

# APPENDIX H

## *Air Quality and Greenhouse Gas Technical Studies and HRA Evaluation*



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# **Canyon Springs Healthcare Campus & Senior Living**

**AIR QUALITY IMPACT ANALYSIS  
CITY OF RIVERSIDE**

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## **LIST OF ABBREVIATED TERMS**

|                   |                                                       |
|-------------------|-------------------------------------------------------|
| (1)               | Reference                                             |
| µg/m <sup>3</sup> | Microgram per Cubic Meter                             |
| AADT              | Annual Average Daily Trips                            |
| AQIA              | Air Quality Impact Analysis                           |
| AQMD              | Air Quality Management District                       |
| AQMP              | Air Quality Management Plan                           |
| ARB               | California Air Resources Board                        |
| BACM              | Best Available Control Measures                       |
| CAA               | Federal Clean Air Act                                 |
| CAAQS             | California Ambient Air Quality Standards              |
| CalEEMod          | California Emissions Estimator Model                  |
| Caltrans          | California Department of Transportation               |
| CAPCOA            | California Air Pollution Control Officers Association |
| CARB              | California Air Resources Board                        |
| CCR               | California Code of Regulations                        |
| CEQA              | California Environmental Quality Act                  |
| CFR               | Code of Federal Regulations                           |
| CO                | Carbon Monoxide                                       |
| DPM               | Diesel Particulate Matter                             |
| EPA               | Environmental Protection Agency                       |
| kBTU              | kilo British Thermal Units                            |
| LST               | Localized Significance Threshold                      |
| NAAQS             | National Ambient Air Quality Standards                |
| NO <sub>2</sub>   | Nitrogen Dioxide                                      |
| NO <sub>x</sub>   | Oxides of Nitrogen                                    |
| Pb                | Lead                                                  |
| PM <sub>10</sub>  | Particulate Matter 10 microns in diameter or less     |
| PM <sub>2.5</sub> | Particulate Matter 2.5 microns in diameter or less    |
| PPM               | Parts Per Million                                     |
| Project           | Canyon Springs Healthcare Campus & Senior Living      |
| ROG               | Reactive Organic Gases                                |
| SCAB              | South Coast Air Basin                                 |
| SCAQMD            | South Coast Air Quality Management District           |
| SCF               | Standard Cubic Feet                                   |
| SIPs              | State Implementation Plans                            |
| SRA               | Source Receptor Area                                  |

|     |                            |
|-----|----------------------------|
| TAC | Toxic Air Contaminant      |
| TIA | Traffic Impact Analysis    |
| TOG | Total Organic Gases        |
| VMT | Vehicle Miles Traveled     |
| VOC | Volatile Organic Compounds |

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## EXECUTIVE SUMMARY

### Short-Term Construction

For regional emissions, the Project will exceed the numerical thresholds of significance established by the South Coast Air Quality Management District (SCAQMD) for emissions of Nitrogen Oxides (NO<sub>x</sub>) prior to implementation of mitigation measures (MMs).

The proposed mitigation measures MM AQ-1 is recommended to reduce the impacts to less than significant levels. After implementation of MM AQ-1, construction activity emissions will not exceed the numerical thresholds established by the SCAQMD. Thus a less than significant impact will occur with the implementation MM AQ-1.

Additionally, emissions during construction activity will not exceed the SCAQMD's localized significance threshold without/with implementation of applicable mitigation measures. Therefore, a less than significant impact would occur. Furthermore, project construction-source emissions would not conflict with the applicable Air Quality Management Plan (AQMP).

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

### Long-Term Operational

For regional emissions, the Project would exceed the numerical thresholds of significance established by the SCAQMD for emissions of VOCs, NO<sub>x</sub>, and CO. This is due, for the most part, to the Project's daily traffic generation and the associated tailpipe exhaust emissions. There are no feasible mitigation measures within the control of the Project Applicant or the City of Riverside that would reduce these emissions to levels that are less-than-significant. Thus a significant impact would occur even with implementation of the proposed mitigation measures (MM AQ-2 through MM AQ-6). Project operational-source VOC, NO<sub>x</sub>, and CO emissions exceedances of applicable SCAQMD regional thresholds are therefore considered significant and unavoidable. Nonetheless, as discussed in detail in Section 3.5.5, the Project would not result in a significantly greater amount of emissions than what would otherwise occur under the previously approved Specific Plan. See Section 3.5.5 for a detailed discussion of emission summaries.

Project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the operational LSTs section of this report. The proposed Project would not result in a significant CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact as discussed in Section 3.8, thus a less than significant impact to sensitive receptors during

operational activity is expected. Project operational-source emissions would conflict with the AQMP.

Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Project would include disposal of miscellaneous medical, residential, and food preparation refuse. Moreover, SCAQMD Rule 402 acts to prevent occurrences of odor nuisances (1) . Consistent with City requirements, all Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations. Potential operational-source odor impacts are therefore considered less-than-significant.

# 1 INTRODUCTION

This report presents the results of the air quality impact analysis (AQIA) prepared by Urban Crossroads, Inc., for the Canyon Springs Healthcare Campus & Senior Living Project (referred to as “Project.”

The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the proposed Project, and recommend measures to mitigate impacts considered potentially significant in comparison to established regulatory thresholds.

## 1.1 SITE LOCATION

The proposed Project is generally located north of Eucalyptus Avenue, between Valley Springs Parkway and Day Street in the City of Riverside as shown, as shown on Exhibit 1-A. The Project is proposed to consist of several large contiguous parcels with improved street frontage and adequate infrastructure in a master planned business park. The largest parcel is situated south of Gateway Drive and includes medical uses. Two nearby 10-acre parcels within Canyon Springs will provide land for the related senior living and assisted living facilities.

## 1.2 PROJECT OVERVIEW

The previously approved specific plan land use consists of 100,000 square feet of general retail use and 800,000 square feet of general office use.

The currently proposed project (Canyon Springs Healthcare Campus & Senior Living) land use plan (shown on Exhibit 1-B) is more intensive than the previously approved land use plan. The proposed project consists of hospital land use with approximately 280 beds, 370,000 square feet of medical office, 234 senior adult-housing attached dwelling units, and an assisted living facility with approximately 267 beds. For the purposes of this AQIA, it is assumed, for analytical purposes, that the Project will be constructed in a single phase and at full occupancy by 2016<sup>1</sup>.

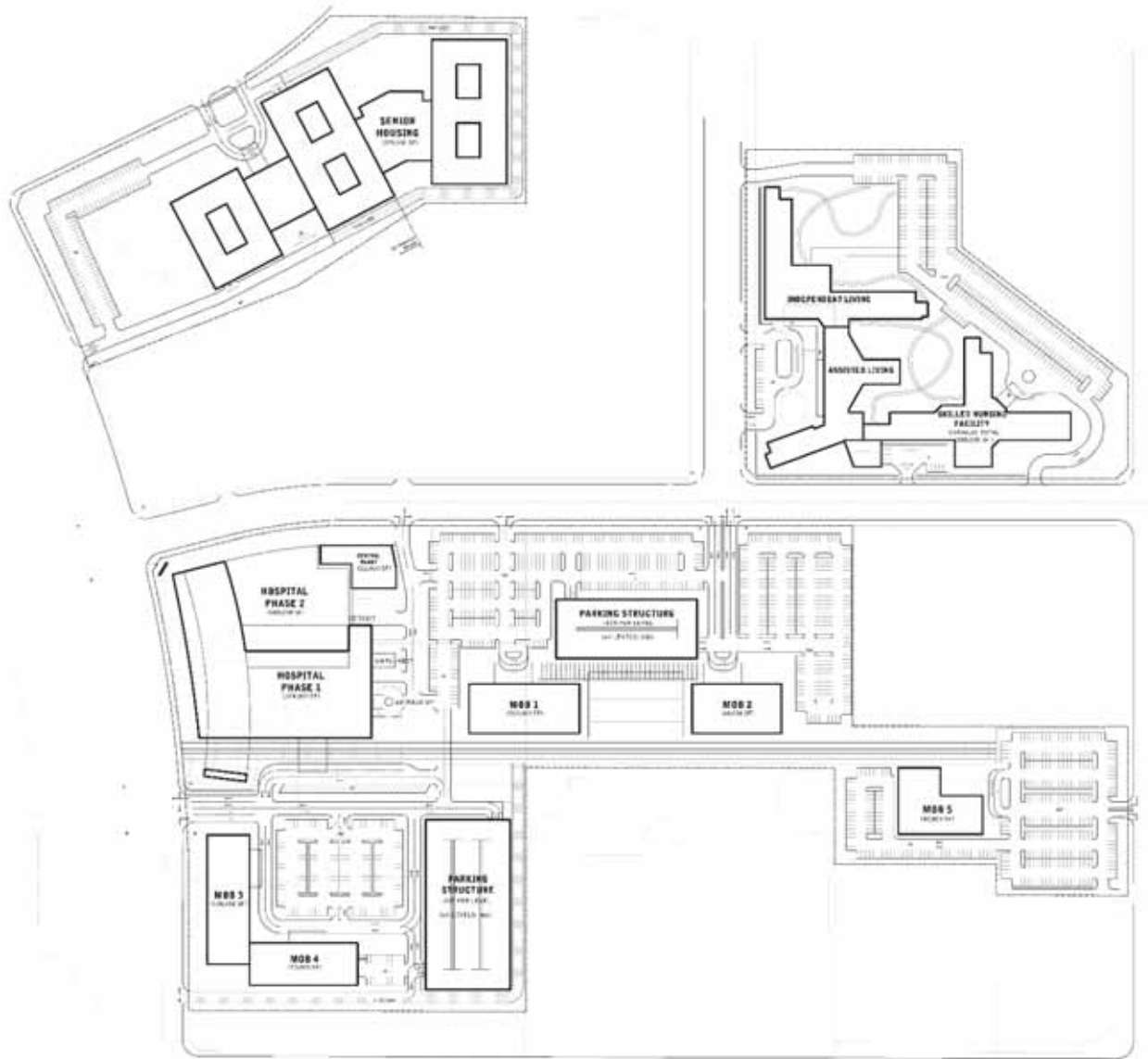
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<sup>1</sup> It should be noted that analyzing construction activity as a single phase represents a worst case scenario as the maximum feasible construction emissions per day are reported, rather than dispersed between multiple phases of construction. Any limitations due to multiple phasing, order of phasing, or amount of square feet under construction would not substantially change the findings of the analysis.

**EXHIBIT 1-A: LOCATION MAP**



**EXHIBIT 1-B: PRELIMINARY SITE PLAN**





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## **2 AIR QUALITY SETTING**

This section provides an overview of the existing air quality conditions in the Project area and region.

### **2.1 SOUTH COAST AIR BASIN**

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (2). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As discussed above, the Project site is located within the South Coast Air Basin, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The larger South Coast district boundary includes 10,743 square miles.

The jurisdiction of SCAQMD includes the SCAB and parts of the Mojave Desert Air Basin (MDAB) and the Salton Sea Air Basin (SSAB). The SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the MDAB is bound by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the SSAB is bound by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

### **2.2 REGIONAL CLIMATE**

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s (degrees Fahrenheit). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14 1/2 hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over Southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as NOX and CO from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.



## **2.3 WIND PATTERNS AND PROJECT LOCATION**

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The Basin is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

## **2.4 EXISTING AIR QUALITY**

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect, as well as health effects of each pollutant regulated under these standards are shown in Table 2-1 (3).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in Table 2-1. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O<sub>3</sub>, CO, SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are not equaled or exceeded at any time in any consecutive three-year period; and the federal standards (other than O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The O<sub>3</sub> standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24 hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

TABLE 2-1: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

| Ambient Air Quality Standards                                  |                         |                                    |                                                        |                                                         |                                   |                                                                     |  |
|----------------------------------------------------------------|-------------------------|------------------------------------|--------------------------------------------------------|---------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------|--|
| Pollutant                                                      | Averaging Time          | California Standards <sup>1</sup>  |                                                        | National Standards <sup>2</sup>                         |                                   |                                                                     |  |
|                                                                |                         | Concentration <sup>3</sup>         | Method <sup>4</sup>                                    | Primary <sup>3,5</sup>                                  | Secondary <sup>3,6</sup>          | Method <sup>7</sup>                                                 |  |
| Ozone (O <sub>3</sub> ) <sup>8</sup>                           | 1 Hour                  | 0.09 ppm (180 µg/m <sup>3</sup> )  | Ultraviolet Photometry                                 | —                                                       | Same as Primary Standard          | Ultraviolet Photometry                                              |  |
|                                                                | 8 Hour                  | 0.070 ppm (137 µg/m <sup>3</sup> ) |                                                        | 0.070 ppm (137 µg/m <sup>3</sup> )                      |                                   |                                                                     |  |
| Respirable Particulate Matter (PM <sub>10</sub> ) <sup>9</sup> | 24 Hour                 | 50 µg/m <sup>3</sup>               | Gravimetric or Beta Attenuation                        | 150 µg/m <sup>3</sup>                                   | Same as Primary Standard          | Inertial Separation and Gravimetric Analysis                        |  |
|                                                                | Annual Arithmetic Mean  | 20 µg/m <sup>3</sup>               |                                                        | —                                                       |                                   |                                                                     |  |
| Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>9</sup>      | 24 Hour                 | —                                  | —                                                      | 35 µg/m <sup>3</sup>                                    | Same as Primary Standard          | Inertial Separation and Gravimetric Analysis                        |  |
|                                                                | Annual Arithmetic Mean  | 12 µg/m <sup>3</sup>               | Gravimetric or Beta Attenuation                        | 12.0 µg/m <sup>3</sup>                                  | 15 µg/m <sup>3</sup>              |                                                                     |  |
| Carbon Monoxide (CO)                                           | 1 Hour                  | 20 ppm (23 mg/m <sup>3</sup> )     | Non-Dispersive Infrared Photometry (NDIR)              | 35 ppm (40 mg/m <sup>3</sup> )                          | —                                 | Non-Dispersive Infrared Photometry (NDIR)                           |  |
|                                                                | 8 Hour                  | 9.0 ppm (10 mg/m <sup>3</sup> )    |                                                        | 9 ppm (10 mg/m <sup>3</sup> )                           | —                                 |                                                                     |  |
|                                                                | 8 Hour (Lake Tahoe)     | 6 ppm (7 mg/m <sup>3</sup> )       |                                                        | —                                                       | —                                 |                                                                     |  |
| Nitrogen Dioxide (NO <sub>2</sub> ) <sup>10</sup>              | 1 Hour                  | 0.18 ppm (339 µg/m <sup>3</sup> )  | Gas Phase Chemiluminescence                            | 100 ppb (188 µg/m <sup>3</sup> )                        | —                                 | Gas Phase Chemiluminescence                                         |  |
|                                                                | Annual Arithmetic Mean  | 0.030 ppm (57 µg/m <sup>3</sup> )  |                                                        | 0.053 ppm (100 µg/m <sup>3</sup> )                      | Same as Primary Standard          |                                                                     |  |
| Sulfur Dioxide (SO <sub>2</sub> ) <sup>11</sup>                | 1 Hour                  | 0.25 ppm (655 µg/m <sup>3</sup> )  | Ultraviolet Fluorescence                               | 75 ppb (196 µg/m <sup>3</sup> )                         | —                                 | Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) |  |
|                                                                | 3 Hour                  | —                                  |                                                        | —                                                       | 0.5 ppm (1300 µg/m <sup>3</sup> ) |                                                                     |  |
|                                                                | 24 Hour                 | 0.04 ppm (105 µg/m <sup>3</sup> )  |                                                        | 0.14 ppm (for certain areas) <sup>10</sup>              | —                                 |                                                                     |  |
|                                                                | Annual Arithmetic Mean  | —                                  |                                                        | 0.030 ppm (for certain areas) <sup>10</sup>             | —                                 |                                                                     |  |
| Lead <sup>12,13</sup>                                          | 30 Day Average          | 1.5 µg/m <sup>3</sup>              | Atomic Absorption                                      | —                                                       | —                                 | High Volume Sampler and Atomic Absorption                           |  |
|                                                                | Calendar Quarter        | —                                  |                                                        | 1.5 µg/m <sup>3</sup> (for certain areas) <sup>12</sup> | Same as Primary Standard          |                                                                     |  |
|                                                                | Rolling 3-Month Average | —                                  |                                                        | 0.15 µg/m <sup>3</sup>                                  |                                   |                                                                     |  |
| Visibility Reducing Particles <sup>14</sup>                    | 8 Hour                  | See footnote 13                    | Beta Attenuation and Transmittance through Filter Tape | No National Standards                                   |                                   |                                                                     |  |
| Sulfates                                                       | 24 Hour                 | 25 µg/m <sup>3</sup>               | Ion Chromatography                                     |                                                         |                                   |                                                                     |  |
| Hydrogen Sulfide                                               | 1 Hour                  | 0.03 ppm (42 µg/m <sup>3</sup> )   | Ultraviolet Fluorescence                               |                                                         |                                   |                                                                     |  |
| Vinyl Chloride <sup>12</sup>                                   | 24 Hour                 | 0.01 ppm (26 µg/m <sup>3</sup> )   | Gas Chromatography                                     |                                                         |                                   |                                                                     |  |

See footnotes on next page ...

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (10/1/15)

**TABLE 2-1: AMBIENT AIR QUALITY STANDARDS (2 OF 2)**

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above  $150 \mu\text{g}/\text{m}^3$  is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of  $25^\circ\text{C}$  and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of  $25^\circ\text{C}$  and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from  $15 \mu\text{g}/\text{m}^3$  to  $12.0 \mu\text{g}/\text{m}^3$ . The existing national 24-hour PM2.5 standards (primary and secondary) were retained at  $35 \mu\text{g}/\text{m}^3$ , as was the annual secondary standard of  $15 \mu\text{g}/\text{m}^3$ . The existing 24-hour PM10 standards (primary and secondary) of  $150 \mu\text{g}/\text{m}^3$  also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour  $\text{SO}_2$  standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971  $\text{SO}_2$  national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.  
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ( $1.5 \mu\text{g}/\text{m}^3$  as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990

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## 2.5 REGIONAL AIR QUALITY

The SCAQMD monitors levels of various criteria pollutants at 30 monitoring stations throughout the air district. In 2015, the federal and state ambient air quality standards (NAAQS and CAAQS) were exceeded on one or more days for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> at most monitoring locations (4). No areas of the SCAB exceeded federal or state standards for NO<sub>2</sub>, SO<sub>2</sub>, CO, sulfates or lead. See Table 2-2 for attainment designations for the SCAB (5). Appendix 3.2 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

**TABLE 2-2: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN (SCAB)**

| Criteria Pollutant      | State Designation | Federal Designation     |
|-------------------------|-------------------|-------------------------|
| Ozone - 1hour standard  | Nonattainment     | No Standard             |
| Ozone - 8 hour standard | Nonattainment     | Nonattainment           |
| PM <sub>10</sub>        | Nonattainment     | Attainment              |
| PM <sub>2.5</sub>       | Nonattainment     | Nonattainment           |
| Carbon Monoxide         | Attainment        | Attainment              |
| Nitrogen Dioxide        | Attainment        | Unclassified/Attainment |
| Sulfur Dioxide          | Attainment        | Attainment              |
| Lead <sup>2</sup>       | Attainment        | Attainment              |

Source: State/Federal designations were taken from <http://www.arb.ca.gov/design/adm/adm.htm>

Note: See Appendix 3.2 for a detailed map of State/National Area Designations within the South Coast Air Basin

## 2.6 LOCAL AIR QUALITY

Relative to the Project site, the nearest long-term air quality monitoring site for Carbon Monoxide (CO), Nitrogen Dioxide (NO<sub>2</sub>), and particulate matter  $\leq 2.5$  microns (PM<sub>2.5</sub>) is the Metropolitan Riverside County 2 monitoring station, located approximately 6.50 miles west of the Project site. Data for Ozone (O<sub>3</sub>) and particulate matter  $\leq 10$  microns (PM<sub>10</sub>) were obtained from the Metropolitan Riverside County 1 monitoring station located approximately 8.75 miles northwest of the Project site and since it is the nearest monitoring station with available data. It should be noted that the Metropolitan Riverside County 1 monitoring station was utilized in lieu of the Metropolitan Riverside County 2 monitoring station only in instances where data was not available from the Metropolitan Riverside County 2 site.

The most recent three (3) years of data available is shown on Table 2-3 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site (6). Additionally, data for SO<sub>2</sub> has been omitted as attainment is regularly met in the South Coast Air Basin and few monitoring stations measure SO<sub>2</sub> concentrations.

<sup>2</sup> The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.



**TABLE 2-3: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2013-2015**

| POLLUTANT <sup>3</sup>                                   | STANDARD    | YEAR  |       |       |
|----------------------------------------------------------|-------------|-------|-------|-------|
|                                                          |             | 2013  | 2014  | 2015  |
| Ozone (O3)                                               |             |       |       |       |
| Maximum 1-Hour Concentration (ppm)                       |             | 0.123 | 0.141 | 0.132 |
| Maximum 8-Hour Concentration (ppm)                       |             | 0.103 | 0.104 | 0.103 |
| Number of Days Exceeding State 1-Hour Standard           | > 0.09 ppm  | 13    | 29    | 31    |
| Number of Days Exceeding State 8-Hour Standard           | > 0.07 ppm  | 38    | 69    | 59    |
| Number of Days Exceeding Federal 1-Hour Standard         | > 0.12 ppm  | 0     | 1     | 1     |
| Number of Days Exceeding Federal 8-Hour Standard         | > 0.075 ppm | 26    | 41    | 39    |
| Number of Days Exceeding Health Advisory                 | ≥ 0.15 ppm  | 0     | 0     | 0     |
| Carbon Monoxide (CO)                                     |             |       |       |       |
| Maximum 1-Hour Concentration (ppm)                       |             | 4.5   | 2.0   | --    |
| Maximum 8-Hour Concentration (ppm)                       |             | 1.6   | 2.4   | --    |
| Number of Days Exceeding State 1-Hour Standard           | > 20 ppm    | 0     | 0     | --    |
| Number of Days Exceeding Federal / State 8-Hour Standard | > 9.0 ppm   | 0     | 0     | --    |
| Number of Days Exceeding Federal 1-Hour Standard         | > 35 ppm    | 0     | 0     | --    |
| Nitrogen Dioxide (NO2)                                   |             |       |       |       |
| Maximum 1-Hour Concentration (ppm)                       |             | 0.058 | 0.058 | 0.057 |
| Annual Arithmetic Mean Concentration (ppm)               |             | --    | 0.015 | 0.014 |
| Number of Days Exceeding State 1-Hour Standard           | > 0.18 ppm  | 0     | 0     | 0     |
| Particulate Matter ≤ 10 Microns (PM10)                   |             |       |       |       |
| Maximum 24-Hour Concentration (µg/m3)                    |             | 135   | 100   | 69    |
| Number of Samples                                        |             | 117   | 117   | --    |
| Number of Samples Exceeding State Standard               | > 50 µg/m3  | 86    | 119   | 87    |
| Number of Samples Exceeding Federal Standard             | > 150 µg/m3 | 0     | 0     | 0     |
| Particulate Matter ≤ 2.5 Microns (PM2.5)                 |             |       |       |       |
| Maximum 24-Hour Concentration (µg/m3)                    |             | 53.7  | --    | 54.7  |
| Annual Arithmetic Mean (µg/m3)                           |             | 11.3  | 14.5  | --    |
| Number of Samples Exceeding Federal 24-Hour Standard     | > 35 µg/m3  | --    | --    | 9     |

-- = data not available from either SCAQMD or ARB

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and effects are identified below:

<sup>3</sup> Data for CO, NO<sub>2</sub>, and PM<sub>2.5</sub> was obtained from the Metropolitan Riverside County 2 monitoring station (SRA 23). Data for O<sub>3</sub> and PM<sub>10</sub> was obtained from the Metropolitan Riverside County 1 monitoring stations (SRA23).

- Carbon Monoxide (CO): Is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.
- Sulfur Dioxide (SO<sub>2</sub>): Is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO<sub>2</sub> oxidizes in the atmosphere, it forms sulfates (SO<sub>4</sub>). Collectively, these pollutants are referred to as sulfur oxides (SOX).
- Nitrogen Oxides (Oxides of Nitrogen, or NO<sub>x</sub>): Nitrogen oxides (NO<sub>x</sub>) consist of nitric oxide (NO), nitrogen dioxide (NO<sub>2</sub>) and nitrous oxide (N<sub>2</sub>O) and are formed when nitrogen (N<sub>2</sub>) combines with oxygen (O<sub>2</sub>). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO<sub>2</sub> is a criteria air pollutant, and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO<sub>2</sub> is the most abundant in the atmosphere. As ambient concentrations of NO<sub>2</sub> are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO<sub>2</sub> than those indicated by regional monitors.
- Ozone (O<sub>3</sub>): Is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.
- PM<sub>10</sub> (Particulate Matter less than 10 microns): A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM<sub>10</sub> also causes visibility reduction and is a criteria air pollutant.
- PM<sub>2.5</sub> (Particulate Matter less than 2.5 microns): A similar air pollutant consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO<sub>2</sub> release from power plants and industrial facilities and nitrates that are formed from NO<sub>x</sub> release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. PM<sub>2.5</sub> is a criteria air pollutant.
- Volatile Organic Compounds (VOC): Volatile organic compounds are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or

carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O<sub>3</sub>, which is a criteria pollutant. The SCAQMD uses the terms VOC and ROG (see below) interchangeably.

- **Reactive Organic Gases (ROG):** Similar to VOC, Reactive Organic Gases (ROG) are also precursors in forming ozone. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. ROG's are a criteria pollutant since they are a precursor to O<sub>3</sub>, which is a criteria pollutant. The SCAQMD uses the terms ROG and VOC (see previous) interchangeably.
- **Lead (Pb):** Lead is a heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. It should be noted that the Project is not anticipated to generate a quantifiable amount of lead emissions. Lead is a criteria air pollutant.

## **Health Effects of Air Pollutants**

### **Ozone**

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for ozone effects. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels.

Ozone exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

### **Carbon Monoxide**

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

#### Particulate Matter

A consistent correlation between elevated ambient fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in PM<sub>2.5</sub> concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM<sub>10</sub> and PM<sub>2.5</sub>.

#### Nitrogen Dioxide

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO<sub>2</sub> at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO<sub>2</sub> in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO<sub>2</sub> considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO<sub>2</sub>.

#### Sulfur Dioxide

A few minutes of exposure to low levels of SO<sub>2</sub> can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO<sub>2</sub>. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO<sub>2</sub>.



Animal studies suggest that despite SO<sub>2</sub> being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO<sub>2</sub> levels. In these studies, efforts to separate the effects of SO<sub>2</sub> from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

## Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.

## Odors

The science of odor as a health concern is still new. Merely identifying the hundreds of VOCs that cause odors poses a big challenge. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

## **2.7 REGULATORY BACKGROUND**

### **2.7.1 FEDERAL REGULATIONS**

The U.S. EPA is responsible for setting and enforcing the NAAQS for O<sub>3</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and lead (3). The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (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 the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (7). The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, CO, PM<sub>2.5</sub>, and lead. The NAAQS were amended in July 1997 to include an additional standard for O<sub>3</sub> and to adopt a NAAQS for PM<sub>2.5</sub>. Table 2-1 (previously presented) provides the NAAQS within the basin.

The Project's mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and nitrogen oxides (NO<sub>x</sub>). NO<sub>x</sub> is a collective term that includes all forms of nitrogen oxides (NO, NO<sub>2</sub>, NO<sub>3</sub>) which are emitted as byproducts of the combustion process.

## **2.7.2 CALIFORNIA REGULATIONS**

The CARB, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (8) (3).

Local air quality management districts, such as the SCAQMD, regulate air emissions from commercial and light industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;

- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a five percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROGs, NOx, CO and PM10. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than five percent per year under certain circumstances.

### **2.7.3 AIR QUALITY MANAGEMENT PLANNING**

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards (9). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.9.

## **2.8 EXISTING PROJECT SITE AIR QUALITY CONDITIONS**

Existing air quality conditions at the Project site would generally reflect ambient monitored conditions as presented previously at Table 2-3.

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### **3 PROJECT AIR QUALITY IMPACT**

#### **3.1 INTRODUCTION**

The Project has been evaluated to determine if it will violate an air quality standard or contribute to an existing or projected air quality violation. Additionally, the Project has been evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment under an applicable federal or state ambient air quality standard. The significance of these potential impacts is described in the following section.

#### **3.2 STANDARDS OF SIGNIFICANCE**

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (10):

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute 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, which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

The SCAQMD has also developed regional and localized significance thresholds for other regulated pollutants, as summarized at Table 3-1 (11). The SCAQMD's CEQA Air Quality Significance Thresholds (March 2015) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

**TABLE 3-1: MAXIMUM DAILY EMISSIONS THRESHOLDS**

| Pollutant                   | Construction           | Operations            |
|-----------------------------|------------------------|-----------------------|
| <b>Regional Thresholds</b>  |                        |                       |
| NO <sub>x</sub>             | 100 lbs/day            | 55 lbs/day            |
| VOC                         | 75 lbs/day             | 55 lbs/day            |
| PM <sub>10</sub>            | 150 lbs/day            | 150 lbs/day           |
| PM <sub>2.5</sub>           | 55 lbs/day             | 55 lbs/day            |
| Sox                         | 150 lbs/day            | 150 lbs/day           |
| CO                          | 550 lbs/day            | 550 lbs/day           |
| Lead                        | 3 lbs/day              | 3 lbs/day             |
| <b>Localized Thresholds</b> |                        |                       |
| CO (1-Hour)                 | 20.0 ppm               | 20.0 ppm              |
| CO (8-Hour)                 | 9.0 ppm                | 9.0 ppm               |
| NO <sub>2</sub>             | 0.18 ppm               | 0.18 ppm              |
| PM <sub>10</sub>            | 10.4 µg/m <sup>3</sup> | 2.5 µg/m <sup>3</sup> |
| PM <sub>2.5</sub>           | 10.4 µg/m <sup>3</sup> | 2.5 µg/m <sup>3</sup> |

### 3.3 PROJECT-RELATED SOURCES OF POTENTIAL IMPACT

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

On October 2, 2013, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2013.2.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (NO<sub>x</sub>, VOC, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, and CO) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (17). Accordingly, the latest version of CalEEMod™ has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendix 3.1.

### 3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of CO, VOCs, NOx, SOx, PM10, and PM2.5. Construction related emissions are expected from the following construction activities:

- Rough Grading
- Building Construction
- Architectural Coatings (painting)
- Finish Grading
- Paving

Construction is expected to commence in June 2015 and will last through November 2016. Construction duration by phase is shown on Table 3-2. The construction schedule utilized in the analysis represents a “worst-case” analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as the analysis year increases. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA guidelines. Site specific construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity and associated construction equipment was based on consultation with the applicant. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1 of this analysis. A detailed summary of construction equipment assumptions by phase is provided at Table 3-3.

Dust is typically a major concern during rough grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions”. Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). The CalEEMod model was utilized to calculate fugitive dust emissions resulting from this phase of activity.

Construction emissions for construction worker vehicles traveling to and from the Project site, as well as vendor trips (construction materials delivered to the Project site) were estimated based on information CalEEMod model defaults.

**TABLE 3-2: CONSTRUCTION DURATION**

| Phase                  | Duration (working days) |
|------------------------|-------------------------|
| Rough Grading          | 40                      |
| Building Construction  | 300                     |
| Architectural Coatings | 300                     |
| Finish Grading         | 20                      |
| Paving                 | 30                      |



**TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS**

| Activity               | Equipment                 | Number | Hours Per Day |
|------------------------|---------------------------|--------|---------------|
| Rough Grading          | Water Trucks              | 2      | 8             |
|                        | Blades                    | 2      | 8             |
|                        | Rubber Tired Dozers       | 1      | 8             |
|                        | Rubber Tired Loaders      | 1      | 8             |
|                        | Scrapers                  | 5      | 8             |
|                        | Tractor Dozer             | 1      | 8             |
| Building Construction  | Cranes                    | 1      | 8             |
|                        | Forklifts                 | 3      | 8             |
|                        | Generator Sets            | 1      | 8             |
|                        | Tractors/Loaders/Backhoes | 3      | 8             |
|                        | Welders                   | 1      | 8             |
| Architectural Coatings | Air Compressors           | 1      | 8             |
| Finish Grading         | Excavators                | 2      | 8             |
|                        | Graders                   | 1      | 8             |
|                        | Water Trucks              | 1      | 8             |
|                        | Rubber Tired Dozers       | 1      | 8             |
|                        | Scrapers                  | 2      | 8             |
|                        | Tractors/Loaders/Backhoes | 2      | 8             |
| Paving                 | Pavers                    | 2      | 8             |
|                        | Paving Equipment          | 2      | 8             |
|                        | Rollers                   | 2      | 8             |

### 3.4.1 CONSTRUCTION EMISSIONS SUMMARY

#### *Impacts Without Mitigation*

The estimated maximum daily construction emissions without mitigation are summarized on Table 3-4. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction will exceed criteria pollutant thresholds established by the SCAQMD for emissions of NO<sub>x</sub> (before mitigation). It should be noted that the impacts without mitigation take credit for reductions achieved through standard regulatory requirements (SCAQMD's Rule 403 And Rule 1113).

**TABLE 3-4: EMISSIONS SUMMARY OF CONSTRUCTION (WITHOUT MITIGATION)**

| Year                           | Emissions (pounds per day) |                 |               |                 |                  |                   |
|--------------------------------|----------------------------|-----------------|---------------|-----------------|------------------|-------------------|
|                                | VOC                        | NO <sub>x</sub> | CO            | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| 2015                           | 70.26                      | 151.05          | 149.24        | 0.28            | 19.37            | 9.96              |
| 2016                           | 69.39                      | 87.35           | 137.87        | 0.28            | 19.07            | 8.18              |
| <b>Maximum Daily Emissions</b> | <b>70.26</b>               | <b>151.05</b>   | <b>149.24</b> | <b>0.28</b>     | <b>19.37</b>     | <b>9.96</b>       |
| SCAQMD Regional Threshold      | 75                         | 100             | 550           | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>     | <b>NO</b>                  | <b>YES</b>      | <b>NO</b>     | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

#### *Impacts With Mitigation*

The estimated maximum daily construction emissions with mitigation are summarized on Table 3-5. Detailed construction model outputs are presented in Appendix 3.1. After implementation of MM AQ-1, construction activity emissions will not exceed the numerical thresholds established by the SCAQMD for any criteria pollutants. Thus a less than significant impact would occur with implementation of applicable regulatory requirements and MM AQ-1.

**TABLE 3-5: EMISSIONS SUMMARY OF CONSTRUCTION (WITH MITIGATION)**

| Year                           | Emissions (pounds per day) |                 |               |                 |                  |                   |
|--------------------------------|----------------------------|-----------------|---------------|-----------------|------------------|-------------------|
|                                | VOC                        | NO <sub>x</sub> | CO            | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| 2015                           | 70.11                      | 86.22           | 149.17        | 0.28            | 19.07            | 7.12              |
| 2016                           | 68.81                      | 65.46           | 137.89        | 0.28            | 18.79            | 6.85              |
| <b>Maximum Daily Emissions</b> | <b>70.11</b>               | <b>86.22</b>    | <b>149.17</b> | <b>0.28</b>     | <b>19.07</b>     | <b>7.12</b>       |
| SCAQMD Regional Threshold      | 75                         | 100             | 550           | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>     | <b>NO</b>                  | <b>NO</b>       | <b>NO</b>     | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

### **3.5 OPERATIONAL EMISSIONS**

Operational activities associated with the proposed Project will result in emissions of ROG, NOX, CO, SOX, PM10, and PM2.5. Operational emissions would be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- Stationary Source Emissions

#### **3.5.1 AREA SOURCE EMISSIONS**

##### Architectural Coatings

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using the CalEEMod model.

##### Consumer Products

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within the CalEEMod model.

##### Hearths/Fireplaces

The emissions associated with use of hearths/fireplaces were calculated based on assumptions provided in the CalEEMod model. The Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development. In order to account for the requirements of this Rule, the unmitigated CalEEMod model estimates were adjusted to remove wood burning stoves and fireplaces. As the project is required to comply with SCAQMD Rule 445, the removal of wood burning stoves and fireplaces is not considered "mitigation" although it must be identified as such in CalEEMod in order to treat the case appropriately.

##### Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod model.

### 3.5.2 ENERGY SOURCE EMISSIONS

#### Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using the CalEEMod model.

### 3.5.3 MOBILE SOURCE EMISSIONS

#### Vehicles

Project operational (vehicular) impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. The Project related operational air quality impacts derive primarily from vehicle trips generated by the Project. Trip characteristics available from the report, Canyon Springs Healthcare Campus & Senior Living Traffic Impact Analysis (Urban Crossroads) 2016 were utilized in this analysis (12).

#### Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of tire wear particulates. The emissions estimates for travel on paved roads were calculated using the CalEEMod model.

### 3.5.4 STATIONARY SOURCE EMISSIONS

The Project will include natural gas powered boilers with an estimated annual energy usage of approximately 50,000,000 kilo British thermal units(kBtu). This equates to a maximum heat input of 5.71 million british thermal units per hour (mmBTU/HR) and an annual fuel usage of 50 million standard cubic feet (SCF). Please refer to Appendix 3.4 for more detail.

### 3.5.5 OPERATIONAL EMISSIONS SUMMARY

#### ***Impacts Without Mitigation***

Operational-source emissions without implementation of mitigation measures are summarized on Table 3-6. For regional emissions, the Project would exceed the numerical thresholds of significance established by the SCAQMD for emissions of VOCs, NO<sub>x</sub>, and CO. Mitigation measures (MM AQ-2 through MM AQ-6) are recommended to reduce the severity of the impact.

**TABLE 3-6: SUMMARY OF PEAK OPERATIONAL EMISSIONS (WITHOUT MITIGATION)**

| Operational Activities – Summer Scenario | Emissions (pounds per day) |                 |               |                 |                  |                   |
|------------------------------------------|----------------------------|-----------------|---------------|-----------------|------------------|-------------------|
|                                          | VOC                        | NO <sub>x</sub> | CO            | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area Source                              | 60.08                      | 0.49            | 42.34         | 2.21e-3         | 0.90             | 0.89              |
| Energy Source                            | 1.19                       | 10.72           | 8.29          | 0.07            | 0.82             | 0.82              |
| Mobile                                   | 67.34                      | 179.72          | 746.08        | 1.72            | 117.02           | 32.95             |
| Stationary                               | 0.72                       | 6.72            | 11.28         | 0.00            | 0.96             | 0.96              |
| <b>Maximum Daily Emissions</b>           | <b>129.33</b>              | <b>197.65</b>   | <b>807.99</b> | <b>1.78</b>     | <b>119.70</b>    | <b>35.62</b>      |
| SCAQMD Regional Threshold                | 55                         | 55              | 550           | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>               | <b>YES</b>                 | <b>YES</b>      | <b>YES</b>    | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

| Operational Activities – Winter Scenario | Emissions (pounds per day) |                 |               |                 |                  |                   |
|------------------------------------------|----------------------------|-----------------|---------------|-----------------|------------------|-------------------|
|                                          | VOC                        | NO <sub>x</sub> | CO            | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area Source                              | 60.08                      | 0.49            | 42.34         | 2.21e-3         | 0.90             | 0.89              |
| Energy Source                            | 1.19                       | 10.72           | 8.29          | 0.07            | 0.82             | 0.82              |
| Mobile                                   | 69.75                      | 188.94          | 737.84        | 1.63            | 117.03           | 32.96             |
| Stationary                               | 0.72                       | 6.72            | 11.28         | 0.00            | 0.96             | 0.96              |
| <b>Maximum Daily Emissions</b>           | <b>131.74</b>              | <b>206.87</b>   | <b>799.74</b> | <b>1.70</b>     | <b>119.71</b>    | <b>35.63</b>      |
| SCAQMD Regional Threshold                | 55                         | 55              | 550           | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>               | <b>YES</b>                 | <b>YES</b>      | <b>YES</b>    | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

### ***Impacts With Mitigation Measures***

Operational-source emissions with implementation of mitigation measures are summarized on Table 3-7. For regional emissions, the Project would exceed the numerical thresholds of significance established by the SCAQMD for emissions of VOCs, NO<sub>x</sub>, and CO. No feasible mitigation measures exist that would reduce these emissions to levels that are less-than-significant. Thus a significant impact would occur even with implementation of the proposed mitigation measures (MM AQ-2 through MM AQ-6). Project operational-source VOCs, NO<sub>x</sub>, and CO emissions exceedances of applicable SCAQMD regional thresholds are therefore considered significant and unavoidable.

**TABLE 3-7: SUMMARY OF PEAK OPERATIONAL EMISSIONS (WITH MITIGATION)**

| Operational Activities – Summer Scenario | Emissions (pounds per day) |                 |               |                 |                  |                   |
|------------------------------------------|----------------------------|-----------------|---------------|-----------------|------------------|-------------------|
|                                          | VOC                        | NO <sub>x</sub> | CO            | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area Source                              | 60.08                      | 0.38            | 32.02         | 1.43e-3         | 0.84             | 0.83              |
| Energy Source                            | 1.08                       | 9.76            | 7.54          | 0.06            | 0.75             | 0.75              |
| Mobile                                   | 62.45                      | 145.65          | 617.60        | 1.34            | 90.77            | 25.58             |
| Stationary                               | 0.72                       | 6.72            | 11.28         | 0.00            | 0.96             | 0.96              |
| <b>Maximum Daily Emissions</b>           | <b>124.33</b>              | <b>162.51</b>   | <b>668.44</b> | <b>1.40</b>     | <b>93.32</b>     | <b>28.12</b>      |
| SCAQMD Regional Threshold                | 55                         | 55              | 550           | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>               | <b>YES</b>                 | <b>YES</b>      | <b>YES</b>    | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

| Operational Activities – Winter Scenario | Emissions (pounds per day) |                 |               |                 |                  |                   |
|------------------------------------------|----------------------------|-----------------|---------------|-----------------|------------------|-------------------|
|                                          | VOC                        | NO <sub>x</sub> | CO            | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area Source                              | 60.08                      | 0.38            | 32.02         | 1.43e-3         | 0.84             | 0.83              |
| Energy Source                            | 1.08                       | 9.76            | 7.54          | 0.06            | 0.75             | 0.75              |
| Mobile                                   | 65.20                      | 152.86          | 622.12        | 1.27            | 90.78            | 25.59             |
| Stationary                               | 0.72                       | 6.72            | 11.28         | 0.00            | 0.96             | 0.96              |
| <b>Maximum Daily Emissions</b>           | <b>127.08</b>              | <b>169.72</b>   | <b>672.40</b> | <b>1.33</b>     | <b>93.33</b>     | <b>28.13</b>      |
| SCAQMD Regional Threshold                | 55                         | 55              | 550           | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>               | <b>YES</b>                 | <b>YES</b>      | <b>YES</b>    | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

### 3.5.6 COMPARISON TO EMISSIONS ALLOWED UNDER THE PREVIOUSLY APPROVED SPECIFIC PLAN LAND USE

In addition to the construction and operational effects associated with establishing a hospital land use with approximately 280 beds, 370,000 square feet of medical office, 234 senior adult-housing attached dwelling units, and an assisted living facility with approximately 267 beds on the property, this study also evaluates the potential changes in emissions associated with the proposed changes in development intensity that are proposed for the project site.

Based on the previously approved Specific Plan land use, the Project site was previously approved for the development of up to 100,000 square feet of retail use and 800,000 square feet of general office building land use. The analysis provided in Table 3-8 of this document demonstrates that the Project would not result in a significantly greater amount of emissions as compared to the previously approved Specific Plan land use<sup>4</sup>.

<sup>4</sup> It should be noted that the analysis is based on a hypothetical situation of the maximum allowable land use intensities as based on the Specific Plan.

TABLE 3-8: COMPARATIVE OPERATIONAL EMISSIONS SUMMARY

| Operational Activities – Summer Scenario                  | Emissions (pounds per day) |                 |               |                 |                  |                   |
|-----------------------------------------------------------|----------------------------|-----------------|---------------|-----------------|------------------|-------------------|
|                                                           | VOC                        | NO <sub>x</sub> | CO            | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Currently Proposed Project Land Use                       |                            |                 |               |                 |                  |                   |
| Area Source <sup>a</sup>                                  | 60.08                      | 0.38            | 32.02         | 1.43e-3         | 0.84             | 0.83              |
| Energy Source <sup>b</sup>                                | 1.08                       | 9.76            | 7.54          | 0.06            | 0.75             | 0.75              |
| Mobile <sup>c</sup>                                       | 62.45                      | 145.65          | 617.60        | 1.34            | 90.77            | 25.58             |
| Stationary <sup>d</sup>                                   | 0.72                       | 6.72            | 11.28         | 0.00            | 0.96             | 0.96              |
| <b>Project Total</b>                                      | <b>124.33</b>              | <b>162.51</b>   | <b>668.44</b> | <b>1.40</b>     | <b>93.32</b>     | <b>28.12</b>      |
| Previously Approved Specific Plan Land Use                |                            |                 |               |                 |                  |                   |
| Area Source <sup>a</sup>                                  | 23.54                      | 9.00e-4         | 0.09          | 1.00e-5         | 3.40e-4          | 3.40e-4           |
| Energy Source <sup>b</sup>                                | 0.08                       | 0.71            | 0.59          | 4.24e-3         | 0.05             | 0.05              |
| Mobile <sup>c</sup>                                       | 46.59                      | 118.93          | 497.06        | 1.12            | 76.39            | 21.51             |
| <b>Previously Approved Specific Plan Total</b>            | <b>70.21</b>               | <b>119.63</b>   | <b>497.75</b> | <b>1.13</b>     | <b>76.44</b>     | <b>21.57</b>      |
| <b>Delta (Project– Previously Approved Specific Plan)</b> | <b>54.12</b>               | <b>42.88</b>    | <b>170.69</b> | <b>0.27</b>     | <b>16.88</b>     | <b>6.55</b>       |

| Operational Activities – Winter Scenario                  | Emissions (pounds per day) |                 |               |                 |                  |                   |
|-----------------------------------------------------------|----------------------------|-----------------|---------------|-----------------|------------------|-------------------|
|                                                           | VOC                        | NO <sub>x</sub> | CO            | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Currently Proposed Project Land Use                       |                            |                 |               |                 |                  |                   |
| Area Source <sup>a</sup>                                  | 60.08                      | 0.38            | 32.02         | 1.43e-3         | 0.84             | 0.83              |
| Energy Source <sup>b</sup>                                | 1.08                       | 9.76            | 7.54          | 0.06            | 0.75             | 0.75              |
| Mobile <sup>c</sup>                                       | 65.20                      | 152.86          | 622.12        | 1.27            | 90.78            | 25.59             |
| Stationary <sup>d</sup>                                   | 0.72                       | 6.72            | 11.28         | 0.00            | 0.96             | 0.96              |
| <b>Project Total</b>                                      | <b>127.08</b>              | <b>169.72</b>   | <b>672.40</b> | <b>1.33</b>     | <b>93.33</b>     | <b>28.13</b>      |
| Previously Approved Specific Plan Land Use                |                            |                 |               |                 |                  |                   |
| Area Source <sup>a</sup>                                  | 23.54                      | 9.00e-4         | 0.09          | 1.00e-5         | 3.40e-4          | 3.40e-4           |
| Energy Source <sup>b</sup>                                | 0.08                       | 0.71            | 0.59          | 4.24e-3         | 0.05             | 0.05              |
| Mobile <sup>c</sup>                                       | 48.35                      | 124.96          | 494.49        | 1.07            | 76.40            | 21.52             |
| <b>Previously Approved Specific Plan Total</b>            | <b>71.97</b>               | <b>125.67</b>   | <b>495.18</b> | <b>1.07</b>     | <b>76.45</b>     | <b>21.57</b>      |
| <b>Delta (Project– Previously Approved Specific Plan)</b> | <b>55.11</b>               | <b>44.05</b>    | <b>177.22</b> | <b>0.26</b>     | <b>16.88</b>     | <b>6.56</b>       |

Note: Please refer to Appendix 3.1 for the CalEEMod™ output files and additional supporting information for the estimated emissions.

<sup>a</sup> Includes emissions of landscape maintenance equipment and architectural coatings emissions

<sup>b</sup> Includes emissions of natural gas consumption

<sup>c</sup> Includes emissions of vehicle emissions and fugitive dust related to vehicular travel

<sup>d</sup> Includes emissions of natural gas powered stationary sources



### 3.6 LOCALIZED SIGNIFICANCE - CONSTRUCTION ACTIVITY

#### BACKGROUND ON LOCALIZED SIGNIFICANCE THRESHOLDS (LSTs)

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (Methodology) (13). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below State standards. In the case of CO and NO<sub>2</sub>, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. For the nonattainment pollutants PM<sub>10</sub> and PM<sub>2.5</sub>, background ambient concentrations already exceed state and/or federal standards. LSTs for PM<sub>10</sub> and PM<sub>2.5</sub> are therefore based on SCAQMD Rules 403/1303 (construction-source/operational-source emissions respectively) and are established as an allowable change in concentration. Background concentrations are irrelevant.

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses. The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (13). For this Project, the appropriate Source Receptor Area (SRA) for the LST analysis is the Metropolitan Riverside County 2 monitoring station (SRA 23). LSTs apply to carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), particulate matter ≤ 10 microns (PM<sub>10</sub>), and particulate matter ≤ 2.5 microns (PM<sub>2.5</sub>).

#### EMISSIONS CONSIDERED

SCAQMD's Methodology clearly states that "off-site mobile emissions from the Project should NOT be included in the emissions compared to LSTs (13)." Therefore, for purposes of the construction LST analysis only emissions included in the CalEEMod "on-site" emissions outputs were considered.

#### Sensitive Receptors

The nearest sensitive receptor land use (where an individual could remain for 24 hours) is located immediately adjacent to the site to the south. Notwithstanding, the *Methodology* explicitly states that "*It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.*" (13) Accordingly, LSTs for receptors at 25 meters are utilized in this analysis and provide for a conservative i.e. "health protective" standard of care.

### CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

Table 3-9 is used to determine the maximum daily disturbed-acreage for use in determining the applicability of the SCAQMD's LST look-up tables. As shown in Table 3-9, the Project could actively disturb approximately 6 acres per day during rough grading activity and thus would exceed the 5 acre per day limit established by the SCAQMD's LST look-up tables.

**TABLE 3-9: MAXIMUM DAILY DISTURBED-ACREAGE**

| Construction Phase                              | Equipment Type      | Equipment Quantity | Acres graded per 8 hour day | Operating Hours per Day | Acres graded per day |
|-------------------------------------------------|---------------------|--------------------|-----------------------------|-------------------------|----------------------|
| Rough Grading                                   | Tractor Dozer       | 1                  | 0.5                         | 8                       | 0.5                  |
|                                                 | Rubber Tired Dozers | 1                  | 0.5                         | 8                       | 0.5                  |
|                                                 | Scrapers            | 5                  | 1                           | 8                       | 5.0                  |
| Total acres graded per day during Rough Grading |                     |                    |                             |                         | 6.0                  |

### DISPERSION MODELING

SCREEN3 (14), is a U.S. EPA approved air quality model that contains algorithms associated with the USEPA's *Screening Procedures for Estimating the Air Quality Impact of Stationary Sources* (15). SCREEN3 was used to calculate localized pollutant concentrations for construction and operational activity. SCREEN3 uses dispersion screening techniques to estimate impacts of point, area, and volume stationary sources. It should be noted that the SCREEN3 model was utilized in lieu of the more robust AERMOD (16) and Industrial Source Complex (ISC) (17) model in order to account for worst-case conditions, and since precise construction phasing information is not available at this time.

For purposes of this analysis, receptors are conservatively assumed to be located at ~25 meters/82 feet west for emissions of CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. For emissions of NO<sub>2</sub>, discrete receptors were placed at 20, 50, 70, 100, 200, 500, 1000, 2000, 3000, 4000, and 5000 meters from the fence-line of the Project site to account for the change in NO<sub>x</sub> to NO<sub>2</sub> conversion as a function of distance.

It should be noted that for PM<sub>10</sub> / PM<sub>2.5</sub>, a discrete receptor was placed at the facility fence-line and the SCAQMD—approved downwind distance equation ( $C_x = 0.9403 C_0 e^{-0.0462 X}$ ) was utilized to predict the concentration at the actual location of the nearest receptor.

- $C_x$  is the predicted PM<sub>10</sub> concentration at X meters from the fence line.
- $C_0$  is the PM<sub>10</sub> concentration at the fence line as estimated by SCREEN3.
- $e$  is the natural logarithm.
- $X$  is the distance in meters from the fence line to the nearest sensitive receptor. (For purposes of this analysis, it is estimated that the nearest sensitive receptor is conservatively located 25 meters/85 feet south from the Project boundary).

For construction, an area source encompassing approximately 6.0 acres was modeled. The urban option of the model was selected, and receptor height was conservatively set at 2.0 meters (consistent with the document Final Localized Significance Threshold Methodology, SCAQMD, June 2003). For PM<sub>10</sub> and PM<sub>2.5</sub> a source release height of 1.0 meters was utilized consistent with SCAQMD methodology. Additionally, for emissions of NO<sub>x</sub> and CO released during construction activity, consistent with SCAQMD methodology, a source release height of 5.0 meters was utilized.

An emissions rate of 1 gram per second was utilized for emissions of CO, PM<sub>10</sub>, and PM<sub>2.5</sub> and the output in micrograms per cubic meter (µg/m<sup>3</sup>) was then multiplied by the emissions rate determined from the CalEEMod model outputs (and averaged over the appropriate time period and disturbance area). For emissions of NO<sub>x</sub>, the actual emissions rate (in grams/second/m<sup>2</sup>) was programmed into the model. A summary of calculations from both the SCREEN3 model output and calculations for the actual concentration for each pollutant are available for review in Appendix 3.3.

#### LOCALIZED THRESHOLDS FOR CONSTRUCTION ACTIVITY

The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the Federal and/or State Ambient Air Quality Standards (18).

Applicable localized thresholds are as follows:

- California State 1-hour CO standard of 20.0 ppm;
- California State 8-hour CO standard of 9.0 ppm;
- California State 1-hour NO<sub>2</sub> standard of 0.18 ppm;
- SCAQMD 24-hour construction PM<sub>10</sub> LST of 10.4 µg/m<sup>3</sup>; or
- SCAQMD 24-hour construction PM<sub>2.5</sub> LST of 10.4 µg/m<sup>3</sup>

#### Impacts Without Mitigation

Without implementation of applicable mitigation measures, emissions during grading activity will not exceed any of the SCAQMD's localized significance thresholds. Table 3-10 identifies the localized impacts at the nearest receptor location in the vicinity of the Project without mitigation. A less than significant impact would occur and no mitigation is required.

**TABLE 3-10: LOCALIZED SIGNIFICANCE SUMMARY GRADING (WITHOUT MITIGATION)**

| Rough Grading                           | CO             |             | NO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
|-----------------------------------------|----------------|-------------|-----------------|------------------|-------------------|
|                                         | Averaging Time |             |                 |                  |                   |
|                                         | 1-Hour         | 8-Hour      | 1-Hour          | 24-Hours         |                   |
| Peak Day Localized Emissions            | 0.46           | 0.33        | 0.0212          | 8.55             | 4.73              |
| Background Concentration <sup>A</sup>   | 4.50           | 1.60        | 0.06            |                  |                   |
| <b>Total Concentration</b>              | <b>4.96</b>    | <b>1.93</b> | <b>0.08</b>     | <b>8.55</b>      | <b>4.73</b>       |
| SCAQMD Localized Significance Threshold | 20             | 9           | 0.18            | 10.4             | 10.4              |
| <b>Threshold Exceeded?</b>              | <b>NO</b>      | <b>NO</b>   | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

<sup>A</sup> Highest concentration from the last three years of available data

Note: PM<sub>10</sub> and PM<sub>2.5</sub> concentrations are expressed in µg/m<sup>3</sup>. All others are expressed in ppm

### Impacts With Mitigation

After the implementation of MM AQ-1, emissions during grading activity will be further reduced. Table 3-11 identifies the mitigated localized impacts at the nearest receptor location in the vicinity of the Project.

**TABLE 3-11: LOCALIZED SIGNIFICANCE SUMMARY GRADING (WITH MITIGATION)**

| Rough Grading                           | CO             |             | NO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
|-----------------------------------------|----------------|-------------|-----------------|------------------|-------------------|
|                                         | Averaging Time |             |                 |                  |                   |
|                                         | 1-Hour         | 8-Hour      | 1-Hour          | 24-Hours         |                   |
| Peak Day Localized Emissions            | 0.37           | 0.27        | 0.0121          | 3.86             | 2.38              |
| Background Concentration <sup>A</sup>   | 4.50           | 1.60        | 0.06            |                  |                   |
| <b>Total Concentration</b>              | <b>4.87</b>    | <b>1.87</b> | <b>0.07</b>     | <b>3.86</b>      | <b>2.38</b>       |
| SCAQMD Localized Significance Threshold | 20             | 9           | 0.18            | 10.4             | 10.4              |
| <b>Threshold Exceeded?</b>              | <b>NO</b>      | <b>NO</b>   | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

<sup>A</sup> Highest concentration from the last three years of available data

Note: PM<sub>10</sub> and PM<sub>2.5</sub> concentrations are expressed in µg/m<sup>3</sup>. All others are expressed in ppm

### 3.7 LOCALIZED SIGNIFICANCE – LONG-TERM OPERATIONAL ACTIVITY

For operational LSTS, on-site passenger car and truck travel emissions were modeled in AERMOD using emission factors for CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> generated with the 2014 version of the Emission FACTor model (EMFAC) developed by the ARB. EMFAC 2014 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the ARB to project changes in future emissions from on-road mobile sources (19).

For this Project, criteria pollutant emission factors were generated by running EMFAC 2014 in EMFAC Mode for vehicles in the SCAQMD district. The EMFAC Mode generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of temperature, relative humidity, and vehicle speed. The model was run for speeds traveled in the vicinity of the Project. The vehicle travel speeds for each segment modeled are summarized below.

- Idling – assumed 15 minutes of idling for passenger cars and trucks
- 5 miles per hour – on-site vehicle movement including driving and maneuvering

#### LOCALIZED THRESHOLDS FOR OPERATIONAL ACTIVITY

The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the Federal and/or State Ambient Air Quality Standards (18).

Applicable localized thresholds are as follows:

- California State 1-hour CO standard of 20.0 ppm;

- California State 8-hour CO standard of 9.0 ppm;
- California State 1-hour NO<sub>2</sub> standard of 0.18 ppm;
- SCAQMD 24-hour operational PM<sub>10</sub> LST of 2.5 µg/m<sup>3</sup>;
- SCAQMD 24-hour operational PM<sub>2.5</sub> LST of 2.5 µg/m<sup>3</sup>.

As shown on Table 3-12, operational emissions would not exceed the SCAQMD's localized significance thresholds for any criteria pollutant at the nearest sensitive receptor. Therefore, the Project will have a less than significant localized impact during operational activity, and no mitigation is required.

**TABLE 3-12: LOCALIZED SIGNIFICANCE SUMMARY OPERATIONS**

| Operations                              | CO             |             | NO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
|-----------------------------------------|----------------|-------------|-----------------|------------------|-------------------|
|                                         | Averaging Time |             |                 |                  |                   |
|                                         | 1-Hour         | 8-Hour      | 1-Hour          | 24-Hours         |                   |
| Peak Day Localized Emissions            | 0.0473         | 0.0262      | 0.0015          | 0.1046           | 0.0964            |
| Background Concentration <sup>A</sup>   | 4.50           | 1.60        | 0.06            |                  |                   |
| <b>Total Concentration</b>              | <b>4.55</b>    | <b>1.63</b> | <b>0.06</b>     | <b>0.10</b>      | <b>0.10</b>       |
| SCAQMD Localized Significance Threshold | 20             | 9           | 0.18            | 2.5              | 2.5               |
| <b>Threshold Exceeded?</b>              | <b>NO</b>      | <b>NO</b>   | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

<sup>A</sup> Highest concentration from the last three years of available data

Note: PM<sub>10</sub> and PM<sub>2.5</sub> concentrations are expressed in µg/m<sup>3</sup>. All others are expressed in ppm

### 3.8 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific carbon monoxide (CO) "hot spots" is not needed to reach this conclusion.

An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the California AAQS and National AAQS for CO (20).

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment, as previously noted in Table 2-2. Also, CO concentrations in the Project vicinity have steadily declined, as indicated by historical emissions data presented previously at Table 2-3.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak

morning and afternoon time periods. This “hot spot” analysis did not predict any violation of CO standards, as shown on Table 3-13.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 9.3 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the “hot spot” analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 8.6 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (20). In contrast, the ambient 8-hr CO concentration within the Project study area is estimated at 1.4 ppm—1.6 ppm (please refer to previous Table 2-3). Therefore, even if the traffic volumes for the proposed Project were double or even triple of the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, coupled with the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO “hot spot” at any study area intersections.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (21).

Traffic volumes generating the CO concentrations for the “hot spot” analysis, shown on Table 3-14. The busiest intersection evaluated was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations ( $4.6 \text{ ppm} \times 4 = 18.4 \text{ ppm}$ ) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm).<sup>5</sup> At buildout of the Project, the highest average daily trips on a segment of road would be 54,000 daily trips on Eucalyptus Av. east of the I-215, which is lower than the highest daily traffic volumes generated at the busiest intersection in the CO “hot spot” analysis (22).

The proposed Project considered herein would not produce the volume of traffic required to generate a CO “hot spot” either in the context of the 2003 Los Angeles hot spot study, or based on representative BAAQMD CO threshold considerations, as shown on Table 3-15. Therefore, CO “hot spots” are not an environmental impact of concern for the proposed Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

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<sup>5</sup> Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).



**TABLE 3-13: CO MODEL RESULTS**

| Intersection Location | Carbon Monoxide Concentrations (ppm) |                  |        |
|-----------------------|--------------------------------------|------------------|--------|
|                       | Morning 1-hour                       | Afternoon 1-hour | 8-hour |
| Wilshire-Veteran      | 4.6                                  | 3.5              | 4.2    |
| Sunset-Highland       | 4                                    | 4.5              | 3.9    |
| La Cienega-Century    | 3.7                                  | 3.1              | 5.8    |
| Long Beach-Imperial   | 3                                    | 3.1              | 9.3    |

**TABLE 3-14: TRAFFIC VOLUMES FOR INTERSECTIONS EVALUATED IN AQMP**

| Intersection Location | Peak Traffic Volumes (vph) |                   |                    |                    |               |
|-----------------------|----------------------------|-------------------|--------------------|--------------------|---------------|
|                       | Eastbound (AM/PM)          | Westbound (AM/PM) | Southbound (AM/PM) | Northbound (AM/PM) | Total (AM/PM) |
| Wilshire-Veteran      | 4,954/2,069                | 1,830/3,317       | 721/1,400          | 560/933            | 8,062/7,719   |
| Sunset-Highland       | 1,417/1,764                | 1,342/1,540       | 2,304/1,832        | 1,551/2,238        | 6,614/5,374   |
| La Cienega-Century    | 2,540/2,243                | 1,890/2,728       | 1,384/2,029        | 821/1,674          | 6,634/8,674   |
| Long Beach-Imperial   | 1,217/2,020                | 1,760/1,400       | 479/944            | 756/1,150          | 4,212/5,514   |

**TABLE 3-15: PROJECT PEAK HOUR TRAFFIC VOLUMES**

| Intersection Location                 | Northbound (AM/PM) | Southbound (AM/PM) | Eastbound (AM/PM) | Westbound (AM/PM) | Total (AM/PM) |
|---------------------------------------|--------------------|--------------------|-------------------|-------------------|---------------|
| Sycamore Cyn. Bl- Eastridge Av.       | 1,813/975          | 496/1,272          | 745/1,331         | 1,421/1,036       | 4,475/4,614   |
| I-215 Ramps- Eucalyptus Av.           | 457/735            | 545/1,078          | 1,418/2,779       | 1,935/1,533       | 4,355/6,125   |
| 4 Valley Sprigs Pkwy.- Eucalyptus Av. | 1,215/1,131        | 131/571            | 836/1,812         | 2,216/2,519       | 4,398/6,033   |
| Day St.- Alessandro Bl.               | 658/797            | 695/538            | 1,202/2,184       | 1,819/1,616       | 4,374/5,135   |

Source: Canyon Springs Healthcare Campus &amp; Senior Living Traffic Impact Analysis (Urban Crossroads, Inc., 2015).

### 3.9 AIR QUALITY MANAGEMENT PLANNING

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the Basin. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in



order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

The Final 2012 AQMP was adopted by the AQMD Governing Board on December 7, 2012 (23) (9). The 2012 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories.

Similar to the 2007 AQMP, the 2012 AQMP was based on assumptions provided by both CARB and SCAG in the latest available EMFAC model for the most recent motor vehicle and demographics information, respectively. The air quality levels projected in the 2012 AQMP are based on several assumptions. For example, the 2012 AQMP has assumed that development associated with general plans, specific plans, residential projects, and wastewater facilities will be constructed in accordance with population growth projections identified by SCAG in its 2012 RTP. The 2012 AQMP also has assumed that such development projects will implement strategies to reduce emissions generated during the construction and operational phases of development. The Project's consistency with the 2012 AQMP is discussed as follows:

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993) (24). These indicators are discussed below:

- Consistency Criterion No. 1: The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

### **Construction Impacts**

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if LSTs were exceeded. As evaluated as part of the Project LST analysis (previously presented), the Project's localized construction-source emissions would not exceed applicable LSTs.

### **Operational Impacts**

The Project LST analysis demonstrates that Project operational-source emissions would not exceed applicable thresholds, and would therefore not result in or cause violations of the CAAQS and NAAQS.

On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

- Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

## **Overview**

The 2012 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the Southern California Association of Governments (SCAG), which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in the City of Riverside General Plan is considered to be consistent with the AQMP.

## **Construction Impacts**

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities.

## **Operational Impacts**

A project would conflict with the AQMP if it would exceed the assumptions in the AQMP. The current zoning of the Project site is Office (O) and Commercial Retail (CR). Based on the previously approved Specific Plan land use, the Project site would be approved for the development of up to 100,000 square feet of retail use and 800,000 square feet of general office building land use. As shown in Section 3.5.5, the Proposed Project would result in a greater amount of emissions as compared to the previously approved Specific Plan land use. Thus, the Proposed Project would result in more emissions and would therefore be inconsistent with assumptions set forth in the City of Riverside General Plan. Accordingly, the Proposed Project would be inconsistent with the growth assumptions used by the AQMP, and is therefore inconsistent with the second criterion.

## **AQMP Consistency Conclusion**

The Project would not result in or cause NAAQS or CAAQS violations. The Project's proposed land use designation for the subject site increases the development intensities as reflected in the adopted General Plan. The Project is therefore considered to be inconsistent with the AQMP.

### **3.10 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS**

Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during construction or operational activity. Therefore sensitive receptors would not be subject to a significant air quality impact during Project construction and operational activity.

The proposed Project would not result in a CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact

as discussed in Section 3.8. Thus a less than significant impact to sensitive receptors during operational activity is expected.

### **3.11 ODORS**

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

Agricultural uses (livestock and farming). The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child care centers, and athletic facilities can also be considered as sensitive receptors.

- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required.

### 3.12 CUMULATIVE IMPACTS

The Project area is designated as an extreme non-attainment area for ozone and a non-attainment area for PM<sub>10</sub> and PM<sub>2.5</sub>.

#### CRITERION 1; REGIONAL ANALYSIS

##### Construction Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that after mitigation, Project construction-source air pollutant emissions will not result in exceedances of regional thresholds. Therefore, project construction-source emission would be considered less than significant.

##### Operational Impacts

Project operational-source emissions will exceed applicable SCAQMD regional thresholds. Per SCAQMD significance guidance, these impacts at the Project level are considered a cumulatively significant impact persisting over the life of the Project.

#### CRITERION 2; LIST APPROACH

A list approach is used, in accordance with Section 15130(b) of the CEQA Guidelines, which states the following:

*The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.*

The SCAQMD has recognized that there is typically insufficient information to quantitatively evaluate the cumulative contributions of multiple projects because each project applicant has no control over nearby projects. Nevertheless, the potential cumulative impacts from the Project and other projects are discussed below. A cumulative project list was developed for this analysis and is shown in Table 3-16.

Related projects could contribute to an existing or projected air quality exceedance because the Basin is currently nonattainment for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. With regard to determining the significance of the contribution from the Project, the SCAQMD recommends that any given project's potential contribution to cumulative impacts should be assessed using the same significance criteria as for project-specific impacts. Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a commutatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air

quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously noted, the Project will not exceed the applicable SCAQMD regional threshold for construction, but will exceed the applicable SCAQMD regional thresholds for operational-source emissions. As such, the Project will result in a cumulatively significant impact.

**TABLE 3-16: CUMULATIVE DEVELOPMENT LIST**

| ID                         | Project Name                                                                                 | Land Use <sup>1</sup>                | Quantity  | Units <sup>2</sup> |
|----------------------------|----------------------------------------------------------------------------------------------|--------------------------------------|-----------|--------------------|
| <b>CITY OF RIVERSIDE</b>   |                                                                                              |                                      |           |                    |
| 1                          | 6287 Day Street (P10-0090; P10-0091)                                                         | Gas Station                          | 2         | VFP                |
| 2                          | 2570 Canyon Springs Parkway (P08-0274; P08-0275)                                             | Bank w/ Drive Thru                   | 2.746     | TSF                |
| 3                          | 6211 Valley Springs Parkway (Steak N' Shake Restaurant; P14-0536)                            | Fast Food w/ Drive Thru              | 3.750     | TSF                |
| 4                          | 5940-5980 Sycamore Canyon Boulevard<br>(P13-0553; P13-0554; P13-0583; P14-0065)              | Apartments                           | 275       | DU                 |
| 5                          | SE corner of Sycamore Cyn. Bl. & Box Springs Rd.<br>(P13-0607 P13-06008; P13-0609; P13-0854) | Light Industrial                     | 171.616   | TSF                |
| 6                          | 6465 Sycamore Canyon Boulevard                                                               | Health Club                          | 4.000     | TSF                |
| 7                          | 2325 Cottonwood Avenue (P12-0507; P12-0508; P12-0509; P12-0510)                              | High-Cube Warehouse                  | 235.741   | TSF                |
| 8                          | Alessandro Bl.<br>(APN 263-091-008, 263-100-019, 263-100-005; P14-0841 to 0848)              | Commercial and Industrial Complex    | 101.580   | TSF                |
| 9                          | 2100 Alessandro Boulevard                                                                    | Vocational School                    | 11.505    | TSF                |
| 10                         | NW cor Alessandro Blvd & San Gorgonio Dr.<br>(TM34707; Alessandro Business Park)             | 4 Industrial/<br>Manufacturing Bldgs | 662.018   | TSF                |
| 11                         | Alessandro and Gorgonio                                                                      | Fast Food w/ Drive Thru              | 4.050     | TSF                |
| 12                         | 360 Alessandro Boulevard (P12-0419; P12-0557; P12-0558; P12-0559)                            | Bank w/ Drive Thru                   | 3.858     | TSF                |
| 13                         | 381 Alessandro Bl. (P07-1181; P07-0593)                                                      | Auto Parts Store                     | 1.500     | TSF                |
| 14                         | 14601 Dauchy Av. - TM36370 (P12-0601; P12-0697; P12-0698)                                    | Residential                          | 10        | DU                 |
| 15                         | TM32180 (P07-1073)                                                                           | SFDR                                 | 9         | DU                 |
| 16                         | 18875 Moss Road                                                                              | SFDR                                 | 8         | DU                 |
| 17                         | South of Clarke St., west of Crystal View Terrace<br>(PM34583; P09-0141; P09-173)            | SFDR                                 | 3         | DU                 |
| 18                         | 18580 Van Buren Boulevard (P08-0402; P13-0822)                                               | Auto Repair Shop                     | 8.142     | TSF                |
| 19                         | N. of Van Buren Boulevard; W. of Wood Street (P10-0808; P10-0708)                            | Fast Food w/Drive Thru               | 2.361     | TSF                |
| 20                         | 19985 Van Buren Boulevard (P10-0118; Gless Ranch)                                            | Commercial Retail                    | 425.447   | TSF                |
| <b>COUNTY OF RIVERSIDE</b> |                                                                                              |                                      |           |                    |
| 21                         | PP 22925 (Amstar/Kaliber Development)                                                        | Office (258.102 TSF)                 | 258.102   | TSF                |
|                            |                                                                                              | Warehousing                          | 409.312   | TSF                |
|                            |                                                                                              | General Light Industrial             | 42.222    | TSF                |
|                            |                                                                                              | Retail                               | 10.000    | TSF                |
| 22                         | Meridian Business Park North                                                                 | Industrial Park                      | 5,985.000 | TSF                |
| 23                         | Freeway Business Center<br>Southwest corner of Old 215 Frontage Rd. and Alessandro Bl.       | High-Cube Warehouse                  | 709.083   | TSF                |
| 24                         | Airport Master Plan                                                                          | Airport Use                          | 559.000   | TSF                |

| CITY OF MORENO VALLEY             |                                                            |                              |           |         |
|-----------------------------------|------------------------------------------------------------|------------------------------|-----------|---------|
| 25                                | Edgemont Street, South of Eucalyptus Av.                   | Apartments                   | 112       | DU      |
| 26                                | Moreno Valley/March Field Metrolink Station <sup>3,4</sup> | Commuter Rail Station        | 1         | Station |
| 27                                | PA 08-0047-0052 (Komar Cactus Plaza) <sup>5</sup>          | Hotel                        | 110       | RMS     |
|                                   |                                                            | Fast Food w/Drive Thru       | 8.000     | TSF     |
|                                   |                                                            | Commercial                   | 42.400    | TSF     |
| 28                                | 373K Industrial Facility                                   | High-Cube Warehouse          | 373.030   | TSF     |
| 29                                | PA 08-0072 (Overton Moore Properties)                      | High-Cube Warehouse          | 520.000   | TSF     |
| CITY OF MORENO VALLEY (Continued) |                                                            |                              |           |         |
| 30                                | TR 32515                                                   | Residential                  | 161       | DU      |
| 31                                | Harbor Freight Expansion                                   | High-Cube Warehouse          | 1,279.910 | TSF     |
| 32                                | PA 09-0031                                                 | Gas Station                  | 12        | VFP     |
| 33                                | Centerpointe Business Park                                 | General Light Industrial     | 356.000   | TSF     |
| 34                                | PA 04-0063 (Centerpointe Buildings 8 and 9)                | General Light Industrial     | 361.384   | TSF     |
| 35                                | PA 08-0093 (Centerpointe Business Park II)                 | General Light Industrial     | 99.988    | TSF     |
| 36                                | March Lifecare Campus Specific Plan <sup>6</sup>           | Medical Offices              | 190.000   | TSF     |
|                                   |                                                            | Commercial Retail            | 210.000   | TSF     |
|                                   |                                                            | Research & Education         | 200.000   | TSF     |
|                                   |                                                            | Hospital                     | 50        | Beds    |
|                                   |                                                            | Institutional Residential    | 660       | Beds    |
| 37                                | TR 33771 / Creative Design Associates                      | Residential                  | 12        | DU      |
| 38                                | TR 35663 / Kha                                             | Residential                  | 12        | DU      |
| 39                                | TR 31814 / Moreno Valley Investors                         | Residential                  | 60        | DU      |
| 40                                | TM 34748                                                   | SFDR                         | 135       | DU      |
| 41                                | PA 07-0035; PA 07-0039<br>(Moreno Valley Industrial Park)  | General Light Industrial     | 204.657   | TSF     |
|                                   |                                                            | High-Cube Warehouse          | 409.920   | TSF     |
| 42                                | March Business Center                                      | General Light Industrial     | 16.732    | TSF     |
|                                   |                                                            | Warehousing                  | 87.429    | TSF     |
|                                   |                                                            | High-Cube Warehouse          | 1,380.246 | TSF     |
| 43                                | PA 07-0079 (Indian Business Park)                          | High-Cube Warehouse          | 1,560.046 | TSF     |
| 44                                | TM 33810                                                   | SFDR                         | 16        | DU      |
| 45                                | TM 34151                                                   | SFDR                         | 37        | DU      |
| 46                                | Legacy Park / TR36760                                      | Residential                  | 186       | DU      |
| 47                                | Moreno Valley Walmart                                      | Free Standing Discount Store | 189.520   | TSF     |
|                                   |                                                            | Gas Station/Market/Car Wash  | 16        | VFP     |
| 48                                | TM 34988                                                   | Condo/Townhomes              | 251       | DU      |
| 49                                | TM 33417                                                   | Condo/Townhomes              | 10        | DU      |
| 50                                | TM 33607                                                   | Condo/Townhomes              | 54        | DU      |

<sup>1</sup> SFDR = Single Family Detached Residential<sup>2</sup> DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions<sup>3</sup> Source: Steak N' Shake Restaurant Approved Traffic Impact Study Scope, Kunzman Associates, Inc., August 4, 2014.<sup>4</sup> Source: Perris Valley Line DEIR, Kleinfelder/STV, July 2011.<sup>5</sup> Source: Cactus Avenue and Commerce Center Drive Commercial Center TIA, Urban Crossroads, Inc., December 9, 2008 (Revised).<sup>6</sup> Source: March Lifecare Campus Specific Plan Traffic Impact Analysis, Mountain Pacific, Inc., May 2009 (Revised).

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## **4 FINDINGS & CONCLUSIONS**

### **4.1 CONSTRUCTION-SOURCE EMISSIONS**

For regional emissions, the Project will exceed the numerical thresholds of significance established by the SCAQMD for emissions of NO<sub>x</sub> prior to implementation of MMs.

The proposed mitigation measures MM AQ-1 is recommended to reduce the impacts to less than significant levels. After implementation of MM AQ-1, construction activity emissions will not exceed the numerical thresholds established by the SCAQMD. Thus a less than significant impact will occur with the implementation of MM AQ-1.

Additionally, emissions during construction activity will not exceed the SCAQMD's localized significance threshold without/with implementation of applicable mitigation measures. Therefore, a less than significant impact would occur. Furthermore, project construction-source emissions would not conflict with the applicable AQMP.

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

### **4.2 OPERATIONAL-SOURCE EMISSIONS**

For regional emissions, the Project would exceed the numerical thresholds of significance established by the SCAQMD for emissions of VOCs, NO<sub>x</sub>, and CO. This is due, for the most part, to the Project's daily traffic generation and the associated tailpipe exhaust emissions. There are no feasible mitigation measures within the control of the Project Applicant or the City of Riverside that would reduce these emissions to levels that are less-than-significant. Thus a significant impact would occur even with implementation of the proposed mitigation measures (MM AQ-2 through MM AQ-6). Project operational-source VOC, NO<sub>x</sub>, and CO emissions exceedances of applicable SCAQMD regional thresholds are therefore considered significant and unavoidable. Nonetheless, as discussed in detail in Section 3.5.5, the Project would not result in a significantly greater amount of emissions than what would otherwise occur under the previously approved Specific Plan. See Section 3.5.5 for a detailed discussion of emission summaries.

Project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the operational LSTs section of this report. The proposed Project would not result in a significant CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact as discussed in Section 3.8, thus a less than significant impact to sensitive receptors during operational activity is expected. Project operational-source emissions would conflict with the AQMP.

Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Project would include disposal of miscellaneous medical and residential refuse. Moreover, SCAQMD Rule 402 acts to prevent occurrences of odor nuisances (1) . Consistent with City requirements, all Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations. Potential operational-source odor impacts are therefore considered less-than-significant.

#### **4.3 STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES (BACMs)**

Measures listed below (or equivalent language) shall appear on all Project grading plans, construction specifications and bid documents, and the City shall ensure such language is incorporated prior to issuance of any development permits. City monitoring of construction activities shall be conducted to ensure mitigation compliance.

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings) (25); Rule 431.2 (Low Sulfur Fuel) (26); Rule 403 (Fugitive Dust) (27); and Rule 1186 / 1186.1 (Street Sweepers) (28). In order to facilitate monitoring and compliance, applicable SCAQMD regulatory requirements are summarized below.

##### **BACM AQ-1**

The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403 (27):

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

##### **BACM AQ-2**

Only “Low-Volatile Organic Compounds” paints (no more than 100 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.

Additional regulatory requirements that are in effect during Project construction include the following:

### **BACM AQ-3**

The California Air Resources Board, in Title 13, Chapter 10, Section 2485, Division 3 of the of the California Code of Regulations, imposes a requirement that heavy duty trucks accessing the site shall not idle for greater than five minutes at any location. This measure is intended to apply to construction traffic. Grading plans shall reference that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling (29).

In addition to the above-cited SCAQMD regulatory requirements and BACMs, the Project shall implement the following construction activity mitigation measures.

## **4.4 CONSTRUCTION-SOURCE MITIGATION MEASURES**

### **MM AQ-1**

During construction activity, all construction equipment ( $\geq 150$  horsepower) shall be California Air Resources Board (CARB) Tier 3 Certified or better. Additionally, during grading activity, total horsepower-hours per day for all equipment shall not exceed 24,608 horsepower-hours per day and the maximum disturbance (actively graded) area shall not exceed 6 acres per day.

## **4.5 OPERATIONAL-SOURCE MITIGATION MEASURES**

### **MM AQ-2**

Prior to the issuance of building permits, the Project applicant shall submit energy usage calculations to the Planning Division showing that the Project is designed to achieve 5% efficiency beyond the 2016 California Building Code Title 24 requirements. Example of measures that reduce energy consumption include, but are not limited to, the following (it being understood that the items listed below are not all required and merely present examples; the list is not all-inclusive and other features that reduce energy consumption also are acceptable):

- Increase in insulation such that heat transfer and thermal bridging is minimized;
- Limit air leakage through the structure and/or within the heating and cooling distribution system;
- Use of energy-efficient space heating and cooling equipment;
- Installation of electrical hook-ups at loading dock areas;
- Installation of dual-paned or other energy efficient windows;
- Use of interior and exterior energy efficient lighting that exceeds then incumbent California Title 24 Energy Efficiency performance standards;
- Installation of automatic devices to turn off lights where they are not needed;
- Application of a paint and surface color palette that emphasizes light and off-white colors that reflect heat away from buildings;
- Design of buildings with “cool roofs” using products certified by the Cool Roof Rating Council, and/or exposed roof surfaces using light and off-white colors;

- Design of buildings to accommodate photo-voltaic solar electricity systems or the installation of photo-voltaic solar electricity systems;
- Installation of ENERGY STAR-qualified energy-efficient appliances, heating and cooling systems, office equipment, and/or lighting products;

### **MM AQ-3**

To reduce water consumption and the associated energy-usage, the Project will be designed to comply with the mandatory reductions in indoor water usage contained in the incumbent CalGreen Code (30) and any mandated reduction in outdoor water usage contained in the City's water efficient landscape requirements. Additionally, the Project shall implement the following:

- Landscaping palette emphasizing drought tolerant plants;
- Use of water-efficient irrigation techniques;
- U.S. EPA Certified WaterSense labeled or equivalent faucets, high-efficiency toilets (HETs), and water-conserving shower heads.

### **MM AQ-4**

The Project will reduce vehicle miles traveled and emissions associated with by implementing the following measures:

- Pedestrian and bicycle connections shall be provided to surrounding areas consistent with the City's General Plan.

### **MM AQ-5**

The project Applicant shall encourage its tenants to use water-based or low VOC cleaning products by providing publicly available information from the Southern California Air Quality Management District (SCAQMD), California Air Resources Board (CARB), and U.S. Environmental Protection Agency on such cleaning products.

### **MM AQ-6**

Electric lawn equipment including but not limited to lawn mowers, leaf blowers and vacuums, shredders shall be used in lieu of conventional gas-powered equipment.

## 5 REFERENCES

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## 6 CERTIFICATION

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Canyon Springs Healthcare Campus & Senior Living Project. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 660-1994 ext. 217.

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### EDUCATION

Master of Science in Environmental Studies  
California State University, Fullerton • May, 2010

Bachelor of Arts in Environmental Analysis and Design  
University of California, Irvine • June, 2006

### PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners  
AWMA – Air and Waste Management Association  
ASTM – American Society for Testing and Materials

### PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June, 2011  
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008  
Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007  
AB2588 Regulatory Standards – Trinity Consultants • November, 2006  
Air Dispersion Modeling – Lakes Environmental • June, 2006



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**APPENDIX 3.1:**

**CALEEMOD EMISSIONS MODEL OUTPUTS**

## Canyon Springs Healthcare Campus & Senior Living

### South Coast AQMD Air District, Summer

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                         | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|-----------------------------------|----------|---------------|-------------|--------------------|------------|
| Hospital                          | 280.00   | Bed           | 4.60        | 504,000.00         | 0          |
| Medical Office Building           | 370.00   | 1000sqft      | 8.49        | 370,000.00         | 0          |
| Enclosed Parking Structure        | 2,962.00 | Space         | 26.66       | 1,184,800.00       | 0          |
| Congregate Care (Assisted Living) | 267.00   | Dwelling Unit | 16.69       | 280,000.00         | 764        |
| Retirement Community              | 234.00   | Dwelling Unit | 46.80       | 375,000.00         | 669        |

### 1.2 Other Project Characteristics

|                            |                            |                            |       |                            |       |
|----------------------------|----------------------------|----------------------------|-------|----------------------------|-------|
| Urbanization               | Urban                      | Wind Speed (m/s)           | 2.2   | Precipitation Freq (Days)  | 31    |
| Climate Zone               | 10                         |                            |       | Operational Year           | 2016  |
| Utility Company            | Southern California Edison |                            |       |                            |       |
| CO2 Intensity<br>(lb/MWhr) | 533.36                     | CH4 Intensity<br>(lb/MWhr) | 0.029 | N2O Intensity<br>(lb/MWhr) | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Source: CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - based on information provided by the applicant

Construction Phase - based on a 2016 opening year

Off-road Equipment - 8 hour work day

Off-road Equipment - 8 hour work day

Off-road Equipment - added grading phase and equipment based on discussion with the applicant

Off-road Equipment - added a water truck

Off-road Equipment -

Off-road Equipment - based on information provided by the applicant

Trips and VMT -

Grading -

Vehicle Trips - TR based on the Project's TIA

Woodstoves - no woodstoves. all natural gas fireplaces

Energy Use - Title-24 Electricity Energy Intensity and Title-24 Natural Gas Energy Intensity were adjusted by 21.8% and 16.8% respectively, to reflect 2013 Title 24 requirements. Source: Impact Analysis California's 2013 Building Energy Efficiency Standards (CEC 2013)

Construction Off-road Equipment Mitigation - tier 3 mitigation to all equipment greater than 150 HP

Mobile Land Use Mitigation -

Area Mitigation - Rule 1113

Energy Mitigation -

Water Mitigation -

Architectural Coating - Rule 1113 requirements

Area Coating -

| Table Name              | Column Name                               | Default Value | New Value |
|-------------------------|-------------------------------------------|---------------|-----------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior                | 250.00        | 100.00    |
| tblArchitecturalCoating | EF_Nonresidential_Interior                | 250.00        | 50.00     |
| tblAreaMitigation       | UseLowVOCPaintNonresidentialExteriorValue | 250           | 100       |
| tblAreaMitigation       | UseLowVOCPaintNonresidentialInteriorValue | 250           | 50        |

|                         |                            |            |            |
|-------------------------|----------------------------|------------|------------|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 1.00       |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 1.00       |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 2.00       |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 2.00       |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 1.00       |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 5.00       |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstructionPhase    | NumDays                    | 220.00     | 300.00     |
| tblConstructionPhase    | NumDays                    | 3,100.00   | 300.00     |
| tblConstructionPhase    | NumDays                    | 310.00     | 40.00      |
| tblConstructionPhase    | NumDays                    | 310.00     | 20.00      |
| tblConstructionPhase    | NumDays                    | 220.00     | 30.00      |
| tblConstructionPhase    | PhaseEndDate               | 11/10/2017 | 10/24/2016 |
| tblConstructionPhase    | PhaseEndDate               | 11/21/2016 | 10/14/2016 |
| tblConstructionPhase    | PhaseStartDate             | 9/17/2016  | 9/1/2015   |
| tblConstructionPhase    | PhaseStartDate             | 10/25/2016 | 9/17/2016  |
| tblEnergyUse            | T24E                       | 559.54     | 437.56     |
| tblEnergyUse            | T24E                       | 3.92       | 3.07       |
| tblEnergyUse            | T24E                       | 8.75       | 6.84       |
| tblEnergyUse            | T24E                       | 3.75       | 2.93       |
| tblEnergyUse            | T24E                       | 749.55     | 586.15     |
| tblEnergyUse            | T24NG                      | 10,214.61  | 8,498.56   |
| tblEnergyUse            | T24NG                      | 69.84      | 58.11      |

|                           |                            |            |            |
|---------------------------|----------------------------|------------|------------|
| tblEnergyUse              | T24NG                      | 3.65       | 3.04       |
| tblEnergyUse              | T24NG                      | 17,654.53  | 14,688.57  |
| tblFireplaces             | NumberGas                  | 226.95     | 267.00     |
| tblFireplaces             | NumberGas                  | 198.90     | 234.00     |
| tblFireplaces             | NumberNoFireplace          | 26.70      | 0.00       |
| tblFireplaces             | NumberNoFireplace          | 23.40      | 0.00       |
| tblFireplaces             | NumberWood                 | 13.35      | 0.00       |
| tblFireplaces             | NumberWood                 | 11.70      | 0.00       |
| tblLandUse                | LandUseSquareFeet          | 200,412.12 | 504,000.00 |
| tblLandUse                | LandUseSquareFeet          | 267,000.00 | 280,000.00 |
| tblLandUse                | LandUseSquareFeet          | 234,000.00 | 375,000.00 |
| tblOffRoadEquipment       | HorsePower                 | 400.00     | 189.00     |
| tblOffRoadEquipment       | HorsePower                 | 400.00     | 189.00     |
| tblOffRoadEquipment       | LoadFactor                 | 0.38       | 0.50       |
| tblOffRoadEquipment       | LoadFactor                 | 0.38       | 0.50       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 5.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 1.00       |
| tblOffRoadEquipment       | UsageHours                 | 6.00       | 8.00       |
| tblOffRoadEquipment       | UsageHours                 | 7.00       | 8.00       |
| tblOffRoadEquipment       | UsageHours                 | 7.00       | 8.00       |
| tblProjectCharacteristics | CO2IntensityFactor         | 630.89     | 533.36     |
| tblProjectCharacteristics | OperationalYear            | 2014       | 2016       |
| tblTripsAndVMT            | VendorTripNumber           | 391.00     | 341.00     |
| tblTripsAndVMT            | WorkerTripNumber           | 1,138.00   | 1,041.00   |
| tblTripsAndVMT            | WorkerTripNumber           | 228.00     | 208.00     |
| tblVehicleTrips           | ST_TR                      | 2.81       | 2.61       |

|                 |                    |       |       |
|-----------------|--------------------|-------|-------|
| tblVehicleTrips | SU_TR              | 2.81  | 2.84  |
| tblVehicleTrips | WD_TR              | 11.81 | 12.94 |
| tblVehicleTrips | WD_TR              | 2.81  | 3.44  |
| tblWoodstoves   | NumberCatalytic    | 13.35 | 0.00  |
| tblWoodstoves   | NumberCatalytic    | 11.70 | 0.00  |
| tblWoodstoves   | NumberNoncatalytic | 13.35 | 0.00  |
| tblWoodstoves   | NumberNoncatalytic | 11.70 | 0.00  |

## 2.0 Emissions Summary

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## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

|       | ROG      | NOx      | CO       | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|-------|----------|----------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Year  | lb/day   |          |          |        |               |              |            |                |               |             | lb/day   |             |             |        |        |             |
| 2015  | 70.2599  | 151.0305 | 149.1464 | 0.2839 | 16.0914       | 6.5131       | 19.3597    | 4.3092         | 5.9920        | 9.9637      | 0.0000   | 26,165.6996 | 26,165.6996 | 3.8145 | 0.0000 | 26,245.8033 |
| 2016  | 69.0101  | 87.2274  | 137.4442 | 0.2837 | 16.0921       | 4.2142       | 19.0656    | 4.3094         | 3.8980        | 8.1793      | 0.0000   | 25,530.3299 | 25,530.3299 | 2.3728 | 0.0000 | 25,580.1589 |
| Total | 139.2700 | 238.2579 | 286.5906 | 0.5676 | 32.1835       | 10.7273      | 38.4252    | 8.6186         | 9.8900        | 18.1430     | 0.0000   | 51,696.0294 | 51,696.0294 | 6.1873 | 0.0000 | 51,825.9622 |

### Mitigated Construction

|       | ROG      | NOx      | CO       | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|-------|----------|----------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Year  | lb/day   |          |          |        |               |              |            |                |               |             | lb/day   |             |             |        |        |             |
| 2015  | 69.6563  | 86.2016  | 149.0848 | 0.2839 | 16.0914       | 3.6246       | 19.0592    | 4.3092         | 3.4552        | 7.1135      | 0.0000   | 26,165.6996 | 26,165.6996 | 3.8145 | 0.0000 | 26,245.8033 |
| 2016  | 68.4288  | 64.0812  | 137.4648 | 0.2837 | 16.0921       | 2.6881       | 18.7802    | 4.3094         | 2.5404        | 6.8498      | 0.0000   | 25,530.3299 | 25,530.3299 | 2.3728 | 0.0000 | 25,580.1589 |
| Total | 138.0850 | 150.2828 | 286.5495 | 0.5676 | 32.1835       | 6.3127       | 37.8394    | 8.6186         | 5.9956        | 13.9633     | 0.0000   | 51,696.0294 | 51,696.0294 | 6.1873 | 0.0000 | 51,825.9622 |

|                   | ROG  | NOx   | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|-------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.85 | 36.92 | 0.01 | 0.00 | 0.00          | 41.15        | 1.52       | 0.00           | 39.38         | 23.04       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

## 2.2 Overall Operational

### Unmitigated Operational

|              | ROG             | NOx             | CO              | SO2           | Fugitive PM10   | Exhaust PM10  | PM10 Total      | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2      | NBio- CO2           | Total CO2           | CH4           | N2O           | CO2e                |
|--------------|-----------------|-----------------|-----------------|---------------|-----------------|---------------|-----------------|----------------|---------------|----------------|---------------|---------------------|---------------------|---------------|---------------|---------------------|
| Category     | lb/day          |                 |                 |               |                 |               |                 |                |               |                | lb/day        |                     |                     |               |               |                     |
| Area         | 70.5380         | 0.4940          | 42.3404         | 2.2100e-003   |                 | 0.8994        | 0.8994          |                | 0.8923        | 0.8923         | 0.0000        | 10,684.6270         | 10,684.6270         | 0.2814        | 0.1945        | 10,750.8338         |
| Energy       | 1.1914          | 10.7201         | 8.2858          | 0.0650        |                 | 0.8231        | 0.8231          |                | 0.8231        | 0.8231         |               | 12,996.9912         | 12,996.9912         | 0.2491        | 0.2383        | 13,076.0888         |
| Mobile       | 67.3355         | 179.7178        | 746.0838        | 1.7150        | 114.4398        | 2.5787        | 117.0185        | 30.5753        | 2.3709        | 32.9462        |               | 150,644.4847        | 150,644.4847        | 6.0007        |               | 150,770.4984        |
| <b>Total</b> | <b>139.0649</b> | <b>190.9319</b> | <b>796.7100</b> | <b>1.7822</b> | <b>114.4398</b> | <b>4.3012</b> | <b>118.7410</b> | <b>30.5753</b> | <b>4.0864</b> | <b>34.6617</b> | <b>0.0000</b> | <b>174,326.1029</b> | <b>174,326.1029</b> | <b>6.5312</b> | <b>0.4328</b> | <b>174,597.4210</b> |

### Mitigated Operational

|              | ROG             | NOx             | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2      | NBio- CO2           | Total CO2           | CH4           | N2O           | CO2e                |
|--------------|-----------------|-----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|---------------|---------------------|---------------------|---------------|---------------|---------------------|
| Category     | lb/day          |                 |                 |               |                |               |                |                |               |                | lb/day        |                     |                     |               |               |                     |
| Area         | 60.0828         | 0.3830          | 32.0190         | 1.4300e-003   |                | 0.8397        | 0.8397         |                | 0.8327        | 0.8327         | 0.0000        | 10,661.9167         | 10,661.9167         | 0.2434        | 0.1945        | 10,727.3244         |
| Energy       | 1.0847          | 9.7591          | 7.5383          | 0.0592        |                | 0.7494        | 0.7494         |                | 0.7494        | 0.7494         |               | 11,832.8178         | 11,832.8178         | 0.2268        | 0.2169        | 11,904.8304         |
| Mobile       | 62.4527         | 145.6467        | 617.6040        | 1.3410        | 88.7379        | 2.0329        | 90.7708        | 23.7084        | 1.8690        | 25.5774        |               | 117,768.7577        | 117,768.7577        | 4.7808        |               | 117,869.1534        |
| <b>Total</b> | <b>123.6202</b> | <b>155.7888</b> | <b>657.1613</b> | <b>1.4016</b> | <b>88.7379</b> | <b>3.6220</b> | <b>92.3599</b> | <b>23.7084</b> | <b>3.4511</b> | <b>27.1595</b> | <b>0.0000</b> | <b>140,263.4922</b> | <b>140,263.4922</b> | <b>5.2509</b> | <b>0.4114</b> | <b>140,501.3082</b> |

|                   | ROG   | NOx   | CO    | SO2   | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4   | N2O  | CO2e  |
|-------------------|-------|-------|-------|-------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|-------|------|-------|
| Percent Reduction | 11.11 | 18.41 | 17.52 | 21.36 | 22.46         | 15.79        | 22.22      | 22.46          | 15.55         | 21.64       | 0.00     | 19.54    | 19.54     | 19.60 | 4.93 | 19.53 |

### 3.0 Construction Detail

#### Construction Phase

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Rough Grading         | Grading               | 6/1/2015   | 7/24/2015  | 5             | 40       |                   |
| 2            | Building Construction | Building Construction | 7/25/2015  | 9/16/2016  | 5             | 300      |                   |
| 3            | Architectural Coating | Architectural Coating | 9/1/2015   | 10/24/2016 | 5             | 300      |                   |
| 4            | Finish Grading        | Grading               | 9/17/2016  | 10/14/2016 | 5             | 20       |                   |
| 5            | Paving                | Paving                | 10/15/2016 | 11/25/2016 | 5             | 30       |                   |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,326,375; Residential Outdoor: 442,125; Non-Residential Indoor: 3,088,200; Non-Residential Outdoor: 1,029,400  
(Architectural Coating – sqft)

#### OffRoad Equipment

| Phase Name            | Offroad Equipment Type       | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|------------------------------|--------|-------------|-------------|-------------|
| Rough Grading         | Excavators                   | 0      | 8.00        | 162         | 0.38        |
| Rough Grading         | Graders                      | 0      | 8.00        | 174         | 0.41        |
| Rough Grading         | Off-Highway Trucks           | 2      | 8.00        | 189         | 0.50        |
| Rough Grading         | Other Construction Equipment | 2      | 8.00        | 171         | 0.42        |
| Rough Grading         | Rubber Tired Dozers          | 1      | 8.00        | 255         | 0.40        |
| Rough Grading         | Rubber Tired Loaders         | 1      | 8.00        | 199         | 0.36        |
| Rough Grading         | Scrapers                     | 5      | 8.00        | 361         | 0.48        |
| Rough Grading         | Tractors/Loaders/Backhoes    | 1      | 8.00        | 97          | 0.37        |
| Building Construction | Cranes                       | 1      | 8.00        | 226         | 0.29        |
| Building Construction | Forklifts                    | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets               | 1      | 8.00        | 84          | 0.74        |
| Building Construction | Tractors/Loaders/Backhoes    | 3      | 8.00        | 97          | 0.37        |
| Building Construction | Welders                      | 1      | 8.00        | 46          | 0.45        |
| Architectural Coating | Air Compressors              | 1      | 8.00        | 78          | 0.48        |
| Finish Grading        | Excavators                   | 2      | 8.00        | 162         | 0.38        |
| Finish Grading        | Graders                      | 1      | 8.00        | 174         | 0.41        |
| Finish Grading        | Off-Highway Trucks           | 1      | 8.00        | 189         | 0.50        |
| Finish Grading        | Rubber Tired Dozers          | 1      | 8.00        | 255         | 0.40        |
| Finish Grading        | Scrapers                     | 2      | 8.00        | 361         | 0.48        |
| Finish Grading        | Tractors/Loaders/Backhoes    | 2      | 8.00        | 97          | 0.37        |
| Paving                | Pavers                       | 2      | 8.00        | 125         | 0.42        |
| Paving                | Paving Equipment             | 2      | 8.00        | 130         | 0.36        |
| Paving                | Rollers                      | 2      | 8.00        | 80          | 0.38        |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Rough Grading         | 12                      | 30.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 1,041.00           | 341.00             | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 208.00             | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Finish Grading        | 9                       | 23.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

### 3.2 Rough Grading - 2015

#### Unmitigated Construction On-Site

|               | ROG            | NOx             | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O | CO2e               |
|---------------|----------------|-----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| Category      | lb/day         |                 |                |               |                |               |                |                |               |               | lb/day   |                    |                    |               |     |                    |
| Fugitive Dust |                |                 |                |               | 11.3246        | 0.0000        | 11.3246        | 3.8828         | 0.0000        | 3.8828        |          |                    | 0.0000             |               |     | 0.0000             |
| Off-Road      | 12.3510        | 150.8568        | 88.0557        | 0.1210        |                | 6.5101        | 6.5101         |                | 5.9893        | 5.9893        |          | 12,710.3271        | 12,710.3271        | 3.7946        |     | 12,790.0129        |
| <b>Total</b>  | <b>12.3510</b> | <b>150.8568</b> | <b>88.0557</b> | <b>0.1210</b> | <b>11.3246</b> | <b>6.5101</b> | <b>17.8347</b> | <b>3.8828</b>  | <b>5.9893</b> | <b>9.8721</b> |          | <b>12,710.3271</b> | <b>12,710.3271</b> | <b>3.7946</b> |     | <b>12,790.0129</b> |

**3.2 Rough Grading - 2015****Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Worker       | 0.1389        | 0.1737        | 2.1538        | 4.2500e-003        | 0.3353        | 2.9500e-003        | 0.3383        | 0.0889         | 2.7000e-003        | 0.0916        |          | 369.5696        | 369.5696        | 0.0199        |     | 369.9875        |
| <b>Total</b> | <b>0.1389</b> | <b>0.1737</b> | <b>2.1538</b> | <b>4.2500e-003</b> | <b>0.3353</b> | <b>2.9500e-003</b> | <b>0.3383</b> | <b>0.0889</b>  | <b>2.7000e-003</b> | <b>0.0916</b> |          | <b>369.5696</b> | <b>369.5696</b> | <b>0.0199</b> |     | <b>369.9875</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O | CO2e               |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|-----|--------------------|
| Category      | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                    |                    |               |     |                    |
| Fugitive Dust |               |                |                |               | 4.4166        | 0.0000        | 4.4166        | 1.5143         | 0.0000        | 1.5143        |               |                    | 0.0000             |               |     | 0.0000             |
| Off-Road      | 6.0043        | 86.0279        | 71.0891        | 0.1210        |               | 3.6216        | 3.6216        |                | 3.4525        | 3.4525        | 0.0000        | 12,710.3271        | 12,710.3271        | 3.7946        |     | 12,790.0129        |
| <b>Total</b>  | <b>6.0043</b> | <b>86.0279</b> | <b>71.0891</b> | <b>0.1210</b> | <b>4.4166</b> | <b>3.6216</b> | <b>8.0382</b> | <b>1.5143</b>  | <b>3.4525</b> | <b>4.9668</b> | <b>0.0000</b> | <b>12,710.3271</b> | <b>12,710.3271</b> | <b>3.7946</b> |     | <b>12,790.0129</b> |

**3.2 Rough Grading - 2015****Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Worker       | 0.1389        | 0.1737        | 2.1538        | 4.2500e-003        | 0.3353        | 2.9500e-003        | 0.3383        | 0.0889         | 2.7000e-003        | 0.0916        |          | 369.5696        | 369.5696        | 0.0199        |     | 369.9875        |
| <b>Total</b> | <b>0.1389</b> | <b>0.1737</b> | <b>2.1538</b> | <b>4.2500e-003</b> | <b>0.3353</b> | <b>2.9500e-003</b> | <b>0.3383</b> | <b>0.0889</b>  | <b>2.7000e-003</b> | <b>0.0916</b> |          | <b>369.5696</b> | <b>369.5696</b> | <b>0.0199</b> |     | <b>369.9875</b> |

**3.3 Building Construction - 2015****Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.8870        | 32.4182        | 20.0375        | 0.0287        |               | 2.2678        | 2.2678        |                | 2.1293        | 2.1293        |          | 2,886.4292        | 2,886.4292        | 0.7336        |     | 2,901.8345        |
| <b>Total</b> | <b>3.8870</b> | <b>32.4182</b> | <b>20.0375</b> | <b>0.0287</b> |               | <b>2.2678</b> | <b>2.2678</b> |                | <b>2.1293</b> | <b>2.1293</b> |          | <b>2,886.4292</b> | <b>2,886.4292</b> | <b>0.7336</b> |     | <b>2,901.8345</b> |

**3.3 Building Construction - 2015****Unmitigated Construction Off-Site**

|              | ROG           | NOx            | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O | CO2e               |
|--------------|---------------|----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| Category     | lb/day        |                |                 |               |                |               |                |                |               |               | lb/day   |                    |                    |               |     |                    |
| Hauling      | 0.0000        | 0.0000         | 0.0000          | 0.0000        | 0.0000         | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        |     | 0.0000             |
| Vendor       | 3.2120        | 33.3445        | 36.9028         | 0.0743        | 2.1305         | 0.5831        | 2.7137         | 0.6067         | 0.5362        | 1.1429        |          | 7,517.5912         | 7,517.5912         | 0.0588        |     | 7,518.8251         |
| Worker       | 4.8184        | 6.0273         | 74.7373         | 0.1475        | 11.6359        | 0.1024        | 11.7383        | 3.0859         | 0.0939        | 3.1798        |          | 12,824.0658        | 12,824.0658        | 0.6905        |     | 12,838.5655        |
| <b>Total</b> | <b>8.0303</b> | <b>39.3718</b> | <b>111.6401</b> | <b>0.2218</b> | <b>13.7665</b> | <b>0.6855</b> | <b>14.4520</b> | <b>3.6926</b>  | <b>0.6301</b> | <b>4.3226</b> |          | <b>20,341.6570</b> | <b>20,341.6570</b> | <b>0.7492</b> |     | <b>20,357.3906</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 3.2834        | 26.2900        | 19.9759        | 0.0287        |               | 1.9673        | 1.9673        |                | 1.8610        | 1.8610        | 0.0000        | 2,886.4292        | 2,886.4292        | 0.7336        |     | 2,901.8345        |
| <b>Total</b> | <b>3.2834</b> | <b>26.2900</b> | <b>19.9759</b> | <b>0.0287</b> |               | <b>1.9673</b> | <b>1.9673</b> |                | <b>1.8610</b> | <b>1.8610</b> | <b>0.0000</b> | <b>2,886.4292</b> | <b>2,886.4292</b> | <b>0.7336</b> |     | <b>2,901.8345</b> |



**3.3 Building Construction - 2015****Mitigated Construction Off-Site**

|              | ROG           | NOx            | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2               | Total CO2               | CH4           | N2O | CO2e                    |
|--------------|---------------|----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------------|-------------------------|---------------|-----|-------------------------|
| Category     | lb/day        |                |                 |               |                |               |                |                |               |               | lb/day   |                         |                         |               |     |                         |
| Hauling      | 0.0000        | 0.0000         | 0.0000          | 0.0000        | 0.0000         | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                  | 0.0000                  | 0.0000        |     | 0.0000                  |
| Vendor       | 3.2120        | 33.3445        | 36.9028         | 0.0743        | 2.1305         | 0.5831        | 2.7137         | 0.6067         | 0.5362        | 1.1429        |          | 7,517.591<br>2          | 7,517.591<br>2          | 0.0588        |     | 7,518.825<br>1          |
| Worker       | 4.8184        | 6.0273         | 74.7373         | 0.1475        | 11.6359        | 0.1024        | 11.7383        | 3.0859         | 0.0939        | 3.1798        |          | 12,824.06<br>58         | 12,824.06<br>58         | 0.6905        |     | 12,838.56<br>55         |
| <b>Total</b> | <b>8.0303</b> | <b>39.3718</b> | <b>111.6401</b> | <b>0.2218</b> | <b>13.7665</b> | <b>0.6855</b> | <b>14.4520</b> | <b>3.6926</b>  | <b>0.6301</b> | <b>4.3226</b> |          | <b>20,341.65<br/>70</b> | <b>20,341.65<br/>70</b> | <b>0.7492</b> |     | <b>20,357.39<br/>06</b> |

**3.3 Building Construction - 2016****Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Off-Road     | 3.6240        | 30.7934        | 19.7845        | 0.0287        |               | 2.1098        | 2.1098        |                | 1.9794        | 1.9794        |          | 2,863.944<br>7         | 2,863.944<br>7         | 0.7208        |     | 2,879.080<br>4         |
| <b>Total</b> | <b>3.6240</b> | <b>30.7934</b> | <b>19.7845</b> | <b>0.0287</b> |               | <b>2.1098</b> | <b>2.1098</b> |                | <b>1.9794</b> | <b>1.9794</b> |          | <b>2,863.944<br/>7</b> | <b>2,863.944<br/>7</b> | <b>0.7208</b> |     | <b>2,879.080<br/>4</b> |

### 3.3 Building Construction - 2016

#### Unmitigated Construction Off-Site

|              | ROG           | NOx            | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2               | Total CO2               | CH4           | N2O | CO2e                    |
|--------------|---------------|----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------------|-------------------------|---------------|-----|-------------------------|
| Category     | lb/day        |                |                 |               |                |               |                |                |               |               | lb/day   |                         |                         |               |     |                         |
| Hauling      | 0.0000        | 0.0000         | 0.0000          | 0.0000        | 0.0000         | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                  | 0.0000                  | 0.0000        |     | 0.0000                  |
| Vendor       | 2.8392        | 29.4513        | 33.9605         | 0.0742        | 2.1312         | 0.4849        | 2.6161         | 0.6069         | 0.4459        | 1.0529        |          | 7,434.786<br>1          | 7,434.786<br>1          | 0.0531        |     | 7,435.900<br>4          |
| Worker       | 4.3490        | 5.4370         | 67.6670         | 0.1474        | 11.6359        | 0.0972        | 11.7332        | 3.0859         | 0.0894        | 3.1753        |          | 12,382.26<br>16         | 12,382.26<br>16         | 0.6353        |     | 12,395.60<br>29         |
| <b>Total</b> | <b>7.1882</b> | <b>34.8882</b> | <b>101.6274</b> | <b>0.2216</b> | <b>13.7671</b> | <b>0.5822</b> | <b>14.3493</b> | <b>3.6928</b>  | <b>0.5353</b> | <b>4.2282</b> |          | <b>19,817.04<br/>77</b> | <b>19,817.04<br/>77</b> | <b>0.6884</b> |     | <b>19,831.50<br/>33</b> |

#### Mitigated Construction On-Site

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                        |                        |               |     |                        |
| Off-Road     | 3.0426        | 24.9436        | 19.8051        | 0.0287        |               | 1.8244        | 1.8244        |                | 1.7250        | 1.7250        | 0.0000        | 2,863.944<br>7         | 2,863.944<br>7         | 0.7208        |     | 2,879.080<br>4         |
| <b>Total</b> | <b>3.0426</b> | <b>24.9436</b> | <b>19.8051</b> | <b>0.0287</b> |               | <b>1.8244</b> | <b>1.8244</b> |                | <b>1.7250</b> | <b>1.7250</b> | <b>0.0000</b> | <b>2,863.944<br/>7</b> | <b>2,863.944<br/>7</b> | <b>0.7208</b> |     | <b>2,879.080<br/>4</b> |

### 3.3 Building Construction - 2016

#### Mitigated Construction Off-Site

|              | ROG           | NOx            | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2               | Total CO2               | CH4           | N2O | CO2e                    |
|--------------|---------------|----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------------|-------------------------|---------------|-----|-------------------------|
| Category     | lb/day        |                |                 |               |                |               |                |                |               |               | lb/day   |                         |                         |               |     |                         |
| Hauling      | 0.0000        | 0.0000         | 0.0000          | 0.0000        | 0.0000         | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                  | 0.0000                  | 0.0000        |     | 0.0000                  |
| Vendor       | 2.8392        | 29.4513        | 33.9605         | 0.0742        | 2.1312         | 0.4849        | 2.6161         | 0.6069         | 0.4459        | 1.0529        |          | 7,434.786<br>1          | 7,434.786<br>1          | 0.0531        |     | 7,435.900<br>4          |
| Worker       | 4.3490        | 5.4370         | 67.6670         | 0.1474        | 11.6359        | 0.0972        | 11.7332        | 3.0859         | 0.0894        | 3.1753        |          | 12,382.26<br>16         | 12,382.26<br>16         | 0.6353        |     | 12,395.60<br>29         |
| <b>Total</b> | <b>7.1882</b> | <b>34.8882</b> | <b>101.6274</b> | <b>0.2216</b> | <b>13.7671</b> | <b>0.5822</b> | <b>14.3493</b> | <b>3.6928</b>  | <b>0.5353</b> | <b>4.2282</b> |          | <b>19,817.04<br/>77</b> | <b>19,817.04<br/>77</b> | <b>0.6884</b> |     | <b>19,831.50<br/>33</b> |

### 3.4 Architectural Coating - 2015

#### Unmitigated Construction On-Site

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Archit. Coating | 56.8377        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.5421         | 3.4271        | 2.5357        | 3.9600e-003        |               | 0.2945        | 0.2945        |                | 0.2945        | 0.2945        |          | 375.2641        | 375.2641        | 0.0489        |     | 376.2902        |
| <b>Total</b>    | <b>57.3798</b> | <b>3.4271</b> | <b>2.5357</b> | <b>3.9600e-003</b> |               | <b>0.2945</b> | <b>0.2945</b> |                | <b>0.2945</b> | <b>0.2945</b> |          | <b>375.2641</b> | <b>375.2641</b> | <b>0.0489</b> |     | <b>376.2902</b> |

### 3.4 Architectural Coating - 2015

#### Unmitigated Construction Off-Site

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Worker       | 0.9627        | 1.2043        | 14.9331        | 0.0295        | 2.3250        | 0.0205        | 2.3454        | 0.6166         | 0.0188        | 0.6353        |          | 2,562.349<br>4         | 2,562.349<br>4         | 0.1380        |     | 2,565,246<br>5         |
| <b>Total</b> | <b>0.9627</b> | <b>1.2043</b> | <b>14.9331</b> | <b>0.0295</b> | <b>2.3250</b> | <b>0.0205</b> | <b>2.3454</b> | <b>0.6166</b>  | <b>0.0188</b> | <b>0.6353</b> |          | <b>2,562.349<br/>4</b> | <b>2,562.349<br/>4</b> | <b>0.1380</b> |     | <b>2,565,246<br/>5</b> |

#### Mitigated Construction On-Site

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Archit. Coating | 56.8377        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.5421         | 3.4271        | 2.5357        | 3.9600e-003        |               | 0.2945        | 0.2945        |                | 0.2945        | 0.2945        | 0.0000        | 375.2641        | 375.2641        | 0.0489        |     | 376.2902        |
| <b>Total</b>    | <b>57.3798</b> | <b>3.4271</b> | <b>2.5357</b> | <b>3.9600e-003</b> |               | <b>0.2945</b> | <b>0.2945</b> |                | <b>0.2945</b> | <b>0.2945</b> | <b>0.0000</b> | <b>375.2641</b> | <b>375.2641</b> | <b>0.0489</b> |     | <b>376.2902</b> |

**3.4 Architectural Coating - 2015****Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Worker       | 0.9627        | 1.2043        | 14.9331        | 0.0295        | 2.3250        | 0.0205        | 2.3454        | 0.6166         | 0.0188        | 0.6353        |          | 2,562.349<br>4         | 2,562.349<br>4         | 0.1380        |     | 2,565.246<br>5         |
| <b>Total</b> | <b>0.9627</b> | <b>1.2043</b> | <b>14.9331</b> | <b>0.0295</b> | <b>2.3250</b> | <b>0.0205</b> | <b>2.3454</b> | <b>0.6166</b>  | <b>0.0188</b> | <b>0.6353</b> |          | <b>2,562.349<br/>4</b> | <b>2,562.349<br/>4</b> | <b>0.1380</b> |     | <b>2,565.246<br/>5</b> |

**3.4 Architectural Coating - 2016****Unmitigated Construction On-Site**

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Archit. Coating | 56.8377        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.4913         | 3.1630        | 2.5119        | 3.9600e-003        |               | 0.2622        | 0.2622        |                | 0.2622        | 0.2622        |          | 375.2641        | 375.2641        | 0.0442        |     | 376.1932        |
| <b>Total</b>    | <b>57.3289</b> | <b>3.1630</b> | <b>2.5119</b> | <b>3.9600e-003</b> |               | <b>0.2622</b> | <b>0.2622</b> |                | <b>0.2622</b> | <b>0.2622</b> |          | <b>375.2641</b> | <b>375.2641</b> | <b>0.0442</b> |     | <b>376.1932</b> |

### 3.4 Architectural Coating - 2016

#### Unmitigated Construction Off-Site

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Worker       | 0.8690        | 1.0864        | 13.5204        | 0.0295        | 2.3250        | 0.0194        | 2.3444        | 0.6166         | 0.0179        | 0.6345        |          | 2,474.073<br>4         | 2,474.073<br>4         | 0.1269        |     | 2,476.739<br>1         |
| <b>Total</b> | <b>0.8690</b> | <b>1.0864</b> | <b>13.5204</b> | <b>0.0295</b> | <b>2.3250</b> | <b>0.0194</b> | <b>2.3444</b> | <b>0.6166</b>  | <b>0.0179</b> | <b>0.6345</b> |          | <b>2,474.073<br/>4</b> | <b>2,474.073<br/>4</b> | <b>0.1269</b> |     | <b>2,476.739<br/>1</b> |

#### Mitigated Construction On-Site

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Archit. Coating | 56.8377        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.4913         | 3.1630        | 2.5119        | 3.9600e-003        |               | 0.2622        | 0.2622        |                | 0.2622        | 0.2622        | 0.0000        | 375.2641        | 375.2641        | 0.0442        |     | 376.1932        |
| <b>Total</b>    | <b>57.3289</b> | <b>3.1630</b> | <b>2.5119</b> | <b>3.9600e-003</b> |               | <b>0.2622</b> | <b>0.2622</b> |                | <b>0.2622</b> | <b>0.2622</b> | <b>0.0000</b> | <b>375.2641</b> | <b>375.2641</b> | <b>0.0442</b> |     | <b>376.1932</b> |

### 3.4 Architectural Coating - 2016

#### Mitigated Construction Off-Site

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Worker       | 0.8690        | 1.0864        | 13.5204        | 0.0295        | 2.3250        | 0.0194        | 2.3444        | 0.6166         | 0.0179        | 0.6345        |          | 2,474.073<br>4         | 2,474.073<br>4         | 0.1269        |     | 2,476.739<br>1         |
| <b>Total</b> | <b>0.8690</b> | <b>1.0864</b> | <b>13.5204</b> | <b>0.0295</b> | <b>2.3250</b> | <b>0.0194</b> | <b>2.3444</b> | <b>0.6166</b>  | <b>0.0179</b> | <b>0.6345</b> |          | <b>2,474.073<br/>4</b> | <b>2,474.073<br/>4</b> | <b>0.1269</b> |     | <b>2,476.739<br/>1</b> |

### 3.5 Finish Grading - 2016

#### Unmitigated Construction On-Site

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category      | lb/day        |                |                |               |               |               |                |                |               |               | lb/day   |                        |                        |               |     |                        |
| Fugitive Dust |               |                |                |               | 8.6733        | 0.0000        | 8.6733         | 3.5965         | 0.0000        | 3.5965        |          |                        | 0.0000                 |               |     | 0.0000                 |
| Off-Road      | 7.2224        | 82.8580        | 52.1771        | 0.0698        |               | 3.9305        | 3.9305         |                | 3.6160        | 3.6160        |          | 7,252.450<br>1         | 7,252.450<br>1         | 2.1876        |     | 7,298.389<br>6         |
| <b>Total</b>  | <b>7.2224</b> | <b>82.8580</b> | <b>52.1771</b> | <b>0.0698</b> | <b>8.6733</b> | <b>3.9305</b> | <b>12.6038</b> | <b>3.5965</b>  | <b>3.6160</b> | <b>7.2125</b> |          | <b>7,252.450<br/>1</b> | <b>7,252.450<br/>1</b> | <b>2.1876</b> |     | <b>7,298.389<br/>6</b> |

**3.5 Finish Grading - 2016****Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Worker       | 0.0961        | 0.1201        | 1.4950        | 3.2600e-003        | 0.2571        | 2.1500e-003        | 0.2592        | 0.0682         | 1.9800e-003        | 0.0702        |          | 273.5754        | 273.5754        | 0.0140        |     | 273.8702        |
| <b>Total</b> | <b>0.0961</b> | <b>0.1201</b> | <b>1.4950</b> | <b>3.2600e-003</b> | <b>0.2571</b> | <b>2.1500e-003</b> | <b>0.2592</b> | <b>0.0682</b>  | <b>1.9800e-003</b> | <b>0.0702</b> |          | <b>273.5754</b> | <b>273.5754</b> | <b>0.0140</b> |     | <b>273.8702</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 3.3826        | 0.0000        | 3.3826        | 1.4026         | 0.0000        | 1.4026        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 3.8899        | 50.7823        | 41.7302        | 0.0698        |               | 2.3760        | 2.3760        |                | 2.2404        | 2.2404        | 0.0000        | 7,252.4501        | 7,252.4501        | 2.1876        |     | 7,298.3896        |
| <b>Total</b>  | <b>3.8899</b> | <b>50.7823</b> | <b>41.7302</b> | <b>0.0698</b> | <b>3.3826</b> | <b>2.3760</b> | <b>5.7586</b> | <b>1.4026</b>  | <b>2.2404</b> | <b>3.6430</b> | <b>0.0000</b> | <b>7,252.4501</b> | <b>7,252.4501</b> | <b>2.1876</b> |     | <b>7,298.3896</b> |



**3.5 Finish Grading - 2016****Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Worker       | 0.0961        | 0.1201        | 1.4950        | 3.2600e-003        | 0.2571        | 2.1500e-003        | 0.2592        | 0.0682         | 1.9800e-003        | 0.0702        |          | 273.5754        | 273.5754        | 0.0140        |     | 273.8702        |
| <b>Total</b> | <b>0.0961</b> | <b>0.1201</b> | <b>1.4950</b> | <b>3.2600e-003</b> | <b>0.2571</b> | <b>2.1500e-003</b> | <b>0.2592</b> | <b>0.0682</b>  | <b>1.9800e-003</b> | <b>0.0702</b> |          | <b>273.5754</b> | <b>273.5754</b> | <b>0.0140</b> |     | <b>273.8702</b> |

**3.6 Paving - 2016****Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 2.0898        | 22.3859        | 14.8176        | 0.0223        |               | 1.2610        | 1.2610        |                | 1.1601        | 1.1601        |          | 2,316.3767        | 2,316.3767        | 0.6987        |     | 2,331.0495        |
| Paving       | 0.0000        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>2.0898</b> | <b>22.3859</b> | <b>14.8176</b> | <b>0.0223</b> |               | <b>1.2610</b> | <b>1.2610</b> |                | <b>1.1601</b> | <b>1.1601</b> |          | <b>2,316.3767</b> | <b>2,316.3767</b> | <b>0.6987</b> |     | <b>2,331.0495</b> |

**3.6 Paving - 2016****Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0627        | 0.0783        | 0.9750        | 2.1200e-003        | 0.1677        | 1.4000e-003        | 0.1691        | 0.0445         | 1.2900e-003        | 0.0458        |          | 178.4188        | 178.4188        | 9.1500e-003        |     | 178.6110        |
| <b>Total</b> | <b>0.0627</b> | <b>0.0783</b> | <b>0.9750</b> | <b>2.1200e-003</b> | <b>0.1677</b> | <b>1.4000e-003</b> | <b>0.1691</b> | <b>0.0445</b>  | <b>1.2900e-003</b> | <b>0.0458</b> |          | <b>178.4188</b> | <b>178.4188</b> | <b>9.1500e-003</b> |     | <b>178.6110</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 2.0898        | 22.3859        | 14.8176        | 0.0223        |               | 1.2610        | 1.2610        |                | 1.1601        | 1.1601        | 0.0000        | 2,316.3767        | 2,316.3767        | 0.6987        |     | 2,331.0495        |
| Paving       | 0.0000        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>2.0898</b> | <b>22.3859</b> | <b>14.8176</b> | <b>0.0223</b> |               | <b>1.2610</b> | <b>1.2610</b> |                | <b>1.1601</b> | <b>1.1601</b> | <b>0.0000</b> | <b>2,316.3767</b> | <b>2,316.3767</b> | <b>0.6987</b> |     | <b>2,331.0495</b> |

### 3.6 Paving - 2016

#### Mitigated Construction Off-Site

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0627        | 0.0783        | 0.9750        | 2.1200e-003        | 0.1677        | 1.4000e-003        | 0.1691        | 0.0445         | 1.2900e-003        | 0.0458        |          | 178.4188        | 178.4188        | 9.1500e-003        |     | 178.6110        |
| <b>Total</b> | <b>0.0627</b> | <b>0.0783</b> | <b>0.9750</b> | <b>2.1200e-003</b> | <b>0.1677</b> | <b>1.4000e-003</b> | <b>0.1691</b> | <b>0.0445</b>  | <b>1.2900e-003</b> | <b>0.0458</b> |          | <b>178.4188</b> | <b>178.4188</b> | <b>9.1500e-003</b> |     | <b>178.6110</b> |

### 4.0 Operational Detail - Mobile

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#### 4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

|             | ROG     | NOx      | CO       | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2    | Total CO2    | CH4    | N2O | CO2e         |
|-------------|---------|----------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|--------------|--------------|--------|-----|--------------|
| Category    | lb/day  |          |          |        |               |              |            |                |               |             | lb/day   |              |              |        |     |              |
| Mitigated   | 62.4527 | 145.6467 | 617.6040 | 1.3410 | 88.7379       | 2.0329       | 90.7708    | 23.7084        | 1.8690        | 25.5774     |          | 117,768.7577 | 117,768.7577 | 4.7808 |     | 117,869.1534 |
| Unmitigated | 67.3355 | 179.7178 | 746.0838 | 1.7150 | 114.4398      | 2.5787       | 117.0185   | 30.5753        | 2.3709        | 32.9462     |          | 150,644.4847 | 150,644.4847 | 6.0007 |     | 150,770.4984 |

## 4.2 Trip Summary Information

| Land Use                          | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|-----------------------------------|-------------------------|----------|----------|-------------|------------|
|                                   | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Congregate Care (Assisted Living) | 731.58                  | 587.40   | 651.48   | 2,390,434   | 1,853,568  |
| Enclosed Parking Structure        | 0.00                    | 0.00     | 0.00     |             |            |
| Hospital                          | 3,623.20                | 2,279.20 | 2013.20  | 12,410,546  | 9,623,269  |
| Medical Office Building           | 13,368.10               | 3,315.20 | 573.50   | 26,208,791  | 20,322,576 |
| Retirement Community              | 804.96                  | 610.74   | 664.56   | 2,587,321   | 2,006,236  |
| Total                             | 18,527.84               | 6,792.54 | 3,902.74 | 43,597,092  | 33,805,650 |

## 4.3 Trip Type Information

| Land Use                          | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-----------------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                                   | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Congregate Care (Assisted Living) | 14.70      | 5.90       | 8.70        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| Enclosed Parking Structure        | 16.60      | 8.40       | 6.90        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Hospital                          | 16.60      | 8.40       | 6.90        | 64.90      | 16.10      | 19.00       | 73             | 25       | 2       |
| Medical Office Building           | 16.60      | 8.40       | 6.90        | 29.60      | 51.40      | 19.00       | 60             | 30       | 10      |
| Retirement Community              | 14.70      | 5.90       | 8.70        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.513363 | 0.060352 | 0.180146 | 0.139338 | 0.042155 | 0.006672 | 0.015739 | 0.030749 | 0.001928 | 0.002503 | 0.004351 | 0.000593 | 0.002111 |

## 5.0 Energy Detail

### 5.1 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

Exceed Title 24

|                        | ROG    | NOx     | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|------------------------|--------|---------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category               | lb/day |         |        |        |               |              |            |                |               |             | lb/day   |             |             |        |        |             |
| NaturalGas Mitigated   | 1.0847 | 9.7591  | 7.5383 | 0.0592 |               | 0.7494       | 0.7494     |                | 0.7494        | 0.7494      |          | 11,832.8178 | 11,832.8178 | 0.2268 | 0.2169 | 11,904.8304 |
| NaturalGas Unmitigated | 1.1914 | 10.7201 | 8.2858 | 0.0650 |               | 0.8231       | 0.8231     |                | 0.8231        | 0.8231      |          | 12,996.9912 | 12,996.9912 | 0.2491 | 0.2383 | 13,076.0888 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                                   | NaturalGas Use | ROG           | NOx            | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|-----------------------------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Land Use                          | kBTU/yr        | lb/day        |                |               |               |               |               |               |                |               |               | lb/day   |                    |                    |               |               |                    |
| Enclosed Parking Structure        | 0              | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Hospital                          | 88565.9        | 0.9551        | 8.6829         | 7.2937        | 0.0521        |               | 0.6599        | 0.6599        |                | 0.6599        | 0.6599        |          | 10,419.5197        | 10,419.5197        | 0.1997        | 0.1910        | 10,482.9312        |
| Medical Office Building           | 3081.64        | 0.0332        | 0.3021         | 0.2538        | 1.8100e-003   |               | 0.0230        | 0.0230        |                | 0.0230        | 0.0230        |          | 362.5463           | 362.5463           | 6.9500e-003   | 6.6500e-003   | 364.7527           |
| Retirement Community              | 11308.7        | 0.1220        | 1.0422         | 0.4435        | 6.6500e-003   |               | 0.0843        | 0.0843        |                | 0.0843        | 0.0843        |          | 1,330.4301         | 1,330.4301         | 0.0255        | 0.0244        | 1,338.5269         |
| Congregate Care (Assisted Living) | 7518.21        | 0.0811        | 0.6929         | 0.2948        | 4.4200e-003   |               | 0.0560        | 0.0560        |                | 0.0560        | 0.0560        |          | 884.4951           | 884.4951           | 0.0170        | 0.0162        | 889.8779           |
| <b>Total</b>                      |                | <b>1.1914</b> | <b>10.7201</b> | <b>8.2858</b> | <b>0.0650</b> |               | <b>0.8231</b> | <b>0.8231</b> |                | <b>0.8231</b> | <b>0.8231</b> |          | <b>12,996.9912</b> | <b>12,996.9912</b> | <b>0.2491</b> | <b>0.2383</b> | <b>13,076.0887</b> |

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

|                                   | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|-----------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Land Use                          | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                    |                    |               |               |                    |
| Hospital                          | 80.542         | 0.8686        | 7.8963        | 6.6329        | 0.0474        |               | 0.6001        | 0.6001        |                | 0.6001        | 0.6001        |          | 9,475.5249         | 9,475.5249         | 0.1816        | 0.1737        | 9,533.1914         |
| Medical Office Building           | 2.77348        | 0.0299        | 0.2719        | 0.2284        | 1.6300e-003   |               | 0.0207        | 0.0207        |                | 0.0207        | 0.0207        |          | 326.2917           | 326.2917           | 6.2500e-003   | 5.9800e-003   | 328.2775           |
| Retirement Community              | 10.367         | 0.1118        | 0.9554        | 0.4066        | 6.1000e-003   |               | 0.0772        | 0.0772        |                | 0.0772        | 0.0772        |          | 1,219.6444         | 1,219.6444         | 0.0234        | 0.0224        | 1,227.0670         |
| Congregate Care (Assisted Living) | 6.89653        | 0.0744        | 0.6356        | 0.2705        | 4.0600e-003   |               | 0.0514        | 0.0514        |                | 0.0514        | 0.0514        |          | 811.3568           | 811.3568           | 0.0156        | 0.0149        | 816.2945           |
| Enclosed Parking Structure        | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| <b>Total</b>                      |                | <b>1.0847</b> | <b>9.7591</b> | <b>7.5383</b> | <b>0.0592</b> |               | <b>0.7494</b> | <b>0.7494</b> |                | <b>0.7494</b> | <b>0.7494</b> |          | <b>11,832.8178</b> | <b>11,832.8178</b> | <b>0.2268</b> | <b>0.2169</b> | <b>11,904.8303</b> |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

|             | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|-------------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category    | lb/day  |        |         |             |               |              |            |                |               |             | lb/day   |             |             |        |        |             |
| Mitigated   | 60.0828 | 0.3830 | 32.0190 | 1.4300e-003 |               | 0.8397       | 0.8397     |                | 0.8327        | 0.8327      | 0.0000   | 10,661.9167 | 10,661.9167 | 0.2434 | 0.1945 | 10,727.3244 |
| Unmitigated | 70.5380 | 0.4940 | 42.3404 | 2.2100e-003 |               | 0.8994       | 0.8994     |                | 0.8923        | 0.8923      | 0.0000   | 10,684.6270 | 10,684.6270 | 0.2814 | 0.1945 | 10,750.8338 |

## 6.2 Area by SubCategory

### Unmitigated

|                       | ROG            | NOx           | CO             | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|-----------------------|----------------|---------------|----------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| SubCategory           | lb/day         |               |                |                    |               |               |               |                |               |               | lb/day        |                    |                    |               |               |                    |
| Architectural Coating | 14.4756        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                    | 0.0000             |               |               | 0.0000             |
| Consumer Products     | 53.7332        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                    | 0.0000             |               |               | 0.0000             |
| Hearth                | 0.9725         | 4.0000e-005   | 0.0531         | 0.0000             |               | 0.6719        | 0.6719        |                | 0.6649        | 0.6649        | 0.0000        | 10,609.4118        | 10,609.4118        | 0.2034        | 0.1945        | 10,673.9789        |
| Landscaping           | 1.3567         | 0.4940        | 42.2874        | 2.2100e-003        |               | 0.2275        | 0.2275        |                | 0.2275        | 0.2275        |               | 75.2152            | 75.2152            | 0.0781        |               | 76.8549            |
| <b>Total</b>          | <b>70.5380</b> | <b>0.4940</b> | <b>42.3404</b> | <b>2.2100e-003</b> |               | <b>0.8994</b> | <b>0.8994</b> |                | <b>0.8923</b> | <b>0.8923</b> | <b>0.0000</b> | <b>10,684.6270</b> | <b>10,684.6270</b> | <b>0.2814</b> | <b>0.1945</b> | <b>10,750.8338</b> |



## 6.2 Area by SubCategory

### Mitigated

|                       | ROG            | NOx           | CO             | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|-----------------------|----------------|---------------|----------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| SubCategory           | lb/day         |               |                |                    |               |               |               |                |               |               | lb/day        |                    |                    |               |               |                    |
| Architectural Coating | 4.6716         |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                    | 0.0000             |               |               | 0.0000             |
| Consumer Products     | 53.7332        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                    | 0.0000             |               |               | 0.0000             |
| Hearth                | 0.9725         | 4.0000e-005   | 0.0531         | 0.0000             |               | 0.6719        | 0.6719        |                | 0.6649        | 0.6649        | 0.0000        | 10,609.4118        | 10,609.4118        | 0.2034        | 0.1945        | 10,673.9789        |
| Landscaping           | 0.7054         | 0.3830        | 31.9659        | 1.4300e-003        |               | 0.1678        | 0.1678        |                | 0.1678        | 0.1678        |               | 52.5049            | 52.5049            | 0.0400        |               | 53.3455            |
| <b>Total</b>          | <b>60.0828</b> | <b>0.3830</b> | <b>32.0190</b> | <b>1.4300e-003</b> |               | <b>0.8397</b> | <b>0.8397</b> |                | <b>0.8327</b> | <b>0.8327</b> | <b>0.0000</b> | <b>10,661.9167</b> | <b>10,661.9167</b> | <b>0.2434</b> | <b>0.1945</b> | <b>10,727.3244</b> |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

## 10.0 Vegetation

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## Canyon Springs Healthcare Campus & Senior Living

### South Coast AQMD Air District, Winter

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                         | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|-----------------------------------|----------|---------------|-------------|--------------------|------------|
| Hospital                          | 280.00   | Bed           | 4.60        | 504,000.00         | 0          |
| Medical Office Building           | 370.00   | 1000sqft      | 8.49        | 370,000.00         | 0          |
| Enclosed Parking Structure        | 2,962.00 | Space         | 26.66       | 1,184,800.00       | 0          |
| Congregate Care (Assisted Living) | 267.00   | Dwelling Unit | 16.69       | 280,000.00         | 764        |
| Retirement Community              | 234.00   | Dwelling Unit | 46.80       | 375,000.00         | 669        |

### 1.2 Other Project Characteristics

|                            |                            |                            |       |                            |       |
|----------------------------|----------------------------|----------------------------|-------|----------------------------|-------|
| Urbanization               | Urban                      | Wind Speed (m/s)           | 2.2   | Precipitation Freq (Days)  | 31    |
| Climate Zone               | 10                         |                            |       | Operational Year           | 2016  |
| Utility Company            | Southern California Edison |                            |       |                            |       |
| CO2 Intensity<br>(lb/MWhr) | 533.36                     | CH4 Intensity<br>(lb/MWhr) | 0.029 | N2O Intensity<br>(lb/MWhr) | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Source: CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - based on information provided by the applicant

Construction Phase - based on a 2016 opening year

Off-road Equipment - 8 hour work day

Off-road Equipment - 8 hour work day

Off-road Equipment - added grading phase and equipment based on discussion with the applicant

Off-road Equipment - added a water truck

Off-road Equipment -

Off-road Equipment - based on information provided by the applicant

Trips and VMT -

Grading -

Vehicle Trips - TR based on the Project's TIA

Woodstoves - no woodstoves. all natural gas fireplaces

Energy Use - Title-24 Electricity Energy Intensity and Title-24 Natural Gas Energy Intensity were adjusted by 21.8% and 16.8% respectively, to reflect 2013 Title 24 requirements. Source: Impact Analysis California's 2013 Building Energy Efficiency Standards (CEC 2013)

Construction Off-road Equipment Mitigation - tier 3 mitigation to all equipment greater than 150 HP

Mobile Land Use Mitigation -

Area Mitigation - Rule 1113

Energy Mitigation -

Water Mitigation -

Architectural Coating - Rule 1113 requirements

Area Coating -

| Table Name              | Column Name                               | Default Value | New Value |
|-------------------------|-------------------------------------------|---------------|-----------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior                | 250.00        | 100.00    |
| tblArchitecturalCoating | EF_Nonresidential_Interior                | 250.00        | 50.00     |
| tblAreaMitigation       | UseLowVOCPaintNonresidentialExteriorValue | 250           | 100       |
| tblAreaMitigation       | UseLowVOCPaintNonresidentialInteriorValue | 250           | 50        |

|                         |                            |            |            |
|-------------------------|----------------------------|------------|------------|
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 1.00       |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 1.00       |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 2.00       |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 2.00       |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 1.00       |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00       | 5.00       |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstEquipMitigation | Tier                       | No Change  | Tier 3     |
| tblConstructionPhase    | NumDays                    | 220.00     | 300.00     |
| tblConstructionPhase    | NumDays                    | 3,100.00   | 300.00     |
| tblConstructionPhase    | NumDays                    | 310.00     | 40.00      |
| tblConstructionPhase    | NumDays                    | 310.00     | 20.00      |
| tblConstructionPhase    | NumDays                    | 220.00     | 30.00      |
| tblConstructionPhase    | PhaseEndDate               | 11/10/2017 | 10/24/2016 |
| tblConstructionPhase    | PhaseEndDate               | 11/21/2016 | 10/14/2016 |
| tblConstructionPhase    | PhaseStartDate             | 9/17/2016  | 9/1/2015   |
| tblConstructionPhase    | PhaseStartDate             | 10/25/2016 | 9/17/2016  |
| tblEnergyUse            | T24E                       | 559.54     | 437.56     |
| tblEnergyUse            | T24E                       | 3.92       | 3.07       |
| tblEnergyUse            | T24E                       | 8.75       | 6.84       |
| tblEnergyUse            | T24E                       | 3.75       | 2.93       |
| tblEnergyUse            | T24E                       | 749.55     | 586.15     |
| tblEnergyUse            | T24NG                      | 10,214.61  | 8,498.56   |
| tblEnergyUse            | T24NG                      | 69.84      | 58.11      |

|                           |                            |            |            |
|---------------------------|----------------------------|------------|------------|
| tblEnergyUse              | T24NG                      | 3.65       | 3.04       |
| tblEnergyUse              | T24NG                      | 17,654.53  | 14,688.57  |
| tblFireplaces             | NumberGas                  | 226.95     | 267.00     |
| tblFireplaces             | NumberGas                  | 198.90     | 234.00     |
| tblFireplaces             | NumberNoFireplace          | 26.70      | 0.00       |
| tblFireplaces             | NumberNoFireplace          | 23.40      | 0.00       |
| tblFireplaces             | NumberWood                 | 13.35      | 0.00       |
| tblFireplaces             | NumberWood                 | 11.70      | 0.00       |
| tblLandUse                | LandUseSquareFeet          | 200,412.12 | 504,000.00 |
| tblLandUse                | LandUseSquareFeet          | 267,000.00 | 280,000.00 |
| tblLandUse                | LandUseSquareFeet          | 234,000.00 | 375,000.00 |
| tblOffRoadEquipment       | HorsePower                 | 400.00     | 189.00     |
| tblOffRoadEquipment       | HorsePower                 | 400.00     | 189.00     |
| tblOffRoadEquipment       | LoadFactor                 | 0.38       | 0.50       |
| tblOffRoadEquipment       | LoadFactor                 | 0.38       | 0.50       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 5.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 1.00       |
| tblOffRoadEquipment       | UsageHours                 | 6.00       | 8.00       |
| tblOffRoadEquipment       | UsageHours                 | 7.00       | 8.00       |
| tblOffRoadEquipment       | UsageHours                 | 7.00       | 8.00       |
| tblProjectCharacteristics | CO2IntensityFactor         | 630.89     | 533.36     |
| tblProjectCharacteristics | OperationalYear            | 2014       | 2016       |
| tblTripsAndVMT            | VendorTripNumber           | 391.00     | 341.00     |
| tblTripsAndVMT            | WorkerTripNumber           | 1,138.00   | 1,041.00   |
| tblTripsAndVMT            | WorkerTripNumber           | 228.00     | 208.00     |
| tblVehicleTrips           | ST_TR                      | 2.81       | 2.61       |

|                 |                    |       |       |
|-----------------|--------------------|-------|-------|
| tblVehicleTrips | SU_TR              | 2.81  | 2.84  |
| tblVehicleTrips | WD_TR              | 11.81 | 12.94 |
| tblVehicleTrips | WD_TR              | 2.81  | 3.44  |
| tblWoodstoves   | NumberCatalytic    | 13.35 | 0.00  |
| tblWoodstoves   | NumberCatalytic    | 11.70 | 0.00  |
| tblWoodstoves   | NumberNoncatalytic | 13.35 | 0.00  |
| tblWoodstoves   | NumberNoncatalytic | 11.70 | 0.00  |

## 2.0 Emissions Summary

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## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

|       | ROG      | NOx      | CO       | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4    | N2O    | CO2e            |
|-------|----------|----------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|--------|--------|-----------------|
| Year  | lb/day   |          |          |        |               |              |            |                |               |             | lb/day   |                 |                 |        |        |                 |
| 2015  | 70.7095  | 151.0475 | 149.2356 | 0.2723 | 16.0914       | 6.5131       | 19.3667    | 4.3092         | 5.9920        | 9.9637      | 0.0000   | 25,150.73<br>36 | 25,150.73<br>36 | 3.8145 | 0.0000 | 25,230.83<br>73 |
| 2016  | 69.3930  | 87.3453  | 137.8708 | 0.2721 | 16.0921       | 4.2142       | 19.0706    | 4.3094         | 3.8980        | 8.1793      | 0.0000   | 24,546.92<br>63 | 24,546.92<br>63 | 2.3728 | 0.0000 | 24,596.75<br>54 |
| Total | 140.1025 | 238.3928 | 287.1064 | 0.5444 | 32.1835       | 10.7273      | 38.4373    | 8.6186         | 9.8900        | 18.1430     | 0.0000   | 49,697.65<br>99 | 49,697.65<br>99 | 6.1873 | 0.0000 | 49,827.59<br>27 |

### Mitigated Construction

|       | ROG      | NOx      | CO       | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4    | N2O    | CO2e            |
|-------|----------|----------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|--------|--------|-----------------|
| Year  | lb/day   |          |          |        |               |              |            |                |               |             | lb/day   |                 |                 |        |        |                 |
| 2015  | 70.1059  | 86.2186  | 149.1740 | 0.2723 | 16.0914       | 3.6246       | 19.0663    | 4.3092         | 3.4552        | 7.1200      | 0.0000   | 25,150.73<br>36 | 25,150.73<br>36 | 3.8145 | 0.0000 | 25,230.83<br>73 |
| 2016  | 68.8117  | 65.4617  | 137.8913 | 0.2721 | 16.0921       | 2.6931       | 18.7852    | 4.3094         | 2.5449        | 6.8544      | 0.0000   | 24,546.92<br>63 | 24,546.92<br>63 | 2.3728 | 0.0000 | 24,596.75<br>54 |
| Total | 138.9176 | 151.6803 | 287.0653 | 0.5444 | 32.1835       | 6.3176       | 37.8514    | 8.6186         | 6.0002        | 13.9744     | 0.0000   | 49,697.65<br>99 | 49,697.65<br>99 | 6.1873 | 0.0000 | 49,827.59<br>27 |

|                   | ROG  | NOx   | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|-------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.85 | 36.37 | 0.01 | 0.00 | 0.00          | 41.11        | 1.52       | 0.00           | 39.33         | 22.98       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |



## 2.2 Overall Operational

### Unmitigated Operational

|              | ROG             | NOx             | CO              | SO2           | Fugitive PM10   | Exhaust PM10  | PM10 Total      | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2      | NBio- CO2           | Total CO2           | CH4           | N2O           | CO2e                |
|--------------|-----------------|-----------------|-----------------|---------------|-----------------|---------------|-----------------|----------------|---------------|----------------|---------------|---------------------|---------------------|---------------|---------------|---------------------|
| Category     | lb/day          |                 |                 |               |                 |               |                 |                |               |                | lb/day        |                     |                     |               |               |                     |
| Area         | 70.5380         | 0.4940          | 42.3404         | 2.2100e-003   |                 | 0.8994        | 0.8994          |                | 0.8923        | 0.8923         | 0.0000        | 10,684.6270         | 10,684.6270         | 0.2814        | 0.1945        | 10,750.8338         |
| Energy       | 1.1914          | 10.7201         | 8.2858          | 0.0650        |                 | 0.8231        | 0.8231          |                | 0.8231        | 0.8231         |               | 12,996.9912         | 12,996.9912         | 0.2491        | 0.2383        | 13,076.0888         |
| Mobile       | 69.7537         | 188.9388        | 737.8370        | 1.6291        | 114.4398        | 2.5907        | 117.0306        | 30.5753        | 2.3821        | 32.9574        |               | 143,356.4547        | 143,356.4547        | 6.0056        |               | 143,482.5712        |
| <b>Total</b> | <b>141.4832</b> | <b>200.1529</b> | <b>788.4631</b> | <b>1.6963</b> | <b>114.4398</b> | <b>4.3133</b> | <b>118.7531</b> | <b>30.5753</b> | <b>4.0975</b> | <b>34.6728</b> | <b>0.0000</b> | <b>167,038.0729</b> | <b>167,038.0729</b> | <b>6.5361</b> | <b>0.4328</b> | <b>167,309.4937</b> |

### Mitigated Operational

|              | ROG             | NOx             | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2      | NBio- CO2           | Total CO2           | CH4           | N2O           | CO2e                |
|--------------|-----------------|-----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|---------------|---------------------|---------------------|---------------|---------------|---------------------|
| Category     | lb/day          |                 |                 |               |                |               |                |                |               |                | lb/day        |                     |                     |               |               |                     |
| Area         | 60.0828         | 0.3830          | 32.0190         | 1.4300e-003   |                | 0.8397        | 0.8397         |                | 0.8327        | 0.8327         | 0.0000        | 10,661.9167         | 10,661.9167         | 0.2434        | 0.1945        | 10,727.3244         |
| Energy       | 1.0847          | 9.7591          | 7.5383          | 0.0592        |                | 0.7494        | 0.7494         |                | 0.7494        | 0.7494         |               | 11,832.8178         | 11,832.8178         | 0.2268        | 0.2169        | 11,904.8304         |
| Mobile       | 65.0156         | 152.8596        | 622.1224        | 1.2742        | 88.7379        | 2.0450        | 90.7828        | 23.7084        | 1.8801        | 25.5886        |               | 112,080.6856        | 112,080.6856        | 4.7856        |               | 112,181.1841        |
| <b>Total</b> | <b>126.1830</b> | <b>163.0018</b> | <b>661.6797</b> | <b>1.3348</b> | <b>88.7379</b> | <b>3.6341</b> | <b>92.3720</b> | <b>23.7084</b> | <b>3.4622</b> | <b>27.1706</b> | <b>0.0000</b> | <b>134,575.4200</b> | <b>134,575.4200</b> | <b>5.2558</b> | <b>0.4114</b> | <b>134,813.3388</b> |

|                   | ROG   | NOx   | CO    | SO2   | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4   | N2O  | CO2e  |
|-------------------|-------|-------|-------|-------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|-------|------|-------|
| Percent Reduction | 10.81 | 18.56 | 16.08 | 21.31 | 22.46         | 15.75        | 22.22      | 22.46          | 15.50         | 21.64       | 0.00     | 19.43    | 19.43     | 19.59 | 4.93 | 19.42 |

### 3.0 Construction Detail

#### Construction Phase

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Rough Grading         | Grading               | 6/1/2015   | 7/24/2015  | 5             | 40       |                   |
| 2            | Building Construction | Building Construction | 7/25/2015  | 9/16/2016  | 5             | 300      |                   |
| 3            | Architectural Coating | Architectural Coating | 9/1/2015   | 10/24/2016 | 5             | 300      |                   |
| 4            | Finish Grading        | Grading               | 9/17/2016  | 10/14/2016 | 5             | 20       |                   |
| 5            | Paving                | Paving                | 10/15/2016 | 11/25/2016 | 5             | 30       |                   |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,326,375; Residential Outdoor: 442,125; Non-Residential Indoor: 3,088,200; Non-Residential Outdoor: 1,029,400  
(Architectural Coating – sqft)

#### OffRoad Equipment

| Phase Name            | Offroad Equipment Type       | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|------------------------------|--------|-------------|-------------|-------------|
| Rough Grading         | Excavators                   | 0      | 8.00        | 162         | 0.38        |
| Rough Grading         | Graders                      | 0      | 8.00        | 174         | 0.41        |
| Rough Grading         | Off-Highway Trucks           | 2      | 8.00        | 189         | 0.50        |
| Rough Grading         | Other Construction Equipment | 2      | 8.00        | 171         | 0.42        |
| Rough Grading         | Rubber Tired Dozers          | 1      | 8.00        | 255         | 0.40        |
| Rough Grading         | Rubber Tired Loaders         | 1      | 8.00        | 199         | 0.36        |
| Rough Grading         | Scrapers                     | 5      | 8.00        | 361         | 0.48        |
| Rough Grading         | Tractors/Loaders/Backhoes    | 1      | 8.00        | 97          | 0.37        |
| Building Construction | Cranes                       | 1      | 8.00        | 226         | 0.29        |
| Building Construction | Forklifts                    | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets               | 1      | 8.00        | 84          | 0.74        |
| Building Construction | Tractors/Loaders/Backhoes    | 3      | 8.00        | 97          | 0.37        |
| Building Construction | Welders                      | 1      | 8.00        | 46          | 0.45        |
| Architectural Coating | Air Compressors              | 1      | 8.00        | 78          | 0.48        |
| Finish Grading        | Excavators                   | 2      | 8.00        | 162         | 0.38        |
| Finish Grading        | Graders                      | 1      | 8.00        | 174         | 0.41        |
| Finish Grading        | Off-Highway Trucks           | 1      | 8.00        | 189         | 0.50        |
| Finish Grading        | Rubber Tired Dozers          | 1      | 8.00        | 255         | 0.40        |
| Finish Grading        | Scrapers                     | 2      | 8.00        | 361         | 0.48        |
| Finish Grading        | Tractors/Loaders/Backhoes    | 2      | 8.00        | 97          | 0.37        |
| Paving                | Pavers                       | 2      | 8.00        | 125         | 0.42        |
| Paving                | Paving Equipment             | 2      | 8.00        | 130         | 0.36        |
| Paving                | Rollers                      | 2      | 8.00        | 80          | 0.38        |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Rough Grading         | 12                      | 30.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 1,041.00           | 341.00             | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 208.00             | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Finish Grading        | 9                       | 23.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

### 3.2 Rough Grading - 2015

#### Unmitigated Construction On-Site

|               | ROG            | NOx             | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O | CO2e               |
|---------------|----------------|-----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| Category      | lb/day         |                 |                |               |                |               |                |                |               |               | lb/day   |                    |                    |               |     |                    |
| Fugitive Dust |                |                 |                |               | 11.3246        | 0.0000        | 11.3246        | 3.8828         | 0.0000        | 3.8828        |          |                    | 0.0000             |               |     | 0.0000             |
| Off-Road      | 12.3510        | 150.8568        | 88.0557        | 0.1210        |                | 6.5101        | 6.5101         |                | 5.9893        | 5.9893        |          | 12,710.3271        | 12,710.3271        | 3.7946        |     | 12,790.0129        |
| <b>Total</b>  | <b>12.3510</b> | <b>150.8568</b> | <b>88.0557</b> | <b>0.1210</b> | <b>11.3246</b> | <b>6.5101</b> | <b>17.8347</b> | <b>3.8828</b>  | <b>5.9893</b> | <b>9.8721</b> |          | <b>12,710.3271</b> | <b>12,710.3271</b> | <b>3.7946</b> |     | <b>12,790.0129</b> |

**3.2 Rough Grading - 2015****Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Worker       | 0.1421        | 0.1907        | 1.9908        | 3.9800e-003        | 0.3353        | 2.9500e-003        | 0.3383        | 0.0889         | 2.7000e-003        | 0.0916        |          | 346.6983        | 346.6983        | 0.0199        |     | 347.1161        |
| <b>Total</b> | <b>0.1421</b> | <b>0.1907</b> | <b>1.9908</b> | <b>3.9800e-003</b> | <b>0.3353</b> | <b>2.9500e-003</b> | <b>0.3383</b> | <b>0.0889</b>  | <b>2.7000e-003</b> | <b>0.0916</b> |          | <b>346.6983</b> | <b>346.6983</b> | <b>0.0199</b> |     | <b>347.1161</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O | CO2e               |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|-----|--------------------|
| Category      | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                    |                    |               |     |                    |
| Fugitive Dust |               |                |                |               | 4.4166        | 0.0000        | 4.4166        | 1.5143         | 0.0000        | 1.5143        |               |                    | 0.0000             |               |     | 0.0000             |
| Off-Road      | 6.0043        | 86.0279        | 71.0891        | 0.1210        |               | 3.6216        | 3.6216        |                | 3.4525        | 3.4525        | 0.0000        | 12,710.3271        | 12,710.3271        | 3.7946        |     | 12,790.0129        |
| <b>Total</b>  | <b>6.0043</b> | <b>86.0279</b> | <b>71.0891</b> | <b>0.1210</b> | <b>4.4166</b> | <b>3.6216</b> | <b>8.0382</b> | <b>1.5143</b>  | <b>3.4525</b> | <b>4.9668</b> | <b>0.0000</b> | <b>12,710.3271</b> | <b>12,710.3271</b> | <b>3.7946</b> |     | <b>12,790.0129</b> |

**3.2 Rough Grading - 2015****Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Worker       | 0.1421        | 0.1907        | 1.9908        | 3.9800e-003        | 0.3353        | 2.9500e-003        | 0.3383        | 0.0889         | 2.7000e-003        | 0.0916        |          | 346.6983        | 346.6983        | 0.0199        |     | 347.1161        |
| <b>Total</b> | <b>0.1421</b> | <b>0.1907</b> | <b>1.9908</b> | <b>3.9800e-003</b> | <b>0.3353</b> | <b>2.9500e-003</b> | <b>0.3383</b> | <b>0.0889</b>  | <b>2.7000e-003</b> | <b>0.0916</b> |          | <b>346.6983</b> | <b>346.6983</b> | <b>0.0199</b> |     | <b>347.1161</b> |

**3.3 Building Construction - 2015****Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.8870        | 32.4182        | 20.0375        | 0.0287        |               | 2.2678        | 2.2678        |                | 2.1293        | 2.1293        |          | 2,886.4292        | 2,886.4292        | 0.7336        |     | 2,901.8345        |
| <b>Total</b> | <b>3.8870</b> | <b>32.4182</b> | <b>20.0375</b> | <b>0.0287</b> |               | <b>2.2678</b> | <b>2.2678</b> |                | <b>2.1293</b> | <b>2.1293</b> |          | <b>2,886.4292</b> | <b>2,886.4292</b> | <b>0.7336</b> |     | <b>2,901.8345</b> |

### 3.3 Building Construction - 2015

#### Unmitigated Construction Off-Site

|              | ROG           | NOx            | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O | CO2e               |
|--------------|---------------|----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| Category     | lb/day        |                |                 |               |                |               |                |                |               |               | lb/day   |                    |                    |               |     |                    |
| Hauling      | 0.0000        | 0.0000         | 0.0000          | 0.0000        | 0.0000         | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        |     | 0.0000             |
| Vendor       | 3.5289        | 34.2114        | 43.7776         | 0.0737        | 2.1305         | 0.5902        | 2.7208         | 0.6067         | 0.5427        | 1.1494        |          | 7,454.8356         | 7,454.8356         | 0.0604        |     | 7,456.1043         |
| Worker       | 4.9290        | 6.6175         | 69.0817         | 0.1383        | 11.6359        | 0.1024        | 11.7383        | 3.0859         | 0.0939        | 3.1798        |          | 12,030.4301        | 12,030.4301        | 0.6905        |     | 12,044.9298        |
| <b>Total</b> | <b>8.4579</b> | <b>40.8289</b> | <b>112.8593</b> | <b>0.2120</b> | <b>13.7665</b> | <b>0.6926</b> | <b>14.4591</b> | <b>3.6926</b>  | <b>0.6366</b> | <b>4.3291</b> |          | <b>19,485.2657</b> | <b>19,485.2657</b> | <b>0.7509</b> |     | <b>19,501.0341</b> |

#### Mitigated Construction On-Site

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 3.2834        | 26.2900        | 19.9759        | 0.0287        |               | 1.9673        | 1.9673        |                | 1.8610        | 1.8610        | 0.0000        | 2,886.4292        | 2,886.4292        | 0.7336        |     | 2,901.8345        |
| <b>Total</b> | <b>3.2834</b> | <b>26.2900</b> | <b>19.9759</b> | <b>0.0287</b> |               | <b>1.9673</b> | <b>1.9673</b> |                | <b>1.8610</b> | <b>1.8610</b> | <b>0.0000</b> | <b>2,886.4292</b> | <b>2,886.4292</b> | <b>0.7336</b> |     | <b>2,901.8345</b> |

**3.3 Building Construction - 2015****Mitigated Construction Off-Site**

|              | ROG           | NOx            | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O | CO2e               |
|--------------|---------------|----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| Category     | lb/day        |                |                 |               |                |               |                |                |               |               | lb/day   |                    |                    |               |     |                    |
| Hauling      | 0.0000        | 0.0000         | 0.0000          | 0.0000        | 0.0000         | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        |     | 0.0000             |
| Vendor       | 3.5289        | 34.2114        | 43.7776         | 0.0737        | 2.1305         | 0.5902        | 2.7208         | 0.6067         | 0.5427        | 1.1494        |          | 7,454.8356         | 7,454.8356         | 0.0604        |     | 7,456.1043         |
| Worker       | 4.9290        | 6.6175         | 69.0817         | 0.1383        | 11.6359        | 0.1024        | 11.7383        | 3.0859         | 0.0939        | 3.1798        |          | 12,030.4301        | 12,030.4301        | 0.6905        |     | 12,044.9298        |
| <b>Total</b> | <b>8.4579</b> | <b>40.8289</b> | <b>112.8593</b> | <b>0.2120</b> | <b>13.7665</b> | <b>0.6926</b> | <b>14.4591</b> | <b>3.6926</b>  | <b>0.6366</b> | <b>4.3291</b> |          | <b>19,485.2657</b> | <b>19,485.2657</b> | <b>0.7509</b> |     | <b>19,501.0341</b> |

**3.3 Building Construction - 2016****Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.6240        | 30.7934        | 19.7845        | 0.0287        |               | 2.1098        | 2.1098        |                | 1.9794        | 1.9794        |          | 2,863.9447        | 2,863.9447        | 0.7208        |     | 2,879.0804        |
| <b>Total</b> | <b>3.6240</b> | <b>30.7934</b> | <b>19.7845</b> | <b>0.0287</b> |               | <b>2.1098</b> | <b>2.1098</b> |                | <b>1.9794</b> | <b>1.9794</b> |          | <b>2,863.9447</b> | <b>2,863.9447</b> | <b>0.7208</b> |     | <b>2,879.0804</b> |



**3.3 Building Construction - 2016****Unmitigated Construction Off-Site**

|              | ROG           | NOx            | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2               | Total CO2               | CH4           | N2O | CO2e                    |
|--------------|---------------|----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------------|-------------------------|---------------|-----|-------------------------|
| Category     | lb/day        |                |                 |               |                |               |                |                |               |               | lb/day   |                         |                         |               |     |                         |
| Hauling      | 0.0000        | 0.0000         | 0.0000          | 0.0000        | 0.0000         | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                  | 0.0000                  | 0.0000        |     | 0.0000                  |
| Vendor       | 3.1127        | 30.1947        | 40.7702         | 0.0736        | 2.1312         | 0.4899        | 2.6211         | 0.6069         | 0.4505        | 1.0574        |          | 7,372.434<br>1          | 7,372.434<br>1          | 0.0547        |     | 7,373.581<br>7          |
| Worker       | 4.4402        | 5.9680         | 62.3468         | 0.1382        | 11.6359        | 0.0972        | 11.7332        | 3.0859         | 0.0894        | 3.1753        |          | 11,614.59<br>58         | 11,614.59<br>58         | 0.6353        |     | 11,627.93<br>71         |
| <b>Total</b> | <b>7.5529</b> | <b>36.1627</b> | <b>103.1170</b> | <b>0.2118</b> | <b>13.7671</b> | <b>0.5871</b> | <b>14.3543</b> | <b>3.6928</b>  | <b>0.5399</b> | <b>4.2328</b> |          | <b>18,987.02<br/>98</b> | <b>18,987.02<br/>98</b> | <b>0.6900</b> |     | <b>19,001.51<br/>87</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                        |                        |               |     |                        |
| Off-Road     | 3.0426        | 24.9436        | 19.8051        | 0.0287        |               | 1.8244        | 1.8244        |                | 1.7250        | 1.7250        | 0.0000        | 2,863.944<br>7         | 2,863.944<br>7         | 0.7208        |     | 2,879.080<br>4         |
| <b>Total</b> | <b>3.0426</b> | <b>24.9436</b> | <b>19.8051</b> | <b>0.0287</b> |               | <b>1.8244</b> | <b>1.8244</b> |                | <b>1.7250</b> | <b>1.7250</b> | <b>0.0000</b> | <b>2,863.944<br/>7</b> | <b>2,863.944<br/>7</b> | <b>0.7208</b> |     | <b>2,879.080<br/>4</b> |

### 3.3 Building Construction - 2016

#### Mitigated Construction Off-Site

|              | ROG           | NOx            | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2               | Total CO2               | CH4           | N2O | CO2e                    |
|--------------|---------------|----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------------|-------------------------|---------------|-----|-------------------------|
| Category     | lb/day        |                |                 |               |                |               |                |                |               |               | lb/day   |                         |                         |               |     |                         |
| Hauling      | 0.0000        | 0.0000         | 0.0000          | 0.0000        | 0.0000         | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                  | 0.0000                  | 0.0000        |     | 0.0000                  |
| Vendor       | 3.1127        | 30.1947        | 40.7702         | 0.0736        | 2.1312         | 0.4899        | 2.6211         | 0.6069         | 0.4505        | 1.0574        |          | 7,372.434<br>1          | 7,372.434<br>1          | 0.0547        |     | 7,373.581<br>7          |
| Worker       | 4.4402        | 5.9680         | 62.3468         | 0.1382        | 11.6359        | 0.0972        | 11.7332        | 3.0859         | 0.0894        | 3.1753        |          | 11,614.59<br>58         | 11,614.59<br>58         | 0.6353        |     | 11,627.93<br>71         |
| <b>Total</b> | <b>7.5529</b> | <b>36.1627</b> | <b>103.1170</b> | <b>0.2118</b> | <b>13.7671</b> | <b>0.5871</b> | <b>14.3543</b> | <b>3.6928</b>  | <b>0.5399</b> | <b>4.2328</b> |          | <b>18,987.02<br/>98</b> | <b>18,987.02<br/>98</b> | <b>0.6900</b> |     | <b>19,001.51<br/>87</b> |

### 3.4 Architectural Coating - 2015

#### Unmitigated Construction On-Site

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Archit. Coating | 56.8377        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.5421         | 3.4271        | 2.5357        | 3.9600e-003        |               | 0.2945        | 0.2945        |                | 0.2945        | 0.2945        |          | 375.2641        | 375.2641        | 0.0489        |     | 376.2902        |
| <b>Total</b>    | <b>57.3798</b> | <b>3.4271</b> | <b>2.5357</b> | <b>3.9600e-003</b> |               | <b>0.2945</b> | <b>0.2945</b> |                | <b>0.2945</b> | <b>0.2945</b> |          | <b>375.2641</b> | <b>375.2641</b> | <b>0.0489</b> |     | <b>376.2902</b> |

### 3.4 Architectural Coating - 2015

#### Unmitigated Construction Off-Site

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Worker       | 0.9849        | 1.3222        | 13.8031        | 0.0276        | 2.3250        | 0.0205        | 2.3454        | 0.6166         | 0.0188        | 0.6353        |          | 2,403.774<br>7         | 2,403.774<br>7         | 0.1380        |     | 2,406.671<br>9         |
| <b>Total</b> | <b>0.9849</b> | <b>1.3222</b> | <b>13.8031</b> | <b>0.0276</b> | <b>2.3250</b> | <b>0.0205</b> | <b>2.3454</b> | <b>0.6166</b>  | <b>0.0188</b> | <b>0.6353</b> |          | <b>2,403.774<br/>7</b> | <b>2,403.774<br/>7</b> | <b>0.1380</b> |     | <b>2,406.671<br/>9</b> |

#### Mitigated Construction On-Site

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Archit. Coating | 56.8377        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.5421         | 3.4271        | 2.5357        | 3.9600e-003        |               | 0.2945        | 0.2945        |                | 0.2945        | 0.2945        | 0.0000        | 375.2641        | 375.2641        | 0.0489        |     | 376.2902        |
| <b>Total</b>    | <b>57.3798</b> | <b>3.4271</b> | <b>2.5357</b> | <b>3.9600e-003</b> |               | <b>0.2945</b> | <b>0.2945</b> |                | <b>0.2945</b> | <b>0.2945</b> | <b>0.0000</b> | <b>375.2641</b> | <b>375.2641</b> | <b>0.0489</b> |     | <b>376.2902</b> |

**3.4 Architectural Coating - 2015****Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Worker       | 0.9849        | 1.3222        | 13.8031        | 0.0276        | 2.3250        | 0.0205        | 2.3454        | 0.6166         | 0.0188        | 0.6353        |          | 2,403.774<br>7         | 2,403.774<br>7         | 0.1380        |     | 2,406.671<br>9         |
| <b>Total</b> | <b>0.9849</b> | <b>1.3222</b> | <b>13.8031</b> | <b>0.0276</b> | <b>2.3250</b> | <b>0.0205</b> | <b>2.3454</b> | <b>0.6166</b>  | <b>0.0188</b> | <b>0.6353</b> |          | <b>2,403.774<br/>7</b> | <b>2,403.774<br/>7</b> | <b>0.1380</b> |     | <b>2,406.671<br/>9</b> |

**3.4 Architectural Coating - 2016****Unmitigated Construction On-Site**

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Archit. Coating | 56.8377        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.4913         | 3.1630        | 2.5119        | 3.9600e-003        |               | 0.2622        | 0.2622        |                | 0.2622        | 0.2622        |          | 375.2641        | 375.2641        | 0.0442        |     | 376.1932        |
| <b>Total</b>    | <b>57.3289</b> | <b>3.1630</b> | <b>2.5119</b> | <b>3.9600e-003</b> |               | <b>0.2622</b> | <b>0.2622</b> |                | <b>0.2622</b> | <b>0.2622</b> |          | <b>375.2641</b> | <b>375.2641</b> | <b>0.0442</b> |     | <b>376.1932</b> |

### 3.4 Architectural Coating - 2016

#### Unmitigated Construction Off-Site

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Worker       | 0.8872        | 1.1925        | 12.4574        | 0.0276        | 2.3250        | 0.0194        | 2.3444        | 0.6166         | 0.0179        | 0.6345        |          | 2,320.687<br>7         | 2,320.687<br>7         | 0.1269        |     | 2,323.353<br>4         |
| <b>Total</b> | <b>0.8872</b> | <b>1.1925</b> | <b>12.4574</b> | <b>0.0276</b> | <b>2.3250</b> | <b>0.0194</b> | <b>2.3444</b> | <b>0.6166</b>  | <b>0.0179</b> | <b>0.6345</b> |          | <b>2,320.687<br/>7</b> | <b>2,320.687<br/>7</b> | <b>0.1269</b> |     | <b>2,323.353<br/>4</b> |

#### Mitigated Construction On-Site

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Archit. Coating | 56.8377        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.4913         | 3.1630        | 2.5119        | 3.9600e-003        |               | 0.2622        | 0.2622        |                | 0.2622        | 0.2622        | 0.0000        | 375.2641        | 375.2641        | 0.0442        |     | 376.1932        |
| <b>Total</b>    | <b>57.3289</b> | <b>3.1630</b> | <b>2.5119</b> | <b>3.9600e-003</b> |               | <b>0.2622</b> | <b>0.2622</b> |                | <b>0.2622</b> | <b>0.2622</b> | <b>0.0000</b> | <b>375.2641</b> | <b>375.2641</b> | <b>0.0442</b> |     | <b>376.1932</b> |

### 3.4 Architectural Coating - 2016

#### Mitigated Construction Off-Site

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Worker       | 0.8872        | 1.1925        | 12.4574        | 0.0276        | 2.3250        | 0.0194        | 2.3444        | 0.6166         | 0.0179        | 0.6345        |          | 2,320.687<br>7         | 2,320.687<br>7         | 0.1269        |     | 2,323.353<br>4         |
| <b>Total</b> | <b>0.8872</b> | <b>1.1925</b> | <b>12.4574</b> | <b>0.0276</b> | <b>2.3250</b> | <b>0.0194</b> | <b>2.3444</b> | <b>0.6166</b>  | <b>0.0179</b> | <b>0.6345</b> |          | <b>2,320.687<br/>7</b> | <b>2,320.687<br/>7</b> | <b>0.1269</b> |     | <b>2,323.353<br/>4</b> |

### 3.5 Finish Grading - 2016

#### Unmitigated Construction On-Site

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category      | lb/day        |                |                |               |               |               |                |                |               |               | lb/day   |                        |                        |               |     |                        |
| Fugitive Dust |               |                |                |               | 8.6733        | 0.0000        | 8.6733         | 3.5965         | 0.0000        | 3.5965        |          |                        | 0.0000                 |               |     | 0.0000                 |
| Off-Road      | 7.2224        | 82.8580        | 52.1771        | 0.0698        |               | 3.9305        | 3.9305         |                | 3.6160        | 3.6160        |          | 7,252.450<br>1         | 7,252.450<br>1         | 2.1876        |     | 7,298.389<br>6         |
| <b>Total</b>  | <b>7.2224</b> | <b>82.8580</b> | <b>52.1771</b> | <b>0.0698</b> | <b>8.6733</b> | <b>3.9305</b> | <b>12.6038</b> | <b>3.5965</b>  | <b>3.6160</b> | <b>7.2125</b> |          | <b>7,252.450<br/>1</b> | <b>7,252.450<br/>1</b> | <b>2.1876</b> |     | <b>7,298.389<br/>6</b> |

**3.5 Finish Grading - 2016****Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Worker       | 0.0981        | 0.1319        | 1.3775        | 3.0500e-003        | 0.2571        | 2.1500e-003        | 0.2592        | 0.0682         | 1.9800e-003        | 0.0702        |          | 256.6145        | 256.6145        | 0.0140        |     | 256.9093        |
| <b>Total</b> | <b>0.0981</b> | <b>0.1319</b> | <b>1.3775</b> | <b>3.0500e-003</b> | <b>0.2571</b> | <b>2.1500e-003</b> | <b>0.2592</b> | <b>0.0682</b>  | <b>1.9800e-003</b> | <b>0.0702</b> |          | <b>256.6145</b> | <b>256.6145</b> | <b>0.0140</b> |     | <b>256.9093</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 3.3826        | 0.0000        | 3.3826        | 1.4026         | 0.0000        | 1.4026        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 3.8899        | 50.7823        | 41.7302        | 0.0698        |               | 2.3760        | 2.3760        |                | 2.2404        | 2.2404        | 0.0000        | 7,252.4501        | 7,252.4501        | 2.1876        |     | 7,298.3896        |
| <b>Total</b>  | <b>3.8899</b> | <b>50.7823</b> | <b>41.7302</b> | <b>0.0698</b> | <b>3.3826</b> | <b>2.3760</b> | <b>5.7586</b> | <b>1.4026</b>  | <b>2.2404</b> | <b>3.6430</b> | <b>0.0000</b> | <b>7,252.4501</b> | <b>7,252.4501</b> | <b>2.1876</b> |     | <b>7,298.3896</b> |

**3.5 Finish Grading - 2016****Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Worker       | 0.0981        | 0.1319        | 1.3775        | 3.0500e-003        | 0.2571        | 2.1500e-003        | 0.2592        | 0.0682         | 1.9800e-003        | 0.0702        |          | 256.6145        | 256.6145        | 0.0140        |     | 256.9093        |
| <b>Total</b> | <b>0.0981</b> | <b>0.1319</b> | <b>1.3775</b> | <b>3.0500e-003</b> | <b>0.2571</b> | <b>2.1500e-003</b> | <b>0.2592</b> | <b>0.0682</b>  | <b>1.9800e-003</b> | <b>0.0702</b> |          | <b>256.6145</b> | <b>256.6145</b> | <b>0.0140</b> |     | <b>256.9093</b> |

**3.6 Paving - 2016****Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 2.0898        | 22.3859        | 14.8176        | 0.0223        |               | 1.2610        | 1.2610        |                | 1.1601        | 1.1601        |          | 2,316.3767        | 2,316.3767        | 0.6987        |     | 2,331.0495        |
| Paving       | 0.0000        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>2.0898</b> | <b>22.3859</b> | <b>14.8176</b> | <b>0.0223</b> |               | <b>1.2610</b> | <b>1.2610</b> |                | <b>1.1601</b> | <b>1.1601</b> |          | <b>2,316.3767</b> | <b>2,316.3767</b> | <b>0.6987</b> |     | <b>2,331.0495</b> |



### 3.6 Paving - 2016

#### Unmitigated Construction Off-Site

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0640        | 0.0860        | 0.8984        | 1.9900e-003        | 0.1677        | 1.4000e-003        | 0.1691        | 0.0445         | 1.2900e-003        | 0.0458        |          | 167.3573        | 167.3573        | 9.1500e-003        |     | 167.5495        |
| <b>Total</b> | <b>0.0640</b> | <b>0.0860</b> | <b>0.8984</b> | <b>1.9900e-003</b> | <b>0.1677</b> | <b>1.4000e-003</b> | <b>0.1691</b> | <b>0.0445</b>  | <b>1.2900e-003</b> | <b>0.0458</b> |          | <b>167.3573</b> | <b>167.3573</b> | <b>9.1500e-003</b> |     | <b>167.5495</b> |

#### Mitigated Construction On-Site

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 2.0898        | 22.3859        | 14.8176        | 0.0223        |               | 1.2610        | 1.2610        |                | 1.1601        | 1.1601        | 0.0000        | 2,316.3767        | 2,316.3767        | 0.6987        |     | 2,331.0495        |
| Paving       | 0.0000        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>2.0898</b> | <b>22.3859</b> | <b>14.8176</b> | <b>0.0223</b> |               | <b>1.2610</b> | <b>1.2610</b> |                | <b>1.1601</b> | <b>1.1601</b> | <b>0.0000</b> | <b>2,316.3767</b> | <b>2,316.3767</b> | <b>0.6987</b> |     | <b>2,331.0495</b> |

### 3.6 Paving - 2016

#### Mitigated Construction Off-Site

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0640        | 0.0860        | 0.8984        | 1.9900e-003        | 0.1677        | 1.4000e-003        | 0.1691        | 0.0445         | 1.2900e-003        | 0.0458        |          | 167.3573        | 167.3573        | 9.1500e-003        |     | 167.5495        |
| <b>Total</b> | <b>0.0640</b> | <b>0.0860</b> | <b>0.8984</b> | <b>1.9900e-003</b> | <b>0.1677</b> | <b>1.4000e-003</b> | <b>0.1691</b> | <b>0.0445</b>  | <b>1.2900e-003</b> | <b>0.0458</b> |          | <b>167.3573</b> | <b>167.3573</b> | <b>9.1500e-003</b> |     | <b>167.5495</b> |

### 4.0 Operational Detail - Mobile

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#### 4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

|             | ROG     | NOx      | CO       | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2    | Total CO2    | CH4    | N2O | CO2e         |
|-------------|---------|----------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|--------------|--------------|--------|-----|--------------|
| Category    | lb/day  |          |          |        |               |              |            |                |               |             | lb/day   |              |              |        |     |              |
| Mitigated   | 65.0156 | 152.8596 | 622.1224 | 1.2742 | 88.7379       | 2.0450       | 90.7828    | 23.7084        | 1.8801        | 25.5886     |          | 112,080.6856 | 112,080.6856 | 4.7856 |     | 112,181.1841 |
| Unmitigated | 69.7537 | 188.9388 | 737.8370 | 1.6291 | 114.4398      | 2.5907       | 117.0306   | 30.5753        | 2.3821        | 32.9574     |          | 143,356.4547 | 143,356.4547 | 6.0056 |     | 143,482.5712 |

## 4.2 Trip Summary Information

| Land Use                          | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|-----------------------------------|-------------------------|----------|----------|-------------|------------|
|                                   | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Congregate Care (Assisted Living) | 731.58                  | 587.40   | 651.48   | 2,390,434   | 1,853,568  |
| Enclosed Parking Structure        | 0.00                    | 0.00     | 0.00     |             |            |
| Hospital                          | 3,623.20                | 2,279.20 | 2013.20  | 12,410,546  | 9,623,269  |
| Medical Office Building           | 13,368.10               | 3,315.20 | 573.50   | 26,208,791  | 20,322,576 |
| Retirement Community              | 804.96                  | 610.74   | 664.56   | 2,587,321   | 2,006,236  |
| Total                             | 18,527.84               | 6,792.54 | 3,902.74 | 43,597,092  | 33,805,650 |

## 4.3 Trip Type Information

| Land Use                          | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-----------------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                                   | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Congregate Care (Assisted Living) | 14.70      | 5.90       | 8.70        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| Enclosed Parking Structure        | 16.60      | 8.40       | 6.90        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Hospital                          | 16.60      | 8.40       | 6.90        | 64.90      | 16.10      | 19.00       | 73             | 25       | 2       |
| Medical Office Building           | 16.60      | 8.40       | 6.90        | 29.60      | 51.40      | 19.00       | 60             | 30       | 10      |
| Retirement Community              | 14.70      | 5.90       | 8.70        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.513363 | 0.060352 | 0.180146 | 0.139338 | 0.042155 | 0.006672 | 0.015739 | 0.030749 | 0.001928 | 0.002503 | 0.004351 | 0.000593 | 0.002111 |

## 5.0 Energy Detail

### 5.1 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

Exceed Title 24

|                        | ROG    | NOx     | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|------------------------|--------|---------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category               | lb/day |         |        |        |               |              |            |                |               |             | lb/day   |             |             |        |        |             |
| NaturalGas Mitigated   | 1.0847 | 9.7591  | 7.5383 | 0.0592 |               | 0.7494       | 0.7494     |                | 0.7494        | 0.7494      |          | 11,832.8178 | 11,832.8178 | 0.2268 | 0.2169 | 11,904.8304 |
| NaturalGas Unmitigated | 1.1914 | 10.7201 | 8.2858 | 0.0650 |               | 0.8231       | 0.8231     |                | 0.8231        | 0.8231      |          | 12,996.9912 | 12,996.9912 | 0.2491 | 0.2383 | 13,076.0888 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                                   | NaturalGas Use | ROG           | NOx            | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|-----------------------------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Land Use                          | kBTU/yr        | lb/day        |                |               |               |               |               |               |                |               |               | lb/day   |                    |                    |               |               |                    |
| Enclosed Parking Structure        | 0              | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Hospital                          | 88565.9        | 0.9551        | 8.6829         | 7.2937        | 0.0521        |               | 0.6599        | 0.6599        |                | 0.6599        | 0.6599        |          | 10,419.5197        | 10,419.5197        | 0.1997        | 0.1910        | 10,482.9312        |
| Medical Office Building           | 3081.64        | 0.0332        | 0.3021         | 0.2538        | 1.8100e-003   |               | 0.0230        | 0.0230        |                | 0.0230        | 0.0230        |          | 362.5463           | 362.5463           | 6.9500e-003   | 6.6500e-003   | 364.7527           |
| Retirement Community              | 11308.7        | 0.1220        | 1.0422         | 0.4435        | 6.6500e-003   |               | 0.0843        | 0.0843        |                | 0.0843        | 0.0843        |          | 1,330.4301         | 1,330.4301         | 0.0255        | 0.0244        | 1,338.5269         |
| Congregate Care (Assisted Living) | 7518.21        | 0.0811        | 0.6929         | 0.2948        | 4.4200e-003   |               | 0.0560        | 0.0560        |                | 0.0560        | 0.0560        |          | 884.4951           | 884.4951           | 0.0170        | 0.0162        | 889.8779           |
| <b>Total</b>                      |                | <b>1.1914</b> | <b>10.7201</b> | <b>8.2858</b> | <b>0.0650</b> |               | <b>0.8231</b> | <b>0.8231</b> |                | <b>0.8231</b> | <b>0.8231</b> |          | <b>12,996.9912</b> | <b>12,996.9912</b> | <b>0.2491</b> | <b>0.2383</b> | <b>13,076.0887</b> |

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

|                                   | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|-----------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Land Use                          | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                    |                    |               |               |                    |
| Hospital                          | 80.542         | 0.8686        | 7.8963        | 6.6329        | 0.0474        |               | 0.6001        | 0.6001        |                | 0.6001        | 0.6001        |          | 9,475.5249         | 9,475.5249         | 0.1816        | 0.1737        | 9,533.1914         |
| Medical Office Building           | 2.77348        | 0.0299        | 0.2719        | 0.2284        | 1.6300e-003   |               | 0.0207        | 0.0207        |                | 0.0207        | 0.0207        |          | 326.2917           | 326.2917           | 6.2500e-003   | 5.9800e-003   | 328.2775           |
| Retirement Community              | 10.367         | 0.1118        | 0.9554        | 0.4066        | 6.1000e-003   |               | 0.0772        | 0.0772        |                | 0.0772        | 0.0772        |          | 1,219.6444         | 1,219.6444         | 0.0234        | 0.0224        | 1,227.0670         |
| Congregate Care (Assisted Living) | 6.89653        | 0.0744        | 0.6356        | 0.2705        | 4.0600e-003   |               | 0.0514        | 0.0514        |                | 0.0514        | 0.0514        |          | 811.3568           | 811.3568           | 0.0156        | 0.0149        | 816.2945           |
| Enclosed Parking Structure        | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| <b>Total</b>                      |                | <b>1.0847</b> | <b>9.7591</b> | <b>7.5383</b> | <b>0.0592</b> |               | <b>0.7494</b> | <b>0.7494</b> |                | <b>0.7494</b> | <b>0.7494</b> |          | <b>11,832.8178</b> | <b>11,832.8178</b> | <b>0.2268</b> | <b>0.2169</b> | <b>11,904.8303</b> |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

|             | ROG     | NOx    | CO      | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|-------------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category    | lb/day  |        |         |             |               |              |            |                |               |             | lb/day   |             |             |        |        |             |
| Mitigated   | 60.0828 | 0.3830 | 32.0190 | 1.4300e-003 |               | 0.8397       | 0.8397     |                | 0.8327        | 0.8327      | 0.0000   | 10,661.9167 | 10,661.9167 | 0.2434 | 0.1945 | 10,727.3244 |
| Unmitigated | 70.5380 | 0.4940 | 42.3404 | 2.2100e-003 |               | 0.8994       | 0.8994     |                | 0.8923        | 0.8923      | 0.0000   | 10,684.6270 | 10,684.6270 | 0.2814 | 0.1945 | 10,750.8338 |

## 6.2 Area by SubCategory

### Unmitigated

|                       | ROG            | NOx           | CO             | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|-----------------------|----------------|---------------|----------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| SubCategory           | lb/day         |               |                |                    |               |               |               |                |               |               | lb/day        |                    |                    |               |               |                    |
| Architectural Coating | 14.4756        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                    | 0.0000             |               |               | 0.0000             |
| Consumer Products     | 53.7332        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                    | 0.0000             |               |               | 0.0000             |
| Hearth                | 0.9725         | 4.0000e-005   | 0.0531         | 0.0000             |               | 0.6719        | 0.6719        |                | 0.6649        | 0.6649        | 0.0000        | 10,609.4118        | 10,609.4118        | 0.2034        | 0.1945        | 10,673.9789        |
| Landscaping           | 1.3567         | 0.4940        | 42.2874        | 2.2100e-003        |               | 0.2275        | 0.2275        |                | 0.2275        | 0.2275        |               | 75.2152            | 75.2152            | 0.0781        |               | 76.8549            |
| <b>Total</b>          | <b>70.5380</b> | <b>0.4940</b> | <b>42.3404</b> | <b>2.2100e-003</b> |               | <b>0.8994</b> | <b>0.8994</b> |                | <b>0.8923</b> | <b>0.8923</b> | <b>0.0000</b> | <b>10,684.6270</b> | <b>10,684.6270</b> | <b>0.2814</b> | <b>0.1945</b> | <b>10,750.8338</b> |

## 6.2 Area by SubCategory

### Mitigated

|                       | ROG            | NOx           | CO             | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|-----------------------|----------------|---------------|----------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| SubCategory           | lb/day         |               |                |                    |               |               |               |                |               |               | lb/day        |                    |                    |               |               |                    |
| Architectural Coating | 4.6716         |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                    | 0.0000             |               |               | 0.0000             |
| Consumer Products     | 53.7332        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                    | 0.0000             |               |               | 0.0000             |
| Hearth                | 0.9725         | 4.0000e-005   | 0.0531         | 0.0000             |               | 0.6719        | 0.6719        |                | 0.6649        | 0.6649        | 0.0000        | 10,609.4118        | 10,609.4118        | 0.2034        | 0.1945        | 10,673.9789        |
| Landscaping           | 0.7054         | 0.3830        | 31.9659        | 1.4300e-003        |               | 0.1678        | 0.1678        |                | 0.1678        | 0.1678        |               | 52.5049            | 52.5049            | 0.0400        |               | 53.3455            |
| <b>Total</b>          | <b>60.0828</b> | <b>0.3830</b> | <b>32.0190</b> | <b>1.4300e-003</b> |               | <b>0.8397</b> | <b>0.8397</b> |                | <b>0.8327</b> | <b>0.8327</b> | <b>0.0000</b> | <b>10,661.9167</b> | <b>10,661.9167</b> | <b>0.2434</b> | <b>0.1945</b> | <b>10,727.3244</b> |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad



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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

## 10.0 Vegetation

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**Previously Approved Specific Plan Land Use**  
**South Coast AQMD Air District, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|--------------------------|--------|----------|-------------|--------------------|------------|
| Regional Shopping Center | 100.00 | 1000sqft | 2.30        | 100,000.00         | 0          |
| General Office Building  | 800.00 | 1000sqft | 18.37       | 800,000.00         | 0          |

### 1.2 Other Project Characteristics

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2016  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 533.36                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Source: CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - based on the Canyon Springs Healthcare Campus & Senior Living TIA

Construction Phase - construction emissions not modeled

Off-road Equipment - construction emissions not modeled

Vehicle Trips - Weekday TR baswed on the Project's TIA. Weekend TR based on the ITE Code 710 and 820

Energy Use - Title-24 Electricity Energy Intensity and Title-24 Natural Gas Energy Intensity were adjusted by 21.8% and 16.8% respectively, to reflect 2013 Title 24 requirements. Source: Impact Analysis California's 2013 Building Energy Efficiency Standards (CEC 2013)

| Table Name                | Column Name                | Default Value | New Value |
|---------------------------|----------------------------|---------------|-----------|
| tblConstructionPhase      | NumDays                    | 20.00         | 1.00      |
| tblEnergyUse              | T24E                       | 3.75          | 2.93      |
| tblEnergyUse              | T24E                       | 5.60          | 4.38      |
| tblEnergyUse              | T24NG                      | 3.65          | 3.04      |
| tblEnergyUse              | T24NG                      | 2.02          | 1.68      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 3.00          | 0.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00          | 0.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00          | 0.00      |
| tblProjectCharacteristics | CO2IntensityFactor         | 630.89        | 533.36    |
| tblProjectCharacteristics | OperationalYear            | 2014          | 2016      |
| tblVehicleTrips           | ST_TR                      | 2.37          | 2.46      |
| tblVehicleTrips           | SU_TR                      | 0.98          | 1.05      |
| tblVehicleTrips           | WD_TR                      | 11.01         | 7.97      |
| tblVehicleTrips           | WD_TR                      | 42.94         | 67.91     |

## 2.0 Emissions Summary

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## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]

## 2.2 Overall Operational

### Unmitigated Operational

|              | ROG            | NOx             | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|----------------|-----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day         |                 |                 |               |                |               |                |                |               |                | lb/day   |                    |                    |               |               |                    |
| Area         | 23.5436        | 9.0000e-004     | 0.0943          | 1.0000e-005   |                | 3.4000e-004   | 3.4000e-004    |                | 3.4000e-004   | 3.4000e-004    |          | 0.1970             | 0.1970             | 5.6000e-004   |               | 0.2087             |
| Energy       | 0.0777         | 0.7064          | 0.5934          | 4.2400e-003   |                | 0.0537        | 0.0537         |                | 0.0537        | 0.0537         |          | 847.7035           | 847.7035           | 0.0163        | 0.0155        | 852.8625           |
| Mobile       | 46.5927        | 118.9264        | 497.0583        | 1.1223        | 74.6955        | 1.6917        | 76.3872        | 19.9567        | 1.5554        | 21.5121        |          | 98,573.5609        | 98,573.5609        | 3.9496        |               | 98,656.5032        |
| <b>Total</b> | <b>70.2139</b> | <b>119.6337</b> | <b>497.7459</b> | <b>1.1265</b> | <b>74.6955</b> | <b>1.7457</b> | <b>76.4413</b> | <b>19.9567</b> | <b>1.6094</b> | <b>21.5661</b> |          | <b>99,421.4613</b> | <b>99,421.4613</b> | <b>3.9664</b> | <b>0.0155</b> | <b>99,509.5743</b> |

### Mitigated Operational

|              | ROG            | NOx             | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|----------------|-----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day         |                 |                 |               |                |               |                |                |               |                | lb/day   |                    |                    |               |               |                    |
| Area         | 23.5436        | 9.0000e-004     | 0.0943          | 1.0000e-005   |                | 3.4000e-004   | 3.4000e-004    |                | 3.4000e-004   | 3.4000e-004    |          | 0.1970             | 0.1970             | 5.6000e-004   |               | 0.2087             |
| Energy       | 0.0777         | 0.7064          | 0.5934          | 4.2400e-003   |                | 0.0537        | 0.0537         |                | 0.0537        | 0.0537         |          | 847.7035           | 847.7035           | 0.0163        | 0.0155        | 852.8625           |
| Mobile       | 46.5927        | 118.9264        | 497.0583        | 1.1223        | 74.6955        | 1.6917        | 76.3872        | 19.9567        | 1.5554        | 21.5121        |          | 98,573.5609        | 98,573.5609        | 3.9496        |               | 98,656.5032        |
| <b>Total</b> | <b>70.2139</b> | <b>119.6337</b> | <b>497.7459</b> | <b>1.1265</b> | <b>74.6955</b> | <b>1.7457</b> | <b>76.4413</b> | <b>19.9567</b> | <b>1.6094</b> | <b>21.5661</b> |          | <b>99,421.4613</b> | <b>99,421.4613</b> | <b>3.9664</b> | <b>0.0155</b> | <b>99,509.5743</b> |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

### 3.0 Construction Detail

#### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|------------|------------|------------|----------|---------------|----------|-------------------|
| 1            | Demolition | Demolition | 1/1/2016   | 1/1/2016 | 5             | 1        |                   |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

| Phase Name | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|------------|--------------------------|--------|-------------|-------------|-------------|
| Demolition | Excavators               | 0      | 8.00        | 162         | 0.38        |
| Demolition | Concrete/Industrial Saws | 0      | 8.00        | 81          | 0.73        |
| Demolition | Rubber Tired Dozers      | 0      | 8.00        | 255         | 0.40        |

#### Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition | 0                       | 0.00               | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

**3.2 Demolition - 2016****Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Off-Road     | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**3.2 Demolition - 2016****Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day        |               |               |               |     |               |
| Off-Road     | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**4.0 Operational Detail - Mobile**



#### 4.1 Mitigation Measures Mobile

|             | ROG     | NOx      | CO       | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O | CO2e        |
|-------------|---------|----------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|-----|-------------|
| Category    | lb/day  |          |          |        |               |              |            |                |               |             | lb/day   |             |             |        |     |             |
| Mitigated   | 46.5927 | 118.9264 | 497.0583 | 1.1223 | 74.6955       | 1.6917       | 76.3872    | 19.9567        | 1.5554        | 21.5121     |          | 98,573.5609 | 98,573.5609 | 3.9496 |     | 98,656.5032 |
| Unmitigated | 46.5927 | 118.9264 | 497.0583 | 1.1223 | 74.6955       | 1.6917       | 76.3872    | 19.9567        | 1.5554        | 21.5121     |          | 98,573.5609 | 98,573.5609 | 3.9496 |     | 98,656.5032 |

#### 4.2 Trip Summary Information

| Land Use                 | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|--------------------------|-------------------------|----------|----------|-------------|------------|
|                          | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| General Office Building  | 6,376.00                | 1,968.00 | 840.00   | 15,963,720  | 15,963,720 |
| Regional Shopping Center | 6,791.00                | 4,997.00 | 2524.00  | 12,815,159  | 12,815,159 |
| Total                    | 13,167.00               | 6,965.00 | 3,364.00 | 28,778,879  | 28,778,879 |

#### 4.3 Trip Type Information

| Land Use                 | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| General Office Building  | 16.60      | 8.40       | 6.90        | 33.00      | 48.00      | 19.00       | 77             | 19       | 4       |
| Regional Shopping Center | 16.60      | 8.40       | 6.90        | 16.30      | 64.70      | 19.00       | 54             | 35       | 11      |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.513363 | 0.060352 | 0.180146 | 0.139338 | 0.042155 | 0.006672 | 0.015739 | 0.030749 | 0.001928 | 0.002503 | 0.004351 | 0.000593 | 0.002111 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

|                        | ROG    | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|------------------------|--------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category               | lb/day |        |        |             |               |              |            |                |               |             | lb/day   |           |           |        |        |          |
| NaturalGas Mitigated   | 0.0777 | 0.7064 | 0.5934 | 4.2400e-003 |               | 0.0537       | 0.0537     |                | 0.0537        | 0.0537      |          | 847.7035  | 847.7035  | 0.0163 | 0.0155 | 852.8625 |
| NaturalGas Unmitigated | 0.0777 | 0.7064 | 0.5934 | 4.2400e-003 |               | 0.0537       | 0.0537     |                | 0.0537        | 0.0537      |          | 847.7035  | 847.7035  | 0.0163 | 0.0155 | 852.8625 |

### 5.2 Energy by Land Use - NaturalGas

#### Unmitigated

|                          | NaturalGas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Land Use                 | kBTU/yr        | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| General Office Building  | 6663.01        | 0.0719        | 0.6532        | 0.5487        | 3.9200e-003        |               | 0.0497        | 0.0497        |                | 0.0497        | 0.0497        |          | 783.8840        | 783.8840        | 0.0150        | 0.0144        | 788.6546        |
| Regional Shopping Center | 542.466        | 5.8500e-003   | 0.0532        | 0.0447        | 3.2000e-004        |               | 4.0400e-003   | 4.0400e-003   |                | 4.0400e-003   | 4.0400e-003   |          | 63.8195         | 63.8195         | 1.2200e-003   | 1.1700e-003   | 64.2079         |
| <b>Total</b>             |                | <b>0.0777</b> | <b>0.7064</b> | <b>0.5934</b> | <b>4.2400e-003</b> |               | <b>0.0537</b> | <b>0.0537</b> |                | <b>0.0537</b> | <b>0.0537</b> |          | <b>847.7035</b> | <b>847.7035</b> | <b>0.0162</b> | <b>0.0155</b> | <b>852.8625</b> |

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

|                          | NaturalGas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Land Use                 | kBTU/yr        | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| General Office Building  | 6.66301        | 0.0719        | 0.6532        | 0.5487        | 3.9200e-003        |               | 0.0497        | 0.0497        |                | 0.0497        | 0.0497        |          | 783.8840        | 783.8840        | 0.0150        | 0.0144        | 788.6546        |
| Regional Shopping Center | 0.542466       | 5.8500e-003   | 0.0532        | 0.0447        | 3.2000e-004        |               | 4.0400e-003   | 4.0400e-003   |                | 4.0400e-003   | 4.0400e-003   |          | 63.8195         | 63.8195         | 1.2200e-003   | 1.1700e-003   | 64.2079         |
| <b>Total</b>             |                | <b>0.0777</b> | <b>0.7064</b> | <b>0.5934</b> | <b>4.2400e-003</b> |               | <b>0.0537</b> | <b>0.0537</b> |                | <b>0.0537</b> | <b>0.0537</b> |          | <b>847.7035</b> | <b>847.7035</b> | <b>0.0162</b> | <b>0.0155</b> | <b>852.8625</b> |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

|             | ROG     | NOx         | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O | CO2e   |
|-------------|---------|-------------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-----|--------|
| Category    | lb/day  |             |        |             |               |              |             |                |               |             | lb/day   |           |           |             |     |        |
| Mitigated   | 23.5436 | 9.0000e-004 | 0.0943 | 1.0000e-005 |               | 3.4000e-004  | 3.4000e-004 |                | 3.4000e-004   | 3.4000e-004 |          | 0.1970    | 0.1970    | 5.6000e-004 |     | 0.2087 |
| Unmitigated | 23.5436 | 9.0000e-004 | 0.0943 | 1.0000e-005 |               | 3.4000e-004  | 3.4000e-004 |                | 3.4000e-004   | 3.4000e-004 |          | 0.1970    | 0.1970    | 5.6000e-004 |     | 0.2087 |

## 6.2 Area by SubCategory

### Unmitigated

|                       | ROG            | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2     | Total CO2     | CH4                | N2O | CO2e          |
|-----------------------|----------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|---------------|---------------|--------------------|-----|---------------|
| SubCategory           | lb/day         |                    |               |                    |               |                    |                    |                |                    |                    | lb/day   |               |               |                    |     |               |
| Architectural Coating | 5.7144         |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 17.8200        |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 9.1900e-003    | 9.0000e-004        | 0.0943        | 1.0000e-005        |               | 3.4000e-004        | 3.4000e-004        |                | 3.4000e-004        | 3.4000e-004        |          | 0.1970        | 0.1970        | 5.6000e-004        |     | 0.2087        |
| <b>Total</b>          | <b>23.5436</b> | <b>9.0000e-004</b> | <b>0.0943</b> | <b>1.0000e-005</b> |               | <b>3.4000e-004</b> | <b>3.4000e-004</b> |                | <b>3.4000e-004</b> | <b>3.4000e-004</b> |          | <b>0.1970</b> | <b>0.1970</b> | <b>5.6000e-004</b> |     | <b>0.2087</b> |

### Mitigated

|                       | ROG            | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2     | Total CO2     | CH4                | N2O | CO2e          |
|-----------------------|----------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|---------------|---------------|--------------------|-----|---------------|
| SubCategory           | lb/day         |                    |               |                    |               |                    |                    |                |                    |                    | lb/day   |               |               |                    |     |               |
| Architectural Coating | 5.7144         |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 17.8200        |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 9.1900e-003    | 9.0000e-004        | 0.0943        | 1.0000e-005        |               | 3.4000e-004        | 3.4000e-004        |                | 3.4000e-004        | 3.4000e-004        |          | 0.1970        | 0.1970        | 5.6000e-004        |     | 0.2087        |
| <b>Total</b>          | <b>23.5436</b> | <b>9.0000e-004</b> | <b>0.0943</b> | <b>1.0000e-005</b> |               | <b>3.4000e-004</b> | <b>3.4000e-004</b> |                | <b>3.4000e-004</b> | <b>3.4000e-004</b> |          | <b>0.1970</b> | <b>0.1970</b> | <b>5.6000e-004</b> |     | <b>0.2087</b> |

## 7.0 Water Detail

**7.1 Mitigation Measures Water****8.0 Waste Detail**

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**8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Vegetation**

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**Previously Approved Specific Plan Land Use**  
**South Coast AQMD Air District, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|--------------------------|--------|----------|-------------|--------------------|------------|
| Regional Shopping Center | 100.00 | 1000sqft | 2.30        | 100,000.00         | 0          |
| General Office Building  | 800.00 | 1000sqft | 18.37       | 800,000.00         | 0          |

### 1.2 Other Project Characteristics

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2016  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 533.36                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Source: CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - based on the Canyon Springs Healthcare Campus & Senior Living TIA

Construction Phase - construction emissions not modeled

Off-road Equipment - construction emissions not modeled

Vehicle Trips - Weekday TR baswed on the Project's TIA. Weekend TR based on the ITE Code 710 and 820

Energy Use - Title-24 Electricity Energy Intensity and Title-24 Natural Gas Energy Intensity were adjusted by 21.8% and 16.8% respectively, to reflect 2013 Title 24 requirements. Source: Impact Analysis California's 2013 Building Energy Efficiency Standards (CEC 2013)

| Table Name                | Column Name                | Default Value | New Value |
|---------------------------|----------------------------|---------------|-----------|
| tblConstructionPhase      | NumDays                    | 20.00         | 1.00      |
| tblEnergyUse              | T24E                       | 3.75          | 2.93      |
| tblEnergyUse              | T24E                       | 5.60          | 4.38      |
| tblEnergyUse              | T24NG                      | 3.65          | 3.04      |
| tblEnergyUse              | T24NG                      | 2.02          | 1.68      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 3.00          | 0.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00          | 0.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00          | 0.00      |
| tblProjectCharacteristics | CO2IntensityFactor         | 630.89        | 533.36    |
| tblProjectCharacteristics | OperationalYear            | 2014          | 2016      |
| tblVehicleTrips           | ST_TR                      | 2.37          | 2.46      |
| tblVehicleTrips           | SU_TR                      | 0.98          | 1.05      |
| tblVehicleTrips           | WD_TR                      | 11.01         | 7.97      |
| tblVehicleTrips           | WD_TR                      | 42.94         | 67.91     |

## 2.0 Emissions Summary

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## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]



## 2.2 Overall Operational

### Unmitigated Operational

|              | ROG            | NOx             | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|----------------|-----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day         |                 |                 |               |                |               |                |                |               |                | lb/day   |                    |                    |               |               |                    |
| Area         | 23.5436        | 9.0000e-004     | 0.0943          | 1.0000e-005   |                | 3.4000e-004   | 3.4000e-004    |                | 3.4000e-004   | 3.4000e-004    |          | 0.1970             | 0.1970             | 5.6000e-004   |               | 0.2087             |
| Energy       | 0.0777         | 0.7064          | 0.5934          | 4.2400e-003   |                | 0.0537        | 0.0537         |                | 0.0537        | 0.0537         |          | 847.7035           | 847.7035           | 0.0163        | 0.0155        | 852.8625           |
| Mobile       | 48.3485        | 124.9612        | 494.4916        | 1.0662        | 74.6955        | 1.7003        | 76.3958        | 19.9567        | 1.5633        | 21.5200        |          | 93,807.1122        | 93,807.1122        | 3.9531        |               | 93,890.1275        |
| <b>Total</b> | <b>71.9698</b> | <b>125.6685</b> | <b>495.1793</b> | <b>1.0704</b> | <b>74.6955</b> | <b>1.7543</b> | <b>76.4499</b> | <b>19.9567</b> | <b>1.6173</b> | <b>21.5740</b> |          | <b>94,655.0126</b> | <b>94,655.0126</b> | <b>3.9699</b> | <b>0.0155</b> | <b>94,743.1986</b> |

### Mitigated Operational

|              | ROG            | NOx             | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|----------------|-----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day         |                 |                 |               |                |               |                |                |               |                | lb/day   |                    |                    |               |               |                    |
| Area         | 23.5436        | 9.0000e-004     | 0.0943          | 1.0000e-005   |                | 3.4000e-004   | 3.4000e-004    |                | 3.4000e-004   | 3.4000e-004    |          | 0.1970             | 0.1970             | 5.6000e-004   |               | 0.2087             |
| Energy       | 0.0777         | 0.7064          | 0.5934          | 4.2400e-003   |                | 0.0537        | 0.0537         |                | 0.0537        | 0.0537         |          | 847.7035           | 847.7035           | 0.0163        | 0.0155        | 852.8625           |
| Mobile       | 48.3485        | 124.9612        | 494.4916        | 1.0662        | 74.6955        | 1.7003        | 76.3958        | 19.9567        | 1.5633        | 21.5200        |          | 93,807.1122        | 93,807.1122        | 3.9531        |               | 93,890.1275        |
| <b>Total</b> | <b>71.9698</b> | <b>125.6685</b> | <b>495.1793</b> | <b>1.0704</b> | <b>74.6955</b> | <b>1.7543</b> | <b>76.4499</b> | <b>19.9567</b> | <b>1.6173</b> | <b>21.5740</b> |          | <b>94,655.0126</b> | <b>94,655.0126</b> | <b>3.9699</b> | <b>0.0155</b> | <b>94,743.1986</b> |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

### 3.0 Construction Detail

#### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|------------|------------|------------|----------|---------------|----------|-------------------|
| 1            | Demolition | Demolition | 1/1/2016   | 1/1/2016 | 5             | 1        |                   |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

| Phase Name | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|------------|--------------------------|--------|-------------|-------------|-------------|
| Demolition | Excavators               | 0      | 8.00        | 162         | 0.38        |
| Demolition | Concrete/Industrial Saws | 0      | 8.00        | 81          | 0.73        |
| Demolition | Rubber Tired Dozers      | 0      | 8.00        | 255         | 0.40        |

#### Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition | 0                       | 0.00               | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

**3.2 Demolition - 2016****Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Off-Road     | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

### 3.2 Demolition - 2016

#### Mitigated Construction On-Site

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day        |               |               |               |     |               |
| Off-Road     | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

#### Mitigated Construction Off-Site

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

### 4.0 Operational Detail - Mobile

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#### 4.1 Mitigation Measures Mobile

|             | ROG     | NOx      | CO       | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4    | N2O | CO2e            |
|-------------|---------|----------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|--------|-----|-----------------|
| Category    | lb/day  |          |          |        |               |              |            |                |               |             | lb/day   |                 |                 |        |     |                 |
| Mitigated   | 48.3485 | 124.9612 | 494.4916 | 1.0662 | 74.6955       | 1.7003       | 76.3958    | 19.9567        | 1.5633        | 21.5200     |          | 93,807.11<br>22 | 93,807.11<br>22 | 3.9531 |     | 93,890.12<br>75 |
| Unmitigated | 48.3485 | 124.9612 | 494.4916 | 1.0662 | 74.6955       | 1.7003       | 76.3958    | 19.9567        | 1.5633        | 21.5200     |          | 93,807.11<br>22 | 93,807.11<br>22 | 3.9531 |     | 93,890.12<br>75 |

#### 4.2 Trip Summary Information

| Land Use                 | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|--------------------------|-------------------------|----------|----------|-------------|------------|
|                          | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| General Office Building  | 6,376.00                | 1,968.00 | 840.00   | 15,963,720  | 15,963,720 |
| Regional Shopping Center | 6,791.00                | 4,997.00 | 2524.00  | 12,815,159  | 12,815,159 |
| Total                    | 13,167.00               | 6,965.00 | 3,364.00 | 28,778,879  | 28,778,879 |

#### 4.3 Trip Type Information

| Land Use                 | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| General Office Building  | 16.60      | 8.40       | 6.90        | 33.00      | 48.00      | 19.00       | 77             | 19       | 4       |
| Regional Shopping Center | 16.60      | 8.40       | 6.90        | 16.30      | 64.70      | 19.00       | 54             | 35       | 11      |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.513363 | 0.060352 | 0.180146 | 0.139338 | 0.042155 | 0.006672 | 0.015739 | 0.030749 | 0.001928 | 0.002503 | 0.004351 | 0.000593 | 0.002111 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

|                        | ROG    | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|------------------------|--------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category               | lb/day |        |        |             |               |              |            |                |               |             | lb/day   |           |           |        |        |          |
| NaturalGas Mitigated   | 0.0777 | 0.7064 | 0.5934 | 4.2400e-003 |               | 0.0537       | 0.0537     |                | 0.0537        | 0.0537      |          | 847.7035  | 847.7035  | 0.0163 | 0.0155 | 852.8625 |
| NaturalGas Unmitigated | 0.0777 | 0.7064 | 0.5934 | 4.2400e-003 |               | 0.0537       | 0.0537     |                | 0.0537        | 0.0537      |          | 847.7035  | 847.7035  | 0.0163 | 0.0155 | 852.8625 |

### 5.2 Energy by Land Use - NaturalGas

#### Unmitigated

|                          | NaturalGas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Land Use                 | kBTU/yr        | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| General Office Building  | 6663.01        | 0.0719        | 0.6532        | 0.5487        | 3.9200e-003        |               | 0.0497        | 0.0497        |                | 0.0497        | 0.0497        |          | 783.8840        | 783.8840        | 0.0150        | 0.0144        | 788.6546        |
| Regional Shopping Center | 542.466        | 5.8500e-003   | 0.0532        | 0.0447        | 3.2000e-004        |               | 4.0400e-003   | 4.0400e-003   |                | 4.0400e-003   | 4.0400e-003   |          | 63.8195         | 63.8195         | 1.2200e-003   | 1.1700e-003   | 64.2079         |
| <b>Total</b>             |                | <b>0.0777</b> | <b>0.7064</b> | <b>0.5934</b> | <b>4.2400e-003</b> |               | <b>0.0537</b> | <b>0.0537</b> |                | <b>0.0537</b> | <b>0.0537</b> |          | <b>847.7035</b> | <b>847.7035</b> | <b>0.0162</b> | <b>0.0155</b> | <b>852.8625</b> |

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

|                          | NaturalGas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Land Use                 | kBTU/yr        | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| General Office Building  | 6.66301        | 0.0719        | 0.6532        | 0.5487        | 3.9200e-003        |               | 0.0497        | 0.0497        |                | 0.0497        | 0.0497        |          | 783.8840        | 783.8840        | 0.0150        | 0.0144        | 788.6546        |
| Regional Shopping Center | 0.542466       | 5.8500e-003   | 0.0532        | 0.0447        | 3.2000e-004        |               | 4.0400e-003   | 4.0400e-003   |                | 4.0400e-003   | 4.0400e-003   |          | 63.8195         | 63.8195         | 1.2200e-003   | 1.1700e-003   | 64.2079         |
| <b>Total</b>             |                | <b>0.0777</b> | <b>0.7064</b> | <b>0.5934</b> | <b>4.2400e-003</b> |               | <b>0.0537</b> | <b>0.0537</b> |                | <b>0.0537</b> | <b>0.0537</b> |          | <b>847.7035</b> | <b>847.7035</b> | <b>0.0162</b> | <b>0.0155</b> | <b>852.8625</b> |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

|             | ROG     | NOx         | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O | CO2e   |
|-------------|---------|-------------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-----|--------|
| Category    | lb/day  |             |        |             |               |              |             |                |               |             | lb/day   |           |           |             |     |        |
| Mitigated   | 23.5436 | 9.0000e-004 | 0.0943 | 1.0000e-005 |               | 3.4000e-004  | 3.4000e-004 |                | 3.4000e-004   | 3.4000e-004 |          | 0.1970    | 0.1970    | 5.6000e-004 |     | 0.2087 |
| Unmitigated | 23.5436 | 9.0000e-004 | 0.0943 | 1.0000e-005 |               | 3.4000e-004  | 3.4000e-004 |                | 3.4000e-004   | 3.4000e-004 |          | 0.1970    | 0.1970    | 5.6000e-004 |     | 0.2087 |

## 6.2 Area by SubCategory

### Unmitigated

|                       | ROG            | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2     | Total CO2     | CH4                | N2O | CO2e          |
|-----------------------|----------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|---------------|---------------|--------------------|-----|---------------|
| SubCategory           | lb/day         |                    |               |                    |               |                    |                    |                |                    |                    | lb/day   |               |               |                    |     |               |
| Architectural Coating | 5.7144         |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 17.8200        |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 9.1900e-003    | 9.0000e-004        | 0.0943        | 1.0000e-005        |               | 3.4000e-004        | 3.4000e-004        |                | 3.4000e-004        | 3.4000e-004        |          | 0.1970        | 0.1970        | 5.6000e-004        |     | 0.2087        |
| <b>Total</b>          | <b>23.5436</b> | <b>9.0000e-004</b> | <b>0.0943</b> | <b>1.0000e-005</b> |               | <b>3.4000e-004</b> | <b>3.4000e-004</b> |                | <b>3.4000e-004</b> | <b>3.4000e-004</b> |          | <b>0.1970</b> | <b>0.1970</b> | <b>5.6000e-004</b> |     | <b>0.2087</b> |

### Mitigated

|                       | ROG            | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2     | Total CO2     | CH4                | N2O | CO2e          |
|-----------------------|----------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|---------------|---------------|--------------------|-----|---------------|
| SubCategory           | lb/day         |                    |               |                    |               |                    |                    |                |                    |                    | lb/day   |               |               |                    |     |               |
| Architectural Coating | 5.7144         |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 17.8200        |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 9.1900e-003    | 9.0000e-004        | 0.0943        | 1.0000e-005        |               | 3.4000e-004        | 3.4000e-004        |                | 3.4000e-004        | 3.4000e-004        |          | 0.1970        | 0.1970        | 5.6000e-004        |     | 0.2087        |
| <b>Total</b>          | <b>23.5436</b> | <b>9.0000e-004</b> | <b>0.0943</b> | <b>1.0000e-005</b> |               | <b>3.4000e-004</b> | <b>3.4000e-004</b> |                | <b>3.4000e-004</b> | <b>3.4000e-004</b> |          | <b>0.1970</b> | <b>0.1970</b> | <b>5.6000e-004</b> |     | <b>0.2087</b> |

## 7.0 Water Detail



**7.1 Mitigation Measures Water****8.0 Waste Detail**

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**8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Vegetation**

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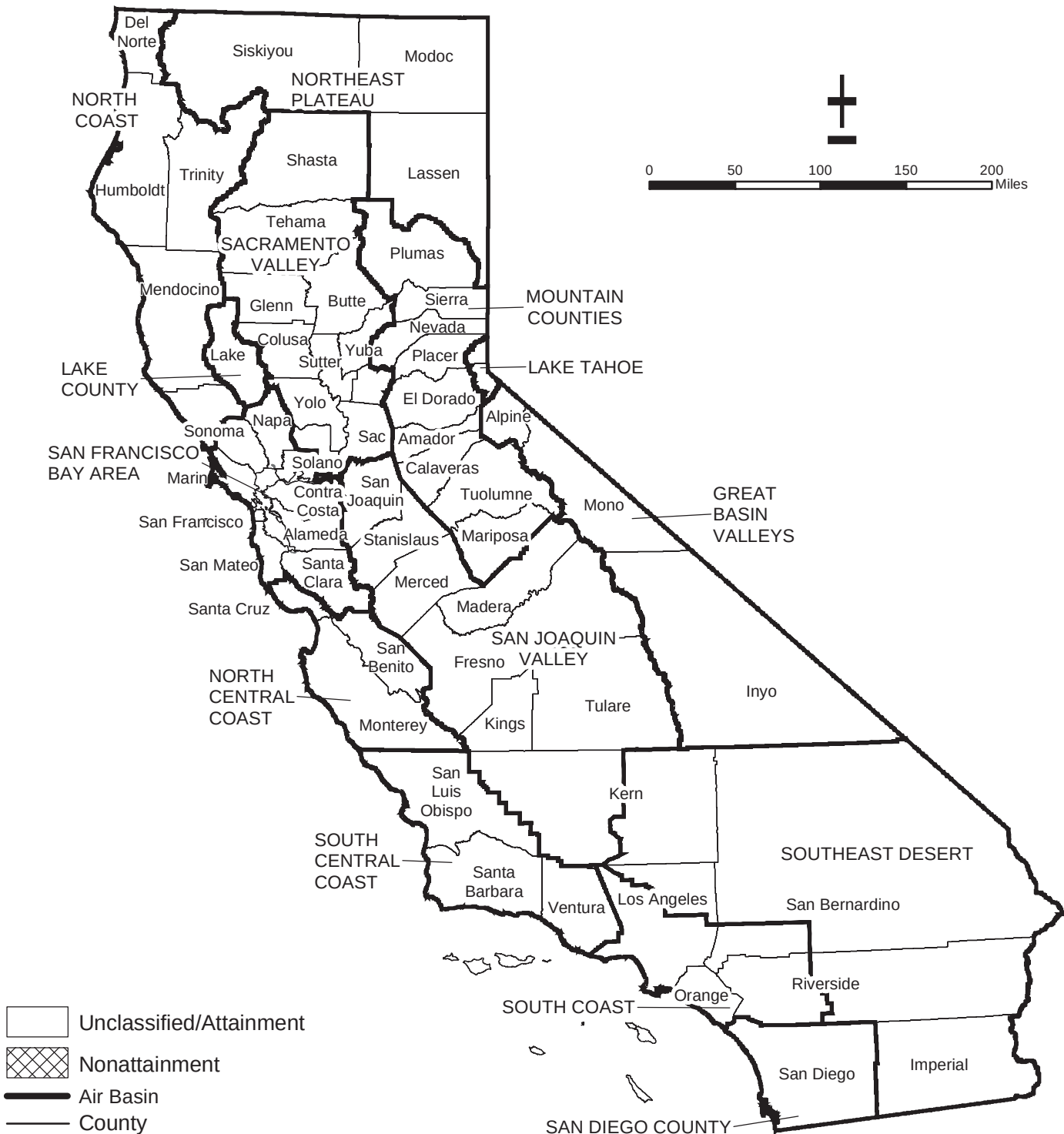
## **APPENDIX 3.2:**

### **STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS**

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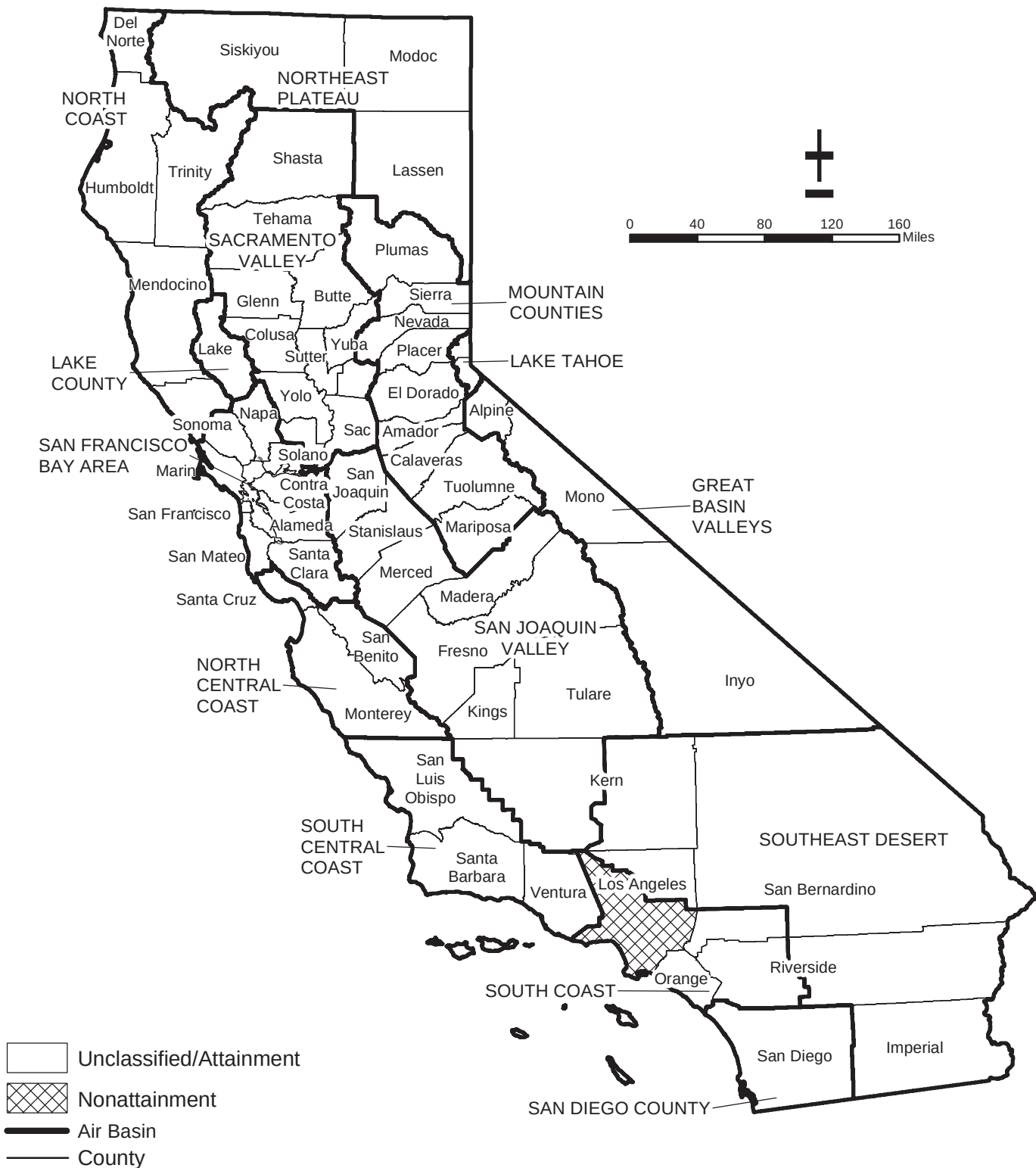
# Area Designations for National Ambient Air Quality Standards

## CARBON MONOXIDE



# Area Designations for National Ambient Air Quality Standards

## LEAD



# Area Designations for National Ambient Air Quality Standards

## NITROGEN DIOXIDE



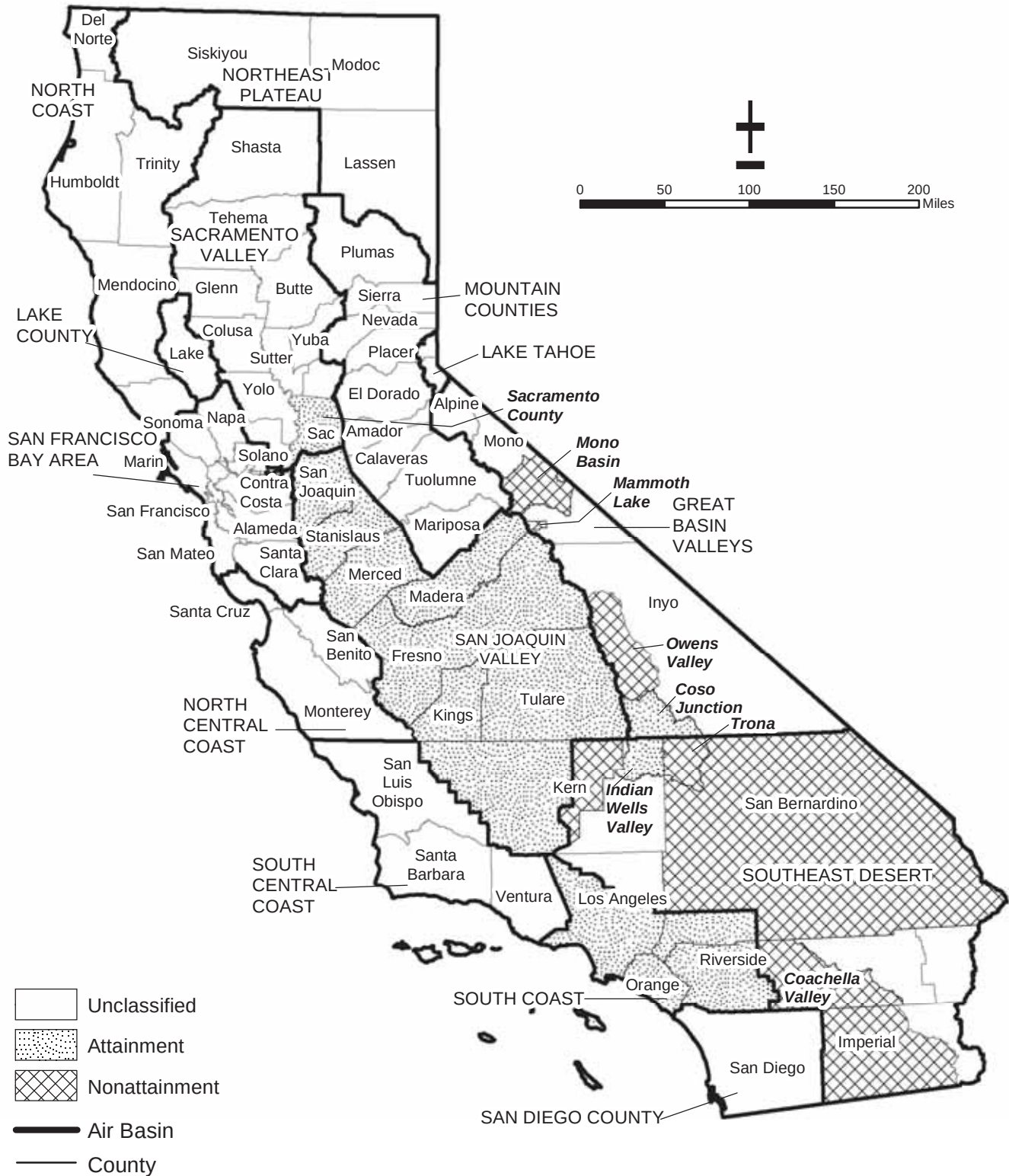
# Area Designations for National Ambient Air Quality Standards 8-HOUR OZONE





# Area Designations for National Ambient Air Quality Standards

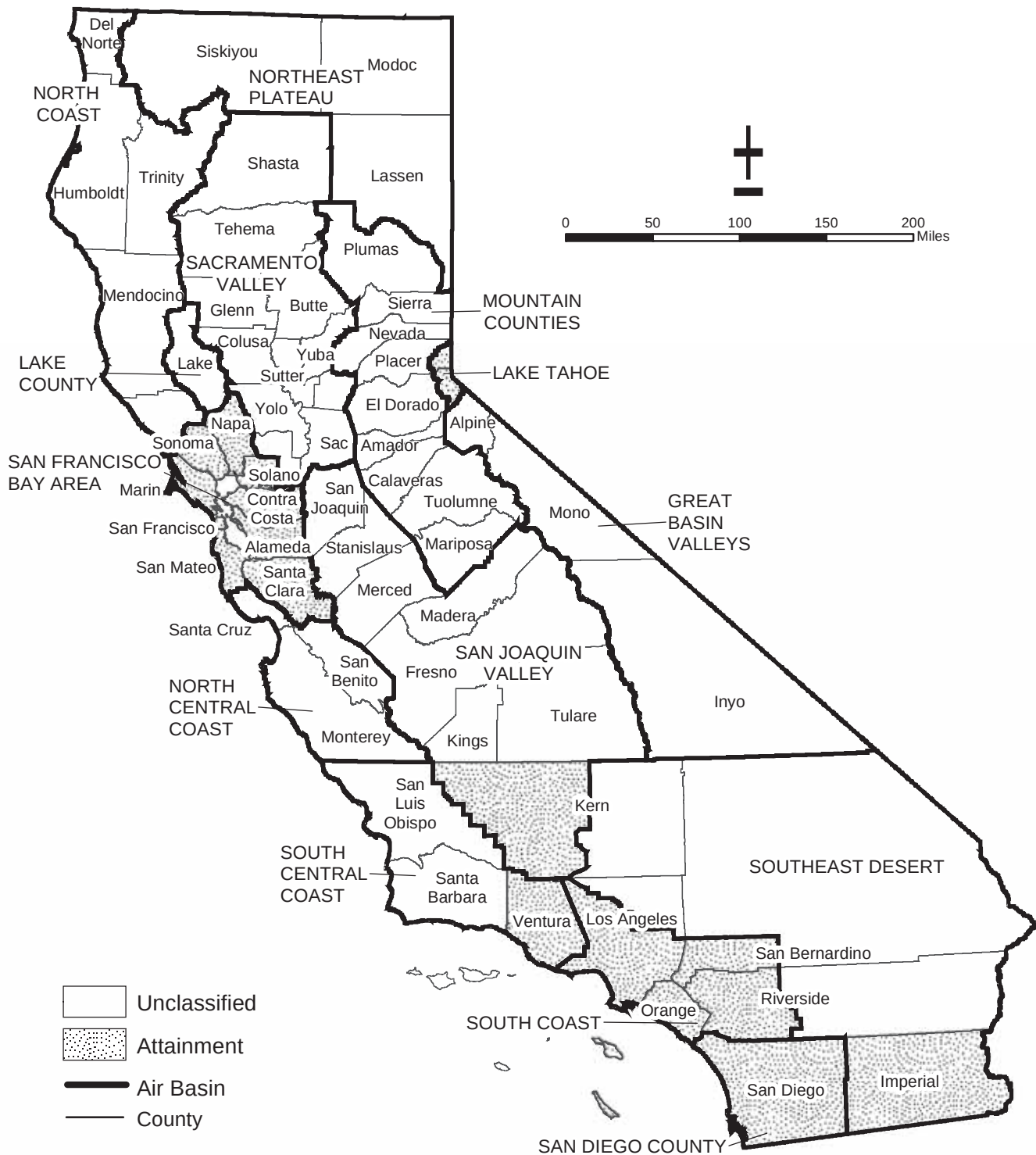
## PM10



# Area Designations for National Ambient Air Quality Standards PM<sub>2.5</sub>



# Area Designations for National Ambient Air Quality Standards SULFUR DIOXIDE



# Area Designations for State Ambient Air Quality Standards

## CARBON MONOXIDE





# Area Designations for State Ambient Air Quality Standards

## LEAD



# Area Designations for State Ambient Air Quality Standards

## NITROGEN DIOXIDE





# Area Designations for State Ambient Air Quality Standards OZONE



# Area Designations for State Ambient Air Quality Standards

## PM10





# Area Designations for State Ambient Air Quality Standards PM<sub>2.5</sub>



# Area Designations for State Ambient Air Quality Standards

## SULFUR DIOXIDE



## **APPENDIX 3.3:**

### **SCREEN3 CALCULATIONS**

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## **SCREEN3 CALCULATIONS:**

### **CONSTRUCTION LSTs**

# Rough Grading Unmitigated

## Rough Grading Unmitigated

NO<sub>2</sub><sup>1</sup>

| Downwind Distance | NO <sub>2</sub> /NO <sub>x</sub> Ratio | SCREEN3 OP | NO <sub>2</sub> Concentration (ug/m3) | NO <sub>2</sub> Concentration (ppm) |
|-------------------|----------------------------------------|------------|---------------------------------------|-------------------------------------|
| 20                | 0.05                                   | 287.900    | 15.26                                 | 0.0081                              |
| 50                | 0.06                                   | 352.000    | 20.77                                 | 0.0111                              |
| 70                | 0.06                                   | 390.000    | 24.96                                 | 0.0133                              |
| 100               | 0.07                                   | 440.700    | 32.61                                 | 0.0174                              |
| 200               | 0.11                                   | 349.800    | 39.88                                 | 0.0212                              |
| 500               | 0.26                                   | 121.700    | 31.40                                 | 0.0167                              |
| 1000              | 0.47                                   | 47.990     | 22.41                                 | 0.0119                              |
| 2000              | 0.75                                   | 18.490     | 13.87                                 | 0.0074                              |
| 3000              | 0.90                                   | 10.830     | 9.75                                  | 0.0052                              |
| 4000              | 0.98                                   | 7.526      | 7.36                                  | 0.0039                              |
| 5000              | 1.00                                   | 5.722      | 5.72                                  | 0.0030                              |

|    |                |               |                     |                       |
|----|----------------|---------------|---------------------|-----------------------|
| CO | Pounds Per day | Grams Per day | Grams Per Second    | Meters squared (area) |
|    | 88.06          | 39943.344     | 1.38692167          | 24,281.139            |
|    |                |               | Screen 3 Output     |                       |
|    |                |               | 9.25E+06            |                       |
|    |                |               | FINAL Concentration |                       |
|    |                |               | 5.28E+02            |                       |
|    |                |               | 0.459 ppm (1-hour)  |                       |
|    |                |               | 0.333 ppm (8-hour)  |                       |

|                  |                |               |                     |                       |
|------------------|----------------|---------------|---------------------|-----------------------|
| PM <sub>10</sub> | Pounds Per day | Grams Per day | Grams Per Second    | Meters squared (area) |
|                  | 17.83          | 8087.552      | 0.2808              | 24,281.139            |
|                  |                |               | Screen 3 Output     |                       |
|                  |                |               | 1.66E+07            |                       |
|                  |                |               | FINAL Concentration |                       |
|                  |                |               | 1.92E+02            |                       |

PM10 Calculation

$$C_x = 0.9403 C_o e^{-0.0462 x}$$

$$C_o^2 = 2.89E+01$$

$$e = 0.3150575$$

$$x \text{ (meters)} = 25$$

$$C_x = 8.55$$

$$\text{Total PM}_{10} = 8.55E+00$$

|                   |                |               |                     |                       |
|-------------------|----------------|---------------|---------------------|-----------------------|
| PM <sub>2.5</sub> | Pounds Per day | Grams Per day | Grams Per Second    | Meters squared (area) |
|                   | 9.87           | 4476.9567     | 0.1554              | 24,281.139            |
|                   |                |               | Screen 3 Output     |                       |
|                   |                |               | 1.66E+07            |                       |
|                   |                |               | FINAL Concentration |                       |
|                   |                |               | 1.07E+02            |                       |

PM2.5 Calculation

$$C_x = 0.9403 C_o e^{-0.0462 x}$$

$$C_o^2 = 1.60E+01$$

$$e = 0.3150575$$

$$x \text{ (meters)} = 25$$

$$C_x = 4.73$$

$$\text{Total PM}_{2.5} = 4.73E+00$$

<sup>1</sup> Per SCAQMD LST Handbook (Table 2-4) NQ to NO<sub>2</sub> conversion factor

<sup>2</sup> Conversion factor of 0.15 applied to convert from one-hour max to 24-hour average for area sources (<http://www.colorado.gov/airquality/permits/screen.pdf>)

Rough Grading Mitigated

NO<sub>2</sub><sup>1</sup>

| Downwind Distance | NO <sub>2</sub> /NO <sub>x</sub> Ratio | SCREEN3 OP | NO <sub>2</sub> Concentration (ug/m3) | NO <sub>2</sub> Concentration (ppm) |
|-------------------|----------------------------------------|------------|---------------------------------------|-------------------------------------|
| 20                | 0.05                                   | 164.600    | 8.72                                  | 0.0046                              |
| 50                | 0.06                                   | 201.300    | 11.88                                 | 0.0063                              |
| 70                | 0.06                                   | 223.000    | 14.27                                 | 0.0076                              |
| 100               | 0.07                                   | 252.000    | 18.65                                 | 0.0099                              |
| 200               | 0.11                                   | 200.000    | 22.80                                 | 0.0121                              |
| 500               | 0.26                                   | 69.560     | 17.95                                 | 0.0096                              |
| 1000              | 0.47                                   | 27.440     | 12.81                                 | 0.0068                              |
| 2000              | 0.75                                   | 10.570     | 7.93                                  | 0.0042                              |
| 3000              | 0.90                                   | 6.195      | 5.58                                  | 0.0030                              |
| 4000              | 0.98                                   | 4.303      | 4.21                                  | 0.0022                              |
| 5000              | 1.00                                   | 3.272      | 3.27                                  | 0.0017                              |

|    |                |               |                     |                       |
|----|----------------|---------------|---------------------|-----------------------|
| CO | Pounds Per day | Grams Per day | Grams Per Second    | Meters squared (area) |
|    | 71.09          | 32245.882     | 1.11964867          | 24,281.139            |
|    |                |               | Screen 3 Output     |                       |
|    |                |               | 9.25E+06            |                       |
|    |                |               | FINAL Concentration |                       |
|    |                |               | 4.26E+02            |                       |
|    |                |               | 0.371 ppm (1-hour)  |                       |
|    |                |               | 0.269 ppm (8-hour)  |                       |

|                  |                |               |                     |                       |
|------------------|----------------|---------------|---------------------|-----------------------|
| PM <sub>10</sub> | Pounds Per day | Grams Per day | Grams Per Second    | Meters squared (area) |
|                  | 8.04           | 3646.8827     | 0.1266              | 24,281.139            |
|                  |                |               | Screen 3 Output     |                       |
|                  |                |               | 1.66E+07            |                       |
|                  |                |               | FINAL Concentration |                       |
|                  |                |               | 8.68E+01            |                       |

PM10 Calculation

$$C_x = 0.9403 C_o e^{-0.0462 x}$$

$$C_o^2 = 1.30E+01$$

$$e = 0.3150575$$

$$x \text{ (meters)} = 25$$

$$C_x = 3.86$$

$$\text{Total PM}_{10} = 3.86$$

|                   |                |               |                     |                       |
|-------------------|----------------|---------------|---------------------|-----------------------|
| PM <sub>2.5</sub> | Pounds Per day | Grams Per day | Grams Per Second    | Meters squared (area) |
|                   | 4.97           | 2254.3541     | 0.0783              | 24,281.139            |
|                   |                |               | Screen 3 Output     |                       |
|                   |                |               | 1.66E+07            |                       |
|                   |                |               | FINAL Concentration |                       |
|                   |                |               | 5.36E+01            |                       |

PM2.5 Calculation

$$C_x = 0.9403 C_o e^{-0.0462 x}$$

$$C_o^2 = 8.05E+00$$

$$e = 0.3150575$$

$$x \text{ (meters)} = 25$$

$$C_x = 2.38$$

$$\text{Total PM}_{2.5} = 2.38$$

<sup>1</sup> Per SCAQMD LST Handbook (Table 2-4) NQ to NO<sub>2</sub> conversion factor

<sup>2</sup> Conversion factor of 0.15 applied to convert from one-hour max to 24-hour average for area sources (<http://www.colorado.gov/airquality/permits/screen.pdf>)

02/13/15

15:14:20

\*\*\* SCREEN3 MODEL RUN \*\*\*  
\*\*\* VERSION DATED 96043 \*\*\*

Canyon Springs Construction LST Analysis - CO

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = AREA  
EMISSION RATE (G/(S-M\*\*2)) = 1.00000  
SOURCE HEIGHT (M) = 5.0000  
LENGTH OF LARGER SIDE (M) = 158.8241  
LENGTH OF SMALLER SIDE (M) = 155.8241  
RECEPTOR HEIGHT (M) = 2.0000  
URBAN/RURAL OPTION = URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.  
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M\*\*4/S\*\*3; MOM. FLUX = 0.000 M\*\*4/S\*\*2.

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\*\*\*  
\*\*\* SCREEN DISCRETE DISTANCES \*\*\*  
\*\*\*\*\*

\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING  
DISTANCES \*\*\*

| DIST<br>(M) | CONC<br>(UG/M**3) | STAB | U10M<br>(M/S) | USTK<br>(M/S) | MIX HT<br>(M) | PLUME<br>HT (M) | MAX DIR<br>(DEG) |
|-------------|-------------------|------|---------------|---------------|---------------|-----------------|------------------|
| 25.         | 0.9247E+07        | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 44.              |

\*\*\*\*\*  
\*\*\* SUMMARY OF SCREEN MODEL RESULTS \*\*\*  
\*\*\*\*\*

| CALCULATION<br>PROCEDURE | MAX CONC<br>(UG/M**3) | DIST TO<br>MAX (M) | TERRAIN<br>HT (M) |
|--------------------------|-----------------------|--------------------|-------------------|
| SIMPLE TERRAIN           | 0.9247E+07            | 25.                | 0.                |

\*\*\*\*\*  
\*\* REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS \*\*  
\*\*\*\*\*



02/13/15

15:15:09

\*\*\* SCREEN3 MODEL RUN \*\*\*  
\*\*\* VERSION DATED 96043 \*\*\*

Canyon Springs Construction LST Analysis - PM10/PM2.5

SIMPLE TERRAIN INPUTS:

|                            |   |          |
|----------------------------|---|----------|
| SOURCE TYPE                | = | AREA     |
| EMISSION RATE (G/(S-M**2)) | = | 1.00000  |
| SOURCE HEIGHT (M)          | = | 1.0000   |
| LENGTH OF LARGER SIDE (M)  | = | 155.8241 |
| LENGTH OF SMALLER SIDE (M) | = | 155.8241 |
| RECEPTOR HEIGHT (M)        | = | 2.0000   |
| URBAN/RURAL OPTION         | = | URBAN    |

THE NON-REGULATORY BUT CONSERVATIVE BRODE 2 MIXING HEIGHT OPTION WAS SELECTED.

THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M\*\*4/S\*\*3; MOM. FLUX = 0.000 M\*\*4/S\*\*2.

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\*\*\*  
\*\*\* SCREEN DISCRETE DISTANCES \*\*\*  
\*\*\*\*\*

\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*\*

| DIST<br>(M) | CONC<br>(UG/M**3) | STAB | U10M<br>(M/S) | USTK<br>(M/S) | MIX HT<br>(M) | PLUME<br>HT (M) | MAX DIR<br>(DEG) |
|-------------|-------------------|------|---------------|---------------|---------------|-----------------|------------------|
| 1.          | 0.1664E+08        | 6    | 1.0           | 1.0           | 10000.0       | 1.00            | 45.              |

\*\*\*\*\*  
\*\*\* SUMMARY OF SCREEN MODEL RESULTS \*\*\*  
\*\*\*\*\*

| CALCULATION<br>PROCEDURE | MAX CONC<br>(UG/M**3) | DIST TO<br>MAX (M) | TERRAIN<br>HT (M) |
|--------------------------|-----------------------|--------------------|-------------------|
| SIMPLE TERRAIN           | 0.1664E+08            | 1.                 | 0.                |

\*\*\*\*\*  
\*\* REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS \*\*  
\*\*\*\*\*

15:26:27

## Canyon Springs Construction LST Analysis - N02 Unmitigated

|                            |   |              |
|----------------------------|---|--------------|
| SOURCE TYPE                | = | AREA         |
| EMISSION RATE (G/(S-M**2)) | = | 0.326180E-04 |
| SOURCE HEIGHT (M)          | = | 5.0000       |
| LENGTH OF LARGER SIDE (M)  | = | 155.8241     |
| LENGTH OF SMALLER SIDE (M) | = | 155.8241     |
| RECEPTOR HEIGHT (M)        | = | 2.0000       |
| URBAN/RURAL OPTION         | = | URBAN        |

### MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

\*\*\* FULL METEOROLOGY \*\*\*

```

*** TERRAIN HEIGHT OF      0. M ABOVE STACK BASE USED FOR FOLLOWING
DISTANCES ***

```

| DIST<br>(M) | CONC<br>(UG/M**3) | STAB | U10M<br>(M/S) | USTK<br>(M/S) | MIX HT<br>(M) | PLUME<br>HT (M) | MAX DIR<br>(DEG) |
|-------------|-------------------|------|---------------|---------------|---------------|-----------------|------------------|
| 20.         | 287.9             | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 45.              |
| 50.         | 352.0             | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 45.              |
| 70.         | 390.0             | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 45.              |
| 100.        | 440.7             | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 45.              |
| 200.        | 349.8             | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 45.              |
| 500.        | 121.7             | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 44.              |
| 1000.       | 47.99             | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 43.              |
| 2000.       | 18.49             | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 39.              |
| 3000.       | 10.83             | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 43.              |
| 4000.       | 7.526             | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 3.               |
| 5000.       | 5.722             | 5    | 1.0           | 1.0           | 10000.0       | 5.00            | 24.              |

| CALCULATION | MAX CONC | DIST TO | TERRAIN |
|-------------|----------|---------|---------|
|-------------|----------|---------|---------|

| PROCEDURE      | (UG/M**3) | MAX (M) | HT (M) |
|----------------|-----------|---------|--------|
| -----          | -----     | -----   | -----  |
| SIMPLE TERRAIN | 440.7     | 100.    | 0.     |

\*\*\*\*\*

\*\* REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS \*\*

\*\*\*\*\*



| PROCEDURE      | (UG/M**3) | MAX (M) | HT (M) |
|----------------|-----------|---------|--------|
| SIMPLE TERRAIN | 252.0     | 100.    | 0.     |

\*\*\*\*\*  
\*\* REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS \*\*  
\*\*\*\*\*

## **SCREEN3 CALCULATIONS:**

### **OPERATIONAL LSTs**

AVERAGE EMISSION FACTOR (CO)  
SCAQMD 2016

| Speed | LDA      |
|-------|----------|
| 0     | 9.561735 |
| 5     | 1.912347 |

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Emission Rates - CO

| Passenger Car Emission Rates                   |               |                                 |                                               |                                           |                                          |                           |                                      |
|------------------------------------------------|---------------|---------------------------------|-----------------------------------------------|-------------------------------------------|------------------------------------------|---------------------------|--------------------------------------|
| Source                                         | Trips Per Day | VMT <sup>a</sup><br>(miles/day) | PC Emission Rate <sup>b</sup><br>(grams/mile) | PC Rate <sup>b</sup><br>(grams/idle-hour) | PC Emissions <sup>c</sup><br>(grams/day) | PC Emissions<br>(lbs/day) | Modeled Emission Rates<br>(g/second) |
| On-Site Idling - Hospital (1&2)                | 3053          |                                 |                                               | 9.5617                                    | 7298.98                                  | 16.09                     | 8.448E-02                            |
| On-Site Idling - Medical Office Building (1&2) | 969           |                                 |                                               | 9.5617                                    | 2316.36                                  | 5.11                      | 2.681E-02                            |



AVERAGE EMISSION FACTOR (NO2)  
SCAQMD 2016

| Speed | LDA      |
|-------|----------|
| 0     | 0.780552 |
| 5     | 0.15611  |

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Emission Rates - NO2

| Passenger Car Emission Rates                   |               |                                 |                                               |                                           |                                          |                           |                                      |
|------------------------------------------------|---------------|---------------------------------|-----------------------------------------------|-------------------------------------------|------------------------------------------|---------------------------|--------------------------------------|
| Source                                         | Trips Per Day | VMT <sup>a</sup><br>(miles/day) | PC Emission Rate <sup>b</sup><br>(grams/mile) | PC Rate <sup>b</sup><br>(grams/idle-hour) | PC Emissions <sup>c</sup><br>(grams/day) | PC Emissions<br>(lbs/day) | Modeled Emission Rates<br>(g/second) |
| On-Site Idling - Hospital (1&2)                | 3053          |                                 |                                               | 0.7806                                    | 595.84                                   | 1.31                      | 6.896E-03                            |
| On-Site Idling - Medical Office Building (1&2) | 969           |                                 |                                               | 0.7806                                    | 189.09                                   | 0.42                      | 2.189E-03                            |

AVERAGE EMISSION FACTOR (PM 10)  
SCAQMD 2016

| Speed | LDA      |
|-------|----------|
| 0     | 0.056769 |
| 5     | 0.011354 |

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Emission Rates - PM10

| Passenger Car Emission Rates                   |               |                                 |                                               |                                           |                                          |                           |                                      |
|------------------------------------------------|---------------|---------------------------------|-----------------------------------------------|-------------------------------------------|------------------------------------------|---------------------------|--------------------------------------|
| Source                                         | Trips Per Day | VMT <sup>a</sup><br>(miles/day) | PC Emission Rate <sup>b</sup><br>(grams/mile) | PC Rate <sup>b</sup><br>(grams/idle-hour) | PC Emissions <sup>c</sup><br>(grams/day) | PC Emissions<br>(lbs/day) | Modeled Emission Rates<br>(g/second) |
| On-Site Idling - Hospital (1&2)                | 3053          |                                 |                                               | 0.0568                                    | 43.33                                    | 0.10                      | 5.016E-04                            |
| On-Site Idling - Medical Office Building (1&2) | 969           |                                 |                                               | 0.0568                                    | 13.75                                    | 0.03                      | 1.592E-04                            |

AVERAGE EMISSION FACTOR (PM 10)  
SCAQMD 2016

| Speed | LDA      |
|-------|----------|
| 0     | 0.052337 |
| 5     | 0.010467 |

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Emission Rates - PM2.5

| Passenger Car Emission Rates                   |               |                                 |                                               |                                           |                                          |                           |                                      |
|------------------------------------------------|---------------|---------------------------------|-----------------------------------------------|-------------------------------------------|------------------------------------------|---------------------------|--------------------------------------|
| Source                                         | Trips Per Day | VMT <sup>a</sup><br>(miles/day) | PC Emission Rate <sup>b</sup><br>(grams/mile) | PC Rate <sup>b</sup><br>(grams/idle-hour) | PC Emissions <sup>c</sup><br>(grams/day) | PC Emissions<br>(lbs/day) | Modeled Emission Rates<br>(g/second) |
| On-Site Idling - Hospital (1&2)                | 3053          |                                 |                                               | 0.0523                                    | 39.95                                    | 0.09                      | 4.624E-04                            |
| On-Site Idling - Medical Office Building (1&2) | 969           |                                 |                                               | 0.0523                                    | 12.68                                    | 0.03                      | 1.467E-04                            |

AVERAGE EMISSION FACTOR (CO)  
SCAQMD 2016

| Speed | LHD1     | MHD      | HHD         |
|-------|----------|----------|-------------|
| 0     | 77.78304 | 24.22933 | 5.845407051 |
| 5     | 3.956463 | 4.038367 | 5.758024149 |

| Speed | Weighted Average Emissions |
|-------|----------------------------|
| 0     | 5.84541                    |
| 5     | 5.75802                    |

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Emission Rates - CO

| Truck Emission Rates                           |                |                                 |                                                  |                                                       |                                                   |                                    |                                      |
|------------------------------------------------|----------------|---------------------------------|--------------------------------------------------|-------------------------------------------------------|---------------------------------------------------|------------------------------------|--------------------------------------|
| Source                                         | Trucks Per Day | VMT <sup>a</sup><br>(miles/day) | Truck Emission Rate <sup>b</sup><br>(grams/mile) | Truck Emission Rate <sup>b</sup><br>(grams/idle-hour) | Daily Truck Emissions <sup>c</sup><br>(grams/day) | Daily Truck Emissions<br>(lbs/day) | Modeled Emission Rates<br>(g/second) |
| On-Site Idling - Hospital (1&2)                | 2              |                                 |                                                  | 5.8454                                                | 3.31                                              | 0.01                               | 3.836E-05                            |
| On-Site Idling - Medical Office Building (1&2) | 1              |                                 |                                                  | 5.8454                                                | 1.05                                              | 0.00                               | 1.218E-05                            |
| On-Site Idling - Medical Office Building (3&4) | 1              |                                 |                                                  | 5.8454                                                | 1.12                                              | 0.00                               | 1.294E-05                            |
| On-Site Idling - Surgical Center               | 0              |                                 |                                                  | 5.8454                                                | 0.26                                              | 0.00                               | 3.044E-06                            |
| On-Site Idling - Senior Housing                | 2              |                                 |                                                  | 5.8454                                                | 2.47                                              | 0.01                               | 2.854E-05                            |
| On-Site Idling - Assisted Living               | 1              |                                 |                                                  | 5.8454                                                | 1.84                                              | 0.00                               | 2.131E-05                            |
| On-Site Travel - Hospital (1&2)                | 5              | 0.34                            | 5.7580                                           |                                                       | 1.94                                              | 0.00                               | 2.250E-05                            |
| On-Site Travel - Medical Office Building (1&2) | 1              | 0.07                            | 5.7580                                           |                                                       | 0.43                                              | 0.00                               | 4.973E-06                            |
| On-Site Travel - Medical Office Building (3&4) | 2              | 0.20                            | 5.7580                                           |                                                       | 1.15                                              | 0.00                               | 1.334E-05                            |
| On-Site Travel - Surgical Center               | 0              | 0.04                            | 5.7580                                           |                                                       | 0.21                                              | 0.00                               | 2.388E-06                            |
| On-Site Travel - Senior Housing                | 3              | 0.14                            | 5.7580                                           |                                                       | 0.83                                              | 0.00                               | 9.643E-06                            |
| On-Site Travel - Assisted Living               | 3              | 0.35                            | 5.7580                                           |                                                       | 2.01                                              | 0.00                               | 2.321E-05                            |



AVERAGE EMISSION FACTOR (NO2)  
SCAQMD 2016

| Speed | LHD1     | MHD      | HHD         |
|-------|----------|----------|-------------|
| 0     | 38.25071 | 76.79864 | 42.09933688 |
| 5     | 1.892709 | 12.00467 | 20.01699674 |

| Speed | Weighted Average Emissions |
|-------|----------------------------|
| 0     | 42.09934                   |
| 5     | 20.01700                   |

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Emission Rates - NO2

| Truck Emission Rates                           |                |                                 |                                                  |                                                       |                                                   |                                    |                                      |
|------------------------------------------------|----------------|---------------------------------|--------------------------------------------------|-------------------------------------------------------|---------------------------------------------------|------------------------------------|--------------------------------------|
| Source                                         | Trucks Per Day | VMT <sup>a</sup><br>(miles/day) | Truck Emission Rate <sup>b</sup><br>(grams/mile) | Truck Emission Rate <sup>b</sup><br>(grams/idle-hour) | Daily Truck Emissions <sup>c</sup><br>(grams/day) | Daily Truck Emissions<br>(lbs/day) | Modeled Emission Rates<br>(g/second) |
| On-Site Idling - Hospital (1&2)                | 2              |                                 |                                                  | 42.0993                                               | 23.87                                             | 0.05                               | 2.763E-04                            |
| On-Site Idling - Medical Office Building (1&2) | 1              |                                 |                                                  | 42.0993                                               | 7.58                                              | 0.02                               | 8.771E-05                            |
| On-Site Idling - Medical Office Building (3&4) | 1              |                                 |                                                  | 42.0993                                               | 8.05                                              | 0.02                               | 9.319E-05                            |
| On-Site Idling - Surgical Center               | 0              |                                 |                                                  | 42.0993                                               | 1.89                                              | 0.00                               | 2.193E-05                            |
| On-Site Idling - Senior Housing                | 2              |                                 |                                                  | 42.0993                                               | 17.76                                             | 0.04                               | 2.056E-04                            |
| On-Site Idling - Assisted Living               | 1              |                                 |                                                  | 42.0993                                               | 13.26                                             | 0.03                               | 1.535E-04                            |
| On-Site Travel - Hospital (1&2)                | 5              | 0.34                            | 20.0170                                          |                                                       | 6.76                                              | 0.01                               | 7.823E-05                            |
| On-Site Travel - Medical Office Building (1&2) | 1              | 0.07                            | 20.0170                                          |                                                       | 1.49                                              | 0.00                               | 1.729E-05                            |
| On-Site Travel - Medical Office Building (3&4) | 2              | 0.20                            | 20.0170                                          |                                                       | 4.01                                              | 0.01                               | 4.636E-05                            |
| On-Site Travel - Surgical Center               | 0              | 0.04                            | 20.0170                                          |                                                       | 0.72                                              | 0.00                               | 8.302E-06                            |
| On-Site Travel - Senior Housing                | 3              | 0.14                            | 20.0170                                          |                                                       | 2.90                                              | 0.01                               | 3.352E-05                            |
| On-Site Travel - Assisted Living               | 3              | 0.35                            | 20.0170                                          |                                                       | 6.97                                              | 0.02                               | 8.068E-05                            |

AVERAGE EMISSION FACTOR (PM 10)  
SCAQMD 2016

| Speed | LHD1     | MHD      | HHD         |
|-------|----------|----------|-------------|
| 0     | 0.405644 | 0.398021 | 0.107222672 |
| 5     | 0.060289 | 0.32115  | 0.17344881  |

| Speed | Weighted Average Emissions |
|-------|----------------------------|
| 0     | 0.10722                    |
| 5     | 0.17345                    |

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Emission Rates - PM10

| Truck Emission Rates                           |                |                                 |                                                  |                                                       |                                                   |                                    |                                      |
|------------------------------------------------|----------------|---------------------------------|--------------------------------------------------|-------------------------------------------------------|---------------------------------------------------|------------------------------------|--------------------------------------|
| Source                                         | Trucks Per Day | VMT <sup>a</sup><br>(miles/day) | Truck Emission Rate <sup>b</sup><br>(grams/mile) | Truck Emission Rate <sup>b</sup><br>(grams/idle-hour) | Daily Truck Emissions <sup>c</sup><br>(grams/day) | Daily Truck Emissions<br>(lbs/day) | Modeled Emission Rates<br>(g/second) |
| On-Site Idling - Hospital (1&2)                | 2              |                                 |                                                  | 0.1072                                                | 0.06                                              | 0.00                               | 7.036E-07                            |
| On-Site Idling - Medical Office Building (1&2) | 1              |                                 |                                                  | 0.1072                                                | 0.02                                              | 0.00                               | 2.234E-07                            |
| On-Site Idling - Medical Office Building (3&4) | 1              |                                 |                                                  | 0.1072                                                | 0.02                                              | 0.00                               | 2.373E-07                            |
| On-Site Idling - Surgical Center               | 0              |                                 |                                                  | 0.1072                                                | 0.00                                              | 0.00                               | 5.585E-08                            |
| On-Site Idling - Senior Housing                | 2              |                                 |                                                  | 0.1072                                                | 0.05                                              | 0.00                               | 5.235E-07                            |
| On-Site Idling - Assisted Living               | 1              |                                 |                                                  | 0.1072                                                | 0.03                                              | 0.00                               | 3.909E-07                            |
| On-Site Travel - Hospital (1&2)                | 5              | 0.34                            | 0.1734                                           |                                                       | 0.06                                              | 0.00                               | 6.779E-07                            |
| On-Site Travel - Medical Office Building (1&2) | 1              | 0.07                            | 0.1734                                           |                                                       | 0.01                                              | 0.00                               | 1.498E-07                            |
| On-Site Travel - Medical Office Building (3&4) | 2              | 0.20                            | 0.1734                                           |                                                       | 0.03                                              | 0.00                               | 4.017E-07                            |
| On-Site Travel - Surgical Center               | 0              | 0.04                            | 0.1734                                           |                                                       | 0.01                                              | 0.00                               | 7.194E-08                            |
| On-Site Travel - Senior Housing                | 3              | 0.14                            | 0.1734                                           |                                                       | 0.03                                              | 0.00                               | 2.905E-07                            |
| On-Site Travel - Assisted Living               | 3              | 0.35                            | 0.1734                                           |                                                       | 0.06                                              | 0.00                               | 6.991E-07                            |

AVERAGE EMISSION FACTOR (PM 2.5)  
SCAQMD 2016

| Speed | LHD1     | MHD      | HHD         |
|-------|----------|----------|-------------|
| 0     | 0.388096 | 0.380803 | 0.102584266 |
| 5     | 0.057476 | 0.307232 | 0.165944185 |

| Speed | Weighted Average Emissions |
|-------|----------------------------|
| 0     | 0.10258                    |
| 5     | 0.16594                    |

---

Emission Rates - PM2.5

| Truck Emission Rates                           |                |                                 |                                                  |                                                       |                                                   |                                    |                                      |
|------------------------------------------------|----------------|---------------------------------|--------------------------------------------------|-------------------------------------------------------|---------------------------------------------------|------------------------------------|--------------------------------------|
| Source                                         | Trucks Per Day | VMT <sup>a</sup><br>(miles/day) | Truck Emission Rate <sup>b</sup><br>(grams/mile) | Truck Emission Rate <sup>b</sup><br>(grams/idle-hour) | Daily Truck Emissions <sup>c</sup><br>(grams/day) | Daily Truck Emissions<br>(lbs/day) | Modeled Emission Rates<br>(g/second) |
| On-Site Idling - Hospital (1&2)                | 2              |                                 |                                                  | 0.1026                                                | 0.06                                              | 0.00                               | 6.732E-07                            |
| On-Site Idling - Medical Office Building (1&2) | 1              |                                 |                                                  | 0.1026                                                | 0.02                                              | 0.00                               | 2.137E-07                            |
| On-Site Idling - Medical Office Building (3&4) | 1              |                                 |                                                  | 0.1026                                                | 0.02                                              | 0.00                               | 2.271E-07                            |
| On-Site Idling - Surgical Center               | 0              |                                 |                                                  | 0.1026                                                | 0.00                                              | 0.00                               | 5.343E-08                            |
| On-Site Idling - Senior Housing                | 2              |                                 |                                                  | 0.1026                                                | 0.04                                              | 0.00                               | 5.009E-07                            |
| On-Site Idling - Assisted Living               | 1              |                                 |                                                  | 0.1026                                                | 0.03                                              | 0.00                               | 3.740E-07                            |
| On-Site Travel - Hospital (1&2)                | 5              | 0.34                            | 0.1659                                           |                                                       | 0.06                                              | 0.00                               | 6.485E-07                            |
| On-Site Travel - Medical Office Building (1&2) | 1              | 0.07                            | 0.1659                                           |                                                       | 0.01                                              | 0.00                               | 1.433E-07                            |
| On-Site Travel - Medical Office Building (3&4) | 2              | 0.20                            | 0.1659                                           |                                                       | 0.03                                              | 0.00                               | 3.844E-07                            |
| On-Site Travel - Surgical Center               | 0              | 0.04                            | 0.1659                                           |                                                       | 0.01                                              | 0.00                               | 6.883E-08                            |
| On-Site Travel - Senior Housing                | 3              | 0.14                            | 0.1659                                           |                                                       | 0.02                                              | 0.00                               | 2.779E-07                            |
| On-Site Travel - Assisted Living               | 3              | 0.35                            | 0.1659                                           |                                                       | 0.06                                              | 0.00                               | 6.689E-07                            |

How to use:  
Column A requests a value. Enter that value in column B.  
Be sure to enter all four requested values.  
The result appears in cell B20.

## CONVERSION OF MICROGRAMS PER CUBIC METER TO PPM

|                                                  |             |
|--------------------------------------------------|-------------|
| <u>MICROGRAMS</u> PER CUBIC METER CONCENTRATION  | 2.80284     |
| MOLECULAR WEIGHT                                 | 46.0055     |
| TEMPERATURE IN DEG CELSIUS                       | 25          |
| ATMOSPHERIC PRESSURE IN mmHg (use 760 if unsure) | 760         |
| CONCENTRATION IN PPM                             | 0.001490506 |

How to use:  
Column A requests a value. Enter that value in column B.  
Be sure to enter all four requested values.  
The result appears in cell B20.

## CONVERSION OF MICROGRAMS PER CUBIC METER TO PPM

|                                                  |             |
|--------------------------------------------------|-------------|
| <u>MICROGRAMS</u> PER CUBIC METER CONCENTRATION  | 54.20052    |
| MOLECULAR WEIGHT                                 | 28.01       |
| TEMPERATURE IN DEG CELSIUS                       | 25          |
| ATMOSPHERIC PRESSURE IN mmHg (use 760 if unsure) | 760         |
| CONCENTRATION IN PPM                             | 0.047340798 |



How to use:  
Column A requests a value. Enter that value in column B.  
Be sure to enter all four requested values.  
The result appears in cell B20.

## CONVERSION OF MICROGRAMS PER CUBIC METER TO PPM

|                                                         |             |
|---------------------------------------------------------|-------------|
| <b><u>MICROGRAMS</u> PER CUBIC METER CONCENTRATION</b>  | 29.95765    |
| <b>MOLECULAR WEIGHT</b>                                 | 28.01       |
| <b>TEMPERATURE IN DEG CELSIUS</b>                       | 25          |
| <b>ATMOSPHERIC PRESSURE IN mmHg (use 760 if unsure)</b> | 760         |
| <b>CONCENTRATION IN PPM</b>                             | 0.026166152 |

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 8.8.9
** Lakes Environmental Software Inc.
** Date: 3/13/2015
** File: U:\UcJobs\_08600-09000\_08900\08990\08990_Operational
LST\CO\CO.ADI
**

```

```

*****
**
**
*****
** AERMOD Control Pathway
*****
**
**

```

```

CO STARTING
  TITLEONE U:\UcJobs\_08600-09000\_08900\08990\08990_Operational
LST\CO\CO.isc
  MODELOPT CONC FLAT FASTALL
  AVERTIME 1 8
  URBANOPT 2100516
  POLLUTID CO
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL CO.err

```

```

CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**

```

```

SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC On-Site Passenger Car Idling - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.08448
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 3
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.080, 3754684.434, 0.00, 4.00, 3.95
** -----
  LOCATION L0001329      VOLUME    473797.069 3754701.662 0.0

```

```

LOCATION L0001330      VOLUME    473797.074 3754693.162 0.0
LOCATION L0001331      VOLUME    473797.080 3754684.662 0.0
** End of LINE VOLUME Source ID = SLINE1
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC On-Site Passenger Car Idling - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0285
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 4
** 473736.964, 3754551.125, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95
** 473745.446, 3754483.696, 0.00, 4.00, 3.95
** 473829.839, 3754482.423, 0.00, 4.00, 3.95
** -----
LOCATION L0001332      VOLUME    473737.082 3754546.877 0.0
LOCATION L0001333      VOLUME    473737.316 3754538.380 0.0
LOCATION L0001334      VOLUME    473737.550 3754529.883 0.0
LOCATION L0001335      VOLUME    473737.785 3754521.386 0.0
LOCATION L0001336      VOLUME    473738.019 3754512.889 0.0
LOCATION L0001337      VOLUME    473738.254 3754504.393 0.0
LOCATION L0001338      VOLUME    473738.488 3754495.896 0.0
LOCATION L0001339      VOLUME    473740.342 3754488.161 0.0
LOCATION L0001340      VOLUME    473747.164 3754483.670 0.0
LOCATION L0001341      VOLUME    473755.663 3754483.542 0.0
LOCATION L0001342      VOLUME    473764.162 3754483.413 0.0
LOCATION L0001343      VOLUME    473772.661 3754483.285 0.0
LOCATION L0001344      VOLUME    473781.160 3754483.157 0.0
LOCATION L0001345      VOLUME    473789.659 3754483.029 0.0
LOCATION L0001346      VOLUME    473798.158 3754482.901 0.0
LOCATION L0001347      VOLUME    473806.657 3754482.773 0.0
LOCATION L0001348      VOLUME    473815.156 3754482.645 0.0
LOCATION L0001349      VOLUME    473823.656 3754482.517 0.0
** End of LINE VOLUME Source ID = SLINE2
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC On-Site Passenger Car Idling - Surgical Center
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.006715
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474146.956, 3754542.362, 0.00, 4.00, 3.95
** 474203.982, 3754541.933, 0.00, 4.00, 3.95
** -----
LOCATION L0001350      VOLUME    474151.206 3754542.330 0.0
LOCATION L0001351      VOLUME    474159.706 3754542.266 0.0

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LOCATION L0001352      VOLUME  474168.206 3754542.202 0.0
LOCATION L0001353      VOLUME  474176.705 3754542.138 0.0
LOCATION L0001354      VOLUME  474185.205 3754542.074 0.0
LOCATION L0001355      VOLUME  474193.705 3754542.010 0.0
LOCATION L0001356      VOLUME  474202.205 3754541.946 0.0
** End of LINE VOLUME Source ID = SLINE3
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC On-Site Passenger Car Idling - Senior Housing
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.06287
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 9
** 473705.823, 3754992.649, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0001357      VOLUME  473709.107 3754989.951 0.0
LOCATION L0001358      VOLUME  473716.408 3754985.826 0.0
LOCATION L0001359      VOLUME  473724.564 3754986.512 0.0
LOCATION L0001360      VOLUME  473730.201 3754992.580 0.0
LOCATION L0001361      VOLUME  473730.631 3755001.008 0.0
** End of LINE VOLUME Source ID = SLINE4
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC On-Site Passenger Car Idling - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.04693
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474217.752, 3754863.013, 0.00, 4.00, 3.95
** -----
LOCATION L0001362      VOLUME  474157.470 3754909.512 0.0
LOCATION L0001363      VOLUME  474164.200 3754904.320 0.0
LOCATION L0001364      VOLUME  474170.930 3754899.129 0.0
LOCATION L0001365      VOLUME  474177.661 3754893.937 0.0
LOCATION L0001366      VOLUME  474184.391 3754888.746 0.0
LOCATION L0001367      VOLUME  474191.122 3754883.554 0.0
LOCATION L0001368      VOLUME  474197.852 3754878.363 0.0

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LOCATION L0001369      VOLUME    474204.583 3754873.171 0.0
LOCATION L0001370      VOLUME    474211.313 3754867.980 0.0
** End of LINE VOLUME Source ID = SLINE5
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC On-Site Passenger Car Travel - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.01006
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 7
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.079, 3754683.979, 0.00, 4.00, 3.95
** 473832.857, 3754684.580, 0.00, 4.00, 3.95
** 473831.534, 3754711.303, 0.00, 4.00, 3.95
** 473825.370, 3754730.840, 0.00, 4.00, 3.95
** 473825.424, 3754745.686, 0.00, 4.00, 3.95
** -----
LOCATION L0001371      VOLUME    473797.069 3754701.662 0.0
LOCATION L0001372      VOLUME    473797.073 3754693.162 0.0
LOCATION L0001373      VOLUME    473797.078 3754684.662 0.0
LOCATION L0001374      VOLUME    473804.895 3754684.110 0.0
LOCATION L0001375      VOLUME    473813.393 3754684.253 0.0
LOCATION L0001376      VOLUME    473821.892 3754684.396 0.0
LOCATION L0001377      VOLUME    473830.391 3754684.539 0.0
LOCATION L0001378      VOLUME    473832.558 3754690.607 0.0
LOCATION L0001379      VOLUME    473832.138 3754699.096 0.0
LOCATION L0001380      VOLUME    473831.718 3754707.586 0.0
LOCATION L0001381      VOLUME    473830.096 3754715.860 0.0
LOCATION L0001382      VOLUME    473827.538 3754723.966 0.0
LOCATION L0001383      VOLUME    473825.374 3754732.132 0.0
LOCATION L0001384      VOLUME    473825.406 3754740.632 0.0
** End of LINE VOLUME Source ID = SLINE6
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC On-Site Passenger Car Travel - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.005965
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 5
** 473690.932, 3754560.433, 0.00, 4.00, 3.95
** 473736.934, 3754560.673, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95
** 473745.446, 3754483.696, 0.00, 4.00, 3.95
** 473829.839, 3754482.423, 0.00, 4.00, 3.95
** -----

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|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0001385 | VOLUME | 473695.182 | 3754560.456 | 0.0 |
| LOCATION | L0001386 | VOLUME | 473703.682 | 3754560.500 | 0.0 |
| LOCATION | L0001387 | VOLUME | 473712.182 | 3754560.544 | 0.0 |
| LOCATION | L0001388 | VOLUME | 473720.682 | 3754560.588 | 0.0 |
| LOCATION | L0001389 | VOLUME | 473729.182 | 3754560.633 | 0.0 |
| LOCATION | L0001390 | VOLUME | 473736.953 | 3754559.926 | 0.0 |
| LOCATION | L0001391 | VOLUME | 473737.159 | 3754551.428 | 0.0 |
| LOCATION | L0001392 | VOLUME | 473737.366 | 3754542.931 | 0.0 |
| LOCATION | L0001393 | VOLUME | 473737.572 | 3754534.433 | 0.0 |
| LOCATION | L0001394 | VOLUME | 473737.779 | 3754525.936 | 0.0 |
| LOCATION | L0001395 | VOLUME | 473737.985 | 3754517.439 | 0.0 |
| LOCATION | L0001396 | VOLUME | 473738.192 | 3754508.941 | 0.0 |
| LOCATION | L0001397 | VOLUME | 473738.398 | 3754500.444 | 0.0 |
| LOCATION | L0001398 | VOLUME | 473738.605 | 3754491.946 | 0.0 |
| LOCATION | L0001399 | VOLUME | 473743.316 | 3754485.559 | 0.0 |
| LOCATION | L0001400 | VOLUME | 473751.115 | 3754483.610 | 0.0 |
| LOCATION | L0001401 | VOLUME | 473759.614 | 3754483.482 | 0.0 |
| LOCATION | L0001402 | VOLUME | 473768.113 | 3754483.354 | 0.0 |
| LOCATION | L0001403 | VOLUME | 473776.612 | 3754483.226 | 0.0 |
| LOCATION | L0001404 | VOLUME | 473785.111 | 3754483.098 | 0.0 |
| LOCATION | L0001405 | VOLUME | 473793.610 | 3754482.969 | 0.0 |
| LOCATION | L0001406 | VOLUME | 473802.110 | 3754482.841 | 0.0 |
| LOCATION | L0001407 | VOLUME | 473810.609 | 3754482.713 | 0.0 |
| LOCATION | L0001408 | VOLUME | 473819.108 | 3754482.585 | 0.0 |
| LOCATION | L0001409 | VOLUME | 473827.607 | 3754482.457 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE7

\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE8

\*\* DESCRSRC On-Site Passenger Car Travel - Surgical Center

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 0.00107

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 4

\*\* 474146.956, 3754542.362, 0.00, 4.00, 3.95

\*\* 474225.093, 3754541.662, 0.00, 4.00, 3.95

\*\* 474224.571, 3754563.881, 0.00, 4.00, 3.95

\*\* 474284.387, 3754563.753, 0.00, 4.00, 3.95

\*\*

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0001410 | VOLUME | 474151.206 | 3754542.324 | 0.0 |
| LOCATION | L0001411 | VOLUME | 474159.706 | 3754542.248 | 0.0 |
| LOCATION | L0001412 | VOLUME | 474168.205 | 3754542.171 | 0.0 |
| LOCATION | L0001413 | VOLUME | 474176.705 | 3754542.095 | 0.0 |
| LOCATION | L0001414 | VOLUME | 474185.205 | 3754542.019 | 0.0 |
| LOCATION | L0001415 | VOLUME | 474193.704 | 3754541.943 | 0.0 |
| LOCATION | L0001416 | VOLUME | 474202.204 | 3754541.867 | 0.0 |
| LOCATION | L0001417 | VOLUME | 474210.704 | 3754541.791 | 0.0 |
| LOCATION | L0001418 | VOLUME | 474219.203 | 3754541.714 | 0.0 |
| LOCATION | L0001419 | VOLUME | 474225.032 | 3754544.271 | 0.0 |
| LOCATION | L0001420 | VOLUME | 474224.832 | 3754552.769 | 0.0 |
| LOCATION | L0001421 | VOLUME | 474224.632 | 3754561.266 | 0.0 |

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LOCATION L0001422      VOLUME  474230.455 3754563.868 0.0
LOCATION L0001423      VOLUME  474238.955 3754563.850 0.0
LOCATION L0001424      VOLUME  474247.455 3754563.832 0.0
LOCATION L0001425      VOLUME  474255.955 3754563.814 0.0
LOCATION L0001426      VOLUME  474264.455 3754563.795 0.0
LOCATION L0001427      VOLUME  474272.955 3754563.777 0.0
LOCATION L0001428      VOLUME  474281.455 3754563.759 0.0
** End of LINE VOLUME Source ID = SLINE8
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC On-Site Passenger Car Travel - Senior Housing
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.004313
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 10
** 473693.729, 3755016.836, 0.00, 4.00, 3.95
** 473706.280, 3754992.273, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0001429      VOLUME  473695.663 3755013.052 0.0
LOCATION L0001430      VOLUME  473699.531 3755005.482 0.0
LOCATION L0001431      VOLUME  473703.398 3754997.913 0.0
LOCATION L0001432      VOLUME  473707.954 3754990.898 0.0
LOCATION L0001433      VOLUME  473715.011 3754986.350 0.0
LOCATION L0001434      VOLUME  473723.272 3754985.764 0.0
LOCATION L0001435      VOLUME  473729.388 3754991.329 0.0
LOCATION L0001436      VOLUME  473730.833 3754999.530 0.0
** End of LINE VOLUME Source ID = SLINE9
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC On-Site Passenger Car Travel - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.01038
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 8
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474275.659, 3754818.227, 0.00, 4.00, 3.95
** 474276.685, 3754808.563, 0.00, 4.00, 3.95
** 474271.043, 3754798.926, 0.00, 4.00, 3.95

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\*\* 474263.098, 3754791.586, 0.00, 4.00, 3.95  
\*\* 474247.089, 3754790.184, 0.00, 4.00, 3.95  
\*\* 474237.633, 3754788.405, 0.00, 4.00, 3.95  
\*\* 474234.942, 3754777.285, 0.00, 4.00, 3.95  
\*\*

-----  
LOCATION L0001437 VOLUME 474157.468 3754909.510 0.0  
LOCATION L0001438 VOLUME 474164.195 3754904.314 0.0  
LOCATION L0001439 VOLUME 474170.922 3754899.118 0.0  
LOCATION L0001440 VOLUME 474177.650 3754893.923 0.0  
LOCATION L0001441 VOLUME 474184.377 3754888.727 0.0  
LOCATION L0001442 VOLUME 474191.104 3754883.531 0.0  
LOCATION L0001443 VOLUME 474197.831 3754878.336 0.0  
LOCATION L0001444 VOLUME 474204.558 3754873.140 0.0  
LOCATION L0001445 VOLUME 474211.286 3754867.944 0.0  
LOCATION L0001446 VOLUME 474218.013 3754862.749 0.0  
LOCATION L0001447 VOLUME 474224.740 3754857.553 0.0  
LOCATION L0001448 VOLUME 474231.467 3754852.358 0.0  
LOCATION L0001449 VOLUME 474238.195 3754847.162 0.0  
LOCATION L0001450 VOLUME 474244.922 3754841.966 0.0  
LOCATION L0001451 VOLUME 474251.649 3754836.771 0.0  
LOCATION L0001452 VOLUME 474258.376 3754831.575 0.0  
LOCATION L0001453 VOLUME 474265.103 3754826.379 0.0  
LOCATION L0001454 VOLUME 474271.831 3754821.184 0.0  
LOCATION L0001455 VOLUME 474276.046 3754814.585 0.0  
LOCATION L0001456 VOLUME 474275.450 3754806.453 0.0  
LOCATION L0001457 VOLUME 474271.156 3754799.118 0.0  
LOCATION L0001458 VOLUME 474264.963 3754793.309 0.0  
LOCATION L0001459 VOLUME 474257.160 3754791.066 0.0  
LOCATION L0001460 VOLUME 474248.692 3754790.324 0.0  
LOCATION L0001461 VOLUME 474240.317 3754788.910 0.0  
LOCATION L0001462 VOLUME 474236.276 3754782.798 0.0

\*\* End of LINE VOLUME Source ID = SLINE10

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE11  
\*\* DESCRSRC On-Site Passenger Car Idling - Medical Office Building (1&2)  
\*\* PREFIX  
\*\* Length of Side = 8.50  
\*\* Configuration = Adjacent  
\*\* Emission Rate = 0.02681  
\*\* Vertical Dimension = 4.00  
\*\* SZINIT = 1.86  
\*\* Nodes = 2  
\*\* 474028.388, 3754698.671, 0.00, 4.00, 3.95  
\*\* 474028.146, 3754663.431, 0.00, 4.00, 3.95  
\*\*

-----  
LOCATION L0001463 VOLUME 474028.359 3754694.421 0.0  
LOCATION L0001464 VOLUME 474028.301 3754685.921 0.0  
LOCATION L0001465 VOLUME 474028.242 3754677.421 0.0  
LOCATION L0001466 VOLUME 474028.184 3754668.921 0.0

\*\* End of LINE VOLUME Source ID = SLINE11

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE12



```

** DESCRSRC On-Site Passenger Car Travel - Medical Office Building (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.002223
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474027.769, 3754746.815, 0.00, 4.00, 3.95
** 474028.146, 3754663.431, 0.00, 4.00, 3.95
** -----
LOCATION L0001467      VOLUME    474027.788 3754742.565 0.0
LOCATION L0001468      VOLUME    474027.827 3754734.065 0.0
LOCATION L0001469      VOLUME    474027.865 3754725.565 0.0
LOCATION L0001470      VOLUME    474027.903 3754717.065 0.0
LOCATION L0001471      VOLUME    474027.942 3754708.565 0.0
LOCATION L0001472      VOLUME    474027.980 3754700.065 0.0
LOCATION L0001473      VOLUME    474028.019 3754691.565 0.0
LOCATION L0001474      VOLUME    474028.057 3754683.065 0.0
LOCATION L0001475      VOLUME    474028.095 3754674.565 0.0
LOCATION L0001476      VOLUME    474028.134 3754666.066 0.0
** End of LINE VOLUME Source ID = SLINE12
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE13
** DESCRSRC On-Site Truck Idling - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00003836
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 3
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.080, 3754684.434, 0.00, 4.00, 3.95
** -----
LOCATION L0001773      VOLUME    473797.069 3754701.662 0.0
LOCATION L0001774      VOLUME    473797.074 3754693.162 0.0
LOCATION L0001775      VOLUME    473797.080 3754684.662 0.0
** End of LINE VOLUME Source ID = SLINE13
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE14
** DESCRSRC On-Site Truck Idling - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00001294
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 4
** 473736.964, 3754551.125, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95

```

\*\* 473745.446, 3754483.696, 0.00, 4.00, 3.95

\*\* 473829.839, 3754482.423, 0.00, 4.00, 3.95

\*\*

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0001776 | VOLUME | 473737.082 | 3754546.877 | 0.0 |
| LOCATION | L0001777 | VOLUME | 473737.316 | 3754538.380 | 0.0 |
| LOCATION | L0001778 | VOLUME | 473737.550 | 3754529.883 | 0.0 |
| LOCATION | L0001779 | VOLUME | 473737.785 | 3754521.386 | 0.0 |
| LOCATION | L0001780 | VOLUME | 473738.019 | 3754512.889 | 0.0 |
| LOCATION | L0001781 | VOLUME | 473738.254 | 3754504.393 | 0.0 |
| LOCATION | L0001782 | VOLUME | 473738.488 | 3754495.896 | 0.0 |
| LOCATION | L0001783 | VOLUME | 473740.342 | 3754488.161 | 0.0 |
| LOCATION | L0001784 | VOLUME | 473747.164 | 3754483.670 | 0.0 |
| LOCATION | L0001785 | VOLUME | 473755.663 | 3754483.542 | 0.0 |
| LOCATION | L0001786 | VOLUME | 473764.162 | 3754483.413 | 0.0 |
| LOCATION | L0001787 | VOLUME | 473772.661 | 3754483.285 | 0.0 |
| LOCATION | L0001788 | VOLUME | 473781.160 | 3754483.157 | 0.0 |
| LOCATION | L0001789 | VOLUME | 473789.659 | 3754483.029 | 0.0 |
| LOCATION | L0001790 | VOLUME | 473798.158 | 3754482.901 | 0.0 |
| LOCATION | L0001791 | VOLUME | 473806.657 | 3754482.773 | 0.0 |
| LOCATION | L0001792 | VOLUME | 473815.156 | 3754482.645 | 0.0 |
| LOCATION | L0001793 | VOLUME | 473823.656 | 3754482.517 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE14

\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE15

\*\* DESCRSRC On-Site Truck Idling - Surgical Center

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 3.044E-06

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 2

\*\* 474146.956, 3754542.362, 0.00, 4.00, 3.95

\*\* 474203.982, 3754541.933, 0.00, 4.00, 3.95

\*\*

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0001794 | VOLUME | 474151.206 | 3754542.330 | 0.0 |
| LOCATION | L0001795 | VOLUME | 474159.706 | 3754542.266 | 0.0 |
| LOCATION | L0001796 | VOLUME | 474168.206 | 3754542.202 | 0.0 |
| LOCATION | L0001797 | VOLUME | 474176.705 | 3754542.138 | 0.0 |
| LOCATION | L0001798 | VOLUME | 474185.205 | 3754542.074 | 0.0 |
| LOCATION | L0001799 | VOLUME | 474193.705 | 3754542.010 | 0.0 |
| LOCATION | L0001800 | VOLUME | 474202.205 | 3754541.946 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE15

\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE16

\*\* DESCRSRC On-Site Truck Idling - Senior Housing

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 0.00002854

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

```

** Nodes = 9
** 473705.823, 3754992.649, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
** LOCATION L0001801      VOLUME  473709.107 3754989.951 0.0
** LOCATION L0001802      VOLUME  473716.408 3754985.826 0.0
** LOCATION L0001803      VOLUME  473724.564 3754986.512 0.0
** LOCATION L0001804      VOLUME  473730.201 3754992.580 0.0
** LOCATION L0001805      VOLUME  473730.631 3755001.008 0.0
** End of LINE VOLUME Source ID = SLINE16
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE17
** DESCRSRC On-Site Truck Idling - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00002131
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474217.752, 3754863.013, 0.00, 4.00, 3.95
** -----
** LOCATION L0001806      VOLUME  474157.470 3754909.512 0.0
** LOCATION L0001807      VOLUME  474164.200 3754904.320 0.0
** LOCATION L0001808      VOLUME  474170.930 3754899.129 0.0
** LOCATION L0001809      VOLUME  474177.661 3754893.937 0.0
** LOCATION L0001810      VOLUME  474184.391 3754888.746 0.0
** LOCATION L0001811      VOLUME  474191.122 3754883.554 0.0
** LOCATION L0001812      VOLUME  474197.852 3754878.363 0.0
** LOCATION L0001813      VOLUME  474204.583 3754873.171 0.0
** LOCATION L0001814      VOLUME  474211.313 3754867.980 0.0
** End of LINE VOLUME Source ID = SLINE17
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE18
** DESCRSRC On-Site Truck Travel - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0000225
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 7
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95

```

```

** 473797.079, 3754683.979, 0.00, 4.00, 3.95
** 473832.857, 3754684.580, 0.00, 4.00, 3.95
** 473831.534, 3754711.303, 0.00, 4.00, 3.95
** 473825.370, 3754730.840, 0.00, 4.00, 3.95
** 473825.424, 3754745.686, 0.00, 4.00, 3.95

```

```

** -----
LOCATION L0001815    VOLUME  473797.069 3754701.662 0.0
LOCATION L0001816    VOLUME  473797.073 3754693.162 0.0
LOCATION L0001817    VOLUME  473797.078 3754684.662 0.0
LOCATION L0001818    VOLUME  473804.895 3754684.110 0.0
LOCATION L0001819    VOLUME  473813.393 3754684.253 0.0
LOCATION L0001820    VOLUME  473821.892 3754684.396 0.0
LOCATION L0001821    VOLUME  473830.391 3754684.539 0.0
LOCATION L0001822    VOLUME  473832.558 3754690.607 0.0
LOCATION L0001823    VOLUME  473832.138 3754699.096 0.0
LOCATION L0001824    VOLUME  473831.718 3754707.586 0.0
LOCATION L0001825    VOLUME  473830.096 3754715.860 0.0
LOCATION L0001826    VOLUME  473827.538 3754723.966 0.0
LOCATION L0001827    VOLUME  473825.374 3754732.132 0.0
LOCATION L0001828    VOLUME  473825.406 3754740.632 0.0

```

```

** End of LINE VOLUME Source ID = SLINE18

```

```

** -----

```

```

** Line Source Represented by Adjacent Volume Sources

```

```

** LINE VOLUME Source ID = SLINE19

```

```

** DESCRSRC On-Site Truck Travel - Medical Office Building (3&4)

```

```

** PREFIX

```

```

** Length of Side = 8.50

```

```

** Configuration = Adjacent

```

```

** Emission Rate = 0.00001334

```

```

** Vertical Dimension = 4.00

```

```

** SZINIT = 1.86

```

```

** Nodes = 5

```

```

** 473690.932, 3754560.433, 0.00, 4.00, 3.95
** 473736.934, 3754560.673, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95
** 473745.446, 3754483.696, 0.00, 4.00, 3.95
** 473829.839, 3754482.423, 0.00, 4.00, 3.95

```

```

** -----
LOCATION L0001829    VOLUME  473695.182 3754560.456 0.0
LOCATION L0001830    VOLUME  473703.682 3754560.500 0.0
LOCATION L0001831    VOLUME  473712.182 3754560.544 0.0
LOCATION L0001832    VOLUME  473720.682 3754560.588 0.0
LOCATION L0001833    VOLUME  473729.182 3754560.633 0.0
LOCATION L0001834    VOLUME  473736.953 3754559.926 0.0
LOCATION L0001835    VOLUME  473737.159 3754551.428 0.0
LOCATION L0001836    VOLUME  473737.366 3754542.931 0.0
LOCATION L0001837    VOLUME  473737.572 3754534.433 0.0
LOCATION L0001838    VOLUME  473737.779 3754525.936 0.0
LOCATION L0001839    VOLUME  473737.985 3754517.439 0.0
LOCATION L0001840    VOLUME  473738.192 3754508.941 0.0
LOCATION L0001841    VOLUME  473738.398 3754500.444 0.0
LOCATION L0001842    VOLUME  473738.605 3754491.946 0.0
LOCATION L0001843    VOLUME  473743.316 3754485.559 0.0
LOCATION L0001844    VOLUME  473751.115 3754483.610 0.0

```

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0001845 | VOLUME | 473759.614 | 3754483.482 | 0.0 |
| LOCATION | L0001846 | VOLUME | 473768.113 | 3754483.354 | 0.0 |
| LOCATION | L0001847 | VOLUME | 473776.612 | 3754483.226 | 0.0 |
| LOCATION | L0001848 | VOLUME | 473785.111 | 3754483.098 | 0.0 |
| LOCATION | L0001849 | VOLUME | 473793.610 | 3754482.969 | 0.0 |
| LOCATION | L0001850 | VOLUME | 473802.110 | 3754482.841 | 0.0 |
| LOCATION | L0001851 | VOLUME | 473810.609 | 3754482.713 | 0.0 |
| LOCATION | L0001852 | VOLUME | 473819.108 | 3754482.585 | 0.0 |
| LOCATION | L0001853 | VOLUME | 473827.607 | 3754482.457 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE19

-----

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE20

\*\* DESCRSRC On-Site Truck Travel - Surgical Center

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 2.388E-06

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 4

\*\* 474146.956, 3754542.362, 0.00, 4.00, 3.95

\*\* 474225.093, 3754541.662, 0.00, 4.00, 3.95

\*\* 474224.571, 3754563.881, 0.00, 4.00, 3.95

\*\* 474284.387, 3754563.753, 0.00, 4.00, 3.95

-----

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0001854 | VOLUME | 474151.206 | 3754542.324 | 0.0 |
| LOCATION | L0001855 | VOLUME | 474159.706 | 3754542.248 | 0.0 |
| LOCATION | L0001856 | VOLUME | 474168.205 | 3754542.171 | 0.0 |
| LOCATION | L0001857 | VOLUME | 474176.705 | 3754542.095 | 0.0 |
| LOCATION | L0001858 | VOLUME | 474185.205 | 3754542.019 | 0.0 |
| LOCATION | L0001859 | VOLUME | 474193.704 | 3754541.943 | 0.0 |
| LOCATION | L0001860 | VOLUME | 474202.204 | 3754541.867 | 0.0 |
| LOCATION | L0001861 | VOLUME | 474210.704 | 3754541.791 | 0.0 |
| LOCATION | L0001862 | VOLUME | 474219.203 | 3754541.714 | 0.0 |
| LOCATION | L0001863 | VOLUME | 474225.032 | 3754544.271 | 0.0 |
| LOCATION | L0001864 | VOLUME | 474224.832 | 3754552.769 | 0.0 |
| LOCATION | L0001865 | VOLUME | 474224.632 | 3754561.266 | 0.0 |
| LOCATION | L0001866 | VOLUME | 474230.455 | 3754563.868 | 0.0 |
| LOCATION | L0001867 | VOLUME | 474238.955 | 3754563.850 | 0.0 |
| LOCATION | L0001868 | VOLUME | 474247.455 | 3754563.832 | 0.0 |
| LOCATION | L0001869 | VOLUME | 474255.955 | 3754563.814 | 0.0 |
| LOCATION | L0001870 | VOLUME | 474264.455 | 3754563.795 | 0.0 |
| LOCATION | L0001871 | VOLUME | 474272.955 | 3754563.777 | 0.0 |
| LOCATION | L0001872 | VOLUME | 474281.455 | 3754563.759 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE20

-----

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE21

\*\* DESCRSRC On-Site Truck Travel - Senior Housing

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 9.643E-06

```

** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 10
** 473693.729, 3755016.836, 0.00, 4.00, 3.95
** 473706.280, 3754992.273, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0001873      VOLUME  473695.663 3755013.052 0.0
LOCATION L0001874      VOLUME  473699.531 3755005.482 0.0
LOCATION L0001875      VOLUME  473703.398 3754997.913 0.0
LOCATION L0001876      VOLUME  473707.954 3754990.898 0.0
LOCATION L0001877      VOLUME  473715.011 3754986.350 0.0
LOCATION L0001878      VOLUME  473723.272 3754985.764 0.0
LOCATION L0001879      VOLUME  473729.388 3754991.329 0.0
LOCATION L0001880      VOLUME  473730.833 3754999.530 0.0
** End of LINE VOLUME Source ID = SLINE21
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE22
** DESCRSRC On-Site Truck Travel - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00002321
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 8
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474275.659, 3754818.227, 0.00, 4.00, 3.95
** 474276.685, 3754808.563, 0.00, 4.00, 3.95
** 474271.043, 3754798.926, 0.00, 4.00, 3.95
** 474263.098, 3754791.586, 0.00, 4.00, 3.95
** 474247.089, 3754790.184, 0.00, 4.00, 3.95
** 474237.633, 3754788.405, 0.00, 4.00, 3.95
** 474234.942, 3754777.285, 0.00, 4.00, 3.95
** -----
LOCATION L0001881      VOLUME  474157.468 3754909.510 0.0
LOCATION L0001882      VOLUME  474164.195 3754904.314 0.0
LOCATION L0001883      VOLUME  474170.922 3754899.118 0.0
LOCATION L0001884      VOLUME  474177.650 3754893.923 0.0
LOCATION L0001885      VOLUME  474184.377 3754888.727 0.0
LOCATION L0001886      VOLUME  474191.104 3754883.531 0.0
LOCATION L0001887      VOLUME  474197.831 3754878.336 0.0
LOCATION L0001888      VOLUME  474204.558 3754873.140 0.0
LOCATION L0001889      VOLUME  474211.286 3754867.944 0.0
LOCATION L0001890      VOLUME  474218.013 3754862.749 0.0
LOCATION L0001891      VOLUME  474224.740 3754857.553 0.0

```



|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0001892 | VOLUME | 474231.467 | 3754852.358 | 0.0 |
| LOCATION | L0001893 | VOLUME | 474238.195 | 3754847.162 | 0.0 |
| LOCATION | L0001894 | VOLUME | 474244.922 | 3754841.966 | 0.0 |
| LOCATION | L0001895 | VOLUME | 474251.649 | 3754836.771 | 0.0 |
| LOCATION | L0001896 | VOLUME | 474258.376 | 3754831.575 | 0.0 |
| LOCATION | L0001897 | VOLUME | 474265.103 | 3754826.379 | 0.0 |
| LOCATION | L0001898 | VOLUME | 474271.831 | 3754821.184 | 0.0 |
| LOCATION | L0001899 | VOLUME | 474276.046 | 3754814.585 | 0.0 |
| LOCATION | L0001900 | VOLUME | 474275.450 | 3754806.453 | 0.0 |
| LOCATION | L0001901 | VOLUME | 474271.156 | 3754799.118 | 0.0 |
| LOCATION | L0001902 | VOLUME | 474264.963 | 3754793.309 | 0.0 |
| LOCATION | L0001903 | VOLUME | 474257.160 | 3754791.066 | 0.0 |
| LOCATION | L0001904 | VOLUME | 474248.692 | 3754790.324 | 0.0 |
| LOCATION | L0001905 | VOLUME | 474240.317 | 3754788.910 | 0.0 |
| LOCATION | L0001906 | VOLUME | 474236.276 | 3754782.798 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE22

\*\*\*\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE23

\*\* DESCRSRC On-Site Truck Idling - Medical Office Building (1&2)

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 0.00001218

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 2

\*\* 474028.388, 3754698.671, 0.00, 4.00, 3.95

\*\* 474028.146, 3754663.431, 0.00, 4.00, 3.95

\*\*\*\*\*

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0001907 | VOLUME | 474028.359 | 3754694.421 | 0.0 |
| LOCATION | L0001908 | VOLUME | 474028.301 | 3754685.921 | 0.0 |
| LOCATION | L0001909 | VOLUME | 474028.242 | 3754677.421 | 0.0 |
| LOCATION | L0001910 | VOLUME | 474028.184 | 3754668.921 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE23

\*\*\*\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE24

\*\* DESCRSRC On-Site Truck Travel - Medical Office Building (1&2)

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 4.973E-06

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 2

\*\* 474027.769, 3754746.815, 0.00, 4.00, 3.95

\*\* 474028.146, 3754663.431, 0.00, 4.00, 3.95

\*\*\*\*\*

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0001911 | VOLUME | 474027.788 | 3754742.565 | 0.0 |
| LOCATION | L0001912 | VOLUME | 474027.827 | 3754734.065 | 0.0 |
| LOCATION | L0001913 | VOLUME | 474027.865 | 3754725.565 | 0.0 |
| LOCATION | L0001914 | VOLUME | 474027.903 | 3754717.065 | 0.0 |
| LOCATION | L0001915 | VOLUME | 474027.942 | 3754708.565 | 0.0 |

|                                           |          |              |            |             |      |
|-------------------------------------------|----------|--------------|------------|-------------|------|
| LOCATION                                  | L0001916 | VOLUME       | 474027.980 | 3754700.065 | 0.0  |
| LOCATION                                  | L0001917 | VOLUME       | 474028.019 | 3754691.565 | 0.0  |
| LOCATION                                  | L0001918 | VOLUME       | 474028.057 | 3754683.065 | 0.0  |
| LOCATION                                  | L0001919 | VOLUME       | 474028.095 | 3754674.565 | 0.0  |
| LOCATION                                  | L0001920 | VOLUME       | 474028.134 | 3754666.066 | 0.0  |
| ** End of LINE VOLUME Source ID = SLINE24 |          |              |            |             |      |
| ** Source Parameters **                   |          |              |            |             |      |
| ** LINE VOLUME Source ID = SLINE1         |          |              |            |             |      |
| SRCPARAM                                  | L0001329 | 0.02816      | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001330 | 0.02816      | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001331 | 0.02816      | 4.00       | 3.95        | 1.86 |
| ** -----                                  |          |              |            |             |      |
| ** LINE VOLUME Source ID = SLINE2         |          |              |            |             |      |
| SRCPARAM                                  | L0001332 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001333 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001334 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001335 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001336 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001337 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001338 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001339 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001340 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001341 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001342 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001343 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001344 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001345 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001346 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001347 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001348 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001349 | 0.0015833333 | 4.00       | 3.95        | 1.86 |
| ** -----                                  |          |              |            |             |      |
| ** LINE VOLUME Source ID = SLINE3         |          |              |            |             |      |
| SRCPARAM                                  | L0001350 | 0.0009592857 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001351 | 0.0009592857 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001352 | 0.0009592857 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001353 | 0.0009592857 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001354 | 0.0009592857 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001355 | 0.0009592857 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001356 | 0.0009592857 | 4.00       | 3.95        | 1.86 |
| ** -----                                  |          |              |            |             |      |
| ** LINE VOLUME Source ID = SLINE4         |          |              |            |             |      |
| SRCPARAM                                  | L0001357 | 0.012574     | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001358 | 0.012574     | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001359 | 0.012574     | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001360 | 0.012574     | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001361 | 0.012574     | 4.00       | 3.95        | 1.86 |
| ** -----                                  |          |              |            |             |      |
| ** LINE VOLUME Source ID = SLINE5         |          |              |            |             |      |
| SRCPARAM                                  | L0001362 | 0.0052144444 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001363 | 0.0052144444 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001364 | 0.0052144444 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001365 | 0.0052144444 | 4.00       | 3.95        | 1.86 |
| SRCPARAM                                  | L0001366 | 0.0052144444 | 4.00       | 3.95        | 1.86 |



|          |                                |              |      |      |      |
|----------|--------------------------------|--------------|------|------|------|
| SRCPARAM | L0001367                       | 0.0052144444 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001368                       | 0.0052144444 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001369                       | 0.0052144444 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001370                       | 0.0052144444 | 4.00 | 3.95 | 1.86 |
| ** ----- |                                |              |      |      |      |
| **       | LINE VOLUME Source ID = SLINE6 |              |      |      |      |
| SRCPARAM | L0001371                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001372                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001373                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001374                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001375                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001376                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001377                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001378                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001379                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001380                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001381                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001382                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001383                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001384                       | 0.0007185714 | 4.00 | 3.95 | 1.86 |
| ** ----- |                                |              |      |      |      |
| **       | LINE VOLUME Source ID = SLINE7 |              |      |      |      |
| SRCPARAM | L0001385                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001386                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001387                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001388                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001389                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001390                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001391                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001392                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001393                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001394                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001395                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001396                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001397                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001398                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001399                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001400                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001401                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001402                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001403                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001404                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001405                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001406                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001407                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001408                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001409                       | 0.0002386    | 4.00 | 3.95 | 1.86 |
| ** ----- |                                |              |      |      |      |
| **       | LINE VOLUME Source ID = SLINE8 |              |      |      |      |
| SRCPARAM | L0001410                       | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001411                       | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001412                       | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001413                       | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001414                       | 0.0000563158 | 4.00 | 3.95 | 1.86 |

|                                    |          |              |      |      |      |
|------------------------------------|----------|--------------|------|------|------|
| SRCPARAM                           | L0001415 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001416 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001417 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001418 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001419 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001420 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001421 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001422 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001423 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001424 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001425 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001426 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001427 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001428 | 0.0000563158 | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE9  |          |              |      |      |      |
| SRCPARAM                           | L0001429 | 0.000539125  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001430 | 0.000539125  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001431 | 0.000539125  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001432 | 0.000539125  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001433 | 0.000539125  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001434 | 0.000539125  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001435 | 0.000539125  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001436 | 0.000539125  | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE10 |          |              |      |      |      |
| SRCPARAM                           | L0001437 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001438 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001439 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001440 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001441 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001442 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001443 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001444 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001445 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001446 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001447 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001448 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001449 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001450 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001451 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001452 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001453 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001454 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001455 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001456 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001457 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001458 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001459 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001460 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001461 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001462 | 0.0003992308 | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE11 |          |              |      |      |      |

|          |                                 |              |      |      |      |
|----------|---------------------------------|--------------|------|------|------|
| SRCPARAM | L0001463                        | 0.0067025    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001464                        | 0.0067025    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001465                        | 0.0067025    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001466                        | 0.0067025    | 4.00 | 3.95 | 1.86 |
| ** ----- |                                 |              |      |      |      |
| **       | LINE VOLUME Source ID = SLINE12 |              |      |      |      |
| SRCPARAM | L0001467                        | 0.0002223    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001468                        | 0.0002223    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001469                        | 0.0002223    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001470                        | 0.0002223    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001471                        | 0.0002223    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001472                        | 0.0002223    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001473                        | 0.0002223    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001474                        | 0.0002223    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001475                        | 0.0002223    | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001476                        | 0.0002223    | 4.00 | 3.95 | 1.86 |
| ** ----- |                                 |              |      |      |      |
| **       | LINE VOLUME Source ID = SLINE13 |              |      |      |      |
| SRCPARAM | L0001773                        | 0.0000127867 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001774                        | 0.0000127867 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001775                        | 0.0000127867 | 4.00 | 3.95 | 1.86 |
| ** ----- |                                 |              |      |      |      |
| **       | LINE VOLUME Source ID = SLINE14 |              |      |      |      |
| SRCPARAM | L0001776                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001777                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001778                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001779                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001780                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001781                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001782                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001783                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001784                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001785                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001786                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001787                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001788                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001789                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001790                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001791                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001792                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001793                        | 0.0000007189 | 4.00 | 3.95 | 1.86 |
| ** ----- |                                 |              |      |      |      |
| **       | LINE VOLUME Source ID = SLINE15 |              |      |      |      |
| SRCPARAM | L0001794                        | 0.0000004349 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001795                        | 0.0000004349 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001796                        | 0.0000004349 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001797                        | 0.0000004349 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001798                        | 0.0000004349 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001799                        | 0.0000004349 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001800                        | 0.0000004349 | 4.00 | 3.95 | 1.86 |
| ** ----- |                                 |              |      |      |      |
| **       | LINE VOLUME Source ID = SLINE16 |              |      |      |      |
| SRCPARAM | L0001801                        | 0.000005708  | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001802                        | 0.000005708  | 4.00 | 3.95 | 1.86 |

|    |                                 |          |              |      |      |      |
|----|---------------------------------|----------|--------------|------|------|------|
|    | SRCPARAM                        | L0001803 | 0.000005708  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001804 | 0.000005708  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001805 | 0.000005708  | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE17 |          |              |      |      |      |
|    | SRCPARAM                        | L0001806 | 0.000002368  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001807 | 0.000002368  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001808 | 0.000002368  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001809 | 0.000002368  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001810 | 0.000002368  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001811 | 0.000002368  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001812 | 0.000002368  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001813 | 0.000002368  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001814 | 0.000002368  | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE18 |          |              |      |      |      |
|    | SRCPARAM                        | L0001815 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001816 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001817 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001818 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001819 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001820 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001821 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001822 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001823 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001824 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001825 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001826 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001827 | 0.000001607  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001828 | 0.000001607  | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE19 |          |              |      |      |      |
|    | SRCPARAM                        | L0001829 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001830 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001831 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001832 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001833 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001834 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001835 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001836 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001837 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001838 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001839 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001840 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001841 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001842 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001843 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001844 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001845 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001846 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001847 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001848 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001849 | 0.0000005336 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001850 | 0.0000005336 | 4.00 | 3.95 | 1.86 |

|    |                                 |          |               |      |      |      |
|----|---------------------------------|----------|---------------|------|------|------|
|    | SRCPARAM                        | L0001851 | 0.0000005336  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001852 | 0.0000005336  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001853 | 0.0000005336  | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |               |      |      |      |
| ** | LINE VOLUME Source ID = SLINE20 |          |               |      |      |      |
|    | SRCPARAM                        | L0001854 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001855 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001856 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001857 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001858 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001859 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001860 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001861 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001862 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001863 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001864 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001865 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001866 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001867 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001868 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001869 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001870 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001871 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001872 | 0.0000001257  | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |               |      |      |      |
| ** | LINE VOLUME Source ID = SLINE21 |          |               |      |      |      |
|    | SRCPARAM                        | L0001873 | 0.0000001205  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001874 | 0.0000001205  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001875 | 0.0000001205  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001876 | 0.0000001205  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001877 | 0.0000001205  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001878 | 0.0000001205  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001879 | 0.0000001205  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001880 | 0.0000001205  | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |               |      |      |      |
| ** | LINE VOLUME Source ID = SLINE22 |          |               |      |      |      |
|    | SRCPARAM                        | L0001881 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001882 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001883 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001884 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001885 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001886 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001887 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001888 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001889 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001890 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001891 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001892 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001893 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001894 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001895 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001896 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001897 | 0.00000008927 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0001898 | 0.00000008927 | 4.00 | 3.95 | 1.86 |

|                                    |           |              |      |      |      |
|------------------------------------|-----------|--------------|------|------|------|
| SRCPARAM                           | L0001899  | 0.0000008927 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001900  | 0.0000008927 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001901  | 0.0000008927 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001902  | 0.0000008927 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001903  | 0.0000008927 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001904  | 0.0000008927 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001905  | 0.0000008927 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001906  | 0.0000008927 | 4.00 | 3.95 | 1.86 |
| ** -----                           |           |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE23 |           |              |      |      |      |
| SRCPARAM                           | L0001907  | 0.000003045  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001908  | 0.000003045  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001909  | 0.000003045  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001910  | 0.000003045  | 4.00 | 3.95 | 1.86 |
| ** -----                           |           |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE24 |           |              |      |      |      |
| SRCPARAM                           | L0001911  | 0.0000004973 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001912  | 0.0000004973 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001913  | 0.0000004973 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001914  | 0.0000004973 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001915  | 0.0000004973 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001916  | 0.0000004973 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001917  | 0.0000004973 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001918  | 0.0000004973 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001919  | 0.0000004973 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0001920  | 0.0000004973 | 4.00 | 3.95 | 1.86 |
| ** -----                           |           |              |      |      |      |
| URBANSRC ALL                       |           |              |      |      |      |
| SRCGROUP ALL                       |           |              |      |      |      |
| SO FINISHED                        |           |              |      |      |      |
| **                                 |           |              |      |      |      |
| *****                              |           |              |      |      |      |
| ** AERMOD Receptor Pathway         |           |              |      |      |      |
| *****                              |           |              |      |      |      |
| **                                 |           |              |      |      |      |
| **                                 |           |              |      |      |      |
| RE STARTING                        |           |              |      |      |      |
| ** DESCRREC "" ""                  |           |              |      |      |      |
| DISCCART                           | 474201.46 | 3754331.71   | 2.00 |      |      |
| DISCCART                           | 474401.46 | 3754331.71   | 2.00 |      |      |
| DISCCART                           | 474501.46 | 3754331.71   | 2.00 |      |      |
| DISCCART                           | 473801.46 | 3754431.71   | 2.00 |      |      |
| DISCCART                           | 473715.92 | 3754428.71   | 2.00 |      |      |
| DISCCART                           | 473738.73 | 3754428.62   | 2.00 |      |      |
| DISCCART                           | 473755.69 | 3754428.85   | 2.00 |      |      |
| DISCCART                           | 473774.94 | 3754428.85   | 2.00 |      |      |
| DISCCART                           | 473815.97 | 3754429.55   | 2.00 |      |      |
| DISCCART                           | 473831.00 | 3754424.36   | 2.00 |      |      |
| DISCCART                           | 473853.90 | 3754425.20   | 2.00 |      |      |
| DISCCART                           | 473871.89 | 3754423.79   | 2.00 |      |      |
| DISCCART                           | 473891.98 | 3754427.59   | 2.00 |      |      |
| DISCCART                           | 473779.02 | 3754366.16   | 2.00 |      |      |
| DISCCART                           | 473813.90 | 3754366.49   | 2.00 |      |      |
| DISCCART                           | 474014.62 | 3754372.20   | 2.00 |      |      |



|          |           |            |      |
|----------|-----------|------------|------|
| DISCCART | 474058.72 | 3754367.30 | 2.00 |
| DISCCART | 474106.33 | 3754366.60 | 2.00 |
| DISCCART | 474129.66 | 3754366.83 | 2.00 |
| DISCCART | 474153.46 | 3754367.77 | 2.00 |
| DISCCART | 474231.55 | 3754356.87 | 2.00 |
| DISCCART | 474273.79 | 3754374.60 | 2.00 |
| DISCCART | 474545.34 | 3754362.52 | 2.00 |
| DISCCART | 474582.52 | 3754377.24 | 2.00 |
| DISCCART | 474612.74 | 3754387.31 | 2.00 |
| DISCCART | 474642.95 | 3754391.18 | 2.00 |
| DISCCART | 474354.43 | 3754341.93 | 2.00 |

RE FINISHED  
\*\*  
\*\*\*\*\*  
\*\* AERMOD Meteorology Pathway  
\*\*\*\*\*  
\*\*  
\*\*  
ME STARTING  
SURFFILE ..\..\Aermod\rivr8.sfc  
PROFFILE ..\..\Aermod\rivr8.PFL  
SURFDATA 3190 2008  
UAIRDATA 3190 2008  
SITEDATA 99999 2008  
PROFBASE 250.0 METERS  
ME FINISHED  
\*\*  
\*\*\*\*\*  
\*\* AERMOD Output Pathway  
\*\*\*\*\*  
\*\*  
\*\*  
OU STARTING  
RECTABLE ALLAVE 1ST  
RECTABLE 1 1ST  
RECTABLE 8 1ST  
\*\* Auto-Generated Plotfiles  
PLOTFILE 1 ALL 1ST C0.AD\01H1GALL.PLT 31  
PLOTFILE 8 ALL 1ST C0.AD\08H1GALL.PLT 32  
SUMMFILE C0.sum  
OU FINISHED

\*\*\* Message Summary For AERMOD Model Setup \*\*\*

----- Summary of Total Messages -----

|            |                            |
|------------|----------------------------|
| A Total of | 0 Fatal Error Message(s)   |
| A Total of | 1 Warning Message(s)       |
| A Total of | 0 Informational Message(s) |

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

```
***** WARNING MESSAGES *****
ME W531      1158      MEOPEN: CAUTION! Met Station ID Missing from
SURFFILE for      SURFDATA
```

```
*****
*** SETUP Finishes Successfully ***
*****
```



\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
09000\\_08900\08990\08990\_Operational LST\CO\CO.isc \*\*\* 03/13/15  
\*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
\*\*\* 18:14:53

PAGE 1

\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* MODEL SETUP OPTIONS

SUMMARY \*\*\*

-----  
\*\*Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --

\*\*NO GAS DEPOSITION Data Provided.

\*\*NO PARTICLE DEPOSITION Data Provided.

\*\*Model Uses NO DRY DEPLETION. DRYDPLT = F

\*\*Model Uses NO WET DEPLETION. WETDPLT = F

\*\*Model Uses URBAN Dispersion Algorithm for the SBL for 296 Source(s),  
for Total of 1 Urban Area(s):

Urban Population = 2100516.0 ; Urban Roughness Length = 1.000 m

\*\*Model Allows User-Specified Options:

1. Stack-tip Downwash.
2. Model Assumes Receptors on FLAT Terrain.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.
6. Urban Roughness Length of 1.0 Meter Used.

\*\*Other Options Specified:

FASTALL - Use effective sigma-y to optimize meander for  
POINT and VOLUME sources, and hybrid approach  
to optimize AREA sources (formerly TOXICS option)  
TEMP\_Sub - Meteorological data includes TEMP substitutions

\*\*Model Accepts FLAGPOLE Receptor Heights.

\*\*The User Specified a Pollutant Type of: CO

\*\*Model Calculates 2 Short Term Average(s) of: 1-HR 8-HR

\*\*This Run Includes: 296 Source(s); 1 Source Group(s); and  
27 Receptor(s)

\*\*Model Set To Continue RUNning After the Setup Testing.

\*\*The AERMET Input Meteorological Data Version Date: 14134

\*\*Output Options Selected:

Model Outputs Tables of Highest Short Term Values by Receptor  
(RECTABLE Keyword)  
Model Outputs External File(s) of High Values for Plotting  
(PLOTFILE Keyword)  
Model Outputs Separate Summary File of High Ranked Values  
(SUMMFILE Keyword)

\*\*NOTE: The Following Flags May Appear Following CONC Values: c for  
Calm Hours  
m for  
Missing Hours  
b for  
Both Calm and Missing Hours

\*\*Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 250.00 ;  
Decay Coef. = 0.000 ; Rot. Angle = 0.0  
Emission Units = GRAMS/SEC  
; Emission Rate Unit Factor = 0.10000E+07  
Output Units = MICROGRAMS/M\*\*3

\*\*Approximate Storage Requirements of Model = 3.6 MB of RAM.

\*\*Detailed Error/Message File: CO.err  
\*\*File for Summary of Results: CO.sum

```

*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\C0\C0.isc ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:14:53

```

```

PAGE      2
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

```

\*\*\* VOLUME SOURCE DATA

\*\*\*

| INIT.    | INIT.    | NUMBER      | EMISSION    | RATE      |          | BASE     | RELEASE  |
|----------|----------|-------------|-------------|-----------|----------|----------|----------|
| SOURCE   | SOURCE   | URBAN       | EMISSION    | RATE      |          | ELEV.    | HEIGHT   |
| SY       | SZ       | PART.       | (GRAMS/SEC) | X         | Y        |          |          |
| ID       | CATS.    | SCALAR      | VARY        | (METERS)  | (METERS) | (METERS) | (METERS) |
| (METERS) | (METERS) | BY          |             |           |          |          |          |
| L0001329 | 0        | 0.28160E-01 | 473797.1    | 3754701.7 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001330 | 0        | 0.28160E-01 | 473797.1    | 3754693.2 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001331 | 0        | 0.28160E-01 | 473797.1    | 3754684.7 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001332 | 0        | 0.15833E-02 | 473737.1    | 3754546.9 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001333 | 0        | 0.15833E-02 | 473737.3    | 3754538.4 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001334 | 0        | 0.15833E-02 | 473737.5    | 3754529.9 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001335 | 0        | 0.15833E-02 | 473737.8    | 3754521.4 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001336 | 0        | 0.15833E-02 | 473738.0    | 3754512.9 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001337 | 0        | 0.15833E-02 | 473738.3    | 3754504.4 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001338 | 0        | 0.15833E-02 | 473738.5    | 3754495.9 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001339 | 0        | 0.15833E-02 | 473740.3    | 3754488.2 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001340 | 0        | 0.15833E-02 | 473747.2    | 3754483.7 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001341 | 0        | 0.15833E-02 | 473755.7    | 3754483.5 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001342 | 0        | 0.15833E-02 | 473764.2    | 3754483.4 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001343 | 0        | 0.15833E-02 | 473772.7    | 3754483.3 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0001344 | 0        | 0.15833E-02 | 473781.2    | 3754483.2 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0001345  | 0   | 0.15833E-02 | 473789.7 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001346  | 0   | 0.15833E-02 | 473798.2 | 3754482.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001347  | 0   | 0.15833E-02 | 473806.7 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001348  | 0   | 0.15833E-02 | 473815.2 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001349  | 0   | 0.15833E-02 | 473823.7 | 3754482.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001350  | 0   | 0.95929E-03 | 474151.2 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001351  | 0   | 0.95929E-03 | 474159.7 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001352  | 0   | 0.95929E-03 | 474168.2 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001353  | 0   | 0.95929E-03 | 474176.7 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001354  | 0   | 0.95929E-03 | 474185.2 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001355  | 0   | 0.95929E-03 | 474193.7 | 3754542.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001356  | 0   | 0.95929E-03 | 474202.2 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001357  | 0   | 0.12574E-01 | 473709.1 | 3754990.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001358  | 0   | 0.12574E-01 | 473716.4 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001359  | 0   | 0.12574E-01 | 473724.6 | 3754986.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001360  | 0   | 0.12574E-01 | 473730.2 | 3754992.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001361  | 0   | 0.12574E-01 | 473730.6 | 3755001.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001362  | 0   | 0.52144E-02 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001363  | 0   | 0.52144E-02 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001364  | 0   | 0.52144E-02 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001365  | 0   | 0.52144E-02 | 474177.7 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001366  | 0   | 0.52144E-02 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001367  | 0   | 0.52144E-02 | 474191.1 | 3754883.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001368  | 0   | 0.52144E-02 | 474197.9 | 3754878.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\C0\C0.isc ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
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PAGE      3
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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\*\*\* VOLUME SOURCE DATA

\*\*\*

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| -----    |          |        |             |          |           |          |          |
| L0001369 |          | 0      | 0.52144E-02 | 474204.6 | 3754873.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001370 |          | 0      | 0.52144E-02 | 474211.3 | 3754868.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001371 |          | 0      | 0.71857E-03 | 473797.1 | 3754701.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001372 |          | 0      | 0.71857E-03 | 473797.1 | 3754693.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001373 |          | 0      | 0.71857E-03 | 473797.1 | 3754684.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001374 |          | 0      | 0.71857E-03 | 473804.9 | 3754684.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001375 |          | 0      | 0.71857E-03 | 473813.4 | 3754684.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001376 |          | 0      | 0.71857E-03 | 473821.9 | 3754684.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001377 |          | 0      | 0.71857E-03 | 473830.4 | 3754684.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001378 |          | 0      | 0.71857E-03 | 473832.6 | 3754690.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001379 |          | 0      | 0.71857E-03 | 473832.1 | 3754699.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001380 |          | 0      | 0.71857E-03 | 473831.7 | 3754707.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001381 |          | 0      | 0.71857E-03 | 473830.1 | 3754715.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001382 |          | 0      | 0.71857E-03 | 473827.5 | 3754724.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001383 |          | 0      | 0.71857E-03 | 473825.4 | 3754732.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001384 |          | 0      | 0.71857E-03 | 473825.4 | 3754740.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0001385  | 0   | 0.23860E-03 | 473695.2 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001386  | 0   | 0.23860E-03 | 473703.7 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001387  | 0   | 0.23860E-03 | 473712.2 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001388  | 0   | 0.23860E-03 | 473720.7 | 3754560.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001389  | 0   | 0.23860E-03 | 473729.2 | 3754560.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001390  | 0   | 0.23860E-03 | 473737.0 | 3754559.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001391  | 0   | 0.23860E-03 | 473737.2 | 3754551.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001392  | 0   | 0.23860E-03 | 473737.4 | 3754542.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001393  | 0   | 0.23860E-03 | 473737.6 | 3754534.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001394  | 0   | 0.23860E-03 | 473737.8 | 3754525.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001395  | 0   | 0.23860E-03 | 473738.0 | 3754517.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001396  | 0   | 0.23860E-03 | 473738.2 | 3754508.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001397  | 0   | 0.23860E-03 | 473738.4 | 3754500.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001398  | 0   | 0.23860E-03 | 473738.6 | 3754491.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001399  | 0   | 0.23860E-03 | 473743.3 | 3754485.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001400  | 0   | 0.23860E-03 | 473751.1 | 3754483.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001401  | 0   | 0.23860E-03 | 473759.6 | 3754483.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001402  | 0   | 0.23860E-03 | 473768.1 | 3754483.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001403  | 0   | 0.23860E-03 | 473776.6 | 3754483.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001404  | 0   | 0.23860E-03 | 473785.1 | 3754483.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001405  | 0   | 0.23860E-03 | 473793.6 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001406  | 0   | 0.23860E-03 | 473802.1 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001407  | 0   | 0.23860E-03 | 473810.6 | 3754482.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001408  | 0   | 0.23860E-03 | 473819.1 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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 \*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* VOLUME SOURCE DATA

\*\*\*

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           | ELEV.    | HEIGHT   |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         |          |          |
| ID       | CATS.    | SCALAR | VARY        | (METERS) | (METERS)  | (METERS) | (METERS) |
| (METERS) | (METERS) | BY     |             |          |           |          |          |
| L0001409 |          | 0      | 0.23860E-03 | 473827.6 | 3754482.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001410 |          | 0      | 0.56316E-04 | 474151.2 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001411 |          | 0      | 0.56316E-04 | 474159.7 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001412 |          | 0      | 0.56316E-04 | 474168.2 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001413 |          | 0      | 0.56316E-04 | 474176.7 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001414 |          | 0      | 0.56316E-04 | 474185.2 | 3754542.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001415 |          | 0      | 0.56316E-04 | 474193.7 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001416 |          | 0      | 0.56316E-04 | 474202.2 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001417 |          | 0      | 0.56316E-04 | 474210.7 | 3754541.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001418 |          | 0      | 0.56316E-04 | 474219.2 | 3754541.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001419 |          | 0      | 0.56316E-04 | 474225.0 | 3754544.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001420 |          | 0      | 0.56316E-04 | 474224.8 | 3754552.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001421 |          | 0      | 0.56316E-04 | 474224.6 | 3754561.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001422 |          | 0      | 0.56316E-04 | 474230.5 | 3754563.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001423 |          | 0      | 0.56316E-04 | 474239.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001424 |          | 0      | 0.56316E-04 | 474247.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0001425  | 0   | 0.56316E-04 | 474256.0 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001426  | 0   | 0.56316E-04 | 474264.5 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001427  | 0   | 0.56316E-04 | 474273.0 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001428  | 0   | 0.56316E-04 | 474281.5 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001429  | 0   | 0.53912E-03 | 473695.7 | 3755013.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001430  | 0   | 0.53912E-03 | 473699.5 | 3755005.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001431  | 0   | 0.53912E-03 | 473703.4 | 3754997.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001432  | 0   | 0.53912E-03 | 473708.0 | 3754990.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001433  | 0   | 0.53912E-03 | 473715.0 | 3754986.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001434  | 0   | 0.53912E-03 | 473723.3 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001435  | 0   | 0.53912E-03 | 473729.4 | 3754991.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001436  | 0   | 0.53912E-03 | 473730.8 | 3754999.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001437  | 0   | 0.39923E-03 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001438  | 0   | 0.39923E-03 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001439  | 0   | 0.39923E-03 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001440  | 0   | 0.39923E-03 | 474177.6 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001441  | 0   | 0.39923E-03 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001442  | 0   | 0.39923E-03 | 474191.1 | 3754883.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001443  | 0   | 0.39923E-03 | 474197.8 | 3754878.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001444  | 0   | 0.39923E-03 | 474204.6 | 3754873.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001445  | 0   | 0.39923E-03 | 474211.3 | 3754867.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001446  | 0   | 0.39923E-03 | 474218.0 | 3754862.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001447  | 0   | 0.39923E-03 | 474224.7 | 3754857.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001448  | 0   | 0.39923E-03 | 474231.5 | 3754852.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |



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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
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*** AERMET - VERSION 14134 ***      ***
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PAGE      5
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0001449 |          | 0      | 0.39923E-03 | 474238.2 | 3754847.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001450 |          | 0      | 0.39923E-03 | 474244.9 | 3754842.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001451 |          | 0      | 0.39923E-03 | 474251.6 | 3754836.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001452 |          | 0      | 0.39923E-03 | 474258.4 | 3754831.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001453 |          | 0      | 0.39923E-03 | 474265.1 | 3754826.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001454 |          | 0      | 0.39923E-03 | 474271.8 | 3754821.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001455 |          | 0      | 0.39923E-03 | 474276.0 | 3754814.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001456 |          | 0      | 0.39923E-03 | 474275.5 | 3754806.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001457 |          | 0      | 0.39923E-03 | 474271.2 | 3754799.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001458 |          | 0      | 0.39923E-03 | 474265.0 | 3754793.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001459 |          | 0      | 0.39923E-03 | 474257.2 | 3754791.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001460 |          | 0      | 0.39923E-03 | 474248.7 | 3754790.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001461 |          | 0      | 0.39923E-03 | 474240.3 | 3754788.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001462 |          | 0      | 0.39923E-03 | 474236.3 | 3754782.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001463 |          | 0      | 0.67025E-02 | 474028.4 | 3754694.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001464 |          | 0      | 0.67025E-02 | 474028.3 | 3754685.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0001465  | 0   | 0.67025E-02 | 474028.2 | 3754677.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001466  | 0   | 0.67025E-02 | 474028.2 | 3754668.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001467  | 0   | 0.22230E-03 | 474027.8 | 3754742.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001468  | 0   | 0.22230E-03 | 474027.8 | 3754734.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001469  | 0   | 0.22230E-03 | 474027.9 | 3754725.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001470  | 0   | 0.22230E-03 | 474027.9 | 3754717.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001471  | 0   | 0.22230E-03 | 474027.9 | 3754708.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001472  | 0   | 0.22230E-03 | 474028.0 | 3754700.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001473  | 0   | 0.22230E-03 | 474028.0 | 3754691.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001474  | 0   | 0.22230E-03 | 474028.1 | 3754683.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001475  | 0   | 0.22230E-03 | 474028.1 | 3754674.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001476  | 0   | 0.22230E-03 | 474028.1 | 3754666.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001773  | 0   | 0.12787E-04 | 473797.1 | 3754701.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001774  | 0   | 0.12787E-04 | 473797.1 | 3754693.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001775  | 0   | 0.12787E-04 | 473797.1 | 3754684.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001776  | 0   | 0.71890E-06 | 473737.1 | 3754546.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001777  | 0   | 0.71890E-06 | 473737.3 | 3754538.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001778  | 0   | 0.71890E-06 | 473737.5 | 3754529.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001779  | 0   | 0.71890E-06 | 473737.8 | 3754521.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001780  | 0   | 0.71890E-06 | 473738.0 | 3754512.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001781  | 0   | 0.71890E-06 | 473738.3 | 3754504.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001782  | 0   | 0.71890E-06 | 473738.5 | 3754495.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001783  | 0   | 0.71890E-06 | 473740.3 | 3754488.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001784  | 0   | 0.71890E-06 | 473747.2 | 3754483.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\CO\CO.isc ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:14:53

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PAGE      6
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0001785 |          | 0      | 0.71890E-06 | 473755.7 | 3754483.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001786 |          | 0      | 0.71890E-06 | 473764.2 | 3754483.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001787 |          | 0      | 0.71890E-06 | 473772.7 | 3754483.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001788 |          | 0      | 0.71890E-06 | 473781.2 | 3754483.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001789 |          | 0      | 0.71890E-06 | 473789.7 | 3754483.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001790 |          | 0      | 0.71890E-06 | 473798.2 | 3754482.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001791 |          | 0      | 0.71890E-06 | 473806.7 | 3754482.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001792 |          | 0      | 0.71890E-06 | 473815.2 | 3754482.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001793 |          | 0      | 0.71890E-06 | 473823.7 | 3754482.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001794 |          | 0      | 0.43490E-06 | 474151.2 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001795 |          | 0      | 0.43490E-06 | 474159.7 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001796 |          | 0      | 0.43490E-06 | 474168.2 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001797 |          | 0      | 0.43490E-06 | 474176.7 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001798 |          | 0      | 0.43490E-06 | 474185.2 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001799 |          | 0      | 0.43490E-06 | 474193.7 | 3754542.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001800 |          | 0      | 0.43490E-06 | 474202.2 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0001801  | 0   | 0.57080E-05 | 473709.1 | 3754990.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001802  | 0   | 0.57080E-05 | 473716.4 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001803  | 0   | 0.57080E-05 | 473724.6 | 3754986.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001804  | 0   | 0.57080E-05 | 473730.2 | 3754992.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001805  | 0   | 0.57080E-05 | 473730.6 | 3755001.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001806  | 0   | 0.23680E-05 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001807  | 0   | 0.23680E-05 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001808  | 0   | 0.23680E-05 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001809  | 0   | 0.23680E-05 | 474177.7 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001810  | 0   | 0.23680E-05 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001811  | 0   | 0.23680E-05 | 474191.1 | 3754883.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001812  | 0   | 0.23680E-05 | 474197.9 | 3754878.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001813  | 0   | 0.23680E-05 | 474204.6 | 3754873.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001814  | 0   | 0.23680E-05 | 474211.3 | 3754868.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001815  | 0   | 0.16070E-05 | 473797.1 | 3754701.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001816  | 0   | 0.16070E-05 | 473797.1 | 3754693.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001817  | 0   | 0.16070E-05 | 473797.1 | 3754684.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001818  | 0   | 0.16070E-05 | 473804.9 | 3754684.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001819  | 0   | 0.16070E-05 | 473813.4 | 3754684.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001820  | 0   | 0.16070E-05 | 473821.9 | 3754684.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001821  | 0   | 0.16070E-05 | 473830.4 | 3754684.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001822  | 0   | 0.16070E-05 | 473832.6 | 3754690.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001823  | 0   | 0.16070E-05 | 473832.1 | 3754699.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001824  | 0   | 0.16070E-05 | 473831.7 | 3754707.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
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**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0001825 |          | 0      | 0.16070E-05 | 473830.1 | 3754715.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001826 |          | 0      | 0.16070E-05 | 473827.5 | 3754724.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001827 |          | 0      | 0.16070E-05 | 473825.4 | 3754732.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001828 |          | 0      | 0.16070E-05 | 473825.4 | 3754740.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001829 |          | 0      | 0.53360E-06 | 473695.2 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001830 |          | 0      | 0.53360E-06 | 473703.7 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001831 |          | 0      | 0.53360E-06 | 473712.2 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001832 |          | 0      | 0.53360E-06 | 473720.7 | 3754560.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001833 |          | 0      | 0.53360E-06 | 473729.2 | 3754560.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001834 |          | 0      | 0.53360E-06 | 473737.0 | 3754559.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001835 |          | 0      | 0.53360E-06 | 473737.2 | 3754551.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001836 |          | 0      | 0.53360E-06 | 473737.4 | 3754542.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001837 |          | 0      | 0.53360E-06 | 473737.6 | 3754534.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001838 |          | 0      | 0.53360E-06 | 473737.8 | 3754525.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001839 |          | 0      | 0.53360E-06 | 473738.0 | 3754517.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001840 |          | 0      | 0.53360E-06 | 473738.2 | 3754508.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0001841  | 0   | 0.53360E-06 | 473738.4 | 3754500.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001842  | 0   | 0.53360E-06 | 473738.6 | 3754491.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001843  | 0   | 0.53360E-06 | 473743.3 | 3754485.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001844  | 0   | 0.53360E-06 | 473751.1 | 3754483.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001845  | 0   | 0.53360E-06 | 473759.6 | 3754483.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001846  | 0   | 0.53360E-06 | 473768.1 | 3754483.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001847  | 0   | 0.53360E-06 | 473776.6 | 3754483.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001848  | 0   | 0.53360E-06 | 473785.1 | 3754483.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001849  | 0   | 0.53360E-06 | 473793.6 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001850  | 0   | 0.53360E-06 | 473802.1 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001851  | 0   | 0.53360E-06 | 473810.6 | 3754482.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001852  | 0   | 0.53360E-06 | 473819.1 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001853  | 0   | 0.53360E-06 | 473827.6 | 3754482.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001854  | 0   | 0.12570E-06 | 474151.2 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001855  | 0   | 0.12570E-06 | 474159.7 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001856  | 0   | 0.12570E-06 | 474168.2 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001857  | 0   | 0.12570E-06 | 474176.7 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001858  | 0   | 0.12570E-06 | 474185.2 | 3754542.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001859  | 0   | 0.12570E-06 | 474193.7 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001860  | 0   | 0.12570E-06 | 474202.2 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001861  | 0   | 0.12570E-06 | 474210.7 | 3754541.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001862  | 0   | 0.12570E-06 | 474219.2 | 3754541.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001863  | 0   | 0.12570E-06 | 474225.0 | 3754544.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001864  | 0   | 0.12570E-06 | 474224.8 | 3754552.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
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*** AERMET - VERSION 14134 ***      ***
***      18:14:53

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PAGE      8
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           | ELEV.    | HEIGHT   |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         |          |          |
| ID       |          | SOURCE | SCALAR      | VARY     |           | (METERS) | (METERS) |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0001865 |          | 0      | 0.12570E-06 | 474224.6 | 3754561.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001866 |          | 0      | 0.12570E-06 | 474230.5 | 3754563.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001867 |          | 0      | 0.12570E-06 | 474239.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001868 |          | 0      | 0.12570E-06 | 474247.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001869 |          | 0      | 0.12570E-06 | 474256.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001870 |          | 0      | 0.12570E-06 | 474264.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001871 |          | 0      | 0.12570E-06 | 474273.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001872 |          | 0      | 0.12570E-06 | 474281.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001873 |          | 0      | 0.12050E-05 | 473695.7 | 3755013.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001874 |          | 0      | 0.12050E-05 | 473699.5 | 3755005.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001875 |          | 0      | 0.12050E-05 | 473703.4 | 3754997.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001876 |          | 0      | 0.12050E-05 | 473708.0 | 3754990.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001877 |          | 0      | 0.12050E-05 | 473715.0 | 3754986.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001878 |          | 0      | 0.12050E-05 | 473723.3 | 3754985.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001879 |          | 0      | 0.12050E-05 | 473729.4 | 3754991.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001880 |          | 0      | 0.12050E-05 | 473730.8 | 3754999.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0001881  | 0   | 0.89270E-06 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001882  | 0   | 0.89270E-06 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001883  | 0   | 0.89270E-06 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001884  | 0   | 0.89270E-06 | 474177.6 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001885  | 0   | 0.89270E-06 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001886  | 0   | 0.89270E-06 | 474191.1 | 3754883.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001887  | 0   | 0.89270E-06 | 474197.8 | 3754878.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001888  | 0   | 0.89270E-06 | 474204.6 | 3754873.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001889  | 0   | 0.89270E-06 | 474211.3 | 3754867.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001890  | 0   | 0.89270E-06 | 474218.0 | 3754862.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001891  | 0   | 0.89270E-06 | 474224.7 | 3754857.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001892  | 0   | 0.89270E-06 | 474231.5 | 3754852.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001893  | 0   | 0.89270E-06 | 474238.2 | 3754847.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001894  | 0   | 0.89270E-06 | 474244.9 | 3754842.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001895  | 0   | 0.89270E-06 | 474251.6 | 3754836.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001896  | 0   | 0.89270E-06 | 474258.4 | 3754831.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001897  | 0   | 0.89270E-06 | 474265.1 | 3754826.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001898  | 0   | 0.89270E-06 | 474271.8 | 3754821.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001899  | 0   | 0.89270E-06 | 474276.0 | 3754814.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001900  | 0   | 0.89270E-06 | 474275.5 | 3754806.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001901  | 0   | 0.89270E-06 | 474271.2 | 3754799.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001902  | 0   | 0.89270E-06 | 474265.0 | 3754793.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001903  | 0   | 0.89270E-06 | 474257.2 | 3754791.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001904  | 0   | 0.89270E-06 | 474248.7 | 3754790.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |



```

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**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

```

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0001905 |          | 0      | 0.89270E-06 | 474240.3 | 3754788.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001906 |          | 0      | 0.89270E-06 | 474236.3 | 3754782.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001907 |          | 0      | 0.30450E-05 | 474028.4 | 3754694.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001908 |          | 0      | 0.30450E-05 | 474028.3 | 3754685.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001909 |          | 0      | 0.30450E-05 | 474028.2 | 3754677.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001910 |          | 0      | 0.30450E-05 | 474028.2 | 3754668.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001911 |          | 0      | 0.49730E-06 | 474027.8 | 3754742.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001912 |          | 0      | 0.49730E-06 | 474027.8 | 3754734.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001913 |          | 0      | 0.49730E-06 | 474027.9 | 3754725.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001914 |          | 0      | 0.49730E-06 | 474027.9 | 3754717.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001915 |          | 0      | 0.49730E-06 | 474027.9 | 3754708.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001916 |          | 0      | 0.49730E-06 | 474028.0 | 3754700.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001917 |          | 0      | 0.49730E-06 | 474028.0 | 3754691.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001918 |          | 0      | 0.49730E-06 | 474028.1 | 3754683.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001919 |          | 0      | 0.49730E-06 | 474028.1 | 3754674.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001920 |          | 0      | 0.49730E-06 | 474028.1 | 3754666.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

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**MODELOPTs:   NonDFAULT CONC      FLAT      FLGPOL      FASTALL

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*** SOURCE IDs DEFINING SOURCE
GROUPS ***

```

| SRCGROUP ID |            | SOURCE IDs |          |   |          |   |
|-------------|------------|------------|----------|---|----------|---|
| -----       |            | -----      |          |   |          |   |
| ALL         | L0001329   | ,          | L0001330 | , | L0001331 | , |
| L0001333    | , L0001334 | ,          | L0001335 | , | L0001336 | , |
|             | L0001337   | ,          | L0001338 | , | L0001339 | , |
| L0001341    | , L0001342 | ,          | L0001343 | , | L0001344 | , |
|             | L0001345   | ,          | L0001346 | , | L0001347 | , |
| L0001349    | , L0001350 | ,          | L0001351 | , | L0001352 | , |
|             | L0001353   | ,          | L0001354 | , | L0001355 | , |
| L0001357    | , L0001358 | ,          | L0001359 | , | L0001360 | , |
|             | L0001361   | ,          | L0001362 | , | L0001363 | , |
| L0001365    | , L0001366 | ,          | L0001367 | , | L0001368 | , |
|             | L0001369   | ,          | L0001370 | , | L0001371 | , |
| L0001373    | , L0001374 | ,          | L0001375 | , | L0001376 | , |
|             | L0001377   | ,          | L0001378 | , | L0001379 | , |
| L0001381    | , L0001382 | ,          | L0001383 | , | L0001384 | , |
|             | L0001385   | ,          | L0001386 | , | L0001387 | , |
| L0001389    | , L0001390 | ,          | L0001391 | , | L0001392 | , |
|             | L0001393   | ,          | L0001394 | , | L0001395 | , |
| L0001397    | , L0001398 | ,          | L0001399 | , | L0001400 | , |
|             | L0001401   | ,          | L0001402 | , | L0001403 | , |
| L0001405    | , L0001406 | ,          | L0001407 | , | L0001408 | , |
|             | L0001409   | ,          | L0001410 | , | L0001411 | , |
| L0001413    | , L0001414 | ,          | L0001415 | , | L0001416 | , |
|             | L0001417   | ,          | L0001418 | , | L0001419 | , |
| L0001421    | , L0001422 | ,          | L0001423 | , | L0001424 | , |
|             | L0001425   | ,          | L0001426 | , | L0001427 | , |
| L0001429    | , L0001430 | ,          | L0001431 | , | L0001432 | , |

|          |                        |                          |                          |                 |   |
|----------|------------------------|--------------------------|--------------------------|-----------------|---|
| L0001437 | L0001433<br>, L0001438 | , L0001434<br>, L0001439 | , L0001435<br>, L0001440 | , L0001436<br>, | , |
| L0001445 | L0001441<br>, L0001446 | , L0001442<br>, L0001447 | , L0001443<br>, L0001448 | , L0001444<br>, | , |
| L0001453 | L0001449<br>, L0001454 | , L0001450<br>, L0001455 | , L0001451<br>, L0001456 | , L0001452<br>, | , |
| L0001461 | L0001457<br>, L0001462 | , L0001458<br>, L0001463 | , L0001459<br>, L0001464 | , L0001460<br>, | , |
| L0001469 | L0001465<br>, L0001470 | , L0001466<br>, L0001471 | , L0001467<br>, L0001472 | , L0001468<br>, | , |
| L0001773 | L0001473<br>, L0001774 | , L0001474<br>, L0001775 | , L0001475<br>, L0001776 | , L0001476<br>, | , |
| L0001781 | L0001777<br>, L0001782 | , L0001778<br>, L0001783 | , L0001779<br>, L0001784 | , L0001780<br>, | , |

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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* SOURCE IDs DEFINING SOURCE

GROUPS \*\*\*

| SRCGROUP ID | SOURCE IDs          |                     |                     |            |  |
|-------------|---------------------|---------------------|---------------------|------------|--|
| -----       | -----               |                     |                     |            |  |
| L0001789    | L0001785 , L0001790 | L0001786 , L0001791 | L0001787 , L0001792 | L0001788 , |  |
| L0001797    | L0001793 , L0001798 | L0001794 , L0001799 | L0001795 , L0001800 | L0001796 , |  |
| L0001805    | L0001801 , L0001806 | L0001802 , L0001807 | L0001803 , L0001808 | L0001804 , |  |
| L0001813    | L0001809 , L0001814 | L0001810 , L0001815 | L0001811 , L0001816 | L0001812 , |  |
| L0001821    | L0001817 , L0001822 | L0001818 , L0001823 | L0001819 , L0001824 | L0001820 , |  |
| L0001829    | L0001825 , L0001830 | L0001826 , L0001831 | L0001827 , L0001832 | L0001828 , |  |
| L0001837    | L0001833 , L0001838 | L0001834 , L0001839 | L0001835 , L0001840 | L0001836 , |  |
| L0001845    | L0001841 , L0001846 | L0001842 , L0001847 | L0001843 , L0001848 | L0001844 , |  |
| L0001853    | L0001849 , L0001854 | L0001850 , L0001855 | L0001851 , L0001856 | L0001852 , |  |
| L0001861    | L0001857 , L0001862 | L0001858 , L0001863 | L0001859 , L0001864 | L0001860 , |  |
| L0001869    | L0001865 , L0001870 | L0001866 , L0001871 | L0001867 , L0001872 | L0001868 , |  |
| L0001877    | L0001873 , L0001878 | L0001874 , L0001879 | L0001875 , L0001880 | L0001876 , |  |
| L0001885    | L0001881 , L0001886 | L0001882 , L0001887 | L0001883 , L0001888 | L0001884 , |  |

|          |            |            |            |            |   |
|----------|------------|------------|------------|------------|---|
| L0001893 | L0001889   | , L0001890 | , L0001891 | , L0001892 | , |
|          | , L0001894 | , L0001895 | , L0001896 | ,          |   |
| L0001901 | L0001897   | , L0001898 | , L0001899 | , L0001900 | , |
|          | , L0001902 | , L0001903 | , L0001904 | ,          |   |
| L0001909 | L0001905   | , L0001906 | , L0001907 | , L0001908 | , |
|          | , L0001910 | , L0001911 | , L0001912 | ,          |   |
| L0001917 | L0001913   | , L0001914 | , L0001915 | , L0001916 | , |
|          | , L0001918 | , L0001919 | , L0001920 | ,          |   |

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**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** SOURCE IDs DEFINED AS URBAN
SOURCES ***

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| URBAN ID | URBAN POP  | SOURCE IDs |            |            |   |
|----------|------------|------------|------------|------------|---|
| -----    | -----      | -----      |            |            |   |
| L0001332 | 2100516.   | L0001329   | , L0001330 | , L0001331 | , |
| L0001336 | , L0001333 | , L0001334 | , L0001335 | ,          |   |
| L0001341 | , L0001337 | , L0001338 | , L0001339 | , L0001340 | , |
| L0001349 | , L0001342 | , L0001343 | , L0001344 | ,          |   |
| L0001357 | , L0001345 | , L0001346 | , L0001347 | , L0001348 | , |
| L0001365 | , L0001350 | , L0001351 | , L0001352 | ,          |   |
| L0001373 | , L0001353 | , L0001354 | , L0001355 | , L0001356 | , |
| L0001381 | , L0001358 | , L0001359 | , L0001360 | ,          |   |
| L0001389 | , L0001361 | , L0001362 | , L0001363 | , L0001364 | , |
| L0001397 | , L0001366 | , L0001367 | , L0001368 | ,          |   |
| L0001405 | , L0001369 | , L0001370 | , L0001371 | , L0001372 | , |
| L0001413 | , L0001374 | , L0001375 | , L0001376 | ,          |   |
| L0001421 | , L0001377 | , L0001378 | , L0001379 | , L0001380 | , |
|          | , L0001382 | , L0001383 | , L0001384 | ,          |   |
|          | , L0001385 | , L0001386 | , L0001387 | , L0001388 | , |
|          | , L0001390 | , L0001391 | , L0001392 | ,          |   |
|          | , L0001393 | , L0001394 | , L0001395 | , L0001396 | , |
|          | , L0001398 | , L0001399 | , L0001400 | ,          |   |
|          | , L0001401 | , L0001402 | , L0001403 | , L0001404 | , |
|          | , L0001406 | , L0001407 | , L0001408 | ,          |   |
|          | , L0001409 | , L0001410 | , L0001411 | , L0001412 | , |
|          | , L0001414 | , L0001415 | , L0001416 | ,          |   |
|          | , L0001417 | , L0001418 | , L0001419 | , L0001420 | , |
|          | , L0001422 | , L0001423 | , L0001424 | ,          |   |

|          |                        |                          |                          |                 |  |
|----------|------------------------|--------------------------|--------------------------|-----------------|--|
| L0001429 | L0001425<br>, L0001430 | , L0001426<br>, L0001431 | , L0001427<br>, L0001432 | , L0001428<br>, |  |
| L0001437 | L0001433<br>, L0001438 | , L0001434<br>, L0001439 | , L0001435<br>, L0001440 | , L0001436<br>, |  |
| L0001445 | L0001441<br>, L0001446 | , L0001442<br>, L0001447 | , L0001443<br>, L0001448 | , L0001444<br>, |  |
| L0001453 | L0001449<br>, L0001454 | , L0001450<br>, L0001455 | , L0001451<br>, L0001456 | , L0001452<br>, |  |
| L0001461 | L0001457<br>, L0001462 | , L0001458<br>, L0001463 | , L0001459<br>, L0001464 | , L0001460<br>, |  |
| L0001469 | L0001465<br>, L0001470 | , L0001466<br>, L0001471 | , L0001467<br>, L0001472 | , L0001468<br>, |  |
| L0001773 | L0001473<br>, L0001774 | , L0001474<br>, L0001775 | , L0001475<br>, L0001776 | , L0001476<br>, |  |
| L0001781 | L0001777<br>, L0001782 | , L0001778<br>, L0001783 | , L0001779<br>, L0001784 | , L0001780<br>, |  |

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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* SOURCE IDs DEFINED AS URBAN

SOURCES \*\*\*

| URBAN ID | URBAN POP           | SOURCE IDs                                             |
|----------|---------------------|--------------------------------------------------------|
| -----    | -----               | -----                                                  |
| L0001789 | L0001785 , L0001790 | L0001786 , L0001791 , L0001787 , L0001792 , L0001788 , |
| L0001797 | L0001793 , L0001798 | L0001794 , L0001799 , L0001795 , L0001800 , L0001796 , |
| L0001805 | L0001801 , L0001806 | L0001802 , L0001807 , L0001803 , L0001808 , L0001804 , |
| L0001813 | L0001809 , L0001814 | L0001810 , L0001815 , L0001811 , L0001816 , L0001812 , |
| L0001821 | L0001817 , L0001822 | L0001818 , L0001823 , L0001819 , L0001824 , L0001820 , |
| L0001829 | L0001825 , L0001830 | L0001826 , L0001831 , L0001827 , L0001832 , L0001828 , |
| L0001837 | L0001833 , L0001838 | L0001834 , L0001839 , L0001835 , L0001840 , L0001836 , |
| L0001845 | L0001841 , L0001846 | L0001842 , L0001847 , L0001843 , L0001848 , L0001844 , |
| L0001853 | L0001849 , L0001854 | L0001850 , L0001855 , L0001851 , L0001856 , L0001852 , |
| L0001861 | L0001857 , L0001862 | L0001858 , L0001863 , L0001859 , L0001864 , L0001860 , |
| L0001869 | L0001865 , L0001870 | L0001866 , L0001871 , L0001867 , L0001872 , L0001868 , |
| L0001877 | L0001873 , L0001878 | L0001874 , L0001879 , L0001875 , L0001880 , L0001876 , |
| L0001885 | L0001881 , L0001886 | L0001882 , L0001887 , L0001883 , L0001888 , L0001884 , |



|          |            |            |            |            |   |
|----------|------------|------------|------------|------------|---|
| L0001893 | L0001889   | , L0001890 | , L0001891 | , L0001892 | , |
|          | , L0001894 | , L0001895 | , L0001896 | ,          |   |
| L0001901 | L0001897   | , L0001898 | , L0001899 | , L0001900 | , |
|          | , L0001902 | , L0001903 | , L0001904 | ,          |   |
| L0001909 | L0001905   | , L0001906 | , L0001907 | , L0001908 | , |
|          | , L0001910 | , L0001911 | , L0001912 | ,          |   |
| L0001917 | L0001913   | , L0001914 | , L0001915 | , L0001916 | , |
|          | , L0001918 | , L0001919 | , L0001920 | ,          |   |

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\*\*MODELOPTs: NonDFAULT CONC FLAT FLGPOL FASTALL

\*\*\* DISCRETE CARTESIAN

RECEPTORS \*\*\*

(X-COORD, Y-COORD, ZELEV,

ZHILL, ZFLAG)

(METERS)

```

( 474201.5, 3754331.7, 250.0, 250.0, 2.0); (
474401.5, 3754331.7, 250.0, 250.0, 2.0); (
( 474501.5, 3754331.7, 250.0, 250.0, 2.0); (
473801.5, 3754431.7, 250.0, 250.0, 2.0); (
( 473715.9, 3754428.7, 250.0, 250.0, 2.0); (
473738.7, 3754428.6, 250.0, 250.0, 2.0); (
( 473755.7, 3754428.8, 250.0, 250.0, 2.0); (
473774.9, 3754428.8, 250.0, 250.0, 2.0); (
( 473816.0, 3754429.5, 250.0, 250.0, 2.0); (
473831.0, 3754424.4, 250.0, 250.0, 2.0); (
( 473853.9, 3754425.2, 250.0, 250.0, 2.0); (
473871.9, 3754423.8, 250.0, 250.0, 2.0); (
( 473892.0, 3754427.6, 250.0, 250.0, 2.0); (
473779.0, 3754366.2, 250.0, 250.0, 2.0); (
( 473813.9, 3754366.5, 250.0, 250.0, 2.0); (
474014.6, 3754372.2, 250.0, 250.0, 2.0); (
( 474058.7, 3754367.3, 250.0, 250.0, 2.0); (
474106.3, 3754366.6, 250.0, 250.0, 2.0); (
( 474129.7, 3754366.8, 250.0, 250.0, 2.0); (
474153.5, 3754367.8, 250.0, 250.0, 2.0); (
( 474231.5, 3754356.9, 250.0, 250.0, 2.0); (
474273.8, 3754374.6, 250.0, 250.0, 2.0); (
( 474545.3, 3754362.5, 250.0, 250.0, 2.0); (
474582.5, 3754377.2, 250.0, 250.0, 2.0); (
( 474612.7, 3754387.3, 250.0, 250.0, 2.0); (
474643.0, 3754391.2, 250.0, 250.0, 2.0); (
( 474354.4, 3754341.9, 250.0, 250.0, 2.0); (

```

8.23, 10.80, 1.54, 3.09, 5.14,

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* UP TO THE FIRST 24 HOURS OF

METEOROLOGICAL DATA \*\*\*

Surface file: ..\..\Aermod\rivr8.sfc  
 Met Version: 14134  
 Profile file: ..\..\Aermod\rivr8.PFL  
 Surface format: FREE  
 Profile format: FREE  
 Surface station no.: 3190 Upper air station no.:  
 3190  
 Name: UNKNOWN Name:  
 UNKNOWN Year: 2008 Year:  
 2008

First 24 hours of scalar data

| YR    | MO     | DY  | JDY | HR | H0     | U*     | W*     | DT/DZ  | ZICNV | ZIMCH | M-O      | LEN  | Z0 |
|-------|--------|-----|-----|----|--------|--------|--------|--------|-------|-------|----------|------|----|
| BOWEN | ALBEDO | REF | WS  | WD | HT     | REF    | TA     | HT     |       |       |          |      |    |
| 08    | 01     | 01  | 1   | 01 | -64.0  | 0.616  | -9.000 | -9.000 | -999. | 1157. | 319.6    | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 5.40   | 27.    | 9.1    | 287.5  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 02 | -54.0  | 0.502  | -9.000 | -9.000 | -999. | 866.  | 204.9    | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 4.50   | 40.    | 9.1    | 287.5  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 03 | -16.4  | 0.152  | -9.000 | -9.000 | -999. | 347.  | 18.8     | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 2.20   | 62.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 3.10   | 67.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 05 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 4.90   | 96.    | 9.1    | 286.4  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 06 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 3.10   | 342.   | 9.1    | 286.4  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 07 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 4.00   | 38.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 08 | -35.7  | 0.448  | -9.000 | -9.000 | -999. | 719.  | 220.9    | 0.31 |    |
| 1.00  | 0.53   |     |     |    | 4.00   | 62.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 09 | 26.7   | 0.649  | 0.357  | 0.005  | 59.   | 1253. | -895.5   | 0.31 |    |
| 1.00  | 0.32   |     |     |    | 5.40   | 294.   | 9.1    | 288.1  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 10 | 76.5   | 0.503  | 0.700  | 0.009  | 157.  | 879.  | -146.3   | 0.31 |    |
| 1.00  | 0.25   |     |     |    | 4.00   | 42.    | 9.1    | 289.2  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 11 | 123.5  | 0.418  | 1.124  | 0.012  | 404.  | 655.  | -51.7    | 0.31 |    |
| 1.00  | 0.22   |     |     |    | 3.10   | 30.    | 9.1    | 290.9  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 12 | 130.9  | 0.715  | 1.311  | 0.005  | 605.  | 1451. | -245.0   | 0.31 |    |
| 1.00  | 0.21   |     |     |    | 5.80   | 37.    | 9.1    | 290.9  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 13 | 81.1   | 0.560  | 1.174  | 0.006  | 701.  | 1033. | -189.8   | 0.31 |    |
| 1.00  | 0.21   |     |     |    | 4.50   | 4.     | 9.1    | 290.9  | 5.5   |       |          |      |    |

|      |      |      |      |     |       |       |        |        |       |       |        |      |
|------|------|------|------|-----|-------|-------|--------|--------|-------|-------|--------|------|
| 08   | 01   | 01   | 1    | 14  | 76.4  | 0.604 | 1.171  | 0.005  | 739.  | 1124. | -252.5 | 0.31 |
| 1.00 | 0.23 | 4.90 | 13.  | 9.1 | 290.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 15  | 52.3  | 0.805 | 1.043  | 0.005  | 762.  | 1730. | -875.8 | 0.31 |
| 1.00 | 0.26 | 6.70 | 39.  | 9.1 | 290.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 16  | 11.1  | 0.377 | 0.624  | 0.011  | 767.  | 800.  | -422.2 | 0.31 |
| 1.00 | 0.35 | 3.10 | 346. | 9.1 | 290.4 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 17  | -43.3 | 0.441 | -9.000 | -9.000 | -999. | 705.  | 173.6  | 0.31 |
| 1.00 | 0.63 | 4.00 | 9.   | 9.1 | 290.4 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 18  | -29.0 | 0.400 | -9.000 | -9.000 | -999. | 608.  | 192.9  | 0.31 |
| 1.00 | 1.00 | 3.60 | 45.  | 9.1 | 289.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 19  | -49.6 | 0.505 | -9.000 | -9.000 | -999. | 860.  | 227.3  | 0.31 |
| 1.00 | 1.00 | 4.50 | 25.  | 9.1 | 289.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 20  | -64.0 | 0.730 | -9.000 | -9.000 | -999. | 1496. | 533.1  | 0.31 |
| 1.00 | 1.00 | 6.30 | 60.  | 9.1 | 289.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 21  | -29.1 | 0.400 | -9.000 | -9.000 | -999. | 736.  | 192.1  | 0.31 |
| 1.00 | 1.00 | 3.60 | 238. | 9.1 | 288.8 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 22  | -41.2 | 0.562 | -9.000 | -9.000 | -999. | 1010. | 378.5  | 0.31 |
| 1.00 | 1.00 | 4.90 | 87.  | 9.1 | 287.5 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 23  | -53.8 | 0.733 | -9.000 | -9.000 | -999. | 1504. | 642.6  | 0.31 |
| 1.00 | 1.00 | 6.30 | 95.  | 9.1 | 287.0 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 24  | -29.5 | 0.399 | -9.000 | -9.000 | -999. | 738.  | 189.5  | 0.31 |
| 1.00 | 1.00 | 3.60 | 37.  | 9.1 | 285.4 | 5.5   |        |        |       |       |        |      |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR  | WSPD   | AMB_TMP | sigmaA | sigmaW | sigmaV |
|----|----|----|----|--------|---|-------|--------|---------|--------|--------|--------|
| 08 | 01 | 01 | 01 | 5.5    | 0 | -999. | -99.00 | 287.6   | 99.0   | -99.00 | -99.00 |
| 08 | 01 | 01 | 01 | 9.1    | 1 | 27.   | 5.40   | -999.0  | 99.0   | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)

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\*\*MODELOPTs:    NonDEFAULT CONC            FLAT            FLGPOL            FASTALL

\*\*\* THE 1ST HIGHEST 1-HR AVERAGE  
 CONCENTRATION VALUES FOR SOURCE GROUP: ALL \*\*\*  
 INCLUDING SOURCE(S):      L0001329 ,  
 L0001330 , L0001331 , L0001332 , L0001333 ,  
                  L0001334 , L0001335 , L0001336 , L0001337 ,  
 L0001338 , L0001339 , L0001340 , L0001341 ,  
                  L0001342 , L0001343 , L0001344 , L0001345 ,  
 L0001346 , L0001347 , L0001348 , L0001349 ,  
                  L0001350 , L0001351 , L0001352 , L0001353 ,  
 L0001354 , L0001355 , L0001356 , . . . ,

\*\*\* DISCRETE CARTESIAN

RECEPTOR POINTS \*\*\*

|                 |             |          |            | ** CONC OF CO | IN |
|-----------------|-------------|----------|------------|---------------|----|
| MICROGRAMS/M**3 |             |          |            | **            |    |
| X-COORD (M)     | Y-COORD (M) | CONC     | (YYMMDDHH) |               | X- |
| COORD (M)       | Y-COORD (M) | CONC     | (YYMMDDHH) |               |    |
| -----           |             |          |            |               |    |
| 474201.46       | 3754331.71  | 7.92750  | (10020924) |               |    |
| 474401.46       | 3754331.71  | 5.74267  | (10020924) |               |    |
| 474501.46       | 3754331.71  | 4.87768  | (12071320) |               |    |
| 473801.46       | 3754431.71  | 54.20052 | (11060807) |               |    |
| 473715.92       | 3754428.71  | 33.95756 | (11060807) |               |    |
| 473738.73       | 3754428.62  | 44.30522 | (11060807) |               |    |
| 473755.69       | 3754428.85  | 50.46926 | (11060807) |               |    |
| 473774.94       | 3754428.85  | 53.93795 | (11060807) |               |    |
| 473815.97       | 3754429.55  | 48.11229 | (11060807) |               |    |
| 473831.00       | 3754424.36  | 40.03442 | (11060807) |               |    |
| 473853.90       | 3754425.20  | 32.41588 | (11060807) |               |    |
| 473871.89       | 3754423.79  | 26.58311 | (11060807) |               |    |
| 473891.98       | 3754427.59  | 21.75829 | (11060807) |               |    |
| 473779.02       | 3754366.16  | 25.58243 | (11060807) |               |    |
| 473813.90       | 3754366.49  | 25.18539 | (11060807) |               |    |
| 474014.62       | 3754372.20  | 10.49092 | (09082923) |               |    |
| 474058.72       | 3754367.30  | 9.69775  | (09051722) |               |    |
| 474106.33       | 3754366.60  | 9.22229  | (09051722) |               |    |
| 474129.66       | 3754366.83  | 9.08981  | (10020924) |               |    |
| 474153.46       | 3754367.77  | 9.03043  | (10020924) |               |    |
| 474231.55       | 3754356.87  | 8.09456  | (10020924) |               |    |
| 474273.79       | 3754374.60  | 7.84469  | (10020924) |               |    |
| 474545.34       | 3754362.52  | 4.73927  | (12071320) |               |    |
| 474582.52       | 3754377.24  | 4.53730  | (12071320) |               |    |

|           |            |         |            |
|-----------|------------|---------|------------|
| 474612.74 | 3754387.31 | 4.36227 | (12071320) |
| 474642.95 | 3754391.18 | 4.16865 | (12071320) |
| 474354.43 | 3754341.93 | 6.36141 | (10020924) |

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\*\*MODELOPTs:    NonDEFAULT CONC            FLAT            FLGPOL            FASTALL

\*\*\* THE 1ST HIGHEST 8-HR AVERAGE  
 CONCENTRATION VALUES FOR SOURCE GROUP: ALL \*\*\*  
 INCLUDING SOURCE(S):      L0001329 ,  
 L0001330 , L0001331 , L0001332 , L0001333 ,  
                  L0001334 , L0001335 , L0001336 , L0001337 ,  
 L0001338 , L0001339 , L0001340 , L0001341 ,  
                  L0001342 , L0001343 , L0001344 , L0001345 ,  
 L0001346 , L0001347 , L0001348 , L0001349 ,  
                  L0001350 , L0001351 , L0001352 , L0001353 ,  
 L0001354 , L0001355 , L0001356 , . . . ,

\*\*\* DISCRETE CARTESIAN

RECEPTOR POINTS \*\*\*

| X-COORD (M) |             | Y-COORD (M) | CONC       | (YYMMDDHH) | X- |
|-------------|-------------|-------------|------------|------------|----|
| COORD (M)   | Y-COORD (M) | CONC        | (YYMMDDHH) |            |    |
| -----       |             |             |            |            |    |
| -----       |             |             |            |            |    |
| -----       |             |             |            |            |    |
| 474201.46   | 3754331.71  | 5.01933     | (10121608) |            |    |
| 474401.46   | 3754331.71  | 3.72977     | (12122624) |            |    |
| 474501.46   | 3754331.71  | 3.25758     | (12122624) |            |    |
| 473801.46   | 3754431.71  | 23.97597    | (11122808) |            |    |
| 473715.92   | 3754428.71  | 26.45385    | (12011008) |            |    |
| 473738.73   | 3754428.62  | 29.95765    | (12011008) |            |    |
| 473755.69   | 3754428.85  | 27.48586    | (11122808) |            |    |
| 473774.94   | 3754428.85  | 26.83906    | (11122808) |            |    |
| 473815.97   | 3754429.55  | 22.00850    | (11102024) |            |    |
| 473831.00   | 3754424.36  | 19.22201    | (10111908) |            |    |
| 473853.90   | 3754425.20  | 16.75198    | (11021424) |            |    |
| 473871.89   | 3754423.79  | 14.76759    | (11021424) |            |    |
| 473891.98   | 3754427.59  | 13.25384    | (11021424) |            |    |
| 473779.02   | 3754366.16  | 14.41064    | (11122808) |            |    |
| 473813.90   | 3754366.49  | 13.19944    | (11111524) |            |    |
| 474014.62   | 3754372.20  | 7.52783     | (10121608) |            |    |
| 474058.72   | 3754367.30  | 6.84944     | (11012124) |            |    |
| 474106.33   | 3754366.60  | 6.33696     | (12122424) |            |    |
| 474129.66   | 3754366.83  | 6.26020     | (10121608) |            |    |
| 474153.46   | 3754367.77  | 6.26968     | (10121608) |            |    |
| 474231.55   | 3754356.87  | 5.32080     | (10111908) |            |    |
| 474273.79   | 3754374.60  | 5.17572     | (11021424) |            |    |
| 474545.34   | 3754362.52  | 3.23285     | (12122624) |            |    |
| 474582.52   | 3754377.24  | 3.01378     | (11030824) |            |    |



|           |            |          |            |
|-----------|------------|----------|------------|
| 474612.74 | 3754387.31 | 2.92019  | (11030824) |
| 474642.95 | 3754391.18 | 2.80213  | (11030824) |
| 474354.43 | 3754341.93 | 4.20338m | (10042424) |

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\*\*MODELOPTs: NonDFAULT CONC FLAT FLGPOL FASTALL

\*\*\* THE SUMMARY OF

HIGHEST 1-HR RESULTS \*\*\*

MICROGRAMS/M\*\*3 \*\* CONC OF CO IN

DATE  
NETWORK  
GROUP ID AVERAGE CONC (YYMMDDHH)  
RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID  
- - - - -  
- - - - -

ALL HIGH 1ST HIGH VALUE IS 54.20052 ON 11060807: AT (  
473801.46, 3754431.71, 250.00, 250.00, 2.00) DC

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
09000\\_08900\08990\08990\_Operational LST\CO\CO.isc \*\*\* 03/13/15  
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\*\*MODELOPTs: NonDFAULT CONC FLAT FLGPOL FASTALL

\*\*\* THE SUMMARY OF

HIGHEST 8-HR RESULTS \*\*\*

MICROGRAMS/M\*\*3 \*\* CONC OF CO IN

DATE

NETWORK  
GROUP ID AVERAGE CONC (YYMMDDHH)  
RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID

- - - - -  
- - - - -

ALL HIGH 1ST HIGH VALUE IS 29.95765 ON 12011008: AT (  
473738.73, 3754428.62, 250.00, 250.00, 2.00) DC

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
09000\\_08900\08990\08990\_Operational LST\C0\C0.isc \*\*\* 03/13/15  
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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* Message Summary : AERMOD Model Execution \*\*\*

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)  
A Total of 1 Warning Message(s)  
A Total of 2006 Informational Message(s)  
  
A Total of 43848 Hours Were Processed  
  
A Total of 7 Calm Hours Identified  
  
A Total of 1999 Missing Hours Identified ( 4.56 Percent)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
ME W531 1158 MEOPEN: CAUTION! Met Station ID Missing from  
SURFFILE for SURFDATA

\*\*\*\*\*  
\*\*\* AERMOD Finishes Successfully \*\*\*  
\*\*\*\*\*

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 8.8.9
** Lakes Environmental Software Inc.
** Date: 3/13/2015
** File: U:\UcJobs\_08600-09000\_08900\08990\08990_Operational
LST\N02\N02.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE U:\UcJobs\_08600-09000\_08900\08990\08990_Operational
LST\PM10\PM10.
  MODELOPT CONC FLAT FASTALL OLM
  AVERTIME 1 ANNUAL
  URBANOPT 2100516
  POLLUTID N02
  FLAGPOLE 2.00
  RUNORNOT RUN
** N02 Conversion Options
  N02STACK 0.100
  N02EQUIL 0.900
  OZONEFIL "U:\UcAir\6-10-14 AQMD Ozone Data\table-4-hourly-ozone-
riverside (3).dat" UG/M3
  ERRORFIL N02.err
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC On-Site Passenger Car Idling - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.006896
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 3

```

```

** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.080, 3754684.434, 0.00, 4.00, 3.95
** -----
LOCATION L0002531      VOLUME  473797.069 3754701.662 0.0
LOCATION L0002532      VOLUME  473797.074 3754693.162 0.0
LOCATION L0002533      VOLUME  473797.080 3754684.662 0.0
** End of LINE VOLUME Source ID = SLINE1
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC On-Site Passenger Car Idling - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.002327
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 4
** 473736.964, 3754551.125, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95
** 473745.446, 3754483.696, 0.00, 4.00, 3.95
** 473829.839, 3754482.423, 0.00, 4.00, 3.95
** -----
LOCATION L0002534      VOLUME  473737.082 3754546.877 0.0
LOCATION L0002535      VOLUME  473737.316 3754538.380 0.0
LOCATION L0002536      VOLUME  473737.550 3754529.883 0.0
LOCATION L0002537      VOLUME  473737.785 3754521.386 0.0
LOCATION L0002538      VOLUME  473738.019 3754512.889 0.0
LOCATION L0002539      VOLUME  473738.254 3754504.393 0.0
LOCATION L0002540      VOLUME  473738.488 3754495.896 0.0
LOCATION L0002541      VOLUME  473740.342 3754488.161 0.0
LOCATION L0002542      VOLUME  473747.164 3754483.670 0.0
LOCATION L0002543      VOLUME  473755.663 3754483.542 0.0
LOCATION L0002544      VOLUME  473764.162 3754483.413 0.0
LOCATION L0002545      VOLUME  473772.661 3754483.285 0.0
LOCATION L0002546      VOLUME  473781.160 3754483.157 0.0
LOCATION L0002547      VOLUME  473789.659 3754483.029 0.0
LOCATION L0002548      VOLUME  473798.158 3754482.901 0.0
LOCATION L0002549      VOLUME  473806.657 3754482.773 0.0
LOCATION L0002550      VOLUME  473815.156 3754482.645 0.0
LOCATION L0002551      VOLUME  473823.656 3754482.517 0.0
** End of LINE VOLUME Source ID = SLINE2
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC On-Site Passenger Car Idling - Surgical Center
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0005482
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2

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** 474146.956, 3754542.362, 0.00, 4.00, 3.95
** 474203.982, 3754541.933, 0.00, 4.00, 3.95
** -----
LOCATION L0002552      VOLUME  474151.206 3754542.330 0.0
LOCATION L0002553      VOLUME  474159.706 3754542.266 0.0
LOCATION L0002554      VOLUME  474168.206 3754542.202 0.0
LOCATION L0002555      VOLUME  474176.705 3754542.138 0.0
LOCATION L0002556      VOLUME  474185.205 3754542.074 0.0
LOCATION L0002557      VOLUME  474193.705 3754542.010 0.0
LOCATION L0002558      VOLUME  474202.205 3754541.946 0.0
** End of LINE VOLUME Source ID = SLINE3
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC On-Site Passenger Car Idling - Senior Housing
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.005132
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 9
** 473705.823, 3754992.649, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0002559      VOLUME  473709.107 3754989.951 0.0
LOCATION L0002560      VOLUME  473716.408 3754985.826 0.0
LOCATION L0002561      VOLUME  473724.564 3754986.512 0.0
LOCATION L0002562      VOLUME  473730.201 3754992.580 0.0
LOCATION L0002563      VOLUME  473730.631 3755001.008 0.0
** End of LINE VOLUME Source ID = SLINE4
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC On-Site Passenger Car Idling - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.003831
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474217.752, 3754863.013, 0.00, 4.00, 3.95
** -----
LOCATION L0002564      VOLUME  474157.470 3754909.512 0.0
LOCATION L0002565      VOLUME  474164.200 3754904.320 0.0

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LOCATION L0002566      VOLUME  474170.930 3754899.129 0.0
LOCATION L0002567      VOLUME  474177.661 3754893.937 0.0
LOCATION L0002568      VOLUME  474184.391 3754888.746 0.0
LOCATION L0002569      VOLUME  474191.122 3754883.554 0.0
LOCATION L0002570      VOLUME  474197.852 3754878.363 0.0
LOCATION L0002571      VOLUME  474204.583 3754873.171 0.0
LOCATION L0002572      VOLUME  474211.313 3754867.980 0.0
** End of LINE VOLUME Source ID = SLINE5
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC On-Site Passenger Car Travel - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0008214
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 7
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.079, 3754683.979, 0.00, 4.00, 3.95
** 473832.857, 3754684.580, 0.00, 4.00, 3.95
** 473831.534, 3754711.303, 0.00, 4.00, 3.95
** 473825.370, 3754730.840, 0.00, 4.00, 3.95
** 473825.424, 3754745.686, 0.00, 4.00, 3.95
** -----
LOCATION L0002573      VOLUME  473797.069 3754701.662 0.0
LOCATION L0002574      VOLUME  473797.073 3754693.162 0.0
LOCATION L0002575      VOLUME  473797.078 3754684.662 0.0
LOCATION L0002576      VOLUME  473804.895 3754684.110 0.0
LOCATION L0002577      VOLUME  473813.393 3754684.253 0.0
LOCATION L0002578      VOLUME  473821.892 3754684.396 0.0
LOCATION L0002579      VOLUME  473830.391 3754684.539 0.0
LOCATION L0002580      VOLUME  473832.558 3754690.607 0.0
LOCATION L0002581      VOLUME  473832.138 3754699.096 0.0
LOCATION L0002582      VOLUME  473831.718 3754707.586 0.0
LOCATION L0002583      VOLUME  473830.096 3754715.860 0.0
LOCATION L0002584      VOLUME  473827.538 3754723.966 0.0
LOCATION L0002585      VOLUME  473825.374 3754732.132 0.0
LOCATION L0002586      VOLUME  473825.406 3754740.632 0.0
** End of LINE VOLUME Source ID = SLINE6
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC On-Site Passenger Car Travel - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0004869
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 5
** 473690.932, 3754560.433, 0.00, 4.00, 3.95

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\*\* 473736.934, 3754560.673, 0.00, 4.00, 3.95  
 \*\* 473738.661, 3754489.633, 0.00, 4.00, 3.95  
 \*\* 473745.446, 3754483.696, 0.00, 4.00, 3.95  
 \*\* 473829.839, 3754482.423, 0.00, 4.00, 3.95

\*\* -----  
 LOCATION L0002587 VOLUME 473695.182 3754560.456 0.0  
 LOCATION L0002588 VOLUME 473703.682 3754560.500 0.0  
 LOCATION L0002589 VOLUME 473712.182 3754560.544 0.0  
 LOCATION L0002590 VOLUME 473720.682 3754560.588 0.0  
 LOCATION L0002591 VOLUME 473729.182 3754560.633 0.0  
 LOCATION L0002592 VOLUME 473736.953 3754559.926 0.0  
 LOCATION L0002593 VOLUME 473737.159 3754551.428 0.0  
 LOCATION L0002594 VOLUME 473737.366 3754542.931 0.0  
 LOCATION L0002595 VOLUME 473737.572 3754534.433 0.0  
 LOCATION L0002596 VOLUME 473737.779 3754525.936 0.0  
 LOCATION L0002597 VOLUME 473737.985 3754517.439 0.0  
 LOCATION L0002598 VOLUME 473738.192 3754508.941 0.0  
 LOCATION L0002599 VOLUME 473738.398 3754500.444 0.0  
 LOCATION L0002600 VOLUME 473738.605 3754491.946 0.0  
 LOCATION L0002601 VOLUME 473743.316 3754485.559 0.0  
 LOCATION L0002602 VOLUME 473751.115 3754483.610 0.0  
 LOCATION L0002603 VOLUME 473759.614 3754483.482 0.0  
 LOCATION L0002604 VOLUME 473768.113 3754483.354 0.0  
 LOCATION L0002605 VOLUME 473776.612 3754483.226 0.0  
 LOCATION L0002606 VOLUME 473785.111 3754483.098 0.0  
 LOCATION L0002607 VOLUME 473793.610 3754482.969 0.0  
 LOCATION L0002608 VOLUME 473802.110 3754482.841 0.0  
 LOCATION L0002609 VOLUME 473810.609 3754482.713 0.0  
 LOCATION L0002610 VOLUME 473819.108 3754482.585 0.0  
 LOCATION L0002611 VOLUME 473827.607 3754482.457 0.0

\*\* End of LINE VOLUME Source ID = SLINE7  
 \*\* -----

\*\* Line Source Represented by Adjacent Volume Sources  
 \*\* LINE VOLUME Source ID = SLINE8  
 \*\* DESCRSRC On-Site Passenger Car Travel - Surgical Center  
 \*\* PREFIX  
 \*\* Length of Side = 8.50  
 \*\* Configuration = Adjacent  
 \*\* Emission Rate = 0.00008731  
 \*\* Vertical Dimension = 4.00  
 \*\* SZINIT = 1.86  
 \*\* Nodes = 4

\*\* 474146.956, 3754542.362, 0.00, 4.00, 3.95  
 \*\* 474225.093, 3754541.662, 0.00, 4.00, 3.95  
 \*\* 474224.571, 3754563.881, 0.00, 4.00, 3.95  
 \*\* 474284.387, 3754563.753, 0.00, 4.00, 3.95  
 \*\* -----

LOCATION L0002612 VOLUME 474151.206 3754542.324 0.0  
 LOCATION L0002613 VOLUME 474159.706 3754542.248 0.0  
 LOCATION L0002614 VOLUME 474168.205 3754542.171 0.0  
 LOCATION L0002615 VOLUME 474176.705 3754542.095 0.0  
 LOCATION L0002616 VOLUME 474185.205 3754542.019 0.0  
 LOCATION L0002617 VOLUME 474193.704 3754541.943 0.0  
 LOCATION L0002618 VOLUME 474202.204 3754541.867 0.0

| LOCATION          | VOLUME |            |             |     |  |
|-------------------|--------|------------|-------------|-----|--|
| LOCATION L0002619 | VOLUME | 474210.704 | 3754541.791 | 0.0 |  |
| LOCATION L0002620 | VOLUME | 474219.203 | 3754541.714 | 0.0 |  |
| LOCATION L0002621 | VOLUME | 474225.032 | 3754544.271 | 0.0 |  |
| LOCATION L0002622 | VOLUME | 474224.832 | 3754552.769 | 0.0 |  |
| LOCATION L0002623 | VOLUME | 474224.632 | 3754561.266 | 0.0 |  |
| LOCATION L0002624 | VOLUME | 474230.455 | 3754563.868 | 0.0 |  |
| LOCATION L0002625 | VOLUME | 474238.955 | 3754563.850 | 0.0 |  |
| LOCATION L0002626 | VOLUME | 474247.455 | 3754563.832 | 0.0 |  |
| LOCATION L0002627 | VOLUME | 474255.955 | 3754563.814 | 0.0 |  |
| LOCATION L0002628 | VOLUME | 474264.455 | 3754563.795 | 0.0 |  |
| LOCATION L0002629 | VOLUME | 474272.955 | 3754563.777 | 0.0 |  |
| LOCATION L0002630 | VOLUME | 474281.455 | 3754563.759 | 0.0 |  |

\*\* End of LINE VOLUME Source ID = SLINE8  
 \*\* -----  
 \*\* Line Source Represented by Adjacent Volume Sources  
 \*\* LINE VOLUME Source ID = SLINE9  
 \*\* DESCRSRC On-Site Passenger Car Travel - Senior Housing  
 \*\* PREFIX  
 \*\* Length of Side = 8.50  
 \*\* Configuration = Adjacent  
 \*\* Emission Rate = 0.0003521  
 \*\* Vertical Dimension = 4.00  
 \*\* SZINIT = 1.86  
 \*\* Nodes = 10  
 \*\* 473693.729, 3755016.836, 0.00, 4.00, 3.95  
 \*\* 473706.280, 3754992.273, 0.00, 4.00, 3.95  
 \*\* 473712.214, 3754987.399, 0.00, 4.00, 3.95  
 \*\* 473717.692, 3754985.344, 0.00, 4.00, 3.95  
 \*\* 473722.942, 3754985.573, 0.00, 4.00, 3.95  
 \*\* 473727.279, 3754988.084, 0.00, 4.00, 3.95  
 \*\* 473730.246, 3754992.649, 0.00, 4.00, 3.95  
 \*\* 473730.931, 3754998.811, 0.00, 4.00, 3.95  
 \*\* 473730.246, 3755003.833, 0.00, 4.00, 3.95  
 \*\* 473730.018, 3755004.746, 0.00, 4.00, 3.95  
 \*\* -----  

| LOCATION          | VOLUME |            |             |     |  |
|-------------------|--------|------------|-------------|-----|--|
| LOCATION L0002631 | VOLUME | 473695.663 | 3755013.052 | 0.0 |  |
| LOCATION L0002632 | VOLUME | 473699.531 | 3755005.482 | 0.0 |  |
| LOCATION L0002633 | VOLUME | 473703.398 | 3754997.913 | 0.0 |  |
| LOCATION L0002634 | VOLUME | 473707.954 | 3754990.898 | 0.0 |  |
| LOCATION L0002635 | VOLUME | 473715.011 | 3754986.350 | 0.0 |  |
| LOCATION L0002636 | VOLUME | 473723.272 | 3754985.764 | 0.0 |  |
| LOCATION L0002637 | VOLUME | 473729.388 | 3754991.329 | 0.0 |  |
| LOCATION L0002638 | VOLUME | 473730.833 | 3754999.530 | 0.0 |  |

 \*\* End of LINE VOLUME Source ID = SLINE9  
 \*\* -----  
 \*\* Line Source Represented by Adjacent Volume Sources  
 \*\* LINE VOLUME Source ID = SLINE10  
 \*\* DESCRSRC On-Site Passenger Car Travel - Assisted Living  
 \*\* PREFIX  
 \*\* Length of Side = 8.50  
 \*\* Configuration = Adjacent  
 \*\* Emission Rate = 0.0008471  
 \*\* Vertical Dimension = 4.00  
 \*\* SZINIT = 1.86

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** Nodes = 8
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474275.659, 3754818.227, 0.00, 4.00, 3.95
** 474276.685, 3754808.563, 0.00, 4.00, 3.95
** 474271.043, 3754798.926, 0.00, 4.00, 3.95
** 474263.098, 3754791.586, 0.00, 4.00, 3.95
** 474247.089, 3754790.184, 0.00, 4.00, 3.95
** 474237.633, 3754788.405, 0.00, 4.00, 3.95
** 474234.942, 3754777.285, 0.00, 4.00, 3.95
** -----
LOCATION L0002639      VOLUME  474157.468 3754909.510 0.0
LOCATION L0002640      VOLUME  474164.195 3754904.314 0.0
LOCATION L0002641      VOLUME  474170.922 3754899.118 0.0
LOCATION L0002642      VOLUME  474177.650 3754893.923 0.0
LOCATION L0002643      VOLUME  474184.377 3754888.727 0.0
LOCATION L0002644      VOLUME  474191.104 3754883.531 0.0
LOCATION L0002645      VOLUME  474197.831 3754878.336 0.0
LOCATION L0002646      VOLUME  474204.558 3754873.140 0.0
LOCATION L0002647      VOLUME  474211.286 3754867.944 0.0
LOCATION L0002648      VOLUME  474218.013 3754862.749 0.0
LOCATION L0002649      VOLUME  474224.740 3754857.553 0.0
LOCATION L0002650      VOLUME  474231.467 3754852.358 0.0
LOCATION L0002651      VOLUME  474238.195 3754847.162 0.0
LOCATION L0002652      VOLUME  474244.922 3754841.966 0.0
LOCATION L0002653      VOLUME  474251.649 3754836.771 0.0
LOCATION L0002654      VOLUME  474258.376 3754831.575 0.0
LOCATION L0002655      VOLUME  474265.103 3754826.379 0.0
LOCATION L0002656      VOLUME  474271.831 3754821.184 0.0
LOCATION L0002657      VOLUME  474276.046 3754814.585 0.0
LOCATION L0002658      VOLUME  474275.450 3754806.453 0.0
LOCATION L0002659      VOLUME  474271.156 3754799.118 0.0
LOCATION L0002660      VOLUME  474264.963 3754793.309 0.0
LOCATION L0002661      VOLUME  474257.160 3754791.066 0.0
LOCATION L0002662      VOLUME  474248.692 3754790.324 0.0
LOCATION L0002663      VOLUME  474240.317 3754788.910 0.0
LOCATION L0002664      VOLUME  474236.276 3754782.798 0.0
** End of LINE VOLUME Source ID = SLINE10
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE11
** DESCRSRC On-Site Passenger Car Idling - Medical Office Building (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.002189
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474028.388, 3754698.671, 0.00, 4.00, 3.95
** 474028.146, 3754663.431, 0.00, 4.00, 3.95
** -----
LOCATION L0002665      VOLUME  474028.359 3754694.421 0.0
LOCATION L0002666      VOLUME  474028.301 3754685.921 0.0
LOCATION L0002667      VOLUME  474028.242 3754677.421 0.0

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LOCATION L0002668      VOLUME    474028.184 3754668.921 0.0
** End of LINE VOLUME Source ID = SLINE11
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE12
** DESCRSRC On-Site Passenger Car Travel - Medical Office Building (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0001815
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474027.769, 3754746.815, 0.00, 4.00, 3.95
** 474028.146, 3754663.431, 0.00, 4.00, 3.95
** -----
LOCATION L0002669      VOLUME    474027.788 3754742.565 0.0
LOCATION L0002670      VOLUME    474027.827 3754734.065 0.0
LOCATION L0002671      VOLUME    474027.865 3754725.565 0.0
LOCATION L0002672      VOLUME    474027.903 3754717.065 0.0
LOCATION L0002673      VOLUME    474027.942 3754708.565 0.0
LOCATION L0002674      VOLUME    474027.980 3754700.065 0.0
LOCATION L0002675      VOLUME    474028.019 3754691.565 0.0
LOCATION L0002676      VOLUME    474028.057 3754683.065 0.0
LOCATION L0002677      VOLUME    474028.095 3754674.565 0.0
LOCATION L0002678      VOLUME    474028.134 3754666.066 0.0
** End of LINE VOLUME Source ID = SLINE12
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE13
** DESCRSRC On-Site Truck Idling - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0002763
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 3
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.080, 3754684.434, 0.00, 4.00, 3.95
** -----
LOCATION L0002679      VOLUME    473797.069 3754701.662 0.0
LOCATION L0002680      VOLUME    473797.074 3754693.162 0.0
LOCATION L0002681      VOLUME    473797.080 3754684.662 0.0
** End of LINE VOLUME Source ID = SLINE13
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE14
** DESCRSRC On-Site Truck Idling - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00009319

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** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 4
** 473736.964, 3754551.125, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95
** 473745.446, 3754483.696, 0.00, 4.00, 3.95
** 473829.839, 3754482.423, 0.00, 4.00, 3.95
** -----
LOCATION L0002682      VOLUME  473737.082 3754546.877 0.0
LOCATION L0002683      VOLUME  473737.316 3754538.380 0.0
LOCATION L0002684      VOLUME  473737.550 3754529.883 0.0
LOCATION L0002685      VOLUME  473737.785 3754521.386 0.0
LOCATION L0002686      VOLUME  473738.019 3754512.889 0.0
LOCATION L0002687      VOLUME  473738.254 3754504.393 0.0
LOCATION L0002688      VOLUME  473738.488 3754495.896 0.0
LOCATION L0002689      VOLUME  473740.342 3754488.161 0.0
LOCATION L0002690      VOLUME  473747.164 3754483.670 0.0
LOCATION L0002691      VOLUME  473755.663 3754483.542 0.0
LOCATION L0002692      VOLUME  473764.162 3754483.413 0.0
LOCATION L0002693      VOLUME  473772.661 3754483.285 0.0
LOCATION L0002694      VOLUME  473781.160 3754483.157 0.0
LOCATION L0002695      VOLUME  473789.659 3754483.029 0.0
LOCATION L0002696      VOLUME  473798.158 3754482.901 0.0
LOCATION L0002697      VOLUME  473806.657 3754482.773 0.0
LOCATION L0002698      VOLUME  473815.156 3754482.645 0.0
LOCATION L0002699      VOLUME  473823.656 3754482.517 0.0
** End of LINE VOLUME Source ID = SLINE14
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE15
** DESCRSRC On-Site Truck Idling - Surgical Center
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00002193
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474146.956, 3754542.362, 0.00, 4.00, 3.95
** 474203.982, 3754541.933, 0.00, 4.00, 3.95
** -----
LOCATION L0002700      VOLUME  474151.206 3754542.330 0.0
LOCATION L0002701      VOLUME  474159.706 3754542.266 0.0
LOCATION L0002702      VOLUME  474168.206 3754542.202 0.0
LOCATION L0002703      VOLUME  474176.705 3754542.138 0.0
LOCATION L0002704      VOLUME  474185.205 3754542.074 0.0
LOCATION L0002705      VOLUME  474193.705 3754542.010 0.0
LOCATION L0002706      VOLUME  474202.205 3754541.946 0.0
** End of LINE VOLUME Source ID = SLINE15
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE16
** DESCRSRC On-Site Truck Idling - Senior Housing
** PREFIX

```

```

** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0002056
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 9
** 473705.823, 3754992.649, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0002707      VOLUME  473709.107 3754989.951 0.0
LOCATION L0002708      VOLUME  473716.408 3754985.826 0.0
LOCATION L0002709      VOLUME  473724.564 3754986.512 0.0
LOCATION L0002710      VOLUME  473730.201 3754992.580 0.0
LOCATION L0002711      VOLUME  473730.631 3755001.008 0.0
** End of LINE VOLUME Source ID = SLINE16
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE17
** DESCRSRC On-Site Truck Idling - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0001535
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474217.752, 3754863.013, 0.00, 4.00, 3.95
** -----
LOCATION L0002712      VOLUME  474157.470 3754909.512 0.0
LOCATION L0002713      VOLUME  474164.200 3754904.320 0.0
LOCATION L0002714      VOLUME  474170.930 3754899.129 0.0
LOCATION L0002715      VOLUME  474177.661 3754893.937 0.0
LOCATION L0002716      VOLUME  474184.391 3754888.746 0.0
LOCATION L0002717      VOLUME  474191.122 3754883.554 0.0
LOCATION L0002718      VOLUME  474197.852 3754878.363 0.0
LOCATION L0002719      VOLUME  474204.583 3754873.171 0.0
LOCATION L0002720      VOLUME  474211.313 3754867.980 0.0
** End of LINE VOLUME Source ID = SLINE17
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE18
** DESCRSRC On-Site Truck Travel - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00007823

```



```

** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 7
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.079, 3754683.979, 0.00, 4.00, 3.95
** 473832.857, 3754684.580, 0.00, 4.00, 3.95
** 473831.534, 3754711.303, 0.00, 4.00, 3.95
** 473825.370, 3754730.840, 0.00, 4.00, 3.95
** 473825.424, 3754745.686, 0.00, 4.00, 3.95
** -----
LOCATION L0002721      VOLUME  473797.069 3754701.662 0.0
LOCATION L0002722      VOLUME  473797.073 3754693.162 0.0
LOCATION L0002723      VOLUME  473797.078 3754684.662 0.0
LOCATION L0002724      VOLUME  473804.895 3754684.110 0.0
LOCATION L0002725      VOLUME  473813.393 3754684.253 0.0
LOCATION L0002726      VOLUME  473821.892 3754684.396 0.0
LOCATION L0002727      VOLUME  473830.391 3754684.539 0.0
LOCATION L0002728      VOLUME  473832.558 3754690.607 0.0
LOCATION L0002729      VOLUME  473832.138 3754699.096 0.0
LOCATION L0002730      VOLUME  473831.718 3754707.586 0.0
LOCATION L0002731      VOLUME  473830.096 3754715.860 0.0
LOCATION L0002732      VOLUME  473827.538 3754723.966 0.0
LOCATION L0002733      VOLUME  473825.374 3754732.132 0.0
LOCATION L0002734      VOLUME  473825.406 3754740.632 0.0
** End of LINE VOLUME Source ID = SLINE18
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE19
** DESCRSRC On-Site Truck Travel - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00004636
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 5
** 473690.932, 3754560.433, 0.00, 4.00, 3.95
** 473736.934, 3754560.673, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95
** 473745.446, 3754483.696, 0.00, 4.00, 3.95
** 473829.839, 3754482.423, 0.00, 4.00, 3.95
** -----
LOCATION L0002735      VOLUME  473695.182 3754560.456 0.0
LOCATION L0002736      VOLUME  473703.682 3754560.500 0.0
LOCATION L0002737      VOLUME  473712.182 3754560.544 0.0
LOCATION L0002738      VOLUME  473720.682 3754560.588 0.0
LOCATION L0002739      VOLUME  473729.182 3754560.633 0.0
LOCATION L0002740      VOLUME  473736.953 3754559.926 0.0
LOCATION L0002741      VOLUME  473737.159 3754551.428 0.0
LOCATION L0002742      VOLUME  473737.366 3754542.931 0.0
LOCATION L0002743      VOLUME  473737.572 3754534.433 0.0
LOCATION L0002744      VOLUME  473737.779 3754525.936 0.0
LOCATION L0002745      VOLUME  473737.985 3754517.439 0.0

```

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002746 | VOLUME | 473738.192 | 3754508.941 | 0.0 |
| LOCATION | L0002747 | VOLUME | 473738.398 | 3754500.444 | 0.0 |
| LOCATION | L0002748 | VOLUME | 473738.605 | 3754491.946 | 0.0 |
| LOCATION | L0002749 | VOLUME | 473743.316 | 3754485.559 | 0.0 |
| LOCATION | L0002750 | VOLUME | 473751.115 | 3754483.610 | 0.0 |
| LOCATION | L0002751 | VOLUME | 473759.614 | 3754483.482 | 0.0 |
| LOCATION | L0002752 | VOLUME | 473768.113 | 3754483.354 | 0.0 |
| LOCATION | L0002753 | VOLUME | 473776.612 | 3754483.226 | 0.0 |
| LOCATION | L0002754 | VOLUME | 473785.111 | 3754483.098 | 0.0 |
| LOCATION | L0002755 | VOLUME | 473793.610 | 3754482.969 | 0.0 |
| LOCATION | L0002756 | VOLUME | 473802.110 | 3754482.841 | 0.0 |
| LOCATION | L0002757 | VOLUME | 473810.609 | 3754482.713 | 0.0 |
| LOCATION | L0002758 | VOLUME | 473819.108 | 3754482.585 | 0.0 |
| LOCATION | L0002759 | VOLUME | 473827.607 | 3754482.457 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE19  
 \*\* -----  
 \*\* Line Source Represented by Adjacent Volume Sources  
 \*\* LINE VOLUME Source ID = SLINE20  
 \*\* DESCRSRC On-Site Truck Travel - Surgical Center  
 \*\* PREFIX  
 \*\* Length of Side = 8.50  
 \*\* Configuration = Adjacent  
 \*\* Emission Rate = 8.302E-06  
 \*\* Vertical Dimension = 4.00  
 \*\* SZINIT = 1.86  
 \*\* Nodes = 4  
 \*\* 474146.956, 3754542.362, 0.00, 4.00, 3.95  
 \*\* 474225.093, 3754541.662, 0.00, 4.00, 3.95  
 \*\* 474224.571, 3754563.881, 0.00, 4.00, 3.95  
 \*\* 474284.387, 3754563.753, 0.00, 4.00, 3.95  
 \*\* -----  

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002760 | VOLUME | 474151.206 | 3754542.324 | 0.0 |
| LOCATION | L0002761 | VOLUME | 474159.706 | 3754542.248 | 0.0 |
| LOCATION | L0002762 | VOLUME | 474168.205 | 3754542.171 | 0.0 |
| LOCATION | L0002763 | VOLUME | 474176.705 | 3754542.095 | 0.0 |
| LOCATION | L0002764 | VOLUME | 474185.205 | 3754542.019 | 0.0 |
| LOCATION | L0002765 | VOLUME | 474193.704 | 3754541.943 | 0.0 |
| LOCATION | L0002766 | VOLUME | 474202.204 | 3754541.867 | 0.0 |
| LOCATION | L0002767 | VOLUME | 474210.704 | 3754541.791 | 0.0 |
| LOCATION | L0002768 | VOLUME | 474219.203 | 3754541.714 | 0.0 |
| LOCATION | L0002769 | VOLUME | 474225.032 | 3754544.271 | 0.0 |
| LOCATION | L0002770 | VOLUME | 474224.832 | 3754552.769 | 0.0 |
| LOCATION | L0002771 | VOLUME | 474224.632 | 3754561.266 | 0.0 |
| LOCATION | L0002772 | VOLUME | 474230.455 | 3754563.868 | 0.0 |
| LOCATION | L0002773 | VOLUME | 474238.955 | 3754563.850 | 0.0 |
| LOCATION | L0002774 | VOLUME | 474247.455 | 3754563.832 | 0.0 |
| LOCATION | L0002775 | VOLUME | 474255.955 | 3754563.814 | 0.0 |
| LOCATION | L0002776 | VOLUME | 474264.455 | 3754563.795 | 0.0 |
| LOCATION | L0002777 | VOLUME | 474272.955 | 3754563.777 | 0.0 |
| LOCATION | L0002778 | VOLUME | 474281.455 | 3754563.759 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE20  
 \*\* -----  
 \*\* Line Source Represented by Adjacent Volume Sources  
 \*\* LINE VOLUME Source ID = SLINE21



\*\* DESCRSRC On-Site Truck Travel - Senior Housing

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 0.00003352

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 10

\*\* 473693.729, 3755016.836, 0.00, 4.00, 3.95

\*\* 473706.280, 3754992.273, 0.00, 4.00, 3.95

\*\* 473712.214, 3754987.399, 0.00, 4.00, 3.95

\*\* 473717.692, 3754985.344, 0.00, 4.00, 3.95

\*\* 473722.942, 3754985.573, 0.00, 4.00, 3.95

\*\* 473727.279, 3754988.084, 0.00, 4.00, 3.95

\*\* 473730.246, 3754992.649, 0.00, 4.00, 3.95

\*\* 473730.931, 3754998.811, 0.00, 4.00, 3.95

\*\* 473730.246, 3755003.833, 0.00, 4.00, 3.95

\*\* 473730.018, 3755004.746, 0.00, 4.00, 3.95

\*\*

LOCATION L0002779 VOLUME 473695.663 3755013.052 0.0

LOCATION L0002780 VOLUME 473699.531 3755005.482 0.0

LOCATION L0002781 VOLUME 473703.398 3754997.913 0.0

LOCATION L0002782 VOLUME 473707.954 3754990.898 0.0

LOCATION L0002783 VOLUME 473715.011 3754986.350 0.0

LOCATION L0002784 VOLUME 473723.272 3754985.764 0.0

LOCATION L0002785 VOLUME 473729.388 3754991.329 0.0

LOCATION L0002786 VOLUME 473730.833 3754999.530 0.0

\*\* End of LINE VOLUME Source ID = SLINE21

\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE22

\*\* DESCRSRC On-Site Truck Travel - Assisted Living

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 0.00008068

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 8

\*\* 474154.104, 3754912.107, 0.00, 4.00, 3.95

\*\* 474275.659, 3754818.227, 0.00, 4.00, 3.95

\*\* 474276.685, 3754808.563, 0.00, 4.00, 3.95

\*\* 474271.043, 3754798.926, 0.00, 4.00, 3.95

\*\* 474263.098, 3754791.586, 0.00, 4.00, 3.95

\*\* 474247.089, 3754790.184, 0.00, 4.00, 3.95

\*\* 474237.633, 3754788.405, 0.00, 4.00, 3.95

\*\* 474234.942, 3754777.285, 0.00, 4.00, 3.95

\*\*

LOCATION L0002787 VOLUME 474157.468 3754909.510 0.0

LOCATION L0002788 VOLUME 474164.195 3754904.314 0.0

LOCATION L0002789 VOLUME 474170.922 3754899.118 0.0

LOCATION L0002790 VOLUME 474177.650 3754893.923 0.0

LOCATION L0002791 VOLUME 474184.377 3754888.727 0.0

LOCATION L0002792 VOLUME 474191.104 3754883.531 0.0

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002793 | VOLUME | 474197.831 | 3754878.336 | 0.0 |
| LOCATION | L0002794 | VOLUME | 474204.558 | 3754873.140 | 0.0 |
| LOCATION | L0002795 | VOLUME | 474211.286 | 3754867.944 | 0.0 |
| LOCATION | L0002796 | VOLUME | 474218.013 | 3754862.749 | 0.0 |
| LOCATION | L0002797 | VOLUME | 474224.740 | 3754857.553 | 0.0 |
| LOCATION | L0002798 | VOLUME | 474231.467 | 3754852.358 | 0.0 |
| LOCATION | L0002799 | VOLUME | 474238.195 | 3754847.162 | 0.0 |
| LOCATION | L0002800 | VOLUME | 474244.922 | 3754841.966 | 0.0 |
| LOCATION | L0002801 | VOLUME | 474251.649 | 3754836.771 | 0.0 |
| LOCATION | L0002802 | VOLUME | 474258.376 | 3754831.575 | 0.0 |
| LOCATION | L0002803 | VOLUME | 474265.103 | 3754826.379 | 0.0 |
| LOCATION | L0002804 | VOLUME | 474271.831 | 3754821.184 | 0.0 |
| LOCATION | L0002805 | VOLUME | 474276.046 | 3754814.585 | 0.0 |
| LOCATION | L0002806 | VOLUME | 474275.450 | 3754806.453 | 0.0 |
| LOCATION | L0002807 | VOLUME | 474271.156 | 3754799.118 | 0.0 |
| LOCATION | L0002808 | VOLUME | 474264.963 | 3754793.309 | 0.0 |
| LOCATION | L0002809 | VOLUME | 474257.160 | 3754791.066 | 0.0 |
| LOCATION | L0002810 | VOLUME | 474248.692 | 3754790.324 | 0.0 |
| LOCATION | L0002811 | VOLUME | 474240.317 | 3754788.910 | 0.0 |
| LOCATION | L0002812 | VOLUME | 474236.276 | 3754782.798 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE22

\*\* -----

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE23

\*\* DESCRSRC On-Site Truck Idling - Medical Office Building (1&2)

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 0.00008771

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 2

\*\* 474028.388, 3754698.671, 0.00, 4.00, 3.95

\*\* 474028.146, 3754663.431, 0.00, 4.00, 3.95

\*\* -----

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002813 | VOLUME | 474028.359 | 3754694.421 | 0.0 |
| LOCATION | L0002814 | VOLUME | 474028.301 | 3754685.921 | 0.0 |
| LOCATION | L0002815 | VOLUME | 474028.242 | 3754677.421 | 0.0 |
| LOCATION | L0002816 | VOLUME | 474028.184 | 3754668.921 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE23

\*\* -----

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE24

\*\* DESCRSRC On-Site Truck Travel - Medical Office Building (1&2)

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 0.00001729

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 2

\*\* 474027.769, 3754746.815, 0.00, 4.00, 3.95

\*\* 474028.146, 3754663.431, 0.00, 4.00, 3.95

\*\* -----

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002817 | VOLUME | 474027.788 | 3754742.565 | 0.0 |
| LOCATION | L0002818 | VOLUME | 474027.827 | 3754734.065 | 0.0 |
| LOCATION | L0002819 | VOLUME | 474027.865 | 3754725.565 | 0.0 |
| LOCATION | L0002820 | VOLUME | 474027.903 | 3754717.065 | 0.0 |
| LOCATION | L0002821 | VOLUME | 474027.942 | 3754708.565 | 0.0 |
| LOCATION | L0002822 | VOLUME | 474027.980 | 3754700.065 | 0.0 |
| LOCATION | L0002823 | VOLUME | 474028.019 | 3754691.565 | 0.0 |
| LOCATION | L0002824 | VOLUME | 474028.057 | 3754683.065 | 0.0 |
| LOCATION | L0002825 | VOLUME | 474028.095 | 3754674.565 | 0.0 |
| LOCATION | L0002826 | VOLUME | 474028.134 | 3754666.066 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE24

\*\* Source Parameters \*\*

\*\* LINE VOLUME Source ID = SLINE1

|          |          |              |      |      |      |
|----------|----------|--------------|------|------|------|
| SRCPARAM | L0002531 | 0.0022986667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002532 | 0.0022986667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002533 | 0.0022986667 | 4.00 | 3.95 | 1.86 |

-----

\*\* LINE VOLUME Source ID = SLINE2

|          |          |              |      |      |      |
|----------|----------|--------------|------|------|------|
| SRCPARAM | L0002534 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002535 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002536 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002537 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002538 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002539 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002540 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002541 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002542 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002543 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002544 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002545 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002546 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002547 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002548 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002549 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002550 | 0.0001292778 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002551 | 0.0001292778 | 4.00 | 3.95 | 1.86 |

-----

\*\* LINE VOLUME Source ID = SLINE3

|          |          |              |      |      |      |
|----------|----------|--------------|------|------|------|
| SRCPARAM | L0002552 | 0.0000783143 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002553 | 0.0000783143 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002554 | 0.0000783143 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002555 | 0.0000783143 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002556 | 0.0000783143 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002557 | 0.0000783143 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002558 | 0.0000783143 | 4.00 | 3.95 | 1.86 |

-----

\*\* LINE VOLUME Source ID = SLINE4

|          |          |           |      |      |      |
|----------|----------|-----------|------|------|------|
| SRCPARAM | L0002559 | 0.0010264 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002560 | 0.0010264 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002561 | 0.0010264 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002562 | 0.0010264 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002563 | 0.0010264 | 4.00 | 3.95 | 1.86 |

-----

\*\* LINE VOLUME Source ID = SLINE5

|                                   |          |              |      |      |      |
|-----------------------------------|----------|--------------|------|------|------|
| SRCPARAM                          | L0002564 | 0.0004256667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002565 | 0.0004256667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002566 | 0.0004256667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002567 | 0.0004256667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002568 | 0.0004256667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002569 | 0.0004256667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002570 | 0.0004256667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002571 | 0.0004256667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002572 | 0.0004256667 | 4.00 | 3.95 | 1.86 |
| ** -----                          |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE6 |          |              |      |      |      |
| SRCPARAM                          | L0002573 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002574 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002575 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002576 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002577 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002578 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002579 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002580 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002581 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002582 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002583 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002584 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002585 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002586 | 0.0000586714 | 4.00 | 3.95 | 1.86 |
| ** -----                          |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE7 |          |              |      |      |      |
| SRCPARAM                          | L0002587 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002588 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002589 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002590 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002591 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002592 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002593 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002594 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002595 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002596 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002597 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002598 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002599 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002600 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002601 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002602 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002603 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002604 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002605 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002606 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002607 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002608 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002609 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002610 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002611 | 0.000019476  | 4.00 | 3.95 | 1.86 |
| ** -----                          |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE8 |          |              |      |      |      |

|          |          |             |      |      |      |
|----------|----------|-------------|------|------|------|
| SRCPARAM | L0002612 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002613 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002614 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002615 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002616 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002617 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002618 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002619 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002620 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002621 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002622 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002623 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002624 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002625 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002626 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002627 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002628 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002629 | 0.000004595 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002630 | 0.000004595 | 4.00 | 3.95 | 1.86 |

\*\*

\*\* LINE VOLUME Source ID = SLINE9

|          |          |              |      |      |      |
|----------|----------|--------------|------|------|------|
| SRCPARAM | L0002631 | 0.0000440125 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002632 | 0.0000440125 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002633 | 0.0000440125 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002634 | 0.0000440125 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002635 | 0.0000440125 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002636 | 0.0000440125 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002637 | 0.0000440125 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002638 | 0.0000440125 | 4.00 | 3.95 | 1.86 |

\*\*

\*\* LINE VOLUME Source ID = SLINE10

|          |          |              |      |      |      |
|----------|----------|--------------|------|------|------|
| SRCPARAM | L0002639 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002640 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002641 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002642 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002643 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002644 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002645 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002646 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002647 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002648 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002649 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002650 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002651 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002652 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002653 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002654 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002655 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002656 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002657 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002658 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002659 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002660 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002661 | 0.0000325808 | 4.00 | 3.95 | 1.86 |

|    |                                 |          |              |      |      |      |
|----|---------------------------------|----------|--------------|------|------|------|
|    | SRCPARAM                        | L0002662 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002663 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002664 | 0.0000325808 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE11 |          |              |      |      |      |
|    | SRCPARAM                        | L0002665 | 0.00054725   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002666 | 0.00054725   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002667 | 0.00054725   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002668 | 0.00054725   | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE12 |          |              |      |      |      |
|    | SRCPARAM                        | L0002669 | 0.00001815   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002670 | 0.00001815   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002671 | 0.00001815   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002672 | 0.00001815   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002673 | 0.00001815   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002674 | 0.00001815   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002675 | 0.00001815   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002676 | 0.00001815   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002677 | 0.00001815   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002678 | 0.00001815   | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE13 |          |              |      |      |      |
|    | SRCPARAM                        | L0002679 | 0.0000921    | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002680 | 0.0000921    | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002681 | 0.0000921    | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE14 |          |              |      |      |      |
|    | SRCPARAM                        | L0002682 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002683 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002684 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002685 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002686 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002687 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002688 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002689 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002690 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002691 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002692 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002693 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002694 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002695 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002696 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002697 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002698 | 0.000005177  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002699 | 0.000005177  | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE15 |          |              |      |      |      |
|    | SRCPARAM                        | L0002700 | 0.000003133  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002701 | 0.000003133  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002702 | 0.000003133  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002703 | 0.000003133  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002704 | 0.000003133  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002705 | 0.000003133  | 4.00 | 3.95 | 1.86 |



|    |                                 |              |      |      |      |
|----|---------------------------------|--------------|------|------|------|
| ** | SRCPARAM L0002706               | 0.000003133  | 4.00 | 3.95 | 1.86 |
| ** | -----                           |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE16 |              |      |      |      |
|    | SRCPARAM L0002707               | 0.00004112   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002708               | 0.00004112   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002709               | 0.00004112   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002710               | 0.00004112   | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002711               | 0.00004112   | 4.00 | 3.95 | 1.86 |
| ** | -----                           |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE17 |              |      |      |      |
|    | SRCPARAM L0002712               | 0.0000170556 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002713               | 0.0000170556 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002714               | 0.0000170556 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002715               | 0.0000170556 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002716               | 0.0000170556 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002717               | 0.0000170556 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002718               | 0.0000170556 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002719               | 0.0000170556 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002720               | 0.0000170556 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE18 |              |      |      |      |
|    | SRCPARAM L0002721               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002722               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002723               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002724               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002725               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002726               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002727               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002728               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002729               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002730               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002731               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002732               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002733               | 0.000005588  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002734               | 0.000005588  | 4.00 | 3.95 | 1.86 |
| ** | -----                           |              |      |      |      |
| ** | LINE VOLUME Source ID = SLINE19 |              |      |      |      |
|    | SRCPARAM L0002735               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002736               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002737               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002738               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002739               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002740               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002741               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002742               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002743               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002744               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002745               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002746               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002747               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002748               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002749               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002750               | 0.000001854  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0002751               | 0.000001854  | 4.00 | 3.95 | 1.86 |

|                                    |          |              |      |      |      |
|------------------------------------|----------|--------------|------|------|------|
| SRCPARAM                           | L0002752 | 0.0000001854 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002753 | 0.0000001854 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002754 | 0.0000001854 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002755 | 0.0000001854 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002756 | 0.0000001854 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002757 | 0.0000001854 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002758 | 0.0000001854 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002759 | 0.0000001854 | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE20 |          |              |      |      |      |
| SRCPARAM                           | L0002760 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002761 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002762 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002763 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002764 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002765 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002766 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002767 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002768 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002769 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002770 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002771 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002772 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002773 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002774 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002775 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002776 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002777 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002778 | 0.0000004369 | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE21 |          |              |      |      |      |
| SRCPARAM                           | L0002779 | 0.000000419  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002780 | 0.000000419  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002781 | 0.000000419  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002782 | 0.000000419  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002783 | 0.000000419  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002784 | 0.000000419  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002785 | 0.000000419  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002786 | 0.000000419  | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE22 |          |              |      |      |      |
| SRCPARAM                           | L0002787 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002788 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002789 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002790 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002791 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002792 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002793 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002794 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002795 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002796 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002797 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002798 | 0.0000003103 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002799 | 0.0000003103 | 4.00 | 3.95 | 1.86 |



|                                    |           |              |      |      |      |
|------------------------------------|-----------|--------------|------|------|------|
| SRCPARAM                           | L0002800  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002801  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002802  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002803  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002804  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002805  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002806  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002807  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002808  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002809  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002810  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002811  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002812  | 0.000003103  | 4.00 | 3.95 | 1.86 |
| ** -----                           |           |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE23 |           |              |      |      |      |
| SRCPARAM                           | L0002813  | 0.0000219275 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002814  | 0.0000219275 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002815  | 0.0000219275 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002816  | 0.0000219275 | 4.00 | 3.95 | 1.86 |
| ** -----                           |           |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE24 |           |              |      |      |      |
| SRCPARAM                           | L0002817  | 0.000001729  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002818  | 0.000001729  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002819  | 0.000001729  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002820  | 0.000001729  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002821  | 0.000001729  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002822  | 0.000001729  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002823  | 0.000001729  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002824  | 0.000001729  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002825  | 0.000001729  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002826  | 0.000001729  | 4.00 | 3.95 | 1.86 |
| ** -----                           |           |              |      |      |      |
| URBANSRC ALL                       |           |              |      |      |      |
| SRCGROUP ALL                       |           |              |      |      |      |
| SO FINISHED                        |           |              |      |      |      |
| **                                 |           |              |      |      |      |
| *****                              |           |              |      |      |      |
| ** AERMOD Receptor Pathway         |           |              |      |      |      |
| *****                              |           |              |      |      |      |
| **                                 |           |              |      |      |      |
| **                                 |           |              |      |      |      |
| RE STARTING                        |           |              |      |      |      |
| ** DESCRREC "" ""                  |           |              |      |      |      |
| DISCCART                           | 474201.46 | 3754331.71   | 2.00 |      |      |
| DISCCART                           | 474401.46 | 3754331.71   | 2.00 |      |      |
| DISCCART                           | 474501.46 | 3754331.71   | 2.00 |      |      |
| DISCCART                           | 473801.46 | 3754431.71   | 2.00 |      |      |
| DISCCART                           | 473715.92 | 3754428.71   | 2.00 |      |      |
| DISCCART                           | 473738.73 | 3754428.62   | 2.00 |      |      |
| DISCCART                           | 473755.69 | 3754428.85   | 2.00 |      |      |
| DISCCART                           | 473774.94 | 3754428.85   | 2.00 |      |      |
| DISCCART                           | 473815.97 | 3754429.55   | 2.00 |      |      |
| DISCCART                           | 473831.00 | 3754424.36   | 2.00 |      |      |
| DISCCART                           | 473853.90 | 3754425.20   | 2.00 |      |      |

|          |           |            |      |
|----------|-----------|------------|------|
| DISCCART | 473871.89 | 3754423.79 | 2.00 |
| DISCCART | 473891.98 | 3754427.59 | 2.00 |
| DISCCART | 473779.02 | 3754366.16 | 2.00 |
| DISCCART | 473813.90 | 3754366.49 | 2.00 |
| DISCCART | 474014.62 | 3754372.20 | 2.00 |
| DISCCART | 474058.72 | 3754367.30 | 2.00 |
| DISCCART | 474106.33 | 3754366.60 | 2.00 |
| DISCCART | 474129.66 | 3754366.83 | 2.00 |
| DISCCART | 474153.46 | 3754367.77 | 2.00 |
| DISCCART | 474231.55 | 3754356.87 | 2.00 |
| DISCCART | 474273.79 | 3754374.60 | 2.00 |
| DISCCART | 474545.34 | 3754362.52 | 2.00 |
| DISCCART | 474582.52 | 3754377.24 | 2.00 |
| DISCCART | 474612.74 | 3754387.31 | 2.00 |
| DISCCART | 474642.95 | 3754391.18 | 2.00 |
| DISCCART | 474354.43 | 3754341.93 | 2.00 |

RE FINISHED  
\*\*  
\*\*\*\*\*  
\*\* AERMOD Meteorology Pathway  
\*\*\*\*\*  
\*\*  
\*\*  
ME STARTING  
SURFFILE "U:\UcAir\6-10-14 AQMD Meteorological data\rivr6.sfc"  
PROFFILE "U:\UcAir\6-10-14 AQMD Meteorological data\rivr6.PFL"  
SURFDATA 3190 2005  
UAIRDATA 3190 2005  
SITEDATA 99999 2005  
PROFBASE 250.0 METERS  
ME FINISHED  
\*\*  
\*\*\*\*\*  
\*\* AERMOD Output Pathway  
\*\*\*\*\*  
\*\*  
\*\*  
OU STARTING  
RECTABLE ALLAVE 1ST  
RECTABLE 1 1ST  
\*\* Auto-Generated Plotfiles  
PLOTFILE 1 ALL 1ST N02.AD\01H1GALL.PLT 31  
PLOTFILE ANNUAL ALL N02.AD\AN00GALL.PLT 32  
SUMMFILE N02.sum  
OU FINISHED

\*\*\* Message Summary For AERMOD Model Setup \*\*\*

----- Summary of Total Messages -----

|            |                            |
|------------|----------------------------|
| A Total of | 0 Fatal Error Message(s)   |
| A Total of | 4 Warning Message(s)       |
| A Total of | 0 Informational Message(s) |

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
CO W271 31 COCARD: 03FILE w/o 03VALs; full conv for hrs with  
miss 03  
CO W361 31 COCARD: Multiyear PERIOD/ANNUAL values for N02/S02  
require MULTYEAR Opt  
ME W396 1162 MEOPEN: Met data from outdated version of AERMET,  
version: 12345  
ME W531 1162 MEOPEN: CAUTION! Met Station ID Missing from  
SURFFILE for SURFDATA

\*\*\*\*\*  
\*\*\* SETUP Finishes Successfully \*\*\*  
\*\*\*\*\*

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\* 03/13/15  
\*\*\* AERMET - VERSION 12345 \*\*\* \*\*\*  
\*\*\* 18:04:52

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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL OLM

\*\*\* MODEL SETUP OPTIONS

SUMMARY \*\*\*

---  
---  
\*\*Model Is Setup For Calculation of Average CONcEntration Values.

-- DEPOSITION LOGIC --

\*\*NO GAS DEPOSITION Data Provided.

\*\*NO PARTICLE DEPOSITION Data Provided.

\*\*Model Uses NO DRY DEPLETION. DRYDPLT = F

\*\*Model Uses NO WET DEPLETION. WETDPLT = F

\*\*Model Uses URBAN Dispersion Algorithm for the SBL for 296 Source(s),  
for Total of 1 Urban Area(s):

Urban Population = 2100516.0 ; Urban Roughness Length = 1.000 m

\*\*Model Allows User-Specified Options:

1. Stack-tip Downwash.
2. Model Assumes Receptors on FLAT Terrain.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.
6. Ozone Limiting Method (OLM) Used for NO2 Conversion  
with an Equilibrium NO2/NOx Ratio of 0.900 and  
with NO OLMGROUPs
7. Urban Roughness Length of 1.0 Meter Used.

\*\*Other Options Specified:

FASTALL - Use effective sigma-y to optimize meander for  
POINT and VOLUME sources, and hybrid approach  
to optimize AREA sources (formerly TOXICS option)

\*\*Model Accepts FLAGPOLE Receptor Heights.

\*\*The User Specified a Pollutant Type of: NO2

\*\*Note that special processing requirements apply for the 1-hour NO2  
NAAQS - check available guidance.

Model will process user-specified ranks of daily maximum 1-hour values  
averaged across the number of years modeled.

For annual NO2 NAAQS modeling, the multi-year maximum of PERIOD values  
can be simulated using the MULTYEAR keyword.

Multi-year PERIOD and 1-hour values should only be done in a single  
model run using the MULTYEAR option with a  
single multi-year meteorological data file using STARTEND keyword.

\*\*Model Calculates 1 Short Term Average(s) of: 1-HR  
and Calculates ANNUAL Averages

\*\*This Run Includes: 296 Source(s); 1 Source Group(s); and  
27 Receptor(s)

\*\*This Run Includes OZONE Values for a Single Sector  
HOURLY OZONE Values are Available

\*\*Model Set To Continue RUNNING After the Setup Testing.

\*\*The AERMET Input Meteorological Data Version Date: 12345

\*\*Output Options Selected:

Model Outputs Tables of ANNUAL Averages by Receptor  
Model Outputs Tables of Highest Short Term Values by Receptor  
(RECTABLE Keyword)  
Model Outputs External File(s) of High Values for Plotting  
(PLOTFILE Keyword)  
Model Outputs Separate Summary File of High Ranked Values  
(SUMMFILE Keyword)

\*\*NOTE: The Following Flags May Appear Following CONC Values: c for  
Calm Hours

m for  
Missing Hours

b for  
Both Calm and Missing Hours

\*\*Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 250.00 ;  
Decay Coef. = 0.000 ; Rot. Angle = 0.0  
Emission Units = GRAMS/SEC  
; Emission Rate Unit Factor = 0.10000E+07  
Output Units = MICROGRAMS/M\*\*3

\*\*Approximate Storage Requirements of Model = 3.7 MB of RAM.

\*\*Detailed Error/Message File: N02.err

\*\*File for Summary of Results: N02.sum

\*\*\* AERMOD - VERSION 14134 \*\*\*      \*\*\* U:\UcJobs\\_08600-  
 09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\*      03/13/15  
 \*\*\* AERMET - VERSION 12345 \*\*\*      \*\*\*  
 \*\*\*      18:04:52

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 \*\*MODELOPTs:    NonDEFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

\*\*\* VOLUME SOURCE DATA

\*\*\*

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   |          | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002531 |          | 0      | 0.22987E-02 | 473797.1 | 3754701.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002532 |          | 0      | 0.22987E-02 | 473797.1 | 3754693.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002533 |          | 0      | 0.22987E-02 | 473797.1 | 3754684.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002534 |          | 0      | 0.12928E-03 | 473737.1 | 3754546.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002535 |          | 0      | 0.12928E-03 | 473737.3 | 3754538.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002536 |          | 0      | 0.12928E-03 | 473737.5 | 3754529.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002537 |          | 0      | 0.12928E-03 | 473737.8 | 3754521.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002538 |          | 0      | 0.12928E-03 | 473738.0 | 3754512.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002539 |          | 0      | 0.12928E-03 | 473738.3 | 3754504.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002540 |          | 0      | 0.12928E-03 | 473738.5 | 3754495.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002541 |          | 0      | 0.12928E-03 | 473740.3 | 3754488.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002542 |          | 0      | 0.12928E-03 | 473747.2 | 3754483.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002543 |          | 0      | 0.12928E-03 | 473755.7 | 3754483.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002544 |          | 0      | 0.12928E-03 | 473764.2 | 3754483.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002545 |          | 0      | 0.12928E-03 | 473772.7 | 3754483.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002546 |          | 0      | 0.12928E-03 | 473781.2 | 3754483.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002547  | 0   | 0.12928E-03 | 473789.7 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002548  | 0   | 0.12928E-03 | 473798.2 | 3754482.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002549  | 0   | 0.12928E-03 | 473806.7 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002550  | 0   | 0.12928E-03 | 473815.2 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002551  | 0   | 0.12928E-03 | 473823.7 | 3754482.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002552  | 0   | 0.78314E-04 | 474151.2 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002553  | 0   | 0.78314E-04 | 474159.7 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002554  | 0   | 0.78314E-04 | 474168.2 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002555  | 0   | 0.78314E-04 | 474176.7 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002556  | 0   | 0.78314E-04 | 474185.2 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002557  | 0   | 0.78314E-04 | 474193.7 | 3754542.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002558  | 0   | 0.78314E-04 | 474202.2 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002559  | 0   | 0.10264E-02 | 473709.1 | 3754990.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002560  | 0   | 0.10264E-02 | 473716.4 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002561  | 0   | 0.10264E-02 | 473724.6 | 3754986.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002562  | 0   | 0.10264E-02 | 473730.2 | 3754992.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002563  | 0   | 0.10264E-02 | 473730.6 | 3755001.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002564  | 0   | 0.42567E-03 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002565  | 0   | 0.42567E-03 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002566  | 0   | 0.42567E-03 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002567  | 0   | 0.42567E-03 | 474177.7 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002568  | 0   | 0.42567E-03 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002569  | 0   | 0.42567E-03 | 474191.1 | 3754883.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002570  | 0   | 0.42567E-03 | 474197.9 | 3754878.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 12345 ***      ***
***      18:04:52

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**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

```

\*\*\* VOLUME SOURCE DATA

\*\*\*

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           | ELEV.    | HEIGHT   |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         |          |          |
| ID       |          | CATS.  | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) |        |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002571 |          | 0      | 0.42567E-03 | 474204.6 | 3754873.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002572 |          | 0      | 0.42567E-03 | 474211.3 | 3754868.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002573 |          | 0      | 0.58671E-04 | 473797.1 | 3754701.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002574 |          | 0      | 0.58671E-04 | 473797.1 | 3754693.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002575 |          | 0      | 0.58671E-04 | 473797.1 | 3754684.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002576 |          | 0      | 0.58671E-04 | 473804.9 | 3754684.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002577 |          | 0      | 0.58671E-04 | 473813.4 | 3754684.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002578 |          | 0      | 0.58671E-04 | 473821.9 | 3754684.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002579 |          | 0      | 0.58671E-04 | 473830.4 | 3754684.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002580 |          | 0      | 0.58671E-04 | 473832.6 | 3754690.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002581 |          | 0      | 0.58671E-04 | 473832.1 | 3754699.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002582 |          | 0      | 0.58671E-04 | 473831.7 | 3754707.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002583 |          | 0      | 0.58671E-04 | 473830.1 | 3754715.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002584 |          | 0      | 0.58671E-04 | 473827.5 | 3754724.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002585 |          | 0      | 0.58671E-04 | 473825.4 | 3754732.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002586 |          | 0      | 0.58671E-04 | 473825.4 | 3754740.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |



|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002587  | 0   | 0.19476E-04 | 473695.2 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002588  | 0   | 0.19476E-04 | 473703.7 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002589  | 0   | 0.19476E-04 | 473712.2 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002590  | 0   | 0.19476E-04 | 473720.7 | 3754560.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002591  | 0   | 0.19476E-04 | 473729.2 | 3754560.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002592  | 0   | 0.19476E-04 | 473737.0 | 3754559.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002593  | 0   | 0.19476E-04 | 473737.2 | 3754551.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002594  | 0   | 0.19476E-04 | 473737.4 | 3754542.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002595  | 0   | 0.19476E-04 | 473737.6 | 3754534.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002596  | 0   | 0.19476E-04 | 473737.8 | 3754525.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002597  | 0   | 0.19476E-04 | 473738.0 | 3754517.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002598  | 0   | 0.19476E-04 | 473738.2 | 3754508.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002599  | 0   | 0.19476E-04 | 473738.4 | 3754500.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002600  | 0   | 0.19476E-04 | 473738.6 | 3754491.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002601  | 0   | 0.19476E-04 | 473743.3 | 3754485.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002602  | 0   | 0.19476E-04 | 473751.1 | 3754483.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002603  | 0   | 0.19476E-04 | 473759.6 | 3754483.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002604  | 0   | 0.19476E-04 | 473768.1 | 3754483.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002605  | 0   | 0.19476E-04 | 473776.6 | 3754483.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002606  | 0   | 0.19476E-04 | 473785.1 | 3754483.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002607  | 0   | 0.19476E-04 | 473793.6 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002608  | 0   | 0.19476E-04 | 473802.1 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002609  | 0   | 0.19476E-04 | 473810.6 | 3754482.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002610  | 0   | 0.19476E-04 | 473819.1 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 12345 ***      ***
***      18:04:52

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PAGE      4
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   |          | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002611 |          | 0      | 0.19476E-04 | 473827.6 | 3754482.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002612 |          | 0      | 0.45950E-05 | 474151.2 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002613 |          | 0      | 0.45950E-05 | 474159.7 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002614 |          | 0      | 0.45950E-05 | 474168.2 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002615 |          | 0      | 0.45950E-05 | 474176.7 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002616 |          | 0      | 0.45950E-05 | 474185.2 | 3754542.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002617 |          | 0      | 0.45950E-05 | 474193.7 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002618 |          | 0      | 0.45950E-05 | 474202.2 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002619 |          | 0      | 0.45950E-05 | 474210.7 | 3754541.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002620 |          | 0      | 0.45950E-05 | 474219.2 | 3754541.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002621 |          | 0      | 0.45950E-05 | 474225.0 | 3754544.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002622 |          | 0      | 0.45950E-05 | 474224.8 | 3754552.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002623 |          | 0      | 0.45950E-05 | 474224.6 | 3754561.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002624 |          | 0      | 0.45950E-05 | 474230.5 | 3754563.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002625 |          | 0      | 0.45950E-05 | 474239.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002626 |          | 0      | 0.45950E-05 | 474247.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002627  | 0   | 0.45950E-05 | 474256.0 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002628  | 0   | 0.45950E-05 | 474264.5 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002629  | 0   | 0.45950E-05 | 474273.0 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002630  | 0   | 0.45950E-05 | 474281.5 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002631  | 0   | 0.44013E-04 | 473695.7 | 3755013.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002632  | 0   | 0.44013E-04 | 473699.5 | 3755005.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002633  | 0   | 0.44013E-04 | 473703.4 | 3754997.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002634  | 0   | 0.44013E-04 | 473708.0 | 3754990.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002635  | 0   | 0.44013E-04 | 473715.0 | 3754986.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002636  | 0   | 0.44013E-04 | 473723.3 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002637  | 0   | 0.44013E-04 | 473729.4 | 3754991.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002638  | 0   | 0.44013E-04 | 473730.8 | 3754999.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002639  | 0   | 0.32581E-04 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002640  | 0   | 0.32581E-04 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002641  | 0   | 0.32581E-04 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002642  | 0   | 0.32581E-04 | 474177.6 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002643  | 0   | 0.32581E-04 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002644  | 0   | 0.32581E-04 | 474191.1 | 3754883.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002645  | 0   | 0.32581E-04 | 474197.8 | 3754878.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002646  | 0   | 0.32581E-04 | 474204.6 | 3754873.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002647  | 0   | 0.32581E-04 | 474211.3 | 3754867.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002648  | 0   | 0.32581E-04 | 474218.0 | 3754862.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002649  | 0   | 0.32581E-04 | 474224.7 | 3754857.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002650  | 0   | 0.32581E-04 | 474231.5 | 3754852.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 12345 ***      ***
***      18:04:52

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PAGE      5
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

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\*\*\* VOLUME SOURCE DATA

\*\*\*

| INIT.    | INIT.    | NUMBER      | EMISSION    | RATE      |          | BASE     | RELEASE  |
|----------|----------|-------------|-------------|-----------|----------|----------|----------|
| SOURCE   | SOURCE   | URBAN       | EMISSION    | RATE      |          | ELEV.    | HEIGHT   |
| SY       | SZ       | PART.       | (GRAMS/SEC) | X         | Y        |          |          |
| ID       | CATS.    | SCALAR      | VARY        | (METERS)  | (METERS) | (METERS) | (METERS) |
| (METERS) | (METERS) | BY          |             |           |          |          |          |
| L0002651 | 0        | 0.32581E-04 | 474238.2    | 3754847.2 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002652 | 0        | 0.32581E-04 | 474244.9    | 3754842.0 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002653 | 0        | 0.32581E-04 | 474251.6    | 3754836.8 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002654 | 0        | 0.32581E-04 | 474258.4    | 3754831.6 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002655 | 0        | 0.32581E-04 | 474265.1    | 3754826.4 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002656 | 0        | 0.32581E-04 | 474271.8    | 3754821.2 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002657 | 0        | 0.32581E-04 | 474276.0    | 3754814.6 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002658 | 0        | 0.32581E-04 | 474275.5    | 3754806.5 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002659 | 0        | 0.32581E-04 | 474271.2    | 3754799.1 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002660 | 0        | 0.32581E-04 | 474265.0    | 3754793.3 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002661 | 0        | 0.32581E-04 | 474257.2    | 3754791.1 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002662 | 0        | 0.32581E-04 | 474248.7    | 3754790.3 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002663 | 0        | 0.32581E-04 | 474240.3    | 3754788.9 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002664 | 0        | 0.32581E-04 | 474236.3    | 3754782.8 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002665 | 0        | 0.54725E-03 | 474028.4    | 3754694.4 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |
| L0002666 | 0        | 0.54725E-03 | 474028.3    | 3754685.9 | 250.0    | 4.00     |          |
| 3.95     | 1.86     | YES         |             |           |          |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002667  | 0   | 0.54725E-03 | 474028.2 | 3754677.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002668  | 0   | 0.54725E-03 | 474028.2 | 3754668.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002669  | 0   | 0.18150E-04 | 474027.8 | 3754742.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002670  | 0   | 0.18150E-04 | 474027.8 | 3754734.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002671  | 0   | 0.18150E-04 | 474027.9 | 3754725.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002672  | 0   | 0.18150E-04 | 474027.9 | 3754717.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002673  | 0   | 0.18150E-04 | 474027.9 | 3754708.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002674  | 0   | 0.18150E-04 | 474028.0 | 3754700.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002675  | 0   | 0.18150E-04 | 474028.0 | 3754691.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002676  | 0   | 0.18150E-04 | 474028.1 | 3754683.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002677  | 0   | 0.18150E-04 | 474028.1 | 3754674.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002678  | 0   | 0.18150E-04 | 474028.1 | 3754666.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002679  | 0   | 0.92100E-04 | 473797.1 | 3754701.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002680  | 0   | 0.92100E-04 | 473797.1 | 3754693.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002681  | 0   | 0.92100E-04 | 473797.1 | 3754684.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002682  | 0   | 0.51770E-05 | 473737.1 | 3754546.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002683  | 0   | 0.51770E-05 | 473737.3 | 3754538.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002684  | 0   | 0.51770E-05 | 473737.5 | 3754529.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002685  | 0   | 0.51770E-05 | 473737.8 | 3754521.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002686  | 0   | 0.51770E-05 | 473738.0 | 3754512.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002687  | 0   | 0.51770E-05 | 473738.3 | 3754504.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002688  | 0   | 0.51770E-05 | 473738.5 | 3754495.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002689  | 0   | 0.51770E-05 | 473740.3 | 3754488.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002690  | 0   | 0.51770E-05 | 473747.2 | 3754483.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 *** *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. *** 03/13/15
*** AERMET - VERSION 12345 *** ***
*** 18:04:52

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**MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL OLM

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\*\*\* VOLUME SOURCE DATA

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           | ELEV.    | HEIGHT   |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         |          |          |
| ID       | CATS.    | SCALAR | VARY        | (METERS) | (METERS)  | (METERS) | (METERS) |
| (METERS) | (METERS) | BY     |             |          |           |          |          |
| L0002691 |          | 0      | 0.51770E-05 | 473755.7 | 3754483.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002692 |          | 0      | 0.51770E-05 | 473764.2 | 3754483.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002693 |          | 0      | 0.51770E-05 | 473772.7 | 3754483.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002694 |          | 0      | 0.51770E-05 | 473781.2 | 3754483.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002695 |          | 0      | 0.51770E-05 | 473789.7 | 3754483.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002696 |          | 0      | 0.51770E-05 | 473798.2 | 3754482.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002697 |          | 0      | 0.51770E-05 | 473806.7 | 3754482.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002698 |          | 0      | 0.51770E-05 | 473815.2 | 3754482.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002699 |          | 0      | 0.51770E-05 | 473823.7 | 3754482.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002700 |          | 0      | 0.31330E-05 | 474151.2 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002701 |          | 0      | 0.31330E-05 | 474159.7 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002702 |          | 0      | 0.31330E-05 | 474168.2 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002703 |          | 0      | 0.31330E-05 | 474176.7 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002704 |          | 0      | 0.31330E-05 | 474185.2 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002705 |          | 0      | 0.31330E-05 | 474193.7 | 3754542.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002706 |          | 0      | 0.31330E-05 | 474202.2 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002707  | 0   | 0.41120E-04 | 473709.1 | 3754990.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002708  | 0   | 0.41120E-04 | 473716.4 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002709  | 0   | 0.41120E-04 | 473724.6 | 3754986.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002710  | 0   | 0.41120E-04 | 473730.2 | 3754992.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002711  | 0   | 0.41120E-04 | 473730.6 | 3755001.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002712  | 0   | 0.17056E-04 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002713  | 0   | 0.17056E-04 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002714  | 0   | 0.17056E-04 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002715  | 0   | 0.17056E-04 | 474177.7 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002716  | 0   | 0.17056E-04 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002717  | 0   | 0.17056E-04 | 474191.1 | 3754883.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002718  | 0   | 0.17056E-04 | 474197.9 | 3754878.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002719  | 0   | 0.17056E-04 | 474204.6 | 3754873.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002720  | 0   | 0.17056E-04 | 474211.3 | 3754868.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002721  | 0   | 0.55880E-05 | 473797.1 | 3754701.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002722  | 0   | 0.55880E-05 | 473797.1 | 3754693.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002723  | 0   | 0.55880E-05 | 473797.1 | 3754684.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002724  | 0   | 0.55880E-05 | 473804.9 | 3754684.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002725  | 0   | 0.55880E-05 | 473813.4 | 3754684.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002726  | 0   | 0.55880E-05 | 473821.9 | 3754684.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002727  | 0   | 0.55880E-05 | 473830.4 | 3754684.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002728  | 0   | 0.55880E-05 | 473832.6 | 3754690.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002729  | 0   | 0.55880E-05 | 473832.1 | 3754699.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002730  | 0   | 0.55880E-05 | 473831.7 | 3754707.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
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*** AERMET - VERSION 12345 ***      ***
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PAGE      7
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   |          | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002731 |          | 0      | 0.55880E-05 | 473830.1 | 3754715.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002732 |          | 0      | 0.55880E-05 | 473827.5 | 3754724.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002733 |          | 0      | 0.55880E-05 | 473825.4 | 3754732.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002734 |          | 0      | 0.55880E-05 | 473825.4 | 3754740.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002735 |          | 0      | 0.18540E-05 | 473695.2 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002736 |          | 0      | 0.18540E-05 | 473703.7 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002737 |          | 0      | 0.18540E-05 | 473712.2 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002738 |          | 0      | 0.18540E-05 | 473720.7 | 3754560.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002739 |          | 0      | 0.18540E-05 | 473729.2 | 3754560.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002740 |          | 0      | 0.18540E-05 | 473737.0 | 3754559.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002741 |          | 0      | 0.18540E-05 | 473737.2 | 3754551.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002742 |          | 0      | 0.18540E-05 | 473737.4 | 3754542.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002743 |          | 0      | 0.18540E-05 | 473737.6 | 3754534.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002744 |          | 0      | 0.18540E-05 | 473737.8 | 3754525.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002745 |          | 0      | 0.18540E-05 | 473738.0 | 3754517.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002746 |          | 0      | 0.18540E-05 | 473738.2 | 3754508.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |



|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002747  | 0   | 0.18540E-05 | 473738.4 | 3754500.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002748  | 0   | 0.18540E-05 | 473738.6 | 3754491.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002749  | 0   | 0.18540E-05 | 473743.3 | 3754485.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002750  | 0   | 0.18540E-05 | 473751.1 | 3754483.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002751  | 0   | 0.18540E-05 | 473759.6 | 3754483.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002752  | 0   | 0.18540E-05 | 473768.1 | 3754483.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002753  | 0   | 0.18540E-05 | 473776.6 | 3754483.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002754  | 0   | 0.18540E-05 | 473785.1 | 3754483.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002755  | 0   | 0.18540E-05 | 473793.6 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002756  | 0   | 0.18540E-05 | 473802.1 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002757  | 0   | 0.18540E-05 | 473810.6 | 3754482.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002758  | 0   | 0.18540E-05 | 473819.1 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002759  | 0   | 0.18540E-05 | 473827.6 | 3754482.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002760  | 0   | 0.43690E-06 | 474151.2 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002761  | 0   | 0.43690E-06 | 474159.7 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002762  | 0   | 0.43690E-06 | 474168.2 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002763  | 0   | 0.43690E-06 | 474176.7 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002764  | 0   | 0.43690E-06 | 474185.2 | 3754542.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002765  | 0   | 0.43690E-06 | 474193.7 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002766  | 0   | 0.43690E-06 | 474202.2 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002767  | 0   | 0.43690E-06 | 474210.7 | 3754541.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002768  | 0   | 0.43690E-06 | 474219.2 | 3754541.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002769  | 0   | 0.43690E-06 | 474225.0 | 3754544.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002770  | 0   | 0.43690E-06 | 474224.8 | 3754552.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
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PAGE      8
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002771 |          | 0      | 0.43690E-06 | 474224.6 | 3754561.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002772 |          | 0      | 0.43690E-06 | 474230.5 | 3754563.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002773 |          | 0      | 0.43690E-06 | 474239.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002774 |          | 0      | 0.43690E-06 | 474247.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002775 |          | 0      | 0.43690E-06 | 474256.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002776 |          | 0      | 0.43690E-06 | 474264.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002777 |          | 0      | 0.43690E-06 | 474273.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002778 |          | 0      | 0.43690E-06 | 474281.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002779 |          | 0      | 0.41900E-05 | 473695.7 | 3755013.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002780 |          | 0      | 0.41900E-05 | 473699.5 | 3755005.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002781 |          | 0      | 0.41900E-05 | 473703.4 | 3754997.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002782 |          | 0      | 0.41900E-05 | 473708.0 | 3754990.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002783 |          | 0      | 0.41900E-05 | 473715.0 | 3754986.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002784 |          | 0      | 0.41900E-05 | 473723.3 | 3754985.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002785 |          | 0      | 0.41900E-05 | 473729.4 | 3754991.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002786 |          | 0      | 0.41900E-05 | 473730.8 | 3754999.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002787  | 0   | 0.31030E-05 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002788  | 0   | 0.31030E-05 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002789  | 0   | 0.31030E-05 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002790  | 0   | 0.31030E-05 | 474177.6 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002791  | 0   | 0.31030E-05 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002792  | 0   | 0.31030E-05 | 474191.1 | 3754883.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002793  | 0   | 0.31030E-05 | 474197.8 | 3754878.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002794  | 0   | 0.31030E-05 | 474204.6 | 3754873.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002795  | 0   | 0.31030E-05 | 474211.3 | 3754867.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002796  | 0   | 0.31030E-05 | 474218.0 | 3754862.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002797  | 0   | 0.31030E-05 | 474224.7 | 3754857.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002798  | 0   | 0.31030E-05 | 474231.5 | 3754852.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002799  | 0   | 0.31030E-05 | 474238.2 | 3754847.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002800  | 0   | 0.31030E-05 | 474244.9 | 3754842.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002801  | 0   | 0.31030E-05 | 474251.6 | 3754836.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002802  | 0   | 0.31030E-05 | 474258.4 | 3754831.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002803  | 0   | 0.31030E-05 | 474265.1 | 3754826.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002804  | 0   | 0.31030E-05 | 474271.8 | 3754821.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002805  | 0   | 0.31030E-05 | 474276.0 | 3754814.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002806  | 0   | 0.31030E-05 | 474275.5 | 3754806.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002807  | 0   | 0.31030E-05 | 474271.2 | 3754799.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002808  | 0   | 0.31030E-05 | 474265.0 | 3754793.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002809  | 0   | 0.31030E-05 | 474257.2 | 3754791.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002810  | 0   | 0.31030E-05 | 474248.7 | 3754790.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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***      18:04:52

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**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

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\*\*\* VOLUME SOURCE DATA

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           | ELEV.    | HEIGHT   |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         |          |          |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002811 |          | 0      | 0.31030E-05 | 474240.3 | 3754788.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002812 |          | 0      | 0.31030E-05 | 474236.3 | 3754782.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002813 |          | 0      | 0.21928E-04 | 474028.4 | 3754694.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002814 |          | 0      | 0.21928E-04 | 474028.3 | 3754685.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002815 |          | 0      | 0.21928E-04 | 474028.2 | 3754677.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002816 |          | 0      | 0.21928E-04 | 474028.2 | 3754668.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002817 |          | 0      | 0.17290E-05 | 474027.8 | 3754742.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002818 |          | 0      | 0.17290E-05 | 474027.8 | 3754734.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002819 |          | 0      | 0.17290E-05 | 474027.9 | 3754725.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002820 |          | 0      | 0.17290E-05 | 474027.9 | 3754717.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002821 |          | 0      | 0.17290E-05 | 474027.9 | 3754708.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002822 |          | 0      | 0.17290E-05 | 474028.0 | 3754700.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002823 |          | 0      | 0.17290E-05 | 474028.0 | 3754691.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002824 |          | 0      | 0.17290E-05 | 474028.1 | 3754683.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002825 |          | 0      | 0.17290E-05 | 474028.1 | 3754674.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002826 |          | 0      | 0.17290E-05 | 474028.1 | 3754666.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 12345 ***      ***
***      18:04:52

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PAGE 10
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

```

```

*** SOURCE IDs DEFINING SOURCE
GROUPS ***

```

| SRCGROUP ID |            | SOURCE IDs |          |   |          |   |
|-------------|------------|------------|----------|---|----------|---|
| -----       |            | -----      |          |   |          |   |
| ALL         | L0002531   | ,          | L0002532 | , | L0002533 | , |
| L0002535    | , L0002536 | ,          | L0002537 | , | L0002538 | , |
|             | L0002539   | ,          | L0002540 | , | L0002541 | , |
| L0002543    | , L0002544 | ,          | L0002545 | , | L0002546 | , |
|             | L0002547   | ,          | L0002548 | , | L0002549 | , |
| L0002551    | , L0002552 | ,          | L0002553 | , | L0002554 | , |
|             | L0002555   | ,          | L0002556 | , | L0002557 | , |
| L0002559    | , L0002560 | ,          | L0002561 | , | L0002562 | , |
|             | L0002563   | ,          | L0002564 | , | L0002565 | , |
| L0002567    | , L0002568 | ,          | L0002569 | , | L0002570 | , |
|             | L0002571   | ,          | L0002572 | , | L0002573 | , |
| L0002575    | , L0002576 | ,          | L0002577 | , | L0002578 | , |
|             | L0002579   | ,          | L0002580 | , | L0002581 | , |
| L0002583    | , L0002584 | ,          | L0002585 | , | L0002586 | , |
|             | L0002587   | ,          | L0002588 | , | L0002589 | , |
| L0002591    | , L0002592 | ,          | L0002593 | , | L0002594 | , |
|             | L0002595   | ,          | L0002596 | , | L0002597 | , |
| L0002599    | , L0002600 | ,          | L0002601 | , | L0002602 | , |
|             | L0002603   | ,          | L0002604 | , | L0002605 | , |
| L0002607    | , L0002608 | ,          | L0002609 | , | L0002610 | , |
|             | L0002611   | ,          | L0002612 | , | L0002613 | , |
| L0002615    | , L0002616 | ,          | L0002617 | , | L0002618 | , |
|             | L0002619   | ,          | L0002620 | , | L0002621 | , |
| L0002623    | , L0002624 | ,          | L0002625 | , | L0002626 | , |
|             | L0002627   | ,          | L0002628 | , | L0002629 | , |
| L0002631    | , L0002632 | ,          | L0002633 | , | L0002634 | , |

|          |                        |                          |                          |                 |  |
|----------|------------------------|--------------------------|--------------------------|-----------------|--|
| L0002639 | L0002635<br>, L0002640 | , L0002636<br>, L0002641 | , L0002637<br>, L0002642 | , L0002638<br>, |  |
| L0002647 | L0002643<br>, L0002648 | , L0002644<br>, L0002649 | , L0002645<br>, L0002650 | , L0002646<br>, |  |
| L0002655 | L0002651<br>, L0002656 | , L0002652<br>, L0002657 | , L0002653<br>, L0002658 | , L0002654<br>, |  |
| L0002663 | L0002659<br>, L0002664 | , L0002660<br>, L0002665 | , L0002661<br>, L0002666 | , L0002662<br>, |  |
| L0002671 | L0002667<br>, L0002672 | , L0002668<br>, L0002673 | , L0002669<br>, L0002674 | , L0002670<br>, |  |
| L0002679 | L0002675<br>, L0002680 | , L0002676<br>, L0002681 | , L0002677<br>, L0002682 | , L0002678<br>, |  |
| L0002687 | L0002683<br>, L0002688 | , L0002684<br>, L0002689 | , L0002685<br>, L0002690 | , L0002686<br>, |  |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 12345 ***      ***
***      18:04:52

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PAGE 11
**MODELOPTs:   NonDFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

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*** SOURCE IDs DEFINING SOURCE
GROUPS ***

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| SRCGROUP ID |            | SOURCE IDs |            |   |            |   |
|-------------|------------|------------|------------|---|------------|---|
| -----       |            | -----      |            |   |            |   |
| L0002695    | L0002691   | ,          | L0002692   | , | L0002693   | , |
|             | , L0002696 |            | , L0002697 |   | , L0002698 | , |
| L0002703    | L0002699   | ,          | L0002700   | , | L0002701   | , |
|             | , L0002704 |            | , L0002705 |   | , L0002706 | , |
| L0002711    | L0002707   | ,          | L0002708   | , | L0002709   | , |
|             | , L0002712 |            | , L0002713 |   | , L0002714 | , |
| L0002719    | L0002715   | ,          | L0002716   | , | L0002717   | , |
|             | , L0002720 |            | , L0002721 |   | , L0002722 | , |
| L0002727    | L0002723   | ,          | L0002724   | , | L0002725   | , |
|             | , L0002728 |            | , L0002729 |   | , L0002730 | , |
| L0002735    | L0002731   | ,          | L0002732   | , | L0002733   | , |
|             | , L0002736 |            | , L0002737 |   | , L0002738 | , |
| L0002743    | L0002739   | ,          | L0002740   | , | L0002741   | , |
|             | , L0002744 |            | , L0002745 |   | , L0002746 | , |
| L0002751    | L0002747   | ,          | L0002748   | , | L0002749   | , |
|             | , L0002752 |            | , L0002753 |   | , L0002754 | , |
| L0002759    | L0002755   | ,          | L0002756   | , | L0002757   | , |
|             | , L0002760 |            | , L0002761 |   | , L0002762 | , |
| L0002767    | L0002763   | ,          | L0002764   | , | L0002765   | , |
|             | , L0002768 |            | , L0002769 |   | , L0002770 | , |
| L0002775    | L0002771   | ,          | L0002772   | , | L0002773   | , |
|             | , L0002776 |            | , L0002777 |   | , L0002778 | , |
| L0002783    | L0002779   | ,          | L0002780   | , | L0002781   | , |
|             | , L0002784 |            | , L0002785 |   | , L0002786 | , |
| L0002791    | L0002787   | ,          | L0002788   | , | L0002789   | , |
|             | , L0002792 |            | , L0002793 |   | , L0002794 | , |

|          |            |            |            |            |   |
|----------|------------|------------|------------|------------|---|
| L0002799 | L0002795   | , L0002796 | , L0002797 | , L0002798 | , |
|          | , L0002800 | , L0002801 | , L0002802 | ,          |   |
| L0002807 | L0002803   | , L0002804 | , L0002805 | , L0002806 | , |
|          | , L0002808 | , L0002809 | , L0002810 | ,          |   |
| L0002815 | L0002811   | , L0002812 | , L0002813 | , L0002814 | , |
|          | , L0002816 | , L0002817 | , L0002818 | ,          |   |
| L0002823 | L0002819   | , L0002820 | , L0002821 | , L0002822 | , |
|          | , L0002824 | , L0002825 | , L0002826 | ,          |   |



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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 12345 ***      ***
***      18:04:52

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PAGE 12
**MODELOPTs:   NonDFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

```

```

*** SOURCE IDs DEFINED AS URBAN
SOURCES ***

```

| URBAN ID | URBAN POP  | SOURCE IDs |            |            |   |
|----------|------------|------------|------------|------------|---|
| -----    | -----      | -----      |            |            |   |
| L0002534 | 2100516.   | L0002531   | , L0002532 | , L0002533 | , |
| L0002538 | , L0002535 | , L0002536 | , L0002537 | ,          |   |
| L0002543 | L0002539   | , L0002540 | , L0002541 | , L0002542 | , |
|          | , L0002544 | , L0002545 | , L0002546 | ,          |   |
| L0002551 | L0002547   | , L0002548 | , L0002549 | , L0002550 | , |
|          | , L0002552 | , L0002553 | , L0002554 | ,          |   |
| L0002559 | L0002555   | , L0002556 | , L0002557 | , L0002558 | , |
|          | , L0002560 | , L0002561 | , L0002562 | ,          |   |
| L0002567 | L0002563   | , L0002564 | , L0002565 | , L0002566 | , |
|          | , L0002568 | , L0002569 | , L0002570 | ,          |   |
| L0002575 | L0002571   | , L0002572 | , L0002573 | , L0002574 | , |
|          | , L0002576 | , L0002577 | , L0002578 | ,          |   |
| L0002583 | L0002579   | , L0002580 | , L0002581 | , L0002582 | , |
|          | , L0002584 | , L0002585 | , L0002586 | ,          |   |
| L0002591 | L0002587   | , L0002588 | , L0002589 | , L0002590 | , |
|          | , L0002592 | , L0002593 | , L0002594 | ,          |   |
| L0002599 | L0002595   | , L0002596 | , L0002597 | , L0002598 | , |
|          | , L0002600 | , L0002601 | , L0002602 | ,          |   |
| L0002607 | L0002603   | , L0002604 | , L0002605 | , L0002606 | , |
|          | , L0002608 | , L0002609 | , L0002610 | ,          |   |
| L0002615 | L0002611   | , L0002612 | , L0002613 | , L0002614 | , |
|          | , L0002616 | , L0002617 | , L0002618 | ,          |   |
| L0002623 | L0002619   | , L0002620 | , L0002621 | , L0002622 | , |
|          | , L0002624 | , L0002625 | , L0002626 | ,          |   |

|          |                        |                          |                          |                 |   |
|----------|------------------------|--------------------------|--------------------------|-----------------|---|
| L0002631 | L0002627<br>, L0002632 | , L0002628<br>, L0002633 | , L0002629<br>, L0002634 | , L0002630<br>, | , |
| L0002639 | L0002635<br>, L0002640 | , L0002636<br>, L0002641 | , L0002637<br>, L0002642 | , L0002638<br>, | , |
| L0002647 | L0002643<br>, L0002648 | , L0002644<br>, L0002649 | , L0002645<br>, L0002650 | , L0002646<br>, | , |
| L0002655 | L0002651<br>, L0002656 | , L0002652<br>, L0002657 | , L0002653<br>, L0002658 | , L0002654<br>, | , |
| L0002663 | L0002659<br>, L0002664 | , L0002660<br>, L0002665 | , L0002661<br>, L0002666 | , L0002662<br>, | , |
| L0002671 | L0002667<br>, L0002672 | , L0002668<br>, L0002673 | , L0002669<br>, L0002674 | , L0002670<br>, | , |
| L0002679 | L0002675<br>, L0002680 | , L0002676<br>, L0002681 | , L0002677<br>, L0002682 | , L0002678<br>, | , |
| L0002687 | L0002683<br>, L0002688 | , L0002684<br>, L0002689 | , L0002685<br>, L0002690 | , L0002686<br>, | , |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 12345 ***      ***
***      18:04:52

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PAGE 13
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

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*** SOURCE IDs DEFINED AS URBAN
SOURCES ***

```

| URBAN ID | URBAN POP           | SOURCE IDs            |                       |              |  |
|----------|---------------------|-----------------------|-----------------------|--------------|--|
| -----    | -----               | -----                 |                       |              |  |
| L0002695 | L0002691 , L0002696 | , L0002692 , L0002697 | , L0002693 , L0002698 | , L0002694 , |  |
| L0002703 | L0002699 , L0002704 | , L0002700 , L0002705 | , L0002701 , L0002706 | , L0002702 , |  |
| L0002711 | L0002707 , L0002712 | , L0002708 , L0002713 | , L0002709 , L0002714 | , L0002710 , |  |
| L0002719 | L0002715 , L0002720 | , L0002716 , L0002721 | , L0002717 , L0002722 | , L0002718 , |  |
| L0002727 | L0002723 , L0002728 | , L0002724 , L0002729 | , L0002725 , L0002730 | , L0002726 , |  |
| L0002735 | L0002731 , L0002736 | , L0002732 , L0002737 | , L0002733 , L0002738 | , L0002734 , |  |
| L0002743 | L0002739 , L0002744 | , L0002740 , L0002745 | , L0002741 , L0002746 | , L0002742 , |  |
| L0002751 | L0002747 , L0002752 | , L0002748 , L0002753 | , L0002749 , L0002754 | , L0002750 , |  |
| L0002759 | L0002755 , L0002760 | , L0002756 , L0002761 | , L0002757 , L0002762 | , L0002758 , |  |
| L0002767 | L0002763 , L0002768 | , L0002764 , L0002769 | , L0002765 , L0002770 | , L0002766 , |  |
| L0002775 | L0002771 , L0002776 | , L0002772 , L0002777 | , L0002773 , L0002778 | , L0002774 , |  |
| L0002783 | L0002779 , L0002784 | , L0002780 , L0002785 | , L0002781 , L0002786 | , L0002782 , |  |
| L0002791 | L0002787 , L0002792 | , L0002788 , L0002793 | , L0002789 , L0002794 | , L0002790 , |  |

|          |            |            |            |            |   |
|----------|------------|------------|------------|------------|---|
| L0002799 | L0002795   | , L0002796 | , L0002797 | , L0002798 | , |
|          | , L0002800 | , L0002801 | , L0002802 | ,          |   |
| L0002807 | L0002803   | , L0002804 | , L0002805 | , L0002806 | , |
|          | , L0002808 | , L0002809 | , L0002810 | ,          |   |
| L0002815 | L0002811   | , L0002812 | , L0002813 | , L0002814 | , |
|          | , L0002816 | , L0002817 | , L0002818 | ,          |   |
| L0002823 | L0002819   | , L0002820 | , L0002821 | , L0002822 | , |
|          | , L0002824 | , L0002825 | , L0002826 | ,          |   |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 12345 ***      ***
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PAGE 14
**MODELOPTs:   NonDFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

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*** IN-STOCK NO2 RATIOS FOR
OLM/PVMMR OPTIONS ***

```

| SOURCE_ID<br>NO2_RATIO | NO2_RATIO<br>SOURCE_ID | SOURCE_ID<br>NO2_RATIO | NO2_RATIO | SOURCE_ID |
|------------------------|------------------------|------------------------|-----------|-----------|
| L0002531               | 0.100                  | L0002532               | 0.100     | L0002533  |
| 0.100                  | L0002534               | 0.100                  |           |           |
| L0002535               | 0.100                  | L0002536               | 0.100     | L0002537  |
| 0.100                  | L0002538               | 0.100                  |           |           |
| L0002539               | 0.100                  | L0002540               | 0.100     | L0002541  |
| 0.100                  | L0002542               | 0.100                  |           |           |
| L0002543               | 0.100                  | L0002544               | 0.100     | L0002545  |
| 0.100                  | L0002546               | 0.100                  |           |           |
| L0002547               | 0.100                  | L0002548               | 0.100     | L0002549  |
| 0.100                  | L0002550               | 0.100                  |           |           |
| L0002551               | 0.100                  | L0002552               | 0.100     | L0002553  |
| 0.100                  | L0002554               | 0.100                  |           |           |
| L0002555               | 0.100                  | L0002556               | 0.100     | L0002557  |
| 0.100                  | L0002558               | 0.100                  |           |           |
| L0002559               | 0.100                  | L0002560               | 0.100     | L0002561  |
| 0.100                  | L0002562               | 0.100                  |           |           |
| L0002563               | 0.100                  | L0002564               | 0.100     | L0002565  |
| 0.100                  | L0002566               | 0.100                  |           |           |
| L0002567               | 0.100                  | L0002568               | 0.100     | L0002569  |
| 0.100                  | L0002570               | 0.100                  |           |           |
| L0002571               | 0.100                  | L0002572               | 0.100     | L0002573  |
| 0.100                  | L0002574               | 0.100                  |           |           |
| L0002575               | 0.100                  | L0002576               | 0.100     | L0002577  |
| 0.100                  | L0002578               | 0.100                  |           |           |
| L0002579               | 0.100                  | L0002580               | 0.100     | L0002581  |
| 0.100                  | L0002582               | 0.100                  |           |           |
| L0002583               | 0.100                  | L0002584               | 0.100     | L0002585  |
| 0.100                  | L0002586               | 0.100                  |           |           |
| L0002587               | 0.100                  | L0002588               | 0.100     | L0002589  |
| 0.100                  | L0002590               | 0.100                  |           |           |
| L0002591               | 0.100                  | L0002592               | 0.100     | L0002593  |
| 0.100                  | L0002594               | 0.100                  |           |           |
| L0002595               | 0.100                  | L0002596               | 0.100     | L0002597  |
| 0.100                  | L0002598               | 0.100                  |           |           |
| L0002599               | 0.100                  | L0002600               | 0.100     | L0002601  |
| 0.100                  | L0002602               | 0.100                  |           |           |
| L0002603               | 0.100                  | L0002604               | 0.100     | L0002605  |
| 0.100                  | L0002606               | 0.100                  |           |           |

|          |          |          |       |          |
|----------|----------|----------|-------|----------|
| L0002607 | 0.100    | L0002608 | 0.100 | L0002609 |
| 0.100    | L0002610 | 0.100    |       |          |
| L0002611 | 0.100    | L0002612 | 0.100 | L0002613 |
| 0.100    | L0002614 | 0.100    |       |          |
| L0002615 | 0.100    | L0002616 | 0.100 | L0002617 |
| 0.100    | L0002618 | 0.100    |       |          |
| L0002619 | 0.100    | L0002620 | 0.100 | L0002621 |
| 0.100    | L0002622 | 0.100    |       |          |
| L0002623 | 0.100    | L0002624 | 0.100 | L0002625 |
| 0.100    | L0002626 | 0.100    |       |          |
| L0002627 | 0.100    | L0002628 | 0.100 | L0002629 |
| 0.100    | L0002630 | 0.100    |       |          |
| L0002631 | 0.100    | L0002632 | 0.100 | L0002633 |
| 0.100    | L0002634 | 0.100    |       |          |
| L0002635 | 0.100    | L0002636 | 0.100 | L0002637 |
| 0.100    | L0002638 | 0.100    |       |          |
| L0002639 | 0.100    | L0002640 | 0.100 | L0002641 |
| 0.100    | L0002642 | 0.100    |       |          |
| L0002643 | 0.100    | L0002644 | 0.100 | L0002645 |
| 0.100    | L0002646 | 0.100    |       |          |
| L0002647 | 0.100    | L0002648 | 0.100 | L0002649 |
| 0.100    | L0002650 | 0.100    |       |          |
| L0002651 | 0.100    | L0002652 | 0.100 | L0002653 |
| 0.100    | L0002654 | 0.100    |       |          |
| L0002655 | 0.100    | L0002656 | 0.100 | L0002657 |
| 0.100    | L0002658 | 0.100    |       |          |
| L0002659 | 0.100    | L0002660 | 0.100 | L0002661 |
| 0.100    | L0002662 | 0.100    |       |          |
| L0002663 | 0.100    | L0002664 | 0.100 | L0002665 |
| 0.100    | L0002666 | 0.100    |       |          |
| L0002667 | 0.100    | L0002668 | 0.100 | L0002669 |
| 0.100    | L0002670 | 0.100    |       |          |
| L0002671 | 0.100    | L0002672 | 0.100 | L0002673 |
| 0.100    | L0002674 | 0.100    |       |          |
| L0002675 | 0.100    | L0002676 | 0.100 | L0002677 |
| 0.100    | L0002678 | 0.100    |       |          |
| L0002679 | 0.100    | L0002680 | 0.100 | L0002681 |
| 0.100    | L0002682 | 0.100    |       |          |
| L0002683 | 0.100    | L0002684 | 0.100 | L0002685 |
| 0.100    | L0002686 | 0.100    |       |          |
| L0002687 | 0.100    | L0002688 | 0.100 | L0002689 |
| 0.100    | L0002690 | 0.100    |       |          |

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*** AERMOD - VERSION 14134 *** *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. *** 03/13/15
*** AERMET - VERSION 12345 *** ***
*** 18:04:52

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**MODELOPTs: NonDFAULT CONC FLAT FLGPOL FASTALL OLM

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*** IN-STOCK NO2 RATIOS FOR
OLM/PVMMR OPTIONS ***

```

| SOURCE_ID<br>NO2_RATIO | NO2_RATIO<br>SOURCE_ID | SOURCE_ID<br>NO2_RATIO | NO2_RATIO | SOURCE_ID |
|------------------------|------------------------|------------------------|-----------|-----------|
| L0002691               | 0.100                  | L0002692               | 0.100     | L0002693  |
| 0.100                  | L0002694               | 0.100                  |           |           |
| L0002695               | 0.100                  | L0002696               | 0.100     | L0002697  |
| 0.100                  | L0002698               | 0.100                  |           |           |
| L0002699               | 0.100                  | L0002700               | 0.100     | L0002701  |
| 0.100                  | L0002702               | 0.100                  |           |           |
| L0002703               | 0.100                  | L0002704               | 0.100     | L0002705  |
| 0.100                  | L0002706               | 0.100                  |           |           |
| L0002707               | 0.100                  | L0002708               | 0.100     | L0002709  |
| 0.100                  | L0002710               | 0.100                  |           |           |
| L0002711               | 0.100                  | L0002712               | 0.100     | L0002713  |
| 0.100                  | L0002714               | 0.100                  |           |           |
| L0002715               | 0.100                  | L0002716               | 0.100     | L0002717  |
| 0.100                  | L0002718               | 0.100                  |           |           |
| L0002719               | 0.100                  | L0002720               | 0.100     | L0002721  |
| 0.100                  | L0002722               | 0.100                  |           |           |
| L0002723               | 0.100                  | L0002724               | 0.100     | L0002725  |
| 0.100                  | L0002726               | 0.100                  |           |           |
| L0002727               | 0.100                  | L0002728               | 0.100     | L0002729  |
| 0.100                  | L0002730               | 0.100                  |           |           |
| L0002731               | 0.100                  | L0002732               | 0.100     | L0002733  |
| 0.100                  | L0002734               | 0.100                  |           |           |
| L0002735               | 0.100                  | L0002736               | 0.100     | L0002737  |
| 0.100                  | L0002738               | 0.100                  |           |           |
| L0002739               | 0.100                  | L0002740               | 0.100     | L0002741  |
| 0.100                  | L0002742               | 0.100                  |           |           |
| L0002743               | 0.100                  | L0002744               | 0.100     | L0002745  |
| 0.100                  | L0002746               | 0.100                  |           |           |
| L0002747               | 0.100                  | L0002748               | 0.100     | L0002749  |
| 0.100                  | L0002750               | 0.100                  |           |           |
| L0002751               | 0.100                  | L0002752               | 0.100     | L0002753  |
| 0.100                  | L0002754               | 0.100                  |           |           |
| L0002755               | 0.100                  | L0002756               | 0.100     | L0002757  |
| 0.100                  | L0002758               | 0.100                  |           |           |
| L0002759               | 0.100                  | L0002760               | 0.100     | L0002761  |
| 0.100                  | L0002762               | 0.100                  |           |           |
| L0002763               | 0.100                  | L0002764               | 0.100     | L0002765  |
| 0.100                  | L0002766               | 0.100                  |           |           |

|          |          |          |       |          |
|----------|----------|----------|-------|----------|
| L0002767 | 0.100    | L0002768 | 0.100 | L0002769 |
| 0.100    | L0002770 | 0.100    |       |          |
| L0002771 | 0.100    | L0002772 | 0.100 | L0002773 |
| 0.100    | L0002774 | 0.100    |       |          |
| L0002775 | 0.100    | L0002776 | 0.100 | L0002777 |
| 0.100    | L0002778 | 0.100    |       |          |
| L0002779 | 0.100    | L0002780 | 0.100 | L0002781 |
| 0.100    | L0002782 | 0.100    |       |          |
| L0002783 | 0.100    | L0002784 | 0.100 | L0002785 |
| 0.100    | L0002786 | 0.100    |       |          |
| L0002787 | 0.100    | L0002788 | 0.100 | L0002789 |
| 0.100    | L0002790 | 0.100    |       |          |
| L0002791 | 0.100    | L0002792 | 0.100 | L0002793 |
| 0.100    | L0002794 | 0.100    |       |          |
| L0002795 | 0.100    | L0002796 | 0.100 | L0002797 |
| 0.100    | L0002798 | 0.100    |       |          |
| L0002799 | 0.100    | L0002800 | 0.100 | L0002801 |
| 0.100    | L0002802 | 0.100    |       |          |
| L0002803 | 0.100    | L0002804 | 0.100 | L0002805 |
| 0.100    | L0002806 | 0.100    |       |          |
| L0002807 | 0.100    | L0002808 | 0.100 | L0002809 |
| 0.100    | L0002810 | 0.100    |       |          |
| L0002811 | 0.100    | L0002812 | 0.100 | L0002813 |
| 0.100    | L0002814 | 0.100    |       |          |
| L0002815 | 0.100    | L0002816 | 0.100 | L0002817 |
| 0.100    | L0002818 | 0.100    |       |          |
| L0002819 | 0.100    | L0002820 | 0.100 | L0002821 |
| 0.100    | L0002822 | 0.100    |       |          |
| L0002823 | 0.100    | L0002824 | 0.100 | L0002825 |
| 0.100    | L0002826 | 0.100    |       |          |



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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL OLM

\*\*\* DISCRETE CARTESIAN

RECEPTORS \*\*\*

(X-COORD, Y-COORD, ZELEV,

ZHILL, ZFLAG)

(METERS)

|                        |        |        |       |   |
|------------------------|--------|--------|-------|---|
| ( 474201.5, 3754331.7, | 250.0, | 250.0, | 2.0); | ( |
| 474401.5, 3754331.7,   | 250.0, | 250.0, | 2.0); |   |
| ( 474501.5, 3754331.7, | 250.0, | 250.0, | 2.0); | ( |
| 473801.5, 3754431.7,   | 250.0, | 250.0, | 2.0); |   |
| ( 473715.9, 3754428.7, | 250.0, | 250.0, | 2.0); | ( |
| 473738.7, 3754428.6,   | 250.0, | 250.0, | 2.0); |   |
| ( 473755.7, 3754428.8, | 250.0, | 250.0, | 2.0); | ( |
| 473774.9, 3754428.8,   | 250.0, | 250.0, | 2.0); |   |
| ( 473816.0, 3754429.5, | 250.0, | 250.0, | 2.0); | ( |
| 473831.0, 3754424.4,   | 250.0, | 250.0, | 2.0); |   |
| ( 473853.9, 3754425.2, | 250.0, | 250.0, | 2.0); | ( |
| 473871.9, 3754423.8,   | 250.0, | 250.0, | 2.0); |   |
| ( 473892.0, 3754427.6, | 250.0, | 250.0, | 2.0); | ( |
| 473779.0, 3754366.2,   | 250.0, | 250.0, | 2.0); |   |
| ( 473813.9, 3754366.5, | 250.0, | 250.0, | 2.0); | ( |
| 474014.6, 3754372.2,   | 250.0, | 250.0, | 2.0); |   |
| ( 474058.7, 3754367.3, | 250.0, | 250.0, | 2.0); | ( |
| 474106.3, 3754366.6,   | 250.0, | 250.0, | 2.0); |   |
| ( 474129.7, 3754366.8, | 250.0, | 250.0, | 2.0); | ( |
| 474153.5, 3754367.8,   | 250.0, | 250.0, | 2.0); |   |
| ( 474231.5, 3754356.9, | 250.0, | 250.0, | 2.0); | ( |
| 474273.8, 3754374.6,   | 250.0, | 250.0, | 2.0); |   |
| ( 474545.3, 3754362.5, | 250.0, | 250.0, | 2.0); | ( |
| 474582.5, 3754377.2,   | 250.0, | 250.0, | 2.0); |   |
| ( 474612.7, 3754387.3, | 250.0, | 250.0, | 2.0); | ( |
| 474643.0, 3754391.2,   | 250.0, | 250.0, | 2.0); |   |
| ( 474354.4, 3754341.9, | 250.0, | 250.0, | 2.0); |   |

8.23, 10.80, 1.54, 3.09, 5.14,

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL OLM

\*\*\* UP TO THE FIRST 24 HOURS OF

METEOROLOGICAL DATA \*\*\*

Surface file: U:\UcAir\6-10-14 AQMD Meteorological data\rivr6.sfc  
Met Version: 12345  
Profile file: U:\UcAir\6-10-14 AQMD Meteorological data\rivr6.PFL  
Surface format: FREE  
Profile format: FREE  
Surface station no.: 3190 Upper air station no.:  
3190  
Name: UNKNOWN Name:  
UNKNOWN Year: 2005 Year:  
2005

First 24 hours of scalar data

| YR    | MO     | DY  | JDY | HR | H0    | U*    | W*     | DT/DZ  | ZICNV | ZIMCH | M-O   | LEN  | Z0 |
|-------|--------|-----|-----|----|-------|-------|--------|--------|-------|-------|-------|------|----|
| BOWEN | ALBEDO | REF | WS  | WD | HT    | REF   | TA     | HT     |       |       |       |      |    |
| -     | -      | -   | -   | -  | -     | -     | -      | -      | -     | -     | -     | -    | -  |
| -     | -      | -   | -   | -  | -     | -     | -      | -      | -     | -     | -     | -    | -  |
| 05    | 01     | 01  | 1   | 01 | -9.7  | 0.107 | -9.000 | -9.000 | -999. | 80.   | 11.1  | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 1.80  | 338.  | 9.1    | 279.2  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 02 | -2.4  | 0.053 | -9.000 | -9.000 | -999. | 29.   | 5.5   | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 0.90  | 263.  | 9.1    | 279.2  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 03 | -2.3  | 0.053 | -9.000 | -9.000 | -999. | 28.   | 5.8   | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 0.90  | 54.   | 9.1    | 278.8  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 04 | -2.4  | 0.053 | -9.000 | -9.000 | -999. | 28.   | 5.5   | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 0.90  | 360.  | 9.1    | 278.8  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 05 | -2.3  | 0.053 | -9.000 | -9.000 | -999. | 28.   | 5.8   | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 0.90  | 318.  | 9.1    | 278.1  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 06 | -2.3  | 0.053 | -9.000 | -9.000 | -999. | 28.   | 5.7   | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 0.90  | 53.   | 9.1    | 277.5  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 07 | -2.4  | 0.053 | -9.000 | -9.000 | -999. | 28.   | 5.5   | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 0.90  | 134.  | 9.1    | 278.8  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 08 | -2.1  | 0.053 | -9.000 | -9.000 | -999. | 28.   | 6.3   | 0.31 |    |
| 1.00  | 0.53   |     |     |    | 0.90  | 319.  | 9.1    | 278.8  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 09 | 29.7  | 0.193 | 0.396  | 0.005  | 73.   | 195.  | -21.2 | 0.31 |    |
| 1.00  | 0.32   |     |     |    | 1.30  | 110.  | 9.1    | 282.0  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 10 | 78.5  | 0.213 | 1.204  | 0.005  | 780.  | 227.  | -10.8 | 0.31 |    |
| 1.00  | 0.25   |     |     |    | 1.30  | 107.  | 9.1    | 284.2  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 11 | 118.9 | 0.279 | 1.514  | 0.007  | 1025. | 338.  | -15.9 | 0.31 |    |
| 1.00  | 0.22   |     |     |    | 1.80  | 122.  | 9.1    | 285.9  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 12 | 132.2 | 0.226 | 1.665  | 0.009  | 1227. | 248.  | -7.6  | 0.31 |    |
| 1.00  | 0.21   |     |     |    | 1.30  | 154.  | 9.1    | 287.0  | 5.5   |       |       |      |    |
| 05    | 01     | 01  | 1   | 13 | 80.9  | 0.214 | 1.421  | 0.009  | 1245. | 228.  | -10.6 | 0.31 |    |
| 1.00  | 0.21   |     |     |    | 1.30  | 166.  | 9.1    | 287.0  | 5.5   |       |       |      |    |

|      |      |      |      |     |       |       |        |        |       |      |        |      |
|------|------|------|------|-----|-------|-------|--------|--------|-------|------|--------|------|
| 05   | 01   | 01   | 1    | 14  | 80.7  | 0.268 | 1.427  | 0.009  | 1263. | 319. | -20.9  | 0.31 |
| 1.00 | 0.23 | 1.80 | 235. | 9.1 | 287.5 | 5.5   |        |        |       |      |        |      |
| 05   | 01   | 01   | 1    | 15  | 36.6  | 0.293 | 1.098  | 0.009  | 1271. | 364. | -60.1  | 0.31 |
| 1.00 | 0.26 | 2.20 | 305. | 9.1 | 286.4 | 5.5   |        |        |       |      |        |      |
| 05   | 01   | 01   | 1    | 16  | 1.2   | 0.217 | 0.354  | 0.009  | 1271. | 234. | -733.2 | 0.31 |
| 1.00 | 0.35 | 1.80 | 292. | 9.1 | 285.9 | 5.5   |        |        |       |      |        |      |
| 05   | 01   | 01   | 1    | 17  | -9.4  | 0.144 | -9.000 | -9.000 | -999. | 127. | 27.7   | 0.31 |
| 1.00 | 0.63 | 1.80 | 279. | 9.1 | 285.4 | 5.5   |        |        |       |      |        |      |
| 05   | 01   | 01   | 1    | 18  | -27.8 | 0.255 | -9.000 | -9.000 | -999. | 296. | 52.3   | 0.31 |
| 1.00 | 1.00 | 2.70 | 304. | 9.1 | 284.2 | 5.5   |        |        |       |      |        |      |
| 05   | 01   | 01   | 1    | 19  | -9.6  | 0.107 | -9.000 | -9.000 | -999. | 96.  | 11.1   | 0.31 |
| 1.00 | 1.00 | 1.80 | 311. | 9.1 | 283.8 | 5.5   |        |        |       |      |        |      |
| 05   | 01   | 01   | 1    | 20  | -2.4  | 0.053 | -9.000 | -9.000 | -999. | 30.  | 5.6    | 0.31 |
| 1.00 | 1.00 | 0.90 | 13.  | 9.1 | 283.1 | 5.5   |        |        |       |      |        |      |
| 05   | 01   | 01   | 1    | 21  | -4.8  | 0.077 | -9.000 | -9.000 | -999. | 49.  | 8.4    | 0.31 |
| 1.00 | 1.00 | 1.30 | 8.   | 9.1 | 282.0 | 5.5   |        |        |       |      |        |      |
| 05   | 01   | 01   | 1    | 22  | -2.3  | 0.053 | -9.000 | -9.000 | -999. | 28.  | 5.8    | 0.31 |
| 1.00 | 1.00 | 0.90 | 183. | 9.1 | 280.9 | 5.5   |        |        |       |      |        |      |
| 05   | 01   | 01   | 1    | 23  | -1.7  | 0.053 | -9.000 | -9.000 | -999. | 28.  | 7.8    | 0.31 |
| 1.00 | 1.00 | 0.90 | 16.  | 9.1 | 280.4 | 5.5   |        |        |       |      |        |      |
| 05   | 01   | 01   | 1    | 24  | -1.7  | 0.053 | -9.000 | -9.000 | -999. | 28.  | 7.8    | 0.31 |
| 1.00 | 1.00 | 0.90 | 61.  | 9.1 | 279.9 | 5.5   |        |        |       |      |        |      |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR  | WSPD   | AMB_TMP | sigmaA | sigmaW | sigmaV |
|----|----|----|----|--------|---|-------|--------|---------|--------|--------|--------|
| 05 | 01 | 01 | 01 | 5.5    | 0 | -999. | -99.00 | 279.3   | 99.0   | -99.00 | -99.00 |
| 05 | 01 | 01 | 01 | 9.1    | 1 | 338.  | 1.80   | -999.0  | 99.0   | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 12345 ***      ***
***      18:04:52

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**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL      OLM

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      *** THE ANNUAL AVERAGE CONCENTRATION      VALUES
AVERAGED OVER  5 YEARS FOR SOURCE GROUP: ALL      ***
      INCLUDING SOURCE(S):      L0002531      ,
L0002532      , L0002533      , L0002534      , L0002535      ,
      L0002536      , L0002537      , L0002538      , L0002539      ,
L0002540      , L0002541      , L0002542      , L0002543      ,
      L0002544      , L0002545      , L0002546      , L0002547      ,
L0002548      , L0002549      , L0002550      , L0002551      ,
      L0002552      , L0002553      , L0002554      , L0002555      ,
L0002556      , L0002557      , L0002558      , . . .      ,

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      *** DISCRETE CARTESIAN
RECEPTOR POINTS ***

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      ** CONC OF NO2      IN
      **
MICROGRAMS/M**3

      X-COORD (M)      Y-COORD (M)      CONC      X-
COORD (M)      Y-COORD (M)      CONC
- - - - -
- - - - -
      474201.46      3754331.71      0.13680
474401.46      3754331.71      0.09870
      474501.46      3754331.71      0.08314
473801.46      3754431.71      0.61372
      473715.92      3754428.71      0.39078
473738.73      3754428.62      0.47496
      473755.69      3754428.85      0.53592
473774.94      3754428.85      0.57822
      473815.97      3754429.55      0.57250
473831.00      3754424.36      0.50065
      473853.90      3754425.20      0.44694
473871.89      3754423.79      0.39812
      473891.98      3754427.59      0.36815
473779.02      3754366.16      0.27651
      473813.90      3754366.49      0.28166
474014.62      3754372.20      0.20054
      474058.72      3754367.30      0.18501
474106.33      3754366.60      0.17398
      474129.66      3754366.83      0.16933
474153.46      3754367.77      0.16514
      474231.55      3754356.87      0.14249
474273.79      3754374.60      0.14040
      474545.34      3754362.52      0.08118
474582.52      3754377.24      0.07774

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|           |            |            |         |
|-----------|------------|------------|---------|
|           | 474612.74  | 3754387.31 | 0.07476 |
| 474642.95 | 3754391.18 | 0.07130    |         |
|           | 474354.43  | 3754341.93 | 0.10989 |

\*\*\* AERMOD - VERSION 14134 \*\*\*      \*\*\* U:\UcJobs\\_08600-  
 09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\*      03/13/15  
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 \*\*\*      18:04:52

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 \*\*MODELOPTs:    NonDEFAULT CONC            FLAT            FLGPOL           FASTALL       OLM  
  
 \*\*\* THE    1ST-HIGHEST MAX DAILY 1-HR AVERAGE CONCENTRATION    VALUES  
 AVERAGED OVER    5 YEARS FOR SOURCE GROUP: ALL            \*\*\*  
  
                                  INCLUDING SOURCE(S):            L0002531       ,  
 L0002532       , L0002533       , L0002534       , L0002535       ,  
                                  L0002536       , L0002537       , L0002538       , L0002539       ,  
 L0002540       , L0002541       , L0002542       , L0002543       ,  
                                  L0002544       , L0002545       , L0002546       , L0002547       ,  
 L0002548       , L0002549       , L0002550       , L0002551       ,  
                                  L0002552       , L0002553       , L0002554       , L0002555       ,  
 L0002556       , L0002557       , L0002558       , . . .       ,

                                                         \*\*\* DISCRETE CARTESIAN  
 RECEPTOR POINTS \*\*\*

| MICROGRAMS/M**3 |             |         | ** CONC OF NO2 | IN |
|-----------------|-------------|---------|----------------|----|
|                 |             |         | **             |    |
| X-COORD (M)     | Y-COORD (M) |         | CONC           | X- |
| COORD (M)       | Y-COORD (M) | CONC    |                |    |
| -----           |             |         |                |    |
| -----           |             |         |                |    |
| 474201.46       | 3754331.71  |         | 0.58973        |    |
| 474401.46       | 3754331.71  | 0.45308 |                |    |
| 474501.46       | 3754331.71  |         | 0.39461        |    |
| 473801.46       | 3754431.71  | 2.58181 |                |    |
| 473715.92       | 3754428.71  |         | 2.39535        |    |
| 473738.73       | 3754428.62  | 2.80284 |                |    |
| 473755.69       | 3754428.85  |         | 2.73677        |    |
| 473774.94       | 3754428.85  | 2.66968 |                |    |
| 473815.97       | 3754429.55  |         | 2.52903        |    |
| 473831.00       | 3754424.36  | 2.28732 |                |    |
| 473853.90       | 3754425.20  |         | 1.90129        |    |
| 473871.89       | 3754423.79  | 1.70090 |                |    |
| 473891.98       | 3754427.59  |         | 1.54742        |    |
| 473779.02       | 3754366.16  | 1.53361 |                |    |
| 473813.90       | 3754366.49  |         | 1.55747        |    |
| 474014.62       | 3754372.20  | 0.83288 |                |    |
| 474058.72       | 3754367.30  |         | 0.75896        |    |
| 474106.33       | 3754366.60  | 0.72033 |                |    |
| 474129.66       | 3754366.83  |         | 0.69920        |    |
| 474153.46       | 3754367.77  | 0.68644 |                |    |
| 474231.55       | 3754356.87  |         | 0.59926        |    |
| 474273.79       | 3754374.60  | 0.60381 |                |    |
| 474545.34       | 3754362.52  |         | 0.37779        |    |
| 474582.52       | 3754377.24  | 0.35767 |                |    |

|           |            |            |         |
|-----------|------------|------------|---------|
|           | 474612.74  | 3754387.31 | 0.34408 |
| 474642.95 | 3754391.18 | 0.32769    |         |
|           | 474354.43  | 3754341.93 | 0.49732 |



\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
 09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\* 03/13/15  
 \*\*\* AERMET - VERSION 12345 \*\*\* \*\*\*  
 \*\*\* 18:04:52

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 \*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL OLM

\*\*\* THE SUMMARY OF MAXIMUM ANNUAL  
 RESULTS AVERAGED OVER 5 YEARS \*\*\*

\*\* CONC OF NO2 IN  
 MICROGRAMS/M\*\*3

| NETWORK<br>GROUP ID | AVERAGE CONC<br>YR, ZELEV, ZHILL, ZFLAG) OF TYPE | RECEPTOR (XR,<br>GRID-ID |
|---------------------|--------------------------------------------------|--------------------------|
| ALL                 | 1ST HIGHEST VALUE IS                             | 0.61372 AT ( 473801.46,  |
| 3754431.71,         | 250.00, 250.00,                                  | 2.00) DC                 |
|                     | 2ND HIGHEST VALUE IS                             | 0.57822 AT ( 473774.94,  |
| 3754428.85,         | 250.00, 250.00,                                  | 2.00) DC                 |
|                     | 3RD HIGHEST VALUE IS                             | 0.57250 AT ( 473815.97,  |
| 3754429.55,         | 250.00, 250.00,                                  | 2.00) DC                 |
|                     | 4TH HIGHEST VALUE IS                             | 0.53592 AT ( 473755.69,  |
| 3754428.85,         | 250.00, 250.00,                                  | 2.00) DC                 |
|                     | 5TH HIGHEST VALUE IS                             | 0.50065 AT ( 473831.00,  |
| 3754424.36,         | 250.00, 250.00,                                  | 2.00) DC                 |
|                     | 6TH HIGHEST VALUE IS                             | 0.47496 AT ( 473738.73,  |
| 3754428.62,         | 250.00, 250.00,                                  | 2.00) DC                 |
|                     | 7TH HIGHEST VALUE IS                             | 0.44694 AT ( 473853.90,  |
| 3754425.20,         | 250.00, 250.00,                                  | 2.00) DC                 |
|                     | 8TH HIGHEST VALUE IS                             | 0.39812 AT ( 473871.89,  |
| 3754423.79,         | 250.00, 250.00,                                  | 2.00) DC                 |
|                     | 9TH HIGHEST VALUE IS                             | 0.39078 AT ( 473715.92,  |
| 3754428.71,         | 250.00, 250.00,                                  | 2.00) DC                 |
|                     | 10TH HIGHEST VALUE IS                            | 0.36815 AT ( 473891.98,  |
| 3754427.59,         | 250.00, 250.00,                                  | 2.00) DC                 |

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
 GP = GRIDPOLR  
 DC = DISCCART  
 DP = DISCPOLR

\*\*\* AERMOD - VERSION 14134 \*\*\*      \*\*\* U:\UcJobs\\_08600-  
 09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\*      03/13/15  
 \*\*\* AERMET - VERSION 12345 \*\*\*      \*\*\*  
 \*\*\*      18:04:52

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\*\*MODELOPTs:    NonDEFAULT CONC            FLAT            FLGPOL            FASTALL            OLM

\*\*\* THE SUMMARY OF MAXIMUM    1ST-HIGHEST MAX DAILY  
 1-HR RESULTS AVERAGED OVER    5 YEARS \*\*\*

MICROGRAMS/M\*\*3                      \*\* CONC OF NO2            IN  
                                          \*\*

| NETWORK<br>GROUP ID      | AVERAGE CONC          |              | RECEPTOR (XR, |
|--------------------------|-----------------------|--------------|---------------|
| YR, ZELEV, ZHILL, ZFLAG) | OF TYPE               | GRID-ID      |               |
| ALL                      | 1ST HIGHEST VALUE IS  | 2.80284 AT ( | 473738.73,    |
| 3754428.62,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 2ND HIGHEST VALUE IS  | 2.73677 AT ( | 473755.69,    |
| 3754428.85,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 3RD HIGHEST VALUE IS  | 2.66968 AT ( | 473774.94,    |
| 3754428.85,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 4TH HIGHEST VALUE IS  | 2.58181 AT ( | 473801.46,    |
| 3754431.71,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 5TH HIGHEST VALUE IS  | 2.52903 AT ( | 473815.97,    |
| 3754429.55,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 6TH HIGHEST VALUE IS  | 2.39535 AT ( | 473715.92,    |
| 3754428.71,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 7TH HIGHEST VALUE IS  | 2.28732 AT ( | 473831.00,    |
| 3754424.36,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 8TH HIGHEST VALUE IS  | 1.90129 AT ( | 473853.90,    |
| 3754425.20,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 9TH HIGHEST VALUE IS  | 1.70090 AT ( | 473871.89,    |
| 3754423.79,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 10TH HIGHEST VALUE IS | 1.55747 AT ( | 473813.90,    |
| 3754366.49,              | 250.00, 250.00,       | 2.00) DC     |               |

\*\*\* RECEPTOR TYPES:    GC = GRIDCART  
                                  GP = GRIDPOLR  
                                  DC = DISCCART  
                                  DP = DISCPOLR

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\* 03/13/15  
\*\*\* AERMET - VERSION 12345 \*\*\* \*\*\*  
\*\*\* 18:04:52

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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL OLM

\*\*\* Message Summary : AERMOD Model Execution \*\*\*

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)  
A Total of 4 Warning Message(s)  
A Total of 1435 Informational Message(s)  
  
A Total of 43824 Hours Were Processed  
  
A Total of 0 Calm Hours Identified  
  
A Total of 1435 Missing Hours Identified ( 3.27 Percent)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
CO W271 31 COCARD: 03FILE w/o 03VALs; full conv for hrs with  
miss 03  
CO W361 31 COCARD: Multiyear PERIOD/ANNUAL values for N02/S02  
require MULTYEAR Opt  
ME W396 1162 MEOPEN: Met data from outdated version of AERMET,  
version: 12345  
ME W531 1162 MEOPEN: CAUTION! Met Station ID Missing from  
SURFFILE for SURFDATA

\*\*\*\*\*  
\*\*\* AERMOD Finishes Successfully \*\*\*  
\*\*\*\*\*

```
**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 8.8.9
** Lakes Environmental Software Inc.
** Date: 3/13/2015
** File: U:\UcJobs\_08600-09000\_08900\08990\08990_Operational
LST\PM10\PM10.ADI
**
```

```
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
```

```
CO STARTING
  TITLEONE U:\UcJobs\_08600-09000\_08900\08990\08990_Operational
LST\PM10\PM10.
  MODELOPT CONC FLAT FASTALL
  AVERTIME 24 ANNUAL
  URBANOPT 2100516
  POLLUTID PM_10
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL PM10.err
```

```
CO FINISHED
```

```
**
*****
** AERMOD Source Pathway
*****
**
**
```

```
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC On-Site Passenger Car Idling - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0005016
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 3
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.080, 3754684.434, 0.00, 4.00, 3.95
** -----
```

```
LOCATION L0001921      VOLUME    473797.069 3754701.662 0.0
```

```

LOCATION L0001922      VOLUME    473797.074 3754693.162 0.0
LOCATION L0001923      VOLUME    473797.080 3754684.662 0.0
** End of LINE VOLUME Source ID = SLINE1
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC On-Site Passenger Car Idling - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0001692
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 4
** 473736.964, 3754551.125, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95
** 473745.446, 3754483.696, 0.00, 4.00, 3.95
** 473829.839, 3754482.423, 0.00, 4.00, 3.95
** -----
LOCATION L0001924      VOLUME    473737.082 3754546.877 0.0
LOCATION L0001925      VOLUME    473737.316 3754538.380 0.0
LOCATION L0001926      VOLUME    473737.550 3754529.883 0.0
LOCATION L0001927      VOLUME    473737.785 3754521.386 0.0
LOCATION L0001928      VOLUME    473738.019 3754512.889 0.0
LOCATION L0001929      VOLUME    473738.254 3754504.393 0.0
LOCATION L0001930      VOLUME    473738.488 3754495.896 0.0
LOCATION L0001931      VOLUME    473740.342 3754488.161 0.0
LOCATION L0001932      VOLUME    473747.164 3754483.670 0.0
LOCATION L0001933      VOLUME    473755.663 3754483.542 0.0
LOCATION L0001934      VOLUME    473764.162 3754483.413 0.0
LOCATION L0001935      VOLUME    473772.661 3754483.285 0.0
LOCATION L0001936      VOLUME    473781.160 3754483.157 0.0
LOCATION L0001937      VOLUME    473789.659 3754483.029 0.0
LOCATION L0001938      VOLUME    473798.158 3754482.901 0.0
LOCATION L0001939      VOLUME    473806.657 3754482.773 0.0
LOCATION L0001940      VOLUME    473815.156 3754482.645 0.0
LOCATION L0001941      VOLUME    473823.656 3754482.517 0.0
** End of LINE VOLUME Source ID = SLINE2
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC On-Site Passenger Car Idling - Surgical Center
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00003987
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474146.956, 3754542.362, 0.00, 4.00, 3.95
** 474203.982, 3754541.933, 0.00, 4.00, 3.95
** -----
LOCATION L0001942      VOLUME    474151.206 3754542.330 0.0
LOCATION L0001943      VOLUME    474159.706 3754542.266 0.0

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LOCATION L0001944      VOLUME    474168.206 3754542.202 0.0
LOCATION L0001945      VOLUME    474176.705 3754542.138 0.0
LOCATION L0001946      VOLUME    474185.205 3754542.074 0.0
LOCATION L0001947      VOLUME    474193.705 3754542.010 0.0
LOCATION L0001948      VOLUME    474202.205 3754541.946 0.0
** End of LINE VOLUME Source ID = SLINE3
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC On-Site Passenger Car Idling - Senior Housing
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0003733
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 9
** 473705.823, 3754992.649, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0001949      VOLUME    473709.107 3754989.951 0.0
LOCATION L0001950      VOLUME    473716.408 3754985.826 0.0
LOCATION L0001951      VOLUME    473724.564 3754986.512 0.0
LOCATION L0001952      VOLUME    473730.201 3754992.580 0.0
LOCATION L0001953      VOLUME    473730.631 3755001.008 0.0
** End of LINE VOLUME Source ID = SLINE4
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC On-Site Passenger Car Idling - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0002786
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474217.752, 3754863.013, 0.00, 4.00, 3.95
** -----
LOCATION L0001954      VOLUME    474157.470 3754909.512 0.0
LOCATION L0001955      VOLUME    474164.200 3754904.320 0.0
LOCATION L0001956      VOLUME    474170.930 3754899.129 0.0
LOCATION L0001957      VOLUME    474177.661 3754893.937 0.0
LOCATION L0001958      VOLUME    474184.391 3754888.746 0.0
LOCATION L0001959      VOLUME    474191.122 3754883.554 0.0
LOCATION L0001960      VOLUME    474197.852 3754878.363 0.0

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LOCATION L0001961      VOLUME    474204.583 3754873.171 0.0
LOCATION L0001962      VOLUME    474211.313 3754867.980 0.0
** End of LINE VOLUME Source ID = SLINE5
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC On-Site Passenger Car Travel - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00005974
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 7
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.079, 3754683.979, 0.00, 4.00, 3.95
** 473832.857, 3754684.580, 0.00, 4.00, 3.95
** 473831.534, 3754711.303, 0.00, 4.00, 3.95
** 473825.370, 3754730.840, 0.00, 4.00, 3.95
** 473825.424, 3754745.686, 0.00, 4.00, 3.95
** -----
LOCATION L0001963      VOLUME    473797.069 3754701.662 0.0
LOCATION L0001964      VOLUME    473797.073 3754693.162 0.0
LOCATION L0001965      VOLUME    473797.078 3754684.662 0.0
LOCATION L0001966      VOLUME    473804.895 3754684.110 0.0
LOCATION L0001967      VOLUME    473813.393 3754684.253 0.0
LOCATION L0001968      VOLUME    473821.892 3754684.396 0.0
LOCATION L0001969      VOLUME    473830.391 3754684.539 0.0
LOCATION L0001970      VOLUME    473832.558 3754690.607 0.0
LOCATION L0001971      VOLUME    473832.138 3754699.096 0.0
LOCATION L0001972      VOLUME    473831.718 3754707.586 0.0
LOCATION L0001973      VOLUME    473830.096 3754715.860 0.0
LOCATION L0001974      VOLUME    473827.538 3754723.966 0.0
LOCATION L0001975      VOLUME    473825.374 3754732.132 0.0
LOCATION L0001976      VOLUME    473825.406 3754740.632 0.0
** End of LINE VOLUME Source ID = SLINE6
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC On-Site Passenger Car Travel - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00003541
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 5
** 473690.932, 3754560.433, 0.00, 4.00, 3.95
** 473736.934, 3754560.673, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95
** 473745.446, 3754483.696, 0.00, 4.00, 3.95
** 473829.839, 3754482.423, 0.00, 4.00, 3.95
** -----

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|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0001977 | VOLUME | 473695.182 | 3754560.456 | 0.0 |
| LOCATION | L0001978 | VOLUME | 473703.682 | 3754560.500 | 0.0 |
| LOCATION | L0001979 | VOLUME | 473712.182 | 3754560.544 | 0.0 |
| LOCATION | L0001980 | VOLUME | 473720.682 | 3754560.588 | 0.0 |
| LOCATION | L0001981 | VOLUME | 473729.182 | 3754560.633 | 0.0 |
| LOCATION | L0001982 | VOLUME | 473736.953 | 3754559.926 | 0.0 |
| LOCATION | L0001983 | VOLUME | 473737.159 | 3754551.428 | 0.0 |
| LOCATION | L0001984 | VOLUME | 473737.366 | 3754542.931 | 0.0 |
| LOCATION | L0001985 | VOLUME | 473737.572 | 3754534.433 | 0.0 |
| LOCATION | L0001986 | VOLUME | 473737.779 | 3754525.936 | 0.0 |
| LOCATION | L0001987 | VOLUME | 473737.985 | 3754517.439 | 0.0 |
| LOCATION | L0001988 | VOLUME | 473738.192 | 3754508.941 | 0.0 |
| LOCATION | L0001989 | VOLUME | 473738.398 | 3754500.444 | 0.0 |
| LOCATION | L0001990 | VOLUME | 473738.605 | 3754491.946 | 0.0 |
| LOCATION | L0001991 | VOLUME | 473743.316 | 3754485.559 | 0.0 |
| LOCATION | L0001992 | VOLUME | 473751.115 | 3754483.610 | 0.0 |
| LOCATION | L0001993 | VOLUME | 473759.614 | 3754483.482 | 0.0 |
| LOCATION | L0001994 | VOLUME | 473768.113 | 3754483.354 | 0.0 |
| LOCATION | L0001995 | VOLUME | 473776.612 | 3754483.226 | 0.0 |
| LOCATION | L0001996 | VOLUME | 473785.111 | 3754483.098 | 0.0 |
| LOCATION | L0001997 | VOLUME | 473793.610 | 3754482.969 | 0.0 |
| LOCATION | L0001998 | VOLUME | 473802.110 | 3754482.841 | 0.0 |
| LOCATION | L0001999 | VOLUME | 473810.609 | 3754482.713 | 0.0 |
| LOCATION | L0002000 | VOLUME | 473819.108 | 3754482.585 | 0.0 |
| LOCATION | L0002001 | VOLUME | 473827.607 | 3754482.457 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE7

\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE8

\*\* DESCRSRC On-Site Passenger Car Travel - Surgical Center

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 6.35E-06

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 4

\*\* 474146.956, 3754542.362, 0.00, 4.00, 3.95

\*\* 474225.093, 3754541.662, 0.00, 4.00, 3.95

\*\* 474224.571, 3754563.881, 0.00, 4.00, 3.95

\*\* 474284.387, 3754563.753, 0.00, 4.00, 3.95

\*\*

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002002 | VOLUME | 474151.206 | 3754542.324 | 0.0 |
| LOCATION | L0002003 | VOLUME | 474159.706 | 3754542.248 | 0.0 |
| LOCATION | L0002004 | VOLUME | 474168.205 | 3754542.171 | 0.0 |
| LOCATION | L0002005 | VOLUME | 474176.705 | 3754542.095 | 0.0 |
| LOCATION | L0002006 | VOLUME | 474185.205 | 3754542.019 | 0.0 |
| LOCATION | L0002007 | VOLUME | 474193.704 | 3754541.943 | 0.0 |
| LOCATION | L0002008 | VOLUME | 474202.204 | 3754541.867 | 0.0 |
| LOCATION | L0002009 | VOLUME | 474210.704 | 3754541.791 | 0.0 |
| LOCATION | L0002010 | VOLUME | 474219.203 | 3754541.714 | 0.0 |
| LOCATION | L0002011 | VOLUME | 474225.032 | 3754544.271 | 0.0 |
| LOCATION | L0002012 | VOLUME | 474224.832 | 3754552.769 | 0.0 |
| LOCATION | L0002013 | VOLUME | 474224.632 | 3754561.266 | 0.0 |



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LOCATION L0002014      VOLUME  474230.455 3754563.868 0.0
LOCATION L0002015      VOLUME  474238.955 3754563.850 0.0
LOCATION L0002016      VOLUME  474247.455 3754563.832 0.0
LOCATION L0002017      VOLUME  474255.955 3754563.814 0.0
LOCATION L0002018      VOLUME  474264.455 3754563.795 0.0
LOCATION L0002019      VOLUME  474272.955 3754563.777 0.0
LOCATION L0002020      VOLUME  474281.455 3754563.759 0.0
** End of LINE VOLUME Source ID = SLINE8
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC On-Site Passenger Car Travel - Senior Housing
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00002561
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 10
** 473693.729, 3755016.836, 0.00, 4.00, 3.95
** 473706.280, 3754992.273, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0002021      VOLUME  473695.663 3755013.052 0.0
LOCATION L0002022      VOLUME  473699.531 3755005.482 0.0
LOCATION L0002023      VOLUME  473703.398 3754997.913 0.0
LOCATION L0002024      VOLUME  473707.954 3754990.898 0.0
LOCATION L0002025      VOLUME  473715.011 3754986.350 0.0
LOCATION L0002026      VOLUME  473723.272 3754985.764 0.0
LOCATION L0002027      VOLUME  473729.388 3754991.329 0.0
LOCATION L0002028      VOLUME  473730.833 3754999.530 0.0
** End of LINE VOLUME Source ID = SLINE9
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC On-Site Passenger Car Travel - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00006161
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 8
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474275.659, 3754818.227, 0.00, 4.00, 3.95
** 474276.685, 3754808.563, 0.00, 4.00, 3.95
** 474271.043, 3754798.926, 0.00, 4.00, 3.95

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\*\* 474263.098, 3754791.586, 0.00, 4.00, 3.95  
\*\* 474247.089, 3754790.184, 0.00, 4.00, 3.95  
\*\* 474237.633, 3754788.405, 0.00, 4.00, 3.95  
\*\* 474234.942, 3754777.285, 0.00, 4.00, 3.95  
\*\*

-----  
LOCATION L0002029 VOLUME 474157.468 3754909.510 0.0  
LOCATION L0002030 VOLUME 474164.195 3754904.314 0.0  
LOCATION L0002031 VOLUME 474170.922 3754899.118 0.0  
LOCATION L0002032 VOLUME 474177.650 3754893.923 0.0  
LOCATION L0002033 VOLUME 474184.377 3754888.727 0.0  
LOCATION L0002034 VOLUME 474191.104 3754883.531 0.0  
LOCATION L0002035 VOLUME 474197.831 3754878.336 0.0  
LOCATION L0002036 VOLUME 474204.558 3754873.140 0.0  
LOCATION L0002037 VOLUME 474211.286 3754867.944 0.0  
LOCATION L0002038 VOLUME 474218.013 3754862.749 0.0  
LOCATION L0002039 VOLUME 474224.740 3754857.553 0.0  
LOCATION L0002040 VOLUME 474231.467 3754852.358 0.0  
LOCATION L0002041 VOLUME 474238.195 3754847.162 0.0  
LOCATION L0002042 VOLUME 474244.922 3754841.966 0.0  
LOCATION L0002043 VOLUME 474251.649 3754836.771 0.0  
LOCATION L0002044 VOLUME 474258.376 3754831.575 0.0  
LOCATION L0002045 VOLUME 474265.103 3754826.379 0.0  
LOCATION L0002046 VOLUME 474271.831 3754821.184 0.0  
LOCATION L0002047 VOLUME 474276.046 3754814.585 0.0  
LOCATION L0002048 VOLUME 474275.450 3754806.453 0.0  
LOCATION L0002049 VOLUME 474271.156 3754799.118 0.0  
LOCATION L0002050 VOLUME 474264.963 3754793.309 0.0  
LOCATION L0002051 VOLUME 474257.160 3754791.066 0.0  
LOCATION L0002052 VOLUME 474248.692 3754790.324 0.0  
LOCATION L0002053 VOLUME 474240.317 3754788.910 0.0  
LOCATION L0002054 VOLUME 474236.276 3754782.798 0.0

\*\* End of LINE VOLUME Source ID = SLINE10

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE11  
\*\* DESCRSRC On-Site Passenger Car Idling - Medical Office Building (1&2)  
\*\* PREFIX  
\*\* Length of Side = 8.50  
\*\* Configuration = Adjacent  
\*\* Emission Rate = 0.0001592  
\*\* Vertical Dimension = 4.00  
\*\* SZINIT = 1.86  
\*\* Nodes = 2  
\*\* 474028.388, 3754698.671, 0.00, 4.00, 3.95  
\*\* 474028.146, 3754663.431, 0.00, 4.00, 3.95  
\*\*

-----  
LOCATION L0002055 VOLUME 474028.359 3754694.421 0.0  
LOCATION L0002056 VOLUME 474028.301 3754685.921 0.0  
LOCATION L0002057 VOLUME 474028.242 3754677.421 0.0  
LOCATION L0002058 VOLUME 474028.184 3754668.921 0.0

\*\* End of LINE VOLUME Source ID = SLINE11

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE12

```

** DESCRSRC On-Site Passenger Car Travel - Medical Office Building (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0000132
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474027.769, 3754746.815, 0.00, 4.00, 3.95
** 474028.146, 3754663.431, 0.00, 4.00, 3.95
** -----
LOCATION L0002059      VOLUME  474027.788 3754742.565 0.0
LOCATION L0002060      VOLUME  474027.827 3754734.065 0.0
LOCATION L0002061      VOLUME  474027.865 3754725.565 0.0
LOCATION L0002062      VOLUME  474027.903 3754717.065 0.0
LOCATION L0002063      VOLUME  474027.942 3754708.565 0.0
LOCATION L0002064      VOLUME  474027.980 3754700.065 0.0
LOCATION L0002065      VOLUME  474028.019 3754691.565 0.0
LOCATION L0002066      VOLUME  474028.057 3754683.065 0.0
LOCATION L0002067      VOLUME  474028.095 3754674.565 0.0
LOCATION L0002068      VOLUME  474028.134 3754666.066 0.0
** End of LINE VOLUME Source ID = SLINE12
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE13
** DESCRSRC On-Site Truck Idling - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 7.036E-07
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 3
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.080, 3754684.434, 0.00, 4.00, 3.95
** -----
LOCATION L0002069      VOLUME  473797.069 3754701.662 0.0
LOCATION L0002070      VOLUME  473797.074 3754693.162 0.0
LOCATION L0002071      VOLUME  473797.080 3754684.662 0.0
** End of LINE VOLUME Source ID = SLINE13
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE14
** DESCRSRC On-Site Truck Idling - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 2.373E-07
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 4
** 473736.964, 3754551.125, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95

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\*\* 473745.446, 3754483.696, 0.00, 4.00, 3.95  
\*\* 473829.839, 3754482.423, 0.00, 4.00, 3.95

\*\* -----  
LOCATION L0002072 VOLUME 473737.082 3754546.877 0.0  
LOCATION L0002073 VOLUME 473737.316 3754538.380 0.0  
LOCATION L0002074 VOLUME 473737.550 3754529.883 0.0  
LOCATION L0002075 VOLUME 473737.785 3754521.386 0.0  
LOCATION L0002076 VOLUME 473738.019 3754512.889 0.0  
LOCATION L0002077 VOLUME 473738.254 3754504.393 0.0  
LOCATION L0002078 VOLUME 473738.488 3754495.896 0.0  
LOCATION L0002079 VOLUME 473740.342 3754488.161 0.0  
LOCATION L0002080 VOLUME 473747.164 3754483.670 0.0  
LOCATION L0002081 VOLUME 473755.663 3754483.542 0.0  
LOCATION L0002082 VOLUME 473764.162 3754483.413 0.0  
LOCATION L0002083 VOLUME 473772.661 3754483.285 0.0  
LOCATION L0002084 VOLUME 473781.160 3754483.157 0.0  
LOCATION L0002085 VOLUME 473789.659 3754483.029 0.0  
LOCATION L0002086 VOLUME 473798.158 3754482.901 0.0  
LOCATION L0002087 VOLUME 473806.657 3754482.773 0.0  
LOCATION L0002088 VOLUME 473815.156 3754482.645 0.0  
LOCATION L0002089 VOLUME 473823.656 3754482.517 0.0

\*\* End of LINE VOLUME Source ID = SLINE14

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE15  
\*\* DESCRSRC On-Site Truck Idling - Surgical Center  
\*\* PREFIX  
\*\* Length of Side = 8.50  
\*\* Configuration = Adjacent  
\*\* Emission Rate = 5.585E-08  
\*\* Vertical Dimension = 4.00  
\*\* SZINIT = 1.86  
\*\* Nodes = 2  
\*\* 474146.956, 3754542.362, 0.00, 4.00, 3.95  
\*\* 474203.982, 3754541.933, 0.00, 4.00, 3.95

\*\* -----  
LOCATION L0002108 VOLUME 474151.206 3754542.330 0.0  
LOCATION L0002109 VOLUME 474159.706 3754542.266 0.0  
LOCATION L0002110 VOLUME 474168.206 3754542.202 0.0  
LOCATION L0002111 VOLUME 474176.705 3754542.138 0.0  
LOCATION L0002112 VOLUME 474185.205 3754542.074 0.0  
LOCATION L0002113 VOLUME 474193.705 3754542.010 0.0  
LOCATION L0002114 VOLUME 474202.205 3754541.946 0.0

\*\* End of LINE VOLUME Source ID = SLINE15

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE16  
\*\* DESCRSRC On-Site Truck Idling - Senior Housing  
\*\* PREFIX  
\*\* Length of Side = 8.50  
\*\* Configuration = Adjacent  
\*\* Emission Rate = 5.235E-07  
\*\* Vertical Dimension = 4.00  
\*\* SZINIT = 1.86

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** Nodes = 9
** 473705.823, 3754992.649, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0002115      VOLUME  473709.107 3754989.951 0.0
LOCATION L0002116      VOLUME  473716.408 3754985.826 0.0
LOCATION L0002117      VOLUME  473724.564 3754986.512 0.0
LOCATION L0002118      VOLUME  473730.201 3754992.580 0.0
LOCATION L0002119      VOLUME  473730.631 3755001.008 0.0
** End of LINE VOLUME Source ID = SLINE16
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE17
** DESCRSRC On-Site Truck Idling - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 3.909E-07
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474217.752, 3754863.013, 0.00, 4.00, 3.95
** -----
LOCATION L0002120      VOLUME  474157.470 3754909.512 0.0
LOCATION L0002121      VOLUME  474164.200 3754904.320 0.0
LOCATION L0002122      VOLUME  474170.930 3754899.129 0.0
LOCATION L0002123      VOLUME  474177.661 3754893.937 0.0
LOCATION L0002124      VOLUME  474184.391 3754888.746 0.0
LOCATION L0002125      VOLUME  474191.122 3754883.554 0.0
LOCATION L0002126      VOLUME  474197.852 3754878.363 0.0
LOCATION L0002127      VOLUME  474204.583 3754873.171 0.0
LOCATION L0002128      VOLUME  474211.313 3754867.980 0.0
** End of LINE VOLUME Source ID = SLINE17
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE18
** DESCRSRC On-Site Truck Travel - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 6.779E-07
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 7
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95

```

\*\* 473797.079, 3754683.979, 0.00, 4.00, 3.95  
 \*\* 473832.857, 3754684.580, 0.00, 4.00, 3.95  
 \*\* 473831.534, 3754711.303, 0.00, 4.00, 3.95  
 \*\* 473825.370, 3754730.840, 0.00, 4.00, 3.95  
 \*\* 473825.424, 3754745.686, 0.00, 4.00, 3.95

\*\* -----  
 LOCATION L0002129 VOLUME 473797.069 3754701.662 0.0  
 LOCATION L0002130 VOLUME 473797.073 3754693.162 0.0  
 LOCATION L0002131 VOLUME 473797.078 3754684.662 0.0  
 LOCATION L0002132 VOLUME 473804.895 3754684.110 0.0  
 LOCATION L0002133 VOLUME 473813.393 3754684.253 0.0  
 LOCATION L0002134 VOLUME 473821.892 3754684.396 0.0  
 LOCATION L0002135 VOLUME 473830.391 3754684.539 0.0  
 LOCATION L0002136 VOLUME 473832.558 3754690.607 0.0  
 LOCATION L0002137 VOLUME 473832.138 3754699.096 0.0  
 LOCATION L0002138 VOLUME 473831.718 3754707.586 0.0  
 LOCATION L0002139 VOLUME 473830.096 3754715.860 0.0  
 LOCATION L0002140 VOLUME 473827.538 3754723.966 0.0  
 LOCATION L0002141 VOLUME 473825.374 3754732.132 0.0  
 LOCATION L0002142 VOLUME 473825.406 3754740.632 0.0

\*\* End of LINE VOLUME Source ID = SLINE18

\*\* -----

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE19

\*\* DESCRSRC On-Site Truck Travel - Medical Office Building (3&4)

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 4.017E-07

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 5

\*\* 473690.932, 3754560.433, 0.00, 4.00, 3.95  
 \*\* 473736.934, 3754560.673, 0.00, 4.00, 3.95  
 \*\* 473738.661, 3754489.633, 0.00, 4.00, 3.95  
 \*\* 473745.446, 3754483.696, 0.00, 4.00, 3.95  
 \*\* 473829.839, 3754482.423, 0.00, 4.00, 3.95

\*\* -----

LOCATION L0002143 VOLUME 473695.182 3754560.456 0.0  
 LOCATION L0002144 VOLUME 473703.682 3754560.500 0.0  
 LOCATION L0002145 VOLUME 473712.182 3754560.544 0.0  
 LOCATION L0002146 VOLUME 473720.682 3754560.588 0.0  
 LOCATION L0002147 VOLUME 473729.182 3754560.633 0.0  
 LOCATION L0002148 VOLUME 473736.953 3754559.926 0.0  
 LOCATION L0002149 VOLUME 473737.159 3754551.428 0.0  
 LOCATION L0002150 VOLUME 473737.366 3754542.931 0.0  
 LOCATION L0002151 VOLUME 473737.572 3754534.433 0.0  
 LOCATION L0002152 VOLUME 473737.779 3754525.936 0.0  
 LOCATION L0002153 VOLUME 473737.985 3754517.439 0.0  
 LOCATION L0002154 VOLUME 473738.192 3754508.941 0.0  
 LOCATION L0002155 VOLUME 473738.398 3754500.444 0.0  
 LOCATION L0002156 VOLUME 473738.605 3754491.946 0.0  
 LOCATION L0002157 VOLUME 473743.316 3754485.559 0.0  
 LOCATION L0002158 VOLUME 473751.115 3754483.610 0.0



|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002159 | VOLUME | 473759.614 | 3754483.482 | 0.0 |
| LOCATION | L0002160 | VOLUME | 473768.113 | 3754483.354 | 0.0 |
| LOCATION | L0002161 | VOLUME | 473776.612 | 3754483.226 | 0.0 |
| LOCATION | L0002162 | VOLUME | 473785.111 | 3754483.098 | 0.0 |
| LOCATION | L0002163 | VOLUME | 473793.610 | 3754482.969 | 0.0 |
| LOCATION | L0002164 | VOLUME | 473802.110 | 3754482.841 | 0.0 |
| LOCATION | L0002165 | VOLUME | 473810.609 | 3754482.713 | 0.0 |
| LOCATION | L0002166 | VOLUME | 473819.108 | 3754482.585 | 0.0 |
| LOCATION | L0002167 | VOLUME | 473827.607 | 3754482.457 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE19  
 \*\* -----  
 \*\* Line Source Represented by Adjacent Volume Sources  
 \*\* LINE VOLUME Source ID = SLINE20  
 \*\* DESCRSRC On-Site Truck Travel - Surgical Center  
 \*\* PREFIX  
 \*\* Length of Side = 8.50  
 \*\* Configuration = Adjacent  
 \*\* Emission Rate = 7.194E-08  
 \*\* Vertical Dimension = 4.00  
 \*\* SZINIT = 1.86  
 \*\* Nodes = 4  
 \*\* 474146.956, 3754542.362, 0.00, 4.00, 3.95  
 \*\* 474225.093, 3754541.662, 0.00, 4.00, 3.95  
 \*\* 474224.571, 3754563.881, 0.00, 4.00, 3.95  
 \*\* 474284.387, 3754563.753, 0.00, 4.00, 3.95  
 \*\* -----

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002168 | VOLUME | 474151.206 | 3754542.324 | 0.0 |
| LOCATION | L0002169 | VOLUME | 474159.706 | 3754542.248 | 0.0 |
| LOCATION | L0002170 | VOLUME | 474168.205 | 3754542.171 | 0.0 |
| LOCATION | L0002171 | VOLUME | 474176.705 | 3754542.095 | 0.0 |
| LOCATION | L0002172 | VOLUME | 474185.205 | 3754542.019 | 0.0 |
| LOCATION | L0002173 | VOLUME | 474193.704 | 3754541.943 | 0.0 |
| LOCATION | L0002174 | VOLUME | 474202.204 | 3754541.867 | 0.0 |
| LOCATION | L0002175 | VOLUME | 474210.704 | 3754541.791 | 0.0 |
| LOCATION | L0002176 | VOLUME | 474219.203 | 3754541.714 | 0.0 |
| LOCATION | L0002177 | VOLUME | 474225.032 | 3754544.271 | 0.0 |
| LOCATION | L0002178 | VOLUME | 474224.832 | 3754552.769 | 0.0 |
| LOCATION | L0002179 | VOLUME | 474224.632 | 3754561.266 | 0.0 |
| LOCATION | L0002180 | VOLUME | 474230.455 | 3754563.868 | 0.0 |
| LOCATION | L0002181 | VOLUME | 474238.955 | 3754563.850 | 0.0 |
| LOCATION | L0002182 | VOLUME | 474247.455 | 3754563.832 | 0.0 |
| LOCATION | L0002183 | VOLUME | 474255.955 | 3754563.814 | 0.0 |
| LOCATION | L0002184 | VOLUME | 474264.455 | 3754563.795 | 0.0 |
| LOCATION | L0002185 | VOLUME | 474272.955 | 3754563.777 | 0.0 |
| LOCATION | L0002186 | VOLUME | 474281.455 | 3754563.759 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE20  
 \*\* -----  
 \*\* Line Source Represented by Adjacent Volume Sources  
 \*\* LINE VOLUME Source ID = SLINE21  
 \*\* DESCRSRC On-Site Truck Travel - Senior Housing  
 \*\* PREFIX  
 \*\* Length of Side = 8.50  
 \*\* Configuration = Adjacent  
 \*\* Emission Rate = 2.905E-07

```

** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 10
** 473693.729, 3755016.836, 0.00, 4.00, 3.95
** 473706.280, 3754992.273, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0002187      VOLUME  473695.663 3755013.052 0.0
LOCATION L0002188      VOLUME  473699.531 3755005.482 0.0
LOCATION L0002189      VOLUME  473703.398 3754997.913 0.0
LOCATION L0002190      VOLUME  473707.954 3754990.898 0.0
LOCATION L0002191      VOLUME  473715.011 3754986.350 0.0
LOCATION L0002192      VOLUME  473723.272 3754985.764 0.0
LOCATION L0002193      VOLUME  473729.388 3754991.329 0.0
LOCATION L0002194      VOLUME  473730.833 3754999.530 0.0
** End of LINE VOLUME Source ID = SLINE21
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE22
** DESCRSRC On-Site Truck Travel - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 6.991E-07
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 8
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474275.659, 3754818.227, 0.00, 4.00, 3.95
** 474276.685, 3754808.563, 0.00, 4.00, 3.95
** 474271.043, 3754798.926, 0.00, 4.00, 3.95
** 474263.098, 3754791.586, 0.00, 4.00, 3.95
** 474247.089, 3754790.184, 0.00, 4.00, 3.95
** 474237.633, 3754788.405, 0.00, 4.00, 3.95
** 474234.942, 3754777.285, 0.00, 4.00, 3.95
** -----
LOCATION L0002195      VOLUME  474157.468 3754909.510 0.0
LOCATION L0002196      VOLUME  474164.195 3754904.314 0.0
LOCATION L0002197      VOLUME  474170.922 3754899.118 0.0
LOCATION L0002198      VOLUME  474177.650 3754893.923 0.0
LOCATION L0002199      VOLUME  474184.377 3754888.727 0.0
LOCATION L0002200      VOLUME  474191.104 3754883.531 0.0
LOCATION L0002201      VOLUME  474197.831 3754878.336 0.0
LOCATION L0002202      VOLUME  474204.558 3754873.140 0.0
LOCATION L0002203      VOLUME  474211.286 3754867.944 0.0
LOCATION L0002204      VOLUME  474218.013 3754862.749 0.0
LOCATION L0002205      VOLUME  474224.740 3754857.553 0.0

```



|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002206 | VOLUME | 474231.467 | 3754852.358 | 0.0 |
| LOCATION | L0002207 | VOLUME | 474238.195 | 3754847.162 | 0.0 |
| LOCATION | L0002208 | VOLUME | 474244.922 | 3754841.966 | 0.0 |
| LOCATION | L0002209 | VOLUME | 474251.649 | 3754836.771 | 0.0 |
| LOCATION | L0002210 | VOLUME | 474258.376 | 3754831.575 | 0.0 |
| LOCATION | L0002211 | VOLUME | 474265.103 | 3754826.379 | 0.0 |
| LOCATION | L0002212 | VOLUME | 474271.831 | 3754821.184 | 0.0 |
| LOCATION | L0002213 | VOLUME | 474276.046 | 3754814.585 | 0.0 |
| LOCATION | L0002214 | VOLUME | 474275.450 | 3754806.453 | 0.0 |
| LOCATION | L0002215 | VOLUME | 474271.156 | 3754799.118 | 0.0 |
| LOCATION | L0002216 | VOLUME | 474264.963 | 3754793.309 | 0.0 |
| LOCATION | L0002217 | VOLUME | 474257.160 | 3754791.066 | 0.0 |
| LOCATION | L0002218 | VOLUME | 474248.692 | 3754790.324 | 0.0 |
| LOCATION | L0002219 | VOLUME | 474240.317 | 3754788.910 | 0.0 |
| LOCATION | L0002220 | VOLUME | 474236.276 | 3754782.798 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE22

-----

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE23

\*\* DESCRSRC On-Site Truck Idling - Medical Office Building (1&2)

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 2.234E-07

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 2

\*\* 474028.388, 3754698.671, 0.00, 4.00, 3.95

\*\* 474028.146, 3754663.431, 0.00, 4.00, 3.95

-----

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002221 | VOLUME | 474028.359 | 3754694.421 | 0.0 |
| LOCATION | L0002222 | VOLUME | 474028.301 | 3754685.921 | 0.0 |
| LOCATION | L0002223 | VOLUME | 474028.242 | 3754677.421 | 0.0 |
| LOCATION | L0002224 | VOLUME | 474028.184 | 3754668.921 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE23

-----

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE24

\*\* DESCRSRC On-Site Truck Travel - Medical Office Building (1&2)

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 1.498E-07

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 2

\*\* 474027.769, 3754746.815, 0.00, 4.00, 3.95

\*\* 474028.146, 3754663.431, 0.00, 4.00, 3.95

-----

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002225 | VOLUME | 474027.788 | 3754742.565 | 0.0 |
| LOCATION | L0002226 | VOLUME | 474027.827 | 3754734.065 | 0.0 |
| LOCATION | L0002227 | VOLUME | 474027.865 | 3754725.565 | 0.0 |
| LOCATION | L0002228 | VOLUME | 474027.903 | 3754717.065 | 0.0 |
| LOCATION | L0002229 | VOLUME | 474027.942 | 3754708.565 | 0.0 |

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002230 | VOLUME | 474027.980 | 3754700.065 | 0.0 |
| LOCATION | L0002231 | VOLUME | 474028.019 | 3754691.565 | 0.0 |
| LOCATION | L0002232 | VOLUME | 474028.057 | 3754683.065 | 0.0 |
| LOCATION | L0002233 | VOLUME | 474028.095 | 3754674.565 | 0.0 |
| LOCATION | L0002234 | VOLUME | 474028.134 | 3754666.066 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE24

\*\* Source Parameters \*\*

\*\* LINE VOLUME Source ID = SLINE1

|          |          |           |      |      |      |
|----------|----------|-----------|------|------|------|
| SRCPARAM | L0001921 | 0.0001672 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001922 | 0.0001672 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001923 | 0.0001672 | 4.00 | 3.95 | 1.86 |

\*\* -----

\*\* LINE VOLUME Source ID = SLINE2

|          |          |           |      |      |      |
|----------|----------|-----------|------|------|------|
| SRCPARAM | L0001924 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001925 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001926 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001927 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001928 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001929 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001930 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001931 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001932 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001933 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001934 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001935 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001936 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001937 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001938 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001939 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001940 | 0.0000094 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001941 | 0.0000094 | 4.00 | 3.95 | 1.86 |

\*\* -----

\*\* LINE VOLUME Source ID = SLINE3

|          |          |             |      |      |      |
|----------|----------|-------------|------|------|------|
| SRCPARAM | L0001942 | 0.000005696 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001943 | 0.000005696 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001944 | 0.000005696 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001945 | 0.000005696 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001946 | 0.000005696 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001947 | 0.000005696 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001948 | 0.000005696 | 4.00 | 3.95 | 1.86 |

\*\* -----

\*\* LINE VOLUME Source ID = SLINE4

|          |          |            |      |      |      |
|----------|----------|------------|------|------|------|
| SRCPARAM | L0001949 | 0.00007466 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001950 | 0.00007466 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001951 | 0.00007466 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001952 | 0.00007466 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001953 | 0.00007466 | 4.00 | 3.95 | 1.86 |

\*\* -----

\*\* LINE VOLUME Source ID = SLINE5

|          |          |              |      |      |      |
|----------|----------|--------------|------|------|------|
| SRCPARAM | L0001954 | 0.0000309556 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001955 | 0.0000309556 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001956 | 0.0000309556 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001957 | 0.0000309556 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0001958 | 0.0000309556 | 4.00 | 3.95 | 1.86 |

|                                   |          |              |      |      |      |
|-----------------------------------|----------|--------------|------|------|------|
| SRCPARAM                          | L0001959 | 0.0000309556 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001960 | 0.0000309556 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001961 | 0.0000309556 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001962 | 0.0000309556 | 4.00 | 3.95 | 1.86 |
| ** -----                          |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE6 |          |              |      |      |      |
| SRCPARAM                          | L0001963 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001964 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001965 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001966 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001967 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001968 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001969 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001970 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001971 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001972 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001973 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001974 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001975 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001976 | 0.000004267  | 4.00 | 3.95 | 1.86 |
| ** -----                          |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE7 |          |              |      |      |      |
| SRCPARAM                          | L0001977 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001978 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001979 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001980 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001981 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001982 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001983 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001984 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001985 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001986 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001987 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001988 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001989 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001990 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001991 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001992 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001993 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001994 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001995 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001996 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001997 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001998 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0001999 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002000 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002001 | 0.000001416  | 4.00 | 3.95 | 1.86 |
| ** -----                          |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE8 |          |              |      |      |      |
| SRCPARAM                          | L0002002 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002003 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002004 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002005 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002006 | 0.0000003342 | 4.00 | 3.95 | 1.86 |

|                                    |          |              |      |      |      |
|------------------------------------|----------|--------------|------|------|------|
| SRCPARAM                           | L0002007 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002008 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002009 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002010 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002011 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002012 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002013 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002014 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002015 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002016 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002017 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002018 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002019 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002020 | 0.0000003342 | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE9  |          |              |      |      |      |
| SRCPARAM                           | L0002021 | 0.000003201  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002022 | 0.000003201  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002023 | 0.000003201  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002024 | 0.000003201  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002025 | 0.000003201  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002026 | 0.000003201  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002027 | 0.000003201  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002028 | 0.000003201  | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE10 |          |              |      |      |      |
| SRCPARAM                           | L0002029 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002030 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002031 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002032 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002033 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002034 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002035 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002036 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002037 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002038 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002039 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002040 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002041 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002042 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002043 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002044 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002045 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002046 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002047 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002048 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002049 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002050 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002051 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002052 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002053 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002054 | 0.00000237   | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE11 |          |              |      |      |      |

|                                    |          |                |      |      |      |
|------------------------------------|----------|----------------|------|------|------|
| SRCPARAM                           | L0002055 | 0.0000398      | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002056 | 0.0000398      | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002057 | 0.0000398      | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002058 | 0.0000398      | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |                |      |      |      |
| ** LINE VOLUME Source ID = SLINE12 |          |                |      |      |      |
| SRCPARAM                           | L0002059 | 0.00000132     | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002060 | 0.00000132     | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002061 | 0.00000132     | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002062 | 0.00000132     | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002063 | 0.00000132     | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002064 | 0.00000132     | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002065 | 0.00000132     | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002066 | 0.00000132     | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002067 | 0.00000132     | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002068 | 0.00000132     | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |                |      |      |      |
| ** LINE VOLUME Source ID = SLINE13 |          |                |      |      |      |
| SRCPARAM                           | L0002069 | 0.0000002345   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002070 | 0.0000002345   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002071 | 0.0000002345   | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |                |      |      |      |
| ** LINE VOLUME Source ID = SLINE14 |          |                |      |      |      |
| SRCPARAM                           | L0002072 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002073 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002074 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002075 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002076 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002077 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002078 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002079 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002080 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002081 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002082 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002083 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002084 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002085 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002086 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002087 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002088 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002089 | 0.00000001318  | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |                |      |      |      |
| ** LINE VOLUME Source ID = SLINE15 |          |                |      |      |      |
| SRCPARAM                           | L0002108 | 0.000000007979 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002109 | 0.000000007979 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002110 | 0.000000007979 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002111 | 0.000000007979 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002112 | 0.000000007979 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002113 | 0.000000007979 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002114 | 0.000000007979 | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |                |      |      |      |
| ** LINE VOLUME Source ID = SLINE16 |          |                |      |      |      |
| SRCPARAM                           | L0002115 | 0.0000001047   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002116 | 0.0000001047   | 4.00 | 3.95 | 1.86 |

|    |                                 |          |                |      |      |      |
|----|---------------------------------|----------|----------------|------|------|------|
|    | SRCPARAM                        | L0002117 | 0.00000001047  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002118 | 0.00000001047  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002119 | 0.00000001047  | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |                |      |      |      |
| ** | LINE VOLUME Source ID = SLINE17 |          |                |      |      |      |
|    | SRCPARAM                        | L0002120 | 0.000000004343 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002121 | 0.000000004343 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002122 | 0.000000004343 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002123 | 0.000000004343 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002124 | 0.000000004343 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002125 | 0.000000004343 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002126 | 0.000000004343 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002127 | 0.000000004343 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002128 | 0.000000004343 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |                |      |      |      |
| ** | LINE VOLUME Source ID = SLINE18 |          |                |      |      |      |
|    | SRCPARAM                        | L0002129 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002130 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002131 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002132 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002133 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002134 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002135 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002136 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002137 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002138 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002139 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002140 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002141 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002142 | 0.000000004842 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |                |      |      |      |
| ** | LINE VOLUME Source ID = SLINE19 |          |                |      |      |      |
|    | SRCPARAM                        | L0002143 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002144 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002145 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002146 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002147 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002148 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002149 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002150 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002151 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002152 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002153 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002154 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002155 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002156 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002157 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002158 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002159 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002160 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002161 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002162 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002163 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002164 | 0.000000001607 | 4.00 | 3.95 | 1.86 |



|    |                                 |          |                |      |      |      |
|----|---------------------------------|----------|----------------|------|------|------|
|    | SRCPARAM                        | L0002165 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002166 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002167 | 0.000000001607 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |                |      |      |      |
| ** | LINE VOLUME Source ID = SLINE20 |          |                |      |      |      |
|    | SRCPARAM                        | L0002168 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002169 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002170 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002171 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002172 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002173 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002174 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002175 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002176 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002177 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002178 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002179 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002180 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002181 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002182 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002183 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002184 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002185 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002186 | 0.000000003786 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |                |      |      |      |
| ** | LINE VOLUME Source ID = SLINE21 |          |                |      |      |      |
|    | SRCPARAM                        | L0002187 | 0.000000003631 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002188 | 0.000000003631 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002189 | 0.000000003631 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002190 | 0.000000003631 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002191 | 0.000000003631 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002192 | 0.000000003631 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002193 | 0.000000003631 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002194 | 0.000000003631 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |                |      |      |      |
| ** | LINE VOLUME Source ID = SLINE22 |          |                |      |      |      |
|    | SRCPARAM                        | L0002195 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002196 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002197 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002198 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002199 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002200 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002201 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002202 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002203 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002204 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002205 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002206 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002207 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002208 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002209 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002210 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002211 | 0.000000002689 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002212 | 0.000000002689 | 4.00 | 3.95 | 1.86 |

|                                    |           |               |      |      |      |
|------------------------------------|-----------|---------------|------|------|------|
| SRCPARAM                           | L0002213  | 0.00000002689 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002214  | 0.00000002689 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002215  | 0.00000002689 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002216  | 0.00000002689 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002217  | 0.00000002689 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002218  | 0.00000002689 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002219  | 0.00000002689 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002220  | 0.00000002689 | 4.00 | 3.95 | 1.86 |
| ** -----                           |           |               |      |      |      |
| ** LINE VOLUME Source ID = SLINE23 |           |               |      |      |      |
| SRCPARAM                           | L0002221  | 0.00000005585 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002222  | 0.00000005585 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002223  | 0.00000005585 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002224  | 0.00000005585 | 4.00 | 3.95 | 1.86 |
| ** -----                           |           |               |      |      |      |
| ** LINE VOLUME Source ID = SLINE24 |           |               |      |      |      |
| SRCPARAM                           | L0002225  | 0.00000001498 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002226  | 0.00000001498 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002227  | 0.00000001498 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002228  | 0.00000001498 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002229  | 0.00000001498 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002230  | 0.00000001498 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002231  | 0.00000001498 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002232  | 0.00000001498 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002233  | 0.00000001498 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002234  | 0.00000001498 | 4.00 | 3.95 | 1.86 |
| ** -----                           |           |               |      |      |      |
| URBANSRC ALL                       |           |               |      |      |      |
| SRCGROUP ALL                       |           |               |      |      |      |
| SO FINISHED                        |           |               |      |      |      |
| **                                 |           |               |      |      |      |
| *****                              |           |               |      |      |      |
| ** AERMOD Receptor Pathway         |           |               |      |      |      |
| *****                              |           |               |      |      |      |
| **                                 |           |               |      |      |      |
| **                                 |           |               |      |      |      |
| RE STARTING                        |           |               |      |      |      |
| ** DESCRREC "" ""                  |           |               |      |      |      |
| DISCCART                           | 474201.46 | 3754331.71    | 2.00 |      |      |
| DISCCART                           | 474401.46 | 3754331.71    | 2.00 |      |      |
| DISCCART                           | 474501.46 | 3754331.71    | 2.00 |      |      |
| DISCCART                           | 473801.46 | 3754431.71    | 2.00 |      |      |
| DISCCART                           | 473715.92 | 3754428.71    | 2.00 |      |      |
| DISCCART                           | 473738.73 | 3754428.62    | 2.00 |      |      |
| DISCCART                           | 473755.69 | 3754428.85    | 2.00 |      |      |
| DISCCART                           | 473774.94 | 3754428.85    | 2.00 |      |      |
| DISCCART                           | 473815.97 | 3754429.55    | 2.00 |      |      |
| DISCCART                           | 473831.00 | 3754424.36    | 2.00 |      |      |
| DISCCART                           | 473853.90 | 3754425.20    | 2.00 |      |      |
| DISCCART                           | 473871.89 | 3754423.79    | 2.00 |      |      |
| DISCCART                           | 473891.98 | 3754427.59    | 2.00 |      |      |
| DISCCART                           | 473779.02 | 3754366.16    | 2.00 |      |      |
| DISCCART                           | 473813.90 | 3754366.49    | 2.00 |      |      |
| DISCCART                           | 474014.62 | 3754372.20    | 2.00 |      |      |



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DISCCART      474058.72    3754367.30    2.00
DISCCART      474106.33    3754366.60    2.00
DISCCART      474129.66    3754366.83    2.00
DISCCART      474153.46    3754367.77    2.00
DISCCART      474231.55    3754356.87    2.00
DISCCART      474273.79    3754374.60    2.00
DISCCART      474545.34    3754362.52    2.00
DISCCART      474582.52    3754377.24    2.00
DISCCART      474612.74    3754387.31    2.00
DISCCART      474642.95    3754391.18    2.00
DISCCART      474354.43    3754341.93    2.00
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
SURFFILE  ..\..\Aermod\rivr8.sfc
PROFFILE  ..\..\Aermod\rivr8.PFL
SURFDATA  3190  2008
UAIRDATA  3190  2008
SITEDATA  99999  2008
PROFBASE  250.0  METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
RECTABLE  ALLAVE 1ST
RECTABLE  24 1ST
** Auto-Generated Plotfiles
PLOTFILE  24 ALL 1ST PM10.AD\24H1GALL.PLT 31
PLOTFILE  ANNUAL ALL PM10.AD\AN00GALL.PLT 32
SUMMFILE  PM10.sum
OU FINISHED

*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

A Total of          0 Fatal Error Message(s)
A Total of          1 Warning Message(s)
A Total of          0 Informational Message(s)

***** FATAL ERROR MESSAGES *****
***      NONE      ***

```

```
***** WARNING MESSAGES *****
ME W531      1158      MEOPEN: CAUTION! Met Station ID Missing from
SURFFILE for      SURFDATA
```

```
*****
*** SETUP Finishes Successfully ***
*****
```

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\* 03/13/15  
\*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
\*\*\* 18:20:00

PAGE 1

\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* MODEL SETUP OPTIONS

SUMMARY \*\*\*

---  
\*\*Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --

\*\*NO GAS DEPOSITION Data Provided.

\*\*NO PARTICLE DEPOSITION Data Provided.

\*\*Model Uses NO DRY DEPLETION. DRYDPLT = F

\*\*Model Uses NO WET DEPLETION. WETDPLT = F

\*\*Model Uses URBAN Dispersion Algorithm for the SBL for 296 Source(s),  
for Total of 1 Urban Area(s):

Urban Population = 2100516.0 ; Urban Roughness Length = 1.000 m

\*\*Model Allows User-Specified Options:

1. Stack-tip Downwash.
2. Model Assumes Receptors on FLAT Terrain.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.
6. Urban Roughness Length of 1.0 Meter Used.

\*\*Other Options Specified:

FASTALL - Use effective sigma-y to optimize meander for  
POINT and VOLUME sources, and hybrid approach  
to optimize AREA sources (formerly TOXICS option)  
TEMP\_Sub - Meteorological data includes TEMP substitutions

\*\*Model Accepts FLAGPOLE Receptor Heights.

\*\*The User Specified a Pollutant Type of: PM\_10

\*\*Model Calculates 1 Short Term Average(s) of: 24-HR  
and Calculates ANNUAL Averages

\*\*This Run Includes: 296 Source(s); 1 Source Group(s); and  
27 Receptor(s)

\*\*Model Set To Continue RUNning After the Setup Testing.

\*\*The AERMET Input Meteorological Data Version Date: 14134

\*\*Output Options Selected:

Model Outputs Tables of ANNUAL Averages by Receptor  
Model Outputs Tables of Highest Short Term Values by Receptor  
(RECTABLE Keyword)  
Model Outputs External File(s) of High Values for Plotting  
(PLOTFILE Keyword)  
Model Outputs Separate Summary File of High Ranked Values  
(SUMMFILE Keyword)

\*\*NOTE: The Following Flags May Appear Following CONC Values: c for  
Calm Hours

m for  
Missing Hours

b for  
Both Calm and Missing Hours

\*\*Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 250.00 ;  
Decay Coef. = 0.000 ; Rot. Angle = 0.0  
Emission Units = GRAMS/SEC  
; Emission Rate Unit Factor = 0.10000E+07  
Output Units = MICROGRAMS/M\*\*3

\*\*Approximate Storage Requirements of Model = 3.6 MB of RAM.

\*\*Detailed Error/Message File: PM10.err

\*\*File for Summary of Results: PM10.sum

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:20:00

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PAGE      2
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

```

```

*** VOLUME SOURCE DATA
***

```

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0001921 |          | 0      | 0.16720E-03 | 473797.1 | 3754701.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001922 |          | 0      | 0.16720E-03 | 473797.1 | 3754693.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001923 |          | 0      | 0.16720E-03 | 473797.1 | 3754684.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001924 |          | 0      | 0.94000E-05 | 473737.1 | 3754546.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001925 |          | 0      | 0.94000E-05 | 473737.3 | 3754538.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001926 |          | 0      | 0.94000E-05 | 473737.5 | 3754529.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001927 |          | 0      | 0.94000E-05 | 473737.8 | 3754521.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001928 |          | 0      | 0.94000E-05 | 473738.0 | 3754512.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001929 |          | 0      | 0.94000E-05 | 473738.3 | 3754504.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001930 |          | 0      | 0.94000E-05 | 473738.5 | 3754495.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001931 |          | 0      | 0.94000E-05 | 473740.3 | 3754488.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001932 |          | 0      | 0.94000E-05 | 473747.2 | 3754483.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001933 |          | 0      | 0.94000E-05 | 473755.7 | 3754483.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001934 |          | 0      | 0.94000E-05 | 473764.2 | 3754483.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001935 |          | 0      | 0.94000E-05 | 473772.7 | 3754483.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001936 |          | 0      | 0.94000E-05 | 473781.2 | 3754483.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0001937  | 0   | 0.94000E-05 | 473789.7 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001938  | 0   | 0.94000E-05 | 473798.2 | 3754482.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001939  | 0   | 0.94000E-05 | 473806.7 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001940  | 0   | 0.94000E-05 | 473815.2 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001941  | 0   | 0.94000E-05 | 473823.7 | 3754482.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001942  | 0   | 0.56960E-05 | 474151.2 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001943  | 0   | 0.56960E-05 | 474159.7 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001944  | 0   | 0.56960E-05 | 474168.2 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001945  | 0   | 0.56960E-05 | 474176.7 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001946  | 0   | 0.56960E-05 | 474185.2 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001947  | 0   | 0.56960E-05 | 474193.7 | 3754542.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001948  | 0   | 0.56960E-05 | 474202.2 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001949  | 0   | 0.74660E-04 | 473709.1 | 3754990.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001950  | 0   | 0.74660E-04 | 473716.4 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001951  | 0   | 0.74660E-04 | 473724.6 | 3754986.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001952  | 0   | 0.74660E-04 | 473730.2 | 3754992.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001953  | 0   | 0.74660E-04 | 473730.6 | 3755001.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001954  | 0   | 0.30956E-04 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001955  | 0   | 0.30956E-04 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001956  | 0   | 0.30956E-04 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001957  | 0   | 0.30956E-04 | 474177.7 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001958  | 0   | 0.30956E-04 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001959  | 0   | 0.30956E-04 | 474191.1 | 3754883.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001960  | 0   | 0.30956E-04 | 474197.9 | 3754878.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:20:00

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PAGE      3
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   |          | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0001961 |          | 0      | 0.30956E-04 | 474204.6 | 3754873.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001962 |          | 0      | 0.30956E-04 | 474211.3 | 3754868.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001963 |          | 0      | 0.42670E-05 | 473797.1 | 3754701.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001964 |          | 0      | 0.42670E-05 | 473797.1 | 3754693.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001965 |          | 0      | 0.42670E-05 | 473797.1 | 3754684.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001966 |          | 0      | 0.42670E-05 | 473804.9 | 3754684.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001967 |          | 0      | 0.42670E-05 | 473813.4 | 3754684.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001968 |          | 0      | 0.42670E-05 | 473821.9 | 3754684.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001969 |          | 0      | 0.42670E-05 | 473830.4 | 3754684.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001970 |          | 0      | 0.42670E-05 | 473832.6 | 3754690.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001971 |          | 0      | 0.42670E-05 | 473832.1 | 3754699.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001972 |          | 0      | 0.42670E-05 | 473831.7 | 3754707.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001973 |          | 0      | 0.42670E-05 | 473830.1 | 3754715.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001974 |          | 0      | 0.42670E-05 | 473827.5 | 3754724.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001975 |          | 0      | 0.42670E-05 | 473825.4 | 3754732.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0001976 |          | 0      | 0.42670E-05 | 473825.4 | 3754740.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0001977  | 0   | 0.14160E-05 | 473695.2 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001978  | 0   | 0.14160E-05 | 473703.7 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001979  | 0   | 0.14160E-05 | 473712.2 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001980  | 0   | 0.14160E-05 | 473720.7 | 3754560.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001981  | 0   | 0.14160E-05 | 473729.2 | 3754560.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001982  | 0   | 0.14160E-05 | 473737.0 | 3754559.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001983  | 0   | 0.14160E-05 | 473737.2 | 3754551.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001984  | 0   | 0.14160E-05 | 473737.4 | 3754542.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001985  | 0   | 0.14160E-05 | 473737.6 | 3754534.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001986  | 0   | 0.14160E-05 | 473737.8 | 3754525.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001987  | 0   | 0.14160E-05 | 473738.0 | 3754517.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001988  | 0   | 0.14160E-05 | 473738.2 | 3754508.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001989  | 0   | 0.14160E-05 | 473738.4 | 3754500.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001990  | 0   | 0.14160E-05 | 473738.6 | 3754491.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001991  | 0   | 0.14160E-05 | 473743.3 | 3754485.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001992  | 0   | 0.14160E-05 | 473751.1 | 3754483.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001993  | 0   | 0.14160E-05 | 473759.6 | 3754483.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001994  | 0   | 0.14160E-05 | 473768.1 | 3754483.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001995  | 0   | 0.14160E-05 | 473776.6 | 3754483.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001996  | 0   | 0.14160E-05 | 473785.1 | 3754483.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001997  | 0   | 0.14160E-05 | 473793.6 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001998  | 0   | 0.14160E-05 | 473802.1 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0001999  | 0   | 0.14160E-05 | 473810.6 | 3754482.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002000  | 0   | 0.14160E-05 | 473819.1 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |



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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:20:00

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PAGE      4
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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\*\*\* VOLUME SOURCE DATA

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           | ELEV.    | HEIGHT   |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         |          |          |
| ID       |          | CATS.  | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) |        |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002001 |          | 0      | 0.14160E-05 | 473827.6 | 3754482.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002002 |          | 0      | 0.33420E-06 | 474151.2 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002003 |          | 0      | 0.33420E-06 | 474159.7 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002004 |          | 0      | 0.33420E-06 | 474168.2 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002005 |          | 0      | 0.33420E-06 | 474176.7 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002006 |          | 0      | 0.33420E-06 | 474185.2 | 3754542.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002007 |          | 0      | 0.33420E-06 | 474193.7 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002008 |          | 0      | 0.33420E-06 | 474202.2 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002009 |          | 0      | 0.33420E-06 | 474210.7 | 3754541.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002010 |          | 0      | 0.33420E-06 | 474219.2 | 3754541.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002011 |          | 0      | 0.33420E-06 | 474225.0 | 3754544.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002012 |          | 0      | 0.33420E-06 | 474224.8 | 3754552.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002013 |          | 0      | 0.33420E-06 | 474224.6 | 3754561.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002014 |          | 0      | 0.33420E-06 | 474230.5 | 3754563.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002015 |          | 0      | 0.33420E-06 | 474239.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002016 |          | 0      | 0.33420E-06 | 474247.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002017  | 0   | 0.33420E-06 | 474256.0 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002018  | 0   | 0.33420E-06 | 474264.5 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002019  | 0   | 0.33420E-06 | 474273.0 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002020  | 0   | 0.33420E-06 | 474281.5 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002021  | 0   | 0.32010E-05 | 473695.7 | 3755013.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002022  | 0   | 0.32010E-05 | 473699.5 | 3755005.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002023  | 0   | 0.32010E-05 | 473703.4 | 3754997.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002024  | 0   | 0.32010E-05 | 473708.0 | 3754990.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002025  | 0   | 0.32010E-05 | 473715.0 | 3754986.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002026  | 0   | 0.32010E-05 | 473723.3 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002027  | 0   | 0.32010E-05 | 473729.4 | 3754991.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002028  | 0   | 0.32010E-05 | 473730.8 | 3754999.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002029  | 0   | 0.23700E-05 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002030  | 0   | 0.23700E-05 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002031  | 0   | 0.23700E-05 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002032  | 0   | 0.23700E-05 | 474177.6 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002033  | 0   | 0.23700E-05 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002034  | 0   | 0.23700E-05 | 474191.1 | 3754883.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002035  | 0   | 0.23700E-05 | 474197.8 | 3754878.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002036  | 0   | 0.23700E-05 | 474204.6 | 3754873.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002037  | 0   | 0.23700E-05 | 474211.3 | 3754867.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002038  | 0   | 0.23700E-05 | 474218.0 | 3754862.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002039  | 0   | 0.23700E-05 | 474224.7 | 3754857.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002040  | 0   | 0.23700E-05 | 474231.5 | 3754852.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:20:00

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PAGE      5
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   |          | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002041 |          | 0      | 0.23700E-05 | 474238.2 | 3754847.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002042 |          | 0      | 0.23700E-05 | 474244.9 | 3754842.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002043 |          | 0      | 0.23700E-05 | 474251.6 | 3754836.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002044 |          | 0      | 0.23700E-05 | 474258.4 | 3754831.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002045 |          | 0      | 0.23700E-05 | 474265.1 | 3754826.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002046 |          | 0      | 0.23700E-05 | 474271.8 | 3754821.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002047 |          | 0      | 0.23700E-05 | 474276.0 | 3754814.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002048 |          | 0      | 0.23700E-05 | 474275.5 | 3754806.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002049 |          | 0      | 0.23700E-05 | 474271.2 | 3754799.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002050 |          | 0      | 0.23700E-05 | 474265.0 | 3754793.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002051 |          | 0      | 0.23700E-05 | 474257.2 | 3754791.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002052 |          | 0      | 0.23700E-05 | 474248.7 | 3754790.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002053 |          | 0      | 0.23700E-05 | 474240.3 | 3754788.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002054 |          | 0      | 0.23700E-05 | 474236.3 | 3754782.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002055 |          | 0      | 0.39800E-04 | 474028.4 | 3754694.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002056 |          | 0      | 0.39800E-04 | 474028.3 | 3754685.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002057  | 0   | 0.39800E-04 | 474028.2 | 3754677.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002058  | 0   | 0.39800E-04 | 474028.2 | 3754668.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002059  | 0   | 0.13200E-05 | 474027.8 | 3754742.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002060  | 0   | 0.13200E-05 | 474027.8 | 3754734.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002061  | 0   | 0.13200E-05 | 474027.9 | 3754725.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002062  | 0   | 0.13200E-05 | 474027.9 | 3754717.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002063  | 0   | 0.13200E-05 | 474027.9 | 3754708.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002064  | 0   | 0.13200E-05 | 474028.0 | 3754700.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002065  | 0   | 0.13200E-05 | 474028.0 | 3754691.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002066  | 0   | 0.13200E-05 | 474028.1 | 3754683.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002067  | 0   | 0.13200E-05 | 474028.1 | 3754674.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002068  | 0   | 0.13200E-05 | 474028.1 | 3754666.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002069  | 0   | 0.23450E-06 | 473797.1 | 3754701.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002070  | 0   | 0.23450E-06 | 473797.1 | 3754693.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002071  | 0   | 0.23450E-06 | 473797.1 | 3754684.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002072  | 0   | 0.13180E-07 | 473737.1 | 3754546.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002073  | 0   | 0.13180E-07 | 473737.3 | 3754538.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002074  | 0   | 0.13180E-07 | 473737.5 | 3754529.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002075  | 0   | 0.13180E-07 | 473737.8 | 3754521.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002076  | 0   | 0.13180E-07 | 473738.0 | 3754512.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002077  | 0   | 0.13180E-07 | 473738.3 | 3754504.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002078  | 0   | 0.13180E-07 | 473738.5 | 3754495.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002079  | 0   | 0.13180E-07 | 473740.3 | 3754488.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002080  | 0   | 0.13180E-07 | 473747.2 | 3754483.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:20:00

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PAGE      6
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002081 |          | 0      | 0.13180E-07 | 473755.7 | 3754483.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002082 |          | 0      | 0.13180E-07 | 473764.2 | 3754483.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002083 |          | 0      | 0.13180E-07 | 473772.7 | 3754483.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002084 |          | 0      | 0.13180E-07 | 473781.2 | 3754483.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002085 |          | 0      | 0.13180E-07 | 473789.7 | 3754483.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002086 |          | 0      | 0.13180E-07 | 473798.2 | 3754482.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002087 |          | 0      | 0.13180E-07 | 473806.7 | 3754482.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002088 |          | 0      | 0.13180E-07 | 473815.2 | 3754482.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002089 |          | 0      | 0.13180E-07 | 473823.7 | 3754482.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002108 |          | 0      | 0.79790E-08 | 474151.2 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002109 |          | 0      | 0.79790E-08 | 474159.7 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002110 |          | 0      | 0.79790E-08 | 474168.2 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002111 |          | 0      | 0.79790E-08 | 474176.7 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002112 |          | 0      | 0.79790E-08 | 474185.2 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002113 |          | 0      | 0.79790E-08 | 474193.7 | 3754542.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002114 |          | 0      | 0.79790E-08 | 474202.2 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002115  | 0   | 0.10470E-06 | 473709.1 | 3754990.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002116  | 0   | 0.10470E-06 | 473716.4 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002117  | 0   | 0.10470E-06 | 473724.6 | 3754986.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002118  | 0   | 0.10470E-06 | 473730.2 | 3754992.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002119  | 0   | 0.10470E-06 | 473730.6 | 3755001.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002120  | 0   | 0.43430E-07 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002121  | 0   | 0.43430E-07 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002122  | 0   | 0.43430E-07 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002123  | 0   | 0.43430E-07 | 474177.7 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002124  | 0   | 0.43430E-07 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002125  | 0   | 0.43430E-07 | 474191.1 | 3754883.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002126  | 0   | 0.43430E-07 | 474197.9 | 3754878.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002127  | 0   | 0.43430E-07 | 474204.6 | 3754873.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002128  | 0   | 0.43430E-07 | 474211.3 | 3754868.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002129  | 0   | 0.48420E-07 | 473797.1 | 3754701.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002130  | 0   | 0.48420E-07 | 473797.1 | 3754693.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002131  | 0   | 0.48420E-07 | 473797.1 | 3754684.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002132  | 0   | 0.48420E-07 | 473804.9 | 3754684.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002133  | 0   | 0.48420E-07 | 473813.4 | 3754684.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002134  | 0   | 0.48420E-07 | 473821.9 | 3754684.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002135  | 0   | 0.48420E-07 | 473830.4 | 3754684.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002136  | 0   | 0.48420E-07 | 473832.6 | 3754690.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002137  | 0   | 0.48420E-07 | 473832.1 | 3754699.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002138  | 0   | 0.48420E-07 | 473831.7 | 3754707.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:20:00

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PAGE      7
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           | ELEV.    | HEIGHT   |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         |          |          |
| ID       | CATS.    | SCALAR | VARY        | (METERS) | (METERS)  | (METERS) | (METERS) |
| (METERS) | (METERS) | BY     |             |          |           |          |          |
| -----    |          |        |             |          |           |          |          |
| L0002139 |          | 0      | 0.48420E-07 | 473830.1 | 3754715.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002140 |          | 0      | 0.48420E-07 | 473827.5 | 3754724.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002141 |          | 0      | 0.48420E-07 | 473825.4 | 3754732.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002142 |          | 0      | 0.48420E-07 | 473825.4 | 3754740.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002143 |          | 0      | 0.16070E-07 | 473695.2 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002144 |          | 0      | 0.16070E-07 | 473703.7 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002145 |          | 0      | 0.16070E-07 | 473712.2 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002146 |          | 0      | 0.16070E-07 | 473720.7 | 3754560.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002147 |          | 0      | 0.16070E-07 | 473729.2 | 3754560.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002148 |          | 0      | 0.16070E-07 | 473737.0 | 3754559.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002149 |          | 0      | 0.16070E-07 | 473737.2 | 3754551.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002150 |          | 0      | 0.16070E-07 | 473737.4 | 3754542.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002151 |          | 0      | 0.16070E-07 | 473737.6 | 3754534.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002152 |          | 0      | 0.16070E-07 | 473737.8 | 3754525.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002153 |          | 0      | 0.16070E-07 | 473738.0 | 3754517.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002154 |          | 0      | 0.16070E-07 | 473738.2 | 3754508.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002155  | 0   | 0.16070E-07 | 473738.4 | 3754500.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002156  | 0   | 0.16070E-07 | 473738.6 | 3754491.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002157  | 0   | 0.16070E-07 | 473743.3 | 3754485.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002158  | 0   | 0.16070E-07 | 473751.1 | 3754483.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002159  | 0   | 0.16070E-07 | 473759.6 | 3754483.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002160  | 0   | 0.16070E-07 | 473768.1 | 3754483.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002161  | 0   | 0.16070E-07 | 473776.6 | 3754483.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002162  | 0   | 0.16070E-07 | 473785.1 | 3754483.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002163  | 0   | 0.16070E-07 | 473793.6 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002164  | 0   | 0.16070E-07 | 473802.1 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002165  | 0   | 0.16070E-07 | 473810.6 | 3754482.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002166  | 0   | 0.16070E-07 | 473819.1 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002167  | 0   | 0.16070E-07 | 473827.6 | 3754482.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002168  | 0   | 0.37860E-08 | 474151.2 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002169  | 0   | 0.37860E-08 | 474159.7 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002170  | 0   | 0.37860E-08 | 474168.2 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002171  | 0   | 0.37860E-08 | 474176.7 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002172  | 0   | 0.37860E-08 | 474185.2 | 3754542.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002173  | 0   | 0.37860E-08 | 474193.7 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002174  | 0   | 0.37860E-08 | 474202.2 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002175  | 0   | 0.37860E-08 | 474210.7 | 3754541.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002176  | 0   | 0.37860E-08 | 474219.2 | 3754541.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002177  | 0   | 0.37860E-08 | 474225.0 | 3754544.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002178  | 0   | 0.37860E-08 | 474224.8 | 3754552.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |



```

*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:20:00

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PAGE      8
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

```

```

*** VOLUME SOURCE DATA
***

```

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   |          | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002179 |          | 0      | 0.37860E-08 | 474224.6 | 3754561.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002180 |          | 0      | 0.37860E-08 | 474230.5 | 3754563.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002181 |          | 0      | 0.37860E-08 | 474239.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002182 |          | 0      | 0.37860E-08 | 474247.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002183 |          | 0      | 0.37860E-08 | 474256.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002184 |          | 0      | 0.37860E-08 | 474264.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002185 |          | 0      | 0.37860E-08 | 474273.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002186 |          | 0      | 0.37860E-08 | 474281.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002187 |          | 0      | 0.36310E-07 | 473695.7 | 3755013.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002188 |          | 0      | 0.36310E-07 | 473699.5 | 3755005.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002189 |          | 0      | 0.36310E-07 | 473703.4 | 3754997.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002190 |          | 0      | 0.36310E-07 | 473708.0 | 3754990.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002191 |          | 0      | 0.36310E-07 | 473715.0 | 3754986.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002192 |          | 0      | 0.36310E-07 | 473723.3 | 3754985.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002193 |          | 0      | 0.36310E-07 | 473729.4 | 3754991.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002194 |          | 0      | 0.36310E-07 | 473730.8 | 3754999.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002195  | 0   | 0.26890E-07 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002196  | 0   | 0.26890E-07 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002197  | 0   | 0.26890E-07 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002198  | 0   | 0.26890E-07 | 474177.6 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002199  | 0   | 0.26890E-07 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002200  | 0   | 0.26890E-07 | 474191.1 | 3754883.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002201  | 0   | 0.26890E-07 | 474197.8 | 3754878.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002202  | 0   | 0.26890E-07 | 474204.6 | 3754873.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002203  | 0   | 0.26890E-07 | 474211.3 | 3754867.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002204  | 0   | 0.26890E-07 | 474218.0 | 3754862.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002205  | 0   | 0.26890E-07 | 474224.7 | 3754857.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002206  | 0   | 0.26890E-07 | 474231.5 | 3754852.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002207  | 0   | 0.26890E-07 | 474238.2 | 3754847.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002208  | 0   | 0.26890E-07 | 474244.9 | 3754842.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002209  | 0   | 0.26890E-07 | 474251.6 | 3754836.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002210  | 0   | 0.26890E-07 | 474258.4 | 3754831.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002211  | 0   | 0.26890E-07 | 474265.1 | 3754826.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002212  | 0   | 0.26890E-07 | 474271.8 | 3754821.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002213  | 0   | 0.26890E-07 | 474276.0 | 3754814.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002214  | 0   | 0.26890E-07 | 474275.5 | 3754806.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002215  | 0   | 0.26890E-07 | 474271.2 | 3754799.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002216  | 0   | 0.26890E-07 | 474265.0 | 3754793.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002217  | 0   | 0.26890E-07 | 474257.2 | 3754791.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002218  | 0   | 0.26890E-07 | 474248.7 | 3754790.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:20:00

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PAGE      9
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

```

```

*** VOLUME SOURCE DATA
***

```

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002219 |          | 0      | 0.26890E-07 | 474240.3 | 3754788.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002220 |          | 0      | 0.26890E-07 | 474236.3 | 3754782.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002221 |          | 0      | 0.55850E-07 | 474028.4 | 3754694.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002222 |          | 0      | 0.55850E-07 | 474028.3 | 3754685.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002223 |          | 0      | 0.55850E-07 | 474028.2 | 3754677.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002224 |          | 0      | 0.55850E-07 | 474028.2 | 3754668.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002225 |          | 0      | 0.14980E-07 | 474027.8 | 3754742.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002226 |          | 0      | 0.14980E-07 | 474027.8 | 3754734.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002227 |          | 0      | 0.14980E-07 | 474027.9 | 3754725.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002228 |          | 0      | 0.14980E-07 | 474027.9 | 3754717.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002229 |          | 0      | 0.14980E-07 | 474027.9 | 3754708.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002230 |          | 0      | 0.14980E-07 | 474028.0 | 3754700.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002231 |          | 0      | 0.14980E-07 | 474028.0 | 3754691.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002232 |          | 0      | 0.14980E-07 | 474028.1 | 3754683.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002233 |          | 0      | 0.14980E-07 | 474028.1 | 3754674.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002234 |          | 0      | 0.14980E-07 | 474028.1 | 3754666.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:20:00

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PAGE 10
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

```

```

*** SOURCE IDs DEFINING SOURCE
GROUPS ***

```

| SRCGROUP ID |            | SOURCE IDs |          |   |          |   |
|-------------|------------|------------|----------|---|----------|---|
| -----       |            | -----      |          |   |          |   |
| ALL         | L0001921   | ,          | L0001922 | , | L0001923 | , |
| L0001925    | , L0001926 | ,          | L0001927 | , | L0001928 | , |
|             | L0001929   | ,          | L0001930 | , | L0001931 | , |
| L0001933    | , L0001934 | ,          | L0001935 | , | L0001936 | , |
|             | L0001937   | ,          | L0001938 | , | L0001939 | , |
| L0001941    | , L0001942 | ,          | L0001943 | , | L0001944 | , |
|             | L0001945   | ,          | L0001946 | , | L0001947 | , |
| L0001949    | , L0001950 | ,          | L0001951 | , | L0001952 | , |
|             | L0001953   | ,          | L0001954 | , | L0001955 | , |
| L0001957    | , L0001958 | ,          | L0001959 | , | L0001960 | , |
|             | L0001961   | ,          | L0001962 | , | L0001963 | , |
| L0001965    | , L0001966 | ,          | L0001967 | , | L0001968 | , |
|             | L0001969   | ,          | L0001970 | , | L0001971 | , |
| L0001973    | , L0001974 | ,          | L0001975 | , | L0001976 | , |
|             | L0001977   | ,          | L0001978 | , | L0001979 | , |
| L0001981    | , L0001982 | ,          | L0001983 | , | L0001984 | , |
|             | L0001985   | ,          | L0001986 | , | L0001987 | , |
| L0001989    | , L0001990 | ,          | L0001991 | , | L0001992 | , |
|             | L0001993   | ,          | L0001994 | , | L0001995 | , |
| L0001997    | , L0001998 | ,          | L0001999 | , | L0002000 | , |
|             | L0002001   | ,          | L0002002 | , | L0002003 | , |
| L0002005    | , L0002006 | ,          | L0002007 | , | L0002008 | , |
|             | L0002009   | ,          | L0002010 | , | L0002011 | , |
| L0002013    | , L0002014 | ,          | L0002015 | , | L0002016 | , |
|             | L0002017   | ,          | L0002018 | , | L0002019 | , |
| L0002021    | , L0002022 | ,          | L0002023 | , | L0002024 | , |

|          |                        |                          |                          |                 |  |
|----------|------------------------|--------------------------|--------------------------|-----------------|--|
| L0002029 | L0002025<br>, L0002030 | , L0002026<br>, L0002031 | , L0002027<br>, L0002032 | , L0002028<br>, |  |
| L0002037 | L0002033<br>, L0002038 | , L0002034<br>, L0002039 | , L0002035<br>, L0002040 | , L0002036<br>, |  |
| L0002045 | L0002041<br>, L0002046 | , L0002042<br>, L0002047 | , L0002043<br>, L0002048 | , L0002044<br>, |  |
| L0002053 | L0002049<br>, L0002054 | , L0002050<br>, L0002055 | , L0002051<br>, L0002056 | , L0002052<br>, |  |
| L0002061 | L0002057<br>, L0002062 | , L0002058<br>, L0002063 | , L0002059<br>, L0002064 | , L0002060<br>, |  |
| L0002069 | L0002065<br>, L0002070 | , L0002066<br>, L0002071 | , L0002067<br>, L0002072 | , L0002068<br>, |  |
| L0002077 | L0002073<br>, L0002078 | , L0002074<br>, L0002079 | , L0002075<br>, L0002080 | , L0002076<br>, |  |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:20:00

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PAGE 11
**MODELOPTs:   NonDFAULT CONC      FLAT      FLGPOL      FASTALL

```

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*** SOURCE IDs DEFINING SOURCE
GROUPS ***

```

| SRCGROUP ID |            | SOURCE IDs |            |   |            |   |
|-------------|------------|------------|------------|---|------------|---|
| -----       |            | -----      |            |   |            |   |
| L0002085    | L0002081   | ,          | L0002082   | , | L0002083   | , |
|             | , L0002086 |            | , L0002087 |   | , L0002088 | , |
| L0002111    | L0002089   | ,          | L0002108   | , | L0002109   | , |
|             | , L0002112 |            | , L0002113 |   | , L0002114 | , |
| L0002119    | L0002115   | ,          | L0002116   | , | L0002117   | , |
|             | , L0002120 |            | , L0002121 |   | , L0002122 | , |
| L0002127    | L0002123   | ,          | L0002124   | , | L0002125   | , |
|             | , L0002128 |            | , L0002129 |   | , L0002130 | , |
| L0002135    | L0002131   | ,          | L0002132   | , | L0002133   | , |
|             | , L0002136 |            | , L0002137 |   | , L0002138 | , |
| L0002143    | L0002139   | ,          | L0002140   | , | L0002141   | , |
|             | , L0002144 |            | , L0002145 |   | , L0002146 | , |
| L0002151    | L0002147   | ,          | L0002148   | , | L0002149   | , |
|             | , L0002152 |            | , L0002153 |   | , L0002154 | , |
| L0002159    | L0002155   | ,          | L0002156   | , | L0002157   | , |
|             | , L0002160 |            | , L0002161 |   | , L0002162 | , |
| L0002167    | L0002163   | ,          | L0002164   | , | L0002165   | , |
|             | , L0002168 |            | , L0002169 |   | , L0002170 | , |
| L0002175    | L0002171   | ,          | L0002172   | , | L0002173   | , |
|             | , L0002176 |            | , L0002177 |   | , L0002178 | , |
| L0002183    | L0002179   | ,          | L0002180   | , | L0002181   | , |
|             | , L0002184 |            | , L0002185 |   | , L0002186 | , |
| L0002191    | L0002187   | ,          | L0002188   | , | L0002189   | , |
|             | , L0002192 |            | , L0002193 |   | , L0002194 | , |
| L0002199    | L0002195   | ,          | L0002196   | , | L0002197   | , |
|             | , L0002200 |            | , L0002201 |   | , L0002202 | , |

|          |            |            |            |            |   |
|----------|------------|------------|------------|------------|---|
| L0002207 | L0002203   | , L0002204 | , L0002205 | , L0002206 | , |
|          | , L0002208 | , L0002209 | , L0002210 | ,          |   |
| L0002215 | L0002211   | , L0002212 | , L0002213 | , L0002214 | , |
|          | , L0002216 | , L0002217 | , L0002218 | ,          |   |
| L0002223 | L0002219   | , L0002220 | , L0002221 | , L0002222 | , |
|          | , L0002224 | , L0002225 | , L0002226 | ,          |   |
| L0002231 | L0002227   | , L0002228 | , L0002229 | , L0002230 | , |
|          | , L0002232 | , L0002233 | , L0002234 | ,          |   |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:20:00

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PAGE 12
**MODELOPTs:   NonDFAULT CONC      FLAT      FLGPOL      FASTALL

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```

*** SOURCE IDs DEFINED AS URBAN
SOURCES ***

```

| URBAN ID | URBAN POP  | SOURCE IDs |            |            |   |
|----------|------------|------------|------------|------------|---|
| -----    | -----      | -----      |            |            |   |
| L0001924 | 2100516.   | L0001921   | , L0001922 | , L0001923 | , |
| L0001928 | , L0001925 | , L0001926 | , L0001927 | ,          |   |
| L0001933 | L0001929   | , L0001930 | , L0001931 | , L0001932 | , |
|          | , L0001934 | , L0001935 | , L0001936 | ,          |   |
| L0001941 | L0001937   | , L0001938 | , L0001939 | , L0001940 | , |
|          | , L0001942 | , L0001943 | , L0001944 | ,          |   |
| L0001949 | L0001945   | , L0001946 | , L0001947 | , L0001948 | , |
|          | , L0001950 | , L0001951 | , L0001952 | ,          |   |
| L0001957 | L0001953   | , L0001954 | , L0001955 | , L0001956 | , |
|          | , L0001958 | , L0001959 | , L0001960 | ,          |   |
| L0001965 | L0001961   | , L0001962 | , L0001963 | , L0001964 | , |
|          | , L0001966 | , L0001967 | , L0001968 | ,          |   |
| L0001973 | L0001969   | , L0001970 | , L0001971 | , L0001972 | , |
|          | , L0001974 | , L0001975 | , L0001976 | ,          |   |
| L0001981 | L0001977   | , L0001978 | , L0001979 | , L0001980 | , |
|          | , L0001982 | , L0001983 | , L0001984 | ,          |   |
| L0001989 | L0001985   | , L0001986 | , L0001987 | , L0001988 | , |
|          | , L0001990 | , L0001991 | , L0001992 | ,          |   |
| L0001997 | L0001993   | , L0001994 | , L0001995 | , L0001996 | , |
|          | , L0001998 | , L0001999 | , L0002000 | ,          |   |
| L0002005 | L0002001   | , L0002002 | , L0002003 | , L0002004 | , |
|          | , L0002006 | , L0002007 | , L0002008 | ,          |   |
| L0002013 | L0002009   | , L0002010 | , L0002011 | , L0002012 | , |
|          | , L0002014 | , L0002015 | , L0002016 | ,          |   |



|          |                        |                          |                          |                 |  |
|----------|------------------------|--------------------------|--------------------------|-----------------|--|
| L0002021 | L0002017<br>, L0002022 | , L0002018<br>, L0002023 | , L0002019<br>, L0002024 | , L0002020<br>, |  |
| L0002029 | L0002025<br>, L0002030 | , L0002026<br>, L0002031 | , L0002027<br>, L0002032 | , L0002028<br>, |  |
| L0002037 | L0002033<br>, L0002038 | , L0002034<br>, L0002039 | , L0002035<br>, L0002040 | , L0002036<br>, |  |
| L0002045 | L0002041<br>, L0002046 | , L0002042<br>, L0002047 | , L0002043<br>, L0002048 | , L0002044<br>, |  |
| L0002053 | L0002049<br>, L0002054 | , L0002050<br>, L0002055 | , L0002051<br>, L0002056 | , L0002052<br>, |  |
| L0002061 | L0002057<br>, L0002062 | , L0002058<br>, L0002063 | , L0002059<br>, L0002064 | , L0002060<br>, |  |
| L0002069 | L0002065<br>, L0002070 | , L0002066<br>, L0002071 | , L0002067<br>, L0002072 | , L0002068<br>, |  |
| L0002077 | L0002073<br>, L0002078 | , L0002074<br>, L0002079 | , L0002075<br>, L0002080 | , L0002076<br>, |  |

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*** AERMOD - VERSION 14134 *** *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. *** 03/13/15
*** AERMET - VERSION 14134 *** ***
*** 18:20:00

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**MODELOPTs:  NonDEFAULT CONC          FLAT          FLGPOL          FASTALL

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*** SOURCE IDs DEFINED AS URBAN
SOURCES ***

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| URBAN ID | URBAN POP           | SOURCE IDs          |                     |            |  |
|----------|---------------------|---------------------|---------------------|------------|--|
| -----    | -----               | -----               |                     |            |  |
| L0002085 | L0002081 , L0002086 | L0002082 , L0002087 | L0002083 , L0002088 | L0002084 , |  |
| L0002111 | L0002089 , L0002112 | L0002108 , L0002113 | L0002109 , L0002114 | L0002110 , |  |
| L0002119 | L0002115 , L0002120 | L0002116 , L0002121 | L0002117 , L0002122 | L0002118 , |  |
| L0002127 | L0002123 , L0002128 | L0002124 , L0002129 | L0002125 , L0002130 | L0002126 , |  |
| L0002135 | L0002131 , L0002136 | L0002132 , L0002137 | L0002133 , L0002138 | L0002134 , |  |
| L0002143 | L0002139 , L0002144 | L0002140 , L0002145 | L0002141 , L0002146 | L0002142 , |  |
| L0002151 | L0002147 , L0002152 | L0002148 , L0002153 | L0002149 , L0002154 | L0002150 , |  |
| L0002159 | L0002155 , L0002160 | L0002156 , L0002161 | L0002157 , L0002162 | L0002158 , |  |
| L0002167 | L0002163 , L0002168 | L0002164 , L0002169 | L0002165 , L0002170 | L0002166 , |  |
| L0002175 | L0002171 , L0002176 | L0002172 , L0002177 | L0002173 , L0002178 | L0002174 , |  |
| L0002183 | L0002179 , L0002184 | L0002180 , L0002185 | L0002181 , L0002186 | L0002182 , |  |
| L0002191 | L0002187 , L0002192 | L0002188 , L0002193 | L0002189 , L0002194 | L0002190 , |  |
| L0002199 | L0002195 , L0002200 | L0002196 , L0002201 | L0002197 , L0002202 | L0002198 , |  |

|          |                        |                          |                          |                 |   |
|----------|------------------------|--------------------------|--------------------------|-----------------|---|
| L0002207 | L0002203<br>, L0002208 | , L0002204<br>, L0002209 | , L0002205<br>, L0002210 | , L0002206<br>, | , |
| L0002215 | L0002211<br>, L0002216 | , L0002212<br>, L0002217 | , L0002213<br>, L0002218 | , L0002214<br>, | , |
| L0002223 | L0002219<br>, L0002224 | , L0002220<br>, L0002225 | , L0002221<br>, L0002226 | , L0002222<br>, | , |
| L0002231 | L0002227<br>, L0002232 | , L0002228<br>, L0002233 | , L0002229<br>, L0002234 | , L0002230<br>, | , |

\*\*\* AERMOD - VERSION 14134 \*\*\*      \*\*\* U:\UcJobs\\_08600-  
 09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\*      03/13/15  
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 \*\*\*      18:20:00

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\*\*MODELOPTS:      NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

\*\*\* DISCRETE CARTESIAN

RECEPTORS \*\*\*

(X-COORD, Y-COORD, ZELEV,

ZHILL, ZFLAG)

(METERS)

|                        |        |        |       |   |
|------------------------|--------|--------|-------|---|
| ( 474201.5, 3754331.7, | 250.0, | 250.0, | 2.0); | ( |
| 474401.5, 3754331.7,   | 250.0, | 250.0, | 2.0); |   |
| ( 474501.5, 3754331.7, | 250.0, | 250.0, | 2.0); | ( |
| 473801.5, 3754431.7,   | 250.0, | 250.0, | 2.0); |   |
| ( 473715.9, 3754428.7, | 250.0, | 250.0, | 2.0); | ( |
| 473738.7, 3754428.6,   | 250.0, | 250.0, | 2.0); |   |
| ( 473755.7, 3754428.8, | 250.0, | 250.0, | 2.0); | ( |
| 473774.9, 3754428.8,   | 250.0, | 250.0, | 2.0); |   |
| ( 473816.0, 3754429.5, | 250.0, | 250.0, | 2.0); | ( |
| 473831.0, 3754424.4,   | 250.0, | 250.0, | 2.0); |   |
| ( 473853.9, 3754425.2, | 250.0, | 250.0, | 2.0); | ( |
| 473871.9, 3754423.8,   | 250.0, | 250.0, | 2.0); |   |
| ( 473892.0, 3754427.6, | 250.0, | 250.0, | 2.0); | ( |
| 473779.0, 3754366.2,   | 250.0, | 250.0, | 2.0); |   |
| ( 473813.9, 3754366.5, | 250.0, | 250.0, | 2.0); | ( |
| 474014.6, 3754372.2,   | 250.0, | 250.0, | 2.0); |   |
| ( 474058.7, 3754367.3, | 250.0, | 250.0, | 2.0); | ( |
| 474106.3, 3754366.6,   | 250.0, | 250.0, | 2.0); |   |
| ( 474129.7, 3754366.8, | 250.0, | 250.0, | 2.0); | ( |
| 474153.5, 3754367.8,   | 250.0, | 250.0, | 2.0); |   |
| ( 474231.5, 3754356.9, | 250.0, | 250.0, | 2.0); | ( |
| 474273.8, 3754374.6,   | 250.0, | 250.0, | 2.0); |   |
| ( 474545.3, 3754362.5, | 250.0, | 250.0, | 2.0); | ( |
| 474582.5, 3754377.2,   | 250.0, | 250.0, | 2.0); |   |
| ( 474612.7, 3754387.3, | 250.0, | 250.0, | 2.0); | ( |
| 474643.0, 3754391.2,   | 250.0, | 250.0, | 2.0); |   |
| ( 474354.4, 3754341.9, | 250.0, | 250.0, | 2.0); |   |

8.23, 10.80, 1.54, 3.09, 5.14,

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
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\*\*MODELOPTs: NonDFAULT CONC FLAT FLGPOL FASTALL

\*\*\* UP TO THE FIRST 24 HOURS OF

METEOROLOGICAL DATA \*\*\*

Surface file: ..\..\Aermod\rivr8.sfc  
 Met Version: 14134  
 Profile file: ..\..\Aermod\rivr8.PFL  
 Surface format: FREE  
 Profile format: FREE  
 Surface station no.: 3190 Upper air station no.:  
 3190  
 Name: UNKNOWN Name:  
 UNKNOWN Year: 2008 Year:  
 2008

First 24 hours of scalar data

| YR    | MO     | DY  | JDY | HR | H0     | U*     | W*     | DT/DZ  | ZICNV | ZIMCH | M-O      | LEN  | Z0 |
|-------|--------|-----|-----|----|--------|--------|--------|--------|-------|-------|----------|------|----|
| BOWEN | ALBEDO | REF | WS  | WD | HT     | REF    | TA     | HT     |       |       |          |      |    |
| 08    | 01     | 01  | 1   | 01 | -64.0  | 0.616  | -9.000 | -9.000 | -999. | 1157. | 319.6    | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 5.40   | 27.    | 9.1    | 287.5  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 02 | -54.0  | 0.502  | -9.000 | -9.000 | -999. | 866.  | 204.9    | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 4.50   | 40.    | 9.1    | 287.5  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 03 | -16.4  | 0.152  | -9.000 | -9.000 | -999. | 347.  | 18.8     | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 2.20   | 62.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 3.10   | 67.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 05 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 4.90   | 96.    | 9.1    | 286.4  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 06 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 3.10   | 342.   | 9.1    | 286.4  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 07 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 4.00   | 38.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 08 | -35.7  | 0.448  | -9.000 | -9.000 | -999. | 719.  | 220.9    | 0.31 |    |
| 1.00  | 0.53   |     |     |    | 4.00   | 62.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 09 | 26.7   | 0.649  | 0.357  | 0.005  | 59.   | 1253. | -895.5   | 0.31 |    |
| 1.00  | 0.32   |     |     |    | 5.40   | 294.   | 9.1    | 288.1  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 10 | 76.5   | 0.503  | 0.700  | 0.009  | 157.  | 879.  | -146.3   | 0.31 |    |
| 1.00  | 0.25   |     |     |    | 4.00   | 42.    | 9.1    | 289.2  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 11 | 123.5  | 0.418  | 1.124  | 0.012  | 404.  | 655.  | -51.7    | 0.31 |    |
| 1.00  | 0.22   |     |     |    | 3.10   | 30.    | 9.1    | 290.9  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 12 | 130.9  | 0.715  | 1.311  | 0.005  | 605.  | 1451. | -245.0   | 0.31 |    |
| 1.00  | 0.21   |     |     |    | 5.80   | 37.    | 9.1    | 290.9  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 13 | 81.1   | 0.560  | 1.174  | 0.006  | 701.  | 1033. | -189.8   | 0.31 |    |
| 1.00  | 0.21   |     |     |    | 4.50   | 4.     | 9.1    | 290.9  | 5.5   |       |          |      |    |

|      |      |      |      |     |       |       |        |        |       |       |        |      |
|------|------|------|------|-----|-------|-------|--------|--------|-------|-------|--------|------|
| 08   | 01   | 01   | 1    | 14  | 76.4  | 0.604 | 1.171  | 0.005  | 739.  | 1124. | -252.5 | 0.31 |
| 1.00 | 0.23 | 4.90 | 13.  | 9.1 | 290.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 15  | 52.3  | 0.805 | 1.043  | 0.005  | 762.  | 1730. | -875.8 | 0.31 |
| 1.00 | 0.26 | 6.70 | 39.  | 9.1 | 290.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 16  | 11.1  | 0.377 | 0.624  | 0.011  | 767.  | 800.  | -422.2 | 0.31 |
| 1.00 | 0.35 | 3.10 | 346. | 9.1 | 290.4 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 17  | -43.3 | 0.441 | -9.000 | -9.000 | -999. | 705.  | 173.6  | 0.31 |
| 1.00 | 0.63 | 4.00 | 9.   | 9.1 | 290.4 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 18  | -29.0 | 0.400 | -9.000 | -9.000 | -999. | 608.  | 192.9  | 0.31 |
| 1.00 | 1.00 | 3.60 | 45.  | 9.1 | 289.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 19  | -49.6 | 0.505 | -9.000 | -9.000 | -999. | 860.  | 227.3  | 0.31 |
| 1.00 | 1.00 | 4.50 | 25.  | 9.1 | 289.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 20  | -64.0 | 0.730 | -9.000 | -9.000 | -999. | 1496. | 533.1  | 0.31 |
| 1.00 | 1.00 | 6.30 | 60.  | 9.1 | 289.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 21  | -29.1 | 0.400 | -9.000 | -9.000 | -999. | 736.  | 192.1  | 0.31 |
| 1.00 | 1.00 | 3.60 | 238. | 9.1 | 288.8 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 22  | -41.2 | 0.562 | -9.000 | -9.000 | -999. | 1010. | 378.5  | 0.31 |
| 1.00 | 1.00 | 4.90 | 87.  | 9.1 | 287.5 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 23  | -53.8 | 0.733 | -9.000 | -9.000 | -999. | 1504. | 642.6  | 0.31 |
| 1.00 | 1.00 | 6.30 | 95.  | 9.1 | 287.0 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 24  | -29.5 | 0.399 | -9.000 | -9.000 | -999. | 738.  | 189.5  | 0.31 |
| 1.00 | 1.00 | 3.60 | 37.  | 9.1 | 285.4 | 5.5   |        |        |       |       |        |      |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR  | WSPD   | AMB_TMP | sigmaA | sigmaW | sigmaV |
|----|----|----|----|--------|---|-------|--------|---------|--------|--------|--------|
| 08 | 01 | 01 | 01 | 5.5    | 0 | -999. | -99.00 | 287.6   | 99.0   | -99.00 | -99.00 |
| 08 | 01 | 01 | 01 | 9.1    | 1 | 27.   | 5.40   | -999.0  | 99.0   | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
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**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

      *** THE ANNUAL AVERAGE CONCENTRATION      VALUES
AVERAGED OVER  5 YEARS FOR SOURCE GROUP: ALL      ***
      INCLUDING SOURCE(S):      L0001921      ,
L0001922      , L0001923      , L0001924      , L0001925      ,
      L0001926      , L0001927      , L0001928      , L0001929      ,
L0001930      , L0001931      , L0001932      , L0001933      ,
      L0001934      , L0001935      , L0001936      , L0001937      ,
L0001938      , L0001939      , L0001940      , L0001941      ,
      L0001942      , L0001943      , L0001944      , L0001945      ,
L0001946      , L0001947      , L0001948      , . . .      ,

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*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

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      ** CONC OF PM_10      IN
      **
MICROGRAMS/M**3

      X-COORD (M)      Y-COORD (M)      CONC      X-
COORD (M)      Y-COORD (M)      CONC
- - - - -
- - - - -
      474201.46      3754331.71      0.01076
474401.46      3754331.71      0.00746
      474501.46      3754331.71      0.00620
473801.46      3754431.71      0.05221
      473715.92      3754428.71      0.03676
473738.73      3754428.62      0.04376
      473755.69      3754428.85      0.04821
473774.94      3754428.85      0.05081
      473815.97      3754429.55      0.04780
473831.00      3754424.36      0.04117
      473853.90      3754425.20      0.03617
473871.89      3754423.79      0.03207
      473891.98      3754427.59      0.02952
473779.02      3754366.16      0.02418
      473813.90      3754366.49      0.02396
474014.62      3754372.20      0.01621
      474058.72      3754367.30      0.01488
474106.33      3754366.60      0.01393
      474129.66      3754366.83      0.01353
474153.46      3754367.77      0.01314
      474231.55      3754356.87      0.01111
474273.79      3754374.60      0.01081
      474545.34      3754362.52      0.00601
474582.52      3754377.24      0.00573

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|           |            |            |         |
|-----------|------------|------------|---------|
|           | 474612.74  | 3754387.31 | 0.00549 |
| 474642.95 | 3754391.18 | 0.00522    |         |
|           | 474354.43  | 3754341.93 | 0.00836 |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
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*** AERMET - VERSION 14134 ***      ***
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**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

*** THE 1ST HIGHEST 24-HR AVERAGE
CONCENTRATION  VALUES FOR SOURCE GROUP: ALL ***
                INCLUDING SOURCE(S):      L0001921 ,
L0001922      , L0001923      , L0001924      , L0001925      ,
                L0001926      , L0001927      , L0001928      , L0001929      ,
L0001930      , L0001931      , L0001932      , L0001933      ,
                L0001934      , L0001935      , L0001936      , L0001937      ,
L0001938      , L0001939      , L0001940      , L0001941      ,
                L0001942      , L0001943      , L0001944      , L0001945      ,
L0001946      , L0001947      , L0001948      , . . .      ,

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*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

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** CONC OF PM_10      IN
**
MICROGRAMS/M**3

      X-COORD (M)  Y-COORD (M)      CONC      (YYMMDDHH)      X-
COORD (M)  Y-COORD (M)      CONC      (YYMMDDHH)
- - - - -
- - - - -
      474201.46  3754331.71      0.01951  (10111924)
474401.46  3754331.71      0.01326  (10111924)
      474501.46  3754331.71      0.01099m (11030124)
473801.46  3754431.71      0.09640  (11103124)
      473715.92  3754428.71      0.08932  (12011024)
473738.73  3754428.62      0.10459  (12011024)
      473755.69  3754428.85      0.10353  (12011024)
473774.94  3754428.85      0.10207  (11103124)
      473815.97  3754429.55      0.08565  (10111924)
473831.00  3754424.36      0.07954  (10111924)
      473853.90  3754425.20      0.06677  (10111924)
473871.89  3754423.79      0.05671  (10111924)
      473891.98  3754427.59      0.04908  (10111924)
473779.02  3754366.16      0.05041  (12011024)
      473813.90  3754366.49      0.04964  (11103124)
474014.62  3754372.20      0.02677  (10120924)
      474058.72  3754367.30      0.02515m (11013124)
474106.33  3754366.60      0.02303m (11020124)
      474129.66  3754366.83      0.02241  (10121524)
474153.46  3754367.77      0.02158  (10111924)
      474231.55  3754356.87      0.02090  (10111924)
474273.79  3754374.60      0.02025  (10111924)
      474545.34  3754362.52      0.01066  (11031624)
474582.52  3754377.24      0.01027m (11013124)

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|           |            |         |            |
|-----------|------------|---------|------------|
| 474612.74 | 3754387.31 | 0.00982 | (10020824) |
| 474642.95 | 3754391.18 | 0.00948 | (10020824) |
| 474354.43 | 3754341.93 | 0.01532 | (10111924) |

\*\*\* AERMOD - VERSION 14134 \*\*\*      \*\*\* U:\UcJobs\\_08600-  
 09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\*      03/13/15  
 \*\*\* AERMET - VERSION 14134 \*\*\*      \*\*\*  
 \*\*\*      18:20:00

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\*\*MODELOPTs:    NonDEFAULT CONC            FLAT            FLGPOL            FASTALL

\*\*\* THE SUMMARY OF MAXIMUM ANNUAL  
 RESULTS AVERAGED OVER    5 YEARS \*\*\*

\*\* CONC OF PM\_10            IN  
 MICROGRAMS/M\*\*3            \*\*

| NETWORK<br>GROUP ID      | AVERAGE CONC          |              | RECEPTOR (XR, |
|--------------------------|-----------------------|--------------|---------------|
| YR, ZELEV, ZHILL, ZFLAG) | OF TYPE               | GRID-ID      |               |
| ALL                      | 1ST HIGHEST VALUE IS  | 0.05221 AT ( | 473801.46,    |
| 3754431.71,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 2ND HIGHEST VALUE IS  | 0.05081 AT ( | 473774.94,    |
| 3754428.85,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 3RD HIGHEST VALUE IS  | 0.04821 AT ( | 473755.69,    |
| 3754428.85,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 4TH HIGHEST VALUE IS  | 0.04780 AT ( | 473815.97,    |
| 3754429.55,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 5TH HIGHEST VALUE IS  | 0.04376 AT ( | 473738.73,    |
| 3754428.62,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 6TH HIGHEST VALUE IS  | 0.04117 AT ( | 473831.00,    |
| 3754424.36,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 7TH HIGHEST VALUE IS  | 0.03676 AT ( | 473715.92,    |
| 3754428.71,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 8TH HIGHEST VALUE IS  | 0.03617 AT ( | 473853.90,    |
| 3754425.20,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 9TH HIGHEST VALUE IS  | 0.03207 AT ( | 473871.89,    |
| 3754423.79,              | 250.00, 250.00,       | 2.00) DC     |               |
|                          | 10TH HIGHEST VALUE IS | 0.02952 AT ( | 473891.98,    |
| 3754427.59,              | 250.00, 250.00,       | 2.00) DC     |               |

\*\*\* RECEPTOR TYPES:    GC = GRIDCART  
                              GP = GRIDPOLR  
                              DC = DISCCART  
                              DP = DISCPOLR

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\* 03/13/15  
\*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
\*\*\* 18:20:00

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\*\*MODELOPTs: NonDFAULT CONC FLAT FLGPOL FASTALL

\*\*\* THE SUMMARY OF

HIGHEST 24-HR RESULTS \*\*\*

\*\*\* CONC OF PM<sub>10</sub> IN  
MICROGRAMS/M<sup>3</sup>

| NETWORK                                | DATE                    |
|----------------------------------------|-------------------------|
| GROUP ID                               | AVERAGE CONC (YYMMDDHH) |
| RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE GRID-ID         |
| - - - - -                              | - - - - -               |
| - - - - -                              | - - - - -               |

ALL HIGH 1ST HIGH VALUE IS 0.10459 ON 12011024: AT (  
473738.73, 3754428.62, 250.00, 250.00, 2.00) DC

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\* 03/13/15  
\*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
\*\*\* 18:20:00

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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* Message Summary : AERMOD Model Execution \*\*\*

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)  
A Total of 1 Warning Message(s)  
A Total of 2006 Informational Message(s)  
  
A Total of 43848 Hours Were Processed  
  
A Total of 7 Calm Hours Identified  
  
A Total of 1999 Missing Hours Identified ( 4.56 Percent)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
ME W531 1158 MEOPEN: CAUTION! Met Station ID Missing from  
SURFFILE for SURFDATA

\*\*\*\*\*  
\*\*\* AERMOD Finishes Successfully \*\*\*  
\*\*\*\*\*

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 8.8.9
** Lakes Environmental Software Inc.
** Date: 3/13/2015
** File: U:\UcJobs\_08600-09000\_08900\08990\08990_Operational
LST\PM2\PM2.ADI
**

```

```

*****
**
**
*****
** AERMOD Control Pathway
*****
**
**

```

```

CO STARTING
  TITLEONE U:\UcJobs\_08600-09000\_08900\08990\08990_Operational
LST\PM10\PM10.
  MODELOPT CONC FLAT FASTALL
  AVERTIME 24
  URBANOPT 2100516
  POLLUTID PM_2.5
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL PM2.err

```

```

CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**

```

```

SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC On-Site Passenger Car Idling - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0004624
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 3
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.080, 3754684.434, 0.00, 4.00, 3.95
** -----
  LOCATION L0002235      VOLUME    473797.069 3754701.662 0.0

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LOCATION L0002236      VOLUME    473797.074 3754693.162 0.0
LOCATION L0002237      VOLUME    473797.080 3754684.662 0.0
** End of LINE VOLUME Source ID = SLINE1
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC On-Site Passenger Car Idling - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.000156
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 4
** 473736.964, 3754551.125, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95
** 473745.446, 3754483.696, 0.00, 4.00, 3.95
** 473829.839, 3754482.423, 0.00, 4.00, 3.95
** -----
LOCATION L0002238      VOLUME    473737.082 3754546.877 0.0
LOCATION L0002239      VOLUME    473737.316 3754538.380 0.0
LOCATION L0002240      VOLUME    473737.550 3754529.883 0.0
LOCATION L0002241      VOLUME    473737.785 3754521.386 0.0
LOCATION L0002242      VOLUME    473738.019 3754512.889 0.0
LOCATION L0002243      VOLUME    473738.254 3754504.393 0.0
LOCATION L0002244      VOLUME    473738.488 3754495.896 0.0
LOCATION L0002245      VOLUME    473740.342 3754488.161 0.0
LOCATION L0002246      VOLUME    473747.164 3754483.670 0.0
LOCATION L0002247      VOLUME    473755.663 3754483.542 0.0
LOCATION L0002248      VOLUME    473764.162 3754483.413 0.0
LOCATION L0002249      VOLUME    473772.661 3754483.285 0.0
LOCATION L0002250      VOLUME    473781.160 3754483.157 0.0
LOCATION L0002251      VOLUME    473789.659 3754483.029 0.0
LOCATION L0002252      VOLUME    473798.158 3754482.901 0.0
LOCATION L0002253      VOLUME    473806.657 3754482.773 0.0
LOCATION L0002254      VOLUME    473815.156 3754482.645 0.0
LOCATION L0002255      VOLUME    473823.656 3754482.517 0.0
** End of LINE VOLUME Source ID = SLINE2
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC On-Site Passenger Car Idling - Surgical Center
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00003676
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474146.956, 3754542.362, 0.00, 4.00, 3.95
** 474203.982, 3754541.933, 0.00, 4.00, 3.95
** -----
LOCATION L0002256      VOLUME    474151.206 3754542.330 0.0
LOCATION L0002257      VOLUME    474159.706 3754542.266 0.0

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LOCATION L0002258      VOLUME    474168.206 3754542.202 0.0
LOCATION L0002259      VOLUME    474176.705 3754542.138 0.0
LOCATION L0002260      VOLUME    474185.205 3754542.074 0.0
LOCATION L0002261      VOLUME    474193.705 3754542.010 0.0
LOCATION L0002262      VOLUME    474202.205 3754541.946 0.0
** End of LINE VOLUME Source ID = SLINE3
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC On-Site Passenger Car Idling - Senior Housing
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0003441
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 9
** 473705.823, 3754992.649, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0002263      VOLUME    473709.107 3754989.951 0.0
LOCATION L0002264      VOLUME    473716.408 3754985.826 0.0
LOCATION L0002265      VOLUME    473724.564 3754986.512 0.0
LOCATION L0002266      VOLUME    473730.201 3754992.580 0.0
LOCATION L0002267      VOLUME    473730.631 3755001.008 0.0
** End of LINE VOLUME Source ID = SLINE4
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC On-Site Passenger Car Idling - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0002569
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474217.752, 3754863.013, 0.00, 4.00, 3.95
** -----
LOCATION L0002268      VOLUME    474157.470 3754909.512 0.0
LOCATION L0002269      VOLUME    474164.200 3754904.320 0.0
LOCATION L0002270      VOLUME    474170.930 3754899.129 0.0
LOCATION L0002271      VOLUME    474177.661 3754893.937 0.0
LOCATION L0002272      VOLUME    474184.391 3754888.746 0.0
LOCATION L0002273      VOLUME    474191.122 3754883.554 0.0
LOCATION L0002274      VOLUME    474197.852 3754878.363 0.0

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LOCATION L0002275      VOLUME    474204.583 3754873.171 0.0
LOCATION L0002276      VOLUME    474211.313 3754867.980 0.0
** End of LINE VOLUME Source ID = SLINE5
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC On-Site Passenger Car Travel - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00005507
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 7
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.079, 3754683.979, 0.00, 4.00, 3.95
** 473832.857, 3754684.580, 0.00, 4.00, 3.95
** 473831.534, 3754711.303, 0.00, 4.00, 3.95
** 473825.370, 3754730.840, 0.00, 4.00, 3.95
** 473825.424, 3754745.686, 0.00, 4.00, 3.95
** -----
LOCATION L0002277      VOLUME    473797.069 3754701.662 0.0
LOCATION L0002278      VOLUME    473797.073 3754693.162 0.0
LOCATION L0002279      VOLUME    473797.078 3754684.662 0.0
LOCATION L0002280      VOLUME    473804.895 3754684.110 0.0
LOCATION L0002281      VOLUME    473813.393 3754684.253 0.0
LOCATION L0002282      VOLUME    473821.892 3754684.396 0.0
LOCATION L0002283      VOLUME    473830.391 3754684.539 0.0
LOCATION L0002284      VOLUME    473832.558 3754690.607 0.0
LOCATION L0002285      VOLUME    473832.138 3754699.096 0.0
LOCATION L0002286      VOLUME    473831.718 3754707.586 0.0
LOCATION L0002287      VOLUME    473830.096 3754715.860 0.0
LOCATION L0002288      VOLUME    473827.538 3754723.966 0.0
LOCATION L0002289      VOLUME    473825.374 3754732.132 0.0
LOCATION L0002290      VOLUME    473825.406 3754740.632 0.0
** End of LINE VOLUME Source ID = SLINE6
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC On-Site Passenger Car Travel - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00003265
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 5
** 473690.932, 3754560.433, 0.00, 4.00, 3.95
** 473736.934, 3754560.673, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95
** 473745.446, 3754483.696, 0.00, 4.00, 3.95
** 473829.839, 3754482.423, 0.00, 4.00, 3.95
** -----

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|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002291 | VOLUME | 473695.182 | 3754560.456 | 0.0 |
| LOCATION | L0002292 | VOLUME | 473703.682 | 3754560.500 | 0.0 |
| LOCATION | L0002293 | VOLUME | 473712.182 | 3754560.544 | 0.0 |
| LOCATION | L0002294 | VOLUME | 473720.682 | 3754560.588 | 0.0 |
| LOCATION | L0002295 | VOLUME | 473729.182 | 3754560.633 | 0.0 |
| LOCATION | L0002296 | VOLUME | 473736.953 | 3754559.926 | 0.0 |
| LOCATION | L0002297 | VOLUME | 473737.159 | 3754551.428 | 0.0 |
| LOCATION | L0002298 | VOLUME | 473737.366 | 3754542.931 | 0.0 |
| LOCATION | L0002299 | VOLUME | 473737.572 | 3754534.433 | 0.0 |
| LOCATION | L0002300 | VOLUME | 473737.779 | 3754525.936 | 0.0 |
| LOCATION | L0002301 | VOLUME | 473737.985 | 3754517.439 | 0.0 |
| LOCATION | L0002302 | VOLUME | 473738.192 | 3754508.941 | 0.0 |
| LOCATION | L0002303 | VOLUME | 473738.398 | 3754500.444 | 0.0 |
| LOCATION | L0002304 | VOLUME | 473738.605 | 3754491.946 | 0.0 |
| LOCATION | L0002305 | VOLUME | 473743.316 | 3754485.559 | 0.0 |
| LOCATION | L0002306 | VOLUME | 473751.115 | 3754483.610 | 0.0 |
| LOCATION | L0002307 | VOLUME | 473759.614 | 3754483.482 | 0.0 |
| LOCATION | L0002308 | VOLUME | 473768.113 | 3754483.354 | 0.0 |
| LOCATION | L0002309 | VOLUME | 473776.612 | 3754483.226 | 0.0 |
| LOCATION | L0002310 | VOLUME | 473785.111 | 3754483.098 | 0.0 |
| LOCATION | L0002311 | VOLUME | 473793.610 | 3754482.969 | 0.0 |
| LOCATION | L0002312 | VOLUME | 473802.110 | 3754482.841 | 0.0 |
| LOCATION | L0002313 | VOLUME | 473810.609 | 3754482.713 | 0.0 |
| LOCATION | L0002314 | VOLUME | 473819.108 | 3754482.585 | 0.0 |
| LOCATION | L0002315 | VOLUME | 473827.607 | 3754482.457 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE7

\*\*

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE8

\*\* DESCRSRC On-Site Passenger Car Travel - Surgical Center

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 5.854E-06

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 4

\*\* 474146.956, 3754542.362, 0.00, 4.00, 3.95

\*\* 474225.093, 3754541.662, 0.00, 4.00, 3.95

\*\* 474224.571, 3754563.881, 0.00, 4.00, 3.95

\*\* 474284.387, 3754563.753, 0.00, 4.00, 3.95

\*\*

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002316 | VOLUME | 474151.206 | 3754542.324 | 0.0 |
| LOCATION | L0002317 | VOLUME | 474159.706 | 3754542.248 | 0.0 |
| LOCATION | L0002318 | VOLUME | 474168.205 | 3754542.171 | 0.0 |
| LOCATION | L0002319 | VOLUME | 474176.705 | 3754542.095 | 0.0 |
| LOCATION | L0002320 | VOLUME | 474185.205 | 3754542.019 | 0.0 |
| LOCATION | L0002321 | VOLUME | 474193.704 | 3754541.943 | 0.0 |
| LOCATION | L0002322 | VOLUME | 474202.204 | 3754541.867 | 0.0 |
| LOCATION | L0002323 | VOLUME | 474210.704 | 3754541.791 | 0.0 |
| LOCATION | L0002324 | VOLUME | 474219.203 | 3754541.714 | 0.0 |
| LOCATION | L0002325 | VOLUME | 474225.032 | 3754544.271 | 0.0 |
| LOCATION | L0002326 | VOLUME | 474224.832 | 3754552.769 | 0.0 |
| LOCATION | L0002327 | VOLUME | 474224.632 | 3754561.266 | 0.0 |

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LOCATION L0002328      VOLUME  474230.455 3754563.868 0.0
LOCATION L0002329      VOLUME  474238.955 3754563.850 0.0
LOCATION L0002330      VOLUME  474247.455 3754563.832 0.0
LOCATION L0002331      VOLUME  474255.955 3754563.814 0.0
LOCATION L0002332      VOLUME  474264.455 3754563.795 0.0
LOCATION L0002333      VOLUME  474272.955 3754563.777 0.0
LOCATION L0002334      VOLUME  474281.455 3754563.759 0.0
** End of LINE VOLUME Source ID = SLINE8
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC On-Site Passenger Car Travel - Senior Housing
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00002361
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 10
** 473693.729, 3755016.836, 0.00, 4.00, 3.95
** 473706.280, 3754992.273, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0002335      VOLUME  473695.663 3755013.052 0.0
LOCATION L0002336      VOLUME  473699.531 3755005.482 0.0
LOCATION L0002337      VOLUME  473703.398 3754997.913 0.0
LOCATION L0002338      VOLUME  473707.954 3754990.898 0.0
LOCATION L0002339      VOLUME  473715.011 3754986.350 0.0
LOCATION L0002340      VOLUME  473723.272 3754985.764 0.0
LOCATION L0002341      VOLUME  473729.388 3754991.329 0.0
LOCATION L0002342      VOLUME  473730.833 3754999.530 0.0
** End of LINE VOLUME Source ID = SLINE9
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC On-Site Passenger Car Travel - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.0000568
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 8
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474275.659, 3754818.227, 0.00, 4.00, 3.95
** 474276.685, 3754808.563, 0.00, 4.00, 3.95
** 474271.043, 3754798.926, 0.00, 4.00, 3.95

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\*\* 474263.098, 3754791.586, 0.00, 4.00, 3.95  
\*\* 474247.089, 3754790.184, 0.00, 4.00, 3.95  
\*\* 474237.633, 3754788.405, 0.00, 4.00, 3.95  
\*\* 474234.942, 3754777.285, 0.00, 4.00, 3.95

\*\* -----  
LOCATION L0002343 VOLUME 474157.468 3754909.510 0.0  
LOCATION L0002344 VOLUME 474164.195 3754904.314 0.0  
LOCATION L0002345 VOLUME 474170.922 3754899.118 0.0  
LOCATION L0002346 VOLUME 474177.650 3754893.923 0.0  
LOCATION L0002347 VOLUME 474184.377 3754888.727 0.0  
LOCATION L0002348 VOLUME 474191.104 3754883.531 0.0  
LOCATION L0002349 VOLUME 474197.831 3754878.336 0.0  
LOCATION L0002350 VOLUME 474204.558 3754873.140 0.0  
LOCATION L0002351 VOLUME 474211.286 3754867.944 0.0  
LOCATION L0002352 VOLUME 474218.013 3754862.749 0.0  
LOCATION L0002353 VOLUME 474224.740 3754857.553 0.0  
LOCATION L0002354 VOLUME 474231.467 3754852.358 0.0  
LOCATION L0002355 VOLUME 474238.195 3754847.162 0.0  
LOCATION L0002356 VOLUME 474244.922 3754841.966 0.0  
LOCATION L0002357 VOLUME 474251.649 3754836.771 0.0  
LOCATION L0002358 VOLUME 474258.376 3754831.575 0.0  
LOCATION L0002359 VOLUME 474265.103 3754826.379 0.0  
LOCATION L0002360 VOLUME 474271.831 3754821.184 0.0  
LOCATION L0002361 VOLUME 474276.046 3754814.585 0.0  
LOCATION L0002362 VOLUME 474275.450 3754806.453 0.0  
LOCATION L0002363 VOLUME 474271.156 3754799.118 0.0  
LOCATION L0002364 VOLUME 474264.963 3754793.309 0.0  
LOCATION L0002365 VOLUME 474257.160 3754791.066 0.0  
LOCATION L0002366 VOLUME 474248.692 3754790.324 0.0  
LOCATION L0002367 VOLUME 474240.317 3754788.910 0.0  
LOCATION L0002368 VOLUME 474236.276 3754782.798 0.0

\*\* End of LINE VOLUME Source ID = SLINE10

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE11  
\*\* DESCRSRC On-Site Passenger Car Idling - Medical Office Building (1&2)  
\*\* PREFIX  
\*\* Length of Side = 8.50  
\*\* Configuration = Adjacent  
\*\* Emission Rate = 0.0001467  
\*\* Vertical Dimension = 4.00  
\*\* SZINIT = 1.86  
\*\* Nodes = 2  
\*\* 474028.388, 3754698.671, 0.00, 4.00, 3.95  
\*\* 474028.146, 3754663.431, 0.00, 4.00, 3.95

\*\* -----  
LOCATION L0002369 VOLUME 474028.359 3754694.421 0.0  
LOCATION L0002370 VOLUME 474028.301 3754685.921 0.0  
LOCATION L0002371 VOLUME 474028.242 3754677.421 0.0  
LOCATION L0002372 VOLUME 474028.184 3754668.921 0.0  
\*\* End of LINE VOLUME Source ID = SLINE11

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE12

```

** DESCRSRC On-Site Passenger Car Travel - Medical Office Building (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 0.00001217
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474027.769, 3754746.815, 0.00, 4.00, 3.95
** 474028.146, 3754663.431, 0.00, 4.00, 3.95
** -----
LOCATION L0002373      VOLUME  474027.788 3754742.565 0.0
LOCATION L0002374      VOLUME  474027.827 3754734.065 0.0
LOCATION L0002375      VOLUME  474027.865 3754725.565 0.0
LOCATION L0002376      VOLUME  474027.903 3754717.065 0.0
LOCATION L0002377      VOLUME  474027.942 3754708.565 0.0
LOCATION L0002378      VOLUME  474027.980 3754700.065 0.0
LOCATION L0002379      VOLUME  474028.019 3754691.565 0.0
LOCATION L0002380      VOLUME  474028.057 3754683.065 0.0
LOCATION L0002381      VOLUME  474028.095 3754674.565 0.0
LOCATION L0002382      VOLUME  474028.134 3754666.066 0.0
** End of LINE VOLUME Source ID = SLINE12
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE13
** DESCRSRC On-Site Truck Idling - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 6.732E-07
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 3
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95
** 473797.080, 3754684.434, 0.00, 4.00, 3.95
** -----
LOCATION L0002383      VOLUME  473797.069 3754701.662 0.0
LOCATION L0002384      VOLUME  473797.074 3754693.162 0.0
LOCATION L0002385      VOLUME  473797.080 3754684.662 0.0
** End of LINE VOLUME Source ID = SLINE13
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE14
** DESCRSRC On-Site Truck Idling - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 2.271E-07
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 4
** 473736.964, 3754551.125, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95

```



\*\* 473745.446, 3754483.696, 0.00, 4.00, 3.95  
\*\* 473829.839, 3754482.423, 0.00, 4.00, 3.95

\*\* -----  
LOCATION L0002386 VOLUME 473737.082 3754546.877 0.0  
LOCATION L0002387 VOLUME 473737.316 3754538.380 0.0  
LOCATION L0002388 VOLUME 473737.550 3754529.883 0.0  
LOCATION L0002389 VOLUME 473737.785 3754521.386 0.0  
LOCATION L0002390 VOLUME 473738.019 3754512.889 0.0  
LOCATION L0002391 VOLUME 473738.254 3754504.393 0.0  
LOCATION L0002392 VOLUME 473738.488 3754495.896 0.0  
LOCATION L0002393 VOLUME 473740.342 3754488.161 0.0  
LOCATION L0002394 VOLUME 473747.164 3754483.670 0.0  
LOCATION L0002395 VOLUME 473755.663 3754483.542 0.0  
LOCATION L0002396 VOLUME 473764.162 3754483.413 0.0  
LOCATION L0002397 VOLUME 473772.661 3754483.285 0.0  
LOCATION L0002398 VOLUME 473781.160 3754483.157 0.0  
LOCATION L0002399 VOLUME 473789.659 3754483.029 0.0  
LOCATION L0002400 VOLUME 473798.158 3754482.901 0.0  
LOCATION L0002401 VOLUME 473806.657 3754482.773 0.0  
LOCATION L0002402 VOLUME 473815.156 3754482.645 0.0  
LOCATION L0002403 VOLUME 473823.656 3754482.517 0.0

\*\* End of LINE VOLUME Source ID = SLINE14

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE15  
\*\* DESCRSRC On-Site Truck Idling - Surgical Center  
\*\* PREFIX  
\*\* Length of Side = 8.50  
\*\* Configuration = Adjacent  
\*\* Emission Rate = 5.343E-08  
\*\* Vertical Dimension = 4.00  
\*\* SZINIT = 1.86  
\*\* Nodes = 2  
\*\* 474146.956, 3754542.362, 0.00, 4.00, 3.95  
\*\* 474203.982, 3754541.933, 0.00, 4.00, 3.95

\*\* -----  
LOCATION L0002404 VOLUME 474151.206 3754542.330 0.0  
LOCATION L0002405 VOLUME 474159.706 3754542.266 0.0  
LOCATION L0002406 VOLUME 474168.206 3754542.202 0.0  
LOCATION L0002407 VOLUME 474176.705 3754542.138 0.0  
LOCATION L0002408 VOLUME 474185.205 3754542.074 0.0  
LOCATION L0002409 VOLUME 474193.705 3754542.010 0.0  
LOCATION L0002410 VOLUME 474202.205 3754541.946 0.0

\*\* End of LINE VOLUME Source ID = SLINE15

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE16  
\*\* DESCRSRC On-Site Truck Idling - Senior Housing  
\*\* PREFIX  
\*\* Length of Side = 8.50  
\*\* Configuration = Adjacent  
\*\* Emission Rate = 5.009E-07  
\*\* Vertical Dimension = 4.00  
\*\* SZINIT = 1.86

```

** Nodes = 9
** 473705.823, 3754992.649, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0002411      VOLUME  473709.107 3754989.951 0.0
LOCATION L0002412      VOLUME  473716.408 3754985.826 0.0
LOCATION L0002413      VOLUME  473724.564 3754986.512 0.0
LOCATION L0002414      VOLUME  473730.201 3754992.580 0.0
LOCATION L0002415      VOLUME  473730.631 3755001.008 0.0
** End of LINE VOLUME Source ID = SLINE16
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE17
** DESCRSRC On-Site Truck Idling - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 3.74E-07
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474217.752, 3754863.013, 0.00, 4.00, 3.95
** -----
LOCATION L0002416      VOLUME  474157.470 3754909.512 0.0
LOCATION L0002417      VOLUME  474164.200 3754904.320 0.0
LOCATION L0002418      VOLUME  474170.930 3754899.129 0.0
LOCATION L0002419      VOLUME  474177.661 3754893.937 0.0
LOCATION L0002420      VOLUME  474184.391 3754888.746 0.0
LOCATION L0002421      VOLUME  474191.122 3754883.554 0.0
LOCATION L0002422      VOLUME  474197.852 3754878.363 0.0
LOCATION L0002423      VOLUME  474204.583 3754873.171 0.0
LOCATION L0002424      VOLUME  474211.313 3754867.980 0.0
** End of LINE VOLUME Source ID = SLINE17
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE18
** DESCRSRC On-Site Truck Travel - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 6.485E-07
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 7
** 473797.066, 3754704.470, 0.00, 4.00, 0.00
** 473797.066, 3754705.191, 0.00, 4.00, 3.95

```



```

** 473797.079, 3754683.979, 0.00, 4.00, 3.95
** 473832.857, 3754684.580, 0.00, 4.00, 3.95
** 473831.534, 3754711.303, 0.00, 4.00, 3.95
** 473825.370, 3754730.840, 0.00, 4.00, 3.95
** 473825.424, 3754745.686, 0.00, 4.00, 3.95

```

```

** -----
LOCATION L0002425      VOLUME  473797.069 3754701.662 0.0
LOCATION L0002426      VOLUME  473797.073 3754693.162 0.0
LOCATION L0002427      VOLUME  473797.078 3754684.662 0.0
LOCATION L0002428      VOLUME  473804.895 3754684.110 0.0
LOCATION L0002429      VOLUME  473813.393 3754684.253 0.0
LOCATION L0002430      VOLUME  473821.892 3754684.396 0.0
LOCATION L0002431      VOLUME  473830.391 3754684.539 0.0
LOCATION L0002432      VOLUME  473832.558 3754690.607 0.0
LOCATION L0002433      VOLUME  473832.138 3754699.096 0.0
LOCATION L0002434      VOLUME  473831.718 3754707.586 0.0
LOCATION L0002435      VOLUME  473830.096 3754715.860 0.0
LOCATION L0002436      VOLUME  473827.538 3754723.966 0.0
LOCATION L0002437      VOLUME  473825.374 3754732.132 0.0
LOCATION L0002438      VOLUME  473825.406 3754740.632 0.0

```

```

** End of LINE VOLUME Source ID = SLINE18

```

```

** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE19
** DESCRSRC On-Site Truck Travel - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 3.844E-07
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 5
** 473690.932, 3754560.433, 0.00, 4.00, 3.95
** 473736.934, 3754560.673, 0.00, 4.00, 3.95
** 473738.661, 3754489.633, 0.00, 4.00, 3.95
** 473745.446, 3754483.696, 0.00, 4.00, 3.95
** 473829.839, 3754482.423, 0.00, 4.00, 3.95

```

```

** -----
LOCATION L0002439      VOLUME  473695.182 3754560.456 0.0
LOCATION L0002440      VOLUME  473703.682 3754560.500 0.0
LOCATION L0002441      VOLUME  473712.182 3754560.544 0.0
LOCATION L0002442      VOLUME  473720.682 3754560.588 0.0
LOCATION L0002443      VOLUME  473729.182 3754560.633 0.0
LOCATION L0002444      VOLUME  473736.953 3754559.926 0.0
LOCATION L0002445      VOLUME  473737.159 3754551.428 0.0
LOCATION L0002446      VOLUME  473737.366 3754542.931 0.0
LOCATION L0002447      VOLUME  473737.572 3754534.433 0.0
LOCATION L0002448      VOLUME  473737.779 3754525.936 0.0
LOCATION L0002449      VOLUME  473737.985 3754517.439 0.0
LOCATION L0002450      VOLUME  473738.192 3754508.941 0.0
LOCATION L0002451      VOLUME  473738.398 3754500.444 0.0
LOCATION L0002452      VOLUME  473738.605 3754491.946 0.0
LOCATION L0002453      VOLUME  473743.316 3754485.559 0.0
LOCATION L0002454      VOLUME  473751.115 3754483.610 0.0

```

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002455 | VOLUME | 473759.614 | 3754483.482 | 0.0 |
| LOCATION | L0002456 | VOLUME | 473768.113 | 3754483.354 | 0.0 |
| LOCATION | L0002457 | VOLUME | 473776.612 | 3754483.226 | 0.0 |
| LOCATION | L0002458 | VOLUME | 473785.111 | 3754483.098 | 0.0 |
| LOCATION | L0002459 | VOLUME | 473793.610 | 3754482.969 | 0.0 |
| LOCATION | L0002460 | VOLUME | 473802.110 | 3754482.841 | 0.0 |
| LOCATION | L0002461 | VOLUME | 473810.609 | 3754482.713 | 0.0 |
| LOCATION | L0002462 | VOLUME | 473819.108 | 3754482.585 | 0.0 |
| LOCATION | L0002463 | VOLUME | 473827.607 | 3754482.457 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE19  
 \*\* -----  
 \*\* Line Source Represented by Adjacent Volume Sources  
 \*\* LINE VOLUME Source ID = SLINE20  
 \*\* DESCRSRC On-Site Truck Travel - Surgical Center  
 \*\* PREFIX  
 \*\* Length of Side = 8.50  
 \*\* Configuration = Adjacent  
 \*\* Emission Rate = 6.883E-08  
 \*\* Vertical Dimension = 4.00  
 \*\* SZINIT = 1.86  
 \*\* Nodes = 4  
 \*\* 474146.956, 3754542.362, 0.00, 4.00, 3.95  
 \*\* 474225.093, 3754541.662, 0.00, 4.00, 3.95  
 \*\* 474224.571, 3754563.881, 0.00, 4.00, 3.95  
 \*\* 474284.387, 3754563.753, 0.00, 4.00, 3.95  
 \*\* -----

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002464 | VOLUME | 474151.206 | 3754542.324 | 0.0 |
| LOCATION | L0002465 | VOLUME | 474159.706 | 3754542.248 | 0.0 |
| LOCATION | L0002466 | VOLUME | 474168.205 | 3754542.171 | 0.0 |
| LOCATION | L0002467 | VOLUME | 474176.705 | 3754542.095 | 0.0 |
| LOCATION | L0002468 | VOLUME | 474185.205 | 3754542.019 | 0.0 |
| LOCATION | L0002469 | VOLUME | 474193.704 | 3754541.943 | 0.0 |
| LOCATION | L0002470 | VOLUME | 474202.204 | 3754541.867 | 0.0 |
| LOCATION | L0002471 | VOLUME | 474210.704 | 3754541.791 | 0.0 |
| LOCATION | L0002472 | VOLUME | 474219.203 | 3754541.714 | 0.0 |
| LOCATION | L0002473 | VOLUME | 474225.032 | 3754544.271 | 0.0 |
| LOCATION | L0002474 | VOLUME | 474224.832 | 3754552.769 | 0.0 |
| LOCATION | L0002475 | VOLUME | 474224.632 | 3754561.266 | 0.0 |
| LOCATION | L0002476 | VOLUME | 474230.455 | 3754563.868 | 0.0 |
| LOCATION | L0002477 | VOLUME | 474238.955 | 3754563.850 | 0.0 |
| LOCATION | L0002478 | VOLUME | 474247.455 | 3754563.832 | 0.0 |
| LOCATION | L0002479 | VOLUME | 474255.955 | 3754563.814 | 0.0 |
| LOCATION | L0002480 | VOLUME | 474264.455 | 3754563.795 | 0.0 |
| LOCATION | L0002481 | VOLUME | 474272.955 | 3754563.777 | 0.0 |
| LOCATION | L0002482 | VOLUME | 474281.455 | 3754563.759 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE20  
 \*\* -----  
 \*\* Line Source Represented by Adjacent Volume Sources  
 \*\* LINE VOLUME Source ID = SLINE21  
 \*\* DESCRSRC On-Site Truck Travel - Senior Housing  
 \*\* PREFIX  
 \*\* Length of Side = 8.50  
 \*\* Configuration = Adjacent  
 \*\* Emission Rate = 2.779E-07

```

** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 10
** 473693.729, 3755016.836, 0.00, 4.00, 3.95
** 473706.280, 3754992.273, 0.00, 4.00, 3.95
** 473712.214, 3754987.399, 0.00, 4.00, 3.95
** 473717.692, 3754985.344, 0.00, 4.00, 3.95
** 473722.942, 3754985.573, 0.00, 4.00, 3.95
** 473727.279, 3754988.084, 0.00, 4.00, 3.95
** 473730.246, 3754992.649, 0.00, 4.00, 3.95
** 473730.931, 3754998.811, 0.00, 4.00, 3.95
** 473730.246, 3755003.833, 0.00, 4.00, 3.95
** 473730.018, 3755004.746, 0.00, 4.00, 3.95
** -----
LOCATION L0002483      VOLUME  473695.663 3755013.052 0.0
LOCATION L0002484      VOLUME  473699.531 3755005.482 0.0
LOCATION L0002485      VOLUME  473703.398 3754997.913 0.0
LOCATION L0002486      VOLUME  473707.954 3754990.898 0.0
LOCATION L0002487      VOLUME  473715.011 3754986.350 0.0
LOCATION L0002488      VOLUME  473723.272 3754985.764 0.0
LOCATION L0002489      VOLUME  473729.388 3754991.329 0.0
LOCATION L0002490      VOLUME  473730.833 3754999.530 0.0
** End of LINE VOLUME Source ID = SLINE21
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE22
** DESCRSRC On-Site Truck Travel - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 6.689E-07
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 8
** 474154.104, 3754912.107, 0.00, 4.00, 3.95
** 474275.659, 3754818.227, 0.00, 4.00, 3.95
** 474276.685, 3754808.563, 0.00, 4.00, 3.95
** 474271.043, 3754798.926, 0.00, 4.00, 3.95
** 474263.098, 3754791.586, 0.00, 4.00, 3.95
** 474247.089, 3754790.184, 0.00, 4.00, 3.95
** 474237.633, 3754788.405, 0.00, 4.00, 3.95
** 474234.942, 3754777.285, 0.00, 4.00, 3.95
** -----
LOCATION L0002491      VOLUME  474157.468 3754909.510 0.0
LOCATION L0002492      VOLUME  474164.195 3754904.314 0.0
LOCATION L0002493      VOLUME  474170.922 3754899.118 0.0
LOCATION L0002494      VOLUME  474177.650 3754893.923 0.0
LOCATION L0002495      VOLUME  474184.377 3754888.727 0.0
LOCATION L0002496      VOLUME  474191.104 3754883.531 0.0
LOCATION L0002497      VOLUME  474197.831 3754878.336 0.0
LOCATION L0002498      VOLUME  474204.558 3754873.140 0.0
LOCATION L0002499      VOLUME  474211.286 3754867.944 0.0
LOCATION L0002500      VOLUME  474218.013 3754862.749 0.0
LOCATION L0002501      VOLUME  474224.740 3754857.553 0.0

```

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002502 | VOLUME | 474231.467 | 3754852.358 | 0.0 |
| LOCATION | L0002503 | VOLUME | 474238.195 | 3754847.162 | 0.0 |
| LOCATION | L0002504 | VOLUME | 474244.922 | 3754841.966 | 0.0 |
| LOCATION | L0002505 | VOLUME | 474251.649 | 3754836.771 | 0.0 |
| LOCATION | L0002506 | VOLUME | 474258.376 | 3754831.575 | 0.0 |
| LOCATION | L0002507 | VOLUME | 474265.103 | 3754826.379 | 0.0 |
| LOCATION | L0002508 | VOLUME | 474271.831 | 3754821.184 | 0.0 |
| LOCATION | L0002509 | VOLUME | 474276.046 | 3754814.585 | 0.0 |
| LOCATION | L0002510 | VOLUME | 474275.450 | 3754806.453 | 0.0 |
| LOCATION | L0002511 | VOLUME | 474271.156 | 3754799.118 | 0.0 |
| LOCATION | L0002512 | VOLUME | 474264.963 | 3754793.309 | 0.0 |
| LOCATION | L0002513 | VOLUME | 474257.160 | 3754791.066 | 0.0 |
| LOCATION | L0002514 | VOLUME | 474248.692 | 3754790.324 | 0.0 |
| LOCATION | L0002515 | VOLUME | 474240.317 | 3754788.910 | 0.0 |
| LOCATION | L0002516 | VOLUME | 474236.276 | 3754782.798 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE22

\*\* -----

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE23

\*\* DESCRSRC On-Site Truck Idling - Medical Office Building (1&2)

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 2.137E-07

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 2

\*\* 474028.388, 3754698.671, 0.00, 4.00, 3.95

\*\* 474028.146, 3754663.431, 0.00, 4.00, 3.95

\*\* -----

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002517 | VOLUME | 474028.359 | 3754694.421 | 0.0 |
| LOCATION | L0002518 | VOLUME | 474028.301 | 3754685.921 | 0.0 |
| LOCATION | L0002519 | VOLUME | 474028.242 | 3754677.421 | 0.0 |
| LOCATION | L0002520 | VOLUME | 474028.184 | 3754668.921 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE23

\*\* -----

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE24

\*\* DESCRSRC On-Site Truck Travel - Medical Office Building (1&2)

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 1.433E-07

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 2

\*\* 474027.769, 3754746.815, 0.00, 4.00, 3.95

\*\* 474028.146, 3754663.431, 0.00, 4.00, 3.95

\*\* -----

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002521 | VOLUME | 474027.788 | 3754742.565 | 0.0 |
| LOCATION | L0002522 | VOLUME | 474027.827 | 3754734.065 | 0.0 |
| LOCATION | L0002523 | VOLUME | 474027.865 | 3754725.565 | 0.0 |
| LOCATION | L0002524 | VOLUME | 474027.903 | 3754717.065 | 0.0 |
| LOCATION | L0002525 | VOLUME | 474027.942 | 3754708.565 | 0.0 |

|          |          |        |            |             |     |
|----------|----------|--------|------------|-------------|-----|
| LOCATION | L0002526 | VOLUME | 474027.980 | 3754700.065 | 0.0 |
| LOCATION | L0002527 | VOLUME | 474028.019 | 3754691.565 | 0.0 |
| LOCATION | L0002528 | VOLUME | 474028.057 | 3754683.065 | 0.0 |
| LOCATION | L0002529 | VOLUME | 474028.095 | 3754674.565 | 0.0 |
| LOCATION | L0002530 | VOLUME | 474028.134 | 3754666.066 | 0.0 |

\*\* End of LINE VOLUME Source ID = SLINE24

\*\* Source Parameters \*\*

\*\* LINE VOLUME Source ID = SLINE1

|          |          |              |      |      |      |
|----------|----------|--------------|------|------|------|
| SRCPARAM | L0002235 | 0.0001541333 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002236 | 0.0001541333 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002237 | 0.0001541333 | 4.00 | 3.95 | 1.86 |

-----

\*\* LINE VOLUME Source ID = SLINE2

|          |          |             |      |      |      |
|----------|----------|-------------|------|------|------|
| SRCPARAM | L0002238 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002239 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002240 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002241 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002242 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002243 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002244 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002245 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002246 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002247 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002248 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002249 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002250 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002251 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002252 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002253 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002254 | 0.000008667 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002255 | 0.000008667 | 4.00 | 3.95 | 1.86 |

-----

\*\* LINE VOLUME Source ID = SLINE3

|          |          |             |      |      |      |
|----------|----------|-------------|------|------|------|
| SRCPARAM | L0002256 | 0.000005251 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002257 | 0.000005251 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002258 | 0.000005251 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002259 | 0.000005251 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002260 | 0.000005251 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002261 | 0.000005251 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002262 | 0.000005251 | 4.00 | 3.95 | 1.86 |

-----

\*\* LINE VOLUME Source ID = SLINE4

|          |          |            |      |      |      |
|----------|----------|------------|------|------|------|
| SRCPARAM | L0002263 | 0.00006882 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002264 | 0.00006882 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002265 | 0.00006882 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002266 | 0.00006882 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002267 | 0.00006882 | 4.00 | 3.95 | 1.86 |

-----

\*\* LINE VOLUME Source ID = SLINE5

|          |          |              |      |      |      |
|----------|----------|--------------|------|------|------|
| SRCPARAM | L0002268 | 0.0000285444 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002269 | 0.0000285444 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002270 | 0.0000285444 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002271 | 0.0000285444 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002272 | 0.0000285444 | 4.00 | 3.95 | 1.86 |

|                                   |          |              |      |      |      |
|-----------------------------------|----------|--------------|------|------|------|
| SRCPARAM                          | L0002273 | 0.0000285444 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002274 | 0.0000285444 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002275 | 0.0000285444 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002276 | 0.0000285444 | 4.00 | 3.95 | 1.86 |
| ** -----                          |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE6 |          |              |      |      |      |
| SRCPARAM                          | L0002277 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002278 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002279 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002280 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002281 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002282 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002283 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002284 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002285 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002286 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002287 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002288 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002289 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002290 | 0.000003934  | 4.00 | 3.95 | 1.86 |
| ** -----                          |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE7 |          |              |      |      |      |
| SRCPARAM                          | L0002291 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002292 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002293 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002294 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002295 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002296 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002297 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002298 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002299 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002300 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002301 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002302 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002303 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002304 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002305 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002306 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002307 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002308 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002309 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002310 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002311 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002312 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002313 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002314 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002315 | 0.000001306  | 4.00 | 3.95 | 1.86 |
| ** -----                          |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE8 |          |              |      |      |      |
| SRCPARAM                          | L0002316 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002317 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002318 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002319 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                          | L0002320 | 0.0000003081 | 4.00 | 3.95 | 1.86 |



|                                    |          |              |      |      |      |
|------------------------------------|----------|--------------|------|------|------|
| SRCPARAM                           | L0002321 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002322 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002323 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002324 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002325 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002326 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002327 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002328 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002329 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002330 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002331 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002332 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002333 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002334 | 0.0000003081 | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE9  |          |              |      |      |      |
| SRCPARAM                           | L0002335 | 0.000002951  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002336 | 0.000002951  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002337 | 0.000002951  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002338 | 0.000002951  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002339 | 0.000002951  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002340 | 0.000002951  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002341 | 0.000002951  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002342 | 0.000002951  | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE10 |          |              |      |      |      |
| SRCPARAM                           | L0002343 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002344 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002345 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002346 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002347 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002348 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002349 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002350 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002351 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002352 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002353 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002354 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002355 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002356 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002357 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002358 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002359 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002360 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002361 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002362 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002363 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002364 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002365 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002366 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002367 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002368 | 0.000002185  | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |              |      |      |      |
| ** LINE VOLUME Source ID = SLINE11 |          |              |      |      |      |

|                                    |          |                |      |      |      |
|------------------------------------|----------|----------------|------|------|------|
| SRCPARAM                           | L0002369 | 0.000036675    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002370 | 0.000036675    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002371 | 0.000036675    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002372 | 0.000036675    | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |                |      |      |      |
| ** LINE VOLUME Source ID = SLINE12 |          |                |      |      |      |
| SRCPARAM                           | L0002373 | 0.000001217    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002374 | 0.000001217    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002375 | 0.000001217    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002376 | 0.000001217    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002377 | 0.000001217    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002378 | 0.000001217    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002379 | 0.000001217    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002380 | 0.000001217    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002381 | 0.000001217    | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002382 | 0.000001217    | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |                |      |      |      |
| ** LINE VOLUME Source ID = SLINE13 |          |                |      |      |      |
| SRCPARAM                           | L0002383 | 0.0000002244   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002384 | 0.0000002244   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002385 | 0.0000002244   | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |                |      |      |      |
| ** LINE VOLUME Source ID = SLINE14 |          |                |      |      |      |
| SRCPARAM                           | L0002386 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002387 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002388 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002389 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002390 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002391 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002392 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002393 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002394 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002395 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002396 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002397 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002398 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002399 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002400 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002401 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002402 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002403 | 0.00000001262  | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |                |      |      |      |
| ** LINE VOLUME Source ID = SLINE15 |          |                |      |      |      |
| SRCPARAM                           | L0002404 | 0.000000007633 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002405 | 0.000000007633 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002406 | 0.000000007633 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002407 | 0.000000007633 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002408 | 0.000000007633 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002409 | 0.000000007633 | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002410 | 0.000000007633 | 4.00 | 3.95 | 1.86 |
| ** -----                           |          |                |      |      |      |
| ** LINE VOLUME Source ID = SLINE16 |          |                |      |      |      |
| SRCPARAM                           | L0002411 | 0.0000001002   | 4.00 | 3.95 | 1.86 |
| SRCPARAM                           | L0002412 | 0.0000001002   | 4.00 | 3.95 | 1.86 |



|    |                                 |          |               |      |      |      |
|----|---------------------------------|----------|---------------|------|------|------|
|    | SRCPARAM                        | L0002413 | 0.00000001002 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002414 | 0.00000001002 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002415 | 0.00000001002 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |               |      |      |      |
| ** | LINE VOLUME Source ID = SLINE17 |          |               |      |      |      |
|    | SRCPARAM                        | L0002416 | 0.00000004156 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002417 | 0.00000004156 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002418 | 0.00000004156 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002419 | 0.00000004156 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002420 | 0.00000004156 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002421 | 0.00000004156 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002422 | 0.00000004156 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002423 | 0.00000004156 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002424 | 0.00000004156 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |               |      |      |      |
| ** | LINE VOLUME Source ID = SLINE18 |          |               |      |      |      |
|    | SRCPARAM                        | L0002425 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002426 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002427 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002428 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002429 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002430 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002431 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002432 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002433 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002434 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002435 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002436 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002437 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002438 | 0.00000004632 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |               |      |      |      |
| ** | LINE VOLUME Source ID = SLINE19 |          |               |      |      |      |
|    | SRCPARAM                        | L0002439 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002440 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002441 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002442 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002443 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002444 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002445 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002446 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002447 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002448 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002449 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002450 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002451 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002452 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002453 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002454 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002455 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002456 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002457 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002458 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002459 | 0.00000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002460 | 0.00000001538 | 4.00 | 3.95 | 1.86 |

|    |                                 |          |                |      |      |      |
|----|---------------------------------|----------|----------------|------|------|------|
|    | SRCPARAM                        | L0002461 | 0.000000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002462 | 0.000000001538 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002463 | 0.000000001538 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |                |      |      |      |
| ** | LINE VOLUME Source ID = SLINE20 |          |                |      |      |      |
|    | SRCPARAM                        | L0002464 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002465 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002466 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002467 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002468 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002469 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002470 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002471 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002472 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002473 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002474 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002475 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002476 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002477 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002478 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002479 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002480 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002481 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002482 | 0.000000003623 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |                |      |      |      |
| ** | LINE VOLUME Source ID = SLINE21 |          |                |      |      |      |
|    | SRCPARAM                        | L0002483 | 0.000000003474 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002484 | 0.000000003474 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002485 | 0.000000003474 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002486 | 0.000000003474 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002487 | 0.000000003474 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002488 | 0.000000003474 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002489 | 0.000000003474 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002490 | 0.000000003474 | 4.00 | 3.95 | 1.86 |
| ** | -----                           |          |                |      |      |      |
| ** | LINE VOLUME Source ID = SLINE22 |          |                |      |      |      |
|    | SRCPARAM                        | L0002491 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002492 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002493 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002494 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002495 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002496 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002497 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002498 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002499 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002500 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002501 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002502 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002503 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002504 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002505 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002506 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002507 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM                        | L0002508 | 0.000000002573 | 4.00 | 3.95 | 1.86 |

|          |          |                |      |      |      |
|----------|----------|----------------|------|------|------|
| SRCPARAM | L0002509 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002510 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002511 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002512 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002513 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002514 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002515 | 0.000000002573 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002516 | 0.000000002573 | 4.00 | 3.95 | 1.86 |

\*\*  
 \*\* LINE VOLUME Source ID = SLINE23  

|          |          |                |      |      |      |
|----------|----------|----------------|------|------|------|
| SRCPARAM | L0002517 | 0.000000005343 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002518 | 0.000000005343 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002519 | 0.000000005343 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002520 | 0.000000005343 | 4.00 | 3.95 | 1.86 |

 \*\*  
 \*\* LINE VOLUME Source ID = SLINE24  

|          |          |                |      |      |      |
|----------|----------|----------------|------|------|------|
| SRCPARAM | L0002521 | 0.000000001433 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002522 | 0.000000001433 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002523 | 0.000000001433 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002524 | 0.000000001433 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002525 | 0.000000001433 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002526 | 0.000000001433 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002527 | 0.000000001433 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002528 | 0.000000001433 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002529 | 0.000000001433 | 4.00 | 3.95 | 1.86 |
| SRCPARAM | L0002530 | 0.000000001433 | 4.00 | 3.95 | 1.86 |

 \*\*  
 URBANSRC ALL  
 SRCGROUP ALL  
 SO FINISHED  
 \*\*  
 \*\*\*\*\*  
 \*\* AERMOD Receptor Pathway  
 \*\*\*\*\*  
 \*\*  
 \*\*  
 RE STARTING  
 \*\* DESCRREC    ""    ""  

|          |           |            |      |
|----------|-----------|------------|------|
| DISCCART | 474201.46 | 3754331.71 | 2.00 |
| DISCCART | 474401.46 | 3754331.71 | 2.00 |
| DISCCART | 474501.46 | 3754331.71 | 2.00 |
| DISCCART | 473801.46 | 3754431.71 | 2.00 |
| DISCCART | 473715.92 | 3754428.71 | 2.00 |
| DISCCART | 473738.73 | 3754428.62 | 2.00 |
| DISCCART | 473755.69 | 3754428.85 | 2.00 |
| DISCCART | 473774.94 | 3754428.85 | 2.00 |
| DISCCART | 473815.97 | 3754429.55 | 2.00 |
| DISCCART | 473831.00 | 3754424.36 | 2.00 |
| DISCCART | 473853.90 | 3754425.20 | 2.00 |
| DISCCART | 473871.89 | 3754423.79 | 2.00 |
| DISCCART | 473891.98 | 3754427.59 | 2.00 |
| DISCCART | 473779.02 | 3754366.16 | 2.00 |
| DISCCART | 473813.90 | 3754366.49 | 2.00 |
| DISCCART | 474014.62 | 3754372.20 | 2.00 |

|          |           |            |      |
|----------|-----------|------------|------|
| DISCCART | 474058.72 | 3754367.30 | 2.00 |
| DISCCART | 474106.33 | 3754366.60 | 2.00 |
| DISCCART | 474129.66 | 3754366.83 | 2.00 |
| DISCCART | 474153.46 | 3754367.77 | 2.00 |
| DISCCART | 474231.55 | 3754356.87 | 2.00 |
| DISCCART | 474273.79 | 3754374.60 | 2.00 |
| DISCCART | 474545.34 | 3754362.52 | 2.00 |
| DISCCART | 474582.52 | 3754377.24 | 2.00 |
| DISCCART | 474612.74 | 3754387.31 | 2.00 |
| DISCCART | 474642.95 | 3754391.18 | 2.00 |
| DISCCART | 474354.43 | 3754341.93 | 2.00 |

RE FINISHED  
\*\*  
\*\*\*\*\*  
\*\* AERMOD Meteorology Pathway  
\*\*\*\*\*  
\*\*  
\*\*  
ME STARTING  
SURFFILE ..\..\Aermod\rivr8.sfc  
PROFFILE ..\..\Aermod\rivr8.PFL  
SURFDATA 3190 2008  
UAIRDATA 3190 2008  
SITEDATA 99999 2008  
PROFBASE 250.0 METERS  
ME FINISHED  
\*\*  
\*\*\*\*\*  
\*\* AERMOD Output Pathway  
\*\*\*\*\*  
\*\*  
\*\*  
OU STARTING  
RECTABLE ALLAVE 1ST  
RECTABLE 24 1ST  
\*\* Auto-Generated Plotfiles  
PLOTFILE 24 ALL 1ST PM2.AD\24H1GALL.PLT 31  
SUMMFILE PM2.sum  
OU FINISHED

\*\*\* Message Summary For AERMOD Model Setup \*\*\*

----- Summary of Total Messages -----

|            |                            |
|------------|----------------------------|
| A Total of | 0 Fatal Error Message(s)   |
| A Total of | 1 Warning Message(s)       |
| A Total of | 0 Informational Message(s) |

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

```
***** WARNING MESSAGES *****
ME W531      1158      MEOPEN: CAUTION! Met Station ID Missing from
SURFFILE for      SURFDATA
```

```
*****
*** SETUP Finishes Successfully ***
*****
```

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\* 03/13/15  
\*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
\*\*\* 18:25:54

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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* MODEL SETUP OPTIONS

SUMMARY \*\*\*

---  
\*\*Model Is Setup For Calculation of Average CONcEntration Values.

-- DEPOSITION LOGIC --

\*\*NO GAS DEPOSITION Data Provided.

\*\*NO PARTICLE DEPOSITION Data Provided.

\*\*Model Uses NO DRY DEPLETION. DRYDPLT = F

\*\*Model Uses NO WET DEPLETION. WETDPLT = F

\*\*Model Uses URBAN Dispersion Algorithm for the SBL for 296 Source(s),  
for Total of 1 Urban Area(s):

Urban Population = 2100516.0 ; Urban Roughness Length = 1.000 m

\*\*Model Allows User-Specified Options:

1. Stack-tip Downwash.
2. Model Assumes Receptors on FLAT Terrain.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.
6. Urban Roughness Length of 1.0 Meter Used.

\*\*Other Options Specified:

FASTALL - Use effective sigma-y to optimize meander for  
POINT and VOLUME sources, and hybrid approach  
to optimize AREA sources (formerly TOXICS option)  
TEMP\_Sub - Meteorological data includes TEMP substitutions

\*\*Model Accepts FLAGPOLE Receptor Heights.

\*\*The User Specified a Pollutant Type of: PM\_2.5

\*\*Model Calculates 1 Short Term Average(s) of: 24-HR

\*\*This Run Includes: 296 Source(s); 1 Source Group(s); and  
27 Receptor(s)

\*\*Model Set To Continue RUNning After the Setup Testing.

\*\*The AERMET Input Meteorological Data Version Date: 14134

\*\*Output Options Selected:

Model Outputs Tables of Highest Short Term Values by Receptor  
(RECTABLE Keyword)  
Model Outputs External File(s) of High Values for Plotting  
(PLOTFILE Keyword)  
Model Outputs Separate Summary File of High Ranked Values  
(SUMMFILE Keyword)

\*\*NOTE: The Following Flags May Appear Following CONC Values: c for  
Calm Hours  
m for  
Missing Hours  
b for  
Both Calm and Missing Hours

\*\*Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 250.00 ;  
Decay Coef. = 0.000 ; Rot. Angle = 0.0  
Emission Units = GRAMS/SEC  
; Emission Rate Unit Factor = 0.10000E+07  
Output Units = MICROGRAMS/M\*\*3

\*\*Approximate Storage Requirements of Model = 3.6 MB of RAM.

\*\*Detailed Error/Message File: PM2.err  
\*\*File for Summary of Results: PM2.sum

```

*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
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PAGE      2
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

```

```

*** VOLUME SOURCE DATA
***

```

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002235 |          | 0      | 0.15413E-03 | 473797.1 | 3754701.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002236 |          | 0      | 0.15413E-03 | 473797.1 | 3754693.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002237 |          | 0      | 0.15413E-03 | 473797.1 | 3754684.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002238 |          | 0      | 0.86670E-05 | 473737.1 | 3754546.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002239 |          | 0      | 0.86670E-05 | 473737.3 | 3754538.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002240 |          | 0      | 0.86670E-05 | 473737.5 | 3754529.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002241 |          | 0      | 0.86670E-05 | 473737.8 | 3754521.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002242 |          | 0      | 0.86670E-05 | 473738.0 | 3754512.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002243 |          | 0      | 0.86670E-05 | 473738.3 | 3754504.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002244 |          | 0      | 0.86670E-05 | 473738.5 | 3754495.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002245 |          | 0      | 0.86670E-05 | 473740.3 | 3754488.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002246 |          | 0      | 0.86670E-05 | 473747.2 | 3754483.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002247 |          | 0      | 0.86670E-05 | 473755.7 | 3754483.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002248 |          | 0      | 0.86670E-05 | 473764.2 | 3754483.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002249 |          | 0      | 0.86670E-05 | 473772.7 | 3754483.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002250 |          | 0      | 0.86670E-05 | 473781.2 | 3754483.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |



|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002251  | 0   | 0.86670E-05 | 473789.7 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002252  | 0   | 0.86670E-05 | 473798.2 | 3754482.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002253  | 0   | 0.86670E-05 | 473806.7 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002254  | 0   | 0.86670E-05 | 473815.2 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002255  | 0   | 0.86670E-05 | 473823.7 | 3754482.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002256  | 0   | 0.52510E-05 | 474151.2 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002257  | 0   | 0.52510E-05 | 474159.7 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002258  | 0   | 0.52510E-05 | 474168.2 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002259  | 0   | 0.52510E-05 | 474176.7 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002260  | 0   | 0.52510E-05 | 474185.2 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002261  | 0   | 0.52510E-05 | 474193.7 | 3754542.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002262  | 0   | 0.52510E-05 | 474202.2 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002263  | 0   | 0.68820E-04 | 473709.1 | 3754990.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002264  | 0   | 0.68820E-04 | 473716.4 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002265  | 0   | 0.68820E-04 | 473724.6 | 3754986.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002266  | 0   | 0.68820E-04 | 473730.2 | 3754992.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002267  | 0   | 0.68820E-04 | 473730.6 | 3755001.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002268  | 0   | 0.28544E-04 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002269  | 0   | 0.28544E-04 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002270  | 0   | 0.28544E-04 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002271  | 0   | 0.28544E-04 | 474177.7 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002272  | 0   | 0.28544E-04 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002273  | 0   | 0.28544E-04 | 474191.1 | 3754883.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002274  | 0   | 0.28544E-04 | 474197.9 | 3754878.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
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***      18:25:54

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PAGE      3
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

```

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002275 |          | 0      | 0.28544E-04 | 474204.6 | 3754873.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002276 |          | 0      | 0.28544E-04 | 474211.3 | 3754868.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002277 |          | 0      | 0.39340E-05 | 473797.1 | 3754701.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002278 |          | 0      | 0.39340E-05 | 473797.1 | 3754693.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002279 |          | 0      | 0.39340E-05 | 473797.1 | 3754684.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002280 |          | 0      | 0.39340E-05 | 473804.9 | 3754684.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002281 |          | 0      | 0.39340E-05 | 473813.4 | 3754684.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002282 |          | 0      | 0.39340E-05 | 473821.9 | 3754684.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002283 |          | 0      | 0.39340E-05 | 473830.4 | 3754684.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002284 |          | 0      | 0.39340E-05 | 473832.6 | 3754690.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002285 |          | 0      | 0.39340E-05 | 473832.1 | 3754699.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002286 |          | 0      | 0.39340E-05 | 473831.7 | 3754707.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002287 |          | 0      | 0.39340E-05 | 473830.1 | 3754715.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002288 |          | 0      | 0.39340E-05 | 473827.5 | 3754724.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002289 |          | 0      | 0.39340E-05 | 473825.4 | 3754732.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002290 |          | 0      | 0.39340E-05 | 473825.4 | 3754740.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002291  | 0   | 0.13060E-05 | 473695.2 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002292  | 0   | 0.13060E-05 | 473703.7 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002293  | 0   | 0.13060E-05 | 473712.2 | 3754560.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002294  | 0   | 0.13060E-05 | 473720.7 | 3754560.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002295  | 0   | 0.13060E-05 | 473729.2 | 3754560.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002296  | 0   | 0.13060E-05 | 473737.0 | 3754559.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002297  | 0   | 0.13060E-05 | 473737.2 | 3754551.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002298  | 0   | 0.13060E-05 | 473737.4 | 3754542.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002299  | 0   | 0.13060E-05 | 473737.6 | 3754534.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002300  | 0   | 0.13060E-05 | 473737.8 | 3754525.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002301  | 0   | 0.13060E-05 | 473738.0 | 3754517.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002302  | 0   | 0.13060E-05 | 473738.2 | 3754508.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002303  | 0   | 0.13060E-05 | 473738.4 | 3754500.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002304  | 0   | 0.13060E-05 | 473738.6 | 3754491.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002305  | 0   | 0.13060E-05 | 473743.3 | 3754485.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002306  | 0   | 0.13060E-05 | 473751.1 | 3754483.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002307  | 0   | 0.13060E-05 | 473759.6 | 3754483.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002308  | 0   | 0.13060E-05 | 473768.1 | 3754483.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002309  | 0   | 0.13060E-05 | 473776.6 | 3754483.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002310  | 0   | 0.13060E-05 | 473785.1 | 3754483.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002311  | 0   | 0.13060E-05 | 473793.6 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002312  | 0   | 0.13060E-05 | 473802.1 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002313  | 0   | 0.13060E-05 | 473810.6 | 3754482.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002314  | 0   | 0.13060E-05 | 473819.1 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:25:54

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PAGE      4
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002315 |          | 0      | 0.13060E-05 | 473827.6 | 3754482.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002316 |          | 0      | 0.30810E-06 | 474151.2 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002317 |          | 0      | 0.30810E-06 | 474159.7 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002318 |          | 0      | 0.30810E-06 | 474168.2 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002319 |          | 0      | 0.30810E-06 | 474176.7 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002320 |          | 0      | 0.30810E-06 | 474185.2 | 3754542.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002321 |          | 0      | 0.30810E-06 | 474193.7 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002322 |          | 0      | 0.30810E-06 | 474202.2 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002323 |          | 0      | 0.30810E-06 | 474210.7 | 3754541.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002324 |          | 0      | 0.30810E-06 | 474219.2 | 3754541.7 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002325 |          | 0      | 0.30810E-06 | 474225.0 | 3754544.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002326 |          | 0      | 0.30810E-06 | 474224.8 | 3754552.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002327 |          | 0      | 0.30810E-06 | 474224.6 | 3754561.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002328 |          | 0      | 0.30810E-06 | 474230.5 | 3754563.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002329 |          | 0      | 0.30810E-06 | 474239.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002330 |          | 0      | 0.30810E-06 | 474247.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002331  | 0   | 0.30810E-06 | 474256.0 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002332  | 0   | 0.30810E-06 | 474264.5 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002333  | 0   | 0.30810E-06 | 474273.0 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002334  | 0   | 0.30810E-06 | 474281.5 | 3754563.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002335  | 0   | 0.29510E-05 | 473695.7 | 3755013.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002336  | 0   | 0.29510E-05 | 473699.5 | 3755005.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002337  | 0   | 0.29510E-05 | 473703.4 | 3754997.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002338  | 0   | 0.29510E-05 | 473708.0 | 3754990.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002339  | 0   | 0.29510E-05 | 473715.0 | 3754986.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002340  | 0   | 0.29510E-05 | 473723.3 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002341  | 0   | 0.29510E-05 | 473729.4 | 3754991.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002342  | 0   | 0.29510E-05 | 473730.8 | 3754999.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002343  | 0   | 0.21850E-05 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002344  | 0   | 0.21850E-05 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002345  | 0   | 0.21850E-05 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002346  | 0   | 0.21850E-05 | 474177.6 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002347  | 0   | 0.21850E-05 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002348  | 0   | 0.21850E-05 | 474191.1 | 3754883.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002349  | 0   | 0.21850E-05 | 474197.8 | 3754878.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002350  | 0   | 0.21850E-05 | 474204.6 | 3754873.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002351  | 0   | 0.21850E-05 | 474211.3 | 3754867.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002352  | 0   | 0.21850E-05 | 474218.0 | 3754862.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002353  | 0   | 0.21850E-05 | 474224.7 | 3754857.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002354  | 0   | 0.21850E-05 | 474231.5 | 3754852.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:25:54

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PAGE      5
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

```

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           | ELEV.    | HEIGHT   |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         |          |          |
| ID       |          | SCALAR | VARY        |          |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| -----    |          |        |             |          |           |          |          |
| L0002355 |          | 0      | 0.21850E-05 | 474238.2 | 3754847.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002356 |          | 0      | 0.21850E-05 | 474244.9 | 3754842.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002357 |          | 0      | 0.21850E-05 | 474251.6 | 3754836.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002358 |          | 0      | 0.21850E-05 | 474258.4 | 3754831.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002359 |          | 0      | 0.21850E-05 | 474265.1 | 3754826.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002360 |          | 0      | 0.21850E-05 | 474271.8 | 3754821.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002361 |          | 0      | 0.21850E-05 | 474276.0 | 3754814.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002362 |          | 0      | 0.21850E-05 | 474275.5 | 3754806.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002363 |          | 0      | 0.21850E-05 | 474271.2 | 3754799.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002364 |          | 0      | 0.21850E-05 | 474265.0 | 3754793.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002365 |          | 0      | 0.21850E-05 | 474257.2 | 3754791.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002366 |          | 0      | 0.21850E-05 | 474248.7 | 3754790.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002367 |          | 0      | 0.21850E-05 | 474240.3 | 3754788.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002368 |          | 0      | 0.21850E-05 | 474236.3 | 3754782.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002369 |          | 0      | 0.36675E-04 | 474028.4 | 3754694.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002370 |          | 0      | 0.36675E-04 | 474028.3 | 3754685.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002371  | 0   | 0.36675E-04 | 474028.2 | 3754677.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002372  | 0   | 0.36675E-04 | 474028.2 | 3754668.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002373  | 0   | 0.12170E-05 | 474027.8 | 3754742.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002374  | 0   | 0.12170E-05 | 474027.8 | 3754734.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002375  | 0   | 0.12170E-05 | 474027.9 | 3754725.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002376  | 0   | 0.12170E-05 | 474027.9 | 3754717.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002377  | 0   | 0.12170E-05 | 474027.9 | 3754708.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002378  | 0   | 0.12170E-05 | 474028.0 | 3754700.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002379  | 0   | 0.12170E-05 | 474028.0 | 3754691.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002380  | 0   | 0.12170E-05 | 474028.1 | 3754683.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002381  | 0   | 0.12170E-05 | 474028.1 | 3754674.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002382  | 0   | 0.12170E-05 | 474028.1 | 3754666.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002383  | 0   | 0.22440E-06 | 473797.1 | 3754701.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002384  | 0   | 0.22440E-06 | 473797.1 | 3754693.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002385  | 0   | 0.22440E-06 | 473797.1 | 3754684.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002386  | 0   | 0.12620E-07 | 473737.1 | 3754546.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002387  | 0   | 0.12620E-07 | 473737.3 | 3754538.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002388  | 0   | 0.12620E-07 | 473737.5 | 3754529.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002389  | 0   | 0.12620E-07 | 473737.8 | 3754521.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002390  | 0   | 0.12620E-07 | 473738.0 | 3754512.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002391  | 0   | 0.12620E-07 | 473738.3 | 3754504.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002392  | 0   | 0.12620E-07 | 473738.5 | 3754495.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002393  | 0   | 0.12620E-07 | 473740.3 | 3754488.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002394  | 0   | 0.12620E-07 | 473747.2 | 3754483.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:25:54

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PAGE      6
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       | CATS.    | SCALAR | VARY        | (METERS) | (METERS)  | (METERS) | (METERS) |
| (METERS) | (METERS) | BY     |             |          |           |          |          |
| -----    |          |        |             |          |           |          |          |
| L0002395 |          | 0      | 0.12620E-07 | 473755.7 | 3754483.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002396 |          | 0      | 0.12620E-07 | 473764.2 | 3754483.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002397 |          | 0      | 0.12620E-07 | 473772.7 | 3754483.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002398 |          | 0      | 0.12620E-07 | 473781.2 | 3754483.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002399 |          | 0      | 0.12620E-07 | 473789.7 | 3754483.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002400 |          | 0      | 0.12620E-07 | 473798.2 | 3754482.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002401 |          | 0      | 0.12620E-07 | 473806.7 | 3754482.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002402 |          | 0      | 0.12620E-07 | 473815.2 | 3754482.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002403 |          | 0      | 0.12620E-07 | 473823.7 | 3754482.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002404 |          | 0      | 0.76330E-08 | 474151.2 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002405 |          | 0      | 0.76330E-08 | 474159.7 | 3754542.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002406 |          | 0      | 0.76330E-08 | 474168.2 | 3754542.2 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002407 |          | 0      | 0.76330E-08 | 474176.7 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002408 |          | 0      | 0.76330E-08 | 474185.2 | 3754542.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002409 |          | 0      | 0.76330E-08 | 474193.7 | 3754542.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002410 |          | 0      | 0.76330E-08 | 474202.2 | 3754541.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |



|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002411  | 0   | 0.10020E-06 | 473709.1 | 3754990.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002412  | 0   | 0.10020E-06 | 473716.4 | 3754985.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002413  | 0   | 0.10020E-06 | 473724.6 | 3754986.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002414  | 0   | 0.10020E-06 | 473730.2 | 3754992.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002415  | 0   | 0.10020E-06 | 473730.6 | 3755001.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002416  | 0   | 0.41560E-07 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002417  | 0   | 0.41560E-07 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002418  | 0   | 0.41560E-07 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002419  | 0   | 0.41560E-07 | 474177.7 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002420  | 0   | 0.41560E-07 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002421  | 0   | 0.41560E-07 | 474191.1 | 3754883.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002422  | 0   | 0.41560E-07 | 474197.9 | 3754878.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002423  | 0   | 0.41560E-07 | 474204.6 | 3754873.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002424  | 0   | 0.41560E-07 | 474211.3 | 3754868.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002425  | 0   | 0.46320E-07 | 473797.1 | 3754701.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002426  | 0   | 0.46320E-07 | 473797.1 | 3754693.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002427  | 0   | 0.46320E-07 | 473797.1 | 3754684.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002428  | 0   | 0.46320E-07 | 473804.9 | 3754684.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002429  | 0   | 0.46320E-07 | 473813.4 | 3754684.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002430  | 0   | 0.46320E-07 | 473821.9 | 3754684.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002431  | 0   | 0.46320E-07 | 473830.4 | 3754684.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002432  | 0   | 0.46320E-07 | 473832.6 | 3754690.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002433  | 0   | 0.46320E-07 | 473832.1 | 3754699.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002434  | 0   | 0.46320E-07 | 473831.7 | 3754707.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
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*** AERMET - VERSION 14134 ***      ***
***      18:25:54

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PAGE      7
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           | ELEV.    | HEIGHT   |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         |          |          |
| ID       | CATS.    | SCALAR | VARY        | (METERS) | (METERS)  | (METERS) | (METERS) |
| (METERS) | (METERS) | BY     |             |          |           |          |          |
| -----    |          |        |             |          |           |          |          |
| L0002435 |          | 0      | 0.46320E-07 | 473830.1 | 3754715.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002436 |          | 0      | 0.46320E-07 | 473827.5 | 3754724.0 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002437 |          | 0      | 0.46320E-07 | 473825.4 | 3754732.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002438 |          | 0      | 0.46320E-07 | 473825.4 | 3754740.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002439 |          | 0      | 0.15380E-07 | 473695.2 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002440 |          | 0      | 0.15380E-07 | 473703.7 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002441 |          | 0      | 0.15380E-07 | 473712.2 | 3754560.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002442 |          | 0      | 0.15380E-07 | 473720.7 | 3754560.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002443 |          | 0      | 0.15380E-07 | 473729.2 | 3754560.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002444 |          | 0      | 0.15380E-07 | 473737.0 | 3754559.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002445 |          | 0      | 0.15380E-07 | 473737.2 | 3754551.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002446 |          | 0      | 0.15380E-07 | 473737.4 | 3754542.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002447 |          | 0      | 0.15380E-07 | 473737.6 | 3754534.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002448 |          | 0      | 0.15380E-07 | 473737.8 | 3754525.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002449 |          | 0      | 0.15380E-07 | 473738.0 | 3754517.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002450 |          | 0      | 0.15380E-07 | 473738.2 | 3754508.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002451  | 0   | 0.15380E-07 | 473738.4 | 3754500.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002452  | 0   | 0.15380E-07 | 473738.6 | 3754491.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002453  | 0   | 0.15380E-07 | 473743.3 | 3754485.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002454  | 0   | 0.15380E-07 | 473751.1 | 3754483.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002455  | 0   | 0.15380E-07 | 473759.6 | 3754483.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002456  | 0   | 0.15380E-07 | 473768.1 | 3754483.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002457  | 0   | 0.15380E-07 | 473776.6 | 3754483.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002458  | 0   | 0.15380E-07 | 473785.1 | 3754483.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002459  | 0   | 0.15380E-07 | 473793.6 | 3754483.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002460  | 0   | 0.15380E-07 | 473802.1 | 3754482.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002461  | 0   | 0.15380E-07 | 473810.6 | 3754482.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002462  | 0   | 0.15380E-07 | 473819.1 | 3754482.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002463  | 0   | 0.15380E-07 | 473827.6 | 3754482.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002464  | 0   | 0.36230E-08 | 474151.2 | 3754542.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002465  | 0   | 0.36230E-08 | 474159.7 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002466  | 0   | 0.36230E-08 | 474168.2 | 3754542.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002467  | 0   | 0.36230E-08 | 474176.7 | 3754542.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002468  | 0   | 0.36230E-08 | 474185.2 | 3754542.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002469  | 0   | 0.36230E-08 | 474193.7 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002470  | 0   | 0.36230E-08 | 474202.2 | 3754541.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002471  | 0   | 0.36230E-08 | 474210.7 | 3754541.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002472  | 0   | 0.36230E-08 | 474219.2 | 3754541.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002473  | 0   | 0.36230E-08 | 474225.0 | 3754544.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002474  | 0   | 0.36230E-08 | 474224.8 | 3754552.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:25:54

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PAGE      8
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

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| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002475 |          | 0      | 0.36230E-08 | 474224.6 | 3754561.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002476 |          | 0      | 0.36230E-08 | 474230.5 | 3754563.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002477 |          | 0      | 0.36230E-08 | 474239.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002478 |          | 0      | 0.36230E-08 | 474247.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002479 |          | 0      | 0.36230E-08 | 474256.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002480 |          | 0      | 0.36230E-08 | 474264.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002481 |          | 0      | 0.36230E-08 | 474273.0 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002482 |          | 0      | 0.36230E-08 | 474281.5 | 3754563.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002483 |          | 0      | 0.34740E-07 | 473695.7 | 3755013.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002484 |          | 0      | 0.34740E-07 | 473699.5 | 3755005.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002485 |          | 0      | 0.34740E-07 | 473703.4 | 3754997.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002486 |          | 0      | 0.34740E-07 | 473708.0 | 3754990.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002487 |          | 0      | 0.34740E-07 | 473715.0 | 3754986.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002488 |          | 0      | 0.34740E-07 | 473723.3 | 3754985.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002489 |          | 0      | 0.34740E-07 | 473729.4 | 3754991.3 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002490 |          | 0      | 0.34740E-07 | 473730.8 | 3754999.5 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

|           |     |             |          |           |       |      |
|-----------|-----|-------------|----------|-----------|-------|------|
| L0002491  | 0   | 0.25730E-07 | 474157.5 | 3754909.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002492  | 0   | 0.25730E-07 | 474164.2 | 3754904.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002493  | 0   | 0.25730E-07 | 474170.9 | 3754899.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002494  | 0   | 0.25730E-07 | 474177.6 | 3754893.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002495  | 0   | 0.25730E-07 | 474184.4 | 3754888.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002496  | 0   | 0.25730E-07 | 474191.1 | 3754883.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002497  | 0   | 0.25730E-07 | 474197.8 | 3754878.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002498  | 0   | 0.25730E-07 | 474204.6 | 3754873.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002499  | 0   | 0.25730E-07 | 474211.3 | 3754867.9 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002500  | 0   | 0.25730E-07 | 474218.0 | 3754862.7 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002501  | 0   | 0.25730E-07 | 474224.7 | 3754857.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002502  | 0   | 0.25730E-07 | 474231.5 | 3754852.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002503  | 0   | 0.25730E-07 | 474238.2 | 3754847.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002504  | 0   | 0.25730E-07 | 474244.9 | 3754842.0 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002505  | 0   | 0.25730E-07 | 474251.6 | 3754836.8 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002506  | 0   | 0.25730E-07 | 474258.4 | 3754831.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002507  | 0   | 0.25730E-07 | 474265.1 | 3754826.4 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002508  | 0   | 0.25730E-07 | 474271.8 | 3754821.2 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002509  | 0   | 0.25730E-07 | 474276.0 | 3754814.6 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002510  | 0   | 0.25730E-07 | 474275.5 | 3754806.5 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002511  | 0   | 0.25730E-07 | 474271.2 | 3754799.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002512  | 0   | 0.25730E-07 | 474265.0 | 3754793.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002513  | 0   | 0.25730E-07 | 474257.2 | 3754791.1 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |
| L0002514  | 0   | 0.25730E-07 | 474248.7 | 3754790.3 | 250.0 | 4.00 |
| 3.95 1.86 | YES |             |          |           |       |      |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:25:54

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PAGE      9
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** VOLUME SOURCE DATA
***

```

| INIT.    | INIT.    | NUMBER | EMISSION    | RATE     |           | BASE     | RELEASE  |
|----------|----------|--------|-------------|----------|-----------|----------|----------|
| SOURCE   | SOURCE   | URBAN  | EMISSION    | RATE     |           |          |          |
| SY       | SZ       | PART.  | (GRAMS/SEC) | X        | Y         | ELEV.    | HEIGHT   |
| ID       |          | SOURCE | SCALAR      | VARY     |           |          |          |
| (METERS) | (METERS) | CATS.  |             | (METERS) | (METERS)  | (METERS) | (METERS) |
|          |          |        | BY          |          |           |          |          |
| L0002515 |          | 0      | 0.25730E-07 | 474240.3 | 3754788.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002516 |          | 0      | 0.25730E-07 | 474236.3 | 3754782.8 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002517 |          | 0      | 0.53430E-07 | 474028.4 | 3754694.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002518 |          | 0      | 0.53430E-07 | 474028.3 | 3754685.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002519 |          | 0      | 0.53430E-07 | 474028.2 | 3754677.4 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002520 |          | 0      | 0.53430E-07 | 474028.2 | 3754668.9 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002521 |          | 0      | 0.14330E-07 | 474027.8 | 3754742.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002522 |          | 0      | 0.14330E-07 | 474027.8 | 3754734.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002523 |          | 0      | 0.14330E-07 | 474027.9 | 3754725.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002524 |          | 0      | 0.14330E-07 | 474027.9 | 3754717.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002525 |          | 0      | 0.14330E-07 | 474027.9 | 3754708.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002526 |          | 0      | 0.14330E-07 | 474028.0 | 3754700.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002527 |          | 0      | 0.14330E-07 | 474028.0 | 3754691.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002528 |          | 0      | 0.14330E-07 | 474028.1 | 3754683.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002529 |          | 0      | 0.14330E-07 | 474028.1 | 3754674.6 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |
| L0002530 |          | 0      | 0.14330E-07 | 474028.1 | 3754666.1 | 250.0    | 4.00     |
| 3.95     | 1.86     | YES    |             |          |           |          |          |

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*** AERMOD - VERSION 14134 *** *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. *** 03/13/15
*** AERMET - VERSION 14134 *** ***
*** 18:25:54

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PAGE 10
**MODELOPTs:  NonDEFAULT CONC          FLAT          FLGPOL          FASTALL

```

```

*** SOURCE IDs DEFINING SOURCE
GROUPS ***

```

| SRCGROUP ID |            | SOURCE IDs |          |   |          |   |
|-------------|------------|------------|----------|---|----------|---|
| -----       |            | -----      |          |   |          |   |
| ALL         | L0002235   | ,          | L0002236 | , | L0002237 | , |
| L0002239    | , L0002240 | ,          | L0002241 | , | L0002242 | , |
|             | L0002243   | ,          | L0002244 | , | L0002245 | , |
| L0002247    | , L0002248 | ,          | L0002249 | , | L0002250 | , |
|             | L0002251   | ,          | L0002252 | , | L0002253 | , |
| L0002255    | , L0002256 | ,          | L0002257 | , | L0002258 | , |
|             | L0002259   | ,          | L0002260 | , | L0002261 | , |
| L0002263    | , L0002264 | ,          | L0002265 | , | L0002266 | , |
|             | L0002267   | ,          | L0002268 | , | L0002269 | , |
| L0002271    | , L0002272 | ,          | L0002273 | , | L0002274 | , |
|             | L0002275   | ,          | L0002276 | , | L0002277 | , |
| L0002279    | , L0002280 | ,          | L0002281 | , | L0002282 | , |
|             | L0002283   | ,          | L0002284 | , | L0002285 | , |
| L0002287    | , L0002288 | ,          | L0002289 | , | L0002290 | , |
|             | L0002291   | ,          | L0002292 | , | L0002293 | , |
| L0002295    | , L0002296 | ,          | L0002297 | , | L0002298 | , |
|             | L0002299   | ,          | L0002300 | , | L0002301 | , |
| L0002303    | , L0002304 | ,          | L0002305 | , | L0002306 | , |
|             | L0002307   | ,          | L0002308 | , | L0002309 | , |
| L0002311    | , L0002312 | ,          | L0002313 | , | L0002314 | , |
|             | L0002315   | ,          | L0002316 | , | L0002317 | , |
| L0002319    | , L0002320 | ,          | L0002321 | , | L0002322 | , |
|             | L0002323   | ,          | L0002324 | , | L0002325 | , |
| L0002327    | , L0002328 | ,          | L0002329 | , | L0002330 | , |
|             | L0002331   | ,          | L0002332 | , | L0002333 | , |
| L0002335    | , L0002336 | ,          | L0002337 | , | L0002338 | , |

|          |            |            |            |            |   |
|----------|------------|------------|------------|------------|---|
| L0002343 | L0002339   | , L0002340 | , L0002341 | , L0002342 | , |
|          | , L0002344 | , L0002345 | , L0002346 | ,          |   |
| L0002351 | L0002347   | , L0002348 | , L0002349 | , L0002350 | , |
|          | , L0002352 | , L0002353 | , L0002354 | ,          |   |
| L0002359 | L0002355   | , L0002356 | , L0002357 | , L0002358 | , |
|          | , L0002360 | , L0002361 | , L0002362 | ,          |   |
| L0002367 | L0002363   | , L0002364 | , L0002365 | , L0002366 | , |
|          | , L0002368 | , L0002369 | , L0002370 | ,          |   |
| L0002375 | L0002371   | , L0002372 | , L0002373 | , L0002374 | , |
|          | , L0002376 | , L0002377 | , L0002378 | ,          |   |
| L0002383 | L0002379   | , L0002380 | , L0002381 | , L0002382 | , |
|          | , L0002384 | , L0002385 | , L0002386 | ,          |   |
| L0002391 | L0002387   | , L0002388 | , L0002389 | , L0002390 | , |
|          | , L0002392 | , L0002393 | , L0002394 | ,          |   |



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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
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**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** SOURCE IDs DEFINING SOURCE
GROUPS ***

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| SRCGROUP ID |          | SOURCE IDs |          |   |          |   |
|-------------|----------|------------|----------|---|----------|---|
| -----       |          | -----      |          |   |          |   |
| L0002399    | L0002395 | ,          | L0002396 | , | L0002397 | , |
|             | L0002400 | ,          | L0002401 | , | L0002402 | , |
| L0002407    | L0002403 | ,          | L0002404 | , | L0002405 | , |
|             | L0002408 | ,          | L0002409 | , | L0002410 | , |
| L0002415    | L0002411 | ,          | L0002412 | , | L0002413 | , |
|             | L0002416 | ,          | L0002417 | , | L0002418 | , |
| L0002423    | L0002419 | ,          | L0002420 | , | L0002421 | , |
|             | L0002424 | ,          | L0002425 | , | L0002426 | , |
| L0002431    | L0002427 | ,          | L0002428 | , | L0002429 | , |
|             | L0002432 | ,          | L0002433 | , | L0002434 | , |
| L0002439    | L0002435 | ,          | L0002436 | , | L0002437 | , |
|             | L0002440 | ,          | L0002441 | , | L0002442 | , |
| L0002447    | L0002443 | ,          | L0002444 | , | L0002445 | , |
|             | L0002448 | ,          | L0002449 | , | L0002450 | , |
| L0002455    | L0002451 | ,          | L0002452 | , | L0002453 | , |
|             | L0002456 | ,          | L0002457 | , | L0002458 | , |
| L0002463    | L0002459 | ,          | L0002460 | , | L0002461 | , |
|             | L0002464 | ,          | L0002465 | , | L0002466 | , |
| L0002471    | L0002467 | ,          | L0002468 | , | L0002469 | , |
|             | L0002472 | ,          | L0002473 | , | L0002474 | , |
| L0002479    | L0002475 | ,          | L0002476 | , | L0002477 | , |
|             | L0002480 | ,          | L0002481 | , | L0002482 | , |
| L0002487    | L0002483 | ,          | L0002484 | , | L0002485 | , |
|             | L0002488 | ,          | L0002489 | , | L0002490 | , |
| L0002495    | L0002491 | ,          | L0002492 | , | L0002493 | , |
|             | L0002496 | ,          | L0002497 | , | L0002498 | , |

|          |            |            |            |            |   |
|----------|------------|------------|------------|------------|---|
| L0002503 | L0002499   | , L0002500 | , L0002501 | , L0002502 | , |
|          | , L0002504 | , L0002505 | , L0002506 | ,          |   |
| L0002511 | L0002507   | , L0002508 | , L0002509 | , L0002510 | , |
|          | , L0002512 | , L0002513 | , L0002514 | ,          |   |
| L0002519 | L0002515   | , L0002516 | , L0002517 | , L0002518 | , |
|          | , L0002520 | , L0002521 | , L0002522 | ,          |   |
| L0002527 | L0002523   | , L0002524 | , L0002525 | , L0002526 | , |
|          | , L0002528 | , L0002529 | , L0002530 | ,          |   |

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*** AERMOD - VERSION 14134 *** *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. *** 03/13/15
*** AERMET - VERSION 14134 *** ***
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**MODELOPTs:  NonDEFAULT CONC          FLAT          FLGPOL          FASTALL

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*** SOURCE IDs DEFINED AS URBAN
SOURCES ***

```

| URBAN ID | URBAN POP  | SOURCE IDs |            |            |   |
|----------|------------|------------|------------|------------|---|
| -----    | -----      | -----      |            |            |   |
| L0002238 | 2100516.   | L0002235   | , L0002236 | , L0002237 | , |
| L0002242 | , L0002239 | , L0002240 | , L0002241 | ,          |   |
| L0002247 | , L0002243 | , L0002244 | , L0002245 | , L0002246 | , |
| L0002255 | , L0002248 | , L0002249 | , L0002250 | ,          |   |
| L0002263 | , L0002251 | , L0002252 | , L0002253 | , L0002254 | , |
| L0002271 | , L0002256 | , L0002257 | , L0002258 | ,          |   |
| L0002279 | , L0002259 | , L0002260 | , L0002261 | , L0002262 | , |
| L0002287 | , L0002264 | , L0002265 | , L0002266 | ,          |   |
| L0002295 | , L0002267 | , L0002268 | , L0002269 | , L0002270 | , |
| L0002303 | , L0002272 | , L0002273 | , L0002274 | ,          |   |
| L0002311 | , L0002275 | , L0002276 | , L0002277 | , L0002278 | , |
| L0002319 | , L0002280 | , L0002281 | , L0002282 | ,          |   |
| L0002327 | , L0002283 | , L0002284 | , L0002285 | , L0002286 | , |
|          | , L0002288 | , L0002289 | , L0002290 | ,          |   |
|          | , L0002291 | , L0002292 | , L0002293 | , L0002294 | , |
|          | , L0002296 | , L0002297 | , L0002298 | ,          |   |
|          | , L0002299 | , L0002300 | , L0002301 | , L0002302 | , |
|          | , L0002304 | , L0002305 | , L0002306 | ,          |   |
|          | , L0002307 | , L0002308 | , L0002309 | , L0002310 | , |
|          | , L0002312 | , L0002313 | , L0002314 | ,          |   |
|          | , L0002315 | , L0002316 | , L0002317 | , L0002318 | , |
|          | , L0002320 | , L0002321 | , L0002322 | ,          |   |
|          | , L0002323 | , L0002324 | , L0002325 | , L0002326 | , |
|          | , L0002328 | , L0002329 | , L0002330 | ,          |   |

|          |                        |                          |                          |                 |   |
|----------|------------------------|--------------------------|--------------------------|-----------------|---|
| L0002335 | L0002331<br>, L0002336 | , L0002332<br>, L0002337 | , L0002333<br>, L0002338 | , L0002334<br>, | , |
| L0002343 | L0002339<br>, L0002344 | , L0002340<br>, L0002345 | , L0002341<br>, L0002346 | , L0002342<br>, | , |
| L0002351 | L0002347<br>, L0002352 | , L0002348<br>, L0002353 | , L0002349<br>, L0002354 | , L0002350<br>, | , |
| L0002359 | L0002355<br>, L0002360 | , L0002356<br>, L0002361 | , L0002357<br>, L0002362 | , L0002358<br>, | , |
| L0002367 | L0002363<br>, L0002368 | , L0002364<br>, L0002369 | , L0002365<br>, L0002370 | , L0002366<br>, | , |
| L0002375 | L0002371<br>, L0002376 | , L0002372<br>, L0002377 | , L0002373<br>, L0002378 | , L0002374<br>, | , |
| L0002383 | L0002379<br>, L0002384 | , L0002380<br>, L0002385 | , L0002381<br>, L0002386 | , L0002382<br>, | , |
| L0002391 | L0002387<br>, L0002392 | , L0002388<br>, L0002393 | , L0002389<br>, L0002394 | , L0002390<br>, | , |

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*** AERMOD - VERSION 14134 ***      *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. ***      03/13/15
*** AERMET - VERSION 14134 ***      ***
***      18:25:54

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PAGE 13
**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

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*** SOURCE IDs DEFINED AS URBAN
SOURCES ***

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| URBAN ID | URBAN POP           | SOURCE IDs            |                       |              |  |
|----------|---------------------|-----------------------|-----------------------|--------------|--|
| -----    | -----               | -----                 |                       |              |  |
| L0002399 | L0002395 , L0002400 | , L0002396 , L0002401 | , L0002397 , L0002402 | , L0002398 , |  |
| L0002407 | L0002403 , L0002408 | , L0002404 , L0002409 | , L0002405 , L0002410 | , L0002406 , |  |
| L0002415 | L0002411 , L0002416 | , L0002412 , L0002417 | , L0002413 , L0002418 | , L0002414 , |  |
| L0002423 | L0002419 , L0002424 | , L0002420 , L0002425 | , L0002421 , L0002426 | , L0002422 , |  |
| L0002431 | L0002427 , L0002432 | , L0002428 , L0002433 | , L0002429 , L0002434 | , L0002430 , |  |
| L0002439 | L0002435 , L0002440 | , L0002436 , L0002441 | , L0002437 , L0002442 | , L0002438 , |  |
| L0002447 | L0002443 , L0002448 | , L0002444 , L0002449 | , L0002445 , L0002450 | , L0002446 , |  |
| L0002455 | L0002451 , L0002456 | , L0002452 , L0002457 | , L0002453 , L0002458 | , L0002454 , |  |
| L0002463 | L0002459 , L0002464 | , L0002460 , L0002465 | , L0002461 , L0002466 | , L0002462 , |  |
| L0002471 | L0002467 , L0002472 | , L0002468 , L0002473 | , L0002469 , L0002474 | , L0002470 , |  |
| L0002479 | L0002475 , L0002480 | , L0002476 , L0002481 | , L0002477 , L0002482 | , L0002478 , |  |
| L0002487 | L0002483 , L0002488 | , L0002484 , L0002489 | , L0002485 , L0002490 | , L0002486 , |  |
| L0002495 | L0002491 , L0002496 | , L0002492 , L0002497 | , L0002493 , L0002498 | , L0002494 , |  |

|          |            |            |            |            |   |
|----------|------------|------------|------------|------------|---|
| L0002503 | L0002499   | , L0002500 | , L0002501 | , L0002502 | , |
|          | , L0002504 | , L0002505 | , L0002506 | ,          |   |
| L0002511 | L0002507   | , L0002508 | , L0002509 | , L0002510 | , |
|          | , L0002512 | , L0002513 | , L0002514 | ,          |   |
| L0002519 | L0002515   | , L0002516 | , L0002517 | , L0002518 | , |
|          | , L0002520 | , L0002521 | , L0002522 | ,          |   |
| L0002527 | L0002523   | , L0002524 | , L0002525 | , L0002526 | , |
|          | , L0002528 | , L0002529 | , L0002530 | ,          |   |

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*** AERMOD - VERSION 14134 *** *** U:\UcJobs\_08600-
09000\_08900\08990\08990_Operational LST\PM10\PM10. *** 03/13/15
*** AERMET - VERSION 14134 *** ***
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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* DISCRETE CARTESIAN

RECEPTORS \*\*\*

(X-COORD, Y-COORD, ZELEV,

ZHILL, ZFLAG)

(METERS)

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( 474201.5, 3754331.7, 250.0, 250.0, 2.0); (
474401.5, 3754331.7, 250.0, 250.0, 2.0); (
( 474501.5, 3754331.7, 250.0, 250.0, 2.0); (
473801.5, 3754431.7, 250.0, 250.0, 2.0); (
( 473715.9, 3754428.7, 250.0, 250.0, 2.0); (
473738.7, 3754428.6, 250.0, 250.0, 2.0); (
( 473755.7, 3754428.8, 250.0, 250.0, 2.0); (
473774.9, 3754428.8, 250.0, 250.0, 2.0); (
( 473816.0, 3754429.5, 250.0, 250.0, 2.0); (
473831.0, 3754424.4, 250.0, 250.0, 2.0); (
( 473853.9, 3754425.2, 250.0, 250.0, 2.0); (
473871.9, 3754423.8, 250.0, 250.0, 2.0); (
( 473892.0, 3754427.6, 250.0, 250.0, 2.0); (
473779.0, 3754366.2, 250.0, 250.0, 2.0); (
( 473813.9, 3754366.5, 250.0, 250.0, 2.0); (
474014.6, 3754372.2, 250.0, 250.0, 2.0); (
( 474058.7, 3754367.3, 250.0, 250.0, 2.0); (
474106.3, 3754366.6, 250.0, 250.0, 2.0); (
( 474129.7, 3754366.8, 250.0, 250.0, 2.0); (
474153.5, 3754367.8, 250.0, 250.0, 2.0); (
( 474231.5, 3754356.9, 250.0, 250.0, 2.0); (
474273.8, 3754374.6, 250.0, 250.0, 2.0); (
( 474545.3, 3754362.5, 250.0, 250.0, 2.0); (
474582.5, 3754377.2, 250.0, 250.0, 2.0); (
( 474612.7, 3754387.3, 250.0, 250.0, 2.0); (
474643.0, 3754391.2, 250.0, 250.0, 2.0); (
( 474354.4, 3754341.9, 250.0, 250.0, 2.0); (

```

8.23, 10.80, 1.54, 3.09, 5.14,



\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
 09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\* 03/13/15  
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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* UP TO THE FIRST 24 HOURS OF

METEOROLOGICAL DATA \*\*\*

Surface file: ..\..\Aermod\rivr8.sfc  
 Met Version: 14134  
 Profile file: ..\..\Aermod\rivr8.PFL  
 Surface format: FREE  
 Profile format: FREE  
 Surface station no.: 3190 Upper air station no.:  
 3190  
 Name: UNKNOWN Name:  
 UNKNOWN Year: 2008 Year:  
 2008

First 24 hours of scalar data

| YR    | MO     | DY  | JDY | HR | H0     | U*     | W*     | DT/DZ  | ZICNV | ZIMCH | M-O      | LEN  | Z0 |
|-------|--------|-----|-----|----|--------|--------|--------|--------|-------|-------|----------|------|----|
| BOWEN | ALBEDO | REF | WS  | WD | HT     | REF    | TA     | HT     |       |       |          |      |    |
| 08    | 01     | 01  | 1   | 01 | -64.0  | 0.616  | -9.000 | -9.000 | -999. | 1157. | 319.6    | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 5.40   | 27.    | 9.1    | 287.5  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 02 | -54.0  | 0.502  | -9.000 | -9.000 | -999. | 866.  | 204.9    | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 4.50   | 40.    | 9.1    | 287.5  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 03 | -16.4  | 0.152  | -9.000 | -9.000 | -999. | 347.  | 18.8     | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 2.20   | 62.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 3.10   | 67.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 05 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 4.90   | 96.    | 9.1    | 286.4  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 06 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 3.10   | 342.   | 9.1    | 286.4  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 07 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.31 |    |
| 1.00  | 1.00   |     |     |    | 4.00   | 38.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 08 | -35.7  | 0.448  | -9.000 | -9.000 | -999. | 719.  | 220.9    | 0.31 |    |
| 1.00  | 0.53   |     |     |    | 4.00   | 62.    | 9.1    | 287.0  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 09 | 26.7   | 0.649  | 0.357  | 0.005  | 59.   | 1253. | -895.5   | 0.31 |    |
| 1.00  | 0.32   |     |     |    | 5.40   | 294.   | 9.1    | 288.1  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 10 | 76.5   | 0.503  | 0.700  | 0.009  | 157.  | 879.  | -146.3   | 0.31 |    |
| 1.00  | 0.25   |     |     |    | 4.00   | 42.    | 9.1    | 289.2  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 11 | 123.5  | 0.418  | 1.124  | 0.012  | 404.  | 655.  | -51.7    | 0.31 |    |
| 1.00  | 0.22   |     |     |    | 3.10   | 30.    | 9.1    | 290.9  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 12 | 130.9  | 0.715  | 1.311  | 0.005  | 605.  | 1451. | -245.0   | 0.31 |    |
| 1.00  | 0.21   |     |     |    | 5.80   | 37.    | 9.1    | 290.9  | 5.5   |       |          |      |    |
| 08    | 01     | 01  | 1   | 13 | 81.1   | 0.560  | 1.174  | 0.006  | 701.  | 1033. | -189.8   | 0.31 |    |
| 1.00  | 0.21   |     |     |    | 4.50   | 4.     | 9.1    | 290.9  | 5.5   |       |          |      |    |

|      |      |      |      |     |       |       |        |        |       |       |        |      |
|------|------|------|------|-----|-------|-------|--------|--------|-------|-------|--------|------|
| 08   | 01   | 01   | 1    | 14  | 76.4  | 0.604 | 1.171  | 0.005  | 739.  | 1124. | -252.5 | 0.31 |
| 1.00 | 0.23 | 4.90 | 13.  | 9.1 | 290.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 15  | 52.3  | 0.805 | 1.043  | 0.005  | 762.  | 1730. | -875.8 | 0.31 |
| 1.00 | 0.26 | 6.70 | 39.  | 9.1 | 290.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 16  | 11.1  | 0.377 | 0.624  | 0.011  | 767.  | 800.  | -422.2 | 0.31 |
| 1.00 | 0.35 | 3.10 | 346. | 9.1 | 290.4 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 17  | -43.3 | 0.441 | -9.000 | -9.000 | -999. | 705.  | 173.6  | 0.31 |
| 1.00 | 0.63 | 4.00 | 9.   | 9.1 | 290.4 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 18  | -29.0 | 0.400 | -9.000 | -9.000 | -999. | 608.  | 192.9  | 0.31 |
| 1.00 | 1.00 | 3.60 | 45.  | 9.1 | 289.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 19  | -49.6 | 0.505 | -9.000 | -9.000 | -999. | 860.  | 227.3  | 0.31 |
| 1.00 | 1.00 | 4.50 | 25.  | 9.1 | 289.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 20  | -64.0 | 0.730 | -9.000 | -9.000 | -999. | 1496. | 533.1  | 0.31 |
| 1.00 | 1.00 | 6.30 | 60.  | 9.1 | 289.9 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 21  | -29.1 | 0.400 | -9.000 | -9.000 | -999. | 736.  | 192.1  | 0.31 |
| 1.00 | 1.00 | 3.60 | 238. | 9.1 | 288.8 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 22  | -41.2 | 0.562 | -9.000 | -9.000 | -999. | 1010. | 378.5  | 0.31 |
| 1.00 | 1.00 | 4.90 | 87.  | 9.1 | 287.5 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 23  | -53.8 | 0.733 | -9.000 | -9.000 | -999. | 1504. | 642.6  | 0.31 |
| 1.00 | 1.00 | 6.30 | 95.  | 9.1 | 287.0 | 5.5   |        |        |       |       |        |      |
| 08   | 01   | 01   | 1    | 24  | -29.5 | 0.399 | -9.000 | -9.000 | -999. | 738.  | 189.5  | 0.31 |
| 1.00 | 1.00 | 3.60 | 37.  | 9.1 | 285.4 | 5.5   |        |        |       |       |        |      |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR  | WSPD   | AMB_TMP | sigmaA | sigmaW | sigmaV |
|----|----|----|----|--------|---|-------|--------|---------|--------|--------|--------|
| 08 | 01 | 01 | 01 | 5.5    | 0 | -999. | -99.00 | 287.6   | 99.0   | -99.00 | -99.00 |
| 08 | 01 | 01 | 01 | 9.1    | 1 | 27.   | 5.40   | -999.0  | 99.0   | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)

```

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**MODELOPTs:   NonDEFAULT CONC      FLAT      FLGPOL      FASTALL

*** THE 1ST HIGHEST 24-HR AVERAGE
CONCENTRATION  VALUES FOR SOURCE GROUP: ALL ***
                INCLUDING SOURCE(S):      L0002235 ,
L0002236      , L0002237      , L0002238      , L0002239      ,
                L0002240      , L0002241      , L0002242      , L0002243      ,
L0002244      , L0002245      , L0002246      , L0002247      ,
                L0002248      , L0002249      , L0002250      , L0002251      ,
L0002252      , L0002253      , L0002254      , L0002255      ,
                L0002256      , L0002257      , L0002258      , L0002259      ,
L0002260      , L0002261      , L0002262      , . . .      ,

```

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*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

```

```

** CONC OF PM_2.5      IN
**
MICROGRAMS/M**3

      X-COORD (M)  Y-COORD (M)      CONC      (YYMMDDHH)      X-
COORD (M)  Y-COORD (M)      CONC      (YYMMDDHH)
- - - - -
- - - - -
      474201.46   3754331.71      0.01799   (10111924)
474401.46   3754331.71      0.01222   (10111924)
      474501.46   3754331.71      0.01013m (11030124)
473801.46   3754431.71      0.08888   (11103124)
      473715.92   3754428.71      0.08236   (12011024)
473738.73   3754428.62      0.09644   (12011024)
      473755.69   3754428.85      0.09547   (12011024)
473774.94   3754428.85      0.09412   (11103124)
      473815.97   3754429.55      0.07897   (10111924)
473831.00   3754424.36      0.07334   (10111924)
      473853.90   3754425.20      0.06156   (10111924)
473871.89   3754423.79      0.05229   (10111924)
      473891.98   3754427.59      0.04526   (10111924)
473779.02   3754366.16      0.04648   (12011024)
      473813.90   3754366.49      0.04577   (11103124)
474014.62   3754372.20      0.02468   (10120924)
      474058.72   3754367.30      0.02318m (11013124)
474106.33   3754366.60      0.02123m (11020124)
      474129.66   3754366.83      0.02066   (10121524)
474153.46   3754367.77      0.01989   (10111924)
      474231.55   3754356.87      0.01927   (10111924)
474273.79   3754374.60      0.01867   (10111924)
      474545.34   3754362.52      0.00983   (11031624)
474582.52   3754377.24      0.00947m (11013124)

```

|           |            |         |            |
|-----------|------------|---------|------------|
| 474612.74 | 3754387.31 | 0.00906 | (10020824) |
| 474642.95 | 3754391.18 | 0.00874 | (10020824) |
| 474354.43 | 3754341.93 | 0.01412 | (10111924) |

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
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\*\*MODELOPTs: NonDFAULT CONC FLAT FLGPOL FASTALL

\*\*\* THE SUMMARY OF

HIGHEST 24-HR RESULTS \*\*\*

\*\*\* CONC OF PM<sub>2.5</sub> IN  
MICROGRAMS/M<sup>3</sup>

|           |                               |           |           |           | DATE       |
|-----------|-------------------------------|-----------|-----------|-----------|------------|
| NETWORK   |                               |           |           |           |            |
| GROUP ID  | AVERAGE CONC                  |           |           |           | (YYMMDDHH) |
| RECEPTOR  | (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE   |           | GRID-ID   |            |
| - - - - - | - - - - -                     | - - - - - | - - - - - | - - - - - | - - - - -  |
| - - - - - | - - - - -                     | - - - - - | - - - - - | - - - - - | - - - - -  |

ALL HIGH 1ST HIGH VALUE IS 0.09644 ON 12011024: AT (  
473738.73, 3754428.62, 250.00, 250.00, 2.00) DC

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR

\*\*\* AERMOD - VERSION 14134 \*\*\* \*\*\* U:\UcJobs\\_08600-  
09000\\_08900\08990\08990\_Operational LST\PM10\PM10. \*\*\* 03/13/15  
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\*\*MODELOPTs: NonDEFAULT CONC FLAT FLGPOL FASTALL

\*\*\* Message Summary : AERMOD Model Execution \*\*\*

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)  
A Total of 1 Warning Message(s)  
A Total of 2006 Informational Message(s)  
  
A Total of 43848 Hours Were Processed  
  
A Total of 7 Calm Hours Identified  
  
A Total of 1999 Missing Hours Identified ( 4.56 Percent)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
ME W531 1158 MEOPEN: CAUTION! Met Station ID Missing from  
SURFFILE for SURFDATA

\*\*\*\*\*  
\*\*\* AERMOD Finishes Successfully \*\*\*  
\*\*\*\*\*

**APPENDIX 3.4:**  
**STATIONARY SOURCES EMISSIONS CALCULATION**

# NATURAL GAS COMBUSTION EMISSIONS CALCULATOR REVISION M 06/22/2015 - INPUT SCREEN



Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed / printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.

This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

Directions: Enter and select information in the boxes in the column on the right:

## FIELDS

COMPANY NAME:  
FACILITY ID NUMBER:  
PERMIT NUMBER  
FACILITY CITY:  
FACILITY COUNTY:  
SPREADSHEET PREPARED BY:

## SELECTIONS

Canyon Springs Health Campus  
TBD  
TBD  
Riverside  
Riverside  
Urban Crossroads

EMISSION SOURCE ID NO.:  
MAXIMUM HEAT INPUT (MILLION BTU PER HOUR):

Boiler  
5.71 mmBTU/HR

TYPE OF BOILER:

SMALL BOILER (< 100 mmBTU/HR)

DOES THE SOURCE ALSO BURN COAL OR FUEL OIL?

No

DATE OF CONSTRUCTION:

5/1/2000  
(mm/dd/yyyy)

## ADDITIONAL INFORMATION FOR GREENHOUSE GAS (GHG) EMISSIONS

ENTER Calculation Tier from EPA Mandatory Reporting Rule (MRR)\* Subpart C  
\* See <http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>

TIER 1: DEFAULT HHV AND DEFAULT EF

SINCE TIER 3 IS NOT BEING USED, DO NOT ENTER FUEL CARBON CONTENT

0.7500

SINCE TIER 3 IS NOT BEING USED, DO NOT ENTER MOLECULAR WEIGHT

19.00

kg/kg-mole

## FUEL HEATING VALUE

ANNUAL AVG MEASURED FUEL HEATING VALUE (BTU/SCF): 1,020 BTU/SCF

DEFAULT FUEL HEATING VALUE (BTU/SCF) -- will be used for GHG calculations under TIER 1 approach

1,028 BTU/SCF

default value is from EPA's mandatory reporting rule, Table C-1, "Natural Gas Pipeline (Weighted U.S. Average)"

## USAGE AND OTHER SOURCE-SPECIFIC DATA

ACTUAL YEARLY FUEL USAGE (MILLION SCF):  
CALCULATED POTENTIAL YEARLY USAGE (MILLION SCF)  
REQUESTED ANNUAL LIMITATION (MILLION SCF)

50.00  
49.04  
50.00

MILLION SCF  
MILLION SCF  
MILLION SCF

(TYPEOVER IF NECESSARY - DEFAULT IS POTENTIAL)

DAILY HOURS OF OPERATION:

24 HOURS

TYPE OF EMISSION CONTROL:

LOW NOx BURNERS

IS SNCR APPLIED TO THE BOILER?

NO



# NATURAL GAS COMBUSTION EMISSIONS CALCULATOR REVISION M 06/22/2015 - OUTPUT SCREEN



Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed / printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.

This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

## SOURCE / FACILITY / USER INPUT SUMMARY (FROM INPUT SCREEN)

|                                                                     |  |                        |  |                            |  |
|---------------------------------------------------------------------|--|------------------------|--|----------------------------|--|
| COMPANY: Canyon Springs Health Campus                               |  |                        |  | FACILITY ID NO.: TBD       |  |
| EMISSION SOURCE DESCRIPTION: 5.71 MMBTU/HR NATURAL GAS-FIRED BOILER |  |                        |  | PERMIT NUMBER: TBD         |  |
| EMISSION SOURCE ID NO.: Boiler                                      |  |                        |  | FACILITY CITY: Riverside   |  |
| CONTROL DEVICE: LOW NOx BURNERS                                     |  |                        |  | FACILITY COUNTY: Riverside |  |
| SPREADSHEET PREPARED BY: Urban Crossroads                           |  |                        |  | POLLUTANT                  |  |
| ACTUAL FUEL THROUGHPUT: 50.00                                       |  | 10 <sup>6</sup> SCF/YR |  | CONTROL EFF.               |  |
| POTENTIAL FUEL THROUGHPUT: 49.04                                    |  | 10 <sup>6</sup> SCF/YR |  | NOX                        |  |
| REQUESTED MAX. FUEL THRPT: 50.00                                    |  | 10 <sup>6</sup> SCF/YR |  | CALC'D AS 50%              |  |
| FUEL HEAT VALUE: 1,020 BTU/SCF                                      |  |                        |  | NO SNCR APPLIED            |  |
| BOILER TYPE: SMALL BOILER (<100 mmBTU/HR)                           |  |                        |  |                            |  |
| HOURS OF OPERATIONS: 24                                             |  |                        |  |                            |  |

## CRITERIA AIR POLLUTANT EMISSIONS INFORMATION

| AIR POLLUTANT EMITTED              | ACTUAL EMISSIONS          |         | POTENTIAL EMISSIONS        |         |                           |         | EMISSION FACTOR |            |
|------------------------------------|---------------------------|---------|----------------------------|---------|---------------------------|---------|-----------------|------------|
|                                    | (AFTER CONTROLS / LIMITS) |         | (BEFORE CONTROLS / LIMITS) |         | (AFTER CONTROLS / LIMITS) |         | lb/mmBtu        |            |
|                                    | lb/hr                     | tons/yr | lb/hr                      | tons/yr | lb/hr                     | tons/yr | uncontrolled    | controlled |
| PARTICULATE MATTER (Total)         | 0.04                      | 0.19    | 0.04                       | 0.19    | 0.04                      | 0.19    | 0.007           | 0.007      |
| PARTICULATE MATTER (Condensable)   | 0.03                      | 0.14    | 0.03                       | 0.14    | 0.03                      | 0.14    | 0.006           | 0.006      |
| PARTICULATE MATTER (Filterable)    | 0.01                      | 0.05    | 0.01                       | 0.05    | 0.01                      | 0.05    | 0.002           | 0.002      |
| SULFUR DIOXIDE (SO <sub>2</sub> )  | 0.00                      | 0.02    | 0.00                       | 0.01    | 0.00                      | 0.02    | 0.001           | 0.001      |
| NITROGEN OXIDES (NO <sub>x</sub> ) | 0.28                      | 1.25    | 0.56                       | 2.45    | 0.28                      | 1.25    | 0.098           | 0.049      |
| CARBON MONOXIDE (CO)               | 0.47                      | 2.10    | 0.47                       | 2.06    | 0.47                      | 2.10    | 0.082           | 0.082      |
| VOLATILE ORGANIC COMPOUNDS (VOC)   | 0.03                      | 0.14    | 0.03                       | 0.13    | 0.03                      | 0.14    | 0.005           | 0.005      |

## TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION

| TOXIC / HAZARDOUS AIR POLLUTANT          | CAS NUMBER | ACTUAL EMISSIONS          |          | POTENTIAL EMISSIONS        |          |                           |          | EMISSION FACTOR |            |
|------------------------------------------|------------|---------------------------|----------|----------------------------|----------|---------------------------|----------|-----------------|------------|
|                                          |            | (AFTER CONTROLS / LIMITS) |          | (BEFORE CONTROLS / LIMITS) |          | (AFTER CONTROLS / LIMITS) |          | lb/mmBtu        |            |
|                                          |            | lb/hr                     | tons/yr  | lb/hr                      | tons/yr  | lb/hr                     | tons/yr  | uncontrolled    | controlled |
| Acetaldehyde (TH)                        | 75070      | 8.51E-08                  | 7.60E-04 | 8.51E-08                   | 7.45E-04 | 8.51E-08                  | 7.60E-04 | 1.49E-08        | 1.49E-08   |
| Acrolein (TH)                            | 107028     | 1.01E-07                  | 9.00E-04 | 1.01E-07                   | 8.83E-04 | 1.01E-07                  | 9.00E-04 | 1.76E-08        | 1.76E-08   |
| Ammonia (T)                              | 7664417    | 1.79E-02                  | 1.60E+02 | 1.79E-02                   | 1.57E+02 | 1.79E-02                  | 1.60E+02 | 3.14E-03        | 3.14E-03   |
| Arsenic unlisted compounds (TH)          | ASC-other  | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Benzene (TH)                             | 71432      | 1.18E-05                  | 1.05E-01 | 1.18E-05                   | 1.03E-01 | 1.18E-05                  | 1.05E-01 | 2.06E-06        | 2.06E-06   |
| Benzo(a)pyrene (TH)                      | 50328      | 6.72E-09                  | 6.00E-05 | 6.72E-09                   | 5.88E-05 | 6.72E-09                  | 6.00E-05 | 1.18E-09        | 1.18E-09   |
| Beryllium metal (unreacted) (TH)         | 7440417    | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Cadmium metal (elemental unreacted) (TH) | 7440439    | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Chromic acid (VI) (TH)                   | 7738945    | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Cobalt unlisted compounds (H)            | COC-other  | 4.70E-07                  | 4.20E-03 | 4.70E-07                   | 4.12E-03 | 4.70E-07                  | 4.20E-03 | 8.24E-08        | 8.24E-08   |
| Formaldehyde (TH)                        | 50000      | 4.20E-04                  | 3.75E+00 | 4.20E-04                   | 3.68E+00 | 4.20E-04                  | 3.75E+00 | 7.35E-05        | 7.35E-05   |
| Hexane, n- (TH)                          | 110543     | 1.01E-02                  | 9.00E+01 | 1.01E-02                   | 8.83E+01 | 1.01E-02                  | 9.00E+01 | 1.76E-03        | 1.76E-03   |
| Lead unlisted compounds (H)              | PBC-other  | 2.80E-06                  | 2.50E-02 | 2.80E-06                   | 2.45E-02 | 2.80E-06                  | 2.50E-02 | 4.90E-07        | 4.90E-07   |
| Manganese unlisted compounds (TH)        | MNC-other  | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Mercury vapor (TH)                       | 7439976    | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Naphthalene (H)                          | 91203      | 3.41E-06                  | 3.05E-02 | 3.41E-06                   | 2.99E-02 | 3.41E-06                  | 3.05E-02 | 5.98E-07        | 5.98E-07   |
| Nickel metal (TH)                        | 7440020    | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Selenium compounds (H)                   | SEC        | 1.34E-07                  | 1.20E-03 | 1.34E-07                   | 1.18E-03 | 1.34E-07                  | 1.20E-03 | 2.35E-08        | 2.35E-08   |
| Toluene (TH)                             | 108883     | 1.90E-05                  | 1.70E-01 | 1.90E-05                   | 1.67E-01 | 1.90E-05                  | 1.70E-01 | 3.33E-06        | 3.33E-06   |
| Total HAPs                               |            | 1.05E-02                  | 9.41E+01 | 1.05E-02                   | 9.23E+01 | 1.05E-02                  | 9.41E+01 | 1.84E-03        | 1.84E-03   |
| Highest HAP                              | Hexane     | 1.01E-02                  | 9.00E+01 | 1.01E-02                   | 8.83E+01 | 1.01E-02                  | 9.00E+01 | 1.76E-03        | 1.76E-03   |

## TOXIC AIR POLLUTANT EMISSIONS INFORMATION (FOR PERMITTING PURPOSES)

| EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS  |           |          |        |          | EMISSION FACTOR |            |
|---------------------------------------------------------|-----------|----------|--------|----------|-----------------|------------|
| TOXIC AIR POLLUTANT                                     | CAS Num.  | lb/hr    | lb/day | lb/yr    | uncontrolled    | controlled |
| Acetaldehyde (TH)                                       | 75070     | 8.51E-08 |        | 7.60E-04 | 1.49E-08        | 1.49E-08   |
| Acrolein (TH)                                           | 107028    | 1.01E-07 |        | 2.42E-06 | 1.76E-08        | 1.76E-08   |
| Ammonia (T)                                             | 7664417   | 1.79E-02 |        | 4.30E-01 | 1.60E+02        | 3.14E-03   |
| Arsenic unlisted compounds (TH)                         | ASC-other | 0.00E+00 |        | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Benzene (TH)                                            | 71432     | 1.18E-05 |        | 2.82E-04 | 1.05E-01        | 2.06E-06   |
| Benzo(a)pyrene (TH)                                     | 50328     | 6.72E-09 |        | 1.61E-07 | 6.00E-05        | 1.18E-09   |
| Beryllium metal (unreacted) (TH)                        | 7440417   | 0.00E+00 |        | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Cadmium metal (elemental unreacted) (TH)                | 7440439   | 0.00E+00 |        | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Soluble chromate compounds, as chromium (VI) equivalent | SoICr6    | 0.00E+00 |        | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Formaldehyde (TH)                                       | 50000     | 4.20E-04 |        | 1.01E-02 | 3.75E+00        | 7.35E-05   |
| Hexane, n- (TH)                                         | 110543    | 1.01E-02 |        | 2.42E-01 | 9.00E+01        | 1.76E-03   |
| Manganese unlisted compounds (TH)                       | MNC-other | 0.00E+00 |        | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Mercury vapor (TH)                                      | 7439976   | 0.00E+00 |        | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Nickel metal (TH)                                       | 7440020   | 0.00E+00 |        | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Toluene (TH)                                            | 108883    | 1.90E-05 |        | 4.57E-04 | 1.70E-01        | 3.33E-06   |

## GREENHOUSE GAS EMISSIONS INFORMATION (FOR EMISSIONS INVENTORY PURPOSES) - CONSISTENT WITH EPA MANDATORY REPORTING RULE (MRR) METHOD

## GHG - POTENTIAL TO EMIT NOT BASED ON EPA MRR METHOD

| GREENHOUSE GAS POLLUTANT          | ACTUAL EMISSIONS                   |                                       |               | POTENTIAL EMISSIONS                  |                                  |
|-----------------------------------|------------------------------------|---------------------------------------|---------------|--------------------------------------|----------------------------------|
|                                   | EPA MRR CALCULATION METHOD: TIER 1 |                                       |               |                                      |                                  |
|                                   | metric tons/yr                     | metric tons/yr, CO <sub>2</sub> e     | short tons/yr | short tons/yr                        | short tons/yr, CO <sub>2</sub> e |
| CARBON DIOXIDE (CO <sub>2</sub> ) | 2725.23                            | 2,725.23                              | 3,004.05      | 2,923.37                             | 2923.37                          |
| METHANE (CH <sub>4</sub> )        | 5.14E-02                           | 1.29E+00                              | 5.67E-02      | 5.51E-02                             | 1.38E+00                         |
| NITROUS OXIDE (N <sub>2</sub> O)  | 5.14E-03                           | 1.53E+00                              | 5.67E-03      | 5.51E-03                             | 1.64E+00                         |
|                                   |                                    | TOTAL CO <sub>2</sub> e (metric tons) | 2,728.04      |                                      |                                  |
|                                   |                                    |                                       |               | TOTAL CO <sub>2</sub> e (short tons) | 2,926.39                         |

NOTE: CO<sub>2</sub>e means CO<sub>2</sub> equivalent

NOTE: The DAQ Air Emissions Reporting Online (AERO) system requires short tons be reported. The EPA MRR requires metric tons be reported.

NOTE: Do not use greenhouse gas emission estimates from this spreadsheet for PSD (Prevention of Significant Deterioration) purposes.



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# **Canyon Springs Healthcare Campus & Senior Living**

## **GREENHOUSE GAS ANALYSIS**

### **CITY OF RIVERSIDE**

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## **LIST OF ABBREVIATED TERMS**

|                      |                                                       |
|----------------------|-------------------------------------------------------|
| (1)                  | Reference                                             |
| ARB                  | California Air Resources Board                        |
| AQIA                 | Air Quality Impact Analysis                           |
| CAA                  | Federal Clean Air Act                                 |
| CalEEMod             | California Emissions Estimator Model                  |
| CalEPA               | California Environmental Protection Agency            |
| CAPCOA               | California Air Pollution Control Officers Association |
| CARB                 | California Air Resource Board                         |
| CAT                  | Climate Action Team                                   |
| CBSC                 | California Building Standards Commission              |
| CEC                  | California Energy Commission                          |
| CCR                  | California Code of Regulations                        |
| CEQA                 | California Environmental Quality Act                  |
| CFC                  | Chlorofluorocarbons                                   |
| CFR                  | Code of Federal Regulations                           |
| CH <sub>4</sub>      | Methane                                               |
| CO                   | Carbon Monoxide                                       |
| CO <sub>2</sub>      | Carbon Dioxide                                        |
| CO <sub>2</sub> e    | Carbon Dioxide Equivalent                             |
| CPUC                 | California Public Utilities Commission                |
| EPA                  | Environmental Protection Agency                       |
| EPS                  | Emission Performance Standard                         |
| GCC                  | Global Climate Change                                 |
| GHGA                 | Greenhouse Gas Analysis                               |
| GWP                  | Global Warming Potential                              |
| HFC                  | Hydrofluorocarbons                                    |
| LCA                  | Life-Cycle Analysis                                   |
| MMs                  | Mitigation Measures                                   |
| MMTCO <sub>2</sub> e | Million Metric Ton of Carbon Dioxide Equivalent       |
| MTCO <sub>2</sub> e  | Metric Ton of Carbon Dioxide Equivalent               |
| N <sub>2</sub> O     | Nitrogen Dioxide                                      |
| NIOSH                | National Institute for Occupational Safety and Health |
| NO <sub>x</sub>      | Oxides of Nitrogen                                    |
| PFC                  | Perfluorocarbons                                      |
| PM <sub>10</sub>     | Particulate Matter 10 microns in diameter or less     |
| PM <sub>2.5</sub>    | Particulate Matter 2.5 microns in diameter or less    |

|         |                                                        |
|---------|--------------------------------------------------------|
| PPM     | Parts Per Million                                      |
| Project | Canyon Springs Healthcare Campus & Senior Living       |
| RTP     | Regional Transportation Plan                           |
| SB      | Senate Bill                                            |
| SCAG    | Southern California Association of Governments         |
| SCAQMD  | South Coast Air Quality Management District            |
| UNFCCC  | United Nations' Framework Convention on Climate Change |
| VOC     | Volatile Organic Compounds                             |



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## EXECUTIVE SUMMARY

**Impact GHG-1: The Project would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment.**

To date, the South Coast Air Quality Management District (SCAQMD) and CARB have not established significance thresholds for GHG emissions under the California Environmental Quality Act (CEQA)<sup>1</sup>. To evaluate the Project's GHG impacts the proposed Project's emissions are compared with a baseline scenario to determine if the development is likely to be consistent with the City of Riverside's Climate Action Plan (CAP) supporting AB 32 in California which calls for an approximate 15% reduction from 2010 baseline conditions (1).

As shown in Table ES-1, Project GHG emissions would be reduced by approximately 28.74% when compared to the baseline scenario. This reduction is consistent with the target reduction percentage of 15% based on the City of Riverside's CAP analysis supporting AB 32. Additionally, as discussed in detail in Section 3.8, the Project would not result in a significantly greater amount of emissions than what would otherwise occur under the previously approved Specific Plan. See Section 3.8 for a detailed discussion of emission summaries.

**TABLE ES-1: SUMMARY OF GHG EMISSIONS FOR BASELINE VS PROJECT**

| Category                                 | CO2e Emissions         |                                                                           |
|------------------------------------------|------------------------|---------------------------------------------------------------------------|
|                                          | 2010 Baseline Scenario | Project (With regulatory requirements and applicable mitigation measures) |
|                                          | Metric Tons per Year   |                                                                           |
| Construction                             | 125.03                 | 125.03                                                                    |
| Area                                     | 129.79                 | 127.09                                                                    |
| Energy Use                               | 8,246.34               | 6,298.58                                                                  |
| Mobile Sources                           | 21,447.96              | 13,370.19                                                                 |
| Waste Disposed                           | 2,349.59               | 2,349.59                                                                  |
| Water Use                                | 628.29                 | 410.47                                                                    |
| Stationary Sources                       | 2,728.04               | 2,728.04                                                                  |
| <b>Total</b>                             | <b>35,655.04</b>       | <b>25,408.99</b>                                                          |
| <b>Project Improvement over Baseline</b> | <b>28.74%</b>          |                                                                           |

<sup>1</sup> SCAQMD has adopted interim significance thresholds for industrial sources of 10,000 metric tons of carbon dioxide equivalent per year. The Board adopted these thresholds December 5, 2008. This threshold however was adopted by SCAQMD only for projects where it is the lead agency.

***Impact GHG-2: The Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.***

### **Consistency with AB 32**

AB 32 requires California to reduce its GHG emissions by approximately 15% below business as usual. CARB identified reduction measures to achieve this goal as set forth in the CARB Scoping Plan (2). Thus, projects that are consistent with the CARB Scoping Plan are also consistent with the 15% reduction below business as usual required by AB 32.

The proposed Project would generate GHG emissions from a variety of sources which would all emit CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O. GHGs could also be indirectly generated by incremental electricity consumption and waste generation from the proposed Project.

As stated previously, the Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32. The Scoping Plan recommendations serve as statewide strategies to reduce the state's existing GHG emissions and proposed Project's contributions. Table ES-2 highlights measures that have or will be developed under the Scoping Plan and that would be applicable to the Project. Therefore, the Project will not conflict with or obstruct implementation of AB 32.

### **Consistency with SB 375**

Senate Bill 375 (SB 375) creates a formal process that builds on the experience of voluntary regional visioning initiatives in California, often referred to as "Regional Blueprints". Furthering the goals of AB 32, SB 375 relies on the regional collaboration by local officials to address California's goals for reducing the portion of the emissions of greenhouse gases that stems from automobile travel (light duty auto and light duty trucks only). SB 375 requires local metropolitan planning agencies to prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its GHG reduction targets through integrated land use, housing, and transportation planning (3). More specifically, SB 375 provides CEQA relief for residential and mixed-use projects that are consistent with an approved SCS or Alternative Planning Strategy (APS).

The Southern California Association of Governments (SCAG) is the metropolitan planning agency for the project area. The SCS for the southern California region, including Riverside, Los Angeles, Orange, and San Bernardino counties was prepared by SCAG and approved on April 4, 2012. The SCS incorporates goals to concentrate future development and provide residential and mixed use developments in proximity to transit hubs in order to reduce vehicle miles traveled and, thereby, reduce GHG emissions from light duty auto and light duty trucks.

The Governor's Office of Planning and Research published the guidance document *Senate Bill 375 CEQA Provision Flow Charts* to assist in understanding SB 375's CEQA options. Based on Chart 1, since the Project is not consistent with general plan land use designations, density, and building intensity, the Project does not qualify for SB 375 CEQA provisions and the lead agency should use the standard CEQA process.

Inconsistency with SB 375 does not in itself constitute a significant impact to GHGs – this is largely due to the fact that SB 375 targets a very specific sector for GHG reductions (passenger cars and light-duty trucks). Thus, if a Project's emissions *overall* (when considering all sectors) are less than an applicable threshold, then a finding of less than significant can also be made. As such, a Project's GHG emissions may be found to be less than the identified threshold despite being inconsistent with the land use designations or densities found in a SCS.

For purposes of this analysis, the applicable threshold utilized for determining significance is whether or not the Project can reduce emissions by 15% from BAU consistent with the City of Riverside's CAP. It should be noted that SB 375 is a small piece of the State's overall reduction target pursuant to AB 32. For this Project, although the SB 375-specific targets are not met, an evaluation of the Project's overall GHG emissions including all emission sectors (including light duty auto and light duty trucks only and other sectors of vehicles) indicates that the Project is consistent with the applicable threshold adopted by the lead agency, and consistent with the overall reduction targets set forth by AB 32, consequently the Project will result in a less than significant GHG impact.

**TABLE ES-2: PROJECT CONSISTENCY WITH SCOPING PLAN GREENHOUSE GAS EMISSION REDUCTION STRATEGIES**

| Scoping Plan Measure                                                               | Measure Number | Project Consistency                                                                                                                                          |
|------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pavley Motor Vehicle Standards (AB 1493)                                           | T-1            | The project's residences and employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase. |
| Limit High GWP Use in Consumer Products                                            | H-4            | The project's residences and employees would use consumer products that would comply with the regulations that are in effect at the time of manufacture.     |
| Motor Vehicle Air Conditioning Systems – Reduction from Non-Professional Servicing | H-1            | The project's residences and employees would be prohibited from performing air conditioning repairs and required to use professional servicing.              |
| Tire Pressure Program                                                              | T-4            | Motor vehicles driven by the project's residences and employees would maintain proper tire pressure when their vehicles are serviced.                        |
| Low Carbon Fuel Standard                                                           | T-2            | Motor vehicles driven by project's residences and employees would use compliant fuels in the future.                                                         |
| Water Use Efficiency                                                               | W-1            | The project includes measures to minimize water use and maximize efficiency.                                                                                 |
| Green Buildings                                                                    | GB-1           | The project will be required to be constructed in compliance with state or local green building standards in effect at the time of building construction.    |
| Air Conditioning Refrigerant Leak Test During Vehicle Smog Check                   | H-5            | Motor vehicles driven by the project's residences and employees would comply with the leak test requirements during smog checks.                             |
| Renewable Portfolios Standard (33% by 2020)                                        | E-3            | The electricity used by residences in the proposed project will benefit from reduced GHG emissions resulting from increased use of renewable energy sources. |
| Energy Efficiency Measures                                                         | E-1            | The project will comply with energy efficiency standards for                                                                                                 |

| Scoping Plan Measure                                 | Measure Number | Project Consistency                                                                                                                         |
|------------------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| (Electricity)                                        |                | electrical appliances and other devices at the time of building construction.                                                               |
| Energy Efficiency (Natural Gas)                      | CR-1           | The project will comply with energy efficiency standards for natural gas appliances and other devices at the time of building construction. |
| Greening New Residential and Commercial Construction | GB-1           | The project's buildings would meet green building standards that are in effect at the time of design and construction.                      |
| Greening Existing Homes and Commercial Buildings     | GB-1           | The proposed project's buildings would meet retrofit standards when they become effective.                                                  |

# 1 INTRODUCTION

This report presents the results of the greenhouse gas analysis (GHGA) prepared by Urban Crossroads, Inc., for the proposed Canyon Springs Healthcare Campus & Senior Living (referred to as “Project”).

The purpose of this GHGA is to evaluate Project-related construction and operational emissions and determine the level of greenhouse gas (GHG) impacts as a result of constructing and operating the proposed Project. This GHGA quantifies the GHG emissions associated with the Project for two scenarios: first, as if no actions to reduce emissions were taken as compared to the assumptions used in preparing the baseline 2010 emissions for the City of Riverside’s CAP to implement Assembly Bill (AB) 32, and second as designed with applicable design features.

## 1.1 SITE LOCATION

The proposed Project is generally located north of Eucalyptus Avenue, between Valley Springs Parkway and Day Street in the City of Riverside as shown, as shown on Exhibit 1-A. The Project is proposed to consist of several large contiguous parcels with improved street frontage and adequate infrastructure in a master planned business park. The largest parcel is situated south of Gateway Drive and includes medical uses. Two nearby 10-acre parcels within Canyon Springs will provide land for the related senior living and assisted living facilities.

## 1.2 PROJECT OVERVIEW

The previously approved specific plan land use consists of 100,000 square feet of general retail use and 800,000 square feet of general office use.

The currently proposed project (Canyon Springs Healthcare Campus & Senior Living) land use plan (shown on Exhibit 1-B) is more intensive than the previously approved land use plan. The proposed project consists of hospital land use with approximately 280 beds, 370,000 square feet of medical office, 234 senior adult-housing attached dwelling units, and an assisted living facility with approximately 267 beds. For the purposes of this GHGA, it is assumed, for analytical purposes, that the Project will be constructed and at full occupancy by 2016<sup>2</sup>.

---

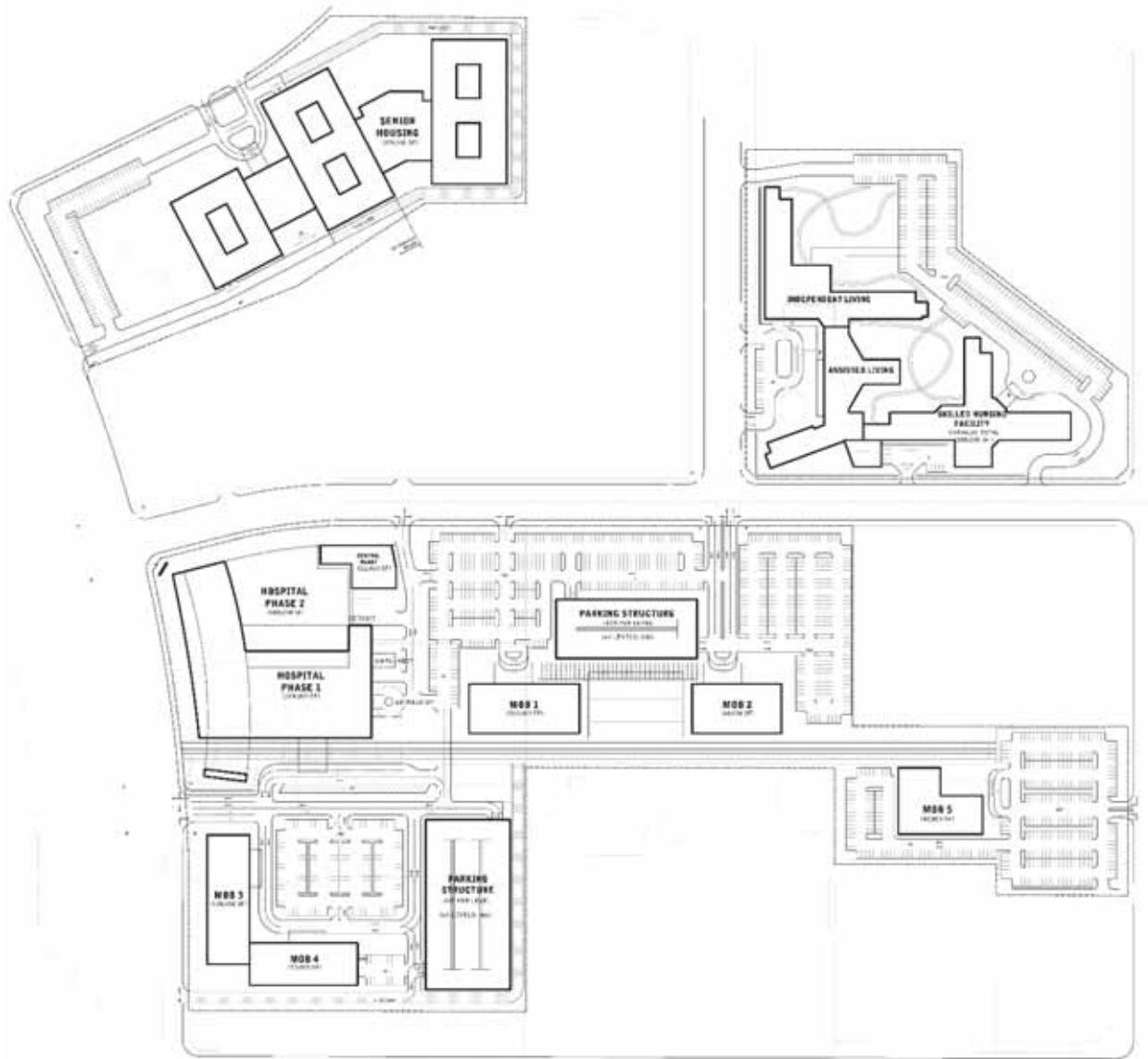
<sup>2</sup> It should be noted that analyzing construction activity as a single phase represents a worst case scenario as the maximum feasible construction emissions per day are reported, rather than dispersed between multiple phases of construction. Any limitations due to multiple phasing, order of phasing, or amount of square feet under construction would not substantially change the findings of the analysis.



## EXHIBIT 1-A: LOCATION MAP



## EXHIBIT 1-B: PRELIMINARY SITE PLAN





### 1.3 REGULATORY REQUIREMENTS

The Project would be required to comply with all mandates imposed by the State of California and the South Coast Air Quality Management District aimed at the reduction of air quality emissions. Those that are applicable to the Project and that would assist in the reduction of greenhouse gas emissions are:

- Global Warming Solutions Act of 2006 (AB32) (2). AB 32 is applicable to the Project because, as a development Project, the Canyon Springs Healthcare Campus & Senior Living will need to meet 2020 GHG reduction goals set forth in AB 32. AB 32 requires the California Air Resources Board (CARB or ARB) to develop regulations and market mechanisms to reduce California's greenhouse gas emissions to 1990 levels by the year of 2020. Many of the GHG reduction measures outlined in AB 32 (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted over the last five years and implementation activities are ongoing.
- Pavley Fuel Efficiency Standards (AB1493). Establishes fuel efficiency ratings for new vehicles (4). AB 1493 (Pavley) establishes fuel efficiency rating for model year 2009-2016 passenger cars and light trucks. AB 1493 is applicable to the Project because model year 2009-2016 passenger cars and light duty truck vehicles traveling to and from the Project site are required by the State of California to implement GHG emission reduction standards related to fuel efficiency. The CARB anticipates that implementation of the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 30 percent in 2016 compared to emissions that occurred prior to 2009 when AB 1492 was enacted.
- Title 24 California Code of Regulations (California Building Code). Establishes energy efficiency requirements for new construction (5). The Title 24 energy standards address the energy efficiency of new (and altered) homes and commercial buildings. Because energy efficiency reduces energy costs, increases reliability and availability of electricity, improves building occupant comfort, and reduces impacts to the environment, standards are important and necessary for California's energy future. Therefore, a new development such as the Canyon Springs Healthcare Campus & Senior Living is required to comply with Title 24 Code of Regulations and would therefore increase the Project's energy efficiency and reduce its environmental impact.
- Title 17 California Code of Regulations (Low Carbon Fuel Standard). Requires carbon content of fuel sold in California to be 10% less by 2020 (6). Because the LCFS applies to any transportation fuel that is sold, supplied, or offered for sale in California, and to any person who, as a regulated party, is responsible for a transportation fuel in a calendar year, all vehicles accessing the site will be required to comply with LCFS. Implementation of such a standard will reduce greenhouse gas emissions by reducing the full fuel-cycle, carbon intensity of the transportation fuel pool used in California.
- California Water Conservation in Landscaping Act of 2010 (AB1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent by January 1, 2010 to ensure efficient landscapes in new development and reduced water waste in existing landscapes (7). Per the Governor's Executive Order B-29-15, the Water Efficient Landscape Ordinance has been updated to increase the water efficiency standards for new and retrofitted landscapes (8). This ordinance requires the reporting requirements to be effective December 1, 2015, with the remainder of the ordinance to be effective no later than

February 1, 2016. As a new development project within the State of California, the Canyon Springs Healthcare Campus & Senior Living is required to comply with the City of Riverside's adopted water efficient landscape requirements and would therefore be consistent with the requirements of AB1881 in order to help conserve California's water resources and to promote efficient water use.

Promulgated regulations that will affect the Project's emissions are accounted for in the Project's GHG calculations provided in this report. In particular, the Pavley Standards, Low Carbon Fuel Standards, and Renewable Portfolio Standards (RPS) will be in effect for the AB 32 target year of 2020, and therefore are accounted for in the Project's emission calculations. The baseline scenario emissions do not include regulations designed to meet AB 32 standards; therefore these regulations were not included in the GHG emissions calculations for the baseline scenario.

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## 2 CLIMATE CHANGE SETTING

### 2.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. GCC is currently one of the most controversial environmental issues in the United States, and much debate exists within the scientific community about whether or not GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred in the past over the course of thousands or millions of years. These historical changes to the Earth's climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases in the earth's atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of greenhouse gases resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Project evaluated in this GHGA cannot generate enough greenhouse gas emissions to effect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of greenhouse gases combined with the cumulative increase of all other sources of greenhouse gases, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, Section 3.0 will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

### 2.2 GREENHOUSE GAS EMISSIONS INVENTORIES

#### *Global*

Worldwide anthropogenic (man-made) GHG emissions are tracked by the Intergovernmental Panel on Climate Change for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Man-made GHG emissions data for Annex I nations are available through 2011. For the Year 2011 the sum of these emissions totaled approximately 25,285,543 Gg CO<sub>2</sub>e<sup>3</sup> (9) (10). The GHG emissions in more recent years may differ from the inventories presented in Table 2-1; however, the data is representative of currently available inventory data.

<sup>3</sup> The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2005 data, the UNFCCC data for the most recent year were used. United Nations Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF,"

### United States

As noted in Table 2-1, the United States, as a single country, was the number two producer of GHG emissions in 2012. The primary greenhouse gas emitted by human activities in the United States was CO<sub>2</sub>, representing approximately 83 percent of total greenhouse gas emissions (11). Carbon dioxide from fossil fuel combustion, the largest source of US greenhouse gas emissions, accounted for approximately 78 percent of the GHG emissions.

**TABLE 2-1: TOP GHG PRODUCER COUNTRIES AND THE EUROPEAN UNION<sup>4</sup>**

| <b>Emitting Countries</b>            | <b>GHG Emissions (Gg CO<sub>2</sub>e)</b> |
|--------------------------------------|-------------------------------------------|
| China                                | 10,975,500                                |
| United States                        | 6,665,700                                 |
| European Union (28 member countries) | 4,544,224                                 |
| India                                | 3,013,770                                 |
| Russian Federation                   | 2,322,220                                 |
| Japan                                | 1,344,580                                 |
| <b>Total</b>                         | <b>28,865,994</b>                         |

### State of California

CARB compiles GHG inventories for the State of California. CARB GHG inventory data indicates that in 2013 (the most recent inventory of record) California GHG emissions totaled approximately 459.3 Million Metric Tons of Carbon Dioxide Equivalent (MMTCO<sub>2</sub>e).<sup>5</sup> “In 2010, California accounted for 6.8 percent of all emissions in the country [United States], and ranked second highest among the states with total emissions of 453 MMTCO<sub>2</sub>e, only behind Texas with 763 MMTCO<sub>2</sub>e. From a per capita standpoint, California has the 45th lowest emissions with 12.1 MMTCO<sub>2</sub>e /person in 2010.”<sup>6</sup>

## 2.3 GLOBAL CLIMATE CHANGE DEFINED

Global Climate Change (GCC) refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO<sub>2</sub> (Carbon Dioxide), N<sub>2</sub>O (Nitrous Oxide), CH<sub>4</sub> (Methane), hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the Earth’s atmosphere, but prevent radioactive heat from escaping, thus warming the Earth’s atmosphere. GCC can occur naturally as it has in the past with the previous ice ages. According to the California Air Resources Board (CARB), the

<sup>4</sup> Used <http://unfccc.int> data for Annex I countries. Consulted the CAIT Climate Data Explorer in <http://www.wri.org> site to reference Non-Annex I countries such as China and India.

<sup>5</sup> Cal EPA. “California Greenhouse Gas Emission Inventory - 2015 Edition.” California’s Greenhouse Gas Emission Inventory. Cal EPA, n.d. Web. 29 Oct. 2015.

<sup>6</sup> California Environmental Protection Agency. Air Resources Board. California’s Greenhouse Gas Emission Inventory - 2014 Edition (May 2014), p. 28.

climate change since the industrial revolution differs from previous climate changes in both rate and magnitude (12).

Gases that trap heat in the atmosphere are often referred to as greenhouse gases. Greenhouse gases are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural greenhouse gas effect, the Earth's average temperature would be approximately 61° Fahrenheit (F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

Although California's rate of growth of greenhouse gas emissions is slowing, the state is still a substantial contributor to the U.S. emissions inventory total. In 2004, California is estimated to have produced 492 million gross metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) greenhouse gas emissions. Despite a population increase of 16 percent between 1990 and 2004, California has significantly slowed the rate of growth of greenhouse gas emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls (13).

## **2.4 GREENHOUSE GASES**

For the purposes of this analysis, emissions of carbon dioxide, methane, and nitrous oxide were evaluated (see Table 3-4 later in this report) because these gasses are the primary contributors to GCC from development projects. Although other substances such as fluorinated gases also contribute to GCC, sources of fluorinated gases are not well-defined and no accepted emissions factors or methodology exist to accurately calculate these gases.

Greenhouse gases have varying global warming potential (GWP) values; GWP values represent the potential of a gas to trap heat in the atmosphere. Carbon dioxide is utilized as the reference gas for GWP, and thus has a GWP of 1.

The atmospheric lifetime and GWP of selected greenhouse gases are summarized at Table 2-2. As shown in the table below, GWP for the SAR range from 1 for carbon dioxide to 23,900 for sulfur hexafluoride and GWP for the AR4 range from 1 for carbon dioxide to 22,800 for sulfur hexafluoride.

**TABLE 2-2: GLOBAL WARMING POTENTIAL AND ATMOSPHERIC LIFETIME OF SELECT GHGS**

| Gas                                    | Atmospheric Lifetime (years) | Global Warming Potential (100 year time horizon) |                                         |
|----------------------------------------|------------------------------|--------------------------------------------------|-----------------------------------------|
|                                        |                              | Second Assessment Report (SAR)                   | 4 <sup>th</sup> Assessment Report (AR4) |
| Carbon Dioxide                         | 50-200                       | 1                                                | 1                                       |
| Methane                                | 12 ± 3                       | 21                                               | 25                                      |
| Nitrous Oxide                          | 120                          | 310                                              | 298                                     |
| HFC-23                                 | 264                          | 11,700                                           | 14,800                                  |
| HFC-134a                               | 14.6                         | 1,300                                            | 1,430                                   |
| HFC-152a                               | 1.5                          | 140                                              | 124                                     |
| Sulfur Hexafluoride (SF <sub>6</sub> ) | 3,200                        | 23,900                                           | 22,800                                  |

Source: Table 2.14 of the IPCC Fourth Assessment Report, 2007

**Water Vapor:** Water vapor (H<sub>2</sub>O) is the most abundant, important, and variable greenhouse gas in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change.

As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to ‘hold’ more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a “positive feedback loop.” The extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth’s surface and heat it up).

There are no human health effects from water vapor itself; however, when some pollutants come in contact with water vapor, they can dissolve and the water vapor can then act as a pollutant-carrying agent. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include: evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.



Carbon Dioxide: Carbon dioxide (CO<sub>2</sub>) is an odorless and colorless GHG. Outdoor levels of carbon dioxide are not high enough to result in negative health effects. Carbon dioxide is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. Carbon dioxide is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (14).

Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO<sub>2</sub> concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Left unchecked, the concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (15).

Methane: Methane (CH<sub>4</sub>) is an extremely effective absorber of radiation, though its atmospheric concentration is less than carbon dioxide and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs. No health effects are known to occur from exposure to methane.

Methane has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropogenic sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide: Nitrous oxide (N<sub>2</sub>O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage) (16).

Concentrations of nitrous oxide also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). Nitrous oxide is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. Nitrous oxide can be transported into the stratosphere, be deposited on the Earth's surface, and be converted to other compounds by chemical reaction

Chlorofluorocarbons: Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C<sub>2</sub>H<sub>6</sub>) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of



air at the Earth's surface). CFCs are no longer being used; therefore, it is not likely that health effects would be experienced. Nonetheless, in confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

CFCs have no natural source, but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons: Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the greenhouse gases, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 ( $\text{CHF}_3$ ), HFC-134a ( $\text{CF}_3\text{CH}_2\text{F}$ ), and HFC-152a ( $\text{CH}_3\text{CHF}_2$ ). Prior to 1990, the only significant emissions were of HFC-23. HFC-134a emissions are increasing due to its use as a refrigerant. The U.S. EPA estimates that concentrations of HFC-23 and HFC-134a are now about 10 parts per trillion (ppt) each; and that concentrations of HFC-152a are about 1 ppt (17). No health effects are known to result from exposure to HFCs, which are manmade for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons: Perfluorocarbons (PFCs) have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above Earth's surface, are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane ( $\text{CF}_4$ ) and hexafluoroethane ( $\text{C}_2\text{F}_6$ ). The U.S. EPA estimates that concentrations of  $\text{CF}_4$  in the atmosphere are over 70 ppt.

No health effects are known to result from exposure to PFCs. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur Hexafluoride: Sulfur hexafluoride ( $\text{SF}_6$ ) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900). The U.S. EPA indicates that concentrations in the 1990s were about 4 ppt. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

## 2.5 EFFECTS OF CLIMATE CHANGE IN CALIFORNIA

### *Public Health*

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35 percent under the lower warming range to 75 to 85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55 percent more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

### *Water Resources*

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

## *Agriculture*

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25 percent of the water supply they need. Although higher CO<sub>2</sub> levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate O<sub>3</sub> pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts.

In addition, continued global climate change could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued global climate change could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

## *Forests and Landscapes*

Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90 percent due to decreased precipitation.

Moreover, continued global climate change has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of global climate change.

## *Rising Sea Levels*

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea

level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

## 2.6 HUMAN HEALTH EFFECTS

The potential health effects related directly to the emissions of carbon dioxide, methane, and nitrous oxide as they relate to development projects such as the proposed Project are still being debated in the scientific community. Their cumulative effects to global climate change have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change will likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (18). Exhibit 2-A presents the potential impacts of global warming.

Specific health effects associated with directly emitted GHG emissions are as follows:

Water Vapor: There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

Carbon Dioxide: According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of carbon dioxide can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of carbon dioxide in the earth's atmosphere are estimated to be approximately 370 parts per million (ppm), the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period (19).

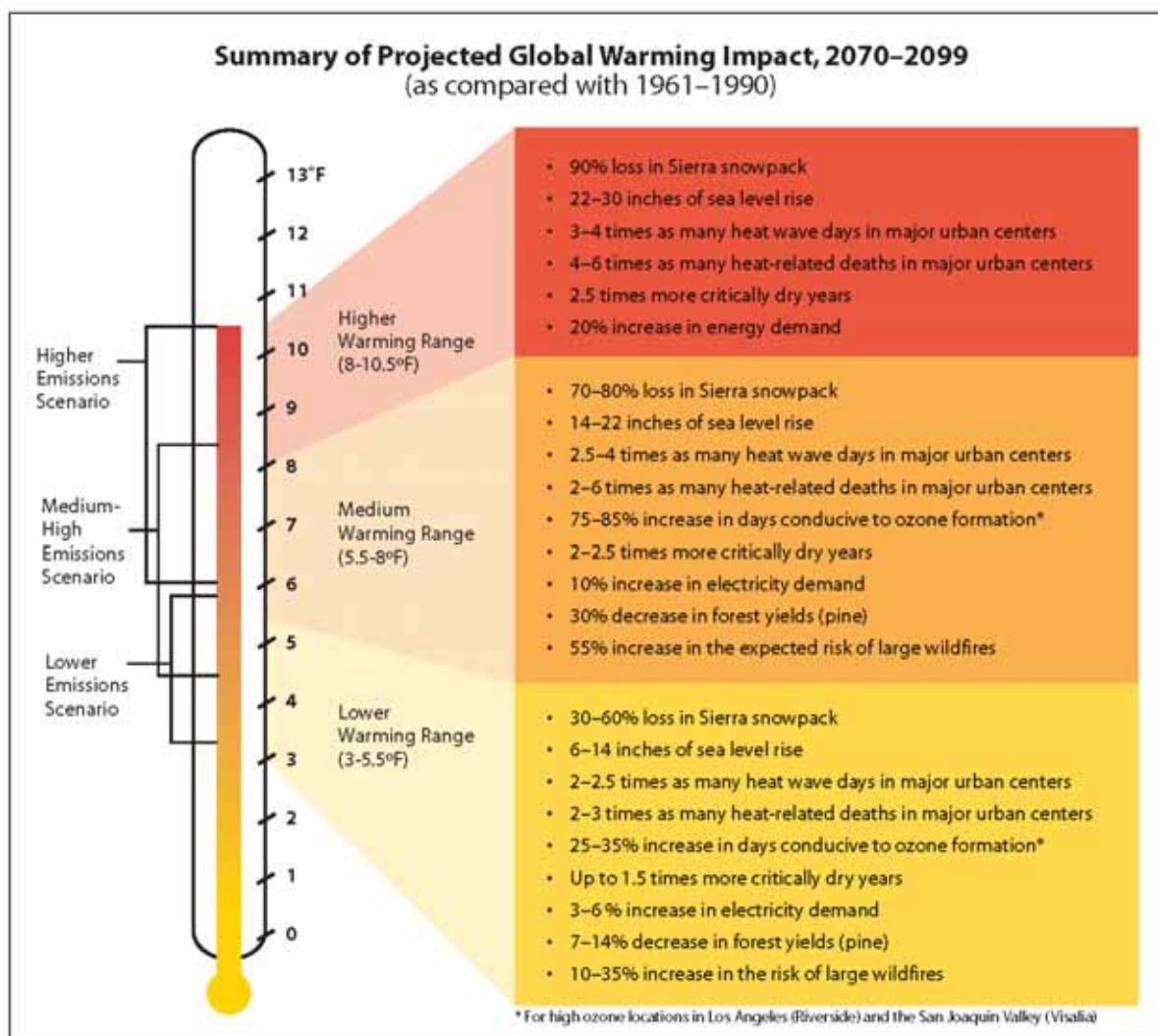
Methane: Methane is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Methane is also an asphyxiant and may displace oxygen in an enclosed space (20).

Nitrous Oxide: Nitrous Oxide is often referred to as laughing gas; it is a colorless greenhouse gas. The health effects associated with exposure to elevated concentrations of nitrous oxide include dizziness, euphoria, slight hallucinations, and in extreme cases of elevated concentrations nitrous oxide can also cause brain damage (20).

Fluorinated Gases: High concentrations of fluorinated gases can also result in adverse health effects such as asphyxiation, dizziness, headache, cardiovascular disease, cardiac disorders, and in extreme cases, increased mortality (19).

Aerosols: The health effects of aerosols are similar to that of other fine particulate matter. Thus aerosols can cause elevated respiratory and cardiovascular diseases as well as increased mortality (21).

### EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT



## 2.7 Regulatory Setting

### International Regulation and the Kyoto Protocol:

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling greenhouse gas emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The Plan currently consists of more than 50 voluntary programs for member nations to adopt.



The Kyoto protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. Some have estimated that if the commitments outlined in the Kyoto protocol are met, global GHG emissions could be reduced an estimated five percent from 1990 levels during the first commitment period of 2008-2012. Notably, while the United States is a signatory to the Kyoto protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol's commitments.

In December 2009, international leaders from 192 nations met in Copenhagen, in a conference known as the Copenhagen Summit, to address the future of international climate change commitments post-Kyoto. The Copenhagen Summit produced the Copenhagen Accord, which failed to garner unanimous support, and did not get formally adopted. As such, the document does not have any binding or legally binding commitments for countries to engage in reducing greenhouse gases.

#### Federal Regulation and the Clean Air Act:

Coinciding 2009 meeting in Copenhagen, on December 7, 2009, the U.S. Environmental Protection Agency (EPA) issued an Endangerment Finding under Section 202(a) of the Clean Air Act, opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the Clean Air Act. To date, the EPA has not promulgated regulations on GHG emissions, but it has already begun to develop them.

Previously the EPA had not regulated GHGs under the Clean Air Act (22) because it asserted that the Act did not authorize it to issue mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In *Massachusetts v. Environmental Protection Agency et al.* (127 S. Ct. 1438 (2007)), however, the U.S. Supreme Court held that GHGs are pollutants under the Clean Air Act and directed the EPA to decide whether the gases endangered public health or welfare. The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before the U.S. Congress adopts major climate change legislation. The EPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress.

Although global climate change did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the unintended reduction of greenhouse gas emissions. In order to manage the state's energy needs and promote energy efficiency, AB 1575 created the California Energy Commission (CEC) in 1975.

#### Title 24 Energy Standards:

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (5) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG

emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The Energy Commission's most recent standard, 2013 Building Energy Efficiency Standard, is 25 percent more efficient than previous standards for residential construction and 30 percent better for nonresidential construction. The Standards, which took effect on January 1, 2014, requires the use of better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. Some improved measures in the Standards include:

Residential:

- Solar-ready roofs to allow homeowners to add solar photovoltaic panels at a future date
- More efficient windows to allow increased sunlight, while decreasing heat gain
- Insulated hot water pipes, to save water and energy and reduce the time it takes to deliver hot water
- Whole house fans to cool homes and attics with evening air reducing the need for air conditioning load
- Air conditioner installation verification to insure efficient operation

Nonresidential:

- High performance windows, sensors and controls that allow buildings to use "daylighting"
- Efficient process equipment in supermarkets, computer data centers, commercial kitchens, laboratories, and parking garages
- Advanced lighting controls to synchronize light levels with daylight and building occupancy, and provide demand response capability
- Solar-ready roofs to allow businesses to add solar photovoltaic panels at a future date
- Cool roof technologies

CALGreen

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code) (23). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). The CBSC has released the 2010 California Green Building Standards Code on its Web site. Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code.

CALGreen contains both mandatory and voluntary measures, for Non-Residential land uses there are 39 mandatory measures including, but not limited to: exterior light pollution reduction, wastewater reduction by 20%, and commissioning of projects over 10,000 sf. There are two tiers of voluntary measures for Non-Residential land uses for a total of 36 additional elective measures.

The 2013 CALGreen includes additions and amendments to the water efficiency standards for non residential buildings in order to comply with the reduced flow rate table. The 2013 CALGreen has also been rewritten to clarify and definitively identify the requirements and applicability for residential and nonresidential buildings.

California Assembly Bill No. 1493 (AB 1493):

AB 1493 requires CARB to develop and adopt the nation's first greenhouse gas emission standards for automobiles. The Legislature declared in AB 1493 that global warming was a matter of increasing concern for public health and environment in California (24). Further, the legislature stated that technological solutions to reduce greenhouse gas emissions would stimulate the California economy and provide jobs.

To meet the requirements of AB 1493, ARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards in 2004. Amendments to CCR Title 13 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961) and adoption of Section 1961.1 (CCR 13 1961.1) require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016.

In December 2004 a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against ARB to prevent enforcement of CCR 13 1900 and CCR 13 1961 as amended by AB 1493 and CCR 13 1961.1 (Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in her official capacity as Executive Director of the California Air Resources Board, et al.). The suit, heard in the U.S. District Court for the Eastern District of California, contended that California's implementation of regulations that in effect regulate vehicle fuel economy violates various federal laws, regulations, and policies. In January 2007, the judge hearing the case accepted a request from the State Attorney General's office that the trial be postponed until a decision is reached by the U.S. Supreme Court on a separate case addressing GHGs, Massachusetts vs. EPA. In Massachusetts vs. EPA, the primary issue in question was whether the federal CAA provides authority for USEPA to regulate CO<sub>2</sub> emissions. In April 2007, the U.S. Supreme Court ruled in Massachusetts' favor, holding that GHGs are air pollutants under the CAA and that the EPA have the authority to regulate CO<sub>2</sub> emissions. On December 11, 2007, the judge in the Central Valley Chrysler-Jeep case rejected each plaintiff's arguments and ruled in California's favor. On December 19, 2007, the USEPA denied California's waiver request of federal preemption. California filed a petition with the Ninth Circuit Court of Appeals challenging USEPA's denial on January 2, 2008.



The Obama administration subsequently directed the USEPA to re-examine their decision. On May 19, 2009, challenging parties, automakers, the State of California, and the federal government reached an agreement on a series of actions that would resolve these current and potential future disputes over the standards through model year 2016. In summary, the USEPA and the U.S. Department of Transportation agreed to adopt a federal program to reduce GHGs and improve fuel economy, respectively, from passenger vehicles in order to achieve equivalent or greater greenhouse gas benefits as the AB 1493 regulations for the 2012–2016 model years. Challenging auto manufacturers agreed to ultimately drop current and forego similar future legal challenges, including challenging a waiver grant, which occurred on June 30, 2009. The State of California committed to (1) revise its standards to allow manufacturers to demonstrate compliance with the fleet-average GHG emission standard by “pooling” California and specified State vehicle sales; (2) revise its standards for 2012–2016 model year vehicles so that compliance with USEPA-adopted GHG standards would also comply with California’s standards; and (3) revise its standards, as necessary, to allow manufacturers to use emissions data from the federal CAFE program to demonstrate compliance with the AB 1493 regulations (CARB 2009, <http://www.arb.ca.gov/regact/2009/ghgpv09/ghgpvisor.pdf>) both of these programs are aimed at light-duty auto and light-duty trucks.

#### Executive Order S-3-05:

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change (25). It declares that increased temperatures could reduce the Sierra’s snowpack, further exacerbate California’s air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 1990 level by 2020, and to 80% below the 1990 level by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary also is required to submit biannual reports to the Governor and state Legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California’s resources; and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created a Climate Action Team (CAT) made up of members from various state agencies and commission. CAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

#### Executive Order B-30-15:

In January 2015, Governor Brown, in his inaugural address and annual report to the Legislature, established supplementary goals which would further reduce GHG emissions over the next 15 years. These goals include an increase in California’s renewable energy portfolio from 33% to 50%, a reduction in vehicle petroleum use for cars and trucks by up to 50% measures to double the efficiency of existing buildings, and decreasing emissions associated with heating fuels.

On April 29, 2015 California Governor Jerry Brown, through Executive Order B-30-15 (“BEO”) states a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030.

The BEO sets an ambitious new Statewide GHG emissions reduction target of 40% below 1990 levels by 2030 as a “mid-term” benchmark needed to achieve the 80% below 1990 levels by 2050. It should be noted however that this target has not been formally enacted by the Legislature or even CARB. As such, the BEO does not appear to constitute a new regulation or requirement adopted to implement a statewide, regional or local plan for the reduction of GHG emissions within the context of CEQA.

The Project reduces its GHG emissions to the maximum extent feasible as discussed in this document. At this time, no further analysis is necessary or required by CEQA as it pertains to Executive Order B-30-15.

Additionally, as described previously, the project applicant would not actively interfere with any future City-mandated, state-mandated, or federally-mandated retrofit obligations enacted or promulgated to legally require development City-wide, state-wide, or nation-wide to assist in meeting state-adopted greenhouse gas emissions reduction targets, including that established under Executive Order S-3-05 or Executive Order B-30-15.

Based on the foregoing, the Project does not interfere with the state’s implementation of (i) Executive Order B-30-15’s target of reducing statewide GHG emissions to 40% below 1990 levels by 2030 or (ii) Executive Order S-3-05’s target of reducing statewide GHG emissions to 80% below 1990 levels by 2050 because it does not interfere with the state’s implementation of GHG reduction plans described in the CARB’s Updated Scoping Plan, including the state providing for 12,000 MW of renewable distributed generation by 2020, the California Building Commission mandating net zero energy homes in the building code after 2020, or existing building retrofits under AB 758. Therefore, the project’s impacts on greenhouse gas emissions in the 2030 and 2050 horizon years are less than significant.

#### California Assembly Bill 32 (AB 32):

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020 (2). This reduction sought to be accomplished through an enforceable statewide cap on GHG emissions that was phased starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes

guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

In November 2007, CARB completed its estimates of 1990 GHG levels. Net emission 1990 levels were estimated at 427 MMTs (emission sources by sector were: transportation – 35 percent; electricity generation – 26 percent; industrial – 24 percent; residential – 7 percent; agriculture – 5 percent; and commercial – 3 percent). Accordingly, 427 MMTs of CO<sub>2</sub> equivalent was established as the emissions limit for 2020. For comparison, CARB's estimate for baseline GHG emissions was 473 MMT for 2000 and 532 MMT for 2010. "Business as usual" conditions (without the 28.4 percent reduction to be implemented by CARB regulations) for 2020 were projected to be 596 MMTs.

In December 2007, CARB approved a regulation for mandatory reporting and verification of GHG emissions for major sources. This regulation covered major stationary sources such as cement plants, oil refineries, electric generating facilities/providers, and co-generation facilities, which comprise 94 percent of the point source CO<sub>2</sub> emissions in the State.

On December 11, 2008, CARB adopted a scoping plan to reduce GHG emissions to 1990 levels. The Scoping Plan's recommendations for reducing GHG emissions to 1990 levels by 2020 include emission reduction measures, including a cap-and-trade program linked to Western Climate Initiative partner jurisdictions, green building strategies, recycling and waste-related measures, as well as Voluntary Early Actions and Reductions. Implementation of individual measures must begin no later than January 1, 2012, so that the emissions reduction target can be fully achieved by 2020.

Table 2-3 shows the proposed reductions from regulations and programs outlined in the Scoping Plan. While local government operations were not accounted for in achieving the 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 MMTons of CO<sub>2</sub>e, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2006 levels by 2020 to ensure that municipal and community-wide emissions match the state's reduction target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 MMTons tons of CO<sub>2</sub>e (or approximately 1.2 percent of the GHG reduction target).

#### California Senate Bill No. 1368 (SB 1368):

In 2006, the State Legislature adopted Senate Bill 1368 ("SB 1368"), which was subsequently signed into law by the Governor (26). SB 1368 directs the California Public Utilities Commission ("CPUC") to adopt a greenhouse gas emission performance standard ("EPS") for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Due to the carbon content of its fuel source, a coal-fired plant

cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants.

Accordingly, the new law will effectively prevent California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. Thus, SB 1368 will lead to dramatically lower greenhouse gas emissions associated with California energy demand, as SB 1368 will effectively prohibit California utilities from purchasing power from out of state producers that cannot satisfy the EPS standard required by SB 1368.

### CEQA Guidelines

CEQA Guideline § 15064.4(a) "A lead agency shall have discretion to determine, in the context of a particular project, whether to: 1. Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . .; or 2. Rely on a qualitative analysis or performance based standards."

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts respectively. Greenhouse gas mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze greenhouse gas emissions in an EIR when a Project's incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emission are cumulatively considerable.

Section 15183.5 permits programmatic greenhouse gas analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support determination that a Project's cumulative effect is not cumulatively considerable, according to proposed Section 15183.5(b).

CEQA emphasizes that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. (See CEQA Guidelines Section 15130(f)).

Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of greenhouse gas emissions:

1. The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of

greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

**TABLE 2-3: SCOPING PLAN GHG REDUCTION MEASURES TOWARDS 2020 TARGET**

| <i>Recommended Reduction Measures</i>                                     | <i>Reductions Counted toward 2020 Target of 169 MMT CO<sub>2</sub>e</i> | <i>Percentage of Statewide 2020 Target</i> |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------|
| <b>Cap and Trade Program and Associated Measures</b>                      |                                                                         |                                            |
| California Light-Duty Vehicle GHG Standards                               | 31.7                                                                    | 19%                                        |
| Energy Efficiency                                                         | 26.3                                                                    | 16%                                        |
| Renewable Portfolio Standard (33 percent by 2020)                         | 21.3                                                                    | 13%                                        |
| Low Carbon Fuel Standard                                                  | 15                                                                      | 9%                                         |
| Regional Transportation-Related GHG Targets <sup>1</sup>                  | 5                                                                       | 3%                                         |
| Vehicle Efficiency Measures                                               | 4.5                                                                     | 3%                                         |
| Goods Movement                                                            | 3.7                                                                     | 2%                                         |
| Million Solar Roofs                                                       | 2.1                                                                     | 1%                                         |
| Medium/Heavy Duty Vehicles                                                | 1.4                                                                     | 1%                                         |
| High Speed Rail                                                           | 1.0                                                                     | 1%                                         |
| Industrial Measures                                                       | 0.3                                                                     | 0%                                         |
| Additional Reduction Necessary to Achieve Cap                             | 34.4                                                                    | 20%                                        |
| <b>Total Cap and Trade Program Reductions</b>                             | <b>146.7</b>                                                            | <b>87%</b>                                 |
| <b>Uncapped Sources/Sectors Measures</b>                                  |                                                                         |                                            |
| High Global Warming Potential Gas Measures                                | 20.2                                                                    | 12%                                        |
| Sustainable Forests                                                       | 5                                                                       | 3%                                         |
| Industrial Measures (for sources not covered under cap and trade program) | 1.1                                                                     | 1%                                         |
| Recycling and Waste (landfill methane capture)                            | 1                                                                       | 1%                                         |
| <b>Total Uncapped Sources/Sectors Reductions</b>                          | <b>27.3</b>                                                             | <b>16%</b>                                 |
| <b>Total Reductions Counted toward 2020 Target</b>                        | <b>174</b>                                                              | <b>100%</b>                                |
| <b>Other Recommended Measures – Not Counted toward 2020 Target</b>        |                                                                         |                                            |
| State Government Operations                                               | 1.0 to 2.0                                                              | 1%                                         |
| Local Government Operations                                               | To Be Determined <sup>2</sup>                                           | NA                                         |
| Green Buildings                                                           | 26                                                                      | 15%                                        |
| Recycling and Waste                                                       | 9                                                                       | 5%                                         |
| Water Sector Measures                                                     | 4.8                                                                     | 3%                                         |
| Methane Capture at Large Dairies                                          | 1                                                                       | 1%                                         |
| <b>Total Other Recommended Measures – Not Counted toward 2020 Target</b>  | <b>42.8</b>                                                             | <b>NA</b>                                  |

Source: CARB. 2008, MMTons CO<sub>2</sub>e: million metric tons of CO<sub>2</sub>e

<sup>1</sup>Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.

<sup>2</sup>According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO<sub>2</sub>e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 Target



### Executive Order S-01-07:

On January 18, 2007 California Governor Arnold Schwarzenegger, through Executive Order S-01-07, mandated a statewide goal to reduce the carbon intensity of California's transportation fuel by at least ten percent by 2020 (27). The order also requires that a California specific Low Carbon Fuel Standard be established for transportation fuels.

### Senate Bills 1078 and 107 and Executive Order S-14-08:

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20% of their supply from renewable sources by 2017 (28). SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010 (27). In November 2008 Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard to 33% renewable power by 2020 (29).

### Senate Bill 375:

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035.

These reduction targets will be updated every 8 years but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects will not be eligible for funding programmed after January 1, 2012.

This law also extends the minimum time period for the regional housing needs allocation cycle from 5 years to 8 years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA would incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

The Southern California Association of Governments (SCAG) is required by law to update the Southern California Regional Transportation Plan (RTP) every four years. On April 4, 2012, the Regional Council of the Southern California Association of Governments (SCAG) adopted the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future. The 2012 plan differed from past plans because it included development of a SCS. The RTP/SCS incorporated land use and housing policies to meet the greenhouse gas

emissions targets established by the California Air Resource Board (CARB) for 2020 (8% reduction) and 2035 (13% reduction).

On April 7, 2016, SCAG adopted the 2016 RTP/SCS plan “Plan.” The Plan continues the goals 2012 RTP/SCS and has been updated to reflect new developments since the adoption of the 2012 RTP/SCS, such as Executive Order B-30-15 (30).

#### CARB’s Preliminary Draft Staff Proposal for Interim Significance Thresholds:

Separate from its Scoping Plan approved in December of 2008 (31), CARB issued a Staff Proposal in October 2008, as its first step toward developing recommended statewide interim thresholds of significance for GHGs that may be adopted by local agencies for their own use. CARB staff’s objective in this proposal is to develop a threshold of significance that will result in the vast majority (approximately 90 percent statewide) of GHG emissions from new industrial projects being subject to CEQA’s requirement to impose feasible mitigation. The proposal does not attempt to address every type of project that may be subject to CEQA, but instead focuses on common project types that, collectively, are responsible for substantial GHG emissions – specifically, industrial, residential, and commercial projects. CARB is developing these thresholds in these sectors to advance climate objectives, streamline project review, and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state. These draft thresholds are under revision in response to comments. There is currently no timetable for finalized thresholds at this time.

As currently proposed by CARB, a quantitative threshold of 7,000 metric tons (MT) of CO<sub>2</sub>e per year for operational emissions (excluding transportation), and performance standards yet to be defined for construction and transportation emissions are under consideration. However, CARB’s proposal is not yet final, and thus cannot be applied to the Project.

#### South Coast Air Quality Management District Recommendations for Significance Thresholds:

In April 2008, the South Coast Air Quality Management District (SCAQMD), in order to provide guidance to local lead agencies on determining the significance of GHG emissions identified in CEQA documents, convened a “GHG CEQA Significance Threshold Working Group.” The goal of the working group is to develop and reach consensus on an acceptable CEQA significance threshold for GHG emissions that would be utilized on an interim basis until CARB (or some other state agency) develops statewide guidance on assessing the significance of GHG emissions under CEQA.

Initially, SCAQMD staff presented the working group with a significance threshold that could be applied to various types of projects—residential; non-residential; industrial; etc (32). However, the threshold is still under development. In December 2008, staff presented the SCAQMD Governing Board with a significance threshold for stationary source projects where it is the lead agency. This threshold uses a tiered approach to determine a project’s significance, with 10,000 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e) as a screening numerical threshold for stationary sources. More importantly it should be noted that when setting the 10,000 MTCO<sub>2</sub>e threshold, the SCAQMD did not consider mobile sources (vehicular travel), rather the threshold is based mainly on stationary source generators such as boilers, refineries, power plants, etc.

Therefore it would be misleading to apply a threshold that was developed without consideration for mobile sources to a Project where the majority of emissions are related to mobile sources. Thus there is no SCAQMD threshold that can be applied to this Project.

In September 2010 (33), the Working Group released additional revisions that consist of the following recommended tiered approach:

- Tier 1 consists of evaluating whether or not the Project qualifies for applicable CEQA exemptions.
- Tier 2 consists of determining whether or not a Project is consistent with a greenhouse gas reduction plan. If a Project is consistent with a greenhouse gas reduction plan, it would not have a significant impact.
- Tier 3 consists of screening values at the discretion of the lead agency; however they should be consistent for all projects within its jurisdiction. Project-related construction emissions should be amortized over 30 years and should be added back the Project's operational emissions. The following thresholds are proposed for consideration:
  - o 3,000 MTCO<sub>2</sub>e per year for all land use types
  - or
  - o 3,500 MTCO<sub>2</sub>e per year for residential; 1,400 MTCO<sub>2</sub>e per year for commercial; or 3,000 MTCO<sub>2</sub>e per year for mixed-use projects
- Tier 4 has the following options:
  - o Option 1: Reduce emissions from business as usual by a certain percentage (currently undefined)
  - o Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - o Option 3: A project-level efficiency target of 4.8 MTCO<sub>2</sub>e per service population as a 2020 target and 3.0 MTCO<sub>2</sub>e per service population as a 2035 target. The recommended plan-level target for 2020 is 6.6 MTCO<sub>2</sub>e and the plan level target for 2035 is 4.1 MTCO<sub>2</sub>e
- Tier 5 involves mitigation offsets to achieve target significance thresholds

The SCAQMD has also adopted Rules 2700, 2701, and 2702 that address GHG reductions. These rules address boilers and process heater, forestry, and manure management projects. The Project may ultimately include boilers. If boilers are included in the central plant, then the Project would be required to comply with the applicable SCAQMD rules.

For Analysis Purposes, the Tier 4 Option 1 approach is utilized in this greenhouse gas analysis in order to determine the significance of the Project GHG emissions. An emissions reduction of 15% below a 2010 baseline scenario was used as the determining threshold which is consistent with the City of Riverside's CAP pursuant to AB 32 reduction targets.



## City of Riverside Climate Action Plan

In 2014 Riverside was one of twelve cities that collaborated with the Western Riverside Council of Governments (WRCOG) on a Subregional Climate Action Plan (CAP). The City of Riverside Climate Action Plan provides a roadmap for the City of Riverside to achieve deep GHG emissions through the year 2035 and establishes policies and priorities enabling the City to implement strategies that successfully fulfill the requirements of state initiatives, AB 32, and SB 375.

AB 32 directs California to reduce statewide GHG emissions to 1990 levels by 2020. To achieve these reductions, the WRCOG recommends that local governments target their 2020 emissions at 15% below “current”<sup>7</sup> levels, consistent with the statewide commitment, to account for emissions growth that has occurred since 1990. A 15 percent reduction target is deemed by the City of Riverside and the WRCOG to be consistent with the state-wide AB 32 goal of reducing emissions to 1990 levels,<sup>8</sup> and is in line with current best practice for climate action plans developed for numerous California cities.

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<sup>7</sup> “Current” is a term used by CARB in its Climate Change Scoping Plan of September 2008, but is undefined. It is generally taken to mean emissions for a year between 2005 and 2008, although other years have been used by local communities.

<sup>8</sup> In its Climate Change Scoping Plan of September 2008, CARB recommends that local governments adopt a GHG reduction target consistent with the State’s commitment to reach 1990 levels by 2020. This is identified as equivalent to 15% below “current” levels at the time of writing (2008).

## 3 PROJECT GREENHOUSE GAS IMPACT

### 3.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a significant greenhouse gas impact. The significance of these potential impacts is described in the following section.

### 3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related greenhouse gas impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

In order to assess the significance of a proposed Project's environmental impacts it is necessary to identify quantitative or qualitative thresholds which, if exceeded, would constitute a finding of significance. As discussed above, while Project-related GHG emissions can be estimated, the direct impacts of such emissions on climate change and global warming cannot be determined on the basis of available science. There is no evidence at this time that would indicate that the emissions from a project the size of the proposed Project would directly or indirectly affect global climate change.

AB 32 states, in part, that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California (2)." Because global warming is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide, global climate change is considered to be a cumulative impact.

As previously discussed, CEQA guidelines indicate that a project would result in a significant impact on climate change if a project were to: a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Or b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Based on the above factors (and particularly the adopted addition of CEQA Guideline § 15064.4, subdivisions (b)(2) and (b)(3), the City of Riverside (the lead agency for the proposed project) has determined it is appropriate to rely on AB 32 implementation guidance as one benchmark for purposes of this analysis (34). In adopting AB 32, the legislature determined the necessary GHG reductions for the state to make in order to sufficiently offset its contribution to the cumulative climate change problem. Accordingly, the project's GHG emission levels will be analyzed to determine whether project approval would impede compliance with the GHG emissions reduction mandate established by AB 32 which requires that California's GHG

emissions limit be reduced to 1990 levels by 2020. As noted in the scoping Plan (35), a reduction of 28.5 percent below the “business as usual” scenario is required to meet the goals of AB 32 (36).

Further, Section 15064(h) (3) of the CEQA Guidelines authorizes lead agencies to conclude that a project’s incremental contribution to a cumulative effect is not cumulatively considerable:

[I]f the project will comply with the requirements in a previously approved plan or mitigation program ... that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency.

AB 32 directs California to reduce statewide GHG emissions to 1990 levels by 2020. Nonetheless, to achieve these reductions, the California Air Resources Board (CARB) recommends that local governments target their 2020 emissions at 15% below current levels, consistent with the statewide commitment, to account for emissions growth that has occurred since 1990.

### **3.3 PROJECT RELATED GREENHOUSE GAS EMISSIONS**

CEQA Guidelines 15064.4 (b) (1) states that a lead agency may use a model or methodology to quantify greenhouse gas emissions associated with a project (37).

On October 2, 2013, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2013.2.2. The purpose of this model is to more accurately calculate construction-source and operational-source criteria pollutant (NO<sub>x</sub>, VOC, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, and CO) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (38). Accordingly, the latest version of CalEEMod™ has been used for this Project to determine construction and operational air quality impacts. Output from the model runs for both construction and operational activity are provided in Appendix 3.1

### **3.4 CONSTRUCTION AND OPERATIONAL LIFE-CYCLE ANALYSIS**

A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the lack of consensus guidance on LCA methodology at this time. Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the project development, infrastructure and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time a LCA would be extremely speculative and thus has not been prepared.

Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a project could occur outside of California, might not be very well understood or documented, and would be challenging to mitigate (39). Additionally, the science to calculate life cycle emissions is not yet established or well defined, therefore SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis.

### 3.5 CONSTRUCTION EMISSIONS

Construction activities associated with the proposed Project will result in emissions of CO<sub>2</sub> and CH<sub>4</sub> from construction activities.

The report Canyon Springs Healthcare Campus & Senior Living Air Quality Impact Analysis Report, Urban Crossroads, Inc. (2016) contains detailed information regarding construction activity (40).

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total greenhouse gas emissions for the construction activities, dividing it by a 30-year project life then adding that number to the annual operational phase GHG emissions (41). As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions.

### 3.6 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- Solid Waste
- Water Supply, Treatment and Distribution
- Stationary Source Emissions

#### 3.6.1 AREA SOURCE EMISSIONS

##### Hearths/Fireplaces

GHG emissions would result from the combustion of wood or biomass and are considered biogenic emissions of CO<sub>2</sub>. The emissions associated with use of hearths/fireplaces were calculated based on assumptions provided in the CalEEMod model. The Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development. In order to account for the requirements of this Rule, the unmitigated CalEEMod model estimates were adjusted to remove wood burning stoves and fireplaces. As the project is required to comply with SCAQMD Rule 445, the removal of wood burning stoves

and fireplaces is not considered "mitigation" although it must be identified as such in CalEEMod in order to treat the case appropriately.

#### Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod model.

### **3.6.2 ENERGY SOURCE EMISSIONS**

#### Combustion Emissions Associated with Natural Gas and Electricity

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO<sub>2</sub> and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. Unless otherwise noted, CalEEMod™ default parameters were used.

### **3.6.3 MOBILE SOURCE EMISSIONS**

#### Vehicles

GHG emissions will also result from mobile sources associated with the Project. These mobile source emissions will result from the typical daily operation of motor vehicles by visitors, employees, and residents.

Project mobile source emissions are dependent on both overall daily vehicle trip generation. Trip characteristics available from the report, Canyon Springs Healthcare Campus & Senior Living Traffic Impact Analysis Urban Crossroads, Inc. (2016) were utilized in this analysis (42).

### **3.6.4 SOLID WASTE**

Medical, residential, and ancillary commercial (restaurant/cafeteria) land uses will result in the generation and disposal of solid waste. A large percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the proposed Project were calculated by the CalEEMod™ model using default parameters.

### **3.6.5 WATER SUPPLY, TREATMENT AND DISTRIBUTION**

Indirect GHG emissions result from the production of electricity used to convey, treat and distribute water and wastewater. The amount of electricity required to convey, treat and

distribute water depends on the volume of water as well as the sources of the water. Unless otherwise noted, CalEEMod™ default parameters were used.

### 3.6.5 STATIONARY SOURCE EMISSIONS

The Project will include natural gas powered boilers with an estimated annual energy usage of approximately 50,000,000 kilo British thermal units(kBtu). This equates to a maximum heat input of 5.71 million british thermal units per hour (mmBTU/HR) and an annual fuel usage of 50 million standard cubic feet (SCF). Please refer to Appendix 3.2 for more detail.

## 3.7 EMISSIONS SUMMARY

The total amount of Project-related GHG emissions for the 2010 baseline scenario without accounting for regulatory developments that would reduce GHG emissions from direct and indirect sources combined would total 35,655.04 MTCO<sub>2</sub>e as shown on Table 3-1.

The total amount of Project-related GHG emissions when accounting for applicable regulatory developments that would reduce GHG emissions from direct and indirect sources combined would total 25,408.99 MTCO<sub>2</sub>e as shown on Table 3-2. This results in a 28.74 % reduction from the baseline scenario, thus with implementation of regulatory developments, the Project's GHG reduction would exceed the City of Riverside's reduction target of 15%. Project GHG emissions reductions by source and state regulations are shown in Table 3-3.

**TABLE 3-1: "2010 BASELINE" GREENHOUSE GAS EMISSIONS**

| Emission Source                                               | Emissions (metric tons per year) |                 |                  |                         |
|---------------------------------------------------------------|----------------------------------|-----------------|------------------|-------------------------|
|                                                               | CO <sub>2</sub>                  | CH <sub>4</sub> | N <sub>2</sub> O | Total CO <sub>2</sub> E |
| Annual construction-related emissions amortized over 30 years | 124.81                           | 0.01            | --               | 125.03                  |
| Area                                                          | 128.84                           | 0.01            | 2.21e-3          | 129.79                  |
| Energy                                                        | 8,209.54                         | 0.32            | 0.10             | 8,246.34                |
| Mobile                                                        | 21,419.58                        | 1.35            | --               | 21,447.96               |
| Waste                                                         | 1,048.42                         | 61.96           | --               | 2,349.59                |
| Water Usage                                                   | 530.17                           | 3.42            | 0.08             | 628.29                  |
| Stationary Sources                                            | --                               | --              | --               | 2,728.04                |
| <b>Total CO<sub>2</sub>E (All Sources)</b>                    | <b>35,655.04</b>                 |                 |                  |                         |

**TABLE 3-2: 2020 GREENHOUSE GAS EMISSIONS WITH APPLICABLE REGULATORY DEVELOPMENTS, DESIGN FEATURES AND MITIGATION MEASURES**

| Emission Source                                               | Emissions (metric tons per year) |                 |                  |                         |
|---------------------------------------------------------------|----------------------------------|-----------------|------------------|-------------------------|
|                                                               | CO <sub>2</sub>                  | CH <sub>4</sub> | N <sub>2</sub> O | Total CO <sub>2</sub> E |
| Annual construction-related emissions amortized over 30 years | 124.81                           | 0.01            | --               | 125.03                  |
| Area                                                          | 126.26                           | 6.70e-3         | 2.21e-3          | 127.09                  |
| Energy                                                        | 6,263.89                         | 0.30            | 0.09             | 6,298.58                |
| Mobile                                                        | 13,359.96                        | 0.49            | --               | 13,370.19               |
| Waste                                                         | 1,048.42                         | 61.96           | --               | 2,349.59                |
| Water Usage                                                   | 331.96                           | 2.74            | 0.07             | 410.47                  |
| Stationary Sources                                            | --                               | --              | --               | 2,728.04                |
| <b>Total CO<sub>2</sub>E (All Sources)</b>                    | <b>25,408.99</b>                 |                 |                  |                         |

Source: CalEEMod™ model output, See Appendix 3.1 for detailed model outputs.

Note: Totals obtained from CalEEMod™ and may not total 100% due to rounding.

Table results include scientific notation. *E* is used to represent *times ten raised to the power of* (which would be written as x 10<sup>*b*</sup>) and is followed by the value of the exponent

**TABLE 3-3: GHG EMISSIONS REDUCTIONS BY SOURCE AND REDUCTION MEASURES BAU 2010 VS 2020 PROJECT SCENARIOS**

| GHG Source               | CO <sub>2</sub> e Emissions (Metric Tons per Year) |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                        |                     |                                  |
|--------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------|
|                          | BAU GHG Emissions                                  | GHG Reduction resulting from State Measures                                                                                                                                                                                                                                         | GHG Reduction resulting from Mitigation                                                                                                                                                                | Total GHG Reduction | Net Project GHG Emissions (2020) |
| Construction             | 125.03                                             | 0.00                                                                                                                                                                                                                                                                                | 0.00                                                                                                                                                                                                   | 0.00                | 125.03                           |
| Area                     | 129.79                                             | 0.04                                                                                                                                                                                                                                                                                | 2.66<br>-Use of low VOC cleaning supplies<br>-Use of electric landscape equipment (lawnmowers, leafblowers, chainsaws)                                                                                 | 0.00                | 127.09                           |
| Energy Use               | 8,246.34                                           | 1,574.52<br>- Renewable Portfolio Standards<br>- 2016 Title 24 Requirements                                                                                                                                                                                                         | 373.24<br>-Exceed Title 24 by 5%                                                                                                                                                                       | 1,947.76            | 6,298.58                         |
| Mobile Sources (Traffic) | 21,447.96                                          | 4,349.61<br>- Pavley Fuel Efficiency Standards (AB1493)<br>- Title 17 California Code of Regulations (Low Carbon Fuel Standard)                                                                                                                                                     | 3,728.16<br>-Increase Diversity<br><br>-Improve Pedestrian Network                                                                                                                                     | 8,077.77            | 13,370.19                        |
| Waste Disposed           | 2,349.59                                           | 0.00                                                                                                                                                                                                                                                                                | 0.00                                                                                                                                                                                                   | 0.00                | 2349.59                          |
| Water Use                | 628.29                                             | 129.21<br>- Renewable Portfolio Standards create an indirect reduction in water use demand that is a result of a decrease in energy intensity. This is due to the fact that water demand is correlated to the energy needed to collect, move, and treat water throughout the state. | 88.61<br>- Landscape palette emphasizing drought tolerant plants<br>-Use of Water-efficient irrigation techniques<br>-Installation of low flow bathroom faucets, kitchen faucets, toilets, and showers | 217.82              | 410.47                           |
| Stationary Sources       | 2,728.04                                           | 0.00                                                                                                                                                                                                                                                                                | 0.00                                                                                                                                                                                                   | 0.00                | 2,728.04                         |
| <b>Total</b>             | <b>35,655.04</b>                                   | <b>6,053.38</b>                                                                                                                                                                                                                                                                     | <b>4,192.67</b>                                                                                                                                                                                        | <b>10,246.05</b>    | <b>25,408.99</b>                 |



### 3.8 COMPARATIVE ANNUAL EMISSIONS SUMMARY

In addition to the construction and operational effects associated with establishing a hospital land use with approximately 280 beds, 370,000 square feet of medical office, 234 senior adult-housing attached dwelling units, and an assisted living facility with approximately 267 beds on the property, this study also evaluates the potential changes in emissions associated with the proposed changes in development intensity that are proposed for the project site.

Based on the previously approved Specific Plan land use, the Project site was previously approved for the development of up to 100,000 square feet of retail use and 800,000 square feet of general office building land use. The analysis provided in Table 3-4 of this document demonstrates that the Project would not result in a significantly greater amount of emissions as compared to the previously approved Specific Plan land use.

**TABLE 3-4: COMPARATIVE OPERATIONAL EMISSIONS SUMMARY**

| Emission Source                                                  | Emissions (metric tons per year) |                 |                  |                         |
|------------------------------------------------------------------|----------------------------------|-----------------|------------------|-------------------------|
|                                                                  | CO <sub>2</sub>                  | CH <sub>4</sub> | N <sub>2</sub> O | Total CO <sub>2</sub> E |
| Currently Proposed Project Land Use                              |                                  |                 |                  |                         |
| Area <sup>a</sup>                                                | 126.26                           | 6.70e-3         | 2.21e-3          | 127.09                  |
| Energy <sup>b</sup>                                              | 6,263.89                         | 0.30            | 0.09             | 6,298.58                |
| Mobile Sources <sup>c</sup>                                      | 13,359.96                        | 0.49            | --               | 13,370.19               |
| Waste                                                            | 1,048.42                         | 61.96           | --               | 2,349.59                |
| Water Usage                                                      | 331.96                           | 2.74            | 0.07             | 410.47                  |
| Stationary Sources                                               | --                               | --              | --               | 2,728.04                |
| <b>Project Total CO<sub>2</sub>E (All Sources)</b>               | <b>25,408.99</b>                 |                 |                  |                         |
| Previously Approved Specific Plan Land Use                       |                                  |                 |                  |                         |
| Area <sup>a</sup>                                                | 0.02                             | 6.00e-5         | --               | 0.02                    |
| Energy <sup>b</sup>                                              | 2,118.44                         | 0.13            | 0.03             | 2,129.75                |
| Mobile Sources <sup>c</sup>                                      | 11,316.57                        | 0.41            | --               | 11,325.15               |
| Waste                                                            | 172.34                           | 10.19           | --               | 386.22                  |
| Water Usage                                                      | 675.73                           | 4.91            | 0.12             | 817.09                  |
| <b>Previously Approved Specific Plan Total CO<sub>2</sub>E</b>   | <b>14,658.24</b>                 |                 |                  |                         |
| <b><i>Delta (Project– Previously Approved Specific Plan)</i></b> | <b><i>10,750.75</i></b>          |                 |                  |                         |

Source: CalEEMod™ model output, See Appendix 3.1 for detailed model outputs.

<sup>a</sup> Includes emissions of landscape maintenance equipment and architectural coatings emissions

<sup>b</sup> Includes emissions of natural gas consumption

<sup>c</sup> Includes emissions of vehicle emissions and fugitive dust related to vehicular travel

## 4 FINDINGS & CONCLUSIONS

To date, the South Coast Air Quality Management District (SCAQMD) and CARB have not established significance thresholds for GHG emissions under the California Environmental Quality Act (CEQA)<sup>9</sup>. To evaluate the Project's GHG impacts the proposed Project's emissions are compared with a baseline scenario to determine if the development is likely to be consistent with the City of Riverside's Climate Action Plan (CAP) supporting AB 32 in California which calls for an approximate 15% reduction from 2010 baseline conditions (1).

As shown in Table 4-1, Project GHG emissions would be reduced by approximately 28.74% when compared to the baseline scenario. This reduction is consistent with the target reduction percentage of 15% based on the City of Riverside's CAP analysis supporting AB 32. Additionally, as discussed in detail in Section 3.8, the Project would not result in a significantly greater amount of emissions than what would otherwise occur under the previously approved Specific Plan. See Section 3.8 for a detailed discussion of emission summaries.

**TABLE 4-1: SUMMARY OF GHG EMISSIONS FOR BASELINE VS PROJECT**

| Category                                 | CO2e Emissions         |                                                                           |
|------------------------------------------|------------------------|---------------------------------------------------------------------------|
|                                          | 2010 Baseline Scenario | Project (With regulatory requirements and applicable mitigation measures) |
|                                          | Metric Tons per Year   |                                                                           |
| Construction                             | 125.03                 | 125.03                                                                    |
| Area                                     | 129.79                 | 127.09                                                                    |
| Energy Use                               | 8,246.34               | 6,298.58                                                                  |
| Mobile Sources                           | 21,447.96              | 13,370.19                                                                 |
| Waste Disposed                           | 2,349.59               | 2,349.59                                                                  |
| Water Use                                | 628.29                 | 410.47                                                                    |
| Stationary Sources                       | 2,728.04               | 2,728.04                                                                  |
| <b>Total</b>                             | <b>35,655.04</b>       | <b>25,408.99</b>                                                          |
| <b>Project Improvement over Baseline</b> | <b>28.74%</b>          |                                                                           |

<sup>9</sup> SCAQMD has adopted interim significance thresholds for industrial sources of 10,000 metric tons of carbon dioxide equivalent per year. The Board adopted these thresholds December 5, 2008. This threshold however was adopted by SCAQMD only for projects where it is the lead agency.

## 4.1 CONSTRUCTION-SOURCE MITIGATION MEASURES

### **MM AQ-1**

During construction activity, all construction equipment ( $\geq 150$  horsepower) shall be California Air Resources Board (CARB) Tier 3 Certified or better. Additionally, during grading activity, total horsepower-hours per day for all equipment shall not exceed 24,608 horsepower-hours per day and the maximum disturbance (actively graded) area shall not exceed 6 acres per day.

## 4.5 OPERATIONAL-SOURCE MITIGATION MEASURES

### **MM AQ-2**

Prior to the issuance of building permits, the Project applicant shall submit energy usage calculations to the Planning Division showing that the Project is designed to achieve 5% efficiency beyond the 2016 California Building Code Title 24 requirements. Example of measures that reduce energy consumption include, but are not limited to, the following (it being understood that the items listed below are not all required and merely present examples; the list is not all-inclusive and other features that reduce energy consumption also are acceptable):

- Increase in insulation such that heat transfer and thermal bridging is minimized;
- Limit air leakage through the structure and/or within the heating and cooling distribution system;
- Use of energy-efficient space heating and cooling equipment;
- Installation of electrical hook-ups at loading dock areas;
- Installation of dual-paned or other energy efficient windows;
- Use of interior and exterior energy efficient lighting that exceeds then incumbent California Title 24 Energy Efficiency performance standards;
- Installation of automatic devices to turn off lights where they are not needed;
- Application of a paint and surface color palette that emphasizes light and off-white colors that reflect heat away from buildings;
- Design of buildings with “cool roofs” using products certified by the Cool Roof Rating Council, and/or exposed roof surfaces using light and off-white colors;
- Design of buildings to accommodate photo-voltaic solar electricity systems or the installation of photo-voltaic solar electricity systems;
- Installation of ENERGY STAR-qualified energy-efficient appliances, heating and cooling systems, office equipment, and/or lighting products;

### **MM AQ-3**

To reduce water consumption and the associated energy-usage, the Project will be designed to comply with the mandatory reductions in indoor water usage contained in the incumbent CalGreen Code (23) and any mandated reduction in outdoor water usage contained in the City’s water efficient landscape requirements. Additionally, the Project shall implement the following:

- Landscaping palette emphasizing drought tolerant plants;
- Use of water-efficient irrigation techniques;
- U.S. EPA Certified WaterSense labeled or equivalent faucets, high-efficiency toilets (HETs), and water-conserving shower heads.

#### **MM AQ-4**

The Project will reduce vehicle miles traveled and emissions associated with by implementing the following measures:

- Pedestrian and bicycle connections shall be provided to surrounding areas consistent with the City's General Plan.

#### **MM AQ-5**

The project Applicant shall encourage its tenants to use water-based or low VOC cleaning products by providing publicly available information from the Southern California Air Quality Management District (SCAQMD), California Air Resources Board (CARB), and U.S. Environmental Protection Agency on such cleaning products.

#### **MM AQ-6**

Electric lawn equipment including but not limited to lawn mowers, leaf blowers and vacuums, shredders shall be used in lieu of conventional gas-powered equipment.

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## 6 CERTIFICATION

The contents of this greenhouse gas study report represent an accurate depiction of the greenhouse gas impacts associated with the proposed Canyon Springs Healthcare Campus & Senior Living Project. The information contained in this greenhouse gas report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 660-1994 ext. 217.

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### EDUCATION

Master of Science in Environmental Studies  
California State University, Fullerton • May, 2010

Bachelor of Arts in Environmental Analysis and Design  
University of California, Irvine • June, 2006

### PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners  
AWMA – Air and Waste Management Association  
ASTM – American Society for Testing and Materials

### PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June, 2011  
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008  
Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007  
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**APPENDIX 3.1:**

**CALEEMOD EMISSIONS MODEL OUTPUTS**

**Canyon Springs Healthcare Campus & Senior Living (BAU)**  
**South Coast AQMD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                         | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|-----------------------------------|----------|---------------|-------------|--------------------|------------|
| Hospital                          | 280.00   | Bed           | 4.60        | 504,000.00         | 0          |
| Medical Office Building           | 370.00   | 1000sqft      | 8.49        | 370,000.00         | 0          |
| Enclosed Parking Structure        | 2,962.00 | Space         | 26.66       | 1,184,800.00       | 0          |
| Congregate Care (Assisted Living) | 267.00   | Dwelling Unit | 16.69       | 280,000.00         | 764        |
| Retirement Community              | 234.00   | Dwelling Unit | 46.80       | 375,000.00         | 669        |

### 1.2 Other Project Characteristics

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>            | 10                         |                                |       | <b>Operational Year</b>          | 2010  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 630.89                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.029 | <b>N2O Intensity (lb/MWhr)</b>   | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - based on information provided by the applicant

Construction Phase - construction emissions modeled seperately

Off-road Equipment - 8 hour work day

Off-road Equipment - construction emissions modeled seperately

Grading -

Vehicle Trips - TR based on the Project's TIA

Woodstoves - no woodstoves. all natural gas fireplaces

Energy Use - Title-24 Electricity Energy Intensity and Title-24 Natural Gas Energy Intensity were adjusted by 21.8% and 16.8% respectively, to reflect 2013 Title 24 requirements. Source: Impact Analysis California's 2013 Building Energy Efficiency Standards (CEC 2013)

Construction Off-road Equipment Mitigation -

Area Mitigation -

Area Coating -

| Table Name           | Column Name       | Default Value | New Value |
|----------------------|-------------------|---------------|-----------|
| tblConstructionPhase | NumDays           | 310.00        | 1.00      |
| tblEnergyUse         | T24E              | 559.54        | 437.56    |
| tblEnergyUse         | T24E              | 3.92          | 3.07      |
| tblEnergyUse         | T24E              | 8.75          | 6.84      |
| tblEnergyUse         | T24E              | 3.75          | 2.93      |
| tblEnergyUse         | T24E              | 749.55        | 586.15    |
| tblEnergyUse         | T24NG             | 10,214.61     | 8,498.56  |
| tblEnergyUse         | T24NG             | 69.84         | 58.11     |
| tblEnergyUse         | T24NG             | 3.65          | 3.04      |
| tblEnergyUse         | T24NG             | 17,654.53     | 14,688.57 |
| tblFireplaces        | NumberGas         | 226.95        | 267.00    |
| tblFireplaces        | NumberGas         | 198.90        | 234.00    |
| tblFireplaces        | NumberNoFireplace | 26.70         | 0.00      |
| tblFireplaces        | NumberNoFireplace | 23.40         | 0.00      |

|                           |                            |            |            |
|---------------------------|----------------------------|------------|------------|
| tblFireplaces             | NumberWood                 | 13.35      | 0.00       |
| tblFireplaces             | NumberWood                 | 11.70      | 0.00       |
| tblLandUse                | LandUseSquareFeet          | 200,412.12 | 504,000.00 |
| tblLandUse                | LandUseSquareFeet          | 267,000.00 | 280,000.00 |
| tblLandUse                | LandUseSquareFeet          | 234,000.00 | 375,000.00 |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 0.00       |
| tblProjectCharacteristics | OperationalYear            | 2014       | 2010       |
| tblVehicleTrips           | ST_TR                      | 2.81       | 2.61       |
| tblVehicleTrips           | SU_TR                      | 2.81       | 2.84       |
| tblVehicleTrips           | WD_TR                      | 11.81      | 12.94      |
| tblVehicleTrips           | WD_TR                      | 2.81       | 3.44       |
| tblWoodstoves             | NumberCatalytic            | 13.35      | 0.00       |
| tblWoodstoves             | NumberCatalytic            | 11.70      | 0.00       |
| tblWoodstoves             | NumberNoncatalytic         | 13.35      | 0.00       |
| tblWoodstoves             | NumberNoncatalytic         | 11.70      | 0.00       |

## 2.0 Emissions Summary

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## 2.1 Overall Construction

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]



## 2.2 Overall Operational

### Unmitigated Operational

|              | ROG            | NOx            | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2          | NBio- CO2          | Total CO2          | CH4            | N2O           | CO2e               |
|--------------|----------------|----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|-------------------|--------------------|--------------------|----------------|---------------|--------------------|
| Category     | tons/yr        |                |                 |               |                |               |                |                |               |               | MT/yr             |                    |                    |                |               |                    |
| Area         | 12.6632        | 0.0664         | 5.5504          | 2.8000e-004   |                | 0.0358        | 0.0358         |                | 0.0357        | 0.0357        | 0.0000            | 128.8380           | 128.8380           | 0.0129         | 2.2100e-003   | 129.7927           |
| Energy       | 0.2174         | 1.9564         | 1.5122          | 0.0119        |                | 0.1502        | 0.1502         |                | 0.1502        | 0.1502        | 0.0000            | 8,209.5384         | 8,209.5384         | 0.3197         | 0.0971        | 8,246.3409         |
| Mobile       | 17.1267        | 44.1152        | 189.6936        | 0.2382        | 16.4938        | 0.9752        | 17.4689        | 4.4112         | 0.8943        | 5.3055        | 0.0000            | 21,419.5832        | 21,419.5832        | 1.3513         | 0.0000        | 21,447.9611        |
| Waste        |                |                |                 |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 1,048.4240        | 0.0000             | 1,048.4240         | 61.9601        | 0.0000        | 2,349.5857         |
| Water        |                |                |                 |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 33.0635           | 497.1055           | 530.1690           | 3.4188         | 0.0849        | 628.2866           |
| <b>Total</b> | <b>30.0073</b> | <b>46.1380</b> | <b>196.7561</b> | <b>0.2503</b> | <b>16.4938</b> | <b>1.1612</b> | <b>17.6549</b> | <b>4.4112</b>  | <b>1.0802</b> | <b>5.4914</b> | <b>1,081.4875</b> | <b>30,255.0650</b> | <b>31,336.5525</b> | <b>67.0628</b> | <b>0.1842</b> | <b>32,801.9670</b> |

## 2.2 Overall Operational

### Mitigated Operational

|              | ROG            | NOx            | CO              | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2          | NBio- CO2          | Total CO2          | CH4            | N2O           | CO2e               |
|--------------|----------------|----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|-------------------|--------------------|--------------------|----------------|---------------|--------------------|
| Category     | tons/yr        |                |                 |               |                |               |                |                |               |               | MT/yr             |                    |                    |                |               |                    |
| Area         | 12.6632        | 0.0664         | 5.5504          | 2.8000e-004   |                | 0.0358        | 0.0358         |                | 0.0357        | 0.0357        | 0.0000            | 128.8380           | 128.8380           | 0.0129         | 2.2100e-003   | 129.7927           |
| Energy       | 0.2174         | 1.9564         | 1.5122          | 0.0119        |                | 0.1502        | 0.1502         |                | 0.1502        | 0.1502        | 0.0000            | 8,209.5384         | 8,209.5384         | 0.3197         | 0.0971        | 8,246.3409         |
| Mobile       | 17.1267        | 44.1152        | 189.6936        | 0.2382        | 16.4938        | 0.9752        | 17.4689        | 4.4112         | 0.8943        | 5.3055        | 0.0000            | 21,419.5832        | 21,419.5832        | 1.3513         | 0.0000        | 21,447.9611        |
| Waste        |                |                |                 |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 1,048.4240        | 0.0000             | 1,048.4240         | 61.9601        | 0.0000        | 2,349.5857         |
| Water        |                |                |                 |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 33.0635           | 497.1055           | 530.1690           | 3.4182         | 0.0848        | 628.2339           |
| <b>Total</b> | <b>30.0073</b> | <b>46.1380</b> | <b>196.7561</b> | <b>0.2503</b> | <b>16.4938</b> | <b>1.1612</b> | <b>17.6549</b> | <b>4.4112</b>  | <b>1.0802</b> | <b>5.4914</b> | <b>1,081.4875</b> | <b>30,255.0650</b> | <b>31,336.5525</b> | <b>67.0622</b> | <b>0.1841</b> | <b>32,801.9143</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.07</b> | <b>0.00</b> |

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|------------|------------|------------|----------|---------------|----------|-------------------|
| 1            | Grading    | Grading    | 1/1/2016   | 1/1/2016 | 5             | 1        |                   |

Acres of Grading (Site Preparation Phase): 0

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|------------|---------------------------|--------|-------------|-------------|-------------|
| Grading    | Excavators                | 0      | 8.00        | 162         | 0.38        |
| Grading    | Graders                   | 0      | 8.00        | 174         | 0.41        |
| Grading    | Rubber Tired Dozers       | 0      | 8.00        | 255         | 0.40        |
| Grading    | Scrapers                  | 0      | 8.00        | 361         | 0.48        |
| Grading    | Tractors/Loaders/Backhoes | 0      | 8.00        | 97          | 0.37        |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Grading    | 0                       | 0.00               | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

### 3.2 Grading - 2016

### Unmitigated Construction On-Site

[illegible]

### Unmitigated Construction Off-Site

[illegible]

### 3.2 Grading - 2016

#### Mitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category      | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Fugitive Dust |               |               |               |               | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Off-Road      | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

#### Mitigated Construction Off-Site

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

|             | ROG     | NOx     | CO       | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4    | N2O    | CO2e            |
|-------------|---------|---------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|--------|--------|-----------------|
| Category    | tons/yr |         |          |        |               |              |            |                |               |             | MT/yr    |                 |                 |        |        |                 |
| Mitigated   | 17.1267 | 44.1152 | 189.6936 | 0.2382 | 16.4938       | 0.9752       | 17.4689    | 4.4112         | 0.8943        | 5.3055      | 0.0000   | 21,419.58<br>32 | 21,419.58<br>32 | 1.3513 | 0.0000 | 21,447.96<br>11 |
| Unmitigated | 17.1267 | 44.1152 | 189.6936 | 0.2382 | 16.4938       | 0.9752       | 17.4689    | 4.4112         | 0.8943        | 5.3055      | 0.0000   | 21,419.58<br>32 | 21,419.58<br>32 | 1.3513 | 0.0000 | 21,447.96<br>11 |

#### 4.2 Trip Summary Information

| Land Use                          | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|-----------------------------------|-------------------------|----------|----------|-------------|------------|
|                                   | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Congregate Care (Assisted Living) | 731.58                  | 587.40   | 651.48   | 2,390,434   | 2,390,434  |
| Enclosed Parking Structure        | 0.00                    | 0.00     | 0.00     |             |            |
| Hospital                          | 3,623.20                | 2,279.20 | 2013.20  | 12,410,546  | 12,410,546 |
| Medical Office Building           | 13,368.10               | 3,315.20 | 573.50   | 26,208,791  | 26,208,791 |
| Retirement Community              | 804.96                  | 610.74   | 664.56   | 2,587,321   | 2,587,321  |
| Total                             | 18,527.84               | 6,792.54 | 3,902.74 | 43,597,092  | 43,597,092 |

#### 4.3 Trip Type Information

| Land Use                   | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|----------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                            | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Congregate Care (Assisted) | 14.70      | 5.90       | 8.70        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| Enclosed Parking Structure | 16.60      | 8.40       | 6.90        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Hospital                   | 16.60      | 8.40       | 6.90        | 64.90      | 16.10      | 19.00       | 73             | 25       | 2       |
| Medical Office Building    | 16.60      | 8.40       | 6.90        | 29.60      | 51.40      | 19.00       | 60             | 30       | 10      |
| Retirement Community       | 14.70      | 5.90       | 8.70        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.516677 | 0.060507 | 0.180009 | 0.146074 | 0.041956 | 0.006834 | 0.013497 | 0.023082 | 0.001965 | 0.002586 | 0.004141 | 0.000604 | 0.002068 |

## 5.0 Energy Detail

### 5.1 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

|                         | ROG     | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------------------|---------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category                | tons/yr |        |        |        |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Electricity Mitigated   |         |        |        |        |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 6,057.7407 | 6,057.7407 | 0.2785 | 0.0576 | 6,081.4478 |
| Electricity Unmitigated |         |        |        |        |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 6,057.7407 | 6,057.7407 | 0.2785 | 0.0576 | 6,081.4478 |
| NaturalGas Mitigated    | 0.2174  | 1.9564 | 1.5122 | 0.0119 |               | 0.1502       | 0.1502     |                | 0.1502        | 0.1502      | 0.0000   | 2,151.7977 | 2,151.7977 | 0.0412 | 0.0395 | 2,164.8931 |
| NaturalGas Unmitigated  | 0.2174  | 1.9564 | 1.5122 | 0.0119 |               | 0.1502       | 0.1502     |                | 0.1502        | 0.1502      | 0.0000   | 2,151.7977 | 2,151.7977 | 0.0412 | 0.0395 | 2,164.8931 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                                   | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Land Use                          | kBTU/yr        | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |                   |                   |               |               |                   |
| Enclosed Parking Structure        | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Hospital                          | 3.23266e+007   | 0.1743        | 1.5846        | 1.3311        | 9.5100e-003   |               | 0.1204        | 0.1204        |                | 0.1204        | 0.1204        | 0.0000        | 1,725.0684        | 1,725.0684        | 0.0331        | 0.0316        | 1,735.5668        |
| Medical Office Building           | 1.1248e+006    | 6.0700e-003   | 0.0551        | 0.0463        | 3.3000e-004   |               | 4.1900e-003   | 4.1900e-003   |                | 4.1900e-003   | 4.1900e-003   | 0.0000        | 60.0236           | 60.0236           | 1.1500e-003   | 1.1000e-003   | 60.3889           |
| Retirement Community              | 4.12766e+006   | 0.0223        | 0.1902        | 0.0809        | 1.2100e-003   |               | 0.0154        | 0.0154        |                | 0.0154        | 0.0154        | 0.0000        | 220.2676          | 220.2676          | 4.2200e-003   | 4.0400e-003   | 221.6081          |
| Congregate Care (Assisted Living) | 2.74415e+006   | 0.0148        | 0.1265        | 0.0538        | 8.1000e-004   |               | 0.0102        | 0.0102        |                | 0.0102        | 0.0102        | 0.0000        | 146.4381          | 146.4381          | 2.8100e-003   | 2.6800e-003   | 147.3293          |
| <b>Total</b>                      |                | <b>0.2174</b> | <b>1.9564</b> | <b>1.5122</b> | <b>0.0119</b> |               | <b>0.1502</b> | <b>0.1502</b> |                | <b>0.1502</b> | <b>0.1502</b> | <b>0.0000</b> | <b>2,151.7977</b> | <b>2,151.7977</b> | <b>0.0412</b> | <b>0.0395</b> | <b>2,164.8932</b> |



## 5.2 Energy by Land Use - NaturalGas

### Mitigated

|                                   | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Land Use                          | kBTU/yr        | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |                   |                   |               |               |                   |
| Enclosed Parking Structure        | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Hospital                          | 3.23266e+007   | 0.1743        | 1.5846        | 1.3311        | 9.5100e-003   |               | 0.1204        | 0.1204        |                | 0.1204        | 0.1204        | 0.0000        | 1,725.0684        | 1,725.0684        | 0.0331        | 0.0316        | 1,735.5668        |
| Medical Office Building           | 1.1248e+006    | 6.0700e-003   | 0.0551        | 0.0463        | 3.3000e-004   |               | 4.1900e-003   | 4.1900e-003   |                | 4.1900e-003   | 4.1900e-003   | 0.0000        | 60.0236           | 60.0236           | 1.1500e-003   | 1.1000e-003   | 60.3889           |
| Retirement Community              | 4.12766e+006   | 0.0223        | 0.1902        | 0.0809        | 1.2100e-003   |               | 0.0154        | 0.0154        |                | 0.0154        | 0.0154        | 0.0000        | 220.2676          | 220.2676          | 4.2200e-003   | 4.0400e-003   | 221.6081          |
| Congregate Care (Assisted Living) | 2.74415e+006   | 0.0148        | 0.1265        | 0.0538        | 8.1000e-004   |               | 0.0102        | 0.0102        |                | 0.0102        | 0.0102        | 0.0000        | 146.4381          | 146.4381          | 2.8100e-003   | 2.6800e-003   | 147.3293          |
| <b>Total</b>                      |                | <b>0.2174</b> | <b>1.9564</b> | <b>1.5122</b> | <b>0.0119</b> |               | <b>0.1502</b> | <b>0.1502</b> |                | <b>0.1502</b> | <b>0.1502</b> | <b>0.0000</b> | <b>2,151.7977</b> | <b>2,151.7977</b> | <b>0.0412</b> | <b>0.0395</b> | <b>2,164.8932</b> |

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

|                                   | Electricity Use | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------------------|-----------------|-------------------|---------------|---------------|-------------------|
| Land Use                          | kWh/yr          | MT/yr             |               |               |                   |
| Congregate Care (Assisted Living) | 996674          | 285.2150          | 0.0131        | 2.7100e-003   | 286.3312          |
| Enclosed Parking Structure        | 6.75336e+006    | 1,932.5880        | 0.0888        | 0.0184        | 1,940.1513        |
| Hospital                          | 8.66376e+006    | 2,479.2813        | 0.1140        | 0.0236        | 2,488.9840        |
| Medical Office Building           | 3.6519e+006     | 1,045.0529        | 0.0480        | 9.9400e-003   | 1,049.1427        |
| Retirement Community              | 1.10287e+006    | 315.6036          | 0.0145        | 3.0000e-003   | 316.8387          |
| <b>Total</b>                      |                 | <b>6,057.7407</b> | <b>0.2785</b> | <b>0.0576</b> | <b>6,081.4478</b> |

### 5.3 Energy by Land Use - Electricity

#### Mitigated

|                                   | Electricity Use | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------------------|-----------------|-------------------|---------------|---------------|-------------------|
| Land Use                          | kWh/yr          | MT/yr             |               |               |                   |
| Congregate Care (Assisted Living) | 996674          | 285.2150          | 0.0131        | 2.7100e-003   | 286.3312          |
| Enclosed Parking Structure        | 6.75336e+006    | 1,932.5880        | 0.0888        | 0.0184        | 1,940.1513        |
| Hospital                          | 8.66376e+006    | 2,479.2813        | 0.1140        | 0.0236        | 2,488.9840        |
| Medical Office Building           | 3.6519e+006     | 1,045.0529        | 0.0480        | 9.9400e-003   | 1,049.1427        |
| Retirement Community              | 1.10287e+006    | 315.6036          | 0.0145        | 3.0000e-003   | 316.8387          |
| <b>Total</b>                      |                 | <b>6,057.7407</b> | <b>0.2785</b> | <b>0.0576</b> | <b>6,081.4478</b> |

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

|             | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O         | CO2e     |
|-------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-------------|----------|
| Category    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |             |          |
| Mitigated   | 12.6632 | 0.0664 | 5.5504 | 2.8000e-004 |               | 0.0358       | 0.0358     |                | 0.0357        | 0.0357      | 0.0000   | 128.8380  | 128.8380  | 0.0129 | 2.2100e-003 | 129.7927 |
| Unmitigated | 12.6632 | 0.0664 | 5.5504 | 2.8000e-004 |               | 0.0358       | 0.0358     |                | 0.0357        | 0.0357      | 0.0000   | 128.8380  | 128.8380  | 0.0129 | 2.2100e-003 | 129.7927 |

## 6.2 Area by SubCategory

### Unmitigated

|                       | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O                | CO2e            |
|-----------------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|--------------------|-----------------|
| SubCategory           | tons/yr        |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |                    |                 |
| Architectural Coating | 2.6418         |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| Consumer Products     | 9.8063         |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| Hearth                | 0.0122         | 0.0000        | 6.6000e-004   | 0.0000             |               | 8.4000e-003   | 8.4000e-003   |                | 8.3100e-003   | 8.3100e-003   | 0.0000        | 120.3087        | 120.3087        | 2.3100e-003   | 2.2100e-003        | 121.0409        |
| Landscaping           | 0.2029         | 0.0664        | 5.5497        | 2.8000e-004        |               | 0.0274        | 0.0274        |                | 0.0274        | 0.0274        | 0.0000        | 8.5293          | 8.5293          | 0.0106        | 0.0000             | 8.7518          |
| <b>Total</b>          | <b>12.6632</b> | <b>0.0664</b> | <b>5.5504</b> | <b>2.8000e-004</b> |               | <b>0.0358</b> | <b>0.0358</b> |                | <b>0.0357</b> | <b>0.0357</b> | <b>0.0000</b> | <b>128.8380</b> | <b>128.8380</b> | <b>0.0129</b> | <b>2.2100e-003</b> | <b>129.7927</b> |

## 6.2 Area by SubCategory

### Mitigated

|                       | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O                | CO2e            |
|-----------------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|--------------------|-----------------|
| SubCategory           | tons/yr        |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |                    |                 |
| Architectural Coating | 2.6418         |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| Consumer Products     | 9.8063         |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| Hearth                | 0.0122         | 0.0000        | 6.6000e-004   | 0.0000             |               | 8.4000e-003   | 8.4000e-003   |                | 8.3100e-003   | 8.3100e-003   | 0.0000        | 120.3087        | 120.3087        | 2.3100e-003   | 2.2100e-003        | 121.0409        |
| Landscaping           | 0.2029         | 0.0664        | 5.5497        | 2.8000e-004        |               | 0.0274        | 0.0274        |                | 0.0274        | 0.0274        | 0.0000        | 8.5293          | 8.5293          | 0.0106        | 0.0000             | 8.7518          |
| <b>Total</b>          | <b>12.6632</b> | <b>0.0664</b> | <b>5.5504</b> | <b>2.8000e-004</b> |               | <b>0.0358</b> | <b>0.0358</b> |                | <b>0.0357</b> | <b>0.0357</b> | <b>0.0000</b> | <b>128.8380</b> | <b>128.8380</b> | <b>0.0129</b> | <b>2.2100e-003</b> | <b>129.7927</b> |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
| Category    | MT/yr     |        |        |          |
| Mitigated   | 530.1690  | 3.4182 | 0.0848 | 628.2339 |
| Unmitigated | 530.1690  | 3.4188 | 0.0849 | 628.2866 |

## 7.2 Water by Land Use

### Unmitigated

|                                   | Indoor/Outdoor Use | Total CO2       | CH4           | N2O           | CO2e            |
|-----------------------------------|--------------------|-----------------|---------------|---------------|-----------------|
| Land Use                          | Mgal               | MT/yr           |               |               |                 |
| Congregate Care (Assisted Living) | 17.3961 / 10.9671  | 105.2080        | 0.5714        | 0.0143        | 121.6513        |
| Enclosed Parking Structure        | 0 / 0              | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Hospital                          | 25.1478 / 4.79006  | 116.9126        | 0.8245        | 0.0204        | 140.5454        |
| Medical Office Building           | 46.4278 / 8.84339  | 215.8436        | 1.5221        | 0.0376        | 259.4743        |
| Retirement Community              | 15.246 / 9.61164   | 92.2048         | 0.5008        | 0.0126        | 106.6157        |
| <b>Total</b>                      |                    | <b>530.1690</b> | <b>3.4188</b> | <b>0.0849</b> | <b>628.2866</b> |

## 7.2 Water by Land Use

### Mitigated

|                                   | Indoor/Outdoor Use | Total CO2       | CH4           | N2O           | CO2e            |
|-----------------------------------|--------------------|-----------------|---------------|---------------|-----------------|
| Land Use                          | Mgal               | MT/yr           |               |               |                 |
| Congregate Care (Assisted Living) | 17.3961 / 10.9671  | 105.2080        | 0.5713        | 0.0143        | 121.6425        |
| Enclosed Parking Structure        | 0 / 0              | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Hospital                          | 25.1478 / 4.79006  | 116.9126        | 0.8243        | 0.0204        | 140.5326        |
| Medical Office Building           | 46.4278 / 8.84339  | 215.8436        | 1.5218        | 0.0376        | 259.4508        |
| Retirement Community              | 15.246 / 9.61164   | 92.2048         | 0.5007        | 0.0125        | 106.6080        |
| <b>Total</b>                      |                    | <b>530.1690</b> | <b>3.4182</b> | <b>0.0848</b> | <b>628.2339</b> |

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

**Category/Year**

|             | Total CO2      | CH4     | N2O    | CO2e           |
|-------------|----------------|---------|--------|----------------|
|             | MT/yr          |         |        |                |
| Unmitigated | 1,048,424<br>0 | 61.9601 | 0.0000 | 2,349.585<br>7 |
| Mitigated   | 1,048,424<br>0 | 61.9601 | 0.0000 | 2,349.585<br>7 |

**8.2 Waste by Land Use****Unmitigated**

|                                      | Waste<br>Disposed | Total CO2              | CH4            | N2O           | CO2e                   |
|--------------------------------------|-------------------|------------------------|----------------|---------------|------------------------|
| Land Use                             | tons              | MT/yr                  |                |               |                        |
| Congregate Care<br>(Assisted Living) | 243.64            | 49.4567                | 2.9228         | 0.0000        | 110.8357               |
| Enclosed Parking<br>Structure        | 0                 | 0.0000                 | 0.0000         | 0.0000        | 0.0000                 |
| Hospital                             | 817.6             | 165.9654               | 9.8083         | 0.0000        | 371.9392               |
| Medical Office<br>Building           | 3996              | 811.1519               | 47.9377        | 0.0000        | 1,817.843<br>7         |
| Retirement<br>Community              | 107.64            | 21.8500                | 1.2913         | 0.0000        | 48.9671                |
| <b>Total</b>                         |                   | <b>1,048.424<br/>0</b> | <b>61.9601</b> | <b>0.0000</b> | <b>2,349.585<br/>7</b> |



## 8.2 Waste by Land Use

### Mitigated

|                                      | Waste<br>Disposed | Total CO2              | CH4            | N2O           | CO2e                   |
|--------------------------------------|-------------------|------------------------|----------------|---------------|------------------------|
| Land Use                             | tons              | MT/yr                  |                |               |                        |
| Congregate Care<br>(Assisted Living) | 243.64            | 49.4567                | 2.9228         | 0.0000        | 110.8357               |
| Enclosed Parking<br>Structure        | 0                 | 0.0000                 | 0.0000         | 0.0000        | 0.0000                 |
| Hospital                             | 817.6             | 165.9654               | 9.8083         | 0.0000        | 371.9392               |
| Medical Office<br>Building           | 3996              | 811.1519               | 47.9377        | 0.0000        | 1,817.843<br>7         |
| Retirement<br>Community              | 107.64            | 21.8500                | 1.2913         | 0.0000        | 48.9671                |
| <b>Total</b>                         |                   | <b>1,048.424<br/>0</b> | <b>61.9601</b> | <b>0.0000</b> | <b>2,349.585<br/>7</b> |

## 9.0 Operational Offroad

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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

## 10.0 Vegetation

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**Canyon Springs Healthcare Campus & Senior Living (2020)**  
**South Coast AQMD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                         | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|-----------------------------------|----------|---------------|-------------|--------------------|------------|
| Hospital                          | 280.00   | Bed           | 4.60        | 504,000.00         | 0          |
| Medical Office Building           | 370.00   | 1000sqft      | 8.49        | 370,000.00         | 0          |
| Enclosed Parking Structure        | 2,962.00 | Space         | 26.66       | 1,184,800.00       | 0          |
| Congregate Care (Assisted Living) | 267.00   | Dwelling Unit | 16.69       | 280,000.00         | 764        |
| Retirement Community              | 234.00   | Dwelling Unit | 46.80       | 375,000.00         | 669        |

### 1.2 Other Project Characteristics

|                         |                            |                         |       |                           |       |
|-------------------------|----------------------------|-------------------------|-------|---------------------------|-------|
| Urbanization            | Urban                      | Wind Speed (m/s)        | 2.2   | Precipitation Freq (Days) | 31    |
| Climate Zone            | 10                         |                         |       | Operational Year          | 2020  |
| Utility Company         | Southern California Edison |                         |       |                           |       |
| CO2 Intensity (lb/MWhr) | 466.91                     | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr)   | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Source: CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - based on information provided by the applicant

Construction Phase - construction emissions modeled separately

Off-road Equipment - 8 hour work day

Off-road Equipment - construction emissions modeled separately

Grading -

Vehicle Trips - TR based on the Project's TIA

Woodstoves - no woodstoves. all natural gas fireplaces

Energy Use - Title-24 Electricity Energy Intensity and Title-24 Natural Gas Energy Intensity were adjusted by 21.8% and 16.8% respectively, to reflect 2013 Title 24 requirements. Source: Impact Analysis California's 2013 Building Energy Efficiency Standards (CEC 2013)

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Area Coating -

| Table Name           | Column Name | Default Value | New Value |
|----------------------|-------------|---------------|-----------|
| tblConstructionPhase | NumDays     | 310.00        | 1.00      |
| tblEnergyUse         | T24E        | 559.54        | 437.56    |
| tblEnergyUse         | T24E        | 3.92          | 3.07      |
| tblEnergyUse         | T24E        | 8.75          | 6.84      |
| tblEnergyUse         | T24E        | 3.75          | 2.93      |
| tblEnergyUse         | T24E        | 749.55        | 586.15    |
| tblEnergyUse         | T24NG       | 10,214.61     | 8,498.56  |
| tblEnergyUse         | T24NG       | 69.84         | 58.11     |
| tblEnergyUse         | T24NG       | 3.65          | 3.04      |
| tblEnergyUse         | T24NG       | 17,654.53     | 14,688.57 |
| tblFireplaces        | NumberGas   | 226.95        | 267.00    |

|                           |                            |            |            |
|---------------------------|----------------------------|------------|------------|
| tblFireplaces             | NumberGas                  | 198.90     | 234.00     |
| tblFireplaces             | NumberNoFireplace          | 26.70      | 0.00       |
| tblFireplaces             | NumberNoFireplace          | 23.40      | 0.00       |
| tblFireplaces             | NumberWood                 | 13.35      | 0.00       |
| tblFireplaces             | NumberWood                 | 11.70      | 0.00       |
| tblLandUse                | LandUseSquareFeet          | 200,412.12 | 504,000.00 |
| tblLandUse                | LandUseSquareFeet          | 267,000.00 | 280,000.00 |
| tblLandUse                | LandUseSquareFeet          | 234,000.00 | 375,000.00 |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 0.00       |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00       | 0.00       |
| tblProjectCharacteristics | CO2IntensityFactor         | 630.89     | 466.91     |
| tblProjectCharacteristics | OperationalYear            | 2014       | 2020       |
| tblVehicleTrips           | ST_TR                      | 2.81       | 2.61       |
| tblVehicleTrips           | SU_TR                      | 2.81       | 2.84       |
| tblVehicleTrips           | WD_TR                      | 11.81      | 12.94      |
| tblVehicleTrips           | WD_TR                      | 2.81       | 3.44       |
| tblWoodstoves             | NumberCatalytic            | 13.35      | 0.00       |
| tblWoodstoves             | NumberCatalytic            | 11.70      | 0.00       |
| tblWoodstoves             | NumberNoncatalytic         | 13.35      | 0.00       |
| tblWoodstoves             | NumberNoncatalytic         | 11.70      | 0.00       |

## 2.0 Emissions Summary

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## 2.1 Overall Construction

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]

## 2.2 Overall Operational

### Unmitigated Operational

|              | ROG            | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2          | NBio- CO2          | Total CO2          | CH4            | N2O           | CO2e               |
|--------------|----------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|-------------------|--------------------|--------------------|----------------|---------------|--------------------|
| Category     | tons/yr        |                |                |               |                |               |                |                |               |               | MT/yr             |                    |                    |                |               |                    |
| Area         | 12.6225        | 0.0604         | 5.2309         | 2.8000e-004   |                | 0.0371        | 0.0371         |                | 0.0370        | 0.0370        | 0.0000            | 128.8380           | 128.8380           | 0.0108         | 2.2100e-003   | 129.7480           |
| Energy       | 0.2174         | 1.9564         | 1.5122         | 0.0119        |                | 0.1502        | 0.1502         |                | 0.1502        | 0.1502        | 0.0000            | 6,635.0193         | 6,635.0193         | 0.3197         | 0.0971        | 6,671.8219         |
| Mobile       | 7.3877         | 20.9390        | 82.1887        | 0.2432        | 16.5266        | 0.3340        | 16.8607        | 4.4228         | 0.3081        | 4.7308        | 0.0000            | 17,085.4741        | 17,085.4741        | 0.6131         | 0.0000        | 17,098.3485        |
| Waste        |                |                |                |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 1,048.4240        | 0.0000             | 1,048.4240         | 61.9601        | 0.0000        | 2,349.5857         |
| Water        |                |                |                |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 33.0635           | 367.8986           | 400.9621           | 3.4188         | 0.0849        | 499.0797           |
| <b>Total</b> | <b>20.2276</b> | <b>22.9558</b> | <b>88.9318</b> | <b>0.2554</b> | <b>16.5266</b> | <b>0.5213</b> | <b>17.0480</b> | <b>4.4228</b>  | <b>0.4953</b> | <b>4.9180</b> | <b>1,081.4875</b> | <b>24,217.2299</b> | <b>25,298.7174</b> | <b>66.3224</b> | <b>0.1842</b> | <b>26,748.5838</b> |

## 2.2 Overall Operational

### Mitigated Operational

|              | ROG            | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2          | NBio- CO2          | Total CO2          | CH4            | N2O           | CO2e               |
|--------------|----------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|-------------------|--------------------|--------------------|----------------|---------------|--------------------|
| Category     | tons/yr        |                |                |               |                |               |                |                |               |               | MT/yr             |                    |                    |                |               |                    |
| Area         | 12.5455        | 0.0475         | 3.9647         | 1.8000e-004   |                | 0.0297        | 0.0297         |                | 0.0296        | 0.0296        | 0.0000            | 126.2627           | 126.2627           | 6.7000e-003    | 2.2100e-003   | 127.0871           |
| Energy       | 0.1980         | 1.7810         | 1.3757         | 0.0108        |                | 0.1368        | 0.1368         |                | 0.1368        | 0.1368        | 0.0000            | 6,263.8939         | 6,263.8939         | 0.3049         | 0.0912        | 6,298.5802         |
| Mobile       | 6.8827         | 17.0037        | 69.4724        | 0.1902        | 12.8149        | 0.2640        | 13.0789        | 3.4295         | 0.2435        | 3.6730        | 0.0000            | 13,359.9632        | 13,359.9632        | 0.4871         | 0.0000        | 13,370.1917        |
| Waste        |                |                |                |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 1,048.4240        | 0.0000             | 1,048.4240         | 61.9601        | 0.0000        | 2,349.5857         |
| Water        |                |                |                |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 26.4508           | 305.5083           | 331.9591           | 2.7352         | 0.0680        | 410.4702           |
| <b>Total</b> | <b>19.6262</b> | <b>18.8323</b> | <b>74.8128</b> | <b>0.2012</b> | <b>12.8149</b> | <b>0.4305</b> | <b>13.2454</b> | <b>3.4295</b>  | <b>0.4098</b> | <b>3.8393</b> | <b>1,074.8748</b> | <b>20,055.6281</b> | <b>21,130.5028</b> | <b>65.4940</b> | <b>0.1614</b> | <b>22,555.9148</b> |

|                          | ROG         | NOx          | CO           | SO2          | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio-CO2     | Total CO2    | CH4         | N2O          | CO2e         |
|--------------------------|-------------|--------------|--------------|--------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|--------------|--------------|-------------|--------------|--------------|
| <b>Percent Reduction</b> | <b>2.97</b> | <b>17.96</b> | <b>15.88</b> | <b>21.21</b> | <b>22.46</b>  | <b>17.43</b> | <b>22.31</b> | <b>22.46</b>   | <b>17.25</b>  | <b>21.93</b> | <b>0.61</b> | <b>17.18</b> | <b>16.48</b> | <b>1.25</b> | <b>12.36</b> | <b>15.67</b> |

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|------------|------------|------------|----------|---------------|----------|-------------------|
| 1            | Grading    | Grading    | 1/1/2016   | 1/1/2016 | 5             | 1        |                   |

Acres of Grading (Site Preparation Phase): 0

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|------------|---------------------------|--------|-------------|-------------|-------------|
| Grading    | Excavators                | 0      | 8.00        | 162         | 0.38        |
| Grading    | Graders                   | 0      | 8.00        | 174         | 0.41        |
| Grading    | Rubber Tired Dozers       | 0      | 8.00        | 255         | 0.40        |
| Grading    | Scrapers                  | 0      | 8.00        | 361         | 0.48        |
| Grading    | Tractors/Loaders/Backhoes | 0      | 8.00        | 97          | 0.37        |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Grading    | 0                       | 0.00               | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**



### 3.2 Grading - 2016

### Unmitigated Construction On-Site

[illegible]

### Unmitigated Construction Off-Site

[illegible]

### 3.2 Grading - 2016

#### Mitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category      | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Fugitive Dust |               |               |               |               | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Off-Road      | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

#### Mitigated Construction Off-Site

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

|             | ROG     | NOx     | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4    | N2O    | CO2e            |
|-------------|---------|---------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|--------|--------|-----------------|
| Category    | tons/yr |         |         |        |               |              |            |                |               |             | MT/yr    |                 |                 |        |        |                 |
| Mitigated   | 6.8827  | 17.0037 | 69.4724 | 0.1902 | 12.8149       | 0.2640       | 13.0789    | 3.4295         | 0.2435        | 3.6730      | 0.0000   | 13,359.96<br>32 | 13,359.96<br>32 | 0.4871 | 0.0000 | 13,370.19<br>17 |
| Unmitigated | 7.3877  | 20.9390 | 82.1887 | 0.2432 | 16.5266       | 0.3340       | 16.8607    | 4.4228         | 0.3081        | 4.7308      | 0.0000   | 17,085.47<br>41 | 17,085.47<br>41 | 0.6131 | 0.0000 | 17,098.34<br>85 |

#### 4.2 Trip Summary Information

| Land Use                          | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|-----------------------------------|-------------------------|----------|----------|-------------|------------|
|                                   | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Congregate Care (Assisted Living) | 731.58                  | 587.40   | 651.48   | 2,390,434   | 1,853,568  |
| Enclosed Parking Structure        | 0.00                    | 0.00     | 0.00     |             |            |
| Hospital                          | 3,623.20                | 2,279.20 | 2013.20  | 12,410,546  | 9,623,269  |
| Medical Office Building           | 13,368.10               | 3,315.20 | 573.50   | 26,208,791  | 20,322,576 |
| Retirement Community              | 804.96                  | 610.74   | 664.56   | 2,587,321   | 2,006,236  |
| Total                             | 18,527.84               | 6,792.54 | 3,902.74 | 43,597,092  | 33,805,650 |

#### 4.3 Trip Type Information

|                            | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|----------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
| Land Use                   | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Congregate Care (Assisted  | 14.70      | 5.90       | 8.70        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| Enclosed Parking Structure | 16.60      | 8.40       | 6.90        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Hospital                   | 16.60      | 8.40       | 6.90        | 64.90      | 16.10      | 19.00       | 73             | 25       | 2       |
| Medical Office Building    | 16.60      | 8.40       | 6.90        | 29.60      | 51.40      | 19.00       | 60             | 30       | 10      |
| Retirement Community       | 14.70      | 5.90       | 8.70        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.509128 | 0.059640 | 0.181069 | 0.139276 | 0.042833 | 0.006726 | 0.016156 | 0.033615 | 0.001941 | 0.002483 | 0.004400 | 0.000574 | 0.002159 |

## 5.0 Energy Detail

### 5.1 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

Exceed Title 24

|                         | ROG     | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------------------|---------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category                | tons/yr |        |        |        |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Electricity Mitigated   |         |        |        |        |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 4,304.8382 | 4,304.8382 | 0.2674 | 0.0553 | 4,327.6020 |
| Electricity Unmitigated |         |        |        |        |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 4,483.2217 | 4,483.2217 | 0.2785 | 0.0576 | 4,506.9287 |
| NaturalGas Mitigated    | 0.1980  | 1.7810 | 1.3757 | 0.0108 |               | 0.1368       | 0.1368     |                | 0.1368        | 0.1368      | 0.0000   | 1,959.0557 | 1,959.0557 | 0.0376 | 0.0359 | 1,970.9782 |
| NaturalGas Unmitigated  | 0.2174  | 1.9564 | 1.5122 | 0.0119 |               | 0.1502       | 0.1502     |                | 0.1502        | 0.1502      | 0.0000   | 2,151.7977 | 2,151.7977 | 0.0412 | 0.0395 | 2,164.8931 |

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                                   | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Land Use                          | kBTU/yr        | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |                   |                   |               |               |                   |
| Enclosed Parking Structure        | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Hospital                          | 3.23266e+007   | 0.1743        | 1.5846        | 1.3311        | 9.5100e-003   |               | 0.1204        | 0.1204        |                | 0.1204        | 0.1204        | 0.0000        | 1,725.0684        | 1,725.0684        | 0.0331        | 0.0316        | 1,735.5668        |
| Medical Office Building           | 1.1248e+006    | 6.0700e-003   | 0.0551        | 0.0463        | 3.3000e-004   |               | 4.1900e-003   | 4.1900e-003   |                | 4.1900e-003   | 4.1900e-003   | 0.0000        | 60.0236           | 60.0236           | 1.1500e-003   | 1.1000e-003   | 60.3889           |
| Retirement Community              | 4.12766e+006   | 0.0223        | 0.1902        | 0.0809        | 1.2100e-003   |               | 0.0154        | 0.0154        |                | 0.0154        | 0.0154        | 0.0000        | 220.2676          | 220.2676          | 4.2200e-003   | 4.0400e-003   | 221.6081          |
| Congregate Care (Assisted Living) | 2.74415e+006   | 0.0148        | 0.1265        | 0.0538        | 8.1000e-004   |               | 0.0102        | 0.0102        |                | 0.0102        | 0.0102        | 0.0000        | 146.4381          | 146.4381          | 2.8100e-003   | 2.6800e-003   | 147.3293          |
| <b>Total</b>                      |                | <b>0.2174</b> | <b>1.9564</b> | <b>1.5122</b> | <b>0.0119</b> |               | <b>0.1502</b> | <b>0.1502</b> |                | <b>0.1502</b> | <b>0.1502</b> | <b>0.0000</b> | <b>2,151.7977</b> | <b>2,151.7977</b> | <b>0.0412</b> | <b>0.0395</b> | <b>2,164.8932</b> |

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

|                                   | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Land Use                          | kBTU/yr        | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |                   |                   |               |               |                   |
| Enclosed Parking Structure        | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Hospital                          | 2.93978e+007   | 0.1585        | 1.4411        | 1.2105        | 8.6500e-003   |               | 0.1095        | 0.1095        |                | 0.1095        | 0.1095        | 0.0000        | 1,568.7794        | 1,568.7794        | 0.0301        | 0.0288        | 1,578.3268        |
| Medical Office Building           | 1.01232e+006   | 5.4600e-003   | 0.0496        | 0.0417        | 3.0000e-004   |               | 3.7700e-003   | 3.7700e-003   |                | 3.7700e-003   | 3.7700e-003   | 0.0000        | 54.0213           | 54.0213           | 1.0400e-003   | 9.9000e-004   | 54.3500           |
| Retirement Community              | 3.78395e+006   | 0.0204        | 0.1744        | 0.0742        | 1.1100e-003   |               | 0.0141        | 0.0141        |                | 0.0141        | 0.0141        | 0.0000        | 201.9258          | 201.9258          | 3.8700e-003   | 3.7000e-003   | 203.1547          |
| Congregate Care (Assisted Living) | 2.51723e+006   | 0.0136        | 0.1160        | 0.0494        | 7.4000e-004   |               | 9.3800e-003   | 9.3800e-003   |                | 9.3800e-003   | 9.3800e-003   | 0.0000        | 134.3292          | 134.3292          | 2.5700e-003   | 2.4600e-003   | 135.1467          |
| <b>Total</b>                      |                | <b>0.1980</b> | <b>1.7810</b> | <b>1.3757</b> | <b>0.0108</b> |               | <b>0.1368</b> | <b>0.1368</b> |                | <b>0.1368</b> | <b>0.1368</b> | <b>0.0000</b> | <b>1,959.0557</b> | <b>1,959.0557</b> | <b>0.0376</b> | <b>0.0359</b> | <b>1,970.9782</b> |

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

|                                   | Electricity Use | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------------------|-----------------|-------------------|---------------|---------------|-------------------|
| Land Use                          | kWh/yr          | MT/yr             |               |               |                   |
| Congregate Care (Assisted Living) | 996674          | 211.0823          | 0.0131        | 2.7100e-003   | 212.1985          |
| Enclosed Parking Structure        | 6.75336e+006    | 1,430.2726        | 0.0888        | 0.0184        | 1,437.8358        |
| Hospital                          | 8.66376e+006    | 1,834.8701        | 0.1140        | 0.0236        | 1,844.5728        |
| Medical Office Building           | 3.6519e+006     | 773.4243          | 0.0480        | 9.9400e-003   | 777.5141          |
| Retirement Community              | 1.10287e+006    | 233.5724          | 0.0145        | 3.0000e-003   | 234.8075          |
| <b>Total</b>                      |                 | <b>4,483.2217</b> | <b>0.2785</b> | <b>0.0576</b> | <b>4,506.9287</b> |

### 5.3 Energy by Land Use - Electricity

#### Mitigated

|                                   | Electricity Use | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------------------|-----------------|-------------------|---------------|---------------|-------------------|
| Land Use                          | kWh/yr          | MT/yr             |               |               |                   |
| Congregate Care (Assisted Living) | 984991          | 208.6081          | 0.0130        | 2.6800e-003   | 209.7112          |
| Enclosed Parking Structure        | 6.38963e+006    | 1,353.2386        | 0.0841        | 0.0174        | 1,360.3945        |
| Hospital                          | 8.31902e+006    | 1,761.8596        | 0.1094        | 0.0226        | 1,771.1762        |
| Medical Office Building           | 3.54349e+006    | 750.4645          | 0.0466        | 9.6400e-003   | 754.4329          |
| Retirement Community              | 1.08915e+006    | 230.6675          | 0.0143        | 2.9600e-003   | 231.8873          |
| <b>Total</b>                      |                 | <b>4,304.8382</b> | <b>0.2674</b> | <b>0.0553</b> | <b>4,327.6020</b> |

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Cleaning Supplies



|             | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|-------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Category    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |             |             |          |
| Mitigated   | 12.5455 | 0.0475 | 3.9647 | 1.8000e-004 |               | 0.0297       | 0.0297     |                | 0.0296        | 0.0296      | 0.0000   | 126.2627  | 126.2627  | 6.7000e-003 | 2.2100e-003 | 127.0871 |
| Unmitigated | 12.6225 | 0.0604 | 5.2309 | 2.8000e-004 |               | 0.0371       | 0.0371     |                | 0.0370        | 0.0370      | 0.0000   | 128.8380  | 128.8380  | 0.0108      | 2.2100e-003 | 129.7480 |

## 6.2 Area by SubCategory

### Unmitigated

|                       | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O                | CO2e            |
|-----------------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|--------------------|-----------------|
| SubCategory           | tons/yr        |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |                    |                 |
| Architectural Coating | 2.6418         |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| Consumer Products     | 9.8063         |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| Hearth                | 0.0122         | 0.0000        | 6.6000e-004   | 0.0000             |               | 8.4000e-003   | 8.4000e-003   |                | 8.3100e-003   | 8.3100e-003   | 0.0000        | 120.3087        | 120.3087        | 2.3100e-003   | 2.2100e-003        | 121.0409        |
| Landscaping           | 0.1622         | 0.0604        | 5.2302        | 2.8000e-004        |               | 0.0287        | 0.0287        |                | 0.0287        | 0.0287        | 0.0000        | 8.5293          | 8.5293          | 8.4700e-003   | 0.0000             | 8.7071          |
| <b>Total</b>          | <b>12.6225</b> | <b>0.0604</b> | <b>5.2309</b> | <b>2.8000e-004</b> |               | <b>0.0371</b> | <b>0.0371</b> |                | <b>0.0370</b> | <b>0.0370</b> | <b>0.0000</b> | <b>128.8380</b> | <b>128.8380</b> | <b>0.0108</b> | <b>2.2100e-003</b> | <b>129.7480</b> |

## 6.2 Area by SubCategory

### Mitigated

|                       | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|-----------------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| SubCategory           | tons/yr        |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |                    |                    |                 |
| Architectural Coating | 2.6418         |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Consumer Products     | 9.8063         |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Hearth                | 0.0122         | 0.0000        | 6.6000e-004   | 0.0000             |               | 8.4000e-003   | 8.4000e-003   |                | 8.3100e-003   | 8.3100e-003   | 0.0000        | 120.3087        | 120.3087        | 2.3100e-003        | 2.2100e-003        | 121.0409        |
| Landscaping           | 0.0853         | 0.0475        | 3.9641        | 1.8000e-004        |               | 0.0213        | 0.0213        |                | 0.0213        | 0.0213        | 0.0000        | 5.9540          | 5.9540          | 4.3900e-003        | 0.0000             | 6.0462          |
| <b>Total</b>          | <b>12.5455</b> | <b>0.0475</b> | <b>3.9647</b> | <b>1.8000e-004</b> |               | <b>0.0297</b> | <b>0.0297</b> |                | <b>0.0296</b> | <b>0.0296</b> | <b>0.0000</b> | <b>126.2627</b> | <b>126.2627</b> | <b>6.7000e-003</b> | <b>2.2100e-003</b> | <b>127.0871</b> |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
| Category    | MT/yr     |        |        |          |
| Mitigated   | 331.9591  | 2.7352 | 0.0680 | 410.4702 |
| Unmitigated | 400.9621  | 3.4188 | 0.0849 | 499.0797 |

## 7.2 Water by Land Use

### Unmitigated

|                                   | Indoor/Outdoor Use | Total CO2       | CH4           | N2O           | CO2e            |
|-----------------------------------|--------------------|-----------------|---------------|---------------|-----------------|
| Land Use                          | Mgal               | MT/yr           |               |               |                 |
| Congregate Care (Assisted Living) | 17.3961 / 10.9671  | 79.2970         | 0.5714        | 0.0143        | 95.7403         |
| Enclosed Parking Structure        | 0 / 0              | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Hospital                          | 25.1478 / 4.79006  | 88.5986         | 0.8245        | 0.0204        | 112.2313        |
| Medical Office Building           | 46.4278 / 8.84339  | 163.5703        | 1.5221        | 0.0376        | 207.2009        |
| Retirement Community              | 15.246 / 9.61164   | 69.4962         | 0.5008        | 0.0126        | 83.9072         |
| <b>Total</b>                      |                    | <b>400.9621</b> | <b>3.4188</b> | <b>0.0849</b> | <b>499.0797</b> |

## 7.2 Water by Land Use

### Mitigated

|                                   | Indoor/Outdoor Use | Total CO2       | CH4           | N2O           | CO2e            |
|-----------------------------------|--------------------|-----------------|---------------|---------------|-----------------|
| Land Use                          | Mgal               | MT/yr           |               |               |                 |
| Congregate Care (Assisted Living) | 13.9169 / 10.2981  | 67.0245         | 0.4573        | 0.0115        | 80.1910         |
| Enclosed Parking Structure        | 0 / 0              | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Hospital                          | 20.1183 / 4.49787  | 72.4455         | 0.6595        | 0.0163        | 91.3498         |
| Medical Office Building           | 37.1422 / 8.30394  | 133.7486        | 1.2176        | 0.0301        | 168.6496        |
| Retirement Community              | 12.1968 / 9.02533  | 58.7406         | 0.4008        | 0.0101        | 70.2798         |
| <b>Total</b>                      |                    | <b>331.9591</b> | <b>2.7352</b> | <b>0.0680</b> | <b>410.4702</b> |

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

**Category/Year**

|             | Total CO2      | CH4     | N2O    | CO2e           |
|-------------|----------------|---------|--------|----------------|
|             | MT/yr          |         |        |                |
| Unmitigated | 1,048.424<br>0 | 61.9601 | 0.0000 | 2,349.585<br>7 |
| Mitigated   | 1,048.424<br>0 | 61.9601 | 0.0000 | 2,349.585<br>7 |

**8.2 Waste by Land Use****Unmitigated**

|                                      | Waste<br>Disposed | Total CO2              | CH4            | N2O           | CO2e                   |
|--------------------------------------|-------------------|------------------------|----------------|---------------|------------------------|
| Land Use                             | tons              | MT/yr                  |                |               |                        |
| Congregate Care<br>(Assisted Living) | 243.64            | 49.4567                | 2.9228         | 0.0000        | 110.8357               |
| Enclosed Parking<br>Structure        | 0                 | 0.0000                 | 0.0000         | 0.0000        | 0.0000                 |
| Hospital                             | 817.6             | 165.9654               | 9.8083         | 0.0000        | 371.9392               |
| Medical Office<br>Building           | 3996              | 811.1519               | 47.9377        | 0.0000        | 1,817.843<br>7         |
| Retirement<br>Community              | 107.64            | 21.8500                | 1.2913         | 0.0000        | 48.9671                |
| <b>Total</b>                         |                   | <b>1,048.424<br/>0</b> | <b>61.9601</b> | <b>0.0000</b> | <b>2,349.585<br/>7</b> |

## 8.2 Waste by Land Use

### Mitigated

|                                      | Waste<br>Disposed | Total CO2              | CH4            | N2O           | CO2e                   |
|--------------------------------------|-------------------|------------------------|----------------|---------------|------------------------|
| Land Use                             | tons              | MT/yr                  |                |               |                        |
| Congregate Care<br>(Assisted Living) | 243.64            | 49.4567                | 2.9228         | 0.0000        | 110.8357               |
| Enclosed Parking<br>Structure        | 0                 | 0.0000                 | 0.0000         | 0.0000        | 0.0000                 |
| Hospital                             | 817.6             | 165.9654               | 9.8083         | 0.0000        | 371.9392               |
| Medical Office<br>Building           | 3996              | 811.1519               | 47.9377        | 0.0000        | 1,817.843<br>7         |
| Retirement<br>Community              | 107.64            | 21.8500                | 1.2913         | 0.0000        | 48.9671                |
| <b>Total</b>                         |                   | <b>1,048.424<br/>0</b> | <b>61.9601</b> | <b>0.0000</b> | <b>2,349.585<br/>7</b> |

## 9.0 Operational Offroad

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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

## 10.0 Vegetation

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**Previously Approved Specific Plan Land Use 2020**  
**South Coast AQMD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|--------------------------|--------|----------|-------------|--------------------|------------|
| Regional Shopping Center | 100.00 | 1000sqft | 2.30        | 100,000.00         | 0          |
| General Office Building  | 800.00 | 1000sqft | 18.37       | 800,000.00         | 0          |

### 1.2 Other Project Characteristics

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2020  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 466.91                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Source: CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - based on the Canyon Springs Healthcare Campus & Senior Living TIA

Construction Phase - construction emissions not modeled

Off-road Equipment - construction emissions not modeled

Vehicle Trips - Weekday TR baswed on the Project's TIA. Weekend TR based on the ITE Code 710 and 820

Energy Use - Title-24 Electricity Energy Intensity and Title-24 Natural Gas Energy Intensity were adjusted by 21.8% and 16.8% respectively, to reflect 2013 Title 24 requirements. Source: Impact Analysis California's 2013 Building Energy Efficiency Standards (CEC 2013)

| Table Name                | Column Name                | Default Value | New Value |
|---------------------------|----------------------------|---------------|-----------|
| tblConstructionPhase      | NumDays                    | 20.00         | 1.00      |
| tblEnergyUse              | T24E                       | 3.75          | 2.93      |
| tblEnergyUse              | T24E                       | 5.60          | 4.38      |
| tblEnergyUse              | T24NG                      | 3.65          | 3.04      |
| tblEnergyUse              | T24NG                      | 2.02          | 1.68      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 3.00          | 0.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 1.00          | 0.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00          | 0.00      |
| tblProjectCharacteristics | CO2IntensityFactor         | 630.89        | 466.91    |
| tblProjectCharacteristics | OperationalYear            | 2014          | 2020      |
| tblVehicleTrips           | ST_TR                      | 2.37          | 2.46      |
| tblVehicleTrips           | SU_TR                      | 0.98          | 1.05      |
| tblVehicleTrips           | WD_TR                      | 11.01         | 7.97      |
| tblVehicleTrips           | WD_TR                      | 42.94         | 67.91     |

## 2.0 Emissions Summary

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## 2.1 Overall Construction

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]

## 2.2 Overall Operational

### Unmitigated Operational

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2        | NBio- CO2          | Total CO2          | CH4            | N2O           | CO2e               |
|--------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|-----------------|--------------------|--------------------|----------------|---------------|--------------------|
| Category     | tons/yr       |                |                |               |                |               |                |                |               |               | MT/yr           |                    |                    |                |               |                    |
| Area         | 4.2961        | 1.1000e-004    | 0.0116         | 0.0000        |                | 4.0000e-005   | 4.0000e-005    |                | 4.0000e-005   | 4.0000e-005   | 0.0000          | 0.0223             | 0.0223             | 6.0000e-005    | 0.0000        | 0.0236             |
| Energy       | 0.0142        | 0.1289         | 0.1083         | 7.7000e-004   |                | 9.8000e-003   | 9.8000e-003    |                | 9.8000e-003   | 9.8000e-003   | 0.0000          | 2,118.4357         | 2,118.4357         | 0.1256         | 0.0280        | 2,129.7498         |
| Mobile       | 5.2722        | 14.0850        | 56.2212        | 0.1611        | 10.9094        | 0.2222        | 11.1316        | 2.9195         | 0.2049        | 3.1244        | 0.0000          | 11,316.5674        | 11,316.5674        | 0.4087         | 0.0000        | 11,325.1501        |
| Waste        |               |                |                |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 172.3393        | 0.0000             | 172.3393           | 10.1850        | 0.0000        | 386.2235           |
| Water        |               |                |                |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 47.4594         | 628.2671           | 675.7264           | 4.9136         | 0.1232        | 817.0943           |
| <b>Total</b> | <b>9.5825</b> | <b>14.2140</b> | <b>56.3410</b> | <b>0.1619</b> | <b>10.9094</b> | <b>0.2321</b> | <b>11.1415</b> | <b>2.9195</b>  | <b>0.2148</b> | <b>3.1343</b> | <b>219.7987</b> | <b>14,063.2925</b> | <b>14,283.0912</b> | <b>15.6328</b> | <b>0.1512</b> | <b>14,658.2413</b> |

## 2.2 Overall Operational

### Mitigated Operational

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2        | NBio- CO2          | Total CO2          | CH4            | N2O           | CO2e               |
|--------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|-----------------|--------------------|--------------------|----------------|---------------|--------------------|
| Category     | tons/yr       |                |                |               |                |               |                |                |               |               | MT/yr           |                    |                    |                |               |                    |
| Area         | 4.2961        | 1.1000e-004    | 0.0116         | 0.0000        |                | 4.0000e-005   | 4.0000e-005    |                | 4.0000e-005   | 4.0000e-005   | 0.0000          | 0.0223             | 0.0223             | 6.0000e-005    | 0.0000        | 0.0236             |
| Energy       | 0.0142        | 0.1289         | 0.1083         | 7.7000e-004   |                | 9.8000e-003   | 9.8000e-003    |                | 9.8000e-003   | 9.8000e-003   | 0.0000          | 2,118.4357         | 2,118.4357         | 0.1256         | 0.0280        | 2,129.7498         |
| Mobile       | 5.2722        | 14.0850        | 56.2212        | 0.1611        | 10.9094        | 0.2222        | 11.1316        | 2.9195         | 0.2049        | 3.1244        | 0.0000          | 11,316.5674        | 11,316.5674        | 0.4087         | 0.0000        | 11,325.1501        |
| Waste        |               |                |                |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 172.3393        | 0.0000             | 172.3393           | 10.1850        | 0.0000        | 386.2235           |
| Water        |               |                |                |               |                | 0.0000        | 0.0000         |                | 0.0000        | 0.0000        | 47.4594         | 628.2671           | 675.7264           | 4.9127         | 0.1230        | 817.0186           |
| <b>Total</b> | <b>9.5825</b> | <b>14.2140</b> | <b>56.3410</b> | <b>0.1619</b> | <b>10.9094</b> | <b>0.2321</b> | <b>11.1415</b> | <b>2.9195</b>  | <b>0.2148</b> | <b>3.1343</b> | <b>219.7987</b> | <b>14,063.2925</b> | <b>14,283.0912</b> | <b>15.6319</b> | <b>0.1510</b> | <b>14,658.1656</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.01</b> | <b>0.12</b> | <b>0.00</b> |

## 3.0 Construction Detail

### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|------------|------------|------------|----------|---------------|----------|-------------------|
| 1            | Demolition | Demolition | 1/1/2016   | 1/1/2016 | 5             | 1        |                   |

Acres of Grading (Site Preparation Phase): 0

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|------------|--------------------------|--------|-------------|-------------|-------------|
| Demolition | Excavators               | 0      | 8.00        | 162         | 0.38        |
| Demolition | Concrete/Industrial Saws | 0      | 8.00        | 81          | 0.73        |
| Demolition | Rubber Tired Dozers      | 0      | 8.00        | 255         | 0.40        |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition | 0                       | 0.00               | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

### 3.2 Demolition - 2016

### Unmitigated Construction On-Site

[illegible]

### Unmitigated Construction Off-Site

[illegible]

### 3.2 Demolition - 2016

#### Mitigated Construction On-Site

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Off-Road     | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

#### Mitigated Construction Off-Site

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

### 4.0 Operational Detail - Mobile

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#### 4.1 Mitigation Measures Mobile

|             | ROG     | NOx     | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|-------------|---------|---------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category    | tons/yr |         |         |        |               |              |            |                |               |             | MT/yr    |             |             |        |        |             |
| Mitigated   | 5.2722  | 14.0850 | 56.2212 | 0.1611 | 10.9094       | 0.2222       | 11.1316    | 2.9195         | 0.2049        | 3.1244      | 0.0000   | 11,316.5674 | 11,316.5674 | 0.4087 | 0.0000 | 11,325.1501 |
| Unmitigated | 5.2722  | 14.0850 | 56.2212 | 0.1611 | 10.9094       | 0.2222       | 11.1316    | 2.9195         | 0.2049        | 3.1244      | 0.0000   | 11,316.5674 | 11,316.5674 | 0.4087 | 0.0000 | 11,325.1501 |

#### 4.2 Trip Summary Information

| Land Use                 | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|--------------------------|-------------------------|----------|----------|-------------|------------|
|                          | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| General Office Building  | 6,376.00                | 1,968.00 | 840.00   | 15,963,720  | 15,963,720 |
| Regional Shopping Center | 6,791.00                | 4,997.00 | 2524.00  | 12,815,159  | 12,815,159 |
| Total                    | 13,167.00               | 6,965.00 | 3,364.00 | 28,778,879  | 28,778,879 |

#### 4.3 Trip Type Information

| Land Use                 | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| General Office Building  | 16.60      | 8.40       | 6.90        | 33.00      | 48.00      | 19.00       | 77             | 19       | 4       |
| Regional Shopping Center | 16.60      | 8.40       | 6.90        | 16.30      | 64.70      | 19.00       | 54             | 35       | 11      |

| LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.509128 | 0.059640 | 0.181069 | 0.139276 | 0.042833 | 0.006726 | 0.016156 | 0.033615 | 0.001941 | 0.002483 | 0.004400 | 0.000574 | 0.002159 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

|                         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4         | N2O         | CO2e       |
|-------------------------|---------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|------------|------------|-------------|-------------|------------|
| Category                | tons/yr |        |        |             |               |              |             |                |               |             | MT/yr    |            |            |             |             |            |
| Electricity Mitigated   |         |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 1,978.0888 | 1,978.0888 | 0.1229      | 0.0254      | 1,988.5489 |
| Electricity Unmitigated |         |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 1,978.0888 | 1,978.0888 | 0.1229      | 0.0254      | 1,988.5489 |
| NaturalGas Mitigated    | 0.0142  | 0.1289 | 0.1083 | 7.7000e-004 |               | 9.8000e-003  | 9.8000e-003 |                | 9.8000e-003   | 9.8000e-003 | 0.0000   | 140.3468   | 140.3468   | 2.6900e-003 | 2.5700e-003 | 141.2009   |
| NaturalGas Unmitigated  | 0.0142  | 0.1289 | 0.1083 | 7.7000e-004 |               | 9.8000e-003  | 9.8000e-003 |                | 9.8000e-003   | 9.8000e-003 | 0.0000   | 140.3468   | 140.3468   | 2.6900e-003 | 2.5700e-003 | 141.2009   |



## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

|                          | NaturalGas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Land Use                 | kBTU/yr        | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                 |                 |                    |                    |                 |
| General Office Building  | 2.432e+006     | 0.0131        | 0.1192        | 0.1001        | 7.2000e-004        |               | 9.0600e-003        | 9.0600e-003        |                | 9.0600e-003        | 9.0600e-003        | 0.0000        | 129.7808        | 129.7808        | 2.4900e-003        | 2.3800e-003        | 130.5706        |
| Regional Shopping Center | 198000         | 1.0700e-003   | 9.7100e-003   | 8.1500e-003   | 6.0000e-005        |               | 7.4000e-004        | 7.4000e-004        |                | 7.4000e-004        | 7.4000e-004        | 0.0000        | 10.5660         | 10.5660         | 2.0000e-004        | 1.9000e-004        | 10.6303         |
| <b>Total</b>             |                | <b>0.0142</b> | <b>0.1289</b> | <b>0.1083</b> | <b>7.8000e-004</b> |               | <b>9.8000e-003</b> | <b>9.8000e-003</b> |                | <b>9.8000e-003</b> | <b>9.8000e-003</b> | <b>0.0000</b> | <b>140.3468</b> | <b>140.3468</b> | <b>2.6900e-003</b> | <b>2.5700e-003</b> | <b>141.2010</b> |

### Mitigated

|                          | NaturalGas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Land Use                 | kBTU/yr        | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                 |                 |                    |                    |                 |
| General Office Building  | 2.432e+006     | 0.0131        | 0.1192        | 0.1001        | 7.2000e-004        |               | 9.0600e-003        | 9.0600e-003        |                | 9.0600e-003        | 9.0600e-003        | 0.0000        | 129.7808        | 129.7808        | 2.4900e-003        | 2.3800e-003        | 130.5706        |
| Regional Shopping Center | 198000         | 1.0700e-003   | 9.7100e-003   | 8.1500e-003   | 6.0000e-005        |               | 7.4000e-004        | 7.4000e-004        |                | 7.4000e-004        | 7.4000e-004        | 0.0000        | 10.5660         | 10.5660         | 2.0000e-004        | 1.9000e-004        | 10.6303         |
| <b>Total</b>             |                | <b>0.0142</b> | <b>0.1289</b> | <b>0.1083</b> | <b>7.8000e-004</b> |               | <b>9.8000e-003</b> | <b>9.8000e-003</b> |                | <b>9.8000e-003</b> | <b>9.8000e-003</b> | <b>0.0000</b> | <b>140.3468</b> | <b>140.3468</b> | <b>2.6900e-003</b> | <b>2.5700e-003</b> | <b>141.2010</b> |

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

|                          | Electricity Use | Total CO2         | CH4           | N2O           | CO2e              |
|--------------------------|-----------------|-------------------|---------------|---------------|-------------------|
| Land Use                 | kWh/yr          | MT/yr             |               |               |                   |
| General Office Building  | 7.896e+006      | 1,672.2687        | 0.1039        | 0.0215        | 1,681.1116        |
| Regional Shopping Center | 1.444e+006      | 305.8202          | 0.0190        | 3.9300e-003   | 307.4373          |
| <b>Total</b>             |                 | <b>1,978.0888</b> | <b>0.1229</b> | <b>0.0254</b> | <b>1,988.5489</b> |

#### Mitigated

|                          | Electricity Use | Total CO2         | CH4           | N2O           | CO2e              |
|--------------------------|-----------------|-------------------|---------------|---------------|-------------------|
| Land Use                 | kWh/yr          | MT/yr             |               |               |                   |
| General Office Building  | 7.896e+006      | 1,672.2687        | 0.1039        | 0.0215        | 1,681.1116        |
| Regional Shopping Center | 1.444e+006      | 305.8202          | 0.0190        | 3.9300e-003   | 307.4373          |
| <b>Total</b>             |                 | <b>1,978.0888</b> | <b>0.1229</b> | <b>0.0254</b> | <b>1,988.5489</b> |

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

|             | ROG     | NOx         | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|-------------|---------|-------------|--------|--------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category    | tons/yr |             |        |        |               |              |             |                |               |             | MT/yr    |           |           |             |        |        |
| Mitigated   | 4.2961  | 1.1000e-004 | 0.0116 | 0.0000 |               | 4.0000e-005  | 4.0000e-005 |                | 4.0000e-005   | 4.0000e-005 | 0.0000   | 0.0223    | 0.0223    | 6.0000e-005 | 0.0000 | 0.0236 |
| Unmitigated | 4.2961  | 1.1000e-004 | 0.0116 | 0.0000 |               | 4.0000e-005  | 4.0000e-005 |                | 4.0000e-005   | 4.0000e-005 | 0.0000   | 0.0223    | 0.0223    | 6.0000e-005 | 0.0000 | 0.0236 |

## 6.2 Area by SubCategory

### Unmitigated

|                       | ROG           | NOx                | CO            | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| SubCategory           | tons/yr       |                    |               |               |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Architectural Coating | 1.0429        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Consumer Products     | 3.2522        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Landscaping           | 1.0900e-003   | 1.1000e-004        | 0.0116        | 0.0000        |               | 4.0000e-005        | 4.0000e-005        |                | 4.0000e-005        | 4.0000e-005        | 0.0000        | 0.0223        | 0.0223        | 6.0000e-005        | 0.0000        | 0.0236        |
| <b>Total</b>          | <b>4.2961</b> | <b>1.1000e-004</b> | <b>0.0116</b> | <b>0.0000</b> |               | <b>4.0000e-005</b> | <b>4.0000e-005</b> |                | <b>4.0000e-005</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.0223</b> | <b>0.0223</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>0.0236</b> |

## 6.2 Area by SubCategory

### Mitigated

|                       | ROG           | NOx                | CO            | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| SubCategory           | tons/yr       |                    |               |               |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Architectural Coating | 1.0429        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Consumer Products     | 3.2522        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Landscaping           | 1.0900e-003   | 1.1000e-004        | 0.0116        | 0.0000        |               | 4.0000e-005        | 4.0000e-005        |                | 4.0000e-005        | 4.0000e-005        | 0.0000        | 0.0223        | 0.0223        | 6.0000e-005        | 0.0000        | 0.0236        |
| <b>Total</b>          | <b>4.2961</b> | <b>1.1000e-004</b> | <b>0.0116</b> | <b>0.0000</b> |               | <b>4.0000e-005</b> | <b>4.0000e-005</b> |                | <b>4.0000e-005</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.0223</b> | <b>0.0223</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>0.0236</b> |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
| Category    | MT/yr     |        |        |          |
| Mitigated   | 675.7264  | 4.9127 | 0.1230 | 817.0186 |
| Unmitigated | 675.7264  | 4.9136 | 0.1232 | 817.0943 |

## 7.2 Water by Land Use

### Unmitigated

|                          | Indoor/Outdoor Use | Total CO2       | CH4           | N2O           | CO2e            |
|--------------------------|--------------------|-----------------|---------------|---------------|-----------------|
| Land Use                 | Mgal               | MT/yr           |               |               |                 |
| General Office Building  | 142.187 / 87.1469  | 642.2674        | 4.6703        | 0.1171        | 776.6354        |
| Regional Shopping Center | 7.40725 / 4.53993  | 33.4590         | 0.2433        | 6.1000e-003   | 40.4589         |
| <b>Total</b>             |                    | <b>675.7264</b> | <b>4.9136</b> | <b>0.1232</b> | <b>817.0943</b> |

### Mitigated

|                          | Indoor/Outdoor Use | Total CO2       | CH4           | N2O           | CO2e            |
|--------------------------|--------------------|-----------------|---------------|---------------|-----------------|
| Land Use                 | Mgal               | MT/yr           |               |               |                 |
| General Office Building  | 142.187 / 87.1469  | 642.2674        | 4.6694        | 0.1169        | 776.5634        |
| Regional Shopping Center | 7.40725 / 4.53993  | 33.4590         | 0.2433        | 6.0900e-003   | 40.4552         |
| <b>Total</b>             |                    | <b>675.7264</b> | <b>4.9127</b> | <b>0.1230</b> | <b>817.0186</b> |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

**Category/Year**

|             | Total CO2 | CH4     | N2O    | CO2e     |
|-------------|-----------|---------|--------|----------|
|             | MT/yr     |         |        |          |
| Unmitigated | 172.3393  | 10.1850 | 0.0000 | 386.2235 |
| Mitigated   | 172.3393  | 10.1850 | 0.0000 | 386.2235 |

**8.2 Waste by Land Use****Unmitigated**

|                          | Waste Disposed | Total CO2       | CH4            | N2O           | CO2e            |
|--------------------------|----------------|-----------------|----------------|---------------|-----------------|
| Land Use                 | tons           | MT/yr           |                |               |                 |
| General Office Building  | 744            | 151.0253        | 8.9253         | 0.0000        | 338.4574        |
| Regional Shopping Center | 105            | 21.3141         | 1.2596         | 0.0000        | 47.7662         |
| <b>Total</b>             |                | <b>172.3393</b> | <b>10.1850</b> | <b>0.0000</b> | <b>386.2235</b> |

## 8.2 Waste by Land Use

### Mitigated

|                             | Waste<br>Disposed | Total CO2       | CH4            | N2O           | CO2e            |
|-----------------------------|-------------------|-----------------|----------------|---------------|-----------------|
| Land Use                    | tons              | MT/yr           |                |               |                 |
| General Office<br>Building  | 744               | 151.0253        | 8.9253         | 0.0000        | 338.4574        |
| Regional<br>Shopping Center | 105               | 21.3141         | 1.2596         | 0.0000        | 47.7662         |
| <b>Total</b>                |                   | <b>172.3393</b> | <b>10.1850</b> | <b>0.0000</b> | <b>386.2235</b> |

## 9.0 Operational Offroad

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| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

## 10.0 Vegetation

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## **APPENDIX 3.2:**

### **STATIONARY SOURCES EMISSIONS CALCULATION**



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# NATURAL GAS COMBUSTION EMISSIONS CALCULATOR REVISION M 06/22/2015 - INPUT SCREEN



Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed / printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.

This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

Directions: Enter and select information in the boxes in the column on the right:

## FIELDS

COMPANY NAME:  
FACILITY ID NUMBER:  
PERMIT NUMBER  
FACILITY CITY:  
FACILITY COUNTY:  
SPREADSHEET PREPARED BY:

## SELECTIONS

Canyon Springs Health Campus  
TBD  
TBD  
Riverside  
Riverside  
Urban Crossroads

EMISSION SOURCE ID NO.:  
MAXIMUM HEAT INPUT (MILLION BTU PER HOUR):

Boiler  
5.71 mmBTU/HR

TYPE OF BOILER:

SMALL BOILER (< 100 mmBTU/HR)

DOES THE SOURCE ALSO BURN COAL OR FUEL OIL?

No

DATE OF CONSTRUCTION:

5/1/2000  
(mm/dd/yyyy)

## ADDITIONAL INFORMATION FOR GREENHOUSE GAS (GHG) EMISSIONS

ENTER Calculation Tier from EPA Mandatory Reporting Rule (MRR)\* Subpart C  
\* See <http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>

TIER 1: DEFAULT HHV AND DEFAULT EF

SINCE TIER 3 IS NOT BEING USED, DO NOT ENTER FUEL CARBON CONTENT

0.7500

SINCE TIER 3 IS NOT BEING USED, DO NOT ENTER MOLECULAR WEIGHT

19.00

kg/kg-mole

## FUEL HEATING VALUE

ANNUAL AVG MEASURED FUEL HEATING VALUE (BTU/SCF): 1,020 BTU/SCF

DEFAULT FUEL HEATING VALUE (BTU/SCF) -- will be used for GHG calculations under TIER 1 approach

1,028 BTU/SCF default value is from EPA's mandatory reporting rule, Table C-1, "Natural Gas Pipeline (Weighted U.S. Average)"

## USAGE AND OTHER SOURCE-SPECIFIC DATA

ACTUAL YEARLY FUEL USAGE (MILLION SCF):  
CALCULATED POTENTIAL YEARLY USAGE (MILLION SCF)  
REQUESTED ANNUAL LIMITATION (MILLION SCF)

50.00 MILLION SCF  
49.04 MILLION SCF  
50.00 MILLION SCF

(TYPEOVER IF NECESSARY - DEFAULT IS POTENTIAL)

DAILY HOURS OF OPERATION:

24 HOURS

TYPE OF EMISSION CONTROL:

LOW NOx BURNERS

IS SNCR APPLIED TO THE BOILER?

NO

# NATURAL GAS COMBUSTION EMISSIONS CALCULATOR REVISION M 06/22/2015 - OUTPUT SCREEN



Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed / printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.

This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

## SOURCE / FACILITY / USER INPUT SUMMARY (FROM INPUT SCREEN)

|                                                                     |  |                        |  |                            |  |
|---------------------------------------------------------------------|--|------------------------|--|----------------------------|--|
| COMPANY: Canyon Springs Health Campus                               |  |                        |  | FACILITY ID NO.: TBD       |  |
| EMISSION SOURCE DESCRIPTION: 5.71 MMBTU/HR NATURAL GAS-FIRED BOILER |  |                        |  | PERMIT NUMBER: TBD         |  |
| EMISSION SOURCE ID NO.: Boiler                                      |  |                        |  | FACILITY CITY: Riverside   |  |
| CONTROL DEVICE: LOW NOx BURNERS                                     |  |                        |  | FACILITY COUNTY: Riverside |  |
| SPREADSHEET PREPARED BY: Urban Crossroads                           |  |                        |  | POLLUTANT                  |  |
| ACTUAL FUEL THROUGHPUT: 50.00                                       |  | 10 <sup>6</sup> SCF/YR |  | CONTROL EFF.               |  |
| POTENTIAL FUEL THROUGHPUT: 49.04                                    |  | 10 <sup>6</sup> SCF/YR |  | NOX                        |  |
| REQUESTED MAX. FUEL THRPT: 50.00                                    |  | 10 <sup>6</sup> SCF/YR |  | CALC'D AS 50%              |  |
| FUEL HEAT VALUE: 1,020 BTU/SCF                                      |  |                        |  | NO SNCR APPLIED            |  |
| BOILER TYPE: SMALL BOILER (<100 mmBTU/HR)                           |  |                        |  |                            |  |
| HOURS OF OPERATIONS: 24                                             |  |                        |  |                            |  |

## CRITERIA AIR POLLUTANT EMISSIONS INFORMATION

| AIR POLLUTANT EMITTED              | ACTUAL EMISSIONS          |         | POTENTIAL EMISSIONS        |         |                           |         | EMISSION FACTOR |            |
|------------------------------------|---------------------------|---------|----------------------------|---------|---------------------------|---------|-----------------|------------|
|                                    | (AFTER CONTROLS / LIMITS) |         | (BEFORE CONTROLS / LIMITS) |         | (AFTER CONTROLS / LIMITS) |         | lb/mmBtu        |            |
|                                    | lb/hr                     | tons/yr | lb/hr                      | tons/yr | lb/hr                     | tons/yr | uncontrolled    | controlled |
| PARTICULATE MATTER (Total)         | 0.04                      | 0.19    | 0.04                       | 0.19    | 0.04                      | 0.19    | 0.007           | 0.007      |
| PARTICULATE MATTER (Condensable)   | 0.03                      | 0.14    | 0.03                       | 0.14    | 0.03                      | 0.14    | 0.006           | 0.006      |
| PARTICULATE MATTER (Filterable)    | 0.01                      | 0.05    | 0.01                       | 0.05    | 0.01                      | 0.05    | 0.002           | 0.002      |
| SULFUR DIOXIDE (SO <sub>2</sub> )  | 0.00                      | 0.02    | 0.00                       | 0.01    | 0.00                      | 0.02    | 0.001           | 0.001      |
| NITROGEN OXIDES (NO <sub>x</sub> ) | 0.28                      | 1.25    | 0.56                       | 2.45    | 0.28                      | 1.25    | 0.098           | 0.049      |
| CARBON MONOXIDE (CO)               | 0.47                      | 2.10    | 0.47                       | 2.06    | 0.47                      | 2.10    | 0.082           | 0.082      |
| VOLATILE ORGANIC COMPOUNDS (VOC)   | 0.03                      | 0.14    | 0.03                       | 0.13    | 0.03                      | 0.14    | 0.005           | 0.005      |

## TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION

| TOXIC / HAZARDOUS AIR POLLUTANT          | CAS NUMBER | ACTUAL EMISSIONS          |          | POTENTIAL EMISSIONS        |          |                           |          | EMISSION FACTOR |            |
|------------------------------------------|------------|---------------------------|----------|----------------------------|----------|---------------------------|----------|-----------------|------------|
|                                          |            | (AFTER CONTROLS / LIMITS) |          | (BEFORE CONTROLS / LIMITS) |          | (AFTER CONTROLS / LIMITS) |          | lb/mmBtu        |            |
|                                          |            | lb/hr                     | tons/yr  | lb/hr                      | tons/yr  | lb/hr                     | tons/yr  | uncontrolled    | controlled |
| Acetaldehyde (TH)                        | 75070      | 8.51E-08                  | 7.60E-04 | 8.51E-08                   | 7.45E-04 | 8.51E-08                  | 7.60E-04 | 1.49E-08        | 1.49E-08   |
| Acrolein (TH)                            | 107028     | 1.01E-07                  | 9.00E-04 | 1.01E-07                   | 8.83E-04 | 1.01E-07                  | 9.00E-04 | 1.76E-08        | 1.76E-08   |
| Ammonia (T)                              | 7664417    | 1.79E-02                  | 1.60E+02 | 1.79E-02                   | 1.57E+02 | 1.79E-02                  | 1.60E+02 | 3.14E-03        | 3.14E-03   |
| Arsenic unlisted compounds (TH)          | ASC-other  | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Benzene (TH)                             | 71432      | 1.18E-05                  | 1.05E-01 | 1.18E-05                   | 1.03E-01 | 1.18E-05                  | 1.05E-01 | 2.06E-06        | 2.06E-06   |
| Benzo(a)pyrene (TH)                      | 50328      | 6.72E-09                  | 6.00E-05 | 6.72E-09                   | 5.88E-05 | 6.72E-09                  | 6.00E-05 | 1.18E-09        | 1.18E-09   |
| Beryllium metal (unreacted) (TH)         | 7440417    | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Cadmium metal (elemental unreacted) (TH) | 7440439    | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Chromic acid (VI) (TH)                   | 7738945    | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Cobalt unlisted compounds (H)            | COC-other  | 4.70E-07                  | 4.20E-03 | 4.70E-07                   | 4.12E-03 | 4.70E-07                  | 4.20E-03 | 8.24E-08        | 8.24E-08   |
| Formaldehyde (TH)                        | 50000      | 4.20E-04                  | 3.75E+00 | 4.20E-04                   | 3.68E+00 | 4.20E-04                  | 3.75E+00 | 7.35E-05        | 7.35E-05   |
| Hexane, n- (TH)                          | 110543     | 1.01E-02                  | 9.00E+01 | 1.01E-02                   | 8.83E+01 | 1.01E-02                  | 9.00E+01 | 1.76E-03        | 1.76E-03   |
| Lead unlisted compounds (H)              | PBC-other  | 2.80E-06                  | 2.50E-02 | 2.80E-06                   | 2.45E-02 | 2.80E-06                  | 2.50E-02 | 4.90E-07        | 4.90E-07   |
| Manganese unlisted compounds (TH)        | MNC-other  | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Mercury vapor (TH)                       | 7439976    | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Naphthalene (H)                          | 91203      | 3.41E-06                  | 3.05E-02 | 3.41E-06                   | 2.99E-02 | 3.41E-06                  | 3.05E-02 | 5.98E-07        | 5.98E-07   |
| Nickel metal (TH)                        | 7440020    | 0.00E+00                  | 0.00E+00 | 0.00E+00                   | 0.00E+00 | 0.00E+00                  | 0.00E+00 | 0.00E+00        | 0.00E+00   |
| Selenium compounds (H)                   | SEC        | 1.34E-07                  | 1.20E-03 | 1.34E-07                   | 1.18E-03 | 1.34E-07                  | 1.20E-03 | 2.35E-08        | 2.35E-08   |
| Toluene (TH)                             | 108883     | 1.90E-05                  | 1.70E-01 | 1.90E-05                   | 1.67E-01 | 1.90E-05                  | 1.70E-01 | 3.33E-06        | 3.33E-06   |
| Total HAPs                               |            | 1.05E-02                  | 9.41E+01 | 1.05E-02                   | 9.23E+01 | 1.05E-02                  | 9.41E+01 | 1.84E-03        | 1.84E-03   |
| Highest HAP                              | Hexane     | 1.01E-02                  | 9.00E+01 | 1.01E-02                   | 8.83E+01 | 1.01E-02                  | 9.00E+01 | 1.76E-03        | 1.76E-03   |

## TOXIC AIR POLLUTANT EMISSIONS INFORMATION (FOR PERMITTING PURPOSES)

| EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS  |           |          |          |          |          |              | EMISSION FACTOR |  |
|---------------------------------------------------------|-----------|----------|----------|----------|----------|--------------|-----------------|--|
| TOXIC AIR POLLUTANT                                     | CAS Num.  | lb/hr    | lb/day   | lb/yr    | lb/mmBtu | uncontrolled | controlled      |  |
|                                                         |           |          |          |          |          |              |                 |  |
| Acetaldehyde (TH)                                       | 75070     | 8.51E-08 | 2.04E-06 | 7.60E-04 | 1.49E-08 | 1.49E-08     | 1.49E-08        |  |
| Acrolein (TH)                                           | 107028    | 1.01E-07 | 2.42E-06 | 9.00E-04 | 1.76E-08 | 1.76E-08     | 1.76E-08        |  |
| Ammonia (T)                                             | 7664417   | 1.79E-02 | 4.30E-01 | 1.60E+02 | 3.14E-03 | 3.14E-03     | 3.14E-03        |  |
| Arsenic unlisted compounds (TH)                         | ASC-other | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00     | 0.00E+00        |  |
| Benzene (TH)                                            | 71432     | 1.18E-05 | 2.82E-04 | 1.05E-01 | 2.06E-06 | 2.06E-06     | 2.06E-06        |  |
| Benzo(a)pyrene (TH)                                     | 50328     | 6.72E-09 | 1.61E-07 | 6.00E-05 | 1.18E-09 | 1.18E-09     | 1.18E-09        |  |
| Beryllium metal (unreacted) (TH)                        | 7440417   | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00     | 0.00E+00        |  |
| Cadmium metal (elemental unreacted) (TH)                | 7440439   | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00     | 0.00E+00        |  |
| Soluble chromate compounds, as chromium (VI) equivalent | SoICr6    | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00     | 0.00E+00        |  |
| Formaldehyde (TH)                                       | 50000     | 4.20E-04 | 1.01E-02 | 3.75E+00 | 7.35E-05 | 7.35E-05     | 7.35E-05        |  |
| Hexane, n- (TH)                                         | 110543    | 1.01E-02 | 2.42E-01 | 9.00E+01 | 1.76E-03 | 1.76E-03     | 1.76E-03        |  |
| Manganese unlisted compounds (TH)                       | MNC-other | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00     | 0.00E+00        |  |
| Mercury vapor (TH)                                      | 7439976   | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00     | 0.00E+00        |  |
| Nickel metal (TH)                                       | 7440020   | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00     | 0.00E+00        |  |
| Toluene (TH)                                            | 108883    | 1.90E-05 | 4.57E-04 | 1.70E-01 | 3.33E-06 | 3.33E-06     | 3.33E-06        |  |

## GREENHOUSE GAS EMISSIONS INFORMATION (FOR EMISSIONS INVENTORY PURPOSES) - CONSISTENT WITH EPA MANDATORY REPORTING RULE (MRR) METHOD

## GHG - POTENTIAL TO EMIT NOT BASED ON EPA MRR METHOD

| GREENHOUSE GAS POLLUTANT          | ACTUAL EMISSIONS                   |                                       |               | POTENTIAL EMISSIONS |                                      |
|-----------------------------------|------------------------------------|---------------------------------------|---------------|---------------------|--------------------------------------|
|                                   | EPA MRR CALCULATION METHOD: TIER 1 |                                       |               |                     |                                      |
|                                   | metric tons/yr                     | metric tons/yr, CO <sub>2</sub> e     | short tons/yr | short tons/yr       | short tons/yr, CO <sub>2</sub> e     |
| CARBON DIOXIDE (CO <sub>2</sub> ) | 2725.23                            | 2,725.23                              | 3,004.05      | 2,923.37            | 2923.37                              |
| METHANE (CH <sub>4</sub> )        | 5.14E-02                           | 1.29E+00                              | 5.67E-02      | 5.51E-02            | 1.38E+00                             |
| NITROUS OXIDE (N <sub>2</sub> O)  | 5.14E-03                           | 1.53E+00                              | 5.67E-03      | 5.51E-03            | 1.64E+00                             |
|                                   |                                    | TOTAL CO <sub>2</sub> e (metric tons) | 2,728.04      |                     | TOTAL CO <sub>2</sub> e (short tons) |
|                                   |                                    |                                       |               |                     | 2,926.39                             |

NOTE: CO<sub>2</sub>e means CO<sub>2</sub> equivalent

NOTE: The DAQ Air Emissions Reporting Online (AERO) system requires short tons be reported. The EPA MRR requires metric tons be reported.

NOTE: Do not use greenhouse gas emission estimates from this spreadsheet for PSD (Prevention of Significant Deterioration) purposes.



December 19, 2016

c/o Ms. Paula Purcell  
Canyon Springs Marketplace Corp.  
2025 Pioneer Court  
San Mateo, CA 94403

**SUBJECT: CANYON SPRINGS HEALTHCARE CAMPUS & SENIOR LIVING SUPPLEMENTAL AQ, GHG, HRA EVALUATION**

Dear Ms. Paula Purcell:

Urban Crossroads, Inc. is pleased to submit the following supplemental AQ, GHG, and HRA Evaluation for the Canyon Springs Healthcare Campus & Senior Living Project ("Project"). The purpose of this supplemental evaluation is to determine if emissions associated with the proposed helipad at the Project site would result in any new impacts beyond those identified in the June 2016 AQ, GHG, and HRA Reports.

### **PROPOSED HELIPAD**

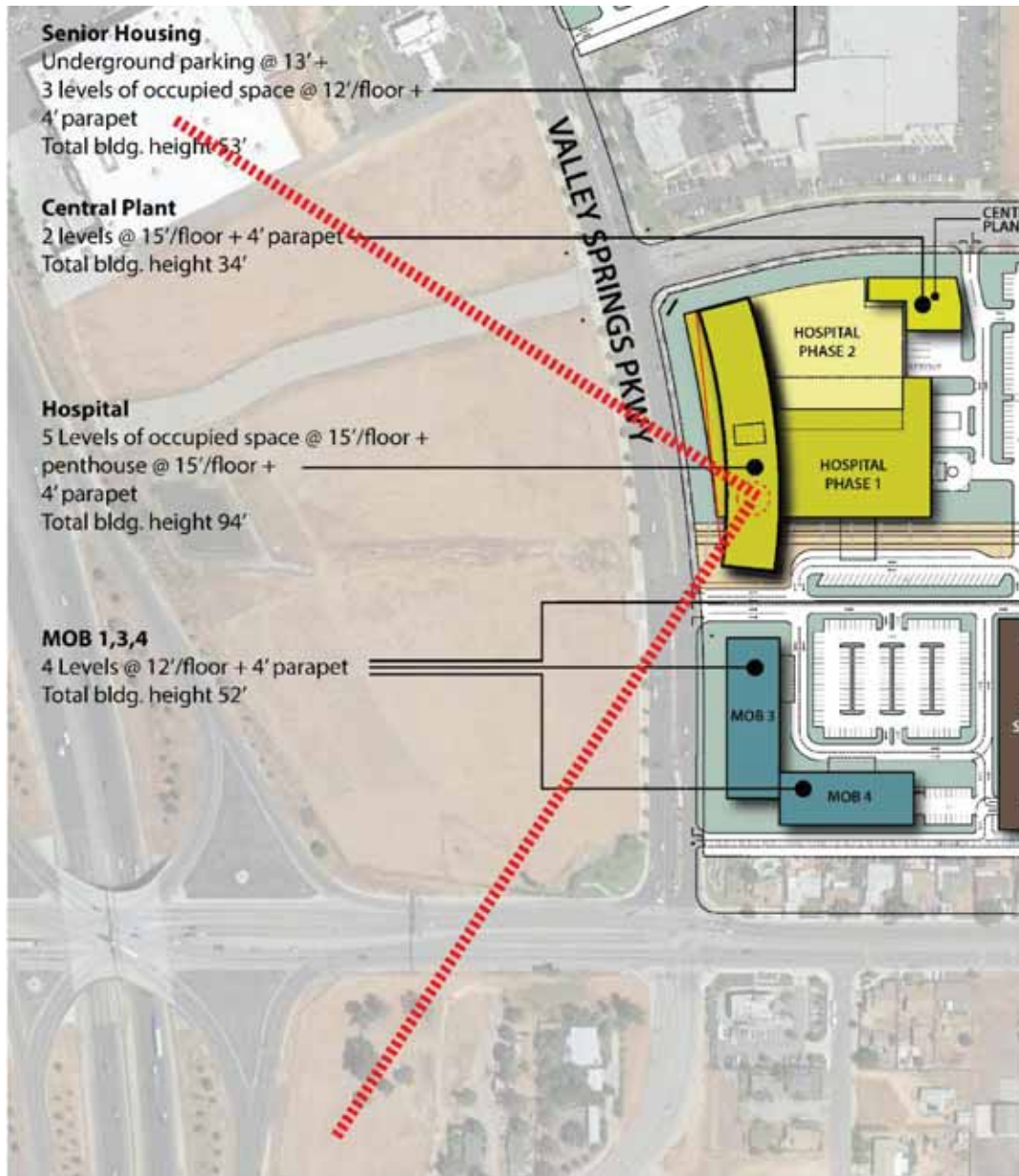
Helicopter activities at the Project site are anticipated to occur under two conditions: typical activity and trauma activity. Typical helicopter activities include the scheduled transferring of patients to and from the hospital on an as-needed basis, for patients who require the services of the Project's hospital use, or those of another local hospital, while trauma includes the non-scheduled helicopter activities for major traumatic injuries or events. At the time this analysis was prepared, the exact model type and specifications of the typical helicopter activity to be used at the hospital helipad operations were unknown. However, based on information provided by Heliplanners (the helipad consultant for the Project), a H145 Airbus helicopter is used to represent the typical hospital helicopter activities, and a Blackhawk helicopter represents the trauma activities.

The typical helicopter activities will occur two times per week or eight times per month and the trauma activities are anticipated to occur five times per week or twenty times per month. Exhibit 1 illustrates the conceptual helipad and approach locations.

### **AIR QUALITY IMPACTS**

Air Quality emissions associated with helicopter use at the Project site would result from landing and takeoff (LTO) and travel during the helicopter routes. For analytical purposes, and as a conservative measure, a one-hour flight time per helicopter trip is anticipated also based on available literature, helicopters typically average 4 minutes of ground idle time before departure, 3 minutes to hover and climb, 5.5 minutes for the approach, and 1 minute of ground idle time after landing (*Guidance on the*

### EXHIBIT 1: CONCEPTUAL HELIPAD AND APPROACH LOCATIONS



#### LEGEND:

- |||| Conceptual Helicopter Approach
- Conceptual Helicopter Landing Location

*Determination of Helicopter Emissions*, Swiss Federation 2015 see Appendix A of this memorandum for additional details). More specifically for purposes of the air quality impacts, it is assumed that one typical helicopter and one trauma helicopter would be generated by the Project on a peak day. This would coincide with the peak daily operational emissions previously evaluated in the AQ Report. Table 1 illustrates the daily air quality emissions associated with helicopter operations from LTO and a one-hour flight.

Emissions rates for helicopter emissions were obtained from the *Guidance on the Determination of Helicopter Emissions* (Swiss Federation 2015). Additional detailed calculations for helicopter emissions are provided in Appendix B of this memorandum.

**TABLE 1: SUMMARY OF PEAK HELICOPTER EMISSIONS**

| Helicopter                           | Emissions (pounds per day) |                 |             |                 |                  |                   |
|--------------------------------------|----------------------------|-----------------|-------------|-----------------|------------------|-------------------|
|                                      | VOC                        | NO <sub>x</sub> | CO          | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| LTO                                  |                            |                 |             |                 |                  |                   |
| H 145 Airbus                         | 1.37                       | 0.72            | 1.76        | 0.00            | 0.02             | 0.02              |
| Black Hawk                           | 1.28                       | 1.26            | 1.62        | 0.00            | 0.04             | 0.04              |
| One Hour Flight                      |                            |                 |             |                 |                  |                   |
| H 145 Airbus                         | 2.78                       | 6.02            | 3.40        | 0.00            | 0.17             | 0.17              |
| Black Hawk                           | 2.45                       | 11.97           | 2.95        | 0.00            | 0.33             | 0.33              |
| <b>Total Maximum Daily Emissions</b> | <b>7.88</b>                | <b>19.98</b>    | <b>9.74</b> | <b>0.00</b>     | <b>0.56</b>      | <b>0.56</b>       |
| SCAQMD Regional Threshold            | 55                         | 55              | 550         | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>           | <b>NO</b>                  | <b>NO</b>       | <b>NO</b>   | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

Table 2 illustrates the daily air quality emissions associated with helicopter operations from LTO and a one-hour flight in addition to the operational emissions for summer and winter conditions previously identified in the AQ Report. As shown in Table 2, no new impacts, beyond those identified in the previous AQ Report would result with the addition of helicopter emissions.

**TABLE 2: SUMMARY OF PEAK OPERATIONAL EMISSIONS**

| Operational Activities – Summer Scenario | Emissions (pounds per day) |                 |        |                 |                  |                   |
|------------------------------------------|----------------------------|-----------------|--------|-----------------|------------------|-------------------|
|                                          | VOC                        | NO <sub>x</sub> | CO     | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area Source                              | 60.08                      | 0.38            | 32.02  | 1.43e-3         | 0.84             | 0.83              |
| Energy Source                            | 1.08                       | 9.76            | 7.54   | 0.06            | 0.75             | 0.75              |
| Mobile                                   | 62.45                      | 145.65          | 617.60 | 1.34            | 90.77            | 25.58             |
| Stationary                               | 0.72                       | 6.72            | 11.28  | 0.00            | 0.96             | 0.96              |
| Helicopter                               | 7.88                       | 19.98           | 9.74   | 0.00            | 0.56             | 0.56              |

|                                |               |               |               |             |              |              |
|--------------------------------|---------------|---------------|---------------|-------------|--------------|--------------|
| <b>Maximum Daily Emissions</b> | <b>132.21</b> | <b>182.49</b> | <b>678.18</b> | <b>1.40</b> | <b>93.88</b> | <b>28.68</b> |
| SCAQMD Regional Threshold      | 55            | 55            | 550           | 150         | 150          | 55           |
| <b>Threshold Exceeded?</b>     | <b>YES</b>    | <b>YES</b>    | <b>YES</b>    | <b>NO</b>   | <b>NO</b>    | <b>NO</b>    |

| Operational Activities – Winter Scenario | Emissions (pounds per day) |                 |               |                 |                  |                   |
|------------------------------------------|----------------------------|-----------------|---------------|-----------------|------------------|-------------------|
|                                          | VOC                        | NO <sub>x</sub> | CO            | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area Source                              | 60.08                      | 0.38            | 32.02         | 1.43e-3         | 0.84             | 0.83              |
| Energy Source                            | 1.08                       | 9.76            | 7.54          | 0.06            | 0.75             | 0.75              |
| Mobile                                   | 65.20                      | 152.86          | 622.12        | 1.27            | 90.78            | 25.59             |
| Stationary                               | 0.72                       | 6.72            | 11.28         | 0.00            | 0.96             | 0.96              |
| Helicopter                               | 7.88                       | 19.98           | 9.74          | 0.00            | 0.56             | 0.56              |
| <b>Maximum Daily Emissions</b>           | <b>134.96</b>              | <b>189.70</b>   | <b>682.14</b> | <b>1.33</b>     | <b>93.89</b>     | <b>28.69</b>      |
| SCAQMD Regional Threshold                | 55                         | 55              | 550           | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>               | <b>YES</b>                 | <b>YES</b>      | <b>YES</b>    | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

### GREENHOUSE GAS IMPACTS

Greenhouse gas emissions associated with helicopter activity are calculated in a manner consistent with that described above within the air quality discussion. Table 3 illustrates the annual GHG emissions associated with helicopter operations from LTO and a one-hour flight.

**TABLE 3: ANNUAL GHG EMISSIONS FROM HELICOPTER EMISSIONS**

| Emission Source                            | Emissions (metric tons per year) |
|--------------------------------------------|----------------------------------|
|                                            | CO <sub>2</sub>                  |
| LTO                                        |                                  |
| H 145 Airbus                               | 12.60                            |
| Black Hawk                                 | 44.95                            |
| One Hour Flight                            |                                  |
| H 145 Airbus                               | 83.23                            |
| Black Hawk                                 | 313.65                           |
| <b>Total CO<sub>2</sub>E (All Sources)</b> | <b>454.42</b>                    |

Table 4 illustrates the annual GHG emissions associated with helicopter operations from LTO and a one-hour flight in addition to the annual GHG emissions previously identified in the GHG Report. As shown in Table 4, the Project would not result in a significant GHG impact as it is consistent with the target reductions set forth in the City's Climate Action Plan (CAP).



**TABLE 4: SUMMARY OF GHG EMISSIONS FOR BASELINE VS PROJECT**

| Category                                 | CO2e Emissions         |                                                                           |
|------------------------------------------|------------------------|---------------------------------------------------------------------------|
|                                          | 2010 Baseline Scenario | Project (With regulatory requirements and applicable mitigation measures) |
|                                          | Metric Tons per Year   |                                                                           |
| Construction                             | 125.03                 | 125.03                                                                    |
| Area                                     | 129.79                 | 127.09                                                                    |
| Energy Use                               | 8,246.34               | 6,298.58                                                                  |
| Mobile Sources                           | 21,447.96              | 13,370.19                                                                 |
| Waste Disposed                           | 2,349.59               | 2,349.59                                                                  |
| Water Use                                | 628.29                 | 410.47                                                                    |
| Stationary Sources                       | 2,728.04               | 2,728.04                                                                  |
| Helicopter                               | 454.42                 | 454.42                                                                    |
| <b>Total</b>                             | <b>36,109.46</b>       | <b>25,863.41</b>                                                          |
| <b>Project Improvement over Baseline</b> | <b>28.38%</b>          |                                                                           |

### **HEALTH RISK ASSESSMENT IMPACTS**

Toxic emissions associated with helicopter emissions were calculated based on the amount of fuel used during LTO and a one-hour flight. The fuel used was calculated based on the document *Guidance on the Determination of Helicopter Emissions* (Swiss Federation 2015). Additional detailed calculations for helicopter emissions are provided in Appendix B of this memorandum.

Toxic emissions were calculated based on the South Coast Air Quality Management District (SCAQMD) protocol (Table B-5) of their AB2588 Facilities Reporting which provides toxic emission factors per gallon of fuel combusted.

The source characterization of the helicopter is based on a line of volume sources representing the LTO and off-site travel. The initial vertical height is 15 feet above the building height and the length of side used in 10 meters. All other parameters consistent with the HRA report were utilized for consistency. Exhibit 2 illustrates the modeled emission sources for the Project site.

The maximum cancer risk from helicopter activity is summarized on Table 5. As shown, the incremental risk from the helicopter activity is less than significant. Appendix C of this memorandum includes the



AERMOD input/output files and risk calculations.

**TABLE 5: MAXIMUM CANCER RISK FROM HELICOPTER ACTIVITY**

| Maximum Lifetime Cancer Risk<br>(Risk per Million) | Significance Threshold<br>(Risk per Million) | Exceeds Significance Threshold |
|----------------------------------------------------|----------------------------------------------|--------------------------------|
| 0.03                                               | 10                                           | NO                             |

Table 6 illustrates the maximum incremental cancer risk associated with the helicopter activity in addition to the cancer risk previously identified in the HRA Report. As shown, the incremental cancer risk is less than the applicable threshold and therefore no impacts would occur.

**TABLE 6: MAXIMUM CANCER RISK FROM PROJECT**

| Helicopter Activity<br>(Risk Per Million) | Operational Activity<br>(Risk Per Million) | Total Risk<br>(Risk per Million) | Significance Threshold<br>(Risk per Million) | Exceeds Significance Threshold |
|-------------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------------|--------------------------------|
| 0.03                                      | 3.52                                       | 3.55                             | NO                                           | NO                             |

If you have any questions or require any additional information regarding this response to comments, please contact me directly at (949) 336-5987.

Respectfully submitted,

URBAN CROSSROADS, INC.



Haseeb Qureshi,  
Senior Associate

## EXHIBIT 2: MODELED EMISSION SOURCES AND RECEPTOR LOCATIONS



## APPENDIX A: SWISS CONFEDERATION REPORT



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Confederation

Theo Rindlisbacher / Lucien Chabbey

# Guidance on the Determination of Helicopter Emissions

Reference: COO.2207.111.2.2015750



Guidance on the Determination of Helicopter Emissions, Edition 2, Dec 2015, FOCA, CH-3003 Bern  
Contact person: Theo Rindlisbacher  
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Appendix B: LTO data, measured fuel flow and estimated emissions for a small twin engine turboshaft helicopter

Appendix C: LTO data, measured fuel flow and estimated emissions for a large twin engine turboshaft helicopter

Appendix D: Estimated one hour operation emissions and indicated scale factors

Appendix E: Graphical Representation of Approximation Functions for Piston Engines

Appendix F: Graphical Representation of Approximation Functions for Turboshaft Engines



## Motivation and Summary

The civil aviation emission inventory of Switzerland is a bottom-up emission calculation based on individual aircraft tail numbers, which includes the tail numbers of helicopters. Although helicopters may be considered a minor source of aviation emissions, it is interesting to see that in a small country like Switzerland, more than 1000 individual helicopters have been flying in the last couple of years, some of them doing thousands of cycles or so called rotations. Switzerland therefore needs to include helicopters in the country's aviation emission inventory. However helicopter emissions are extremely difficult to assess because their engine emissions data are usually not publicly available and there is no generally accepted methodology on how to calculate helicopter emissions known by FOCA. In the past, the helicopter emission estimations done by FOCA have been based on two engine data sets only. Assumptions for fuel flow and Nitrogen oxides (NO<sub>x</sub>) have been conservative and it has become evident that the share of helicopter emissions in the emission inventory of Switzerland has been significantly overestimated so far, at least for CO<sub>2</sub> and NO<sub>x</sub>.

FOCA therefore launched project HELEN (**HEL**icopter **EN**gines) in January 2008 with the main goal to fill significant gaps of knowledge concerning the determination of helicopter emissions and to further improve the quality of the Swiss civil aviation emission inventory. The FOCA activity for engine emission testing is based on Swiss aviation law<sup>1</sup>, which states that emissions from all engine powered aircraft have to be evaluated and tested. The legal requirement also incorporates aircraft engines that are currently unregulated and do not have an ICAO<sup>2</sup> emissions certification – like aircraft piston, helicopter, turboprop and small jet engines. Helicopter engine emissions have been measured at the engine test facility of RUAG AEROSPACE, Stans, Switzerland, where turboshaft engines are tested after overhaul. The measured turboshaft engines are owned by the Swiss Government. As turboshaft engine emissions measurements during ordinary engine performance tests are not very costly, the measurements have been extended to incorporate particle emissions, smoke number, carbonyls and to study the influence of different probe designs used for small engine exhaust diameters. These measurements have been performed by DLR INSTITUTE OF COMBUSTION TECHNOLOGY, Stuttgart, Germany.

The results of the measurements as well as confidential helicopter engine manufacturer data are the basis for the suggested mathematical functions for helicopter engine emission factors and fuel flow approximations. In order to make the functions work, only the input of shaft horsepower (SHP) is necessary. The maximum SHP of the engine(s) of a certain helicopter must first be determined and can be found in spec sheets or in flight manuals. Percentages of maximum SHP for different operating modes and times in mode are listed and are differentiated between three categories of helicopters: piston engine powered, single and twin turboshaft powered helicopters. Calculated shaft horsepower for different modes is then entered into approximation formulas which provide fuel flow and emission factors.

Power settings and times in mode for the modelling have been established a first time in 2009 with in-flight measurements, from helicopter flight manuals and with the help of experienced flight instructors. In 2015, the Working Group 3 of the ICAO Committee on Environmental Protection (CAEP) developed a guidance for generating aggregated cycle emissions data for small turbofan, turboprop, helicopter and APU engines. FOCA was interested to compare the guidance of the report with its own guidance (2009). Indeed, the Working Group 3 used the FOCA guidance of 2009 as a basis but adjusted it. Some adaptations have been made and are re-used and implemented in the updated version of the FOCA guidance (2015). The main adaptations are listed below:

---

<sup>1</sup> SR 748.0, LFG Art. 58

<sup>2</sup> International Civil Aviation Organisation

- The GI departure (4 minutes) and the GI arrival (1 minute) have been merged into a single GI mode (5 minutes). Furthermore, the power setting of the GI mode has been adjusted to 20%, 13%, 7% and 6% for the piston engine, the single light engine, the twin light engine and the twin heavy engine respectively.
- Concerning the Take-off and Approach mode, the power settings stay unchanged in comparison with the guidance of 2009.
- A number of new helicopter models and engines have been added to the database.
- Finally, a new variable has been added with the 2015 update: The number of PM non-volatile matter is now roughly estimated and taken into account.

In consequence, the FOCA reviewed the 2009 helicopter emissions guidance and provides an update with edition 2. The edition 2 report presents the updated estimation of LTO<sup>3</sup> and one hour emissions for individual helicopter types. It has to be noted that helicopters may fly many cycles (rotations) far away from an airport or heliport, especially for aerial work. To overcome problems with emissions estimation for helicopter rotations, estimations of per hour emissions are suggested to complement the LTO values. In the case of Switzerland, helicopter companies transmit the annual flight-hours of their helicopters to FOCA, which allows applying a flight-hour based emissions calculation in most cases. This guidance suggests using the emission values per hour also for determination of helicopter cruise emissions. Finally, the guidance material offers a summary list of helicopters with estimated LTO and one hour emissions for direct application in emission inventories.

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<sup>3</sup> LTO = Landing and Take-off cycle



# 1. Classification of Helicopters by Engine Category

## 1.1 Piston Engine Powered Helicopters



Piston engine powered helicopters are the smallest helicopter category. Most of them are two-seaters used for pilot education and training. Their operation includes a lot of hover exercises. Generally, they are operated at low level and at low altitudes because of their limited high altitude performance. Typical engines have four or six horizontally opposed cylinders and are air cooled. The engine technology goes back to the 1950s. The engines run on gasoline (AVGAS or MOGAS). For operational studies, the **Schweizer 269C** and the **Robinson R22** have been selected as the representative helicopter in this category.

## 1.2 Single Engine Turboshift Powered Helicopters



The majority of civil helicopters are powered by a single gas turbine with a shaft for power extraction ("turboshift engines"). The shaft drives a reduction gear for the main rotor and the tail rotor. Maximum shaft power for this helicopter category is normally in the range of 300 to 1000 kW. Most of the turboshift engine compressors are single stage and the driving shaft is a free turbine, which means that it is not mechanically connected to the compressor shaft. The engines run on jet fuel. For operational studies, the **Eurocopter AS350B2 Ecureuil** has been selected as the representative helicopter in this category.

## 1.3 Twin Engine Turboshift Powered Helicopters



The basic engine design is normally identical to that of the single engine turboshift helicopters. The reason for making a distinction is the fact that the engines run at significantly lower power during normal operation compared to a single engine powered helicopter. If one engine should fail, the remaining engine is capable of restoring nearly the performance of the helicopter at twin engine operation. This has to be taken into account when doing emissions calculations, as e.g. a doubling of the fuel flow of the single engine for a twin engine

helicopter would result in an excessive overestimation of the fuel consumption. For operational studies, the **Agusta A109E** (MTOM 2850 kg) and the **Eurocopter AS332 Super Puma** (MTOM 8600 kg) have been chosen as the representative helicopters in this category.

## 2. Operational Assumptions for Emissions Modelling

### 2.1 General Remarks about Helicopter Operations and their Modelling

In contrast to fixed wing aircraft, helicopters usually need a high percentage of the maximum engine power during most of the flight segments. They often fly cycles (or so called rotations) away from an airport or heliport, especially for aerial work. This poses special problems to emissions estimation of helicopters. Airport or heliport movements are usually not consistent with the actual number of rotations flown. This guidance material suggests two ways of how to deal with helicopter emissions: A practitioner may use one of the three suggested standard LTO cycles below, corresponding to the respective helicopter category and multiply the resulting LTO emissions (see section 3) with the number of LTO (= number of movements divided by 2). This is suggested for airport LTO emissions calculation.

For a country's emission inventory, the practitioner may use the emissions calculation given per flight-hour, if the helicopter operating hours are known. In this case, helicopter rotations and cruise are considered to be included and the final emission calculation is given simply by multiplying the emissions per hour by the number of operating hours.

If helicopter cruise emissions have to be calculated for a given flight distance, it is suggested to start again with the emissions per hour data and divide them by an assumed mean cruising speed for the respective helicopter type.

Example: Estimated fuel consumption for helicopter type XYZ (see section 3) = 133 kg fuel / hour  
Mean cruising speed (from spec sheet, flight manual etc.)<sup>4</sup> = 120 kts  
→ 133 kg fuel / hour divided by 120 Nautical Miles / hour = 1.11 kg fuel / Nautical Mile  
The value of 1.11 kg fuel / Nautical Mile is multiplied by the number of Nautical Miles flown in order to get the number of kg fuel.

### 2.2 Piston Engine Helicopter Operations

Engine running time on ground shows a great seasonal variability, with a long engine warm up sequence in winter and a long cool down sequence at the end of the flight in summer (air cooled engines). Total engine ground running time has been determined to be approximately 5 minutes. Climb rate has been assumed 750ft/min based on performance tables of the reference helicopter manuals, resulting in more time needed to climb 3000ft (LTO) with piston engine than with turboshaft powered helicopters. However, approach time is considered similar to the other helicopter categories.

Engine percentage power for ground running is higher than for piston engine aircraft. From RPM and Manifold Pressure indications, it is assumed 20% of max. SHP. For hover and climb, nearly full SHP is used. According to information from experienced flight instructors, cruise power is usually set near the maximum continuous power. Therefore, 95% of max. SHP is the suggested cruise value. Approach shows a large variation in power settings, but it is generally relatively high (60% of max. SHP), either for maintaining a comfortable sink rate or for gaining speed in order to reduce flight time.

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<sup>4</sup> Aircraft or helicopter speeds are often given in kts (knots). 1 knot = 1 Nautical Mile per hour

Table 1: Suggested times in mode and % of max. SHP for piston engine helicopters. GI = Ground Idle before departure and after landing, TO = Hover and Climb, AP = Approach. "Mean operating % power per engine" = power setting for determination of emissions per flight-hour.

| GI_Time<br>(Min.) | TO_Time<br>(Min.) | AP_Time<br>(Min.) | GI %Power<br>per engine | TO %Power<br>per engine | AP %Power<br>per engine | Mean<br>operating<br>%Power<br>per engine |
|-------------------|-------------------|-------------------|-------------------------|-------------------------|-------------------------|-------------------------------------------|
| 5                 | 4                 | 5.5               | 20                      | 95                      | 60                      | 90                                        |

## 2.3 Single Engine Turboshift Helicopter Operations

The values of table 2 have been generated from flight testing. An example of detailed recording and calculation of weighted averages is given in Appendix A.

Table 2: Suggested times in mode and % of max. SHP for single engine turboshift helicopters

| GI_Time<br>(Min.) | TO_Time<br>(Min.) | AP_Time<br>(Min.) | GI %Power<br>per engine | TO %Power<br>per engine | AP %Power<br>per engine | Mean<br>operating<br>% power<br>per engine |
|-------------------|-------------------|-------------------|-------------------------|-------------------------|-------------------------|--------------------------------------------|
| 5                 | 3                 | 5.5               | 13                      | 87                      | 46                      | 80                                         |

## 2.4 Twin Engine Turboshift Helicopter Operations

For twin engine helicopters, the % power values per engine are normally lower than for single engine helicopters. At 100% rotor torque, the two engines are running at less than their 100% power rating<sup>5</sup>. This has been taken into account in table 3 (see Appendix B). It is suggested to first calculate the emissions of one engine based on the % power and times in mode below, followed by a multiplication of the results by a factor of 2.

Table 3: Suggested times in mode and % of max. SHP per engine for small twin engine turboshift helicopters (below 3.4 tons MTOM)

| GI_Time<br>(Min.) | TO_Time<br>(Min.) | AP_Time<br>(Min.) | GI %Power<br>per engine | TO %Power<br>per engine | AP %Power<br>per engine | Mean<br>operating<br>% power<br>per engine |
|-------------------|-------------------|-------------------|-------------------------|-------------------------|-------------------------|--------------------------------------------|
| 5                 | 3                 | 5.5               | 7                       | 78                      | 38                      | 65                                         |

For large twin engine turboshift helicopters it is suggested to further reduce the %power values (see Appendix C)

Table 4: Suggested times in mode and % of max. SHP per engine for large twin engine turboshift

<sup>5</sup> Generally, if an engine should fail, the remaining engine can restore nearly the twin engine performance (depending on the helicopter model).

helicopters (above 3.4 tons MTOM)

| GI_Time<br>(Min.) | TO_Time<br>(Min.) | AP_Time<br>(Min.) | GI %Power<br>per engine | TO %Power<br>per engine | AP %Power<br>per engine | Mean<br>operating<br>% power<br>per engine |
|-------------------|-------------------|-------------------|-------------------------|-------------------------|-------------------------|--------------------------------------------|
| 5                 | 3                 | 5.5               | 6                       | 66                      | 32                      | 62                                         |

### 3. Estimation of Fuel Flow and Emission Factors from Shaft Horsepower

The functions suggested in this section are based on the fitting of FOCA's own engine test data and on confidential engine manufacturer data. Manufacturer data are confidential and can not be published together with a corresponding engine name.

The main concept consists of entering a SHP value into the formulas and getting fuel flow (kg/s) and the emission factors for the standard pollutants (EI NO<sub>x</sub> (g/kg), EI HC (g/kg), EI CO (g/kg), EI PM<sub>non volatile</sub> (g/kg), and EI PM number)<sup>6</sup>. The following steps are recommended:

- Firstly, the practitioner need to determine the maximum SHP of the engine(s) of the selected helicopter. The information can be found in publicly available helicopter or engine spec sheets or in helicopter operating manuals.
- Secondly, the helicopter category (piston, single turboshaft, twin turboshaft) has to be determined. With the corresponding table in section 2, the estimated SHP for the different operating modes of that helicopter engine are calculated.
- Next, the mode related SHPs are entered into the corresponding approximation functions, suggested in this section. The results are fuel flow and emission factors estimations for all modes of that particular helicopter.
- Finally, fuel flow and emission factors are combined with time in mode (from the appropriate table in section 2) to generate kg of fuel and grams emissions for LTO and one hour operation (see next section 4).

Due to a substantial variability of real measured emissions data between different engine types, the suggested general approximation functions for emissions may still lead to an error of a factor of two or more for a specific engine (see Appendix F). For PM emissions, these are very rough estimations and the error may be one order of magnitude. For fuel flow, the error is assumed +/- 15%. The suggested formulas are representing the current state of knowledge. With additional data, a further refinement and improvement of the approximations would be possible.

<sup>6</sup> NO<sub>x</sub> = Nitrogen oxides, HC = unburned hydrocarbons (unburned fuel), CO = Carbon monoxide, PM non volatile = Non volatile ultra fine particles, generally soot

### 3.1 Piston Engines

- Fuel flow (kg/s):

$$Fuel\ flow \approx 19 * 10^{-12} * SHP^4 - 10^{-9} * SHP^3 + 2.6 * 10^{-7} * SHP^2 + 4 * 10^{-5} * SHP + 0.006$$

- Emission factors for NO<sub>x</sub>

Table 5

| Mode          | GI  | TO  | AP  | CRUISE |
|---------------|-----|-----|-----|--------|
| % max. SHP    | 20% | 95% | 60% | 90%    |
| EI Nox (g/kg) | 1   | 1   | 4   | 2      |

- Emission factors for HC:

$$EI\ HC\ \left(\frac{g}{kg}\right) \approx 80 * (SHP^{-0.35})$$

- Emission factors for CO:

$$EI\ CO\ \left(\frac{g}{kg}\right) \approx 1000\ (for\ all\ SHP)$$

- Emission factors for PM (non volatile particles, soot)

Table 6

| Mode         | GI   | TO  | AP   | CRUISE |
|--------------|------|-----|------|--------|
| % max. SHP   | 20%  | 95% | 60%  | 90%    |
| EI PM (g/kg) | 0.05 | 0.1 | 0.04 | 0.07   |

All data for approximations of fuel flow and emission factors are taken from FOCA project ECERT. A graphical representation of approximation functions can be found in Appendix E.

- PM number:

$$PM\ number \approx \frac{EI\ PM\ \left(\frac{g}{kg}\right)}{\frac{\pi}{6} * Mean\ Particle\ Size^3(nm^3) * e^{(4.5*1.8^2)}}$$

*EI PM (g/kg) and the mean particle size depends on the power settings and are approximated in table 6 and 7 respectively.*

Table 7

*Estimation of the Mean Particle Size depending on the Power settings.*

| Piston Engine         | Idle/Taxi | Approach | Takeoff | Mean |
|-----------------------|-----------|----------|---------|------|
| Power setting         | 20%       | 60%      | 95%     | 90%  |
| Mean Particle Size nm | 18.9      | 29.2     | 40.3    | 39.3 |

### 3.2 Turboshift Engines

- Fuel flow (kg/s) for engines above 1000 SHP

$$\text{Fuel flow} \approx 4.0539 * 10^{-18} * SHP^5 - 3.16298 * 10^{-14} * SHP^4 + 9.2087 * 10^{-11} * SHP^3 - 1.2156 * 10^{-7} * SHP^2 + 1.1476 * 10^{-4} * SHP + 0.01256$$

- Fuel flow (kg/s) for engines above 600 SHP and maximum 1000 SHP

$$\text{Fuel flow} \approx 3.3158 * 10^{-16} * SHP^5 - 1.0175 * 10^{-12} * SHP^4 + 1.1627 * 10^{-9} * SHP^3 - 5.9528 * 10^{-7} * SHP^2 + 1.8168 * 10^{-4} * SHP + 0.0062945$$

- Fuel flow (kg/s) for engines up to 600 SHP

$$\text{Fuel flow} \approx 2.197 * 10^{-15} * SHP^5 - 4.4441 * 10^{-12} * SHP^4 + 3.4208 * 10^{-9} * SHP^3 - 1.2138 * 10^{-6} * SHP^2 + 2.414 * 10^{-4} * SHP + 0.004583$$

- Emission factors for NO<sub>x</sub>

$$EI \text{ NO}_x \left( \frac{g}{kg} \right) \approx 0.2113 * (SHP^{0.5677})$$

- Emission factors for HC

$$EI \text{ HC} \left( \frac{g}{kg} \right) \approx 3819 * (SHP^{-1.0801})$$

- Emission factors for CO

$$EI \text{ CO} \left( \frac{g}{kg} \right) \approx 5660 * (SHP^{-1.11})$$

- Emission factors for PM (non volatile particles, soot)

$$EI\ PM\ non\ volatile\left(\frac{g}{kg}\right) \approx -4.8 * 10^{-8} * SHP^2 + 2.3664 * 10^{-4} * SHP + 0.1056$$

- PM number:

$$PM\ number \cong \frac{EI\ PM\left(\frac{g}{kg}\right)}{\frac{\pi}{6} * Mean\ Particle\ Size^3(nm^3) * e^{(4.5*1.8^2)}}$$

*EI PM (g/kg) can be obtained by applying the aforementioned equation. An estimation of the mean particle size in function of SHP is found in the table 8.*

Table 8

*Estimation of the Mean Particle Size depending on the Power settings and on the engine type.*

|                     |           |          |         |      |
|---------------------|-----------|----------|---------|------|
| Twin Engine (light) | Idle/Taxi | Approach | Takeoff | Mean |
| Power setting       | 7%        | 38%      | 78%     | 65%  |
| Mean Particle nm    | 20        | 21.8     | 35.8    | 31.1 |
| Single Engine       | Idle/Taxi | Approach | Takeoff | Mean |
| Power setting       | 13%       | 46%      | 87%     | 80%  |
| Mean Particle nm    | 19.1      | 24.2     | 38.5    | 36.5 |
| Twin Engine (heavy) | Idle/Taxi | Approach | Takeoff | Mean |
| Power setting       | 6%        | 32%      | 66%     | 62%  |
| Mean Particle nm    | 20.2      | 20.4     | 31.5    | 30   |

A graphical representation of approximation functions can be found in Appendix F.

## 4. Final Calculations

### 4.1 LTO Emissions

$$\text{LTO Fuel} = 60 * (GI_{\text{Time}} * GI_{\text{Fuelflow}} + TO_{\text{Time}} * TO_{\text{Fuelflow}} + AP_{\text{Time}} * AP_{\text{Fuelflow}}) * \text{number of engines}$$

Remark: The factor of 60 converts minutes to seconds, as the times in the tables of section 2 are given in minutes but the estimated fuel flow values are in kg per second (see sections 2 and 3 of this guidance material)

$$\text{LTO NOx} = 60 * (GI_{\text{Time}} * GI_{\text{Fuelflow}} * GI_{\text{ElNOx}} + TO_{\text{Time}} * TO_{\text{Fuelflow}} * TO_{\text{ElNOx}} + AP_{\text{Time}} * AP_{\text{Fuelflow}} * AP_{\text{ElNOx}}) * \text{number of engines}$$

LTO HC, CO and PM are calculated accordingly by replacement of EI NO<sub>x</sub> by EI HC, EI CO or EI PM.

### 4.2 Emissions for One Hour Operation

Fuel for one hour operation =

$$3600 * (\text{fuel flow for mean operating power per engine}) * \text{number of engines}$$

NO<sub>x</sub> emissions for one hour operation =

$$3600 * (\text{fuel flow for mean operating power per engine}) * (\text{EI NO}_x \text{ for mean operating power per engine}) * \text{number of engines}$$

HC, CO and PM emissions for one hour operation are calculated accordingly.

## 5. Helicopter Emissions Table

Based on this guidance material, estimated LTO emissions and emissions for one hour operation have been calculated for a variety of helicopters. The table is offered for direct application in emission inventories, for example by matching helicopter tail numbers with the emission results for the corresponding helicopter types contained in the table. The original excel file, containing all input data and calculation formulas can be downloaded from the FOCA Web. As far as fuel consumption and emissions for one hour operation (respectively cruise) are concerned, the results have been scaled in a range of about +/-15% for some of the helicopters according to information from operators. This procedure allows to more accurately reflecting differences between different helicopter models. With more information expected from operators in the future, the scaling factors will be updated. For details about current one hour operation scaling factors, see Appendix D.



Table 9: Estimated LTO emissions and one hour operation emissions for different helicopter models.

| Code | Aircraft ICA O | Aircraft Name    | Engine Name | Max SHP per engine | Number of Engines | LTO Emissions |             |            |            |                         |               | One hour emissions |                   |                  |                  | One hour PM number |
|------|----------------|------------------|-------------|--------------------|-------------------|---------------|-------------|------------|------------|-------------------------|---------------|--------------------|-------------------|------------------|------------------|--------------------|
|      |                |                  |             |                    |                   | LTO fuel (kg) | LTO NOx (g) | LTO HC (g) | LTO CO (g) | LTO PM non volatile (g) | LTO PM number | One hour fuel (kg) | One hour NOx (kg) | One hour HC (kg) | One hour CO (kg) |                    |
| H011 | S76            | SIKORSKY S76     | PT6B-30A    | 981                | 2                 | 59            | 499.9       | 573.6      | 547.2      | 11.6                    | 3.463E+16     | 360                | 2.99              | 1.3              | 0.79             | 85                 |
| H012 | A119           | AGUSTA A119      | PT6B-37     | 900                | 1                 | 31.5          | 210.5       | 87.3       | 288.8      | 6.4                     | 3.3274E+10    | 216                | 1.77              | 0.07             | 0.78             | 54                 |
| H013 | A139           | AGUSTA A139      | PT6T-3D     | 1800               | 2                 | 55            | 312.8       | 250.1      | 689.6      | 12.7                    | 4.6879E+16    | 360                | 2.56              | 0.26             | 1.98             | 112                |
| H013 | B412           | Bell 412         | PT6T-3      | 1800               | 2                 | 55            | 419.5       | 797.4      | 873        | 12.7                    | 4.6879E+16    | 360                | 4.1               | 1.76             | 1.12             | 112                |
| H017 | A139           | AGUSTA A139      | PT6C-67C    | 1100               | 2                 | 60.4          | 377.5       | 739.7      | 949.1      | 11.8                    | 3.939E+16     | 412.2              | 3.55              | 1.37             | 1.85             | 101                |
| H020 | EXPL           | MD 900           | PW206A      | 621                | 2                 | 36            | 127.7       | 577.5      | 1158.2     | 6                       | 3.0591E+16    | 223.2              | 1.08              | 0.87             | 3.39             | 43                 |
| H022 | A109           | AGUSTA A109E     | PW206C      | 550                | 2                 | 34.6          | 159.9       | 629.1      | 1216.7     | 5.4                     | 2.9751E+16    | 194.4              | 1.01              | 1                | 3.73             | 35.8               |
| H030 | A109           | AGUSTA A109      | PW207C      | 650                | 2                 | 34.9          | 157.3       | 632.7      | 1226.6     | 5.8                     | 3.084E+16     | 177.7              | 0.93              | 0.9098           | 3.4              | 35                 |
| H031 | B427           | Bell 427         | PW207D      | 572                | 2                 | 34.9          | 150.4       | 243.7      | 671.7      | 5.6                     | 3E+16         | 197.4              | 1.19              | 0                | 1.91             | 37                 |
| H032 | EXPL           | MD 902           | PW207E      | 429                | 2                 | 36.9          | 125.4       | 657.6      | 1227.3     | 5.4                     | 2.8302E+16    | 212.8              | 1.05              | 0.83             | 3.22             | 36                 |
| H101 | AS65           | AS 365 C1        | ARRIEL 1A1  | 641                | 2                 | 41.6          | 210.7       | 761.7      | 988.5      | 7.1                     | 3.0735E+16    | 261                | 1.7               | 1.47             | 1.83             | 51                 |
| H101 | AS65           | AS 365 C2        | ARRIEL 1A2  | 641                | 2                 | 41.6          | 210.7       | 761.7      | 988.5      | 7.1                     | 3.0735E+16    | 261                | 1.7               | 1.47             | 1.83             | 51.2               |
| H102 | AS35           | ECUREUIL AS 350  | ARRIEL 1B   | 641                | 1                 | 23.4          | 128.2       | 289.6      | 370.6      | 4.2                     | 3.0155E+16    | 133.2              | 0.97              | 0.6              | 0.75             | 29                 |
| H103 | AS65           | AS 365 N         | ARRIEL 1C   | 660                | 2                 | 42.2          | 217.7       | 753        | 976.8      | 7.2                     | 3.0964E+16    | 265.2              | 1.75              | 1.45             | 1.8              | 53                 |
| H104 | AS65           | AS 365 N1        | ARRIEL 1C1  | 700                | 2                 | 43.4          | 231         | 724.2      | 938        | 7.6                     | 3.143E+16     | 274.3              | 1.87              | 1.41             | 1.73             | 56                 |
| H105 | AS65           | AS 365           | ARRIEL 1C2  | 763                | 2                 | 45.2          | 253.8       | 679.1      | 877.4      | 8.2                     | 3.2145E+16    | 289.5              | 2.08              | 1.35             | 1.68             | 61                 |
| H106 | AS35           | ECUREUIL AS 350B | ARRIEL 1D1  | 732                | 1                 | 25.2          | 149.7       | 266.8      | 339.6      | 4.7                     | 3.1321E+16    | 146.5              | 1.16              | 0.57             | 0.7              | 33                 |
| H106 | AS50           | FENNEC AS 550    | ARRIEL 1D1  | 732                | 1                 | 25.2          | 149.7       | 266.8      | 339.6      | 4.7                     | 3.1321E+16    | 146.5              | 1.16              | 0.57             | 0.7              | 33.4               |
| H107 | AS55           | FENNEC AS 555    | ARRIEL 1D1  | 712                | 2                 | 43.8          | 235.5       | 713.8      | 924.1      | 7.7                     | 3.1554E+16    | 277.1              | 1.91              | 1.4              | 1.72             | 57                 |
| H108 | A109           | AGUSTA A109 K2   | ARRIEL 1K1  | 738                | 2                 | 44.6          | 246         | 700.8      | 907        | 8                       | 3.1915E+16    | 255                | 1.79              | 1.24             | 1.53             | 53                 |
| H108 | BK17           | ARRIEL 1E2       | ARRIEL 1E2  | 738                | 2                 | 44.6          | 246         | 700.8      | 907        | 8                       | 3.1915E+16    | 283.3              | 1.98              | 1.38             | 1.7              | 59                 |
| H108 | BK17           | BK117 C-2        | ARRIEL 1E2  | 738                | 2                 | 44.6          | 246         | 700.8      | 907        | 8                       | 3.1915E+16    | 283.3              | 1.98              | 1.38             | 1.7              | 59                 |
| H110 | AS35           | AS 350 B3        | ARRIEL 2B   | 848                | 1                 | 27.6          | 180.5       | 247.7      | 313        | 5.5                     | 3.2659E+16    | 151.6              | 1.3               | 0.51             | 0.82             | 37                 |
| H110 | AS35           | AS 350 B3        | ARRIEL 2B1  | 848                | 1                 | 27.6          | 180.5       | 247.7      | 313        | 5.5                     | 3.2659E+16    | 151.6              | 1.3               | 0.51             | 0.82             | 37                 |
| H110 | EC30           | EC 130 B4        | ARRIEL 2B1  | 848                | 1                 | 27.6          | 180.5       | 247.7      | 313        | 5.5                     | 3.2659E+16    | 182.6              | 1.57              | 0.81             | 0.75             | 44.6               |
| H111 | AS65           | AS 365 N3        | ARRIEL 2C   | 839                | 2                 | 47.8          | 286         | 642.6      | 826.6      | 9                       | 3.2984E+16    | 308.9              | 2.35              | 1.31             | 1.61             | 68                 |
| H111 | EC55           | EC 155 B         | ARRIEL 2C1  | 839                | 2                 | 47.8          | 286         | 642.6      | 826.6      | 9                       | 3.2984E+16    | 308.9              | 2.35              | 1.31             | 1.61             | 68                 |
| H112 | EC55           | EC 155 B1        | ARRIEL 2C2  | 944                | 2                 | 51.2          | 329.9       | 603.6      | 774.4      | 10.2                    | 3.4164E+16    | 337.4              | 2.73              | 1.26             | 1.55             | 79                 |
| H113 | AS50           | AS 360B3         | ARRIEL 2D   | 962                | 1                 | 29.5          | 206.6       | 231.1      | 291.3      | 6.2                     | 3.384E+16     | 200.3              | 1.82              | 0.59             | 0.72             | 52                 |
| H114 | S76            | SIKORSKY S76 C+  | ARRIEL 2S1  | 856                | 2                 | 48.4          | 292         | 640.3      | 822.7      | 9.2                     | 3.322E+16     | 313.4              | 2.38              | 1.3              | 1.6              | 70                 |
| H115 | S76            | SIKORSKY S76C++  | ARRIEL 2S2  | 897                | 2                 | 50            | 310.7       | 624.2      | 800.7      | 9.7                     | 3.3679E+16    | 324.5              | 2.56              | 1.28             | 1.56             | 74                 |
| H121 | AS55           | AS 355 N         | ARRIUS 1A   | 480                | 2                 | 35            | 150.5       | 883        | 1156.2     | 5.4                     | 2.8801E+16    | 216.2              | 1.19              | 1.67             | 2.08             | 38                 |
| H122 | EC35           | EC 135           | ARRIUS 2B1  | 633                | 2                 | 41.2          | 206.9       | 769.1      | 999.6      | 7                       | 3.0715E+16    | 259.3              | 1.66              | 1.49             | 1.84             | 51                 |
| H122 | EC35           | EC 135           | ARRIUS 2B2  | 633                | 2                 | 41.2          | 206.9       | 769.1      | 999.6      | 7                       | 3.0715E+16    | 259.3              | 1.66              | 1.49             | 1.84             | 51                 |
| H123 | EC20           | EC 120           | ARRIUS 2F   | 432                | 1                 | 18.8          | 81.7        | 364        | 469.9      | 2.9                     | 2.7589E+16    | 114                | 0.66              | 0.79             | 0.98             | 21                 |

Table 9: (Continued)

| Code | Aircraft ICAO | Aircraft Name        | Engine Name    | Max Shp per engine | Number of Engines | LTO Emissions |             |            |            | One hour emissions      |               |                    |                   | One hour HC (kg) | One hour CO (kg) | One hour PM (non vol. g) | One hour PM number |
|------|---------------|----------------------|----------------|--------------------|-------------------|---------------|-------------|------------|------------|-------------------------|---------------|--------------------|-------------------|------------------|------------------|--------------------------|--------------------|
|      |               |                      |                |                    |                   | LTO fuel (kg) | LTO NOx (g) | LTO HC (g) | LTO CO (g) | LTO PM non volatile (g) | LTO PM number | One hour fuel (kg) | One hour NOx (kg) |                  |                  |                          |                    |
| H124 | A109          | AGUSTA A109 Power    | ARRIUS 2K      | 670                | 2                 | 42.4          | 220.7       | 741.8      | 961.1      | 7.3                     | 3.1181E+16    | 240.7              | 1.61              | 1.3              | 1.61             | 48                       | 1.58E+18           |
| H131 | AL02          | ALOUETTE II          | ARTOUSTE RC25  | 402                | 1                 | 18.1          | 75.4        | 378        | 489.2      | 2.7                     | 2.718E+16     | 109.7              | 0.61              | 0.62             | 1.02             | 19.4                     | 6.38E+17           |
| H131 | AL02          | ALOUETTE II          | ARTOUSTE RC28  | 402                | 1                 | 18.1          | 75.4        | 378        | 489.2      | 2.7                     | 2.718E+16     | 109.7              | 0.61              | 0.62             | 1.02             | 19.4                     | 6.38E+17           |
| H132 | EC20          | EC-120 COLIBRI III B | ARTOUSTE III B | 563                | 1                 | 21.4          | 108.9       | 308.9      | 395.9      | 3.6                     | 2.9258E+16    | 134.9              | 0.92              | 0.7              | 0.86             | 27                       | 8.64E+17           |
| H132 | LAMA          | S3115B LAMA          | ARTOUSTE III B | 563                | 1                 | 21.4          | 108.9       | 308.9      | 395.9      | 3.6                     | 2.9258E+16    | 159.2              | 1.06              | 0.83             | 1.02             | 32.2                     | 5.89E+17           |
| H132 | AL03          | ALOUETTE III         | ARTOUSTE III B | 563                | 1                 | 21.4          | 108.9       | 308.9      | 395.9      | 3.6                     | 2.9258E+16    | 134.9              | 0.92              | 0.7              | 0.86             | 27.2                     | 8.66E+17           |
| H133 | AS555         | AS 355 ECUREUIL      | ARTOUSTE III B | 563                | 2                 | 37.6          | 175.8       | 802.1      | 1040.7     | 6.1                     | 2.9876E+16    | 235.7              | 1.41              | 1.53             | 1.91             | 44                       | 1.29E+18           |
| H141 | GAZL          | GAZELLE SA341        | ASTAZOU IIIA   | 644                | 1                 | 23.5          | 128.9       | 288.6      | 367.6      | 4.2                     | 3.0155E+16    | 148.5              | 1.06              | 0.67             | 0.82             | 32                       | 5.83E+17           |
| H141 | GAZL          | GAZELLE SA341        | ASTAZOU IIIA2  | 644                | 1                 | 23.5          | 128.9       | 288.6      | 367.6      | 4.2                     | 3.0155E+16    | 148.5              | 1.06              | 0.67             | 0.82             | 32                       | 5.83E+17           |
| H142 | AL03          | ALOUETTE III         | ASTAZOU XIVB   | 590                | 1                 | 21.9          | 114.5       | 299.6      | 384.7      | 3.8                     | 2.9446E+16    | 139.4              | 0.96              | 0.69             | 0.85             | 29                       | 9.52E+17           |
| H142 | GAZL          | GAZELLE XIVG         | ASTAZOU XIVG   | 590                | 1                 | 21.9          | 114.5       | 299.6      | 384.7      | 3.8                     | 2.9446E+16    | 139.4              | 0.96              | 0.69             | 0.85             | 28.9                     | 5.28E+17           |
| H142 | GAZL          | GAZELLE XIVH         | ASTAZOU XIVH   | 590                | 1                 | 21.9          | 114.5       | 299.6      | 384.7      | 3.8                     | 2.9446E+16    | 139.4              | 0.96              | 0.69             | 0.85             | 28.9                     | 5.28E+17           |
| H151 | TIGR          | ER 665 TIGR          | MTR 390        | 1450               | 2                 | 69            | 507.6       | 613.6      | 781        | 15.2                    | 4.3258E+16    | 476                | 4.76              | 1.17             | 1.43             | 133                      | 1.95E+18           |
| H161 | 2NAC          | HAL DRIVIN UK II     | TM333-282      | 1219               | 2                 | 63.4          | 421.3       | 688.7      | 881.4      | 12.9                    | 4.0814E+16    | 434.1              | 3.95              | 1.29             | 1.56             | 112                      | 3.68E+18           |
| H201 | H500          | HUGHES 500           | DOA250-C18     | 317                | 1                 | 16.4          | 59.5        | 438.2      | 571.2      | 2.3                     | 2.5999E+16    | 98.8               | 0.48              | 0.96             | 1.2              | 16                       | 2.94E+17           |
| H202 | A109          | AGUSTA A109A II      | DOA250-C20B    | 420                | 2                 | 32.8          | 130.2       | 960.2      | 1262       | 4.9                     | 2.8197E+16    | 203.5              | 1.04              | 1.82             | 2.28             | 34                       | 1.12E+18           |
| H202 | AS55          | AS 355               | DOA250-C20F    | 420                | 2                 | 32.8          | 130.2       | 960.2      | 1262       | 4.9                     | 2.8197E+16    | 203.5              | 1.04              | 1.82             | 2.28             | 34                       | 1.01E+18           |
| H202 | A109          | AGUSTA A109          | DOA250-C20B    | 420                | 2                 | 32.8          | 130.2       | 960.2      | 1262       | 4.9                     | 2.8197E+16    | 203.5              | 1.04              | 1.82             | 2.28             | 34                       | 1.12E+18           |
| H202 | B105          | BO 105               | DOA250-C20     | 400                | 2                 | 32.2          | 124.3       | 968.4      | 1297.6     | 4.7                     | 2.7656E+16    | 199.6              | 1                 | 1.68             | 2.36             | 32.7                     | 9.07E+17           |
| H202 | B105          | BO 105               | DOA250-C20B    | 420                | 2                 | 32.8          | 130.2       | 960.2      | 1262       | 4.9                     | 2.8197E+16    | 203.5              | 1.04              | 1.82             | 2.28             | 34                       | 1.01E+18           |
| H203 | B06           | BELL 206B            | DOA250-C20     | 400                | 1                 | 18.1          | 75.4        | 380        | 491.7      | 2.7                     | 2.718E+16     | 109.5              | 0.61              | 0.62             | 1.03             | 19.3                     | 5.71E+17           |
| H203 | B06           | BELL 206B            | DOA250-C20B    | 420                | 1                 | 18.5          | 78.6        | 388.2      | 476.2      | 2.8                     | 2.7308E+16    | 101                | 0.58              | 0.72             | 0.9              | 18                       | 5.38E+17           |
| H203 | B06           | BELL 206B            | DOA250-C20     | 420                | 1                 | 18.5          | 78.6        | 388.2      | 476.2      | 2.8                     | 2.7308E+16    | 101                | 0.58              | 0.72             | 0.9              | 18                       | 5.38E+17           |
| H203 | E348          | ENSTROM 480          | DOA250-C20W    | 420                | 1                 | 18.5          | 78.6        | 388.2      | 476.2      | 2.8                     | 2.7308E+16    | 112.3              | 0.64              | 0.8              | 1                | 20.2                     | 3.68E+17           |
| H203 | H500          | HUGHES 501           | DOA250-C20B    | 420                | 1                 | 18.5          | 78.6        | 388.2      | 476.2      | 2.8                     | 2.7308E+16    | 112.3              | 0.64              | 0.8              | 1                | 20.2                     | 3.68E+17           |
| H203 | MD 52         | MD 520N              | DOA250-C20     | 400                | 1                 | 18.1          | 75.4        | 380        | 491.7      | 2.7                     | 2.718E+16     | 109.5              | 0.61              | 0.62             | 1.03             | 19.3                     | 5.38E+17           |
| H204 | B06           | BELL 206B            | DOA250-C20R    | 450                | 1                 | 19.1          | 85.1        | 354.8      | 457.7      | 3                       | 2.7702E+16    | 105                | 0.63              | 0.7              | 0.86             | 19.4                     | 5.78E+17           |
| H204 | B06           | BELL 206B            | DOA250-C20R-4  | 450                | 1                 | 19.1          | 85.1        | 354.8      | 457.7      | 3                       | 2.7702E+16    | 105                | 0.63              | 0.7              | 0.86             | 19.4                     | 5.78E+17           |
| H204 | B06           | BELL 206L            | DOA250-C20R    | 450                | 1                 | 19.1          | 85.1        | 354.8      | 457.7      | 3                       | 2.7702E+16    | 116.7              | 0.7               | 0.77             | 0.96             | 22                       | 6.38E+17           |
| H204 | H500          | MD 500N              | DOA250-C20R    | 450                | 1                 | 19.1          | 85.1        | 354.8      | 457.7      | 3                       | 2.7702E+16    | 116.7              | 0.7               | 0.77             | 0.96             | 21.6                     | 3.95E+17           |
| H205 | A109          | AGUSTA A109          | DOA250-C20R-1  | 450                | 2                 | 34            | 140         | 919.6      | 1206.8     | 5.2                     | 2.8552E+16    | 209.7              | 1.11              | 1.74             | 2.18             | 35.9                     | 1.18E+18           |
| H205 | A109          | A109C                | DOA250-C20R    | 450                | 2                 | 34            | 140         | 919.6      | 1206.8     | 5.2                     | 2.8552E+16    | 209.7              | 1.11              | 1.74             | 2.18             | 36                       | 1.18E+18           |
| H205 | B06T          | BELL Twin Ranger     | DOA250-C20R    | 450                | 2                 | 34            | 140         | 919.6      | 1206.8     | 5.2                     | 2.8552E+16    | 209.7              | 1.11              | 1.74             | 2.18             | 35.9                     | 1.06E+18           |
| H206 | B06           | BELL 206L            | DOA250-C30     | 650                | 1                 | 23.6          | 130.5       | 286.5      | 365.5      | 4.2                     | 3.0234E+16    | 149.4              | 1.11              | 0.66             | 0.82             | 32                       | 9.55E+17           |
| H206 | B06           | BELL 206L            | DOA250-C30F    | 650                | 1                 | 23.6          | 130.5       | 286.5      | 365.5      | 4.2                     | 3.0234E+16    | 149.4              | 1.11              | 0.66             | 0.82             | 32                       | 9.55E+17           |
| H207 | S76           | SUKHOI S76           | DOA250-C30S    | 650                | 2                 | 41.6          | 212.2       | 750.1      | 972.9      | 7.1                     | 3.084E+16     | 263                | 1.71              | 1.46             | 1.81             | 52                       | 7.59E+17           |
| H208 | B222          | BELL 222             | DOA250-C40B    | 715                | 2                 | 43.6          | 237.1       | 710.5      | 918.7      | 7.7                     | 3.1574E+16    | 277.8              | 1.92              | 1.39             | 1.72             | 57                       | 1.68E+18           |



Table 9: (Continued). Green shaded lines are piston engine powered helicopters.

| Code | Aircraft ICAO | Aircraft Name             | Engine Name        | Max SHP per engine | Number of Engines | LTO Emissions |              |            |            | One hour emissions      |                    |                   |                 | One hour HC (g) | One hour CO (g) | One hour PM non vol. (g) | One hour PM number |
|------|---------------|---------------------------|--------------------|--------------------|-------------------|---------------|--------------|------------|------------|-------------------------|--------------------|-------------------|-----------------|-----------------|-----------------|--------------------------|--------------------|
|      |               |                           |                    |                    |                   | LTO fuel (kg) | LTO NOx (kg) | LTO HC (g) | LTO CO (g) | LTO PM non volatile (g) | One hour fuel (kg) | One hour NOx (kg) | One hour HC (g) |                 |                 |                          |                    |
| H206 | B430          | Boeing 430                | DDA250-C408        | 715                | 2                 | 43.8          | 237.1        | 710.5      | 918.7      | 7.7                     | 3.1574E+16         | 277.8             | 1.92            | 1.29            | 1.72            | 57                       | 1.68E+16           |
| H211 | LYNX          | WESTLAND BATTLEFIELD LYNX | GEM 42-1           | 1120               | 2                 | 60.8          | 385.3        | 727.3      | 933.7      | 11.9                    | 3.9552E+16         | 415.9             | 3.62            | 1.36            | 1.66            | 103                      | 1.88E+16           |
| H221 | B407          | Boeing 407                | DDA250-C478        | 650                | 1                 | 23.6          | 130.5        | 288.5      | 365.5      | 4.2                     | 3.0234E+16         | 149.4             | 1.11            | 0.96            | 0.82            | 32                       | 9.55E+17           |
| H221 | MD60          | MD 600N                   | DDA250-C47M        | 808                | 1                 | 26.7          | 168.7        | 252.7      | 319.7      | 5.2                     | 3.2187E+16         | 175.7             | 1.46            | 0.62            | 0.76            | 42                       | 7.68E+17           |
| H222 | B06           | BELL OH-58A+              | BELL OH-58A        | 420                | 1                 | 18.5          | 78.6         | 368.2      | 476.2      | 2.8                     | 2.7368E+16         | 112.3             | 0.64            | 0.8             | 1               | 20                       | 5.97E+17           |
| H301 | B222          | BELL 222                  | LTS101-750C-1      | 735                | 2                 | 44.6          | 246          | 704        | 909.6      | 8                       | 3.1895E+16         | 282.6             | 1.98            | 1.38            | 1.7             | 59                       | 1.74E+18           |
| H301 | BK17          | BK117B                    | LTS101-750B-1      | 727                | 2                 | 44.2          | 240.5        | 700.3      | 905.5      | 7.9                     | 3.179E+16          | 280.7             | 1.96            | 1.38            | 1.71            | 58.1                     | 1.72E+18           |
| H302 | AS50          | ASTAR 70002               | TL LTS-101-742     | 742                | 1                 | 25.5          | 152.5        | 260.7      | 338.6      | 4.8                     | 3.1396E+16         | 164.5             | 1.3             | 0.63            | 0.77            | 38                       | 1.11E+18           |
| H303 | UH1           | BELL UH-1H                | TS3 113            | 1400               | 1                 | 41.7          | 359.8        | 214.7      | 266.7      | 10.3                    | 3.8725E+16         | 271.3             | 3.09            | 0.53            | 0.62            | 84.1                     | 1.23E+18           |
| H303 | KMAX          | K-1200                    | TS3 17A-1          | 1500               | 1                 | 43.3          | 388.5        | 206.5      | 257.6      | 11.1                    | 3.9765E+16         | 283.9             | 3.35            | 0.51            | 0.62            | 91                       | 1.69E+18           |
| H304 | UH1           | BELL AB-204B              | TS3-09A            | 1100               | 1                 | 36.6          | 273.3        | 246.5      | 308.9      | 8.1                     | 3.5482E+16         | 235.2             | 2.33            | 0.59            | 0.73            | 65                       | 9.55E+17           |
| H305 | H47           | CH-47 Chinook             | TS5-0A-714A        | 4800               | 2                 | 153.8         | 2380.2       | 319.6      | 385.1      | 51.8                    | 6.6267E+16         | 1223.6            | 24.23           | 0.83            | 0.98            | 471                      | 8.60E+18           |
| H401 | M26           | MIL M1-2                  | ISOTOW             | 400                | 2                 | 30            | 104.4        | 1095.3     | 1448.3     | 4.2                     | 3.0809E+16         | 196               | 0.94            | 1.94            | 2.43            | 32                       | 5.78E+17           |
| H402 | M18           | MIL M1-8                  | TV2-117            | 1500               | 2                 | 70.2          | 525.4        | 600.8      | 764.4      | 15.7                    | 4.3822E+16         | 485.1             | 4.95            | 1.15            | 1.41            | 136                      | 2.52E+18           |
| H403 | KA27          | KA-32A12                  | TV3-117VMA         | 2200               | 2                 | 86.4          | 816.8        | 472.6      | 591.7      | 23                      | 5.0548E+16         | 621.2             | 7.89            | 0.98            | 1.18            | 211                      | 3.85E+18           |
| H501 | H53           | SIKORSKY CH-53G (S-65)    | T 64-GE-7          | 3925               | 2                 | 125.6         | 1688.7       | 346.5      | 428.3      | 41.3                    | 6.2697E+16         | 977.5             | 17.3            | 0.82            | 0.98            | 368                      | 7.10E+18           |
| H502 | H53S          | SIKORSKY MH53E            | T64-GE-416         | 4380               | 2                 | 138.2         | 1998.9       | 330.6      | 404        | 46.2                    | 6.4685E+16         | 1083.4            | 20.37           | 0.81            | 0.98            | 427                      | 7.81E+18           |
| H503 | HUCO          | HUEYCOBR                  | T700-GE-401A       | 1800               | 2                 | 77.2          | 646.8        | 534.9      | 677        | 18.7                    | 4.6879E+16         | 541.3             | 6.17            | 1.06            | 1.25            | 168                      | 3.07E+18           |
| H503 | H60           | BLACK HAWK                | T700-GE-700        | 1622               | 2                 | 73            | 575.3        | 571        | 724.9      | 16.9                    | 4.6976E+16         | 507.8             | 5.43            | 1.11            | 1.32            | 15                       | 2.74E+18           |
| H505 | 2H4C          | DER                       | GE CT7-6           | 1920               | 2                 | 79.8          | 693.9        | 514.1      | 644.8      | 19.9                    | 4.7976E+16         | 594.7             | 6.66            | 1.03            | 1.24            | 180                      | 5.90E+18           |
| H508 | S52           | SIKORSKY S52A             | GE CT7-6A          | 2740               | 2                 | 98.8          | 1066.2       | 419.1      | 524.5      | 28.9                    | 5.509E+16          | 735.1             | 10.59           | 0.91            | 1.1             | 271                      | 3.97E+18           |
| H701 | M26           | MIL M1-26                 | I.O D-136          | 11400              | 2                 | 268.2         | 2426.4       | 2885.5     | 1853.6     | 95.9                    | 6.1279E+16         | 142827            | 4627.6          | 38.56           | 42.85           | 1428                     | 2.61E+19           |
| H801 | W3            | SOKOL                     | PZL W-3            | 880                | 2                 | 44.8          | 247.6        | 689.3      | 889.7      | 8.1                     | 3.6764E+16         | 309               | 2.35            | 1.31            | 1.61            | 68                       | 9.96E+17           |
| HF30 | AS32          | PUMA                      | MAKILA 1A1         | 1620               | 2                 | 78.7          | 391.1        | 48.4       | 457.6      | 16.4                    | 3.1774E+16         | 453.6             | 3.1             | 0.19            | 1.32            | 151                      | 4.96E+18           |
| HP41 | R22           | R22 BETA                  | HO-360             | 180                | 1                 | 7             | 17.2         | 99.3       | 997.0      | 0.5                     | 9.7598E+15         | 72                | 0.14            | 0.04            | 72              | 6.5                      | 9.55E+16           |
| HP42 | H130          | HUGHES 300                | H60-360            | 190                | 1                 | 8.7           | 20.8         | 121.9      | 865.0      | 1.2                     | 2.2557E+16         | 54.6              | 0.11            | 0.74            | 54.58           | 8                        | 1.17E+17           |
| HP42 | E428          | 280C                      | H60-360            | 190                | 1                 | 8.7           | 20.8         | 121.9      | 865.0      | 1.2                     | 2.2557E+16         | 54.6              | 0.11            | 0.74            | 54.58           | 8                        | 1.17E+17           |
| HP42 | H269          | Schweizer 269C            | H60-360            | 190                | 1                 | 8.7           | 20.8         | 121.9      | 865.0      | 1.2                     | 2.2557E+16         | 54.6              | 0.11            | 0.74            | 54.58           | 8                        | 1.17E+17           |
| HP43 | R44           | R44 RAVEN                 | H60-540            | 245                | 1                 | 8.5           | 19           | 110.8      | 845.0      | 1.2                     | 2.2979E+16         | 59.9              | 0.12            | 0.72            | 59.86           | 9.5                      | 1.39E+17           |
| HP44 | UH12          | HILLER UH-12A             | TVO-540-1B         | 320                | 1                 | 11.6          | 24.8         | 143.2      | 1160.0     | 0.8                     | 9.3726E+15         | 82.3              | 0.16            | 0.91            | 82.33           | 5.8                      | 8.50E+16           |
| HP45 | B47G          | Boeing 470-3B             | TVO-435            | 220                | 1                 | 7.3           | 16           | 103.4      | 730.0      | 0.5                     | 9.3726E+15         | 49.9              | 0.1             | 0.63            | 49.94           | 3.5                      | 5.13E+16           |
| HP45 | B47G          | Boeing 470-3B             | TVO-435            | 206                | 1                 | 9.2           | 20           | 121.1      | 950.0      | 0.7                     | 9.3726E+15         | 64.6              | 0.13            | 0.76            | 64.62           | 4.5                      | 6.59E+16           |
| HP51 | SYCA          | SYCAMORE                  | LEONIDES           | 550                | 1                 | 33.5          | 62           | 328.3      | 3350.0     | 2.7                     | 9.3726E+15         | 276.8             | 0.55            | 2.52            | 276.8           | 19.4                     | 2.84E+17           |
| HP61 | EXEC          | ROTORWAY EXEC 90          | ROTORWAY 90 RH-162 | 160                | 1                 | 5             | 11           | 77.8       | 500.0      | 0.4                     | 1.0449E+16         | 34.5              | 0.07            | 0.48            | 34.5            | 2.4                      | 3.52E+16           |
| HP62 | SCOR          | ROTORWAY SCORPION         | ROTORWAY RW 133    | 133                | 1                 | 4.2           | 9.3          | 71.5       | 400.0      | 0.3                     | 9.3726E+15         | 26                | 0.06            | 0.42            | 26.04           | 2                        | 2.93E+16           |

Table 10: Comparison between the 2009 and 2015 FOCA guidance

| Mean emission per helicopter | LTO fuel (kg) | Difference (%) | LTO PM (g) | Difference (%) | LTO HC (g) | Difference (%) | LTO CO (g) | Difference (%) | LTO NOx (g) | Difference (%) |
|------------------------------|---------------|----------------|------------|----------------|------------|----------------|------------|----------------|-------------|----------------|
| Single Engine FOCA 2009      | 26.6          |                | 5.5        |                | 314        |                | 402.3      |                | 192.2       |                |
| FOCA 2015                    | 22.9          | -16.2          | 4.1        | -34.1          | 309.6      | -1.4           | 402.3      | <1             | 127.9       | -50.3          |
| Light Twin Engine FOCA 2009  | 41.4          |                | 7.2        |                | 771.6      |                | 1003.2     |                | 214.5       |                |
| FOCA 2015                    | 41.2          | <1             | 7.1        | -1.4           | 752.6      | -2.5           | 1010.2     | <1             | 215.2       | <1             |
| Heavy Twin Engine FOCA 2009  | 95.3          |                | 26.3       |                | 525.9      |                | 662.6      |                | 988.3       |                |
| FOCA 2015                    | 92.9          | -2.6           | 25.4       | -3.5           | 501.5      | -4.9           | 661.8      | <1             | 932.6       | -6             |
| Piston Engine FOCA 2009      | 9.4           |                | 0.7        |                | 120.4      |                | 9371       |                | 19.4        |                |
| FOCA 2015                    | 10.2          | 7.8            | 0.96       | 27.1           | 129.2      | 6.8            | 10179      | 7.9            | 21.9        | 11.4           |

## References

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- 13) Engine specifications [GE Aviation](#)
- 14) Control of air pollution from aircraft and aircraft engines, US Environmental Protection Agency, US federal register, Volume 38, Number 136, July 17, 1973
- 15) Helicopter Pictures © by B. Baur, FOCA, Switzerland

Appendix A: LTO data, cruise data and estimated emissions for a single engine turboshaft helicopter

| SINGLE ENGINE TURBINE HELICOPTER LTO AND CRUISE DATA |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | CRUISE AND LTO MEAN                                                                      |     |        |                  |          |                     |                         |                        |                        |                        |
|------------------------------------------------------|--|-------------------|-----------------|--------------|-------------|--------------|----------|----------------|--------------------|-------------------|-------------------|-------------------|------------------------------------------------------------------------------------------|-----|--------|------------------|----------|---------------------|-------------------------|------------------------|------------------------|------------------------|
| HBXVA                                                |  | 19.02.2009        |                 |              |             |              |          |                |                    |                   |                   |                   | CR                                                                                       |     | Cruise | Mean Time (Min.) | Est. SHP | Est. Mean FF (kg/s) | Est. Mean EI NOx (g/kg) | Est. Mean EI HC (g/kg) | Est. Mean EI CO (g/kg) | Est. Mean EI PM (g/kg) |
| Type                                                 |  | AS350B2           |                 |              |             |              |          |                |                    |                   |                   |                   | CR                                                                                       | 75% | 60     | 549              | 0.043    | 7.588               | 4.197                   | 5.151                  | 0.221                  |                        |
| Engine                                               |  | Aniel 1D1         |                 |              |             |              |          |                |                    |                   |                   |                   | CR                                                                                       | 80% | 60     | 586              | 0.045    | 7.872               | 3.914                   | 4.795                  | 0.228                  |                        |
| Ref. Power:                                          |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | CR                                                                                       | 85% | 60     | 622              | 0.047    | 8.147               | 3.666                   | 4.483                  | 0.234                  |                        |
| 100%T                                                |  | 732 SHP           |                 |              |             |              |          |                |                    |                   |                   |                   | CR                                                                                       | 90% | 60     | 659              | 0.050    | 8.416               | 3.447                   | 4.207                  | 0.241                  |                        |
| 94%T (MCP)                                           |  | 688 SHP           |                 |              |             |              |          |                |                    |                   |                   |                   | Est. Mean Fuel (kg) Est. Mean NOx (g) Est. Mean HC (g) Est. Mean CO (g) Est. Mean PM (g) |     |        |                  |          |                     |                         |                        |                        |                        |
|                                                      |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | 75% 155 1178 651 799 34                                                                  |     |        |                  |          |                     |                         |                        |                        |                        |
|                                                      |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | 80% 163 1281 637 781 37                                                                  |     |        |                  |          |                     |                         |                        |                        |                        |
|                                                      |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | 85% 171 1389 625 765 40                                                                  |     |        |                  |          |                     |                         |                        |                        |                        |
|                                                      |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | 90% 178 1501 615 751 43                                                                  |     |        |                  |          |                     |                         |                        |                        |                        |
| TOM                                                  |  | 2020 kg           |                 |              |             |              |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| OM test end                                          |  | 1820 kg           |                 |              |             |              |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
|                                                      |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| LTO MODE                                             |  | Time Incr. (Min.) | Time sum (Min.) | Rotororque % | Engine N1 % | ROD (ft/min) | Est. SHP | Est. FF (kg/s) | Est. EI NOx (g/kg) | Est. EI HC (g/kg) | Est. EI CO (g/kg) | Est. EI PM (g/kg) |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| GI                                                   |  | 2                 | 2               | 15           | 70          | 0            | 51       | 0.014          | 1.974              | 54.375            | 71.639            | 0.118             |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| GR (full rotor RPM)                                  |  | 2                 | 4               | 23           | 80.2        | 0            | 168      | 0.026          | 3.879              | 15.045            | 19.129            | 0.144             |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| HOVER (GE)                                           |  | 0.3               | 4.3             | 65           | 90.3        | 0            | 476      | 0.039          | 6.986              | 4.889             | 6.038             | 0.207             |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| CL                                                   |  | 2.5               | 6.8             | 90           | 95.8        | 1000         | 659      | 0.050          | 8.416              | 3.447             | 4.207             | 0.241             |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
|                                                      |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | Est. Fuel (kg) Est. NOx (g) Est. HC (g) Est. CO (g) Est. PM (g)                          |     |        |                  |          |                     |                         |                        |                        |                        |
| GI                                                   |  | 4.7               | 14.9            | 137.3        | 178.9       | 0.6          |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| TO 5 NM                                              |  | 3.7               | 7.7             |              |             |              |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| TO 3000ft                                            |  | 3                 | 7               |              |             |              |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
|                                                      |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | Est. Mean Fuel (kg) Est. Mean NOx (g) Est. Mean HC (g) Est. Mean CO (g) Est. Mean PM (g) |     |        |                  |          |                     |                         |                        |                        |                        |
| GI                                                   |  | 4.9               | 14.9            | 14.9         | 17.2        | 151.0        | 0.6      |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| TO                                                   |  | 8.1               | 67.2            | 28.9         | 35.4        | 1.9          |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| Total 1                                              |  | 13.0              | 82.2            | 146.2        | 186.3       | 2.6          |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
|                                                      |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | Est. Mean Fuel (kg) Est. Mean NOx (g) Est. Mean HC (g) Est. Mean CO (g) Est. Mean PM (g) |     |        |                  |          |                     |                         |                        |                        |                        |
| LTO MODE                                             |  | Time Incr. (Min.) | Time sum (Min.) | Rotororque % | Engine N1 % | ROD (ft/min) | Est. SHP | Est. FF (kg/s) | Est. EI NOx (g/kg) | Est. EI HC (g/kg) | Est. EI CO (g/kg) | Est. EI PM (g/kg) |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| DCCT                                                 |  | 2.5               | 2.5             | 60           | 60          | 700          | 439      | 0.037          | 6.686              | 5.341             | 6.599             | 0.200             |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| DCCT                                                 |  | 1                 | 3.5             | 45           | 45          | 500          | 329      | 0.032          | 5.678              | 7.287             | 9.081             | 0.178             |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| AP                                                   |  | 0.7               | 4.2             | 30           | 30          | 500          | 220      | 0.028          | 4.511              | 11.292            | 14.243            | 0.155             |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| FINAL                                                |  | 0.3               | 4.5             | 15           | 78          | 250          | 110      | 0.020          | 3.043              | 23.872            | 30.743            | 0.131             |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| FINAL                                                |  | 0.7               | 5.2             | 20           | 80          | 250          | 146      | 0.023          | 3.563              | 17.496            | 22.339            | 0.139             |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| HOVER (GE)                                           |  | 0.3               | 5.5             | 60           | 89          | 0            | 439      | 0.037          | 6.686              | 5.341             | 6.599             | 0.200             |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| GI                                                   |  | 1                 | 6.5             | 15           | 7           | 69           | 0        | 0.014          | 1.974              | 54.375            | 71.639            | 0.118             |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
|                                                      |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | Est. Fuel (kg) Est. NOx (g) Est. HC (g) Est. CO (g) Est. PM (g)                          |     |        |                  |          |                     |                         |                        |                        |                        |
| GI                                                   |  | 0.9               | 1.7             | 46.3         | 61.0        | 0.1          |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| AP                                                   |  | 10.7              | 62.8            | 86.7         | 108.8       | 2.0          |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| Total 2                                              |  | 11.6              | 64.5            | 133.0        | 169.8       | 2.1          |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
|                                                      |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | Est. Mean Fuel (kg) Est. Mean NOx (g) Est. Mean HC (g) Est. Mean CO (g) Est. Mean PM (g) |     |        |                  |          |                     |                         |                        |                        |                        |
| AP                                                   |  | 10.8              | 62.0            | 76.9         | 95.8        | 1.9          |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| GI                                                   |  | 0.9               | 1.7             | 46.3         | 61.0        | 0.1          |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
| Total 2                                              |  | 11.6              | 63.6            | 123.2        | 156.8       | 2.0          |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |
|                                                      |  |                   |                 |              |             |              |          |                |                    |                   |                   |                   | Est. Mean Fuel (kg) Est. Mean NOx (g) Est. Mean HC (g) Est. Mean CO (g) Est. Mean PM (g) |     |        |                  |          |                     |                         |                        |                        |                        |
| TOTAL LTO                                            |  | 24.7              | 145.8           | 269.4        | 343.2       | 4.6          |          |                |                    |                   |                   |                   |                                                                                          |     |        |                  |          |                     |                         |                        |                        |                        |

Appendix B: LTO data, measured fuel flow and estimated emissions for a small twin engine turboshaft helicopter (continued on next page)

TWIN ENGINE TURBINE HELICOPTER LTO DATA

|       |            |
|-------|------------|
| HBXQE | 12.02.2009 |
|-------|------------|

|        |        |
|--------|--------|
| Type   | A109   |
| Engine | PW206C |

Ref. Power:

|                   |         |
|-------------------|---------|
| max. one engine   | 550 SHP |
| 100% Rotor-Torque | 900 SHP |
| MC per engine     | 450 SHP |

TOM (= MTOM)

|             |         |
|-------------|---------|
| TOM         | 2850 kg |
| OM test end | 2650 kg |

| LTO MODE            | Time Incr.<br>(Min) | Time sum<br>(Min.) | Rotor torque<br>% | Total<br>SHP % | Engine 1<br>N1 % | Engine 2<br>N1 % | Engine 1<br>FF (kg/s) | Engine 2<br>FF (kg/s) | RoC<br>RoD<br>(ft/min) | Est. SHP<br>per<br>engine | Est. FF per<br>engine<br>(kg/s) | Est. EI<br>NOx per<br>engine<br>(g/kg) | Est. EI HC<br>per engine<br>(g/kg) | Est. EI CO<br>per engine<br>(g/kg) | Est. EI PM<br>per engine<br>(g/kg) |
|---------------------|---------------------|--------------------|-------------------|----------------|------------------|------------------|-----------------------|-----------------------|------------------------|---------------------------|---------------------------------|----------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| GI                  | 3.3                 | 3.3                | 9                 | 6              | 61.5             | 60.3             | 0.01                  | 0.01                  | 0                      | 27                        | 0.010                           | 1.372                                  | 108.626                            | 145.882                            | 0.112                              |
| GR (full rotor RPM) | 0.7                 | 4                  | 21                | 21             | 75.5             | 74.7             | 0.01583               | 0.01583               | 0                      | 95                        | 0.019                           | 2.795                                  | 28.073                             | 36.315                             | 0.128                              |
| HOVER IGE           | 0                   | 4                  |                   |                |                  |                  |                       |                       | 0                      | 0                         |                                 |                                        |                                    |                                    |                                    |
| CL                  | 3                   | 7                  | 95                | 95             | 90.4             | 91.4             | 0.03333               | 0.03194               | 1000                   | 428                       | 0.036                           | 6.584                                  | 5.499                              | 6.800                              | 0.198                              |

| Meas.<br>Total fuel<br>(kg) |      |
|-----------------------------|------|
| GI                          | 5.3  |
| TO                          | 11.7 |
| Total 1                     | 17.0 |

|           |   |   |
|-----------|---|---|
| TO 5 NM   | 4 | 8 |
| TO 3000ft | 3 | 7 |

| Meas.<br>Total fuel<br>(kg) |      |
|-----------------------------|------|
| GI                          | 5.7  |
| TO                          | 13.0 |
| Total 1                     | 18.7 |

| LTO MODE | Time Incr.<br>(Min) | Time sum<br>(Min.) | Rotor torque<br>% | Total<br>SHP % | Engine 1<br>N1 % | Engine 2<br>N1 % | Engine 1<br>FF (kg/s) | Engine 2<br>FF (kg/s) | RoC<br>RoD<br>(ft/min) | Est. SHP<br>per<br>engine | Est. FF per<br>engine<br>(kg/s) | Est. EI<br>NOx per<br>engine<br>(g/kg) | Est. EI HC<br>per engine<br>(g/kg) | Est. EI CO<br>per engine<br>(g/kg) | Est. EI PM<br>per engine<br>(g/kg) |
|----------|---------------------|--------------------|-------------------|----------------|------------------|------------------|-----------------------|-----------------------|------------------------|---------------------------|---------------------------------|----------------------------------------|------------------------------------|------------------------------------|------------------------------------|
|----------|---------------------|--------------------|-------------------|----------------|------------------|------------------|-----------------------|-----------------------|------------------------|---------------------------|---------------------------------|----------------------------------------|------------------------------------|------------------------------------|------------------------------------|

|           |     |     |    |    |  |  |        |        |     |     |       |       |         |         |       |
|-----------|-----|-----|----|----|--|--|--------|--------|-----|-----|-------|-------|---------|---------|-------|
| DCT       | 2.5 | 2.5 | 60 | 60 |  |  | 0.0257 | 0.0257 | 700 | 270 | 0.028 | 5.072 | 9.033   | 11.324  | 0.166 |
| DCT       | 1   | 3.5 | 45 | 45 |  |  | 0.0222 | 0.0222 | 500 | 203 | 0.025 | 4.308 | 12.325  | 15.584  | 0.152 |
| AP        | 0.7 | 4.2 | 30 | 30 |  |  | 0.0167 | 0.0167 | 500 | 135 | 0.022 | 3.422 | 19.097  | 24.443  | 0.137 |
| FINAL     | 0.3 | 4.5 | 15 | 15 |  |  | 0.0148 | 0.0148 | 250 | 68  | 0.016 | 2.309 | 40.376  | 52.758  | 0.121 |
| FINAL     | 0.7 | 5.2 | 20 | 20 |  |  | 0.0158 | 0.0158 | 250 | 90  | 0.019 | 2.718 | 29.592  | 38.336  | 0.127 |
| HOVER IGE | 0.3 | 5.5 | 70 | 70 |  |  | 0.0275 | 0.0275 | 0   | 315 | 0.030 | 5.536 | 7.648   | 9.543   | 0.175 |
| GI        | 1   | 6.5 | 8  | 6  |  |  | 0.01   | 0.01   | 0   | 27  | 0.010 | 1.372 | 108.626 | 145.882 | 0.112 |

| Meas.<br>Total fuel<br>(kg) |      |
|-----------------------------|------|
| GI                          | 1.2  |
| TO                          | 14.6 |
| Total 1                     | 15.8 |

|          |     |     |
|----------|-----|-----|
| L 5NM    | 4.5 | 5.5 |
| L 3000ft | 5.5 | 6.5 |

| Meas.<br>Total fuel<br>(kg) |      |
|-----------------------------|------|
| GI                          | 1.2  |
| AP                          | 16.6 |
| Total 2                     | 17.8 |

|              |      |
|--------------|------|
| TOTAL<br>LTO | 32.9 |
|--------------|------|

|              |      |       |       |        |     |
|--------------|------|-------|-------|--------|-----|
| TOTAL<br>LTO | 36.5 | 171.4 | 920.6 | 1210.6 | 6.0 |
|--------------|------|-------|-------|--------|-----|

Appendix B: Weighted average LTO data, measured cruise fuel flow and estimated emissions for a small twin engine turboshaft helicopter

| CR                         | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (kg/s) | Est. Mean EI HC per engine (kg/s) | Est. Mean EI CO per engine (kg/s) | Est. Mean EI PM per engine (kg/s) |
|----------------------------|------------------|------------------|----------------------------|--------------------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
|                            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| 75%                        | 675              | 60               | 61                         | 338                            | 5757                               | 7098                              | 8840                              | 0.180                             |
| 80%                        | 720              | 60               | 65                         | 360                            | 5972                               | 6620                              | 8228                              | 0.185                             |
| 85%                        | 765              | 60               | 70                         | 383                            | 6181                               | 6201                              | 7693                              | 0.189                             |
| 90%                        | 810              | 60               | 74                         | 405                            | 6385                               | 5830                              | 7220                              | 0.194                             |
| Meas. Fuel (kg)            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | Est. Mean Fuel (kg)            | Est. Mean NOx (g)                  | Est. Mean HC (g)                  | Est. Mean CO (g)                  | Est. Mean PM (g)                  |
|                            |                  |                  |                            | 225                            | 1296                               | 1598                              | 1990                              | 41                                |
|                            |                  |                  |                            | 75%                            | 233                                | 1394                              | 1545                              | 1921                              |
|                            |                  |                  |                            | 80%                            | 242                                | 1497                              | 1501                              | 1863                              |
|                            |                  |                  |                            | 85%                            | 251                                | 1603                              | 1464                              | 1813                              |
|                            |                  |                  |                            | 90%                            |                                    |                                   |                                   | 49                                |
| 200                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| 75%                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| 80%                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| 85%                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| 90%                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| Mean est. SHP % per engine |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | Mean est. SHP per engine       | Est. Mean EI NOx per engine (kg/s) | Est. Mean EI HC per engine (kg/s) | Est. Mean EI CO per engine (kg/s) | Est. Mean EI PM per engine (kg/s) |
|                            |                  |                  |                            | 39                             | 0.012                              | 1.679                             | 74.045                            | 98.391                            |
|                            |                  |                  |                            | 75                             | 0.035                              | 6.452                             | 5.715                             | 7.075                             |
|                            |                  |                  |                            | 413                            |                                    |                                   |                                   | 0.195                             |
| LTO                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| LTO                        | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (kg/s) | Est. Mean EI HC per engine (kg/s) | Est. Mean EI CO per engine (kg/s) | Est. Mean EI PM per engine (kg/s) |
|                            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| GI                         | 9                | 4                | 7                          | 39                             | 0.012                              | 1.679                             | 74.045                            | 98.391                            |
| TO                         | 92               | 3                | 75                         | 413                            | 0.035                              | 6.452                             | 5.715                             | 7.075                             |
| Meas. Fuel (kg)            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | Est. Mean Fuel (kg)            | Est. Mean NOx (g)                  | Est. Mean HC (g)                  | Est. Mean CO (g)                  | Est. Mean PM (g)                  |
|                            |                  |                  |                            | 5.9                            | 9.9                                | 437.7                             | 581.6                             | 0.7                               |
|                            |                  |                  |                            | 13.0                           | 84.0                               | 74.4                              | 92.1                              | 2.5                               |
|                            |                  |                  |                            | 18.9                           | 93.9                               | 512.0                             | 673.6                             | 3.2                               |
| Mean est. SHP % per engine |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | Mean est. SHP per engine       | Est. Mean EI NOx per engine (kg/s) | Est. Mean EI HC per engine (kg/s) | Est. Mean EI CO per engine (kg/s) | Est. Mean EI PM per engine (kg/s) |
|                            |                  |                  |                            | 193                            | 0.025                              | 4.186                             | 13.018                            | 16.485                            |
|                            |                  |                  |                            | 39                             | 0.012                              | 1.679                             | 74.045                            | 98.391                            |
|                            |                  |                  |                            |                                |                                    |                                   |                                   | 0.149                             |
|                            |                  |                  |                            |                                |                                    |                                   |                                   | 0.115                             |
| LTO                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| LTO                        | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (kg/s) | Est. Mean EI HC per engine (kg/s) | Est. Mean EI CO per engine (kg/s) | Est. Mean EI PM per engine (kg/s) |
|                            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| AP                         | 43               | 5.5              | 35                         | 193                            | 0.025                              | 4.186                             | 13.018                            | 16.485                            |
| GI                         | 9                | 1                | 7                          | 39                             | 0.012                              | 1.679                             | 74.045                            | 98.391                            |
| Meas. Fuel (kg)            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | Est. Mean Fuel (kg)            | Est. Mean NOx (g)                  | Est. Mean HC (g)                  | Est. Mean CO (g)                  | Est. Mean PM (g)                  |
|                            |                  |                  |                            | 16.5                           | 70.8                               | 220.3                             | 279.0                             | 2.5                               |
|                            |                  |                  |                            | 1.5                            | 2.1                                | 91.3                              | 121.4                             | 0.1                               |
|                            |                  |                  |                            | 17.9                           | 72.9                               | 311.7                             | 400.4                             | 2.7                               |
| TOTAL LTO                  |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | 36.5                           | 166.8                              | 823.7                             | 1074.0                            | 5.9                               |

| CR                         | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (kg/s) | Est. Mean EI HC per engine (kg/s) | Est. Mean EI CO per engine (kg/s) | Est. Mean EI PM per engine (kg/s) |
|----------------------------|------------------|------------------|----------------------------|--------------------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
|                            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| 75%                        | 675              | 60               | 61                         | 338                            | 5757                               | 7098                              | 8840                              | 0.180                             |
| 80%                        | 720              | 60               | 65                         | 360                            | 5972                               | 6620                              | 8228                              | 0.185                             |
| 85%                        | 765              | 60               | 70                         | 383                            | 6181                               | 6201                              | 7693                              | 0.189                             |
| 90%                        | 810              | 60               | 74                         | 405                            | 6385                               | 5830                              | 7220                              | 0.194                             |
| Meas. Fuel (kg)            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | Est. Mean Fuel (kg)            | Est. Mean NOx (g)                  | Est. Mean HC (g)                  | Est. Mean CO (g)                  | Est. Mean PM (g)                  |
|                            |                  |                  |                            | 225                            | 1296                               | 1598                              | 1990                              | 41                                |
|                            |                  |                  |                            | 75%                            | 233                                | 1394                              | 1545                              | 1921                              |
|                            |                  |                  |                            | 80%                            | 242                                | 1497                              | 1501                              | 1863                              |
|                            |                  |                  |                            | 85%                            | 251                                | 1603                              | 1464                              | 1813                              |
|                            |                  |                  |                            | 90%                            |                                    |                                   |                                   | 49                                |
| 200                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| 75%                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| 80%                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| 85%                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| 90%                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| Mean est. SHP % per engine |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | Mean est. SHP per engine       | Est. Mean EI NOx per engine (kg/s) | Est. Mean EI HC per engine (kg/s) | Est. Mean EI CO per engine (kg/s) | Est. Mean EI PM per engine (kg/s) |
|                            |                  |                  |                            | 39                             | 0.012                              | 1.686                             | 73.401                            | 97.512                            |
|                            |                  |                  |                            | 78                             | 0.036                              | 6.564                             | 5.499                             | 6.800                             |
|                            |                  |                  |                            | 428                            |                                    |                                   |                                   | 0.198                             |
| LTO                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| LTO                        | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (kg/s) | Est. Mean EI HC per engine (kg/s) | Est. Mean EI CO per engine (kg/s) | Est. Mean EI PM per engine (kg/s) |
|                            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| GI                         | 9                | 4                | 7                          | 39                             | 0.012                              | 1.686                             | 73.401                            | 97.512                            |
| TO                         | 95               | 3                | 78                         | 428                            | 0.036                              | 6.564                             | 5.499                             | 6.800                             |
| Meas. Fuel (kg)            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | Est. Mean Fuel (kg)            | Est. Mean NOx (g)                  | Est. Mean HC (g)                  | Est. Mean CO (g)                  | Est. Mean PM (g)                  |
|                            |                  |                  |                            | 5.9                            | 10.0                               | 433.9                             | 576.4                             | 0.7                               |
|                            |                  |                  |                            | 13.0                           | 85.7                               | 71.6                              | 88.5                              | 2.6                               |
|                            |                  |                  |                            | 18.9                           | 95.7                               | 505.4                             | 664.9                             | 3.3                               |
| Mean est. SHP % per engine |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | Mean est. SHP per engine       | Est. Mean EI NOx per engine (kg/s) | Est. Mean EI HC per engine (kg/s) | Est. Mean EI CO per engine (kg/s) | Est. Mean EI PM per engine (kg/s) |
|                            |                  |                  |                            | 209                            | 0.026                              | 4.386                             | 11.909                            | 15.044                            |
|                            |                  |                  |                            | 27                             | 0.010                              | 1.372                             | 108.626                           | 145.882                           |
|                            |                  |                  |                            |                                |                                    |                                   |                                   | 0.153                             |
|                            |                  |                  |                            |                                |                                    |                                   |                                   | 0.112                             |
| LTO                        |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| LTO                        | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (kg/s) | Est. Mean EI HC per engine (kg/s) | Est. Mean EI CO per engine (kg/s) | Est. Mean EI PM per engine (kg/s) |
|                            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
| AP                         | 46               | 5.5              | 38                         | 209                            | 0.026                              | 4.386                             | 11.909                            | 15.044                            |
| GI                         | 6                | 1                | 5                          | 27                             | 0.010                              | 1.372                             | 108.626                           | 145.882                           |
| Meas. Fuel (kg)            |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | Est. Mean Fuel (kg)            | Est. Mean NOx (g)                  | Est. Mean HC (g)                  | Est. Mean CO (g)                  | Est. Mean PM (g)                  |
|                            |                  |                  |                            | 16.9                           | 74.2                               | 201.5                             | 254.6                             | 2.6                               |
|                            |                  |                  |                            | 1.2                            | 1.7                                | 134.0                             | 180.0                             | 0.1                               |
|                            |                  |                  |                            | 18.2                           | 75.9                               | 335.6                             | 434.6                             | 2.7                               |
| TOTAL LTO                  |                  |                  |                            |                                |                                    |                                   |                                   |                                   |
|                            |                  |                  |                            | 37.1                           | 171.6                              | 841.0                             | 1099.4                            | 6.0                               |

\*COO.2207.111.3.2270810\*



# Appendix C: LTO data, measured fuel flow and estimated emissions for a large twin engine turboshaft helicopter (continued on next page)

## TWIN ENGINE TURBINE HELICOPTER LTO DATA

|       |            |
|-------|------------|
| HBXQE | 12.01.2009 |
|-------|------------|

|        |            |
|--------|------------|
| Type   | AS32       |
| Engine | MAKILA 1A1 |

Ref. Power:

|                   |          |
|-------------------|----------|
| max. one engine   | 1820 SHP |
| 100% Rotor-Torque | 2906 SHP |
| MC per engine     | 1589 SHP |

|             |         |
|-------------|---------|
| TOM         | 7600 kg |
| OM test end | kg      |

(= MTOM)

|                     | Time Incr.<br>(Min) | Time sum<br>(Min.) | Rotortorque<br>% | Total<br>SHP % | Engine 1<br>N1 % | Engine 2<br>N1 % | Engine 1<br>FF (kg/s)       | Engine 2<br>FF (kg/s) | RoC<br>RoD<br>(ft/min) | Est. SHP<br>per<br>engine | Est. FF per<br>engine<br>(kg/s) | Est. EI<br>NOx per<br>engine<br>(g/kg) | Est. EI HC<br>per engine<br>(g/kg) | Est. EI CO<br>per engine<br>(g/kg) | Est. EI PM<br>per engine<br>(g/kg) |
|---------------------|---------------------|--------------------|------------------|----------------|------------------|------------------|-----------------------------|-----------------------|------------------------|---------------------------|---------------------------------|----------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| LTO MODE            |                     |                    |                  |                |                  |                  |                             |                       |                        |                           |                                 |                                        |                                    |                                    |                                    |
| GI                  | 3.3                 | 3.3                | 7                | 5.8            | 65               | 65               | 0.0233                      | 0.0233                | 0                      | 87                        | 0.022                           | 2.665                                  | 30.740                             | 39.865                             | 0.027                              |
| GR (full rotor RPM) | 0.7                 | 4                  | 15               | 15             | 75               | 75               | 0.0375                      | 0.0375                | 0                      | 225                       | 0.033                           | 4.570                                  | 11.015                             | 13.885                             | 0.069                              |
| HOVER IGE           | 0.1                 | 4.1                | 64               | 64             | 90               | 90               | 0.0653                      | 0.0653                | 0                      | 959                       |                                 |                                        |                                    |                                    |                                    |
| CL                  | 3                   | 7.1                | 81               | 81             | 90.3             | 90.1             | 0.075                       | 0.075                 | 1000                   | 1213                      | 0.079                           | 11.904                                 | 1.782                              | 2.136                              | 0.300                              |
|                     |                     |                    |                  |                |                  |                  | Meas.<br>Total fuel<br>(kg) |                       |                        |                           | Est. Fuel<br>(kg)               | Est. NOx<br>(g)                        | Est. HC (g)                        | Est. CO (g)                        | Est. PM (g)                        |
| TO 5 NM             | 4                   | 8                  |                  |                |                  |                  | GI                          | 12.4                  |                        |                           | 11.4                            | 35.6                                   | 294.5                              | 380.8                              | 0.4                                |
| TO 3000ft           | 3                   | 7                  |                  |                |                  |                  | TO                          | 27.8                  |                        |                           | 28.6                            | 340.4                                  | 51.0                               | 61.1                               | 8.6                                |
|                     |                     |                    |                  |                |                  |                  | Total 1                     | 40.2                  |                        |                           | 40.0                            | 376.1                                  | 345.5                              | 441.9                              | 9.0                                |

|           | Time Incr.<br>(Min) | Time sum<br>(Min.) | Rotortorque<br>% | Total<br>SHP % | Engine 1<br>N1 % | Engine 2<br>N1 % | Engine 1<br>FF (kg/s)       | Engine 2<br>FF (kg/s) | RoC<br>RoD<br>(ft/min) | Est. SHP<br>per<br>engine | Est. FF per<br>engine<br>(kg/s) | Est. EI<br>NOx per<br>engine<br>(g/kg) | Est. EI HC<br>per engine<br>(g/kg) | Est. EI CO<br>per engine<br>(g/kg) | Est. EI PM<br>per engine<br>(g/kg) |
|-----------|---------------------|--------------------|------------------|----------------|------------------|------------------|-----------------------------|-----------------------|------------------------|---------------------------|---------------------------------|----------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| LTO MODE  |                     |                    |                  |                |                  |                  |                             |                       |                        |                           |                                 |                                        |                                    |                                    |                                    |
| DCT       | 2.5                 | 2.5                | 45               | 45             | 84.2             | 84.5             | 0.0542                      | 0.0542                | 700                    | 674                       | 0.057                           | 8.526                                  | 3.362                              | 4.101                              | 0.188                              |
| DCT       | 1                   | 3.5                | 41               | 41             | 83.9             | 83.2             | 0.05                        | 0.05                  | 500                    | 614                       | 0.054                           | 8.088                                  | 3.718                              | 4.548                              | 0.174                              |
| AP        | 0.7                 | 4.2                | 30               | 30             |                  |                  | 0.047                       | 0.047                 | 500                    | 449                       | 0.047                           | 6.773                                  | 5.210                              | 6.433                              | 0.132                              |
| FINAL     | 0.3                 | 4.5                | 15               | 15             |                  |                  | 0.0375                      | 0.0375                | 250                    | 225                       | 0.033                           | 4.570                                  | 11.015                             | 13.885                             | 0.069                              |
| FINAL     | 0.7                 | 5.2                | 20               | 20             |                  |                  | 0.04                        | 0.04                  | 250                    | 300                       | 0.038                           | 5.381                                  | 8.073                              | 10.089                             | 0.090                              |
| HOVER IGE | 0.3                 | 5.5                | 65               | 65             |                  |                  | 0.066                       | 0.066                 | 0                      | 974                       | 0.069                           | 10.506                                 | 2.260                              | 2.727                              | 0.255                              |
| GI        | 1                   | 6.5                | 7                | 5.8            |                  |                  | 0.0233                      | 0.0233                | 0                      | 87                        | 0.022                           | 2.665                                  | 30.740                             | 39.865                             | 0.027                              |
|           |                     |                    |                  |                |                  |                  | Meas.<br>Total fuel<br>(kg) |                       |                        |                           | Est. Fuel<br>(kg)               | Est. NOx<br>(g)                        | Est. HC (g)                        | Est. CO (g)                        | Est. PM (g)                        |
| L 5NM     | 4.5                 | 5.5                |                  |                |                  |                  | GI                          | 2.8                   |                        |                           | 2.6                             | 6.9                                    | 79.9                               | 103.7                              | 0.1                                |
| L 3000ft  | 5.5                 | 6.5                |                  |                |                  |                  | TO                          | 33.3                  |                        |                           | 34.4                            | 273.9                                  | 146.9                              | 180.8                              | 5.9                                |
|           |                     |                    |                  |                |                  |                  | Total 1                     | 36.1                  |                        |                           | 37.0                            | 280.8                                  | 226.8                              | 284.4                              | 5.9                                |

|           |      |           |      |       |       |       |      |
|-----------|------|-----------|------|-------|-------|-------|------|
| TOTAL LTO | 76.3 | TOTAL LTO | 77.0 | 656.9 | 572.3 | 726.3 | 15.0 |
|-----------|------|-----------|------|-------|-------|-------|------|

\*COO.2207.111.3.2270810\*

CRUISE AND LTO MEAN

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MODEL

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MEAN

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MODEL

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MEAN

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MODEL

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MEAN

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MODEL

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MEAN

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MODEL

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MEAN

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MODEL

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MEAN

| CR            | Est. Total SHP   | Mean Time (Min.) | Est. SHP % per engine      | Est. SHP per engine (g/kg)      | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|---------------|------------------|------------------|----------------------------|---------------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| 75%           | 2247             | 60               | 62                         | 1124                            | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80%           | 2397             | 60               | 66                         | 1198                            | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85%           | 2547             | 60               | 70                         | 1273                            | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90%           | 2696             | 60               | 74                         | 1348                            | 0.086                          | 12.637                             | 1.950                          | 1.900                          | 0.322                             |
| NOT PRACTICAL |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| LTO           | Mean total SHP % | Mean Time (Min.) | Mean est. SHP % per engine | Mean est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|               |                  |                  |                            |                                 |                                |                                    |                                |                                |                                   |
| GI            | 9                | 4                | 7                          | 127                             | 0.025                          | 3.311                              | 20.331                         | 26.066                         | 0.040                             |
| TO            | 91               | 3                | 75                         | 1365                            | 0.086                          | 12.727                             | 1.959                          | 1.874                          | 0.325                             |

CRUISE AND LTO MODEL

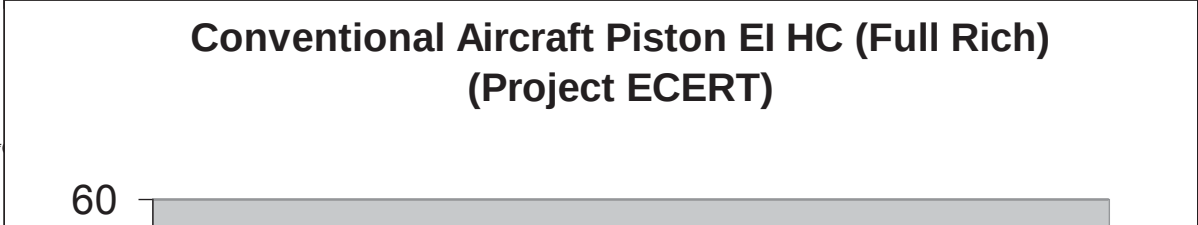
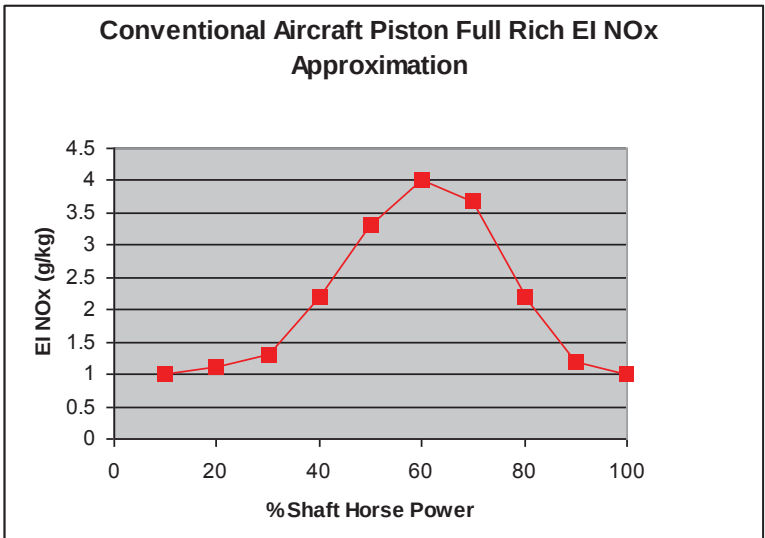
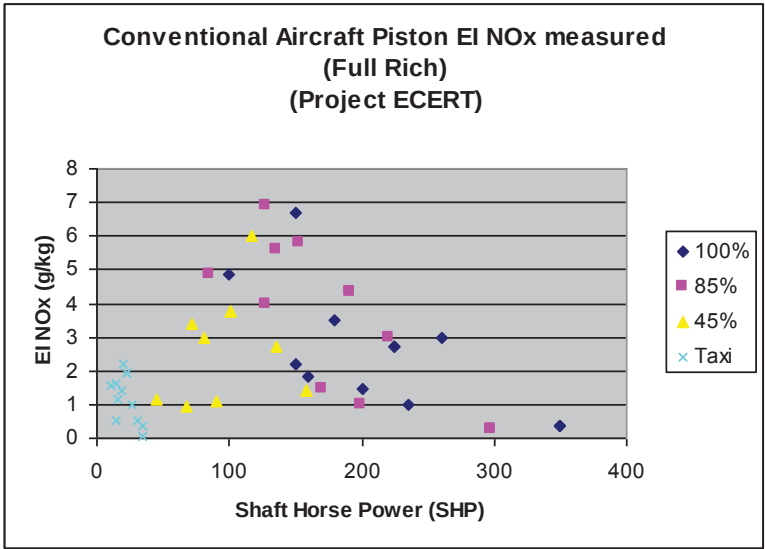
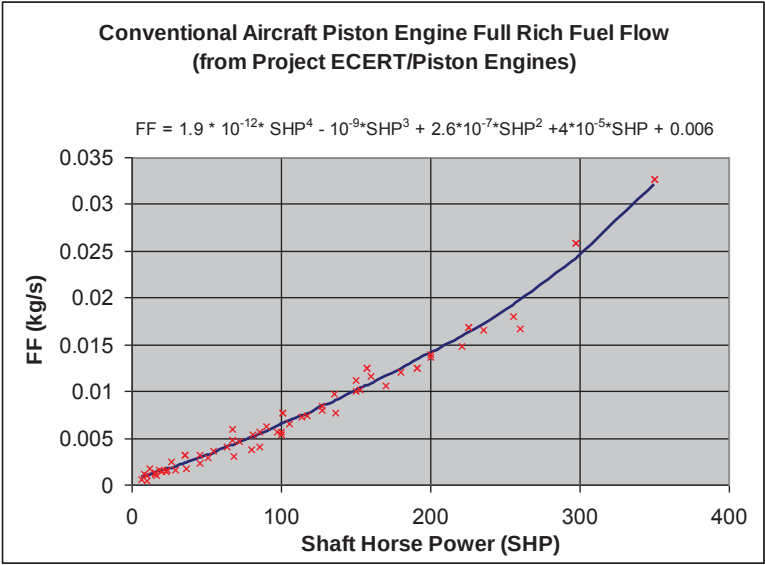
| CR  | Est. Total SHP | Mean Time (Min.) | Est. SHP % per engine | Est. SHP per engine (g/kg) | Est. Mean FF per engine (kg/s) | Est. Mean EI NOx per engine (g/kg) | Est. Mean HC per engine (g/kg) | Est. Mean CO per engine (g/kg) | Est. Mean EI PM per engine (g/kg) |
|-----|----------------|------------------|-----------------------|----------------------------|--------------------------------|------------------------------------|--------------------------------|--------------------------------|-----------------------------------|
|     |                |                  |                       |                            |                                |                                    |                                |                                |                                   |
| 75% | 2247           | 60               | 62                    | 1124                       | 0.076                          | 11.395                             | 1.937                          | 2.326                          | 0.284                             |
| 80% | 2397           | 60               | 66                    | 1198                       | 0.079                          | 11.820                             | 1.906                          | 2.166                          | 0.297                             |
| 85% | 2547           | 60               | 70                    | 1273                       | 0.082                          | 12.234                             | 1.892                          | 2.025                          | 0.310                             |
| 90% |                |                  |                       |                            |                                |                                    |                                |                                |                                   |

**Appendix D: Estimated one hour operation emissions and indicated scale factors (status March 2009). Example: Scale factor 0.9 means that the estimated one hour fuel and emissions have been multiplied by a factor of 0.9**

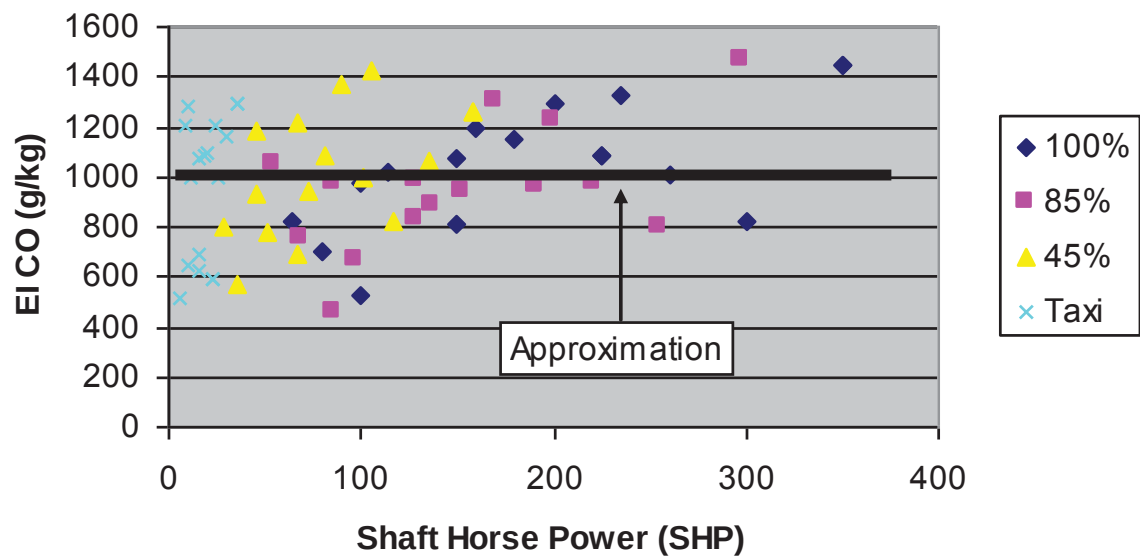
| Code | Aircraft_ICAO | Aircraft_Name       | Engine_Name      | Mean operating helicopter specific scale factor | One hour emissions |                   |                  |                  |                          |                    |
|------|---------------|---------------------|------------------|-------------------------------------------------|--------------------|-------------------|------------------|------------------|--------------------------|--------------------|
|      |               |                     |                  |                                                 | One hour fuel (kg) | One hour NOx (kg) | One hour HC (kg) | One hour CO (kg) | One hour PM non vol. (g) | One hour PM number |
| H005 | 2HAC          | PLACEHOLDER         | GE CT7-6         | 1                                               | 564.7              | 6.66              | 1.03             | 1.24             | 180                      | 5.90E+18           |
| H161 | 2HAC          | HAL DHRUV MK II     | TM333-2B2        | 1                                               | 434.1              | 3.95              | 1.29             | 1.56             | 112                      | 3.68E+18           |
| I005 | A109          | AGUSTA A109         | DDA250-C20R1     | 1                                               | 209.7              | 1.11              | 1.74             | 2.18             | 35.9                     | 1.18E+18           |
| I002 | A109          | AGUSTA A109A II     | DDA250-C20B      | 1                                               | 203.5              | 1.04              | 1.82             | 2.28             | 34                       | 1.12E+18           |
| H108 | A109          | AGUSTA A109 K2      | ARRIEL 1K1       | 0.9                                             | 255                | 1.79              | 1.24             | 1.53             | 53                       | 1.75E+18           |
| H022 | A109          | AGUSTA A109E        | PW206C           | 0.9                                             | 194.4              | 1.01              | 1                | 3.73             | 35.8                     | 1.18E+18           |
| H124 | A109          | AGUSTA A109 Power   | ARRIUS 2K        | 0.9                                             | 240.7              | 1.61              | 1.3              | 1.61             | 48                       | 1.58E+18           |
| I002 | A109          | AGUSTA A109         | ALLISON 250-C20B | 1                                               | 203.5              | 1.04              | 1.82             | 2.28             | 34                       | 1.12E+18           |
| I005 | A109          | AGUSTA A109C        | DDA250-C20R      | 1                                               | 209.7              | 1.11              | 1.74             | 2.18             | 36                       | 1.18E+18           |
| H030 | A109          | AGUSTA A109         | PW207C           | 0.9                                             | 177.7              | 0.93              | 0.9098           | 3.4              | 35                       | 1.15E+18           |
| H012 | A119          | AGUSTA A119         | PT6B-37          | 1                                               | 216                | 1.77              | 0.07             | 0.78             | 54                       | 1.78E+18           |
| H015 | A139          | AGUSTA A139         | PT6T-3D          | 1                                               | 360                | 2.56              | 0.26             | 1.98             | 112                      | 3.68E+18           |
| H017 | A139          | AGUSTA A139         | PT6C-67C         | 1                                               | 412.2              | 3.55              | 1.37             | 1.65             | 101                      | 3.33E+18           |
| H131 | AL02          | ALOUETTE II         | ARTOUSTE IIC5    | 1                                               | 109.7              | 0.61              | 0.82             | 1.02             | 19.4                     | 6.39E+17           |
| H131 | AL02          | ALOUETTE II         | ARTOUSTE IIC6    | 1                                               | 109.7              | 0.61              | 0.82             | 1.02             | 19.4                     | 6.39E+17           |
| H132 | AL03          | SA316B ALOUETTE III | ARTOUSTE IIIB    | 1                                               | 134.9              | 0.92              | 0.7              | 0.86             | 27.2                     | 8.96E+17           |
| H142 | AL03          | SA316B ALOUETTE III | ASTAZOU XIVB     | 1                                               | 139.4              | 0.98              | 0.69             | 0.85             | 29                       | 9.52E+17           |
| H030 | AS32          | SUPER PUMA          | MAKILA 1A1       | 0.9                                             | 453.6              | 3.1               | 0.19             | 1.32             | 151                      | 4.96E+18           |
| H102 | AS35          | ECUREUIL AS 350     | ARRIEL 1B        | 0.9                                             | 133.2              | 0.97              | 0.6              | 0.75             | 29                       | 9.39E+17           |
| H106 | AS35          | ECUREUIL AS 350B    | ARRIEL 1D1       | 0.9                                             | 146.5              | 1.16              | 0.57             | 0.7              | 33                       | 1.10E+18           |
| H110 | AS35          | AS 350 B3           | ARRIEL 2B        | 0.83                                            | 151.6              | 1.3               | 0.51             | 0.62             | 37                       | 1.22E+18           |
| H110 | AS35          | AS 350 B3           | ARRIEL 2B1       | 0.83                                            | 151.6              | 1.3               | 0.51             | 0.62             | 37                       | 1.22E+18           |
| H113 | AS50          | AS 350B3 ASTAR      | ARRIEL 2D        | 1                                               | 200.3              | 1.82              | 0.59             | 0.72             | 52                       | 1.53E+18           |
| I002 | AS50          | AS 350 SD2 ASTAR    | LTS-101-700D2    | 1                                               | 164.5              | 1.3               | 0.63             | 0.77             | 38                       | 1.11E+18           |
| H106 | AS50          | AS 550 FENNEC       | ARRIEL 1D1       | 0.9                                             | 146.5              | 1.16              | 0.57             | 0.7              | 33.4                     | 9.87E+17           |
| I002 | AS55          | AS 355              | DDA250-C20F      | 1                                               | 203.5              | 1.04              | 1.82             | 2.28             | 34                       | 1.01E+18           |
| H107 | AS55          | AS 555 FENNEC       | ARRIEL 1D1       | 1                                               | 277.1              | 1.91              | 1.4              | 1.72             | 57                       | 1.68E+18           |
| H121 | AS55          | AS 355 N            | ARRIUS 1A        | 1                                               | 216.2              | 1.19              | 1.67             | 2.08             | 38                       | 1.12E+18           |
| H133 | AS55          | AS 355 ECUREUIL 21  | ARTOUSTE III B   | 1                                               | 235.7              | 1.41              | 1.53             | 1.91             | 44                       | 1.29E+18           |
| H101 | AS65          | AS 365 C1 DAUPHIN   | ARRIEL 1A1       | 1                                               | 261                | 1.7               | 1.47             | 1.83             | 51                       | 1.51E+18           |
| H101 | AS65          | AS 365 C2 DAUPHIN   | ARRIEL 1A2       | 1                                               | 261                | 1.7               | 1.47             | 1.83             | 51.2                     | 1.51E+18           |
| H103 | AS65          | AS 365 N DAUPHIN    | ARRIEL 1C        | 1                                               | 265.2              | 1.75              | 1.45             | 1.8              | 53                       | 1.55E+18           |
| H104 | AS65          | AS 365 N1 DAUPHIN   | ARRIEL 1C1       | 1                                               | 274.3              | 1.87              | 1.41             | 1.73             | 56                       | 1.65E+18           |
| H105 | AS65          | AS 365 DAUPHIN      | ARRIEL 1C2       | 1                                               | 289.5              | 2.08              | 1.35             | 1.68             | 61                       | 1.81E+18           |
| H111 | AS65          | AS 365 N3 DAUPHIN   | ARRIEL 2C        | 1                                               | 308.9              | 2.35              | 1.31             | 1.61             | 68                       | 2.01E+18           |
| I003 | B06           | BELL 206B           | DDA250-C20       | 1                                               | 109.5              | 0.61              | 0.82             | 1.03             | 19.3                     | 5.71E+17           |
| I003 | B06           | BELL 206B           | DDA250-C20B      | 0.9                                             | 101                | 0.58              | 0.72             | 0.9              | 18                       | 5.38E+17           |
| I003 | B06           | BELL 206B           | DDA250-C20J      | 0.9                                             | 101                | 0.58              | 0.72             | 0.9              | 18                       | 5.38E+17           |
| I004 | B06           | BELL 206B           | DDA250-C20R      | 0.9                                             | 105                | 0.63              | 0.7              | 0.86             | 19.4                     | 5.73E+17           |
| I004 | B06           | BELL 206B           | DDA250-C20R/4    | 0.9                                             | 105                | 0.63              | 0.7              | 0.86             | 19.4                     | 5.73E+17           |
| I004 | B06           | BELL 206L           | DDA250-C20R      | 1                                               | 116.7              | 0.7               | 0.77             | 0.96             | 22                       | 6.39E+17           |
| I006 | B06           | BELL 206L           | DDA250-C30       | 1                                               | 149.4              | 1.11              | 0.66             | 0.82             | 32                       | 9.55E+17           |
| I006 | B06           | BELL 206L           | DDA250-C30P      | 1                                               | 149.4              | 1.11              | 0.66             | 0.82             | 32                       | 9.55E+17           |
| I022 | B06           | BELL OH-58A+        | RR T63-A-720     | 1                                               | 112.3              | 0.64              | 0.8              | 1                | 20                       | 5.97E+17           |
| I005 | B06T          | BELL Twin Ranger    | DDA250-C20R      | 1                                               | 209.7              | 1.11              | 1.74             | 2.18             | 35.9                     | 1.06E+18           |
| I002 | B105          | BO 105              | DDA250-C20       | 1                                               | 199.6              | 1                 | 1.88             | 2.36             | 32.7                     | 9.67E+17           |
| I002 | B105          | BO 105              | DDA250-C20B      | 1                                               | 203.5              | 1.04              | 1.82             | 2.28             | 34                       | 1.01E+18           |
| I008 | B222          | BELL 222            | DDA250-C40B      | 1                                               | 277.8              | 1.92              | 1.39             | 1.72             | 57                       | 1.68E+18           |
| H001 | B222          | BELL 222            | LTS101-750C 1    | 1                                               | 282.6              | 1.98              | 1.38             | 1.7              | 59                       | 1.74E+18           |
| I021 | B407          | Be1 407             | DDA250-C47B      | 1                                               | 149.4              | 1.11              | 0.66             | 0.82             | 32                       | 9.55E+17           |
| H013 | B412          | Be1 412             | PT6T-3           | 1                                               | 360                | 4.1               | 1.76             | 1.12             | 112                      | 3.30E+18           |
| H031 | B427          | Be1 427             | PW207D           | 1                                               | 197.4              | 1.19              | 0                | 1.91             | 37                       | 1.04E+18           |
| I008 | B430          | Be1 430             | DDA250-C40B      | 1                                               | 277.8              | 1.92              | 1.39             | 1.72             | 57                       | 1.68E+18           |
| H108 | BK17          | BK117               | ARRIEL 1E2       | 1                                               | 283.3              | 1.98              | 1.38             | 1.7              | 59                       | 1.74E+18           |

| Code | Aircraft_ICAO | Aircraft_Name             | Engine_Name        | Mean operating helicopters specific scale factor | One hour emissions |                   | One hour HC (kg) | One hour CO (kg) | One hour PM non vol. (g) | One hour PM number |
|------|---------------|---------------------------|--------------------|--------------------------------------------------|--------------------|-------------------|------------------|------------------|--------------------------|--------------------|
|      |               |                           |                    |                                                  | One hour fuel (kg) | One hour NOx (kg) |                  |                  |                          |                    |
| H108 | BK17          | BK117 C-2                 | ARRIEL 1E2         | 1                                                | 283.3              | 1.98              | 1.38             | 1.7              | 59                       | 1.74E+18           |
| H301 | BK17          | BK117B                    | LTS101-750B.1      | 1                                                | 280.7              | 1.96              | 1.38             | 1.71             | 58.1                     | 1.72E+18           |
| H123 | EC20          | EC 120                    | ARRIUS 2F          | 1                                                | 114                | 0.66              | 0.79             | 0.98             | 21                       | 6.15E+17           |
| H132 | EC20          | EC-120 COLIBRI            | ARTOUSTE III B     | 1                                                | 134.9              | 0.92              | 0.7              | 0.86             | 27                       | 8.04E+17           |
| H110 | EC30          | EC 130 B4                 | ARRIEL 2B1         | 1                                                | 182.6              | 1.57              | 0.61             | 0.75             | 44.6                     | 1.32E+18           |
| H122 | EC35          | EC 135                    | ARRIUS 2B1         | 1                                                | 259.3              | 1.66              | 1.49             | 1.84             | 51                       | 1.50E+18           |
| H122 | EC35          | EC 135                    | ARRIUS 2B2         | 1                                                | 259.3              | 1.66              | 1.49             | 1.84             | 51                       | 1.50E+18           |
| H111 | EC55          | EC 155 B                  | ARRIEL 2C1         | 1                                                | 308.9              | 2.35              | 1.31             | 1.61             | 68                       | 1.24E+18           |
| H112 | EC55          | EC 155 B1                 | ARRIEL 2C2         | 1                                                | 337.4              | 2.73              | 1.26             | 1.55             | 79                       | 1.44E+18           |
| H203 | EN48          | ENSTROM 480               | DDA250-C20W        | 1                                                | 112.3              | 0.64              | 0.8              | 1                | 20.2                     | 3.69E+17           |
| H200 | EXPL          | MD 900                    | PW206A             | 1                                                | 223.2              | 1.08              | 0.87             | 3.39             | 43                       | 7.88E+17           |
| H302 | EXPL          | MD 902                    | PW207E             | 1                                                | 212.8              | 1.05              | 0.83             | 3.22             | 36                       | 6.53E+17           |
| H141 | GAZL          | SA341 GAZELLE             | ASTAZOU IIIA       | 1                                                | 148.5              | 1.08              | 0.67             | 0.82             | 32                       | 5.83E+17           |
| H141 | GAZL          | SA341 GAZELLE             | ASTAZOU IIIN2      | 1                                                | 148.5              | 1.08              | 0.67             | 0.82             | 32                       | 5.83E+17           |
| H142 | GAZL          | SA342 GAZELLE             | ASTAZOU XIVG       | 1                                                | 139.4              | 0.98              | 0.69             | 0.85             | 28.9                     | 5.28E+17           |
| H142 | GAZL          | SA342 GAZELLE             | ASTAZOU XIVH       | 1                                                | 139.4              | 0.98              | 0.69             | 0.85             | 28.9                     | 5.28E+17           |
| H305 | H47           | CH-47 Chinook             | T55-GA-714A        | 1                                                | 1223.6             | 24.23             | 0.83             | 0.98             | 471                      | 8.60E+18           |
| H201 | H500          | HUGHES 500                | DDA250-C18         | 1                                                | 98.8               | 0.48              | 0.96             | 1.2              | 16                       | 2.94E+17           |
| H203 | H500          | HUGHES 501                | DDA250-C20B        | 1                                                | 112.3              | 0.64              | 0.8              | 1                | 20.2                     | 3.69E+17           |
| H204 | H500          | MD 500N                   | DDA250-C20R        | 1                                                | 159.2              | 1.08              | 0.83             | 1.02             | 32.2                     | 5.89E+17           |
| H501 | H53           | SIKORSKY CH-53G (S-65)    | T64-GE-7           | 1                                                | 977.5              | 17.3              | 0.82             | 0.98             | 388                      | 7.10E+18           |
| H502 | H53S          | SIKORSKY MH53E            | T64-GE-416         | 1                                                | 1083.4             | 20.37             | 0.81             | 0.98             | 427                      | 7.81E+18           |
| H503 | H60           | SIKORSKY BLACK HAWK       | T700-GE-700        | 1                                                | 507.6              | 5.43              | 1.11             | 1.32             | 15                       | 2.74E+18           |
| H503 | HUCO          | BELL 209 HUEYCOBRA        | T700-GE-401        | 1                                                | 541.3              | 6.17              | 1.06             | 1.25             | 168                      | 3.07E+18           |
| H403 | KA27          | KA-32A12                  | TV3-117VMA         | 1                                                | 621.2              | 7.89              | 0.98             | 1.18             | 211                      | 3.85E+18           |
| H303 | KMAX          | K-1200                    | T53 17A-1          | 1                                                | 283.9              | 3.35              | 0.51             | 0.62             | 91                       | 1.66E+18           |
| H132 | LAMA          | SA315B LAMA               | ARTOUSTE IIIB      | 1.18                                             | 159.2              | 1.08              | 0.83             | 1.02             | 32.2                     | 5.89E+17           |
| H211 | LYNX          | WESTLAND BATTLEFIELD LYNX | GEM 42-1           | 1                                                | 415.9              | 3.62              | 1.36             | 1.66             | 103                      | 1.88E+18           |
| H203 | MD52          | MD 520N                   | DDA250-C20         | 1                                                | 109.5              | 0.61              | 0.82             | 1.03             | 19.3                     | 3.53E+17           |
| H221 | MD60          | MD 600N                   | DDA250-C47M        | 1                                                | 175.7              | 1.46              | 0.62             | 0.76             | 42                       | 7.68E+17           |
| H401 | MI26          | MIL MI-2                  | ISOTOW GTD-350     | 1                                                | 196                | 0.94              | 1.94             | 2.43             | 32                       | 5.78E+17           |
| H701 | MI26          | MIL MI-26                 | LO D-136           | 1                                                | 142827             | 4627.6            | 38.56            | 42.85            | 1428                     | 2.61E+19           |
| H402 | MI8           | MIL MI-8                  | TV2-117            | 1                                                | 485.1              | 4.95              | 1.15             | 1.41             | 138                      | 2.52E+18           |
| H011 | S76           | SIKORSKY S76              | PT6B-36A           | 1                                                | 360                | 2.99              | 1.3              | 0.79             | 85                       | 1.25E+18           |
| H114 | S76           | SIKORSKY S-76 C+          | ARRIEL 2S1         | 1                                                | 313.4              | 2.38              | 1.3              | 1.6              | 70                       | 1.02E+18           |
| H115 | S76           | SIKORSKY S-76C++          | ARRIEL 2S2         | 1                                                | 324.5              | 2.56              | 1.28             | 1.56             | 74                       | 1.08E+18           |
| H207 | S76           | SIKORSKY S76              | DDA250-C30S        | 1                                                | 263                | 1.71              | 1.46             | 1.81             | 52                       | 7.59E+17           |
| H506 | S92           | SIKORSKY S92A             | GE CT7-8A          | 1                                                | 735.1              | 10.59             | 0.91             | 1.1              | 271                      | 3.97E+18           |
| H151 | TIGR          | EUROCOPTER 665 TIGER      | MTR 390            | 1                                                | 476                | 4.76              | 1.17             | 1.43             | 133                      | 1.95E+18           |
| H303 | UH1           | BELL UH-1H                | T53 L13            | 1                                                | 271.3              | 3.09              | 0.53             | 0.62             | 84.1                     | 1.23E+18           |
| H304 | UH1           | AGUSTA-BELL AB-204B       | T53-09A            | 1                                                | 235.2              | 2.33              | 0.59             | 0.73             | 65                       | 9.55E+17           |
| H801 | W3            | PZL W-3 SOKOL             | PZL-10W            | 1                                                | 309                | 2.35              | 1.31             | 1.61             | 68                       | 9.90E+17           |
| HP45 | B47G          | Be1 47G-3B                | TVO-435-B1A        | 1                                                | 63.4               | 0.3               | 0.65             | 0.82             | 10                       | 4.60E+17           |
| HP45 | B47G          | Be1 47G                   | TVO-435-A1D        | 1                                                | 90.7               | 0.39              | 1.14             | 1.45             | 13.7                     | 2.01E+17           |
| HP44 | UH12          | HILLER UH-12A             | TVO-540-1B         | 1                                                | 82.3               | 0.44              | 0.91             | 0.86             | 14                       | 2.05E+17           |
| HP42 | HLJ30         | HUGHES 300                | HIO-360            | 1                                                | 54.6               | 0.05              | 0.74             | 54.58            | 8                        | 1.17E+17           |
| HP42 | H269          | Schweizer 269C            | HIO-360            | 1                                                | 54.6               | 0.05              | 0.74             | 54.58            | 8                        | 1.17E+17           |
| HP62 | SCOR          | ROTORWAY SCORPION         | ROTORWAY RW 133    | 1                                                | 2.4                | 0.01              | 0.04             | 0.07             | 0.3                      | 4.39E+15           |
| HP42 | EN28          | ENSTROM 280C              | HIO-360            | 1                                                | 54.6               | 0.05              | 0.74             | 54.58            | 8                        | 1.46E+17           |
| HP43 | R44           | R44 RAVEN                 | HIO-540            | 1                                                | 59.9               | 0.06              | 0.72             | 59.86            | 9                        | 1.74E+17           |
| HP51 | SYCA          | BRISTOL SYCAMORE          | ALVIS LEONIDES     | 1                                                | 144.2              | 1.04              | 1.31             | 0.84             | 30                       | 4.45E+17           |
| HP41 | R22           | R22 BETA                  | HO-360             | 1                                                | 72                 | 0.07              | 0.84             | 72               | 6                        | 1.19E+17           |
| HP61 | EXEC          | ROTORWAY EXEC 90          | ROTORWAY RI RW-102 | 1                                                | 2.4                | 0.01              | 0.05             | 0.06             | 0.3                      | 5.49E+15           |

Appendix E: Graphical Representation of Approximation Functions for Piston Engines

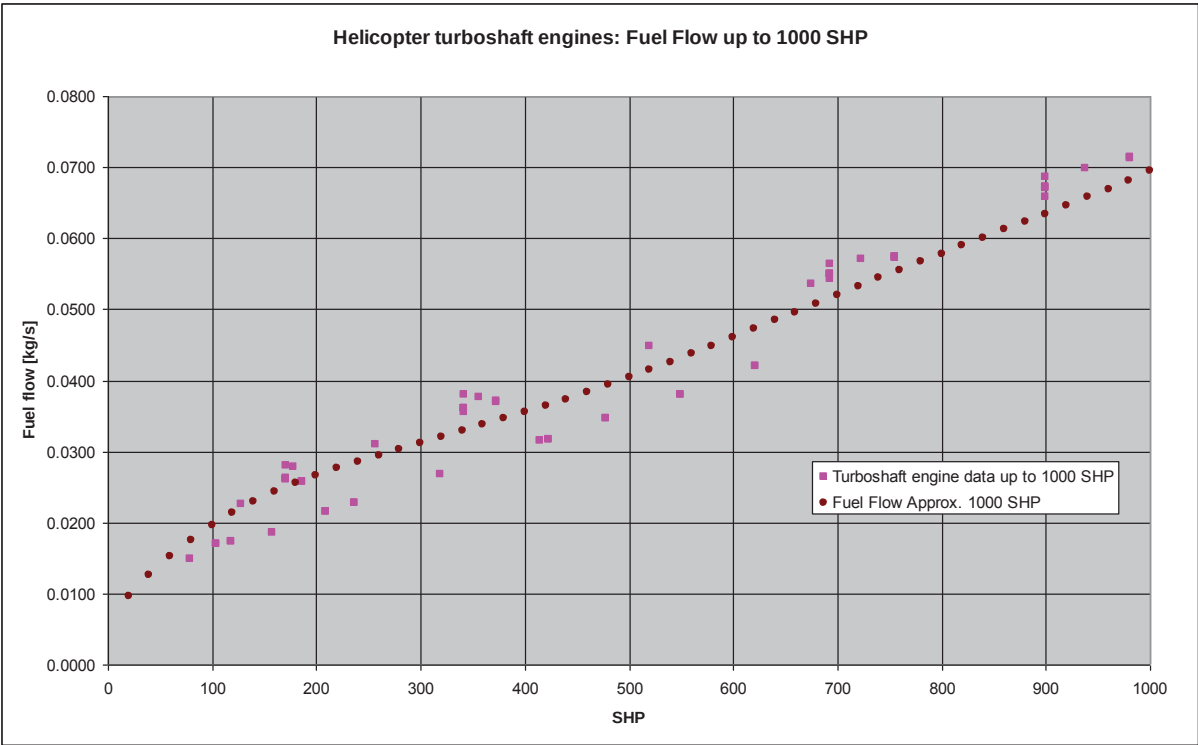
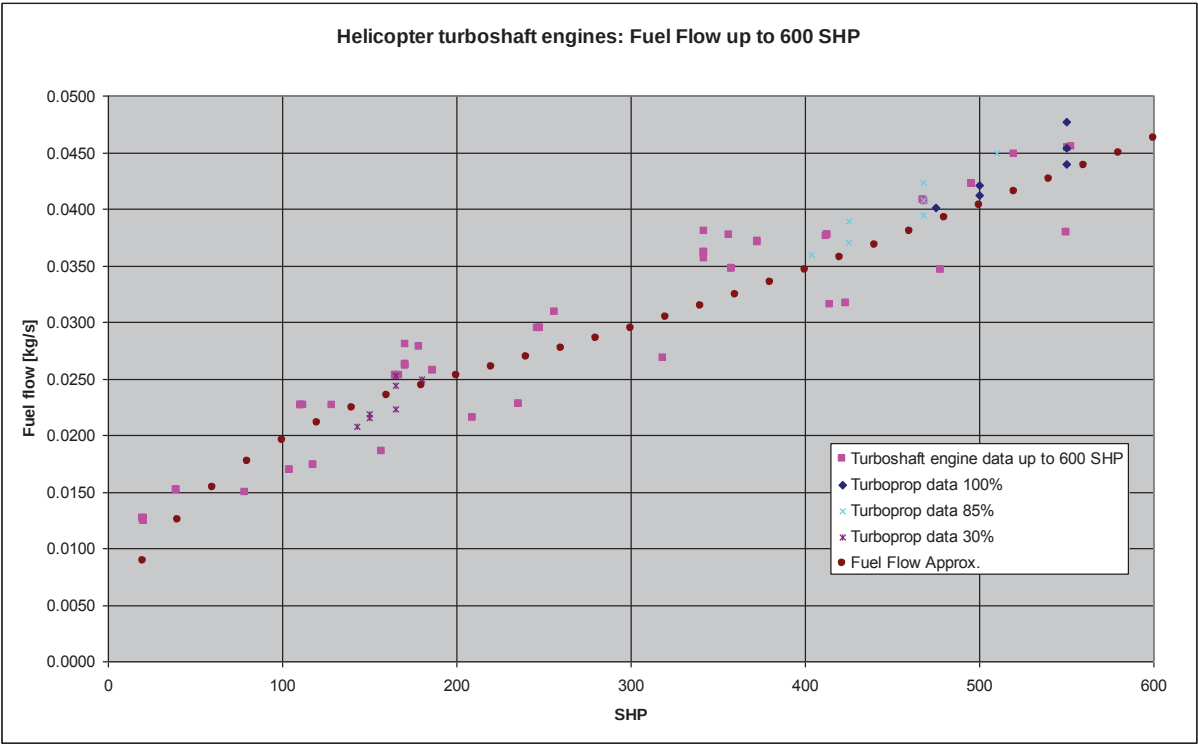


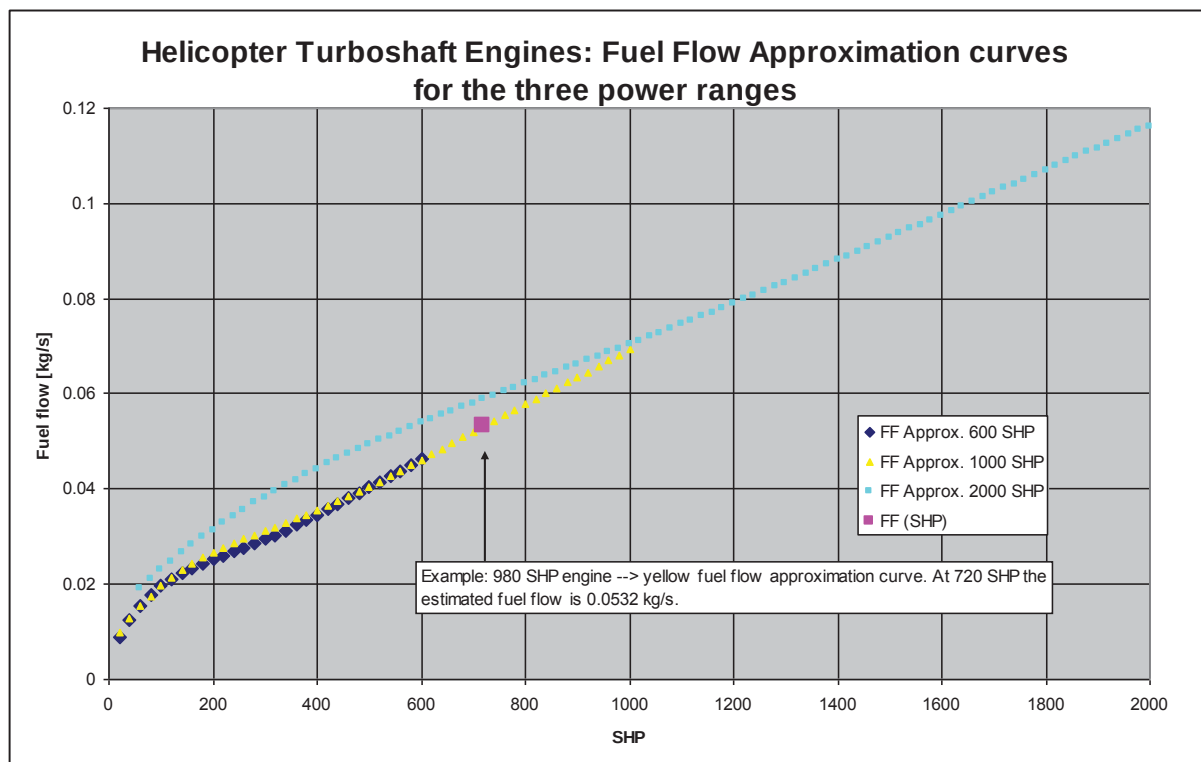
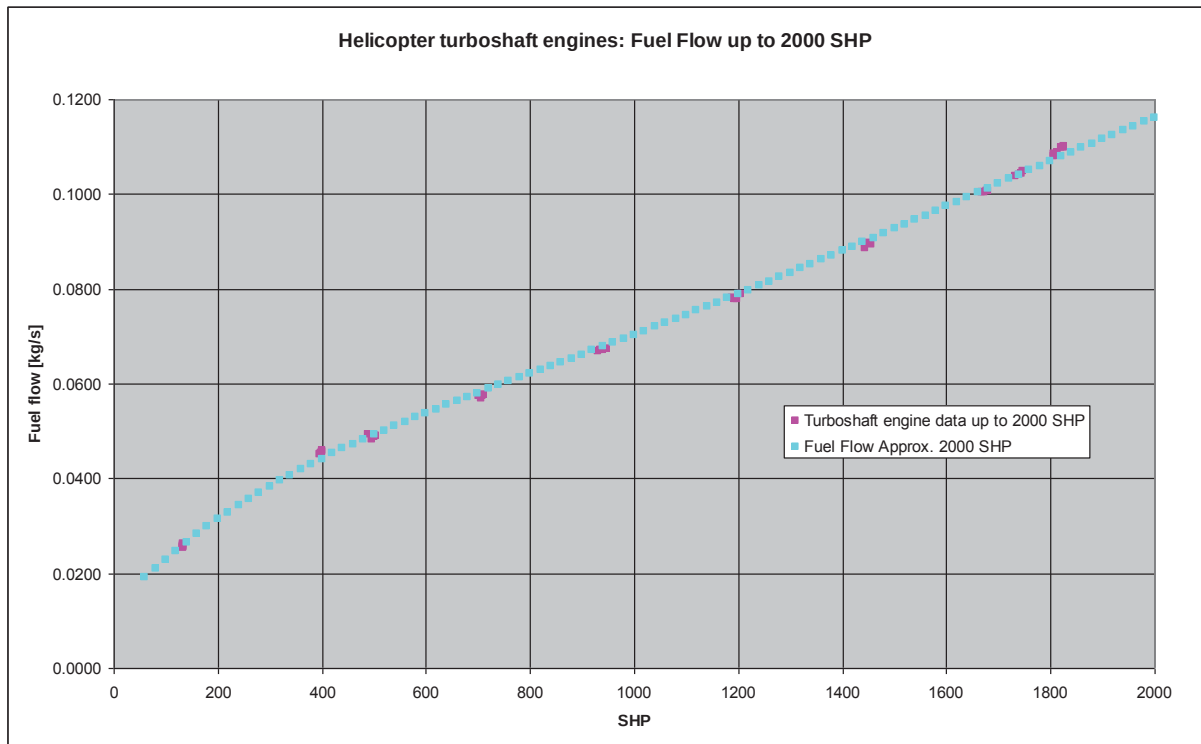
# Conventional Aircraft Piston EI CO measured (Full Rich) (Project ECERT)





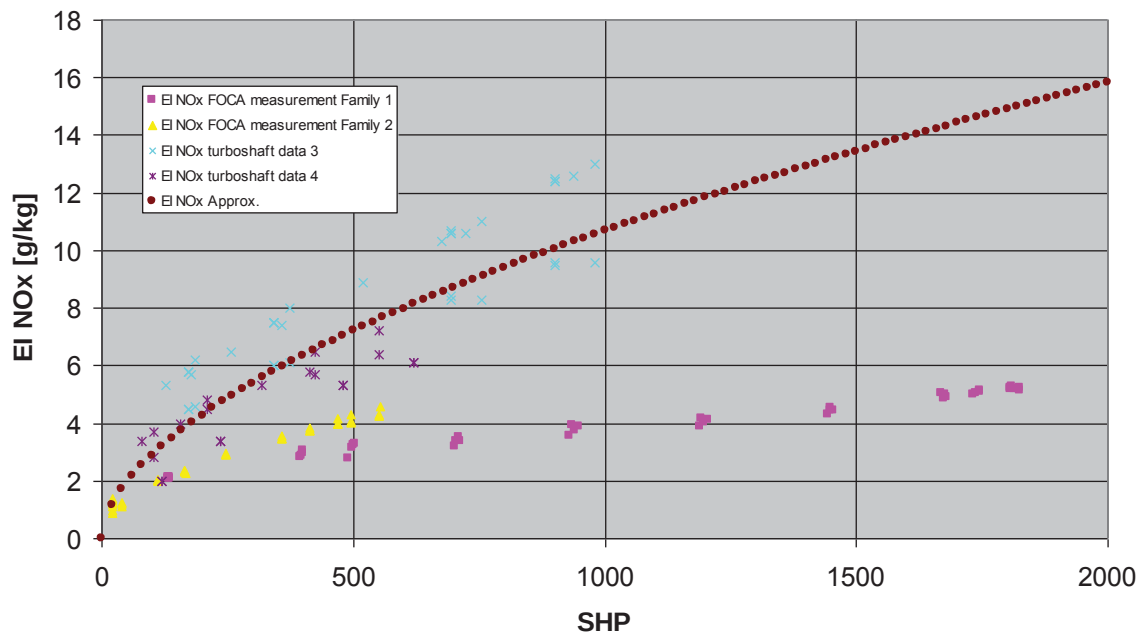
Appendix F: Graphical Representation of Approximation Functions for Turboshaft Engines



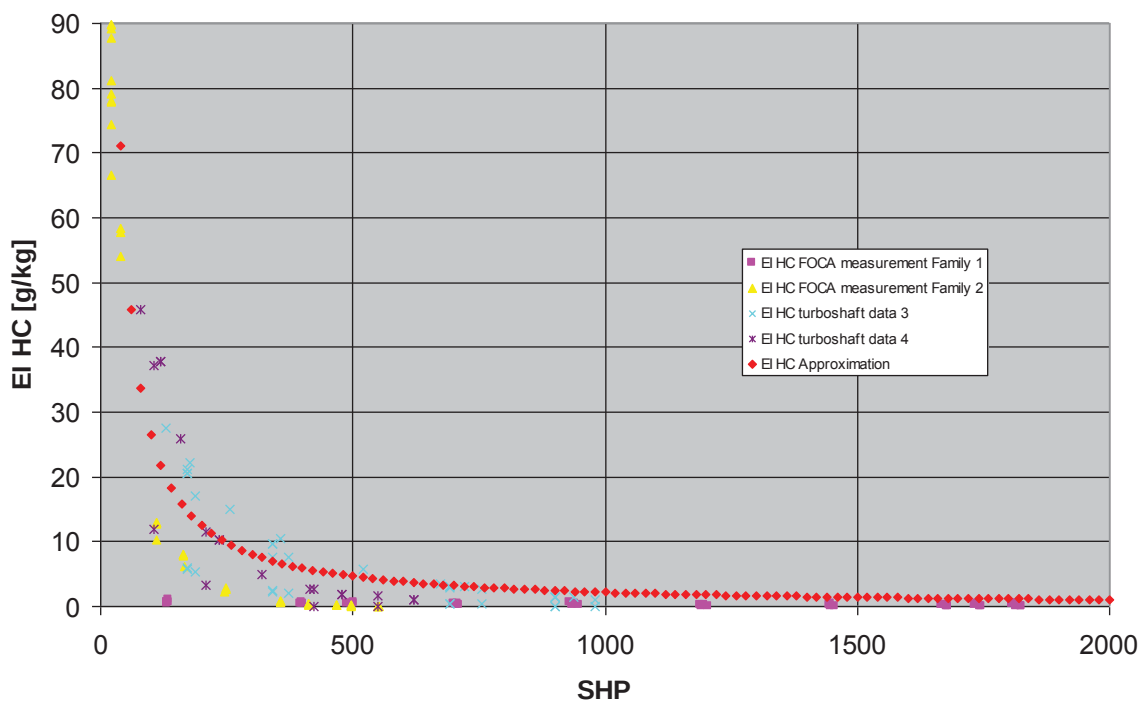


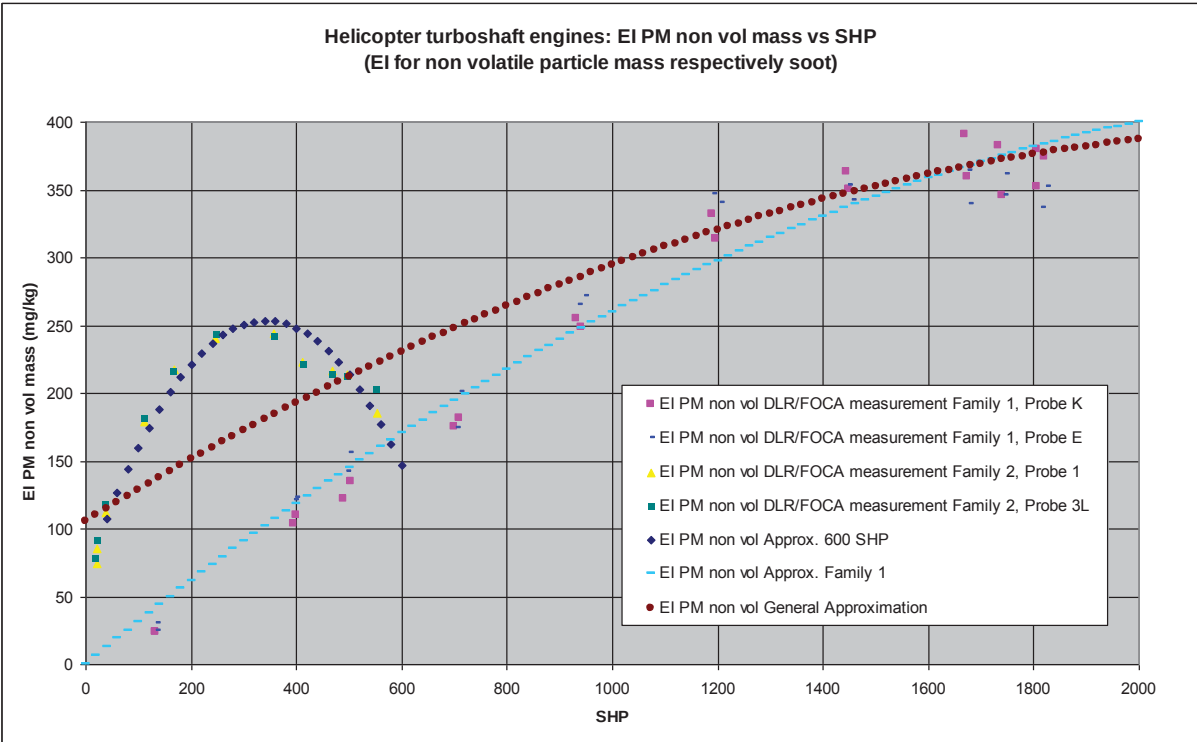
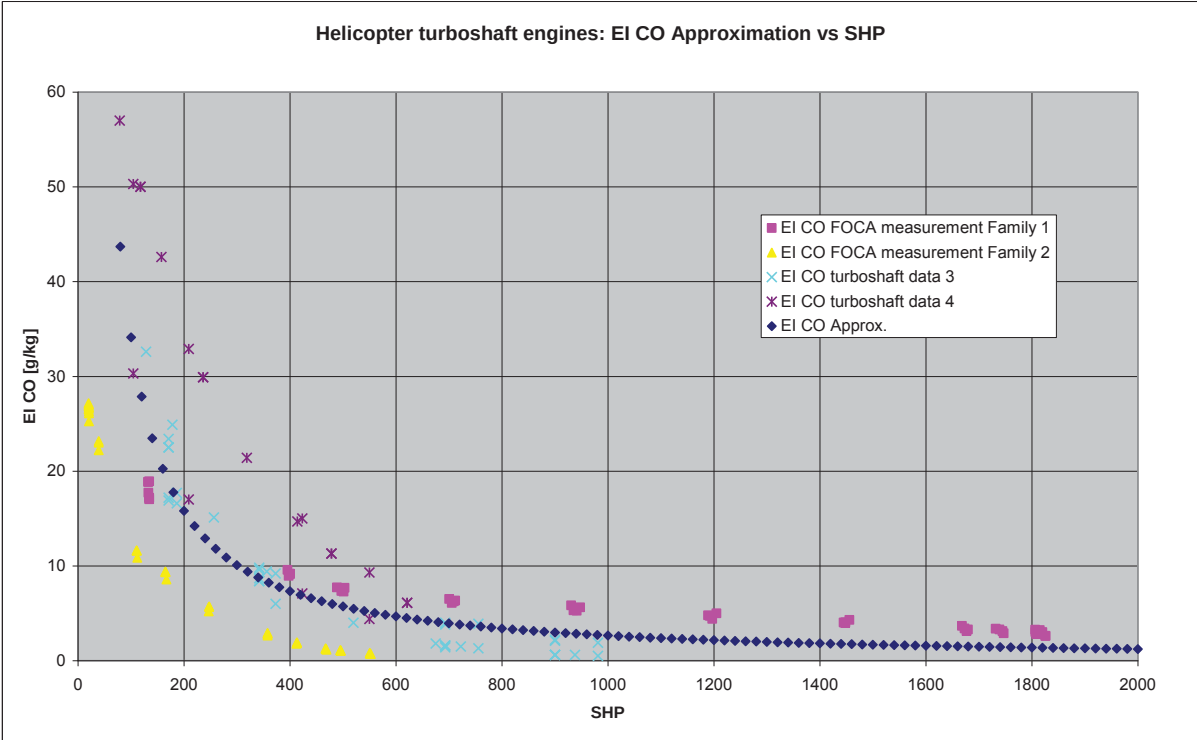


### Helicopter turboshaft engines: EI NOx Approximation vs SHP

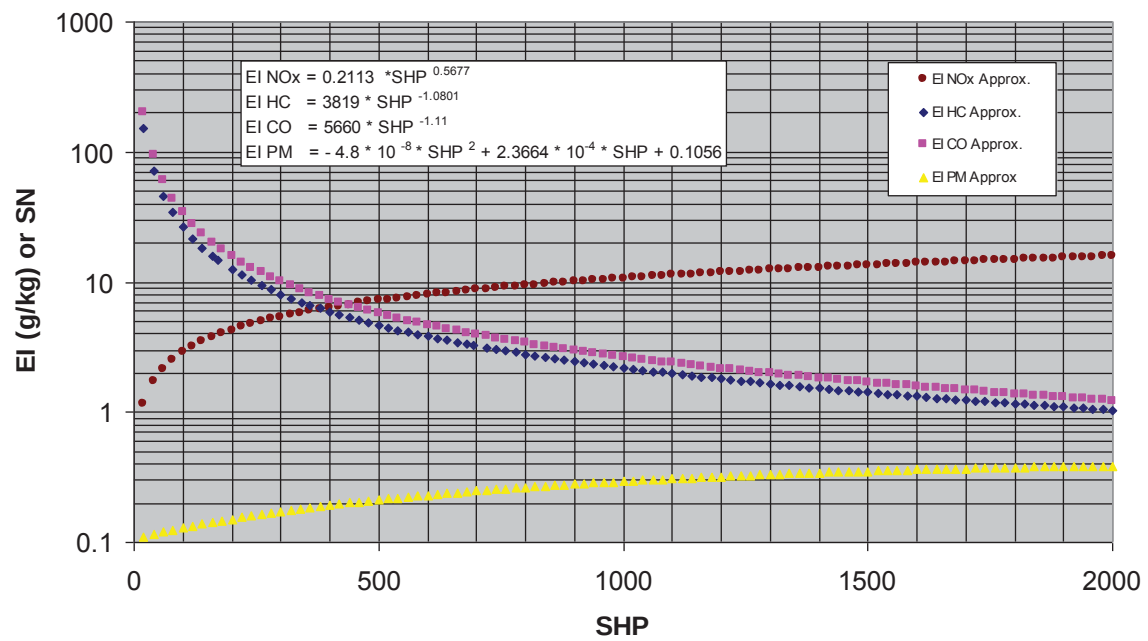


### Helicopter turboshaft engines: EI HC Approximation vs SHP





## Helicopter turboshaft engines: EI approximations (all functions)



## **APPENDIX B: HELICOPTER EMISSIONS CALCULATIONS**

| Helicopter                    | Emissions (pounds per day) |                 |      |                 |                  |                   |
|-------------------------------|----------------------------|-----------------|------|-----------------|------------------|-------------------|
|                               | VOC                        | NO <sub>x</sub> | CO   | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| LTO                           |                            |                 |      |                 |                  |                   |
| H 145 Airbus                  | 1.37                       | 0.72            | 1.76 | 0.00            | 0.02             | 0.02              |
| Black Hawk                    | 1.28                       | 1.26            | 1.62 | 0.00            | 0.04             | 0.04              |
| One Hour Flight               |                            |                 |      |                 |                  |                   |
| H 145 Airbus                  | 2.78                       | 6.02            | 3.40 | 0.00            | 0.17             | 0.17              |
| Black Hawk                    | 2.45                       | 11.97           | 2.95 | 0.00            | 0.33             | 0.33              |
| Total Maximum Daily Emissions | 7.88                       | 19.98           | 9.74 | 0.00            | 0.56             | 0.56              |
| SCAQMD Regional Threshold     | 55                         | 55              | 550  | 150             | 150              | 55                |
| Threshold Exceeded?           | NO                         | NO              | NO   | NO              | NO               | NO                |

EMISSION RATES

|                      | VOC    | NO <sub>x</sub> | CO   | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |           |
|----------------------|--------|-----------------|------|-----------------|------------------|-------------------|-----------|
| LTO (grams)          |        |                 |      |                 |                  |                   | Fuel (KG) |
| H 145 Airbus         | 622    | 328.00          | 800  | 0.00E+00        | 1.00E+01         | 1.00E+01          | 51.00     |
| Black Hawk           | 581.00 | 573.00          | 737  | 0               | 17.00            | 17                | 72.80     |
| One Hour Flight (KG) |        |                 |      |                 |                  |                   |           |
| H 145 Airbus         | 1.26   | 2.73            | 1.54 | 0.00E+00        | 7.90E-02         | 7.90E-02          | 337.00    |
| Black Hawk           | 1.11   | 5.43            | 1.34 | 0               | 0.15             | 0.15              | 508.00    |

| Emission Source                       | Emissions (metric tons per year) |
|---------------------------------------|----------------------------------|
|                                       | CO <sub>2</sub>                  |
| LTO                                   |                                  |
| H 145 Airbus                          | 12.60                            |
| Black Hawk                            | 44.95                            |
| One Hour Flight                       |                                  |
| H 145 Airbus                          | 83.23                            |
| Black Hawk                            | 313.65                           |
| Total CO <sub>2</sub> E (All Sources) | 454.42                           |

|                 |           | per month |    | Annually |  | Annual Fuel Usage (KG) | Annual Fuel Usage (gallons) |
|-----------------|-----------|-----------|----|----------|--|------------------------|-----------------------------|
| LTO             | Fuel (KG) |           |    |          |  |                        |                             |
| H 145 Airbus    | 51.00     |           | 8  | 96       |  | 4896                   | 1291.82                     |
| Black Hawk      | 72.80     |           | 20 | 240      |  | 17472                  | 4610.03                     |
| One Hour Flight |           |           |    |          |  |                        | <b>5901.85</b>              |
| H 145 Airbus    | 337.00    |           | 8  | 96       |  | 32352                  | 8536.15                     |
| Black Hawk      | 508.00    |           | 20 | 240      |  | 121920                 | 32168.9                     |
|                 |           |           |    |          |  |                        | <b>40705</b>                |

Toxic Air Contaminants

| lbs/1,000 gallon |               | LTO                |          | lbs/annually       |
|------------------|---------------|--------------------|----------|--------------------|
| 9.38E-01         | Benzene       |                    | 9.38E-04 | 5.53E+00           |
| 7.27E+00         | Formaldehyde  |                    | 7.27E-03 | 4.29E+01           |
| 8.56E-01         | 1,3-Butadiene |                    | 8.56E-04 | 5.05E+00           |
| 2.25E+00         | Acetaldehyde  |                    | 2.25E-03 | 1.33E+01           |
| 1.68E-02         | Nickel        |                    | 1.68E-05 | 9.92E-02           |
| 1.84E-01         | Lead          |                    | 1.84E-04 | 1.09E+00           |
|                  |               |                    |          | 67.95              |
|                  |               |                    |          | 0.000129276 lbs/hr |
| lbs/1,000 gallon |               | 15 min flight time |          | lbs/annually       |
| 9.38E-01         | Benzene       |                    | 9.38E-04 | 9.54E+00           |
| 7.27E+00         | Formaldehyde  |                    | 7.27E-03 | 7.40E+01           |
| 8.56E-01         | 1,3-Butadiene |                    | 8.56E-04 | 8.71E+00           |
| 2.25E+00         | Acetaldehyde  |                    | 2.25E-03 | 2.29E+01           |
| 1.68E-02         | Nickel        |                    | 1.68E-05 | 1.71E-01           |
| 1.84E-01         | Lead          |                    | 1.84E-04 | 1.88E+00           |
|                  |               |                    |          | 117.16             |
|                  |               |                    |          | 0.000222904 lbs/hr |

## **APPENDIX C: AERMOD INPUT/OUTPUT DATA & RISK CALCULATION**

Table A1  
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards  
70 Year Exposure Scenario / Maximum Residential Receptor

| Source     | Concentration |         | Weight Fraction | Contaminant   | Carcinogenic Risk |         |         | Noncarcinogenic Hazards / Toxicological Endpoints* |         |         |         |         |         |         |         |         |         |
|------------|---------------|---------|-----------------|---------------|-------------------|---------|---------|----------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|            | (ug/m3)       | (mg/m3) |                 |               | URF               | CPF     | RISK    | REL                                                | RfD     | RESP    | CNS/PNS | CV/BL   | IMMUN   | KIDN    | GI/LV   | REPRO   | EYES    |
|            | (b)           | (c)     | (d)             | (e)           | (f)               | (g)     | (h)     | (i)                                                | (j)     | (k)     | (l)     | (m)     | (n)     | (o)     | (p)     | (q)     | (r)     |
| Helicopter | 0.00145       | 1.5E-06 | 8.14E-02        | Benzene       | 2.9E-05           | 1.0E-01 | 3.3E-09 | 3.0E+00                                            | 8.6E-04 |         |         | 3.8E-05 |         |         |         |         |         |
|            |               |         | 6.31E-01        | Formaldehyde  | 6.0E-06           | 2.1E-02 | 5.3E-09 | 9.0E+00                                            | 2.6E-03 | 9.8E-05 |         |         |         |         |         |         |         |
|            |               |         | 7.44E-02        | 1,3-Butadiene | 1.7E-04           | 6.0E-01 | 1.8E-08 | 2.0E+00                                            | 5.7E-04 |         |         |         |         |         |         | 5.2E-05 |         |
|            |               |         | 1.95E-01        | Acetaldehyde  | 2.7E-06           | 1.0E-02 | 7.8E-10 | 1.4E+02                                            | 4.0E-02 | 1.9E-06 |         |         |         |         |         |         |         |
|            |               |         | 1.46E-03        | Nickel        |                   | 9.1E-01 | 5.3E-10 | 2.0E+00                                            | 5.7E-04 | 1.0E-06 |         |         |         |         |         |         |         |
|            |               |         | 1.60E-02        | Lead          |                   | 4.2E-02 | 2.7E-10 |                                                    |         |         |         |         |         |         |         |         |         |
| Total      |               |         |                 |               |                   |         | 2.8E-08 |                                                    |         | 1.0E-04 | 0.0E+00 | 3.8E-05 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 5.2E-05 | 0.0E+00 |

0.03

\* Key to Toxocological Endpoints

|         |                                                                   |
|---------|-------------------------------------------------------------------|
| RESP    | Respiratory System                                                |
| CNS/PNS | Central/Peripheral Nervous System                                 |
| CV/BL   | Cardiovascular/Blood System                                       |
| IMMUN   | Immune System                                                     |
| KIDN    | Kidney                                                            |
| GI/LV   | Gastrointestinal System/Liver                                     |
| REPRO   | Reproductive System (e.g., teratogenic and developmental effects) |
| EYES    | Eye irritation and/or other effects                               |

|                                              |                                                       |
|----------------------------------------------|-------------------------------------------------------|
| Note:                                        | Exposure factors used to calculate contaminant intake |
| exposure frequency (days/year)               | 350                                                   |
| exposure duration (years)                    | 70                                                    |
| inhalation rate (m3/day)                     | 20                                                    |
| average body weight (kg)                     | 70                                                    |
| averaging time <sub>(cancer)</sub> (days)    | 25550                                                 |
| averaging time <sub>(noncancer)</sub> (days) | 25550                                                 |



# Res

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.2.0
** Lakes Environmental Software Inc.
** Date: 11/30/2016
** File: C:\Lakes\AERMOD View\8990 HRA Modeling Files Revised\Res\Res.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE U:\UcJobs\_08600-09000\_08900\08990\Aermod\Res\Res.isc
  MODELOPT DFAULT CONC
  AVERTIME ANNUAL
  URBANOPT 2100516
  POLLUTID DPM
  RUNORNOT RUN
  ERRORFIL Res.err
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC On-Site Idling - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 4.386E-08
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 3
** 473797.066, 3754704.470, 472.27, 4.00, 0.00
** 473797.066, 3754705.191, 472.27, 4.00, 3.95
** 473797.080, 3754684.434, 472.10, 4.00, 3.95
** -----
** LOCATION L0001181    VOLUME    473797.069 3754701.662 472.96
** LOCATION L0001182    VOLUME    473797.074 3754693.162 472.67
** LOCATION L0001183    VOLUME    473797.080 3754684.662 472.39
** End of LINE VOLUME Source ID = SLINE1
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC On-Site Idling - Medical Office Building (3&4)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 1.48E-08
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 4
** 473736.964, 3754551.125, 472.00, 4.00, 3.95
** 473738.661, 3754489.633, 472.37, 4.00, 3.95

```

Res

\*\* 473745.446, 3754483.696, 472.52, 4.00, 3.95  
\*\* 473829.839, 3754482.423, 473.00, 4.00, 3.95

\*\* -----  
LOCATION L0001184 VOLUME 473737.082 3754546.877 472.00  
LOCATION L0001185 VOLUME 473737.316 3754538.380 472.00  
LOCATION L0001186 VOLUME 473737.550 3754529.883 472.00  
LOCATION L0001187 VOLUME 473737.785 3754521.386 472.00  
LOCATION L0001188 VOLUME 473738.019 3754512.889 472.00  
LOCATION L0001189 VOLUME 473738.254 3754504.393 472.00  
LOCATION L0001190 VOLUME 473738.488 3754495.896 472.04  
LOCATION L0001191 VOLUME 473740.342 3754488.161 472.14  
LOCATION L0001192 VOLUME 473747.164 3754483.670 472.31  
LOCATION L0001193 VOLUME 473755.663 3754483.542 472.47  
LOCATION L0001194 VOLUME 473764.162 3754483.413 472.55  
LOCATION L0001195 VOLUME 473772.661 3754483.285 472.56  
LOCATION L0001196 VOLUME 473781.160 3754483.157 472.56  
LOCATION L0001197 VOLUME 473789.659 3754483.029 472.57  
LOCATION L0001198 VOLUME 473798.158 3754482.901 472.69  
LOCATION L0001199 VOLUME 473806.657 3754482.773 472.81  
LOCATION L0001200 VOLUME 473815.156 3754482.645 472.93  
LOCATION L0001201 VOLUME 473823.656 3754482.517 473.00

\*\* End of LINE VOLUME Source ID = SLINE2

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE3

\*\* DESCRSRC On-Site Idling - Surgical Center

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 3.481E-09

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 2

\*\* 474146.956, 3754542.362, 472.81, 4.00, 3.95

\*\* 474203.982, 3754541.933, 473.72, 4.00, 3.95

\*\* -----  
LOCATION L0001202 VOLUME 474151.206 3754542.330 473.00  
LOCATION L0001203 VOLUME 474159.706 3754542.266 473.00  
LOCATION L0001204 VOLUME 474168.206 3754542.202 473.00  
LOCATION L0001205 VOLUME 474176.705 3754542.138 473.00  
LOCATION L0001206 VOLUME 474185.205 3754542.074 473.17  
LOCATION L0001207 VOLUME 474193.705 3754542.010 473.46  
LOCATION L0001208 VOLUME 474202.205 3754541.946 473.74

\*\* End of LINE VOLUME Source ID = SLINE3

\*\* -----  
\*\* Line Source Represented by Adjacent Volume Sources  
\*\* LINE VOLUME Source ID = SLINE4

\*\* DESCRSRC On-Site Idling - Senior Housing

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 3.264E-08

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 9

\*\* 473705.823, 3754992.649, 474.26, 4.00, 3.95

\*\* 473712.214, 3754987.399, 474.37, 4.00, 3.95

\*\* 473717.692, 3754985.344, 474.63, 4.00, 3.95

\*\* 473722.942, 3754985.573, 474.84, 4.00, 3.95

\*\* 473727.279, 3754988.084, 474.89, 4.00, 3.95

\*\* 473730.246, 3754992.649, 474.76, 4.00, 3.95

\*\* 473730.931, 3754998.811, 474.67, 4.00, 3.95

\*\* 473730.246, 3755003.833, 474.61, 4.00, 3.95

\*\* 473730.018, 3755004.746, 474.60, 4.00, 3.95

\*\* -----  
LOCATION L0001209 VOLUME 473709.107 3754989.951 474.53  
LOCATION L0001210 VOLUME 473716.408 3754985.826 474.63

```

                                Res
LOCATION L0001211    VOLUME    473724.564 3754986.512 474.86
LOCATION L0001212    VOLUME    473730.201 3754992.580 475.00
LOCATION L0001213    VOLUME    473730.631 3755001.008 475.01
** End of LINE VOLUME Source ID = SLINE4
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC On-Site Idling - Assisted Living
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 2.437E-08
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474154.104, 3754912.107, 476.38, 4.00, 3.95
** 474217.752, 3754863.013, 477.91, 4.00, 3.95
** -----
LOCATION L0001214    VOLUME    474157.470 3754909.512 476.74
LOCATION L0001215    VOLUME    474164.200 3754904.320 476.72
LOCATION L0001216    VOLUME    474170.930 3754899.129 476.79
LOCATION L0001217    VOLUME    474177.661 3754893.937 476.93
LOCATION L0001218    VOLUME    474184.391 3754888.746 477.15
LOCATION L0001219    VOLUME    474191.122 3754883.554 477.37
LOCATION L0001220    VOLUME    474197.852 3754878.363 477.60
LOCATION L0001221    VOLUME    474204.583 3754873.171 477.82
LOCATION L0001222    VOLUME    474211.313 3754867.980 478.00
** End of LINE VOLUME Source ID = SLINE5
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC On-Site Travel - Hospital (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 6.705E-08
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 7
** 473797.066, 3754704.470, 472.27, 4.00, 0.00
** 473797.066, 3754705.191, 472.27, 4.00, 3.95
** 473797.079, 3754683.979, 472.10, 4.00, 3.95
** 473832.857, 3754684.580, 473.27, 4.00, 3.95
** 473831.534, 3754711.303, 473.87, 4.00, 3.95
** 473825.370, 3754730.840, 473.76, 4.00, 3.95
** 473825.424, 3754745.686, 474.08, 4.00, 3.95
** -----
LOCATION L0001223    VOLUME    473797.069 3754701.662 472.96
LOCATION L0001224    VOLUME    473797.073 3754693.162 472.67
LOCATION L0001225    VOLUME    473797.078 3754684.662 472.39
LOCATION L0001226    VOLUME    473804.895 3754684.110 472.63
LOCATION L0001227    VOLUME    473813.393 3754684.253 472.92
LOCATION L0001228    VOLUME    473821.892 3754684.396 473.20
LOCATION L0001229    VOLUME    473830.391 3754684.539 473.45
LOCATION L0001230    VOLUME    473832.558 3754690.607 473.62
LOCATION L0001231    VOLUME    473832.138 3754699.096 473.78
LOCATION L0001232    VOLUME    473831.718 3754707.586 473.95
LOCATION L0001233    VOLUME    473830.096 3754715.860 474.07
LOCATION L0001234    VOLUME    473827.538 3754723.966 474.12
LOCATION L0001235    VOLUME    473825.374 3754732.132 474.13
LOCATION L0001236    VOLUME    473825.406 3754740.632 474.20
** End of LINE VOLUME Source ID = SLINE6
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC On-Site Travel - Medical Office Building (3&4)
** PREFIX

```

Res

```
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 3.974E-08
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 5
** 473690.932, 3754560.433, 471.83, 4.00, 3.95
** 473736.934, 3754560.673, 472.00, 4.00, 3.95
** 473738.661, 3754489.633, 472.37, 4.00, 3.95
** 473745.446, 3754483.696, 472.52, 4.00, 3.95
** 473829.839, 3754482.423, 473.00, 4.00, 3.95
**
```

```
-----
LOCATION L0001237    VOLUME  473695.182 3754560.456 471.83
LOCATION L0001238    VOLUME  473703.682 3754560.500 471.99
LOCATION L0001239    VOLUME  473712.182 3754560.544 471.99
LOCATION L0001240    VOLUME  473720.682 3754560.588 471.99
LOCATION L0001241    VOLUME  473729.182 3754560.633 472.00
LOCATION L0001242    VOLUME  473736.953 3754559.926 472.00
LOCATION L0001243    VOLUME  473737.159 3754551.428 472.00
LOCATION L0001244    VOLUME  473737.366 3754542.931 472.00
LOCATION L0001245    VOLUME  473737.572 3754534.433 472.00
LOCATION L0001246    VOLUME  473737.779 3754525.936 472.00
LOCATION L0001247    VOLUME  473737.985 3754517.439 472.00
LOCATION L0001248    VOLUME  473738.192 3754508.941 472.00
LOCATION L0001249    VOLUME  473738.398 3754500.444 472.00
LOCATION L0001250    VOLUME  473738.605 3754491.946 472.08
LOCATION L0001251    VOLUME  473743.316 3754485.559 472.21
LOCATION L0001252    VOLUME  473751.115 3754483.610 472.38
LOCATION L0001253    VOLUME  473759.614 3754483.482 472.54
LOCATION L0001254    VOLUME  473768.113 3754483.354 472.55
LOCATION L0001255    VOLUME  473776.612 3754483.226 472.56
LOCATION L0001256    VOLUME  473785.111 3754483.098 472.56
LOCATION L0001257    VOLUME  473793.610 3754482.969 472.62
LOCATION L0001258    VOLUME  473802.110 3754482.841 472.74
LOCATION L0001259    VOLUME  473810.609 3754482.713 472.87
LOCATION L0001260    VOLUME  473819.108 3754482.585 472.99
LOCATION L0001261    VOLUME  473827.607 3754482.457 473.00
**
```

\*\* End of LINE VOLUME Source ID = SLINE7

```
**
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC On-Site Travel - Surgical Center
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 7.116E-09
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 4
```

```
** 474146.956, 3754542.362, 472.81, 4.00, 3.95
** 474225.093, 3754541.662, 473.85, 4.00, 3.95
** 474224.571, 3754563.881, 474.36, 4.00, 3.95
** 474284.387, 3754563.753, 475.00, 4.00, 3.95
**
```

```
-----
LOCATION L0001262    VOLUME  474151.206 3754542.324 473.00
LOCATION L0001263    VOLUME  474159.706 3754542.248 473.00
LOCATION L0001264    VOLUME  474168.205 3754542.171 473.00
LOCATION L0001265    VOLUME  474176.705 3754542.095 473.00
LOCATION L0001266    VOLUME  474185.205 3754542.019 473.17
LOCATION L0001267    VOLUME  474193.704 3754541.943 473.46
LOCATION L0001268    VOLUME  474202.204 3754541.867 473.74
LOCATION L0001269    VOLUME  474210.704 3754541.791 474.01
LOCATION L0001270    VOLUME  474219.203 3754541.714 474.12
LOCATION L0001271    VOLUME  474225.032 3754544.271 474.24
LOCATION L0001272    VOLUME  474224.832 3754552.769 474.38
LOCATION L0001273    VOLUME  474224.632 3754561.266 474.51
LOCATION L0001274    VOLUME  474230.455 3754563.868 474.72
**
```

| LOCATION          | VOLUME            | Res                |
|-------------------|-------------------|--------------------|
| LOCATION L0001275 | VOLUME 474238.955 | 3754563.850 474.97 |
| LOCATION L0001276 | VOLUME 474247.455 | 3754563.832 475.03 |
| LOCATION L0001277 | VOLUME 474255.955 | 3754563.814 475.07 |
| LOCATION L0001278 | VOLUME 474264.455 | 3754563.795 475.10 |
| LOCATION L0001279 | VOLUME 474272.955 | 3754563.777 475.13 |
| LOCATION L0001280 | VOLUME 474281.455 | 3754563.759 475.13 |

\*\* End of LINE VOLUME Source ID = SLINE8

-----

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE9

\*\* DESCRSRC On-Site Travel - Senior Housing

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 2.873E-08

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 10

|                                                |
|------------------------------------------------|
| ** 473693.729, 3755016.836, 475.00, 4.00, 3.95 |
| ** 473706.280, 3754992.273, 474.26, 4.00, 3.95 |
| ** 473712.214, 3754987.399, 474.37, 4.00, 3.95 |
| ** 473717.692, 3754985.344, 474.63, 4.00, 3.95 |
| ** 473722.942, 3754985.573, 474.84, 4.00, 3.95 |
| ** 473727.279, 3754988.084, 474.89, 4.00, 3.95 |
| ** 473730.246, 3754992.649, 474.76, 4.00, 3.95 |
| ** 473730.931, 3754998.811, 474.67, 4.00, 3.95 |
| ** 473730.246, 3755003.833, 474.61, 4.00, 3.95 |
| ** 473730.018, 3755004.746, 474.60, 4.00, 3.95 |

-----

|                   |                   |                    |
|-------------------|-------------------|--------------------|
| LOCATION L0001281 | VOLUME 473695.663 | 3755013.052 475.10 |
| LOCATION L0001282 | VOLUME 473699.531 | 3755005.482 474.85 |
| LOCATION L0001283 | VOLUME 473703.398 | 3754997.913 474.64 |
| LOCATION L0001284 | VOLUME 473707.954 | 3754990.898 474.53 |
| LOCATION L0001285 | VOLUME 473715.011 | 3754986.350 474.61 |
| LOCATION L0001286 | VOLUME 473723.272 | 3754985.764 474.82 |
| LOCATION L0001287 | VOLUME 473729.388 | 3754991.329 474.99 |
| LOCATION L0001288 | VOLUME 473730.833 | 3754999.530 475.02 |

\*\* End of LINE VOLUME Source ID = SLINE9

-----

\*\* Line Source Represented by Adjacent Volume Sources

\*\* LINE VOLUME Source ID = SLINE10

\*\* DESCRSRC On-Site Travel - Assisted Living

\*\* PREFIX

\*\* Length of Side = 8.50

\*\* Configuration = Adjacent

\*\* Emission Rate = 6.915E-08

\*\* Vertical Dimension = 4.00

\*\* SZINIT = 1.86

\*\* Nodes = 8

|                                                |
|------------------------------------------------|
| ** 474154.104, 3754912.107, 476.38, 4.00, 3.95 |
| ** 474275.659, 3754818.227, 478.22, 4.00, 3.95 |
| ** 474276.685, 3754808.563, 478.14, 4.00, 3.95 |
| ** 474271.043, 3754798.926, 478.23, 4.00, 3.95 |
| ** 474263.098, 3754791.586, 477.91, 4.00, 3.95 |
| ** 474247.089, 3754790.184, 477.87, 4.00, 3.95 |
| ** 474237.633, 3754788.405, 477.66, 4.00, 3.95 |
| ** 474234.942, 3754777.285, 477.85, 4.00, 3.95 |

-----

|                   |                   |                    |
|-------------------|-------------------|--------------------|
| LOCATION L0001289 | VOLUME 474157.468 | 3754909.510 476.74 |
| LOCATION L0001290 | VOLUME 474164.195 | 3754904.314 476.72 |
| LOCATION L0001291 | VOLUME 474170.922 | 3754899.118 476.79 |
| LOCATION L0001292 | VOLUME 474177.650 | 3754893.923 476.93 |
| LOCATION L0001293 | VOLUME 474184.377 | 3754888.727 477.15 |
| LOCATION L0001294 | VOLUME 474191.104 | 3754883.531 477.37 |
| LOCATION L0001295 | VOLUME 474197.831 | 3754878.336 477.59 |
| LOCATION L0001296 | VOLUME 474204.558 | 3754873.140 477.82 |
| LOCATION L0001297 | VOLUME 474211.286 | 3754867.944 478.00 |

```

                                Res
LOCATION L0001298    VOLUME    474218.013 3754862.749 478.00
LOCATION L0001299    VOLUME    474224.740 3754857.553 477.96
LOCATION L0001300    VOLUME    474231.467 3754852.358 477.93
LOCATION L0001301    VOLUME    474238.195 3754847.162 477.97
LOCATION L0001302    VOLUME    474244.922 3754841.966 478.00
LOCATION L0001303    VOLUME    474251.649 3754836.771 478.00
LOCATION L0001304    VOLUME    474258.376 3754831.575 478.00
LOCATION L0001305    VOLUME    474265.103 3754826.379 478.00
LOCATION L0001306    VOLUME    474271.831 3754821.184 478.06
LOCATION L0001307    VOLUME    474276.046 3754814.585 478.20
LOCATION L0001308    VOLUME    474275.450 3754806.453 478.18
LOCATION L0001309    VOLUME    474271.156 3754799.118 478.04
LOCATION L0001310    VOLUME    474264.963 3754793.309 478.00
LOCATION L0001311    VOLUME    474257.160 3754791.066 478.00
LOCATION L0001312    VOLUME    474248.692 3754790.324 478.00
LOCATION L0001313    VOLUME    474240.317 3754788.910 478.00
LOCATION L0001314    VOLUME    474236.276 3754782.798 477.88
** End of LINE VOLUME Source ID = SLINE10
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE11
** DESCRSRC On-Site Idling - Medical Office Building (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 1.393E-08
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474028.388, 3754698.671, 475.00, 4.00, 3.95
** 474028.146, 3754663.431, 474.95, 4.00, 3.95
** -----
LOCATION L0001315    VOLUME    474028.359 3754694.421 475.00
LOCATION L0001316    VOLUME    474028.301 3754685.921 475.00
LOCATION L0001317    VOLUME    474028.242 3754677.421 475.00
LOCATION L0001318    VOLUME    474028.184 3754668.921 475.00
** End of LINE VOLUME Source ID = SLINE11
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE12
** DESCRSRC On-Site Travel - Medical Office Building (1&2)
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 1.482E-08
** Vertical Dimension = 4.00
** SZINIT = 1.86
** Nodes = 2
** 474027.769, 3754746.815, 475.07, 4.00, 3.95
** 474028.146, 3754663.431, 474.95, 4.00, 3.95
** -----
LOCATION L0001319    VOLUME    474027.788 3754742.565 475.07
LOCATION L0001320    VOLUME    474027.827 3754734.065 475.06
LOCATION L0001321    VOLUME    474027.865 3754725.565 475.04
LOCATION L0001322    VOLUME    474027.903 3754717.065 475.02
LOCATION L0001323    VOLUME    474027.942 3754708.565 475.00
LOCATION L0001324    VOLUME    474027.980 3754700.065 475.00
LOCATION L0001325    VOLUME    474028.019 3754691.565 475.00
LOCATION L0001326    VOLUME    474028.057 3754683.065 475.00
LOCATION L0001327    VOLUME    474028.095 3754674.565 475.00
LOCATION L0001328    VOLUME    474028.134 3754666.066 475.00
** End of LINE VOLUME Source ID = SLINE12
LOCATION STCK1      POINT      473781.560 3754629.470 472.000
** DESCRSRC Hospital 1 Emergency Generator
LOCATION STCK2      POINT      473755.686 3754699.329 472.640
** DESCRSRC Hospital 2 Emergency Generator
LOCATION STCK3      POINT      473911.791 3754624.295 474.140

```

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Res
** DESCRSRC Medical Office Building 1 Emergency Generator
LOCATION STCK4 POINT 474041.159 3754625.158 474.170
** DESCRSRC Medical Office Building 2 Emergency Generator
LOCATION STCK5 POINT 473711.695 3754510.449 472.000
** DESCRSRC Medical Office Building 3 Emergency Generator
LOCATION STCK6 POINT 473762.582 3754460.425 473.000
** DESCRSRC Medical Office Building 4 Emergency Generator
LOCATION STCK7 POINT 474165.652 3754569.970 473.330
** DESCRSRC Surgical Center Emergency Generator
LOCATION STCK8 POINT 473785.044 3754991.308 476.730
** DESCRSRC Senior Housing Emergency Generator
LOCATION STCK9 POINT 474115.092 3754850.862 475.950
** DESCRSRC Assisted Living Emergency Generator
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE13
** DESCRSRC On-Site Helicopter Emissions
** PREFIX
** Length of Side = 10.00
** Configuration = Adjacent
** Emission Rate = 0.0000162885
** Elevated
** Vertical Dimension = 33.22
** SZINIT = 7.73
** Nodes = 2
** 473710.178, 3754656.999, 471.87, 0.00, 4.65
** 473712.572, 3754607.920, 471.44, 0.00, 4.65
** -----
LOCATION L0001411 VOLUME 473710.422 3754652.005 472.00
LOCATION L0001412 VOLUME 473710.909 3754642.017 471.83
LOCATION L0001413 VOLUME 473711.396 3754632.029 471.63
LOCATION L0001414 VOLUME 473711.883 3754622.041 471.44
LOCATION L0001415 VOLUME 473712.370 3754612.052 471.41
** End of LINE VOLUME Source ID = SLINE13
** -----
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE14
** DESCRSRC Off-Site Helicopter Travel
** PREFIX
** Length of Side = 10.00
** Configuration = Adjacent
** Emission Rate = 0.0000280854
** Elevated
** Vertical Dimension = 33.22
** SZINIT = 7.73
** Nodes = 3
** 473396.969, 3754817.855, 471.00, 0.00, 4.65
** 473710.092, 3754642.469, 471.31, 0.00, 4.65
** 473494.303, 3754298.125, 470.00, 0.00, 4.65
** -----
LOCATION L0001416 VOLUME 473401.331 3754815.412 471.02
LOCATION L0001417 VOLUME 473410.056 3754810.525 471.12
LOCATION L0001418 VOLUME 473418.781 3754805.638 471.12
LOCATION L0001419 VOLUME 473427.505 3754800.751 471.02
LOCATION L0001420 VOLUME 473436.230 3754795.864 471.00
LOCATION L0001421 VOLUME 473444.954 3754790.977 471.00
LOCATION L0001422 VOLUME 473453.679 3754786.091 471.00
LOCATION L0001423 VOLUME 473462.404 3754781.204 471.00
LOCATION L0001424 VOLUME 473471.128 3754776.317 471.00
LOCATION L0001425 VOLUME 473479.853 3754771.430 471.00
LOCATION L0001426 VOLUME 473488.578 3754766.543 470.88
LOCATION L0001427 VOLUME 473497.302 3754761.657 470.55
LOCATION L0001428 VOLUME 473506.027 3754756.770 470.26
LOCATION L0001429 VOLUME 473514.751 3754751.883 470.07
LOCATION L0001430 VOLUME 473523.476 3754746.996 469.91
LOCATION L0001431 VOLUME 473532.201 3754742.109 469.62
LOCATION L0001432 VOLUME 473540.925 3754737.222 469.27

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|                                           |          | Res           |            |             |        |
|-------------------------------------------|----------|---------------|------------|-------------|--------|
| LOCATION                                  | L0001433 | VOLUME        | 473549.650 | 3754732.336 | 469.01 |
| LOCATION                                  | L0001434 | VOLUME        | 473558.374 | 3754727.449 | 469.12 |
| LOCATION                                  | L0001435 | VOLUME        | 473567.099 | 3754722.562 | 469.33 |
| LOCATION                                  | L0001436 | VOLUME        | 473575.824 | 3754717.675 | 469.64 |
| LOCATION                                  | L0001437 | VOLUME        | 473584.548 | 3754712.788 | 469.92 |
| LOCATION                                  | L0001438 | VOLUME        | 473593.273 | 3754707.902 | 470.00 |
| LOCATION                                  | L0001439 | VOLUME        | 473601.998 | 3754703.015 | 470.00 |
| LOCATION                                  | L0001440 | VOLUME        | 473610.722 | 3754698.128 | 470.01 |
| LOCATION                                  | L0001441 | VOLUME        | 473619.447 | 3754693.241 | 470.14 |
| LOCATION                                  | L0001442 | VOLUME        | 473628.171 | 3754688.354 | 470.17 |
| LOCATION                                  | L0001443 | VOLUME        | 473636.896 | 3754683.467 | 470.10 |
| LOCATION                                  | L0001444 | VOLUME        | 473645.621 | 3754678.581 | 470.23 |
| LOCATION                                  | L0001445 | VOLUME        | 473654.345 | 3754673.694 | 470.59 |
| LOCATION                                  | L0001446 | VOLUME        | 473663.070 | 3754668.807 | 470.86 |
| LOCATION                                  | L0001447 | VOLUME        | 473671.795 | 3754663.920 | 471.06 |
| LOCATION                                  | L0001448 | VOLUME        | 473680.519 | 3754659.033 | 471.35 |
| LOCATION                                  | L0001449 | VOLUME        | 473689.244 | 3754654.146 | 471.64 |
| LOCATION                                  | L0001450 | VOLUME        | 473697.968 | 3754649.260 | 471.91 |
| LOCATION                                  | L0001451 | VOLUME        | 473706.693 | 3754644.373 | 471.85 |
| LOCATION                                  | L0001452 | VOLUME        | 473706.851 | 3754637.297 | 471.67 |
| LOCATION                                  | L0001453 | VOLUME        | 473701.540 | 3754628.823 | 471.33 |
| LOCATION                                  | L0001454 | VOLUME        | 473696.230 | 3754620.349 | 471.01 |
| LOCATION                                  | L0001455 | VOLUME        | 473690.920 | 3754611.876 | 471.00 |
| LOCATION                                  | L0001456 | VOLUME        | 473685.610 | 3754603.402 | 471.00 |
| LOCATION                                  | L0001457 | VOLUME        | 473680.300 | 3754594.928 | 471.00 |
| LOCATION                                  | L0001458 | VOLUME        | 473674.990 | 3754586.455 | 471.02 |
| LOCATION                                  | L0001459 | VOLUME        | 473669.680 | 3754577.981 | 471.00 |
| LOCATION                                  | L0001460 | VOLUME        | 473664.369 | 3754569.508 | 471.00 |
| LOCATION                                  | L0001461 | VOLUME        | 473659.059 | 3754561.034 | 471.00 |
| LOCATION                                  | L0001462 | VOLUME        | 473653.749 | 3754552.560 | 471.11 |
| LOCATION                                  | L0001463 | VOLUME        | 473648.439 | 3754544.087 | 471.15 |
| LOCATION                                  | L0001464 | VOLUME        | 473643.129 | 3754535.613 | 471.08 |
| LOCATION                                  | L0001465 | VOLUME        | 473637.819 | 3754527.139 | 471.09 |
| LOCATION                                  | L0001466 | VOLUME        | 473632.509 | 3754518.666 | 471.28 |
| LOCATION                                  | L0001467 | VOLUME        | 473627.198 | 3754510.192 | 471.38 |
| LOCATION                                  | L0001468 | VOLUME        | 473621.888 | 3754501.719 | 471.37 |
| LOCATION                                  | L0001469 | VOLUME        | 473616.578 | 3754493.245 | 471.40 |
| LOCATION                                  | L0001470 | VOLUME        | 473611.268 | 3754484.771 | 471.53 |
| LOCATION                                  | L0001471 | VOLUME        | 473605.958 | 3754476.298 | 471.82 |
| LOCATION                                  | L0001472 | VOLUME        | 473600.648 | 3754467.824 | 472.00 |
| LOCATION                                  | L0001473 | VOLUME        | 473595.338 | 3754459.350 | 472.00 |
| LOCATION                                  | L0001474 | VOLUME        | 473590.027 | 3754450.877 | 472.00 |
| LOCATION                                  | L0001475 | VOLUME        | 473584.717 | 3754442.403 | 472.00 |
| LOCATION                                  | L0001476 | VOLUME        | 473579.407 | 3754433.930 | 472.00 |
| LOCATION                                  | L0001477 | VOLUME        | 473574.097 | 3754425.456 | 471.90 |
| LOCATION                                  | L0001478 | VOLUME        | 473568.787 | 3754416.982 | 471.71 |
| LOCATION                                  | L0001479 | VOLUME        | 473563.477 | 3754408.509 | 471.45 |
| LOCATION                                  | L0001480 | VOLUME        | 473558.167 | 3754400.035 | 471.27 |
| LOCATION                                  | L0001481 | VOLUME        | 473552.856 | 3754391.561 | 471.10 |
| LOCATION                                  | L0001482 | VOLUME        | 473547.546 | 3754383.088 | 471.00 |
| LOCATION                                  | L0001483 | VOLUME        | 473542.236 | 3754374.614 | 471.00 |
| LOCATION                                  | L0001484 | VOLUME        | 473536.926 | 3754366.140 | 471.00 |
| LOCATION                                  | L0001485 | VOLUME        | 473531.616 | 3754357.667 | 471.00 |
| LOCATION                                  | L0001486 | VOLUME        | 473526.306 | 3754349.193 | 470.98 |
| LOCATION                                  | L0001487 | VOLUME        | 473520.996 | 3754340.720 | 470.70 |
| LOCATION                                  | L0001488 | VOLUME        | 473515.685 | 3754332.246 | 470.41 |
| LOCATION                                  | L0001489 | VOLUME        | 473510.375 | 3754323.772 | 470.13 |
| LOCATION                                  | L0001490 | VOLUME        | 473505.065 | 3754315.299 | 470.00 |
| LOCATION                                  | L0001491 | VOLUME        | 473499.755 | 3754306.825 | 470.00 |
| LOCATION                                  | L0001492 | VOLUME        | 473494.445 | 3754298.351 | 470.00 |
| ** End of LINE VOLUME Source ID = SLINE14 |          |               |            |             |        |
| ** Source Parameters **                   |          |               |            |             |        |
| ** LINE VOLUME Source ID = SLINE1         |          |               |            |             |        |
| SRCPARAM                                  | L0001181 | 0.00000001462 | 4.00       | 3.95        | 1.86   |
| SRCPARAM                                  | L0001182 | 0.00000001462 | 4.00       | 3.95        | 1.86   |
| SRCPARAM                                  | L0001183 | 0.00000001462 | 4.00       | 3.95        | 1.86   |

\*\*



|    |                                |                 |      | Res  |      |
|----|--------------------------------|-----------------|------|------|------|
| ** | LINE VOLUME Source ID = SLINE2 |                 |      |      |      |
|    | SRCPARAM L0001184              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001185              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001186              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001187              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001188              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001189              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001190              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001191              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001192              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001193              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001194              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001195              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001196              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001197              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001198              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001199              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001200              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001201              | 0.000000000822  | 4.00 | 3.95 | 1.86 |
| ** | -----                          |                 |      |      |      |
| ** | LINE VOLUME Source ID = SLINE3 |                 |      |      |      |
|    | SRCPARAM L0001202              | 0.000000000497  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001203              | 0.000000000497  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001204              | 0.000000000497  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001205              | 0.000000000497  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001206              | 0.000000000497  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001207              | 0.000000000497  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001208              | 0.000000000497  | 4.00 | 3.95 | 1.86 |
| ** | -----                          |                 |      |      |      |
| ** | LINE VOLUME Source ID = SLINE4 |                 |      |      |      |
|    | SRCPARAM L0001209              | 0.0000000006528 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001210              | 0.0000000006528 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001211              | 0.0000000006528 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001212              | 0.0000000006528 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001213              | 0.0000000006528 | 4.00 | 3.95 | 1.86 |
| ** | -----                          |                 |      |      |      |
| ** | LINE VOLUME Source ID = SLINE5 |                 |      |      |      |
|    | SRCPARAM L0001214              | 0.0000000002708 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001215              | 0.0000000002708 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001216              | 0.0000000002708 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001217              | 0.0000000002708 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001218              | 0.0000000002708 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001219              | 0.0000000002708 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001220              | 0.0000000002708 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001221              | 0.0000000002708 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001222              | 0.0000000002708 | 4.00 | 3.95 | 1.86 |
| ** | -----                          |                 |      |      |      |
| ** | LINE VOLUME Source ID = SLINE6 |                 |      |      |      |
|    | SRCPARAM L0001223              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001224              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001225              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001226              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001227              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001228              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001229              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001230              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001231              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001232              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001233              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001234              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001235              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001236              | 0.0000000004789 | 4.00 | 3.95 | 1.86 |
| ** | -----                          |                 |      |      |      |
| ** | LINE VOLUME Source ID = SLINE7 |                 |      |      |      |
|    | SRCPARAM L0001237              | 0.000000000159  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001238              | 0.000000000159  | 4.00 | 3.95 | 1.86 |
|    | SRCPARAM L0001239              | 0.000000000159  | 4.00 | 3.95 | 1.86 |



|                                    |          |                |       | Res     |                |
|------------------------------------|----------|----------------|-------|---------|----------------|
| SRCPARAM                           | L0001301 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001302 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001303 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001304 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001305 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001306 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001307 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001308 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001309 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001310 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001311 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001312 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001313 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001314 | 0.00000000266  | 4.00  | 3.95    | 1.86           |
| ** -----                           |          |                |       |         |                |
| ** LINE VOLUME Source ID = SLINE11 |          |                |       |         |                |
| SRCPARAM                           | L0001315 | 0.000000003483 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001316 | 0.000000003483 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001317 | 0.000000003483 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001318 | 0.000000003483 | 4.00  | 3.95    | 1.86           |
| ** -----                           |          |                |       |         |                |
| ** LINE VOLUME Source ID = SLINE12 |          |                |       |         |                |
| SRCPARAM                           | L0001319 | 0.000000001482 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001320 | 0.000000001482 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001321 | 0.000000001482 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001322 | 0.000000001482 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001323 | 0.000000001482 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001324 | 0.000000001482 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001325 | 0.000000001482 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001326 | 0.000000001482 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001327 | 0.000000001482 | 4.00  | 3.95    | 1.86           |
| SRCPARAM                           | L0001328 | 0.000000001482 | 4.00  | 3.95    | 1.86           |
| ** -----                           |          |                |       |         |                |
| SRCPARAM                           | STCK1    | 0.119          | 3.000 | 622.000 | 59.10108 0.229 |
| SRCPARAM                           | STCK2    | 0.119          | 3.000 | 622.000 | 59.10108 0.229 |
| SRCPARAM                           | STCK3    | 0.119          | 3.000 | 622.000 | 59.10108 0.229 |
| SRCPARAM                           | STCK4    | 0.119          | 3.000 | 622.000 | 59.10108 0.229 |
| SRCPARAM                           | STCK5    | 0.119          | 3.000 | 622.000 | 59.10108 0.229 |
| SRCPARAM                           | STCK6    | 0.119          | 3.000 | 622.000 | 59.10108 0.229 |
| SRCPARAM                           | STCK7    | 0.119          | 3.000 | 622.000 | 59.10108 0.229 |
| SRCPARAM                           | STCK8    | 0.119          | 3.000 | 622.000 | 59.10108 0.229 |
| SRCPARAM                           | STCK9    | 0.119          | 3.000 | 622.000 | 59.10108 0.229 |
| ** LINE VOLUME Source ID = SLINE13 |          |                |       |         |                |
| SRCPARAM                           | L0001411 | 0.000003258    | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001412 | 0.000003258    | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001413 | 0.000003258    | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001414 | 0.000003258    | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001415 | 0.000003258    | 0.00  | 4.65    | 7.73           |
| ** -----                           |          |                |       |         |                |
| ** LINE VOLUME Source ID = SLINE14 |          |                |       |         |                |
| SRCPARAM                           | L0001416 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001417 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001418 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001419 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001420 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001421 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001422 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001423 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001424 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001425 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001426 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001427 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001428 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001429 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001430 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001431 | 0.0000003647   | 0.00  | 4.65    | 7.73           |
| SRCPARAM                           | L0001432 | 0.0000003647   | 0.00  | 4.65    | 7.73           |

|          |          |              |      | Res  |      |
|----------|----------|--------------|------|------|------|
| SRCPARAM | L0001433 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001434 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001435 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001436 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001437 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001438 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001439 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001440 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001441 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001442 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001443 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001444 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001445 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001446 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001447 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001448 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001449 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001450 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001451 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001452 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001453 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001454 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001455 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001456 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001457 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001458 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001459 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001460 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001461 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001462 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001463 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001464 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001465 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001466 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001467 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001468 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001469 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001470 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001471 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001472 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001473 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001474 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001475 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001476 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001477 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001478 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001479 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001480 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001481 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001482 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001483 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001484 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001485 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001486 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001487 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001488 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001489 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001490 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001491 | 0.0000003647 | 0.00 | 4.65 | 7.73 |
| SRCPARAM | L0001492 | 0.0000003647 | 0.00 | 4.65 | 7.73 |

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-----  
 URBANSRC ALL

\*\* Variable Emissions Type: "By Hour-of-Day (HROFDY)"

\*\* Variable Emission Scenario: "Generators"

EMISFACT STCK1 HROFDY 0.0 0.0 0.0 0.0 0.0 0.0

EMISFACT STCK1 HROFDY 0.137 0.0 0.0 0.0 0.0 0.0

|          |        |          |          |          |          |          |          |     |     |     |     |
|----------|--------|----------|----------|----------|----------|----------|----------|-----|-----|-----|-----|
| EMISFACT | STCK1  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK1  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK2  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK2  |          | HROFDY   | 0.137    | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 | 0.0 |
| EMISFACT | STCK2  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK2  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK3  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK3  |          | HROFDY   | 0.137    | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 | 0.0 |
| EMISFACT | STCK3  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK3  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK4  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK4  |          | HROFDY   | 0.137    | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 | 0.0 |
| EMISFACT | STCK4  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK4  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK5  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK5  |          | HROFDY   | 0.137    | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 | 0.0 |
| EMISFACT | STCK5  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK5  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK6  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK6  |          | HROFDY   | 0.137    | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 | 0.0 |
| EMISFACT | STCK6  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK6  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK7  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK7  |          | HROFDY   | 0.137    | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 | 0.0 |
| EMISFACT | STCK7  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK7  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK8  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK8  |          | HROFDY   | 0.137    | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 | 0.0 |
| EMISFACT | STCK8  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK8  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK9  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK9  |          | HROFDY   | 0.137    | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 | 0.0 |
| EMISFACT | STCK9  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| EMISFACT | STCK9  |          | HROFDY   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0 | 0.0 | 0.0 |     |
| SRCGROUP | Trucks | L0001181 | L0001182 | L0001183 | L0001184 | L0001185 | L0001186 |     |     |     |     |
| SRCGROUP | Trucks | L0001187 | L0001188 | L0001189 | L0001190 | L0001191 | L0001192 |     |     |     |     |
| SRCGROUP | Trucks | L0001193 | L0001194 | L0001195 | L0001196 | L0001197 | L0001198 |     |     |     |     |
| SRCGROUP | Trucks | L0001199 | L0001200 | L0001201 | L0001202 | L0001203 | L0001204 |     |     |     |     |
| SRCGROUP | Trucks | L0001205 | L0001206 | L0001207 | L0001208 | L0001209 | L0001210 |     |     |     |     |
| SRCGROUP | Trucks | L0001211 | L0001212 | L0001213 | L0001214 | L0001215 | L0001216 |     |     |     |     |
| SRCGROUP | Trucks | L0001217 | L0001218 | L0001219 | L0001220 | L0001221 | L0001222 |     |     |     |     |
| SRCGROUP | Trucks | L0001223 | L0001224 | L0001225 | L0001226 | L0001227 | L0001228 |     |     |     |     |
| SRCGROUP | Trucks | L0001229 | L0001230 | L0001231 | L0001232 | L0001    |          |     |     |     |     |

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                                Res
SRCGROUP Helicopt L0001453 L0001454 L0001455 L0001456 L0001457 L0001458
SRCGROUP Helicopt L0001459 L0001460 L0001461 L0001462 L0001463 L0001464
SRCGROUP Helicopt L0001465 L0001466 L0001467 L0001468 L0001469 L0001470
SRCGROUP Helicopt L0001471 L0001472 L0001473 L0001474 L0001475 L0001476
SRCGROUP Helicopt L0001477 L0001478 L0001479 L0001480 L0001481 L0001482
SRCGROUP Helicopt L0001483 L0001484 L0001485 L0001486 L0001487 L0001488
SRCGROUP Helicopt L0001489 L0001490 L0001491 L0001492
SRCGROUP ALL
SO FINISHED
**
*****
** AERMOD Receptor Pathway
*****
**
**
RE STARTING
  INCLUDED Res.rou
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
  SURFFILE ..\rivr8.sfc
  PROFFILE ..\rivr8.PFL
  SURFDATA 3190 2008
  UAIRDATA 3190 2008
  SITEDATA 99999 2008
  PROFBASE 250.0 METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
** Auto-Generated Plotfiles
  PLOTFILE ANNUAL ALL Res.AD\AN00GALL.PLT 31
  PLOTFILE ANNUAL Trucks Res.AD\AN00G001.PLT 32
  PLOTFILE ANNUAL Generato Res.AD\AN00G002.PLT 33
  PLOTFILE ANNUAL Helicopt Res.AD\AN00G003.PLT 34
  SUMMFILE Res.sum
OU FINISHED

*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

A Total of          0 Fatal Error Message(s)
A Total of         10 Warning Message(s)
A Total of          0 Informational Message(s)

***** FATAL ERROR MESSAGES *****
      *** NONE ***

***** WARNING MESSAGES *****
SO W320      704      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320      705      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320      706      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320      707      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320      708      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS

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|         |     |                                                           |     |          |
|---------|-----|-----------------------------------------------------------|-----|----------|
|         |     |                                                           | Res |          |
| SO W320 | 709 | PPARM: Input Parameter May Be Out-of-Range for Parameter  |     | VS       |
| SO W320 | 710 | PPARM: Input Parameter May Be Out-of-Range for Parameter  |     | VS       |
| SO W320 | 711 | PPARM: Input Parameter May Be Out-of-Range for Parameter  |     | VS       |
| SO W320 | 712 | PPARM: Input Parameter May Be Out-of-Range for Parameter  |     | VS       |
| ME W531 | 903 | MEOPEN: CAUTION! Met Station ID Missing from SURFFILE for |     | SURFDATA |

\*\*\*\*\*  
 \*\*\* SETUP Finishes Successfully \*\*\*  
 \*\*\*\*\*

♀ \*\*\* AERMOD - VERSION 15181 \*\*\* \*\*\* U:\UcJobs\\_08600-09000\\_08900\08990\Aermod\Res\Res.isc \*\*\*  
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 \*\*\* AERMET - VERSION 14134 \*\*\* \*\*\*  
 12:24:30

PAGE 1  
 \*\*MODELOPTs: RegDEFAULT CONC ELEV URBAN

\*\*\* MODEL SETUP OPTIONS SUMMARY \*\*\*

\*\*Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --  
 \*\*NO GAS DEPOSITION Data Provided.  
 \*\*NO PARTICLE DEPOSITION Data Provided.  
 \*\*Model Uses NO DRY DEPLETION. DRYDPLT = F  
 \*\*Model Uses NO WET DEPLETION. WETDPLT = F  
 \*\*Model Uses URBAN Dispersion Algorithm for the SBL for 239 Source(s),  
 for Total of 1 Urban Area(s):  
 Urban Population = 2100516.0 ; Urban Roughness Length = 1.000 m  
 \*\*Model Uses Regulatory DEFAULT Options:  
 1. Stack-tip Downwash.  
 2. Model Accounts for ELEVated Terrain Effects.  
 3. Use Calms Processing Routine.  
 4. Use Missing Data Processing Routine.  
 5. No Exponential Decay.  
 6. Urban Roughness Length of 1.0 Meter Assumed.

\*\*Other Options Specified:  
 TEMP\_Sub - Meteorological data includes TEMP substitutions

\*\*Model Assumes No FLAGPOLE Receptor Heights.

\*\*The User Specified a Pollutant Type of: DPM

\*\*Model Calculates ANNUAL Averages Only

\*\*This Run Includes: 239 Source(s); 4 Source Group(s); and 91 Receptor(s)

with: 9 POINT(s), including  
 0 POINTCAP(s) and 0 POINTHOR(s)  
 and: 230 VOLUME source(s)  
 and: 0 AREA type source(s)  
 and: 0 LINE source(s)  
 and: 0 OPENPIT source(s)

\*\*Model Set To Continue RUNning After the Setup Testing.

\*\*The AERMET Input Meteorological Data Version Date: 14134

\*\*Output Options Selected:  
 Model Outputs Tables of ANNUAL Averages by Receptor

Res  
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)  
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

\*\*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours  
m for Missing Hours  
b for Both Calm and Missing Hours

\*\*Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 250.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0  
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07  
Output Units = MICROGRAMS/M\*\*3

\*\*Approximate Storage Requirements of Model = 3.7 MB of RAM.

\*\*Detailed Error/Message File: Res.err

\*\*File for Summary of Results: Res.sum

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* POINT SOURCE DATA \*\*\*

| CAP/       | EMIS RATE | NUMBER      | EMISSION RATE |          | BASE     | STACK   | STACK   | STACK     | STACK    | BLDG   | URBAN  |
|------------|-----------|-------------|---------------|----------|----------|---------|---------|-----------|----------|--------|--------|
| SOURCE     | PART.     | (GRAMS/SEC) | X             | Y        | ELEV.    | HEIGHT  | TEMP.   | EXIT VEL. | DIAMETER | EXISTS | SOURCE |
| HOR SCALAR | CATS.     | (METERS)    | (METERS)      | (METERS) | (METERS) | (DEG.K) | (M/SEC) | (METERS)  |          |        |        |
| ID         |           |             |               |          |          |         |         |           |          |        |        |
| VARY BY    |           |             |               |          |          |         |         |           |          |        |        |

|           |   |             |          |           |       |      |        |       |      |    |     |
|-----------|---|-------------|----------|-----------|-------|------|--------|-------|------|----|-----|
| STCK1     | 0 | 0.11900E+00 | 473781.6 | 3754629.5 | 472.0 | 3.00 | 622.00 | 59.10 | 0.23 | NO | YES |
| NO HROFDY |   |             |          |           |       |      |        |       |      |    |     |
| STCK2     | 0 | 0.11900E+00 | 473755.7 | 3754699.3 | 472.6 | 3.00 | 622.00 | 59.10 | 0.23 | NO | YES |
| NO HROFDY |   |             |          |           |       |      |        |       |      |    |     |
| STCK3     | 0 | 0.11900E+00 | 473911.8 | 3754624.3 | 474.1 | 3.00 | 622.00 | 59.10 | 0.23 | NO | YES |
| NO HROFDY |   |             |          |           |       |      |        |       |      |    |     |
| STCK4     | 0 | 0.11900E+00 | 474041.2 | 3754625.2 | 474.2 | 3.00 | 622.00 | 59.10 | 0.23 | NO | YES |
| NO HROFDY |   |             |          |           |       |      |        |       |      |    |     |
| STCK5     | 0 | 0.11900E+00 | 473711.7 | 3754510.4 | 472.0 | 3.00 | 622.00 | 59.10 | 0.23 | NO | YES |
| NO HROFDY |   |             |          |           |       |      |        |       |      |    |     |
| STCK6     | 0 | 0.11900E+00 | 473762.6 | 3754460.4 | 473.0 | 3.00 | 622.00 | 59.10 | 0.23 | NO | YES |
| NO HROFDY |   |             |          |           |       |      |        |       |      |    |     |
| STCK7     | 0 | 0.11900E+00 | 474165.7 | 3754570.0 | 473.3 | 3.00 | 622.00 | 59.10 | 0.23 | NO | YES |
| NO HROFDY |   |             |          |           |       |      |        |       |      |    |     |
| STCK8     | 0 | 0.11900E+00 | 473785.0 | 3754991.3 | 476.7 | 3.00 | 622.00 | 59.10 | 0.23 | NO | YES |
| NO HROFDY |   |             |          |           |       |      |        |       |      |    |     |
| STCK9     | 0 | 0.11900E+00 | 474115.1 | 3754850.9 | 475.9 | 3.00 | 622.00 | 59.10 | 0.23 | NO | YES |
| NO HROFDY |   |             |          |           |       |      |        |       |      |    |     |

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* VOLUME SOURCE DATA \*\*\*



|              |                          |                              |               |               | Res                       |                               |                         |                         |                 |                                    |
|--------------|--------------------------|------------------------------|---------------|---------------|---------------------------|-------------------------------|-------------------------|-------------------------|-----------------|------------------------------------|
| SOURCE<br>ID | NUMBER<br>PART.<br>CATS. | EMISSION RATE<br>(GRAMS/SEC) | X<br>(METERS) | Y<br>(METERS) | BASE<br>ELEV.<br>(METERS) | RELEASE<br>HEIGHT<br>(METERS) | INIT.<br>SY<br>(METERS) | INIT.<br>SZ<br>(METERS) | URBAN<br>SOURCE | EMISSION RATE<br>SCALAR VARY<br>BY |
| -----        |                          |                              |               |               |                           |                               |                         |                         |                 |                                    |
| -----        |                          |                              |               |               |                           |                               |                         |                         |                 |                                    |
| L0001181     | 0                        | 0.14620E-07                  | 473797.1      | 3754701.7     | 473.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001182     | 0                        | 0.14620E-07                  | 473797.1      | 3754693.2     | 472.7                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001183     | 0                        | 0.14620E-07                  | 473797.1      | 3754684.7     | 472.4                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001184     | 0                        | 0.82200E-09                  | 473737.1      | 3754546.9     | 472.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001185     | 0                        | 0.82200E-09                  | 473737.3      | 3754538.4     | 472.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001186     | 0                        | 0.82200E-09                  | 473737.5      | 3754529.9     | 472.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001187     | 0                        | 0.82200E-09                  | 473737.8      | 3754521.4     | 472.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001188     | 0                        | 0.82200E-09                  | 473738.0      | 3754512.9     | 472.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001189     | 0                        | 0.82200E-09                  | 473738.3      | 3754504.4     | 472.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001190     | 0                        | 0.82200E-09                  | 473738.5      | 3754495.9     | 472.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001191     | 0                        | 0.82200E-09                  | 473740.3      | 3754488.2     | 472.1                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001192     | 0                        | 0.82200E-09                  | 473747.2      | 3754483.7     | 472.3                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001193     | 0                        | 0.82200E-09                  | 473755.7      | 3754483.5     | 472.5                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001194     | 0                        | 0.82200E-09                  | 473764.2      | 3754483.4     | 472.6                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001195     | 0                        | 0.82200E-09                  | 473772.7      | 3754483.3     | 472.6                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001196     | 0                        | 0.82200E-09                  | 473781.2      | 3754483.2     | 472.6                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001197     | 0                        | 0.82200E-09                  | 473789.7      | 3754483.0     | 472.6                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001198     | 0                        | 0.82200E-09                  | 473798.2      | 3754482.9     | 472.7                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001199     | 0                        | 0.82200E-09                  | 473806.7      | 3754482.8     | 472.8                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001200     | 0                        | 0.82200E-09                  | 473815.2      | 3754482.6     | 472.9                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001201     | 0                        | 0.82200E-09                  | 473823.7      | 3754482.5     | 473.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001202     | 0                        | 0.49700E-09                  | 474151.2      | 3754542.3     | 473.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001203     | 0                        | 0.49700E-09                  | 474159.7      | 3754542.3     | 473.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001204     | 0                        | 0.49700E-09                  | 474168.2      | 3754542.2     | 473.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001205     | 0                        | 0.49700E-09                  | 474176.7      | 3754542.1     | 473.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001206     | 0                        | 0.49700E-09                  | 474185.2      | 3754542.1     | 473.2                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001207     | 0                        | 0.49700E-09                  | 474193.7      | 3754542.0     | 473.5                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001208     | 0                        | 0.49700E-09                  | 474202.2      | 3754541.9     | 473.7                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001209     | 0                        | 0.65280E-08                  | 473709.1      | 3754990.0     | 474.5                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001210     | 0                        | 0.65280E-08                  | 473716.4      | 3754985.8     | 474.6                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001211     | 0                        | 0.65280E-08                  | 473724.6      | 3754986.5     | 474.9                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001212     | 0                        | 0.65280E-08                  | 473730.2      | 3754992.6     | 475.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001213     | 0                        | 0.65280E-08                  | 473730.6      | 3755001.0     | 475.0                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001214     | 0                        | 0.27080E-08                  | 474157.5      | 3754909.5     | 476.7                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001215     | 0                        | 0.27080E-08                  | 474164.2      | 3754904.3     | 476.7                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001216     | 0                        | 0.27080E-08                  | 474170.9      | 3754899.1     | 476.8                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001217     | 0                        | 0.27080E-08                  | 474177.7      | 3754893.9     | 476.9                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001218     | 0                        | 0.27080E-08                  | 474184.4      | 3754888.7     | 477.2                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001219     | 0                        | 0.27080E-08                  | 474191.1      | 3754883.6     | 477.4                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |
| L0001220     | 0                        | 0.27080E-08                  | 474197.9      | 3754878.4     | 477.6                     | 4.00                          | 3.95                    | 1.86                    | YES             |                                    |

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* VOLUME SOURCE DATA \*\*\*

| SOURCE<br>ID | NUMBER<br>PART.<br>CATS. | EMISSION RATE<br>(GRAMS/SEC) | X        |           | Y        |          | BASE<br>ELEV.<br>(METERS) | RELEASE<br>HEIGHT<br>(METERS) | INIT.<br>SY<br>(METERS) | INIT.<br>SZ<br>(METERS) | URBAN<br>SOURCE | EMISSION RATE<br>SCALAR VARY<br>BY |
|--------------|--------------------------|------------------------------|----------|-----------|----------|----------|---------------------------|-------------------------------|-------------------------|-------------------------|-----------------|------------------------------------|
|              |                          |                              | (METERS) | (METERS)  | (METERS) | (METERS) |                           |                               |                         |                         |                 |                                    |
| -----        |                          |                              |          |           |          |          |                           |                               |                         |                         |                 |                                    |
| -----        |                          |                              |          |           |          |          |                           |                               |                         |                         |                 |                                    |
| L0001221     | 0                        | 0.27080E-08                  | 474204.6 | 3754873.2 | 477.8    |          | 4.00                      | 3.95                          | 1.86                    | YES                     |                 |                                    |
| L0001222     | 0                        | 0.27080E-08                  | 474211.3 | 3754868.0 | 478.0    |          | 4.00                      | 3.95                          | 1.86                    | YES                     |                 |                                    |
| L0001223     | 0                        | 0.47890E-08                  | 473797.1 | 3754701.7 | 473.0    |          | 4.00                      | 3.95                          | 1.86                    | YES                     |                 |                                    |

|          |   |             |          |           | Res   |      |      |      |     |
|----------|---|-------------|----------|-----------|-------|------|------|------|-----|
| L0001224 | 0 | 0.47890E-08 | 473797.1 | 3754693.2 | 472.7 | 4.00 | 3.95 | 1.86 | YES |
| L0001225 | 0 | 0.47890E-08 | 473797.1 | 3754684.7 | 472.4 | 4.00 | 3.95 | 1.86 | YES |
| L0001226 | 0 | 0.47890E-08 | 473804.9 | 3754684.1 | 472.6 | 4.00 | 3.95 | 1.86 | YES |
| L0001227 | 0 | 0.47890E-08 | 473813.4 | 3754684.3 | 472.9 | 4.00 | 3.95 | 1.86 | YES |
| L0001228 | 0 | 0.47890E-08 | 473821.9 | 3754684.4 | 473.2 | 4.00 | 3.95 | 1.86 | YES |
| L0001229 | 0 | 0.47890E-08 | 473830.4 | 3754684.5 | 473.4 | 4.00 | 3.95 | 1.86 | YES |
| L0001230 | 0 | 0.47890E-08 | 473832.6 | 3754690.6 | 473.6 | 4.00 | 3.95 | 1.86 | YES |
| L0001231 | 0 | 0.47890E-08 | 473832.1 | 3754699.1 | 473.8 | 4.00 | 3.95 | 1.86 | YES |
| L0001232 | 0 | 0.47890E-08 | 473831.7 | 3754707.6 | 473.9 | 4.00 | 3.95 | 1.86 | YES |
| L0001233 | 0 | 0.47890E-08 | 473830.1 | 3754715.9 | 474.1 | 4.00 | 3.95 | 1.86 | YES |
| L0001234 | 0 | 0.47890E-08 | 473827.5 | 3754724.0 | 474.1 | 4.00 | 3.95 | 1.86 | YES |
| L0001235 | 0 | 0.47890E-08 | 473825.4 | 3754732.1 | 474.1 | 4.00 | 3.95 | 1.86 | YES |
| L0001236 | 0 | 0.47890E-08 | 473825.4 | 3754740.6 | 474.2 | 4.00 | 3.95 | 1.86 | YES |
| L0001237 | 0 | 0.15900E-08 | 473695.2 | 3754560.5 | 471.8 | 4.00 | 3.95 | 1.86 | YES |
| L0001238 | 0 | 0.15900E-08 | 473703.7 | 3754560.5 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001239 | 0 | 0.15900E-08 | 473712.2 | 3754560.5 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001240 | 0 | 0.15900E-08 | 473720.7 | 3754560.6 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001241 | 0 | 0.15900E-08 | 473729.2 | 3754560.6 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001242 | 0 | 0.15900E-08 | 473737.0 | 3754559.9 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001243 | 0 | 0.15900E-08 | 473737.2 | 3754551.4 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001244 | 0 | 0.15900E-08 | 473737.4 | 3754542.9 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001245 | 0 | 0.15900E-08 | 473737.6 | 3754534.4 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001246 | 0 | 0.15900E-08 | 473737.8 | 3754525.9 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001247 | 0 | 0.15900E-08 | 473738.0 | 3754517.4 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001248 | 0 | 0.15900E-08 | 473738.2 | 3754508.9 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001249 | 0 | 0.15900E-08 | 473738.4 | 3754500.4 | 472.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001250 | 0 | 0.15900E-08 | 473738.6 | 3754491.9 | 472.1 | 4.00 | 3.95 | 1.86 | YES |
| L0001251 | 0 | 0.15900E-08 | 473743.3 | 3754485.6 | 472.2 | 4.00 | 3.95 | 1.86 | YES |
| L0001252 | 0 | 0.15900E-08 | 473751.1 | 3754483.6 | 472.4 | 4.00 | 3.95 | 1.86 | YES |
| L0001253 | 0 | 0.15900E-08 | 473759.6 | 3754483.5 | 472.5 | 4.00 | 3.95 | 1.86 | YES |
| L0001254 | 0 | 0.15900E-08 | 473768.1 | 3754483.4 | 472.6 | 4.00 | 3.95 | 1.86 | YES |
| L0001255 | 0 | 0.15900E-08 | 473776.6 | 3754483.2 | 472.6 | 4.00 | 3.95 | 1.86 | YES |
| L0001256 | 0 | 0.15900E-08 | 473785.1 | 3754483.1 | 472.6 | 4.00 | 3.95 | 1.86 | YES |
| L0001257 | 0 | 0.15900E-08 | 473793.6 | 3754483.0 | 472.6 | 4.00 | 3.95 | 1.86 | YES |
| L0001258 | 0 | 0.15900E-08 | 473802.1 | 3754482.8 | 472.7 | 4.00 | 3.95 | 1.86 | YES |
| L0001259 | 0 | 0.15900E-08 | 473810.6 | 3754482.7 | 472.9 | 4.00 | 3.95 | 1.86 | YES |
| L0001260 | 0 | 0.15900E-08 | 473819.1 | 3754482.6 | 473.0 | 4.00 | 3.95 | 1.86 | YES |

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* VOLUME SOURCE DATA \*\*\*

| SOURCE ID | NUMBER PART. CATS. | EMISSION RATE (GRAMS/SEC) | X (METERS) | Y (METERS) | BASE ELEV. (METERS) | RELEASE HEIGHT (METERS) | INIT. SY (METERS) | INIT. SZ (METERS) | URBAN SOURCE | EMISSION RATE SCALAR VARY BY |
|-----------|--------------------|---------------------------|------------|------------|---------------------|-------------------------|-------------------|-------------------|--------------|------------------------------|
| L0001261  | 0                  | 0.15900E-08               | 473827.6   | 3754482.5  | 473.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001262  | 0                  | 0.37400E-09               | 474151.2   | 3754542.3  | 473.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001263  | 0                  | 0.37400E-09               | 474159.7   | 3754542.2  | 473.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001264  | 0                  | 0.37400E-09               | 474168.2   | 3754542.2  | 473.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001265  | 0                  | 0.37400E-09               | 474176.7   | 3754542.1  | 473.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001266  | 0                  | 0.37400E-09               | 474185.2   | 3754542.0  | 473.2               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001267  | 0                  | 0.37400E-09               | 474193.7   | 3754541.9  | 473.5               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001268  | 0                  | 0.37400E-09               | 474202.2   | 3754541.9  | 473.7               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001269  | 0                  | 0.37400E-09               | 474210.7   | 3754541.8  | 474.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001270  | 0                  | 0.37400E-09               | 474219.2   | 3754541.7  | 474.1               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001271  | 0                  | 0.37400E-09               | 474225.0   | 3754544.3  | 474.2               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001272  | 0                  | 0.37400E-09               | 474224.8   | 3754552.8  | 474.4               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001273  | 0                  | 0.37400E-09               | 474224.6   | 3754561.3  | 474.5               | 4.00                    | 3.95              | 1.86              | YES          |                              |

|          |   |             |          |           | Res   |      |      |      |     |
|----------|---|-------------|----------|-----------|-------|------|------|------|-----|
| L0001274 | 0 | 0.37400E-09 | 474230.5 | 3754563.9 | 474.7 | 4.00 | 3.95 | 1.86 | YES |
| L0001275 | 0 | 0.37400E-09 | 474239.0 | 3754563.8 | 475.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001276 | 0 | 0.37400E-09 | 474247.5 | 3754563.8 | 475.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001277 | 0 | 0.37400E-09 | 474256.0 | 3754563.8 | 475.1 | 4.00 | 3.95 | 1.86 | YES |
| L0001278 | 0 | 0.37400E-09 | 474264.5 | 3754563.8 | 475.1 | 4.00 | 3.95 | 1.86 | YES |
| L0001279 | 0 | 0.37400E-09 | 474273.0 | 3754563.8 | 475.1 | 4.00 | 3.95 | 1.86 | YES |
| L0001280 | 0 | 0.37400E-09 | 474281.5 | 3754563.8 | 475.1 | 4.00 | 3.95 | 1.86 | YES |
| L0001281 | 0 | 0.35910E-08 | 473695.7 | 3755013.1 | 475.1 | 4.00 | 3.95 | 1.86 | YES |
| L0001282 | 0 | 0.35910E-08 | 473699.5 | 3755005.5 | 474.9 | 4.00 | 3.95 | 1.86 | YES |
| L0001283 | 0 | 0.35910E-08 | 473703.4 | 3754997.9 | 474.6 | 4.00 | 3.95 | 1.86 | YES |
| L0001284 | 0 | 0.35910E-08 | 473708.0 | 3754990.9 | 474.5 | 4.00 | 3.95 | 1.86 | YES |
| L0001285 | 0 | 0.35910E-08 | 473715.0 | 3754986.3 | 474.6 | 4.00 | 3.95 | 1.86 | YES |
| L0001286 | 0 | 0.35910E-08 | 473723.3 | 3754985.8 | 474.8 | 4.00 | 3.95 | 1.86 | YES |
| L0001287 | 0 | 0.35910E-08 | 473729.4 | 3754991.3 | 475.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001288 | 0 | 0.35910E-08 | 473730.8 | 3754999.5 | 475.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001289 | 0 | 0.26600E-08 | 474157.5 | 3754909.5 | 476.7 | 4.00 | 3.95 | 1.86 | YES |
| L0001290 | 0 | 0.26600E-08 | 474164.2 | 3754904.3 | 476.7 | 4.00 | 3.95 | 1.86 | YES |
| L0001291 | 0 | 0.26600E-08 | 474170.9 | 3754899.1 | 476.8 | 4.00 | 3.95 | 1.86 | YES |
| L0001292 | 0 | 0.26600E-08 | 474177.6 | 3754893.9 | 476.9 | 4.00 | 3.95 | 1.86 | YES |
| L0001293 | 0 | 0.26600E-08 | 474184.4 | 3754888.7 | 477.2 | 4.00 | 3.95 | 1.86 | YES |
| L0001294 | 0 | 0.26600E-08 | 474191.1 | 3754883.5 | 477.4 | 4.00 | 3.95 | 1.86 | YES |
| L0001295 | 0 | 0.26600E-08 | 474197.8 | 3754878.3 | 477.6 | 4.00 | 3.95 | 1.86 | YES |
| L0001296 | 0 | 0.26600E-08 | 474204.6 | 3754873.1 | 477.8 | 4.00 | 3.95 | 1.86 | YES |
| L0001297 | 0 | 0.26600E-08 | 474211.3 | 3754867.9 | 478.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001298 | 0 | 0.26600E-08 | 474218.0 | 3754862.7 | 478.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001299 | 0 | 0.26600E-08 | 474224.7 | 3754857.6 | 478.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001300 | 0 | 0.26600E-08 | 474231.5 | 3754852.4 | 477.9 | 4.00 | 3.95 | 1.86 | YES |

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 \*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* VOLUME SOURCE DATA \*\*\*

| SOURCE ID | PART. CATS. | NUMBER EMISSION RATE (GRAMS/SEC) | X (METERS) | Y (METERS) | BASE ELEV. (METERS) | RELEASE HEIGHT (METERS) | INIT. SY (METERS) | INIT. SZ (METERS) | URBAN SOURCE | EMISSION RATE SCALAR VARY BY |
|-----------|-------------|----------------------------------|------------|------------|---------------------|-------------------------|-------------------|-------------------|--------------|------------------------------|
| L0001301  | 0           | 0.26600E-08                      | 474238.2   | 3754847.2  | 478.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001302  | 0           | 0.26600E-08                      | 474244.9   | 3754842.0  | 478.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001303  | 0           | 0.26600E-08                      | 474251.6   | 3754836.8  | 478.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001304  | 0           | 0.26600E-08                      | 474258.4   | 3754831.6  | 478.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001305  | 0           | 0.26600E-08                      | 474265.1   | 3754826.4  | 478.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001306  | 0           | 0.26600E-08                      | 474271.8   | 3754821.2  | 478.1               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001307  | 0           | 0.26600E-08                      | 474276.0   | 3754814.6  | 478.2               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001308  | 0           | 0.26600E-08                      | 474275.5   | 3754806.5  | 478.2               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001309  | 0           | 0.26600E-08                      | 474271.2   | 3754799.1  | 478.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001310  | 0           | 0.26600E-08                      | 474265.0   | 3754793.3  | 478.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001311  | 0           | 0.26600E-08                      | 474257.2   | 3754791.1  | 478.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001312  | 0           | 0.26600E-08                      | 474248.7   | 3754790.3  | 478.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001313  | 0           | 0.26600E-08                      | 474240.3   | 3754788.9  | 478.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001314  | 0           | 0.26600E-08                      | 474236.3   | 3754782.8  | 477.9               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001315  | 0           | 0.34830E-08                      | 474028.4   | 3754694.4  | 475.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001316  | 0           | 0.34830E-08                      | 474028.3   | 3754685.9  | 475.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001317  | 0           | 0.34830E-08                      | 474028.2   | 3754677.4  | 475.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001318  | 0           | 0.34830E-08                      | 474028.2   | 3754668.9  | 475.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001319  | 0           | 0.14820E-08                      | 474027.8   | 3754742.6  | 475.1               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001320  | 0           | 0.14820E-08                      | 474027.8   | 3754734.1  | 475.1               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001321  | 0           | 0.14820E-08                      | 474027.9   | 3754725.6  | 475.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001322  | 0           | 0.14820E-08                      | 474027.9   | 3754717.1  | 475.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |
| L0001323  | 0           | 0.14820E-08                      | 474027.9   | 3754708.6  | 475.0               | 4.00                    | 3.95              | 1.86              | YES          |                              |

|          |   |             |          |           | Res   |      |      |      |     |
|----------|---|-------------|----------|-----------|-------|------|------|------|-----|
| L0001324 | 0 | 0.14820E-08 | 474028.0 | 3754700.1 | 475.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001325 | 0 | 0.14820E-08 | 474028.0 | 3754691.6 | 475.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001326 | 0 | 0.14820E-08 | 474028.1 | 3754683.1 | 475.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001327 | 0 | 0.14820E-08 | 474028.1 | 3754674.6 | 475.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001328 | 0 | 0.14820E-08 | 474028.1 | 3754666.1 | 475.0 | 4.00 | 3.95 | 1.86 | YES |
| L0001411 | 0 | 0.32580E-05 | 473710.4 | 3754652.0 | 472.0 | 0.00 | 4.65 | 7.73 | YES |
| L0001412 | 0 | 0.32580E-05 | 473710.9 | 3754642.0 | 471.8 | 0.00 | 4.65 | 7.73 | YES |
| L0001413 | 0 | 0.32580E-05 | 473711.4 | 3754632.0 | 471.6 | 0.00 | 4.65 | 7.73 | YES |
| L0001414 | 0 | 0.32580E-05 | 473711.9 | 3754622.0 | 471.4 | 0.00 | 4.65 | 7.73 | YES |
| L0001415 | 0 | 0.32580E-05 | 473712.4 | 3754612.1 | 471.4 | 0.00 | 4.65 | 7.73 | YES |
| L0001416 | 0 | 0.36470E-06 | 473401.3 | 3754815.4 | 471.0 | 0.00 | 4.65 | 7.73 | YES |
| L0001417 | 0 | 0.36470E-06 | 473410.1 | 3754810.5 | 471.1 | 0.00 | 4.65 | 7.73 | YES |
| L0001418 | 0 | 0.36470E-06 | 473418.8 | 3754805.6 | 471.1 | 0.00 | 4.65 | 7.73 | YES |
| L0001419 | 0 | 0.36470E-06 | 473427.5 | 3754800.8 | 471.0 | 0.00 | 4.65 | 7.73 | YES |
| L0001420 | 0 | 0.36470E-06 | 473436.2 | 3754795.9 | 471.0 | 0.00 | 4.65 | 7.73 | YES |
| L0001421 | 0 | 0.36470E-06 | 473445.0 | 3754791.0 | 471.0 | 0.00 | 4.65 | 7.73 | YES |
| L0001422 | 0 | 0.36470E-06 | 473453.7 | 3754786.1 | 471.0 | 0.00 | 4.65 | 7.73 | YES |

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\*\*MODELOPTs: RegDEFAULT CONC ELEV URBAN

\*\*\* VOLUME SOURCE DATA \*\*\*

| SOURCE ID | NUMBER PART. CATS. | EMISSION RATE (GRAMS/SEC) | X (METERS) | Y (METERS) | BASE ELEV. (METERS) | RELEASE HEIGHT (METERS) | INIT. SY (METERS) | INIT. SZ (METERS) | URBAN SOURCE | EMISSION RATE SCALAR VARY BY |
|-----------|--------------------|---------------------------|------------|------------|---------------------|-------------------------|-------------------|-------------------|--------------|------------------------------|
| L0001423  | 0                  | 0.36470E-06               | 473462.4   | 3754781.2  | 471.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001424  | 0                  | 0.36470E-06               | 473471.1   | 3754776.3  | 471.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001425  | 0                  | 0.36470E-06               | 473479.9   | 3754771.4  | 471.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001426  | 0                  | 0.36470E-06               | 473488.6   | 3754766.5  | 470.9               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001427  | 0                  | 0.36470E-06               | 473497.3   | 3754761.7  | 470.6               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001428  | 0                  | 0.36470E-06               | 473506.0   | 3754756.8  | 470.3               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001429  | 0                  | 0.36470E-06               | 473514.8   | 3754751.9  | 470.1               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001430  | 0                  | 0.36470E-06               | 473523.5   | 3754747.0  | 469.9               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001431  | 0                  | 0.36470E-06               | 473532.2   | 3754742.1  | 469.6               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001432  | 0                  | 0.36470E-06               | 473540.9   | 3754737.2  | 469.3               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001433  | 0                  | 0.36470E-06               | 473549.6   | 3754732.3  | 469.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001434  | 0                  | 0.36470E-06               | 473558.4   | 3754727.4  | 469.1               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001435  | 0                  | 0.36470E-06               | 473567.1   | 3754722.6  | 469.3               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001436  | 0                  | 0.36470E-06               | 473575.8   | 3754717.7  | 469.6               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001437  | 0                  | 0.36470E-06               | 473584.5   | 3754712.8  | 469.9               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001438  | 0                  | 0.36470E-06               | 473593.3   | 3754707.9  | 470.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001439  | 0                  | 0.36470E-06               | 473602.0   | 3754703.0  | 470.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001440  | 0                  | 0.36470E-06               | 473610.7   | 3754698.1  | 470.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001441  | 0                  | 0.36470E-06               | 473619.4   | 3754693.2  | 470.1               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001442  | 0                  | 0.36470E-06               | 473628.2   | 3754688.4  | 470.2               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001443  | 0                  | 0.36470E-06               | 473636.9   | 3754683.5  | 470.1               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001444  | 0                  | 0.36470E-06               | 473645.6   | 3754678.6  | 470.2               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001445  | 0                  | 0.36470E-06               | 473654.3   | 3754673.7  | 470.6               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001446  | 0                  | 0.36470E-06               | 473663.1   | 3754668.8  | 470.9               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001447  | 0                  | 0.36470E-06               | 473671.8   | 3754663.9  | 471.1               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001448  | 0                  | 0.36470E-06               | 473680.5   | 3754659.0  | 471.4               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001449  | 0                  | 0.36470E-06               | 473689.2   | 3754654.1  | 471.6               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001450  | 0                  | 0.36470E-06               | 473698.0   | 3754649.3  | 471.9               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001451  | 0                  | 0.36470E-06               | 473706.7   | 3754644.4  | 471.9               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001452  | 0                  | 0.36470E-06               | 473706.9   | 3754637.3  | 471.7               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001453  | 0                  | 0.36470E-06               | 473701.5   | 3754628.8  | 471.3               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001454  | 0                  | 0.36470E-06               | 473696.2   | 3754620.3  | 471.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001455  | 0                  | 0.36470E-06               | 473690.9   | 3754611.9  | 471.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |

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Res
L0001456      0  0.36470E-06  473685.6  3754603.4  471.0      0.00      4.65      7.73      YES
L0001457      0  0.36470E-06  473680.3  3754594.9  471.0      0.00      4.65      7.73      YES
L0001458      0  0.36470E-06  473675.0  3754586.5  471.0      0.00      4.65      7.73      YES
L0001459      0  0.36470E-06  473669.7  3754578.0  471.0      0.00      4.65      7.73      YES
L0001460      0  0.36470E-06  473664.4  3754569.5  471.0      0.00      4.65      7.73      YES
L0001461      0  0.36470E-06  473659.1  3754561.0  471.0      0.00      4.65      7.73      YES
L0001462      0  0.36470E-06  473653.7  3754552.6  471.1      0.00      4.65      7.73      YES
♀ *** AERMOD - VERSION 15181 *** *** U:\UcJobs\_08600-09000\_08900\08990\Aermod\Res\Res.isc ***
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**MODELOPTs:  RegDFAULT CONC      ELEV      URBAN

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\*\*\* VOLUME SOURCE DATA \*\*\*

| SOURCE ID | PART. CATS. | EMISSION RATE (GRAMS/SEC) | X (METERS) | Y (METERS) | BASE ELEV. (METERS) | RELEASE HEIGHT (METERS) | INIT. SY (METERS) | INIT. SZ (METERS) | URBAN SOURCE | EMISSION RATE SCALAR VARY BY |
|-----------|-------------|---------------------------|------------|------------|---------------------|-------------------------|-------------------|-------------------|--------------|------------------------------|
| L0001463  | 0           | 0.36470E-06               | 473648.4   | 3754544.1  | 471.2               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001464  | 0           | 0.36470E-06               | 473643.1   | 3754535.6  | 471.1               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001465  | 0           | 0.36470E-06               | 473637.8   | 3754527.1  | 471.1               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001466  | 0           | 0.36470E-06               | 473632.5   | 3754518.7  | 471.3               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001467  | 0           | 0.36470E-06               | 473627.2   | 3754510.2  | 471.4               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001468  | 0           | 0.36470E-06               | 473621.9   | 3754501.7  | 471.4               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001469  | 0           | 0.36470E-06               | 473616.6   | 3754493.2  | 471.4               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001470  | 0           | 0.36470E-06               | 473611.3   | 3754484.8  | 471.5               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001471  | 0           | 0.36470E-06               | 473606.0   | 3754476.3  | 471.8               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001472  | 0           | 0.36470E-06               | 473600.6   | 3754467.8  | 472.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001473  | 0           | 0.36470E-06               | 473595.3   | 3754459.3  | 472.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001474  | 0           | 0.36470E-06               | 473590.0   | 3754450.9  | 472.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001475  | 0           | 0.36470E-06               | 473584.7   | 3754442.4  | 472.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001476  | 0           | 0.36470E-06               | 473579.4   | 3754433.9  | 472.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001477  | 0           | 0.36470E-06               | 473574.1   | 3754425.5  | 471.9               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001478  | 0           | 0.36470E-06               | 473568.8   | 3754417.0  | 471.7               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001479  | 0           | 0.36470E-06               | 473563.5   | 3754408.5  | 471.4               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001480  | 0           | 0.36470E-06               | 473558.2   | 3754400.0  | 471.3               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001481  | 0           | 0.36470E-06               | 473552.9   | 3754391.6  | 471.1               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001482  | 0           | 0.36470E-06               | 473547.5   | 3754383.1  | 471.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001483  | 0           | 0.36470E-06               | 473542.2   | 3754374.6  | 471.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001484  | 0           | 0.36470E-06               | 473536.9   | 3754366.1  | 471.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001485  | 0           | 0.36470E-06               | 473531.6   | 3754357.7  | 471.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001486  | 0           | 0.36470E-06               | 473526.3   | 3754349.2  | 471.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001487  | 0           | 0.36470E-06               | 473521.0   | 3754340.7  | 470.7               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001488  | 0           | 0.36470E-06               | 473515.7   | 3754332.2  | 470.4               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001489  | 0           | 0.36470E-06               | 473510.4   | 3754323.8  | 470.1               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001490  | 0           | 0.36470E-06               | 473505.1   | 3754315.3  | 470.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001491  | 0           | 0.36470E-06               | 473499.8   | 3754306.8  | 470.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |
| L0001492  | 0           | 0.36470E-06               | 473494.4   | 3754298.4  | 470.0               | 0.00                    | 4.65              | 7.73              | YES          |                              |

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**MODELOPTs:  RegDFAULT CONC      ELEV      URBAN

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\*\*\* SOURCE IDs DEFINING SOURCE GROUPS \*\*\*

| SRCGROUP ID | SOURCE IDs |
|-------------|------------|
| -----       | -----      |

|                        | Res       |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|------------------------|-----------|------|----------|--------------------------------------------------------|----------|---|----------|---|----------|---|----------|---|----------|-----|--|
| TRUCKS                 | L0001181  | ,    | L0001182 | ,                                                      | L0001183 | , | L0001184 | , | L0001185 | , | L0001186 | , | L0001187 | ,   |  |
| L0001188               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001189  | ,    | L0001190 | ,                                                      | L0001191 | , | L0001192 | , | L0001193 | , | L0001194 | , | L0001195 | ,   |  |
| L0001196               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001197  | ,    | L0001198 | ,                                                      | L0001199 | , | L0001200 | , | L0001201 | , | L0001202 | , | L0001203 | ,   |  |
| L0001204               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001205  | ,    | L0001206 | ,                                                      | L0001207 | , | L0001208 | , | L0001209 | , | L0001210 | , | L0001211 | ,   |  |
| L0001212               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001213  | ,    | L0001214 | ,                                                      | L0001215 | , | L0001216 | , | L0001217 | , | L0001218 | , | L0001219 | ,   |  |
| L0001220               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001221  | ,    | L0001222 | ,                                                      | L0001223 | , | L0001224 | , | L0001225 | , | L0001226 | , | L0001227 | ,   |  |
| L0001228               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001229  | ,    | L0001230 | ,                                                      | L0001231 | , | L0001232 | , | L0001233 | , | L0001234 | , | L0001235 | ,   |  |
| L0001236               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001237  | ,    | L0001238 | ,                                                      | L0001239 | , | L0001240 | , | L0001241 | , | L0001242 | , | L0001243 | ,   |  |
| L0001244               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001245  | ,    | L0001246 | ,                                                      | L0001247 | , | L0001248 | , | L0001249 | , | L0001250 | , | L0001251 | ,   |  |
| L0001252               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001253  | ,    | L0001254 | ,                                                      | L0001255 | , | L0001256 | , | L0001257 | , | L0001258 | , | L0001259 | ,   |  |
| L0001260               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001261  | ,    | L0001262 | ,                                                      | L0001263 | , | L0001264 | , | L0001265 | , | L0001266 | , | L0001267 | ,   |  |
| L0001268               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001269  | ,    | L0001270 | ,                                                      | L0001271 | , | L0001272 | , | L0001273 | , | L0001274 | , | L0001275 | ,   |  |
| L0001276               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001277  | ,    | L0001278 | ,                                                      | L0001279 | , | L0001280 | , | L0001281 | , | L0001282 | , | L0001283 | ,   |  |
| L0001284               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001285  | ,    | L0001286 | ,                                                      | L0001287 | , | L0001288 | , | L0001289 | , | L0001290 | , | L0001291 | ,   |  |
| L0001292               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001293  | ,    | L0001294 | ,                                                      | L0001295 | , | L0001296 | , | L0001297 | , | L0001298 | , | L0001299 | ,   |  |
| L0001300               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001301  | ,    | L0001302 | ,                                                      | L0001303 | , | L0001304 | , | L0001305 | , | L0001306 | , | L0001307 | ,   |  |
| L0001308               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001309  | ,    | L0001310 | ,                                                      | L0001311 | , | L0001312 | , | L0001313 | , | L0001314 | , | L0001315 | ,   |  |
| L0001316               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001317  | ,    | L0001318 | ,                                                      | L0001319 | , | L0001320 | , | L0001321 | , | L0001322 | , | L0001323 | ,   |  |
| L0001324               | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
|                        | L0001325  | ,    | L0001326 | ,                                                      | L0001327 | , | L0001328 | , |          |   |          |   |          |     |  |
| GENERATO               | STCK1     | ,    | STCK2    | ,                                                      | STCK3    | , | STCK4    | , | STCK5    | , | STCK6    | , | STCK7    | ,   |  |
| STCK8                  | ,         |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
| ♀ *** AERMOD - VERSION | 15181     | ***  | ***      | U:\UcJobs\_08600-09000\_08900\08990\Aermod\Res\Res.isc |          |   |          |   |          |   |          |   |          | *** |  |
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| *** AERMET - VERSION   | 14134     | ***  | ***      |                                                        |          |   |          |   |          |   |          |   |          | *** |  |
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| PAGE 10                |           |      |          |                                                        |          |   |          |   |          |   |          |   |          |     |  |
| **MODELOPTs:           | RegDFAULT | CONC | ELEV     | URBAN                                                  |          |   |          |   |          |   |          |   |          |     |  |

Res

\*\*\* SOURCE IDs DEFINING SOURCE GROUPS \*\*\*

| SRCGROUP ID          | SOURCE IDs |   |          |   |          |   |          |   |
|----------------------|------------|---|----------|---|----------|---|----------|---|
| -----                | -----      |   |          |   |          |   |          |   |
|                      | STCK9      | , |          |   |          |   |          |   |
| HELICOPT<br>L0001418 | L0001411   | , | L0001412 | , | L0001413 | , | L0001414 | , |
|                      |            |   |          |   |          |   | L0001415 | , |
|                      |            |   |          |   |          |   | L0001416 | , |
|                      |            |   |          |   |          |   | L0001417 | , |
| L0001426             | L0001419   | , | L0001420 | , | L0001421 | , | L0001422 | , |
|                      |            |   |          |   |          |   | L0001423 | , |
|                      |            |   |          |   |          |   | L0001424 | , |
|                      |            |   |          |   |          |   | L0001425 | , |
| L0001434             | L0001427   | , | L0001428 | , | L0001429 | , | L0001430 | , |
|                      |            |   |          |   |          |   | L0001431 | , |
|                      |            |   |          |   |          |   | L0001432 | , |
|                      |            |   |          |   |          |   | L0001433 | , |
| L0001442             | L0001435   | , | L0001436 | , | L0001437 | , | L0001438 | , |
|                      |            |   |          |   |          |   | L0001439 | , |
|                      |            |   |          |   |          |   | L0001440 | , |
|                      |            |   |          |   |          |   | L0001441 | , |
| L0001450             | L0001443   | , | L0001444 | , | L0001445 | , | L0001446 | , |
|                      |            |   |          |   |          |   | L0001447 | , |
|                      |            |   |          |   |          |   | L0001448 | , |
|                      |            |   |          |   |          |   | L0001449 | , |
| L0001458             | L0001451   | , | L0001452 | , | L0001453 | , | L0001454 | , |
|                      |            |   |          |   |          |   | L0001455 | , |
|                      |            |   |          |   |          |   | L0001456 | , |
|                      |            |   |          |   |          |   | L0001457 | , |
| L0001466             | L0001459   | , | L0001460 | , | L0001461 | , | L0001462 | , |
|                      |            |   |          |   |          |   | L0001463 | , |
|                      |            |   |          |   |          |   | L0001464 | , |
|                      |            |   |          |   |          |   | L0001465 | , |
| L0001474             | L0001467   | , | L0001468 | , | L0001469 | , | L0001470 | , |
|                      |            |   |          |   |          |   | L0001471 | , |
|                      |            |   |          |   |          |   | L0001472 | , |
|                      |            |   |          |   |          |   | L0001473 | , |
| L0001482             | L0001475   | , | L0001476 | , | L0001477 | , | L0001478 | , |
|                      |            |   |          |   |          |   | L0001479 | , |
|                      |            |   |          |   |          |   | L0001480 | , |
|                      |            |   |          |   |          |   | L0001481 | , |
| L0001490             | L0001483   | , | L0001484 | , | L0001485 | , | L0001486 | , |
|                      |            |   |          |   |          |   | L0001487 | , |
|                      |            |   |          |   |          |   | L0001488 | , |
|                      |            |   |          |   |          |   | L0001489 | , |
|                      | L0001491   | , | L0001492 | , |          |   |          |   |
| ALL<br>L0001188      | L0001181   | , | L0001182 | , | L0001183 | , | L0001184 | , |
|                      |            |   |          |   |          |   | L0001185 | , |
|                      |            |   |          |   |          |   | L0001186 | , |
|                      |            |   |          |   |          |   | L0001187 | , |
| L0001196             | L0001189   | , | L0001190 | , | L0001191 | , | L0001192 | , |
|                      |            |   |          |   |          |   | L0001193 | , |
|                      |            |   |          |   |          |   | L0001194 | , |
|                      |            |   |          |   |          |   | L0001195 | , |
| L0001204             | L0001197   | , | L0001198 | , | L0001199 | , | L0001200 | , |
|                      |            |   |          |   |          |   | L0001201 | , |
|                      |            |   |          |   |          |   | L0001202 | , |
|                      |            |   |          |   |          |   | L0001203 | , |
| L0001212             | L0001205   | , | L0001206 | , | L0001207 | , | L0001208 | , |
|                      |            |   |          |   |          |   | L0001209 | , |
|                      |            |   |          |   |          |   | L0001210 | , |
|                      |            |   |          |   |          |   | L0001211 | , |
| L0001220             | L0001213   | , | L0001214 | , | L0001215 | , | L0001216 | , |
|                      |            |   |          |   |          |   | L0001217 | , |
|                      |            |   |          |   |          |   | L0001218 | , |
|                      |            |   |          |   |          |   | L0001219 | , |
| L0001228             | L0001221   | , | L0001222 | , | L0001223 | , | L0001224 | , |
|                      |            |   |          |   |          |   | L0001225 | , |
|                      |            |   |          |   |          |   | L0001226 | , |
|                      |            |   |          |   |          |   | L0001227 | , |
| L0001236             | L0001229   | , | L0001230 | , | L0001231 | , | L0001232 | , |
|                      |            |   |          |   |          |   | L0001233 | , |
|                      |            |   |          |   |          |   | L0001234 | , |
|                      |            |   |          |   |          |   | L0001235 | , |
| L0001244             | L0001237   | , | L0001238 | , | L0001239 | , | L0001240 | , |
|                      |            |   |          |   |          |   | L0001241 | , |
|                      |            |   |          |   |          |   | L0001242 | , |
|                      |            |   |          |   |          |   | L0001243 | , |

♀ \*\*\* AERMOD - VERSION 15181 \*\*\* \*\*\* U:\UcJobs\\_08600-09000\\_08900\08990\Aermom\Res\Res.isc \*\*\*

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Res

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* SOURCE IDs DEFINING SOURCE GROUPS \*\*\*

| SRCGROUP ID | SOURCE IDs                                                                   |
|-------------|------------------------------------------------------------------------------|
| -----       | -----                                                                        |
| L0001252    | L0001245 , L0001246 , L0001247 , L0001248 , L0001249 , L0001250 , L0001251 , |
| L0001260    | L0001253 , L0001254 , L0001255 , L0001256 , L0001257 , L0001258 , L0001259 , |
| L0001268    | L0001261 , L0001262 , L0001263 , L0001264 , L0001265 , L0001266 , L0001267 , |
| L0001276    | L0001269 , L0001270 , L0001271 , L0001272 , L0001273 , L0001274 , L0001275 , |
| L0001284    | L0001277 , L0001278 , L0001279 , L0001280 , L0001281 , L0001282 , L0001283 , |
| L0001292    | L0001285 , L0001286 , L0001287 , L0001288 , L0001289 , L0001290 , L0001291 , |
| L0001300    | L0001293 , L0001294 , L0001295 , L0001296 , L0001297 , L0001298 , L0001299 , |
| L0001308    | L0001301 , L0001302 , L0001303 , L0001304 , L0001305 , L0001306 , L0001307 , |
| L0001316    | L0001309 , L0001310 , L0001311 , L0001312 , L0001313 , L0001314 , L0001315 , |
| L0001324    | L0001317 , L0001318 , L0001319 , L0001320 , L0001321 , L0001322 , L0001323 , |
| STCK4       | L0001325 , L0001326 , L0001327 , L0001328 , STCK1 , STCK2 , STCK3 ,          |
| L0001413    | STCK5 , STCK6 , STCK7 , STCK8 , STCK9 , L0001411 , L0001412 ,                |
| L0001421    | L0001414 , L0001415 , L0001416 , L0001417 , L0001418 , L0001419 , L0001420 , |
| L0001429    | L0001422 , L0001423 , L0001424 , L0001425 , L0001426 , L0001427 , L0001428 , |
| L0001437    | L0001430 , L0001431 , L0001432 , L0001433 , L0001434 , L0001435 , L0001436 , |
| L0001445    | L0001438 , L0001439 , L0001440 , L0001441 , L0001442 , L0001443 , L0001444 , |
| L0001453    | L0001446 , L0001447 , L0001448 , L0001449 , L0001450 , L0001451 , L0001452 , |
| L0001461    | L0001454 , L0001455 , L0001456 , L0001457 , L0001458 , L0001459 , L0001460 , |



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Res
L0001469 , L0001462 , L0001463 , L0001464 , L0001465 , L0001466 , L0001467 , L0001468 ,
,
L0001470 , L0001471 , L0001472 , L0001473 , L0001474 , L0001475 , L0001476 ,
L0001477 ,
♀ *** AERMOD - VERSION 15181 *** *** U:\UcJobs\_08600-09000\_08900\08990\Aermod\Res\Res.isc ***
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**MODELOPTs: RegDFAULT CONC ELEV URBAN

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\*\*\* SOURCE IDs DEFINING SOURCE GROUPS \*\*\*

```

SRCGROUP ID SOURCE IDs
-----
L0001485 , L0001478 , L0001479 , L0001480 , L0001481 , L0001482 , L0001483 , L0001484 ,
,
L0001486 , L0001487 , L0001488 , L0001489 , L0001490 , L0001491 , L0001492 ,
♀ *** AERMOD - VERSION 15181 *** *** U:\UcJobs\_08600-09000\_08900\08990\Aermod\Res\Res.isc ***
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**MODELOPTs: RegDFAULT CONC ELEV URBAN

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\*\*\* SOURCE IDs DEFINED AS URBAN SOURCES \*\*\*

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URBAN ID URBAN POP SOURCE IDs
-----
L0001187 , 2100516. L0001181 , L0001182 , L0001183 , L0001184 , L0001185 , L0001186 ,
L0001188 ,
,
L0001189 , L0001190 , L0001191 , L0001192 , L0001193 , L0001194 , L0001195 ,
L0001196 ,
,
L0001197 , L0001198 , L0001199 , L0001200 , L0001201 , L0001202 , L0001203 ,
L0001204 ,
,
L0001205 , L0001206 , L0001207 , L0001208 , L0001209 , L0001210 , L0001211 ,
L0001212 ,
,
L0001213 , L0001214 , L0001215 , L0001216 , L0001217 , L0001218 , L0001219 ,
L0001220 ,
,
L0001221 , L0001222 , L0001223 , L0001224 , L0001225 , L0001226 , L0001227 ,
L0001228 ,
,
L0001229 , L0001230 , L0001231 , L0001232 , L0001233 , L0001234 , L0001235 ,
L0001236 ,
,
L0001237 , L0001238 , L0001239 , L0001240 , L0001241 , L0001242 , L0001243 ,
L0001244 ,
,
L0001245 , L0001246 , L0001247 , L0001248 , L0001249 , L0001250 , L0001251 ,
L0001252 ,
,

```

|                                  |                                                          |            |            |            |            |            |            |     |
|----------------------------------|----------------------------------------------------------|------------|------------|------------|------------|------------|------------|-----|
|                                  |                                                          |            |            | Res        |            |            |            |     |
| L0001260                         | L0001253                                                 | , L0001254 | , L0001255 | , L0001256 | , L0001257 | , L0001258 | , L0001259 | ,   |
|                                  |                                                          |            |            |            |            |            |            |     |
| L0001268                         | L0001261                                                 | , L0001262 | , L0001263 | , L0001264 | , L0001265 | , L0001266 | , L0001267 | ,   |
|                                  |                                                          |            |            |            |            |            |            |     |
| L0001276                         | L0001269                                                 | , L0001270 | , L0001271 | , L0001272 | , L0001273 | , L0001274 | , L0001275 | ,   |
|                                  |                                                          |            |            |            |            |            |            |     |
| L0001284                         | L0001277                                                 | , L0001278 | , L0001279 | , L0001280 | , L0001281 | , L0001282 | , L0001283 | ,   |
|                                  |                                                          |            |            |            |            |            |            |     |
| L0001292                         | L0001285                                                 | , L0001286 | , L0001287 | , L0001288 | , L0001289 | , L0001290 | , L0001291 | ,   |
|                                  |                                                          |            |            |            |            |            |            |     |
| L0001300                         | L0001293                                                 | , L0001294 | , L0001295 | , L0001296 | , L0001297 | , L0001298 | , L0001299 | ,   |
|                                  |                                                          |            |            |            |            |            |            |     |
| L0001308                         | L0001301                                                 | , L0001302 | , L0001303 | , L0001304 | , L0001305 | , L0001306 | , L0001307 | ,   |
|                                  |                                                          |            |            |            |            |            |            |     |
| L0001316                         | L0001309                                                 | , L0001310 | , L0001311 | , L0001312 | , L0001313 | , L0001314 | , L0001315 | ,   |
|                                  |                                                          |            |            |            |            |            |            |     |
| L0001324                         | L0001317                                                 | , L0001318 | , L0001319 | , L0001320 | , L0001321 | , L0001322 | , L0001323 | ,   |
|                                  |                                                          |            |            |            |            |            |            |     |
| STCK4                            | L0001325                                                 | , L0001326 | , L0001327 | , L0001328 | , STCK1    | , STCK2    | , STCK3    | ,   |
|                                  |                                                          |            |            |            |            |            |            |     |
| L0001413                         | STCK5                                                    | , STCK6    | , STCK7    | , STCK8    | , STCK9    | , L0001411 | , L0001412 | ,   |
| ♀ *** AERMOD - VERSION 15181 *** | *** U:\UcJobs\08600-09000\08900\08990\Aermod\Res\Res.isc |            |            |            |            |            |            | *** |
| 11/30/16                         |                                                          |            |            |            |            |            |            |     |
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 \*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* SOURCE IDs DEFINED AS URBAN SOURCES \*\*\*

| URBAN ID | URBAN POP                                                                    | SOURCE IDs |
|----------|------------------------------------------------------------------------------|------------|
| -----    | -----                                                                        | -----      |
| L0001421 | L0001414 , L0001415 , L0001416 , L0001417 , L0001418 , L0001419 , L0001420 , |            |
| L0001429 | L0001422 , L0001423 , L0001424 , L0001425 , L0001426 , L0001427 , L0001428 , |            |
| L0001437 | L0001430 , L0001431 , L0001432 , L0001433 , L0001434 , L0001435 , L0001436 , |            |
| L0001445 | L0001438 , L0001439 , L0001440 , L0001441 , L0001442 , L0001443 , L0001444 , |            |
| L0001453 | L0001446 , L0001447 , L0001448 , L0001449 , L0001450 , L0001451 , L0001452 , |            |
| L0001461 | L0001454 , L0001455 , L0001456 , L0001457 , L0001458 , L0001459 , L0001460 , |            |
| L0001469 | L0001462 , L0001463 , L0001464 , L0001465 , L0001466 , L0001467 , L0001468 , |            |

Res

L0001477 , L0001470 , L0001471 , L0001472 , L0001473 , L0001474 , L0001475 , L0001476 ,  
 L0001485 , L0001478 , L0001479 , L0001480 , L0001481 , L0001482 , L0001483 , L0001484 ,  
 L0001486 , L0001487 , L0001488 , L0001489 , L0001490 , L0001491 , L0001492 ,  
 ♀ \*\*\* AERMOD - VERSION 15181 \*\*\* \*\*\* U:\UcJobs\08600-09000\08900\08990\Aermod\Res\Res.isc \*\*\*  
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 \*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY \*

| HOUR                                      | SCALAR     | HOUR | SCALAR     | HOUR | SCALAR     | HOUR | SCALAR     | HOUR | SCALAR     | HOUR | SCALAR |
|-------------------------------------------|------------|------|------------|------|------------|------|------------|------|------------|------|--------|
| -----                                     |            |      |            |      |            |      |            |      |            |      |        |
| -----                                     |            |      |            |      |            |      |            |      |            |      |        |
| SOURCE ID = STCK1 ; SOURCE TYPE = POINT : |            |      |            |      |            |      |            |      |            |      |        |
| 1                                         | .00000E+00 | 2    | .00000E+00 | 3    | .00000E+00 | 4    | .00000E+00 | 5    | .00000E+00 | 6    |        |
| 7                                         | .13700E+00 | 8    | .00000E+00 | 9    | .00000E+00 | 10   | .00000E+00 | 11   | .00000E+00 | 12   |        |
| 13                                        | .00000E+00 | 14   | .00000E+00 | 15   | .00000E+00 | 16   | .00000E+00 | 17   | .00000E+00 | 18   |        |
| 19                                        | .00000E+00 | 20   | .00000E+00 | 21   | .00000E+00 | 22   | .00000E+00 | 23   | .00000E+00 | 24   |        |
| SOURCE ID = STCK2 ; SOURCE TYPE = POINT : |            |      |            |      |            |      |            |      |            |      |        |
| 1                                         | .00000E+00 | 2    | .00000E+00 | 3    | .00000E+00 | 4    | .00000E+00 | 5    | .00000E+00 | 6    |        |
| 7                                         | .13700E+00 | 8    | .00000E+00 | 9    | .00000E+00 | 10   | .00000E+00 | 11   | .00000E+00 | 12   |        |
| 13                                        | .00000E+00 | 14   | .00000E+00 | 15   | .00000E+00 | 16   | .00000E+00 | 17   | .00000E+00 | 18   |        |
| 19                                        | .00000E+00 | 20   | .00000E+00 | 21   | .00000E+00 | 22   | .00000E+00 | 23   | .00000E+00 | 24   |        |
| SOURCE ID = STCK3 ; SOURCE TYPE = POINT : |            |      |            |      |            |      |            |      |            |      |        |
| 1                                         | .00000E+00 | 2    | .00000E+00 | 3    | .00000E+00 | 4    | .00000E+00 | 5    | .00000E+00 | 6    |        |
| 7                                         | .13700E+00 | 8    | .00000E+00 | 9    | .00000E+00 | 10   | .00000E+00 | 11   | .00000E+00 | 12   |        |
| 13                                        | .00000E+00 | 14   | .00000E+00 | 15   | .00000E+00 | 16   | .00000E+00 | 17   | .00000E+00 | 18   |        |
| 19                                        | .00000E+00 | 20   | .00000E+00 | 21   | .00000E+00 | 22   | .00000E+00 | 23   | .00000E+00 | 24   |        |
| SOURCE ID = STCK4 ; SOURCE TYPE = POINT : |            |      |            |      |            |      |            |      |            |      |        |
| 1                                         | .00000E+00 | 2    | .00000E+00 | 3    | .00000E+00 | 4    | .00000E+00 | 5    | .00000E+00 | 6    |        |
| 7                                         | .13700E+00 | 8    | .00000E+00 | 9    | .00000E+00 | 10   | .00000E+00 | 11   | .00000E+00 | 12   |        |
| 13                                        | .00000E+00 | 14   | .00000E+00 | 15   | .00000E+00 | 16   | .00000E+00 | 17   | .00000E+00 | 18   |        |
| 19                                        | .00000E+00 | 20   | .00000E+00 | 21   | .00000E+00 | 22   | .00000E+00 | 23   | .00000E+00 | 24   |        |

Res

SOURCE ID = STCK5 ; SOURCE TYPE = POINT :  
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6  
 .00000E+00  
 7 .13700E+00 8 .00000E+00 9 .00000E+00 10 .00000E+00 11 .00000E+00 12  
 .00000E+00  
 13 .00000E+00 14 .00000E+00 15 .00000E+00 16 .00000E+00 17 .00000E+00 18  
 .00000E+00  
 19 .00000E+00 20 .00000E+00 21 .00000E+00 22 .00000E+00 23 .00000E+00 24  
 .00000E+00

♀ \*\*\* AERMOD - VERSION 15181 \*\*\* \*\*\* U:\UcJobs\\_08600-09000\\_08900\08990\Aermod\Res\Res.isc \*\*\*  
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 \*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY \*

| SCALAR | HOUR  | SCALAR | HOUR  | SCALAR | HOUR  | SCALAR | HOUR  | SCALAR | HOUR  | SCALAR | HOUR  |
|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| -----  | ----- | -----  | ----- | -----  | ----- | -----  | ----- | -----  | ----- | -----  | ----- |
| -----  | ----- | -----  | ----- | -----  | ----- | -----  | ----- | -----  | ----- | -----  | ----- |

SOURCE ID = STCK6 ; SOURCE TYPE = POINT :  
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6  
 .00000E+00  
 7 .13700E+00 8 .00000E+00 9 .00000E+00 10 .00000E+00 11 .00000E+00 12  
 .00000E+00  
 13 .00000E+00 14 .00000E+00 15 .00000E+00 16 .00000E+00 17 .00000E+00 18  
 .00000E+00  
 19 .00000E+00 20 .00000E+00 21 .00000E+00 22 .00000E+00 23 .00000E+00 24  
 .00000E+00

SOURCE ID = STCK7 ; SOURCE TYPE = POINT :  
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6  
 .00000E+00  
 7 .13700E+00 8 .00000E+00 9 .00000E+00 10 .00000E+00 11 .00000E+00 12  
 .00000E+00  
 13 .00000E+00 14 .00000E+00 15 .00000E+00 16 .00000E+00 17 .00000E+00 18  
 .00000E+00  
 19 .00000E+00 20 .00000E+00 21 .00000E+00 22 .00000E+00 23 .00000E+00 24  
 .00000E+00

SOURCE ID = STCK8 ; SOURCE TYPE = POINT :  
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6  
 .00000E+00  
 7 .13700E+00 8 .00000E+00 9 .00000E+00 10 .00000E+00 11 .00000E+00 12  
 .00000E+00  
 13 .00000E+00 14 .00000E+00 15 .00000E+00 16 .00000E+00 17 .00000E+00 18  
 .00000E+00  
 19 .00000E+00 20 .00000E+00 21 .00000E+00 22 .00000E+00 23 .00000E+00 24  
 .00000E+00

SOURCE ID = STCK9 ; SOURCE TYPE = POINT :  
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6  
 .00000E+00  
 7 .13700E+00 8 .00000E+00 9 .00000E+00 10 .00000E+00 11 .00000E+00 12  
 .00000E+00  
 13 .00000E+00 14 .00000E+00 15 .00000E+00 16 .00000E+00 17 .00000E+00 18  
 .00000E+00

19 .00000E+00 20 .00000E+00 21 .00000E+00 22 .00000E+00 23 .00000E+00 24  
 .00000E+00

♀ \*\*\* AERMOD - VERSION 15181 \*\*\* \*\*\* U:\UcJobs\08600-09000\08900\08990\Aermod\Res\Res.isc \*\*\*  
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 \*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* DISCRETE CARTESIAN RECEPTORS \*\*\*  
 (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)  
 (METERS)

|                                            |                                            |
|--------------------------------------------|--------------------------------------------|
| ( 473501.5, 3753931.7, 469.0, 939.0, 0.0); | ( 473601.5, 3753931.7, 469.0, 939.0, 0.0); |
| ( 473701.5, 3753931.7, 468.0, 939.0, 0.0); | ( 473801.5, 3753931.7, 467.1, 939.0, 0.0); |
| ( 473901.5, 3753931.7, 467.3, 939.0, 0.0); | ( 474001.5, 3753931.7, 469.0, 939.0, 0.0); |
| ( 474101.5, 3753931.7, 469.0, 939.0, 0.0); | ( 474201.5, 3753931.7, 469.7, 939.0, 0.0); |
| ( 474301.5, 3753931.7, 471.0, 939.0, 0.0); | ( 474401.5, 3753931.7, 473.0, 939.0, 0.0); |
| ( 474494.9, 3753919.9, 472.7, 939.0, 0.0); | ( 474597.6, 3753921.6, 472.0, 939.0, 0.0); |
| ( 474701.5, 3753931.7, 473.4, 939.0, 0.0); | ( 473501.5, 3754031.7, 470.0, 939.0, 0.0); |
| ( 473601.5, 3754031.7, 469.3, 939.0, 0.0); | ( 473701.5, 3754031.7, 469.0, 939.0, 0.0); |
| ( 473801.5, 3754031.7, 469.0, 939.0, 0.0); | ( 473901.5, 3754031.7, 469.0, 939.0, 0.0); |
| ( 474001.5, 3754031.7, 469.0, 939.0, 0.0); | ( 474101.5, 3754031.7, 469.4, 939.0, 0.0); |
| ( 474201.5, 3754031.7, 470.3, 939.0, 0.0); | ( 474301.5, 3754031.7, 470.4, 939.0, 0.0); |
| ( 474401.5, 3754031.7, 471.4, 939.0, 0.0); | ( 474501.5, 3754031.7, 472.9, 939.0, 0.0); |
| ( 474601.5, 3754031.7, 473.0, 939.0, 0.0); | ( 474701.5, 3754031.7, 473.6, 939.0, 0.0); |
| ( 473501.5, 3754131.7, 470.0, 939.0, 0.0); | ( 473601.5, 3754131.7, 470.0, 939.0, 0.0); |
| ( 473701.5, 3754131.7, 469.0, 939.0, 0.0); | ( 473801.5, 3754131.7, 469.7, 939.0, 0.0); |
| ( 473901.5, 3754131.7, 470.0, 939.0, 0.0); | ( 474001.5, 3754131.7, 469.9, 939.0, 0.0); |
| ( 474101.5, 3754131.7, 470.3, 939.0, 0.0); | ( 474201.5, 3754131.7, 471.9, 939.0, 0.0); |
| ( 474301.5, 3754131.7, 473.0, 939.0, 0.0); | ( 474401.5, 3754131.7, 472.9, 939.0, 0.0); |
| ( 474501.5, 3754131.7, 473.0, 939.0, 0.0); | ( 474601.5, 3754131.7, 474.0, 939.0, 0.0); |
| ( 474701.5, 3754131.7, 474.9, 939.0, 0.0); | ( 473701.5, 3754231.7, 470.0, 939.0, 0.0); |
| ( 473801.5, 3754231.7, 470.4, 939.0, 0.0); | ( 473901.5, 3754231.7, 471.0, 939.0, 0.0); |
| ( 474001.5, 3754231.7, 470.1, 939.0, 0.0); | ( 474101.5, 3754231.7, 471.6, 939.0, 0.0); |
| ( 474201.5, 3754231.7, 472.7, 939.0, 0.0); | ( 474301.5, 3754231.7, 473.0, 939.0, 0.0); |
| ( 474401.5, 3754231.7, 474.1, 939.0, 0.0); | ( 474501.5, 3754231.7, 474.1, 939.0, 0.0); |
| ( 474601.5, 3754231.7, 475.0, 939.0, 0.0); | ( 474701.5, 3754231.7, 475.0, 939.0, 0.0); |
| ( 473801.5, 3754331.7, 472.0, 939.0, 0.0); | ( 473901.5, 3754331.7, 471.4, 939.0, 0.0); |

|                        |        |        |       |                        |        |        |
|------------------------|--------|--------|-------|------------------------|--------|--------|
| ( 474001.5, 3754331.7, | 472.0, | 939.0, | Res   | ( 474101.5, 3754331.7, | 472.0, | 939.0, |
| 0.0);                  |        |        | 0.0); |                        |        |        |
| ( 474201.5, 3754331.7, | 472.0, | 939.0, | 0.0); | ( 474296.3, 3754331.7, | 473.9, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 474401.5, 3754331.7, | 475.6, | 939.0, | 0.0); | ( 474501.5, 3754331.7, | 476.0, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 474601.5, 3754331.7, | 475.0, | 939.0, | 0.0); | ( 474701.5, 3754331.7, | 475.0, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 473701.5, 3754431.7, | 472.3, | 939.0, | 0.0); | ( 473801.5, 3754431.7, | 472.9, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 473901.5, 3754431.7, | 472.0, | 939.0, | 0.0); | ( 473715.9, 3754428.7, | 472.7, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 473738.7, 3754428.6, | 473.0, | 939.0, | 0.0); | ( 473755.7, 3754428.8, | 473.0, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 473774.9, 3754428.8, | 473.0, | 939.0, | 0.0); | ( 473796.3, 3754427.9, | 472.9, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 473816.0, 3754429.5, | 472.7, | 939.0, | 0.0); | ( 473831.0, 3754424.4, | 472.3, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 473853.9, 3754425.2, | 472.0, | 939.0, | 0.0); | ( 473871.9, 3754423.8, | 472.0, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 473892.0, 3754427.6, | 472.0, | 939.0, | 0.0); | ( 473779.0, 3754366.2, | 472.2, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 473813.9, 3754366.5, | 472.0, | 939.0, | 0.0); | ( 474014.6, 3754372.2, | 472.4, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 474058.7, 3754367.3, | 472.0, | 939.0, | 0.0); | ( 474106.3, 3754366.6, | 472.0, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 474129.7, 3754366.8, | 472.0, | 939.0, | 0.0); | ( 474153.5, 3754367.8, | 472.0, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 474231.5, 3754356.9, | 472.0, | 939.0, | 0.0); | ( 474273.8, 3754374.6, | 473.1, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 474545.3, 3754362.5, | 475.3, | 939.0, | 0.0); | ( 474582.5, 3754377.2, | 475.0, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 474612.7, 3754387.3, | 475.0, | 939.0, | 0.0); | ( 474643.0, 3754391.2, | 475.0, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 474354.4, 3754341.9, | 474.9, | 939.0, | 0.0); | ( 473708.0, 3754944.9, | 473.7, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |
| ( 473856.7, 3755011.9, | 479.0, | 939.0, | 0.0); | ( 473766.9, 3755018.5, | 476.2, | 939.0, |
| 0.0);                  |        |        |       |                        |        |        |

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* DISCRETE CARTESIAN RECEPTORS \*\*\*  
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)  
(METERS)

|                        |        |        |       |
|------------------------|--------|--------|-------|
| ( 473794.5, 3754966.2, | 476.7, | 939.0, | 0.0); |
|------------------------|--------|--------|-------|

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* METEOROLOGICAL DAYS SELECTED FOR PROCESSING \*\*\*  
(1=YES; 0=NO)

|     |                     |                     |                     |                     |                     |                     |
|-----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 |
| 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 |



|          |      |       |       |        |        |       |       |        |      |      |      |      |      |     | Res   |
|----------|------|-------|-------|--------|--------|-------|-------|--------|------|------|------|------|------|-----|-------|
| 08 01 01 | 1 11 | 123.5 | 0.418 | 1.124  | 0.012  | 404.  | 655.  | -51.7  | 0.31 | 1.00 | 0.22 | 3.10 | 30.  | 9.1 | 290.9 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 12 | 130.9 | 0.715 | 1.311  | 0.005  | 605.  | 1451. | -245.0 | 0.31 | 1.00 | 0.21 | 5.80 | 37.  | 9.1 | 290.9 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 13 | 81.1  | 0.560 | 1.174  | 0.006  | 701.  | 1033. | -189.8 | 0.31 | 1.00 | 0.21 | 4.50 | 4.   | 9.1 | 290.9 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 14 | 76.4  | 0.604 | 1.171  | 0.005  | 739.  | 1124. | -252.5 | 0.31 | 1.00 | 0.23 | 4.90 | 13.  | 9.1 | 290.9 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 15 | 52.3  | 0.805 | 1.043  | 0.005  | 762.  | 1730. | -875.8 | 0.31 | 1.00 | 0.26 | 6.70 | 39.  | 9.1 | 290.9 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 16 | 11.1  | 0.377 | 0.624  | 0.011  | 767.  | 800.  | -422.2 | 0.31 | 1.00 | 0.35 | 3.10 | 346. | 9.1 | 290.4 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 17 | -43.3 | 0.441 | -9.000 | -9.000 | -999. | 705.  | 173.6  | 0.31 | 1.00 | 0.63 | 4.00 | 9.   | 9.1 | 290.4 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 18 | -29.0 | 0.400 | -9.000 | -9.000 | -999. | 608.  | 192.9  | 0.31 | 1.00 | 1.00 | 3.60 | 45.  | 9.1 | 289.9 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 19 | -49.6 | 0.505 | -9.000 | -9.000 | -999. | 860.  | 227.3  | 0.31 | 1.00 | 1.00 | 4.50 | 25.  | 9.1 | 289.9 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 20 | -64.0 | 0.730 | -9.000 | -9.000 | -999. | 1496. | 533.1  | 0.31 | 1.00 | 1.00 | 6.30 | 60.  | 9.1 | 289.9 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 21 | -29.1 | 0.400 | -9.000 | -9.000 | -999. | 736.  | 192.1  | 0.31 | 1.00 | 1.00 | 3.60 | 238. | 9.1 | 288.8 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 22 | -41.2 | 0.562 | -9.000 | -9.000 | -999. | 1010. | 378.5  | 0.31 | 1.00 | 1.00 | 4.90 | 87.  | 9.1 | 287.5 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 23 | -53.8 | 0.733 | -9.000 | -9.000 | -999. | 1504. | 642.6  | 0.31 | 1.00 | 1.00 | 6.30 | 95.  | 9.1 | 287.0 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |
| 08 01 01 | 1 24 | -29.5 | 0.399 | -9.000 | -9.000 | -999. | 738.  | 189.5  | 0.31 | 1.00 | 1.00 | 3.60 | 37.  | 9.1 | 285.4 |
| 5.5      |      |       |       |        |        |       |       |        |      |      |      |      |      |     |       |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR  | WSPD   | AMB_TMP | sigmaA | sigmaW | sigmaV |
|----|----|----|----|--------|---|-------|--------|---------|--------|--------|--------|
| 08 | 01 | 01 | 01 | 5.5    | 0 | -999. | -99.00 | 287.6   | 99.0   | -99.00 | -99.00 |
| 08 | 01 | 01 | 01 | 9.1    | 1 | 27.   | 5.40   | -999.0  | 99.0   | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: TRUCKS

\*\*\*

INCLUDING SOURCE(S): L0001181 , L0001182 , L0001183 , L0001184 ,

L0001185 , L0001186 , L0001187 , L0001188 , L0001189 , L0001190 , L0001191 , L0001192 ,

L0001193 , L0001194 , L0001195 , L0001196 , L0001197 , L0001198 , L0001199 , L0001200 ,

L0001201 , L0001202 , L0001203 , L0001204 , L0001205 , L0001206 , L0001207 , L0001208 ,

. . . ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

| ** CONC OF DPM |             |         | IN MICROGRAMS/M**3 |             |         | ** |
|----------------|-------------|---------|--------------------|-------------|---------|----|
| X-COORD (M)    | Y-COORD (M) | CONC    | X-COORD (M)        | Y-COORD (M) | CONC    |    |
| 473501.46      | 3753931.71  | 0.00000 | 473601.46          | 3753931.71  | 0.00000 |    |
| 473701.46      | 3753931.71  | 0.00000 | 473801.46          | 3753931.71  | 0.00000 |    |
| 473901.46      | 3753931.71  | 0.00000 | 474001.46          | 3753931.71  | 0.00000 |    |



## Res

|           |            |         |           |            |         |
|-----------|------------|---------|-----------|------------|---------|
| 474101.46 | 3753931.71 | 0.00000 | 474201.46 | 3753931.71 | 0.00000 |
| 474301.46 | 3753931.71 | 0.00000 | 474401.46 | 3753931.71 | 0.00000 |
| 474494.94 | 3753919.88 | 0.00000 | 474597.60 | 3753921.57 | 0.00000 |
| 474701.46 | 3753931.71 | 0.00000 | 473501.46 | 3754031.71 | 0.00000 |
| 473601.46 | 3754031.71 | 0.00000 | 473701.46 | 3754031.71 | 0.00000 |
| 473801.46 | 3754031.71 | 0.00000 | 473901.46 | 3754031.71 | 0.00000 |
| 474001.46 | 3754031.71 | 0.00000 | 474101.46 | 3754031.71 | 0.00000 |
| 474201.46 | 3754031.71 | 0.00000 | 474301.46 | 3754031.71 | 0.00000 |
| 474401.46 | 3754031.71 | 0.00000 | 474501.46 | 3754031.71 | 0.00000 |
| 474601.46 | 3754031.71 | 0.00000 | 474701.46 | 3754031.71 | 0.00000 |
| 473501.46 | 3754131.71 | 0.00000 | 473601.46 | 3754131.71 | 0.00000 |
| 473701.46 | 3754131.71 | 0.00000 | 473801.46 | 3754131.71 | 0.00000 |
| 473901.46 | 3754131.71 | 0.00000 | 474001.46 | 3754131.71 | 0.00000 |
| 474101.46 | 3754131.71 | 0.00000 | 474201.46 | 3754131.71 | 0.00000 |
| 474301.46 | 3754131.71 | 0.00000 | 474401.46 | 3754131.71 | 0.00000 |
| 474501.46 | 3754131.71 | 0.00000 | 474601.46 | 3754131.71 | 0.00000 |
| 474701.46 | 3754131.71 | 0.00000 | 473701.46 | 3754231.71 | 0.00000 |
| 473801.46 | 3754231.71 | 0.00000 | 473901.46 | 3754231.71 | 0.00000 |
| 474001.46 | 3754231.71 | 0.00000 | 474101.46 | 3754231.71 | 0.00000 |
| 474201.46 | 3754231.71 | 0.00000 | 474301.46 | 3754231.71 | 0.00000 |
| 474401.46 | 3754231.71 | 0.00000 | 474501.46 | 3754231.71 | 0.00000 |
| 474601.46 | 3754231.71 | 0.00000 | 474701.46 | 3754231.71 | 0.00000 |
| 473801.46 | 3754331.71 | 0.00000 | 473901.46 | 3754331.71 | 0.00000 |
| 474001.46 | 3754331.71 | 0.00000 | 474101.46 | 3754331.71 | 0.00000 |
| 474201.46 | 3754331.71 | 0.00000 | 474296.30 | 3754331.71 | 0.00000 |
| 474401.46 | 3754331.71 | 0.00000 | 474501.46 | 3754331.71 | 0.00000 |
| 474601.46 | 3754331.71 | 0.00000 | 474701.46 | 3754331.71 | 0.00000 |
| 473701.46 | 3754431.71 | 0.00001 | 473801.46 | 3754431.71 | 0.00001 |
| 473901.46 | 3754431.71 | 0.00001 | 473715.92 | 3754428.71 | 0.00001 |
| 473738.73 | 3754428.62 | 0.00001 | 473755.69 | 3754428.85 | 0.00001 |
| 473774.94 | 3754428.85 | 0.00001 | 473796.29 | 3754427.87 | 0.00001 |
| 473815.97 | 3754429.55 | 0.00001 | 473831.00 | 3754424.36 | 0.00001 |
| 473853.90 | 3754425.20 | 0.00001 | 473871.89 | 3754423.79 | 0.00001 |

| Res | 473891.98 | 3754427.59 | 0.00001 | 473779.02 | 3754366.16 | 0.00001 |
|-----|-----------|------------|---------|-----------|------------|---------|
|     | 473813.90 | 3754366.49 | 0.00001 | 474014.62 | 3754372.20 | 0.00000 |
|     | 474058.72 | 3754367.30 | 0.00000 | 474106.33 | 3754366.60 | 0.00000 |
|     | 474129.66 | 3754366.83 | 0.00000 | 474153.46 | 3754367.77 | 0.00000 |

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN  
 \*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: TRUCKS  
 \*\*\*  
 INCLUDING SOURCE(S): L0001181 , L0001182 , L0001183 , L0001184 ,  
 L0001185 , L0001186 , L0001187 , L0001188 , L0001189 , L0001190 , L0001191 , L0001192 ,  
 L0001193 , L0001194 , L0001195 , L0001196 , L0001197 , L0001198 , L0001199 , L0001200 ,  
 L0001201 , L0001202 , L0001203 , L0001204 , L0001205 , L0001206 , L0001207 , L0001208 ,  
 . . . ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

| ** CONC OF DPM |             |         | IN MICROGRAMS/M**3 |             |         | ** |
|----------------|-------------|---------|--------------------|-------------|---------|----|
| X-COORD (M)    | Y-COORD (M) | CONC    | X-COORD (M)        | Y-COORD (M) | CONC    |    |
| 474231.55      | 3754356.87  | 0.00000 | 474273.79          | 3754374.60  | 0.00000 |    |
| 474545.34      | 3754362.52  | 0.00000 | 474582.52          | 3754377.24  | 0.00000 |    |
| 474612.74      | 3754387.31  | 0.00000 | 474642.95          | 3754391.18  | 0.00000 |    |
| 474354.43      | 3754341.93  | 0.00000 | 473708.01          | 3754944.92  | 0.00002 |    |
| 473856.69      | 3755011.90  | 0.00001 | 473766.94          | 3755018.54  | 0.00002 |    |
| 473794.46      | 3754966.25  | 0.00001 |                    |             |         |    |

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN  
 \*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP:  
 GENERATO \*\*\*  
 INCLUDING SOURCE(S): STCK1 , STCK2 , STCK3 , STCK4 ,  
 STCK5 , STCK6 , STCK7 , STCK8 , STCK9 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

| ** CONC OF DPM |             |      | IN MICROGRAMS/M**3 |             |      | ** |
|----------------|-------------|------|--------------------|-------------|------|----|
| X-COORD (M)    | Y-COORD (M) | CONC | X-COORD (M)        | Y-COORD (M) | CONC |    |
|                |             |      |                    |             |      |    |

|           |            |         |     |           |            |         |
|-----------|------------|---------|-----|-----------|------------|---------|
| 473501.46 | 3753931.71 | 0.00358 | Res | 473601.46 | 3753931.71 | 0.00377 |
| 473701.46 | 3753931.71 | 0.00380 |     | 473801.46 | 3753931.71 | 0.00375 |
| 473901.46 | 3753931.71 | 0.00373 |     | 474001.46 | 3753931.71 | 0.00375 |
| 474101.46 | 3753931.71 | 0.00368 |     | 474201.46 | 3753931.71 | 0.00358 |
| 474301.46 | 3753931.71 | 0.00348 |     | 474401.46 | 3753931.71 | 0.00338 |
| 474494.94 | 3753919.88 | 0.00320 |     | 474597.60 | 3753921.57 | 0.00300 |
| 474701.46 | 3753931.71 | 0.00281 |     | 473501.46 | 3754031.71 | 0.00383 |
| 473601.46 | 3754031.71 | 0.00408 |     | 473701.46 | 3754031.71 | 0.00417 |
| 473801.46 | 3754031.71 | 0.00413 |     | 473901.46 | 3754031.71 | 0.00409 |
| 474001.46 | 3754031.71 | 0.00405 |     | 474101.46 | 3754031.71 | 0.00395 |
| 474201.46 | 3754031.71 | 0.00381 |     | 474301.46 | 3754031.71 | 0.00362 |
| 474401.46 | 3754031.71 | 0.00347 |     | 474501.46 | 3754031.71 | 0.00331 |
| 474601.46 | 3754031.71 | 0.00308 |     | 474701.46 | 3754031.71 | 0.00285 |
| 473501.46 | 3754131.71 | 0.00403 |     | 473601.46 | 3754131.71 | 0.00450 |
| 473701.46 | 3754131.71 | 0.00464 |     | 473801.46 | 3754131.71 | 0.00458 |
| 473901.46 | 3754131.71 | 0.00454 |     | 474001.46 | 3754131.71 | 0.00448 |
| 474101.46 | 3754131.71 | 0.00430 |     | 474201.46 | 3754131.71 | 0.00410 |
| 474301.46 | 3754131.71 | 0.00387 |     | 474401.46 | 3754131.71 | 0.00364 |
| 474501.46 | 3754131.71 | 0.00338 |     | 474601.46 | 3754131.71 | 0.00312 |
| 474701.46 | 3754131.71 | 0.00285 |     | 473701.46 | 3754231.71 | 0.00552 |
| 473801.46 | 3754231.71 | 0.00533 |     | 473901.46 | 3754231.71 | 0.00524 |
| 474001.46 | 3754231.71 | 0.00502 |     | 474101.46 | 3754231.71 | 0.00478 |
| 474201.46 | 3754231.71 | 0.00440 |     | 474301.46 | 3754231.71 | 0.00405 |
| 474401.46 | 3754231.71 | 0.00374 |     | 474501.46 | 3754231.71 | 0.00342 |
| 474601.46 | 3754231.71 | 0.00310 |     | 474701.46 | 3754231.71 | 0.00282 |
| 473801.46 | 3754331.71 | 0.00703 |     | 473901.46 | 3754331.71 | 0.00636 |
| 474001.46 | 3754331.71 | 0.00586 |     | 474101.46 | 3754331.71 | 0.00545 |
| 474201.46 | 3754331.71 | 0.00479 |     | 474296.30 | 3754331.71 | 0.00432 |
| 474401.46 | 3754331.71 | 0.00380 |     | 474501.46 | 3754331.71 | 0.00337 |
| 474601.46 | 3754331.71 | 0.00304 |     | 474701.46 | 3754331.71 | 0.00275 |
| 473701.46 | 3754431.71 | 0.01066 |     | 473801.46 | 3754431.71 | 0.01099 |
| 473901.46 | 3754431.71 | 0.00770 |     | 473715.92 | 3754428.71 | 0.01094 |
| 473738.73 | 3754428.62 | 0.01207 |     | 473755.69 | 3754428.85 | 0.01302 |
| 473774.94 | 3754428.85 | 0.01205 |     | 473796.29 | 3754427.87 | 0.01111 |

Res

|           |            |         |           |            |         |
|-----------|------------|---------|-----------|------------|---------|
| 473815.97 | 3754429.55 | 0.01016 | 473831.00 | 3754424.36 | 0.00934 |
| 473853.90 | 3754425.20 | 0.00856 | 473871.89 | 3754423.79 | 0.00809 |
| 473891.98 | 3754427.59 | 0.00779 | 473779.02 | 3754366.16 | 0.00843 |
| 473813.90 | 3754366.49 | 0.00789 | 474014.62 | 3754372.20 | 0.00619 |
| 474058.72 | 3754367.30 | 0.00596 | 474106.33 | 3754366.60 | 0.00577 |
| 474129.66 | 3754366.83 | 0.00563 | 474153.46 | 3754367.77 | 0.00545 |

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 \*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP:  
 GENERATO \*\*\*  
 INCLUDING SOURCE(S): STCK1 , STCK2 , STCK3 , STCK4 ,  
 STCK5 ,  
 STCK6 , STCK7 , STCK8 , STCK9 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

| ** CONC OF DPM |             |         | IN MICROGRAMS/M**3 |             |         | ** |
|----------------|-------------|---------|--------------------|-------------|---------|----|
| X-COORD (M)    | Y-COORD (M) | CONC    | X-COORD (M)        | Y-COORD (M) | CONC    |    |
| 474231.55      | 3754356.87  | 0.00473 | 474273.79          | 3754374.60  | 0.00461 |    |
| 474545.34      | 3754362.52  | 0.00320 | 474582.52          | 3754377.24  | 0.00306 |    |
| 474612.74      | 3754387.31  | 0.00295 | 474642.95          | 3754391.18  | 0.00285 |    |
| 474354.43      | 3754341.93  | 0.00405 | 473708.01          | 3754944.92  | 0.00570 |    |
| 473856.69      | 3755011.90  | 0.00578 | 473766.94          | 3755018.54  | 0.00749 |    |
| 473794.46      | 3754966.25  | 0.00862 |                    |             |         |    |

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 \*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP:  
 HELICOPT \*\*\*  
 INCLUDING SOURCE(S): L0001411 , L0001412 , L0001413 , L0001414 ,  
 L0001415 ,  
 L0001416 , L0001417 , L0001418 , L0001419 , L0001420 , L0001421 , L0001422 ,  
 L0001423 ,  
 L0001424 , L0001425 , L0001426 , L0001427 , L0001428 , L0001429 , L0001430 ,  
 L0001431 ,  
 L0001432 , L0001433 , L0001434 , L0001435 , L0001436 , L0001437 , L0001438 ,  
 . . . ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

|             |             | Res            |                    |             |         |
|-------------|-------------|----------------|--------------------|-------------|---------|
|             |             | ** CONC OF DPM | IN MICROGRAMS/M**3 |             |         |
| X-COORD (M) | Y-COORD (M) | CONC           | X-COORD (M)        | Y-COORD (M) | CONC    |
| 473501.46   | 3753931.71  | 0.00018        | 473601.46          | 3753931.71  | 0.00017 |
| 473701.46   | 3753931.71  | 0.00017        | 473801.46          | 3753931.71  | 0.00016 |
| 473901.46   | 3753931.71  | 0.00014        | 474001.46          | 3753931.71  | 0.00013 |
| 474101.46   | 3753931.71  | 0.00012        | 474201.46          | 3753931.71  | 0.00010 |
| 474301.46   | 3753931.71  | 0.00009        | 474401.46          | 3753931.71  | 0.00008 |
| 474494.94   | 3753919.88  | 0.00008        | 474597.60          | 3753921.57  | 0.00007 |
| 474701.46   | 3753931.71  | 0.00006        | 473501.46          | 3754031.71  | 0.00024 |
| 473601.46   | 3754031.71  | 0.00024        | 473701.46          | 3754031.71  | 0.00022 |
| 473801.46   | 3754031.71  | 0.00020        | 473901.46          | 3754031.71  | 0.00018 |
| 474001.46   | 3754031.71  | 0.00016        | 474101.46          | 3754031.71  | 0.00014 |
| 474201.46   | 3754031.71  | 0.00012        | 474301.46          | 3754031.71  | 0.00011 |
| 474401.46   | 3754031.71  | 0.00010        | 474501.46          | 3754031.71  | 0.00009 |
| 474601.46   | 3754031.71  | 0.00008        | 474701.46          | 3754031.71  | 0.00007 |
| 473501.46   | 3754131.71  | 0.00036        | 473601.46          | 3754131.71  | 0.00036 |
| 473701.46   | 3754131.71  | 0.00032        | 473801.46          | 3754131.71  | 0.00028 |
| 473901.46   | 3754131.71  | 0.00024        | 474001.46          | 3754131.71  | 0.00020 |
| 474101.46   | 3754131.71  | 0.00017        | 474201.46          | 3754131.71  | 0.00015 |
| 474301.46   | 3754131.71  | 0.00013        | 474401.46          | 3754131.71  | 0.00011 |
| 474501.46   | 3754131.71  | 0.00010        | 474601.46          | 3754131.71  | 0.00008 |
| 474701.46   | 3754131.71  | 0.00007        | 473701.46          | 3754231.71  | 0.00050 |
| 473801.46   | 3754231.71  | 0.00040        | 473901.46          | 3754231.71  | 0.00032 |
| 474001.46   | 3754231.71  | 0.00026        | 474101.46          | 3754231.71  | 0.00021 |
| 474201.46   | 3754231.71  | 0.00017        | 474301.46          | 3754231.71  | 0.00015 |
| 474401.46   | 3754231.71  | 0.00012        | 474501.46          | 3754231.71  | 0.00011 |
| 474601.46   | 3754231.71  | 0.00009        | 474701.46          | 3754231.71  | 0.00008 |
| 473801.46   | 3754331.71  | 0.00059        | 473901.46          | 3754331.71  | 0.00043 |
| 474001.46   | 3754331.71  | 0.00033        | 474101.46          | 3754331.71  | 0.00026 |
| 474201.46   | 3754331.71  | 0.00021        | 474296.30          | 3754331.71  | 0.00017 |
| 474401.46   | 3754331.71  | 0.00014        | 474501.46          | 3754331.71  | 0.00011 |
| 474601.46   | 3754331.71  | 0.00010        | 474701.46          | 3754331.71  | 0.00008 |
| 473701.46   | 3754431.71  | 0.00145        | 473801.46          | 3754431.71  | 0.00091 |

|           |            |         |     |           |            |         |
|-----------|------------|---------|-----|-----------|------------|---------|
| 473901.46 | 3754431.71 | 0.00061 | Res | 473715.92 | 3754428.71 | 0.00132 |
| 473738.73 | 3754428.62 | 0.00118 |     | 473755.69 | 3754428.85 | 0.00110 |
| 473774.94 | 3754428.85 | 0.00101 |     | 473796.29 | 3754427.87 | 0.00091 |
| 473815.97 | 3754429.55 | 0.00085 |     | 473831.00 | 3754424.36 | 0.00078 |
| 473853.90 | 3754425.20 | 0.00071 |     | 473871.89 | 3754423.79 | 0.00066 |
| 473891.98 | 3754427.59 | 0.00062 |     | 473779.02 | 3754366.16 | 0.00073 |
| 473813.90 | 3754366.49 | 0.00065 |     | 474014.62 | 3754372.20 | 0.00035 |
| 474058.72 | 3754367.30 | 0.00031 |     | 474106.33 | 3754366.60 | 0.00027 |
| 474129.66 | 3754366.83 | 0.00026 |     | 474153.46 | 3754367.77 | 0.00025 |

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP:  
 HELICOPT \*\*\*  
 INCLUDING SOURCE(S): L0001411 , L0001412 , L0001413 , L0001414 ,  
 L0001415 , L0001416 , L0001417 , L0001418 , L0001419 , L0001420 , L0001421 , L0001422 ,  
 L0001423 , L0001424 , L0001425 , L0001426 , L0001427 , L0001428 , L0001429 , L0001430 ,  
 L0001431 , L0001432 , L0001433 , L0001434 , L0001435 , L0001436 , L0001437 , L0001438 ,  
 . . . ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

| ** CONC OF DPM |             |         | IN MICROGRAMS/M**3 |             |         | ** |
|----------------|-------------|---------|--------------------|-------------|---------|----|
| X-COORD (M)    | Y-COORD (M) | CONC    | X-COORD (M)        | Y-COORD (M) | CONC    |    |
| 474231.55      | 3754356.87  | 0.00020 | 474273.79          | 3754374.60  | 0.00019 |    |
| 474545.34      | 3754362.52  | 0.00011 | 474582.52          | 3754377.24  | 0.00010 |    |
| 474612.74      | 3754387.31  | 0.00009 | 474642.95          | 3754391.18  | 0.00009 |    |
| 474354.43      | 3754341.93  | 0.00015 | 473708.01          | 3754944.92  | 0.00051 |    |
| 473856.69      | 3755011.90  | 0.00028 | 473766.94          | 3755018.54  | 0.00034 |    |
| 473794.46      | 3754966.25  | 0.00039 |                    |             |         |    |

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL  
 \*\*\*  
 INCLUDING SOURCE(S): L0001181 , L0001182 , L0001183 , L0001184 ,

Res

L0001185 , L0001186 , L0001187 , L0001188 , L0001189 , L0001190 , L0001191 , L0001192 ,  
 L0001193 , L0001194 , L0001195 , L0001196 , L0001197 , L0001198 , L0001199 , L0001200 ,  
 L0001201 , L0001202 , L0001203 , L0001204 , L0001205 , L0001206 , L0001207 , L0001208 ,  
 . . . ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

| ** CONC OF DPM |             |         | IN MICROGRAMS/M**3 |             |         | ** |
|----------------|-------------|---------|--------------------|-------------|---------|----|
| X-COORD (M)    | Y-COORD (M) | CONC    | X-COORD (M)        | Y-COORD (M) | CONC    |    |
| 473501.46      | 3753931.71  | 0.00376 | 473601.46          | 3753931.71  | 0.00394 |    |
| 473701.46      | 3753931.71  | 0.00397 | 473801.46          | 3753931.71  | 0.00391 |    |
| 473901.46      | 3753931.71  | 0.00387 | 474001.46          | 3753931.71  | 0.00388 |    |
| 474101.46      | 3753931.71  | 0.00380 | 474201.46          | 3753931.71  | 0.00369 |    |
| 474301.46      | 3753931.71  | 0.00358 | 474401.46          | 3753931.71  | 0.00347 |    |
| 474494.94      | 3753919.88  | 0.00328 | 474597.60          | 3753921.57  | 0.00306 |    |
| 474701.46      | 3753931.71  | 0.00287 | 473501.46          | 3754031.71  | 0.00407 |    |
| 473601.46      | 3754031.71  | 0.00432 | 473701.46          | 3754031.71  | 0.00440 |    |
| 473801.46      | 3754031.71  | 0.00434 | 473901.46          | 3754031.71  | 0.00428 |    |
| 474001.46      | 3754031.71  | 0.00422 | 474101.46          | 3754031.71  | 0.00410 |    |
| 474201.46      | 3754031.71  | 0.00393 | 474301.46          | 3754031.71  | 0.00373 |    |
| 474401.46      | 3754031.71  | 0.00357 | 474501.46          | 3754031.71  | 0.00339 |    |
| 474601.46      | 3754031.71  | 0.00316 | 474701.46          | 3754031.71  | 0.00292 |    |
| 473501.46      | 3754131.71  | 0.00440 | 473601.46          | 3754131.71  | 0.00486 |    |
| 473701.46      | 3754131.71  | 0.00496 | 473801.46          | 3754131.71  | 0.00486 |    |
| 473901.46      | 3754131.71  | 0.00478 | 474001.46          | 3754131.71  | 0.00468 |    |
| 474101.46      | 3754131.71  | 0.00447 | 474201.46          | 3754131.71  | 0.00425 |    |
| 474301.46      | 3754131.71  | 0.00400 | 474401.46          | 3754131.71  | 0.00375 |    |
| 474501.46      | 3754131.71  | 0.00348 | 474601.46          | 3754131.71  | 0.00320 |    |
| 474701.46      | 3754131.71  | 0.00292 | 473701.46          | 3754231.71  | 0.00602 |    |
| 473801.46      | 3754231.71  | 0.00573 | 473901.46          | 3754231.71  | 0.00556 |    |
| 474001.46      | 3754231.71  | 0.00528 | 474101.46          | 3754231.71  | 0.00500 |    |
| 474201.46      | 3754231.71  | 0.00458 | 474301.46          | 3754231.71  | 0.00420 |    |
| 474401.46      | 3754231.71  | 0.00387 | 474501.46          | 3754231.71  | 0.00353 |    |
| 474601.46      | 3754231.71  | 0.00319 | 474701.46          | 3754231.71  | 0.00290 |    |
| 473801.46      | 3754331.71  | 0.00762 | 473901.46          | 3754331.71  | 0.00680 |    |

|           |            |         | Res |           |            |         |
|-----------|------------|---------|-----|-----------|------------|---------|
| 474001.46 | 3754331.71 | 0.00619 |     | 474101.46 | 3754331.71 | 0.00571 |
| 474201.46 | 3754331.71 | 0.00500 |     | 474296.30 | 3754331.71 | 0.00449 |
| 474401.46 | 3754331.71 | 0.00394 |     | 474501.46 | 3754331.71 | 0.00349 |
| 474601.46 | 3754331.71 | 0.00314 |     | 474701.46 | 3754331.71 | 0.00284 |
| 473701.46 | 3754431.71 | 0.01212 |     | 473801.46 | 3754431.71 | 0.01192 |
| 473901.46 | 3754431.71 | 0.00832 |     | 473715.92 | 3754428.71 | 0.01227 |
| 473738.73 | 3754428.62 | 0.01327 |     | 473755.69 | 3754428.85 | 0.01412 |
| 473774.94 | 3754428.85 | 0.01307 |     | 473796.29 | 3754427.87 | 0.01203 |
| 473815.97 | 3754429.55 | 0.01102 |     | 473831.00 | 3754424.36 | 0.01013 |
| 473853.90 | 3754425.20 | 0.00928 |     | 473871.89 | 3754423.79 | 0.00876 |
| 473891.98 | 3754427.59 | 0.00842 |     | 473779.02 | 3754366.16 | 0.00917 |
| 473813.90 | 3754366.49 | 0.00854 |     | 474014.62 | 3754372.20 | 0.00654 |
| 474058.72 | 3754367.30 | 0.00628 |     | 474106.33 | 3754366.60 | 0.00604 |
| 474129.66 | 3754366.83 | 0.00589 |     | 474153.46 | 3754367.77 | 0.00570 |

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL

\*\*\*

| INCLUDING SOURCE(S): |          | L0001181 | L0001182 | L0001183 | L0001184 |
|----------------------|----------|----------|----------|----------|----------|
| L0001185             |          |          |          |          |          |
|                      | L0001186 | L0001187 | L0001188 | L0001189 | L0001190 |
| L0001193             |          |          |          |          |          |
|                      | L0001194 | L0001195 | L0001196 | L0001197 | L0001198 |
| L0001201             |          |          |          |          |          |
|                      | L0001202 | L0001203 | L0001204 | L0001205 | L0001206 |
|                      |          |          |          |          |          |

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

|             |             | ** CONC OF DPM | IN MICROGRAMS/M**3 |             | **      |
|-------------|-------------|----------------|--------------------|-------------|---------|
| X-COORD (M) | Y-COORD (M) | CONC           | X-COORD (M)        | Y-COORD (M) | CONC    |
| 474231.55   | 3754356.87  | 0.00493        | 474273.79          | 3754374.60  | 0.00479 |
| 474545.34   | 3754362.52  | 0.00330        | 474582.52          | 3754377.24  | 0.00316 |
| 474612.74   | 3754387.31  | 0.00304        | 474642.95          | 3754391.18  | 0.00294 |
| 474354.43   | 3754341.93  | 0.00420        | 473708.01          | 3754944.92  | 0.00623 |
| 473856.69   | 3755011.90  | 0.00606        | 473766.94          | 3755018.54  | 0.00784 |
| 473794.46   | 3754966.25  | 0.00903        |                    |             |         |

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Res

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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS \*\*\*

\*\* CONC OF DPM IN MICROGRAMS/M\*\*3 \*\*

NETWORK  
GROUP ID  
GRID-ID

AVERAGE CONC

RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE

-----

TRUCKS 1ST HIGHEST VALUE IS 0.00002 AT ( 473708.01, 3754944.92, 473.73, 939.00, 0.00) DC

2ND HIGHEST VALUE IS 0.00002 AT ( 473766.94, 3755018.54, 476.23, 939.00, 0.00) DC

3RD HIGHEST VALUE IS 0.00001 AT ( 473794.46, 3754966.25, 476.69, 939.00, 0.00) DC

4TH HIGHEST VALUE IS 0.00001 AT ( 473801.46, 3754431.71, 472.89, 939.00, 0.00) DC

5TH HIGHEST VALUE IS 0.00001 AT ( 473774.94, 3754428.85, 473.00, 939.00, 0.00) DC

6TH HIGHEST VALUE IS 0.00001 AT ( 473796.29, 3754427.87, 472.92, 939.00, 0.00) DC

7TH HIGHEST VALUE IS 0.00001 AT ( 473755.69, 3754428.85, 473.00, 939.00, 0.00) DC

8TH HIGHEST VALUE IS 0.00001 AT ( 473815.97, 3754429.55, 472.70, 939.00, 0.00) DC

9TH HIGHEST VALUE IS 0.00001 AT ( 473738.73, 3754428.62, 473.00, 939.00, 0.00) DC

10TH HIGHEST VALUE IS 0.00001 AT ( 473831.00, 3754424.36, 472.30, 939.00, 0.00) DC

GENERATO 1ST HIGHEST VALUE IS 0.01302 AT ( 473755.69, 3754428.85, 473.00, 939.00, 0.00) DC

2ND HIGHEST VALUE IS 0.01207 AT ( 473738.73, 3754428.62, 473.00, 939.00, 0.00) DC

3RD HIGHEST VALUE IS 0.01205 AT ( 473774.94, 3754428.85, 473.00, 939.00, 0.00) DC

4TH HIGHEST VALUE IS 0.01111 AT ( 473796.29, 3754427.87, 472.92, 939.00, 0.00) DC

5TH HIGHEST VALUE IS 0.01099 AT ( 473801.46, 3754431.71, 472.89, 939.00, 0.00) DC

6TH HIGHEST VALUE IS 0.01094 AT ( 473715.92, 3754428.71, 472.71, 939.00, 0.00) DC

7TH HIGHEST VALUE IS 0.01066 AT ( 473701.46, 3754431.71, 472.31, 939.00, 0.00) DC

8TH HIGHEST VALUE IS 0.01016 AT ( 473815.97, 3754429.55, 472.70, 939.00, 0.00) DC

9TH HIGHEST VALUE IS 0.00934 AT ( 473831.00, 3754424.36, 472.30, 939.00, 0.00) DC

10TH HIGHEST VALUE IS 0.00862 AT ( 473794.46, 3754966.25, 476.69, 939.00, 0.00) DC

HELICOPT 1ST HIGHEST VALUE IS 0.00145 AT ( 473701.46, 3754431.71, 472.31, 939.00, 0.00) DC

2ND HIGHEST VALUE IS 0.00132 AT ( 473715.92, 3754428.71, 472.71, 939.00, 0.00) DC

3RD HIGHEST VALUE IS 0.00118 AT ( 473738.73, 3754428.62, 473.00, 939.00, 0.00) DC

|     |                       |         | Res             |             |         |         |       |    |
|-----|-----------------------|---------|-----------------|-------------|---------|---------|-------|----|
|     | 4TH HIGHEST VALUE IS  | 0.00110 | AT ( 473755.69, | 3754428.85, | 473.00, | 939.00, | 0.00) | DC |
|     | 5TH HIGHEST VALUE IS  | 0.00101 | AT ( 473774.94, | 3754428.85, | 473.00, | 939.00, | 0.00) | DC |
|     | 6TH HIGHEST VALUE IS  | 0.00091 | AT ( 473796.29, | 3754427.87, | 472.92, | 939.00, | 0.00) | DC |
|     | 7TH HIGHEST VALUE IS  | 0.00091 | AT ( 473801.46, | 3754431.71, | 472.89, | 939.00, | 0.00) | DC |
|     | 8TH HIGHEST VALUE IS  | 0.00085 | AT ( 473815.97, | 3754429.55, | 472.70, | 939.00, | 0.00) | DC |
|     | 9TH HIGHEST VALUE IS  | 0.00078 | AT ( 473831.00, | 3754424.36, | 472.30, | 939.00, | 0.00) | DC |
|     | 10TH HIGHEST VALUE IS | 0.00073 | AT ( 473779.02, | 3754366.16, | 472.20, | 939.00, | 0.00) | DC |
| ALL | 1ST HIGHEST VALUE IS  | 0.01412 | AT ( 473755.69, | 3754428.85, | 473.00, | 939.00, | 0.00) | DC |
|     | 2ND HIGHEST VALUE IS  | 0.01327 | AT ( 473738.73, | 3754428.62, | 473.00, | 939.00, | 0.00) | DC |
|     | 3RD HIGHEST VALUE IS  | 0.01307 | AT ( 473774.94, | 3754428.85, | 473.00, | 939.00, | 0.00) | DC |
|     | 4TH HIGHEST VALUE IS  | 0.01227 | AT ( 473715.92, | 3754428.71, | 472.71, | 939.00, | 0.00) | DC |
|     | 5TH HIGHEST VALUE IS  | 0.01212 | AT ( 473701.46, | 3754431.71, | 472.31, | 939.00, | 0.00) | DC |
|     | 6TH HIGHEST VALUE IS  | 0.01203 | AT ( 473796.29, | 3754427.87, | 472.92, | 939.00, | 0.00) | DC |
|     | 7TH HIGHEST VALUE IS  | 0.01192 | AT ( 473801.46, | 3754431.71, | 472.89, | 939.00, | 0.00) | DC |
|     | 8TH HIGHEST VALUE IS  | 0.01102 | AT ( 473815.97, | 3754429.55, | 472.70, | 939.00, | 0.00) | DC |
|     | 9TH HIGHEST VALUE IS  | 0.01013 | AT ( 473831.00, | 3754424.36, | 472.30, | 939.00, | 0.00) | DC |
|     | 10TH HIGHEST VALUE IS | 0.00928 | AT ( 473853.90, | 3754425.20, | 472.00, | 939.00, | 0.00) | DC |

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR

♀ \*\*\* AERMOD - VERSION 15181 \*\*\* \*\*\* U:\UcJobs\\_08600-09000\\_08900\08990\Aermod\Res\Res.isc \*\*\*  
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\*\*MODELOPTs: RegDFAULT CONC ELEV URBAN

\*\*\* Message Summary : AERMOD Model Execution \*\*\*

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)  
A Total of 10 Warning Message(s)  
A Total of 2006 Informational Message(s)  
  
A Total of 43848 Hours Were Processed  
  
A Total of 7 Calm Hours Identified  
  
A Total of 1999 Missing Hours Identified ( 4.56 Percent)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

Res

```
***** WARNING MESSAGES *****
SO W320    704      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320    705      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320    706      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320    707      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320    708      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320    709      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320    710      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320    711      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
SO W320    712      PPARM: Input Parameter May Be Out-of-Range for Parameter      VS
ME W531    903      MEOPEN: CAUTION! Met Station ID Missing from SURFFILE for      SURFDATA
```

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*****
*** AERMOD Finishes Successfully ***
*****
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January 10, 2017

c/o Ms. Paula Purcell  
Canyon Springs Marketplace Corp.  
2025 Pioneer Court  
San Mateo, CA 94403

**SUBJECT: CANYON SPRINGS HEALTHCARE CAMPUS & SENIOR LIVING SUPPLEMENTAL SB 375 EVALUATION**

Dear Ms. Paula Purcell:

Urban Crossroads, Inc. is pleased to submit the following supplemental Evaluation for the Canyon Springs Healthcare Campus & Senior Living Project ("Project"). The purpose of this supplemental evaluation is to provide an updated discussion on the Project's consistency with SB 375 as previously evaluated in the June 2016 GHG report.

### **CONSISTENCY WITH SB 375**

Senate Bill 375 (SB 375) creates a formal process that builds on the experience of voluntary regional visioning initiatives in California, often referred to as "Regional Blueprints". Furthering the goals of AB 32, SB 375 relies on the regional collaboration by local officials to address California's goals for reducing the portion of the emissions of greenhouse gases that stems from automobile travel (light duty auto and light duty trucks only). SB 375 requires local metropolitan planning agencies to prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its GHG reduction targets through integrated land use, housing, and transportation planning (3). More specifically, SB 375 provides CEQA relief for residential and mixed-use projects that are consistent with an approved SCS or Alternative Planning Strategy (APS).

The Southern California Association of Governments (SCAG) is the metropolitan planning agency for the project area. The SCS for the southern California region, including Riverside, Los Angeles, Orange, and San Bernardino counties was prepared by SCAG and approved on April 4, 2012. The SCS incorporates goals to concentrate future development and provide residential and mixed use developments in proximity to transit hubs in order to reduce vehicle miles traveled and, thereby, reduce GHG emissions from light duty auto and light duty trucks.

The Governor's Office of Planning and Research published the guidance document *Senate Bill 375 CEQA Provision Flow Charts* to assist in understanding SB 375's CEQA options (Please refer to Appendix A). Chart 4 is utilized to evaluate whether the Project would comply with SB 375. The Canyon Springs Business Park Specific Plan (CSBPSP) is consistent with all planning documents, including the RTP/SCS and SB 375, and has therefore been approved by the County. The Project is located within the CSBPSP and consists of land uses permitted by the CSBPSP (medical uses are allowed and the Project zoning allows for senior care/ retirement homes). The Project would therefore be consistent with SB 375.

Ms. Paula Purcell  
Canyon Springs Marketplace Corp.  
January 10, 2017  
Page 2 of 3

If you have any questions or require any additional information regarding this response to comments, please contact me directly at (949) 336-5987.

Respectfully submitted,

URBAN CROSSROADS, INC.

A handwritten signature in black ink, appearing to read 'Haseeb Qureshi', with a stylized flourish at the end.

Haseeb Qureshi,  
Senior Associate

Ms. Paula Purcell  
Canyon Springs Marketplace Corp.  
January 10, 2017  
Page 3 of 3

## **APPENDIX A: SB 375 PROVISION FLOW CHARTS**



JERRY BROWN  
GOVERNOR

STATE OF CALIFORNIA  
**GOVERNOR'S OFFICE of PLANNING AND RESEARCH**  
STATE CLEARINGHOUSE AND PLANNING UNIT



## **Senate Bill 375 CEQA Provision Flow Charts**

Developed by the Governor's Office of Planning and Research  
February 2011

### Purpose

The Governor's Office of Planning & Research (OPR), working with the Climate Action Team's Climate Change, Land Use, and Infrastructure Group (CCLU-In) developed the following charts to assist state, regional, and local governments in understanding the California Environmental Quality Act (CEQA) provisions enacted by Senate Bill 375 (Steinberg 2008) (SB 375). SB 375's CEQA provisions will be available for agencies to utilize at such time as a regional Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS) has been adopted by the applicable Metropolitan Planning Organization (MPO) and accepted by the California Air Resources Board. The charts outline the new options described in the California Public Resources Code (PRC) Sections for the review and analysis of certain types of projects:

- 21155.1 (Exemption for "Transit Priority Projects" (TPP's))
- 21155.2 (Sustainable Communities Environmental Assessment and Limited Environmental Impact Report (EIR) for TPP's)
- 21159.28 (Limited Analysis for "Mixed Use Residential Projects" (MURP's))

There are four charts. Chart 1 is a basic overview of all three options. Chart 2 is a basic overview of the TPP exemption. Chart 3 is a basic overview of the option of using either a Sustainable Communities Environmental Assessments (SCEA) or a Limited EIR for a TPP. Chart 4 is a basic overview of the option available for mixed use /residential projects. The PRC text has been truncated in each chart, please refer to the statute for the complete language.

These charts are meant to provide assistance in understanding SB 375's new CEQA options, and should not be considered legal advice. Lead agencies with legal questions regarding the use of the SB 375 CEQA provisions should seek assistance from their legal counsel prior to using these provisions and adopting or certifying CEQA documents.

These charts attempt to outline the CEQA statutes enacted by SB 375. Other CEQA process requirements (such as the issuance of a Notice of Preparation, holding scoping meetings, filing a Notice of Determination, etc.) are not included in these charts, but still must be completed by the lead agency to be compliant with the law. In order for TPP's or MURP's to be eligible for any of the SB 375 CEQA provisions they must be "consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy"(PRC Section 21155(a) and 21159.28).

### Brief Introduction to SB 375

In 2008, the California Legislature and Governor Schwarzenegger enacted SB 375. This landmark bill coordinates land use and transportation planning to reduce greenhouse gas (GHG) emissions from cars

and light trucks. The law requires MPO's to add a new component to their Regional Transportation Plans (RTPs), the Sustainable Communities Strategy (SCS). An SCS must "set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved" by the California Air Resources Board. (GC 65080(b)(2)(B)). If the SCS is unable to feasibly reduce GHG emissions to achieve the GHG emission reduction targets established by ARB, the MPO's shall prepare an Alternative Planning Strategy (APS) showing how the GHG emissions reduction targets would be achieved. After the MPO adopts the SCS or APS it must submit the SCS or APS to the ARB for review. ARB must review whether the SCS or APS would meet the regional GHG emission reduction target. Review by ARB is limited to acceptance or rejection of the MPO's determination that the SCS or APS submitted would, if implemented, achieve the region's GHG emission reduction targets.

Please refer to Government Code Section 65080 for the statutory requirements for ARB to establish and update the regional GHG emissions reduction targets, and the requirements for RTPs, SCSs, and APSs. For additional information on RTP requirements, and for detail and context of the SCS and APS provisions please see the "2010 California Regional Transportation Guidelines".

([http://www2.dot.ca.gov/hq/tpp/offices/orip/rtp/index\\_files/2010 RTP Guidelines 4-27-10.pdf](http://www2.dot.ca.gov/hq/tpp/offices/orip/rtp/index_files/2010_RTP_Guidelines_4-27-10.pdf))

In order to encourage land use planning and development that is consistent with an SCS or APS, SB 375 includes new CEQA provisions that can be used by lead agencies for TPP's as defined in (PRC 51155) and for MURP's as defined in PRC 21159.28(d).

#### Other Approvals

Projects that use the SB 375 CEQA provisions will still need to obtain discretionary permits or other approvals from the lead agency and responsible agency. Regardless of any CEQA streamlining or exemption benefits that a project receives from the SB 375 CEQA provisions, the lead agency must consider the merits of the project before moving forward with project approvals (such as a general plan amendment, rezone, use permit, variance, etc.) in accordance with local codes and procedures. Responsible agencies will also need to rely on the CEQA document prepared by the lead agency prior to issuing permits or otherwise approving the project.

#### Feedback and Next Steps

OPR will continue to maintain and update these charts. The next step is to include expanded explanations for each section similar to the CEQA Process Flow Chart on CERES:

<http://ceres.ca.gov/ceqa/flowchart/> .

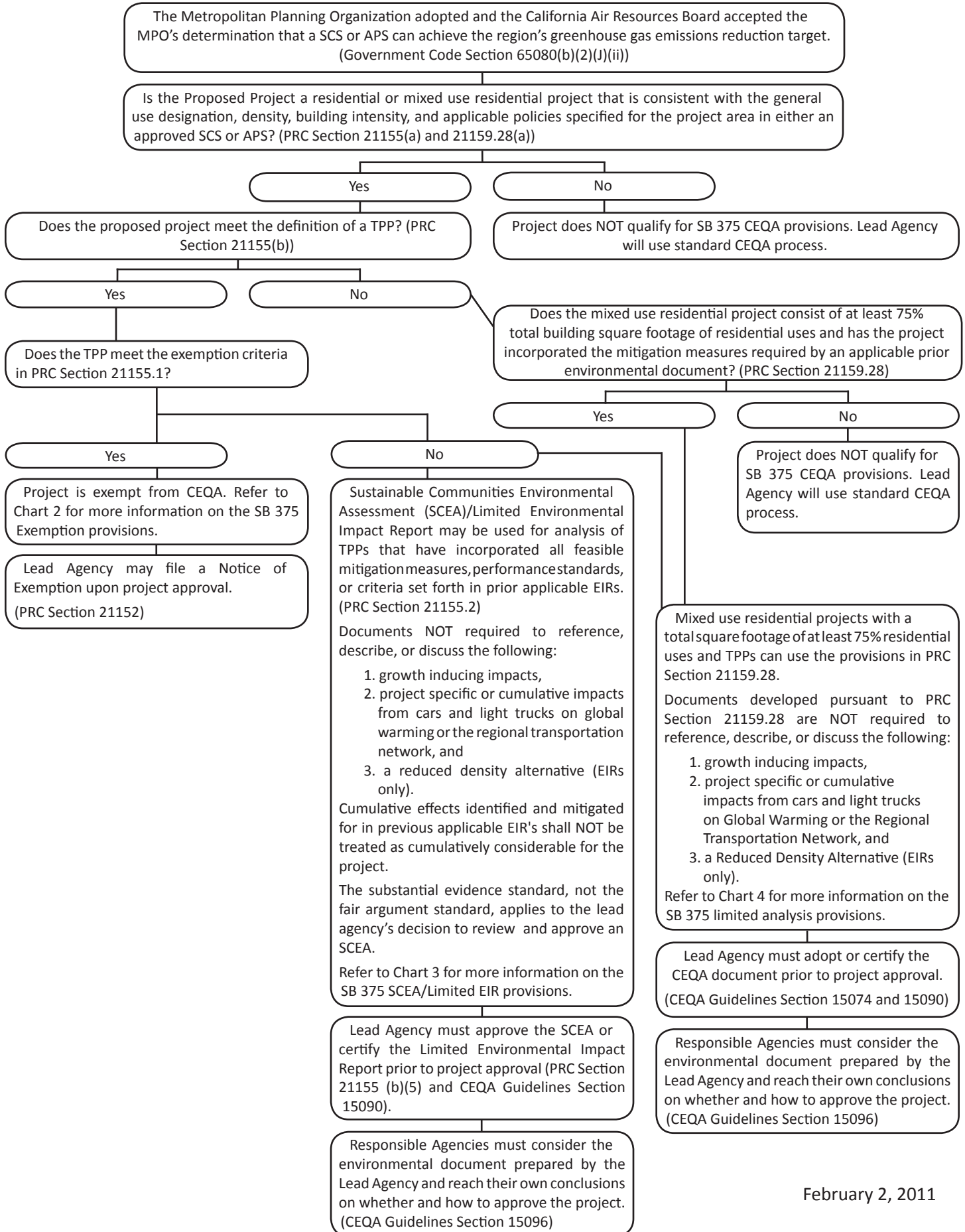
Please send suggestions to improve the charts to Scott Morgan, Director of the State Clearinghouse, at: [Scott.Morgan@opr.ca.gov](mailto:Scott.Morgan@opr.ca.gov) .

Edited 02.02.2011



# Senate Bill 375 CEQA Chart: Overview of 3 New Options for Certain Projects

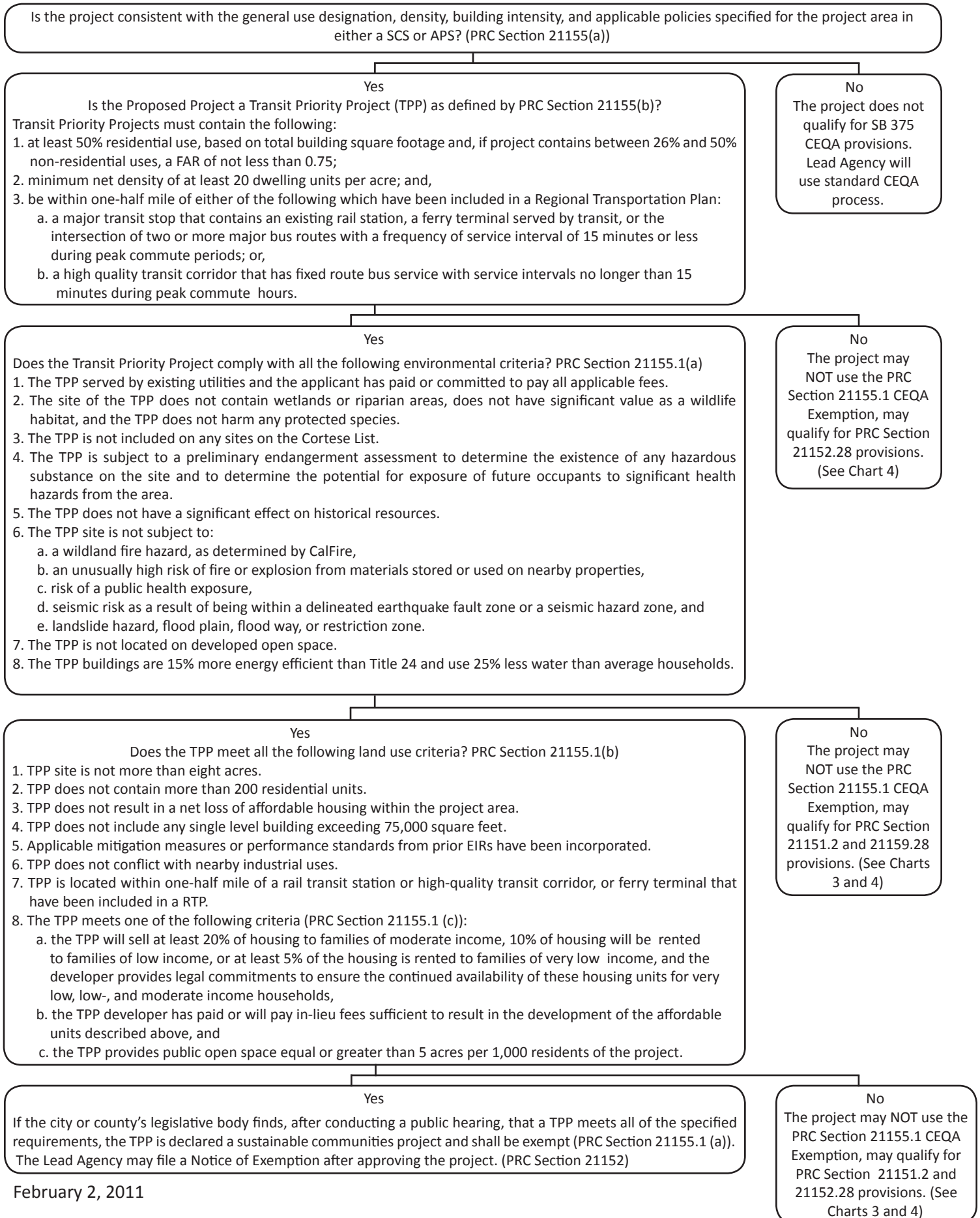
## Chart 1



February 2, 2011

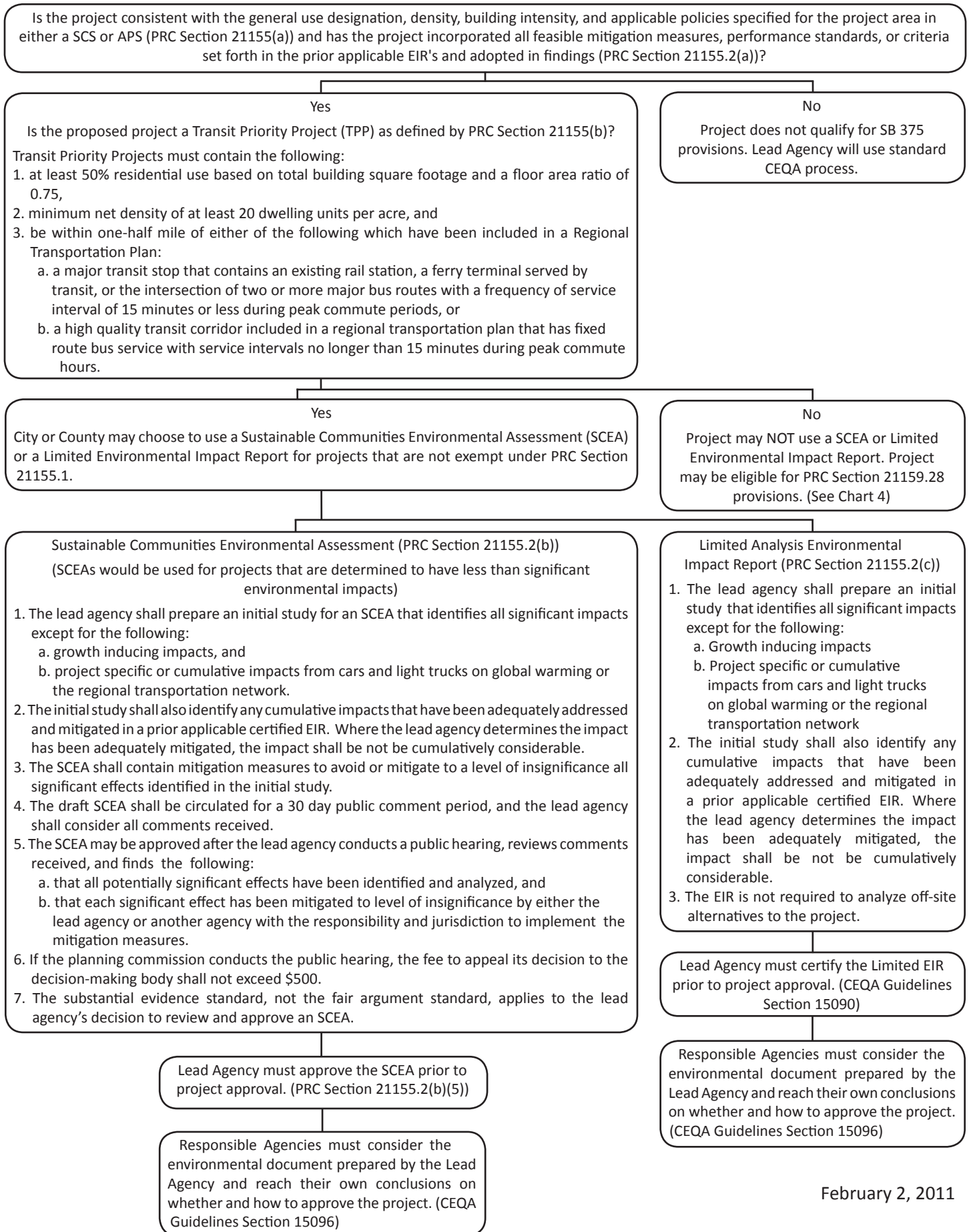
# SB 375 Transit Priority Project CEQA Exemption Flow Chart

## Chart 2



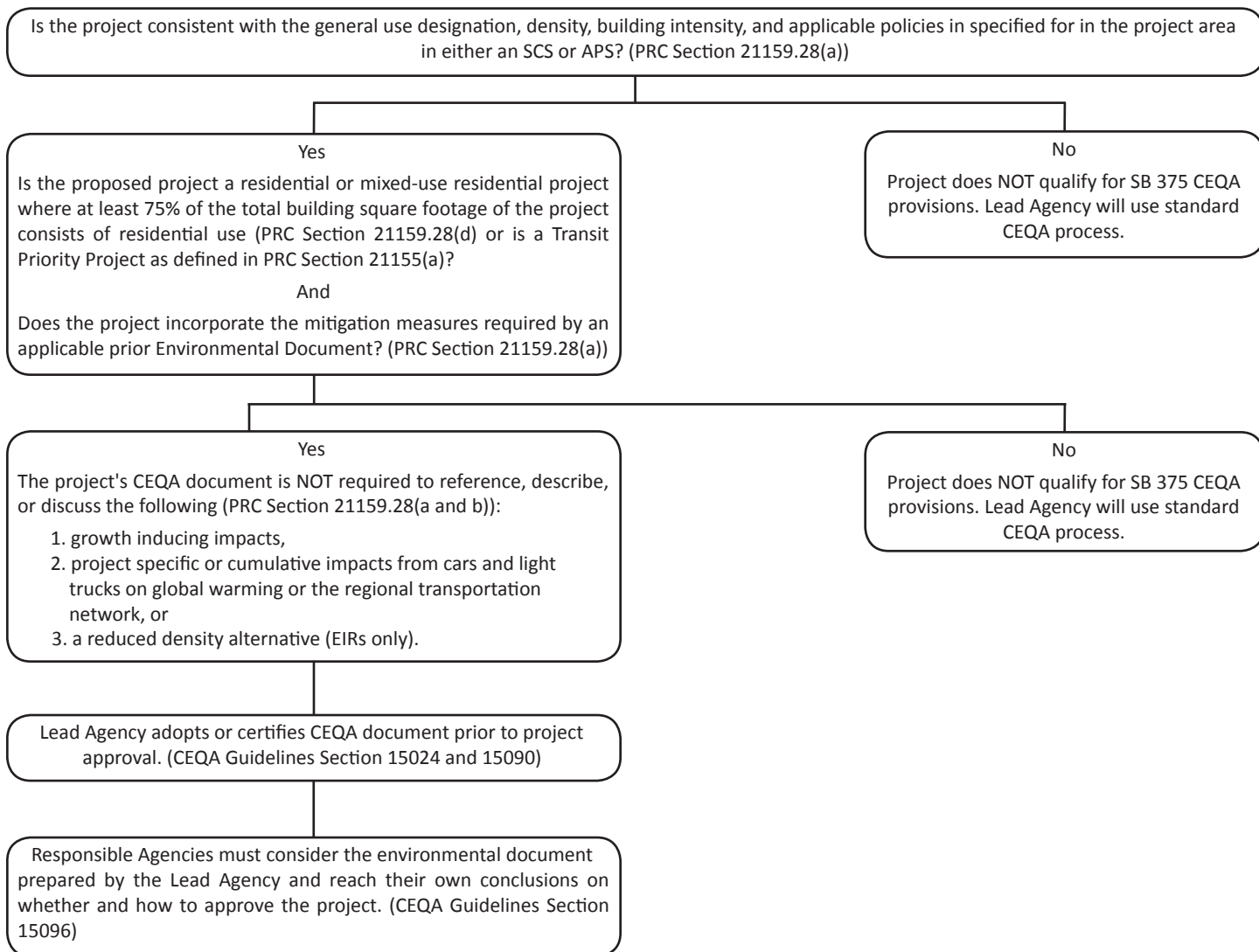
# SB 375 Transit Priority Project SCEA/Limited Analysis EIR CEQA Flow Chart

## Chart 3



# SB 375 Residential/Mixed Use Project CEQA Streamlining Chart

## Chart 4





February 28, 2017

c/o Ms. Paula Purcell  
Canyon Springs Marketplace Corp.  
2025 Pioneer Court  
San Mateo, CA 94403

**SUBJECT: CANYON SPRINGS HEALTHCARE CAMPUS & SENIOR LIVING SUPPLEMENTAL AQ & GHG MEMO**

Dear Ms. Paula Purcell:

Urban Crossroads, Inc. is pleased to submit the following memorandum for the Canyon Springs Healthcare Campus & Senior Living Project ("Project"). The purpose of this memorandum is to provide clarification on the Projects Opening Year utilized in the 2016 Air Quality and Greenhouse Gas Reports.

It is important to note that the Air Quality and Greenhouse Gas Reports commenced in 2015. At that time, the Project's anticipated Opening Year was identified as 2016. Although the 2016 Opening Year is no longer possible, the underlying technical calculations using the 2016 Opening Year are conservative and would overstate rather than understate the potential impacts from the Project. This is due to the fact that as the analysis year increases, emissions are generally reduced due to the natural turnover of older equipment and vehicles being replaced by newer less polluting equipment.

Similarly, the underlying energy demand calculations, which were based on the 2013 Title 24 standards in effect at the time, would actually be reduced based on the most current 2016 Title 24 standards in effect as of January 1, 2017.

As such, the emissions calculations and energy calculations in the 2016 Air Quality and Greenhouse Gas Reports are conservative, overstate potential impacts, and no further analysis is required.

If you have any questions or require any additional information regarding this response to comments, please contact me directly at (949) 336-5987.

Respectfully submitted,

URBAN CROSSROADS, INC.

A handwritten signature in black ink, appearing to be 'Haseeb Qureshi', written over a white background.

Haseeb Qureshi,  
Senior Associate