

Second Addendum to Certified Final EIR College Park Project

State Clearinghouse No. 2003081156

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October 26, 2009

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SECTION 1: INTRODUCTION

1.1 - Purpose

This Second Initial Study/Addendum (IS/Addendum) to the certified Final Environmental Impact Report (EIR) has been prepared in conformance with the California Environmental Quality Act (CEQA) Statutes (PRC Section 21000 et. seq.) and CEQA Guidelines Section 15164 to address the proposed modifications to the College Park Project. The project site is located in the western portion of the City of Upland in San Bernardino County (see Exhibits 1 and 2). The site is located southwest of the intersection of W. Arrow Route and Monte Vista Avenue.

In October 2004, the City of Upland approved the College Park Specific Plan and certified the Environmental Impact Report (EIR) for the College Park Project (SCH No. 2003081156), which evaluated the environmental impacts of the College Park Project pursuant to the approved Specific Plan. Also approved in October 2004 were: (1) Conditional Use Permit No. CUP-04-06 to allow a mixed-use development consisting of approximately 12.8 acres of commercial uses and 25.8 acres of residential uses; and conjunctively (2) Tentative Parcel Map No. TPM-16716 to create six (6) separate parcels within the project site. The EIR for the College Park Project was prepared to address the potential construction and operational level impacts associated with implementation of the College Park Specific Plan.

In August 2005, an Addendum to the certified Final EIR was approved to remove the hotel and office-professional uses in the northwest portion of the site, and substitute 39 single-family detached, patio/courtyard-style homes, resulting in a total of 89 single-family detached homes. Circulation was also revised. In addition, there were: (1) modifications to CUP-04-06; (2) modifications to Tentative Parcel Map No. TPM-16716; and (3) approval of a Tentative Tract Map for subdivision of the single-family area. Based upon the August 2005 Addendum, it was determined that implementation of the 2005 Alternative Development Plan and corresponding amendment to the College Park Specific Plan represented no substantial change from the previous EIR analysis, and would not result in any environmental impacts that were not already addressed in the Final EIR.

The primary intent of this Second IS/Addendum is to address the environmental effects of further amending the College Park Specific Plan ("Specific Plan") and modifying Conditional Use Permit No. CUP-04-06 (CUP) as described below. Changes to the Specific Plan and CUP will address:

- Revision to the Specific Plan to allow a maximum 230 dwelling units within the current 9-acre single-family residential site within the College Park Project property, previously approved for 89 single-family residential units.
- Revision to the Infrastructure, Utilities, and Public Services section of the Specific Plan to be consistent with the land use change to a maximum 230 multiple-family dwelling units.

Source: Census 2000 Data, The CaSIL, MBA GIS 2009.



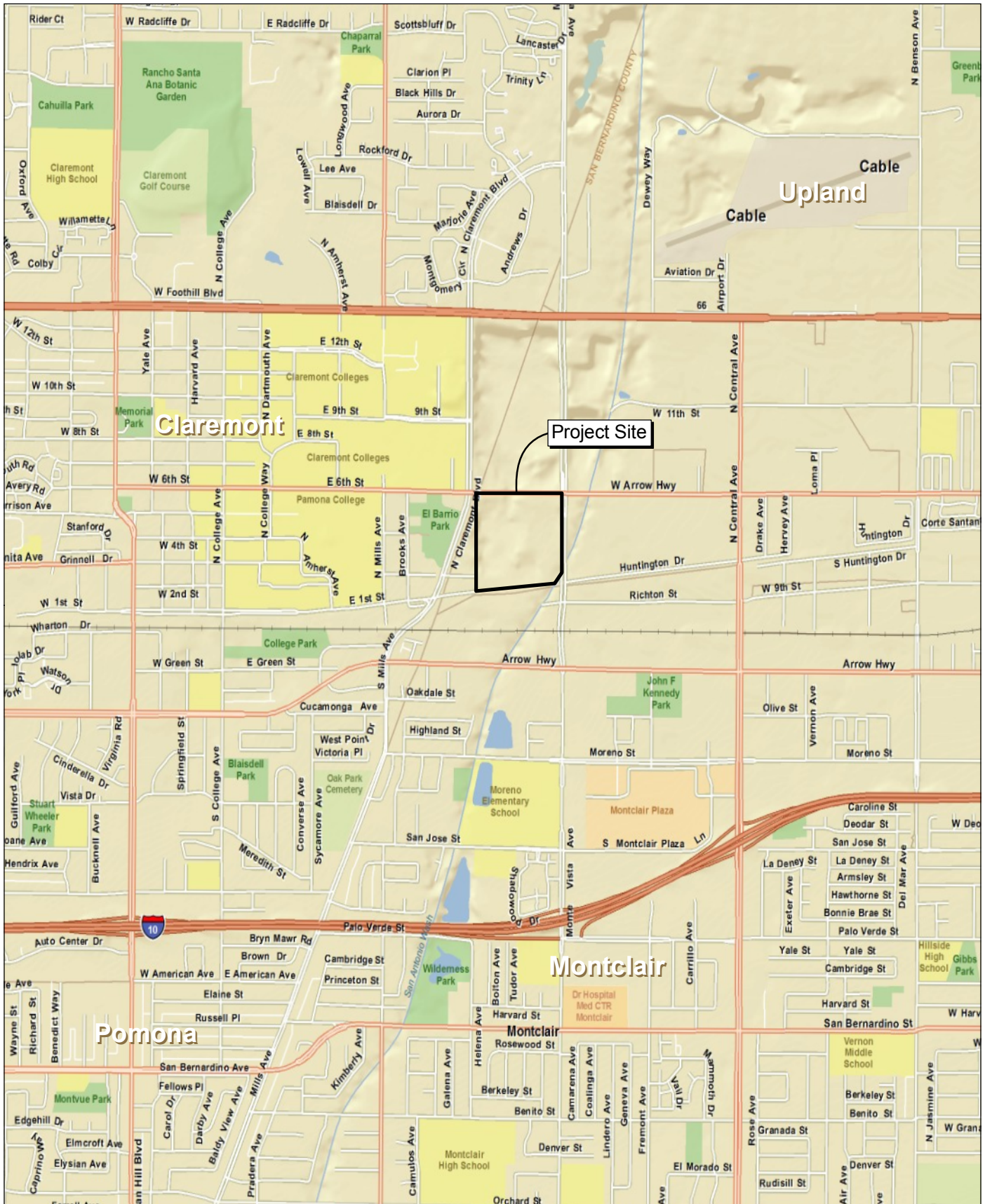
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Exhibit 1

Regional Location Map

COLLEGE PARK PROPERTIES • COLLEGE PARK
SECOND ADDENDUM TO CERTIFIED FINAL EIR



Source: ESRI World Imagery. MBA GIS Data, 2009.



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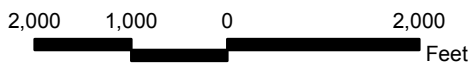
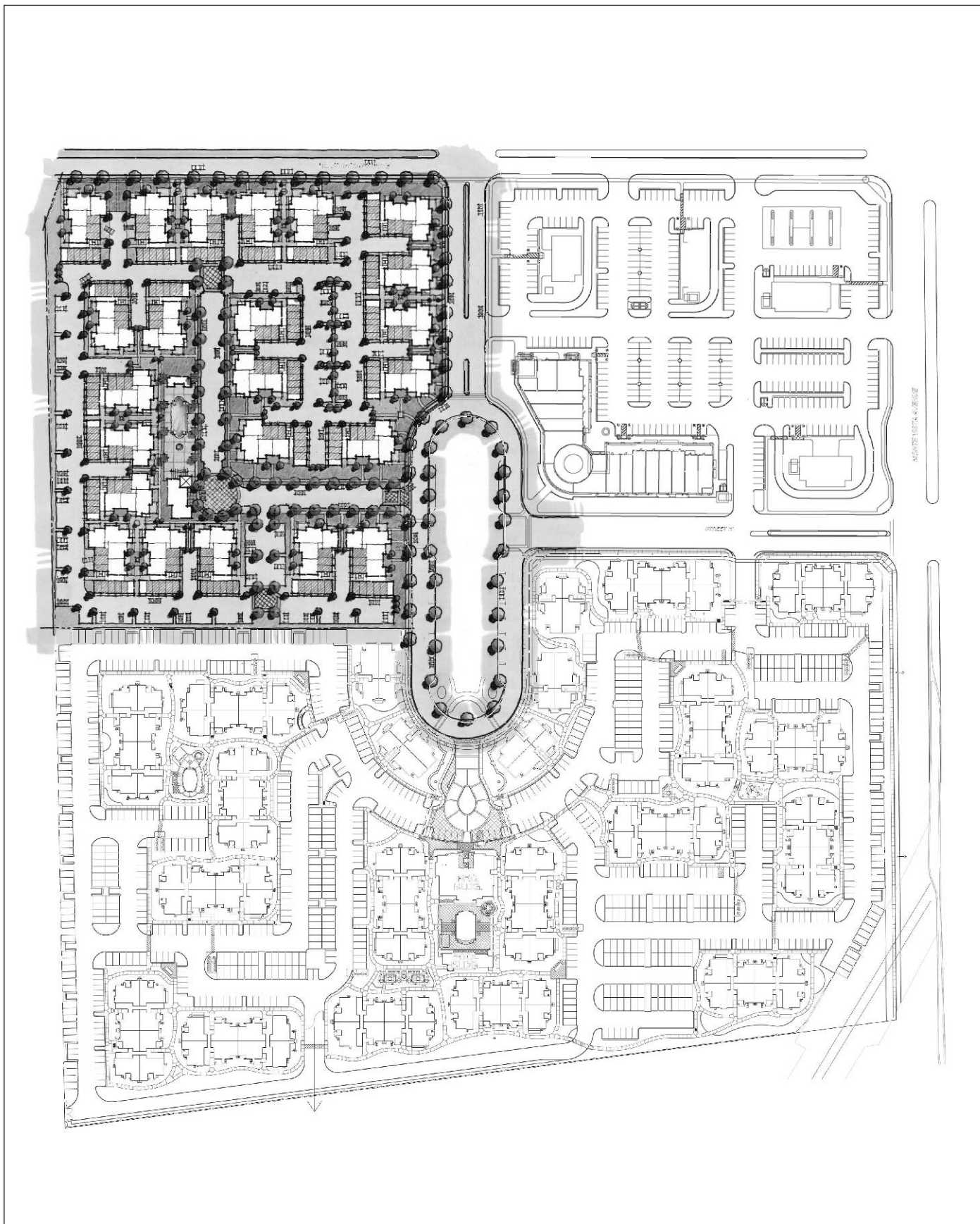


Exhibit 2 Local Vicinity Map

COLLEGE PARK PROPERTIES • COLLEGE PARK
SECOND ADDENDUM TO CERTIFIED FINAL EIR

This Second IS/Addendum compares any potential impacts resulting from the current proposed action (detailed in Exhibit 3), and being addressed in this environmental document, with the projects addressed in the Final EIR and the 2005 Addendum (shown in Exhibits 4 and 5, respectively). This Second IS/Addendum will review any significant changes in the condition of the site and environmental conditions that have occurred since the EIR was prepared and certified. It will also review any new information of substantial importance that was not known and could not have been known with exercise of reasonable diligence at the time the EIR was certified. This IS/Addendum relies on use of an Environmental Checklist Form (Form), as suggested in Section 15063 (d)(3) of the State CEQA Guidelines.



Source: KTG Group, Inc., August 2009.



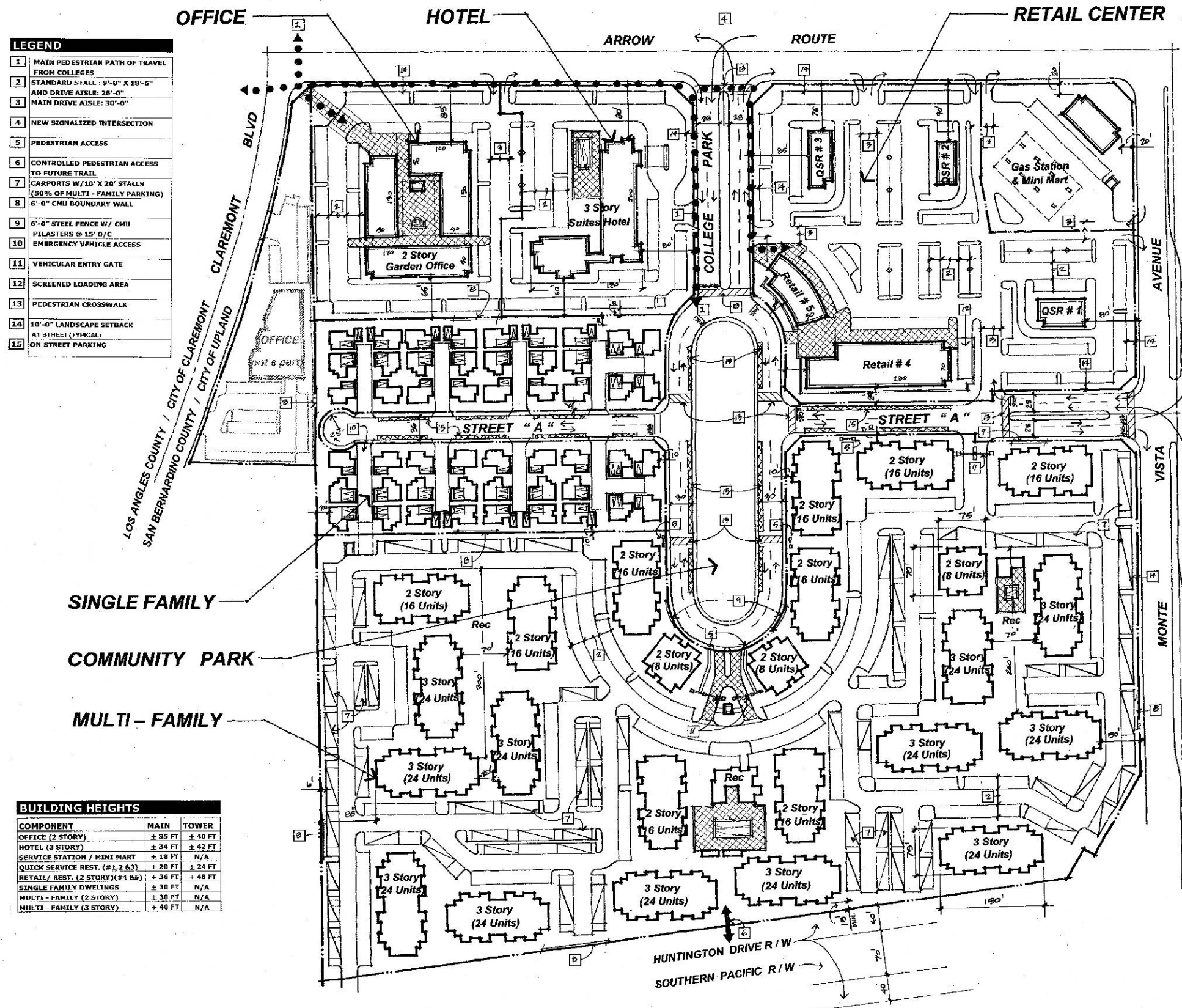
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Exhibit 3 Proposed 2009 Alternative Development Plan

COLLEGE PARK PROPERTIES • COLLEGE PARK
SECOND ADDENDUM TO CERTIFIED FINAL EIR



Source: Hutton Development Company; KTGy Group, Inc.; Lundstrom & Associates, June 2003.



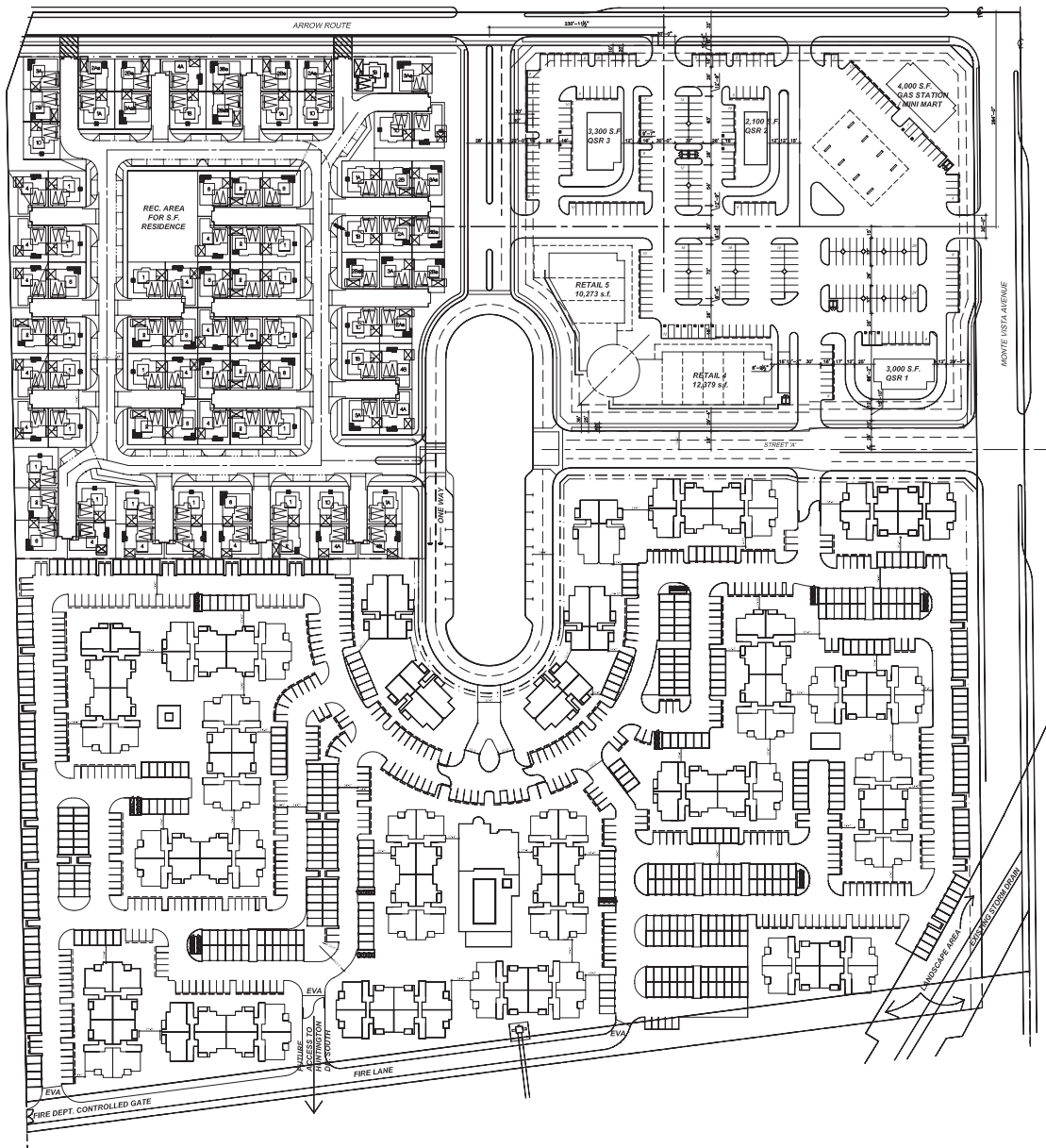
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Exhibit 4
Approved EIR Development Plan

COLLEGE PARK PROPERTIES • COLLEGE PARK
SECOND ADDENDUM TO CERTIFIED FINAL EIR



Source: KTGy Group, Inc., 07/2005.



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Exhibit 5 Approved 2005 Alternative Development Plan

COLLEGE PARK PROPERTIES • COLLEGE PARK
SECOND ADDENDUM TO CERTIFIED FINAL EIR

1.2 - Summary of Findings

As stated in Section 15162 of the CEQA Guidelines, in order for an Addendum to be prepared, the Initial Study must find that there is no new information of substantial importance which was not known and could not have been known with exercise of reasonable diligence at the time the previous EIR was certified, which shows any of the following:

1. The project will have one or more significant effects not discussed in the previous EIR;
2. Significant effects previously examined will be substantially more severe than identified in the previous EIR;
3. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or
4. Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Based upon the environmental checklist prepared for the project (Section 3) and supporting checklist responses (Section 4), implementation of the Proposed 2009 Alternative Development Plan (see Exhibit 3) and amendment to the College Park Specific Plan will not result in any environmental impacts that have not already been addressed in the College Park Project Final EIR. Since only minor additions and clarifications are required to the EIR, and none of the conditions described in Section 15162 of the CEQA Guidelines requiring preparation of a subsequent EIR have occurred, the City of Upland finds that the preparation of an addendum to the College Park Project Final EIR (SCH No. 2003081156) is appropriate and consistent with Sections 15162 and 15164 of the CEQA Guidelines. Environmental impacts of the Proposed 2009 Alternative Development Plan also represent no substantial change from the previous analysis in the August 2005 Addendum.

1.3 - Lead Agency and Discretionary Approvals

This Second Addendum, together with the previously certified EIR (October 2004) and First Addendum (August 2005), are intended to serve as the environmental documentation for the proposed action. The City of Upland is the lead agency and has approval authority over the following entitlements/applications that are included as part of the proposed action and addressed in this Addendum:

- Approval of this Second IS/Addendum to the College Park Project Final EIR.
- Approval of a Specific Plan Amendment to accommodate the proposed action, substituting a maximum 230 multiple-family dwelling units within the current 9-acre single family

residential site, previously approved in 2005 for 89 single-family residential units, and consistent with the studies required by the Parcel Map.

- Approval of modifications to Conditional Use Permit No. CUP-04-06 and/or approval of a new CUP to permit multi-family development of the area currently designated for single-family use.
- Approval of a Tentative Tract Map for conversion of the single-family residential area, previously approved for 89 single-family residential units, to multi-family residential.
- If units are sold as condominiums, then a condominium map will be submitted for approval. (If multi-family area is developed as “for rent” units, no modification to the Recorded Parcel Map No. PM-16716 is necessary.)
- Acting as the Airport Land Use Committee, adoption of a finding that the modified project is compatible with the Airport Land Use Plan for Cable Airport.

These approvals are added to the list of discretionary actions and approvals contained on page 3-19 of the EIR (Section 3.4 ‘Intended Uses of the EIR’).

SECTION 2: DESCRIPTION OF THE PROPOSED ACTION

2.1 - Location and Description

The project site encompasses 39.7 acres located in the western portion of the City of Upland in San Bernardino County (see Exhibit 1). The site is located southwest of the intersection of W. Arrow Route and Monte Vista Avenue. The site is within the City of Upland, but is bordered by the City of Claremont and Los Angeles County line on the west; a San Bernardino County unincorporated island to the north; Upland to the east; and the City of Montclair to the south. The Claremont Colleges lie northwest of the project site. The San Antonio Channel, an improved stormwater flood control facility, lies southeast of the site. Regional freeway access to the site is provided by the San Bernardino Freeway (I-10) and the Foothill Freeway (SR 210). Major arterial access to the site is provided by Mills Avenue, Claremont Boulevard, Foothill Boulevard (SR 66), W. Arrow Route, Arrow Highway, and Monte Vista Avenue.

The proposed action is to amend the College Park Specific Plan and modify Conditional Use Permit No. CUP-04-06 to reflect the revised Site Plan (see Exhibit 3). Changes to the Specific Plan and CUP will address the following items:

- Revision to the Specific Plan to allow a maximum 230 dwelling units within the current 9-acre single-family residential site within the College Park Project property, previously approved for 89 single-family residential units.
- Revision to the Infrastructure, Utilities, and Public Services section of the Specific Plan to be consistent with the land use change to a maximum 230 multiple-family dwelling units.

A land use summary for the modified College Park Project (referred to as the “Proposed 2009 Alternative Development Plan” or “2009 Plan”) is presented in Table 1.

Table 1: Proposed 2009 Alternative Development Plan Summary

Project Use	Square-Feet (SF)/ No. of Units (DU)	Acres (Net)	Status/Expected Date of Completion
Retail Component			
Retail Shops & Inline Food Uses/Restaurants	32,100 SF	—	Completed. Tenants moving in now.
Fast-Food Restaurants	8,400 SF	—	One 4,000 SF Fast Food Restaurant completed. Tenant moving in now. Remaining 4,400 SF for two Fast Food Restaurants to be completed in 2010.

Project Use	Square-Feet (SF)/ No. of Units (DU)	Acres (Net)	Status/Expected Date of Completion
Gas Station/Mini-Mart (16 fueling positions)	4,000 SF	1.11	Not yet begun. Estimated completion is mid-2010.
Retail/Commercial Floor Area (not including Gas Station/Mini-Mart)	44,500 SF	5.82	
Residential Component			
Multi-Family/Courtyard Villas	230 DU	9.03	Now under review through this Second Addendum to the Final EIR. Completion is expected in 2011.
Multi-Family/Apartments	448 DU	20.73	All 448 DUs are under construction or completed. 25% or approximately 112 DUs are now open and ready for occupancy. 75% or approximately 336 DUs are being completed, to be ready for occupancy now through October 2009.
Total Residential	678 DU	29.76	
Greenbelt/Recreational Areas	N/A	1.08	Completed.
Streets and Dedication	229,561 SF	1.91	Completed.
Project Total	N/A	39.68	
DU = dwelling unit SF = square feet N/A = not applicable Source: Recorded Parcel Map No. PM-16716. September 21, 2007.			

Table 2 provides a comparison of land uses for the project site under the three development plans (Approved EIR and 2005 Alternative Development Plans, and Proposed 2009 Alternative Development Plan).

Table 2: Comparison of Land Uses for Project Site

Approved EIR Development Plan	Approved 2005 Alternative Development Plan	Proposed 2009 Alternative Development Plan
Retail Center (44,335 SF)	Retail Center (44,335 SF)	Retail Center (44,500 SF)
Office Building (48,000 SF) Hotel Component (102 Rooms)	Residential Development (39 SFDU)	Residential Development (230 MFDU)
Residential Development (50 SFDU)	Residential Development (50 SFDU)	
Residential Development (448 MFDU)	Residential Development (448 MFDU)	Residential Development (448 MFDU)
SF = Square Feet	SFDU = Single-Family Dwelling Unit	MFDU = Multi-Family Dwelling Unit

2.1.1 - Proposed 2009 Alternative Development Plan - Project Design Features

The current project, the Proposed 2009 Alternative Development Plan (or 2009 Plan), incorporates the following design features that would reduce greenhouse emissions. The 2004 Certified Final EIR and 2005 First Addendum did not address impacts to climate change as this issue has only recently emerged as a topic for inclusion in environmental documents.

Landscaping

The project would have onsite landscaping. There are two 24-inch or larger box trees to every residential unit currently being constructed. The shade provided would reduce the heat island effect, thereby potentially reducing the cooling requirements for the buildings. The onsite landscaping helps to counter-balance the project's contribution of greenhouse gases by providing onsite carbon storage. The trees and shrubs take in carbon dioxide and store it.

Alternative Transportation

To reduce vehicle miles traveled and emissions associated with trucks and vehicles, the project would implement the following features:

- a) Onsite short-term bicycle storage parking would be provided at the park.
- b) Long-term, covered, secure, Class I bicycle parking would be provided for residents of the Courtyard Villas, such as garage, bicycle lockers, etc. (Units to be constructed within the area previously planned for single-family uses are referred to as Courtyard Villas.)
- c) Exterior electricity outlets will be provided to be accessible to charge electric vehicles.

Energy Efficiency

The residential units currently under construction have Energy Star appliances and high efficiency space heating.

The Courtyard Villa residential units would exceed the 2008 Building Energy Efficiency Standards for Residential and Nonresidential Buildings by 5 percent. The Courtyard Villas will implement the following energy efficiency features:

- a) The roofing will have a solar reflectance index of 78 or greater. The solar reflectance index is a measure of the reflectance and emittance of a roof. A higher rating means that more sunlight will be reflected, which reduces cooling demand and emissions associated with electricity generation.
- b) Cool paints will be used on the exterior of the units. Cool paints also increase the solar reflectance and reduce cooling demand.
- c) Cool pavements will be used in the driveway areas. Cool pavements reduce the urban heat island effect.

- d) A minimum of two deciduous shade trees will be planted on the south and west sides of each of the residential units, where feasible. Shade trees block sunlight during the summer months, thereby reducing cooling demand and electricity usage.
- e) Fluorescent or equivalently efficient lighting will be used.
- f) Energy Star skylights will be incorporated in those residential units on the top floors of the buildings, as possible.
- g) Point of use tankless and/or solar water heaters will be installed in the residential units in lieu of conventional water heaters. Tankless (or demand) water heaters provide hot water only as it is needed. For homes that use 41 gallons or less of hot water daily, demand water heaters can be 24 to 34 percent more energy efficient than conventional storage tank water heaters. They can be 8 to 14 percent more energy efficient for homes that use a lot of hot water—around 86 gallons per day. Greater energy savings of 27 to 50 percent can be observed if a demand water heater is installed at each hot water outlet. There are various types of solar water heaters; the basic premise is that the sun's energy is used to heat the water, thereby saving electricity.
- h) Energy Star or equivalent energy efficient appliances will be installed where the developer/applicant is installing the equipment.
- i) Any swimming pool to be constructed as part of the development with a heating system will utilize a solar powered heating system. The pool will also utilize a pool cover. Solar pool heating is a cost-effective use of solar energy in many climates. Utilizing a solar pool heating system would reduce energy use to heat the pool. In hot climates, the system can also be used to cool the pool during peak summer months by circulating the water through the system at night. Swimming pools with covers have the following benefits: they conserve water by reducing the amount of make-up water needed by 30 to 50 percent, they reduce the pool's chemical consumption by 35 to 60 percent, and they reduce energy usage by 80 to 90 percent.

Waste Reduction

During construction of Phase 2, the project will reduce and/or salvage at least 25 percent of non-hazardous construction debris. This feature would reduce emissions from material acquisition and product manufacturing.

The project will integrate spaces for storage of recyclables during project operation. The storage will be located near trash receptacles to encourage recycling. This feature would reduce emissions from material acquisition, product manufacturing, and trash hauling.

Refrigerants

The project will perform maintenance on the heating, ventilation, and air conditioning units and the refrigeration units at least once per year to ensure minimal refrigerant leakage.

Water Efficiency

All fixtures within the residential units are low-flow and each unit is separately metered which results in larger water savings. Water efficient fixtures and appliances will be installed inside the Courtyard Villas.

In addition, the irrigation system for the entire project has weather-driven controls, which monitors evapotranspiration (plant water lost). The only turf areas are in the project park and limited areas within the apartments. No other turf was planted in any landscape areas within the retail component. The landscaping in the open space areas will use drought-resistant, low-water-use plants (with the exception of grass/turf in the park area and small turf areas within the apartments).

2.2 - Environmental Setting

The site was a former sand and gravel quarry that has been completely filled in with engineered compacted fill by others under a separate permit. The EIR analysis evaluated environmental impacts of the Approved EIR Development Plan using the filled site as the baseline environmental condition. As identified in Table 1, portions of the project site have been constructed and are operational.

The City of Upland owns another former sand and gravel site directly across Monte Vista Avenue to the east, which has been excavated for a retention basin. The excavated soils were transported to the project site as fill as part of a separately permitted project. The property immediately to the north is a closed sand and gravel extraction site that is owned and controlled by the Claremont Colleges.

The Vulcan asphalt batch plant, located to the south of the project site, is scheduled for relocation. Since plant relocation plans have not been finalized, however, the potential exists that the plant will continue to operate for a period of two to four years.

Immediately west of the project site is an older residential neighborhood with long-term established residents, and an office building. Some of the older residences abut the batch plant. Northwest of the site, diagonally across the intersection of Claremont Boulevard is the campus of the Claremont Colleges.

Land uses in the general vicinity (approximately one mile) of the site are a mixture of residential, commercial, institutional, and heavy industrial. Principal land uses in the vicinity of the site are sand and gravel facilities, the Claremont Colleges, the Montclair Metrolink Station and Transcenter, the Metrolink railroad line, Cable Airport, the San Bernardino Freeway (I-10), the San Antonio Channel, and Montclair Plaza, a regional shopping center. Additional land uses within approximately 1 mile of

the site are two neighborhood shopping centers, five public schools, a mobile home park, a cemetery, six parks, three municipal buildings, and portions of a botanical garden and golf course.

SECTION 3: ENVIRONMENTAL CHECKLIST

The following Environmental Analysis Checklist is for projects with previously certified/approved environmental documents. This checklist takes into consideration the preparation of an environmental document prepared at an earlier stage of a project. This checklist evaluates the adequacy of the earlier document pursuant to Section 15164 of the CEQA Guidelines. The Initial Study/EIR State Clearinghouse No. 2003081156, College Park Project, was certified by the City of Upland in October 2004.

Environmental Issues	New Significant Impact	New Ability to Substantially Reduce Significant Impact	New Ability to Substantially Reduce Significant Impact	No Substantial Change From Previous Analysis
1. Aesthetics <i>Would the project:</i>				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒
2. Agriculture Resources <i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.</i> <i>Would the project:</i>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Environmental Issues	New Significant Impact	New Ability to Substantially Reduce Significant Impact	New Ability to Substantially Reduce Significant Impact	No Substantial Change From Previous Analysis
3. Air Quality <i>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.</i> <i>Would the project:</i>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒
f) Result in an increase in greenhouse gas emissions that would significantly hinder or delay the State's ability to meet the reduction targets contained in AB 32?	☐	☐	☐	☒
4. Biological Resources <i>Would the project:</i>				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

Environmental Issues	New Significant Impact	New Ability to Substantially Reduce Significant Impact	New Ability to Substantially Reduce Significant Impact	No Substantial Change From Previous Analysis
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒
5. Cultural Resources <i>Would the project:</i>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒
6. Geology and Soils <i>Would the project:</i>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒

Environmental Issues	New Significant Impact	New Ability to Substantially Reduce Significant Impact	New Ability to Substantially Reduce Significant Impact	No Substantial Change From Previous Analysis
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
7. Hazards and Hazardous Materials <i>Would the project:</i>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Environmental Issues	New Significant Impact	New Ability to Substantially Reduce Significant Impact	New Ability to Substantially Reduce Significant Impact	No Substantial Change From Previous Analysis
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒
8. Hydrology and Water Quality <i>Would the project:</i>				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒

Environmental Issues	New Significant Impact	New Ability to Substantially Reduce Significant Impact	New Ability to Substantially Reduce Significant Impact	No Substantial Change From Previous Analysis
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
9. Land Use and Planning <i>Would the project:</i>				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	☐	☐	☐	☒
10. Mineral Resources <i>Would the project:</i>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
11. Noise <i>Would the project result in:</i>				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒

Environmental Issues	New Significant Impact	New Ability to Substantially Reduce Significant Impact	New Ability to Substantially Reduce Significant Impact	No Substantial Change From Previous Analysis
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
12. Population and Housing <i>Would the project:</i>				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
13. Public Services <i>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</i>				
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒
14. Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Environmental Issues	New Significant Impact	New Ability to Substantially Reduce Significant Impact	New Ability to Substantially Reduce Significant Impact	No Substantial Change From Previous Analysis
15. Transportation/Traffic <i>Would the project:</i>				
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☒
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	☐	☐	☐	☒
16. Utilities and Service Systems <i>Would the project:</i>				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒

Environmental Issues	New Significant Impact	New Ability to Substantially Reduce Significant Impact	New Ability to Substantially Reduce Significant Impact	No Substantial Change From Previous Analysis
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
17. Mandatory Findings of Significance				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Environmental Determination

Based upon the evidence in light of the whole record documented in the attached environmental checklist explanation, cited incorporations and attachments, I find that the proposed project:

- ☐ **Has previously been analyzed** as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to State and County CEQA Guidelines. The proposed project is a component of the whole action analyzed in the previously adopted/certified CEQA document.
- ☒ **Has previously been analyzed** as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to State and County CEQA Guidelines. **Minor additions and/or clarifications** are needed to make the previous documentation adequate to cover the project which are documented in this addendum to the earlier CEQA document (CEQA §15164).
- ☐ **Has previously been analyzed** as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to State and County CEQA Guidelines. However, there is important new information and/or **substantial changes have occurred** requiring the preparation of an additional CEQA document (ND or EIR) pursuant to CEQA Guidelines Sections 15162 through 15163.

Signed _____
Sylvia A. Scharf, AICP, Planning Manager
Community Development Department
Telephone: 909.931.4130

Date _____

SECTION 4: DISCUSSION OF ENVIRONMENTAL EVALUATION

1. Aesthetics

Would the project:

- a) *Have a substantial adverse effect on a scenic vista?*
- b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?*
- c) *Substantially degrade the existing visual character or quality of the site and its surroundings?*
- d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

No Substantial Change From Previous Analysis. Aesthetics was one of five environmental issues (aesthetics, agricultural resources, biological resources, population and housing, and recreation) determined not to be significantly affected by the original College Park Project (Approved EIR Development Plan or EIR Plan), and therefore not requiring evaluation in the EIR document (per Section 15063 (c) of the State CEQA Guidelines).

Development of the 9-acre northwest portion of the project site according to the EIR Plan would have provided the maximum amount of light and glare. Under the 2005 Plan, replacement of the Office Building and Hotel Component with 39 single-family dwelling units would have reduced light and glare from the EIR Plan. Incorporation of 230 maximum multiple-family dwelling units in the 9-acre area previously approved for 89 single-family dwelling units will increase light and glare over the 2005 Plan but still generate less light and glare than the EIR Plan.

Light and glare impacts associated with construction of a maximum 230 multiple-family dwelling units (2009 Plan) will act to reduce the amount of light and glare attributed to site development under the Approved EIR Plan. The proposed 230 multiple-family units will have a separate set of design standards, landscaping standards, and elevations. Similar to the Approved EIR Plan, amending the College Park Specific Plan and modifying Conditional Use Permit No. CUP-04-06 to reflect the revised Site Plan presented in Exhibit 3 (Proposed 2009 Alternative Development Plan) will result in no impacts on aesthetics and raise no new substantial issues for aesthetics.

2. Agricultural Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.

Would the project:

- a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*
- b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*
- c) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?*

No Substantial Change From Previous Analysis. Agricultural resources was one of five environmental issues (aesthetics, agricultural resources, biological resources, population and housing, and recreation) determined not to be significantly affected by the Approved EIR Development Plan, and therefore not requiring evaluation in the EIR document (per Section 15063 (c) of the State CEQA Guidelines). Amending the College Park Specific Plan and modifying Conditional Use Permit No. CUP-04-06 to reflect the Proposed 2009 Alternative Development Plan will similarly result in no impacts on agricultural resources and raise no new substantial issues for agricultural resources.

3. Air Quality

This analysis relies upon information contained in the Air Quality Analysis Report contained in Appendix A of this Second Addendum to the certified Final EIR. The following is a summary of the Air Quality Analysis Report.

The project is in the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The South Coast Air Basin is in nonattainment for ozone and particulate matter (PM₁₀ and PM_{2.5}), which means that concentrations of those pollutants exceed the ambient air quality standards for those pollutants. Ambient air quality standards for criteria pollutants are set by the U.S. Environmental Protection Agency and the California Air Resources Board (ARB) to protect the health of sensitive individuals. Criteria pollutants include ozone, PM₁₀, PM_{2.5}, carbon monoxide (CO), nitrogen dioxide, lead, and sulfur dioxide. Ozone is formed through reactions of volatile organic compounds (VOCs), nitrogen oxides (NO_x), and sunlight.

An Air Quality Analysis Report was prepared for the 2009 Alternative Development Plan because some air quality analysis methodologies have changed since the 2004 EIR was certified. To assist Lead Agencies in the analysis of project-related air pollutants, the South Coast Air Quality Management District (SCAQMD) recommends use of regional and localized significance thresholds. If project emissions are over the thresholds, then the project results in a significant impact.

Emissions during construction were estimated using URBEMIS2007 and are compared with the emissions estimated in the 2004 EIR shown in Table 3 below. The rows beginning with 2004 EIR are obtained from the air quality section of the 2004 EIR. The Phase 1 and Phase 2 emissions represent the emissions estimated for this analysis. The differences between the construction emissions estimated in 2004 and the emissions estimated for this analysis are as follows:

1. Construction dates were changed to reflect construction of Phase 1 in 2008 and construction of Phase 2 in 2010;
2. The URBEMIS2007 model was used instead of the URBEMIS2002 model;
3. Compliance with the Best Available Control Measures in SCAQMD Rule 403 is assumed in the new analysis.

The information shown in Table 3 indicates that the SCAQMD regional emission thresholds will be exceeded for the proposed 2009 Alternative Development Plan for VOC and NO_x emissions, which is the same finding as in the 2004 EIR (with mitigation).

Table 3: Short-Term Emissions (Unmitigated)

Phase	Activity	Emissions (pounds per day)					
		VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1	Grading	44	371	222	<1	26	19
	Building	19	167	108	<1	8	7
	Building, coating	84	167	111	<1	8	7
	Paving	8	48	23	<1	3	3
Maximum Daily Emissions		84	371	222	<1	26	19
Phase 2	Grading	3	25	14	0	9	3
	Building	10	91	55	<1	4	4
	Building, coating	35	92	56	<1	4	4
Maximum Daily Emissions		35	92	56	<1	9	4
2004 EIR - Maximum Daily Emissions Phase 1		327	717	558	<1	131	*
2004 EIR - Maximum Daily Emissions Phase 2		207	265	273	<1	12	*
Significance Threshold		75	100	550	150	150	55

Phase	Activity	Emissions (pounds per day)					
		VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Significant Impact-2004 EIR?		Yes	Yes	Yes	No	No	*
Significant Impact-Current?		Yes	Yes	No	No	No	No
Notes: The maximum daily emissions refer to the maximum emissions that would occur in one day. * PM _{2.5} was not estimated in the 2004 EIR. VOC = volatile organic compounds NO _x = nitrogen oxides CO = carbon monoxide SO _x = sulfur oxides PM ₁₀ and PM _{2.5} = particulate matter Source: Air Quality Analysis Report (Appendix A)							

Operational emissions for the current analysis from emission sources generated both onsite and offsite as derived from the URBEMIS2007 model are shown in Table 4. Also shown in the table are emissions during construction of Phase 2. The table indicates that emissions of VOC and NO_x exceed the SCAQMD significance thresholds, also identified as exceeding thresholds in the 2004 EIR.

Table 4: Emissions of Phase 1 Operation with Phase 2 Construction (Unmitigated)

Season	Emission Type	Emissions (pounds per day)					
		VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer	Area	25	5	10	0	<1	<1
	Mobile	41	46	421	<1	57	11
	Total	66	51	431	<1	57	11
Winter	Area	24	7	3	<1	<1	<1
	Mobile	45	56	422	<1	57	11
	Total	69	63	425	<1	57	11
Construction of Phase 2		35	92	56	<1	9	4
Total operational and construction (maximum)		103	155	487	<1	66	15
2004 EIR Analysis*		325	400	1693	<1	124	*
Significance Threshold		55	55	550	150	150	55
Significant Impact – 2004 EIR?		Yes	Yes	Yes	No	No	*
Significant Impact – Current?		Yes	Yes	No	No	No	No
Notes: VOC = volatile organic compounds NO _x = nitrogen oxides CO = carbon monoxide SO _x = sulfur oxides PM ₁₀ and PM _{2.5} = particulate matter * The 2004 EIR analysis did not estimate PM _{2.5} emissions; from Table 4.5-5 of the 2004 EIR. Source: Air Quality Analysis Report (Appendix A)							

Emissions at buildout of the proposed 2009 Alternative Development Plan are shown in Table 5. As shown in the table, emissions of VOC, NO_x, and CO exceed the SCAQMD regional significance thresholds. The impacts are the same as identified in the 2004 EIR.

Table 5: Operational Emissions (Buildout, Unmitigated)

Season	Emission Type	Emissions (pounds per day)					
		VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer	Area	38	7	14	0	<1	<1
	Mobile	66	70	639	1	91	18
	Total	104	77	653	1	91	18
Winter	Area	37	11	8	<1	<1	<1
	Mobile	73	84	649	<1	91	18
	Total	110	95	657	0	91	18
2004 EIR Analysis		147	152	1586	2	133	*
Significance Threshold		55	55	550	150	150	55
Significant Impact – 2004 EIR?		Yes	Yes	Yes	No	No	*
Significant Impact – Current?		Yes	Yes	Yes	No	No	No
Notes: VOC = volatile organic compounds NO _x = nitrogen oxides CO = carbon monoxide SO _x = sulfur oxides PM ₁₀ and PM _{2.5} = particulate matter * The 2004 EIR analysis did not estimate PM _{2.5} emissions Source: Air Quality Analysis Report (Appendix A)							

A localized significance thresholds (LST) analysis was conducted for Phases 1 and 2 of construction. Phase 1 utilized dispersion modeling to estimate the concentration of pollutants at the nearby sensitive receptors. As shown in Table 6, the concentrations do not exceed the LSTs. During Phase 2, the onsite emissions do not exceed the LSTs. Therefore, emissions and concentrations during construction of the project would not exceed the LSTs.

Table 6: Localized Significance Analysis (Phase 1 Construction)

Location	24-hour PM ₁₀ (µg/m ³)	24-hour PM _{2.5} (µg/m ³)	1-hour NO ₂ (ppm)	1-hour CO (ppm)	8-hour CO (ppm)
Sensitive receptors to the west of the grading activity	10.1	8.6	0.075	1	0.5
Localized Significance Threshold	10.4	10.4	0.08	17	7.1
Exceed Localized Threshold?	No	No	No	No	No
Source: Air Quality Analysis Report (Appendix A)					

Table 7: Localized Significance Analysis (Phase 2 Construction)

Activity	Onsite Unmitigated Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Fine grading	25	12	9	3
Localized Significance Threshold	270	2193	16	9
Exceed Threshold?	No	No	No	No
Source: Air Quality Analysis Report (Appendix A)				

There are two potential sources of toxic air contaminants (TACs) that could impact the project during the operation of the project. One source of TAC is diesel particulate matter (DPM) from the diesel-powered trucks and support equipment associated with the operation of the Vulcan Material Company's facility located to the south of the project. The other source of TAC is benzene from the operation of a gasoline service station to be located at the northeastern corner of the project. Both DPM and benzene have been found by the CARB to be carcinogenic substances as well as result in non-cancer health impacts. To assess the health impacts of DPM and benzene, a health risk assessment was performed to derive estimates of cancer and non-cancer risks associated with exposure to DPM and benzene. The health risk estimates were then compared to the SCAQMD health risk significance thresholds for cancer and non-cancer risk. The results of the Health Risk Assessment are shown in Table 8. As shown in the table, the maximum cancer risk does not exceed the SCAQMD significance threshold at the nearest sensitive receptor. For non-cancer health impacts, the largest chronic non-cancer hazard index was calculated to be 0.006, and the largest acute non-cancer hazard index was calculated to be 0.002, both of which are less than the SCAQMD non-cancer hazard index significance level of 1.0.

Table 8: Results of Health Risk Assessment

Type of Receptor	Maximum Lifetime Cancer Risk ⁽¹⁾ (risk per million)	Significance Threshold (risk per million)	Exceeds Significance Threshold?
Sensitive Receptor ⁽²⁾	8.9	10	No
Worker Receptor ⁽³⁾	2.1	10	No
Notes: ⁽¹⁾ Includes impacts from diesel particulate matter and benzene emissions. ⁽²⁾ The maximum impacted sensitive receptor is approximately located in the residential areas along the southern boundary of the project. ⁽³⁾ The maximum impacted worker receptor is located along the southern boundary of the project. Source: Air Quality Analysis Report (Appendix A)			

The 2004 Final Certified EIR included a mitigation measure (AQ-1) to address impacts associated with operation of the Vulcan Material Company's facility located to the south of the project. AQ-1 is no longer required because of reductions in DPM emissions resulting from more stringent emission

controls on off-road (and on-road) equipment promulgated by the CARB since 2004 when the Final EIR was certified.

CEQA Thresholds and Analysis

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- a) *Conflict with or obstruct implementation of the applicable air quality plan?*

No Substantial Change From Previous Analysis. The following two criteria are used to determine the level of significance for this potential impact.

Project's Contribution to Air Quality Violations

According to the SCAQMD, the project is consistent with the Air Quality Management Plan (AQMP) if the 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 timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

If a project's emissions exceed the SCAQMD regional thresholds for NO_x, VOC, PM₁₀, or PM_{2.5}, it follows that the emissions could cumulatively contribute to an exceedance of a pollutant for which the basin is in nonattainment (ozone, PM₁₀, PM_{2.5}) at a monitoring station in the basin. An exceedance of a nonattainment pollutant at a monitoring station would not be consistent with the goals of the AQMP to achieve attainment of pollutants.

As discussed in the Air Quality Analysis Report (also see Table 3, Table 4, and Table 5 contained herein), the 2009 Alternative Development Plan would exceed the regional significance threshold for VOC and NO_x during construction and operation. This is the same finding as was in the 2004 EIR. This means that project emissions of VOC and NO_x could combine with other sources and create ozone. This could result in an ozone exceedance at a nearby monitoring station. The air basin in which the project is located is in nonattainment for ozone; therefore, the project would not be consistent with the AQMP. The project does not meet this criterion.

Control Measures

The next criterion is compliance with the control measures in the 2003 and the 2007 AQMP. As discussed in the Air Quality Analysis Report, the 2009 Alternative Development Plan will comply with all of the SCAQMD's applicable rules and regulations. Therefore, the project complies with this criterion.

Implementation of Mitigation Measures AQ-2 through AQ-10 from the 2004 EIR are required.

- b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

No Substantial Change From Previous Analysis. The CEQA Guidelines indicate that a significant impact would occur if the project would violate any air quality standard or contribute substantially to an existing or projected air quality violation. The 2004 EIR did not identify a significant impact, with or without mitigation, for air quality standard violation(s). Impact would remain less than significant under the Proposed 2009 Alternative Development Plan.

The South Coast Air Basin, the geographical area in which the project is located, is in nonattainment for PM₁₀, PM_{2.5}, and ozone. Levels of PM₁₀ and PM_{2.5} are locally high enough that contributions from new sources may add to the concentrations of those pollutants and contribute to a projected air quality violation. Two criteria are used to assess the significance of this impact: (1) the localized construction analysis and (2) the CO hotspot analysis.

The LSTs are specific to each source receptor area. If the project results in emissions that do not exceed the LSTs, it follows that those emissions would not cause or contribute to a local exceedance of the applicable ambient air quality standards. The LST analysis contained in the Air Quality Analysis Report (also see Table 6 and Table 7 contained herein) demonstrates that without mitigation, the 2009 Alternative Development Plan would not exceed the LSTs for CO, nitrogen dioxide, PM₁₀, or PM_{2.5} during construction. Therefore, according to this criterion, the air pollutant emissions during construction would be less than significant and would not exceed the ambient air quality standards for those pollutants.

A CO hotspot analysis is the appropriate tool to determine if project emissions of CO during operation would exceed ambient air quality standards. The main source of air pollutant emissions during operation are from offsite motor vehicles traveling on the roads surrounding the project site. The CO hotspot analysis in the 2004 EIR demonstrated that project emissions of CO during operation along with emissions from other foreseeable projects in the area would not result in an exceedance of the most stringent ambient air quality standards for CO. Therefore, according to this criterion, air pollutant emissions during operation would result in a less than significant impact.

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

No Substantial Change From Previous Analysis. In accordance with CEQA Guidelines 15130(b), the analysis of cumulative impacts for the 2009 Alternative Development Plan incorporates a summary of projections. The following tiered approach is used to assess cumulative air quality impacts.

1. Consistency with the regional thresholds for nonattainment pollutants
2. Project consistency with existing air quality plans
3. Assessment of the cumulative health effects of the pollutants
4. The potential of project greenhouse gas emissions to increase cumulative ozone concentrations

Regional Analysis

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically been over the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The South Coast Air Basin is in nonattainment for PM₁₀, PM_{2.5}, and ozone. Therefore, if the 2009 Alternative Development Plan exceeds the regional thresholds for PM₁₀, or PM_{2.5}, then it contributes to a cumulatively considerable impact for those pollutants. Additionally, if the project exceeds the regional threshold for NO_x or VOC, then it follows that the project would contribute to a cumulatively considerable impact for ozone.

As discussed in the Air Quality Analysis Report (also refer to Table 3, Table 4, Table 5 above), the regional significance analysis of construction and operational emissions demonstrated that emissions of VOC and NO_x would be over the SCAQMD regional significance thresholds. VOC and NO_x are ozone precursor pollutants. Therefore, according to this criterion, the project results in a significant cumulative impact. In summary, without mitigation, the project contributes to a cumulatively significant regional impact to the budget of ozone.

Plan Approach

The geographic scope for cumulative criteria pollution from air quality impacts is the South Coast Air Basin, because that is the area in which the air pollutants generated by the sources within the basin circulate and are often trapped. The SCAQMD is required to

prepare and maintain an AQMP and a State Implementation Plan to document the strategies and measures to be undertaken to reach attainment of ambient air quality standards. While the SCAQMD does not have direct authority over land use decisions, it is recognized that changes in land use and circulation planning are necessary to maintain clean air. The SCAQMD evaluated the entire basin when it developed the AQMP.

According to the analysis contained above (a - Would the project conflict with or obstruct implementation of the applicable air quality plan?), the project is not consistent with the most recent AQMP without mitigation. Therefore, the project presents a significant impact according to this criterion.

Cumulative Health Impacts

The basin is in nonattainment for ozone, PM₁₀, and PM_{2.5}, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (e.g., elderly, children, and the sick). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population will experience health effects. However, the health effects are a factor of the dose-response curve. Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

The regional analysis of construction and operational emissions (Air Quality Analysis Report and Table 3, Table 4, Table 5 above) indicates that without mitigation, the 2009 Alternative Development Plan would exceed the SCAQMD regional significance thresholds for VOC and NO_x (ozone precursors). Because ozone is a secondary pollutant (it is not emitted directly but is formed by chemical reactions in the air), it can be formed miles downwind of the project site. Project emissions of VOC and NO_x may contribute to the background concentration of ozone and cumulatively cause health effects. Health impacts may or may not include the following: pulmonary function decrements and localized lung edema in humans and animals; risk to public health implied by alterations in pulmonary morphology and host defense in animals; increased mortality risk; and/or risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans. Short-term exposure can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Children who live in high ozone communities and who participate in multiple sports have been observed to

have a higher asthma risk. This is a significant cumulative health impact associated with ground-level ozone concentrations.

Implementation of Mitigation Measures AQ-2 through AQ-10 from the 2004 EIR are required.

d) *Expose sensitive receptors to substantial pollutant concentrations?*

No Substantial Change From Previous Analysis. As indicated in the analysis that follows, sensitive receptors would not be exposed to substantial pollutant concentrations during development construction and/or operation under the Proposed 2009 Alternative Plan. Mitigation measure AQ-1, contained within the 2004 Certified Final EIR to address the front end loader operating at the Vulcan Asphalt Batch Plant, is no longer required to reduce impacts to less than significant. Since certification of the 2004 EIR, new emission control requirements have been placed on off-road equipment. The new emission control requirements deal with the CARB in-use off-road heavy-duty diesel equipment regulations passed in 2007. These 2007 regulations remove the need for mitigation measure AQ-1.

Construction

The localized construction analysis uses thresholds that represent the maximum emissions for a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed from the ambient concentrations of that pollutant for each source receptor area. The thresholds are also based on the location of the sensitive receptors. If the project results in emissions under those thresholds, it follows that the project would not cause or contribute to an exceedance of the standard. If the standards are not exceeded at the sensitive receptor locations, it follows that the receptors would not be exposed to substantial pollutant concentrations.

The localized construction analysis (see Section 5.1 in the Air Quality Analysis Report and Table 6 and Table 7 above) demonstrated that without mitigation, the project would not exceed the localized thresholds for CO, nitrogen dioxide, PM₁₀, or PM_{2.5}. Therefore, during construction, the project would not expose sensitive receptors to substantial pollutant concentrations of CO, nitrogen dioxide, PM₁₀, or PM_{2.5}.

The construction equipment would emit diesel particulate matter, which is a carcinogen. However, the diesel particulate matter emissions are short-term in nature. Determination of risk from diesel particulate matter is considered over a 70-year exposure time. Therefore, considering the dispersion of the emissions and the short time frame, exposure to diesel particulate matter is anticipated to be less than significant.

Operation: Criteria Pollutants

A CO hotspot analysis is the appropriate tool to determine if project emissions of CO during operation would exceed ambient air quality standards. The main source of air pollutant emissions during operation are from offsite motor vehicles traveling on the roads surrounding the project. The CO hotspot analysis conducted as part of the 2004 EIR demonstrated that emissions of CO during operation would not result in an exceedance of the most stringent ambient air quality standards for CO. Therefore, according to this criterion, air pollutant emissions during operation would result in a less than significant impact.

Operation: Indoor Air Pollution

The indoor air pollutants that may be associated with operation of the project include VOCs from new carpets and fresh paints, mold spores, radon, cigarette smoke, and combustion sources. The air pollutants associated with the construction of the project include VOCs from carpets and paints, and radon.

VOCs from new carpets and new paint are temporary impacts that can be reduced by proper ventilation after installation. The health impact from these sources is anticipated to be less than significant.

Radon is a naturally occurring colorless, odorless, and tasteless radioactive gas originating from the radioactive decay of uranium in rock, soil, and groundwater. Radon gets inside a building primarily from soil under homes. It is a known human lung carcinogen and is the largest source of radiation exposure to the public. Most is rapidly exhaled; however, the inhaled decay products can deposit into the lung where they irradiate sensitive airway cells, increasing the risk of lung cancer.

In general, the method and speed of radon's movement through soil is controlled by three conditions: the amount of water present in the pore space (the soil moisture content), the percentage of pore space in the soil (the porosity), and the permeability of the pore spaces that determines the soil's ability to transmit water and air. Therefore, radon moves more rapidly through permeable soils such as coarse sand and gravel, similar to those in Upland.

The distance that radon moves before most of it decays is less than 1 inch in water-saturated rocks or soils, but it can be more than 6 feet, and sometimes tens of feet, through dry rocks or soils. Even though Upland has no "real" source of uranium to produce radon gas, the permeability of the dry gravelly soils permits high indoor radon to occur.

Maps for southern Los Angeles County show Claremont with a low potential (under 4 picocuries) for radon. Upland and Claremont have similar gravelly soil geology; therefore, it can be interpolated that the project area would also have a low potential.

Indoor radon tests in the project's zip code, 91786, indicate that 2 out of 22 of the samples (or 9 percent of the samples) contained radon concentrations in excess of the EPA threshold of 4 picoCuries per liter (pCi/l). The California Department of Public Health classifies zip codes with indoor radon concentrations greater than 4.0 pCi/l as follows: 0 to 6 percent—low potential; 7 to 19 percent—moderate potential; 20 percent or more—high potential. Thus, based on these samples, the project area could have a moderate potential for radon concentrations over 4.0 pCi/l. These samples are taken inside buildings, not in the open, as radon is easily dispersed.

Indoor radon concentrations are of most concern in residential structures with basements because such structures are of lower pressure than surrounding outdoor conditions and, therefore, have the ability to suction radon indoors. Project structures do not have basements. However, as part of normal construction, the project will be installing ventilation fans that bring indoor air outdoors. Because radon is removed from a building through ventilation, the fans and the windows will help to circulate the air and to prevent indoor radon concentrations from reaching significant levels.

Slab-on-grade commercial structures have a much lower ability to suction radon indoors because they are much larger and are not below grade, which substantially reduces the pressure differential between indoors and outdoors. The retail and commercial portions of the project would employ HVAC systems that would circulate air through the structure during operational hours. The system would be sufficient to disperse indoor radon concentrations, which would minimize the risk to human health.

Toxic Pollutants

The Air Resources Board (ARB) Air Quality and Land Use Handbook contains recommendations that will “help keep California’s children and other vulnerable populations out of harm’s way with respect to nearby sources of air pollution,” including recommendations for distances between sensitive receptors and certain land uses.

ARB recommends avoiding siting new sensitive land uses within 1,000 feet of a distribution center. The closest existing or proposed distribution center to the project is located more than 1,000 feet east of the project.

ARB recommends avoiding new sensitive land uses within 300 feet of a large fueling station (a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities. There will be a fueling

station onsite. The Health Risk Assessment contained in Section 5.2 of the Air Quality Analysis Report (also see Table 8 above) indicates that impacts to onsite sensitive receptors from the nearby Vulcan plant and the fueling station would be less than significant.

ARB recommends avoiding siting new sensitive land uses within 300 feet of any dry cleaning operation that uses perchloroethylene. For operations with two or more machines, ARB recommends a buffer of 500 feet. For operations with three or more machines, ARB recommends consultation with the local air district. There are no dry cleaning operations within 500 feet of the project, and no dry cleaning operations proposed for the project site.

- e) *Create objectionable odors affecting a substantial number of people?*

No Substantial Change From Previous Analysis. Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The project does not contain land uses typically associated with emitting objectionable odors. Diesel exhaust and VOCs will be emitted during construction of the project, which are objectionable to some; however, emissions will disperse rapidly from the project site and, therefore, should not reach a level to induce a negative response. Impact level remains less than significant.

4. Biological Resources

Would the project:

- a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*
- b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*
- c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*
- d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?*

- e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*
- f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

No Substantial Change From Previous Analysis. Biological Resources was one of five environmental issues (aesthetics, agricultural resources, biological resources, population and housing, and recreation) determined not to be significantly affected by the Approved EIR Development Plan, and therefore not requiring evaluation in the EIR document (per Section 15063 (c) of the State CEQA Guidelines). A Biological Resources Analysis of the project site was conducted by Michael Brandman Associates, and was contained in Appendix A of the EIR. A small 2-acre area of Riversidean sage scrub, contained in the northwestern corner of the property, was noted during the field survey. This area of Riversidean sage scrub was considered isolated and previously disturbed based on its monotypic vegetation coverage.

Several sensitive species were identified in the literature review for the EIR analysis covering a 7-mile radius, including the California Gnatcatcher. However, the likelihood that sensitive species would occur within the project site was determined to be extremely low due to lack of suitable habitat.

The Biological Resources Analysis noted the absence of riparian or wetland areas, indicating that there were no areas of either US Army Corps of Engineers (USACE) or California Department of Fish and Game (CDFG) jurisdiction on the site. No evidence of connectivity to any downstream drainage feature was identified.

Because no natural watercourses or bodies were contained within the project site, no impacts to fish habitat were determined to occur. Due to the disturbed nature based on past quarry activity, the site was not considered a wildlife corridor. Development of the site for mixed use was determined not to conflict with any local applicable policies protecting biological resources or with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable habitat conservation plan. Project impacts on biological resources were considered less than significant in the EIR. The Proposed 2009 Alternative Development Plan will similarly result in no impacts on biological resources and raises no new substantial issues for biological resources.

5. Cultural Resources

Would the project:

- a) *Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*
- b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*
- c) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*
- d) *Disturb any human remains, including those interred outside of formal cemeteries?*

No Substantial Change From Previous Analysis. The impacts on cultural resources of the Approved EIR Development Plan were fully and adequately evaluated in the EIR. Appropriate mitigation measures to reduce potentially significant effects were identified (EIR Mitigation Measures **CR-1** through **CR-7**, listed in Section 5 Mitigation Measures), addressing potential discovery of historic resources below the modern ground surface. The mitigation measures are applicable to any development of the project site, whether under the EIR Plan, the 2005 Plan or the 2009 Plan. Incorporation of 230 multiple-family attached units in the northwestern portion of the site under the Proposed 2009 Alternative Development Plan would not result in any new cultural resources impacts, or cultural resources impacts of greater severity than those identified in the EIR. Project site development according to the Proposed 2009 Alternative Development Plan will result in no substantial change from the previous EIR analysis for cultural resources.

6. Geology and Soils

Would the project:

- a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:*
 - i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*
 - ii) *Strong seismic ground shaking?*
 - iii) *Seismic-related ground failure, including liquefaction?*

- iv) Landslides?
- b) Result in substantial soil erosion or the loss of topsoil?
- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
- e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Substantial Change From Previous Analysis. The geologic, soils and other geophysical impacts associated with the Approved EIR Development Plan were fully and adequately evaluated in the EIR. Appropriate mitigation measures to reduce potentially significant project effects associated with mixed use development on the project site were identified (EIR Mitigation Measures **GS-1** through **GS-6**, listed in Section 5 Mitigation Measures). These mitigation measures addressed project design and construction considerations related to earthquakes and fill soils. EIR Mitigation Measures **GS-1** through **GS-6** have been followed in onsite construction that has occurred to date, and will continue to be adhered to for future construction in the northwest portion of the site. The Proposed 2009 Alternative Development Plan would not result in any new geology and soils impacts, or geology and soils impacts of greater severity than those identified in the EIR. No additional mitigation is deemed necessary for development as proposed under the 2009 Plan. Project site development according to the Proposed 2009 Alternative Development Plan will result in no substantial change from the previous EIR analysis for geology and soils.

7. Hazards and Hazardous Materials

Would the project:

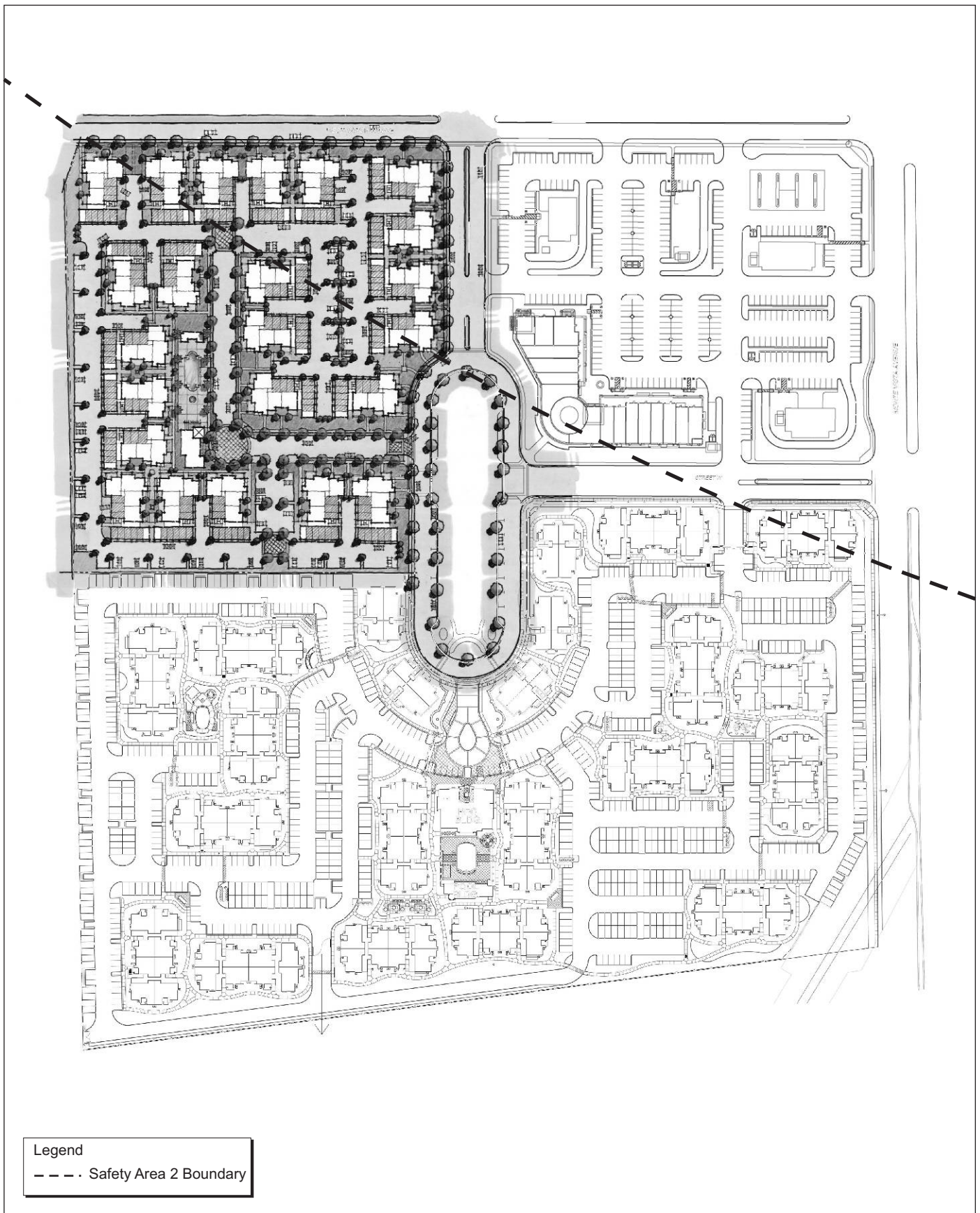
- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the hazardous materials into the environment?

- c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*
- d) *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*
- e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*
- f) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*
- g) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*
- h) *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

No Substantial Change From Previous Analysis. The hazards and hazardous materials impacts associated with the Approved EIR Development Plan were fully and adequately evaluated in the EIR. An appropriate mitigation measure to reduce a potentially significant effect regarding hazardous materials was identified (EIR Mitigation Measure HHM-1).

In regard to Cable Airport, the issue of land use compatibility between Cable Airport and the Approved EIR Development Plan was fully and adequately evaluated in the EIR. Obstructions to air navigation and hazards to people and property on the ground were addressed in Final EIR Section 5.8 Hazards and Hazardous Materials. Exhibit 6 contained herein locates the boundary of Safety Area 2—Moderate Crash Hazard for Cable Airport in relation to the project site, as provided in the 1981 Cable Airport Comprehensive Airport Land Use Plan (ALUP, accessed May 2009 at: <http://www.co.san-bernardino.ca.us/landuseservices/ACLUPs/Cable%20ACLUP.pdf>). Safety Area 2 is defined as follows in the ALUP:

“No structure shall be constructed or object permitted within Safety Area 2 that would penetrate the airport imaginary surfaces as defined in Federal Aviation Regulations Part 77. Because of the proximity to aircraft operations, structures in this area should not reflect glare, emit electronic interference, or produce smoke so as to endanger aircraft operations.”



Source: Source: KTGy Group, Inc., August 2009. 1981 Cable Airport Comprehensive Airport Land Use Plan.



No scale

Michael Brandman Associates

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Exhibit 6 Cable Airport Safety Area 2 Boundary

COLLEGE PARK PROPERTIES • COLLEGE PARK
SECOND ADDENDUM TO CERTIFIED FINAL EIR

Building heights under the Proposed 2009 Alternative Development Plan will not exceed the maximum building height of 50 feet for the Approved EIR Development Plan. Actual maximum building height under the 2009 Plan will be approximately 39 feet. The EIR determined that buildings 50 feet in height would not penetrate any of the established imaginary surfaces identified in Federal Aviation Regulations Part 77 – Objects Affecting Navigable Airspace (§77.25). Relying on the Federal Aviation Regulations Part 77 – Objects Affecting Navigable Airspace (§77.25), and the practical approach for determining airport imaginary surfaces contained in the Aviation Safety Implications Study of Potential Land Uses for Specific Parcels Southwest of Cable Airport (Heliplanners, July 2005), the lowest height of the imaginary surface in the location of the project site is calculated to be 310 feet (per calculations below representing best estimates by Michael Brandman Associates). The imaginary surfaces will not be penetrated by project buildings at 39 feet maximum height. No hazard will occur.

Federal Aviation Regulations Part 77 – Objects Affecting Navigable Airspace §77.25 establishes five civil airport imaginary surfaces with relation to the airport and to each runway:

- Horizontal surface: A horizontal plane 150 feet above the established airport elevation, which is approximately 1,390 feet. Elevation in the northwest corner of the project site (1232 feet at the highest location) is approximately 160 feet below the established airport elevation, or 310 feet below the horizontal plane. Consequently, development according to the 2009 Plan will not penetrate the horizontal surface.
- Conical surface: A surface extending outward and upward from the periphery of the horizontal surface (150 feet above the established airport elevation) at a slope of 20 to 1 for a horizontal distance of 4,000 feet. Project site elevation is 160 feet below the established airport elevation, or 310 feet below the conical plane. Consequently, development according to the 2009 Plan will not penetrate the conical surface.
- Primary surface: A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway. The distance between the portion of the project site closest to the end of a Cable Airport runway and the runway end is approximately 3,886 feet or .75 miles. The primary surface ends 200 feet from runway end, or 3,686 feet from the College Park site.
- Approach surface: A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary

surface. The western approach surface has a 34-to-one slope (34 feet horizontal to one foot vertical) starting at the runway end elevation. The elevation of any point on the approach surface can be determined by measuring its distance from the surface's eastern edge, dividing that distance by 34 and adding the result to the runway end elevation (1,390 ft) and then adding the difference in elevation between the runway end and the site (170 ft). The calculation for the approach surface relative to the College Park site is $3,686 \text{ ft (site distance to primary surface)}/34 = 108.41 \text{ ft} + 1,390 \text{ ft} = 1,498.41 \text{ ft} + 170 \text{ ft} = 1668.41$ or 1,668 feet.

- Transitional surface: These surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 (7 feet horizontal to one foot vertical) from the sides of the primary surface and from the sides of the approach surfaces. The transitional surface elevation at any point is determined by dividing its distance from the primary surface edge by seven and then adding that number to the corresponding approach surface elevation. The calculation for the transitional surface relative to the College Park site is $3,686 \text{ ft}/7 = 527 \text{ ft} + 1,668 \text{ ft} = 2,195$ feet.

Amending the College Park Specific Plan and modifying Conditional Use Permit No. CUP-04-06 to reflect the Proposed 2009 Alternative Development Plan containing a maximum of 230 dwelling units within the northwest portion of the property would generate a maximum population in this location of 668 persons (utilizing a 2009 average persons-per-household figure for the City of Upland from the State Department of Finance (DOF) of 2.904 persons per household). The 50 single-family units planned in this location under the Approved EIR Development Plan would be estimated to generate 145 persons. The additional 523 persons (668 minus 145 persons) would represent a 36-percent increase in project population, from 1,446 persons under the Approved EIR Development Plan to 1,969 persons under the Proposed 2009 Alternative Development Plan.

Multi-family units within the College Park property leased to date (approximately 150 units) and similar multi-family units approximately one-half mile east of the project site (240 units at Rancho Monte Vista, located at Central and Arrow Route) indicate that a persons per household factor of 2.1 persons is probably more accurate for multi-family units on the project site than the DOF 2.904 persons per Upland household figure (personal communication, College Park Properties, June 2009). The estimated population increase of 523 persons over the Approved EIR Plan within the northwest portion of the site, and estimated total population of 1,969 persons project-wide, therefore, represents a maximum scenario. Using a refined factor for population per multi-family unit (2.1 persons/unit experienced in leased College Park and occupied

Rancho Monte Vista units), population generated by the 230 multi-family units in the northwest portion of the site would be closer to 483 persons. Population increase in the northwest portion of the site would then be closer to 338 persons (483 persons minus 145 persons under the Approved EIR Development Plan).

For the 9-acres in the northwest portion of the site, the 2009 Plan would increase the unit density and concentration of people over the EIR Plan as identified in this location. Building height will be greater under the 2009 Plan (39 feet maximum for multiple-family units) than for the 2005 Plan (single-family units), but would still be below the maximum building height of 50 feet identified for the EIR Plan, for which hazards and hazardous materials impacts were fully and adequately evaluated in the EIR. Hazard impacts from Cable Airport were identified as less than significant. An increase in density and concentration of people would not represent a substantial change from the previous analysis, and impacts would, therefore, remain less than significant.

Please refer to Item 11 - Noise within this Second Addendum for a complete discussion of project site noise exposure from Cable Airport (originally addressed in Final EIR Section 5.6). Noise mitigation has been clarified to further address airport noise for the multi-family units in the northwest portion of the site and to ensure that units are sound attenuated to limit interior noise levels to 45 dB CNEL.

The new proposed action would not result in any new hazards and hazardous materials impacts, or hazards and hazardous materials impacts of greater severity than those identified in the EIR. Project site development according to the Proposed 2009 Alternative Development Plan will result in no substantial change from the previous EIR analysis for hazards and hazardous materials.

8. Hydrology and Water Quality

Would the project:

- a) *Violate any water quality standards or waste discharge requirements?*
- b) *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?*
- c) *Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*

- d) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*
- e) *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*
- f) *Otherwise substantially degrade water quality?*
- g) *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*
- h) *Place within a 100-year flood hazard area structures which would impede or redirect flood flows?*
- i) *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*
- j) *Inundation by seiche, tsunami, or mudflow?*

No Substantial Change From Previous Analysis. The hydrology and water quality impacts associated with the Approved EIR Development Plan were fully and adequately evaluated in the EIR. Appropriate mitigation measures to reduce potentially significant hydrology and water quality effects were identified (EIR Mitigation Measures **HWQ-1** through **HWQ-5**). The Proposed 2009 Alternative Development Plan would not result in any new hydrology and water quality impacts, or hydrology and water quality impacts of greater severity than those identified in the EIR. Information obtained from the project engineer (Associated Engineers, Inc., October 2008) indicates that, provided that the relative area of impervious surfaces remains the same or is slightly decreased, existing storm drains can handle flows from the Proposed 2009 Alternative Development Plan. The project architect, KTGy Group, indicates that the amount of impervious surface in the Proposed 2009 Alternative Development Plan will remain the same as in the Approved EIR Plan. Project site development according to the 2009 Plan will result in no substantial change from the previous EIR analysis for hydrology and water quality.

9. Land Use and Planning

Would the project:

- a) *Physically divide an established community?*
- b) *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*
- c) *Conflict with any applicable habitat conservation plan or natural communities conservation plan?*

No Substantial Change From Previous Analysis. The College Park Specific Plan (May 2004), prepared consistent with Government Code Section 65451, was adopted by the City of Upland by ordinance in October 2004. The Specific Plan designated land uses in conformance with the Approved EIR Development Plan (Exhibit 4), and established development standards for mixed-use development of the project site governing land use, design, infrastructure, utilities, and public services. The Approved EIR Development Plan provided for development of 44,000 sf of commercial retail, a 102-room hotel, and a 50,000 sf office building. The residential component was approved for 50 single-family homes and a 448-unit apartment complex.

The Proposed 2009 Alternative Development Plan (Exhibit 3) now being considered substitutes a maximum of 230 dwelling units for the 9-acre area in the northwest portion of the site originally approved for a hotel and office building and 50 single-family residential units (Final EIR, October 2004), and then approved for 89 total single-family residential units (First Addendum, August 2005). Development of the site under the Proposed 2009 Alternative Development Plan would also require an amendment to the College Park Specific Plan and modification of Conditional Use Permit No. CUP-04-06.

Table 2 contained in Section 2.1 of this Second Addendum displays a comparison of square footage and dwellings units under the three plans (Approved EIR and 2005 Plans, and Proposed 2009 Plan). An increase in density will occur in the northwest portion of the site from the 2005 Plan to 2009 Plan (89 single-family detached residential units to the proposed 230 multiple-family attached units).

Amending the College Park Specific Plan and modifying Conditional Use Permit No. CUP-04-06 to reflect the Proposed 2009 Alternative Development Plan containing a maximum of 230 dwelling units within the northwest portion of the property would generate a maximum population in this location of 668 persons (utilizing a 2009 average

persons-per-household figure for the City of Upland from the State Department of Finance (DOF) of 2.904 persons per household). The 50 single-family units planned in this location under the Approved EIR Development Plan would be estimated to generate 145 persons. The additional 523 persons (668 minus 145 persons) would represent a 36-percent increase in project population, from 1,446 persons under the Approved EIR Development Plan to 1,969 persons under the Proposed 2009 Alternative Development Plan.

Multi-family units within the College Park property leased to date (approximately 150 units) and similar multi-family units approximately one-half mile east of the project site (240 units at Rancho Monte Vista, located at Central and Arrow Route) indicate that a persons per household factor of 2.1 persons is probably more accurate for multi-family units on the project site than the DOF 2.904 persons per Upland household figure (personal communication, College Park Properties, June 2009). The estimated population increase of 523 persons over the Approved EIR Plan within the northwest portion of the site, and estimated total population of 1,969 persons project-wide, therefore, represents a maximum scenario. Using a refined factor for population per multi-family unit (2.1 persons/unit experienced in leased College Park and occupied Rancho Monte Vista units), population generated by the 230 multi-family units in the northwest portion of the site would be closer to 483 persons. Population increase in the northwest portion of the site would then be closer to 338 persons (483 persons minus 145 persons under the Approved EIR Development Plan).

For the 9-acres in the northwest portion of the site, the 2009 Plan would increase the unit density and concentration of people over the EIR Plan as identified in this location. Individual potential impacts of increasing the density and concentration of people for this particular project site are identified in the individual analyses within Section 4 of this Second Addendum:

- Air Quality (Item 3)
- Hazards and Hazardous Materials (Item 7)
- Noise (Item 11)
- Population and Housing (Item 12)
- Public Services (Item 13)
- Recreation (Item 14)
- Transportation/Traffic (Item 15):
- Utilities and Service Systems (Item 16)
- Climate Change (Item 17)

In all cases, it was determined that the new proposed action would not result in any new impacts, or impacts of greater severity than those identified in the previous analyses, and that the effects of an increase in density and concentration of people would not represent a substantial change from the previous analysis.

Land use changes at the project site as reflected in the Proposed 2009 Alternative Development Plan (Exhibit 3) raises no new substantial land use and planning issues: no established community will be physically divided; no conflict with any applicable land use plan, policy, or regulation will be created (with the understanding that the Specific Plan will be amended and the CUP will be modified to accommodate the land use change); and no conflict with any applicable habitat or natural communities conservation plan will be created. No substantial change from the previous EIR analysis for land use and planning will occur.

10. Mineral Resources

Would the project:

- a) *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*
- b) *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

No Substantial Change From Previous Analysis. The subject of mineral resources was addressed in the geology and soils section of the EIR. Mineral resources impacts associated with the Approved EIR Development Plan were fully and adequately evaluated in the EIR. The Proposed 2009 Alternative Development Plan would not result in any new mineral resources impacts, or mineral resources impacts of greater severity than those identified in the EIR. Project site development according to the Proposed 2009 Alternative Development Plan will result in no substantial change from the previous EIR analysis for mineral resources.

11. Noise

Would the project result in:

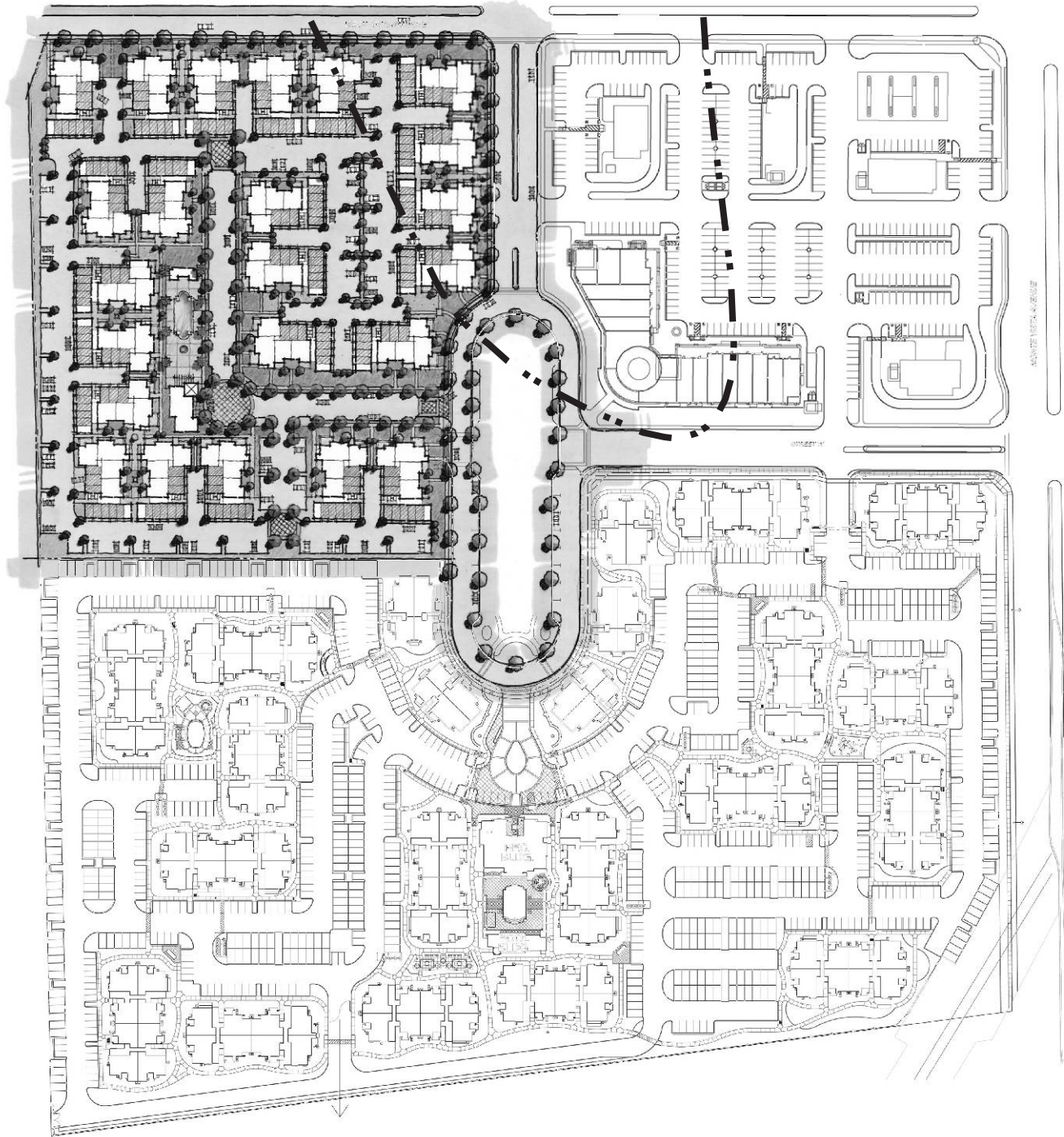
- a) *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
- b) *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

- c) *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*
- d) *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*
- e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*
- f) *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

No Substantial Change From Previous Analysis. Revision to the Specific Plan to allow a maximum 230 dwelling units in the 9-acre northwest portion of the project site will expose additional residents in this location to noise from Cable Airport as well as traffic noise from Arrow Route. For this northwest portion of the site, the 2009 Plan would increase the unit density and concentration of people over the EIR Plan and the 2005 Plan in this location.

Cable Airport has one runway and two helipads. In 2007, the airport had 92,189 take-offs or landings, which averages to 252 per day. According to the *Cable Airport Comprehensive Airport Land Use Plan*, adopted December 9, 1981, the northern portion of the College Park project site is located within Noise Impact Zone B, which indicates a moderate noise impact between 60 to 65 dB CNEL.

Exhibit 7 displays the noise contour from Cable Airport relevant to the project site. As indicated in Exhibit 7, an estimated 44 of the total 230 residences within the northwest portion of the site would be affected by airport noise. A supplemental analysis of noise impacts under the 2005 Alternative Development Plan, analyzed in the First Addendum, was conducted by Giroux and Associates when substitution of residential uses for the hotel and office building was first proposed. The results of the 2005 supplemental analysis have been reviewed in a 2009 Technical Noise Memorandum contained in Appendix D. The analysis supporting the 2009 Memorandum confirmed that the 2005 conclusions are still considered applicable. The results of the 2009 analysis is presented in the following paragraphs, confirming earlier findings, and addressing compliance of the 2009 Plan with the noise parameters for Noise Impact Zone B.



Legend
 - - - - 60 dBA CNEL

Source: Source: KTGy Group, Inc., August 2009. San Bernardino County Official Land Use Plan, General Plan Hazards Overlays.



Michael Brandman Associates

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Exhibit 7 Cable Airport Noise Contour

COLLEGE PARK PROPERTIES • COLLEGE PARK
 SECOND ADDENDUM TO CERTIFIED FINAL EIR

Traffic noise will exceed 65 dB CNEL at ground level of the homes facing Arrow Route. (City of Upland noise standards for noise sensitive land uses specify 65 dB CNEL for exterior noise levels for residential uses and 70 dB CNEL for commercial uses.) The contribution of the airport noise signature superimposed upon traffic noise impacts is predicted to add 1.5 dB CNEL or less to the onsite traffic noise at the proposed homes in the northwest portion of the site. The predicted build-out traffic noise level at 50 feet south of the Arrow Route centerline (C.L.) is predicted to be 68.3 dB CNEL. The traffic noise level drops off quickly with distance, particularly with mitigation of sound walls, but the airport noise will remain near 60 dB CNEL over a larger area of the project site. The superposition of roadway traffic and Cable Airport noise in this location yields the following combined levels:

- 50 feet to C.L.: 68.3 dB (traffic) + 60.0 dB (airport) = 68.9 dB CNEL combined.
- 100 feet to C.L.: 65.3 dB (traffic) + 60.0 dB (airport) = 66.4 dB CNEL combined.

Increases of 0.6 dB (at 50 feet from C.L.) or 1.1 dB (at 100 feet from C.L.) are imperceptible by human ears even under laboratory conditions. Superposition of the airport noise upon unmitigated traffic noise impacts will not perceptibly increase the total noise. However, mitigation is proposed that would reduce the traffic noise through the use of sound walls. Sound walls provide no attenuation of aircraft noise due to the location of the aircraft noise source. Due to this, aircraft noise impacts onto the residential area within the 60 dBA CNEL noise contour shown in Exhibit 7 could result in a potentially significant noise impact.

The California Building Code requires that residential development planned for areas exceeding 60 dB CNEL due to aircraft noise must demonstrate an ability to meet the 45 dB CNEL interior standard through adequate structural noise attenuation. The same noise attenuation features specified in EIR Noise Mitigation Measures **N-4** through **N-6** that are required for homes exposed to excess traffic noise from Arrow Route shall also be installed in the balance of the approximately 44 homes that are within the airport 60 dB CNEL noise contour. Mitigation Measure **N-7** has also been added to provide affected residences with additional notification about the potential of aircraft over flights. Implementation of Mitigation Measures **N-4** through **N-7** will: 1) ensure that residential interior living areas do not exceed 45 dB CNEL; and 2) provide notification to potential residents of the aircraft over flights. Noise impacts from aircraft overflights are thereby reduced to less than significant.

EIR Noise Mitigation Measures N-4 through N-7 are presented below, modified and updated to reflect the land use change from hotel and office professional uses to residential, with deleted material shown with strike-outs and new material underlined.

- N-4** Perimeter walls, berms or other noise attenuation features of sufficient height to reduce exterior traffic noise to 65 dB CNEL or less at ground floor receivers will be erected on the eastern site perimeter adjacent to the apartments on Monte Vista Avenue, and at the northern site perimeter adjacent to the multi-family units. Perimeter walls, berms or other noise attenuation features of sufficient height to reduce exterior noise to 65 dB CNEL or less will be erected around the outdoor eating area of the restaurant closest to Monte Vista Avenue. ~~and around the hotel swimming pool area.~~
- N-5** An acoustical study shall be performed for all upstairs balconies within 445 feet of Monte Vista Avenue and ~~hotel upstairs~~ second- and third-story residential balconies within 105 feet of Arrow Route. The study shall be completed and submitted prior to final plan check approval. Partial balcony enclosures or other attenuation features as recommended in the study sufficient to reduce exterior traffic noise to 65 dB CNEL or less will be erected at the balcony locations designated in the study if such protection is needed to meet the minimum protected outdoor space requirements for the project.
- N-6** An acoustical study shall be performed for ground level, ~~and the second stories of the office space and the hotel to verify that the structural features are adequate to meet the 45 dB CNEL interior standard.~~ G and second and third stories of residential units within 735 feet of Monte Vista Avenue and 285 feet of Arrow Route, and second and third stories of all other onsite buildings also require an acoustical study to verify that the structural features are adequate to meet the 45 dB CNEL interior standard. The study shall be completed and submitted prior to final plan check approval. Noise attenuation features recommended in the study such as dual-paned windows, deck balcony enclosures, and/or additional insulation requirements sufficient to reduce interior noise levels to 45 dB CNEL or less ~~interior noise levels~~ shall be implemented.
- N-7** A notice or sign regarding aircraft noise impacts shall be posted in all sales or leasing offices for the proposed project. The notice shall include a site map that shows the portion of the project site within the 60 dB CNEL airport noise contour.

Noise impacts associated with the Approved EIR Development Plan were fully and adequately evaluated in the EIR. Modification of Noise Mitigation Measures N-4 through N-6 to reflect the change in land use along Arrow Route from hotel and office professional to residential, ensuring adequate noise attenuation, and adding Mitigation Measure N-7 represents no substantial change from the previous EIR analysis for noise. The Proposed 2009 Alternative Development Plan would not result in any new significant impacts, or noise impacts of greater severity than those identified in the EIR.

12. Population and Housing

Would the project:

- a) *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*
- b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*
- c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Substantial Change From Previous Analysis. Population and housing was one of five environmental issues (aesthetics, agricultural resources, biological resources, population and housing, and recreation) determined not to be significantly affected by the Approved EIR Development Plan, and therefore not requiring evaluation in the EIR document (per Section 15063 (c) of the State CEQA Guidelines). Amending the College Park Specific Plan and modifying Conditional Use Permit No. CUP-04-06 to reflect the Proposed 2009 Alternative Development Plan containing a maximum of 230 dwelling units within the northwest portion of the property would generate a maximum population in this location of 668 persons (utilizing a 2009 average persons-per-household figure for the City of Upland from the State Department of Finance (DOF) of 2.904 persons per household). The 50 single-family units planned in this location under the Approved EIR Development Plan would be estimated to generate 145 persons. The additional 523 persons (668 minus 145 persons) would represent a 36-percent increase in project population, from 1,446 persons under the Approved EIR Development Plan to 1,969 persons under the Proposed 2009 Alternative Development Plan.

Multi-family units within the College Park property leased to date (approximately 150 units) and similar multi-family units approximately one-half mile east of the project site (240 units at Rancho Monte Vista, located at Central and Arrow Route) indicate that a

persons per household factor of 2.1 persons is probably more accurate for multi-family units on the project site than the DOF 2.904 persons per Upland household figure. The estimated population increase of 523 persons over the Approved EIR Plan within the northwest portion of the site, and estimated total population of 1,969 persons project-wide, therefore, represents a maximum scenario. Using a refined factor for population per multi-family unit (2.1 persons/unit experienced in leased College Park and occupied Rancho Monte Vista units), population generated by the 230 multi-family units in the northwest portion of the site would be closer to 483 persons. Population increase in the northwest portion of the site would then be closer to 338 persons (483 persons minus 145 persons under the Approved EIR Development Plan).

The additional 338 to 523 persons both represent a less than 1-percent increase to the existing population in the City of Upland of 75,137 (State Department of Finance, 2009), and would similarly result in no impacts on population and housing, and raise no new substantial issues for population and housing.

13. Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- a) *Fire protection?*
- b) *Police protection?*
- c) *Schools?*
- d) *Parks?*
- e) *Other public facilities?*

No Substantial Change From Previous Analysis. Public service impacts associated with the Approved EIR Development Plan were fully and adequately evaluated in the EIR. Appropriate mitigation measures to reduce potentially significant effects were identified (EIR Mitigation Measures **PSU-1** through **PSU-8**). Impacts on fire and police protection under the Proposed 2009 Alternative Development Plan could be of lesser severity than under the Approved EIR Development Plan based on the reduced level vehicle trips associated with the replacement of hotel and office professional uses with a maximum 230 dwelling units in the northwest portion of the project site. The project

engineer (Associated Engineers, Inc.) indicates that fire demand in terms of the water/fire protection system on and offsite will not exceed the design capacity under the Proposed 2009 Alternative Development Plan

Amending the College Park Specific Plan and modifying Conditional Use Permit No. CUP-04-06 to reflect the Proposed 2009 Alternative Development Plan containing a maximum of 230 dwelling units within the northwest portion of the property would be estimated to generate a maximum 161 school-age children (using the state average generation factor of 0.7 school-age child per housing unit for all grade levels employed in the EIR analysis). The 50 single-family units planned in this location under the Approved EIR Development Plan would have generated 35 school-age children. Using the state average generation factor, reflecting all unit types (i.e., single-family and multi-family combined), an additional 126 school-age children (161 minus 35 children) could be generated.

Multi-family units within the College Park property occupied to date (approximately 80 units occupied out of the 150 units leased) and similar multi-family units approximately 0.5 mile east of the project site (240 units at Rancho Monte Vista, located at Central and Arrow Route) reflect an actual generation rate of 0.11 school-age child per unit for all grade levels (College Park Properties, LP, June 2009). This lower factor would translate into an estimated 25 school-age children (230 units x 0.11 school-age children/unit), or a reduction of 10 school-age children from the Approved EIR Development Plan.

Payment of mandated State assessment fees is considered in the EIR as full mitigation for potential impacts that may occur to Upland Unified School District facilities. School-age children generated under the 2009 Plan will result in no substantial change from the previous EIR analysis for schools.

The EIR analysis for estimating parkland needs references the City's Open Space and Conservation Element as identifying a desired standard for park acreage of 10 acres per 1000 population, as developed by the National Recreation and Parks Association (NRPA). The EIR analysis also references the State of California Quimby Act, employing a lower standard of 3 acres of parkland per 1000 population. Based on a predicted population of 1,375 persons for development of the project site under the EIR Plan ¹, the project parkland requirement was estimated to range from 4.125 acres (using the Quimby Act standard) to 13.75 acres (using the NRPA standard). The EIR Plan

¹ Based on a 2.762 persons per household figure for the City of Upland obtained from Report E-5, Table 2, State Department of Finance, Demographic Research Unit, the 498 housing units in the EIR Plan were predicted to generate approximately 1,375 persons. Utilizing a 2009 average persons-per-household figure for the City of Upland from the State Department of Finance (DOF) of 2.904 persons per household, 498 housing units would be expected to generate a maximum population of 1446 persons.

contained a recreational component of 1.05 acres. The remaining requirement was to be determined by the City and was to be met through the payment of park impact fees.

Focusing on parkland requirements for the entire College Park Project as modified under the 2009 Plan, a maximum population of 1969 persons (estimated in Item 12 – Population and Housing of this Second Addendum and repeated in the following table) is estimated to result in a parkland requirement of 5.907 acres (using the Quimby Act standard) to 19.69 acres (using the NRPA standard). The central recreation area is 1.08 net acres in size, construction of which has already been completed. Under the Proposed 2009 Plan, the added multi-family component contains a recreational area for exclusive use by these residents, planned to contain a swimming pool, spa, and recreation building approximately 3,500 to 4,000 square feet in size. The remaining parkland requirement under the 2009 Plan would be determined by the City and would be met through the payment of park impact fees.

Table 9 provides a comparison of park needs under the three development plans. The estimated population for the entire project site under the EIR Plan is updated to reflect the 2009 household size for the City of Upland. Based on the analysis presented in the following table, when comparing the EIR Plan to the 2009 Plan, parkland needs would increase by 1.569 acres under the Quimby Act and 5.23 acres using the City's Open Space and Conservation Element/NRPA standard.

Table 9: Comparison of Park Needs for the Entire Project Site

	Approved EIR Development Plan	Approved 2005 Alternative Development Plan	Proposed 2009 Alternative Development Plan
Residential Dwelling Units	498 dus	537 dus	678 dus
Estimated Maximum Population (Using 2009 2.904 Persons/Household¹)	1,446 persons ²	1,559 persons	1,969 persons
Estimated Parkland Needs (Using Quimby Act Standard of 3 acres/1000 population)	4.338 acres	4.677 acres	5.907 acres
Estimated Parkland Needs (Using NRPA Standard of 10 acres/1000 population)	14.46 acres	15.59 acres	19.69 acres
dus = dwelling units NRPA = National Recreation and Parks Association ¹ 2009 2.904 Persons/Household is for the City of Upland from the California State Department of Finance. ² The EIR analysis estimated 1,375 persons using the then current 2.762 persons per household figure from the California State Department of Finance. Source: Michael Brandman Associates, August 2009.			

Using a refined factor for population per multi-family unit (2.1 persons/unit experienced in leased College Park and occupied Rancho Monte Vista units, as provided by College

Park Properties LP, June 2009), population and park needs generated by 678 total multi-family units on the project site, allowed under the 2009 Plan, would be closer to 1,424 persons and 4.272 acres to 14.24 acres, respectively.

As in the EIR analysis, the City will determine park impact fees to mitigate for potential recreational impacts unmet by the 1.08 net acre central recreational area,. The additional persons generated under the 2009 Plan will result in no substantial change from the previous EIR analysis for parks.

The Proposed 2009 Alternative Development Plan would not result in any new public service impacts, or public service impacts of greater severity than those identified in the EIR. Project site development according to the Proposed 2009 Alternative Development Plan will result in no substantial change from the previous EIR analysis for public services.

14. Recreation

- a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*
- b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?*

No Substantial Change From Previous Analysis. The subject of recreation was addressed in the land use and planning section of the EIR. Parkland needs under the Proposed 2009 Alternative Development Plan are assessed in Item 13, Public Services immediately preceding this discussion. The Proposed 2009 Alternative Development Plan would not result in any new recreation impacts, or recreation impacts of greater severity than those identified in the EIR. Project site development according to the Proposed 2009 Alternative Development Plan will result in no substantial change from the previous EIR analysis for recreation.

15. Transportation/Traffic

Would the project:

- a) *Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?*
- b) *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?*
- c) *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*
- d) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*
- e) *Result in inadequate emergency access?*
- f) *Result in inadequate parking capacity?*
- g) *Conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?*

No Substantial Change From Previous Analysis. The transportation/traffic impacts of the Approved EIR Development Plan were adequately and fully evaluated in the EIR. Appropriate mitigation measures to reduce significant effects were identified (EIR Mitigation Measures **TR-1** through **TR-4**). The Proposed 2009 Alternative Development Plan would not result in any new transportation/traffic impacts, or transportation/traffic impacts of greater severity than those identified in the EIR, as supported by the following discussion.

A Revised Traffic Generation Assessment was prepared by Linscott Law & Greenspan (LLG), the project traffic consultant, in October 2009 and is provided in Appendix B. The Revised Traffic Generation Assessment addresses the replacement of the business hotel and office building with a maximum 230 dwelling units within the northwest portion of the College Park property. Comparative impacts addressing the 2005 Plan are also addressed. Databases employed by LLG for the analysis contained in the October 2009 Traffic Generation Assessment are: (1) Traffic Impact Analysis Report for the College Park Project (December 2003), contained in Appendix D in the certified Final

EIR; and (2) Traffic Impact Analysis Addendum (March 2005), prepared to support the First Addendum to the Final EIR and included as Appendix A to the First Addendum.

Trip Generation Comparison

As part of the Revised Traffic Generation Assessment, LLG compared project traffic generation for the Approved EIR Development Plan and the 2005 and 2009 Alternative Development Plans (see Table 10 and Table 11).

Table 10: 2009 Project Traffic Generation Forecast

Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Retail Component							
Office Suites (6,240 SF)	160	18	2	20	15	72	87
Internal Capture Reduction ¹	-32	0	0	0	-5	-8	-13
Net Trip Generation	128	18	2	20	10	64	74
Specialty Retail Shops (12,490 SF)	510	8	5	13	14	18	32
Internal Capture Reduction	-48	0	0	0	-2	-2	-4
Subtotal	462	8	5	13	12	16	28
Pass-By Reduction ²	-46	-1	-1	-2	-1	-2	-3
Net Trip Generation	416	7	4	11	11	14	25
High-Turnover Rest. (12,480 SF)	1,630	60	56	116	82	54	136
Internal Capture Reduction ¹	-164	0	0	0	-8	-9	-17
Subtotal	1,466	60	56	116	74	45	119
Pass-By Reduction ²	-147	-6	-6	-12	-32	-19	-51
Net Trip Generation	1,319	54	50	104	42	26	68
Fast-Food w/Drive-Thru (9,225 SF)	4,580	235	225	460	161	148	309
Internal Capture Reduction ¹	-471	0	0	0	-18	-20	-38
Subtotal	4,109	235	225	460	143	128	271
Pass-By Reduction ²	-411	-115	-110	-225	-72	-64	-136
Net Trip Generation	3,698	120	115	235	71	64	135
Gas Station w/Mini-Mart (16 VFP)	2,600	80	80	160	107	107	214
Internal Capture Reduction ¹	-279	0	0	0	-12	-13	-25
Subtotal	2,321	80	80	160	95	94	189
Pass-By Reduction ²	-232	-50	-50	-100	-53	-53	-106
Net Trip Generation	2,089	30	30	60	42	41	83
Total Retail Center Trip Generation	9,480	401	368	769	379	399	778
Less Total Internal Capture/Pass-By	-1,830	-249	-244	-493	-275	-258	-533
Net Retail Trip Generation	7,650	152	124	276	104	141	245

Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Residential Component							
Additional Apartments (230 DU)	1,525	19	98	117	96	47	143
Internal Capture Reduction ¹	-318	0	0	0	-14	-11	-25
Net Trip Generation	1,207	19	98	117	82	36	118
Apartments (448 DU)	2,970	36	193	229	188	90	278
Internal Capture Reduction ¹	-616	0	0	0	-26	-22	-48
Net Trip Generation	2,354	36	193	229	162	68	230
Total Residential Trip Generation	4,495	55	291	346	284	137	421
Less Total Internal Capture	-934	0	0	0	-40	-33	-73
Net Residential Trip Generation	3,561	55	291	346	244	104	348
Total Amended Project Trip Generation	13,975	456	659	1,115	663	536	1,199
Less Total Internal Capture/Pass-By	-2,764	-249	-244	-493	-315	-291	-606
Total Amended College Park Mixed-Use Master Plan Trip Generation (Net)	11,211	207	415	622	348	245	593
¹ Source: Internal Capture rates were estimated based on the methodology outlined in Chapter 7 – Multi-Use Development of Trip Generation Handbook, published by ITE, October 1998 ² Pass-By Trips are trips made as intermediate stops on the way from an origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on adjacent streets, which contain direct access to the generator. For this analysis, the following pass-by reduction factors were used (Source: Trip Generation Handbook, ITE October 1998). Special Retail Center: AM & PM Peak Hour – estimated to be 10% (Source: SANDAG Traffic Generators) High-Turnover Restaurant: AM Peak Hour – estimated to be 10% PM Peak Hour - 43% Fast-food with Drive-Thru: AM Peak Hour – 49% PM Peak Hour – 50% Gas Station with Mini Mart AM Peak Hour - 62% PM peak Hour - 56% Daily pass-by percentage estimated to be for all above referenced land uses estimated to be 10%.							

Table 11: Project Traffic Generation Comparison

Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed 2009 Alternative Development Plan (A)							
Retail Center (44,335 SF)	7,650	152	124	276	104	141	245
Residential Development (678 MFDU)	3,561	55	291	346	244	104	348
Net Trip Generation Potential – Updated Project Development	11,211	207	415	622	348	245	593
Approved 2005 Alternative Development Plan (B) ¹							
Retail Center (44,335 SF)	7,372	229	201	430	166	198	364
Residential Development (97 SFDU & 448 MFDU)	2,656	54	247	301	191	73	264
Net Trip Generation Potential – Updated Project Development	10,028	283	448	731	357	271	628

Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Approved EIR Development Plan (C) ¹							
Retail Center (44,335 SF)	7,427	229	202	431	175	204	379
Office Building (48,000 SF)	608	91	12	104	17	103	120
Hotel Component (102 Rooms)	740	35	24	59	38	26	64
Residential Development (50 SFDU & 448 MFDU)	2,355	46	221	267	167	69	236
Net Trip Generation Potential – Approved EIR Development	11,130	401	459	860	397	402	799
Net Difference In Trip Generation Potential – Amended Development Plans vs. Approved EIR Development Plan (A minus C)	81	-194	-44	-238	-49	-157	-206
Net Difference In Trip Generation Potential – Amended Development Plans vs. Approved Alternative Development Plan (A minus B)	1183	-76	-33	-109	-9	-26	-35
¹ Traffic Impact Analysis Addendum for the College Park Project, prepared by LLG, dated March 2005.							

As indicated in Table 11, the Proposed 2009 Alternative Development Plan could generate 109 to 238 fewer AM peak hour trips, and 35 to 206 fewer PM peak hour trips when compared against the Approved EIR Development Plan evaluated in the December 2003 College Park traffic study and the March 2005 traffic addendum for the 2005 Plan.

Based on this comparison, LLG's Revised Traffic Generation Assessment concluded that the traffic impact potential associated with the change from single-family land uses to additional multi-family residential land uses would be insignificant and negligible. Further, the results and findings included in the LLG 2003 and 2005 traffic analyses are considered still valid.

Therefore, transportation/traffic impacts under the Proposed 2009 Alternative Development Plan will be of lesser severity than those identified in the EIR. Development of the project site under the Proposed 2009 Alternative Development Plan will result in no substantial change from the previous EIR analysis for transportation/traffic.

16. Utilities and Service Systems

Would the project:

- a) *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*
- b) *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*
- c) *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*
- d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*
- e) *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*
- f) *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*
- g) *Comply with federal, state, and local statutes and regulations related to solid waste?*

No Substantial Change From Previous Analysis: Utilities and service systems impacts associated with the Approved EIR Development Plan were fully and adequately evaluated in the EIR. The Proposed 2009 Alternative Development Plan would not result in any new utilities and service systems impacts, or utilities and service systems impacts of greater severity than those identified in the EIR. Utilizing the generation factors for utilities and service systems from the EIR analysis, equivalent or less severe impacts under the Proposed 2009 Alternative Development Plan will be experienced:

- Wastewater generation under the Proposed 2009 Alternative Development Plan, compared to the Approved EIR Development Plan, will result in an increase in peak flow from 1.48 cubic feet per second (cfs) to 1.66 cfs. This increase can be accommodated within the design capacity of the on and offsite sewer system, designed to support development of the project site (Associated Engineers, Inc., October 2008). A less than significant impact for wastewater generation would still be experienced.

- Water demand under the Proposed 2009 Alternative Development Plan will be less than water demand estimated for the Approved EIR Development Plan, as demonstrated in Table 12 and Table 13.
- Storm water drainage facilities to accommodate the Proposed 2009 Alternative Development Plan will not require substantial changes from the storm water drainage facilities anticipated to support the Approved EIR Development Plan. Information obtained from the project engineer (Associated Engineers, Inc., October 2008) indicates that, provided that the relative area of impervious surfaces remains the same or is slightly decreased, existing storm drains can handle flows from the Proposed 2009 Alternative Development Plan. The project architect, KTGy Group, indicates that the amount of impervious surface in the Proposed 2009 Alternative Development Plan will remain the same as in the Approved EIR Plan.
- Solid waste generation under the Proposed 2009 Alternative Development Plan (2.6 tons/day) is expected to be less than solid waste generation under the Approved EIR Development Plan (4.5 tons/day), as detailed in Table 14.

Table 12: Proposed 2009 Alternative Development Plan - Water Demand Estimate

Land Use	Area (ac)	Building Area (sf)	Dwelling Units	Density (persons/ dwelling unit)	Demand Factor	Unit (gpd)	Demand (gpd)
Residential Component							
Multi-Family Residential	31.7	—	678	2.1	170	gpd/person	242,046
Retail Component							
Retail	—	14,783	—	—	100	gpd/1000 sf	1,478
Restaurant	—	25,718	—	—	1100	gpd/1000 sf	28,290
Gas/Wash/Minimart	1.1	4,000	—	—	—	gpd/sta	4,000
Recreation							
Park	1.08	—	—	—	2	af/ac/yr	1,928
Totals	—	44,501	678	—	—	—	277,742
Average Demand					311 af/yr		
Maximum Day Demand (2 times Average Demand)					622 af/yr		
Peak Hour Demand (3.5 times Average Demand)					1088 af/yr		
Notes: 1) Building areas and number of dwelling units provided by College Park Properties, L.P. 2) Demand factors are from the City of Upland Water System Master Plan, 1992. 3) Conversion factor is 325,851 gallons = 1 af. Source: Michael Brandman Associates, August 2009, based on the City of Upland Public Works Department, City of Upland Water Supply Assessment for College Park, January 2004, Table 2-3, and information provided by College Park Properties, L.P.							

Table 13 compares water demand for the 2009 Plan to the EIR Plan, and demonstrates that water demand under the Proposed 2009 Alternative Development Plan will be less than water demand estimated for the Approved EIR Development Plan,

Table 13: Comparison of Estimated Water Demand

	Approved EIR Development Plan	Proposed 2009 Alternative Development Plan
Average Water Demand	351 af/yr	311 af/yr
Maximum Day Demand (2 times Average Demand)	702 af/yr	622 af/yr
Peak Hour Demand (3.5 times Average Demand)	1,229 af/yr	1088 af/yr
Source: Michael Brandman Associates, August 2009, based on the City of Upland Public Works Department, City of Upland Water Supply Assessment for College Park, January 2004, Table 2-3, and information provided by College Park Properties, L.P.		

Table 14: Proposed 2009 Alternative Development Plan - Solid Waste Generation Estimate

Project Use	Square-Feet (sf)/ No. of Units (du)	Solid Waste Generation Factor	Solid Waste Generation	Total Solid Waste Generation
Retail Component				
Retail Shops & Inline Food Uses/Restaurants	32,100 sf	0.0284 lb/sf/day	0.4558 tons/day	
Fast-Food Restaurants	8,400 sf	0.0592 lb/sf/day	0.2486 tons/day	
Gas Station/Mini-Mart	4,000 sf	0.0341 lb/sf/day	0.0682 tons/day	
Residential Component				
Multi-Family Residential	678 du	5.3775 lb/du/day	1.8230 tons/day	
Total Solid Waste Generation				2.6 tons/day
Source: Michael Brandman Associates, May 2009, using solid waste generation factors obtained from the California Integrated Waste Management Board website: http://www.ciwmb.ca.gov/WasteChar/WasteGenRates , accessed May 2009.				

Project site development according to the Proposed 2009 Alternative Development Plan will result in no substantial change from the previous EIR analysis for utilities and systems.

17. Climate Change

The 2004 Certified Final EIR and 2005 First Addendum did not address impacts to climate change as this issue has only recently emerged as a topic for inclusion in environmental documents. The City of Upland and SCAQMD do not have an adopted Greenhouse Gas Reduction Plan; therefore, significance will be determined by whether the project will hinder or delay California's ability to meet the reduction targets in AB 32, as expressed in the following threshold.

- a) *Does the project comply with the provisions of an adopted Greenhouse Gas Reduction Plan or Strategy? If no such Plan or Strategy is applicable, would the project significantly hinder or delay California's ability to meet the reduction targets contained in AB 32?*

Less than Significant Impact and No New Environmental Issues Raised: The following information in this section is a summary of the analysis in the Climate Change Analysis Report contained in Appendix C.

The project would emit greenhouse gases during construction and operation. Construction of the proposed project would generate approximately 3,773 metric tons of carbon dioxide equivalents (MTCO₂e). Mitigation measures contained in the 2004 EIR analysis would reduce greenhouse gas emissions from construction equipment, although they are not necessary to reduce this potential impact. Construction emissions would be short-term in nature and would occur before the year 2020. AB 32 requires that the "emissions level," or annual emissions, in the State of California be reduced to 1990 levels by the year 2020. Although some greenhouse gases can remain in the atmosphere for long periods, AB 32 does not regulate concentrations. Therefore, emissions during construction are less than significant.

After project buildout, operation of the proposed project would result in greenhouse gas emissions of approximately 17,494 MTCO₂e per year. If the original project as assessed in the 2004 EIR were constructed, emissions would be 17,720 MTCO₂e per year. The quantity of emissions is similar to those for the Proposed 2009 Alternative Development Plan.

The project is high-density, mixed-use development located near transit and is smart land use. The project would incorporate project design features that reduce greenhouse gas emissions from electricity generation, waste generation, water use, and transportation (see Section 2.1.1, Project Design Features for a complete listing of these project design features). The project is consistent with the ARB Scoping Plan measures. The project would not significantly hinder or delay implementation of AB 32. The greenhouse gas emissions from construction and operation under the Proposed 2009 Alternative

Development Plan would result in a less than significant impact to climate change. No new environmental issues associated with climate change are thereby raised.

18. Mandatory Findings of Significance

- a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?*
- b) *Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*
- c) *Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?*

No Substantial Change From Previous Analysis. The impacts of project site development under the Approved EIR Development Plan were fully and adequately evaluated in the EIR. Biological resources were determined not to be significantly affected by the Approved EIR Development Plan. Appropriate mitigation measures to reduce potentially significant effects were identified in the EIR, and are listed in Section 5 of this Second Addendum to the certified Final EIR for the College Park project. The Proposed 2009 Alternative Development Plan raises no new environmental issues and requires no substantial changes from the previous EIR analysis.

Based on the above evaluation, there are no changes or new information that would require the preparation of a subsequent or supplemental EIR.

SECTION 5: MITIGATION MEASURES

A listing of mitigation measures from the College Park Project Certified Final EIR is presented below. All mitigation measures listed are the same as the measures in the Certified Final EIR, with the exception of: 1) Air Quality Mitigation Measure **AQ-1**, which has been eliminated based on emission control requirements passed in 2007 that have been imposed on in-use off-road heavy-duty diesel equipment; 2) Noise Mitigation Measures **N-4** through **N-6**, modified to reflect the land use change from hotel and office professional uses to residential; and 3) Mitigation Measure **N-7**, merely adding clarification and increased protection for residents within the 60 dB CNEL noise contour for Cable Airport. Modifications to the Noise Mitigation Measures are shown in Section 4, Item 11 - Noise, with deleted material shown with strike-outs and new material underlined.

Air Quality

- AQ-2** Prior to construction of the proposed project, the project proponent will provide a traffic control plan that will describe in detail safe detour routes around the project construction site and provide temporary traffic control (i.e. flag person) during construction related truck hauling activities.
- AQ-3** During construction of the proposed improvements, mobile construction equipment will be properly maintained at an offsite location, including proper tuning and timing of engines. Equipment maintenance records and equipment design specification data sheets shall be kept on-site during construction. During construction of the proposed improvements, all contractors will be advised not to idle trucks on site for more than ten minutes.
- AQ-4** During construction of the proposed improvements, all contractors will be advised not to idle trucks on site for more than ten minutes.
- AQ-5** During construction of the proposed improvements, only low volatility paints and coatings as defined in SCAQMD Rule 1113 shall be used. All paints shall be applied using either high volume, low-pressure (HVLP) spray equipment or by hand application.
- AQ-6** During construction of the proposed improvements, the project applicant will provide on-site electrical hook ups for electric construction tools, such as saws, drills and compressors, to eliminate the need for diesel powered electric generators. Terminate soil disturbance when winds exceed 25 mph.
- AQ-7** Terminate soil disturbance when winds exceed 25 mph.

- AQ-8** The Applicant shall prepare a Fugitive Dust Emission Control Plan in compliance with SCAQMD Rule 403. The plan shall identify methods to control fugitive dust through implementation of reasonable available control measures to prevent visible emissions from crossing the property line of the proposed project. In addition to termination of soil disturbance when winds exceed 25 mph, two or more of the following control measures shall be included in the Plan:
- Application of chemical stabilizers to unpaved roads and vehicle parking areas;
 - Application of sufficient water prior to initiating any earth movement;
 - Sweeping and/or cleaning streets where vehicles exit construction sites;
 - Installation of wheel washers (Trackclean unit or equivalent) where vehicles exit disturbed surface areas onto paved roads;
 - Paving of all roads on a construction site once final elevations have been reached or at the earliest possible time;
 - All stockpiles for material export shall be watered twice daily.
- AQ-9** The Applicant shall submit to the City of Upland project site plans that include pedestrian safety infrastructure improvements including street lighting, pedestrian paths and sidewalks that link residential land uses with commercial and office land uses within the project, and provide shade trees along sidewalks and pedestrian paths as deemed appropriate by the City of Upland Planning Department Staff.
- AQ-10** The Applicant shall contact local transit agencies to determine the feasibility of bus stops at the project site and determine the need for passenger benches, shelters, and signage at that location.

Cultural Resources

- CR-1** Because recent research showed that historic resources might be located below the current modern ground surface level beneath and south of the Arrow Route bridge span, mitigation monitoring shall be required if and only if the topsoil at the base of the gravel pit must be removed as part of the grading process.
- CR-2** If the topsoil at the base of the gravel pit must be removed, a Lead Agency-approved archaeologist shall be retained to develop an archaeological mitigation plan and a discovery clause/treatment plan. Both of these plans shall be reviewed and approved by the Agency. The archaeological mitigation plan shall include limited monitoring for historic archaeological resources on the project site by an Agency-approved archaeologist and/or his representative. The discovery clause/treatment plan shall include recovery and subsequent treatment of any archaeological or historical

remains and associated data uncovered by removal of topsoil at the base of the pit only. The treatment plan shall provide procedures for the curation of any detected cultural specimens. Any recovered cultural resources shall be identified, sites recorded, mapped and artifacts catalogued as required by standard professional archaeological practices. Examination by an archaeological specialist shall be included where necessary, dependent upon the artifacts, features, or sites that are encountered. Specialists will identify, date and/or determine significance potential.

- CR-3** If monitoring is required based on CR-2, and if the archaeological monitor discovers cultural deposits, earthmoving shall be diverted temporarily around the deposits until the deposits have been evaluated, recorded, excavated and/or recovered, as necessary, and in accordance with the Agency-approved recovery plan. Earthmoving shall be allowed to proceed through the area after the archaeologist determines the artifacts are recovered and/or site mitigated to the extent necessary.
- CR-4** Should a previously unknown cultural site be encountered during monitoring and is shown by the archaeologist that a significance determination is required, the site shall be evaluated and recorded in accordance with requirements of the State Office of Historic Preservation (i.e., DPR 523 form). In this case, if the site is not determined to be significant, no measures subsequent to recording the site on appropriate forms are required. If any of the sites are determined to be significant, the Agency-approved archaeologist shall collect an adequate amount of artifacts at the specific archaeological site. The archaeologist shall determine the amount of artifacts needed to be collected.
- CR-5** Should human remains be encountered during excavations associated with this project, all work shall halt and the County Coroner shall be notified (Section 5097.98 of the Public Resources Code). The Coroner will determine whether the remains are of forensic interest. If the coroner, with the aid of the City-approved archaeologist, determines that the remains are prehistoric, he/she will contact the Native American Heritage Commission (NAHC). The NAHC will be responsible for designating the most likely descendant (MLD) who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the California Health and Safety Code. The MLD will make his/her recommendations within 24 hours of their notification by the NAHC. This recommendation may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (Section 7050.5 of the Health and Safety Code).
- CR-6** Should any archaeological resources be uncovered, they shall be identified, sites recorded, mapped and artifacts catalogued as required by standard archaeological practices. Examination by an archaeological specialist should be included where

necessary, dependent upon the artifacts, features or sites that are encountered. Specialists will identify, date and/or determine significance potential.

- CR-7** Should any archaeological resources be uncovered, a final report of findings will be prepared by the Project Archaeologist for submission to the Proponent, the Lead Agency, and the Archaeological Information Center of the San Bernardino County Museum. The report will describe the history of the project area, summarize field and laboratory methods used, if applicable, and include any testing or special analysis information conducted to support the resultant findings.

Geology and Soils

- GS-1** Prior to the issuance of grading and building permits, the applicant shall complete a geotechnical investigation for the project site to establish earthquake parameters for design and construction of project structures. This report shall be subject to review and approval by the City of Upland.
- GS-2** The project shall conform to the geotechnical criteria contained in the Geotechnical Report of Rough Grading (1998) prepared by Morhol, Inc. for foundation and pavement design, trench backfilling, and surface drainage, for incorporation into project design and construction.
- GS-3** Any undocumented fill will be removed and replaced by properly compacted fill soils, utilizing removed fill as possible. The replaced fill soils will be compacted in accordance with accepted standards and under the observation and testing of a licensed geotechnical engineer.
- GS-4** All site grading shall be observed and tested by the project geotechnical consultant.
- GS-5** Materials to be imported for placement as fill shall be sampled and approved by the Geotechnical Consultant prior to being brought on-site.
- GS-6** Precise grading and improvement plans shall be reviewed by the geotechnical consultant prior to construction. Geotechnical parameters contained in the Morhol Report for preliminary foundation design shall be verified by the geotechnical consultant after completion of precise grading operations.

Hazards and Hazardous Materials

- HHM-1** If contaminated soil or groundwater is encountered during construction, construction activities will be immediately halted and remediation efforts will be initiated in compliance with existing regulations governing hazardous materials.

Hydrology and Water Quality

- HWQ-1** Under the Statewide General Construction National Pollutant Discharge Elimination System (NPDES) Permit (Order 92-08-DWQ), the project proponent must submit a Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) prior to commencement of construction activities. In addition, a Stormwater Pollution Prevention Plan (SWPPP) must be prepared and implemented at the project site, and revised as necessary as administrative or physical conditions change. The SWPPP must describe Best Management Practices (BMPs) that address pollutant source reduction and provide measures/controls necessary to mitigate potential pollutant sources. These include, but are not limited to: erosion controls, sediment controls, tracking controls, non-storm water management, materials & waste management, and good housekeeping practices.
- HWQ-2** The following measures addressing post-construction storm water management shall be implemented:
- a) In conformance with WDR Order No. R8-2002-0012, NPDES Permit No. CAS618036, the San Bernardino County NPDES Permit, the College Park Project will implement site design, source control and treatment control Best Management Practices (BMPs) to ensure that long-term water quality is protected from the daily operations of its proposed improvements. Compliance with this standard requires that control measures be incorporated into the design of new development to reduce pollution discharges in site runoff over the life of the project.
 - b) A Water Quality Management Plan (WQMP) shall be prepared pursuant to the recently updated Model WQMP Guidance and Attachment A: WQMP Template (dated June 1, 2004) for City review and approval. The WQMP will outline the BMPs to be used to satisfy storm water discharge criteria for the post-construction phase of the project.
 - c) BMPs for the post-construction operations of the proposed site may include measures that promote infiltration of runoff. Any BMP that has the potential to promote infiltration such as landscaping areas shall be designed so that the landscape drainage features accept the runoff through the soil to benefit from the natural processes of filtering and transformation that occur in the soil and not bypass this component via injection of runoff into the ground, which can potentially increase the risk of groundwater contamination.

- d) The following listing provides additional details on source control measures, which encompass site design (SD) and treatment control (TC) that shall be implemented where appropriate and feasible:
- For the service station, the fuel dispensing area shall be properly designed. The area shall be paved with Portland cement concrete, or equivalent, with a 2 to 4 percent grade to prevent ponding. It shall also be designed to prevent run-on of storm water into the area. The dispensing area shall be canopied and the roof drainage must not enter the area (SD-30).
 - Trash containers in the fuel dispensing area shall also be properly protected from run-on (SD-32).
 - All trash containers located around the commercial buildings and residential areas shall have roof drainage diverted around them and should be leak proof with covers (SD-32).
 - All proposed catch basins shall be stenciled with “No Dumping - Flows to Creek” or other equally effective message, and inlet trash racks should be considered (SD-13).
 - Runoff from impervious areas shall be diverted to landscaped areas wherever possible (i.e. stormwater planters) (SD-10).
 - Semi-permeable pavement shall be considered for applicable hardscape areas, where feasible (SD-20).
 - Each restaurant shall have contained areas, floor sinks, and mop sinks all connecting to the sanitary sewer for disposal of wash waters. In addition, the contained areas shall be covered to prevent storm water contact. Outdoor storage of materials should have secondary containment and shall be protected from storm waters.
 - Parking lots and streets shall be swept on a routine basis (i.e. monthly).
 - Efficient irrigation systems that minimize runoff and evaporation, and maximize the water that would reach the plant roots, such as a dripline system shall be installed (SD-12).
 - Timed irrigation systems shall be provided for water conservation in all community or public serving areas (SD-12).
 - Mulch shall be used to the extent feasible in all landscape areas to minimize soil erosion.

- The project developer and homeowners' association(s) shall adopt Integrated Pest Management (IPM) programs for use on their own public grounds to reduce pesticide and fertilizer use at the source. Use of the IPM programs shall be promoted to project residents through the homeowner association(s).
- "Pooper-scooper" regulations shall be included in CC&Rs to require proper disposal of animal waste and prevent additional bacteria loading into storm water. Exposed surfaces shall be stabilized with permanent measures such as hydroseed and vegetation as soon as practical after completion of final grading.
- Car wash racks shall be provided if car washing is to be allowed in the high-density multi-family areas (SD-33).
- Homeowner/Tenant stormwater education material shall be distributed by the homeowner association(s).
- A flow-based BMP or a series of flow-based BMPs such as vegetated swales (TC-30) and/or manufactured/proprietary (MP) devices to satisfy the requirement to treat the maximum flow rate of runoff from 0.2 inches per hour for all areas that do not already include storm water management measures such as pervious paving, landscaped treatment or roof filters.
- An agreement between the project applicant/developer, the homeowner association(s), and the City of Upland shall be executed citing maintenance requirements for all water quality structural BMPs (catch basin inserts, storm drain inserts, landscaping areas), maintenance schedules, and funding sources."

HWQ-3 Final engineering plans addressing project drainage improvements shall draw from the following list of recommended measures:

- Drainage from the building sites shall be directed toward the street in non-erosive drainage devices.
- Building pads shall have sufficient height above the curb to drain toward the street on a slope of two percent.
- Slopes shall be graded so that runoff of surface water is minimized.

- HWQ-4** Permanent drainage facilities shall be constructed to the satisfaction of the City Engineer. As proposed, these facilities include:
- Underground storm drains with a local sump capacity for a 25-year conveyance and combined capacity of storm drains and street right-of-ways for 100-year flood protection.
 - Roof runoff collected in a rain gutter and downspout system and directed to approved areas via non-erodible conductors or stormwater planters.
- HWQ-5** Proposed project shall adhere to applicable provisions of the City Engineering/Public Works Department and the County of San Bernardino Public Works Department.

Noise

- N-1** Construction activities entailing use of heavy equipment shall be restricted to the following hours:
- | | |
|-------------------|------------------|
| Monday - Friday | 7 a.m. to 5 p.m. |
| Weekends/Holidays | Not allowed |
- N-2** Construction staging areas shall be located on site to maximize the distance between staging areas and occupied residential areas.
- N-3** When construction operations occur in close proximity to occupied residential areas, appropriate additional noise reduction measures shall be implemented, including: changing the location of stationary construction equipment to maximize the distance between stationary equipment and occupied residential areas, installing muffling devices on equipment, shutting off idling equipment, notifying adjacent residences in advance of construction, and installing temporary acoustic barriers around stationary construction noise sources.
- N-4** Perimeter walls, berms or other noise attenuation features of sufficient height to reduce exterior traffic noise to 65 dB CNEL or less at ground floor receivers will be erected on the eastern site perimeter adjacent to the apartments on Monte Vista Avenue, and at the northern site perimeter adjacent to the multi-family units. Perimeter walls, berms or other noise attenuation features of sufficient height to reduce exterior noise to 65 dB CNEL or less will be erected around the outdoor eating area of the restaurant closest to Monte Vista Avenue.
- N-5** An acoustical study shall be performed for all upstairs balconies within 445 feet of Monte Vista Avenue and second- and third-story residential balconies within 105 feet of Arrow Route. The study shall be completed and submitted prior to final plan

check approval. Partial balcony enclosures or other attenuation features as recommended in the study sufficient to reduce exterior traffic noise to 65 dB CNEL or less will be erected at the balcony locations designated in the study if such protection is needed to meet the minimum protected outdoor space requirements for the project.

- N-6** An acoustical study shall be performed for ground level, second, and third stories of residential units within 735 feet of Monte Vista Avenue and 285 feet of Arrow Route, and second and third stories of all other onsite buildings to verify that the structural features are adequate to meet the 45 dB CNEL interior standard. The study shall be completed and submitted prior to final plan check approval. Noise attenuation features recommended in the study such as dual-paned windows, deck balcony enclosures, and/or additional insulation requirements sufficient to reduce interior noise levels to 45 dB CNEL or less shall be implemented.
- N-7** A notice or sign regarding aircraft noise impacts shall be posted in all sales or leasing offices for the proposed project. The notice shall include a site map that shows the portion of the project site within the 60 dB CNEL airport noise contour.

Public Services and Utilities

- PSU-1** Prior to actual development, the project applicant shall submit an emergency access plan to the City of Upland Fire Department for review and approval.
- PSU-2** The project applicant shall pay all applicable fire facility fees required by the City of Upland Fire Department.
- PSU-3** Sufficient accessibility for fire-fighting equipment shall be provided during all phases of construction and subsequent operation.
- PSU-4** Prior to actual development, the City Fire Department shall review and approve building plans to ensure adequate access and fire protection facilities are available.
- PSU-5** To reduce the demand for short-term police service to the project area during the construction phase, building materials stored on-site will be fenced or enclosed in locked containers.
- PSU-6** To reduce the demand for short-term police service to the project area during construction, on-site private security will be provided during periods of non-construction.

- PSU-7** Prior to the issuance of building permits, the project applicant shall pay required library impact mitigation fees of \$25,000 to the City of Upland Public Library.

Transportation/Traffic

- TR-1** Prior to issuance of a grading permit, the applicant shall submit a construction area traffic management plan to the City of Upland Traffic Engineer for review and approval. The plan shall be designed by a registered civil engineer/traffic engineer and shall address traffic control for any street closure, detour, or other disruption to traffic circulation. The plan shall identify the routes that construction vehicles will utilize to access the site, the hours of construction traffic, traffic controls and detours, off-site vehicle staging and parking areas, and proposed construction phasing plan for the project. The plan shall require the applicant to keep all haul routes clean and free of debris including but not limited to gravel and dirt as a result of its operations.
- TR-2** The College Park project will participate in off-site traffic improvements to a level commensurate to its fair share of the impacts identified for **Year 2006** and **Year 2025** in Draft EIR Section 5.4 and the Traffic Impact Analysis Report, Draft EIR Appendix D, and as modified in the Response to Comments documentation. The fair share contribution of off-site improvements and timing of all onsite traffic improvements shall be incorporated into the conditions of approval for the project.
- TR-3** Final design plans and specifications for the improvements to Arrow Route and Monte Vista Avenue adjacent to the site will be developed in accordance with City Standards and submitted to the City for review and approval.
- TR-4** The project applicant shall be responsible for construction and installation of traffic signalization, related roadway and median improvements, and landscaping resulting from signalization at the intersections of Arrow Route and College Park, and Monte Vista Drive and Street "A."

Appendix A: Air Quality Analysis Report

Air Quality Analysis Report

College Park Project

City of Upland, California

Lead Agency:



City of Upland

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Michael Brandman Associates

June 10, 2009

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Appendix A: URBEMIS Output

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Appendix C: Health Risk Assessment Output

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ACRONYMS AND ABBREVIATIONS

µm	micrometer
AQMP	Air Quality Management Plan
AT	averaging time for cancer risk
ARB	California Air Resources Control Board
CAT	Climate Action Team (Report)
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CO	carbon monoxide
CUP	Conditional Use Permit
DBR	daily breathing rate
DPM	diesel particulate matter
ED	exposure duration for cancer risk
EIR	Environmental Impact Report
EF	Exposure Frequency for Cancer Risk
EPA	Environmental Protection Agency
HVLP	high volume low pressure
LOS	Level of Service
LST	localized significance thresholds
NAAQS	National Ambient Air Quality Standards
NO _x	nitrogen oxides
PAH	polycyclic aromatic hydrocarbons
PM _{2.5}	particulate matter less than 2.5 microns in diameter
PM ₁₀	particulate matter less than 10 microns in diameter
ppm	parts per million
ppt	parts per trillion
PVC	polyvinyl chloride
REL	relative exposure level
ROG	reactive organic gases
RTP	Regional Transportation Plans
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plans
SRA	Source Receptor Areas

TRU	transportation refrigeration units
VMT	vehicle miles traveled
VOC	volatile organic compounds

SECTION 1: INTRODUCTION

1.1 - Purpose and Methods of Analysis

This Air Quality Analysis Report has been prepared in support of a Second Initial Study/Addendum (IS/Addendum) to the certified Final Environmental Impact Report (EIR) to address the proposed modifications to the College Park Project. The primary intent of this IS/Addendum is to address the environmental effects of amending the College Park Specific Plan (Specific Plan) and modifying Conditional Use Permit (CUP) No. CUP-04-06. Changes to the Specific Plan and CUP will address:

- Revisions to the Specific Plan to allow a maximum 230 dwelling units within the current 9-acre, single-family residential site within the College Park Project property.
- Revision to the Infrastructure, Utilities, and Public Services section of the Specific Plan to be consistent with the land use change as described above.

As a result of these changes, this Second Addendum to the certified Final EIR (State Clearinghouse No. 2003081156) for the College Park Project is being prepared.

This air quality analysis was prepared to evaluate whether the new project would result in new significant impacts to air resources in the project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the CEQA Air Quality Handbook prepared by the South Coast Air Quality Management District (SCAQMD) for quantification of emissions and evaluation of potential impacts to air resources (SCAQMD 1993 and SCAQMD 2009a).

1.2 - Comparative Summary

A comparison of the conclusions of this air quality analysis with the assessments for air quality in the 2004 certified Final EIR has been conducted. As shown in Table 1, modification to the Specific Plan and CUP as described above results in no substantial change from the previous analysis for air quality.

Table 1: Comparison of Air Quality Assessments from 2004 Certified Final EIR with Current Proposed Project

Item	2004 EIR	Current Project
SCAQMD regional significance thresholds for construction	Significant. Exceeds VOC, NO _x , CO thresholds	No substantial change from previous analysis; emissions generated with new model exceed VOC, NO _x , and CO

Table 1 (Cont.): Comparison of Air Quality Assessments from 2004 Certified Final EIR with Current Proposed Project

Item	2004 EIR	Current Project
SCAQMD regional significance thresholds for operation	Significant. Exceeds VOC, NO _x , CO thresholds	No substantial change from previous analysis; emissions generated with new model exceed VOC, NO _x , and CO
SCAQMD localized significance thresholds for construction	No analysis conducted	Less than significant
CO hotspot analysis	Less than significant	No substantial change from previous analysis; no new analysis conducted
Would the project:		
a) Conflict with or obstruct implementation of the applicable air quality plan	Significant. However, the project is incorporating many green features, such as mixed-use higher density residential near transit, which will reduce air pollutant emissions.	No substantial change from previous analysis
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation	No analysis conducted	Less than significant
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)	Significant	No substantial change from previous analysis
d) Expose sensitive receptors to substantial pollutant concentrations	Less than significant with mitigation	No substantial change from previous analysis
e) Create objectionable odors affecting a substantial number of people	No analysis conducted	Less than significant

1.3 - Project Description

The project site encompasses 39.7 acres located in the western portion of the City of Upland in San Bernardino County. The site is located southwest of the intersection of W. Arrow Route and Monte Vista Avenue. The site is within the City of Upland but is bordered by the City of Claremont and the Los Angeles County line on the west, a San Bernardino County unincorporated island to the north, Upland to the east, and the City of Montclair to the south. The Claremont Colleges lie northwest of the project site. The San Antonio Channel, an improved stormwater flood control facility, lies southeast of the site. Regional freeway access to the site is provided by the San Bernardino Freeway

(Interstate 10 [I-10]) and the Foothill Freeway (State Route 210 [SR-210]). Major arterial access to the site is provided by Mills Avenue, Claremont Boulevard, Foothill Boulevard (SR-66), W. Arrow Route, Arrow Highway, and Monte Vista Avenue.

The proposed action is to amend the College Park Specific Plan and modify Conditional Use Permit No. CUP-04-06 to reflect the revised Site Plan (see Exhibit 1). Changes to the Specific Plan and CUP will address the following items:

- Revision to the Specific Plan to allow a maximum 230 dwelling units within the current 9-acre, single-family residential site within the College Park Project property.
- Revision to the Infrastructure, Utilities, and Public Services section of the Specific Plan to be consistent with the land use change as described above.

A land use summary for the modified College Park Project (referred to as the Proposed 2009 Alternative Development Plan) is presented in Table 2.

Table 2: Proposed 2009 Alternative Development Plan - Land Use Summary

Project Use	Square-Feet (SF)/ No. of Units (DU)	Acres	Status/Expected Date of Completion
Retail Component			
Retail Shops and Inline Food Uses/Restaurants	32,100 SF	—	Completed. Tenants moving in now.
Fast-Food Restaurants	8,400 SF	—	One 4,000 SF Fast Food Restaurant completed. Tenant moving in now. Remaining 4,400 SF for two Fast Food Restaurants to be completed in 2010.
Gas Station/Mini-Mart (16 fueling positions)	4,000 SF	1.11	Not yet begun. Estimated completion is mid-2010.
Retail (not including Gas Station/Mini-Mart)/Commercial Floor Area	44,500 SF	5.82	—
Residential Component			
Multi-Family/Courtyard Villas	230 DU	9.03	Now under review through this Second Addendum to the Final EIR. Completion is expected in 2011.
Multi-Family/Apartments	448 DU	20.73	All 448 DUs are under construction or completed. Twenty-five percent or approximately 112 DUs are now open and ready for

Table 2 (Cont.): Proposed 2009 Alternative Development Plan - Land Use Summary

Project Use	Square-Feet (SF)/ No. of Units (DU)	Acres	Status/Expected Date of Completion
			occupancy. Seventy-five percent or approximately 336 DUs are being completed, to be ready for occupancy now through October 2009.
Total Residential	678 DU	29.76	—
Greenbelt/Recreational Areas	N/A	1.08	Completed.
Streets and Dedication	229,561 SF	1.91	Completed.
Project Total	N/A	39.68	—
Notes: DU = dwelling unit SF = square feet N/A = not applicable Source: College Park Properties, L.P., 2009.			

Project History

In October 2004, the City of Upland approved the College Park Specific Plan and certified the EIR for the College Park Project (SCH # 2003081156), which evaluated the environmental impacts of the College Park Project pursuant to the approved Specific Plan. Also approved in October 2004 were (1) Conditional Use Permit No. CUP-04-06 to allow a mixed-use development consisting of approximately 12.8 acres of commercial uses and 25.8 acres of residential uses and, conjunctively, (2) Tentative Parcel Map No. TPM-16716 to create six separate parcels within the project site. The EIR for the College Park Project was prepared to address the potential construction and operational level impacts associated with implementation of the College Park Specific Plan.

As indicated in the 2004 Certified Final EIR, the project was expected to be developed in two phases (see Exhibit 2):

- Phase 1: Retail commercial with restaurants and service station/mini mart totaling 44,335 square feet of floor space, office buildings totaling 48,000 square feet of floor space, 50 single-family homes, 224 apartment units, 1.05-acre community park, and all primary access and internal roadway improvements.
- Phase 2: 102-room hotel totaling 51,080 square feet of floor space and 224 apartment units.

In August 2005, an Addendum to the certified Final EIR was approved to remove the hotel and office-professional uses in the northwestern portion of the site, and substitute 39 single-family, detached patio/courtyard-style homes, resulting in a total of 89 single-family, detached homes. Circulation was also revised. In addition, there were modifications to CUP-04-06, a modification to

Tentative Parcel Map No. TPM-16716, and approval of a Tentative Tract Map for subdivision of the single-family area.

Environmental Setting

The site was a former sand and gravel quarry that has been completely filled in with engineered compacted fill by others under a separate permit. The EIR analysis evaluated environmental impacts of the Approved EIR Development Plan using the filled site as the baseline environmental condition. As identified in Table 2, portions of the project site have been constructed and are operational.

The City of Upland owns another former sand and gravel site directly across Monte Vista Avenue to the east, which has been excavated for a retention basin. The excavated soils were transported to the project site as fill for a separately permitted project. The property immediately to the north is a closed sand and gravel extraction site that is owned and controlled by the Claremont Colleges.

The Vulcan asphalt batch plant, located to the south of the project site, is scheduled for relocation. Since plant relocation plans have not been finalized, however, the potential exists that the plant will continue to operate for a period of 2 to 4 years.

Immediately west of the project site is an older residential neighborhood with long-term established residents, and an office building. Some of the older residences abut the batch plant. Northwest of the site, diagonally across the intersection of Claremont Boulevard, is the campus of the Claremont Colleges.

Land uses in the general vicinity (approximately 1 mile) of the site are a mixture of residential, commercial, institutional, and heavy industrial. Principal land uses in the vicinity of the site are sand and gravel facilities, the Claremont Colleges, the Montclair Metrolink Station and Transcenter, the Metrolink railroad line, Cable Airport, the San Bernardino Freeway (I-10), the San Antonio Channel, and a regional shopping center called Montclair Plaza. Additional land uses within approximately 1 mile of the site are two neighborhood shopping centers, five public schools, a mobile home park, a cemetery, six parks, three municipal buildings, and portions of a botanical garden and a golf course.

1.4 - Mitigation Measures in the 2004 Certified Final EIR

The following air quality mitigation measures, contained within the 2004 Certified Final EIR, apply to the Proposed 2009 Alternative Development Plan. Note that Mitigation Measure AQ-1 addressing the front end loader operating at the Vulcan Asphalt Batch Plant is not included. AQ-1 is no longer needed because, since the 2004 EIR, new emission control requirements have been placed on off-road equipment. The new emission control requirements deal with the California Air Resources Board in-use off-road heavy-duty diesel equipment regulations passed in 2007 (ARB 2007). The remaining applicable air quality mitigation measures are as follows:

- AQ-2** Prior to construction of the proposed project, the project proponent will provide a traffic control plan that will describe in detail safe detour routes around the project construction site and provide temporary traffic control (i.e., flag person) during construction related truck hauling activities.
- AQ-3** During construction of the proposed improvements, mobile construction equipment will be properly maintained at an offsite location, including proper tuning and timing of engines. Equipment maintenance records and equipment design specification data sheets shall be kept on-site during construction.
- AQ-4** During construction of the proposed improvements, all contractors will be advised not to idle trucks on site for more than ten minutes.
- AQ-5** During construction of the proposed improvements, only low volatility paints and coatings as defined in SCAQMD Rule 1113 shall be used. All paints shall be applied using either high volume, low-pressure (HVLV) spray equipment or by hand application.
- AQ-6** During construction of the proposed improvements, the project applicant will provide on-site electrical hook ups for electric construction tools, such as saws, drills and compressors, to eliminate the need for diesel powered electric generators.
- AQ-7** Terminate soil disturbance when winds exceed 25 mph.
- AQ-8** The Applicant shall prepare a Fugitive Dust Emission Control Plan in compliance with SCAQMD Rule 403. The plan shall identify methods to control fugitive dust through implementation of reasonable available control measures to prevent visible emissions from crossing the property line of the proposed project. In addition to termination of soil disturbance when winds exceed 25 mph, two or more of the following control measures shall be included in the Plan:
- Application of chemical stabilizers to unpaved roads and vehicle parking areas;
 - Application of sufficient water prior to initiating any earth movement;
 - Sweeping and/or cleaning streets where vehicles exit construction sites;
 - Installation of wheel washers (Trackclean unit or equivalent) where vehicles exit disturbed surface areas onto paved roads;
 - Paving of all roads on a construction site once final elevations have been reached or at the earliest possible time;
 - All stockpiles for material export shall be watered twice daily.
- AQ-9** The Applicant shall submit to the City of Upland project site plans that include pedestrian safety infrastructure improvements including street lighting, pedestrian

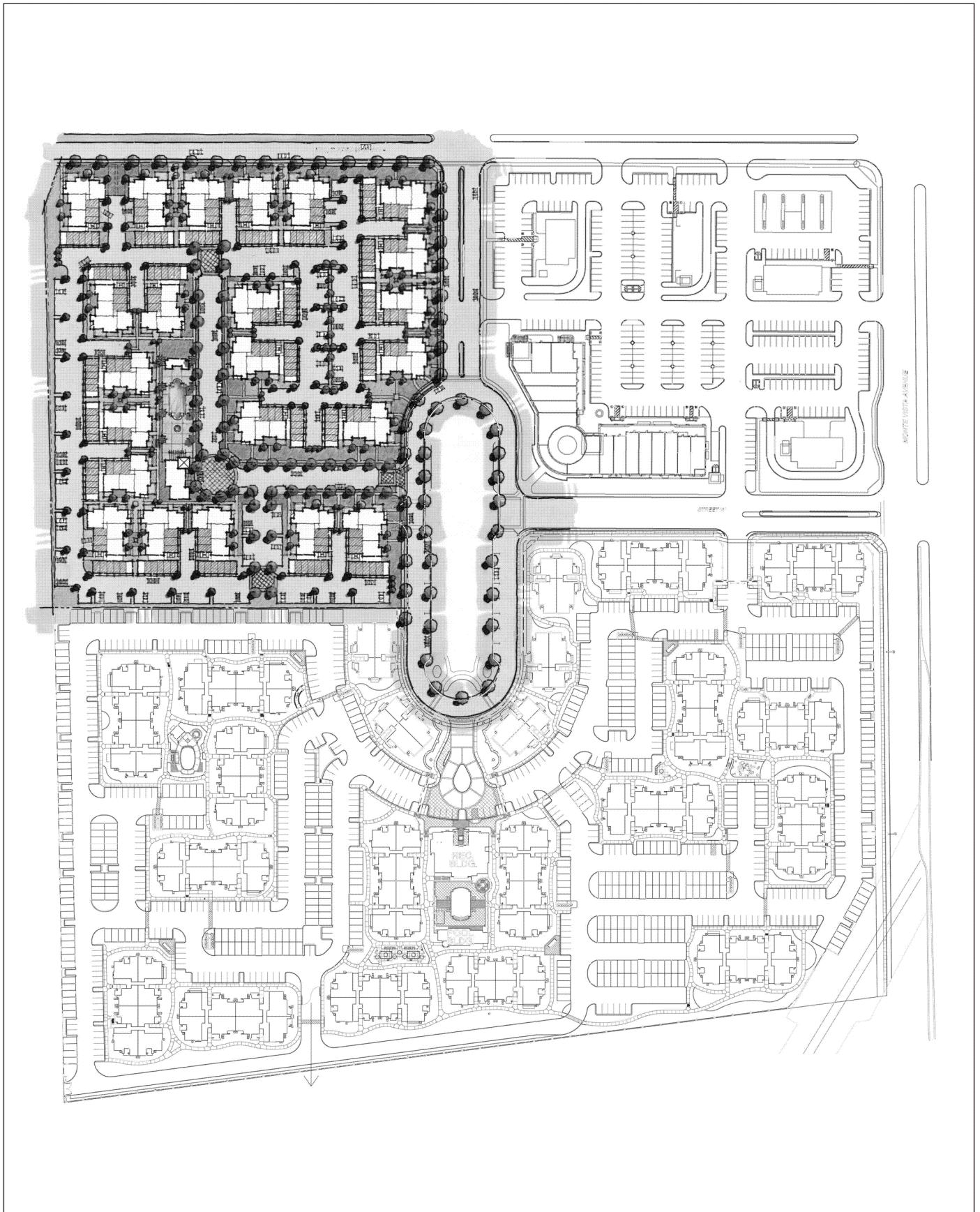
paths, and sidewalks that link residential land uses with commercial and office land uses within the project, and provide shade trees along sidewalks and pedestrian paths as deemed appropriate by the City of Upland Planning Department Staff.

- AQ-10** The Applicant shall contact local transit agencies to determine the feasibility of bus stops at the project site and determine the need for passenger benches, shelters, and signage at that location.

1.5 - Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. For purposes of CEQA, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities. Commercial and industrial facilities are not included in the definition because employees do not typically remain onsite for 24 hours. However, when assessing the impact of pollutants with 1-hour or 8-hour standards (such as nitrogen dioxide and carbon monoxide), commercial and/or industrial facilities would be considered sensitive receptors for those purposes.

The closest sensitive receptors are the onsite residences and the residences adjacent to the western boundary of the project site.



Source: KTGy Group, Inc., August 2009.



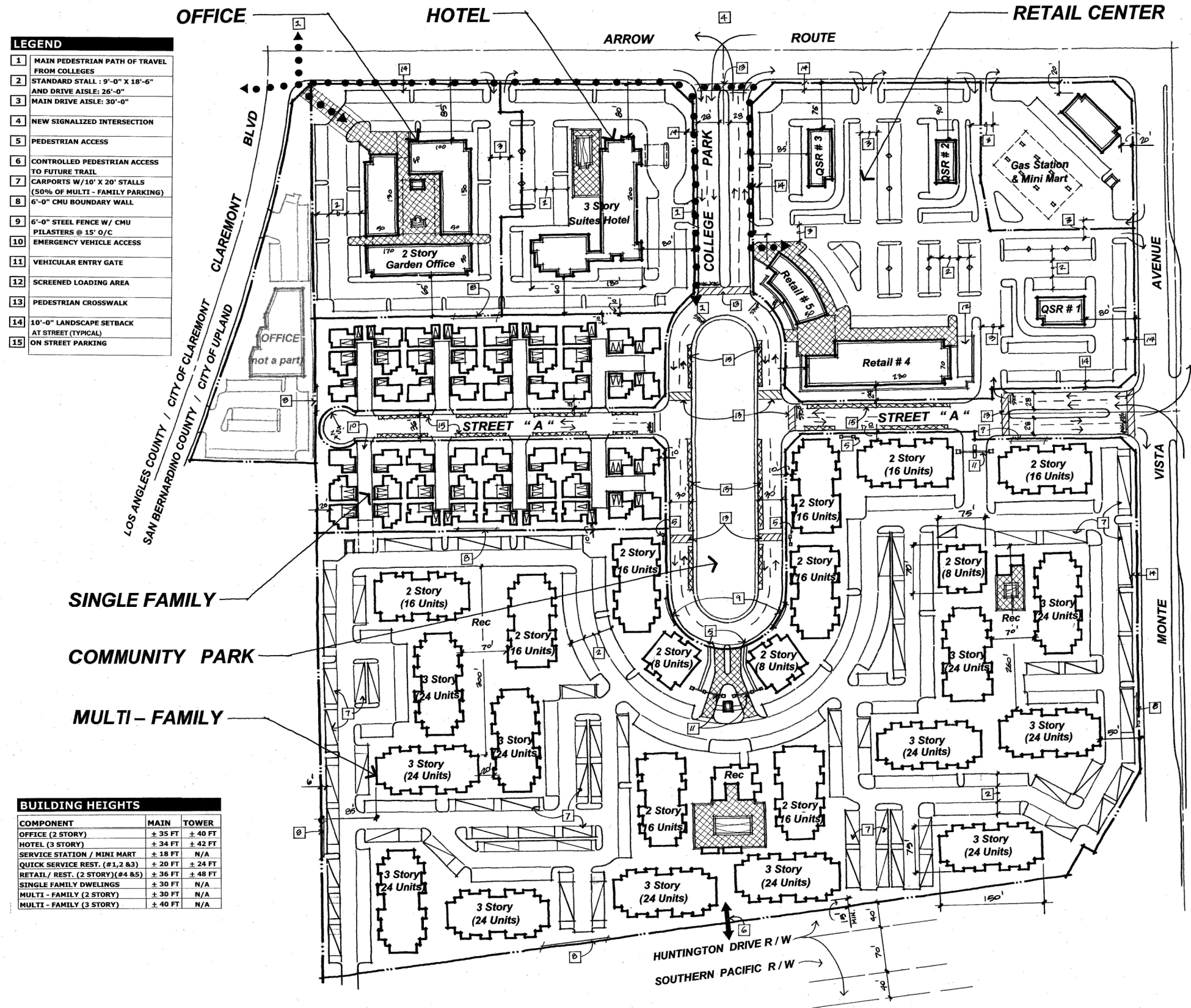
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Michael Brandman Associates

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Exhibit 1 Proposed 2009 Alternative Development Plan

COLLEGE PARK PROPERTIES • COLLEGE PARK



Source: Hutton Development Company; KTG Group, Inc.; Lundstrom & Associates, June 2003.



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Michael Brandman Associates

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Exhibit 2
Approved EIR Development Plan

COLLEGE PARK PROPERTIES • COLLEGE PARK

SECTION 2: SETTING

2.1 - Regulatory Setting

Air pollutants are regulated at the national, state, and air basin level; each agency has a different degree of control. The United States Environmental Protection Agency (EPA) regulates at the national level. The California Air Resources Board (ARB) regulates at the state level. The South Coast Air Quality Management District (SCAQMD) regulates at the air basin level.

2.1.1 - Federal and State Regulatory Agencies

The EPA handles global, international, national, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans (SIP), provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards (NAAQS), also known as federal standards. There are NAAQS for six common air pollutants, called criteria air pollutants, which were identified from provisions of the Clean Air Act of 1970. The criteria pollutants are:

- Ozone
- Nitrogen dioxide
- Particulate matter (PM₁₀ and PM_{2.5})
- Carbon monoxide (CO)
- Lead
- Sulfur dioxide

The NAAQS were set to protect public health, including that of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants. National primary standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health (ARB 2008).

An SIP is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain NAAQS. The SIP for the State of California is administered by the ARB who has overall responsibility for statewide air quality maintenance and air pollution prevention. The ARB also administers California Ambient Air Quality Standards (CAAQS), for the ten air pollutants designated in the California Clean Air Act (CCAA). The ten state air pollutants are the six NAAQS listed above as well as the following: visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride.

The national and state ambient air quality standards, the most relevant effects, the properties, and sources of the pollutants are summarized in Table 3.

Table 3: Air Pollutants

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects	Properties	Sources
Ozone	1 Hour	0.09 ppm	—	(a) Decrease of pulmonary function and localized lung edema in humans and animals; (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) increased mortality risk; (d) risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) vegetation damage; (f) Property damage.	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), NO _x , and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant, thus it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO _x) are mobile sources (on-road and off-road vehicle exhaust).
	8 Hour	0.070 ppm	0.075 ppm			
Carbon monoxide (CO)	1 Hour	20 ppm	35 ppm	(a) Aggravation of angina pectoris (chest pain or discomfort) and other aspects of coronary heart disease; (b) decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) impairment of central nervous system functions; (d) possible increased risk to fetuses.	CO is a colorless, odorless, toxic gas. CO is a primary pollutant. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential woodburning, and natural sources.
	8 Hour	9.0 ppm	9 ppm			
Nitrogen dioxide (NO ₂)	1 Hour	0.18 ppm	—	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes	During combustion of fossil fuels, oxygen reacts with nitrogen to produce NO _x (NO, NO ₂ , NO ₃ , N ₂ O, N ₂ O ₃ , N ₂ O ₄ , and N ₂ O ₅). NO _x is a precursor to ozone, PM ₁₀ , and PM _{2.5} formation. NO _x can react with moisture, ammonia, and other compounds to form nitric acid and	NO _x is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Natural sources of nitrogen oxides (NO _x) include lightning, soils, wildfires, stratospheric intrusion, and the oceans. Natural sources accounted
	Mean	0.030 ppm	0.053 ppm			

Table 3 (Cont.): Air Pollutants

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects	Properties	Sources
<i>cont.</i>				and pulmonary structural changes; (c) contribution to atmospheric discoloration.	related particles. This deposition can harm natural resources and materials.	for approximately seven percent of 1990 emissions of NO _x for the United States.
Sulfur dioxide (SO ₂)	1 Hour	0.25 ppm	—	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO _x) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below State and national standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM ₁₀ .	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	24 Hour	0.04 ppm	0.14 ppm			
	Mean	—	0.030 ppm			
Particulate matter (PM ₁₀)	24 hour	50 µg/m ³	150 µg/m ³	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) declines in pulmonary function growth in children; (c) increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in PM _{2.5} levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma.	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM ₁₀ refers to particulate matter that is 10 microns or less in diameter, (1 micron is one-millionth of a meter). PM _{2.5} refers to particulate matter that is 2.5 microns or less in diameter.	Stationary sources include fuel combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation-related sources are from vehicle exhaust and road dust.
	Mean	20 µg/m ³	—			
Particulate matter (PM _{2.5})	24 Hour	—	35 µg/m ³			
	Mean	12 µg/m ³	15.0 µg/m ³			

Table 3 (Cont.): Air Pollutants

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects	Properties	Sources
Sulfates	24 Hour	25 µg/m ³	—	(a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardio-pulmonary disease; (d) vegetation damage; (e) Degradation of visibility; (f) property damage.	The sulfate ion is a polyatomic anion with the empirical formula SO ₄ ²⁻ .	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. Sulfates can also be formed by dissolving a metal in sulfuric acid. The lead-acid battery typically uses sulfuric acid.
Lead	30-day	1.5 µg/m ³	—	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction. The more serious effects of lead poisoning include behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs. Lead may also contribute to high blood pressure and heart disease.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. An aerosol is a collection of solid, liquid, or mixed-phase particles suspended in the air. Lead was first regulated as an air pollutant in 1976. Leaded gasoline was first marketed in 1923 and was used in motor vehicles until around 1970. Lead concentrations have not exceeded State or national air quality standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering. The mechanisms by which lead can be removed from the atmosphere (sinks) include deposition to soils, ice caps, and oceans, and inhalation.
	Quarter	—	1.5 µg/m ³			
	Rolling 3-month average	—	0.15 µg/m ³			
Vinyl chloride	24 Hour	0.01 ppm (26 µg/m ³)	—	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites

Table 3 (Cont.): Air Pollutants

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects	Properties	Sources
cont.				brain cancers.		due to microbial breakdown of chlorinated solvents.
Hydrogen sulfide	1 Hour	0.03 ppm (42 µg/m ³)	—	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause symptoms like headache, nausea, vomiting, and cough. Long exposure to hydrogen sulfide can cause pulmonary edema.	Hydrogen sulfide (H ₂ S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal) and organic matter that undergoes putrefaction.
Volatile organic compounds (VOC)		There are no State or national ambient air quality standards for VOCs because they are not classified as criteria pollutants.		Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches, loss of coordination, nausea, damage to liver, kidney, and the central nervous system. Many VOCs have been classified as toxic air contaminants.	Reactive organic gases (ROGs), or volatile organic compounds (VOCs), are defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably.	Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are also transformed into organic aerosols in the atmosphere, which contribute to higher PM ₁₀ and lower visibility.
Benzene		There are no ambient air quality standards for benzene.		Short-term (acute) exposure of high doses from inhalation of benzene may cause dizziness, drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation, and at higher levels, loss of consciousness	Benzene is a VOC. It is a clear or colorless light-yellow, volatile, highly flammable liquid with a gasoline-like odor. The EPA has classified benzene as a “Group A” carcinogen.	Benzene is emitted into the air from gasoline service stations (fuel evaporation), motor vehicle exhaust, tobacco smoke, and from burning oil and coal. Benzene is used as a solvent for paints, inks, oils, waxes, plastic, and rubber. It

Table 3 (Cont.): Air Pollutants

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects	Properties	Sources
<i>cont.</i>				can occur. Long-term (chronic) occupational exposure of high doses has caused blood disorders, leukemia, and lymphatic cancer.		is used in the extraction of oils from seeds and nuts and in the manufacture of detergents, explosives, and pharmaceuticals.
Diesel particulate matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of diesel exhaust exposure include eye, nose, throat, and lung irritation, and can cause coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	DPM is a source of PM _{2.5} —diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which is comprised of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons (PAHs) and their derivatives. Fifteen PAHs are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. In 2002 in the South Coast Air Basin, the main sources of diesel particulate matter were due to the combustion of diesel fuel in diesel-powered engines. Such engines can include on-road vehicles like diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.
Abbreviations: ppm = parts per million (concentration) $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter Mean = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter National standard = National ambient air quality standard (NAAQS) = the levels of air quality necessary, with an adequate margin of safety to protect the public health. Source of effects: South Coast Air Quality Management District (SCAQMD 2007b), OEHA 2002, ARB 2005b, EPA 2007, EPA 2000, NTP 2005a Source of standards: (ARB 2008). Source of properties and sources: Ibid and EPA 1997, EPA 1999, EPA 2002, EPA 2003a, EPA 1998, EPA 2008, EPA 2009b, and NTP 2005b.						

Several pollutants listed in Table 3 are not addressed in this analysis. Analysis of lead is not included in this report because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it will not generate hydrogen sulfide in any substantial quantity. There is no generation of hydrogen sulfide usage in the project area.

2.1.2 - South Coast Air Quality Management District

The agency for air pollution control for the South Coast Air Basin (basin) is the South Coast Air Quality Management District (SCAQMD). SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the basin. SCAQMD, in coordination with the Southern California Association of Governments (SCAG), is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the basin. An AQMP is a plan prepared and controlled by an air pollution district for a county or region designated as nonattainment of the national and/or California ambient air quality standards. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

The purpose of the 2003 AQMP (SCAQMD 2003b), previous to the current 2007 AQMP, was to “set forth a comprehensive program that will lead [the South Coast Air Basin and the portions of the Salton Sea Air Basin under SCAQMD jurisdiction] into compliance with all federal and state air quality planning requirements” (2003 AQMP, page 1-1). The 2003 AQMP updated the demonstration of attainment with the federal standards for ozone and PM₁₀, replaced the 1997 attainment demonstration for the federal CO standard and provided a basis for a maintenance plan for CO for the future, and updated the maintenance plan for the federal nitrogen dioxide standard that the South Coast Air Basin (basin) has met since 1992 (2003 AQMP, page 1-1).

The 2003 AQMP also incorporated new scientific data in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2003 AQMP utilized complex modeling to show that with the control measures, the basin would be in compliance with the national and state standards for all pollutants by 2010 except the state ozone and PM₁₀ standards and the state ozone and PM₁₀ standard post-2010 or by the earliest practicable date, as mandated by the California Health and Safety Code Section 40462. The ARB approved the 2003 AQMP on August 1, 2003. EPA’s adequacy finding on the emissions budgets for conformity determination in the basin area was published in the Federal Register (69 FR 15325-15326).

The current AQMP for the Basin is the 2007 AQMP, which was adopted by the SCAQMD on June 1, 2007 (SCAQMD 2007b). On July 13, 2007, the SCAQMD Board adopted the 2007 Final AQMP Transportation Conformity Budgets and directed the Executive Officer to forward them to ARB for

its approval and subsequent submittal to the EPA. On September 27, 2007, ARB adopted the State Strategy for the 2007 State Implementation Plan (SIP) and the 2007 AQMP as part of the SIP. On January 15, 2009, EPA's Regional Administrator signed a final rule to approve in part and disapprove in part the SCAQMD 2003 1-hour ozone plan and the nitrogen dioxide maintenance plan. The parts of the plan that were approved strengthen the SIP. The Clean Air Act does not require the disapproved portions of the plan, and the disapprovals do not start sanctions clocks.

The 2007 AQMP incorporates significant new emissions inventories, ambient measurements, scientific data, control strategies, and air quality modeling. The 2007 AQMP outlines a detailed strategy for meeting the federal health-based standards for PM_{2.5} by 2015 and 8-hour ozone by 2024 while accounting for and accommodating future expected growth. Most of the reductions will be from mobile sources, which are currently responsible for about 75 percent of all smog and particulate-forming emissions. The 2007 AQMP includes 37 control measures proposed for adoption by the SCAQMD, including measures to reduce emissions from new commercial and residential developments, more reductions from industrial facilities, and reductions from woodburning fireplaces and restaurant charbroilers.

2.1.3 - Rules and Regulations

The AQMP for the basin establishes a program of rules and regulations administered by SCAQMD to obtain attainment of the state and national air quality standards. The rules and regulations that apply to this project include, but are not limited to, the following:

- SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices (BMPs), such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.
- SCAQMD Rule 445 prohibits permanently installed woodburning devices into any new development. A woodburning device means any fireplace, woodburning heater, or pellet fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.

- SCAQMD Rule 481 applies to all spray painting and spray coating operations and equipment. The rule states that a person shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:
 - (1) The spray coating equipment is operated inside a control enclosure, which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face velocity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.
 - (2) Coatings are applied with HVLP, electrostatic and/or airless spray equipment.
 - (3) An alternative method of coating application or control is used which has effectiveness equal to or greater than the equipment specified in the rule.
- SCAQMD Rule 1108 governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the South Coast Air Basin. This rule would regulate the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the project must comply with SCAQMD Rule 1108.
- SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of the project must comply with SCAQMD Rule 1113.
- SCAQMD Rule 1186 limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, State, county, agency or special district such as water, air, sanitation, transit, or school district.
- SCAQMD Rule 2202, On-Road Motor Vehicle Mitigation Options, is to provide employers with a menu of options to reduce mobile source emissions generated from employee commutes, to comply with federal and state Clean Air Act requirements, Health & Safety Code Section 40458, and Section 182(d)(1)(B) of the federal Clean Air Act. It applies to any employer who employs 250 or more employees on a full or part-time basis at a worksite for a consecutive six-month period calculated as a monthly average.
- ARB Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling adopts new section 2485 within Chapter 10, Article 1, Division 3, title 13 in the California Code of Regulations. The measure limits the idling of diesel vehicles to reduce emissions of toxics and criteria pollutants. The driver of any vehicle subject to this section: (1) shall not idle the vehicle's primary diesel engine for greater than five (5) minutes at any location; and (2) shall not idle a diesel-fueled auxiliary power system for more than five (5)

minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

- ARB Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks, Beginning in 2008, would require that new 2008 and subsequent model-year heavy-duty diesel engines shall be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to “neutral” or “park”, and the parking brake is engaged. If the parking brake is not engaged, then the engine shutdown system shall shut down the engine after 900 seconds of continuous idling operation once the vehicle is stopped and the transmission is set to “neutral” or “park.”

2.2 - Physical Setting

2.2.1 - Local Climate

The project is located in the City of Upland in San Bernardino County, California. The project is within the South Coast Air Basin (basin). To the west of the basin is the Pacific Ocean. To the north and east of the basin are the San Gabriel, San Bernardino, and San Jacinto mountains. The southern limit of the basin is the San Diego County line. The basin consists of Orange County, all of Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County.

Regional and local air quality in the basin is impacted by dominant airflows, topography, atmospheric inversions, location, season, and time of day.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the Los Angeles area is transported inland until it reaches the mountains where the combination of mountains and inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The annual average temperature varies little throughout much of the basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas where the project site is located.

The majority of the annual rainfall in the basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thunderstorms in the coastal regions and slightly heavier showers in the eastern portion of the basin along the coastal side of the mountains. Year-to-year patterns in rainfall are unpredictable because of fluctuations in the weather.

Temperature inversions limit the vertical depth through which pollution can be mixed. Among the most common temperature inversions in the basin, radiation inversions form on clear winter nights when cold air off mountains sink to the valley floor while the air aloft over the valley remains warm. These inversions, in conjunction with calm winds, trap pollutants near the source. Other types of temperature inversions include marine, subsidence, and high-pressure inversions.

Summers are often periods of hazy visibility and occasionally unhealthy air, while air quality impacts in the winter tend to be highly localized and can consist of odors from agricultural operations.

2.2.2 - Attainment Status

Air basins where ambient air quality standards are exceeded are designated as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” Federal nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

The proposed project is within the South Coast Air Basin (basin). The current attainment designations for the basin are shown in Table 4. The basin is designated as nonattainment for the state and federal ozone, PM₁₀, and PM_{2.5}, standards.

Table 4: South Coast Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
PM ₁₀	Nonattainment	Serious Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
Source: State status from ARB 2007a; national status from EPA 2009a.		

2.2.3 - Local Air Quality

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. For evaluation purposes, the SCAQMD has divided the basin into 38 Source Receptor Areas (SRA) operating monitoring stations in most of the SRAs. These SRAs are designated to

provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area. SCAQMD operates an air monitoring station in SRA 32 in Upland, California. Table 5 summarizes 2006 through 2008 published monitoring data. The data shows that during the past few years, the project area has exceeded the ozone, PM₁₀, and PM_{2.5} standards.

Table 5: Air Quality Monitoring Summary

Air Pollutant, Station	Averaging Time (Units)	2006	2007	2008
Ozone, Upland	Max 1 Hour (ppm)	0.166	0.145	0.155
	Days > CAAQS (0.09 ppm)	52	32	51
	Max 8 Hour (ppm)	0.131	0.115	0.122
	Days > CAAQS (0.07 ppm)	64	55	65
	Days > NAAQS (0.075 ppm)	50	35	50
Carbon Monoxide, Upland	Max 1 Hour (ppm)*	3	2	ND
	Days > CAAQS (20 ppm)	0	0	ND
	Days > NAAQS (35 ppm)	0	0	ND
	Max 8 Hour (ppm)	1.90	1.65	1.38
	Days > CAAQS (9.0 ppm)	0	0	0
	Days > NAAQS (9 ppm)	0	0	0
Nitrogen Dioxide, Upland	Mean (ppm)	0.031	0.027	0.023
	Max 1 Hour (ppm)	0.100	0.095	0.094
	Days > CAAQS (0.18 ppm)	0	0	0
Fine particulate matter (PM ₁₀), Fontana	Mean (µg/m ³)	53.7	60.7	40.2
	24 Hour (µg/m ³)	142	276	75
	Days > CAAQS (50 µg/m ³)	29	33	11
	Days > NAAQS (150 µg/m ³)	0	2	0
Ultra fine particulate matter (PM _{2.5}), Fontana	Mean (µg/m ³)	17.5	18.9	15.5
	24 Hour (µg/m ³)	52.6	77.5	49.0
	Days > NAAQS (35 µg/m ³)	8	10	4
Abbreviations: > = exceed ppm = parts per million µg/m ³ = micrograms per cubic meter ND = no data max = maximum Mean = Annual Arithmetic Mean CAAQS = California Ambient Air Quality Standard NAAQS = National Ambient Air Quality Standard Source: California Air Resources Board (ARB 2009). *South Coast Air Quality Management District (SCAQMD 2009b).				

SECTION 3: THRESHOLDS

3.1 - CEQA Guidelines

The following significance thresholds are contained in Appendix G of the CEQA Guidelines. A significant impact would occur if the project would:

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

CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in the environment.” To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated. While the final determination of whether or not a project is significant is within the purview of the lead agency pursuant to Section 15064(b) of the CEQA Guidelines, SCAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the lead agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts.

3.2 - Regional Significance Thresholds

The following regional significance thresholds have been established by SCAQMD. Projects within the South Coast Air Basin region with construction or operation related emissions in excess of any of the thresholds presented in Table 6 are considered significant. Regional thresholds were set to protect air resources within the basin.

Table 6: SCAQMD Regional Thresholds

Pollutant	Construction (pounds per day)	Operation (pounds per day)
Nitrogen oxides (NO _x)	100	55
Volatile organic compounds (VOC)	75	55

Table 6 (Cont.): SCAQMD Regional Thresholds

Pollutant	Construction (pounds per day)	Operation (pounds per day)
Particulate matter (PM ₁₀)	150	150
Particulate matter (PM _{2.5})	55	55
Sulfur oxides (SO _x)	150	150
Carbon monoxide (CO)	550	550
Source: SCAQMD 2009c.		

3.3 - Local Significance Thresholds

Construction

The SCAQMD Governing Board adopted a methodology for calculating localized air quality impacts through localized significance thresholds (LSTs), which is consistent with SCAQMD's Environmental Justice Enhancement 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 state or national ambient air quality standard. The LSTs are developed based on the ambient concentrations of that pollutant for each source receptor area and are applicable to NO_x, CO, PM₁₀, and PM_{2.5}. LSTs were developed in recognition of the fact that criteria pollutants such as CO, NO_x, PM₁₀, and PM_{2.5} in particular can have local impacts as well as regional impacts. LSTs were set to protect sensitive receptors near onsite project emissions.

The 2004 EIR indicated that the largest source of emissions is during grading activities; therefore, the LST analysis is conducted for the grading emissions to provide a worst-case scenario. During Phase 1 of construction, it is assumed that grading occurred on the entire site (38.69 acres). Phase 2 involves grading of 9 acres, where the 230 multi-family dwelling units are to be constructed.

There are two methods for the LST analysis. The first method pertains to Phase 1, as this method applies to disturbed areas greater than 5 acres in area. The LST for PM₁₀ and PM_{2.5} are identified in the SCAQMD Air Quality Significance Thresholds in its CEQA Handbook. The LST for PM₁₀ and PM_{2.5} during construction is 10.4 µg/m³. LSTs for nitrogen dioxide and CO are derived using the equation $LST = S - C$, where S is the most stringent state or national standard (from Table 3), and C is the maximum background concentration that occurred in the past 3 years at the closest air quality monitoring station (from Table 5). The LST for nitrogen dioxide is 0.08 ppm (0.18 ppm minus 0.10 ppm). The LST for 1-hour CO is 17 ppm (20 ppm minus 3 ppm). The LST for 8-hour CO is 7.1 ppm (9 ppm minus 1.9 ppm). The LSTs are summarized in Table 7.

The second method pertains to Phase 2 construction, as this methodology applies to areas disturbed less than or equal to 5 acres in area. This is appropriate for Phase 2 because although the total

acreage to be graded is 9 acres, URBEMIS2007 assumes that 25 percent of the area will be disturbed in one day. One-fourth of nine acres is 2.25 acres; however, to provide a worst-case scenario, it is assumed that 5 acres per day would be disturbed in Phase 2. To facilitate the localized assessment process, the SCAQMD LST methodology (SCAQMD 2003a) provides a series of look-up tables that contain LSTs for the Source Receptor Areas (SRAs) within the basin. If onsite construction emissions were above the LST, the project would be considered to have a significant air quality impact. The current look-up tables cover the years 2005 through 2007. The LSTs were obtained from the look-up tables in the SCAQMD Final LST Methodology for a 5-acre project in SRA 23. The distance to the nearest receptor is 25 meters, as that is the closest distance in the LST look-up tables. It is typically assumed that one-fourth of the project site is impacted on any one day. However, to provide a worst-case scenario, it was assumed that 5 acres per day would be disturbed during the second phase of fine grading.

The LSTs are summarized in Table 7.

Table 7: SCAQMD Localized Significance Thresholds

Pollutant	Phase 1 Construction	Phase 2 Construction (pounds per day)
Nitrogen dioxide	0.08 ppm	270
Carbon monoxide Carbon monoxide	17 ppm (1-hour) 7.1 ppm (8-hour)	2,193
PM ₁₀	10.4 µg/m ³	16
PM _{2.5}	10.4 µg/m ³	9
Source: SCAQMD, 2003; SCAQMD 2006..		

Carbon Monoxide Hotspot Analysis Threshold

Project concentrations may also be considered significant if a carbon monoxide (CO) hotspot intersection analysis determines that project generated CO concentrations cause a localized violation of the state CO 1-hour standard of 20 ppm, state CO 8-hour standard of 9 ppm, federal CO 1-hour standard of 35 ppm, or federal CO 8-hour standard of 9 ppm.

3.4 - Health Risk Thresholds

Any project with the potential to expose sensitive receptors or the public to substantial levels of toxic air contaminants (TACs) would be deemed to have a potentially significant impact. A health risk is the probability that exposure to a given TAC under a given set of conditions will result in an adverse health effect. The health risk is affected by several factors, such as the amount, toxicity, and concentration of the contaminant; meteorological conditions; distance from the emission sources to people; the distance between emission sources; the age, health, and lifestyle of the people living or working at a location; and the length of exposure to the toxic air contaminant.

In addition to the thresholds established above for criteria pollutants, the SCAQMD has also defined health risk thresholds as follows:

- Maximum Incremental Cancer Risk: 10 in 1 million at the nearest sensitive receptor or offsite worker;
- Hazard Index (project increment): 1.0 or greater.

Cancer risk represents the probability (in terms of risk per million individuals) that an individual will contract cancer because of exposure to TACs continuously over a period of 70 years for residential receptors, 40 years for worker receptors, or 9 years for students.

For non-cancer health effects, a Hazard Index (HI) that expresses the relationship between exposures from the facility's TAC emissions denotes risk and an "acceptable" level of exposure termed the reference exposure level (REL). It is a measure of the chance that area residences will experience non-cancer health problems.

SECTION 4: REGIONAL ANALYSIS

This section calculates the expected emissions from the construction and operation of the project as a necessary requisite for assessing the regulatory significance of project emissions on a regional level.

4.1 - Short-Term Impacts

Short-term impacts refer to emissions generated during construction because they occur on a short-term basis. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from onsite and offsite activities. Onsite emissions principally consist of exhaust emissions (NO_x , SO_x , CO, VOC, PM_{10} , and $\text{PM}_{2.5}$) from heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil. Additionally, paving operations and application of architectural coatings will release VOC emissions. Offsite emissions are caused by motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM_{10} and $\text{PM}_{2.5}$).

Emissions of NO_x , SO_x , CO, VOC, and PM_{10} during construction were estimated in the 2004 Certified Final EIR. However, emissions of $\text{PM}_{2.5}$ were not estimated. Additionally, the 2004 analysis used the URBEMIS2002 emissions model. The current version is the URBEMIS2007 model. Therefore, all emissions are estimated with the URBEMIS2007 model and compared with SCAQMD significance thresholds.

The 2004 EIR assumed the project would be developed in two phases with full occupancy expected by year 2006. A comparison of the assumptions used in the 2004 analysis with the assumptions for the new project are shown in Table 8. Note that occupancy of Phase 1 is anticipated to occur with construction of Phase 2. Because the assumptions are similar to those shown in Table 8, it is assumed for purposes of this analysis that the same equipment fleet assumed in the 2004 EIR would be used for this project.

Table 8: Comparison of Assumptions

Phase	Assumptions in 2004 EIR ¹	Current Assumptions ²
1	• Retail commercial, restaurants, and service station/mini mart (44,335 sf) • Office buildings (48,000 sf) • 50 single-family homes • 224 apartment units • 1.05-acre community park • Primary access and internal roadway improvements	• Retail and fast food restaurant (36,100 sf) • 448 apartment units • Greenbelt • Primary access and internal roadway improvements

Table 8 (Cont.): Comparison of Assumptions

Phase	Assumptions in 2004 EIR ¹	Current Assumptions ²
2	102-room hotel (51,080 sf) 224 apartment units	- Gas station/mini-mart - Fast food restaurants (4,400 sf) 230 multi-family courtyard villas
Notes: sf = square feet Sources: ¹ 2004 Certified Final EIR, page 5.5-15; ² Table 2 of this report.		

SCAQMD Rule 403 requires that fugitive dust generating activities follow best available control measures (BACMs) to reduce emissions of fugitive dust. These BACMs are accounted for in the Urban Emissions Model (URBEMIS) as “mitigation” because URBEMIS categorizes the BACMs as “mitigation,” even though they are technically not mitigation but are requirements of Rule 403. The BACM and associated measure in URBEMIS are displayed in Table 9. Mitigation Measures AQ-6 and AQ-7 in the 2004 EIR also included several fugitive dust control measures. During the second phase of construction, it was assumed that 5 acres per day would be disturbed.

Table 9: Best Available Control Measures - SCAQMD Rule 403

Best Available Control Measure (BACM) ¹	Associated Measure in URBEMIS ²
Clearing and Grubbing 02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing. 02-2 Stabilize soil during clearing and grubbing activities. 02-3 Stabilize soil immediately after clearing and grubbing activities. Earth Moving Activities 08-1 Pre-apply water to depth of proposed cuts 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction 08-3 Stabilize soils once earth-moving activities are complete	Water exposed surfaces two times per day.
Import/Export of Bulk Materials 09-1 Stabilize material while loading to reduce fugitive dust emissions. 09-2 Maintain at least six inches of freeboard on haul vehicles. 09-3 Stabilize material while transporting to reduce fugitive dust emissions. 09-4 Stabilize material while unloading to reduce fugitive dust emissions. 09-5 Comply with Vehicle Code Section 23114.	Equipment loading/unloading

Table 9 (Cont.): Best Available Control Measures - SCAQMD Rule 403

Best Available Control Measure (BACM) ¹	Associated Measure in URBEMIS ²
Landscaping 10-1 Stabilize soils, materials, slopes Guidance: Apply water to materials to stabilize; maintain materials in a crusted condition; maintain effective cover over materials; stabilize sloping surfaces using soil until vegetation or ground cover can effectively stabilize the slopes; hydroseed prior to rain season.	Replace ground cover in disturbed areas quickly.
Staging Areas 13-1 Stabilize staging areas during use by limiting vehicle speeds to 15 miles per hour.	Reduce speed on unpaved roads to 15 miles per hour.
Traffic Areas for Construction Activities 15-1 Stabilize all off-road traffic and parking areas. 15-2 Stabilize all haul routes. 15-3 Direct construction traffic over established haul routes. Guidance: Apply gravel/paving to all haul routes as soon as possible to all future roadway areas; barriers can be used to ensure vehicles are only used on established parking areas/haul routes.	Haul road dust watering 2 times per day.
Sources: ¹ SCAQMD Rule 403; ² URBEMIS output in Appendix A of this report.	

Unmitigated Short-Term Emissions

Table 10 compares construction-related emissions from the 2004 EIR with the current analysis. The rows beginning with 2004 EIR are obtained from the air quality section of the 2004 EIR and were estimated using URBEMIS2002. The Phase 1 and Phase 2 emissions represent the emissions estimated for this analysis. The differences between the construction emissions estimated in 2004 and the emissions estimated for this analysis are as follows:

1. Construction dates were changed to reflect construction of Phase 1 in 2008 and construction of Phase 2 in 2010;
2. The URBEMIS2007 model was used instead of the URBEMIS2002 model;
3. Compliance with the BACM in SCAQMD Rule 403 is assumed in the new analysis.

Note that although construction may continue through 2011, estimating construction emissions in 2010 provides a worst-case scenario because the URBEMIS model assumes that emissions are higher in earlier years because there is equipment turnover and state regulations that reduce emissions in subsequent years.

The information shown in Table 10 indicates that the SCAQMD regional emission thresholds will be exceeded for the proposed 2009 Alternative Development Plan for VOC and NO_x emissions, which is the same finding as in the 2004 EIR (with mitigation).

Table 10: Short-Term Emissions (Unmitigated)

Phase	Activity	Emissions (pounds per day)					
		VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 1	Grading	44	371	222	<1	26	19
	Building	19	167	108	<1	8	7
	Building, coating	84	167	111	<1	8	7
	Paving	8	48	23	<1	3	3
Maximum Daily Emissions		84	371	222	<1	26	19
Phase 2	Grading	3	25	14	0	9	3
	Building	10	91	55	<1	4	4
	Building, coating	35	92	56	<1	4	4
Maximum Daily Emissions		35	92	56	<1	9	4
2004 EIR - Maximum Daily Emissions Phase 1		327	717	558	<1	131	*
2004 EIR - Maximum Daily Emissions Phase 2		207	265	273	<1	12	*
Significance Threshold		75	100	550	150	150	55
Significant Impact-2004 EIR?		Yes	Yes	Yes	No	No	*
Significant Impact-Current?		Yes	Yes	No	No	No	No
Notes: The maximum daily emissions refer to the maximum emissions that would occur in one day. * PM _{2.5} was not estimated in the 2004 EIR. VOC = volatile organic compounds NO _x = nitrogen oxides CO = carbon monoxide SO _x = sulfur oxides PM ₁₀ and PM _{2.5} = particulate matter Source: Appendix A: URBEMIS Output, of this report.							

Note that the emissions estimated in the 2004 EIR are substantially higher than those estimated for the current analysis using the URBEMIS2007 model. This is primarily because construction equipment is assumed to be less polluting now than in 2004. Additionally, the 2004 analysis did not take into account SCAQMD rules limiting VOC emissions from paint. The 2004 emissions also do not take into account reductions from compliance with SCAQMD Rule 403. PM_{2.5} emissions do not exceed the SCAQMD significance thresholds; therefore, there is no new significant information.

4.2 - Long-Term Impacts

Operational, or long-term, emissions occur over the life of the project. Operational emissions include mobile and area source emissions. Area source emissions are from consumer products, heaters that consume natural gas, gasoline-powered landscape equipment, and architectural coatings (painting). Mobile emissions from motor vehicles are the largest single long-term source of air pollutants from the project.

The 2004 EIR estimated operational emissions using the URBEMIS2002 model. Since that time, the URBEMIS2007 model is being utilized, providing updated emission factors for mobile emission sources. In addition, there is now a PM_{2.5} emissions threshold established by the SCAQMD. Therefore, the operational emissions have been estimated again using the URBEMIS2007 model. This analysis assumes compliance with SCAQMD Rule 445, which prohibits woodburning fireplaces. The residential units that are currently being constructed do not have woodburning fireplaces.

Operational emissions for the current analysis from emission sources generated both onsite and offsite as derived from the URBEMIS2007 model are shown in Table 11. Also shown in the table are emissions during construction of Phase 2. The table indicates that emissions of VOC and NO_x exceed the SCAQMD significance thresholds, also identified as exceeding thresholds in the 2004 EIR.

Table 11: Emissions of Phase 1 Operation with Phase 2 Construction (Unmitigated)

Season	Emission Type	Emissions (pounds per day)					
		VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer	Area	25	5	10	0	<1	<1
	Mobile	41	46	421	<1	57	11
	Total	66	51	431	<1	57	11
Winter	Area	24	7	3	<1	<1	<1
	Mobile	45	56	422	<1	57	11
	Total	69	63	425	<1	57	11
Construction of Phase 2		35	92	56	<1	9	4
Total operational and construction (maximum)		103	155	487	<1	66	15
2004 EIR Analysis*		325	400	1693	<1	124	*
Significance Threshold		55	55	550	150	150	55
Significant Impact – 2004 EIR?		Yes	Yes	Yes	No	No	*
Significant Impact – Current?		Yes	Yes	No	No	No	No
Notes: VOC = volatile organic compounds NO _x = nitrogen oxides CO = carbon monoxide SO _x = sulfur oxides PM ₁₀ and PM _{2.5} = particulate matter * The 2004 EIR analysis did not estimate PM _{2.5} emissions; from Table 4.5-5 of the 2004 EIR. Sources: URBEMIS2007 output, Appendix A of this 2009 Air Quality Analysis Report.							

Emissions at buildout of the proposed 2009 Alternative Development Plan are shown in Table 12. As shown in the table, emissions of VOC, NO_x, and CO exceed the SCAQMD regional significance thresholds. The impacts are the same as identified in the 2004 EIR.

Table 12: Operational Emissions (Buildout, Unmitigated)

Season	Emission Type	Emissions (pounds per day)					
		VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer	Area	38	7	14	0	<1	<1
	Mobile	66	70	639	1	91	18
	Total	104	77	653	1	91	18
Winter	Area	37	11	8	<1	<1	<1
	Mobile	73	84	649	<1	91	18
	Total	110	95	657	0	91	18
2004 EIR Analysis		147	152	1586	2	133	*
Significance Threshold		55	55	550	150	150	55
Significant Impact – 2004 EIR?		Yes	Yes	Yes	No	No	*
Significant Impact – Current?		Yes	Yes	Yes	No	No	No
Notes: VOC = volatile organic compounds NO_x = nitrogen oxides CO = carbon monoxide SO_x = sulfur oxides PM₁₀ and PM_{2.5} = particulate matter Sources: Appendix A: URBEMIS2007 Output of this report.							

SECTION 5: LOCAL ANALYSIS

5.1 - Criteria Pollutant Localized Analysis - Construction

The SCAQMD Governing Board adopted a methodology for calculating localized air quality impacts through localized significance thresholds (LSTs), which is consistent with SCAQMD's Environmental Justice Enhancement 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 state or national ambient air quality standard.

Phase 1 Construction Analysis

Methodology

The evaluation of localized impacts determines the potential of the project to violate any air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. To evaluate localized impacts for construction, an air dispersion model (EPA model, ISCST3) was used to simulate the movement of project-related pollutants through the air and compare the concentration of those pollutants with the localized significance thresholds. The estimated concentrations do not represent actual occurrences, nor do they necessarily predict future levels.

To represent fugitive dust, an area source covering approximately 10 acres was placed on the project in the model, which is the maximum amount of land that would be disturbed per day. The regional analysis was based on approximately 10 acres disturbed per day during Phase 1 of grading. To represent exhaust emission sources, 25 volume sources each 20 meters long were placed onsite. A variable emission rate assumed the emissions would be generated during the hours of 8:00 a.m. to 4:00 pm.

The receptors for the NO_x model run included a fenceline grid with 25-meter spacing and intervals of 20, 50, 100, 200, 500, and 1,000 meters from the project site boundary. For PM₁₀ and PM_{2.5}, a 25-meter spaced fenceline grid 1 meter from the source was used, as the concentrations of PM₁₀ and PM_{2.5} were converted to concentrations from the source of the emissions using a formula suggested by the SCAQMD. For CO, a fenceline grid was utilized with 25-meter spacing with intervals of 20, 50, and 100 meters from the project site boundary because the CO concentrations are greatest near the source.

Combustion produces NO_x, which contains primarily nitric oxide. Nitrogen dioxide is formed in the atmosphere by atmospheric chemical reactions involving nitric oxide, ozone, and reactive hydrocarbons. Health effects are observed from nitrogen dioxide, not nitric oxide; therefore, ambient air quality standards are set for nitrogen dioxide. The concentration of nitrogen dioxide increases as the distance from the source increases, but only to a certain point, since dispersion dilutes the

concentrations. The concentrations of NO_x as estimated by the dispersion model are converted to nitrogen dioxide, based on the receptor's distance from the source.

Results

The onsite grading emissions estimated by URBEMIS are used in this analysis because onsite emissions of all pollutants are greatest during grading activities. The dispersion modeling results at the maximum and nearest sensitive receptor locations are presented in Table 13. As shown in the table, the concentrations do not exceed the LSTs and are, therefore, less than significant.

Table 13: Localized Significance Analysis (Construction)

Location	24-hour PM ₁₀ (µg/m ³)	24-hour PM _{2.5} (µg/m ³)	1-hour NO ₂ (ppm)	1-hour CO (ppm)	8-hour CO (ppm)
Sensitive receptors to the west of the grading activity	10.1	8.6	0.075	1	0.5
Localized Significance Threshold	10.4	10.4	0.08	17	7.1
Exceed Localized Threshold?	No	No	No	No	No
Source: Refer to spreadsheets and model output in Appendix B of this report.					

As shown in 2004 EIR Exhibit 5.5-1, Wind Rose, the primary wind direction is blowing from the west; hence, the wind is blowing away from the residents located to the west of the project. Therefore, the impacts would likely be greatest to the east of the project site. There are no sensitive receptors in the immediate vicinity of the eastern project boundary, however.

Phase 2 Construction Analysis

During Phase 2 of construction, there will be minimal fine grading. It is assumed that 5 acres would be graded per day during fine grading. Therefore, the LST emission analysis using the look-up tables is presented below.

The onsite emissions during construction are compared with the localized significance thresholds and are summarized in Table 14. The onsite emissions were generated by URBEMIS2007, as discussed in the regional analysis. Onsite emissions are from fugitive dust during grading and off-road diesel emissions. As shown in Table 14, unmitigated emissions during grading for the 2009 Alternative Development Plan do not exceed the localized significance thresholds.

Table 14: Localized Significance Analysis (Phase 2 Construction)

Activity	Onsite Unmitigated Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Fine grading	25	12	9	3
Localized Significance Threshold	270	2193	16	9

Table 14 (Cont.): Localized Significance Analysis (Phase 2 Construction)

Activity	Onsite Unmitigated Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Exceed Threshold?	No	No	No	No
Source: Onsite emissions from Appendix A: URBEMIS Output of this report.				

5.2 - Health Risk Assessment

A health risk assessment (HRA) is a guide that helps to determine if current or future exposure to a chemical or substance could affect the health of a population. The State of California Office of Environmental Health Hazard Assessment (OEHHA) develops methods for conducting health risk assessments. As defined under the Air Toxics “Hot Spots” Information and Assessment Act of 1987 (“AB 2588” [Chapter 1252, Statutes of 1987], California Health and Safety Code Section 44306), “A health risk assessment means a detailed comprehensive analysis prepared pursuant to Section 44361 to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure” (OEHHA 1987).

5.2.1 - Methodology

Residential land uses within the project site could potentially be exposed to two primary TACs from nearby sources of TAC emissions. These two TACs are as follows:

- Diesel particulate matter (DPM) from the operation of diesel-powered trucks and support equipment from the operation of the Vulcan Material Company’s facility located to the south of the project;
- Benzene from the operation of a gasoline service station to be located at the northeastern corner of the project.

Exposure to these TACs would have the potential to cause health risks in terms of excess risk of cancer, and chronic and acute non-cancer health effects as discussed below. The most relevant health effects of DPM and benzene are discussed in Table 3.

Cancer Health Risk Assessment Methodology

The cancer risk from DPM and benzene is calculated by multiplying the annual average DPM and benzene concentrations calculated using the Industrial Source Complex (ISC) dispersion model and an inhalation exposure factor, as in Equation 1, below (OEHHA 2003).

$$\text{Cancer Risk} = \text{Dose-inhalation} \times \text{Inhalation cancer potency factor} \quad (\text{EQ-1})$$

Where:

Cancer Risk = Total individual lifetime excess cancer risk defined as the cancer risk a hypothetical individual faces if exposed to carcinogenic emissions from a particular facility continuously, 24 hours/day, for a 70-year lifetime for sensitive receptor or 40-year time period for a worker receptor; this risk is defined as an excess risk because it is above and beyond the background cancer risk to the population; cancer risk is expressed in terms of risk per million exposed individuals.

Inhalation cancer potency factor = 1.1 (milligrams per kilogram per day)⁻¹ for DPM and 0.1 (milligrams per kilogram per day)⁻¹ for benzene; inhalation is the principal exposure pathway for cancer impacts for both DPM and benzene.

$$\text{Dose-inhalation} = C_{\text{air}} \times (\text{DBR} \times \text{EF} \times \text{ED} \times 10^{-6} / \text{AT}) \times 10^6 \quad (\text{EQ-2})$$

Where:

C_{air} = Annual average DPM or benzene concentrations calculated from the ISC model in $\mu\text{g}/\text{m}^3$

DBR = Daily breathing rate

EF = Exposure frequency

ED = Exposure duration

AT = Averaging time period over which the exposure is averaged

Values for the components of the Inhalation Exposure Factor were provided by the SCAQMD (SCAQMD 2005) and are shown in Table 15.

Table 15: Values of the Inhalation Exposure Factor

TAC	Receptor	CP (mg/kg-day) ⁻¹	DBR (liters/kg-day)	EF (days/yr)	ED (yrs)	AT (days)
DPM	Sensitive/ Residential	1.1	302	350	70	25,550
DPM	Offsite Worker	1.1	149	245	40	25,550
Benzene	Sensitive/ Residential	0.1	302	350	70	25,550
Benzene	Offsite Worker	0.1	149	245	40	25,550

Applying Equations 1 and 2 with the above values for the various risk factors, the Cancer Risk for DPM and benzene individually and the total cancer risk are then calculated as follows:

$$\text{Cancer Risk}_{\text{DPM}} = C_{\text{DPM}} \times 318.5 \text{ (risk per million for sensitive receptors)} \quad (\text{EQ-3})$$

$$\text{Cancer Risk}_{\text{Benz}} = C_{\text{Benz}} \times 29.0 \text{ (risk per million for sensitive receptors)} \quad (\text{EQ-4})$$

$$\text{Total Cancer Risk}_{\text{SR}} = \text{Cancer Risk}_{\text{DPM}} + \text{Cancer Risk}_{\text{Benz}} \text{ (risk per million for sensitive receptors)}$$

$$\text{Cancer Risk}_{\text{DPM}} = C_{\text{DPM}} \times 62.9 \text{ (risk per million for worker receptors)} \quad (\text{EQ-5})$$

$$\text{Cancer Risk}_{\text{Benz}} = C_{\text{Benz}} \times 5.7 \text{ (risk per million for worker receptors)} \quad (\text{EQ-6})$$

$$\text{Total Cancer Risk}_{\text{WR}} = \text{Cancer Risk}_{\text{DPM}} + \text{Cancer Risk}_{\text{Benz}} \text{ (risk per million for worker receptors)}$$

Non-Cancer Risk Assessment Methodology for Chronic Non-Cancer Impacts

Exposures to TACs such as DPM and benzene can also cause chronic (long-term) related, non-cancer illnesses such as reproductive effects, respiratory effects, eye sensitivity, immune effects, kidney effects, blood effects, central nervous system, birth defects, or other adverse environmental effects. Risk characterization for non-cancer health risks from DPM and benzene is expressed as a hazard index (HI). The HI is a ratio of the predicted concentration of the project's emissions to a concentration considered acceptable to public health professionals, termed the Reference Exposure Level (REL). A significant risk is defined by the SCAQMD as an HI of 1 or greater. When evaluating chronic non-cancer effects that are due to TAC exposures, a hazard quotient (HQ) is established for each individual TAC as follows and for each target organ¹ affected by the individual TAC:

$$\text{HQ}_i = C_{\text{air}}/\text{REL} \quad (\text{EQ-7})$$

Where:

HQ_i = chronic hazard quotient for each TAC

C_{air} = Annual average concentration of each TAC ($\mu\text{g}/\text{m}^3$)

REL = Chronic Reference Exposure Level ($\mu\text{g}/\text{m}^3$)

To evaluate the potential for adverse non-cancer health effects from simultaneous exposure to multiple TACs such as DPM and benzene, the HQs for all TACs that affect the same target organ are summed yielding a hazard index (HI) as follows:

$$\text{HI}_{\text{to}} = \sum_{\text{to}} \text{HQ}_{\text{tac}} \quad (\text{EQ-8})$$

Where:

¹ A target organ is a biological organ(s) most adversely affected by exposure to a chemical substance and includes the respiratory system, cardiovascular system, eyes, nervous system, hematological system, immune system, reproductive system, developmental system, skin, and endocrine system

HI_{to} = sum of the hazard quotients for all TACs affecting the same target organ

HQ_{tac} = hazard quotient for TAC and target organ

The California OEHHA has assigned a chronic non-cancer REL of $5 \mu\text{g}/\text{m}^3$ for DPM and a chronic non-cancer REL of $60 \mu\text{g}/\text{m}^3$ for benzene (OEHHA 2009). The HQs for TACs that produce effects in the same target organ and tissues result in an HI that reflects possible cumulative hazards. Both DPM and benzene have effects on the respiratory system, which accounts for essentially all of the potential chronic non-cancer hazards from these TACs. Therefore, the only HI calculated was for the respiratory system.

Non-Cancer Risk Assessment Methodology for Acute Non-Cancer Impacts

Estimation of an acute (short-term) non-cancer hazard index is estimated in a similar manner to the long-term (chronic) non-cancer hazard index. Both estimations estimate the hazard index as the ratio of the estimated concentration of a TAC divided by an REL, or in this case, an REL established for acute exposures. Of the two TACs evaluated in this report, only benzene has been assigned an acute REL by the California OEHHA (OEHHA 2009). The value of the benzene REL is $1,300 \mu\text{g}/\text{m}^3$. However, for purposes of the estimation of the acute hazard, the value of the air concentration of benzene as calculated using the ISC air dispersion model is an average over 6 hours, in accordance with the toxic exposure to benzene (OEHHA 2009).

5.2.2 - TAC Emission Estimates

DPM Emissions

The sources of DPM are associated with emissions from (1) diesel truck traffic exhaust, (2) diesel truck idling, and (3) operation of diesel support equipment.

Three potential sources of truck emissions could potentially impact the project's residential land uses:

- Material delivery haul truck and water truck emissions from the operation of the Vulcan Materials Company facility;
- Operational support equipment (wheeled loader) associated with the operation of Vulcan Materials Company facility;
- Gasoline delivery truck emissions servicing the gasoline station to be located at the northeast corner of the project site.

Vulcan Materials Company Emissions

The Vulcan Company operates on a 7 a.m. to 3 p.m. schedule, 5 days per week. The equipment inventory for the daily Vulcan operations is provided below in Table 16.

Table 16: Equipment Inventory for the Vulcan Materials Company Operations

Equipment Type	Number of Trucks	Hours of Operation	Days per Week of Operations
Heavy-heavy Duty Haul Trucks	80 per day	7 a.m. to 3 p.m.	5
Medium-heavy Duty Diesel Water Truck	1		This piece of equipment operates approximately 20 hours/month or an average of 1 hour per day
Support Equipment (Front End Loader)	1		The piece of equipment operates approximately 40 hours/month or an average of 2 hours/day
Source: Vulcan Materials Company, Hutton Development Company (VMCHDC 2004) and verified for continued accuracy in April 2009. Note: Equipment inventory represents worst-case scenario as equipment activity level has been reduced by 20 percent to 25 percent over previous 9 months.			

Support Equipment Emissions

DPM emissions from the support equipment derive from the combustion of fuel to power the equipment. Exhaust emissions from this type of equipment were estimated using the following equation:

$$\text{Exhaust Emissions (lb/day)} = \text{EF} \times \text{BHP} \times \text{LF} \times \text{HR} \times \text{N} \quad (\text{EQ-9})$$

Where:

EF = Emission factor for DPM (lb/bhp-hr)
BHP = Equipment brake horse power (bhp)
LF = Equipment load factor (%)
HR = Equipment operating hours/day
N = number of pieces of equipment

Table 17 provides the relevant information used to estimate DPM emissions from the operation of the Vulcan Materials Company support operations.

Table 17: Vulcan Support Equipment Emission Information

Equipment Type	Fuel	Horse-power	Load Factor Percent	DPM lb/bhp-hr	DPM lb/hr
Front End Loader	Diesel	265 ⁽¹⁾	47 ⁽²⁾	0.00026 ⁽²⁾	0.069
Notes: (¹) Vulcan Materials Company and Hutton Development Company (VMCHDC 2004) (²) CARB In-Use Off-Road Fleet Average (2009 to 2020) (ARB 2007)					

Heavy Duty Truck Emissions

DPM emissions from trucks come from two sources: exhaust emissions while traveling onsite and idling emissions during the loading of product by the haul trucks. The following equations were used to estimate the mobile source exhaust and idling emissions.

$$\frac{\text{Emissions}_{\text{exhaust}} (\text{lbs/day})}{\text{Number of Trips (trips/day)/454 pounds per gram}} = \text{EF}_{\text{exhaust}} (\text{g/VMT}) * \text{Distance (VMT/trip)} * \quad (\text{EQ-10})$$

$$\frac{\text{Emissions}_{\text{idle}} (\text{lbs/day})}{\text{Number of Trips (trip/day)/454 grams per pound}} = \text{EF}_{\text{idle}} (\text{g/hr}) * \text{Idling Time (min/trip)} * \quad (\text{EQ-11})$$

Where:

$\text{Emissions}_{\text{exhaust}} (\text{lbs/day})$ = vehicle exhaust emissions while traveling in (pounds/day)

$\text{Emissions}_{\text{idle}} (\text{g/sec})$ = vehicle emissions during idling in (grams/second)

$\text{EF}_{\text{exhaust}} (\text{g/VMT})$ = vehicle exhaust emission factor (grams/vehicle-miles traveled)

$\text{EF}_{\text{idle}} (\text{g/hr})$ = vehicle idle emission factor in (grams/idle-hour)

Distance (VMT/trip) = distance traveled per trip (vehicle-miles traveled /trip)

The Vulcan facility has the capacity to manufacture approximately 2,000 tons of asphalt per day. The maximum truck traffic total that can be used to transport material each day, assuming a truck capacity of 25 tons/vehicle, is 80 vehicles maximum, which are assumed to be heavy heavy-duty diesel trucks. In addition, a water truck operates periodically for dust suppression. This latter vehicle is assumed to be a medium heavy-duty diesel truck. The expected truck population and operational characteristics are shown in the Table 18.

Table 18: Vulcan Vehicle Inventory and Operational Characteristics

Vehicle Type	Vehicle Class	Vehicle Speed On-site (mi/h)	Vehicle Miles Traveled On-site
Material Haul trucks	Heavy heavy-duty	10	0.5 miles/day/truck 75% of trucks operate during the period 7 a.m. to 12 noon and 25% during the period 12 noon to 3 pm
Water Truck	Medium heavy-duty	10	2 miles/day ⁽¹⁾
Notes: ⁽¹⁾ The water truck is assumed to operate 20 hours/month or an average of 1 hour per day Source: Vulcan Materials Company, Hutton Development Company (VMCHDC 2004)			

For the assessment of health risks to sensitive/residential receptors, the DPM emissions factors derived from the CARB EMFAC2007 model were developed as an average of fleet emission factors from the current year of 2009 to 70 years after opening year (2079), since the health risk assessment assumes an exposure over a 70-year period. Note that since EMFAC does not calculate emission factors beyond the year 2040, the fleet emission factors for 2040 were assumed to remain constant

beyond the year 2040. Table 19 provides a summary of the mobile source DPM emission factors for the sensitive/residential receptor analysis. For worker receptors, DPM emission factors were derived over the 40-year averaging period of 2009 to 2049.

Table 19: DPM Emission Factors

Vehicle Type	70-year Average		40-year Average	
	DPM Exhaust Emission Factor ⁽¹⁾ (g/mi)	DPM Idle Emission Factor ⁽¹⁾ (g/hr)	DPM Exhaust Emission Factor ⁽²⁾ (g/mi)	DPM Idle Emission Factor ⁽²⁾ (g/hr)
Medium-Heavy Duty Truck (MHDT)	0.302	0.818	0.328	0.831
Heavy-Heavy Duty Truck (HHDT)	0.245	0.313	0.364	0.457
Notes: ⁽¹⁾ Emission factors derived from EMFAC2007 mobile source emission model for 2009-2079 time period ⁽²⁾ Emission factors derived from EMFAC2007 mobile source emission model for 2009-2049 time period				

Gasoline delivery trucks also contribute to DPM emissions through exhaust and idling. For purposes of this assessment, it was assumed that the service station would be serviced daily by one heavy-heavy duty diesel delivery truck. The gasoline delivery truck emission factors are the same as those provided in Table 19.

Benzene Emissions

Benzene emissions are associated with the operation of a gasoline service station to be located at the northeast corner of the project site. Benzene emissions were estimated based on the following emission processes:

- Offloading of cargo tank trucks into the storage tanks at the station (loading emissions)
- Gasoline vapors released from the storage tank due to temperature and pressure changes within the storage tank vapor space (breathing emissions)
- Vehicle refueling process (refueling emissions)
- Spillage of fuels during vehicle fueling (spillage emissions)

Emissions from the gasoline service station were estimated using the methods published by the Toxics Committee of the California Air Pollution Control Officers Association (CAPCOA 1997) and are shown in Table 20.

Table 20: Emission Factors for Service Station Benzene Emissions

Operation	Benzene (pounds per 1,000 gallons)
Loading	0.001260
Breathing	0.000075
Refueling	0.000960
Spillage	0.004200

The benzene emission factors were assumed to be constant over the 70-year residential/sensitive and 40-year receptor exposure periods. An annual gasoline throughput of 3.2 million gallons was assumed in the estimation of benzene emissions. This amounts to the delivery of one 8,800-gallon tanker truck each day.

5.2.3 - Air Dispersion Model

An air dispersion model is used to estimate the impacts of emissions at receptor locations downwind of emission sources. The model uses estimates of emissions and meteorological data representative of the project site to estimate ground-level health risk impacts at downwind receptor locations. The air dispersion model used in this assessment was the EPA ISC model (EPA 1995), which is the model approved for use by the SCAQMD for air quality assessments. The air dispersion model assessment was accomplished using meteorological data from the nearby SCAQMD Upland air monitoring station. Model receptors were placed on a grid such that all residential land uses were accounted for. The emission sources accounted for in the health risk assessment are identified in Table 21.

Table 21: Summary of Emission Source Configurations

Emission Source Type	Geometric Configuration	Relevant Assumptions
Diesel Truck Traffic	Line Sources	- Stack release height: 13.6 feet - Vehicle Speed: 10 mph - Length of the line source (distance from the facility entrance on Monte Vista Ave to the asphalt loading areas back to Monte Vista Ave); distance from the Monte Vista Ave entrance to the gasoline offloading area - Vehicle types: heavy duty delivery trucks and light heavy duty diesel water truck - Emission factor: CARB EMFAC2007 - Assumes 75% of delivery truck trips between the hours of 7 a.m. to noon and 25% between the hours of noon to 3 p.m. - Water truck operates 1 hour per day
Diesel Truck Idling	Point Sources located at each facility	- Stack release height: 13.6 feet - Stack release characteristics > Stack diameter: 0.3 feet > Stack velocity: 170 feet/sec > Stack temperature: 200°F

Table 21 (Cont.): Summary of Emission Source Configurations

Emission Source Type	Geometric Configuration	Relevant Assumptions
<i>cont.</i>		• Idle time: 5 minutes per truck per day • Vehicle type: heavy duty delivery trucks and light heavy duty diesel water truck • Emission factor: CARB EMFAC2007 • Assumes 75% of delivery truck trips between the hours of 7 a.m. to noon and 25% between the hours of noon to 3 p.m. • Water truck operates 1 hour per day
Diesel Support Equipment	Volume Source	• Front end loader • Operates 2 hours/day
Gasoline Service Station	Point sources for loading and breathing losses; volume sources for refueling and spillage losses	• Emission factors and stack parameters derived from CAPCOA 1997 • Fuel throughput: 3.2 million gallons/year • Assumes 80% of emissions from 6 a.m. to 8 p.m. and 20% during the remainder of the day

5.2.4 - Results of the Health Risk Assessment

The results of the health risk assessment for cancer impacts are provided in Table 22 and includes cancer risk impacts from both DPM and benzene emissions.

Table 22: Cancer Risk Estimates (Unmitigated)

Location	Maximum Lifetime Cancer Risk ⁽¹⁾ (risk per million)	Significance Threshold (risk per million)	Exceeds Significance Threshold?
Maximum Impacted Sensitive Receptor ⁽²⁾	8.9	10	Yes
Maximum Impacted Worker Receptor ⁽³⁾	2.1	10	No
Notes: ⁽¹⁾ Includes impacts from diesel particulate matter and benzene emissions ⁽²⁾ The maximum impacted sensitive receptor is approximately located in the residential areas along the southern boundary of the project. ⁽³⁾ The maximum impacted worker receptor is located along the southern boundary of the project Source: Health Risk Assessment Model output, contained in Appendix C of this report.			

As noted in the above table, the cancer risk at the maximum impacted sensitive receptor would not exceed the SCAQMD cancer risk significance threshold of 10 in 1 million and therefore does not represent a significant impact.

For non-cancer health impacts, the largest chronic non-cancer hazard index was calculated to be 0.006, and the largest acute non-cancer hazard index was calculated to be 0.002, both of which are less than the SCAQMD non-cancer hazard index significance level of 1.0.

5.3 - Carbon Monoxide Hotspot Analysis

A carbon monoxide (CO) hotspot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. To provide a worst-case scenario, CO concentrations are estimated at project-impacted intersections, where the concentrations would be the greatest. Intersections with the highest potential for CO hotspots were selected based on their average delay, traffic volumes (obtained from the October 2008 Traffic Generation Assessment prepared by LLG for the 2009 Alternative Development Plan), and proximity to sensitive receptors. This analysis follows guidelines recommended by the CO Protocol (UCD 1997) and the SCAQMD. According to the CO Protocol, intersections with Level of Service (LOS) E or F require detailed analysis. In addition, intersections that operate under LOS D conditions in areas that experience meteorological conditions favorable to CO accumulation require a detailed analysis. The SCAQMD recommends that a local CO hotspot analysis be conducted if the intersection meets one of the following criteria: (1) the intersection is at LOS D or worse and where the project increases the volume to capacity ratio by 2 percent, or (2) the project decreases LOS at an intersection from C to D.

The 2004 EIR assessed CO hotspots at project-impacted intersections. No significant impacts were identified. The Traffic Generation Assessment for the project (LLG 2008) indicates that the results and findings of the traffic analysis included in the previous analyses are still valid. The traffic impact potential associated with the change from single-family land uses to multi-family residential land uses under the 2009 Alternative Development Plan will be insignificant and negligible. Therefore, a revision of the CO hotspot analysis is not necessary.

SECTION 6: IMPACT ANALYSIS

This section contains an analysis of the criteria in the CEQA Guidelines regarding air quality as well as an assessment of conformity of the 2009 Alternative Development Plan with the General Plan.

6.1 - Conformance with Air Quality Management Plan (AQMP)

The CEQA Guidelines indicate that a significant impact would occur if the project would conflict with or obstruct implementation of the applicable air quality plan. This assessment will use the following criteria for determining project consistency with the current AQMP, as discussed below.

According to the 1993 SCAQMD Handbook, there are two criteria to use to determine if a project would conflict with the AQMP. One of the criteria is that a project would conflict with the AQMP if it will exceed the assumptions in the AQMP in 2010 or increments based on the year of project buildout and phase. The Handbook indicates that key assumptions to use in this analysis are population number and location and a regional housing needs assessment. The parcel-based land use and growth assumptions and inputs used in the Regional Transportation Model run by the Southern California Association of Governments (SCAG) that generated the mobile inventory used by the SCAQMD for AQMP are not available. Therefore, this indicator is not applicable.

Project's Contribution to Air Quality Violations

According to the SCAQMD (1993), the project is consistent with the AQMP if the 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 timely attainment of air quality standards or the interim emission reductions specified in the AQMP (SCAQMD 1993, page 12-3).

If a project's emissions exceed the SCAQMD regional thresholds for NO_x, VOC, PM₁₀, or PM_{2.5}, it follows that the emissions could cumulatively contribute to an exceedance of a pollutant for which the basin is in nonattainment (ozone, PM₁₀, PM_{2.5}) at a monitoring station in the basin. An exceedance of a nonattainment pollutant at a monitoring station would not be consistent with the goals of the AQMP to achieve attainment of pollutants.

The 2009 project would exceed the regional significance threshold for VOC and NO_x during construction and operation. This means that project emissions of VOC and NO_x could combine with other sources and create ozone. This could result in an ozone exceedance at a nearby monitoring station. The air basin in which the project is located is in nonattainment for ozone; therefore, the project would not be consistent with the AQMP. The project does not meet this criterion.

Control Measures

The next criterion is compliance with the control measures in the 2003 and the 2007 AQMP. The 2007 AQMP has been adopted by the SCAQMD and Air Resources Board (ARB), but it has not been

adopted by the U.S. Environmental Protection Agency (EPA). Therefore, the two plans are discussed separately herein.

The 2003 AQMP contains a number of land use and transportation control measures including the following: the District's Stationary and Mobile Source Control Measures, State Control Measures proposed by ARB, and Transportation Control Measures provided by SCAG (AQMP 2003, page 4-3). ARB's strategy for reducing mobile source emissions include the following approaches: new engine standards, reduce emissions from in-use fleet, require clean fuels, support alternative fuels and reduce petroleum dependency, work with EPA to reduce emissions from national and state sources, and pursue long-term advanced technology measures (AQMP 2003, page 4-25). Transportation control measures provided by SCAG include those contained in the Regional Transportation Plans (RTP), the most current version of which is the 2004 RTP (SCAG 2004). The RTP has control measures to reduce emissions from on-road sources by incorporating strategies such as high occupancy vehicle interventions, transit, and information-based technology interventions (AQMP 2003, page 4-19). The measures implemented by ARB and SCAG affect the project indirectly by regulating the vehicles that the residents may use and regulating public transportation. The project indirectly will comply with the control measures set by ARB and SCAG.

The focus of the 2007 AQMP is to demonstrate attainment of the federal $PM_{2.5}$ ambient air quality standard by 2015 and the federal 8-hour ozone standard by 2024, while making expeditious progress toward attainment of state standards. The proposed strategy, however, does not attain the previous federal 1-hour ozone standard by 2010 as previously required prior to the recent change in federal regulations. This is to be accomplished by building upon improvements from the previous plans and incorporating all feasible control measures while balancing costs and socioeconomic impacts. The 2007 AQMP indicates that the majority of time, $PM_{2.5}$ is formed secondarily. Therefore, instead of reducing fugitive dust, the strategy for reducing $PM_{2.5}$ focuses on reducing precursor emissions of SO_x , directly emitted $PM_{2.5}$, NO_x , and VOC.

The Final 2007 AQMP control measures consist of four components. The first component is SCAQMD's Stationary and Mobile Source Control Measures. The Final 2007 AQMP includes 30 short-term and mid-term stationary and seven mobile source control measures for SCAQMD implementation. A complete listing of the measures is in the 2007 AQMP and includes measures such as VOC reductions from gasoline transfer and dispensing facilities, further NO_x reductions from space heaters, localized control program for PM emission hot spots, urban heat island, energy efficiency and conservation, etc. Some of the measures will become new rules and some will be amendments to existing rules. When the rules pass, the project inhabitants will follow the applicable rules.

The second component is ARB's Proposed State Strategy, which includes short- and mid-term control measures aimed at reducing emissions from sources that are primarily under state jurisdiction, including on-road and off-road mobile sources, and consumer products. These measures are required

in order to achieve the remaining emission reductions necessary for PM_{2.5} attainment. ARB's strategy includes measures such as improvements to California's Smog Check Program, expanded passenger vehicle retirement, cleaner in-use heavy-duty trucks, reductions from port-related sources, cleaner off-road equipment, evaporative and exhaust strategies, pesticide strategies, etc. When these measures are implemented by the ARB, the project would be required to follow them.

The third component is SCAQMD Staff's Proposed Policy Options to Supplement ARB's Control Strategy. SCAQMD staff believe that a combination of regulatory actions and public funding is the most effective means of achieving emission reductions. As such, the 2007 Final AQMP proposes three policy options for the decision makers to consider in achieving additional reductions. The first option is to incorporate the SCAQMD-proposed, additional control measures as a menu of selections, further reducing emissions from sources primarily under state and federal jurisdiction. The second option is to have the State fulfill its NO_x emission reduction obligations under the 2003 AQMP by 2010 for its short-term defined control measures, plus additional reductions needed to meet the NO_x emission target between 2010 and 2014. The third option is based on the same rate of progress under Policy Option 1, but it relies heavily on public funding assistance to achieve the needed NO_x reductions via accelerated fleet turnover to post-2010 on-road emission standards or the cleanest off-road engine standards in effect today or after 2010. This strategy does not apply to the project.

The fourth component consists of Regional Transportation Strategy and Control Measures provided by SCAG. Transportation plans within the basin are statutorily required to conform to air quality plans in the region, as established by the 1990 Federal Clean Air Act and reinforced by various other Acts. The region must demonstrate that its transportation plans and programs conform to the mandate to meet the national ambient air quality standards in a timely manner. The long-term transportation planning requirements for emission reductions from on-road mobile sources within the basin are met by SCAG's Regional Transportation Plan (RTP), which is developed every 4 years with a 20-year planning horizon. The biennial Regional Transportation Improvement Program (RTIP) requires that the short-term implementation requirements of the Transportation Conformity Rule be met by SCAG. The first 2 years of the program are fiscally constrained and demonstrate timely implementation of a special category of transportation projects called Transportation Control Measures (TCMs). In general, TCMs are those projects that provide emission reductions from on-road mobile sources, based on changes in the patterns and modes by which the regional transportation system is used. Strategies are grouped into three categories: high occupancy vehicle strategy, transit and systems management, and information-based technology (traveling during a less congested time of day). SCAG approved the transportation measures in the RTP, which have been included in the region's air quality plans. The TCMs will be implemented and will subsequently reduce emissions in the basin. The inhabitants of the project who will use the transportation system may experience less congestion, due to the implementation of the TCMs.

The 2009 Alternative Development Plan will comply with all of the SCAQMD's applicable rules and regulations. Therefore, the project complies with this criterion.

Level of Significance Before Mitigation

Potentially significant impact - no substantial change from previous analysis.

Mitigation Measures

Mitigation Measures AQ-2 through AQ-10 are required.

Level of Significance After Mitigation

Significant and unavoidable - no substantial change from previous analysis.

6.2 - Potential for Air Quality Standard Violation

The CEQA Guidelines indicate that a significant impact would occur if the project would violate any air quality standard or contribute substantially to an existing or projected air quality violation. The 2004 EIR did not address the potential for air quality standard violation.

The South Coast Air Basin, the geographical area in which the project is located, is in nonattainment for PM₁₀, PM_{2.5}, and ozone. Levels of PM₁₀ and PM_{2.5} are locally high enough that contributions from new sources may add to the concentrations of those pollutants and contribute to a projected air quality violation. Although background levels of ozone are high in the basin, the project alone (without other cumulative sources) would not contribute substantially to a projected air quality violation of ozone. Project emissions of VOC and NO_x (ozone precursors) and their cumulative contribution to ozone concentrations are discussed in Section 6.3, Cumulative Impacts, below.

Two criteria are used to assess the significance of this impact: (1) the localized construction analysis and (2) the CO hotspot analysis.

The localized significance thresholds (LSTs) are specific to each source receptor area (SCAQMD 2003a). If the project results in emissions that do not exceed the LSTs, it follows that those emissions would not cause or contribute to a local exceedance of the applicable ambient air quality standards. The localized construction analysis contained in Section 5, Local Analysis demonstrates that without mitigation, the 2009 Alternative Development Plan would not exceed the LSTs for CO, nitrogen dioxide, PM₁₀, or PM_{2.5}. Therefore, according to this criterion, the air pollutant emissions during construction would be less than significant and would not exceed the ambient air quality standards for those pollutants.

A CO hotspot analysis is the appropriate tool to determine if project emissions of CO during operation would exceed ambient air quality standards. The main source of air pollutant emissions during operation are from offsite motor vehicles traveling on the roads surrounding the project site. The CO hotspot analysis in the 2004 EIR demonstrated that project emissions of CO during operation

along with emissions from other foreseeable projects in the area would not result in an exceedance of the most stringent ambient air quality standards for CO. Therefore, according to this criterion, air pollutant emissions during operation would result in a less than significant impact.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant.

6.3 - Cumulative Impacts

According to the checklist in the CEQA Guidelines, a project would create a significant impact if it would “result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).”

Section 15130(b) of the CEQA Guidelines 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 areawide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines 15130(b), the analysis of cumulative impacts for the 2009 Alternative Development Plan incorporates a summary of projections. The following tiered approach is used to assess cumulative air quality impacts.

1. Consistency with the regional thresholds for nonattainment pollutants
2. Project consistency with existing air quality plans
3. Assessment of the cumulative health effects of the pollutants
4. The potential of project greenhouse gas emissions to increase cumulative ozone concentrations

The SCAQMD 1993 Handbook suggests three voluntary approaches to determining cumulative significance. The first approach is a 1-percent-per-year (or 18 percent over 18 years to the year 2010)

reduction in project emissions of VOC, NO_x, CO, PM₁₀ and SO_x. This approach is not straightforward and operational reductions are not easy to quantify. The second approach relies on SCAQMD Regulation XV, which was repealed in 1995 and is therefore not applicable. The third approach is to reduce the rate of growth in vehicle miles traveled (VMT) and trips. In this approach, the rate of growth in VMT and trips “should be held to the rate of population or household growth.” Data that was used by SCAG in the AQMP should be used in this approach; however, that data is not available. Therefore, the approaches in the 1993 SCAQMD Handbook are not used.

Regional Analysis

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically been over the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The South Coast Air Basin is in nonattainment for PM₁₀, PM_{2.5}, and ozone. Therefore, if the 2009 Alternative Development Plan exceeds the regional thresholds for PM₁₀, or PM_{2.5}, then it contributes to a cumulatively considerable impact for those pollutants. Additionally, if the project exceeds the regional threshold for NO_x or VOC, then it follows that the project would contribute to a cumulatively considerable impact for ozone.

The regional significance analysis of construction and operational emissions demonstrated that emissions of VOC and NO_x would be over the SCAQMD regional significance thresholds. VOC and NO_x are ozone precursor pollutants. Therefore, according to this criterion, the project results in a significant cumulative impact.

In summary, without mitigation, the project contributes to a cumulatively significant regional impact to the budget of ozone.

Plan Approach

The geographic scope for cumulative criteria pollution from air quality impacts is the South Coast Air Basin, because that is the area in which the air pollutants generated by the sources within the basin circulate and are often trapped. The SCAQMD is required to prepare and maintain an AQMP and a State Implementation Plan (SIP) to document the strategies and measures to be undertaken to reach attainment of ambient air quality standards. While the SCAQMD does not have direct authority over land use decisions, it is recognized that changes in land use and circulation planning are necessary to maintain clean air. The SCAQMD evaluated the entire basin when it developed the AQMP.

According to the analysis contained in Section 6.1, the project is not consistent with the most recent AQMP without mitigation. Therefore, the project presents a significant impact according to this criterion.

Cumulative Health Impacts

The basin is in nonattainment for ozone, PM₁₀, and PM_{2.5}, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (e.g., elderly, children, and the sick). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population will experience health effects that were described in Table 3. However, the health effects are a factor of the dose-response curve. Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

The regional analysis of construction and operational emissions indicates that without mitigation, the 2009 alternative Development Plan would exceed the SCAQMD regional significance thresholds for VOC and NO_x (ozone precursors). Because ozone is a secondary pollutant (it is not emitted directly but is formed by chemical reactions in the air), it can be formed miles downwind of the project site. Project emissions of VOC and NO_x may contribute to the background concentration of ozone and cumulatively cause health effects. Health impacts may or may not include the following:

- (a) Pulmonary function decrements and localized lung edema in humans and animals
- (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals
- (c) Increased mortality risk
- (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans

Short-term exposure can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (SCAQMD AQMP 2003). Children who live in high ozone communities and who participate in multiple sports have been observed to have a higher asthma risk. This is a significant cumulative health impact associated with ground-level ozone concentrations.

Level of Significance Before Mitigation

Potentially significant impact - no substantial change from previous analysis.

Mitigation Measures

Mitigation Measures AQ-2 through AQ-10 are required.

Level of Significance After Mitigation

Significant and unavoidable - no substantial change from previous analysis.

6.4 - Expose Sensitive Receptors to Substantial Pollutant Concentrations

The CEQA Guidelines indicate that a significant impact would occur if the project would expose sensitive receptors to substantial pollutant concentrations.

Construction

The localized construction analysis uses thresholds that represent the maximum emissions for a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed from the ambient concentrations of that pollutant for each source receptor area (SCAQMD 2003a). The thresholds are also based on the location of the sensitive receptors. If the project results in emissions under those thresholds, it follows that the project would not cause or contribute to an exceedance of the standard. If the standards are not exceeded at the sensitive receptor locations, it follows that the receptors would not be exposed to substantial pollutant concentrations.

The localized construction analysis demonstrated that without mitigation, the project would not exceed the localized thresholds for CO, nitrogen dioxide, PM₁₀, or PM_{2.5}. Therefore, during construction, the project would not expose sensitive receptors to substantial pollutant concentrations of CO, nitrogen dioxide, PM₁₀, or PM_{2.5}.

The construction equipment would emit diesel particulate matter, which is a carcinogen. However, the diesel particulate matter emissions are short-term in nature. Determination of risk from diesel particulate matter is considered over a 70-year exposure time. Therefore, considering the dispersion of the emissions and the short time frame, exposure to diesel particulate matter is anticipated to be less than significant.

Operation

Criteria Pollutants

Emissions of NO_x and VOC (ozone precursors) during construction and operation from only the project would not expose sensitive receptors to substantial pollutant concentrations. (See the Cumulative Impact analysis for an assessment of the cumulative contribution of ozone precursors.)

A CO hotspot analysis is the appropriate tool to determine if project emissions of CO during operation would exceed ambient air quality standards. The main source of air pollutant emissions during operation are from offsite motor vehicles traveling on the roads surrounding the project. The CO hotspot analysis conducted as part of the 2004 EIR demonstrated that emissions of CO during operation would not result in an exceedance of the most stringent ambient air quality standards for

CO. Therefore, according to this criterion, air pollutant emissions during operation would result in a less than significant impact.

Indoor Air Pollution

The indoor air pollutants that may be associated with operation of the project include VOCs from new carpets and fresh paints, mold spores, radon, cigarette smoke, and combustion sources. The air pollutants associated with the construction of the project include VOCs from carpets and paints, and radon.

VOCs from new carpets and new paint are temporary impacts that can be reduced by proper ventilation after installation. The health impact from these sources is anticipated to be less than significant.

Radon is a naturally occurring colorless, odorless, and tasteless radioactive gas originating from the radioactive decay of uranium in rock, soil, and groundwater. Radon gets inside a building primarily from soil under homes. It is a known human lung carcinogen and is the largest source of radiation exposure to the public. Most is rapidly exhaled; however, the inhaled decay products can deposit into the lung where they irradiate sensitive airway cells, increasing the risk of lung cancer (EPA 2003b).

In general, the method and speed of radon's movement through soil is controlled by three conditions: the amount of water present in the pore space (the soil moisture content), the percentage of pore space in the soil (the porosity), and the permeability of the pore spaces that determines the soil's ability to transmit water and air. Therefore, radon moves more rapidly through permeable soils such as coarse sand and gravel, similar to those in Upland.

The distance that radon moves before most of it decays is less than 1 inch in water-saturated rocks or soils, but it can be more than 6 feet, and sometimes tens of feet, through dry rocks or soils. Even though Upland has no "real" source of uranium to produce radon gas, the permeability of the dry gravelly soils permits high indoor radon to occur.

Maps for southern Los Angeles County (CDC 2005) show Claremont with a low potential (under 4 picocuries) for radon. Upland and Claremont have similar gravelly soil geology; therefore, it can be interpolated that the project area would also have a low potential.

Indoor radon tests in the project's zip code, 91786, indicate that 2 out of 22 of the samples (or 9 percent of the samples) contained radon concentrations in excess of the EPA threshold of 4 picoCuries per liter (pCi/l) (CDPH 2008). The California Department of Public Health classifies zip codes with indoor radon concentrations greater than 4.0 pCi/l as follows: 0 to 6 percent—low potential; 7 to 19 percent—moderate potential; 20 percent or more—high potential. Thus, based on these samples, the project area could have a moderate potential for radon concentrations over 4.0 pCi/l. These samples are taken inside buildings, not in the open, as radon is easily dispersed.

Indoor radon concentrations are of most concern in residential structures with basements because such structures are of lower pressure than surrounding outdoor conditions and, therefore, have the ability to suction radon indoors. As part of normal construction, the project will be installing ventilation fans that bring indoor air outdoors. Radon is removed from a building through ventilation. Therefore, the fans and the windows will help to circulate the air and to prevent indoor radon concentrations from reaching significant levels.

Slab-on-grade commercial structures have a much lower ability to suction radon indoors because they are much larger and are not below grade, which substantially reduces the pressure differential between indoors and outdoors. The retail and commercial portions of the project would employ HVAC systems that would circulate air through the structure during operational hours. The system would be sufficient to disperse indoor radon concentrations, which would minimize the risk to human health.

Toxic Pollutants

The ARB Air Quality and Land Use Handbook contains recommendations that will “help keep California’s children and other vulnerable populations out of harm’s way with respect to nearby sources of air pollution” (ARB 2005a), including recommendations for distances between sensitive receptors and certain land uses.

ARB recommends avoiding siting new sensitive land uses within 1,000 feet of a distribution center. The closest existing or proposed distribution center to the project is located more than 1,000 feet east of the project.

ARB recommends avoiding new sensitive land uses within 300 feet of a large fueling station (a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities. There will be a fueling station onsite. The Health Risk Assessment contained in Section 5.2 of this report indicates that impacts to onsite sensitive receptors from the nearby Vulcan plant and the fueling station would be less than significant.

ARB recommends avoiding siting new sensitive land uses within 300 feet of any dry cleaning operation that uses perchloroethylene. For operations with two or more machines, ARB recommends a buffer of 500 feet. For operations with three or more machines, ARB recommends consultation with the local air district. There are no dry cleaning operations within 500 feet of the project.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

Mitigation Measure AQ-1 is no longer required.

Level of Significance After Mitigation

Less than significant.

6.5 - Odors

The CEQA Guidelines indicate that a significant impact would occur if the project would create objectionable odors affecting a substantial number of people.

Background Information

Individual responses to odors are highly variable and can result in a variety of effects. Generally, the impact of an odor results from a variety of interacting factors such as frequency, duration, offensiveness, location, and sensory perception. The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works or visits; the type of activity they are engaged in; and the sensitivity of the impacted receptor.

Sensory perception has four major components: detectability, intensity, character, and hedonic tone. The detection (or threshold) of an odor is based on a panel of responses to the odor. There are two types of thresholds: the odor detection threshold and the recognition threshold. The detection threshold is the lowest concentration of an odor that will elicit a response in a percentage of the population, typically presented as the mean (or 50 percent of the population), but is sometimes indicated as 100 percent or 10 percent. The recognition threshold is the minimum concentration that is recognized as having a characteristic odor quality multiplied by x percent (usually 50 percent) of the population (AIHA 1989). The intensity refers to the perceived strength of the odor. The odor character is what the substance smells like. The hedonic tone is a judgment of the pleasantness or unpleasantness of the odor. The hedonic tone varies according to subjective experience, frequency, odor character, odor intensity, and duration.

Odor is typically a warning system that prevents animals and humans from consuming spoiled food or toxic materials. Odor-related symptoms reported in a number of studies include nervousness, headache, sleeplessness, fatigue, dizziness, nausea, loss of appetite, stomach ache, sinus congestion, eye irritation, nose irritation, runny nose, sore throat, cough, and asthma exacerbation (SCAQMD 2007a).

The SCAQMD's role is to protect the public's health from air pollution by overseeing and enforcing regulations (SCAQMD 2007a). The SCAQMD's resolution activity for odor compliance is mandated under California Health & Safety Code Section 41700, and falls under AQMD Rule 402. This rule on Public Nuisance Regulation states: "A person shall not discharge from any source whatsoever such

quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.”

The SCAQMD indicates that the number of overall complaints has declined over the last 5 years. Over the last 4 years, odor complaints make up 50 to 55 percent of the total nuisance complaints. Over the past decade, odors from paint and coating operations have decreased from 27 to 7 percent, and odors from refuse collection stations have increased from 9 to 34 percent (SCAQMD 2007a).

Project Analysis

Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The project does not contain land uses typically associated with emitting objectionable odors.

Diesel exhaust and VOCs will be emitted during construction of the project, which are objectionable to some; however, emissions will disperse rapidly from the project site and, therefore, should not reach a level to induce a negative response.

Level of Significance Before Mitigation

Less than significant.

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Appendix A: URBEMIS Output

Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Mitigated Emissions (Pounds/Day)

File Name: C:\MBA\Client\35450001 College Park\Air Quality\College Park Construction.urb924

Project Name: College Park - Construction of Phase 1

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Mitigated)

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
Time Slice 1/1/2008-2/28/2008 Active Days: 43	44.39	<u>371.12</u>	<u>221.81</u>	0.01	<u>6.88</u>	<u>18.67</u>	<u>25.54</u>	<u>1.44</u>	<u>17.17</u>	<u>18.62</u>	<u>29,399.97</u>
Mass Grading 01/01/2008-02/28/2008	44.39	371.12	221.81	0.01	6.88	18.67	25.54	1.44	17.17	18.62	29,399.97
Mass Grading Dust	0.00	0.00	0.00	0.00	6.82	0.00	6.82	1.42	0.00	1.42	0.00
Mass Grading Off Road Diesel	44.01	370.42	210.29	0.00	0.00	18.64	18.64	0.00	17.14	17.14	28,217.35
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.38	0.70	11.52	0.01	0.06	0.03	0.09	0.02	0.03	0.05	1,182.62
Time Slice 3/3/2008-9/12/2008 Active Days: 140	18.67	166.98	108.29	0.07	0.28	8.03	8.31	0.10	7.37	7.47	22,039.79
Building 03/03/2008-11/28/2008	18.67	166.98	108.29	0.07	0.28	8.03	8.31	0.10	7.37	7.47	22,039.79
Building Off Road Diesel	16.12	150.63	55.86	0.00	0.00	7.31	7.31	0.00	6.73	6.73	15,556.62
Building Vendor Trips	1.17	13.79	10.52	0.02	0.08	0.60	0.68	0.03	0.55	0.58	2,180.13
Building Worker Trips	1.38	2.56	41.91	0.05	0.20	0.11	0.31	0.07	0.09	0.17	4,303.04

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Time Slice 9/15/2008-11/28/2008	<u>83.70</u>	167.17	111.32	<u>0.07</u>	0.29	8.03	8.33	0.10	7.38	7.49	22,351.11
Active Days: 55											
Building 03/03/2008-11/28/2008	18.67	166.98	108.29	0.07	0.28	8.03	8.31	0.10	7.37	7.47	22,039.79
Building Off Road Diesel	16.12	150.63	55.86	0.00	0.00	7.31	7.31	0.00	6.73	6.73	15,556.62
Building Vendor Trips	1.17	13.79	10.52	0.02	0.08	0.60	0.68	0.03	0.55	0.58	2,180.13
Building Worker Trips	1.38	2.56	41.91	0.05	0.20	0.11	0.31	0.07	0.09	0.17	4,303.04
Coating 09/15/2008-11/28/2008	65.03	0.19	3.03	0.00	0.01	0.01	0.02	0.01	0.01	0.01	311.32
Architectural Coating	64.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.10	0.19	3.03	0.00	0.01	0.01	0.02	0.01	0.01	0.01	311.32
Time Slice 12/1/2008-12/26/2008	7.54	48.41	22.79	0.01	0.03	2.92	2.95	0.01	2.69	2.70	4,406.45
Active Days: 20											
Asphalt 12/01/2008-12/26/2008	7.54	48.41	22.79	0.01	0.03	2.92	2.95	0.01	2.69	2.70	4,406.45
Paving Off-Gas	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	5.74	41.98	18.50	0.00	0.00	2.64	2.64	0.00	2.43	2.43	3,484.10
Paving On Road Diesel	0.47	6.32	2.47	0.01	0.02	0.28	0.30	0.01	0.25	0.26	735.62
Paving Worker Trips	0.06	0.11	1.82	0.00	0.01	0.00	0.01	0.00	0.00	0.01	186.73

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 1/1/2008 - 2/28/2008 - Default Mass Site Grading/Excavation

Description

For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stabilizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

Phase Assumptions

Phase: Mass Grading 1/1/2008 - 2/28/2008 - Default Mass Site Grading/Excavation Description

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Total Acres Disturbed: 38.69

Maximum Daily Acreage Disturbed: 9.67

Fugitive Dust Level of Detail: Default

10 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

19 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

19 Tractors/Loaders/Backhoes (79 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Paving 12/1/2008 - 12/26/2008 - Default Paving Description

Acres to be Paved: 9.67

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 8 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day

Phase: Building Construction 3/3/2008 - 11/28/2008 - Default Building Construction Description

Off-Road Equipment:

8 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

17 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day

8 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day

Phase: Architectural Coating 9/15/2008 - 11/28/2008 - Default Architectural Coating Description

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

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

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

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

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

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

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Mitigated Emissions (Pounds/Day)

File Name: C:\MBA\Client\35450001 College Park\College Park Construction Phase 2.urb924

Project Name: College Park - Construction of Phase 2

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Mitigated)

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
Time Slice 1/4/2010-2/26/2010 Active Days: 40	3.04	25.05	13.51	0.00	7.89	1.25	9.14	1.65	1.15	2.80	2,371.71
Fine Grading 01/04/2010-02/26/2010	3.04	25.05	13.51	0.00	7.89	1.25	9.14	1.65	1.15	2.80	2,371.71
Fine Grading Dust	0.00	0.00	0.00	0.00	7.88	0.00	7.88	1.65	0.00	1.65	0.00
Fine Grading Off Road Diesel	3.00	24.99	12.46	0.00	0.00	1.25	1.25	0.00	1.15	1.15	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39
Time Slice 3/3/2010-8/31/2010 Active Days: 130	10.12	91.49	54.52	0.03	0.14	4.28	4.42	0.05	3.93	3.98	13,192.81
Building 03/03/2010-11/28/2010	10.12	91.49	54.52	0.03	0.14	4.28	4.42	0.05	3.93	3.98	13,192.81
Building Off Road Diesel	9.05	84.53	32.23	0.00	0.00	3.98	3.98	0.00	3.66	3.66	9,997.40
Building Vendor Trips	0.51	5.92	4.57	0.01	0.04	0.25	0.29	0.01	0.23	0.24	1,092.44
Building Worker Trips	0.56	1.05	17.72	0.02	0.10	0.06	0.16	0.04	0.05	0.08	2,102.97

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Time Slice 9/1/2010-11/26/2010	<u>34.79</u>	<u>91.56</u>	<u>55.64</u>	<u>0.03</u>	0.14	<u>4.28</u>	4.43	0.05	<u>3.94</u>	<u>3.99</u>	<u>13,325.75</u>
Active Days: 63											
Building 03/03/2010-11/28/2010	10.12	91.49	54.52	0.03	0.14	4.28	4.42	0.05	3.93	3.98	13,192.81
Building Off Road Diesel	9.05	84.53	32.23	0.00	0.00	3.98	3.98	0.00	3.66	3.66	9,997.40
Building Vendor Trips	0.51	5.92	4.57	0.01	0.04	0.25	0.29	0.01	0.23	0.24	1,092.44
Building Worker Trips	0.56	1.05	17.72	0.02	0.10	0.06	0.16	0.04	0.05	0.08	2,102.97
Coating 09/01/2010-11/28/2010	24.67	0.07	1.12	0.00	0.01	0.00	0.01	0.00	0.00	0.01	132.95
Architectural Coating	24.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.04	0.07	1.12	0.00	0.01	0.00	0.01	0.00	0.00	0.01	132.95

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/4/2010 - 2/26/2010 - Fine grading

For Soil Stabilizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stabilizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

Phase Assumptions

Phase: Fine Grading 1/4/2010 - 2/26/2010 - Fine grading

Total Acres Disturbed: 10

Maximum Daily Acreage Disturbed: 5

Fugitive Dust Level of Detail: Default

10 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

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

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

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

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

Phase: Building Construction 3/3/2010 - 11/28/2010 - Building Phase 2

Off-Road Equipment:

5 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

11 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day

5 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day

Phase: Architectural Coating 9/1/2010 - 11/28/2010 - Default Architectural Coating Description

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

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

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

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

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

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

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\MBA\Client\35450001 College Park\College Park Phase 1 Operation New.urb924

Project Name: College Park - Operation Phase 1

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	24.92	4.81	9.87	0.00	0.04	0.04	6,007.13

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	41.26	46.39	420.83	0.36	57.49	11.28	35,025.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	66.18	51.20	430.70	0.36	57.53	11.32	41,032.79

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.36	4.71	2.14	0.00	0.01	0.01	5,993.09
Hearth - No Summer Emissions							
Landscape	0.61	0.10	7.73	0.00	0.03	0.03	14.04
Consumer Products	22.98						
Architectural Coatings	0.97						
TOTALS (lbs/day, unmitigated)	24.92	4.81	9.87	0.00	0.04	0.04	6,007.13

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Apartments low rise	23.54	27.18	251.30	0.22	35.65	6.99	21,633.74
High turnover (sit-down) rest.	6.67	7.19	63.42	0.05	8.14	1.60	4,994.17
Fast food rest. w/ drive thru	8.04	8.77	77.27	0.06	9.92	1.95	6,084.63
Strip mall	2.11	2.21	19.32	0.02	2.48	0.49	1,522.25
General office building	0.90	1.04	9.52	0.01	1.30	0.25	790.87
TOTALS (lbs/day, unmitigated)	41.26	46.39	420.83	0.36	57.49	11.28	35,025.66

Operational Settings:

Includes correction for passby trips
Does not include double counting adjustment for internal trips
Analysis Year: 2009 Temperature (F): 80 Season: Summer
Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments low rise	28.00	6.90	dwelling units	448.00	3,091.20	20,599.35
High turnover (sit-down) rest.		130.61	1000 sq ft	12.48	1,630.01	4,696.85
Fast food rest. w/ drive thru		496.48	1000 sq ft	4.00	1,985.92	5,722.39
Strip mall		40.83	1000 sq ft	12.49	509.97	1,432.59
General office building		25.64	1000 sq ft	6.24	159.99	748.99
					7,377.09	33,200.17

Vehicle Fleet Mix				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.6	1.4	98.2	0.4
Light Truck < 3750 lbs	7.4	2.7	93.2	4.1
Light Truck 3751-5750 lbs	22.9	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.6	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8

<u>Vehicle Fleet Mix</u>				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	71.4	28.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

High turnover (sit-down) rest.	5.0	2.5	92.5
Fast food rest. w/ drive thru	5.0	2.5	92.5
Strip mall	2.0	1.0	97.0
General office building	35.0	17.5	47.5

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\MBA\Client\35450001 College Park\College Park Phase 1 Operation New.urb924

Project Name: College Park - Operation Phase 1

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	24.45	7.19	3.19	0.02	0.21	0.21	9,155.44

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	44.49	55.69	421.52	0.30	57.49	11.28	31,816.91

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	68.94	62.88	424.71	0.32	57.70	11.49	40,972.35

4/13/2009 4:50:10 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.36	4.71	2.14	0.00	0.01	0.01	5,993.09
Hearth	0.14	2.48	1.05	0.02	0.20	0.20	3,162.35
Landscaping - No Winter Emissions							
Consumer Products	22.98						
Architectural Coatings	0.97						
TOTALS (lbs/day, unmitigated)	24.45	7.19	3.19	0.02	0.21	0.21	9,155.44

Area Source Changes to Defaults

- Percentage of residences with wood stoves changed from 10% to 0%
- Percentage of residences with wood fireplaces changed from 5% to 0%
- Percentage of residences with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Apartments low rise	24.34	32.72	245.23	0.19	35.65	6.99	19,642.84
High turnover (sit-down) rest.	7.59	8.60	66.09	0.04	8.14	1.60	4,540.23
Fast food rest. w/ drive thru	9.21	10.48	80.52	0.05	9.92	1.95	5,531.57
Strip mall	2.35	2.64	20.21	0.01	2.48	0.49	1,383.79
General office building	1.00	1.25	9.47	0.01	1.30	0.25	718.48
TOTALS (lbs/day, unmitigated)	44.49	55.69	421.52	0.30	57.49	11.28	31,816.91

Operational Settings:

Includes correction for passby trips
Does not include double counting adjustment for internal trips
Analysis Year: 2009 Temperature (F): 60 Season: Winter
Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments low rise	28.00	6.90	dwelling units	448.00	3,091.20	20,599.35
High turnover (sit-down) rest.		130.61	1000 sq ft	12.48	1,630.01	4,696.85
Fast food rest. w/ drive thru		496.48	1000 sq ft	4.00	1,985.92	5,722.39
Strip mall		40.83	1000 sq ft	12.49	509.97	1,432.59
General office building		25.64	1000 sq ft	6.24	159.99	748.99
					7,377.09	33,200.17

Vehicle Fleet Mix				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.6	1.4	98.2	0.4
Light Truck < 3750 lbs	7.4	2.7	93.2	4.1
Light Truck 3751-5750 lbs	22.9	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.6	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8

<u>Vehicle Fleet Mix</u>				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	71.4	28.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

High turnover (sit-down) rest.	5.0	2.5	92.5
Fast food rest. w/ drive thru	5.0	2.5	92.5
Strip mall	2.0	1.0	97.0
General office building	35.0	17.5	47.5

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\MBA\Client\35450001 College Park\College Park Buildout New.urb924

Project Name: College Park - Operation Buildout - New

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	37.58	7.17	13.97	0.00	0.05	0.05	8,963.55

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	66.32	69.81	639.17	0.57	90.47	17.75	55,375.16

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	103.90	76.98	653.14	0.57	90.52	17.80	64,338.71

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.54	7.03	3.15	0.00	0.01	0.01	8,943.89
Hearth - No Summer Emissions							
Landscape	0.86	0.14	10.82	0.00	0.04	0.04	19.66
Consumer Products	34.78						
Architectural Coatings	1.40						
TOTALS (lbs/day, unmitigated)	37.58	7.17	13.97	0.00	0.05	0.05	8,963.55

Area Source Changes to Defaults

- Percentage of residences with wood stoves changed from 10% to 0%
- Percentage of residences with wood fireplaces changed from 5% to 0%
- Percentage of residings with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments low rise	19.91	20.56	194.95	0.18	28.45	5.57	17,378.24
Apartments mid rise	10.22	10.56	100.09	0.09	14.60	2.86	8,921.86
High turnover (sit-down) rest.	6.25	6.64	59.16	0.05	8.14	1.60	4,991.03
Fast food rest. w/ drive thru	17.37	18.66	166.15	0.14	22.85	4.49	14,016.24
Strip mall	1.98	2.04	18.03	0.02	2.48	0.49	1,521.29
Gasoline/service station	9.75	10.39	91.90	0.08	12.65	2.49	7,756.09
General office building	0.84	0.96	8.89	0.01	1.30	0.25	790.41
TOTALS (lbs/day, unmitigated)	66.32	69.81	639.17	0.57	90.47	17.75	55,375.16

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

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

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments low rise	28.00	6.63	dwelling units	448.00	2,970.24	16,436.00
Apartments mid rise	6.05	6.63	dwelling units	230.00	1,524.90	8,438.13
High turnover (sit-down) rest.		130.61	1000 sq ft	12.48	1,630.01	4,696.85
Fast food rest. w/ drive thru		496.48	1000 sq ft	9.22	4,577.55	13,190.11

<u>Summary of Land Uses</u>						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		40.83	1000 sq ft	12.49	509.97	1,432.59
Gasoline/service station		162.50	pumps	16.00	2,600.00	7,303.90
General office building		25.64	1000 sq ft	6.24	159.99	748.99
					13,972.66	52,246.57

<u>Vehicle Fleet Mix</u>				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.7	1.2	98.6	0.2
Light Truck < 3750 lbs	7.3	2.7	94.6	2.7
Light Truck 3751-5750 lbs	22.9	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.6	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	67.9	32.1	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
High turnover (sit-down) rest.				5.0	2.5	92.5
Fast food rest. w/ drive thru				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Gasoline/service station				2.0	1.0	97.0
General office building				35.0	17.5	47.5

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\MBA\Client\35450001 College Park\College Park Buildout New.urb924

Project Name: College Park - Operation Buildout - New

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	36.94	10.78	4.75	0.02	0.31	0.31	13,729.77

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	72.28	83.61	648.92	0.48	90.47	17.75	50,302.17

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	109.22	94.39	653.67	0.50	90.78	18.06	64,031.94

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.54	7.03	3.15	0.00	0.01	0.01	8,943.89
Hearth	0.22	3.75	1.60	0.02	0.30	0.30	4,785.88
Landscaping - No Winter Emissions							
Consumer Products	34.78						
Architectural Coatings	1.40						
TOTALS (lbs/day, unmitigated)	36.94	10.78	4.75	0.02	0.31	0.31	13,729.77

Area Source Changes to Defaults

- Percentage of residences with wood stoves changed from 10% to 0%
- Percentage of residences with wood fireplaces changed from 5% to 0%
- Percentage of residences with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments low rise	20.51	24.72	191.99	0.15	28.45	5.57	15,782.35
Apartments mid rise	10.53	12.69	98.57	0.08	14.60	2.86	8,102.54
High turnover (sit-down) rest.	7.11	7.94	61.61	0.04	8.14	1.60	4,534.98
Fast food rest. w/ drive thru	19.89	22.28	173.01	0.12	22.85	4.49	12,735.52
Strip mall	2.21	2.43	18.84	0.01	2.48	0.49	1,382.19
Gasoline/service station	11.10	12.40	96.07	0.07	12.65	2.49	7,046.90
General office building	0.93	1.15	8.83	0.01	1.30	0.25	717.69
TOTALS (lbs/day, unmitigated)	72.28	83.61	648.92	0.48	90.47	17.75	50,302.17

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments low rise	28.00	6.63	dwelling units	448.00	2,970.24	16,436.00
Apartments mid rise	6.05	6.63	dwelling units	230.00	1,524.90	8,438.13
High turnover (sit-down) rest.		130.61	1000 sq ft	12.48	1,630.01	4,696.85
Fast food rest. w/ drive thru		496.48	1000 sq ft	9.22	4,577.55	13,190.11

Summary of Land Uses						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		40.83	1000 sq ft	12.49	509.97	1,432.59
Gasoline/service station		162.50	pumps	16.00	2,600.00	7,303.90
General office building		25.64	1000 sq ft	6.24	159.99	748.99
					13,972.66	52,246.57

Vehicle Fleet Mix				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.7	1.2	98.6	0.2
Light Truck < 3750 lbs	7.3	2.7	94.6	2.7
Light Truck 3751-5750 lbs	22.9	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.6	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	67.9	32.1	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
High turnover (sit-down) rest.				5.0	2.5	92.5
Fast food rest. w/ drive thru				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Gasoline/service station				2.0	1.0	97.0
General office building				35.0	17.5	47.5

Appendix B: LST Spreadsheets and Model Output

College Park

LST Analysis

Prepared by Michael Brandman Associates

Emissions

Activity	Pollutant	Emissions (lbs/day)	Area of Source (m2)	Number of Sources	Hours per day of Operation	Emissions (g/s-m2)	Emissions (g/s)
Grading	CO	210.29		25	8		0.13
Grading	NOx	370.42		25	8		0.23
Grading	PM10 Exhaust	18.67		25	8		0.01
Grading	PM10 Fugitive	6.82	40481		8	2.65E-06	
Grading	PM2.5 Exhaust	17.17		25	8		0.01
Grading	PM2.5 Fugitive	1.42	40481		8	5.52E-07	

CO Results

Location	1-hour CO (ug/m3)	1-hour CO (ppm)	8-hour CO (ug/m3)	8-hour CO (ppm)
Nearest Sensitive Receptor	1117	1.0	579	0.5

NOx Conversion to Nitrogen Dioxide - Construction

Distance to Construction Source (m)	NO2/NOx Ratio	NOx (ug/m3)	NO2 (ppm)
20	0.053	2000	0.056
50	0.059	1704	0.054
100	0.074	1383	0.054
200	0.114	1015	0.062
500	0.258	547	0.075
1000	0.467	281	0.070

PM10 and PM2.5 Results

The following is an excerpt from the SCAQMD LST Methodology, which is used to estimate PM10 and PM2.5 concentrations.

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

Where: C_x is the predicted PM10 concentration at x meters from the fence line;

C_o is the PM10 concentration at the fence line as estimated by ISC3;

e is the natural logarithm; and

x is the distance in meters from the fence line.

Distance from fenceline (m)	PM10 Concentration (ug/m3)	PM2.5 Concentration (ug/m3)
At fenceline (ISC Outp	27	23.0
20	10.1	8.6
45	3.2	2.7
50	2.5	2.1
100	0.3	0.2

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** PM10 *** 15:26:59
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 1
CONC

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**NO GAS DRY DEPOSITION Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Accepts FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR
and Calculates PERIOD Averages

**This Run Includes: 26 Source(s); 1 Source Group(s); and 92 Receptor(s)

**The Model Assumes A Pollutant Type of: PM10_

**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD 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)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; 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 = 1.2 MB of RAM.

**Input Runstream File: TMP0001.TMP

**Output Print File: PM10.OUT

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** PM10 *** 15:26:59
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 2
CONC

*** 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)	EMISSION RATE SCALAR VARY BY
VOL1	0	0.10000E-01	-105.6	155.0	0.0	5.00	9.31	1.16	HROFDY
VOL2	0	0.10000E-01	-65.3	155.2	0.0	5.00	9.31	1.16	
VOL3	0	0.10000E-01	-25.0	155.5	0.0	5.00	9.32	1.16	
VOL4	0	0.10000E-01	15.2	155.5	0.0	5.00	9.31	1.16	
VOL7	0	0.10000E-01	-105.5	114.9	0.0	5.00	9.32	1.16	
VOL8	0	0.10000E-01	-65.5	115.1	0.0	5.00	9.32	1.16	
VOL9	0	0.10000E-01	-25.3	115.3	0.0	5.00	9.40	1.16	
VOL10	0	0.10000E-01	14.7	115.4	0.0	5.00	9.31	1.16	HROFDY
VOL13	0	0.10000E-01	-105.3	74.2	0.0	5.00	9.32	1.16	
VOL14	0	0.10000E-01	-65.3	74.1	0.0	5.00	9.31	1.16	
VOL15	0	0.10000E-01	-25.3	74.6	0.0	5.00	9.32	1.16	
VOL16	0	0.10000E-01	14.6	74.6	0.0	5.00	9.32	1.16	
VOL19	0	0.10000E-01	-105.2	33.8	0.0	5.00	9.31	1.16	
VOL22	0	0.10000E-01	-65.1	33.8	0.0	5.00	9.32	1.16	
VOL25	0	0.10000E-01	-25.5	34.0	0.0	5.00	9.32	1.16	
VOL28	0	0.10000E-01	14.6	34.1	0.0	5.00	9.31	1.16	
VOL29	0	0.10000E-01	55.0	155.0	0.0	5.00	9.30	1.16	
VOL30	0	0.10000E-01	55.0	115.4	0.0	5.00	9.30	1.16	
VOL31	0	0.10000E-01	54.4	74.2	0.0	5.00	9.30	1.16	
VOL32	0	0.10000E-01	54.1	34.4	0.0	5.00	9.30	1.16	
VOL33	0	0.10000E-01	-105.4	-5.4	0.0	5.00	9.30	1.16	
VOL34	0	0.10000E-01	-65.0	-5.7	0.0	5.00	9.30	1.16	
VOL35	0	0.10000E-01	-25.2	-6.0	0.0	5.00	9.19	1.16	
VOL36	0	0.10000E-01	14.3	-5.4	0.0	5.00	9.30	1.16	
VOL37	0	0.10000E-01	55.0	-5.4	0.0	5.00	9.30	1.16	

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** PM10 *** 15:26:59
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 3
CONC

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	COORD (SW CORNER) X (METERS) Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
AREA1	0	0.26500E-05	-125.7 -26.3	0.0	5.00	201.20	201.20	0.00	0.00	HROFDY

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
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*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID

SOURCE IDs

ALL VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 , VOL10 , VOL13 , VOL14 , VOL15 , VOL16 ,
VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 , VOL32 , VOL33 , VOL34 , VOL35 , VOL36 ,

VOL37 , AREA1

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
*** PM10

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

* 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 = VOL1 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	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 = VOL10 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	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 = AREA1 ; SOURCE TYPE = AREA :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	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

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
*** PM10

*** 04/15/09
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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	91.0,	-45.9,	0.0,	2.0);	(	67.4,	-45.9,	0.0,	2.0);
(	43.7,	-45.9,	0.0,	2.0);	(	20.0,	-45.9,	0.0,	2.0);
(	-3.6,	-45.9,	0.0,	2.0);	(	-27.3,	-45.9,	0.0,	2.0);
(	-51.0,	-45.9,	0.0,	2.0);	(	-74.6,	-45.9,	0.0,	2.0);
(	-98.3,	-45.9,	0.0,	2.0);	(	-122.0,	-45.9,	0.0,	2.0);
(	-145.6,	-45.9,	0.0,	2.0);	(	91.0,	-65.9,	0.0,	2.0);
(	67.4,	-65.9,	0.0,	2.0);	(	43.7,	-65.9,	0.0,	2.0);
(	20.0,	-65.9,	0.0,	2.0);	(	-3.6,	-65.9,	0.0,	2.0);
(	-27.3,	-65.9,	0.0,	2.0);	(	-51.0,	-65.9,	0.0,	2.0);
(	-74.6,	-65.9,	0.0,	2.0);	(	-98.3,	-65.9,	0.0,	2.0);
(	-122.0,	-65.9,	0.0,	2.0);	(	-145.6,	-65.9,	0.0,	2.0);
(	-146.6,	-44.9,	0.0,	2.0);	(	-146.6,	-21.6,	0.0,	2.0);
(	-146.6,	1.7,	0.0,	2.0);	(	-146.6,	25.0,	0.0,	2.0);
(	-146.6,	48.4,	0.0,	2.0);	(	-146.6,	71.7,	0.0,	2.0);
(	-146.6,	95.0,	0.0,	2.0);	(	-146.6,	118.3,	0.0,	2.0);
(	-146.6,	141.6,	0.0,	2.0);	(	-146.6,	165.0,	0.0,	2.0);
(	-146.6,	188.3,	0.0,	2.0);	(	-166.6,	-44.9,	0.0,	2.0);
(	-166.6,	-21.6,	0.0,	2.0);	(	-166.6,	1.7,	0.0,	2.0);
(	-166.6,	25.0,	0.0,	2.0);	(	-166.6,	48.4,	0.0,	2.0);
(	-166.6,	71.7,	0.0,	2.0);	(	-166.6,	95.0,	0.0,	2.0);
(	-166.6,	118.3,	0.0,	2.0);	(	-166.6,	141.6,	0.0,	2.0);
(	-166.6,	165.0,	0.0,	2.0);	(	-166.6,	188.3,	0.0,	2.0);
(	-145.6,	189.3,	0.0,	2.0);	(	-122.0,	189.3,	0.0,	2.0);
(	-98.3,	189.3,	0.0,	2.0);	(	-74.6,	189.3,	0.0,	2.0);
(	-51.0,	189.3,	0.0,	2.0);	(	-27.3,	189.3,	0.0,	2.0);
(	-3.6,	189.3,	0.0,	2.0);	(	20.0,	189.3,	0.0,	2.0);
(	43.7,	189.3,	0.0,	2.0);	(	67.4,	189.3,	0.0,	2.0);
(	91.0,	189.3,	0.0,	2.0);	(	-145.6,	209.3,	0.0,	2.0);
(	-122.0,	209.3,	0.0,	2.0);	(	-98.3,	209.3,	0.0,	2.0);
(	-74.6,	209.3,	0.0,	2.0);	(	-51.0,	209.3,	0.0,	2.0);
(	-27.3,	209.3,	0.0,	2.0);	(	-3.6,	209.3,	0.0,	2.0);
(	20.0,	209.3,	0.0,	2.0);	(	43.7,	209.3,	0.0,	2.0);
(	67.4,	209.3,	0.0,	2.0);	(	91.0,	209.3,	0.0,	2.0);
(	92.0,	188.3,	0.0,	2.0);	(	92.0,	165.0,	0.0,	2.0);
(	92.0,	141.6,	0.0,	2.0);	(	92.0,	118.3,	0.0,	2.0);
(	92.0,	95.0,	0.0,	2.0);	(	92.0,	71.7,	0.0,	2.0);
(	92.0,	48.4,	0.0,	2.0);	(	92.0,	25.0,	0.0,	2.0);
(	92.0,	1.7,	0.0,	2.0);	(	92.0,	-21.6,	0.0,	2.0);
(	92.0,	-44.9,	0.0,	2.0);	(	112.0,	188.3,	0.0,	2.0);
(	112.0,	165.0,	0.0,	2.0);	(	112.0,	141.6,	0.0,	2.0);
(	112.0,	118.3,	0.0,	2.0);	(	112.0,	95.0,	0.0,	2.0);
(	112.0,	71.7,	0.0,	2.0);	(	112.0,	48.4,	0.0,	2.0);
(	112.0,	25.0,	0.0,	2.0);	(	112.0,	1.7,	0.0,	2.0);
(	112.0,	-21.6,	0.0,	2.0);	(	112.0,	-44.9,	0.0,	2.0);
(	-145.6,	188.3,	0.0,	2.0);	(	-145.6,	-44.9,	0.0,	2.0);

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
*** PM10

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	91.0,	-44.9,	0.0,	2.0);	(	91.0,	188.3,	0.0,	2.0);

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
*** PM10

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

[illegible]

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY					
	1	2	3	4	5	6
A	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
B	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
C	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00
D	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY					
	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

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*** ISCST3 - VERSION 02035 *** COLLEGE PARK - LST ANALYSIS
*** PM10

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**MODELOPTs:
CONC          URBAN FLAT  FLGPOL          NOCALM

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*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

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FILE:      UPLAND.ASC
FORMAT:    (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
SURFACE    STATION NO.: 54147
           NAME: UNKNOWN
           YEAR: 1981
UPPER AIR   STATION NO.: 99999
           NAME: UNKNOWN
           YEAR: 1981

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YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING RURAL	HEIGHT (M) URBAN	USTAR (M/S)	M-O	LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.00	284.3	7	522.6	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	02	147.4	1.00	284.3	7	507.0	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	03	152.5	1.34	283.1	7	491.4	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	04	166.0	0.00	283.1	7	475.8	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	05	151.5	0.00	282.6	7	460.3	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	06	139.5	1.34	283.1	7	444.7	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	07	162.0	1.34	285.4	6	1.4	170.7	0.0000		0.0	0.0000	0	0.00
81	01	01	08	157.1	0.00	287.6	5	47.0	192.0	0.0000		0.0	0.0000	0	0.00
81	01	01	09	344.0	1.00	289.8	4	92.5	213.3	0.0000		0.0	0.0000	0	0.00
81	01	01	10	346.6	0.00	291.5	3	138.0	234.7	0.0000		0.0	0.0000	0	0.00
81	01	01	11	314.1	1.00	294.3	2	183.5	256.0	0.0000		0.0	0.0000	0	0.00
81	01	01	12	238.1	1.34	297.6	2	229.0	277.3	0.0000		0.0	0.0000	0	0.00
81	01	01	13	357.2	1.79	298.7	3	274.5	298.7	0.0000		0.0	0.0000	0	0.00
81	01	01	14	34.2	2.24	299.8	3	320.0	320.0	0.0000		0.0	0.0000	0	0.00
81	01	01	15	44.8	3.13	299.3	3	320.0	320.0	0.0000		0.0	0.0000	0	0.00
81	01	01	16	75.7	3.13	298.7	4	320.0	320.0	0.0000		0.0	0.0000	0	0.00
81	01	01	17	65.1	1.79	295.4	5	325.6	318.5	0.0000		0.0	0.0000	0	0.00
81	01	01	18	97.6	1.34	291.5	6	357.2	310.3	0.0000		0.0	0.0000	0	0.00
81	01	01	19	133.0	1.00	289.8	7	388.8	302.1	0.0000		0.0	0.0000	0	0.00
81	01	01	20	145.7	0.00	287.0	7	420.4	293.9	0.0000		0.0	0.0000	0	0.00
81	01	01	21	223.6	1.00	286.5	7	452.0	285.7	0.0000		0.0	0.0000	0	0.00
81	01	01	22	159.5	1.00	287.0	7	483.5	277.4	0.0000		0.0	0.0000	0	0.00
81	01	01	23	158.2	1.34	285.9	7	515.1	269.2	0.0000		0.0	0.0000	0	0.00
81	01	01	24	134.7	1.00	285.4	7	546.7	261.0	0.0000		0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - 1ST ANALYSIS

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**MODELOPTs:
CONC          URBAN FLAT  FLGPOL          NOCALM

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*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***										
INCLUDING SOURCE(S):										
VOL10	VOL13	VOL14	VOL15	VOL16	VOL19	VOL22	VOL25	VOL28	VOL29	VOL30
VOL32	VOL33	VOL34	VOL35	VOL36	VOL37	AREA1				

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
91.04	-45.94	17.38925	67.37	-45.94	19.73436
43.70	-45.94	20.34880	20.03	-45.94	20.51185
-3.64	-45.94	20.11449	-27.30	-45.94	18.51367
-50.97	-45.94	16.79666	-74.64	-45.94	13.69041
-98.31	-45.94	9.87292	-121.98	-45.94	6.08178
-145.65	-45.94	4.43984	91.04	-65.94	15.24537
67.37	-65.94	16.32127	43.70	-65.94	16.69053
20.03	-65.94	16.51208	-3.64	-65.94	15.85817

-27.30	-65.94	14.44365	-50.97	-65.94	12.58052
-74.64	-65.94	10.01668	-98.31	-65.94	7.04045
-121.98	-65.94	4.87154	-145.65	-65.94	3.78534
-146.65	-44.94	4.42021	-146.65	-21.62	5.21472
-146.65	1.71	5.70048	-146.65	25.03	5.97857
-146.65	48.36	5.99557	-146.65	71.68	5.83906
-146.65	95.00	5.50463	-146.65	118.33	4.93425
-146.65	141.65	4.29391	-146.65	164.98	3.64573
-146.65	188.30	2.98466	-166.65	-44.94	3.47373
-166.65	-21.62	3.89067	-166.65	1.71	4.12889
-166.65	25.03	4.25358	-166.65	48.36	4.25659
-166.65	71.68	4.14399	-166.65	95.00	3.91624
-166.65	118.33	3.52165	-166.65	141.65	3.10084
-166.65	164.98	2.66675	-166.65	188.30	2.25942
-145.65	189.30	3.00494	-121.98	189.30	4.54809
-98.31	189.30	6.70117	-74.64	189.30	8.34158
-50.97	189.30	10.35893	-27.31	189.30	12.03430
-3.64	189.30	13.42587	20.03	189.30	14.17761
43.70	189.30	14.33731	67.37	189.30	13.95638
91.04	189.30	12.17417	-145.65	209.30	2.50048
-121.98	209.30	3.41147	-98.31	209.30	4.58189
-74.64	209.30	5.73515	-50.97	209.30	6.89411
-27.31	209.30	7.91829	-3.64	209.30	8.83777
20.03	209.30	9.48178	43.70	209.30	9.79383
67.37	209.30	9.73381	91.04	209.30	9.10871
92.04	188.30	12.24093	92.04	164.98	15.04501
92.04	141.65	17.21855	92.04	118.33	20.25670
92.04	95.00	22.64311	92.04	71.68	23.35172
92.04	48.36	23.97742	92.04	25.03	23.09940
92.04	1.71	21.82679	92.04	-21.62	18.98537
92.04	-44.94	17.32010	112.04	188.30	10.31416
112.04	164.98	11.75261	112.04	141.65	13.01165

*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***

PM10

**MODELOPTs: URBAN FLAT FLGPOL NOCALM 04/15/09

CONC PAGE 11

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,

VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,

VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 , AREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10_ IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
112.04	118.33	14.80644	112.04	95.00	16.46536
112.04	71.68	17.30551	112.04	48.36	17.52981
112.04	25.03	17.00988	112.04	1.71	15.80606
112.04	-21.62	14.51176	112.04	-44.94	13.91691
-145.65	188.30	3.03231	-145.65	-44.94	4.47608
91.04	-44.94	17.48604	91.04	188.30	12.34091

*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***

PM10

**MODELOPTs: URBAN FLAT FLGPOL NOCALM 04/15/09

CONC PAGE 12

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,

VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,

VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 , AREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM10_ IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
91.04	-45.94	52.47986	(81010924)	67.37	-45.94	57.36701	(81011724)
43.70	-45.94	57.32290	(81011724)	20.03	-45.94	56.46751	(81011724)
-3.64	-45.94	54.68702	(81011724)	-27.30	-45.94	48.44277	(81011724)
-50.97	-45.94	43.48314	(81011724)	-74.64	-45.94	37.35834	(81012424)
-98.31	-45.94	32.77233	(81112724)	-121.98	-45.94	33.93042	(81112724)
-145.65	-45.94	27.68362	(81112724)	91.04	-65.94	47.37566	(81011724)
67.37	-65.94	49.62284	(81011724)	43.70	-65.94	49.70683	(81011724)
20.03	-65.94	47.60508	(81011724)	-3.64	-65.94	44.70842	(81011724)
-27.30	-65.94	39.08737	(81011724)	-50.97	-65.94	35.69684	(81012424)
-74.64	-65.94	32.28217	(81012424)	-98.31	-65.94	27.80044	(81112724)
-121.98	-65.94	28.30359	(81112724)	-145.65	-65.94	25.87988	(81112724)
-146.65	-44.94	27.39053	(81112724)	-146.65	-21.62	26.65244	(81123024)
-146.65	1.71	26.71712	(81123024)	-146.65	25.03	27.11403	(81123024)
-146.65	48.36	25.67729	(81123024)	-146.65	71.68	25.47775	(81123024)
-146.65	95.00	23.92251	(81123024)	-146.65	118.33	19.90040	(81011124)
-146.65	141.65	17.95261	(81011124)	-146.65	164.98	14.19241	(81121324)
-146.65	188.30	11.09004	(81011524)	-166.65	-44.94	19.64132	(81112724)
-166.65	-21.62	22.76707	(81123024)	-166.65	1.71	23.14867	(81123024)
-166.65	25.03	22.73521	(81123024)	-166.65	48.36	21.86600	(81123024)
-166.65	71.68	20.61603	(81123024)	-166.65	95.00	18.55299	(81123024)
-166.65	118.33	15.90313	(81011124)	-166.65	141.65	14.55690	(81011124)
-166.65	164.98	11.38784	(81011124)	-166.65	188.30	9.50014	(81011524)
-145.65	189.30	11.04618	(81011524)	-121.98	189.30	14.22453	(81102724)
-98.31	189.30	19.19645	(81102724)	-74.64	189.30	24.24101	(81102724)
-50.97	189.30	28.33183	(81102724)	-27.31	189.30	31.44431	(81060224)
-3.64	189.30	34.02542	(81060224)	20.03	189.30	35.84237	(81060224)
43.70	189.30	34.93040	(81060224)	67.37	189.30	34.54364	(81060224)
91.04	189.30	28.86195	(81090524)	-145.65	209.30	9.90138	(81012724)
-121.98	209.30	11.29441	(81012724)	-98.31	209.30	13.97719	(81102724)
-74.64	209.30	17.74310	(81102724)	-50.97	209.30	21.18774	(81102724)
-27.31	209.30	23.56579	(81060224)	-3.64	209.30	26.06742	(81060224)
20.03	209.30	27.49276	(81060224)	43.70	209.30	27.48532	(81060224)
67.37	209.30	26.25100	(81060224)	81.04	209.30	22.36535	(81060224)
92.04	188.30	29.06501	(81090524)	92.04	164.98	41.07978	(81041024)
92.04	141.65	41.42339	(81011224)	92.04	118.33	48.77216	(81011224)
92.04	95.00	53.00575	(81011224)	92.04	71.68	58.61029	(81011224)
92.04	48.36	61.36336	(81011224)	92.04	25.03	62.46400	(81011224)
92.04	1.71	59.19772	(81011224)	92.04	-21.62	54.37881	(81012524)
92.04	-44.94	52.42926	(81010924)	112.04	188.30	26.58830	(81041024)
112.04	164.98	33.27705	(81041024)	112.04	141.65	33.64548	(81041024)

*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***

PM10

**MODELOPTs: URBAN FLAT FLGPOL NOCALM 04/15/09

CONC PAGE 13

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,

VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 , AREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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** CONC OF PM10_ IN MICROGRAMS/M**3
**
X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC (YYMMDDHH)
-----
112.04 118.33 38.09267 (81011224) 112.04 95.00 42.75300 (81011224)
112.04 71.68 46.29507 (81011224) 112.04 48.36 49.74891 (81011224)
112.04 25.03 50.45007 (81011224) 112.04 1.71 48.14184 (81011224)
112.04 -21.62 45.76710 (81012524) 112.04 -44.94 44.98622 (81012524)
-145.65 188.30 11.17884 (81011524) -145.65 -44.94 27.72229 (81112724)
91.04 -44.94 52.77130 (81010924) 91.04 188.30 29.20969 (81090524)
*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***
**MODELPTS: URBAN FLAT FLGPOL NOCALM
CONC
*** THE SUMMARY OF MAXIMUM PERIOD ( 8760 HRS) RESULTS ***

```

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15:26:59
PAGE 14

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** CONC OF PM10_ IN MICROGRAMS/M**3
**
GROUP ID AVERAGE CONC RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE NETWORK GRID-ID
-----
ALL 1ST HIGHEST VALUE IS 23.97742 AT ( 92.04, 48.36, 0.00, 2.00) DC NA
2ND HIGHEST VALUE IS 23.35172 AT ( 92.04, 71.68, 0.00, 2.00) DC NA
3RD HIGHEST VALUE IS 23.09940 AT ( 92.04, 25.03, 0.00, 2.00) DC NA
4TH HIGHEST VALUE IS 22.64311 AT ( 92.04, 95.00, 0.00, 2.00) DC NA
5TH HIGHEST VALUE IS 21.82679 AT ( 92.04, 1.71, 0.00, 2.00) DC NA
6TH HIGHEST VALUE IS 20.51185 AT ( 20.03, -45.94, 0.00, 2.00) DC NA
7TH HIGHEST VALUE IS 20.34800 AT ( 43.70, -45.94, 0.00, 2.00) DC NA
8TH HIGHEST VALUE IS 20.25670 AT ( 92.04, 118.33, 0.00, 2.00) DC NA
9TH HIGHEST VALUE IS 20.11449 AT ( -3.64, -45.94, 0.00, 2.00) DC NA
10TH HIGHEST VALUE IS 19.73436 AT ( 67.37, -45.94, 0.00, 2.00) DC NA

```

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

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***
**MODELPTS: URBAN FLAT FLGPOL NOCALM
CONC

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*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

```

** CONC OF PM10_ IN MICROGRAMS/M**3
**
GROUP ID AVERAGE CONC DATE (YYMMDDHH) RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE NETWORK GRID-ID
-----
ALL HIGH 1ST HIGH VALUE IS 62.46400 ON 81011224: AT ( 92.04, 25.03, 0.00, 2.00) DC NA

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

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***
**MODELPTS: URBAN FLAT FLGPOL NOCALM
CONC

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*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 490 Informational Message(s)
A Total of 490 Calm Hours Identified

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

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST3 Finishes Successfully ***

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** PM2.5 *** 15:27:25
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 1
CONC

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**NO GAS DRY DEPOSITION Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Accepts FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 24-HR
and Calculates PERIOD Averages

**This Run Includes: 26 Source(s); 1 Source Group(s); and 92 Receptor(s)

**The Model Assumes A Pollutant Type of: PM2_5

**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD 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)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; 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 = 1.2 MB of RAM.

**Input Runstream File: TMP0001.TMP

**Output Print File: PM25.OUT

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** PM2.5 *** 15:27:25
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 2
CONC

*** 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)	EMISSION RATE SCALAR VARY BY
VOL1	0	0.10000E-01	-105.6	155.0	0.0	5.00	9.31	1.16	HROFDY
VOL2	0	0.10000E-01	-65.3	155.2	0.0	5.00	9.31	1.16	
VOL3	0	0.10000E-01	-25.0	155.5	0.0	5.00	9.32	1.16	
VOL4	0	0.10000E-01	15.2	155.5	0.0	5.00	9.31	1.16	
VOL7	0	0.10000E-01	-105.5	114.9	0.0	5.00	9.32	1.16	
VOL8	0	0.10000E-01	-65.5	115.1	0.0	5.00	9.32	1.16	
VOL9	0	0.10000E-01	-25.3	115.3	0.0	5.00	9.40	1.16	
VOL10	0	0.10000E-01	14.7	115.4	0.0	5.00	9.31	1.16	
VOL13	0	0.10000E-01	-105.3	74.2	0.0	5.00	9.32	1.16	HROFDY
VOL14	0	0.10000E-01	-65.3	74.1	0.0	5.00	9.31	1.16	
VOL15	0	0.10000E-01	-25.3	74.6	0.0	5.00	9.32	1.16	
VOL16	0	0.10000E-01	14.6	74.6	0.0	5.00	9.32	1.16	
VOL19	0	0.10000E-01	-105.2	33.8	0.0	5.00	9.31	1.16	
VOL22	0	0.10000E-01	-65.1	33.8	0.0	5.00	9.32	1.16	
VOL25	0	0.10000E-01	-25.5	34.0	0.0	5.00	9.32	1.16	
VOL28	0	0.10000E-01	14.6	34.1	0.0	5.00	9.31	1.16	
VOL29	0	0.10000E-01	55.0	155.0	0.0	5.00	9.30	1.16	
VOL30	0	0.10000E-01	55.0	115.4	0.0	5.00	9.30	1.16	HROFDY
VOL31	0	0.10000E-01	54.4	74.2	0.0	5.00	9.30	1.16	
VOL32	0	0.10000E-01	54.1	34.4	0.0	5.00	9.30	1.16	
VOL33	0	0.10000E-01	-105.4	-5.4	0.0	5.00	9.30	1.16	
VOL34	0	0.10000E-01	-65.0	-5.7	0.0	5.00	9.30	1.16	
VOL35	0	0.10000E-01	-25.2	-6.0	0.0	5.00	9.19	1.16	
VOL36	0	0.10000E-01	14.3	-5.4	0.0	5.00	9.30	1.16	
VOL37	0	0.10000E-01	55.0	-5.4	0.0	5.00	9.30	1.16	

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** PM2.5 *** 15:27:25
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 3
CONC

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	COORD (SW CORNER) X (METERS) Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
AREA1	0	0.55200E-06	-125.7 -26.3	0.0	5.00	201.20	201.20	0.00	0.00	HROFDY

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** PM2.5 *** 15:27:25
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 4
CONC

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID

SOURCE IDs

ALL VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 , VOL10 , VOL13 , VOL14 , VOL15 , VOL16 ,
VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 , VOL32 , VOL33 , VOL34 , VOL35 , VOL36 ,

VOL37 , AREA1

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
*** PM2.5

*** 04/15/09
15:27:25
PAGE 5

**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

* 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 = VOL1 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	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 = VOL10 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	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 = AREA1 ; SOURCE TYPE = AREA :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	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

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
*** PM2.5

*** 04/15/09
15:27:25
PAGE 6

**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	91.0,	-45.9,	0.0,	2.0);	(	67.4,	-45.9,	0.0,	2.0);
(	43.7,	-45.9,	0.0,	2.0);	(	20.0,	-45.9,	0.0,	2.0);
(	-3.6,	-45.9,	0.0,	2.0);	(	-27.3,	-45.9,	0.0,	2.0);
(	-51.0,	-45.9,	0.0,	2.0);	(	-74.6,	-45.9,	0.0,	2.0);
(	-98.3,	-45.9,	0.0,	2.0);	(	-122.0,	-45.9,	0.0,	2.0);
(	-145.6,	-45.9,	0.0,	2.0);	(	91.0,	-65.9,	0.0,	2.0);
(	67.4,	-65.9,	0.0,	2.0);	(	43.7,	-65.9,	0.0,	2.0);
(	20.0,	-65.9,	0.0,	2.0);	(	-3.6,	-65.9,	0.0,	2.0);
(	-27.3,	-65.9,	0.0,	2.0);	(	-51.0,	-65.9,	0.0,	2.0);
(	-74.6,	-65.9,	0.0,	2.0);	(	-98.3,	-65.9,	0.0,	2.0);
(	-122.0,	-65.9,	0.0,	2.0);	(	-145.6,	-65.9,	0.0,	2.0);
(	-146.6,	-44.9,	0.0,	2.0);	(	-146.6,	-21.6,	0.0,	2.0);
(	-146.6,	1.7,	0.0,	2.0);	(	-146.6,	25.0,	0.0,	2.0);
(	-146.6,	48.4,	0.0,	2.0);	(	-146.6,	71.7,	0.0,	2.0);
(	-146.6,	95.0,	0.0,	2.0);	(	-146.6,	118.3,	0.0,	2.0);
(	-146.6,	141.6,	0.0,	2.0);	(	-146.6,	165.0,	0.0,	2.0);
(	-146.6,	188.3,	0.0,	2.0);	(	-166.6,	-44.9,	0.0,	2.0);
(	-166.6,	-21.6,	0.0,	2.0);	(	-166.6,	1.7,	0.0,	2.0);
(	-166.6,	25.0,	0.0,	2.0);	(	-166.6,	48.4,	0.0,	2.0);
(	-166.6,	71.7,	0.0,	2.0);	(	-166.6,	95.0,	0.0,	2.0);
(	-166.6,	118.3,	0.0,	2.0);	(	-166.6,	141.6,	0.0,	2.0);
(	-166.6,	165.0,	0.0,	2.0);	(	-166.6,	188.3,	0.0,	2.0);
(	-145.6,	189.3,	0.0,	2.0);	(	-122.0,	189.3,	0.0,	2.0);
(	-98.3,	189.3,	0.0,	2.0);	(	-74.6,	189.3,	0.0,	2.0);
(	-51.0,	189.3,	0.0,	2.0);	(	-27.3,	189.3,	0.0,	2.0);
(	-3.6,	189.3,	0.0,	2.0);	(	20.0,	189.3,	0.0,	2.0);
(	43.7,	189.3,	0.0,	2.0);	(	67.4,	189.3,	0.0,	2.0);
(	91.0,	189.3,	0.0,	2.0);	(	-145.6,	209.3,	0.0,	2.0);
(	-122.0,	209.3,	0.0,	2.0);	(	-98.3,	209.3,	0.0,	2.0);
(	-74.6,	209.3,	0.0,	2.0);	(	-51.0,	209.3,	0.0,	2.0);
(	-27.3,	209.3,	0.0,	2.0);	(	-3.6,	209.3,	0.0,	2.0);
(	20.0,	209.3,	0.0,	2.0);	(	43.7,	209.3,	0.0,	2.0);
(	67.4,	209.3,	0.0,	2.0);	(	91.0,	209.3,	0.0,	2.0);
(	92.0,	188.3,	0.0,	2.0);	(	92.0,	165.0,	0.0,	2.0);
(	92.0,	141.6,	0.0,	2.0);	(	92.0,	118.3,	0.0,	2.0);
(	92.0,	95.0,	0.0,	2.0);	(	92.0,	71.7,	0.0,	2.0);
(	92.0,	48.4,	0.0,	2.0);	(	92.0,	25.0,	0.0,	2.0);
(	92.0,	1.7,	0.0,	2.0);	(	92.0,	-21.6,	0.0,	2.0);
(	92.0,	-44.9,	0.0,	2.0);	(	112.0,	188.3,	0.0,	2.0);
(	112.0,	165.0,	0.0,	2.0);	(	112.0,	141.6,	0.0,	2.0);
(	112.0,	118.3,	0.0,	2.0);	(	112.0,	95.0,	0.0,	2.0);
(	112.0,	71.7,	0.0,	2.0);	(	112.0,	48.4,	0.0,	2.0);
(	112.0,	25.0,	0.0,	2.0);	(	112.0,	1.7,	0.0,	2.0);
(	112.0,	-21.6,	0.0,	2.0);	(	112.0,	-44.9,	0.0,	2.0);
(	-145.6,	188.3,	0.0,	2.0);	(	-145.6,	-44.9,	0.0,	2.0);

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
*** PM2.5

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	91.0,	-44.9,	0.0,	2.0);	(	91.0,	188.3,	0.0,	2.0);

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
*** PM2.5

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

[illegible]

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY					
	1	2	3	4	5	6
A	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
B	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
C	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00
D	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY					
	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

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*** ISCST3 - VERSION 02035 *** COLLEGE PARK - LST ANALYSIS
*** PM2.5 ***

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**MODELOPTs:
CONC          URBAN FLAT  FLGPOL          NOCALM

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*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

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FILE:      UPLAND.ASC
FORMAT:    (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
SURFACE STATION NO.: 54147
NAME: UNKNOWN
YEAR: 1981
UPPER AIR STATION NO.: 99999
NAME: UNKNOWN
YEAR: 1981

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YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING RURAL	HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.00	284.3	7	522.6	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	02	147.4	1.00	284.3	7	507.0	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	03	152.5	1.34	283.1	7	491.4	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	04	166.0	0.00	283.1	7	475.8	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	05	151.5	0.00	282.6	7	460.3	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	06	139.3	1.34	285.4	7	444.7	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	07	162.0	1.34	285.4	6	444.7	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	08	157.1	0.00	287.6	5	47.0	192.0	0.0000	0.0	0.0000	0	0.00
81	01	01	09	344.0	1.00	289.8	4	92.5	213.3	0.0000	0.0	0.0000	0	0.00
81	01	01	10	346.6	0.00	291.5	3	138.0	234.7	0.0000	0.0	0.0000	0	0.00
81	01	01	11	314.1	1.00	294.3	2	183.5	256.0	0.0000	0.0	0.0000	0	0.00
81	01	01	12	238.1	1.34	297.6	2	229.0	277.3	0.0000	0.0	0.0000	0	0.00
81	01	01	13	357.2	1.79	298.7	3	274.5	298.7	0.0000	0.0	0.0000	0	0.00
81	01	01	14	34.2	2.24	299.8	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	15	44.8	3.13	299.3	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	16	75.7	3.13	298.7	4	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	17	65.1	1.79	295.4	5	325.6	318.5	0.0000	0.0	0.0000	0	0.00
81	01	01	18	97.6	1.34	291.5	6	357.2	310.3	0.0000	0.0	0.0000	0	0.00
81	01	01	19	133.0	1.00	289.8	7	388.8	302.1	0.0000	0.0	0.0000	0	0.00
81	01	01	20	145.7	0.00	287.0	7	420.4	293.9	0.0000	0.0	0.0000	0	0.00
81	01	01	21	223.6	1.00	286.5	7	452.0	285.7	0.0000	0.0	0.0000	0	0.00
81	01	01	22	159.5	1.00	287.0	7	483.5	277.4	0.0000	0.0	0.0000	0	0.00
81	01	01	23	158.2	1.34	285.9	7	515.1	269.2	0.0000	0.0	0.0000	0	0.00
81	01	01	24	134.7	1.00	285.4	7	546.7	261.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.

FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** ISCS T3 - VERSION 02035 *** ** COLLEGE PARK - LST ANALYSIS
*** PM2.5

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**MODELOPTs:
CONC          URBAN FLAT  FLGPOL          NOCALM

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*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***											
INCLUDING SOURCE(S):											
			VOL1	VOL2	VOL3	VOL4	VOL7	VOL8	VOL9		
VOL10	VOL13	VOL14	VOL15	VOL16	VOL19	VOL22	VOL25	VOL28	VOL29	VOL30	VOL31
VOL32	VOL33	VOL34	VOL35	VOL36	VOL37	AREA1					

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM2 5 IN MICROGRAMS/M**3

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
91.04	-45.94	17.040908	67.37	-45.94	19.34229
43.70	-45.94	19.92714	20.93	-45.94	20.06707
-3.64	-45.94	19.65932	-27.39	-45.94	18.06274
-50.97	-45.94	16.36682	-74.64	-45.94	13.39238
-98.31	-45.94	9.55129	-121.98	-45.94	5.82702
-145.65	-45.94	4.21636	91.04	-65.94	14.95855
67.37	-65.94	16.01710	43.70	-65.94	16.37532
20.03	-65.94	16.18997	-3.64	-65.94	15.53701

-27.30	-65.94	14.13270	-50.97	-65.94	12.29173
-74.64	-65.94	9.76348	-98.31	-65.94	6.83233
-121.98	-65.94	4.69735	-145.65	-65.94	3.62581
-146.65	-44.94	4.19402	-146.65	-21.62	4.86320
-146.65	1.71	5.22535	-146.65	25.03	5.40014
-146.65	48.36	5.34086	-146.65	71.68	5.13123
-146.65	95.00	4.76460	-146.65	118.33	4.18369
-146.65	141.65	3.56081	-146.65	164.98	2.97943
-146.65	188.30	2.42773	-166.65	-44.94	3.27862
-166.65	-21.62	3.61987	-166.65	1.71	3.78888
-166.65	25.03	3.85290	-166.65	48.36	3.80697
-166.65	71.68	3.65833	-166.65	95.00	3.40844
-166.65	118.33	3.00707	-166.65	141.65	2.60954
-166.65	164.98	2.21021	-166.65	188.30	1.86088
-145.65	189.30	2.44227	-121.98	189.30	3.63472
-98.31	189.30	5.32988	-74.64	189.30	6.67558
-50.97	189.30	8.52304	-27.31	189.30	10.10316
-3.64	189.30	11.45612	20.03	189.30	12.22495
43.70	189.30	12.47432	67.37	189.30	12.31469
91.04	189.30	10.96146	-145.65	209.30	2.02972
-121.98	209.30	2.74180	-98.31	209.30	3.66575
-74.64	209.30	4.61363	-50.97	209.30	5.63290
-27.31	209.30	6.57276	-3.64	209.30	7.45300
20.03	209.30	8.10335	43.70	209.30	8.47571
67.37	209.30	8.55023	91.04	209.30	8.13648
92.04	188.30	11.03566	92.04	164.98	13.71472
92.04	141.65	15.86358	92.04	118.33	18.90733
92.04	95.00	21.32710	92.04	71.68	22.10538
92.04	48.36	22.84501	92.04	25.03	22.13881
92.04	1.71	21.11389	92.04	-21.62	18.54446
92.04	-44.94	16.97106	112.04	188.30	9.43978
112.04	164.98	10.84159	112.04	141.65	12.10515

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

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*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 , AREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM2.5 IN MICROGRAMS/M**3

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
112.04	118.33	13.91505	112.04	95.00	15.60936
112.04	71.68	16.50951	112.04	48.36	16.82182
112.04	25.03	16.42147	112.04	1.71	15.41628
112.04	-21.62	14.18577	112.04	-44.94	13.63675
-145.65	188.30	2.46476	-145.65	-44.94	4.24824
91.04	-44.94	17.13346	91.04	188.30	11.11632

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 , AREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM2.5 IN MICROGRAMS/M**3

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
91.04	-45.94	50.54089	(81010924)	67.37	-45.94	55.74011	(81011724)
43.70	-45.94	55.33648	(81011724)	20.03	-45.94	54.33121	(81011724)
-3.64	-45.94	52.59370	(81011724)	-27.30	-45.94	46.28659	(81011724)
-50.97	-45.94	41.41764	(81011724)	-74.64	-45.94	36.78734	(81012424)
-98.31	-45.94	30.68187	(81012424)	-121.98	-45.94	29.63738	(81112724)
-145.65	-45.94	23.94642	(81112724)	91.04	-65.94	46.11322	(81011724)
67.37	-65.94	48.32243	(81011724)	43.70	-65.94	48.14838	(81011724)
20.03	-65.94	45.99030	(81011724)	-3.64	-65.94	43.12643	(81011724)
-27.30	-65.94	37.59015	(81011724)	-50.97	-65.94	35.17760	(81012424)
-74.64	-65.94	31.93616	(81012424)	-98.31	-65.94	25.79272	(81012424)
-121.98	-65.94	24.69463	(81112724)	-145.65	-65.94	22.45980	(81112724)
-146.65	-44.94	23.61477	(81112724)	-146.65	-21.62	23.21696	(81032324)
-146.65	1.71	23.58109	(81032324)	-146.65	25.03	23.73720	(81032324)
-146.65	48.36	22.09262	(81123024)	-146.65	71.68	21.92985	(81123024)
-146.65	95.00	20.49581	(81123024)	-146.65	118.33	17.40989	(81011124)
-146.65	141.65	15.70311	(81011124)	-146.65	164.98	11.91658	(81011124)
-146.65	188.30	9.06133	(81112824)	-166.65	-44.94	16.91654	(81112724)
-166.65	-21.62	19.83562	(81123024)	-166.65	1.71	20.11038	(81123024)
-166.65	25.03	19.72071	(81123024)	-166.65	48.36	18.91735	(81123024)
-166.65	71.68	17.78190	(81123024)	-166.65	95.00	15.91540	(81123024)
-166.65	118.33	14.04491	(81011124)	-166.65	141.65	12.94606	(81011124)
-166.65	164.98	10.54415	(81040724)	-166.65	188.30	8.02703	(81112824)
-145.65	189.30	9.03614	(81112824)	-121.98	189.30	12.14721	(81102724)
-98.31	189.30	16.37229	(81102724)	-74.64	189.30	21.19547	(81102724)
-50.97	189.30	25.18990	(81102724)	-27.31	189.30	27.67790	(81060224)
-3.64	189.30	30.13674	(81060224)	20.03	189.30	31.90744	(81060224)
43.70	189.30	31.09662	(81060524)	67.37	189.30	31.27090	(81060224)
91.04	189.30	26.95506	(81090524)	-145.65	209.30	8.02665	(81010124)
-121.98	209.30	9.85491	(81100124)	-98.31	209.30	11.94906	(81102724)
-74.64	209.30	15.50737	(81102724)	-50.97	209.30	18.85813	(81102724)
-27.31	209.30	20.49914	(81060224)	-3.64	209.30	22.88078	(81060224)
20.03	209.30	24.17966	(81060224)	43.70	209.30	24.37466	(81060224)
67.37	209.30	23.66107	(81060524)	91.04	209.30	20.64675	(81060224)
92.04	188.30	27.17105	(81090524)	92.04	164.98	36.91882	(81041024)
92.04	141.65	38.33086	(81011224)	92.04	118.33	45.01884	(81011224)
92.04	95.00	48.86038	(81011224)	92.04	71.68	54.23574	(81011224)
92.04	48.36	56.88876	(81011224)	92.04	25.03	58.03611	(81011224)
92.04	1.71	55.03846	(81011224)	92.04	-21.62	52.98295	(81012524)
92.04	-44.94	50.44838	(81010924)	112.04	188.30	24.01880	(81090524)
112.04	164.98	29.86873	(81041024)	112.04	141.65	30.28258	(81041024)

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,

VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 , AREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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** CONC OF PM2_5      IN MICROGRAMS/M**3      **
X-COORD (M)  Y-COORD (M)      CONC      (YYMMDDHH)      X-COORD (M)  Y-COORD (M)      CONC      (YYMMDDHH)
-----
112.04      118.33      35.57285      (81011224)      112.04      95.00      39.85911      (81011224)
112.04      71.68      43.16441      (81011224)      112.04      48.36      46.49685      (81011224)
112.04      25.03      47.21602      (81011224)      112.04      1.71      45.09583      (81011224)
112.04      -21.62      44.42873      (81012524)      112.04      -44.94      43.68780      (81012524)
-145.65      188.30      9.10258      (81112824)      -145.65      -44.94      23.97734      (81112724)
91.04      -44.94      50.79715      (81010924)      91.04      188.30      27.29044      (81090524)
*** ISCST3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
**MODELOPTs:      URBAN FLAT  FLGPOL      NOCALM      15:27:25
CONC      PAGE 14

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*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

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** CONC OF PM2_5      IN MICROGRAMS/M**3      **
GROUP ID      AVERAGE CONC      RECEPTOR (XR, YR, ZELEV, ZFLAG)      OF TYPE      NETWORK GRID-ID
-----
ALL      1ST HIGHEST VALUE IS      22.84501 AT (      92.04,      48.36,      0.00,      2.00) DC      NA
2ND HIGHEST VALUE IS      22.13881 AT (      92.04,      25.03,      0.00,      2.00) DC      NA
3RD HIGHEST VALUE IS      22.10538 AT (      92.04,      71.68,      0.00,      2.00) DC      NA
4TH HIGHEST VALUE IS      21.32710 AT (      92.04,      95.00,      0.00,      2.00) DC      NA
5TH HIGHEST VALUE IS      21.11389 AT (      92.04,      1.71,      0.00,      2.00) DC      NA
6TH HIGHEST VALUE IS      20.06707 AT (      20.03,      -45.94,      0.00,      2.00) DC      NA
7TH HIGHEST VALUE IS      19.92714 AT (      43.70,      -45.94,      0.00,      2.00) DC      NA
8TH HIGHEST VALUE IS      19.65932 AT (      -3.64,      -45.94,      0.00,      2.00) DC      NA
9TH HIGHEST VALUE IS      19.34229 AT (      67.37,      -45.94,      0.00,      2.00) DC      NA
10TH HIGHEST VALUE IS      18.90733 AT (      92.04,      118.33,      0.00,      2.00) DC      NA

```

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

```

*** ISCST3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
**MODELOPTs:      URBAN FLAT  FLGPOL      NOCALM      15:27:25
CONC      PAGE 15

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*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

```

** CONC OF PM2_5      IN MICROGRAMS/M**3      **
GROUP ID      AVERAGE CONC      DATE (YYMMDDHH)      RECEPTOR (XR, YR, ZELEV, ZFLAG)      OF TYPE      NETWORK GRID-ID
-----
ALL      HIGH 1ST HIGH VALUE IS      58.03611 ON 81011224: AT (      92.04,      25.03,      0.00,      2.00) DC      NA

```

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

```

*** ISCST3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
**MODELOPTs:      URBAN FLAT  FLGPOL      NOCALM      15:27:25
CONC      PAGE 16

```

*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 490 Informational Message(s)
A Total of 490 Calm Hours Identified

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

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST3 Finishes Successfully ***

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** CARBON MONOXIDE *** 15:27:50
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 1

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**NO GAS DRY DEPOSITION Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Accepts FLAGPOLE Receptor Heights.

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

**This Run Includes: 25 Source(s); 1 Source Group(s); and 168 Receptor(s)

**The Model Assumes A Pollutant Type of: CO_

**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD 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)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; 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 = 1.2 MB of RAM.

**Input Runstream File: TMP0001_.TMP

**Output Print File: CO.OUT

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** CARBON MONOXIDE *** 15:27:50
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 2

*** 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)	EMISSION RATE SCALAR VARY BY
VOL1	0	0.13000E+00	-105.6	155.0	0.0	5.00	9.31	1.16	HROFDY
VOL2	0	0.13000E+00	-65.3	155.2	0.0	5.00	9.31	1.16	
VOL3	0	0.13000E+00	-25.0	155.5	0.0	5.00	9.32	1.16	
VOL4	0	0.13000E+00	15.2	155.5	0.0	5.00	9.31	1.16	
VOL7	0	0.13000E+00	-105.5	114.9	0.0	5.00	9.32	1.16	
VOL8	0	0.13000E+00	-65.5	115.1	0.0	5.00	9.32	1.16	
VOL9	0	0.13000E+00	-25.3	115.3	0.0	5.00	9.40	1.16	
VOL10	0	0.13000E+00	14.7	115.4	0.0	5.00	9.31	1.16	
VOL13	0	0.13000E+00	-105.3	74.2	0.0	5.00	9.32	1.16	HROFDY
VOL14	0	0.13000E+00	-65.3	74.1	0.0	5.00	9.31	1.16	
VOL15	0	0.13000E+00	-25.3	74.6	0.0	5.00	9.32	1.16	
VOL16	0	0.13000E+00	14.6	74.6	0.0	5.00	9.32	1.16	
VOL19	0	0.13000E+00	-105.2	33.8	0.0	5.00	9.31	1.16	
VOL22	0	0.13000E+00	-65.1	33.8	0.0	5.00	9.32	1.16	
VOL25	0	0.13000E+00	-25.5	34.0	0.0	5.00	9.32	1.16	
VOL28	0	0.13000E+00	14.6	34.1	0.0	5.00	9.31	1.16	
VOL29	0	0.13000E+00	55.0	155.0	0.0	5.00	9.30	1.16	
VOL30	0	0.13000E+00	55.0	115.4	0.0	5.00	9.30	1.16	
VOL31	0	0.13000E+00	54.4	74.2	0.0	5.00	9.30	1.16	
VOL32	0	0.13000E+00	54.1	34.4	0.0	5.00	9.30	1.16	
VOL33	0	0.13000E+00	-105.4	-5.4	0.0	5.00	9.30	1.16	
VOL34	0	0.13000E+00	-65.0	-5.7	0.0	5.00	9.30	1.16	
VOL35	0	0.13000E+00	-25.2	-6.0	0.0	5.00	9.19	1.16	
VOL36	0	0.13000E+00	14.3	-5.4	0.0	5.00	9.30	1.16	
VOL37	0	0.13000E+00	55.0	-5.4	0.0	5.00	9.30	1.16	

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** CARBON MONOXIDE *** 15:27:50
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 3

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 , VOL10 , VOL13 , VOL14 , VOL15 , VOL16 ,
VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 , VOL32 , VOL33 , VOL34 , VOL35 , VOL36 ,
VOL37

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** CARBON MONOXIDE *** 15:27:50
**MODELOPTs: PAGE 4

CONC

URBAN FLAT FLGPOL

NOCALM

* 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 = VOL1 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	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 = VOL10 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	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

*** ISCST3 - VERSION 02035 ***

*** COLLEGE PARK - LST ANALYSIS
*** CARBON MONOXIDE*** 04/15/09
15:27:50
PAGE 5**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	91.0,	-64.9,	0.0,	2.0)	(	67.4,	-64.9,	0.0,	2.0)
(	43.7,	-64.9,	0.0,	2.0)	(	20.0,	-64.9,	0.0,	2.0)
(	-3.6,	-64.9,	0.0,	2.0)	(	-27.3,	-64.9,	0.0,	2.0)
(	-51.0,	-64.9,	0.0,	2.0)	(	-74.6,	-64.9,	0.0,	2.0)
(	-98.3,	-64.9,	0.0,	2.0)	(	-122.0,	-64.9,	0.0,	2.0)
(	-145.6,	-64.9,	0.0,	2.0)	(	108.7,	-87.6,	0.0,	2.0)
(	133.7,	-62.6,	0.0,	2.0)	(	91.0,	-94.9,	0.0,	2.0)
(	67.4,	-94.9,	0.0,	2.0)	(	43.7,	-94.9,	0.0,	2.0)
(	20.0,	-94.9,	0.0,	2.0)	(	-3.6,	-94.9,	0.0,	2.0)
(	-27.3,	-94.9,	0.0,	2.0)	(	-51.0,	-94.9,	0.0,	2.0)
(	-74.6,	-94.9,	0.0,	2.0)	(	-98.3,	-94.9,	0.0,	2.0)
(	-122.0,	-94.9,	0.0,	2.0)	(	-145.6,	-94.9,	0.0,	2.0)
(	108.7,	-137.6,	0.0,	2.0)	(	126.4,	-130.3,	0.0,	2.0)
(	144.1,	-123.0,	0.0,	2.0)	(	169.1,	-98.0,	0.0,	2.0)
(	176.4,	-80.3,	0.0,	2.0)	(	183.7,	-62.6,	0.0,	2.0)
(	91.0,	-144.9,	0.0,	2.0)	(	67.4,	-144.9,	0.0,	2.0)
(	43.7,	-144.9,	0.0,	2.0)	(	20.0,	-144.9,	0.0,	2.0)
(	-3.6,	-144.9,	0.0,	2.0)	(	-27.3,	-144.9,	0.0,	2.0)
(	-51.0,	-144.9,	0.0,	2.0)	(	-74.6,	-144.9,	0.0,	2.0)
(	-98.3,	-144.9,	0.0,	2.0)	(	-122.0,	-144.9,	0.0,	2.0)
(	-145.6,	-144.9,	0.0,	2.0)	(	-165.6,	-44.9,	0.0,	2.0)
(	-165.6,	-21.6,	0.0,	2.0)	(	-165.6,	1.7,	0.0,	2.0)
(	-165.6,	25.0,	0.0,	2.0)	(	-165.6,	48.4,	0.0,	2.0)
(	-165.6,	71.7,	0.0,	2.0)	(	-165.6,	95.0,	0.0,	2.0)
(	-165.6,	118.3,	0.0,	2.0)	(	-165.6,	141.6,	0.0,	2.0)
(	-165.6,	165.0,	0.0,	2.0)	(	-165.6,	188.3,	0.0,	2.0)
(	-188.3,	-62.6,	0.0,	2.0)	(	-163.3,	-87.6,	0.0,	2.0)
(	-195.6,	-44.9,	0.0,	2.0)	(	-195.6,	-21.6,	0.0,	2.0)
(	-195.6,	1.7,	0.0,	2.0)	(	-195.6,	25.0,	0.0,	2.0)
(	-195.6,	48.4,	0.0,	2.0)	(	-195.6,	71.7,	0.0,	2.0)
(	-195.6,	95.0,	0.0,	2.0)	(	-195.6,	118.3,	0.0,	2.0)
(	-195.6,	141.6,	0.0,	2.0)	(	-195.6,	165.0,	0.0,	2.0)
(	-195.6,	188.3,	0.0,	2.0)	(	-238.3,	-62.6,	0.0,	2.0)
(	-231.0,	-80.3,	0.0,	2.0)	(	-223.7,	-98.0,	0.0,	2.0)
(	-198.7,	-123.0,	0.0,	2.0)	(	-181.0,	-130.3,	0.0,	2.0)
(	-163.3,	-137.6,	0.0,	2.0)	(	-245.6,	-44.9,	0.0,	2.0)
(	-245.6,	-21.6,	0.0,	2.0)	(	-245.6,	1.7,	0.0,	2.0)
(	-245.6,	25.0,	0.0,	2.0)	(	-245.6,	48.4,	0.0,	2.0)
(	-245.6,	71.7,	0.0,	2.0)	(	-245.6,	95.0,	0.0,	2.0)
(	-245.6,	118.3,	0.0,	2.0)	(	-245.6,	141.6,	0.0,	2.0)
(	-245.6,	165.0,	0.0,	2.0)	(	-245.6,	188.3,	0.0,	2.0)
(	-145.6,	208.3,	0.0,	2.0)	(	-122.0,	208.3,	0.0,	2.0)
(	-98.3,	208.3,	0.0,	2.0)	(	-74.6,	208.3,	0.0,	2.0)
(	-51.0,	208.3,	0.0,	2.0)	(	-27.3,	208.3,	0.0,	2.0)
(	-3.6,	208.3,	0.0,	2.0)	(	20.0,	208.3,	0.0,	2.0)

*** ISCST3 - VERSION 02035 ***

*** COLLEGE PARK - LST ANALYSIS
*** CARBON MONOXIDE*** 04/15/09
15:27:50
PAGE 6**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	43.7,	208.3,	0.0,	2.0)	(	67.4,	208.3,	0.0,	2.0)
(	91.0,	208.3,	0.0,	2.0)	(	-163.3,	231.0,	0.0,	2.0)
(	-188.3,	206.0,	0.0,	2.0)	(	-145.6,	238.3,	0.0,	2.0)
(	-122.0,	238.3,	0.0,	2.0)	(	-98.3,	238.3,	0.0,	2.0)
(	-74.6,	238.3,	0.0,	2.0)	(	-51.0,	238.3,	0.0,	2.0)
(	-27.3,	238.3,	0.0,	2.0)	(	-3.6,	238.3,	0.0,	2.0)
(	20.0,	238.3,	0.0,	2.0)	(	43.7,	238.3,	0.0,	2.0)
(	67.4,	238.3,	0.0,	2.0)	(	91.0,	238.3,	0.0,	2.0)
(	-163.3,	281.0,	0.0,	2.0)	(	-181.0,	273.7,	0.0,	2.0)
(	-198.7,	266.3,	0.0,	2.0)	(	-223.7,	241.3,	0.0,	2.0)
(	-231.0,	223.7,	0.0,	2.0)	(	-238.3,	206.0,	0.0,	2.0)
(	-145.6,	288.3,	0.0,	2.0)	(	-122.0,	288.3,	0.0,	2.0)
(	-98.3,	288.3,	0.0,	2.0)	(	-74.6,	288.3,	0.0,	2.0)
(	-51.0,	288.3,	0.0,	2.0)	(	-27.3,	288.3,	0.0,	2.0)
(	-3.6,	288.3,	0.0,	2.0)	(	20.0,	288.3,	0.0,	2.0)
(	43.7,	288.3,	0.0,	2.0)	(	67.4,	288.3,	0.0,	2.0)
(	91.0,	288.3,	0.0,	2.0)	(	111.0,	188.3,	0.0,	2.0)
(	111.0,	165.0,	0.0,	2.0)	(	111.0,	141.6,	0.0,	2.0)
(	111.0,	118.3,	0.0,	2.0)	(	111.0,	95.0,	0.0,	2.0)
(	111.0,	71.7,	0.0,	2.0)	(	111.0,	48.4,	0.0,	2.0)
(	111.0,	25.0,	0.0,	2.0)	(	111.0,	1.7,	0.0,	2.0)
(	111.0,	-21.6,	0.0,	2.0)	(	111.0,	-44.9,	0.0,	2.0)
(	133.7,	206.0,	0.0,	2.0)	(	108.7,	231.0,	0.0,	2.0)
(	141.0,	188.3,	0.0,	2.0)	(	141.0,	165.0,	0.0,	2.0)
(	141.0,	141.6,	0.0,	2.0)	(	141.0,	118.3,	0.0,	2.0)
(	141.0,	95.0,	0.0,	2.0)	(	141.0,	71.7,	0.0,	2.0)
(	141.0,	48.4,	0.0,	2.0)	(	141.0,	25.0,	0.0,	2.0)
(	141.0,	1.7,	0.0,	2.0)	(	141.0,	-21.6,	0.0,	2.0)
(	141.0,	-44.9,	0.0,	2.0)	(	183.7,	206.0,	0.0,	2.0)
(	176.4,	223.7,	0.0,	2.0)	(	169.1,	241.3,	0.0,	2.0)

VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO_			IN MICROGRAMS/M**3			**	
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC		
91.04	-64.94	194.86017	67.37	-64.94	209.08656		
43.70	-64.94	213.91270	20.03	-64.94	211.60402		
-3.64	-64.94	203.26122	27.30	-64.94	184.95946		
-50.97	-64.94	161.08231	-74.64	-64.94	128.03792		
-98.31	-64.94	89.46090	-121.98	-64.94	61.09890		
-145.65	-64.94	46.93775	108.72	-87.62	152.53313		
133.72	-62.62	135.02173	91.04	-94.94	156.40936		
67.37	-94.94	160.48187	43.70	-94.94	159.70534		
20.03	-94.94	154.41493	-3.64	-94.94	143.77699		
-27.30	-94.94	127.43198	-50.97	-94.94	106.55627		
-74.64	-94.94	82.70314	-98.31	-94.94	60.07350		
-121.98	-94.94	45.86517	-145.65	-94.94	37.69494		
108.72	-137.62	112.58459	126.40	-130.30	111.37294		
144.07	-122.97	105.43232	169.07	-97.97	93.34428		
176.40	-80.30	87.90300	183.72	-62.62	80.96759		
91.04	-144.94	108.81930	67.37	-144.94	106.46678		
43.70	-144.94	101.38303	20.03	-144.94	94.02141		
-3.64	-144.94	84.24046	27.30	-144.94	72.40488		
-50.97	-144.94	59.46508	-74.64	-144.94	47.02520		
-98.31	-144.94	37.26494	-121.98	-144.94	31.30356		
-145.65	-144.94	27.27136	-165.65	-44.94	42.45542		
-165.65	-21.62	46.77633	-165.65	1.71	48.80951		
-165.65	25.03	49.47746	-165.65	48.36	48.69629		
-165.65	71.68	46.60142	-165.65	95.00	43.23497		
-165.65	118.33	37.90076	-165.65	141.65	32.55972		
-165.65	164.98	27.53394	-165.65	188.30	23.09837		
-188.33	-62.62	30.44132	-163.33	-87.62	33.75676		
-195.65	-44.94	30.45651	-195.65	-21.62	32.17571		
-195.65	1.71	32.85131	-195.65	25.03	32.91824		
-195.65	48.36	32.38791	-195.65	71.68	30.99010		
-195.65	95.00	28.52763	-195.65	118.33	25.31538		
-195.65	141.65	22.21445	-195.65	164.98	19.39160		
-195.65	188.30	16.83954	-238.33	-62.62	19.83675		
-231.01	-80.30	19.72457	-223.68	-97.97	19.35129		
-198.68	-122.97	20.95691	-181.01	-130.30	23.21085		
-163.33	-137.62	25.40322	-245.65	-44.94	19.53790		
-245.65	-21.62	20.06205	-245.65	1.71	20.12261		
-245.65	25.03	19.79702	-245.65	48.36	19.11533		
-245.65	71.68	18.03239	-245.65	95.00	16.59734		
-245.65	118.33	15.05834	-245.65	141.65	13.63623		

*** ISCST3 - VERSION 02035 ***

*** COLLEGE PARK - LST ANALYSIS
*** CARBON MONOXIDE

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO_			IN MICROGRAMS/M**3			**	
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC		
-245.65	164.98	12.36059	-245.65	188.30	11.18504		
-145.65	208.30	25.00718	-121.98	208.30	33.79323		
-98.31	208.30	45.26344	-74.64	208.30	57.11584		
-50.97	208.30	70.20889	-27.31	208.30	82.44489		
-3.64	208.30	94.02680	20.03	208.30	102.64226		
43.70	208.30	107.69447	67.37	208.30	109.02293		
91.04	208.30	104.02506	-163.33	230.98	17.26221		
-188.33	205.98	16.22767	-145.65	238.30	19.06494		
-121.98	238.30	23.67918	-98.31	238.30	29.42605		
-74.64	238.30	35.99700	-50.97	238.30	43.12296		
-27.31	238.30	49.04303	-3.64	238.30	55.75193		
20.03	238.30	60.57526	43.70	238.30	64.22836		
67.37	238.30	66.53375	91.04	238.30	66.70298		
-163.33	280.98	12.03798	-181.01	273.66	11.25051		
-198.68	266.33	10.48935	-223.68	241.33	10.18321		
-231.01	223.66	10.55051	-238.33	205.98	10.88746		
-145.65	288.30	12.81013	-121.98	288.30	14.88575		
-98.31	288.30	17.37347	-74.64	288.30	20.34690		
-50.97	288.30	23.68433	-27.31	288.30	27.02330		
-3.64	288.30	30.01259	20.03	288.30	32.39963		
43.70	288.30	34.16994	67.37	288.30	35.43670		
91.04	288.30	36.13018	111.04	188.30	120.67654		
111.04	164.98	139.29189	111.04	141.65	156.13223		
111.04	118.33	180.40538	111.04	95.00	203.03471		
111.04	71.68	215.03261	111.04	48.36	219.53616		
111.04	25.03	214.65346	111.04	1.71	201.96622		
111.04	-21.62	185.74504	111.04	-44.94	178.37779		
133.72	205.98	87.78219	108.72	230.98	71.76252		
141.04	188.30	95.67950	141.04	164.98	105.14539		
141.04	141.65	113.88375	141.04	118.33	123.95173		
141.04	95.00	134.00578	141.04	71.68	140.73827		
141.04	48.36	142.48331	141.04	25.03	138.50305		
141.04	1.71	130.87999	141.04	-21.62	126.44257		
141.04	-44.94	125.99930	183.72	205.98	66.67083		
176.40	223.66	61.62621	169.07	241.33	54.31500		
144.07	266.33	44.26807	126.40	273.66	41.78521		
108.72	280.98	39.05417	191.04	188.30	68.80975		
191.04	164.98	72.95104	191.04	141.65	76.03783		
191.04	118.33	78.01200	191.04	95.00	78.49197		
191.04	71.68	77.67488	191.04	48.36	75.67182		

*** ISCST3 - VERSION 02035 ***

*** COLLEGE PARK - LST ANALYSIS
*** CARBON MONOXIDE

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO_ IN MICROGRAMS/M**3

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
191.04 25.03 72.88054 191.04 1.71 70.97507
191.04 -21.62 71.51391 191.04 -44.94 73.67415
-145.65 188.30 30.10056 -145.65 -44.94 54.44789
91.04 -44.94 221.52934 91.04 188.30 140.32245
*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***
*** CARBON MONOXIDE ***

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 VOL2 VOL3 VOL4 VOL7 VOL8 VOL9
VOL10 VOL13 VOL14 VOL15 VOL16 VOL19 VOL22 VOL25 VOL28 VOL29 VOL30 VOL31
VOL32 VOL33 VOL34 VOL35 VOL36 VOL37

*** 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)
91.04	-64.94	1170.41345	(81020108)	67.37	-64.94	1138.48767	(81113008)
43.70	-64.94	1147.48816	(81122008)	20.03	-64.94	1122.81299	(81122908)
-3.64	-64.94	1128.52771	(81011408)	-27.30	-64.94	1099.51001	(81040104)
-50.97	-64.94	1086.26563	(81122908)	-74.64	-64.94	1114.76917	(81031601)
-98.31	-64.94	1150.17090	(81112708)	-121.98	-64.94	1153.95288	(81031808)
-145.65	-64.94	1163.38623	(81010808)	108.72	-87.62	1014.88513	(81020408)
133.72	-62.62	1026.48462	(81012608)	91.04	-94.94	985.96655	(81113008)
67.37	-94.94	983.94196	(81122008)	43.70	-94.94	983.05212	(81010108)
20.03	-94.94	969.79352	(81122008)	-3.64	-94.94	974.26923	(81020508)
-27.30	-94.94	946.95416	(81122908)	-50.97	-94.94	932.09930	(81041205)
-74.64	-94.94	949.83728	(81082404)	-98.31	-94.94	973.29700	(81112708)
-121.98	-94.94	989.04962	(81112708)	-145.65	-94.94	995.75031	(81031808)
108.72	-137.62	808.49744	(81122008)	126.40	-130.30	825.99536	(81113008)
144.07	-122.97	824.17371	(81020408)	169.07	-97.97	824.95551	(81011708)
176.40	-80.30	832.87244	(81011808)	183.72	-62.62	823.23383	(81013008)
91.04	-144.94	795.60321	(81012008)	67.37	-144.94	796.72931	(81120708)
43.70	-144.94	795.44232	(81112208)	20.03	-144.94	793.52393	(81122908)
-3.64	-144.94	784.84619	(81122908)	-27.30	-144.94	759.36145	(81080404)
-50.97	-144.94	760.50421	(81092307)	-74.64	-144.94	763.10352	(81031801)
-98.31	-144.94	764.88019	(81012002)	-121.98	-144.94	773.33411	(81112708)
-145.65	-144.94	795.36823	(81112708)	-165.65	-44.94	1111.15991	(81041703)
-165.65	-21.62	1129.72583	(81072224)	-165.65	1.71	1085.32056	(81040304)
-165.65	25.03	1116.91272	(81100721)	-165.65	48.36	1090.27002	(81071702)
-165.65	71.68	1112.36243	(81030308)	-165.65	95.00	1111.74170	(81081107)
-165.65	118.33	1112.09045	(81031108)	-165.65	141.65	1121.74390	(81070906)
-165.65	164.98	1060.68689	(81042022)	-165.65	188.30	950.70435	(81081407)
-188.33	-62.62	961.49249	(81062302)	-163.33	-87.62	1007.33557	(81010808)
-195.65	-44.94	955.55377	(81010306)	-195.65	-21.62	962.84814	(81041123)
-195.65	1.71	954.12097	(81123002)	-195.65	25.03	957.67322	(81012021)
-195.65	48.36	948.34167	(81031108)	-195.65	71.68	955.36279	(81030308)
-195.65	95.00	952.30481	(81090704)	-195.65	118.33	953.66760	(81031108)
-195.65	141.65	951.87970	(81070905)	-195.65	164.98	932.11267	(81091407)
-195.65	188.30	875.45032	(81042022)	-238.33	-62.62	777.65881	(81010306)
-231.01	-80.30	781.55316	(81050502)	-223.68	-97.97	775.04370	(81031623)
-198.68	-122.97	818.41406	(81010808)	-181.01	-130.30	796.67755	(81031808)
-163.33	-137.62	815.42218	(81031808)	-245.65	-44.94	765.71112	(81080601)
-245.65	-21.62	771.74573	(81090306)	-245.65	1.71	773.05713	(81100605)
-245.65	25.03	770.90076	(81012021)	-245.65	48.36	779.59796	(81030308)
-245.65	71.68	778.67505	(81030308)	-245.65	95.00	778.26581	(81031108)
-245.65	118.33	776.10870	(81031108)	-245.65	141.65	761.85297	(81032104)

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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 VOL2 VOL3 VOL4 VOL7 VOL8 VOL9
VOL10 VOL13 VOL14 VOL15 VOL16 VOL19 VOL22 VOL25 VOL28 VOL29 VOL30 VOL31
VOL32 VOL33 VOL34 VOL35 VOL36 VOL37

*** 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)
-245.65	164.98	751.93890	(81070905)	-245.65	188.30	730.53290	(81060905)
-145.65	208.30	915.56116	(81100101)	-121.98	208.30	1104.09741	(81031608)
-98.31	208.30	1145.15161	(81080524)	-74.64	208.30	1170.93201	(81031608)
-50.97	208.30	1123.29980	(81052704)	-27.31	208.30	1148.54956	(81081323)
-3.64	208.30	1158.70166	(81030908)	20.03	208.30	1141.91797	(81030908)
43.70	208.30	1150.07605	(81030908)	67.37	208.30	1173.01965	(81030908)
91.04	208.30	1116.77856	(81010208)	-163.33	230.98	822.13995	(81010101)
-188.33	205.98	833.26355	(81081407)	-145.65	238.30	856.43872	(81092007)
-121.98	238.30	959.07709	(81031608)	-98.31	238.30	985.37653	(81031608)
-74.64	238.30	999.77997	(81031608)	-50.97	238.30	992.93250	(81031608)
-27.31	238.30	981.00067	(81041706)	-3.64	238.30	986.10535	(81061202)
20.03	238.30	992.69434	(81030908)	43.70	238.30	1015.50916	(81030908)
67.37	238.30	1006.35504	(81030908)	91.04	238.30	926.05212	(81090908)
-163.33	280.98	714.13647	(81120419)	-181.01	273.66	703.30353	(81092107)
-198.68	266.33	687.58240	(81100101)	-223.68	241.33	680.68408	(81081407)
-231.01	223.66	710.79730	(81042022)	-238.33	205.98	723.55847	(81072207)
-145.65	288.30	729.65552	(81112818)	-121.98	288.30	781.37677	(81031608)
-98.31	288.30	809.89960	(81031608)	-74.64	288.30	809.74780	(81031608)
-50.97	288.30	800.73474	(81031608)	-27.31	288.30	788.35767	(81041706)
-3.64	288.30	784.63049	(81032123)	20.03	288.30	786.58752	(81030908)
43.70	288.30	811.06335	(81030908)	67.37	288.30	818.59338	(81030908)
91.04	288.30	794.31171	(81030908)	111.04	188.30	1189.17371	(81010208)
111.04	164.98	1125.78967	(81010208)	111.04	141.65	1081.07922	(81013018)
111.04	118.33	1132.05701	(81020308)	111.04	95.00	1131.56079	(81080222)
111.04	71.68	1118.37341	(81043024)	111.04	48.36	1116.58545	(81092621)
111.04	25.03	1143.64038	(81081705)	111.04	1.71	1160.10474	(81013008)
111.04	-21.62	1175.73792	(81013008)	111.04	-44.94	1188.71533	(81012608)
133.72	205.98	1032.16333	(81010208)	108.72	230.98	934.04980	(81010208)
141.04	188.30	946.30518	(81010208)	141.04	164.98	903.18542	(81030108)
141.04	141.65	957.69275	(81020308)	141.04	118.33	969.31805	(81020308)
141.04	95.00	967.52673	(81042721)	141.04	71.68	967.54907	(81020308)
141.04	48.36	966.68347	(81013005)	141.04	25.03	979.71466	(81100102)
141.04	1.71	981.63818	(81012508)	141.04	-21.62	1001.28973	(81012508)
141.04	-44.94	1012.43243	(81010908)	183.72	205.98	737.52997	(81112604)
176.40	223.66	799.61267	(81010208)	169.07	241.33	839.00745	(81010208)
144.07	266.33	755.92542	(81081001)	126.40	273.66	749.03595	(81033122)
108.72	280.98	747.54565	(81033122)	191.04	188.30	723.67426	(81011921)
191.04	164.98	735.51477	(81072223)	191.04	141.65	782.02515	(81020308)

191.04 118.33 788.83649 (81020308) 191.04 95.00 789.78107 (81020308)
191.04 71.68 786.69214 (81020308) 191.04 48.36 784.04193 (81080807)
*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***
*** CARBON MONOXIDE ***
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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** 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)
191.04	25.03	788.37982	(81012722)	191.04	1.71	790.61145	(81071024)
191.04	-21.62	790.81085	(81011201)	191.04	-44.94	803.39337	(81012508)
-145.65	188.30	974.90131	(81100101)	-145.65	-44.94	1273.16016	(81010808)
91.04	-44.94	1301.47046	(81013108)	91.04	188.30	1322.92078	(81010208)

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***
*** CARBON MONOXIDE ***

**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** 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)
91.04	-64.94	1052.21851	(81020408)	67.37	-64.94	1033.11523	(81011908)
43.70	-64.94	990.81488	(81011908)	20.03	-64.94	977.66272	(81012008)
-3.64	-64.94	982.73474	(81012008)	-27.30	-64.94	947.92871	(81012408)
-50.97	-64.94	940.90118	(81012408)	-74.64	-64.94	884.30762	(81012408)
-98.31	-64.94	759.13837	(81012408)	-121.98	-64.94	664.28241	(81022824)
-145.65	-64.94	558.64130	(81022824)	108.72	-87.62	887.41840	(81020408)
133.72	-62.62	830.83844	(81013108)	91.04	-94.94	852.58417	(81020408)
67.37	-94.94	825.75165	(81012708)	43.70	-94.94	806.05664	(81012708)
20.03	-94.94	801.09363	(81012008)	-3.64	-94.94	807.04144	(81012408)
-27.30	-94.94	803.96198	(81012408)	-50.97	-94.94	782.94855	(81012408)
-74.64	-94.94	721.77643	(81012408)	-98.31	-94.94	613.00720	(81012408)
-121.98	-94.94	553.46265	(81031408)	-145.65	-94.94	513.86157	(81022824)
108.72	-137.62	645.13336	(81011908)	126.40	-130.30	680.85162	(81020408)
144.07	-122.97	681.34680	(81020408)	169.07	-97.97	631.07147	(81013108)
176.40	-80.30	597.02777	(81012508)	183.72	-62.62	625.99902	(81012508)
91.04	-144.94	613.89307	(81012708)	67.37	-144.94	626.27344	(81020508)
43.70	-144.94	618.23126	(81020508)	20.03	-144.94	588.34552	(81020508)
-3.64	-144.94	584.75323	(81012408)	-27.30	-144.94	603.31360	(81012408)
-50.97	-144.94	580.93573	(81012408)	-74.64	-144.94	525.75787	(81012408)
-98.31	-144.94	452.35712	(81012408)	-121.98	-144.94	435.52164	(81031408)
-145.65	-144.94	409.08298	(81022824)	-165.65	-44.94	507.72037	(81071008)
-165.65	-21.62	578.81006	(81070208)	-165.65	1.71	576.63013	(81032308)
-165.65	25.03	559.84546	(81032308)	-165.65	48.36	524.27618	(81032308)
-165.65	71.68	485.84906	(81032308)	-165.65	95.00	437.19940	(81070908)
-165.65	118.33	436.37436	(81040708)	-165.65	141.65	417.71228	(81070908)
-165.65	164.98	351.95566	(81040708)	-165.65	188.30	277.78613	(81070908)
-188.33	-62.62	420.37634	(81071008)	-163.33	-87.62	427.44882	(81022824)
-195.65	-44.94	432.91281	(81071008)	-195.65	-21.62	458.36548	(81070208)
-195.65	1.71	448.49637	(81070208)	-195.65	25.03	425.98706	(81070208)
-195.65	48.36	397.71420	(81070208)	-195.65	71.68	351.54276	(81032308)
-195.65	95.00	345.98666	(81040708)	-195.65	118.33	363.76761	(81040708)
-195.65	141.65	356.43848	(81040708)	-195.65	164.98	322.42383	(81040708)
-195.65	188.30	260.39301	(81071008)	-238.33	-62.62	332.05832	(81071008)
-231.01	-80.30	330.48962	(81071008)	-223.68	-97.97	313.67606	(81071008)
-198.68	-122.97	259.05579	(81022824)	-181.01	-130.30	335.62100	(81022824)
-163.33	-137.62	391.73224	(81022824)	-245.65	-44.94	336.03854	(81070208)
-245.65	-21.62	345.63022	(81070208)	-245.65	1.71	332.82019	(81070208)
-245.65	25.03	306.40140	(81070208)	-245.65	48.36	266.62238	(81070208)
-245.65	71.68	267.90082	(81090708)	-245.65	95.00	269.90210	(81090708)
-245.65	118.33	264.99030	(81040708)	-245.65	141.65	271.58865	(81040708)

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***
*** CARBON MONOXIDE ***

**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** 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)
-245.65	164.98	260.91644	(81040708)	-245.65	188.30	233.42470	(81040708)
-145.65	208.30	259.94962	(81012716)	-121.98	208.30	290.88037	(81012716)
-98.31	208.30	309.07898	(81020416)	-74.64	208.30	352.37781	(81020416)
-50.97	208.30	403.49017	(81020924)	-27.31	208.30	474.62244	(81020924)
-3.64	208.30	513.29144	(81020924)	20.03	208.30	499.05865	(81020924)
43.70	208.30	461.62433	(81020924)	67.37	208.30	451.26071	(81020924)
91.04	208.30	441.76447	(81090508)	-163.33	230.98	199.79953	(81012716)
-188.33	205.98	235.26944	(81070908)	-145.65	238.30	213.27223	(81012716)
-121.98	238.30	218.62270	(81012716)	-98.31	238.30	225.55211	(81020416)
-74.64	238.30	256.03375	(81020416)	-50.97	238.30	274.89059	(81020416)
-27.31	238.30	329.15057	(81102708)	-3.64	238.30	363.09570	(81020924)
20.03	238.30	369.01404	(81020924)	43.70	238.30	357.28897	(81020924)
67.37	238.30	350.05649	(81020924)	91.04	238.30	323.89389	(81020924)
-163.33	280.98	153.91702	(81012716)	-181.01	273.66	149.24234	(81012716)
-198.68	266.33	135.00508	(81012716)	-223.68	241.33	171.68431	(81070908)
-231.01	223.66	195.69477	(81070908)	-238.33	205.98	216.59311	(81070908)
-145.65	288.30	149.01042	(81012716)	-121.98	288.30	143.35234	(81012716)
-98.31	288.30	153.08362	(81020416)	-74.64	288.30	168.68422	(81020416)
-50.97	288.30	177.89195	(81020416)	-27.31	288.30	216.20714	(81102708)
-3.64	288.30	252.16504	(81102708)	20.03	288.30	269.39343	(81102708)
43.70	288.30	261.93689	(81102708)	67.37	288.30	248.56451	(81090508)
91.04	288.30	242.77928	(81020924)	111.04	188.30	552.77209	(81090508)
111.04	164.98	610.72412	(81060608)	111.04	141.65	693.34296	(81010424)

```

111.04      118.33      733.85760 (81010424)      111.04      95.00      771.37738 (81013008)
111.04      71.68      802.21466 (81013008)      111.04      48.36      816.38672 (81052308)
111.04      25.03      863.61841 (81012508)      111.04      1.71      939.94135 (81012508)
111.04      -21.62      1001.14642 (81012508)      111.04      -44.94      1010.19116 (81013108)
133.72      205.98      431.45596 (81090508)      108.72      230.98      317.41849 (81090508)
141.04      188.30      457.79239 (81090508)      141.04      164.98      525.97919 (81060608)
141.04      141.65      580.88147 (81010424)      141.04      118.33      628.98016 (81010424)
141.04      95.00      648.50830 (81010424)      141.04      71.68      647.85474 (81010424)
141.04      48.36      635.25696 (81052308)      141.04      25.03      680.59308 (81012508)
141.04      1.71      751.39478 (81012508)      141.04      -21.62      805.94757 (81012508)
141.04      -44.94      814.72601 (81012508)      183.72      205.98      355.20117 (81102424)
176.40      223.66      322.96259 (81090508)      169.07      241.33      282.40607 (81090508)
144.07      266.33      201.77122 (81090508)      126.40      273.66      209.14149 (81020924)
108.72      280.98      234.03590 (81020924)      191.04      188.30      371.44635 (81102424)
191.04      164.98      413.17654 (81013008)      191.04      141.65      436.66217 (81010424)
191.04      118.33      478.27005 (81010424)      191.04      95.00      489.58963 (81010424)
191.04      71.68      474.25220 (81010424)      191.04      48.36      437.49072 (81011208)
*** ISCST3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
*** CARBON MONOXIDE      ***      15:27:50
**MODELOPTs:      URBAN FLAT FLGPOL      NOCALM      PAGE 17
CONC
*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,
*** 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)
- - - - -
191.04 25.03 447.48105 (81012508) 191.04 1.71 517.17212 (81012508)
191.04 -21.62 572.07434 (81012508) 191.04 -44.94 606.54102 (81012508)
-145.65 188.30 303.14709 (81070908) -145.65 -44.94 552.34515 (81022824)
91.04 -44.94 1161.18799 (81013108) 91.04 188.30 598.74585 (81090508)
*** ISCST3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
*** CARBON MONOXIDE      ***      15:27:50
**MODELOPTs:      URBAN FLAT FLGPOL      NOCALM      PAGE 18
CONC
*** THE SUMMARY OF MAXIMUM PERIOD ( 8760 HRS) RESULTS ***
** CONC OF CO_ IN MICROGRAMS/M**3 **
GROUP ID AVERAGE CONC RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE NETWORK GRID-ID
- - - - -
ALL 1ST HIGHEST VALUE IS 221.52934 AT ( 91.04, -44.94, 0.00, 2.00) DC NA
2ND HIGHEST VALUE IS 219.53616 AT ( 111.04, 48.36, 0.00, 2.00) DC NA
3RD HIGHEST VALUE IS 215.03261 AT ( 111.04, 71.68, 0.00, 2.00) DC NA
4TH HIGHEST VALUE IS 214.65346 AT ( 111.04, 25.03, 0.00, 2.00) DC NA
5TH HIGHEST VALUE IS 213.91270 AT ( 43.70, -64.94, 0.00, 2.00) DC NA
6TH HIGHEST VALUE IS 211.60402 AT ( 20.03, -64.94, 0.00, 2.00) DC NA
7TH HIGHEST VALUE IS 209.08656 AT ( 67.37, -64.94, 0.00, 2.00) DC NA
8TH HIGHEST VALUE IS 203.26122 AT ( -3.64, -64.94, 0.00, 2.00) DC NA
9TH HIGHEST VALUE IS 203.03471 AT ( 111.04, 95.00, 0.00, 2.00) DC NA
10TH HIGHEST VALUE IS 201.96622 AT ( 111.04, 1.71, 0.00, 2.00) DC NA
*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY
*** ISCST3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
*** CARBON MONOXIDE      ***      15:27:50
**MODELOPTs:      URBAN FLAT FLGPOL      NOCALM      PAGE 19
CONC
*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***
** CONC OF CO_ IN MICROGRAMS/M**3 **
GROUP ID AVERAGE CONC DATE (YYMMDDHH) RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE NETWORK GRID-ID
- - - - -
ALL HIGH 1ST HIGH VALUE IS 1322.92078 ON 81010208: AT ( 91.04, 188.30, 0.00, 2.00) DC NA
*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY
*** ISCST3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
*** CARBON MONOXIDE      ***      15:27:50
**MODELOPTs:      URBAN FLAT FLGPOL      NOCALM      PAGE 20
CONC
*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***
** CONC OF CO_ IN MICROGRAMS/M**3 **
GROUP ID AVERAGE CONC DATE (YYMMDDHH) RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE NETWORK GRID-ID
- - - - -
ALL HIGH 1ST HIGH VALUE IS 1161.18799 ON 81013108: AT ( 91.04, -44.94, 0.00, 2.00) DC NA
*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY
*** ISCST3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
*** CARBON MONOXIDE      ***      15:27:50
**MODELOPTs:      URBAN FLAT FLGPOL      NOCALM      PAGE 21
CONC
```


*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 490 Informational Message(s)
A Total of 490 Calm Hours Identified

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

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST3 Finishes Successfully ***

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** NITROGEN DIOXIDE (NO2) *** 15:28:14
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 1
CONC

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**NO GAS DRY DEPOSITION Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Accepts FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 1-HR
and Calculates PERIOD Averages

**This Run Includes: 25 Source(s); 1 Source Group(s); and 732 Receptor(s)

**The Model Assumes A Pollutant Type of: NO2_

**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD 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)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; 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 = 1.3 MB of RAM.

**Input Runstream File: TMP0001_.TMP

**Output Print File: NO2.OUT

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** NITROGEN DIOXIDE (NO2) *** 15:28:14
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 2
CONC

*** 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)	EMISSION RATE SCALAR VARY BY
VOL1	0	0.23000E+00	-105.6	155.0	0.0	5.00	9.31	1.16	HROFDY
VOL2	0	0.23000E+00	-65.3	155.2	0.0	5.00	9.31	1.16	
VOL3	0	0.23000E+00	-25.0	155.5	0.0	5.00	9.32	1.16	
VOL4	0	0.23000E+00	15.2	155.5	0.0	5.00	9.31	1.16	
VOL7	0	0.23000E+00	-105.5	114.9	0.0	5.00	9.32	1.16	
VOL8	0	0.23000E+00	-65.5	115.1	0.0	5.00	9.32	1.16	
VOL9	0	0.23000E+00	-25.3	115.3	0.0	5.00	9.40	1.16	
VOL10	0	0.23000E+00	14.7	115.4	0.0	5.00	9.31	1.16	
VOL13	0	0.23000E+00	-105.3	74.2	0.0	5.00	9.32	1.16	
VOL14	0	0.23000E+00	-65.3	74.1	0.0	5.00	9.31	1.16	HROFDY
VOL15	0	0.23000E+00	-25.3	74.6	0.0	5.00	9.32	1.16	
VOL16	0	0.23000E+00	14.6	74.6	0.0	5.00	9.32	1.16	
VOL19	0	0.23000E+00	-105.2	33.8	0.0	5.00	9.31	1.16	
VOL22	0	0.23000E+00	-65.1	33.8	0.0	5.00	9.32	1.16	
VOL25	0	0.23000E+00	-25.5	34.0	0.0	5.00	9.32	1.16	
VOL28	0	0.23000E+00	14.6	34.1	0.0	5.00	9.31	1.16	
VOL29	0	0.23000E+00	55.0	155.0	0.0	5.00	9.30	1.16	
VOL30	0	0.23000E+00	55.0	115.4	0.0	5.00	9.30	1.16	
VOL31	0	0.23000E+00	54.4	74.2	0.0	5.00	9.30	1.16	HROFDY
VOL32	0	0.23000E+00	54.1	34.4	0.0	5.00	9.30	1.16	
VOL33	0	0.23000E+00	-105.4	-5.4	0.0	5.00	9.30	1.16	
VOL34	0	0.23000E+00	-65.0	-5.7	0.0	5.00	9.30	1.16	
VOL35	0	0.23000E+00	-25.2	-6.0	0.0	5.00	9.19	1.16	
VOL36	0	0.23000E+00	14.3	-5.4	0.0	5.00	9.30	1.16	
VOL37	0	0.23000E+00	55.0	-5.4	0.0	5.00	9.30	1.16	
VOL37	0	0.23000E+00	55.0	-5.4	0.0	5.00	9.30	1.16	

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** NITROGEN DIOXIDE (NO2) *** 15:28:14
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 3
CONC

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 , VOL10 , VOL13 , VOL14 , VOL15 , VOL16 ,
VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 , VOL32 , VOL33 , VOL34 , VOL35 , VOL36 ,
VOL37

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** NITROGEN DIOXIDE (NO2) *** 15:28:14
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 4
CONC

CONC

URBAN FLAT FLGPOL

NOCALM

* 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 = VOL1 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	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 = VOL10 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	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

*** ISCST3 - VERSION 02035 ***

*** COLLEGE PARK - LST ANALYSIS
*** NITROGEN DIOXIDE (NO2)*** 04/15/09
15:28:14
PAGE 5

**MODELOPTs:

CONC

URBAN FLAT FLGPOL

NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	91.0,	-64.9,	0.0,	2.0)	(	67.4,	-64.9,	0.0,	2.0)
(	43.7,	-64.9,	0.0,	2.0)	(	20.0,	-64.9,	0.0,	2.0)
(	-3.6,	-64.9,	0.0,	2.0)	(	-27.3,	-64.9,	0.0,	2.0)
(	-51.0,	-64.9,	0.0,	2.0)	(	-74.6,	-64.9,	0.0,	2.0)
(	-98.3,	-64.9,	0.0,	2.0)	(	-122.0,	-64.9,	0.0,	2.0)
(	-145.6,	-64.9,	0.0,	2.0)	(	108.7,	-87.6,	0.0,	2.0)
(	133.7,	-62.6,	0.0,	2.0)	(	91.0,	-94.9,	0.0,	2.0)
(	67.4,	-94.9,	0.0,	2.0)	(	43.7,	-94.9,	0.0,	2.0)
(	20.0,	-94.9,	0.0,	2.0)	(	-3.6,	-94.9,	0.0,	2.0)
(	-27.3,	-94.9,	0.0,	2.0)	(	-51.0,	-94.9,	0.0,	2.0)
(	-74.6,	-94.9,	0.0,	2.0)	(	-98.3,	-94.9,	0.0,	2.0)
(	-122.0,	-94.9,	0.0,	2.0)	(	-145.6,	-94.9,	0.0,	2.0)
(	108.7,	-137.6,	0.0,	2.0)	(	126.4,	-130.3,	0.0,	2.0)
(	144.1,	-123.0,	0.0,	2.0)	(	169.1,	-98.0,	0.0,	2.0)
(	176.4,	-80.3,	0.0,	2.0)	(	183.7,	-62.6,	0.0,	2.0)
(	91.0,	-144.9,	0.0,	2.0)	(	67.4,	-144.9,	0.0,	2.0)
(	43.7,	-144.9,	0.0,	2.0)	(	20.0,	-144.9,	0.0,	2.0)
(	-3.6,	-144.9,	0.0,	2.0)	(	-27.3,	-144.9,	0.0,	2.0)
(	-51.0,	-144.9,	0.0,	2.0)	(	-74.6,	-144.9,	0.0,	2.0)
(	-98.3,	-144.9,	0.0,	2.0)	(	-122.0,	-144.9,	0.0,	2.0)
(	-145.6,	-144.9,	0.0,	2.0)	(	111.2,	-236.6,	0.0,	2.0)
(	131.4,	-228.2,	0.0,	2.0)	(	151.6,	-219.8,	0.0,	2.0)
(	171.9,	-211.5,	0.0,	2.0)	(	192.1,	-203.1,	0.0,	2.0)
(	212.3,	-194.7,	0.0,	2.0)	(	240.8,	-166.2,	0.0,	2.0)
(	249.2,	-146.0,	0.0,	2.0)	(	257.6,	-125.8,	0.0,	2.0)
(	265.9,	-105.6,	0.0,	2.0)	(	274.3,	-85.3,	0.0,	2.0)
(	282.7,	-65.1,	0.0,	2.0)	(	91.0,	-244.9,	0.0,	2.0)
(	67.4,	-244.9,	0.0,	2.0)	(	43.7,	-244.9,	0.0,	2.0)
(	20.0,	-244.9,	0.0,	2.0)	(	-3.6,	-244.9,	0.0,	2.0)
(	-27.3,	-244.9,	0.0,	2.0)	(	-51.0,	-244.9,	0.0,	2.0)
(	-74.6,	-244.9,	0.0,	2.0)	(	-98.3,	-244.9,	0.0,	2.0)
(	-122.0,	-244.9,	0.0,	2.0)	(	-145.6,	-244.9,	0.0,	2.0)
(	111.8,	-536.3,	0.0,	2.0)	(	132.6,	-527.7,	0.0,	2.0)
(	153.4,	-519.1,	0.0,	2.0)	(	174.2,	-510.5,	0.0,	2.0)
(	195.0,	-501.9,	0.0,	2.0)	(	215.8,	-493.3,	0.0,	2.0)
(	236.6,	-484.6,	0.0,	2.0)	(	257.4,	-476.0,	0.0,	2.0)
(	278.2,	-467.4,	0.0,	2.0)	(	299.0,	-458.8,	0.0,	2.0)
(	319.8,	-450.2,	0.0,	2.0)	(	340.6,	-441.6,	0.0,	2.0)
(	361.4,	-433.0,	0.0,	2.0)	(	382.2,	-424.3,	0.0,	2.0)
(	403.0,	-415.7,	0.0,	2.0)	(	423.8,	-407.1,	0.0,	2.0)
(	453.2,	-377.7,	0.0,	2.0)	(	461.8,	-356.9,	0.0,	2.0)
(	470.4,	-336.1,	0.0,	2.0)	(	479.0,	-315.3,	0.0,	2.0)
(	487.7,	-294.5,	0.0,	2.0)	(	496.3,	-273.7,	0.0,	2.0)
(	504.9,	-252.9,	0.0,	2.0)	(	513.5,	-232.1,	0.0,	2.0)
(	522.1,	-211.3,	0.0,	2.0)	(	530.7,	-190.5,	0.0,	2.0)

*** ISCST3 - VERSION 02035 ***

*** COLLEGE PARK - LST ANALYSIS
*** NITROGEN DIOXIDE (NO2)*** 04/15/09
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**MODELOPTs:

CONC

URBAN FLAT FLGPOL

NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	539.3,	-169.7,	0.0,	2.0)	(	548.0,	-148.9,	0.0,	2.0)
(	556.6,	-128.1,	0.0,	2.0)	(	565.2,	-107.3,	0.0,	2.0)
(	573.8,	-86.5,	0.0,	2.0)	(	582.4,	-65.7,	0.0,	2.0)
(	91.0,	-544.9,	0.0,	2.0)	(	67.4,	-544.9,	0.0,	2.0)
(	43.7,	-544.9,	0.0,	2.0)	(	20.0,	-544.9,	0.0,	2.0)
(	-3.6,	-544.9,	0.0,	2.0)	(	-27.3,	-544.9,	0.0,	2.0)
(	-51.0,	-544.9,	0.0,	2.0)	(	-74.6,	-544.9,	0.0,	2.0)
(	-98.3,	-544.9,	0.0,	2.0)	(	-122.0,	-544.9,	0.0,	2.0)
(	-145.6,	-544.9,	0.0,	2.0)	(	112.5,	-1036.1,	0.0,	2.0)
(	133.9,	-1027.2,	0.0,	2.0)	(	155.3,	-1018.3,	0.0,	2.0)
(	176.8,	-1009.4,	0.0,	2.0)	(	198.2,	-1000.6,	0.0,	2.0)
(	219.6,	-991.7,	0.0,	2.0)	(	241.0,	-982.8,	0.0,	2.0)
(	262.5,	-973.9,	0.0,	2.0)	(	283.9,	-965.1,	0.0,	2.0)
(	305.3,	-956.2,	0.0,	2.0)	(	326.7,	-947.3,	0.0,	2.0)
(	348.2,	-938.4,	0.0,	2.0)	(	369.6,	-929.6,	0.0,	2.0)
(	391.0,	-920.7,	0.0,	2.0)	(	412.5,	-911.8,	0.0,	2.0)
(	433.9,	-902.9,	0.0,	2.0)	(	455.3,	-894.1,	0.0,	2.0)
(	476.7,	-885.2,	0.0,	2.0)	(	498.2,	-876.3,	0.0,	2.0)
(	519.6,	-867.4,	0.0,	2.0)	(	541.0,	-858.5,	0.0,	2.0)
(	562.4,	-849.7,	0.0,	2.0)	(	583.9,	-840.8,	0.0,	2.0)
(	605.3,	-831.9,	0.0,	2.0)	(	626.7,	-823.0,	0.0,	2.0)
(	648.2,	-814.2,	0.0,	2.0)	(	669.6,	-805.3,	0.0,	2.0)
(	691.0,	-796.4,	0.0,	2.0)	(	712.4,	-787.5,	0.0,	2.0)
(	733.9,	-778.7,	0.0,	2.0)	(	755.3,	-769.8,	0.0,	2.0)
(	776.7,	-760.9,	0.0,	2.0)	(	807.0,	-730.6,	0.0,	2.0)
(	819.5,	-709.2,	0.0,	2.0)	(	824.8,	-687.8,	0.0,	2.0)
(	833.7,	-666.3,	0.0,	2.0)	(	842.5,	-644.9,	0.0,	2.0)
(	851.4,	-623.5,	0.0,	2.0)	(	860.3,	-602.0,	0.0,	2.0)
(	869.2,	-580.6,	0.0,	2.0)	(	878.0,	-559.2,	0.0,	2.0)
(	886.9,	-537.8,	0.0,	2.0)	(	895.8,	-516.3,	0.0,	2.0)

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*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)
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URBAN FLAT FLGPOL NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

-291.2,	-484.6,	0.0,	2.0)
-249.6,	-581.9,	0.0,	2.0)
-208.0,	-519.1,	0.0,	2.0)
-166.0,	-536.3,	0.0,	2.0)
-645.7,	-21.6,	0.0,	2.0)
-645.7,	25.0,	0.0,	2.0)
-645.7,	71.7,	0.0,	2.0)
-645.7,	118.3,	0.0,	2.0)
-645.7,	165.0,	0.0,	2.0)
-1136.8,	-66.4,	0.0,	2.0)
-1119.0,	-109.2,	0.0,	2.0)
-1101.3,	-152.1,	0.0,	2.0)
-1083.5,	-194.9,	0.0,	2.0)
-1065.8,	-237.8,	0.0,	2.0)
-1048.0,	-280.6,	0.0,	2.0)
-1030.3,	-323.5,	0.0,	2.0)
-1012.5,	-366.4,	0.0,	2.0)
-994.8,	-409.2,	0.0,	2.0)
-977.0,	-452.1,	0.0,	2.0)
-959.3,	-494.9,	0.0,	2.0)
-941.5,	-537.8,	0.0,	2.0)
-923.8,	-580.6,	0.0,	2.0)
-906.0,	-623.5,	0.0,	2.0)
-888.3,	-666.3,	0.0,	2.0)
-870.5,	-709.2,	0.0,	2.0)
-831.3,	-760.9,	0.0,	2.0)
-788.5,	-778.7,	0.0,	2.0)
-745.0,	-796.4,	0.0,	2.0)
-702.0,	-82.2,	0.0,	2.0)
-659.9,	-831.9,	0.0,	2.0)
-617.0,	-849.7,	0.0,	2.0)
-574.2,	-867.4,	0.0,	2.0)
-531.3,	-885.2,	0.0,	2.0)
-488.5,	-902.9,	0.0,	2.0)
-445.6,	-920.7,	0.0,	2.0)
-402.8,	-938.4,	0.0,	2.0)
-359.9,	-956.2,	0.0,	2.0)

(	-338.5,	-965.1,	0.0,	2.0);	(	-317.1,	-973.9,	0.0,	2.0);		
(	-295.6,	-982.8,	0.0,	2.0);	(	-274.2,	-991.7,	0.0,	2.0);		
(	-252.8,	-1000.6,	0.0,	2.0);	(	-231.4,	-1009.4,	0.0,	2.0);		
(	-209.9,	-1018.3,	0.0,	2.0);	(	-188.5,	-1027.2,	0.0,	2.0);		
(	-167.1,	-1036.1,	0.0,	2.0);	(	-1145.7,	-44.9,	0.0,	2.0);		
(	-1145.7,	-21.6,	0.0,	2.0);	(	-1145.7,	1.7,	0.0,	2.0);		
(	-1145.7,	25.0,	0.0,	2.0);	(	-1145.7,	48.4,	0.0,	2.0);		
(	-1145.7,	71.7,	0.0,	2.0);	(	-1145.7,	95.0,	0.0,	2.0);		

*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
 NITROGEN DIOXIDE (NO2) ***

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**MODELOPTs:
 CONC URBAN FLAT FLGPOL NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
 (X-COORD, Y-COORD, ZELEV, ZFLAG)
 (METERS)

(	-1145.7,	118.3,	0.0,	2.0);	(	-1145.7,	141.6,	0.0,	2.0);
(	-1145.7,	165.0,	0.0,	2.0);	(	-1145.7,	188.3,	0.0,	2.0);
(	-145.6,	208.3,	0.0,	2.0);	(	-122.0,	208.3,	0.0,	2.0);
(	-98.3,	208.3,	0.0,	2.0);	(	-74.6,	208.3,	0.0,	2.0);
(	-51.0,	208.3,	0.0,	2.0);	(	-27.3,	208.3,	0.0,	2.0);
(	-3.6,	208.3,	0.0,	2.0);	(	20.0,	208.3,	0.0,	2.0);
(	43.7,	208.3,	0.0,	2.0);	(	67.4,	208.3,	0.0,	2.0);
(	91.0,	208.3,	0.0,	2.0);	(	-163.3,	231.0,	0.0,	2.0);
(	-188.3,	206.0,	0.0,	2.0);	(	-145.6,	238.3,	0.0,	2.0);
(	-122.0,	238.3,	0.0,	2.0);	(	-98.3,	238.3,	0.0,	2.0);
(	-74.6,	238.3,	0.0,	2.0);	(	-51.0,	238.3,	0.0,	2.0);
(	-27.3,	238.3,	0.0,	2.0);	(	-3.6,	238.3,	0.0,	2.0);
(	20.0,	238.3,	0.0,	2.0);	(	43.7,	238.3,	0.0,	2.0);
(	67.4,	238.3,	0.0,	2.0);	(	91.0,	238.3,	0.0,	2.0);
(	-163.3,	281.0,	0.0,	2.0);	(	-181.0,	273.7,	0.0,	2.0);
(	-198.7,	266.3,	0.0,	2.0);	(	-223.7,	241.3,	0.0,	2.0);
(	-231.0,	223.7,	0.0,	2.0);	(	-238.3,	206.0,	0.0,	2.0);
(	-145.6,	288.3,	0.0,	2.0);	(	-122.0,	288.3,	0.0,	2.0);
(	-98.3,	288.3,	0.0,	2.0);	(	-74.6,	288.3,	0.0,	2.0);
(	-51.0,	288.3,	0.0,	2.0);	(	-27.3,	288.3,	0.0,	2.0);
(	-3.6,	288.3,	0.0,	2.0);	(	20.0,	288.3,	0.0,	2.0);
(	43.7,	288.3,	0.0,	2.0);	(	67.4,	288.3,	0.0,	2.0);
(	91.0,	288.3,	0.0,	2.0);	(	-165.9,	379.9,	0.0,	2.0);
(	-186.1,	371.6,	0.0,	2.0);	(	-206.3,	363.2,	0.0,	2.0);
(	-226.5,	354.8,	0.0,	2.0);	(	-246.7,	346.5,	0.0,	2.0);
(	-266.9,	338.1,	0.0,	2.0);	(	-295.4,	309.5,	0.0,	2.0);
(	-303.8,	289.3,	0.0,	2.0);	(	-312.2,	269.1,	0.0,	2.0);
(	-320.5,	248.9,	0.0,	2.0);	(	-328.9,	228.7,	0.0,	2.0);
(	-337.3,	208.5,	0.0,	2.0);	(	-145.6,	388.3,	0.0,	2.0);
(	-122.0,	388.3,	0.0,	2.0);	(	-98.3,	388.3,	0.0,	2.0);
(	-74.6,	388.3,	0.0,	2.0);	(	-51.0,	388.3,	0.0,	2.0);
(	-27.3,	388.3,	0.0,	2.0);	(	-3.6,	388.3,	0.0,	2.0);
(	20.0,	388.3,	0.0,	2.0);	(	43.7,	388.3,	0.0,	2.0);
(	67.4,	388.3,	0.0,	2.0);	(	91.0,	388.3,	0.0,	2.0);
(	-166.4,	679.7,	0.0,	2.0);	(	-187.2,	671.1,	0.0,	2.0);
(	-208.0,	662.5,	0.0,	2.0);	(	-228.8,	653.8,	0.0,	2.0);
(	-249.6,	645.2,	0.0,	2.0);	(	-270.4,	636.6,	0.0,	2.0);
(	-291.2,	628.0,	0.0,	2.0);	(	-312.0,	619.4,	0.0,	2.0);
(	-332.8,	610.8,	0.0,	2.0);	(	-353.6,	602.2,	0.0,	2.0);
(	-374.4,	593.5,	0.0,	2.0);	(	-395.2,	584.9,	0.0,	2.0);
(	-416.0,	576.3,	0.0,	2.0);	(	-436.8,	567.7,	0.0,	2.0);
(	-457.6,	559.1,	0.0,	2.0);	(	-478.4,	550.5,	0.0,	2.0);
(	-507.8,	521.1,	0.0,	2.0);	(	-516.4,	500.3,	0.0,	2.0);
(	-525.0,	479.5,	0.0,	2.0);	(	-533.7,	458.7,	0.0,	2.0);
(	-542.3,	437.9,	0.0,	2.0);	(	-550.9,	417.1,	0.0,	2.0);

*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
 NITROGEN DIOXIDE (NO2) ***

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**MODELOPTs:
 CONC URBAN FLAT FLGPOL NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
 (X-COORD, Y-COORD, ZELEV, ZFLAG)
 (METERS)

(	-559.5,	396.3,	0.0,	2.0);	(	-568.1,	375.5,	0.0,	2.0);
(	-576.7,	354.7,	0.0,	2.0);	(	-585.3,	333.9,	0.0,	2.0);
(	-594.0,	313.1,	0.0,	2.0);	(	-602.6,	292.3,	0.0,	2.0);
(	-611.2,	271.5,	0.0,	2.0);	(	-619.8,	250.7,	0.0,	2.0);
(	-628.4,	229.9,	0.0,	2.0);	(	-637.0,	209.1,	0.0,	2.0);
(	-145.6,	688.3,	0.0,	2.0);	(	-122.0,	688.3,	0.0,	2.0);
(	-98.3,	688.3,	0.0,	2.0);	(	-74.6,	688.3,	0.0,	2.0);
(	-51.0,	688.3,	0.0,	2.0);	(	-27.3,	688.3,	0.0,	2.0);
(	-3.6,	688.3,	0.0,	2.0);	(	20.0,	688.3,	0.0,	2.0);
(	43.7,	688.3,	0.0,	2.0);	(	67.4,	688.3,	0.0,	2.0);
(	91.0,	688.3,	0.0,	2.0);	(	-167.1,	1179.4,	0.0,	2.0);
(	-188.5,	1170.6,	0.0,	2.0);	(	-209.9,	1161.7,	0.0,	2.0);
(	-231.4,	1152.8,	0.0,	2.0);	(	-252.8,	1143.9,	0.0,	2.0);
(	-274.2,	1135.1,	0.0,	2.0);	(	-295.6,	1126.2,	0.0,	2.0);
(	-317.1,	1117.3,	0.0,	2.0);	(	-338.5,	1108.4,	0.0,	2.0);
(	-359.9,	1099.5,	0.0,	2.0);	(	-381.4,	1090.7,	0.0,	2.0);
(	-402.8,	1081.8,	0.0,	2.0);	(	-424.2,	1072.9,	0.0,	2.0);
(	-445.6,	1064.0,	0.0,	2.0);	(	-467.1,	1055.2,	0.0,	2.0);
(	-488.5,	1046.3,	0.0,	2.0);	(	-509.9,	1037.4,	0.0,	2.0);
(	-531.3,	1028.5,	0.0,	2.0);	(	-552.8,	1019.7,	0.0,	2.0);
(	-574.2,	1010.8,	0.0,	2.0);	(	-595.6,	1001.9,	0.0,	2.0);
(	-617.0,	993.0,	0.0,	2.0);	(	-638.5,	984.2,	0.0,	2.0);
(	-659.9,	975.3,	0.0,	2.0);	(	-681.3,	966.4,	0.0,	2.0);
(	-702.8,	957.5,	0.0,	2.0);	(	-724.2,	948.7,	0.0,	2.0);
(	-745.6,	939.8,	0.0,	2.0);	(	-767.0,	930.9,	0.0,	2.0);
(	-788.5,	922.0,	0.0,	2.0);	(	-809.9,	913.2,	0.0,	2.0);
(	-831.3,	904.3,	0.0,	2.0);	(	-861.6,	874.0,	0.0,	2.0);
(	-870.5,	852.5,	0.0,	2.0);	(	-879.4,	831.1,	0.0,	2.0);
(	-888.3,	809.7,	0.0,	2.0);	(	-897.1,	788.3,	0.0,	2.0);
(	-906.0,	766.8,	0.0,	2.0);	(	-914.9,	745.4,	0.0,	2.0);
(	-923.8,	724.0,	0.0,	2.0);	(	-932.6,	702.6,	0.0,	2.0);
(	-941.5,	681.1,	0.0,	2.0);	(	-950.4,	659.7,	0.0,	2.0);
(	-959.3,	638.3,	0.0,	2.0);	(	-968.1,	616.8,	0.0,	2.0);
(	-977.0,	595.4,	0.0,	2.0);	(	-985.9,	574.0,	0.0,	2.0);
(	-994.8,	552.6,	0.0,	2.0);	(	-1003.6,	531.1,	0.0,	2.0);
(	-1012.5,	509.7,	0.0,	2.0);	(	-1021.4,	488.3,	0.0,	2.0);
(	-1030.3,	466.9,	0.0,	2.0);	(	-1039.1,	445.4,	0.0,	2.0);
(	-1048.0,	424.0,	0.0,	2.0);	(	-1056.9,	402.6,	0.0,	2.0);
(	-1065.8,	381.1,	0.0,	2.0);	(	-1074.7,	359.7,	0.0,	2.0);
(	-1083.5,	338.3,	0.0,	2.0);	(	-1092.4,	316.9,	0.0,	2.0);
(	-1101.3,	295.4,	0.0,	2.0);	(	-1110.2,	274.0,	0.0,	2.0);
(	-1119.0,	252.6,	0.0,	2.0);	(	-1127.9,	231.1,	0.0,	2.0);
(	-1136.8,	209.7,	0.0,	2.0);	(	-145.6,	1188.3,	0.0,	2.0);
(	-122.0,	1188.3,	0.0,	2.0);	(	-98.3,	1188.3,	0.0,	2.0);

*** (-74.6, 1188.3, 0.0, 2.0); (-51.0, 1188.3, 0.0, 2.0); *** 04/15/09
*** ISCST3 - VERSION 02035 *** COLLEGE PARK - LST ANALYSIS 15:28:14
*** NITROGEN DIOXIDE (NO2) *** PAGE 11

**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	-27.3	1188.3	0.0	2.0	(	-3.6	1188.3	0.0	2.0
(	20.0	1188.3	0.0	2.0	(	43.7	1188.3	0.0	2.0
(	67.4	1188.3	0.0	2.0	(	91.0	1188.3	0.0	2.0
(	111.0	188.3	0.0	2.0	(	111.0	165.0	0.0	2.0
(	111.0	141.6	0.0	2.0	(	111.0	118.3	0.0	2.0
(	111.0	95.0	0.0	2.0	(	111.0	71.7	0.0	2.0
(	111.0	48.4	0.0	2.0	(	111.0	25.0	0.0	2.0
(	111.0	1.7	0.0	2.0	(	111.0	-21.6	0.0	2.0
(	111.0	-44.9	0.0	2.0	(	133.7	206.0	0.0	2.0
(	108.7	231.0	0.0	2.0	(	141.0	188.3	0.0	2.0
(	141.0	165.0	0.0	2.0	(	141.0	141.6	0.0	2.0
(	141.0	118.3	0.0	2.0	(	141.0	95.0	0.0	2.0
(	141.0	71.7	0.0	2.0	(	141.0	48.4	0.0	2.0
(	141.0	25.0	0.0	2.0	(	141.0	1.7	0.0	2.0
(	141.0	-21.6	0.0	2.0	(	141.0	-44.9	0.0	2.0
(	183.7	206.0	0.0	2.0	(	176.4	223.7	0.0	2.0
(	169.1	241.3	0.0	2.0	(	144.1	266.3	0.0	2.0
(	126.4	273.7	0.0	2.0	(	108.7	281.0	0.0	2.0
(	191.0	188.3	0.0	2.0	(	191.0	165.0	0.0	2.0
(	191.0	141.6	0.0	2.0	(	191.0	118.3	0.0	2.0
(	191.0	95.0	0.0	2.0	(	191.0	71.7	0.0	2.0
(	191.0	48.4	0.0	2.0	(	191.0	25.0	0.0	2.0
(	191.0	1.7	0.0	2.0	(	191.0	-21.6	0.0	2.0
(	191.0	-44.9	0.0	2.0	(	282.7	208.5	0.0	2.0
(	274.3	228.7	0.0	2.0	(	265.9	248.9	0.0	2.0
(	257.6	269.1	0.0	2.0	(	249.2	289.3	0.0	2.0
(	240.8	309.5	0.0	2.0	(	212.3	338.1	0.0	2.0
(	192.1	346.5	0.0	2.0	(	171.9	354.8	0.0	2.0
(	151.6	363.2	0.0	2.0	(	131.4	371.6	0.0	2.0
(	111.2	379.9	0.0	2.0	(	291.0	188.3	0.0	2.0
(	291.0	165.0	0.0	2.0	(	291.0	141.6	0.0	2.0
(	291.0	118.3	0.0	2.0	(	291.0	95.0	0.0	2.0
(	291.0	71.7	0.0	2.0	(	291.0	48.4	0.0	2.0
(	291.0	25.0	0.0	2.0	(	291.0	1.7	0.0	2.0
(	291.0	-21.6	0.0	2.0	(	291.0	-44.9	0.0	2.0
(	582.4	209.1	0.0	2.0	(	573.8	229.9	0.0	2.0
(	565.2	250.7	0.0	2.0	(	556.6	271.5	0.0	2.0
(	548.0	292.3	0.0	2.0	(	539.3	313.1	0.0	2.0
(	530.7	333.9	0.0	2.0	(	522.1	354.7	0.0	2.0
(	513.5	375.5	0.0	2.0	(	504.9	396.3	0.0	2.0
(	496.3	417.1	0.0	2.0	(	487.7	437.9	0.0	2.0
(	479.0	458.7	0.0	2.0	(	470.4	479.5	0.0	2.0
(	461.8	500.3	0.0	2.0	(	453.2	521.1	0.0	2.0
(	423.8	550.5	0.0	2.0	(	403.0	559.1	0.0	2.0
(	382.2	567.7	0.0	2.0	(	361.4	576.3	0.0	2.0

*** ISCST3 - VERSION 02035 *** COLLEGE PARK - LST ANALYSIS
*** NITROGEN DIOXIDE (NO2)

**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	340.6	584.9	0.0	2.0	(	319.8	593.5	0.0	2.0
(	299.0	602.2	0.0	2.0	(	278.2	610.8	0.0	2.0
(	257.4	619.4	0.0	2.0	(	236.6	628.0	0.0	2.0
(	215.8	636.6	0.0	2.0	(	195.0	645.2	0.0	2.0
(	174.2	653.8	0.0	2.0	(	153.4	662.5	0.0	2.0
(	132.6	671.1	0.0	2.0	(	111.8	679.7	0.0	2.0
(	591.0	188.3	0.0	2.0	(	591.0	165.0	0.0	2.0
(	591.0	141.6	0.0	2.0	(	591.0	118.3	0.0	2.0
(	591.0	95.0	0.0	2.0	(	591.0	71.7	0.0	2.0
(	591.0	48.4	0.0	2.0	(	591.0	25.0	0.0	2.0
(	591.0	1.7	0.0	2.0	(	591.0	-21.6	0.0	2.0
(	591.0	-44.9	0.0	2.0	(	1082.2	209.7	0.0	2.0
(	1073.3	231.1	0.0	2.0	(	1064.4	252.6	0.0	2.0
(	1055.5	274.0	0.0	2.0	(	1046.7	295.4	0.0	2.0
(	1037.8	316.9	0.0	2.0	(	1028.9	338.3	0.0	2.0
(	1020.0	359.7	0.0	2.0	(	1011.2	381.1	0.0	2.0
(	1002.3	402.6	0.0	2.0	(	993.4	424.0	0.0	2.0
(	984.5	445.4	0.0	2.0	(	975.7	466.9	0.0	2.0
(	966.8	488.3	0.0	2.0	(	957.9	509.7	0.0	2.0
(	949.0	531.1	0.0	2.0	(	940.2	552.6	0.0	2.0
(	931.3	574.0	0.0	2.0	(	922.4	595.4	0.0	2.0
(	913.5	616.8	0.0	2.0	(	904.7	638.3	0.0	2.0
(	895.8	659.7	0.0	2.0	(	886.9	681.1	0.0	2.0
(	878.0	702.6	0.0	2.0	(	869.2	724.0	0.0	2.0
(	860.3	745.4	0.0	2.0	(	851.4	766.8	0.0	2.0
(	842.5	788.3	0.0	2.0	(	833.7	809.7	0.0	2.0
(	824.8	831.1	0.0	2.0	(	815.9	852.5	0.0	2.0
(	807.0	874.0	0.0	2.0	(	776.7	904.3	0.0	2.0
(	755.3	913.2	0.0	2.0	(	733.9	922.0	0.0	2.0
(	712.4	930.9	0.0	2.0	(	691.0	939.8	0.0	2.0
(	669.6	948.7	0.0	2.0	(	648.2	957.5	0.0	2.0
(	626.7	966.4	0.0	2.0	(	605.3	975.3	0.0	2.0
(	583.9	984.2	0.0	2.0	(	562.4	993.0	0.0	2.0
(	541.0	1001.9	0.0	2.0	(	519.6	1010.8	0.0	2.0
(	498.2	1019.7	0.0	2.0	(	476.7	1028.5	0.0	2.0
(	455.3	1037.4	0.0	2.0	(	433.9	1046.3	0.0	2.0
(	412.5	1055.2	0.0	2.0	(	391.0	1064.0	0.0	2.0
(	369.6	1072.9	0.0	2.0	(	348.2	1081.8	0.0	2.0
(	326.7	1090.7	0.0	2.0	(	305.3	1099.5	0.0	2.0
(	283.9	1108.4	0.0	2.0	(	262.5	1117.3	0.0	2.0
(	241.0	1126.2	0.0	2.0	(	219.6	1135.1	0.0	2.0
(	198.2	1143.9	0.0	2.0	(	176.8	1152.8	0.0	2.0
(	155.3	1161.7	0.0	2.0	(	133.9	1170.6	0.0	2.0
(	112.5	1179.4	0.0	2.0	(	1091.0	188.3	0.0	2.0
(	1091.0	165.0	0.0	2.0	(	1091.0	141.6	0.0	2.0

*** ISCST3 - VERSION 02035 *** COLLEGE PARK - LST ANALYSIS
*** NITROGEN DIOXIDE (NO2)

**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** 04/15/09
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{	1091.0,	118.3,	0.0,	2.0);	(	1091.0,	95.0,	0.0,	2.0);
	1091.0,	71.7,	0.0,	2.0);	(	1091.0,	48.4,	0.0,	2.0);
	1091.0,	25.0,	0.0,	2.0);	(	1091.0,	1.7,	0.0,	2.0);
	1091.0,	-21.6,	0.0,	2.0);	(	1091.0,	-44.9,	0.0,	2.0);
	-145.6,	188.3,	0.0,	2.0);	(	-145.6,	-44.9,	0.0,	2.0);
	91.0,	-44.9,	0.0,	2.0);	(	91.0,	188.3,	0.0,	2.0);

COLLEGE PARK - LST ANALYSIS
NITROGEN DIOXIDE (NO2)

[illegible]

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY					
	1	2	3	4	5	6
A	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
B	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
C	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00
D	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00
F	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00

STABILITY CATEGORY	WIND SPEED CATEGORY					
	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** COLLEGE PARK - LST ANALYSIS
*** NITROGEN DIOXIDE (NO2)

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FILE:      UPLAND.ASC
FORMAT:    (4I2,2F9.4,F6.1,I2,2F7.1,F9.4,F10.1,F8.4,I4,F7.2)
SURFACE    STATION NO.: 54147      UPPER AIR STATION NO.: 99999
          NAME: UNKNOWN          NAME: UNKNOWN
          YEAR: 1981             YEAR: 1981

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YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING RURAL	HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-O (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.00	284.3	7	522.6	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	02	147.4	1.00	284.3	7	507.0	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	03	152.5	1.34	283.1	7	491.4	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	04	166.0	0.00	283.1	7	475.8	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	05	151.5	0.00	282.6	7	460.3	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	06	139.5	1.34	283.1	7	444.7	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	07	162.0	1.34	285.4	6	1.4	170.7	0.0000	0.0	0.0000	0	0.00
81	01	01	08	157.1	0.00	287.6	5	47.0	192.0	0.0000	0.0	0.0000	0	0.00
81	01	01	09	344.0	1.00	289.8	4	92.5	213.3	0.0000	0.0	0.0000	0	0.00
81	01	01	10	346.6	0.00	291.5	3	138.0	234.7	0.0000	0.0	0.0000	0	0.00
81	01	01	11	314.1	1.00	294.3	2	183.5	256.0	0.0000	0.0	0.0000	0	0.00
81	01	01	12	238.1	1.34	297.6	2	229.0	277.3	0.0000	0.0	0.0000	0	0.00
81	01	01	13	357.2	1.79	298.7	3	274.5	298.7	0.0000	0.0	0.0000	0	0.00
81	01	01	14	34.2	2.24	299.8	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	15	44.8	3.13	299.3	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	16	75.7	3.13	298.7	4	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	17	65.1	1.79	295.4	5	325.6	318.5	0.0000	0.0	0.0000	0	0.00
81	01	01	18	97.6	1.34	291.5	6	357.2	310.3	0.0000	0.0	0.0000	0	0.00
81	01	01	19	133.0	1.00	289.8	7	388.8	302.1	0.0000	0.0	0.0000	0	0.00
81	01	01	20	145.7	0.00	287.0	7	420.4	293.9	0.0000	0.0	0.0000	0	0.00
81	01	01	21	223.6	1.00	286.5	7	452.0	285.7	0.0000	0.0	0.0000	0	0.00
81	01	01	22	159.5	1.00	287.0	7	483.5	277.4	0.0000	0.0	0.0000	0	0.00
81	01	01	23	158.2	1.34	285.9	7	515.1	269.2	0.0000	0.0	0.0000	0	0.00
81	01	01	24	134.7	1.00	285.4	7	546.7	261.0	0.0000	0.0	0.0000	0	0.00

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,

VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_ IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
91.04	-64.94	344.75272	67.37	-64.94	369.91818
43.70	-64.94	378.46149	20.03	-64.94	374.37564
-3.64	-64.94	359.61649	-27.30	-64.94	327.23328
-50.97	-64.94	284.99329	-74.64	-64.94	226.52827
-98.31	-64.94	158.27605	-121.98	-64.94	108.09810
-145.65	-64.94	83.04382	108.72	-87.62	269.86713
133.72	-62.62	238.88423	91.04	-94.94	276.72299
67.37	-94.94	283.93036	43.70	-94.94	282.55566
20.03	-94.94	273.19662	-3.64	-94.94	254.37460
-27.30	-94.94	225.45619	-50.97	-94.94	188.52281
-74.64	-94.94	146.32048	-98.31	-94.94	106.28375
-121.98	-94.94	81.14642	-145.65	-94.94	66.69118
108.72	-137.62	199.18733	126.40	-130.30	197.04498
144.07	-122.97	186.53371	169.07	-97.97	165.14847
176.40	-80.30	155.52161	183.72	-62.62	143.25005
91.04	-144.94	192.52722	67.37	-144.94	188.36275
43.70	-144.94	179.36752	20.03	-144.94	166.34497
-3.64	-144.94	149.03979	-27.30	-144.94	128.10188
-50.97	-144.94	105.20786	-74.64	-144.94	83.19782
-98.31	-144.94	65.93024	-121.98	-144.94	55.38330
-145.65	-144.94	48.24928	111.24	-236.57	107.87009
131.45	-228.20	114.83842	151.65	-219.83	118.05755
171.85	-211.47	117.35233	192.06	-203.10	113.20034
212.26	-194.73	106.33386	240.83	-166.16	94.52620
249.20	-145.96	89.27274	257.57	-125.75	82.40398
265.93	-105.55	74.84226	274.30	-85.35	67.35439
282.67	-65.14	60.36670	91.04	-244.94	98.13806
67.37	-244.94	90.70374	43.70	-244.94	81.96502
20.03	-244.94	72.53735	-3.64	-244.94	62.83916
-27.30	-244.94	53.47059	-50.97	-244.94	45.21813
-74.64	-244.94	38.82560	-98.31	-244.94	34.52853
-121.98	-244.94	31.73362	-145.65	-244.94	29.42440
111.84	-536.33	25.44740	132.63	-527.71	28.66928
153.43	-519.10	31.78759	174.23	-510.48	34.65066
195.03	-501.87	37.13148	215.82	-493.25	39.15304
236.62	-484.64	40.68219	257.42	-476.02	41.73035
278.22	-467.41	42.32893	299.01	-458.79	42.52362
319.81	-450.18	42.35187	340.61	-441.57	41.84908
361.40	-432.95	41.04218	382.20	-424.34	39.94655
403.00	-415.72	38.58308	423.80	-407.11	36.97034

*** ISCS3 - VERSION 02035 ***

*** COLLEGE PARK - LST ANALYSIS

*** NITROGEN DIOXIDE (NO2)

04/15/09

15:28:14

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**MODELOPTs:

CONC

URBAN FLAT

FLGPOL

NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S):

VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_ IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
453.21	-377.70	34.54958	461.82	-356.90	33.57798
470.44	-336.10	32.22321	479.05	-315.30	30.52850
487.67	-294.51	28.57561	496.28	-273.71	26.47999
504.89	-252.91	24.36585	513.51	-232.12	22.34511
522.12	-211.32	20.50389	530.74	-190.52	18.89135
539.35	-169.72	17.52981	547.97	-148.93	16.40654
556.58	-128.13	15.49410	565.20	-107.33	14.74518
573.81	-86.53	14.11442	582.43	-65.74	13.56505
91.04	-544.94	22.28129	67.37	-544.94	19.66367
43.70	-544.94	17.23790	20.03	-544.94	15.13345
-3.64	-544.94	13.43429	-27.30	-544.94	12.17246
-50.97	-544.94	11.32356	-74.64	-544.94	10.81638
-98.31	-544.94	10.54849	-121.98	-544.94	10.41061
-145.65	-544.94	10.31034	112.47	-1036.06	5.87190
133.89	-1027.19	6.57835	155.32	-1018.31	7.35958
176.75	-1009.44	8.19705	198.18	-1000.56	9.06952
219.60	-991.69	9.95292	241.03	-982.81	10.82495
262.46	-973.94	11.66328	283.89	-965.06	12.45045
305.31	-956.18	13.17186	326.74	-947.31	13.81868
348.17	-938.43	14.38652	369.60	-929.56	14.87387
391.02	-920.68	15.28356	412.45	-911.81	15.61932
433.88	-902.93	15.88734	455.31	-894.06	16.09343
476.73	-885.18	16.24415	498.16	-876.30	16.34530
519.59	-867.43	16.40160	541.02	-858.55	16.41713
562.44	-849.68	16.39447	583.87	-840.80	16.33508
605.30	-831.93	16.23897	626.73	-823.05	16.10627
648.15	-814.18	15.93664	669.58	-805.30	15.73010
691.01	-796.42	15.48722	712.44	-787.55	15.20875
733.86	-778.67	14.89682	755.29	-769.80	14.55225
776.72	-760.92	14.17709	807.02	-730.62	13.67406
815.90	-709.19	13.52134	824.77	-687.76	13.30609
833.65	-666.34	13.02341	842.52	-644.91	12.67098
851.40	-623.48	12.24808	860.28	-602.05	11.76938
869.15	-580.63	11.21785	878.03	-559.20	10.63425
886.90	-537.77	10.02880	895.78	-516.34	9.42122
904.65	-494.92	8.83225	913.53	-473.49	8.27862
922.40	-452.06	7.77430	931.28	-430.63	7.32672
940.16	-409.21	6.93888	949.03	-387.78	6.60884
957.91	-366.35	6.33149	966.78	-344.92	6.10006
975.66	-323.50	5.90689	984.53	-302.07	5.74470

*** ISCS3 - VERSION 02035 ***

*** COLLEGE PARK - LST ANALYSIS

*** NITROGEN DIOXIDE (NO2)

04/15/09

15:28:14

PAGE 18

**MODELOPTs:

CONC

URBAN FLAT

FLGPOL

NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S):

VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_ IN MICROGRAMS/M**3			**		
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
993.41	-280.64	5.60650	1002.28	-259.21	5.48616
1011.16	-237.79	5.37882	1020.04	-216.36	5.27705
1028.91	-194.93	5.17900	1037.79	-173.50	5.08907
1046.66	-152.08	4.97793	1055.54	-130.65	4.87126
1064.41	-109.22	4.76060	1073.29	-87.79	4.64775
1082.16	-66.37	4.53638	91.04	-1044.94	5.25244
67.37	-1044.94	4.77268	43.70	-1044.94	4.38373
20.03	-1044.94	4.08754	-3.64	-1044.94	3.87953
-27.30	-1044.94	3.74968	-50.97	-1044.94	3.68305
-74.64	-1044.94	3.66596	-98.31	-1044.94	3.67947
-121.98	-1044.94	3.70900	-145.65	-1044.94	3.74172
-165.65	-44.94	75.11361	-165.65	-21.62	82.75815
-165.65	1.71	86.35514	-165.65	25.03	87.53700
-165.65	48.36	86.15501	-165.65	71.68	82.44913
-165.65	95.00	76.49253	-165.65	118.33	67.05518
-165.65	141.65	57.60575	-165.65	164.98	48.71396
-165.65	188.30	40.86649	-188.33	-62.62	53.85770
-163.33	-87.62	59.72349	-195.65	-44.94	53.88460
-195.65	-21.62	56.92625	-195.65	1.71	58.12168
-195.65	25.03	58.24018	-195.65	48.36	57.30154
-195.65	71.68	54.82849	-195.65	95.00	50.47197
-195.65	118.33	44.78873	-195.65	141.65	39.30257
-195.65	164.98	34.30817	-195.65	188.30	29.79294
-238.33	-62.62	35.09571	-231.01	-80.30	34.89739
-223.68	-97.97	34.23684	-198.68	-122.97	37.07773
-181.01	-130.30	41.06528	-163.33	-137.62	44.94421
-245.65	-44.94	34.56709	-245.65	-21.62	35.49444
-245.65	1.71	35.60189	-245.65	25.03	35.02542
-245.65	48.36	33.81943	-245.65	71.68	31.90345
-245.65	95.00	29.36451	-245.65	118.33	26.64156
-245.65	141.65	24.12555	-245.65	164.98	21.86863
-245.65	188.30	19.78881	-337.28	-65.14	19.01865
-328.91	-85.35	19.34128	-320.54	-105.55	19.22364
-312.18	-125.75	18.75426	-303.81	-145.96	18.12502
-295.44	-166.16	17.53862	-266.87	-194.73	18.64534
-246.67	-203.10	20.52983	-226.46	-211.47	22.63749
-206.26	-219.83	24.74425	-186.06	-228.20	26.66705
-165.85	-236.57	28.26762	-345.65	-44.94	18.28674
-345.65	-21.62	18.03986	-345.65	1.71	17.45582
-345.65	25.03	16.58705	-345.65	48.36	15.53303

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
 MODELOPTs: * NITROGEN DIOXIDE (NO2) *** 15:28:14
 CONC URBAN FLAT FLGPOL NOCALM PAGE 19

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): VOL1 VOL2 VOL3 VOL4 VOL7 VOL8 VOL9
 VOL10 VOL13 VOL14 VOL15 VOL16 VOL19 VOL22 VOL25 VOL28 VOL29 VOL30 VOL31
 VOL32 VOL33 VOL34 VOL35 VOL36 VOL37

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_ IN MICROGRAMS/M**3			**		
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
-345.65	71.68	14.43699	-345.65	95.00	13.43465
-345.65	118.33	12.59755	-345.65	141.65	11.90851
-345.65	164.98	11.30153	-345.65	188.30	10.72307
-637.04	-65.74	5.35204	-628.42	-86.53	5.71184
-619.81	-107.33	6.04923	-611.19	-128.13	6.34326
-602.58	-148.93	6.57353	-593.96	-169.72	6.72572
-585.35	-190.52	6.79291	-576.73	-211.32	6.77744
-568.12	-232.12	6.68820	-559.50	-252.91	6.53982
-550.89	-273.71	6.34882	-542.28	-294.51	6.13337
-533.66	-315.30	5.91125	-525.05	-336.10	5.69810
-516.43	-356.90	5.50842	-507.82	-377.70	5.35414
-478.41	-407.11	5.45349	-457.61	-415.72	5.74376
-436.81	-424.34	6.12695	-416.01	-432.95	6.60165
-395.22	-441.57	7.15003	-374.42	-450.18	7.74061
-353.62	-458.79	8.33384	-332.83	-467.41	8.88998
-312.03	-476.02	9.38044	-291.23	-484.64	9.78735
-270.43	-493.25	10.10500	-249.64	-501.87	10.33368
-228.84	-510.48	10.47773	-208.04	-519.10	10.54037
-187.24	-527.71	10.52672	-166.45	-536.33	10.44438
-645.65	-44.94	4.98867	-645.65	-21.62	4.74455
-645.65	1.71	4.50130	-645.65	25.03	4.26716
-645.65	48.36	4.04851	-645.65	71.68	3.85013
-645.65	95.00	3.67380	-645.65	118.33	3.51872
-645.65	141.65	3.38348	-645.65	164.98	3.26746
-645.65	188.30	3.17175	-1136.77	-66.37	1.54340
-1127.90	-87.79	1.62093	-1119.02	-109.22	1.70619
-1110.15	-130.65	1.79811	-1101.27	-152.08	1.89505
-1092.40	-173.50	1.99452	-1083.52	-194.93	2.09393
-1074.65	-216.36	2.19028	-1065.77	-237.79	2.28093
-1056.89	-259.21	2.36337	-1048.02	-280.64	2.43566
-1039.14	-302.07	2.49633	-1030.27	-323.50	2.54423
-1021.39	-344.92	2.57880	-1012.52	-366.35	2.59959
-1003.64	-387.78	2.60672	-994.77	-409.21	2.60952
-985.89	-430.63	2.58185	-977.01	-452.06	2.55191
-968.14	-473.49	2.51235	-959.26	-494.92	2.46523
-950.39	-516.34	2.41275	-941.51	-537.77	2.35706
-932.64	-559.20	2.30013	-923.76	-580.63	2.24364
-914.89	-602.05	2.18878	-906.01	-623.48	2.13624
-897.13	-644.91	2.08645	-888.26	-666.34	2.03960
-879.38	-687.76	1.99594	-870.51	-709.19	1.95573

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
 MODELOPTs: * NITROGEN DIOXIDE (NO2) *** 15:28:14
 CONC URBAN FLAT FLGPOL NOCALM PAGE 20

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): VOL1 VOL2 VOL3 VOL4 VOL7 VOL8 VOL9
 VOL10 VOL13 VOL14 VOL15 VOL16 VOL19 VOL22 VOL25 VOL28 VOL29 VOL30 VOL31
 VOL32 VOL33 VOL34 VOL35 VOL36 VOL37

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_ IN MICROGRAMS/M**3			**		
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
-861.63	-730.62	1.91969	-831.33	-760.92	1.91511

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-809.90      -769.80      1.95110      -788.47      -778.67      1.99999
-767.05      -787.55      2.06510      -745.62      -796.42      2.14956
-724.19      -805.30      2.25538      -702.76      -814.18      2.38317
-681.34      -823.05      2.53148      -659.91      -831.93      2.69685
-638.48      -840.80      2.87360      -617.05      -849.68      3.05453
-595.63      -858.55      3.23159      -574.20      -867.43      3.39709
-552.77      -876.30      3.54436      -531.34      -885.18      3.68688
-509.92      -894.06      3.76780      -488.49      -902.93      3.84223
-467.06      -911.81      3.89438      -445.63      -920.68      3.92854
-424.21      -929.56      3.94961      -402.78      -938.43      3.96274
-381.35      -947.31      3.97196      -359.92      -956.18      3.98019
-338.50      -965.06      3.98843      -317.07      -973.94      3.99621
-295.64      -982.81      4.00150      -274.21      -991.69      4.00111
-252.79      -1000.56      3.99164      -231.36      -1009.44      3.96987
-209.93      -1018.31      3.93371      -188.50      -1027.19      3.88238
-167.08      -1036.06      3.81728      -145.65      -1145.65      1.47367
-1145.65      -21.62      1.42977      -1145.65      -1145.65      1.71      1.39029
-1145.65      25.03      1.35404      -1145.65      -1145.65      48.36      1.31968
-1145.65      71.68      1.28614      -1145.65      -1145.65      95.00      1.25269
-1145.65      118.33      1.21989      -1145.65      -1145.65      141.65      1.18565
-1145.65      164.98      1.15294      -1145.65      -1145.65      188.30      1.12176
-145.65      208.30      44.24328      -121.98      208.30      59.78818
-98.31      208.30      80.08162      -74.64      208.30      101.05103
-50.97      208.30      124.21588      -27.31      208.30      145.86543
-3.64      208.30      166.35385      20.03      208.30      181.59830
43.70      208.30      190.53577      67.37      208.30      192.88466
91.04      208.30      184.04303      -163.33      230.98      30.54070
-188.33      205.98      28.71042      -145.65      238.30      33.73050
-121.98      238.30      41.89376      -98.31      238.30      52.06141
-74.64      238.30      63.68671      -50.97      238.30      76.29453
-27.31      238.30      88.18368      -3.64      238.30      98.63757
20.03      238.30      107.17186      43.70      238.30      113.63506
67.37      238.30      117.71320      91.04      238.30      118.01321
-163.33      280.98      21.29795      -181.01      273.66      19.90475
-198.68      266.33      18.55804      -223.68      241.33      18.01645
-231.01      223.66      18.66617      -238.33      205.98      19.26249
-145.65      288.30      22.66410      -121.98      288.30      26.33622
-98.31      288.30      30.73749      -74.64      288.30      35.99847
-50.97      288.30      41.90308      -27.31      288.30      47.81021

*** ISCS3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
*** NITROGEN DIOXIDE (NO2)      ***      15:28:14
**MODELOPTs:      URBAN FLAT      FLGPOL      NOCALM      PAGE 21
CONC

*** THE PERIOD ( 8760 HRS) AVERAGE CONCENTRATION      VALUES FOR SOURCE GROUP: ALL      ***
INCLUDING SOURCE(S):      VOL1      VOL2      VOL3      VOL4      VOL7      VOL8      VOL9
VOL10      VOL13      VOL14      VOL15      VOL16      VOL19      VOL22      VOL25      VOL28      VOL29      VOL30      VOL31
VOL32      VOL33      VOL34      VOL35      VOL36      VOL37

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_      IN MICROGRAMS/M**3      **

X-COORD (M)      Y-COORD (M)      CONC      X-COORD (M)      Y-COORD (M)      CONC
-3.64      288.30      53.09858      20.03      288.30      57.32276
43.70      288.30      60.45288      67.37      288.30      62.69563
91.04      288.30      63.92243      -165.85      379.93      11.87150
-186.06      371.56      11.33467      -206.26      363.19      10.77011
-226.46      354.83      10.20737      -246.67      346.46      9.67437
-266.87      338.09      9.18762      -295.44      309.52      9.17444
-303.81      289.32      9.59025      -312.18      269.11      9.97170
-320.54      248.91      10.29317      -328.91      228.71      10.52825
-337.28      208.50      10.66853      -145.65      388.30      12.36193
-121.98      388.30      13.59486      -98.31      388.30      14.99912
-74.64      388.30      16.63724      -50.97      388.30      18.51554
-27.31      388.30      20.54405      -3.64      388.30      22.57384
20.03      388.30      24.46680      43.70      388.30      26.13714
67.37      388.30      27.52029      91.04      388.30      28.51509
-166.45      679.69      3.84464      -187.24      671.07      3.80515
-208.04      662.46      3.76105      -228.84      653.84      3.71045
-249.64      645.23      3.65194      -270.43      636.61      3.58502
-291.23      628.00      3.50869      -312.03      619.38      3.42253
-332.83      610.77      3.32595      -353.62      602.15      3.21967
-374.42      593.54      3.10551      -395.22      584.93      2.98749
-416.01      576.31      2.87112      -436.81      567.70      2.76220
-457.61      559.08      2.66657      -478.41      550.47      2.58854
-507.82      521.06      2.62766      -516.43      500.26      2.74713
-525.05      479.46      2.88488      -533.66      458.66      3.03297
-542.28      437.87      3.17988      -550.89      417.07      3.31288
-559.50      396.27      3.41948      -568.12      375.48      3.49017
-576.73      354.68      3.52079      -585.35      333.88      3.51236
-593.96      313.08      3.47191      -602.58      292.29      3.41009
-611.19      271.49      3.33994      -619.81      250.69      3.27348
-628.42      229.89      3.22047      -637.04      209.10      3.18610
-145.65      688.30      3.88302      -121.98      688.30      4.04678
-98.31      688.30      4.23163      -74.64      688.30      4.44624
-50.97      688.30      4.69810      -27.31      688.30      4.99126
-3.64      688.30      5.32451      20.03      688.30      5.68953
43.70      688.30      6.07202      67.37      688.30      6.45393
91.04      688.30      6.81664      -167.08      1179.42      1.31758
-188.50      1170.55      1.31458      -209.93      1161.67      1.31159
-231.36      1152.80      1.30792      -252.79      1143.92      1.30314
-274.21      1135.05      1.29701      -295.64      1126.17      1.28957
-317.07      1117.30      1.28105      -338.50      1108.42      1.27185

*** ISCS3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
*** NITROGEN DIOXIDE (NO2)      ***      15:28:14
**MODELOPTs:      URBAN FLAT      FLGPOL      NOCALM      PAGE 22
CONC

*** THE PERIOD ( 8760 HRS) AVERAGE CONCENTRATION      VALUES FOR SOURCE GROUP: ALL      ***
INCLUDING SOURCE(S):      VOL1      VOL2      VOL3      VOL4      VOL7      VOL8      VOL9
VOL10      VOL13      VOL14      VOL15      VOL16      VOL19      VOL22      VOL25      VOL28      VOL29      VOL30      VOL31
VOL32      VOL33      VOL34      VOL35      VOL36      VOL37

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_      IN MICROGRAMS/M**3      **

X-COORD (M)      Y-COORD (M)      CONC      X-COORD (M)      Y-COORD (M)      CONC
-359.92      1099.54      1.26238      -381.35      1090.67      1.25296
-402.78      1081.79      1.24381      -424.21      1072.92      1.23485
-445.63      1064.04      1.22589      -467.06      1055.17      1.21643
-488.49      1046.29      1.20599      -509.92      1037.42      1.19400
-531.34      1028.54      1.18005      -552.77      1019.66      1.16383
-574.20      1010.79      1.14521      -595.63      1001.91      1.12424
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-617.05	993.04	1.10109	-638.48	984.16	1.07599
-659.91	975.29	1.04926	-681.34	966.41	1.02130
-702.76	957.54	0.99257	-724.19	948.66	0.96364
-745.62	939.78	0.93524	-767.05	930.91	0.90819
-788.47	922.03	0.88347	-809.90	913.16	0.85198
-831.33	904.28	0.84461	-861.63	873.98	0.84931
-870.51	852.55	0.87298	-879.38	831.12	0.90342
-888.26	809.70	0.94049	-897.13	788.27	0.98353
-906.01	766.84	1.03121	-914.89	745.41	1.08168
-923.76	723.99	1.13264	-932.64	702.56	1.18163
-941.51	681.13	1.22613	-950.39	659.70	1.26383
-959.26	638.28	1.29292	-968.14	616.85	1.31223
-977.01	595.42	1.32133	-985.89	573.99	1.32047
-994.77	552.57	1.31067	-1003.64	531.14	1.29353
-1012.52	509.71	1.27091	-1021.39	488.28	1.24490
-1030.27	466.86	1.21750	-1039.14	445.43	1.19050
-1048.02	424.00	1.16532	-1056.89	402.57	1.14305
-1065.77	381.15	1.12431	-1074.65	359.72	1.10947
-1083.52	338.29	1.08864	-1092.40	316.86	1.08176
-1101.27	295.44	1.08869	-1110.15	274.01	1.08926
-1119.02	252.58	1.09325	-1127.90	231.15	1.10930
-1136.77	209.73	1.11090	-145.65	1188.30	1.32140
-121.98	1188.30	1.34887	-98.31	1188.30	1.38050
-74.64	1188.30	1.41758	-50.97	1188.30	1.46127
-27.31	1188.30	1.51248	-3.64	1188.30	1.57185
20.03	1188.30	1.63942	43.70	1188.30	1.71476
67.37	1188.30	1.79679	91.04	1188.30	1.88389
111.04	188.30	213.50348	111.04	164.98	246.44055
111.04	141.65	276.23581	111.04	118.33	319.17801
111.04	95.00	359.22183	111.04	71.68	380.44550
111.04	48.36	388.40778	111.04	25.03	379.76984
111.04	1.71	357.32596	111.04	-21.62	328.62701
111.04	-44.94	315.58932	133.72	205.98	155.30693
108.72	230.98	126.96427	141.04	188.30	169.27924

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***

*** NITROGEN DIOXIDE (NO2) ***

04/15/09

15:28:14

PAGE 23

*** MODELOPTs: URBAN FLAT FLGPOL NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): VOL1 VOL2 VOL3 VOL4 VOL7 VOL8 VOL9 ,

VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,

VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_ IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
141.04	164.98	186.02652	141.04	141.65	201.48695
141.04	118.33	219.29860	141.04	95.00	237.09058
141.04	71.68	249.00240	141.04	48.36	252.08704
141.04	25.03	245.04581	141.04	1.71	231.55699
141.04	-21.62	223.70506	141.04	-44.94	222.92220
183.72	205.98	117.95792	176.40	223.66	109.03199
169.07	241.33	96.09689	144.07	266.33	78.32107
126.40	273.66	73.92746	108.72	280.98	69.09634
191.04	188.30	121.74008	191.04	164.98	129.06708
191.04	141.65	134.52806	191.04	118.33	138.02060
191.04	95.00	138.87218	191.04	71.68	137.42485
191.04	48.36	133.88170	191.04	25.03	128.94290
191.04	1.71	125.57160	191.04	-21.62	126.52610
191.04	-44.94	130.34618	282.67	208.50	73.43021
274.30	228.71	71.96868	265.93	248.91	67.95068
257.57	269.11	61.82080	249.20	289.32	54.49255
240.83	309.52	47.05807	212.26	338.09	38.37878
192.06	346.46	36.63671	171.85	354.83	35.14634
151.65	363.19	33.78008	131.45	371.56	32.32620
111.24	379.93	30.59268	291.04	188.30	72.45711
291.04	164.98	72.50986	291.04	141.65	70.89872
291.04	118.33	67.77025	291.04	95.00	63.38622
291.04	71.68	58.44046	291.04	48.36	53.99364
291.04	25.03	51.11713	291.04	1.71	50.40596
291.04	-21.62	51.65685	291.04	-44.94	54.10272
582.43	209.10	22.54490	573.81	229.89	24.32096
565.20	250.69	25.85493	556.58	271.49	27.02392
547.97	292.29	27.71909	539.35	313.08	27.87072
530.74	333.88	27.45538	522.12	354.68	26.50658
513.51	375.48	25.10028	504.89	396.27	23.34726
496.28	417.07	21.37328	487.67	437.87	19.31648
479.05	458.66	17.31052	470.44	479.46	15.46342
461.82	500.26	13.85129	453.21	521.06	12.50613
423.80	550.47	11.11077	403.00	559.08	10.89861
382.20	567.70	10.75920	361.40	576.31	10.66188
340.61	584.93	10.57630	319.81	593.54	10.47893
299.01	602.15	10.35256	278.22	610.77	10.18762
257.42	619.38	9.98075	236.62	628.00	9.73012
215.82	636.61	9.43546	195.03	645.23	9.09539
174.23	653.84	8.71047	153.43	662.46	8.28256

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***

*** NITROGEN DIOXIDE (NO2) ***

04/15/09

15:28:14

PAGE 24

*** MODELOPTs: URBAN FLAT FLGPOL NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): VOL1 VOL2 VOL3 VOL4 VOL7 VOL8 VOL9 ,

VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,

VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_ IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
132.63	671.07	7.81795	111.84	679.69	7.32523
591.04	188.30	20.65055	591.04	164.98	19.16537
591.04	141.65	17.68237	591.04	118.33	16.30954
591.04	95.00	15.13440	591.04	71.68	14.21557
591.04	48.36	13.57199	591.04	25.03	13.18616
591.04	1.71	13.01431	591.04	-21.62	12.99895
591.04	-44.94	13.08409	1082.16	209.73	6.07923
1073.29	231.15	6.55854	1064.41	252.58	7.07061
1055.54	274.01	7.60140	1046.66	295.44	8.13594
1037.79	316.86	8.65763	1028.91	338.29	9.15140
1020.04	359.72	9.60288	1011.16	381.15	10.00052

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1002.28      402.57      10.33566      993.41      424.00      10.60217
984.53       445.43      10.79593      975.66      466.86      10.91348
966.78       488.28      10.95275      957.91      509.71      10.91025
949.03       531.14      10.78395      940.16      552.57      10.57160
931.28       573.99      10.27388      922.40      595.42      9.89411
913.53       616.85      9.44089      904.65      638.28      8.92478
895.78       659.70      8.36493      886.90      681.13      7.78002
878.03       702.56      7.19133      869.15      723.99      6.61894
860.28       745.41      6.08049      851.40      766.84      5.58894
842.52       788.27      5.15281      833.65      809.70      4.77555
824.77       831.12      4.45642      815.90      852.55      4.19084
807.02       873.98      3.97224      776.72      904.28      3.75075
755.29       913.16      3.72507      733.86      922.03      3.71210
712.44       930.91      3.70747      691.01      939.78      3.70749
669.58       948.66      3.70835      648.15      957.54      3.70715
626.73       966.41      3.70164      605.30      975.29      3.69008
583.87       984.16      3.67168      562.44      993.04      3.64602
541.02       1001.91      3.61351      519.59      1010.79      3.57470
498.16       1019.66      3.53058      476.73      1028.54      3.48206
455.31       1037.42      3.43089      433.88      1046.29      3.37540
412.45       1055.17      3.31833      391.02      1064.04      3.25890
369.60       1072.92      3.19655      348.17      1081.79      3.13049
326.74       1090.67      3.05951      305.31      1099.54      2.98250
283.89       1108.42      2.89826      262.46      1117.30      2.80606
241.03       1126.17      2.70573      219.60      1135.05      2.59761
198.18       1143.92      2.48301      176.75      1152.80      2.36345
155.32       1161.67      2.24131      133.89      1170.55      2.11900
112.47       1179.42      1.99914      1091.04     188.30      5.64249
1091.04     164.98      5.31859      1091.04     141.65      5.04024

*** ISCS3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
*** NITROGEN DIOXIDE (NO2)      ***      15:28:14
**MODELOPTs:      URBAN FLAT FLGPOL      NOCALM      PAGE 25
CONC

*** THE PERIOD ( 8760 HRS) AVERAGE CONCENTRATION      VALUES FOR SOURCE GROUP: ALL      ***
INCLUDING SOURCE(S):      VOL1      VOL2      VOL3      VOL4      VOL7      VOL8      VOL9
VOL10      VOL13      VOL14      VOL15      VOL16      VOL19      VOL22      VOL25      VOL28      VOL29      VOL30      VOL31
VOL32      VOL33      VOL34      VOL35      VOL36      VOL37

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_      IN MICROGRAMS/M**3      **
X-COORD (M)      Y-COORD (M)      CONC      X-COORD (M)      Y-COORD (M)      CONC
-----
1091.04      118.33      4.81210      1091.04      95.00      4.63517
1091.04      71.68      4.50811      1091.04      48.36      4.42696
1091.04      25.03      4.38587      1091.04      1.71      4.37796
1091.04      -21.62      4.39553      1091.04      -44.94      4.43056
-145.65      188.30      53.25508      -145.65      -44.94      96.33083
91.04      -44.94      391.93573      91.04      188.30      248.26370

*** ISCS3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
*** NITROGEN DIOXIDE (NO2)      ***      15:28:14
**MODELOPTs:      URBAN FLAT FLGPOL      NOCALM      PAGE 26
CONC

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION      VALUES FOR SOURCE GROUP: ALL      ***
INCLUDING SOURCE(S):      VOL1      VOL2      VOL3      VOL4      VOL7      VOL8      VOL9
VOL10      VOL13      VOL14      VOL15      VOL16      VOL19      VOL22      VOL25      VOL28      VOL29      VOL30      VOL31
VOL32      VOL33      VOL34      VOL35      VOL36      VOL37

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_      IN MICROGRAMS/M**3      **
X-COORD (M)      Y-COORD (M)      CONC      (YYMMDDHH)      X-COORD (M)      Y-COORD (M)      CONC      (YYMMDDHH)
-----
91.04      -64.94      2070.73145      (81020108)      67.37      -64.94      2014.24792      (81113008)
43.70      -64.94      2030.17163      (81122008)      20.03      -64.94      1986.51526      (81122908)
-3.64      -64.94      1996.62598      (81011408)      -27.30      -64.94      1945.28711      (81040104)
-50.97      -64.94      1921.85449      (81122908)      -74.64      -64.94      1972.28381      (81031601)
-98.31      -64.94      2034.91760      (81112708)      -121.98      -64.94      2041.60913      (81031808)
-145.65      -64.94      2058.29907      (81010808)      108.72      -87.62      1795.56616      (81020408)
133.72      -62.62      1816.08838      (81012608)      91.04      -94.94      1744.40234      (81113008)
67.37      -94.94      1740.82068      (81122008)      43.70      -94.94      1739.24609      (81010108)
20.03      -94.94      1715.78857      (81122908)      -3.64      -94.94      1723.78728      (81020508)
-27.30      -94.94      1675.38037      (81122908)      -50.97      -94.94      1649.09875      (81041205)
-74.64      -94.94      1680.48132      (81082404)      -98.31      -94.94      1721.98694      (81112708)
-121.98      -94.94      1749.85706      (81112708)      -145.65      -94.94      1761.71204      (81031808)
108.72      -137.62      1430.41833      (81122008)      126.40      -130.30      1461.37659      (81113008)
144.07      -122.97      1458.15369      (81020408)      169.07      -97.97      1459.53674      (81011708)
176.40      -80.30      1473.54358      (81011808)      183.72      -62.62      1456.49060      (81013008)
91.04      -144.94      1407.60596      (81012008)      67.37      -144.94      1409.59790      (81120708)
43.70      -144.94      1407.32104      (81112208)      20.03      -144.94      1403.92700      (81122908)
-3.64      -144.94      1388.57422      (81122908)      -27.30      -144.94      1343.48596      (81080404)
-50.97      -144.94      1345.50781      (81092307)      -74.64      -144.94      1350.10632      (81031801)
-98.31      -144.94      1353.24963      (81012002)      -121.98      -144.94      1368.20654      (81112708)
-145.65      -144.94      1407.19006      (81112708)      111.24      -236.57      1033.67822      (81010108)
131.45      -228.20      1047.14929      (81012008)      151.65      -219.83      1035.29358      (81122008)
171.85      -211.47      1055.67578      (81113008)      192.06      -203.10      1038.64990      (81020408)
212.26      -194.73      1033.62549      (81011908)      240.83      -166.16      1036.91369      (81011708)
249.20      -145.96      1052.05798      (81012608)      257.57      -125.75      1059.39844      (81111608)
265.93      -105.55      1058.09741      (81013008)      274.30      -85.35      1049.64343      (81012508)
282.67      -65.14      992.37549      (81010701)      91.04      -244.94      1016.39172      (81011408)
67.37      -244.94      1022.07489      (81122608)      43.70      -244.94      1025.90491      (81122908)
20.03      -244.94      1006.55463      (81122908)      -3.64      -244.94      968.70959      (81072402)
-27.30      -244.94      970.71960      (81042722)      -50.97      -244.94      972.17957      (81081603)
-74.64      -244.94      972.70654      (81021104)      -98.31      -244.94      971.99127      (81013022)
-121.98      -244.94      969.24310      (81112124)      -145.65      -244.94      963.59460      (81011423)
111.84      -536.33      538.13916      (81020508)      132.63      -527.71      542.77161      (81122608)
153.43      -519.10      546.85950      (81010708)      174.23      -510.48      547.00317      (81011408)
195.03      -501.87      552.07739      (81120708)      215.82      -493.25      553.82184      (81010108)
236.62      -484.64      546.09528      (81012008)      257.42      -476.02      554.19855      (81122008)
278.22      -467.41      539.61548      (81122008)      299.01      -458.79      511.58978      (81113008)
319.81      -450.18      541.97534      (81113008)      340.61      -441.57      543.80945      (81020108)
361.40      -432.95      528.31403      (81020108)      382.20      -424.34      533.27344      (81020408)
403.00      -415.72      523.74945      (81011908)      423.80      -407.11      519.05090      (81013108)

*** ISCS3 - VERSION 02035 ***      *** COLLEGE PARK - LST ANALYSIS      ***      04/15/09
*** NITROGEN DIOXIDE (NO2)      ***      15:28:14
**MODELOPTs:      URBAN FLAT FLGPOL      NOCALM      PAGE 27
CONC

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION      VALUES FOR SOURCE GROUP: ALL      ***
INCLUDING SOURCE(S):      VOL1      VOL2      VOL3      VOL4      VOL7      VOL8      VOL9
VOL10      VOL13      VOL14      VOL15      VOL16      VOL19      VOL22      VOL25      VOL28      VOL29      VOL30      VOL31
VOL32      VOL33      VOL34      VOL35      VOL36      VOL37
```

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_				IN MICROGRAMS/M**3				**			
X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)				
453.21	-377.70	520.22626	(811121908)	461.82	-356.90	524.86169	(81011708)				
470.44	-336.10	519.44128	(81012608)	479.05	-315.30	539.49133	(81012608)				
487.67	-294.51	544.24323	(81011808)	496.28	-273.71	546.67328	(81010908)				
504.89	-252.91	544.33929	(81010908)	513.51	-232.12	553.21881	(81013008)				
522.12	-211.32	554.11237	(81012508)	530.74	-190.52	533.67725	(81012508)				
539.35	-169.72	514.45233	(81011021)	547.97	-148.93	513.26324	(81011802)				
556.58	-128.13	511.00589	(81121022)	565.20	-107.33	508.60291	(81070105)				
573.81	-86.53	505.00101	(81012223)	582.43	-65.74	501.23489	(81062123)				
91.04	-544.94	529.84784	(81122908)	67.37	-544.94	503.70578	(81122908)				
43.70	-544.94	502.14050	(81081103)	20.03	-544.94	504.01324	(81072402)				
-3.64	-544.94	505.34055	(81060403)	-27.30	-544.94	505.98438	(81091003)				
-50.97	-544.94	505.98660	(81010307)	-74.64	-544.94	505.33508	(81040824)				
-98.31	-544.94	503.97412	(81062505)	-121.98	-544.94	502.07846	(81042104)				
-145.65	-544.94	499.45126	(81032201)	112.47	-1036.06	247.73241	(81102624)				
133.89	-1027.19	249.35924	(81080824)	155.32	-1018.31	254.66177	(81122908)				
176.75	-1009.44	268.67801	(81122908)	198.18	-1000.56	271.10062	(81122908)				
219.60	-991.69	275.44165	(81020508)	241.03	-982.81	276.66867	(81122608)				
262.46	-973.94	274.88544	(81112208)	283.89	-965.06	278.51639	(81010708)				
305.31	-956.18	276.07874	(81010708)	326.74	-947.31	278.83612	(81011408)				
348.17	-938.43	280.45557	(81010508)	369.60	-929.56	277.72009	(81120708)				
391.02	-920.68	280.82065	(81010108)	412.45	-911.81	277.18781	(81010108)				
433.88	-902.93	274.92532	(81012008)	455.31	-894.06	280.28833	(81012008)				
476.73	-885.18	279.16980	(81122008)	498.16	-876.30	270.12955	(81122008)				
519.59	-867.43	256.75455	(81072024)	541.02	-858.55	255.77965	(81090103)				
562.44	-849.68	262.34650	(81113008)	583.87	-840.80	272.29102	(81113008)				
605.30	-831.93	272.95316	(81113008)	626.73	-823.05	270.98941	(81020108)				
648.15	-814.18	261.36771	(81020108)	669.58	-805.30	263.25504	(81020408)				
691.01	-796.42	266.13156	(81020408)	712.44	-787.55	260.53049	(81020408)				
733.86	-778.67	261.33340	(81011908)	755.29	-769.80	259.29349	(81013108)				
776.72	-760.92	251.01752	(81013108)	807.02	-730.62	256.59988	(81011508)				
815.90	-709.19	259.24930	(81121908)	824.77	-687.76	261.35980	(81011708)				
833.65	-666.34	256.62131	(81011708)	842.52	-644.91	252.78865	(81012608)				
851.40	-623.48	265.47598	(81012608)	860.28	-602.05	269.83963	(81012608)				
869.15	-580.63	269.87402	(81011808)	878.03	-559.20	273.32407	(81111608)				
886.90	-537.77	271.96417	(81010908)	895.78	-516.34	275.94351	(81010908)				
904.65	-494.92	270.33725	(81010908)	913.53	-473.49	277.42731	(81013008)				
922.40	-452.06	277.67297	(81013008)	931.28	-430.63	279.91956	(81012508)				
940.16	-409.21	276.01669	(81012508)	949.03	-387.78	262.47726	(81012508)				
957.91	-366.35	259.32513	(81050701)	966.78	-344.92	259.40988	(81021919)				
975.66	-323.50	259.32654	(81050522)	984.53	-302.07	259.07227	(81121121)				

*** ISCS3 - VERSION 02035 ***

*** COLLEGE PARK - LST ANALYSIS
NITROGEN DIOXIDE (NO2)

*** 04/15/09
15:28:14
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**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2_				IN MICROGRAMS/M**3				**			
X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)				
993.41	-280.64	258.66168	(81121007)	1002.28	-259.21	258.19028	(81012507)				
1011.16	-237.79	257.51749	(81040322)	1020.04	-216.36	256.69781	(81121118)				
1028.91	-194.93	255.63071	(81012223)	1037.79	-173.50	254.66876	(81060824)				
1046.66	-152.08	253.39662	(81080906)	1055.54	-130.65	252.01492	(81091320)				
1064.41	-109.22	250.68839	(81042403)	1073.29	-87.79	249.12766	(81041924)				
1082.16	-66.37	247.45708	(81060923)	91.04	-1044.94	245.99742	(81040405)				
67.37	-1044.94	246.55135	(81060401)	43.70	-1044.94	247.16995	(81091101)				
20.03	-1044.94	247.46074	(81080404)	-3.64	-1044.94	247.78531	(81102122)				
-27.30	-1044.94	247.91927	(81091003)	-50.97	-1044.94	247.87100	(81112020)				
-74.64	-1044.94	247.75734	(81092307)	-98.31	-1044.94	247.46606	(81031707)				
-121.98	-1044.94	247.04549	(81092305)	-145.65	-1044.94	246.46715	(81042103)				
-165.65	-44.94	1965.89819	(81041703)	-165.65	-21.62	1998.74609	(81072224)				
-165.65	1.71	1920.18250	(81040304)	-165.65	25.03	1976.07642	(81100721)				
-165.65	48.36	1928.93945	(81071702)	-165.65	71.68	1968.02576	(81030308)				
-165.65	95.00	1966.92786	(81081107)	-165.65	118.33	1967.54517	(81031108)				
-165.65	141.65	1984.62427	(81070906)	-165.65	164.98	1876.60022	(81042022)				
-165.65	188.30	1682.01563	(81081407)	-188.33	-62.62	1701.10217	(81062302)				
-163.33	-87.62	1782.20911	(81010808)	-195.65	-44.94	1690.59546	(81010306)				
-195.65	-21.62	1703.50061	(81041123)	-195.65	1.71	1688.06042	(81123002)				
-195.65	25.03	1694.34497	(81012021)	-195.65	48.36	1677.83545	(81031108)				
-195.65	71.68	1690.25708	(81030308)	-195.65	95.00	1684.84717	(81090704)				
-195.65	118.33	1687.25818	(81031108)	-195.65	141.65	1684.09473	(81070905)				
-195.65	164.98	1649.12244	(81091407)	-195.65	188.30	1548.87354	(81042022)				
-238.33	-62.62	1375.85803	(81010306)	-231.01	-80.30	1382.74805	(81050502)				
-223.68	-97.97	1371.23132	(81031623)	-198.68	-122.97	1447.96326	(81010808)				
-181.01	-130.30	1409.59647	(81031808)	-163.33	-137.62	1442.67004	(81031808)				
-245.65	-44.94	1354.71973	(81080601)	-245.65	-21.62	1365.39624	(81090306)				
-245.65	1.71	1367.71667	(81100605)	-245.65	25.03	1363.90137	(81012021)				
-245.65	48.36	1379.28894	(81030308)	-245.65	71.68	1377.65564	(81030308)				
-245.65	95.00	1376.93213	(81031108)	-245.65	118.33	1373.11572	(81031108)				
-245.65	141.65	1347.89417	(81032104)	-245.65	164.98	1330.35352	(81070905)				
-245.65	188.30	1292.48120	(81060905)	-337.28	-65.14	982.86151	(81061304)				
-328.91	-85.35	993.59717	(81041607)	-320.54	-105.55	999.31506	(81042305)				
-312.18	-125.75	998.37158	(81080707)	-303.81	-145.96	990.33984	(81092702)				
-295.44	-166.16	975.64386	(81082307)	-266.87	-194.73	1030.34644	(81010808)				
-246.67	-203.10	1014.05048	(81010808)	-226.46	-211.47	1023.50641	(81031808)				
-206.26	-219.83	1053.10828	(81031808)	-186.06	-228.20	1042.11890	(81112708)				
-165.85	-236.57	980.35425	(81112708)	-345.65	-44.94	968.60034	(81032102)				
-345.65	-21.62	975.32245	(81080823)	-345.65	1.71	978.75146	(81100607)				
-345.65	25.03	980.28699	(81012021)	-345.65	48.36	1008.40625	(81030308)				

*** ISCS3 - VERSION 02035 ***

*** COLLEGE PARK - LST ANALYSIS
NITROGEN DIOXIDE (NO2)

*** 04/15/09
15:28:14
PAGE 29

**MODELOPTs:
CONC

URBAN FLAT FLGPOL

NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

		** CONC OF NO2_		IN MICROGRAMS/M**3		**	
X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)

-345.65 71.68 1014.86902 (81030308) -345.65 95.00 1013.92468 (81031108)
-345.65 118.33 1008.47186 (81031108) -345.65 141.65 965.34015 (81031108)
-345.65 164.98 954.29260 (81081107) -345.65 188.30 939.50403 (81102706)
-637.04 -65.74 502.38562 (81123002) -628.42 -86.53 508.23364 (81020602)
-619.81 -107.33 510.96017 (81090306) -611.19 -128.13 515.21088 (81081707)
-602.58 -148.93 517.67047 (81060904) -593.96 -169.72 518.61366 (81080601)
-585.35 -190.52 520.04840 (81071501) -576.73 -211.32 519.93860 (81061303)
-568.12 -232.12 518.81042 (81081505) -559.50 -252.91 516.88599 (81091024)
-550.89 -273.71 514.13373 (81012120) -542.28 -294.51 509.98288 (81041703)
-533.66 -315.30 505.56546 (81062302) -525.05 -336.10 500.42059 (81120420)
-516.43 -356.90 494.34882 (81033024) -507.82 -377.70 487.58987 (81063001)
-478.41 -407.11 504.29352 (81010808) -457.61 -415.72 525.46442 (81010808)
-436.81 -424.34 518.92755 (81010808) -416.01 -432.95 505.45227 (81072703)
-395.22 -441.57 509.24850 (81031423) -374.42 -450.18 525.86304 (81031808)
-353.62 -458.79 549.38916 (81031808) -332.83 -467.41 546.80945 (81112708)
-312.03 -476.02 550.39081 (81112708) -291.23 -484.64 522.78882 (81112708)
-270.43 -493.25 519.03094 (81040823) -249.64 -501.87 517.56665 (81080405)
-228.84 -510.48 515.24408 (81011423) -208.04 -519.10 512.20996 (81010823)
-187.24 -527.71 508.42822 (81112124) -166.45 -536.33 504.25098 (81011524)
-645.65 -44.94 498.74658 (81100605) -645.65 -21.62 500.59561 (81070706)
-645.65 1.71 502.47131 (81012021) -645.65 25.03 501.33279 (81081401)
-645.65 48.36 533.06598 (81030308) -645.65 71.68 537.20923 (81030308)
-645.65 95.00 514.93860 (81031108) -645.65 118.33 536.52405 (81031108)
-645.65 141.65 520.89084 (81031108) -645.65 164.98 495.13766 (81031108)
-645.65 188.30 490.87573 (81090706) -1136.77 -66.37 246.96727 (81100721)
-1127.90 -87.79 248.25854 (81070706) -1119.02 -109.22 249.83141 (81100607)
-1110.15 -130.65 251.92664 (81100605) -1101.27 -152.08 253.59242 (81123002)
-1092.40 -173.50 253.37631 (81080823) -1083.52 -194.93 256.08353 (81090707)
-1074.65 -216.36 257.26566 (81071006) -1065.77 -237.79 257.58551 (81090306)
-1056.89 -259.21 258.99796 (81032102) -1048.02 -280.64 259.64655 (81041123)
-1039.14 -302.07 260.14999 (81092623) -1030.27 -323.50 260.45535 (81081701)
-1021.39 -344.92 260.22443 (81080601) -1012.52 -366.35 260.56485 (81080504)
-1003.64 -387.78 260.52371 (81072306) -994.77 -409.21 260.33844 (81072706)
-985.89 -430.63 259.38705 (81050103) -977.01 -452.06 259.27695 (81041701)
-968.14 -473.49 258.52017 (81070904) -959.26 -494.92 257.33289 (81091024)
-950.39 -516.34 256.50189 (81070201) -941.51 -537.77 255.19638 (81080707)
-932.64 -559.20 252.50122 (81050502) -923.76 -580.63 252.24509 (81071004)
-914.89 -602.05 250.83461 (81062302) -906.01 -623.48 248.63918 (81080101)
-897.13 -644.91 247.43665 (81062402) -888.26 -666.34 245.44930 (81062906)
-879.38 -687.76 243.35437 (81090122) -870.51 -709.19 241.29840 (81063001)

*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** MODELOPTs: *** NITROGEN DIOXIDE (NO2) *** 15:28:14
CONC URBAN FLAT FLGPOL NOCALM PAGE 30

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 VOL2 VOL3 VOL4 VOL7 VOL8 VOL9
VOL10 VOL13 VOL14 VOL15 VOL16 VOL19 VOL22 VOL25 VOL28 VOL29 VOL30 VOL31
VOL32 VOL33 VOL34 VOL35 VOL36 VOL37

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC (YYMMDDHH)
-861.63 -730.62 238.99091 (81100524) -831.33 -760.92 239.15135 (81070606)
-809.90 -769.80 250.97112 (81010808) -788.47 -778.67 260.50809 (81010808)
-767.05 -787.55 262.22461 (81010808) -745.62 -796.42 255.78777 (81010808)
-724.19 -805.30 249.41431 (81120923) -702.76 -814.18 250.32555 (81072703)
-681.34 -823.05 252.78363 (81031423) -659.91 -831.93 254.12984 (81081605)
-638.48 -840.80 255.65399 (81082924) -617.05 -849.68 268.51364 (81031808)
-595.63 -858.55 276.51120 (81031808) -574.20 -867.43 274.82941 (81031808)
-552.77 -876.30 276.68970 (81112708) -531.34 -885.18 278.67761 (81112708)
-509.92 -894.06 270.70334 (81112708) -488.49 -902.93 261.10507 (8110507)
-467.06 -911.81 261.33176 (81031023) -445.63 -920.68 261.34515 (81021519)
-424.21 -929.56 260.28391 (81112707) -402.78 -938.43 260.89334 (81012401)
-381.35 -947.31 260.38013 (81010223) -359.92 -956.18 259.84131 (81112123)
-338.50 -965.06 259.03299 (81072305) -317.07 -973.94 258.19180 (81040220)
-295.64 -982.81 257.15274 (81122707) -274.21 -991.69 255.98628 (81082722)
-252.79 -1000.56 254.68991 (81012422) -231.36 -1009.44 253.27820 (81032423)
-209.93 -1018.31 251.68028 (81012003) -188.50 -1027.19 250.06863 (81010205)
-167.08 -1036.06 248.33817 (81021104) -1145.65 -44.94 245.02626 (81012021)
-1145.65 -21.62 242.71289 (81012021) -1145.65 1.71 245.13863 (81081401)
-1145.65 25.03 259.06702 (81030308) -1145.65 48.36 266.15710 (81030308)
-1145.65 71.68 264.13113 (81030308) -1145.65 95.00 253.18767 (81030308)
-1145.65 118.33 248.05872 (81031108) -1145.65 141.65 261.10153 (81031108)
-1145.65 164.98 265.49768 (81031108) -1145.65 188.30 260.85818 (81031108)
-145.65 208.30 1619.83887 (81100101) -121.98 208.30 1953.40344 (81031608)
-98.31 208.30 2026.03760 (81080524) -74.64 208.30 2071.64941 (81031608)
-50.97 208.30 1987.37659 (81052704) -27.31 208.30 2032.04993 (81081323)
-3.64 208.30 2050.01074 (81030908) 20.03 208.30 2020.31641 (81030908)
43.70 208.30 2034.74976 (81030908) 67.37 208.30 2075.34302 (81030908)
91.04 208.30 1975.83936 (81010208) 163.33 230.98 1454.55518 (81090101)
-188.33 205.98 1474.23572 (81081407) -145.65 238.30 1515.23804 (81020007)
-121.98 238.30 1696.82874 (81031608) -98.31 238.30 1743.35852 (81031608)
-74.64 238.30 1768.84155 (81031608) -50.97 238.30 1756.72681 (81031608)
-27.31 238.30 1735.63110 (81041706) -3.64 238.30 1744.64832 (81061202)
20.03 238.30 1756.39530 (81030908) 43.70 238.30 1796.66980 (81030908)
67.37 238.30 1780.47437 (81030908) 91.04 238.30 1638.40015 (81090908)
-163.33 280.98 1263.47205 (81120419) -181.01 273.66 1244.30640 (81092107)
-198.68 266.33 1216.49219 (81100101) -223.68 241.33 1204.28748 (81081407)
-231.01 223.66 1257.56470 (81042022) -238.33 205.98 1280.14209 (81072207)
-145.65 288.30 1290.92920 (81112818) -121.98 288.30 1382.43567 (81031608)
-98.31 288.30 1432.89941 (81031608) -74.64 288.30 1432.63110 (81031608)
-50.97 288.30 1416.68420 (81031608) -27.31 288.30 1394.78699 (81041706)

*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** MODELOPTs: *** NITROGEN DIOXIDE (NO2) *** 15:28:14
CONC URBAN FLAT FLGPOL NOCALM PAGE 31

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 VOL2 VOL3 VOL4 VOL7 VOL8 VOL9
VOL10 VOL13 VOL14 VOL15 VOL16 VOL19 VOL22 VOL25 VOL28 VOL29 VOL30 VOL31
VOL32 VOL33 VOL34 VOL35 VOL36 VOL37

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC (YYMMDDHH)
-3.64 288.30 1388.19238 (81032123) 20.03 288.30 1391.65491 (81030908)
43.70 288.30 1434.95825 (81030908) 67.37 288.30 1448.28040 (81030908)
91.04 288.30 1405.32092 (81030908) -165.85 379.93 950.23401 (81080207)
-186.06 371.56 948.01709 (81072324) -206.26 363.19 941.00745 (81080524)

-226.46 354.83 927.88464 (81120419) -246.67 346.46 915.70953 (81082305)
-266.87 338.09 898.78210 (81100101) -295.44 309.52 868.77216 (81081407)
-303.81 289.32 915.43909 (81042022) -312.18 269.11 929.74725 (81090807)
-320.54 248.91 939.63055 (81090907) -328.91 228.71 943.06433 (81070906)
-337.28 208.50 944.54340 (81070905) -145.65 388.30 941.67657 (81031608)
-388.30 1024.62646 (81031608) -98.31 388.30 1040.57007 (81031608)
-74.64 388.30 1018.46080 (81031608) -50.97 388.30 987.72021 (81102704)
-27.31 388.30 987.04248 (81081323) -3.64 388.30 977.58783 (81041706)
20.03 388.30 975.19159 (81032123) 43.70 388.30 968.94678 (81060322)
67.37 388.30 1012.76477 (81030908) 81.04 388.30 1036.30847 (81030908)
-166.45 679.69 543.39325 (81031608) -187.24 671.07 530.38300 (81031608)
-208.04 662.46 501.91583 (81100606) -228.84 653.84 487.34366 (81100606)
-249.64 645.23 479.34702 (81080207) -270.43 636.61 502.78751 (81080207)
-291.23 628.00 498.34692 (81080207) -312.03 619.38 502.26898 (81080702)
-332.83 610.77 496.99344 (81112818) -353.62 602.15 497.54642 (81080524)
-374.42 593.54 482.41147 (81080524) -395.22 584.93 489.39435 (81120419)
-416.01 576.31 484.81067 (81092007) -436.81 567.70 476.56168 (81082305)
-457.61 559.08 473.53278 (81100101) -478.41 550.47 462.61160 (81081407)
-507.82 521.06 447.68997 (81081407) -516.43 500.26 449.78030 (81042022)
-525.05 479.46 476.80905 (81042022) -533.66 458.66 482.73389 (81091307)
-542.28 437.87 488.99005 (81072207) -550.89 417.07 493.02487 (81081704)
-559.50 396.27 495.98779 (81112605) -568.12 375.48 499.16818 (81070906)
-576.73 354.68 500.57950 (81083022) -585.35 333.88 501.64883 (81070905)
-593.96 313.08 502.74051 (81080107) -602.58 292.29 502.68610 (81102706)
-611.19 271.49 495.38080 (81032104) -619.81 250.69 499.48346 (81081107)
-628.42 229.89 497.56566 (81090704) -637.04 209.10 494.83463 (81022406)
-145.65 688.30 528.80298 (81031608) -121.98 688.30 495.00357 (81031608)
-98.31 688.30 468.49420 (81081504) -74.64 688.30 498.04666 (81091422)
-50.97 688.30 501.90796 (81102704) -27.31 688.30 500.67444 (81081323)
-3.64 688.30 503.08704 (81081323) 20.03 688.30 504.97253 (81041706)
43.70 688.30 491.78302 (81052704) 67.37 688.30 502.31949 (81052704)
91.04 688.30 498.10751 (81032123) -167.08 1179.42 225.76981 (81081504)
-188.50 1170.55 241.07144 (81081504) -209.93 1161.67 249.08498 (81081504)
-231.36 1152.80 262.48660 (81031608) -252.79 1143.92 273.94775 (81031608)
-274.21 1135.05 276.27124 (81031608) -295.64 1126.17 269.08505 (81031608)
-317.07 1117.30 252.94559 (81031608) -338.50 1108.42 255.60122 (81100606)
*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***
*** NITROGEN DIOXIDE (NO2) ***
**MODELOpts:
CONC URBAN FLAT FLGPOL NOCALM
*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,
*** DISCRETE CARTESIAN RECEPTOR POINTS ***
** CONC OF NO2_ IN MICROGRAMS/M**3 **
X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC (YYMMDDHH)
-359.92 1099.54 252.56171 (81100606) -381.35 1099.67 240.75053 (81100606)
-402.78 1081.79 221.29535 (81100606) -424.21 1072.92 239.97009 (81080207)
-445.63 1064.04 252.76521 (81080207) -467.06 1055.17 256.79794 (81080207)
-488.49 1046.29 251.64906 (81080207) -509.92 1037.42 255.02037 (81030702)
-531.34 1028.54 255.30389 (81072324) -552.77 1019.66 253.89885 (81112818)
-574.20 1010.79 247.23871 (81080524) -595.63 1001.91 252.53616 (81080524)
-617.05 993.04 249.13345 (81080524) -638.48 984.16 237.44991 (81080524)
-659.91 975.29 246.33278 (81120419) -681.34 966.41 247.29350 (81120419)
-702.76 957.54 245.82242 (81092007) -724.19 948.66 244.08896 (81082305)
-745.62 939.78 238.96684 (81082305) -767.05 930.91 239.34512 (81100101)
-788.47 922.03 237.58960 (81100101) -809.90 913.16 230.07552 (81081407)
-831.33 904.28 233.68799 (81081407) -861.63 873.98 225.56247 (81081407)
-870.51 886.55 214.28024 (81081407) -879.38 831.12 212.10910 (81042022)
-888.26 869.70 229.09991 (81042022) -897.13 788.27 240.01164 (81042022)
-906.01 766.84 243.71350 (81042022) -914.89 745.41 245.24692 (81091307)
-923.76 723.99 247.02565 (81090807) -932.64 702.56 247.46461 (81072207)
-941.51 681.13 249.92444 (81081704) -950.39 659.70 251.20843 (81040705)
-959.26 638.28 252.39111 (81112605) -968.14 616.85 253.39532 (81060905)
-977.01 595.42 253.21262 (81040306) -985.89 573.99 253.88841 (81083022)
-994.77 552.57 255.06665 (81040306) -1003.64 531.14 255.75090 (81070905)
-1012.52 509.71 255.80136 (81080107) -1021.39 488.28 254.36848 (81080107)
-1030.27 466.86 256.35617 (81080904) -1039.14 445.43 255.99492 (81082104)
-1048.02 424.00 249.31458 (81081107) -1056.89 402.57 255.33002 (81081107)
-1065.77 381.15 254.59488 (81082303) -1074.65 359.72 254.25746 (81090704)
-1083.52 338.29 249.53700 (81090704) -1092.40 316.86 252.44290 (81022406)
-1101.27 295.44 251.33635 (81060901) -1110.15 274.01 250.10268 (81090706)
-1119.02 252.58 248.69620 (81071702) -1127.90 231.15 242.24013 (81071702)
-1136.77 209.73 250.88531 (81031108) -145.65 1188.30 222.01822 (81091422)
-121.98 1188.30 237.74875 (81091422) -98.31 1188.30 245.59421 (81091422)
-74.64 1188.30 244.89998 (81102704) -50.97 1188.30 235.62396 (81102704)
-27.31 1188.30 242.99901 (81081323) -3.64 1188.30 247.12801 (81081323)
20.03 1188.30 242.34958 (81081323) 43.70 1188.30 246.58430 (81040307)
67.37 1188.30 243.96657 (81041706) 91.04 1188.30 232.83992 (81041706)
111.04 188.30 2103.92212 (81010208) 111.04 164.98 1991.78174 (81010208)
111.04 141.65 1912.67883 (81013018) 111.04 118.33 2002.87048 (81020308)
111.04 95.00 2001.99231 (81080222) 111.04 71.68 1978.66113 (81043024)
111.04 48.36 1975.49744 (81092621) 111.04 25.03 2023.36377 (81081705)
111.04 1.71 2052.49341 (81013008) 111.04 -21.62 2080.15210 (81013008)
111.04 -44.94 2103.11182 (81012608) 133.72 205.98 1826.13525 (81010208)
108.72 230.98 1652.54932 (81010208) 141.04 188.30 1674.23230 (81010208)
*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS ***
*** NITROGEN DIOXIDE (NO2) ***
**MODELOpts:
CONC URBAN FLAT FLGPOL NOCALM
*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,
*** DISCRETE CARTESIAN RECEPTOR POINTS ***
** CONC OF NO2_ IN MICROGRAMS/M**3 **
X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC (YYMMDDHH)
141.04 164.98 1597.94360 (81013018) 141.04 141.65 1694.37976 (81020308)
141.04 118.33 1714.94714 (81020308) 141.04 95.00 1711.77832 (81042721)
141.04 71.68 1711.81763 (81020308) 141.04 48.36 1710.28638 (81013005)
141.04 25.03 1733.34119 (81100102) 141.04 1.71 1736.74463 (81012508)
141.04 -21.62 1771.51245 (81012508) 141.04 -44.94 1791.22656 (81010908)
183.72 205.98 1304.86084 (81112604) 176.40 223.66 1414.69946 (81010208)
169.07 241.33 1484.39783 (81010208) 144.07 266.33 1337.40662 (81081001)
126.40 273.66 1325.21729 (81033122) 108.72 280.98 1322.58105 (81033122)
191.04 188.30 1280.34668 (81011921) 191.04 164.98 1301.29565 (81072223)

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15:28:14
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191.04 141.65 1383.58276 (81020308) 191.04 118.33 1395.63391 (81020308)
191.04 95.00 1397.39505 (81020308) 191.04 71.68 1391.83997 (81020308)
191.04 48.36 1387.15100 (81080807) 191.04 25.03 1394.82685 (81012722)
191.04 1.71 1398.77393 (81071024) 191.04 -21.62 1399.12695 (81011201)
191.04 -44.94 1421.38831 (81012508) 282.67 208.50 952.54065 (81042405)
274.30 228.71 964.21350 (81121117) 265.93 248.91 972.87963 (81011521)
257.57 269.11 976.10278 (81013018) 249.20 289.32 1035.24524 (81010208)
240.83 309.52 1050.17126 (81010208) 212.26 338.09 956.93494 (81081001)
192.06 346.46 969.38678 (81081001) 171.85 354.83 974.44116 (81031222)
151.65 363.19 983.98267 (81071001) 131.45 371.56 976.91943 (81081706)
111.24 379.93 1035.00098 (81030908) 291.04 188.30 939.82373 (81092622)
291.04 164.98 949.00842 (81010720) 291.04 141.65 1004.44592 (81020308)
291.04 118.33 1025.13916 (81020308) 291.04 95.00 1017.12390 (81020308)
291.04 71.68 983.16736 (81121318) 291.04 48.36 988.03137 (81091021)
291.04 25.03 990.53424 (81011321) 291.04 1.71 990.38568 (81012019)
291.04 -21.62 986.79032 (81060824) 291.04 -44.94 978.68585 (81011201)
582.43 209.10 500.87350 (81090503) 573.81 229.89 505.58875 (8101618)
565.20 250.69 508.65018 (81052303) 556.58 271.49 512.05560 (81081202)
547.97 292.29 514.43396 (81042304) 539.35 313.08 514.92438 (81062803)
530.74 333.88 516.86774 (81102423) 522.12 354.68 516.89819 (81121117)
513.51 375.48 516.05615 (81012420) 504.89 396.27 514.39026 (81050105)
496.28 417.07 506.89203 (81013018) 487.67 437.87 505.98932 (81013018)
479.05 458.66 504.06412 (81032124) 470.44 479.46 530.49121 (81010208)
461.82 500.26 530.81873 (81010208) 453.21 521.06 503.00061 (81010208)
423.80 550.47 454.78693 (81081001) 403.00 559.08 488.95154 (81081001)
382.20 567.70 497.99875 (81081001) 361.40 576.31 479.67126 (81081001)
340.61 584.93 478.52078 (81033122) 319.81 593.54 510.40244 (81033122)
299.01 602.15 516.71411 (81071001) 278.22 610.77 518.82056 (81012718)
257.42 619.38 520.01501 (81081706) 236.62 628.00 519.68042 (81042120)
215.82 636.61 519.43463 (81011202) 195.03 645.23 552.19531 (81030908)
174.23 653.84 554.39594 (81030908) 153.43 662.46 526.85632 (81030908)
*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** NITROGEN DIOXIDE (NO2) *** 15:28:14
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 34
CONC
*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,
*** DISCRETE CARTESIAN RECEPTOR POINTS ***
** CONC OF NO2_ IN MICROGRAMS/M**3 **
X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC (YYMMDDHH)
132.63 671.07 507.76355 (81061202) 111.84 679.69 504.67328 (81060322)
591.04 188.30 496.35416 (81041623) 591.04 164.98 529.98132 (81020308)
591.04 141.65 539.45990 (81020308) 591.04 118.33 520.47241 (81020308)
591.04 95.00 504.24832 (81072801) 591.04 71.68 503.48267 (81080807)
591.04 48.36 504.18533 (81041523) 591.04 25.03 503.16867 (81011022)
591.04 1.71 501.55875 (81041502) 591.04 -21.62 499.59857 (81121218)
591.04 -44.94 496.72076 (81090501) 1082.16 209.73 267.78906 (81020308)
1073.29 231.15 263.19247 (81020308) 1064.41 252.58 250.53748 (81080822)
1055.54 274.01 252.86824 (81041623) 1046.66 295.44 254.33441 (81091521)
1037.79 316.86 255.23460 (81090503) 1028.91 338.29 256.60159 (81013001)
1020.04 359.72 257.78983 (81042721) 1011.16 381.15 257.10452 (81052303)
1002.28 402.57 259.11673 (81052122) 993.41 424.00 259.98090 (81081202)
984.53 445.43 260.60562 (81041501) 975.66 466.86 260.92377 (81072701)
966.78 488.28 260.54926 (81011218) 957.91 509.71 261.06033 (81042405)
949.03 531.14 260.95309 (81102423) 940.16 552.57 260.46725 (81010318)
931.28 573.99 260.18985 (81013004) 922.40 595.42 259.57819 (81081522)
913.53 616.85 258.78989 (81060601) 904.65 638.28 257.88110 (81050105)
895.78 659.70 255.64259 (81112604) 886.90 681.13 253.11290 (81013018)
878.03 702.56 254.04721 (81013018) 869.15 723.99 252.70775 (81031302)
860.28 745.41 251.20047 (81032124) 851.40 766.84 252.35661 (81010208)
842.52 788.27 263.03787 (81010208) 833.65 809.70 265.43277 (81010208)
824.77 831.12 259.50620 (81010208) 815.90 852.55 245.96918 (81081001)
807.02 873.98 226.17477 (81010208) 776.72 904.28 198.82323 (81081001)
755.29 913.16 219.81641 (81081001) 733.86 922.03 235.71689 (81081001)
712.44 930.91 244.98973 (81081001) 691.01 939.78 246.61259 (81081001)
669.58 948.66 240.22855 (81081001) 648.15 957.54 226.25914 (81081001)
626.73 966.41 214.14511 (81033122) 605.30 975.29 235.71532 (81033122)
583.87 984.16 250.53444 (81033122) 562.44 993.04 257.01965 (81033122)
541.02 1001.91 258.03690 (81071001) 519.59 1010.79 257.70917 (81012718)
498.16 1019.66 259.77271 (81070123) 476.73 1028.54 260.06995 (81011120)
455.31 1037.42 260.27063 (81090406) 433.88 1046.29 260.94855 (81042120)
412.45 1055.17 261.32532 (81102705) 391.02 1064.04 260.70203 (81012702)
369.60 1072.92 269.53610 (81030908) 348.17 1081.79 280.46295 (81030908)
326.74 1090.67 281.31937 (81030908) 305.31 1099.54 272.11377 (81030908)
283.89 1108.42 253.94714 (81061202) 262.46 1117.30 258.01169 (81061202)
241.03 1126.17 252.85995 (81061202) 219.60 1135.05 255.62445 (81060322)
198.18 1143.92 254.36966 (81032103) 176.75 1152.80 251.03387 (81032123)
155.32 1161.67 248.03101 (81052704) 133.89 1170.55 249.61079 (81052704)
112.47 1179.42 243.01099 (81052704) 1091.04 188.30 263.89032 (81020308)
1091.04 164.98 253.93607 (81020308) 1091.04 141.65 247.04378 (81091022)
*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** NITROGEN DIOXIDE (NO2) *** 15:28:14
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 35
CONC
*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL13 , VOL14 , VOL15 , VOL16 , VOL19 , VOL22 , VOL25 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 ,
*** DISCRETE CARTESIAN RECEPTOR POINTS ***
** CONC OF NO2_ IN MICROGRAMS/M**3 **
X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC (YYMMDDHH)
1091.04 118.33 247.34799 (81090402) 1091.04 95.00 247.50429 (81083023)
1091.04 71.68 247.41972 (81080807) 1091.04 48.36 246.66158 (81091021)
1091.04 25.03 247.18881 (81010505) 1091.04 1.71 246.81979 (81011022)
1091.04 -21.62 246.25163 (81011321) 1091.04 -44.94 245.48100 (81041502)
-145.65 188.30 1724.82544 (81100101) -145.65 -44.94 2252.51465 (81010808)
91.04 -44.94 2302.60156 (81013108) 91.04 188.30 2340.55200 (81010208)
*** ISCS3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS *** 04/15/09
*** NITROGEN DIOXIDE (NO2) *** 15:28:14
**MODELOPTs: URBAN FLAT FLGPOL NOCALM PAGE 36
CONC
*** THE SUMMARY OF MAXIMUM PERIOD ( 8760 HRS) RESULTS ***
```


** CONC OF NO2_ IN MICROGRAMS/M**3

**

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS 391.93573 AT (	91.04, -44.94, 0.00, 2.00)	DC	NA
	2ND HIGHEST VALUE IS 388.40778 AT (	111.04, 48.36, 0.00, 2.00)	DC	NA
	3RD HIGHEST VALUE IS 380.44550 AT (	111.04, 71.68, 0.00, 2.00)	DC	NA
	4TH HIGHEST VALUE IS 379.76984 AT (	111.04, 25.03, 0.00, 2.00)	DC	NA
	5TH HIGHEST VALUE IS 378.46149 AT (	43.70, -64.94, 0.00, 2.00)	DC	NA
	6TH HIGHEST VALUE IS 374.37564 AT (	20.03, -64.94, 0.00, 2.00)	DC	NA
	7TH HIGHEST VALUE IS 369.91818 AT (	67.37, -64.94, 0.00, 2.00)	DC	NA
	8TH HIGHEST VALUE IS 359.61649 AT (	-3.64, -64.94, 0.00, 2.00)	DC	NA
	9TH HIGHEST VALUE IS 359.22183 AT (	111.04, 95.00, 0.00, 2.00)	DC	NA
	10TH HIGHEST VALUE IS 357.32596 AT (	111.04, 1.71, 0.00, 2.00)	DC	NA

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

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
*** NITROGEN DIOXIDE (NO2)

*** 04/15/09
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**MODELOPTs:
CONC

URBAN FLAT FLGPOL NOCALM

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF NO2_ IN MICROGRAMS/M**3

**

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS 2340.55200 ON 81010208: AT (	91.04, 188.30, 0.00, 2.00)	DC	NA	

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

*** ISCST3 - VERSION 02035 *** *** COLLEGE PARK - LST ANALYSIS
*** NITROGEN DIOXIDE (NO2)

*** 04/15/09
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**MODELOPTs:
CONC

URBAN FLAT FLGPOL NOCALM

*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 490 Informational Message(s)
A Total of 490 Calm Hours Identified

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

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST3 Finishes Successfully ***

Appendix C: Health Risk Assessment Output

C-1: Health Risk Assessment Spreadsheets

Emission Assumptions	DPM	Emissions	Sensitive Receptors
College Park			

Facility Operations

Analysis year: 2009

Emission Factors

1) Onsite Vehicle Emissions

a) Truck

(1) EMFAC2007

(a) Average Meteorology

Temperature: 62 degF

Relative Humidity: 50%

(b) Calculations for SCAQMD

(c) Truck Mix

4+ axle heavy-heavy duty diesel trucks (HHDT)

(d) Onsite Truck Travel Speed: 10 mph

(e) Idle speed: 0 mph

(f) Truck Idle time: 5 minutes per truck per day

2) Other Parameters

(a) Width of Volume Source: 24 feet

(b) Truck Operational Schedule 8 hours/day

College Park

Emission: DPM

Processes Modeled

Build-out: 2009

Onsite delivery traffic
Truck idling

Facilities in Operation

Location	Truck type	Daily Trucks
Vulcan Delivery	4+ axle	80
Gas delivery truck	4+ axle	1
Water Truck	2 axle	1

Total 82

Facility Operations:

Delivery Trucks 8 hrs/day, 5 days/week, 52weeks/year
Gas Delivery Truck 1
Water Truck 1

Emission Factors

Vehicle Class	Exhaust @ 10 mph (g/mi)	Idle (g/hr)
4+ axle (HHDDT)	0.245	0.313
2 axle (MHDT)	0.302	0.818

Onsite Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Vehicle Speed (mph)	Daily Truck Trips	Link Length (mi)	Average Emissions Over the Link (g/day)	Average Emissions Over Link (g/sec)	Average Emissions (lbs/day)	Average Emissions Over Link (tons/yr)	ISC Source Name
Vulcan Delivery	4+ axle	10	0.245	10	160	0.54	2.12E+01	7.35E-04	4.66E-02	8.51E-03	GASLINE
Gas delivery truck	4+ axle	10	0.245	10	1	0.02	6.95E-03	1.93E-06	1.53E-05	2.79E-06	
Water Truck	2 axle	10	0.302	10	1	2.00	6.04E-01	1.68E-04	1.33E-03	2.43E-04	
							2.18E+01	9.05E-04	4.80E-02	8.76E-03	

Truck Idling

Idle time 5 minutes

Building/Location	Truck Type	Emission Factor (g/idle-hour)	Idling Time (min)	Daily Trucks	Total Emissions (g/day)	Average Emissions (g/sec)	Average Emissions (lbs/day)	Total Emissions (tons/yr)
Vulcan Delivery	4+ axle	0.313	5	80	2.09E+00	7.25E-05	4.60E-03	8.39E-04
Gas delivery truck	4+ axle	0.313	5	1	2.61E-02	9.06E-07	5.75E-05	1.05E-05
Water Truck	2 axle	0.818	5	1	6.82E-02	2.37E-06	1.50E-04	2.74E-05
					2.18E+00	7.58E-05	4.81E-03	8.77E-04

College Park

Vulcan Delivery Truck Exhaust Operational Profile

Basic Assumptions

Hours of Operation:	8 hours/day
Truck Trip Distribution:	75% Between hours of 7am and Noon 25% Between hours of Noon and 3pm

Calculation of Hourly Varying Emission Factors

Assume total daily emissions =	4.66E-02 pound/day	
Hourly average emissions =	0.0058292 pounds/hour or	7.34E-04 grams/second

Percentage of emissions between 7am to Noon =	75%
Percentage of emissions between Noon and 3pm =	25%

Total emissions from 7am to Noon =	0.034975 pounds/5 hours
Average hourly emissions from 7am to Noon =	0.006995 pounds/hour

Hourly varying emission factor from 7am to Noon = 1.20

Total emissions from Noon to 3pm =	0.011658 pounds/3 hours
Average hourly emissions from 8pm to 6am =	0.003886 pounds/hour

Hourly varying emission factor from Noon to 3pm = 0.666667

Vulcan Delivery Truck Idling Operational Profile

Basic Assumptions

Hours of Operation:	8 hours/day
Truck Trip Distribution:	75% Between hours of 7am and Noon 25% Between hours of Noon and 3pm

Calculation of Hourly Varying Emission Factors

Assume total daily emissions =	4.60E-03 pound/day	
Hourly average emissions =	0.00057476 pounds/hour or	7.24E-05 grams/second

Percentage of emissions between 7am to Noon =	75%
Percentage of emissions between Noon and 3pm =	25%

Total emissions from 7am to Noon =	0.003449 pounds/5 hours
Average hourly emissions from 7am to Noon =	0.00069 pounds/hour

Hourly varying emission factor from 7am to Noon = 1.20

Total emissions from Noon to 3pm =	0.00115 pounds/3 hours
Average hourly emissions from 8pm to 6am =	0.000383 pounds/hour

Hourly varying emission factor from Noon to 3pm = 0.666667

Water Truck Operational Profile

Hour Ending	Trucks/hr	Truck Emissions (#/hr)	Truck Emissions (g/sec)
8	1	1.33E-03	1.68E-04
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0

Diesel Operational Equipment

Equipment

Front end loader (diesel-powered)

Year: 2009-2020

DPM emission factor for large fleet (g/hp-hr)

2009	0.23
2010	0.23
2012	0.16
2013	0.16
2014	0.11
2015	0.11
2016	0.08
2017	0.08
2018	0.06
2019	0.06
2020	0.03

Average 0.119 g/hp-hr

Loader Size 265 hp

Load Factor 0.47

Hrs of Operation 2 hrs/day

Emission Rate 14.83277273 g/hr
0.004120215 g/sec

Emission rates taken from URBEMIS

Emissions assumed to be configured as an volume source within the Vulcan Property

area 10015 m2

DPM Emission rates from CARB Final Regulation Order REGULATION FOR IN-USE OFF-ROAD DIESEL VEHICLES

Title : SCAQMD - Annual
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2007/05/09 19:54:56
 Scen Year: 70-year Average of Fleet Averages All model years in the range 2009 to 2079 selected
 Season : Annual
 Area : South Coast AQMD

Year: 70-yr -- Model Years 1965 to 2079 Inclusive -- Annual
 Emfac2007 Emission Factors: V2.3 Nov 1 2006

District Average District Average South Coast AQMD

SPEED=0 MPH LHDT1DSL LHDT2DSL MHDTDSL HHDTDSL

AV 2009 - 2079 0.793 0.818 0.818 0.313

SPEED=10 MPH LDA LDT1 LDT2 MDT LHDT1DSL LHDT2DSL MHDTDSL HHDTDSL

AV 2009 - 2079 0.116 0.082 0.095 0.079 0.052 0.052 0.302 0.245

Emission Assumptions	DPM	Emissions	Worker Receptors
College Park			

Facility Operations

Analysis year: 2009

Emission Factors

1) Onsite Vehicle Emissions

a) Truck

(1) EMFAC2007

(a) Average Meteorology

Temperature: 62 degF

Relative Humidity: 50%

(b) Calculations for SCAQMD

(c) Truck Mix

4+ axle heavy-heavy duty diesel trucks (HHDT)

(d) Onsite Truck Travel Speed: 10 mph

(e) Idle speed: 0 mph

(f) Truck Idle time: 5 minutes per truck per day

2) Other Parameters

(a) Width of Volume Source: 24 feet

(b) Truck Operational Schedule 8 hours/day

College Park

Emission: DPM

Processes Modeled

Build-out: 2009

Onsite delivery traffic
Truck idling

Facilities in Operation

Location	Truck type	Daily Trucks
Vulcan Delivery	4+ axle	80
Gas delivery truck	4+ axle	1
Water Truck	2 axle	1

Total 82

Facility Operations:

Delivery Trucks 8 hrs/day, 5 days/week, 52weeks/year
Gas Delivery Truck 1
Water Truck 1

Emission Factors

Vehicle Class	Exhaust @ 10 mph (g/mi)	Idle (g/hr)
4+ axle (HHDDT)	0.364	0.457
2 axle (MHDT)	0.328	0.831

Onsite Roadway Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Vehicle Speed (mph)	Daily Truck Trips	Link Length (mi)	Average Emissions Over the Link (g/day)	Average Emissions Over Link (g/sec)	Average Emissions (lbs/day)	Average Emissions Over Link (tons/yr)	ISC Source Name
Vulcan Delivery	4+ axle	10	0.364	10	160	0.54	3.14E+01	1.09E-03	6.92E-02	1.26E-02	GASLINE
Gas delivery truck	4+ axle	10	0.364	10	1	0.02	7.54E-03	2.09E-06	1.66E-05	3.03E-06	
Water Truck	2 axle	10	0.328	10	1	2.00	6.56E-01	1.82E-04	1.44E-03	2.64E-04	
							3.21E+01	1.28E-03	7.07E-02	1.29E-02	

Truck Idling

Idle time 5 minutes

Building/Location	Truck Type	Emission Factor (g/idle-hour)	Idling Time (min)	Daily Trucks	Total Emissions (g/day)	Average Emissions (g/sec)	Average Emissions (lbs/day)	Total Emissions (tons/yr)
Vulcan Delivery	4+ axle	0.457	5	80	3.05E+00	1.06E-04	6.72E-03	1.23E-03
Gas delivery truck	4+ axle	0.457	5	1	3.81E-02	1.32E-06	8.40E-05	1.53E-05
Water Truck	2 axle	0.831	5	1	6.93E-02	2.40E-06	1.53E-04	2.78E-05
					3.16E+00	1.10E-04	6.95E-03	1.27E-03

College Park

Vulcan Delivery Truck Exhaust Operational Profile

Basic Assumptions

Hours of Operation: 8 hours/day

Truck Trip Distribution: 75% Between hours of 7am and Noon
25% Between hours of Noon and 3pm

Calculation of Hourly Varying Emission Factors

Assume total daily emissions = 6.92E-02 pound/day
Hourly average emissions = 0.00864975 pounds/hour or 1.09E-03 grams/second

Percentage of emissions between 7am to Noon = 75%
Percentage of emissions between Noon and 3pm = 25%

Total emissions from 7am to Noon = 0.051898 pounds/5 hours
Average hourly emissions from 7am to Noon = 0.01038 pounds/hour

Hourly varying emission factor from 7am to Noon = 1.20

Total emissions from Noon to 3pm = 0.017299 pounds/3 hours
Average hourly emissions from 8pm to 6am = 0.005766 pounds/hour

Hourly varying emission factor from Noon to 3pm = 0.666667

Vulcan Delivery Truck Idling Operational Profile

Basic Assumptions

Hours of Operation: 8 hours/day

Truck Trip Distribution: 75% Between hours of 7am and Noon
25% Between hours of Noon and 3pm

Calculation of Hourly Varying Emission Factors

Assume total daily emissions = 6.72E-03 pound/day
Hourly average emissions = 0.00083951 pounds/hour or 0.000106 grams/second

Percentage of emissions between 7am to Noon = 75%
Percentage of emissions between Noon and 3pm = 25%

Total emissions from 7am to Noon = 0.005037 pounds/5 hours
Average hourly emissions from 7am to Noon = 0.001007 pounds/hour

Hourly varying emission factor from 7am to Noon = 1.20

Total emissions from Noon to 3pm = 0.001679 pounds/3 hours
Average hourly emissions from 8pm to 6am = 0.00056 pounds/hour

Hourly varying emission factor from Noon to 3pm = 0.666667

Water Truck Operational Profile

Hour Ending	Trucks/hr	Truck Emissions (#/hr)	Truck Emissions (g/sec)
8	1	1.44E-03	1.82E-04
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0

Diesel Operational Equipment

Equipment

Front end loader (diesel-powered)

Year: 2009-2079

DPM emission factor for large fleet (g/hp-hr)

2009	0.23
2010	0.23
2012	0.16
2013	0.16
2014	0.11
2015	0.11
2016	0.08
2017	0.08
2018	0.06
2019	0.06
2020	0.03

Average 0.119 g/hp-hr

Loader Size 265 hp

Load Factor 0.47

Hrs of Operation 2 hrs/day

Emission Rate 14.83277273 g/hr
0.004120215 g/sec

Emission rates taken from URBEMIS

Emissions assumed to be configured as an volume source within the Vulcan Property

area 10015 m2

DPM Emission rates from CARB Final Regulation Order REGULATION FOR IN-USE OFF-ROAD DIESEL VEHICLES

Title : SCAQMD - Annual
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2007/05/09 19:54:56
 Scen Year: 40-year Average of Fleet Averages All model years in the range 2009 to 2049 selected
 Season : Annual
 Area : South Coast AQMD

Year: 40-yr -- Model Years 1965 to 2049 Inclusive -- Annual
 Emfac2007 Emission Factors: V2.3 Nov 1 2006

District Average District Average South Coast AQMD

SPEED=0 MPH LHDT1DSL LHDT2DSL MHDTDSL HHDTDSL

AV 2079 - 2049 0.789 0.830 0.831 0.457

SPEED=10 MPH LDA LDT1 LDT2 MDT LHDT1DSL LHDT2DSL MHDTDSL HHDTDSL

AV 2009 - 2049 0.148 0.089 0.111 0.084 0.056 0.059 0.328 0.364

College Park

Calculation of Toxic Air Contaminant Emissions

Benzene

Basic Assumptions

Annual gasoline throughput

Assumption is that the station is services by one tanker per day: 8800 gal/tanker-truck-day
3212000 gal/tanker-truck-year

Operational time: 24
hours/day

Summary of Benzene Emissions

Process	Emissions (lb/hr)	Emissions (lb/day)	Emissions (tons/yr)	Emissions (g/sec)
Gasoline Loading Emissions	0.000462	0.011088	0.0020236	5.8263E-05
Gasoline Breathing Emissions	0.0000275	0.00066	0.0001205	3.4681E-06
Gasoline Refueling Emissions	0.000352	0.008448	0.0015418	4.4391E-05
Gasoline Spillage Emissions	0.00154	0.03696	0.0067452	0.00019421
Total	0.0023815	0.057156	0.010431	0.00030033

College Park

Summary of Benzene Emissions

Process	Emissions (lb/hr)	Emissions (lb/day)	Emissions (tons/yr)	Emissions (g/sec)
Gasoline Loading Emissions	0.000462	0.011088	0.00202356	5.8263E-05
Gasoline Breathing Emissions	0.0000275	0.00066	0.00012045	3.4681E-06
Gasoline Refueling Emissions	0.000352	0.008448	0.00154176	4.4391E-05
Gasoline Spillage Emissions	0.00154	0.03696	0.0067452	0.00019421
Total	0.0023815	0.057156	0.01043097	0.00030033

College Park

Gasoline Loading Emission Summary

Location	Throughput (gal/yr)	VOC Emission Factor (lb/1000 gal)	VOC Emissions (lb/yr)	Benzene Emissions (lb/yr)	Benzene Emissions (lb/hr)	Benzene Emissions (g/sec)	Stak Exit Velocity (mps)
Underground Tank	3212000	0.42	1349.04	4.04712	0.000462	5.82633E-05	0.00035

Source: SCAQMD: Emission Inventory and Risk Assessment Guidelines for Gasoline Dispensing Stations (January, 2007)

Assumes underground tanks with Phase I and II controls with vent valves

Benzene = VOC * 0.003

College Park

Gasoline Breathing Loss Emissions Summary

Location	Throughput (gal/yr)	VOC Emission Factor (lb/1000gal)	VOC Emissions (lb/yr)	Benzene Emissions (lb/yr)	Benzene Emissions (lb/hr)	Benzene Emissions (g/sec)	Average Stack Velocity (mps)
Service Station	3,212,000	0.025	80.3	0.2409	0.0000275	3.4681E-06	0.000106

Source: SCAQMD: Emission Inventory and Risk Assessment Guidelines for Gasoline Dispensing Stations (January, 2007)

Benzene = VOC * 0.003

College Park

Gasoline Refueling Emissions Summary

Location	Throughput (gal/yr)	VOC Emission Factor (lb/1000gal)	VOC Emissions (lb/yr)	Benzene Emissions (lb/yr)	Benzene Emissions (lb/hr)
Service Station	3,212,000	0.32	1027.84	3.08352	0.000352

Source: SCAQMD: Emission Inventory and Risk Assessment Guidelines for Gasoline Dispensing Stations (January, 2007)

Benzene = VOC * 0.003

College Park

Gasoline Spillage Emission Summary

Location	Throughput (gal/yr)	VOC Emission Factor (lb/1000gal)	VOC Emissions (lb/yr)	Benzene Emissions (lb/yr)	Benzene Emissions (lb/hr)
Service Station	3,212,000	0.42	1349.04	13.4904	0.00154

Source: SCAQMD: Emission Inventory and Risk Assessment Guidelines for Gasoline Dispensing Stations (January, 2007)

Benzene = VOC * 0.01

College Park

Variable Emissions

Basic Assumptions

Hours of Operation: 24 hours/day

Sales distribution: 80% Between hours of 6am and 8pm
20% Between hours of 8pm and 6am

Calculation of Hourly Varying Emission Factors

Assume total daily emissions = 1 pound/day
Hourly average emissions = 0.041667 pounds/hour

Percentage of emissions between 6am to 8pm = 80%
Percentage of emissions between 8pm and 6am = 20%

Total emissions from 6am to 8pm = 0.8 pounds/14 hours
Average hourly emissions from 6am to 8pm = 0.057143 pounds/hour

Hourly varying emission factor from 6am to 8pm = 1.37

Total emissions from 8pm to 6am = 0.2 pounds/10 hours
Average hourly emissions from 8pm to 6am = 0.02 pounds/hour

Hourly varying emission factor from 8pm to 6am = 0.48

24 hours

College Park

Total Cancer Risk - Sensitive Receptors

UTMx(m)	UTMy(m)	Cancer Risk From DPM	UTMx(m)	UTMy(m)	Cancer Risk From Benzene	Total Cancer Risk
435256.8	3772965	8.91921	435256.8	3772965	0.01982	8.93903
435277.3	3772968	8.80615	435277.3	3772968	0.02291	8.82906
435297.4	3772971	8.18891	435297.4	3772971	0.0262	8.21511
435235.3	3772962	8.06562	435235.3	3772962	0.0171	8.08272
435318.9	3772973	7.30564	435318.9	3772973	0.02963	7.33527
435217	3772960	6.50797	435217	3772960	0.01526	6.52323
435340.4	3772976	6.30387	435340.4	3772976	0.03259	6.33646
435358.7	3772979	5.50342	435358.7	3772979	0.0347	5.53812
435277.4	3772997	5.30378	435277.4	3772997	0.02287	5.32665
435297.8	3772997	5.28712	435297.8	3772997	0.02671	5.31383
435318.2	3772997	5.10084	435318.2	3772997	0.03074	5.13158
435257	3772997	5.1045	435257	3772997	0.01967	5.12417
435379.2	3772981	4.83778	435379.2	3772981	0.03663	4.87441
435196.2	3772956	4.85319	435196.2	3772956	0.01366	4.86685
435338.6	3772997	4.76443	435338.6	3772997	0.03436	4.79879
435236.6	3772997	4.61734	435236.6	3772997	0.01727	4.63461
435399.3	3772983	4.40275	435399.3	3772983	0.03833	4.44108
435359.1	3772997	4.36148	435359.1	3772997	0.03717	4.39865
435419.4	3772986	4.03963	435419.4	3772986	0.0404	4.08003
435379.5	3772997	3.99666	435379.5	3772997	0.03917	4.03583
435297.8	3773018	3.98847	435297.8	3773018	0.02675	4.01522
435277.4	3773018	3.9629	435277.4	3773018	0.02275	3.98565
435318.2	3773018	3.92287	435318.2	3773018	0.0314	3.95427
435216.2	3772997	3.9325	435216.2	3772997	0.0156	3.9481
435440.2	3772988	3.81384	435440.2	3772988	0.04247	3.85631
435257	3773018	3.82879	435257	3773018	0.01971	3.8485
435338.6	3773018	3.75205	435338.6	3773018	0.03602	3.78807
435399.9	3772997	3.71983	435399.9	3772997	0.04083	3.76066
435420.3	3772997	3.53209	435420.3	3772997	0.04257	3.57466
435236.6	3773018	3.5415	435236.6	3773018	0.0176	3.5591
435359.1	3773018	3.5053	435359.1	3773018	0.03987	3.54517
435440.7	3772997	3.41401	435440.7	3772997	0.04434	3.45835
435461.1	3772997	3.34217	435461.1	3772997	0.04548	3.38765
435481.5	3772997	3.2889	435481.5	3772997	0.04529	3.33419
435379.5	3773018	3.24833	435379.5	3773018	0.04267	3.291
435501.9	3772997	3.22486	435501.9	3772997	0.04423	3.26909
435195.8	3772997	3.22401	435195.8	3772997	0.01446	3.23847

C-2: Health Risk Assessment Model Output

College Park

Total Cancer Risk - Sensitive Receptors

UTMx(m)	UTMy(m)	Cancer Risk From DPM	UTMx(m)	UTMy(m)	Cancer Risk From Benzene	Total Cancer Risk
435277.281	3772968.25	13.21992	435277.281	3772968.25	0.02291	13.24283
435256.844	3772965.25	13.1083	435256.844	3772965.25	0.01982	13.12812
435297.375	3772971	12.33401	435297.375	3772971	0.0262	12.36021
435235.313	3772962	12.1887	435235.313	3772962	0.0171	12.2058
435217	3772960	10.79658	435217	3772960	0.01526	10.81184
435318.906	3772973.25	10.70107	435318.906	3772973.25	0.02963	10.7307
435542.75	3773325.25	0.51838	435542.75	3773325.25	9.76389	10.28227
435196.188	3772955.5	9.34537	435196.188	3772955.5	0.01366	9.35903
435340.438	3772975.75	8.85841	435340.438	3772975.75	0.03259	8.891
435542.75	3773345.75	0.49343	435542.75	3773345.75	8.03335	8.52678
435542.75	3773366.25	0.4612	435542.75	3773366.25	7.96563	8.42683
435277.438	3772997.25	8.21465	435277.438	3772997.25	0.02287	8.23752
435297.844	3772997.25	7.98642	435297.844	3772997.25	0.02671	8.01313
435257	3772997.25	7.93411	435257	3772997.25	0.01967	7.95378
435358.719	3772978.5	7.42076	435358.719	3772978.5	0.0347	7.45546
435318.25	3772997.25	7.38505	435318.25	3772997.25	0.03074	7.41579
435236.594	3772997.25	7.2497	435236.594	3772997.25	0.01727	7.26697
435338.656	3772997.25	6.64587	435338.656	3772997.25	0.03437	6.68024
435216.188	3772997.25	6.45877	435216.188	3772997.25	0.0156	6.47437
435277.438	3773017.75	6.22372	435277.438	3773017.75	0.02275	6.24647
435379.188	3772981	6.20933	435379.188	3772981	0.03663	6.24596
435522.344	3773366.25	0.47773	435522.344	3773366.25	5.68913	6.16686
435257	3773017.75	6.09173	435257	3773017.75	0.01971	6.11144
435297.844	3773017.75	6.02882	435297.844	3773017.75	0.02676	6.05558
435359.063	3772997.25	5.87222	435359.063	3772997.25	0.03717	5.90939
435195.781	3772997.25	5.74557	435195.781	3772997.25	0.01446	5.76003
435236.594	3773017.75	5.66263	435236.594	3773017.75	0.0176	5.68023
435318.25	3773017.75	5.6342	435318.25	3773017.75	0.03141	5.66561
435399.281	3772982.75	5.39752	435399.281	3772982.75	0.03833	5.43585
435542.75	3773304.75	0.5422	435542.75	3773304.75	4.73394	5.27614
435563.156	3773366.25	0.43663	435563.156	3773366.25	4.77956	5.21619
435338.656	3773017.75	5.17558	435338.656	3773017.75	0.03602	5.2116
435379.469	3772997.25	5.1489	435379.469	3772997.25	0.03917	5.18807
435216.188	3773017.75	5.12765	435216.188	3773017.75	0.01619	5.14384
435175.375	3772997.25	5.12333	435175.375	3772997.25	0.01365	5.13698
435277.438	3773038.25	4.87584	435277.438	3773038.25	0.02275	4.89859
435522.344	3773325.25	0.54242	435522.344	3773325.25	4.3475	4.88992
435257	3773038.25	4.8233	435257	3773038.25	0.02005	4.84335
435419.375	3772985.75	4.77072	435419.375	3772985.75	0.0404	4.81112
435297.844	3773038.25	4.7174	435297.844	3773038.25	0.02665	4.74405
435359.063	3773017.75	4.6943	435359.063	3773017.75	0.03987	4.73417
435195.781	3773017.75	4.62789	435195.781	3773017.75	0.01521	4.6431
435399.875	3772997.25	4.56375	435399.875	3772997.25	0.04083	4.60458
435236.594	3773038.25	4.55575	435236.594	3773038.25	0.01827	4.57402
435318.25	3773038.25	4.44518	435318.25	3773038.25	0.03169	4.47687
435440.188	3772988	4.36996	435440.188	3772988	0.04247	4.41243
435563.156	3773304.75	0.51553	435563.156	3773304.75	3.88672	4.40225
435379.469	3773017.75	4.20146	435379.469	3773017.75	0.04267	4.24413
435175.375	3773017.75	4.19279	435175.375	3773017.75	0.01447	4.20726
435216.188	3773038.25	4.18363	435216.188	3773038.25	0.01708	4.20071
435420.281	3772997.25	4.15683	435420.281	3772997.25	0.04257	4.1994
435338.656	3773038.25	4.14386	435338.656	3773038.25	0.03729	4.18115
435563.156	3773325.25	0.48298	435563.156	3773325.25	3.69265	4.17563
435440.719	3772997.25	3.90001	435440.719	3772997.25	0.04434	3.94435
435277.438	3773058.75	3.92069	435277.438	3773058.75	0.02309	3.94378
435257	3773058.75	3.91105	435257	3773058.75	0.02082	3.93187
435359.063	3773038.25	3.83192	435359.063	3773038.25	0.04247	3.87439
435195.781	3773038.25	3.81606	435195.781	3773038.25	0.01619	3.83225
435297.844	3773058.75	3.79407	435297.844	3773058.75	0.02661	3.82068
435399.875	3773017.75	3.74821	435399.875	3773017.75	0.04474	3.79295
435461.125	3772997.25	3.73517	435461.125	3772997.25	0.04548	3.78065

College Park

Total Cancer Risk - Sensitive Receptors

Cancer Risk From DPM			Cancer Risk From Benzene			Total Cancer Risk
UTMx(m)	UTMy(m)		UTMx(m)	UTMy(m)		
435236.594	3773058.75	3.74605	435236.594	3773058.75	0.01933	3.76538
435481.531	3772997.25	3.60786	435481.531	3772997.25	0.04529	3.65315
435318.25	3773058.75	3.59981	435318.25	3773058.75	0.03167	3.63148
435379.469	3773038.25	3.49993	435379.469	3773038.25	0.04644	3.54637
435501.938	3772997.25	3.47745	435501.938	3772997.25	0.04423	3.52168
435216.188	3773058.75	3.4854	435216.188	3773058.75	0.01825	3.50365
435175.375	3773038.25	3.48702	435175.375	3773038.25	0.01546	3.50248
435420.281	3773017.75	3.38891	435420.281	3773017.75	0.04674	3.43565
435338.656	3773058.75	3.39123	435338.656	3773058.75	0.03804	3.42927
435522.344	3772997.25	3.31899	435522.344	3772997.25	0.04483	3.36382
435257	3773079.25	3.23287	435257	3773079.25	0.02208	3.25495
435277.438	3773079.25	3.21948	435277.438	3773079.25	0.02397	3.24345
435195.781	3773058.75	3.20818	435195.781	3773058.75	0.01738	3.22556
435359.063	3773058.75	3.17987	435359.063	3773058.75	0.0447	3.22457
435399.875	3773038.25	3.16191	435399.875	3773038.25	0.04923	3.21114
435563.156	3773284.25	0.53848	435563.156	3773284.25	2.65858	3.19706
435440.719	3773017.75	3.13682	435440.719	3773017.75	0.04885	3.18567
435501.938	3773345.75	0.52565	435501.938	3773345.75	2.64659	3.17224
435542.75	3772997.25	3.10876	435542.75	3772997.25	0.05089	3.15965
435236.594	3773079.25	3.13391	435236.594	3773079.25	0.02075	3.15466
435297.844	3773079.25	3.11826	435297.844	3773079.25	0.02693	3.14519
435563.156	3773345.75	0.46724	435563.156	3773345.75	2.62351	3.09075
435461.125	3773017.75	2.96847	435461.125	3773017.75	0.05042	3.01889
435318.25	3773079.25	2.97597	435318.25	3773079.25	0.0316	3.00757
435379.469	3773058.75	2.95387	435379.469	3773058.75	0.05033	3.0042
435216.188	3773079.25	2.95105	435216.188	3773079.25	0.01969	2.97074
435175.375	3773058.75	2.9522	435175.375	3773058.75	0.01661	2.96881
435420.281	3773038.25	2.85778	435420.281	3773038.25	0.0516	2.90938
435481.531	3773017.75	2.84565	435481.531	3773017.75	0.05046	2.89611
435563.156	3772997.25	2.81582	435563.156	3772997.25	0.06495	2.88077
435542.75	3773284.25	0.57129	435542.75	3773284.25	2.30226	2.87355
435338.656	3773079.25	2.82568	435338.656	3773079.25	0.03827	2.86395
435542.75	3773386.75	0.43154	435542.75	3773386.75	2.3952	2.82674
435501.938	3773017.75	2.73524	435501.938	3773017.75	0.04931	2.78455
435583.563	3773366.25	0.41067	435583.563	3773366.25	2.36849	2.77916
435399.875	3773058.75	2.70793	435399.875	3773058.75	0.05433	2.76226
435195.781	3773079.25	2.73974	435195.781	3773079.25	0.01877	2.75851
435257	3773099.75	2.71436	435257	3773099.75	0.02384	2.7382
435359.063	3773079.25	2.67608	435359.063	3773079.25	0.0463	2.72238
435277.438	3773099.75	2.68978	435277.438	3773099.75	0.0255	2.71528
435236.594	3773099.75	2.65876	435236.594	3773099.75	0.02253	2.68129
435440.719	3773038.25	2.61882	435440.719	3773038.25	0.05411	2.67293
435522.344	3773017.75	2.61253	435522.344	3773017.75	0.05002	2.66255
435297.844	3773099.75	2.60853	435297.844	3773099.75	0.02794	2.63647
435583.563	3773304.75	0.49091	435583.563	3773304.75	2.10244	2.59335
435379.469	3773079.25	2.51881	435379.469	3773079.25	0.05405	2.57286
435175.375	3773079.25	2.5371	435175.375	3773079.25	0.01793	2.55503
435216.188	3773099.75	2.53161	435216.188	3773099.75	0.0214	2.55301
435583.563	3773284.25	0.51087	435583.563	3773284.25	2.03556	2.54643
435318.25	3773099.75	2.50194	435318.25	3773099.75	0.0319	2.53384
435583.563	3772997.25	2.44095	435583.563	3772997.25	0.08568	2.52663
435420.281	3773058.75	2.46291	435420.281	3773058.75	0.05731	2.52022
435542.75	3773017.75	2.45892	435542.75	3773017.75	0.05751	2.51643
435563.156	3773386.75	0.41102	435563.156	3773386.75	2.09566	2.50668
435461.125	3773038.25	2.44627	435461.125	3773038.25	0.0562	2.50247
435338.656	3773099.75	2.39021	435338.656	3773099.75	0.03823	2.42844
435399.875	3773079.25	2.34231	435399.875	3773079.25	0.05997	2.40228
435195.781	3773099.75	2.3697	435195.781	3773099.75	0.02038	2.39008
435481.531	3773038.25	2.32066	435481.531	3773038.25	0.0566	2.37726
435583.563	3773386.75	0.38959	435583.563	3773386.75	1.98533	2.37492
435563.156	3773017.75	2.26296	435563.156	3773017.75	0.07489	2.33785
435257	3773120.25	2.3098	435257	3773120.25	0.02607	2.33587

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Total Cancer Risk - Sensitive Receptors

Cancer Risk			Cancer Risk			Total
UTMx(m)	UTMy(m)	From DPM	UTMx(m)	UTMy(m)	From Benzene	Cancer Risk
435359.063	3773099.75	2.27976	435359.063	3773099.75	0.04712	2.32688
435522.344	3773304.75	0.57321	435522.344	3773304.75	1.75227	2.32548
435563.156	3773263.75	0.56749	435563.156	3773263.75	1.74466	2.31215
435440.719	3773058.75	2.2483	435440.719	3773058.75	0.06028	2.30858
435277.438	3773120.25	2.2802	435277.438	3773120.25	0.02771	2.30791
435236.594	3773120.25	2.28202	435236.594	3773120.25	0.02466	2.30668
435501.938	3773038.25	2.21726	435501.938	3773038.25	0.05536	2.27262
435297.844	3773120.25	2.21444	435297.844	3773120.25	0.02983	2.24427
435501.938	3773325.25	0.56352	435501.938	3773325.25	1.67206	2.23558
435175.375	3773099.75	2.20699	435175.375	3773099.75	0.01945	2.22644
435379.469	3773099.75	2.16731	435379.469	3773099.75	0.05716	2.22447
435216.188	3773120.25	2.195	435216.188	3773120.25	0.0234	2.2184
435420.281	3773079.25	2.15196	435420.281	3773079.25	0.06404	2.216
435522.344	3773038.25	2.11542	435522.344	3773038.25	0.05621	2.17163
435318.25	3773120.25	2.1331	435318.25	3773120.25	0.03305	2.16615
435461.125	3773058.75	2.07905	435461.125	3773058.75	0.06302	2.14207
435583.563	3773017.75	2.03096	435583.563	3773017.75	0.09991	2.13087
435583.563	3773263.75	0.5352	435583.563	3773263.75	1.59199	2.12719
435399.875	3773099.75	2.04059	435399.875	3773099.75	0.06588	2.10647
435195.781	3773120.25	2.07128	435195.781	3773120.25	0.02224	2.09352
435338.656	3773120.25	2.04794	435338.656	3773120.25	0.03849	2.08643
435542.75	3773038.25	2.00024	435542.75	3773038.25	0.06558	2.06582
435440.719	3773079.25	1.9678	435440.719	3773079.25	0.06763	2.03543
435257	3773140.75	1.9881	435257	3773140.75	0.02878	2.01688
435481.531	3773058.75	1.95065	435481.531	3773058.75	0.06394	2.01459
435522.344	3773386.75	0.44776	435522.344	3773386.75	1.56646	2.01422
435359.063	3773120.25	1.96394	435359.063	3773120.25	0.04729	2.01123
435501.938	3773366.25	0.49161	435501.938	3773366.25	1.51506	2.00667
435236.594	3773140.75	1.97817	435236.594	3773140.75	0.02718	2.00535
435277.438	3773140.75	1.95721	435277.438	3773140.75	0.03057	1.98778
435420.281	3773099.75	1.89582	435420.281	3773099.75	0.07192	1.96774
435175.375	3773120.25	1.93938	435175.375	3773120.25	0.02116	1.96054
435563.156	3773038.25	1.86522	435563.156	3773038.25	0.08731	1.95253
435216.188	3773140.75	1.92032	435216.188	3773140.75	0.02571	1.94603
435379.469	3773120.25	1.88068	435379.469	3773120.25	0.0592	1.93988
435297.844	3773140.75	1.90354	435297.844	3773140.75	0.03266	1.9362
435583.563	3773325.25	0.45782	435583.563	3773325.25	1.45489	1.91271
435501.938	3773058.75	1.8485	435501.938	3773058.75	0.06266	1.91116
435461.125	3773079.25	1.80972	435461.125	3773079.25	0.07115	1.88087
435318.25	3773140.75	1.84042	435318.25	3773140.75	0.03543	1.87585
435399.875	3773120.25	1.78861	435399.875	3773120.25	0.07152	1.86013
435542.75	3773263.75	0.60573	435542.75	3773263.75	1.2459	1.85163
435195.781	3773140.75	1.82687	435195.781	3773140.75	0.02433	1.8512
435583.563	3773038.25	1.71318	435583.563	3773038.25	0.11769	1.83087
435501.938	3773304.75	0.6016	435501.938	3773304.75	1.22721	1.82881
435440.719	3773099.75	1.7444	435440.719	3773099.75	0.07648	1.82088
435522.344	3773058.75	1.75666	435522.344	3773058.75	0.06368	1.82034
435338.656	3773140.75	1.7742	435338.656	3773140.75	0.0398	1.814
435583.563	3773345.75	0.43457	435583.563	3773345.75	1.33862	1.77319
435563.156	3773243.25	0.60225	435563.156	3773243.25	1.1632	1.76545
435583.563	3773243.25	0.56609	435583.563	3773243.25	1.1958	1.76189
435420.281	3773120.25	1.68014	435420.281	3773120.25	0.0809	1.76104
435257	3773161.25	1.72838	435257	3773161.25	0.032	1.76038
435236.594	3773161.25	1.72971	435236.594	3773161.25	0.03009	1.7598
435359.063	3773140.75	1.70846	435359.063	3773140.75	0.04751	1.75597
435481.531	3773079.25	1.68253	435481.531	3773079.25	0.07282	1.75535
435175.375	3773140.75	1.7195	435175.375	3773140.75	0.02298	1.74248
435542.75	3773058.75	1.66344	435542.75	3773058.75	0.07557	1.73901
435277.438	3773161.25	1.69817	435277.438	3773161.25	0.03408	1.73225
435216.188	3773161.25	1.69279	435216.188	3773161.25	0.02826	1.72105
435379.469	3773140.75	1.6447	435379.469	3773140.75	0.06003	1.70473
435297.844	3773161.25	1.65392	435297.844	3773161.25	0.0364	1.69032

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Total Cancer Risk - Sensitive Receptors

Cancer Risk From DPM			Cancer Risk From Benzene			Total Cancer Risk
UTMx(m)	UTMy(m)		UTMx(m)	UTMy(m)		
435461.125	3773099.75	1.60281	435461.125	3773099.75	0.08095	1.68376
435563.156	3773058.75	1.5639	435563.156	3773058.75	0.10308	1.66698
435399.875	3773140.75	1.57661	435399.875	3773140.75	0.07602	1.65263
435501.938	3773079.25	1.58046	435501.938	3773079.25	0.07156	1.65202
435195.781	3773161.25	1.62302	435195.781	3773161.25	0.02649	1.64951
435440.719	3773120.25	1.55878	435440.719	3773120.25	0.08724	1.64602
435318.25	3773161.25	1.6042	435318.25	3773161.25	0.03915	1.64335
435583.563	3773058.75	1.45775	435583.563	3773058.75	0.14016	1.59791
435338.656	3773161.25	1.55181	435338.656	3773161.25	0.04284	1.59465
435420.281	3773140.75	1.49568	435420.281	3773140.75	0.09055	1.58623
435522.344	3773079.25	1.49338	435522.344	3773079.25	0.07281	1.56619
435481.531	3773099.75	1.48142	435481.531	3773099.75	0.08369	1.56511
435175.375	3773161.25	1.53607	435175.375	3773161.25	0.02475	1.56082
435236.594	3773181.75	1.52386	435236.594	3773181.75	0.03321	1.55707
435257	3773181.75	1.51574	435257	3773181.75	0.0357	1.55144
435359.063	3773161.25	1.49921	435359.063	3773161.25	0.04901	1.54822
435522.344	3773284.25	0.60779	435522.344	3773284.25	0.93987	1.54766
435216.188	3773181.75	1.50205	435216.188	3773181.75	0.03079	1.53284
435461.125	3773120.25	1.4366	435461.125	3773120.25	0.09293	1.52953
435277.438	3773181.75	1.48731	435277.438	3773181.75	0.0383	1.52561
435481.531	3773325.25	0.58254	435481.531	3773325.25	0.94286	1.5254
435379.469	3773161.25	1.44874	435379.469	3773161.25	0.06036	1.5091
435583.563	3773222.75	0.60378	435583.563	3773222.75	0.89889	1.50267
435440.719	3773140.75	1.4003	435440.719	3773140.75	0.10035	1.50065
435542.75	3773079.25	1.41237	435542.75	3773079.25	0.08816	1.50053
435297.844	3773181.75	1.45052	435297.844	3773181.75	0.04107	1.49159
435542.75	3773407.25	0.40611	435542.75	3773407.25	1.08308	1.48919
435195.781	3773181.75	1.45094	435195.781	3773181.75	0.02845	1.47939
435399.875	3773161.25	1.39727	435399.875	3773161.25	0.07859	1.47586
435481.531	3773345.75	0.54112	435481.531	3773345.75	0.92611	1.46723
435501.938	3773099.75	1.38109	435501.938	3773099.75	0.08259	1.46368
435563.156	3773079.25	1.33278	435563.156	3773079.25	0.12347	1.45625
435318.25	3773181.75	1.4108	435318.25	3773181.75	0.04418	1.45498
435563.156	3773222.75	0.64298	435563.156	3773222.75	0.79646	1.43944
435420.281	3773161.25	1.33669	435420.281	3773161.25	0.09971	1.4364
435563.156	3773407.25	0.38876	435563.156	3773407.25	1.04538	1.43414
435501.938	3773284.25	0.64278	435501.938	3773284.25	0.78655	1.42933
435481.531	3773120.25	1.32494	435481.531	3773120.25	0.09715	1.42209
435583.563	3773079.25	1.25283	435583.563	3773079.25	0.1689	1.42173
435338.656	3773181.75	1.36881	435338.656	3773181.75	0.04787	1.41668
435175.375	3773181.75	1.38123	435175.375	3773181.75	0.02622	1.40745
435461.125	3773140.75	1.29809	435461.125	3773140.75	0.10784	1.40593
435542.75	3773243.25	0.64466	435542.75	3773243.25	0.74912	1.39378
435236.594	3773202.25	1.35179	435236.594	3773202.25	0.0361	1.38789
435522.344	3773099.75	1.29684	435522.344	3773099.75	0.08414	1.38098
435257	3773202.25	1.33965	435257	3773202.25	0.0395	1.37915
435359.063	3773181.75	1.32596	435359.063	3773181.75	0.05299	1.37895
435440.719	3773161.25	1.26283	435440.719	3773161.25	0.11599	1.37882
435216.188	3773202.25	1.34062	435216.188	3773202.25	0.03289	1.37351
435277.438	3773202.25	1.31345	435277.438	3773202.25	0.04303	1.35648
435379.469	3773181.75	1.28501	435379.469	3773181.75	0.06204	1.34705
435195.781	3773202.25	1.30405	435195.781	3773202.25	0.02989	1.33394
435583.563	3773202.25	0.64943	435583.563	3773202.25	0.68163	1.33106
435297.844	3773202.25	1.28263	435297.844	3773202.25	0.04669	1.32932
435542.75	3773099.75	1.22273	435542.75	3773099.75	0.10434	1.32707
435501.938	3773120.25	1.22862	435501.938	3773120.25	0.09648	1.3251
435399.875	3773181.75	1.24486	435399.875	3773181.75	0.07952	1.32438
435481.531	3773140.75	1.19845	435481.531	3773140.75	0.11409	1.31254
435461.125	3773161.25	1.17905	435461.125	3773161.25	0.12672	1.30577
435420.281	3773181.75	1.1991	435420.281	3773181.75	0.10653	1.30563
435563.156	3773099.75	1.15455	435563.156	3773099.75	0.15034	1.30489
435318.25	3773202.25	1.25049	435318.25	3773202.25	0.05058	1.30107

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Total Cancer Risk - Sensitive Receptors

Cancer Risk From DPM			Cancer Risk From Benzene			Total Cancer Risk
UTMx(m)	UTMy(m)		UTMx(m)	UTMy(m)		
435583.563	3773407.25	0.37045	435583.563	3773407.25	0.92916	1.29961
435583.563	3773099.75	1.08967	435583.563	3773099.75	0.2061	1.29577
435175.375	3773202.25	1.24887	435175.375	3773202.25	0.02714	1.27601
435440.719	3773181.75	1.1423	435440.719	3773181.75	0.13343	1.27573
435338.656	3773202.25	1.21645	435338.656	3773202.25	0.05489	1.27134
435501.938	3773386.75	0.46022	435501.938	3773386.75	0.79377	1.25399
435563.156	3773202.25	0.69111	435563.156	3773202.25	0.5622	1.25331
435522.344	3773120.25	1.14711	435522.344	3773120.25	0.09846	1.24557
435236.594	3773222.75	1.20658	435236.594	3773222.75	0.03815	1.24473
435359.063	3773202.25	1.18101	435359.063	3773202.25	0.06005	1.24106
435216.188	3773222.75	1.20283	435216.188	3773222.75	0.0341	1.23693
435257	3773222.75	1.19231	435257	3773222.75	0.04264	1.23495
435522.344	3773263.75	0.64744	435522.344	3773263.75	0.58501	1.23245
435481.531	3773161.25	1.09264	435481.531	3773161.25	0.13579	1.22843
435583.563	3773181.75	0.70491	435583.563	3773181.75	0.52266	1.22757
435461.125	3773181.75	1.07478	435461.125	3773181.75	0.15099	1.22577
435501.938	3773140.75	1.10842	435501.938	3773140.75	0.11431	1.22273
435481.531	3773304.75	0.62639	435481.531	3773304.75	0.59416	1.22055
435277.438	3773222.75	1.16846	435277.438	3773222.75	0.04754	1.216
435583.563	3773120.25	0.96003	435583.563	3773120.25	0.25482	1.21485
435379.469	3773202.25	1.14703	435379.469	3773202.25	0.0674	1.21443
435501.938	3773263.75	0.68862	435501.938	3773263.75	0.52534	1.21396
435195.781	3773222.75	1.17752	435195.781	3773222.75	0.03048	1.208
435542.75	3773120.25	1.07723	435542.75	3773120.25	0.12565	1.20288
435563.156	3773120.25	1.01579	435563.156	3773120.25	0.18651	1.2023
435399.875	3773202.25	1.11476	435399.875	3773202.25	0.08145	1.19621
435297.844	3773222.75	1.14249	435297.844	3773222.75	0.05275	1.19524
435481.531	3773284.25	0.67417	435481.531	3773284.25	0.52018	1.19435
435420.281	3773202.25	1.07959	435420.281	3773202.25	0.10975	1.18934
435440.719	3773202.25	1.03601	435440.719	3773202.25	0.14992	1.18593
435542.75	3773222.75	0.68896	435542.75	3773222.75	0.49088	1.17984
435583.563	3773161.25	0.77276	435583.563	3773161.25	0.40584	1.1786
435583.563	3773140.75	0.85633	435583.563	3773140.75	0.31938	1.17571
435318.25	3773222.75	1.11619	435318.25	3773222.75	0.0582	1.17439
435461.125	3773325.25	0.5978	435461.125	3773325.25	0.57635	1.17415
435481.531	3773181.75	1.00153	435481.531	3773181.75	0.16418	1.16571
435461.125	3773202.25	0.98238	435461.125	3773202.25	0.18192	1.1643
435175.375	3773222.75	1.13441	435175.375	3773222.75	0.02729	1.1617
435563.156	3773181.75	0.74885	435563.156	3773181.75	0.4093	1.15815
435481.531	3773366.25	0.50351	435481.531	3773366.25	0.65398	1.15749
435481.531	3773263.75	0.72687	435481.531	3773263.75	0.42938	1.15625
435338.656	3773222.75	1.08826	435338.656	3773222.75	0.06394	1.1522
435501.938	3773161.25	1.01067	435501.938	3773161.25	0.13772	1.14839
435522.344	3773140.75	1.03042	435522.344	3773140.75	0.11692	1.14734
435563.156	3773140.75	0.90649	435563.156	3773140.75	0.23638	1.14287
435522.344	3773407.25	0.42022	435522.344	3773407.25	0.71115	1.13137
435359.063	3773222.75	1.05862	435359.063	3773222.75	0.07024	1.12886
435563.156	3773161.25	0.81929	435563.156	3773161.25	0.30689	1.12618
435481.531	3773202.25	0.92136	435481.531	3773202.25	0.20234	1.1237
435236.594	3773243.25	1.08302	435236.594	3773243.25	0.03877	1.12179
435461.125	3773222.75	0.89984	435461.125	3773222.75	0.21859	1.11843
435216.188	3773243.25	1.08437	435216.188	3773243.25	0.03405	1.11842
435542.75	3773140.75	0.96372	435542.75	3773140.75	0.15448	1.1182
435481.531	3773243.25	0.7852	435481.531	3773243.25	0.3301	1.1153
435257	3773243.25	1.06784	435257	3773243.25	0.04426	1.1121
435501.938	3773243.25	0.73934	435501.938	3773243.25	0.37231	1.11165
435379.469	3773222.75	1.02987	435379.469	3773222.75	0.07777	1.10764
435481.531	3773222.75	0.84972	435481.531	3773222.75	0.25526	1.10498
435440.719	3773222.75	0.94208	435440.719	3773222.75	0.1608	1.10288
435501.938	3773181.75	0.92857	435501.938	3773181.75	0.16929	1.09786
435195.781	3773243.25	1.06771	435195.781	3773243.25	0.03001	1.09772
435277.438	3773243.25	1.04632	435277.438	3773243.25	0.0506	1.09692

College Park

Total Cancer Risk - Sensitive Receptors

Cancer Risk From DPM			Cancer Risk From Benzene			Total Cancer Risk
UTMx(m)	UTMy(m)		UTMx(m)	UTMy(m)		
435399.875	3773222.75	1.00319	435399.875	3773222.75	0.08891	1.0921
435522.344	3773243.25	0.69148	435522.344	3773243.25	0.39957	1.09105
435420.281	3773222.75	0.97559	435420.281	3773222.75	0.11231	1.0879
435542.75	3773202.25	0.74017	435542.75	3773202.25	0.34391	1.08408
435297.844	3773243.25	1.02427	435297.844	3773243.25	0.05779	1.08206
435461.125	3773243.25	0.82585	435461.125	3773243.25	0.25292	1.07877
435522.344	3773161.25	0.93723	435522.344	3773161.25	0.14131	1.07854
435501.938	3773222.75	0.79533	435501.938	3773222.75	0.27657	1.0719
435501.938	3773202.25	0.85779	435501.938	3773202.25	0.21319	1.07098
435542.75	3773161.25	0.87359	435542.75	3773161.25	0.19485	1.06844
435318.25	3773243.25	1.00254	435318.25	3773243.25	0.06578	1.06832
435461.125	3773304.75	0.64629	435461.125	3773304.75	0.42001	1.0663
435175.375	3773243.25	1.03456	435175.375	3773243.25	0.02656	1.06112
435542.75	3773181.75	0.80059	435542.75	3773181.75	0.25371	1.0543
435338.656	3773243.25	0.97939	435338.656	3773243.25	0.07439	1.05378
435359.063	3773243.25	0.95438	435359.063	3773243.25	0.08351	1.03789
435522.344	3773181.75	0.86076	435522.344	3773181.75	0.17452	1.03528
435461.125	3773263.75	0.75949	435461.125	3773263.75	0.27197	1.03146
435522.344	3773222.75	0.74061	435522.344	3773222.75	0.29072	1.03133
435440.719	3773243.25	0.8589	435440.719	3773243.25	0.16608	1.02498
435379.469	3773243.25	0.92969	435379.469	3773243.25	0.09338	1.02307
435522.344	3773202.25	0.7963	435522.344	3773202.25	0.2214	1.0177
435236.594	3773263.75	0.97714	435236.594	3773263.75	0.03758	1.01472
435216.188	3773263.75	0.98194	435216.188	3773263.75	0.03257	1.01451
435399.875	3773243.25	0.90704	435399.875	3773243.25	0.1051	1.01214
435420.281	3773243.25	0.88487	435420.281	3773243.25	0.12317	1.00804
435461.125	3773345.75	0.55328	435461.125	3773345.75	0.45471	1.00799
435257	3773263.75	0.96185	435257	3773263.75	0.04366	1.00551
435461.125	3773284.25	0.69992	435461.125	3773284.25	0.30167	1.00159
435195.781	3773263.75	0.97181	435195.781	3773263.75	0.02842	1.00023
435277.438	3773263.75	0.94254	435277.438	3773263.75	0.05103	0.99357
435440.719	3773304.75	0.66171	435440.719	3773304.75	0.32194	0.98365
435297.844	3773263.75	0.92368	435297.844	3773263.75	0.05994	0.98362
435318.25	3773263.75	0.90553	435318.25	3773263.75	0.07064	0.97617
435175.375	3773263.75	0.94684	435175.375	3773263.75	0.02495	0.97179
435338.656	3773263.75	0.88615	435338.656	3773263.75	0.08325	0.9694
435440.719	3773263.75	0.78524	435440.719	3773263.75	0.18292	0.96816
435422.094	3773260.25	0.81665	435422.094	3773260.25	0.14665	0.9633
435359.063	3773263.75	0.86485	435359.063	3773263.75	0.09767	0.96252
435440.719	3773325.25	0.60982	435440.719	3773325.25	0.35224	0.96206
435379.469	3773263.75	0.84341	435379.469	3773263.75	0.11352	0.95693
435420.281	3773263.75	0.80557	435420.281	3773263.75	0.15059	0.95616
435440.719	3773284.25	0.71986	435440.719	3773284.25	0.2351	0.95496
435399.875	3773263.75	0.82384	435399.875	3773263.75	0.13063	0.95447
435420.281	3773284.25	0.73598	435420.281	3773284.25	0.19586	0.93184
435216.188	3773284.25	0.89286	435216.188	3773284.25	0.0299	0.92276
435236.594	3773284.25	0.88581	435236.594	3773284.25	0.0347	0.92051
435420.281	3773304.75	0.67476	435420.281	3773304.75	0.2397	0.91446
435195.781	3773284.25	0.88765	435195.781	3773284.25	0.026	0.91365
435399.875	3773284.25	0.75143	435399.875	3773284.25	0.1616	0.91303
435257	3773284.25	0.87086	435257	3773284.25	0.04069	0.91155
435481.531	3773386.75	0.46974	435481.531	3773386.75	0.43754	0.90728
435277.438	3773284.25	0.85354	435277.438	3773284.25	0.04824	0.90178
435379.469	3773284.25	0.76863	435379.469	3773284.25	0.13128	0.89991
435297.844	3773284.25	0.83733	435297.844	3773284.25	0.05783	0.89516
435501.938	3773407.25	0.43081	435501.938	3773407.25	0.46418	0.89499
435359.063	3773284.25	0.78738	435359.063	3773284.25	0.10602	0.8934
435318.25	3773284.25	0.82203	435318.25	3773284.25	0.0701	0.89213
435175.375	3773284.25	0.86926	435175.375	3773284.25	0.02281	0.89207
435338.656	3773284.25	0.80567	435338.656	3773284.25	0.08587	0.89154
435399.875	3773304.75	0.68815	435399.875	3773304.75	0.17729	0.86544
435461.125	3773366.25	0.51304	435461.125	3773366.25	0.3397	0.85274

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Total Cancer Risk - Sensitive Receptors

Cancer Risk From DPM			Cancer Risk From Benzene			Total Cancer Risk
UTMx(m)	UTMy(m)		UTMx(m)	UTMy(m)		
435420.281	3773325.25	0.62065	435420.281	3773325.25	0.22794	0.84859
435216.188	3773304.75	0.81495	435216.188	3773304.75	0.02685	0.8418
435236.594	3773304.75	0.80649	435236.594	3773304.75	0.03105	0.83754
435195.781	3773304.75	0.81339	435195.781	3773304.75	0.02347	0.83686
435379.469	3773304.75	0.70343	435379.469	3773304.75	0.13281	0.83624
435440.719	3773345.75	0.56308	435440.719	3773345.75	0.26885	0.83193
435257	3773304.75	0.79217	435257	3773304.75	0.03632	0.82849
435359.063	3773304.75	0.71997	435359.063	3773304.75	0.10159	0.82156
435175.375	3773304.75	0.80031	435175.375	3773304.75	0.0207	0.82101
435277.438	3773304.75	0.77666	435277.438	3773304.75	0.04308	0.81974
435338.656	3773304.75	0.73576	435338.656	3773304.75	0.0795	0.81526
435297.844	3773304.75	0.76266	435297.844	3773304.75	0.05188	0.81454
435318.25	3773304.75	0.74968	435318.25	3773304.75	0.06359	0.81327
435399.875	3773325.25	0.6325	435399.875	3773325.25	0.15714	0.78964
435461.125	3773386.75	0.47717	435461.125	3773386.75	0.30316	0.78033
435216.188	3773325.25	0.74649	435216.188	3773325.25	0.02434	0.77083
435195.781	3773325.25	0.74762	435195.781	3773325.25	0.02143	0.76905
435236.594	3773325.25	0.73723	435236.594	3773325.25	0.0279	0.76513
435379.469	3773325.25	0.64625	435379.469	3773325.25	0.11425	0.7605
435175.375	3773325.25	0.73876	435175.375	3773325.25	0.01903	0.75779
435257	3773325.25	0.72369	435257	3773325.25	0.03233	0.75602
435420.281	3773345.75	0.57246	435420.281	3773345.75	0.17755	0.75001
435277.438	3773325.25	0.70981	435277.438	3773325.25	0.03795	0.74776
435359.063	3773325.25	0.66091	435359.063	3773325.25	0.08669	0.7476
435297.844	3773325.25	0.69764	435297.844	3773325.25	0.04522	0.74286
435338.656	3773325.25	0.67462	435338.656	3773325.25	0.06804	0.74266
435318.25	3773325.25	0.68654	435318.25	3773325.25	0.05487	0.74141
435481.531	3773407.25	0.43865	435481.531	3773407.25	0.2954	0.73405
435440.719	3773366.25	0.52113	435440.719	3773366.25	0.20971	0.73084
435399.875	3773345.75	0.58321	435399.875	3773345.75	0.12623	0.70944

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Total Cancer Risk - Sensitive Receptors

Cancer Risk			Cancer Risk			Total
UTMx(m)	UTMy(m)	From DPM	UTMx(m)	UTMy(m)	From Benzene	Cancer Risk
435195.781	3773345.75	0.68911	435195.781	3773345.75	0.01988	0.70899
435216.188	3773345.75	0.68603	435216.188	3773345.75	0.02245	0.70848
435236.594	3773345.75	0.67639	435236.594	3773345.75	0.02556	0.70195
435175.375	3773345.75	0.68361	435175.375	3773345.75	0.01774	0.70135
435257	3773345.75	0.6637	435257	3773345.75	0.02939	0.69309
435379.469	3773345.75	0.5957	435379.469	3773345.75	0.09447	0.69017
435277.438	3773345.75	0.65127	435277.438	3773345.75	0.03418	0.68545
435359.063	3773345.75	0.60878	435359.063	3773345.75	0.07346	0.68224
435440.719	3773386.75	0.48386	435440.719	3773386.75	0.19745	0.68131
435297.844	3773345.75	0.64063	435297.844	3773345.75	0.04028	0.68091
435338.656	3773345.75	0.62079	435338.656	3773345.75	0.05882	0.67961
435318.25	3773345.75	0.63107	435318.25	3773345.75	0.04822	0.67929
435420.281	3773366.25	0.52948	435420.281	3773366.25	0.14351	0.67299
435195.781	3773366.25	0.63689	435195.781	3773366.25	0.01843	0.65532
435216.188	3773366.25	0.63242	435216.188	3773366.25	0.02071	0.65313
435175.375	3773366.25	0.63403	435175.375	3773366.25	0.01652	0.65055
435236.594	3773366.25	0.6227	435236.594	3773366.25	0.02345	0.64615
435461.125	3773407.25	0.44472	435461.125	3773407.25	0.20011	0.64483
435399.875	3773366.25	0.53937	435399.875	3773366.25	0.10495	0.64432
435257	3773366.25	0.61087	435257	3773366.25	0.0268	0.63767
435379.469	3773366.25	0.55082	435379.469	3773366.25	0.08032	0.63114
435277.438	3773366.25	0.59972	435277.438	3773366.25	0.03094	0.63066
435297.844	3773366.25	0.59038	435297.844	3773366.25	0.03616	0.62654
435359.063	3773366.25	0.56257	435359.063	3773366.25	0.06358	0.62615
435318.25	3773366.25	0.58208	435318.25	3773366.25	0.04285	0.62493
435338.656	3773366.25	0.57315	435338.656	3773366.25	0.05166	0.62481
435420.281	3773386.75	0.49133	435420.281	3773386.75	0.13293	0.62426
435440.719	3773407.25	0.45049	435440.719	3773407.25	0.16239	0.61288
435195.781	3773386.75	0.59014	435195.781	3773386.75	0.01705	0.60719
435175.375	3773386.75	0.58934	435175.375	3773386.75	0.01534	0.60468
435216.188	3773386.75	0.5847	435216.188	3773386.75	0.01909	0.60379
435236.594	3773386.75	0.57509	435236.594	3773386.75	0.02153	0.59662
435399.875	3773386.75	0.50045	435399.875	3773386.75	0.09557	0.59602
435257	3773386.75	0.56411	435257	3773386.75	0.0245	0.58861
435420.281	3773407.25	0.45733	435420.281	3773407.25	0.12644	0.58377
435379.469	3773386.75	0.51094	435379.469	3773386.75	0.07251	0.58345
435277.438	3773386.75	0.55408	435277.438	3773386.75	0.02818	0.58226
435359.063	3773386.75	0.52149	435359.063	3773386.75	0.05725	0.57874
435297.844	3773386.75	0.54585	435297.844	3773386.75	0.03279	0.57864
435338.656	3773386.75	0.53082	435338.656	3773386.75	0.04655	0.57737
435318.25	3773386.75	0.53861	435318.25	3773386.75	0.03872	0.57733
435195.781	3773407.25	0.54814	435195.781	3773407.25	0.016	0.56414
435175.375	3773407.25	0.54894	435175.375	3773407.25	0.01439	0.56333
435399.875	3773407.25	0.46578	435399.875	3773407.25	0.09463	0.56041
435216.188	3773407.25	0.54206	435216.188	3773407.25	0.01791	0.55997
435236.594	3773407.25	0.5327	435236.594	3773407.25	0.02021	0.55291
435379.469	3773407.25	0.47538	435379.469	3773407.25	0.07155	0.54693
435257	3773407.25	0.52255	435257	3773407.25	0.02302	0.54557
435359.063	3773407.25	0.48487	435359.063	3773407.25	0.05571	0.54058
435277.438	3773407.25	0.51352	435277.438	3773407.25	0.02654	0.54006
435338.656	3773407.25	0.49311	435338.656	3773407.25	0.04473	0.53784
435297.844	3773407.25	0.50626	435297.844	3773407.25	0.03102	0.53728
435318.25	3773407.25	0.49993	435318.25	3773407.25	0.03686	0.53679
435522.344	3773345.75	0.50846	435522.344	3773345.75	0.00202	0.51048

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Total Cancer Risk - Sensitive Receptors (with mitigation on front end loader)

UTMx(m)	UTMy(m)	Cancer Risk From DPM	UTMx(m)	UTMy(m)	Cancer Risk From Benzene	Total Cancer Risk
435542.75	3773325.25	0.2366	435542.75	3773325.25	9.76389	10.00049
435542.75	3773345.75	0.22437	435542.75	3773345.75	8.03335	8.25772
435542.75	3773366.25	0.20454	435542.75	3773366.25	7.96563	8.17017
435522.344	3773366.25	0.20602	435522.344	3773366.25	5.68913	5.89515
435542.75	3773304.75	0.24736	435542.75	3773304.75	4.73394	4.9813
435563.156	3773366.25	0.19638	435563.156	3773366.25	4.77956	4.97594
435522.344	3773325.25	0.23996	435522.344	3773325.25	4.3475	4.58746
435256.844	3772965.25	4.42616	435256.844	3772965.25	0.01982	4.44598
435277.281	3772968.25	4.34609	435277.281	3772968.25	0.02291	4.369
435235.313	3772962	4.17662	435235.313	3772962	0.0171	4.19372
435563.156	3773304.75	0.24435	435563.156	3773304.75	3.88672	4.13107
435297.375	3772971	4.09482	435297.375	3772971	0.0262	4.12102
435563.156	3773325.25	0.22237	435563.156	3773325.25	3.69265	3.91502
435318.906	3772973.25	3.75232	435318.906	3772973.25	0.02963	3.78195
435217	3772960	3.53616	435217	3772960	0.01526	3.55142
435340.438	3772975.75	3.36422	435340.438	3772975.75	0.03259	3.39681
435358.719	3772978.5	3.04552	435358.719	3772978.5	0.0347	3.08022
435563.156	3773284.25	0.25633	435563.156	3773284.25	2.65858	2.91491
435501.938	3773345.75	0.22329	435501.938	3773345.75	2.64659	2.86988
435196.188	3772955.5	2.82904	435196.188	3772955.5	0.01366	2.8427
435563.156	3773345.75	0.21692	435563.156	3773345.75	2.62351	2.84043
435379.188	3772981	2.79031	435379.188	3772981	0.03663	2.82694
435399.281	3772982.75	2.63489	435399.281	3772982.75	0.03833	2.67322
435277.438	3772997.25	2.64359	435277.438	3772997.25	0.02287	2.66646
435297.844	3772997.25	2.63866	435297.844	3772997.25	0.02671	2.66537
435318.25	3772997.25	2.56248	435318.25	3772997.25	0.03074	2.59322
435542.75	3773386.75	0.18693	435542.75	3773386.75	2.3952	2.58213
435542.75	3773284.25	0.26302	435542.75	3773284.25	2.30226	2.56528
435583.563	3773366.25	0.18725	435583.563	3773366.25	2.36849	2.55574
435257	3772997.25	2.53253	435257	3772997.25	0.01967	2.5522
435419.375	3772985.75	2.48889	435419.375	3772985.75	0.0404	2.52929
435338.656	3772997.25	2.45728	435338.656	3772997.25	0.03437	2.49165
435440.188	3772988	2.41329	435440.188	3772988	0.04247	2.45576
435359.063	3772997.25	2.34515	435359.063	3772997.25	0.03717	2.38232
435583.563	3773304.75	0.24198	435583.563	3773304.75	2.10244	2.34442
435236.594	3772997.25	2.28534	435236.594	3772997.25	0.01727	2.30261
435583.563	3773284.25	0.25251	435583.563	3773284.25	2.03556	2.28807
435379.469	3772997.25	2.24566	435379.469	3772997.25	0.03917	2.28483
435563.156	3773386.75	0.18066	435563.156	3773386.75	2.09566	2.27632
435399.875	3772997.25	2.17345	435399.875	3772997.25	0.04083	2.21428
435481.531	3772997.25	2.14263	435481.531	3772997.25	0.04529	2.18792
435461.125	3772997.25	2.13454	435461.125	3772997.25	0.04548	2.18002
435420.281	3772997.25	2.1347	435420.281	3772997.25	0.04257	2.17727
435501.938	3772997.25	2.13031	435501.938	3772997.25	0.04423	2.17454
435440.719	3772997.25	2.12589	435440.719	3772997.25	0.04434	2.17023
435583.563	3773386.75	0.17424	435583.563	3773386.75	1.98533	2.15957
435522.344	3772997.25	2.08212	435522.344	3772997.25	0.04483	2.12695
435297.844	3773017.75	2.00241	435297.844	3773017.75	0.02676	2.02917

435542.75	3772997.25	1.97705	435542.75	3772997.25	0.05089	2.02794
435277.438	3773017.75	1.99927	435277.438	3773017.75	0.02275	2.02202
435563.156	3773263.75	0.27368	435563.156	3773263.75	1.74466	2.01834
435522.344	3773304.75	0.25451	435522.344	3773304.75	1.75227	2.00678
435318.25	3773017.75	1.96147	435318.25	3773017.75	0.03141	1.99288
435216.188	3772997.25	1.97116	435216.188	3772997.25	0.0156	1.98676
435338.656	3773017.75	1.90447	435338.656	3773017.75	0.03602	1.94049
435257	3773017.75	1.91641	435257	3773017.75	0.01971	1.93612
435501.938	3773325.25	0.24223	435501.938	3773325.25	1.67206	1.91429
435359.063	3773017.75	1.84181	435359.063	3773017.75	0.03987	1.88168
435583.563	3773263.75	0.26646	435583.563	3773263.75	1.59199	1.85845
435563.156	3772997.25	1.78425	435563.156	3772997.25	0.06495	1.8492
435379.469	3773017.75	1.77877	435379.469	3773017.75	0.04267	1.82144
435399.875	3773017.75	1.72395	435399.875	3773017.75	0.04474	1.76869
435236.594	3773017.75	1.74762	435236.594	3773017.75	0.0176	1.76522
435522.344	3773386.75	0.19051	435522.344	3773386.75	1.56646	1.75697
435420.281	3773017.75	1.68448	435420.281	3773017.75	0.04674	1.73122
435501.938	3773366.25	0.20714	435501.938	3773366.25	1.51506	1.7222
435440.719	3773017.75	1.66107	435440.719	3773017.75	0.04885	1.70992
435461.125	3773017.75	1.64793	435461.125	3773017.75	0.05042	1.69835
435195.781	3772997.25	1.67963	435195.781	3772997.25	0.01446	1.69409
435481.531	3773017.75	1.63477	435481.531	3773017.75	0.05046	1.68523
435583.563	3773325.25	0.2177	435583.563	3773325.25	1.45489	1.67259
435501.938	3773017.75	1.60942	435501.938	3773017.75	0.04931	1.65873
435522.344	3773017.75	1.56019	435522.344	3773017.75	0.05002	1.61021
435297.844	3773038.25	1.57986	435297.844	3773038.25	0.02665	1.60651
435277.438	3773038.25	1.57098	435277.438	3773038.25	0.02275	1.59373
435318.25	3773038.25	1.55837	435318.25	3773038.25	0.03169	1.59006
435583.563	3772997.25	1.50363	435583.563	3772997.25	0.08568	1.58931
435338.656	3773038.25	1.52618	435338.656	3773038.25	0.03729	1.56347
435216.188	3773017.75	1.54337	435216.188	3773017.75	0.01619	1.55956
435583.563	3773345.75	0.20292	435583.563	3773345.75	1.33862	1.54154
435542.75	3773017.75	1.47546	435542.75	3773017.75	0.05751	1.53297
435359.063	3773038.25	1.48989	435359.063	3773038.25	0.04247	1.53236
435542.75	3773263.75	0.28353	435542.75	3773263.75	1.2459	1.52943
435257	3773038.25	1.50792	435257	3773038.25	0.02005	1.52797
435379.469	3773038.25	1.45036	435379.469	3773038.25	0.04644	1.4968
435501.938	3773304.75	0.26036	435501.938	3773304.75	1.22721	1.48757
435583.563	3773243.25	0.28547	435583.563	3773243.25	1.1958	1.48127
435399.875	3773038.25	1.41024	435399.875	3773038.25	0.04923	1.45947
435563.156	3773243.25	0.29573	435563.156	3773243.25	1.1632	1.45893
435175.375	3772997.25	1.42442	435175.375	3772997.25	0.01365	1.43807
435420.281	3773038.25	1.3743	435420.281	3773038.25	0.0516	1.4259
435563.156	3773017.75	1.34635	435563.156	3773017.75	0.07489	1.42124
435236.594	3773038.25	1.3902	435236.594	3773038.25	0.01827	1.40847
435440.719	3773038.25	1.34554	435440.719	3773038.25	0.05411	1.39965
435461.125	3773038.25	1.32262	435461.125	3773038.25	0.0562	1.37882
435195.781	3773017.75	1.35099	435195.781	3773017.75	0.01521	1.3662
435481.531	3773038.25	1.30025	435481.531	3773038.25	0.0566	1.35685
435501.938	3773038.25	1.27065	435501.938	3773038.25	0.05536	1.32601
435297.844	3773058.75	1.28144	435297.844	3773058.75	0.02661	1.30805
435318.25	3773058.75	1.2717	435318.25	3773058.75	0.03167	1.30337
435277.438	3773058.75	1.26937	435277.438	3773058.75	0.02309	1.29246
435338.656	3773058.75	1.25322	435338.656	3773058.75	0.03804	1.29126
435522.344	3773038.25	1.22576	435522.344	3773038.25	0.05621	1.28197

435583.563	3773017.75	1.17985	435583.563	3773017.75	0.09991	1.27976
435359.063	3773058.75	1.23133	435359.063	3773058.75	0.0447	1.27603
435216.188	3773038.25	1.24943	435216.188	3773038.25	0.01708	1.26651
435379.469	3773058.75	1.20622	435379.469	3773058.75	0.05033	1.25655
435542.75	3773407.25	0.17317	435542.75	3773407.25	1.08308	1.25625
435257	3773058.75	1.22099	435257	3773058.75	0.02082	1.24181
435399.875	3773058.75	1.17752	435399.875	3773058.75	0.05433	1.23185
435542.75	3773038.25	1.15917	435542.75	3773038.25	0.06558	1.22475
435563.156	3773407.25	0.16807	435563.156	3773407.25	1.04538	1.21345
435522.344	3773284.25	0.27229	435522.344	3773284.25	0.93987	1.21216
435583.563	3773222.75	0.30901	435583.563	3773222.75	0.89889	1.2079
435420.281	3773058.75	1.14743	435420.281	3773058.75	0.05731	1.20474
435175.375	3773017.75	1.17794	435175.375	3773017.75	0.01447	1.19241
435481.531	3773325.25	0.24544	435481.531	3773325.25	0.94286	1.1883
435440.719	3773058.75	1.11881	435440.719	3773058.75	0.06028	1.17909
435236.594	3773058.75	1.1372	435236.594	3773058.75	0.01933	1.15653
435563.156	3773038.25	1.06918	435563.156	3773038.25	0.08731	1.15649
435461.125	3773058.75	1.09261	435461.125	3773058.75	0.06302	1.15563
435481.531	3773345.75	0.22611	435481.531	3773345.75	0.92611	1.15222
435481.531	3773058.75	1.06674	435481.531	3773058.75	0.06394	1.13068
435195.781	3773038.25	1.11384	435195.781	3773038.25	0.01619	1.13003
435563.156	3773222.75	0.32203	435563.156	3773222.75	0.79646	1.11849
435501.938	3773058.75	1.03647	435501.938	3773058.75	0.06266	1.09913
435583.563	3773407.25	0.16303	435583.563	3773407.25	0.92916	1.09219
435318.25	3773079.25	1.05866	435318.25	3773079.25	0.0316	1.09026
435297.844	3773079.25	1.06129	435297.844	3773079.25	0.02693	1.08822
435338.656	3773079.25	1.04848	435338.656	3773079.25	0.03827	1.08675
435359.063	3773079.25	1.03491	435359.063	3773079.25	0.0463	1.08121
435583.563	3773038.25	0.96099	435583.563	3773038.25	0.11769	1.07868
435379.469	3773079.25	1.01852	435379.469	3773079.25	0.05405	1.07257
435277.438	3773079.25	1.04802	435277.438	3773079.25	0.02397	1.07199
435501.938	3773284.25	0.28066	435501.938	3773284.25	0.78655	1.06721
435522.344	3773058.75	0.99663	435522.344	3773058.75	0.06368	1.06031
435399.875	3773079.25	0.99822	435399.875	3773079.25	0.05997	1.05819
435542.75	3773243.25	0.3078	435542.75	3773243.25	0.74912	1.05692
435216.188	3773058.75	1.03666	435216.188	3773058.75	0.01825	1.05491
435420.281	3773079.25	0.97427	435420.281	3773079.25	0.06404	1.03831
435257	3773079.25	1.01072	435257	3773079.25	0.02208	1.0328
435542.75	3773058.75	0.9437	435542.75	3773058.75	0.07557	1.01927
435583.563	3773202.25	0.33729	435583.563	3773202.25	0.68163	1.01892
435440.719	3773079.25	0.94848	435440.719	3773079.25	0.06763	1.01611
435175.375	3773038.25	0.9889	435175.375	3773038.25	0.01546	1.00436
435461.125	3773079.25	0.92259	435461.125	3773079.25	0.07115	0.99374
435501.938	3773386.75	0.19261	435501.938	3773386.75	0.79377	0.98638
435563.156	3773058.75	0.87802	435563.156	3773058.75	0.10308	0.9811
435236.594	3773079.25	0.95006	435236.594	3773079.25	0.02075	0.97081
435481.531	3773079.25	0.89621	435481.531	3773079.25	0.07282	0.96903
435195.781	3773058.75	0.93693	435195.781	3773058.75	0.01738	0.95431
435583.563	3773058.75	0.80275	435583.563	3773058.75	0.14016	0.94291
435501.938	3773079.25	0.86696	435501.938	3773079.25	0.07156	0.93852
435359.063	3773099.75	0.88175	435359.063	3773099.75	0.04712	0.92887
435338.656	3773099.75	0.8902	435338.656	3773099.75	0.03823	0.92843
435379.469	3773099.75	0.87087	435379.469	3773099.75	0.05716	0.92803
435318.25	3773099.75	0.89516	435318.25	3773099.75	0.0319	0.92706
435399.875	3773099.75	0.85647	435399.875	3773099.75	0.06588	0.92235

435297.844	3773099.75	0.89355	435297.844	3773099.75	0.02794	0.92149
435563.156	3773202.25	0.35306	435563.156	3773202.25	0.5622	0.91526
435420.281	3773099.75	0.83788	435420.281	3773099.75	0.07192	0.9098
435277.438	3773099.75	0.88037	435277.438	3773099.75	0.0255	0.90587
435522.344	3773079.25	0.83182	435522.344	3773079.25	0.07281	0.90463
435216.188	3773079.25	0.87637	435216.188	3773079.25	0.01969	0.89606
435583.563	3773181.75	0.37095	435583.563	3773181.75	0.52266	0.89361
435440.719	3773099.75	0.81594	435440.719	3773099.75	0.07648	0.89242
435522.344	3773407.25	0.17677	435522.344	3773407.25	0.71115	0.88792
435522.344	3773263.75	0.2946	435522.344	3773263.75	0.58501	0.87961
435542.75	3773079.25	0.78891	435542.75	3773079.25	0.08816	0.87707
435257	3773099.75	0.85138	435257	3773099.75	0.02384	0.87522
435461.125	3773099.75	0.79212	435461.125	3773099.75	0.08095	0.87307
435481.531	3773366.25	0.20899	435481.531	3773366.25	0.65398	0.86297
435563.156	3773079.25	0.73889	435563.156	3773079.25	0.12347	0.86236
435175.375	3773058.75	0.84324	435175.375	3773058.75	0.01661	0.85985
435481.531	3773304.75	0.26554	435481.531	3773304.75	0.59416	0.8597
435583.563	3773079.25	0.68361	435583.563	3773079.25	0.1689	0.85251
435481.531	3773099.75	0.76695	435481.531	3773099.75	0.08369	0.85064
435501.938	3773263.75	0.30465	435501.938	3773263.75	0.52534	0.82999
435236.594	3773099.75	0.80683	435236.594	3773099.75	0.02253	0.82936
435542.75	3773222.75	0.33622	435542.75	3773222.75	0.49088	0.8271
435461.125	3773325.25	0.24825	435461.125	3773325.25	0.57635	0.8246
435501.938	3773099.75	0.73962	435501.938	3773099.75	0.08259	0.82221
435195.781	3773079.25	0.80095	435195.781	3773079.25	0.01877	0.81972
435583.563	3773161.25	0.41111	435583.563	3773161.25	0.40584	0.81695
435399.875	3773120.25	0.74234	435399.875	3773120.25	0.07152	0.81386
435379.469	3773120.25	0.7526	435379.469	3773120.25	0.0592	0.8118
435420.281	3773120.25	0.72812	435420.281	3773120.25	0.0809	0.80902
435481.531	3773284.25	0.28791	435481.531	3773284.25	0.52018	0.80809
435359.063	3773120.25	0.75989	435359.063	3773120.25	0.04729	0.80718
435338.656	3773120.25	0.76492	435338.656	3773120.25	0.03849	0.80341
435318.25	3773120.25	0.76657	435318.25	3773120.25	0.03305	0.79962
435563.156	3773181.75	0.38979	435563.156	3773181.75	0.4093	0.79909
435583.563	3773099.75	0.59136	435583.563	3773099.75	0.2061	0.79746
435440.719	3773120.25	0.70999	435440.719	3773120.25	0.08724	0.79723
435522.344	3773099.75	0.70869	435522.344	3773099.75	0.08414	0.79283
435297.844	3773120.25	0.76255	435297.844	3773120.25	0.02983	0.79238
435563.156	3773099.75	0.63375	435563.156	3773099.75	0.15034	0.78409
435461.125	3773120.25	0.68895	435461.125	3773120.25	0.09293	0.78188
435583.563	3773140.75	0.45943	435583.563	3773140.75	0.31938	0.77881
435277.438	3773120.25	0.75019	435277.438	3773120.25	0.02771	0.7779
435542.75	3773099.75	0.67319	435542.75	3773099.75	0.10434	0.77753
435216.188	3773099.75	0.7519	435216.188	3773099.75	0.0214	0.77733
435583.563	3773120.25	0.51835	435583.563	3773120.25	0.25482	0.77317
435481.531	3773120.25	0.66593	435481.531	3773120.25	0.09715	0.76308
435257	3773120.25	0.72751	435257	3773120.25	0.02607	0.75358
435175.375	3773079.25	0.7287	435175.375	3773079.25	0.01793	0.74663
435481.531	3773263.75	0.31356	435481.531	3773263.75	0.42938	0.74294
435563.156	3773161.25	0.43365	435563.156	3773161.25	0.30689	0.74054
435563.156	3773120.25	0.55193	435563.156	3773120.25	0.18651	0.73844
435501.938	3773120.25	0.64103	435501.938	3773120.25	0.09648	0.73751
435420.281	3773140.75	0.63826	435420.281	3773140.75	0.09055	0.72881
435399.875	3773140.75	0.64906	435399.875	3773140.75	0.07602	0.72508
435440.719	3773140.75	0.62351	435440.719	3773140.75	0.10035	0.72386

435563.156	3773140.75	0.48671	435563.156	3773140.75	0.23638	0.72309
435522.344	3773243.25	0.32065	435522.344	3773243.25	0.39957	0.72022
435236.594	3773120.25	0.69431	435236.594	3773120.25	0.02466	0.71897
435379.469	3773140.75	0.65638	435379.469	3773140.75	0.06003	0.71641
435195.781	3773099.75	0.69375	435195.781	3773099.75	0.02038	0.71413
435542.75	3773202.25	0.36954	435542.75	3773202.25	0.34391	0.71345
435461.125	3773140.75	0.60548	435461.125	3773140.75	0.10784	0.71332
435522.344	3773120.25	0.61379	435522.344	3773120.25	0.09846	0.71225
435542.75	3773120.25	0.58392	435542.75	3773120.25	0.12565	0.70957
435359.063	3773140.75	0.66122	435359.063	3773140.75	0.04751	0.70873
435501.938	3773243.25	0.3326	435501.938	3773243.25	0.37231	0.70491
435338.656	3773140.75	0.66397	435338.656	3773140.75	0.0398	0.70377
435481.531	3773140.75	0.58499	435481.531	3773140.75	0.11409	0.69908
435318.25	3773140.75	0.66349	435318.25	3773140.75	0.03543	0.69892
435297.844	3773140.75	0.65823	435297.844	3773140.75	0.03266	0.69089
435461.125	3773304.75	0.26961	435461.125	3773304.75	0.42001	0.68962
435461.125	3773345.75	0.22848	435461.125	3773345.75	0.45471	0.68319
435277.438	3773140.75	0.64702	435277.438	3773140.75	0.03057	0.67759
435501.938	3773140.75	0.56269	435501.938	3773140.75	0.11431	0.677
435216.188	3773120.25	0.65282	435216.188	3773120.25	0.0234	0.67622
435481.531	3773243.25	0.34323	435481.531	3773243.25	0.3301	0.67333
435440.719	3773161.25	0.55182	435440.719	3773161.25	0.11599	0.66781
435542.75	3773140.75	0.51323	435542.75	3773140.75	0.15448	0.66771
435461.125	3773161.25	0.53663	435461.125	3773161.25	0.12672	0.66335
435420.281	3773161.25	0.56364	435420.281	3773161.25	0.09971	0.66335
435542.75	3773181.75	0.40891	435542.75	3773181.75	0.25371	0.66262
435257	3773140.75	0.62913	435257	3773140.75	0.02878	0.65791
435175.375	3773099.75	0.63678	435175.375	3773099.75	0.01945	0.65623
435522.344	3773140.75	0.53871	435522.344	3773140.75	0.11692	0.65563
435481.531	3773161.25	0.5188	435481.531	3773161.25	0.13579	0.65459
435542.75	3773161.25	0.45603	435542.75	3773161.25	0.19485	0.65088
435399.875	3773161.25	0.57183	435399.875	3773161.25	0.07859	0.65042
435501.938	3773407.25	0.17902	435501.938	3773407.25	0.46418	0.6432
435522.344	3773222.75	0.35087	435522.344	3773222.75	0.29072	0.64159
435501.938	3773222.75	0.36487	435501.938	3773222.75	0.27657	0.64144
435379.469	3773161.25	0.57702	435379.469	3773161.25	0.06036	0.63738
435501.938	3773161.25	0.49908	435501.938	3773161.25	0.13772	0.6368
435481.531	3773222.75	0.3775	435481.531	3773222.75	0.25526	0.63276
435481.531	3773386.75	0.19417	435481.531	3773386.75	0.43754	0.63171
435236.594	3773140.75	0.60405	435236.594	3773140.75	0.02718	0.63123
435461.125	3773181.75	0.47898	435461.125	3773181.75	0.15099	0.62997
435195.781	3773120.25	0.60739	435195.781	3773120.25	0.02224	0.62963
435359.063	3773161.25	0.58021	435359.063	3773161.25	0.04901	0.62922
435481.531	3773181.75	0.46372	435481.531	3773181.75	0.16418	0.6279
435440.719	3773181.75	0.49158	435440.719	3773181.75	0.13343	0.62501
435338.656	3773161.25	0.58142	435338.656	3773161.25	0.04284	0.62426
435481.531	3773202.25	0.41723	435481.531	3773202.25	0.20234	0.61957
435522.344	3773161.25	0.47801	435522.344	3773161.25	0.14131	0.61932
435318.25	3773161.25	0.57959	435318.25	3773161.25	0.03915	0.61874
435501.938	3773181.75	0.4465	435501.938	3773181.75	0.16929	0.61579
435501.938	3773202.25	0.40239	435501.938	3773202.25	0.21319	0.61558
435461.125	3773202.25	0.43011	435461.125	3773202.25	0.18192	0.61203
435297.844	3773161.25	0.57382	435297.844	3773161.25	0.0364	0.61022
435522.344	3773202.25	0.38624	435522.344	3773202.25	0.2214	0.60764
435420.281	3773181.75	0.50096	435420.281	3773181.75	0.10653	0.60749

435461.125	3773222.75	0.38824	435461.125	3773222.75	0.21859	0.60683
435461.125	3773243.25	0.3521	435461.125	3773243.25	0.25292	0.60502
435522.344	3773181.75	0.42803	435522.344	3773181.75	0.17452	0.60255
435440.719	3773325.25	0.25028	435440.719	3773325.25	0.35224	0.60252
435216.188	3773140.75	0.5724	435216.188	3773140.75	0.02571	0.59811
435277.438	3773161.25	0.56385	435277.438	3773161.25	0.03408	0.59793
435461.125	3773284.25	0.29358	435461.125	3773284.25	0.30167	0.59525
435440.719	3773304.75	0.27247	435440.719	3773304.75	0.32194	0.59441
435461.125	3773263.75	0.32082	435461.125	3773263.75	0.27197	0.59279
435440.719	3773202.25	0.44041	435440.719	3773202.25	0.14992	0.59033
435399.875	3773181.75	0.50715	435399.875	3773181.75	0.07952	0.58667
435175.375	3773120.25	0.56173	435175.375	3773120.25	0.02116	0.58289
435257	3773161.25	0.54957	435257	3773161.25	0.032	0.58157
435379.469	3773181.75	0.51088	435379.469	3773181.75	0.06204	0.57292
435359.063	3773181.75	0.51292	435359.063	3773181.75	0.05299	0.56591
435195.781	3773140.75	0.53665	435195.781	3773140.75	0.02433	0.56098
435338.656	3773181.75	0.51306	435338.656	3773181.75	0.04787	0.56093
435236.594	3773161.25	0.5304	435236.594	3773161.25	0.03009	0.56049
435420.281	3773202.25	0.44779	435420.281	3773202.25	0.10975	0.55754
435440.719	3773222.75	0.39658	435440.719	3773222.75	0.1608	0.55738
435318.25	3773181.75	0.51044	435318.25	3773181.75	0.04418	0.55462
435461.125	3773366.25	0.21074	435461.125	3773366.25	0.3397	0.55044
435297.844	3773181.75	0.50459	435297.844	3773181.75	0.04107	0.54566
435216.188	3773161.25	0.50605	435216.188	3773161.25	0.02826	0.53431
435277.438	3773181.75	0.49583	435277.438	3773181.75	0.0383	0.53413
435399.875	3773202.25	0.45248	435399.875	3773202.25	0.08145	0.53393
435440.719	3773284.25	0.29754	435440.719	3773284.25	0.2351	0.53264
435440.719	3773243.25	0.3588	435440.719	3773243.25	0.16608	0.52488
435175.375	3773140.75	0.49962	435175.375	3773140.75	0.02298	0.5226
435379.469	3773202.25	0.45519	435379.469	3773202.25	0.0674	0.52259
435257	3773181.75	0.48431	435257	3773181.75	0.0357	0.52001
435359.063	3773202.25	0.45643	435359.063	3773202.25	0.06005	0.51648
435420.281	3773222.75	0.40235	435420.281	3773222.75	0.11231	0.51466
435420.281	3773304.75	0.2743	435420.281	3773304.75	0.2397	0.514
435338.656	3773202.25	0.45585	435338.656	3773202.25	0.05489	0.51074
435440.719	3773263.75	0.32608	435440.719	3773263.75	0.18292	0.509
435195.781	3773161.25	0.47776	435195.781	3773161.25	0.02649	0.50425
435318.25	3773202.25	0.45278	435318.25	3773202.25	0.05058	0.50336
435236.594	3773181.75	0.46944	435236.594	3773181.75	0.03321	0.50265
435440.719	3773345.75	0.23013	435440.719	3773345.75	0.26885	0.49898
435461.125	3773386.75	0.19535	435461.125	3773386.75	0.30316	0.49851
435420.281	3773284.25	0.30007	435420.281	3773284.25	0.19586	0.49593
435399.875	3773222.75	0.40592	435399.875	3773222.75	0.08891	0.49483
435297.844	3773202.25	0.44713	435297.844	3773202.25	0.04669	0.49382
435420.281	3773243.25	0.36329	435420.281	3773243.25	0.12317	0.48646
435379.469	3773222.75	0.40789	435379.469	3773222.75	0.07777	0.48566
435277.438	3773202.25	0.43946	435277.438	3773202.25	0.04303	0.48249
435216.188	3773181.75	0.45057	435216.188	3773181.75	0.03079	0.48136
435422.094	3773260.25	0.33469	435422.094	3773260.25	0.14665	0.48134
435420.281	3773263.75	0.3295	435420.281	3773263.75	0.15059	0.48009
435420.281	3773325.25	0.25157	435420.281	3773325.25	0.22794	0.47951
435359.063	3773222.75	0.40855	435359.063	3773222.75	0.07024	0.47879
435481.531	3773407.25	0.18054	435481.531	3773407.25	0.2954	0.47594
435175.375	3773161.25	0.44752	435175.375	3773161.25	0.02475	0.47227
435338.656	3773222.75	0.40749	435338.656	3773222.75	0.06394	0.47143

435399.875	3773243.25	0.36599	435399.875	3773243.25	0.1051	0.47109
435257	3773202.25	0.43007	435257	3773202.25	0.0395	0.46957
435399.875	3773284.25	0.30153	435399.875	3773284.25	0.1616	0.46313
435318.25	3773222.75	0.40424	435318.25	3773222.75	0.0582	0.46244
435399.875	3773263.75	0.33151	435399.875	3773263.75	0.13063	0.46214
435379.469	3773243.25	0.36741	435379.469	3773243.25	0.09338	0.46079
435195.781	3773181.75	0.42808	435195.781	3773181.75	0.02845	0.45653
435236.594	3773202.25	0.41841	435236.594	3773202.25	0.0361	0.45451
435399.875	3773304.75	0.27535	435399.875	3773304.75	0.17729	0.45264
435297.844	3773222.75	0.39894	435297.844	3773222.75	0.05275	0.45169
435359.063	3773243.25	0.36764	435359.063	3773243.25	0.08351	0.45115
435379.469	3773263.75	0.3325	435379.469	3773263.75	0.11352	0.44602
435338.656	3773243.25	0.36629	435338.656	3773243.25	0.07439	0.44068
435277.438	3773222.75	0.39224	435277.438	3773222.75	0.04754	0.43978
435216.188	3773202.25	0.40366	435216.188	3773202.25	0.03289	0.43655
435379.469	3773284.25	0.30218	435379.469	3773284.25	0.13128	0.43346
435359.063	3773263.75	0.3324	435359.063	3773263.75	0.09767	0.43007
435175.375	3773181.75	0.40332	435175.375	3773181.75	0.02622	0.42954
435318.25	3773243.25	0.36302	435318.25	3773243.25	0.06578	0.4288
435257	3773222.75	0.38449	435257	3773222.75	0.04264	0.42713
435440.719	3773366.25	0.21205	435440.719	3773366.25	0.20971	0.42176
435297.844	3773243.25	0.35813	435297.844	3773243.25	0.05779	0.41592
435195.781	3773202.25	0.38572	435195.781	3773202.25	0.02989	0.41561
435338.656	3773263.75	0.33088	435338.656	3773263.75	0.08325	0.41413
435236.594	3773222.75	0.37524	435236.594	3773222.75	0.03815	0.41339
435399.875	3773325.25	0.25232	435399.875	3773325.25	0.15714	0.40946
435420.281	3773345.75	0.23118	435420.281	3773345.75	0.17755	0.40873
435379.469	3773304.75	0.27574	435379.469	3773304.75	0.13281	0.40855
435359.063	3773284.25	0.30187	435359.063	3773284.25	0.10602	0.40789
435277.438	3773243.25	0.35227	435277.438	3773243.25	0.0506	0.40287
435318.25	3773263.75	0.32772	435318.25	3773263.75	0.07064	0.39836
435216.188	3773222.75	0.36362	435216.188	3773222.75	0.0341	0.39772
435440.719	3773386.75	0.19623	435440.719	3773386.75	0.19745	0.39368
435175.375	3773202.25	0.36541	435175.375	3773202.25	0.02714	0.39255
435257	3773243.25	0.34583	435257	3773243.25	0.04426	0.39009
435338.656	3773284.25	0.30028	435338.656	3773284.25	0.08587	0.38615
435297.844	3773263.75	0.32327	435297.844	3773263.75	0.05994	0.38321
435461.125	3773407.25	0.18152	435461.125	3773407.25	0.20011	0.38163
435195.781	3773222.75	0.34926	435195.781	3773222.75	0.03048	0.37974
435236.594	3773243.25	0.3384	435236.594	3773243.25	0.03877	0.37717
435359.063	3773304.75	0.27527	435359.063	3773304.75	0.10159	0.37686
435277.438	3773263.75	0.31817	435277.438	3773263.75	0.05103	0.3692
435318.25	3773284.25	0.29729	435318.25	3773284.25	0.0701	0.36739
435379.469	3773325.25	0.2525	435379.469	3773325.25	0.11425	0.36675
435216.188	3773243.25	0.32918	435216.188	3773243.25	0.03405	0.36323
435175.375	3773222.75	0.33257	435175.375	3773222.75	0.02729	0.35986
435399.875	3773345.75	0.23177	435399.875	3773345.75	0.12623	0.358
435420.281	3773366.25	0.21293	435420.281	3773366.25	0.14351	0.35644
435257	3773263.75	0.31275	435257	3773263.75	0.04366	0.35641
435338.656	3773304.75	0.27367	435338.656	3773304.75	0.0795	0.35317
435297.844	3773284.25	0.29327	435297.844	3773284.25	0.05783	0.3511
435195.781	3773243.25	0.31764	435195.781	3773243.25	0.03001	0.34765
435440.719	3773407.25	0.18216	435440.719	3773407.25	0.16239	0.34455
435236.594	3773263.75	0.30673	435236.594	3773263.75	0.03758	0.34431
435359.063	3773325.25	0.25194	435359.063	3773325.25	0.08669	0.33863

435277.438	3773284.25	0.28881	435277.438	3773284.25	0.04824	0.33705
435318.25	3773304.75	0.27089	435318.25	3773304.75	0.06359	0.33448
435216.188	3773263.75	0.29935	435216.188	3773263.75	0.03257	0.33192
435175.375	3773243.25	0.30391	435175.375	3773243.25	0.02656	0.33047
435420.281	3773386.75	0.19684	435420.281	3773386.75	0.13293	0.32977
435379.469	3773345.75	0.23187	435379.469	3773345.75	0.09447	0.32634
435257	3773284.25	0.28423	435257	3773284.25	0.04069	0.32492
435297.844	3773304.75	0.26728	435297.844	3773304.75	0.05188	0.31916
435195.781	3773263.75	0.29004	435195.781	3773263.75	0.02842	0.31846
435338.656	3773325.25	0.25037	435338.656	3773325.25	0.06804	0.31841
435399.875	3773366.25	0.21342	435399.875	3773366.25	0.10495	0.31837
435236.594	3773284.25	0.2793	435236.594	3773284.25	0.0347	0.314
435420.281	3773407.25	0.18258	435420.281	3773407.25	0.12644	0.30902
435277.438	3773304.75	0.26338	435277.438	3773304.75	0.04308	0.30646
435359.063	3773345.75	0.23127	435359.063	3773345.75	0.07346	0.30473
435175.375	3773263.75	0.27873	435175.375	3773263.75	0.02495	0.30368
435216.188	3773284.25	0.27335	435216.188	3773284.25	0.0299	0.30325
435318.25	3773325.25	0.24781	435318.25	3773325.25	0.05487	0.30268
435257	3773304.75	0.25948	435257	3773304.75	0.03632	0.2958
435379.469	3773366.25	0.21348	435379.469	3773366.25	0.08032	0.2938
435399.875	3773386.75	0.19719	435399.875	3773386.75	0.09557	0.29276
435195.781	3773284.25	0.26582	435195.781	3773284.25	0.026	0.29182
435297.844	3773325.25	0.24458	435297.844	3773325.25	0.04522	0.2898
435338.656	3773345.75	0.2298	435338.656	3773345.75	0.05882	0.28862
435236.594	3773304.75	0.2554	435236.594	3773304.75	0.03105	0.28645
435175.375	3773284.25	0.25649	435175.375	3773284.25	0.02281	0.2793
435277.438	3773325.25	0.24117	435277.438	3773325.25	0.03795	0.27912
435216.188	3773304.75	0.25058	435216.188	3773304.75	0.02685	0.27743
435399.875	3773407.25	0.1828	435399.875	3773407.25	0.09463	0.27743
435359.063	3773366.25	0.2129	435359.063	3773366.25	0.06358	0.27648
435318.25	3773345.75	0.22748	435318.25	3773345.75	0.04822	0.2757
435257	3773325.25	0.23783	435257	3773325.25	0.03233	0.27016
435379.469	3773386.75	0.19717	435379.469	3773386.75	0.07251	0.26968
435195.781	3773304.75	0.24445	435195.781	3773304.75	0.02347	0.26792
435297.844	3773345.75	0.22461	435297.844	3773345.75	0.04028	0.26489
435338.656	3773366.25	0.21154	435338.656	3773366.25	0.05166	0.2632
435236.594	3773325.25	0.23443	435236.594	3773325.25	0.0279	0.26233
435175.375	3773304.75	0.23674	435175.375	3773304.75	0.0207	0.25744
435277.438	3773345.75	0.22162	435277.438	3773345.75	0.03418	0.2558
435216.188	3773325.25	0.23049	435216.188	3773325.25	0.02434	0.25483
435379.469	3773407.25	0.1827	435379.469	3773407.25	0.07155	0.25425
435359.063	3773386.75	0.1966	435359.063	3773386.75	0.05725	0.25385
435318.25	3773366.25	0.20946	435318.25	3773366.25	0.04285	0.25231
435257	3773345.75	0.21876	435257	3773345.75	0.02939	0.24815
435195.781	3773325.25	0.22549	435195.781	3773325.25	0.02143	0.24692
435297.844	3773366.25	0.20693	435297.844	3773366.25	0.03616	0.24309
435338.656	3773386.75	0.19534	435338.656	3773386.75	0.04655	0.24189
435236.594	3773345.75	0.21592	435236.594	3773345.75	0.02556	0.24148
435175.375	3773325.25	0.21911	435175.375	3773325.25	0.01903	0.23814
435359.063	3773407.25	0.18212	435359.063	3773407.25	0.05571	0.23783
435277.438	3773366.25	0.20432	435277.438	3773366.25	0.03094	0.23526
435216.188	3773345.75	0.21269	435216.188	3773345.75	0.02245	0.23514
435318.25	3773386.75	0.19347	435318.25	3773386.75	0.03872	0.23219
435257	3773366.25	0.20186	435257	3773366.25	0.0268	0.22866
435195.781	3773345.75	0.2086	435195.781	3773345.75	0.01988	0.22848

435338.656	3773407.25	0.18095	435338.656	3773407.25	0.04473	0.22568
435297.844	3773386.75	0.19123	435297.844	3773386.75	0.03279	0.22402
435522.344	3773345.75	0.22168	435522.344	3773345.75	0.00202	0.2237
435236.594	3773366.25	0.19948	435236.594	3773366.25	0.02345	0.22293
435175.375	3773345.75	0.20332	435175.375	3773345.75	0.01774	0.22106
435216.188	3773366.25	0.19683	435216.188	3773366.25	0.02071	0.21754
435277.438	3773386.75	0.18896	435277.438	3773386.75	0.02818	0.21714
435318.25	3773407.25	0.17926	435318.25	3773407.25	0.03686	0.21612
435195.781	3773366.25	0.19348	435195.781	3773366.25	0.01843	0.21191
435257	3773386.75	0.18683	435257	3773386.75	0.0245	0.21133
435297.844	3773407.25	0.17727	435297.844	3773407.25	0.03102	0.20829
435236.594	3773386.75	0.18483	435236.594	3773386.75	0.02153	0.20636
435175.375	3773366.25	0.1891	435175.375	3773366.25	0.01652	0.20562
435277.438	3773407.25	0.17527	435277.438	3773407.25	0.02654	0.20181
435216.188	3773386.75	0.18265	435216.188	3773386.75	0.01909	0.20174
435195.781	3773386.75	0.1799	435195.781	3773386.75	0.01705	0.19695
435257	3773407.25	0.17343	435257	3773407.25	0.02302	0.19645
435236.594	3773407.25	0.17173	435236.594	3773407.25	0.02021	0.19194
435175.375	3773386.75	0.17627	435175.375	3773386.75	0.01534	0.19161
435216.188	3773407.25	0.16993	435216.188	3773407.25	0.01791	0.18784
435195.781	3773407.25	0.16768	435195.781	3773407.25	0.016	0.18368
435175.375	3773407.25	0.16467	435175.375	3773407.25	0.01439	0.17906

College Park

Total Cancer Risk - Worker Receptors

UTMx(m)	UTMy(m)	Cancer Risk From DPM	UTMx(m)	UTMy(m)	Cancer Risk From Benzene	Total Cancer Risk
435277.3	3772968.3	2.87283	435277.3	3772968.3	0.0045	2.87733
435256.8	3772965.3	2.86091	435256.8	3772965.3	0.0039	2.86481
435297.4	3772971	2.68437	435297.4	3772971	0.00515	2.68952
435235.3	3772962	2.66578	435235.3	3772962	0.00336	2.66914
435318.9	3772973.3	2.35011	435318.9	3772973.3	0.00582	2.35593
435217	3772960	2.34261	435217	3772960	0.003	2.34561
435542.8	3773325.3	0.11889	435542.8	3773325.3	1.9191	2.03799
435196.2	3772955.5	2.00155	435196.2	3772955.5	0.00268	2.00423
435340.4	3772975.8	1.97289	435340.4	3772975.8	0.00641	1.9793
435277.4	3772997.3	1.77866	435277.4	3772997.3	0.0045	1.78316
435297.8	3772997.3	1.73662	435297.8	3772997.3	0.00525	1.74187
435257	3772997.3	1.71541	435257	3772997.3	0.00387	1.71928
435542.8	3773345.8	0.11277	435542.8	3773345.8	1.57897	1.69174
435358.7	3772978.5	1.67682	435358.7	3772978.5	0.00682	1.68364
435542.8	3773366.3	0.10521	435542.8	3773366.3	1.56566	1.67087
435318.3	3772997.3	1.61889	435318.3	3772997.3	0.00604	1.62493
435236.6	3772997.3	1.56396	435236.6	3772997.3	0.0034	1.56736
435338.7	3772997.3	1.47294	435338.7	3772997.3	0.00675	1.47969
435379.2	3772981	1.4288	435379.2	3772981	0.0072	1.436
435216.2	3772997.3	1.38596	435216.2	3772997.3	0.00307	1.38903
435277.4	3773017.8	1.34693	435277.4	3773017.8	0.00447	1.3514
435359.1	3772997.3	1.32002	435359.1	3772997.3	0.0073	1.32732
435257	3773017.8	1.31386	435257	3773017.8	0.00387	1.31773
435297.8	3773017.8	1.3119	435297.8	3773017.8	0.00526	1.31716
435399.3	3772982.8	1.26423	435399.3	3772982.8	0.00753	1.27176
435318.3	3773017.8	1.23567	435318.3	3773017.8	0.00617	1.24184
435195.8	3772997.3	1.22452	435195.8	3772997.3	0.00284	1.22736
435522.3	3773366.3	0.10866	435522.3	3773366.3	1.11821	1.22687
435236.6	3773017.8	1.21749	435236.6	3773017.8	0.00346	1.22095
435379.5	3772997.3	1.17758	435379.5	3772997.3	0.0077	1.18528
435338.7	3773017.8	1.14607	435338.7	3773017.8	0.00708	1.15315
435419.4	3772985.8	1.13441	435419.4	3772985.8	0.00794	1.14235
435216.2	3773017.8	1.09797	435216.2	3773017.8	0.00318	1.10115
435175.4	3772997.3	1.08393	435175.4	3772997.3	0.00268	1.08661
435399.9	3772997.3	1.06316	435399.9	3772997.3	0.00802	1.07118
435440.2	3772988	1.05339	435440.2	3772988	0.00835	1.06174
435277.4	3773038.3	1.05557	435277.4	3773038.3	0.00447	1.06004
435359.1	3773017.8	1.0517	435359.1	3773017.8	0.00784	1.05954
435542.8	3773304.8	0.1249	435542.8	3773304.8	0.93046	1.05536
435257	3773038.3	1.03916	435257	3773038.3	0.00394	1.0431
435563.2	3773366.3	0.10006	435563.2	3773366.3	0.93943	1.03949
435297.8	3773038.3	1.02778	435297.8	3773038.3	0.00524	1.03302
435420.3	3772997.3	0.98487	435420.3	3772997.3	0.00837	0.99324
435195.8	3773017.8	0.98614	435195.8	3773017.8	0.00299	0.98913
435318.3	3773038.3	0.97599	435318.3	3773038.3	0.00623	0.98222
435236.6	3773038.3	0.97776	435236.6	3773038.3	0.00359	0.98135

435522.3	3773325.3	0.12391	435522.3	3773325.3	0.85451	0.97842
435379.5	3773017.8	0.95516	435379.5	3773017.8	0.00839	0.96355
435440.7	3772997.3	0.93718	435440.7	3772997.3	0.00872	0.9459
435338.7	3773038.3	0.91771	435338.7	3773038.3	0.00733	0.92504
435461.1	3772997.3	0.9082	435461.1	3772997.3	0.00894	0.91714
435216.2	3773038.3	0.89477	435216.2	3773038.3	0.00336	0.89813
435481.5	3772997.3	0.88607	435481.5	3772997.3	0.0089	0.89497
435175.4	3773017.8	0.88839	435175.4	3773017.8	0.00285	0.89124
435563.2	3773304.8	0.11931	435563.2	3773304.8	0.76394	0.88325
435399.9	3773017.8	0.8667	435399.9	3773017.8	0.00879	0.87549
435501.9	3772997.3	0.86128	435501.9	3772997.3	0.00869	0.86997
435359.1	3773038.3	0.85702	435359.1	3773038.3	0.00835	0.86537
435277.4	3773058.8	0.84936	435277.4	3773058.8	0.00454	0.8539
435257	3773058.8	0.8424	435257	3773058.8	0.00409	0.84649
435563.2	3773325.3	0.11143	435563.2	3773325.3	0.7258	0.83723
435522.3	3772997.3	0.82767	435522.3	3772997.3	0.00881	0.83648
435297.8	3773058.8	0.82766	435297.8	3773058.8	0.00523	0.83289
435195.8	3773038.3	0.81314	435195.8	3773038.3	0.00318	0.81632
435236.6	3773058.8	0.80328	435236.6	3773058.8	0.0038	0.80708
435420.3	3773017.8	0.79703	435420.3	3773017.8	0.00919	0.80622
435379.5	3773038.3	0.79233	435379.5	3773038.3	0.00913	0.80146
435318.3	3773058.8	0.79131	435318.3	3773058.8	0.00623	0.79754
435542.8	3772997.3	0.77874	435542.8	3772997.3	0.01	0.78874
435338.7	3773058.8	0.75141	435338.7	3773058.8	0.00748	0.75889
435440.7	3773017.8	0.74868	435440.7	3773017.8	0.0096	0.75828
435216.2	3773058.8	0.74492	435216.2	3773058.8	0.00359	0.74851
435175.4	3773038.3	0.73979	435175.4	3773038.3	0.00304	0.74283
435399.9	3773038.3	0.72648	435399.9	3773038.3	0.00968	0.73616
435461.1	3773017.8	0.71672	435461.1	3773017.8	0.00991	0.72663
435359.1	3773058.8	0.71061	435359.1	3773058.8	0.00879	0.7194
435563.2	3772997.3	0.70536	435563.2	3772997.3	0.01277	0.71813
435481.5	3773017.8	0.69313	435481.5	3773017.8	0.00992	0.70305
435277.4	3773079.3	0.69798	435277.4	3773079.3	0.00471	0.70269
435257	3773079.3	0.69639	435257	3773079.3	0.00434	0.70073
435195.8	3773058.8	0.68364	435195.8	3773058.8	0.00342	0.68706
435297.8	3773079.3	0.68102	435297.8	3773079.3	0.00529	0.68631
435501.9	3773017.8	0.67057	435501.9	3773017.8	0.00969	0.68026
435420.3	3773038.3	0.66725	435420.3	3773038.3	0.01014	0.67739
435379.5	3773058.8	0.66679	435379.5	3773058.8	0.00989	0.67668
435236.6	3773079.3	0.67182	435236.6	3773079.3	0.00408	0.6759
435318.3	3773079.3	0.6549	435318.3	3773079.3	0.00621	0.66111
435522.3	3773017.8	0.64329	435522.3	3773017.8	0.00983	0.65312
435563.2	3773284.3	0.12526	435563.2	3773284.3	0.52255	0.64781
435501.9	3773345.8	0.11946	435501.9	3773345.8	0.52019	0.63965
435216.2	3773079.3	0.63053	435216.2	3773079.3	0.00387	0.6344
435338.7	3773079.3	0.6265	435338.7	3773079.3	0.00752	0.63402
435440.7	3773038.3	0.62073	435440.7	3773038.3	0.01063	0.63136
435175.4	3773058.8	0.62695	435175.4	3773058.8	0.00327	0.63022
435399.9	3773058.8	0.61897	435399.9	3773058.8	0.01068	0.62965
435583.6	3772997.3	0.60713	435583.6	3772997.3	0.01684	0.62397
435563.2	3773345.8	0.10728	435563.2	3773345.8	0.51565	0.62293
435542.8	3773017.8	0.60665	435542.8	3773017.8	0.0113	0.61795
435359.1	3773079.3	0.59786	435359.1	3773079.3	0.0091	0.60696

435461.1	3773038.3	0.58698	435461.1	3773038.3	0.01105	0.59803
435257	3773099.8	0.58495	435257	3773099.8	0.00469	0.58964
435277.4	3773099.8	0.58361	435277.4	3773099.8	0.00501	0.58862
435195.8	3773079.3	0.58388	435195.8	3773079.3	0.00369	0.58757
435542.8	3773284.3	0.13217	435542.8	3773284.3	0.45251	0.58468
435420.3	3773058.8	0.57116	435420.3	3773058.8	0.01127	0.58243
435379.5	3773079.3	0.56752	435379.5	3773079.3	0.01062	0.57814
435297.8	3773099.8	0.57026	435297.8	3773099.8	0.00549	0.57575
435236.6	3773099.8	0.57	435236.6	3773099.8	0.00443	0.57443
435481.5	3773038.3	0.56187	435481.5	3773038.3	0.01112	0.57299
435563.2	3773017.8	0.55749	435563.2	3773017.8	0.01472	0.57221
435542.8	3773386.8	0.09831	435542.8	3773386.8	0.47078	0.56909
435583.6	3773366.3	0.0946	435583.6	3773366.3	0.46553	0.56013
435318.3	3773099.8	0.55108	435318.3	3773099.8	0.00627	0.55735
435501.9	3773038.3	0.5401	435501.9	3773038.3	0.01088	0.55098
435216.2	3773099.8	0.54088	435216.2	3773099.8	0.00421	0.54509
435399.9	3773079.3	0.53325	435399.9	3773079.3	0.01179	0.54504
435175.4	3773079.3	0.53921	435175.4	3773079.3	0.00353	0.54274
435440.7	3773058.8	0.5291	435440.7	3773058.8	0.01185	0.54095
435338.7	3773099.8	0.53027	435338.7	3773099.8	0.00751	0.53778
435522.3	3773038.3	0.51701	435522.3	3773038.3	0.01105	0.52806
435583.6	3773304.8	0.11409	435583.6	3773304.8	0.41324	0.52733
435583.6	3773284.3	0.11937	435583.6	3773284.3	0.40009	0.51946
435359.1	3773099.8	0.50932	435359.1	3773099.8	0.00926	0.51858
435583.6	3773017.8	0.49743	435583.6	3773017.8	0.01964	0.51707
435195.8	3773099.8	0.50511	435195.8	3773099.8	0.00401	0.50912
435420.3	3773079.3	0.49607	435420.3	3773079.3	0.01259	0.50866
435461.1	3773058.8	0.49559	435461.1	3773058.8	0.01239	0.50798
435563.2	3773386.8	0.09401	435563.2	3773386.8	0.41191	0.50592
435257	3773120.3	0.49806	435257	3773120.3	0.00512	0.50318
435542.8	3773038.3	0.48918	435542.8	3773038.3	0.01289	0.50207
435277.4	3773120.3	0.49512	435277.4	3773120.3	0.00545	0.50057
435379.5	3773099.8	0.48775	435379.5	3773099.8	0.01124	0.49899
435236.6	3773120.3	0.4894	435236.6	3773120.3	0.00485	0.49425
435297.8	3773120.3	0.48452	435297.8	3773120.3	0.00586	0.49038
435481.5	3773058.8	0.46959	435481.5	3773058.8	0.01257	0.48216
435583.6	3773386.8	0.08951	435583.6	3773386.8	0.39022	0.47973
435318.3	3773120.3	0.47018	435318.3	3773120.3	0.0065	0.47668
435399.9	3773099.8	0.46318	435399.9	3773099.8	0.01295	0.47613
435522.3	3773304.8	0.13138	435522.3	3773304.8	0.34441	0.47579
435563.2	3773263.8	0.13266	435563.2	3773263.8	0.34292	0.47558
435216.2	3773120.3	0.46906	435216.2	3773120.3	0.0046	0.47366
435175.4	3773099.8	0.46935	435175.4	3773099.8	0.00382	0.47317
435440.7	3773079.3	0.45986	435440.7	3773079.3	0.01329	0.47315
435563.2	3773038.3	0.45516	435563.2	3773038.3	0.01716	0.47232
435338.7	3773120.3	0.45456	435338.7	3773120.3	0.00756	0.46212
435501.9	3773058.8	0.44791	435501.9	3773058.8	0.01232	0.46023
435501.9	3773325.3	0.12829	435501.9	3773325.3	0.32865	0.45694
435420.3	3773099.8	0.43488	435420.3	3773099.8	0.01414	0.44902
435359.1	3773120.3	0.43878	435359.1	3773120.3	0.00929	0.44807
435195.8	3773120.3	0.44161	435195.8	3773120.3	0.00437	0.44598
435461.1	3773079.3	0.4284	435461.1	3773079.3	0.01398	0.44238
435522.3	3773058.8	0.42711	435522.3	3773058.8	0.01252	0.43963

435583.6	3773038.3	0.41588	435583.6	3773038.3	0.02313	0.43901
435583.6	3773263.8	0.12571	435583.6	3773263.8	0.31291	0.43862
435257	3773140.8	0.42899	435257	3773140.8	0.00566	0.43465
435379.5	3773120.3	0.4229	435379.5	3773120.3	0.01164	0.43454
435277.4	3773140.8	0.4253	435277.4	3773140.8	0.00601	0.43131
435236.6	3773140.8	0.42446	435236.6	3773140.8	0.00534	0.4298
435297.8	3773140.8	0.41676	435297.8	3773140.8	0.00642	0.42318
435440.7	3773099.8	0.40502	435440.7	3773099.8	0.01503	0.42005
435542.8	3773058.8	0.40467	435542.8	3773058.8	0.01485	0.41952
435399.9	3773120.3	0.4051	435399.9	3773120.3	0.01406	0.41916
435481.5	3773079.3	0.40253	435481.5	3773079.3	0.01431	0.41684
435175.4	3773120.3	0.41265	435175.4	3773120.3	0.00416	0.41681
435216.2	3773140.8	0.41047	435216.2	3773140.8	0.00505	0.41552
435318.3	3773140.8	0.40587	435318.3	3773140.8	0.00696	0.41283
435522.3	3773386.8	0.1017	435522.3	3773386.8	0.30789	0.40959
435501.9	3773366.3	0.11154	435501.9	3773366.3	0.29779	0.40933
435338.7	3773140.8	0.39391	435338.7	3773140.8	0.00782	0.40173
435563.2	3773058.8	0.37965	435563.2	3773058.8	0.02026	0.39991
435420.3	3773120.3	0.38388	435420.3	3773120.3	0.0159	0.39978
435501.9	3773079.3	0.38096	435501.9	3773079.3	0.01407	0.39503
435195.8	3773140.8	0.38957	435195.8	3773140.8	0.00478	0.39435
435461.1	3773099.8	0.37678	435461.1	3773099.8	0.01591	0.39269
435583.6	3773325.3	0.10612	435583.6	3773325.3	0.28596	0.39208
435359.1	3773140.8	0.38171	435359.1	3773140.8	0.00934	0.39105
435542.8	3773263.8	0.14077	435542.8	3773263.8	0.24488	0.38565
435379.5	3773140.8	0.36964	435379.5	3773140.8	0.0118	0.38144
435583.6	3773058.8	0.35226	435583.6	3773058.8	0.02755	0.37981
435257	3773161.3	0.3732	435257	3773161.3	0.00629	0.37949
435501.9	3773304.8	0.13728	435501.9	3773304.8	0.24121	0.37849
435236.6	3773161.3	0.37135	435236.6	3773161.3	0.00591	0.37726
435440.7	3773120.3	0.3599	435440.7	3773120.3	0.01715	0.37705
435277.4	3773161.3	0.36925	435277.4	3773161.3	0.0067	0.37595
435522.3	3773079.3	0.36149	435522.3	3773079.3	0.01431	0.3758
435399.9	3773140.8	0.35652	435399.9	3773140.8	0.01494	0.37146
435175.4	3773140.8	0.36602	435175.4	3773140.8	0.00452	0.37054
435563.2	3773243.3	0.14148	435563.2	3773243.3	0.22863	0.37011
435297.8	3773161.3	0.36229	435297.8	3773161.3	0.00715	0.36944
435583.6	3773243.3	0.13361	435583.6	3773243.3	0.23504	0.36865
435481.5	3773099.8	0.3521	435481.5	3773099.8	0.01645	0.36855
435216.2	3773161.3	0.36197	435216.2	3773161.3	0.00555	0.36752
435583.6	3773345.8	0.10038	435583.6	3773345.8	0.26311	0.36349
435318.3	3773161.3	0.35388	435318.3	3773161.3	0.00769	0.36157
435542.8	3773079.3	0.3423	435542.8	3773079.3	0.01733	0.35963
435420.3	3773140.8	0.34068	435420.3	3773140.8	0.0178	0.35848
435461.1	3773120.3	0.33549	435461.1	3773120.3	0.01827	0.35376
435338.7	3773161.3	0.34459	435338.7	3773161.3	0.00842	0.35301
435195.8	3773161.3	0.34619	435195.8	3773161.3	0.00521	0.3514
435501.9	3773099.8	0.33101	435501.9	3773099.8	0.01623	0.34724
435563.2	3773079.3	0.32254	435563.2	3773079.3	0.02427	0.34681
435359.1	3773161.3	0.33495	435359.1	3773161.3	0.00963	0.34458
435440.7	3773140.8	0.3218	435440.7	3773140.8	0.01972	0.34152
435379.5	3773161.3	0.32548	435379.5	3773161.3	0.01186	0.33734
435583.6	3773079.3	0.30206	435583.6	3773079.3	0.0332	0.33526

435257	3773181.8	0.32752	435257	3773181.8	0.00702	0.33454
435236.6	3773181.8	0.32737	435236.6	3773181.8	0.00653	0.3339
435175.4	3773161.3	0.32709	435175.4	3773161.3	0.00487	0.33196
435481.5	3773120.3	0.31278	435481.5	3773120.3	0.0191	0.33188
435277.4	3773181.8	0.3236	435277.4	3773181.8	0.00753	0.33113
435399.9	3773161.3	0.31561	435399.9	3773161.3	0.01545	0.33106
435522.3	3773099.8	0.31248	435522.3	3773099.8	0.01654	0.32902
435216.2	3773181.8	0.32134	435216.2	3773181.8	0.00605	0.32739
435297.8	3773181.8	0.31787	435297.8	3773181.8	0.00807	0.32594
435522.3	3773284.3	0.13982	435522.3	3773284.3	0.18473	0.32455
435420.3	3773161.3	0.30376	435420.3	3773161.3	0.0196	0.32336
435461.1	3773140.8	0.30133	435461.1	3773140.8	0.0212	0.32253
435318.3	3773181.8	0.31129	435318.3	3773181.8	0.00868	0.31997
435583.6	3773222.8	0.14315	435583.6	3773222.8	0.17668	0.31983
435481.5	3773325.3	0.13222	435481.5	3773325.3	0.18532	0.31754
435542.8	3773099.8	0.29529	435542.8	3773099.8	0.02051	0.3158
435195.8	3773181.8	0.30958	435195.8	3773181.8	0.00559	0.31517
435338.7	3773181.8	0.30397	435338.7	3773181.8	0.00941	0.31338
435440.7	3773161.3	0.2891	435440.7	3773161.3	0.0228	0.3119
435501.9	3773120.3	0.29266	435501.9	3773120.3	0.01896	0.31162
435563.2	3773222.8	0.15179	435563.2	3773222.8	0.15655	0.30834
435563.2	3773099.8	0.27872	435563.2	3773099.8	0.02955	0.30827
435359.1	3773181.8	0.2962	435359.1	3773181.8	0.01041	0.30661
435542.8	3773407.3	0.09237	435542.8	3773407.3	0.21288	0.30525
435481.5	3773345.8	0.12266	435481.5	3773345.8	0.18203	0.30469
435481.5	3773140.8	0.28106	435481.5	3773140.8	0.02243	0.30349
435583.6	3773099.8	0.26236	435583.6	3773099.8	0.04051	0.30287
435501.9	3773284.3	0.1471	435501.9	3773284.3	0.1546	0.3017
435379.5	3773181.8	0.28859	435379.5	3773181.8	0.01219	0.30078
435175.4	3773181.8	0.29421	435175.4	3773181.8	0.00515	0.29936
435542.8	3773243.3	0.15053	435542.8	3773243.3	0.14724	0.29777
435236.6	3773202.3	0.29061	435236.6	3773202.3	0.0071	0.29771
435257	3773202.3	0.28968	435257	3773202.3	0.00776	0.29744
435461.1	3773161.3	0.27228	435461.1	3773161.3	0.02491	0.29719
435399.9	3773181.8	0.28094	435399.9	3773181.8	0.01563	0.29657
435277.4	3773202.3	0.28594	435277.4	3773202.3	0.00846	0.2944
435522.3	3773120.3	0.275	435522.3	3773120.3	0.01935	0.29435
435563.2	3773407.3	0.08873	435563.2	3773407.3	0.20547	0.2942
435216.2	3773202.3	0.28695	435216.2	3773202.3	0.00646	0.29341
435420.3	3773181.8	0.27199	435420.3	3773181.8	0.02094	0.29293
435297.8	3773202.3	0.28118	435297.8	3773202.3	0.00918	0.29036
435583.6	3773202.3	0.15459	435583.6	3773202.3	0.13397	0.28856
435440.7	3773181.8	0.2607	435440.7	3773181.8	0.02623	0.28693
435318.3	3773202.3	0.27596	435318.3	3773202.3	0.00994	0.2859
435501.9	3773140.8	0.26237	435501.9	3773140.8	0.02247	0.28484
435195.8	3773202.3	0.27834	435195.8	3773202.3	0.00588	0.28422
435542.8	3773120.3	0.25917	435542.8	3773120.3	0.0247	0.28387
435481.5	3773161.3	0.2547	435481.5	3773161.3	0.02669	0.28139
435563.2	3773120.3	0.24461	435563.2	3773120.3	0.03666	0.28127
435583.6	3773120.3	0.23084	435583.6	3773120.3	0.05009	0.28093
435338.7	3773202.3	0.27012	435338.7	3773202.3	0.01079	0.28091
435461.1	3773181.8	0.24711	435461.1	3773181.8	0.02968	0.27679
435359.1	3773202.3	0.26377	435359.1	3773202.3	0.0118	0.27557

435563.2	3773202.3	0.16394	435563.2	3773202.3	0.1105	0.27444
435175.4	3773202.3	0.26609	435175.4	3773202.3	0.00533	0.27142
435583.6	3773181.8	0.16838	435583.6	3773181.8	0.10273	0.27111
435379.5	3773202.3	0.25751	435379.5	3773202.3	0.01325	0.27076
435522.3	3773140.8	0.24567	435522.3	3773140.8	0.02298	0.26865
435583.6	3773140.8	0.20557	435583.6	3773140.8	0.06277	0.26834
435583.6	3773407.3	0.08489	435583.6	3773407.3	0.18263	0.26752
435399.9	3773202.3	0.25139	435399.9	3773202.3	0.01601	0.2674
435236.6	3773222.8	0.25957	435236.6	3773222.8	0.0075	0.26707
435257	3773222.8	0.25799	435257	3773222.8	0.00838	0.26637
435420.3	3773202.3	0.24454	435420.3	3773202.3	0.02157	0.26611
435440.7	3773202.3	0.23586	435440.7	3773202.3	0.02947	0.26533
435583.6	3773161.3	0.1851	435583.6	3773161.3	0.07977	0.26487
435501.9	3773161.3	0.23773	435501.9	3773161.3	0.02707	0.2648
435522.3	3773263.8	0.14953	435522.3	3773263.8	0.11498	0.26451
435481.5	3773181.8	0.23219	435481.5	3773181.8	0.03227	0.26446
435216.2	3773222.8	0.25761	435216.2	3773222.8	0.0067	0.26431
435563.2	3773140.8	0.21764	435563.2	3773140.8	0.04646	0.2641
435277.4	3773222.8	0.25451	435277.4	3773222.8	0.00934	0.26385
435501.9	3773263.8	0.15809	435501.9	3773263.8	0.10326	0.26135
435542.8	3773140.8	0.23087	435542.8	3773140.8	0.03036	0.26123
435297.8	3773222.8	0.25052	435297.8	3773222.8	0.01037	0.26089
435461.1	3773202.3	0.22504	435461.1	3773202.3	0.03576	0.2608
435501.9	3773386.8	0.10429	435501.9	3773386.8	0.15602	0.26031
435481.5	3773304.8	0.14241	435481.5	3773304.8	0.11678	0.25919
435563.2	3773181.8	0.17844	435563.2	3773181.8	0.08045	0.25889
435542.8	3773222.8	0.1617	435542.8	3773222.8	0.09648	0.25818
435318.3	3773222.8	0.24633	435318.3	3773222.8	0.01144	0.25777
435195.8	3773222.8	0.25143	435195.8	3773222.8	0.00599	0.25742
435563.2	3773161.3	0.19602	435563.2	3773161.3	0.06032	0.25634
435481.5	3773284.3	0.15358	435481.5	3773284.3	0.10224	0.25582
435338.7	3773222.8	0.24162	435338.7	3773222.8	0.01257	0.25419
435481.5	3773202.3	0.21259	435481.5	3773202.3	0.03977	0.25236
435481.5	3773263.8	0.16599	435481.5	3773263.8	0.0844	0.25039
435501.9	3773181.8	0.21711	435501.9	3773181.8	0.03327	0.25038
435359.1	3773222.8	0.23638	435359.1	3773222.8	0.01381	0.25019
435522.3	3773161.3	0.22216	435522.3	3773161.3	0.02777	0.24993
435461.1	3773325.3	0.13535	435461.1	3773325.3	0.11328	0.24863
435461.1	3773222.8	0.2055	435461.1	3773222.8	0.04296	0.24846
435175.4	3773222.8	0.24178	435175.4	3773222.8	0.00536	0.24714
435542.8	3773161.3	0.20828	435542.8	3773161.3	0.0383	0.24658
435379.5	3773222.8	0.23111	435379.5	3773222.8	0.01529	0.2464
435440.7	3773222.8	0.21405	435440.7	3773222.8	0.03161	0.24566
435481.5	3773222.8	0.19527	435481.5	3773222.8	0.05017	0.24544
435481.5	3773243.3	0.17982	435481.5	3773243.3	0.06488	0.2447
435399.9	3773222.8	0.22608	435399.9	3773222.8	0.01748	0.24356
435501.9	3773243.3	0.17036	435501.9	3773243.3	0.07318	0.24354
435420.3	3773222.8	0.22072	435420.3	3773222.8	0.02208	0.2428
435481.5	3773366.3	0.114	435481.5	3773366.3	0.12854	0.24254
435542.8	3773202.3	0.17463	435542.8	3773202.3	0.0676	0.24223
435501.9	3773202.3	0.19947	435501.9	3773202.3	0.0419	0.24137
435236.6	3773243.3	0.23316	435236.6	3773243.3	0.00762	0.24078
435257	3773243.3	0.23122	435257	3773243.3	0.0087	0.23992

435542.8	3773181.8	0.18989	435542.8	3773181.8	0.04987	0.23976
435216.2	3773243.3	0.23239	435216.2	3773243.3	0.00669	0.23908
435522.3	3773243.3	0.1604	435522.3	3773243.3	0.07854	0.23894
435501.9	3773222.8	0.18405	435501.9	3773222.8	0.05436	0.23841
435277.4	3773243.3	0.22802	435277.4	3773243.3	0.00995	0.23797
435461.1	3773243.3	0.18814	435461.1	3773243.3	0.04971	0.23785
435522.3	3773181.8	0.20285	435522.3	3773181.8	0.0343	0.23715
435297.8	3773243.3	0.22465	435297.8	3773243.3	0.01136	0.23601
435522.3	3773407.3	0.09532	435522.3	3773407.3	0.13978	0.2351
435318.3	3773243.3	0.22124	435318.3	3773243.3	0.01293	0.23417
435195.8	3773243.3	0.22809	435195.8	3773243.3	0.0059	0.23399
435338.7	3773243.3	0.2174	435338.7	3773243.3	0.01462	0.23202
435522.3	3773202.3	0.1866	435522.3	3773202.3	0.04352	0.23012
435522.3	3773222.8	0.17263	435522.3	3773222.8	0.05714	0.22977
435359.1	3773243.3	0.21302	435359.1	3773243.3	0.01641	0.22943
435461.1	3773304.8	0.1465	435461.1	3773304.8	0.08255	0.22905
435440.7	3773243.3	0.19484	435440.7	3773243.3	0.03264	0.22748
435379.5	3773243.3	0.20853	435379.5	3773243.3	0.01835	0.22688
435461.1	3773263.8	0.17267	435461.1	3773263.8	0.05346	0.22613
435175.4	3773243.3	0.22056	435175.4	3773243.3	0.00522	0.22578
435399.9	3773243.3	0.20429	435399.9	3773243.3	0.02066	0.22495
435420.3	3773243.3	0.20001	435420.3	3773243.3	0.02421	0.22422
435461.1	3773284.3	0.15887	435461.1	3773284.3	0.05929	0.21816
435236.6	3773263.8	0.21051	435236.6	3773263.8	0.00739	0.2179
435257	3773263.8	0.20839	435257	3773263.8	0.00858	0.21697
435216.2	3773263.8	0.21057	435216.2	3773263.8	0.0064	0.21697
435277.4	3773263.8	0.20548	435277.4	3773263.8	0.01003	0.21551
435461.1	3773345.8	0.12516	435461.1	3773345.8	0.08937	0.21453
435297.8	3773263.8	0.20261	435297.8	3773263.8	0.01178	0.21439
435440.7	3773263.8	0.17789	435440.7	3773263.8	0.03595	0.21384
435318.3	3773263.8	0.1998	435318.3	3773263.8	0.01388	0.21368
435422.1	3773260.3	0.18451	435422.1	3773260.3	0.02882	0.21333
435195.8	3773263.8	0.2077	435195.8	3773263.8	0.00559	0.21329
435338.7	3773263.8	0.19664	435338.7	3773263.8	0.01636	0.213
435440.7	3773304.8	0.14961	435440.7	3773304.8	0.06328	0.21289
435359.1	3773263.8	0.19295	435359.1	3773263.8	0.0192	0.21215
435420.3	3773263.8	0.18193	435420.3	3773263.8	0.0296	0.21153
435379.5	3773263.8	0.18909	435379.5	3773263.8	0.02231	0.2114
435399.9	3773263.8	0.18544	435399.9	3773263.8	0.02568	0.21112
435440.7	3773284.3	0.16291	435440.7	3773284.3	0.04621	0.20912
435440.7	3773325.3	0.13777	435440.7	3773325.3	0.06923	0.207
435175.4	3773263.8	0.20192	435175.4	3773263.8	0.0049	0.20682
435420.3	3773284.3	0.1661	435420.3	3773284.3	0.0385	0.2046
435399.9	3773284.3	0.16904	435399.9	3773284.3	0.03176	0.2008
435420.3	3773304.8	0.15218	435420.3	3773304.8	0.04711	0.19929
435379.5	3773284.3	0.17222	435379.5	3773284.3	0.0258	0.19802
435236.6	3773284.3	0.19095	435236.6	3773284.3	0.00682	0.19777
435216.2	3773284.3	0.19158	435216.2	3773284.3	0.00588	0.19746
435257	3773284.3	0.18878	435257	3773284.3	0.008	0.19678
435359.1	3773284.3	0.17558	435359.1	3773284.3	0.02084	0.19642
435277.4	3773284.3	0.18614	435277.4	3773284.3	0.00948	0.19562
435338.7	3773284.3	0.17872	435338.7	3773284.3	0.01688	0.1956
435318.3	3773284.3	0.18135	435318.3	3773284.3	0.01378	0.19513

435297.8	3773284.3	0.18369	435297.8	3773284.3	0.01137	0.19506
435195.8	3773284.3	0.1898	435195.8	3773284.3	0.00511	0.19491
435481.5	3773386.8	0.10626	435481.5	3773386.8	0.086	0.19226
435175.4	3773284.3	0.18543	435175.4	3773284.3	0.00448	0.18991
435399.9	3773304.8	0.15471	435399.9	3773304.8	0.03485	0.18956
435501.9	3773407.3	0.09752	435501.9	3773407.3	0.09124	0.18876
435420.3	3773325.3	0.13988	435420.3	3773325.3	0.0448	0.18468
435379.5	3773304.8	0.15752	435379.5	3773304.8	0.0261	0.18362
435461.1	3773366.3	0.11595	435461.1	3773366.3	0.06677	0.18272
435359.1	3773304.8	0.16046	435359.1	3773304.8	0.01997	0.18043
435216.2	3773304.8	0.17497	435216.2	3773304.8	0.00528	0.18025
435236.6	3773304.8	0.17397	435236.6	3773304.8	0.0061	0.18007
435440.7	3773345.8	0.12712	435440.7	3773345.8	0.05284	0.17996
435257	3773304.8	0.17182	435257	3773304.8	0.00714	0.17896
435338.7	3773304.8	0.16315	435338.7	3773304.8	0.01563	0.17878
435195.8	3773304.8	0.17401	435195.8	3773304.8	0.00461	0.17862
435277.4	3773304.8	0.16944	435277.4	3773304.8	0.00847	0.17791
435318.3	3773304.8	0.16536	435318.3	3773304.8	0.0125	0.17786
435297.8	3773304.8	0.16733	435297.8	3773304.8	0.0102	0.17753
435175.4	3773304.8	0.17079	435175.4	3773304.8	0.00407	0.17486
435399.9	3773325.3	0.14211	435399.9	3773325.3	0.03089	0.173
435461.1	3773386.8	0.10777	435461.1	3773386.8	0.05959	0.16736
435379.5	3773325.3	0.14462	435379.5	3773325.3	0.02246	0.16708
435216.2	3773325.3	0.16037	435216.2	3773325.3	0.00478	0.16515
435236.6	3773325.3	0.15913	435236.6	3773325.3	0.00548	0.16461
435359.1	3773325.3	0.14721	435359.1	3773325.3	0.01704	0.16425
435195.8	3773325.3	0.16002	435195.8	3773325.3	0.00421	0.16423
435420.3	3773345.8	0.12894	435420.3	3773345.8	0.0349	0.16384
435257	3773325.3	0.15705	435257	3773325.3	0.00635	0.1634
435338.7	3773325.3	0.14953	435338.7	3773325.3	0.01337	0.1629
435277.4	3773325.3	0.1549	435277.4	3773325.3	0.00746	0.16236
435318.3	3773325.3	0.15141	435318.3	3773325.3	0.01078	0.16219
435297.8	3773325.3	0.15306	435297.8	3773325.3	0.00889	0.16195
435175.4	3773325.3	0.15771	435175.4	3773325.3	0.00374	0.16145
435440.7	3773366.3	0.11757	435440.7	3773366.3	0.04122	0.15879
435481.5	3773407.3	0.09915	435481.5	3773407.3	0.05806	0.15721
435399.9	3773345.8	0.13095	435399.9	3773345.8	0.02481	0.15576
435216.2	3773345.8	0.14748	435216.2	3773345.8	0.00441	0.15189
435379.5	3773345.8	0.13322	435379.5	3773345.8	0.01857	0.15179
435195.8	3773345.8	0.14758	435195.8	3773345.8	0.00391	0.15149
435236.6	3773345.8	0.14608	435236.6	3773345.8	0.00502	0.1511
435359.1	3773345.8	0.13552	435359.1	3773345.8	0.01444	0.14996
435257	3773345.8	0.1441	435257	3773345.8	0.00578	0.14988
435175.4	3773345.8	0.146	435175.4	3773345.8	0.00349	0.14949
435338.7	3773345.8	0.13754	435338.7	3773345.8	0.01156	0.1491
435277.4	3773345.8	0.14216	435277.4	3773345.8	0.00672	0.14888
435318.3	3773345.8	0.13914	435318.3	3773345.8	0.00948	0.14862
435297.8	3773345.8	0.14056	435297.8	3773345.8	0.00792	0.14848
435440.7	3773386.8	0.10909	435440.7	3773386.8	0.03881	0.1479
435420.3	3773366.3	0.11918	435420.3	3773366.3	0.02821	0.14739
435399.9	3773366.3	0.12102	435399.9	3773366.3	0.02063	0.14165
435216.2	3773366.3	0.13603	435216.2	3773366.3	0.00407	0.1401
435195.8	3773366.3	0.13647	435195.8	3773366.3	0.00362	0.14009

435461.1	3773407.3	0.10037	435461.1	3773407.3	0.03933	0.1397
435236.6	3773366.3	0.13456	435236.6	3773366.3	0.00461	0.13917
435379.5	3773366.3	0.12309	435379.5	3773366.3	0.01579	0.13888
435175.4	3773366.3	0.13547	435175.4	3773366.3	0.00325	0.13872
435257	3773366.3	0.13268	435257	3773366.3	0.00527	0.13795
435359.1	3773366.3	0.12516	435359.1	3773366.3	0.0125	0.13766
435338.7	3773366.3	0.12692	435338.7	3773366.3	0.01015	0.13707
435277.4	3773366.3	0.13093	435277.4	3773366.3	0.00608	0.13701
435318.3	3773366.3	0.12831	435318.3	3773366.3	0.00842	0.13673
435297.8	3773366.3	0.12953	435297.8	3773366.3	0.00711	0.13664
435420.3	3773386.8	0.11051	435420.3	3773386.8	0.02613	0.13664
435440.7	3773407.3	0.1015	435440.7	3773407.3	0.03192	0.13342
435399.9	3773386.8	0.1122	435399.9	3773386.8	0.01878	0.13098
435195.8	3773386.8	0.12652	435195.8	3773386.8	0.00335	0.12987
435216.2	3773386.8	0.12584	435216.2	3773386.8	0.00375	0.12959
435175.4	3773386.8	0.12597	435175.4	3773386.8	0.00301	0.12898
435236.6	3773386.8	0.12434	435236.6	3773386.8	0.00423	0.12857
435379.5	3773386.8	0.11409	435379.5	3773386.8	0.01425	0.12834
435420.3	3773407.3	0.10279	435420.3	3773407.3	0.02485	0.12764
435257	3773386.8	0.12258	435257	3773386.8	0.00482	0.1274
435359.1	3773386.8	0.11594	435359.1	3773386.8	0.01125	0.12719
435338.7	3773386.8	0.11749	435338.7	3773386.8	0.00915	0.12664
435277.4	3773386.8	0.121	435277.4	3773386.8	0.00554	0.12654
435318.3	3773386.8	0.1187	435318.3	3773386.8	0.00761	0.12631
435297.8	3773386.8	0.11976	435297.8	3773386.8	0.00645	0.12621
435399.9	3773407.3	0.10435	435399.9	3773407.3	0.0186	0.12295
435195.8	3773407.3	0.11758	435195.8	3773407.3	0.00314	0.12072
435216.2	3773407.3	0.11673	435216.2	3773407.3	0.00352	0.12025
435175.4	3773407.3	0.11739	435175.4	3773407.3	0.00283	0.12022
435379.5	3773407.3	0.10607	435379.5	3773407.3	0.01406	0.12013
435236.6	3773407.3	0.11524	435236.6	3773407.3	0.00397	0.11921
435359.1	3773407.3	0.10773	435359.1	3773407.3	0.01095	0.11868
435257	3773407.3	0.11359	435257	3773407.3	0.00453	0.11812
435338.7	3773407.3	0.10909	435338.7	3773407.3	0.00879	0.11788
435318.3	3773407.3	0.11014	435318.3	3773407.3	0.00724	0.11738
435277.4	3773407.3	0.11216	435277.4	3773407.3	0.00522	0.11738
435297.8	3773407.3	0.11106	435297.8	3773407.3	0.0061	0.11716
435522.3	3773345.8	0.11588	435522.3	3773345.8	0.0004	0.11628

College Park

Total Chronic Non-Cancer Hazard Index - Sensitive Receptors

UTMx(m)	UTMy(m)	Chronic Non-Cancer HI from DPM	UTMx(m)	UTMy(m)	Chronic Non- Cancer HI from Benzene	Total Non- Cancer HI
435277.3	3772968.3	0.0083	435277.3	3772968.3	0.00001	0.00831
435256.8	3772965.3	0.00823	435256.8	3772965.3	0.00001	0.00824
435297.4	3772971	0.00774	435297.4	3772971	0.00002	0.00776
435235.3	3772962	0.00765	435235.3	3772962	0.00001	0.00766
435217	3772960	0.00678	435217	3772960	0.00001	0.00679
435318.9	3772973.3	0.00672	435318.9	3772973.3	0.00002	0.00674
435542.8	3773325.3	0.00033	435542.8	3773325.3	0.00561	0.00594
435196.2	3772955.5	0.00587	435196.2	3772955.5	0.00001	0.00588
435340.4	3772975.8	0.00556	435340.4	3772975.8	0.00002	0.00558
435277.4	3772997.3	0.00516	435277.4	3772997.3	0.00001	0.00517
435297.8	3772997.3	0.00501	435297.8	3772997.3	0.00002	0.00503
435257	3772997.3	0.00498	435257	3772997.3	0.00001	0.00499
435542.8	3773345.8	0.00031	435542.8	3773345.8	0.00462	0.00493
435542.8	3773366.3	0.00029	435542.8	3773366.3	0.00458	0.00487
435358.7	3772978.5	0.00466	435358.7	3772978.5	0.00002	0.00468
435318.3	3772997.3	0.00464	435318.3	3772997.3	0.00002	0.00466
435236.6	3772997.3	0.00455	435236.6	3772997.3	0.00001	0.00456
435338.7	3772997.3	0.00417	435338.7	3772997.3	0.00002	0.00419
435216.2	3772997.3	0.00406	435216.2	3772997.3	0.00001	0.00407
435277.4	3773017.8	0.00391	435277.4	3773017.8	0.00001	0.00392
435379.2	3772981	0.0039	435379.2	3772981	0.00002	0.00392
435257	3773017.8	0.00383	435257	3773017.8	0.00001	0.00384
435297.8	3773017.8	0.00379	435297.8	3773017.8	0.00002	0.00381
435359.1	3772997.3	0.00369	435359.1	3772997.3	0.00002	0.00371
435195.8	3772997.3	0.00361	435195.8	3772997.3	0.00001	0.00362
435236.6	3773017.8	0.00356	435236.6	3773017.8	0.00001	0.00357
435522.3	3773366.3	0.0003	435522.3	3773366.3	0.00327	0.00357
435318.3	3773017.8	0.00354	435318.3	3773017.8	0.00002	0.00356
435399.3	3772982.8	0.00339	435399.3	3772982.8	0.00002	0.00341
435338.7	3773017.8	0.00325	435338.7	3773017.8	0.00002	0.00327
435379.5	3772997.3	0.00323	435379.5	3772997.3	0.00002	0.00325
435175.4	3772997.3	0.00322	435175.4	3772997.3	0.00001	0.00323
435216.2	3773017.8	0.00322	435216.2	3773017.8	0.00001	0.00323
435277.4	3773038.3	0.00306	435277.4	3773038.3	0.00001	0.00307
435542.8	3773304.8	0.00034	435542.8	3773304.8	0.00272	0.00306
435257	3773038.3	0.00303	435257	3773038.3	0.00001	0.00304
435419.4	3772985.8	0.003	435419.4	3772985.8	0.00002	0.00302
435563.2	3773366.3	0.00027	435563.2	3773366.3	0.00275	0.00302
435297.8	3773038.3	0.00296	435297.8	3773038.3	0.00002	0.00298
435359.1	3773017.8	0.00295	435359.1	3773017.8	0.00002	0.00297
435195.8	3773017.8	0.00291	435195.8	3773017.8	0.00001	0.00292
435399.9	3772997.3	0.00287	435399.9	3772997.3	0.00002	0.00289
435236.6	3773038.3	0.00286	435236.6	3773038.3	0.00001	0.00287
435522.3	3773325.3	0.00034	435522.3	3773325.3	0.0025	0.00284
435318.3	3773038.3	0.00279	435318.3	3773038.3	0.00002	0.00281

435440.2	3772988	0.00274	435440.2	3772988	0.00002	0.00276
435379.5	3773017.8	0.00264	435379.5	3773017.8	0.00002	0.00266
435175.4	3773017.8	0.00263	435175.4	3773017.8	0.00001	0.00264
435216.2	3773038.3	0.00263	435216.2	3773038.3	0.00001	0.00264
435420.3	3772997.3	0.00261	435420.3	3772997.3	0.00002	0.00263
435338.7	3773038.3	0.0026	435338.7	3773038.3	0.00002	0.00262
435563.2	3773304.8	0.00032	435563.2	3773304.8	0.00223	0.00255
435440.7	3772997.3	0.00245	435440.7	3772997.3	0.00003	0.00248
435257	3773058.8	0.00246	435257	3773058.8	0.00001	0.00247
435277.4	3773058.8	0.00246	435277.4	3773058.8	0.00001	0.00247
435359.1	3773038.3	0.00241	435359.1	3773038.3	0.00002	0.00243
435563.2	3773325.3	0.0003	435563.2	3773325.3	0.00212	0.00242
435195.8	3773038.3	0.0024	435195.8	3773038.3	0.00001	0.00241
435297.8	3773058.8	0.00238	435297.8	3773058.8	0.00002	0.0024
435461.1	3772997.3	0.00235	435461.1	3772997.3	0.00003	0.00238
435399.9	3773017.8	0.00235	435399.9	3773017.8	0.00003	0.00238
435236.6	3773058.8	0.00235	435236.6	3773058.8	0.00001	0.00236
435481.5	3772997.3	0.00227	435481.5	3772997.3	0.00003	0.0023
435318.3	3773058.8	0.00226	435318.3	3773058.8	0.00002	0.00228
435379.5	3773038.3	0.0022	435379.5	3773038.3	0.00003	0.00223
435501.9	3772997.3	0.00218	435501.9	3772997.3	0.00003	0.00221
435175.4	3773038.3	0.00219	435175.4	3773038.3	0.00001	0.0022
435216.2	3773058.8	0.00219	435216.2	3773058.8	0.00001	0.0022
435420.3	3773017.8	0.00213	435420.3	3773017.8	0.00003	0.00216
435338.7	3773058.8	0.00213	435338.7	3773058.8	0.00002	0.00215
435522.3	3772997.3	0.00208	435522.3	3772997.3	0.00003	0.00211
435257	3773079.3	0.00203	435257	3773079.3	0.00001	0.00204
435359.1	3773058.8	0.002	435359.1	3773058.8	0.00003	0.00203
435277.4	3773079.3	0.00202	435277.4	3773079.3	0.00001	0.00203
435399.9	3773038.3	0.00199	435399.9	3773038.3	0.00003	0.00202
435195.8	3773058.8	0.00201	435195.8	3773058.8	0.00001	0.00202
435440.7	3773017.8	0.00197	435440.7	3773017.8	0.00003	0.002
435542.8	3772997.3	0.00195	435542.8	3772997.3	0.00003	0.00198
435236.6	3773079.3	0.00197	435236.6	3773079.3	0.00001	0.00198
435297.8	3773079.3	0.00196	435297.8	3773079.3	0.00002	0.00198
435461.1	3773017.8	0.00186	435461.1	3773017.8	0.00003	0.00189
435318.3	3773079.3	0.00187	435318.3	3773079.3	0.00002	0.00189
435379.5	3773058.8	0.00185	435379.5	3773058.8	0.00003	0.00188
435563.2	3773284.3	0.00034	435563.2	3773284.3	0.00153	0.00187
435175.4	3773058.8	0.00185	435175.4	3773058.8	0.00001	0.00186
435216.2	3773079.3	0.00185	435216.2	3773079.3	0.00001	0.00186
435501.9	3773345.8	0.00033	435501.9	3773345.8	0.00152	0.00185
435481.5	3773017.8	0.00179	435481.5	3773017.8	0.00003	0.00182
435420.3	3773038.3	0.00179	435420.3	3773038.3	0.00003	0.00182
435563.2	3772997.3	0.00177	435563.2	3772997.3	0.00004	0.00181
435563.2	3773345.8	0.00029	435563.2	3773345.8	0.00151	0.0018
435338.7	3773079.3	0.00177	435338.7	3773079.3	0.00002	0.00179
435501.9	3773017.8	0.00172	435501.9	3773017.8	0.00003	0.00175
435399.9	3773058.8	0.0017	435399.9	3773058.8	0.00003	0.00173
435195.8	3773079.3	0.00172	435195.8	3773079.3	0.00001	0.00173
435359.1	3773079.3	0.00168	435359.1	3773079.3	0.00003	0.00171
435257	3773099.8	0.0017	435257	3773099.8	0.00001	0.00171
435277.4	3773099.8	0.00169	435277.4	3773099.8	0.00001	0.0017

435236.6	3773099.8	0.00167	435236.6	3773099.8	0.00001	0.00168
435542.8	3773284.3	0.00036	435542.8	3773284.3	0.00132	0.00168
435522.3	3773017.8	0.00164	435522.3	3773017.8	0.00003	0.00167
435440.7	3773038.3	0.00164	435440.7	3773038.3	0.00003	0.00167
435297.8	3773099.8	0.00164	435297.8	3773099.8	0.00002	0.00166
435542.8	3773386.8	0.00027	435542.8	3773386.8	0.00138	0.00165
435583.6	3773366.3	0.00026	435583.6	3773366.3	0.00136	0.00162
435379.5	3773079.3	0.00158	435379.5	3773079.3	0.00003	0.00161
435175.4	3773079.3	0.00159	435175.4	3773079.3	0.00001	0.0016
435216.2	3773099.8	0.00159	435216.2	3773099.8	0.00001	0.0016
435318.3	3773099.8	0.00157	435318.3	3773099.8	0.00002	0.00159
435420.3	3773058.8	0.00155	435420.3	3773058.8	0.00003	0.00158
435583.6	3772997.3	0.00153	435583.6	3772997.3	0.00005	0.00158
435542.8	3773017.8	0.00154	435542.8	3773017.8	0.00003	0.00157
435461.1	3773038.3	0.00154	435461.1	3773038.3	0.00003	0.00157
435338.7	3773099.8	0.0015	435338.7	3773099.8	0.00002	0.00152
435583.6	3773304.8	0.00031	435583.6	3773304.8	0.00121	0.00152
435399.9	3773079.3	0.00147	435399.9	3773079.3	0.00003	0.0015
435195.8	3773099.8	0.00149	435195.8	3773099.8	0.00001	0.0015
435481.5	3773038.3	0.00146	435481.5	3773038.3	0.00003	0.00149
435583.6	3773284.3	0.00032	435583.6	3773284.3	0.00117	0.00149
435563.2	3773017.8	0.00142	435563.2	3773017.8	0.00004	0.00146
435359.1	3773099.8	0.00143	435359.1	3773099.8	0.00003	0.00146
435257	3773120.3	0.00145	435257	3773120.3	0.00001	0.00146
435563.2	3773386.8	0.00026	435563.2	3773386.8	0.0012	0.00146
435277.4	3773120.3	0.00143	435277.4	3773120.3	0.00002	0.00145
435440.7	3773058.8	0.00141	435440.7	3773058.8	0.00003	0.00144
435236.6	3773120.3	0.00143	435236.6	3773120.3	0.00001	0.00144
435501.9	3773038.3	0.00139	435501.9	3773038.3	0.00003	0.00142
435297.8	3773120.3	0.00139	435297.8	3773120.3	0.00002	0.00141
435175.4	3773099.8	0.00139	435175.4	3773099.8	0.00001	0.0014
435420.3	3773079.3	0.00135	435420.3	3773079.3	0.00004	0.00139
435379.5	3773099.8	0.00136	435379.5	3773099.8	0.00003	0.00139
435216.2	3773120.3	0.00138	435216.2	3773120.3	0.00001	0.00139
435583.6	3773386.8	0.00024	435583.6	3773386.8	0.00114	0.00138
435522.3	3773304.8	0.00036	435522.3	3773304.8	0.00101	0.00137
435522.3	3773038.3	0.00133	435522.3	3773038.3	0.00003	0.00136
435318.3	3773120.3	0.00134	435318.3	3773120.3	0.00002	0.00136
435563.2	3773263.8	0.00036	435563.2	3773263.8	0.001	0.00136
435461.1	3773058.8	0.00131	435461.1	3773058.8	0.00004	0.00135
435583.6	3773017.8	0.00128	435583.6	3773017.8	0.00006	0.00134
435399.9	3773099.8	0.00128	435399.9	3773099.8	0.00004	0.00132
435195.8	3773120.3	0.0013	435195.8	3773120.3	0.00001	0.00131
435338.7	3773120.3	0.00129	435338.7	3773120.3	0.00002	0.00131
435501.9	3773325.3	0.00035	435501.9	3773325.3	0.00096	0.00131
435542.8	3773038.3	0.00126	435542.8	3773038.3	0.00004	0.0013
435440.7	3773079.3	0.00124	435440.7	3773079.3	0.00004	0.00128
435257	3773140.8	0.00125	435257	3773140.8	0.00002	0.00127
435481.5	3773058.8	0.00122	435481.5	3773058.8	0.00004	0.00126
435359.1	3773120.3	0.00123	435359.1	3773120.3	0.00003	0.00126
435236.6	3773140.8	0.00124	435236.6	3773140.8	0.00002	0.00126
435277.4	3773140.8	0.00123	435277.4	3773140.8	0.00002	0.00125
435583.6	3773263.8	0.00034	435583.6	3773263.8	0.00091	0.00125

435420.3	3773099.8	0.00119	435420.3	3773099.8	0.00004	0.00123
435175.4	3773120.3	0.00122	435175.4	3773120.3	0.00001	0.00123
435563.2	3773038.3	0.00117	435563.2	3773038.3	0.00005	0.00122
435216.2	3773140.8	0.00121	435216.2	3773140.8	0.00001	0.00122
435297.8	3773140.8	0.0012	435297.8	3773140.8	0.00002	0.00122
435379.5	3773120.3	0.00118	435379.5	3773120.3	0.00003	0.00121
435501.9	3773058.8	0.00116	435501.9	3773058.8	0.00004	0.0012
435461.1	3773079.3	0.00114	435461.1	3773079.3	0.00004	0.00118
435318.3	3773140.8	0.00116	435318.3	3773140.8	0.00002	0.00118
435501.9	3773366.3	0.00031	435501.9	3773366.3	0.00087	0.00118
435522.3	3773386.8	0.00028	435522.3	3773386.8	0.0009	0.00118
435399.9	3773120.3	0.00112	435399.9	3773120.3	0.00004	0.00116
435195.8	3773140.8	0.00115	435195.8	3773140.8	0.00001	0.00116
435583.6	3773038.3	0.00108	435583.6	3773038.3	0.00007	0.00115
435522.3	3773058.8	0.0011	435522.3	3773058.8	0.00004	0.00114
435440.7	3773099.8	0.0011	435440.7	3773099.8	0.00004	0.00114
435338.7	3773140.8	0.00111	435338.7	3773140.8	0.00002	0.00113
435583.6	3773325.3	0.00029	435583.6	3773325.3	0.00084	0.00113
435236.6	3773161.3	0.00109	435236.6	3773161.3	0.00002	0.00111
435257	3773161.3	0.00109	435257	3773161.3	0.00002	0.00111
435420.3	3773120.3	0.00106	435420.3	3773120.3	0.00005	0.00111
435481.5	3773079.3	0.00106	435481.5	3773079.3	0.00004	0.0011
435359.1	3773140.8	0.00107	435359.1	3773140.8	0.00003	0.0011
435542.8	3773263.8	0.00038	435542.8	3773263.8	0.00072	0.0011
435175.4	3773140.8	0.00108	435175.4	3773140.8	0.00001	0.00109
435277.4	3773161.3	0.00107	435277.4	3773161.3	0.00002	0.00109
435501.9	3773304.8	0.00038	435501.9	3773304.8	0.00071	0.00109
435542.8	3773058.8	0.00104	435542.8	3773058.8	0.00004	0.00108
435216.2	3773161.3	0.00106	435216.2	3773161.3	0.00002	0.00108
435379.5	3773140.8	0.00103	435379.5	3773140.8	0.00003	0.00106
435461.1	3773099.8	0.00101	435461.1	3773099.8	0.00005	0.00106
435297.8	3773161.3	0.00104	435297.8	3773161.3	0.00002	0.00106
435563.2	3773243.3	0.00038	435563.2	3773243.3	0.00067	0.00105
435583.6	3773243.3	0.00036	435583.6	3773243.3	0.00069	0.00105
435195.8	3773161.3	0.00102	435195.8	3773161.3	0.00002	0.00104
435563.2	3773058.8	0.00098	435563.2	3773058.8	0.00006	0.00104
435583.6	3773345.8	0.00027	435583.6	3773345.8	0.00077	0.00104
435501.9	3773079.3	0.00099	435501.9	3773079.3	0.00004	0.00103
435399.9	3773140.8	0.00099	435399.9	3773140.8	0.00004	0.00103
435318.3	3773161.3	0.00101	435318.3	3773161.3	0.00002	0.00103
435440.7	3773120.3	0.00098	435440.7	3773120.3	0.00005	0.00103
435583.6	3773058.8	0.00092	435583.6	3773058.8	0.00008	0.001
435420.3	3773140.8	0.00094	435420.3	3773140.8	0.00005	0.00099
435338.7	3773161.3	0.00097	435338.7	3773161.3	0.00002	0.00099
435522.3	3773079.3	0.00094	435522.3	3773079.3	0.00004	0.00098
435481.5	3773099.8	0.00093	435481.5	3773099.8	0.00005	0.00098
435236.6	3773181.8	0.00096	435236.6	3773181.8	0.00002	0.00098
435175.4	3773161.3	0.00096	435175.4	3773161.3	0.00001	0.00097
435257	3773181.8	0.00095	435257	3773181.8	0.00002	0.00097
435359.1	3773161.3	0.00094	435359.1	3773161.3	0.00003	0.00097
435216.2	3773181.8	0.00094	435216.2	3773181.8	0.00002	0.00096
435277.4	3773181.8	0.00093	435277.4	3773181.8	0.00002	0.00095
435461.1	3773120.3	0.0009	435461.1	3773120.3	0.00005	0.00095

435440.7	3773140.8	0.00088	435440.7	3773140.8	0.00006	0.00094
435542.8	3773079.3	0.00089	435542.8	3773079.3	0.00005	0.00094
435379.5	3773161.3	0.00091	435379.5	3773161.3	0.00003	0.00094
435399.9	3773161.3	0.00088	435399.9	3773161.3	0.00005	0.00093
435195.8	3773181.8	0.00091	435195.8	3773181.8	0.00002	0.00093
435297.8	3773181.8	0.00091	435297.8	3773181.8	0.00002	0.00093
435501.9	3773099.8	0.00087	435501.9	3773099.8	0.00005	0.00092
435522.3	3773284.3	0.00038	435522.3	3773284.3	0.00054	0.00092
435318.3	3773181.8	0.00089	435318.3	3773181.8	0.00003	0.00092
435563.2	3773079.3	0.00084	435563.2	3773079.3	0.00007	0.00091
435481.5	3773325.3	0.00037	435481.5	3773325.3	0.00054	0.00091
435420.3	3773161.3	0.00084	435420.3	3773161.3	0.00006	0.0009
435583.6	3773222.8	0.00038	435583.6	3773222.8	0.00052	0.0009
435583.6	3773079.3	0.00079	435583.6	3773079.3	0.0001	0.00089
435481.5	3773120.3	0.00083	435481.5	3773120.3	0.00006	0.00089
435175.4	3773181.8	0.00087	435175.4	3773181.8	0.00002	0.00089
435338.7	3773181.8	0.00086	435338.7	3773181.8	0.00003	0.00089
435461.1	3773140.8	0.00082	435461.1	3773140.8	0.00006	0.00088
435542.8	3773407.3	0.00026	435542.8	3773407.3	0.00062	0.00088
435236.6	3773202.3	0.00085	435236.6	3773202.3	0.00002	0.00087
435481.5	3773345.8	0.00034	435481.5	3773345.8	0.00053	0.00087
435216.2	3773202.3	0.00084	435216.2	3773202.3	0.00002	0.00086
435257	3773202.3	0.00084	435257	3773202.3	0.00002	0.00086
435563.2	3773222.8	0.0004	435563.2	3773222.8	0.00046	0.00086
435522.3	3773099.8	0.00081	435522.3	3773099.8	0.00005	0.00086
435440.7	3773161.3	0.00079	435440.7	3773161.3	0.00007	0.00086
435359.1	3773181.8	0.00083	435359.1	3773181.8	0.00003	0.00086
435501.9	3773284.3	0.0004	435501.9	3773284.3	0.00045	0.00085
435379.5	3773181.8	0.00081	435379.5	3773181.8	0.00004	0.00085
435195.8	3773202.3	0.00082	435195.8	3773202.3	0.00002	0.00084
435277.4	3773202.3	0.00082	435277.4	3773202.3	0.00002	0.00084
435297.8	3773202.3	0.00081	435297.8	3773202.3	0.00003	0.00084
435563.2	3773407.3	0.00024	435563.2	3773407.3	0.0006	0.00084
435542.8	3773099.8	0.00077	435542.8	3773099.8	0.00006	0.00083
435501.9	3773120.3	0.00077	435501.9	3773120.3	0.00006	0.00083
435399.9	3773181.8	0.00078	435399.9	3773181.8	0.00005	0.00083
435542.8	3773243.3	0.0004	435542.8	3773243.3	0.00043	0.00083
435563.2	3773099.8	0.00073	435563.2	3773099.8	0.00009	0.00082
435481.5	3773140.8	0.00075	435481.5	3773140.8	0.00007	0.00082
435318.3	3773202.3	0.00079	435318.3	3773202.3	0.00003	0.00082
435420.3	3773181.8	0.00075	435420.3	3773181.8	0.00006	0.00081
435461.1	3773161.3	0.00074	435461.1	3773161.3	0.00007	0.00081
435583.6	3773099.8	0.00068	435583.6	3773099.8	0.00012	0.0008
435440.7	3773181.8	0.00072	435440.7	3773181.8	0.00008	0.0008
435175.4	3773202.3	0.00078	435175.4	3773202.3	0.00002	0.0008
435583.6	3773202.3	0.00041	435583.6	3773202.3	0.00039	0.0008
435338.7	3773202.3	0.00076	435338.7	3773202.3	0.00003	0.00079
435522.3	3773120.3	0.00072	435522.3	3773120.3	0.00006	0.00078
435216.2	3773222.8	0.00076	435216.2	3773222.8	0.00002	0.00078
435236.6	3773222.8	0.00076	435236.6	3773222.8	0.00002	0.00078
435257	3773222.8	0.00075	435257	3773222.8	0.00002	0.00077
435501.9	3773140.8	0.0007	435501.9	3773140.8	0.00007	0.00077
435481.5	3773161.3	0.00069	435481.5	3773161.3	0.00008	0.00077

435359.1	3773202.3	0.00074	435359.1	3773202.3	0.00003	0.00077
435461.1	3773181.8	0.00067	435461.1	3773181.8	0.00009	0.00076
435379.5	3773202.3	0.00072	435379.5	3773202.3	0.00004	0.00076
435195.8	3773222.8	0.00074	435195.8	3773222.8	0.00002	0.00076
435583.6	3773407.3	0.00023	435583.6	3773407.3	0.00053	0.00076
435277.4	3773222.8	0.00073	435277.4	3773222.8	0.00003	0.00076
435542.8	3773120.3	0.00068	435542.8	3773120.3	0.00007	0.00075
435563.2	3773120.3	0.00064	435563.2	3773120.3	0.00011	0.00075
435399.9	3773202.3	0.0007	435399.9	3773202.3	0.00005	0.00075
435563.2	3773202.3	0.00043	435563.2	3773202.3	0.00032	0.00075
435297.8	3773222.8	0.00072	435297.8	3773222.8	0.00003	0.00075
435522.3	3773263.8	0.00041	435522.3	3773263.8	0.00034	0.00075
435501.9	3773386.8	0.00029	435501.9	3773386.8	0.00046	0.00075
435583.6	3773120.3	0.0006	435583.6	3773120.3	0.00015	0.00075
435420.3	3773202.3	0.00068	435420.3	3773202.3	0.00006	0.00074
435583.6	3773181.8	0.00044	435583.6	3773181.8	0.0003	0.00074
435440.7	3773202.3	0.00065	435440.7	3773202.3	0.00009	0.00074
435175.4	3773222.8	0.00071	435175.4	3773222.8	0.00002	0.00073
435318.3	3773222.8	0.0007	435318.3	3773222.8	0.00003	0.00073
435501.9	3773263.8	0.00043	435501.9	3773263.8	0.0003	0.00073
435481.5	3773304.8	0.00039	435481.5	3773304.8	0.00034	0.00073
435583.6	3773140.8	0.00054	435583.6	3773140.8	0.00018	0.00072
435481.5	3773181.8	0.00063	435481.5	3773181.8	0.00009	0.00072
435461.1	3773202.3	0.00062	435461.1	3773202.3	0.0001	0.00072
435338.7	3773222.8	0.00068	435338.7	3773222.8	0.00004	0.00072
435522.3	3773140.8	0.00065	435522.3	3773140.8	0.00007	0.00072
435583.6	3773161.3	0.00049	435583.6	3773161.3	0.00023	0.00072
435481.5	3773284.3	0.00042	435481.5	3773284.3	0.0003	0.00072
435501.9	3773161.3	0.00063	435501.9	3773161.3	0.00008	0.00071
435563.2	3773181.8	0.00047	435563.2	3773181.8	0.00024	0.00071
435481.5	3773263.8	0.00046	435481.5	3773263.8	0.00025	0.00071
435461.1	3773325.3	0.00038	435461.1	3773325.3	0.00033	0.00071
435563.2	3773140.8	0.00057	435563.2	3773140.8	0.00014	0.00071
435542.8	3773222.8	0.00043	435542.8	3773222.8	0.00028	0.00071
435216.2	3773243.3	0.00068	435216.2	3773243.3	0.00002	0.0007
435236.6	3773243.3	0.00068	435236.6	3773243.3	0.00002	0.0007
435481.5	3773366.3	0.00032	435481.5	3773366.3	0.00038	0.0007
435542.8	3773140.8	0.00061	435542.8	3773140.8	0.00009	0.0007
435481.5	3773202.3	0.00058	435481.5	3773202.3	0.00012	0.0007
435359.1	3773222.8	0.00066	435359.1	3773222.8	0.00004	0.0007
435461.1	3773222.8	0.00057	435461.1	3773222.8	0.00013	0.0007
435257	3773243.3	0.00067	435257	3773243.3	0.00003	0.0007
435563.2	3773161.3	0.00051	435563.2	3773161.3	0.00018	0.00069
435195.8	3773243.3	0.00067	435195.8	3773243.3	0.00002	0.00069
435379.5	3773222.8	0.00065	435379.5	3773222.8	0.00004	0.00069
435277.4	3773243.3	0.00066	435277.4	3773243.3	0.00003	0.00069
435501.9	3773181.8	0.00058	435501.9	3773181.8	0.0001	0.00068
435399.9	3773222.8	0.00063	435399.9	3773222.8	0.00005	0.00068
435440.7	3773222.8	0.00059	435440.7	3773222.8	0.00009	0.00068
435481.5	3773243.3	0.00049	435481.5	3773243.3	0.00019	0.00068
435481.5	3773222.8	0.00053	435481.5	3773222.8	0.00015	0.00068
435522.3	3773161.3	0.00059	435522.3	3773161.3	0.00008	0.00067
435420.3	3773222.8	0.00061	435420.3	3773222.8	0.00006	0.00067

435175.4	3773243.3	0.00065	435175.4	3773243.3	0.00002	0.00067
435297.8	3773243.3	0.00064	435297.8	3773243.3	0.00003	0.00067
435318.3	3773243.3	0.00063	435318.3	3773243.3	0.00004	0.00067
435501.9	3773243.3	0.00046	435501.9	3773243.3	0.00021	0.00067
435522.3	3773407.3	0.00026	435522.3	3773407.3	0.00041	0.00067
435461.1	3773243.3	0.00052	435461.1	3773243.3	0.00015	0.00067
435542.8	3773161.3	0.00055	435542.8	3773161.3	0.00011	0.00066
435501.9	3773202.3	0.00054	435501.9	3773202.3	0.00012	0.00066
435542.8	3773202.3	0.00046	435542.8	3773202.3	0.00002	0.00066
435501.9	3773222.8	0.00005	435501.9	3773222.8	0.00016	0.00066
435522.3	3773243.3	0.00043	435522.3	3773243.3	0.00023	0.00066
435542.8	3773181.8	0.00005	435542.8	3773181.8	0.00015	0.00065
435338.7	3773243.3	0.00061	435338.7	3773243.3	0.00004	0.00065
435359.1	3773243.3	0.00006	435359.1	3773243.3	0.00005	0.00065
435461.1	3773304.8	0.00041	435461.1	3773304.8	0.00024	0.00065
435522.3	3773181.8	0.00054	435522.3	3773181.8	0.00001	0.00064
435440.7	3773243.3	0.00054	435440.7	3773243.3	0.00001	0.00064
435216.2	3773263.8	0.00062	435216.2	3773263.8	0.00002	0.00064
435461.1	3773263.8	0.00048	435461.1	3773263.8	0.00016	0.00064
435522.3	3773222.8	0.00047	435522.3	3773222.8	0.00017	0.00064
435522.3	3773202.3	0.00005	435522.3	3773202.3	0.00013	0.00063
435379.5	3773243.3	0.00058	435379.5	3773243.3	0.00005	0.00063
435399.9	3773243.3	0.00057	435399.9	3773243.3	0.00006	0.00063
435195.8	3773263.8	0.00061	435195.8	3773263.8	0.00002	0.00063
435236.6	3773263.8	0.00061	435236.6	3773263.8	0.00002	0.00063
435420.3	3773243.3	0.00056	435420.3	3773243.3	0.00007	0.00063
435257	3773263.8	0.00006	435257	3773263.8	0.00003	0.00063
435277.4	3773263.8	0.00059	435277.4	3773263.8	0.00003	0.00062
435461.1	3773284.3	0.00044	435461.1	3773284.3	0.00017	0.00061
435440.7	3773304.8	0.00042	435440.7	3773304.8	0.00019	0.00061
435297.8	3773263.8	0.00058	435297.8	3773263.8	0.00003	0.00061
435318.3	3773263.8	0.00057	435318.3	3773263.8	0.00004	0.00061
435338.7	3773263.8	0.00056	435338.7	3773263.8	0.00005	0.00061
435461.1	3773345.8	0.00035	435461.1	3773345.8	0.00026	0.00061
435175.4	3773263.8	0.00059	435175.4	3773263.8	0.00001	0.00006
435359.1	3773263.8	0.00054	435359.1	3773263.8	0.00006	0.00006
435420.3	3773263.8	0.00051	435420.3	3773263.8	0.00009	0.00006
435379.5	3773263.8	0.00053	435379.5	3773263.8	0.00007	0.00006
435399.9	3773263.8	0.00052	435399.9	3773263.8	0.00008	0.00006
435440.7	3773263.8	0.00049	435440.7	3773263.8	0.00011	0.00006
435440.7	3773284.3	0.00045	435440.7	3773284.3	0.00014	0.00059
435422.1	3773260.3	0.00051	435422.1	3773260.3	0.00008	0.00059
435216.2	3773284.3	0.00056	435216.2	3773284.3	0.00002	0.00058
435236.6	3773284.3	0.00056	435236.6	3773284.3	0.00002	0.00058
435440.7	3773325.3	0.00038	435440.7	3773325.3	0.00002	0.00058
435257	3773284.3	0.00055	435257	3773284.3	0.00002	0.00057
435195.8	3773284.3	0.00056	435195.8	3773284.3	0.00001	0.00057
435277.4	3773284.3	0.00054	435277.4	3773284.3	0.00003	0.00057
435420.3	3773284.3	0.00046	435420.3	3773284.3	0.00011	0.00057
435175.4	3773284.3	0.00055	435175.4	3773284.3	0.00001	0.00056
435338.7	3773284.3	0.00051	435338.7	3773284.3	0.00005	0.00056
435379.5	3773284.3	0.00048	435379.5	3773284.3	0.00008	0.00056
435297.8	3773284.3	0.00053	435297.8	3773284.3	0.00003	0.00056

435318.3	3773284.3	0.00052	435318.3	3773284.3	0.00004	0.00056
435399.9	3773284.3	0.00047	435399.9	3773284.3	0.00009	0.00056
435420.3	3773304.8	0.00042	435420.3	3773304.8	0.00014	0.00056
435359.1	3773284.3	0.00049	435359.1	3773284.3	0.00006	0.00055
435481.5	3773386.8	0.00029	435481.5	3773386.8	0.00025	0.00054
435501.9	3773407.3	0.00027	435501.9	3773407.3	0.00027	0.00054
435216.2	3773304.8	0.00051	435216.2	3773304.8	0.00002	0.00053
435236.6	3773304.8	0.00051	435236.6	3773304.8	0.00002	0.00053
435399.9	3773304.8	0.00043	435399.9	3773304.8	0.00001	0.00053
435195.8	3773304.8	0.00051	435195.8	3773304.8	0.00001	0.00052
435257	3773304.8	0.0005	435257	3773304.8	0.00002	0.00052
435379.5	3773304.8	0.00044	435379.5	3773304.8	0.00008	0.00052
435461.1	3773366.3	0.00032	435461.1	3773366.3	0.00002	0.00052
435420.3	3773325.3	0.00039	435420.3	3773325.3	0.00013	0.00052
435175.4	3773304.8	0.0005	435175.4	3773304.8	0.00001	0.00051
435277.4	3773304.8	0.00049	435277.4	3773304.8	0.00002	0.00051
435297.8	3773304.8	0.00048	435297.8	3773304.8	0.00003	0.00051
435318.3	3773304.8	0.00047	435318.3	3773304.8	0.00004	0.00051
435338.7	3773304.8	0.00046	435338.7	3773304.8	0.00005	0.00051
435359.1	3773304.8	0.00045	435359.1	3773304.8	0.00006	0.00051
435440.7	3773345.8	0.00035	435440.7	3773345.8	0.00015	0.0005
435399.9	3773325.3	0.0004	435399.9	3773325.3	0.00009	0.00049
435195.8	3773325.3	0.00047	435195.8	3773325.3	0.00001	0.00048
435216.2	3773325.3	0.00047	435216.2	3773325.3	0.00001	0.00048
435236.6	3773325.3	0.00046	435236.6	3773325.3	0.00002	0.00048
435379.5	3773325.3	0.00041	435379.5	3773325.3	0.00007	0.00048
435175.4	3773325.3	0.00046	435175.4	3773325.3	0.00001	0.00047
435297.8	3773325.3	0.00044	435297.8	3773325.3	0.00003	0.00047
435359.1	3773325.3	0.00042	435359.1	3773325.3	0.00005	0.00047
435257	3773325.3	0.00045	435257	3773325.3	0.00002	0.00047
435277.4	3773325.3	0.00045	435277.4	3773325.3	0.00002	0.00047
435461.1	3773386.8	0.0003	435461.1	3773386.8	0.00017	0.00047
435318.3	3773325.3	0.00043	435318.3	3773325.3	0.00003	0.00046
435338.7	3773325.3	0.00042	435338.7	3773325.3	0.00004	0.00046
435420.3	3773345.8	0.00036	435420.3	3773345.8	0.00001	0.00046
435440.7	3773366.3	0.00033	435440.7	3773366.3	0.00012	0.00045
435481.5	3773407.3	0.00028	435481.5	3773407.3	0.00017	0.00045
435175.4	3773345.8	0.00043	435175.4	3773345.8	0.00001	0.00044
435195.8	3773345.8	0.00043	435195.8	3773345.8	0.00001	0.00044
435216.2	3773345.8	0.00043	435216.2	3773345.8	0.00001	0.00044
435257	3773345.8	0.00042	435257	3773345.8	0.00002	0.00044
435399.9	3773345.8	0.00037	435399.9	3773345.8	0.00007	0.00044
435236.6	3773345.8	0.00042	435236.6	3773345.8	0.00001	0.00043
435318.3	3773345.8	0.0004	435318.3	3773345.8	0.00003	0.00043
435277.4	3773345.8	0.00041	435277.4	3773345.8	0.00002	0.00043
435297.8	3773345.8	0.0004	435297.8	3773345.8	0.00002	0.00042
435338.7	3773345.8	0.00039	435338.7	3773345.8	0.00003	0.00042
435359.1	3773345.8	0.00038	435359.1	3773345.8	0.00004	0.00042
435379.5	3773345.8	0.00037	435379.5	3773345.8	0.00005	0.00042
435175.4	3773366.3	0.0004	435175.4	3773366.3	0.00001	0.00041
435195.8	3773366.3	0.0004	435195.8	3773366.3	0.00001	0.00041
435216.2	3773366.3	0.0004	435216.2	3773366.3	0.00001	0.00041
435420.3	3773366.3	0.00033	435420.3	3773366.3	0.00008	0.00041

435440.7	3773386.8	0.0003	435440.7	3773386.8	0.00011	0.00041
435236.6	3773366.3	0.00039	435236.6	3773366.3	0.00001	0.0004
435257	3773366.3	0.00038	435257	3773366.3	0.00002	0.0004
435277.4	3773366.3	0.00038	435277.4	3773366.3	0.00002	0.0004
435379.5	3773366.3	0.00035	435379.5	3773366.3	0.00005	0.0004
435399.9	3773366.3	0.00034	435399.9	3773366.3	0.00006	0.0004
435461.1	3773407.3	0.00028	435461.1	3773407.3	0.00012	0.0004
435338.7	3773366.3	0.00036	435338.7	3773366.3	0.00003	0.00039
435297.8	3773366.3	0.00037	435297.8	3773366.3	0.00002	0.00039
435318.3	3773366.3	0.00037	435318.3	3773366.3	0.00002	0.00039
435359.1	3773366.3	0.00035	435359.1	3773366.3	0.00004	0.00039
435420.3	3773386.8	0.00031	435420.3	3773386.8	0.00008	0.00039
435175.4	3773386.8	0.00037	435175.4	3773386.8	0.00001	0.00038
435195.8	3773386.8	0.00037	435195.8	3773386.8	0.00001	0.00038
435216.2	3773386.8	0.00037	435216.2	3773386.8	0.00001	0.00038
435236.6	3773386.8	0.00036	435236.6	3773386.8	0.00001	0.00037
435277.4	3773386.8	0.00035	435277.4	3773386.8	0.00002	0.00037
435440.7	3773407.3	0.00028	435440.7	3773407.3	0.00009	0.00037
435257	3773386.8	0.00035	435257	3773386.8	0.00001	0.00036
435297.8	3773386.8	0.00034	435297.8	3773386.8	0.00002	0.00036
435318.3	3773386.8	0.00034	435318.3	3773386.8	0.00002	0.00036
435338.7	3773386.8	0.00033	435338.7	3773386.8	0.00003	0.00036
435359.1	3773386.8	0.00033	435359.1	3773386.8	0.00003	0.00036
435379.5	3773386.8	0.00032	435379.5	3773386.8	0.00004	0.00036
435399.9	3773386.8	0.00031	435399.9	3773386.8	0.00005	0.00036
435420.3	3773407.3	0.00029	435420.3	3773407.3	0.00007	0.00036
435175.4	3773407.3	0.00034	435175.4	3773407.3	0.00001	0.00035
435195.8	3773407.3	0.00034	435195.8	3773407.3	0.00001	0.00035
435216.2	3773407.3	0.00034	435216.2	3773407.3	0.00001	0.00035
435236.6	3773407.3	0.00033	435236.6	3773407.3	0.00001	0.00034
435257	3773407.3	0.00033	435257	3773407.3	0.00001	0.00034
435277.4	3773407.3	0.00032	435277.4	3773407.3	0.00002	0.00034
435297.8	3773407.3	0.00032	435297.8	3773407.3	0.00002	0.00034
435338.7	3773407.3	0.00031	435338.7	3773407.3	0.00003	0.00034
435399.9	3773407.3	0.00029	435399.9	3773407.3	0.00005	0.00034
435379.5	3773407.3	0.0003	435379.5	3773407.3	0.00004	0.00034
435318.3	3773407.3	0.00031	435318.3	3773407.3	0.00002	0.00033
435359.1	3773407.3	0.0003	435359.1	3773407.3	0.00003	0.00033
435522.3	3773345.8	0.00032	435522.3	3773345.8	0	0.00032

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CONC

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**NO GAS DRY DEPOSITION Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 6-HR

**This Run Includes: 4 Source(s); 1 Source Group(s); and 455 Receptor(s)

**The Model Assumes A Pollutant Type of: ACUTEHI

**Model Set To Continue RUNNING After the Setup Testing.

**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)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = /GRAMS/PER/SECOND/ ; Emission Rate Unit Factor = 769.20
Output Units = /RISK/PER/MILLION/

**Approximate Storage Requirements of Model = 1.2 MB of RAM.

**Input Runstream File: CPBenSRA.INP

**Output Print File: CPBenSRA.OUT

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*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
SSL	0	0.58300E-04	435523.8	3773350.8	0.0	3.66	0.00	0.00	0.05	NO	
SSBL	0	0.34700E-05	435523.8	3773350.8	0.0	3.66	0.00	0.00	0.05	NO	

*** ISCST3 - VERSION 02035 *** *** College Park Acute Non-Cancer Risk *** 05/12/09
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*** 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)	EMISSION RATE SCALAR VARY BY
SSRF	0	0.44500E-04	435523.7	3773350.8	0.0	1.00	3.02	2.33	
SSSP	0	0.19420E-03	435523.7	3773350.8	0.0	0.00	3.02	2.33	

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*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL SSL , SSBL , SSRF , SSSP , *** College Park Acute Non-Cancer Risk *** 05/12/09
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*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

435175.4	435195.8	435216.2	435236.6	435257.0	435277.4	435297.8	435318.3	435338.7	435359.1
435379.5	435399.9	435420.3	435440.7	435461.1	435481.5	435501.9	435522.3	435542.8	435563.2

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING RURAL	HEIGHT (M) URBAN	USTAR (M/S)	M-O (M)	LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.00	284.3	7	522.6	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	02	147.4	1.00	284.3	7	507.0	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	03	152.5	1.34	283.1	7	491.4	170.0	0.0000		0.0	0.0000	0	0.00

81 01 01 04	166.0	0.00	283.1	7	475.8	170.0	0.0000	0.0	0.0000	0	0.00
81 01 01 05	151.5	0.00	282.6	7	460.3	170.0	0.0000	0.0	0.0000	0	0.00
81 01 01 06	139.5	1.34	283.1	7	444.7	170.0	0.0000	0.0	0.0000	0	0.00
81 01 01 07	162.0	1.34	285.4	6	1.4	170.7	0.0000	0.0	0.0000	0	0.00
81 01 01 08	157.1	0.00	287.6	5	47.0	192.0	0.0000	0.0	0.0000	0	0.00
81 01 01 09	344.0	1.00	289.8	4	92.5	213.3	0.0000	0.0	0.0000	0	0.00
81 01 01 10	346.6	0.00	291.5	3	138.0	234.7	0.0000	0.0	0.0000	0	0.00
81 01 01 11	314.1	1.00	294.3	2	183.5	256.0	0.0000	0.0	0.0000	0	0.00
81 01 01 12	238.1	1.34	297.6	2	229.0	277.3	0.0000	0.0	0.0000	0	0.00
81 01 01 13	357.2	1.79	298.7	3	274.5	298.7	0.0000	0.0	0.0000	0	0.00
81 01 01 14	34.2	2.24	299.8	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81 01 01 15	44.8	3.13	299.3	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81 01 01 16	75.7	3.13	298.7	4	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81 01 01 17	65.1	1.79	295.4	5	325.6	318.5	0.0000	0.0	0.0000	0	0.00
81 01 01 18	97.6	1.34	291.5	6	357.2	310.3	0.0000	0.0	0.0000	0	0.00
81 01 01 19	133.0	1.00	289.8	7	388.8	302.1	0.0000	0.0	0.0000	0	0.00
81 01 01 20	145.7	0.00	287.0	7	420.4	293.9	0.0000	0.0	0.0000	0	0.00
81 01 01 21	223.6	1.00	286.5	7	452.0	285.7	0.0000	0.0	0.0000	0	0.00
81 01 01 22	159.5	1.00	287.0	7	483.5	277.4	0.0000	0.0	0.0000	0	0.00
81 01 01 23	158.2	1.34	285.9	7	515.1	269.2	0.0000	0.0	0.0000	0	0.00
81 01 01 24	134.7	1.00	285.4	7	546.7	261.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

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**MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE 1ST HIGHEST 6-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF ACUTEHI IN /RISK/PER/MILLION/

Y-COORD (METERS)	435175.38	435195.78	435216.19	435236.59	435257.00
3773407.3	0.00002 (81090706)	0.00002 (81090706)	0.00003 (81090706)	0.00003 (81090706)	0.00004 (81090706)
3773386.8	0.00001 (81090706)	0.00002 (81090706)	0.00002 (81090706)	0.00002 (81090706)	0.00003 (81090706)
3773366.3	0.00001 (81050206)	0.00002 (81050206)	0.00002 (81050206)	0.00002 (81050206)	0.00002 (81050206)
3773345.8	0.00002 (81030312)	0.00002 (81030312)	0.00002 (81030312)	0.00002 (81030312)	0.00002 (81030312)
3773325.3	0.00002 (81012224)	0.00002 (81012224)	0.00002 (81012224)	0.00002 (81012224)	0.00002 (81012224)
3773304.8	0.00002 (81081506)	0.00002 (81081506)	0.00002 (81081506)	0.00003 (81081506)	0.00003 (81081506)
3773284.3	0.00002 (81081506)	0.00002 (81081506)	0.00002 (81081506)	0.00003 (81081506)	0.00003 (81032306)
3773263.8	0.00002 (81032306)	0.00002 (81032306)	0.00002 (81032106)	0.00003 (81032106)	0.00004 (81032106)
3773243.3	0.00002 (81032106)	0.00002 (81032106)	0.00003 (81032106)	0.00003 (81032106)	0.00003 (81080606)
3773222.8	0.00002 (81032106)	0.00002 (81032106)	0.00003 (81080606)	0.00003 (81080606)	0.00003 (81080606)
3773202.3	0.00002 (81080606)	0.00003 (81080606)	0.00003 (81080606)	0.00003 (81041706)	0.00004 (81041706)
3773181.8	0.00002 (81080606)	0.00003 (81041706)	0.00003 (81041706)	0.00004 (81041706)	0.00004 (81041706)
3773161.3	0.00003 (81041706)	0.00003 (81041706)	0.00003 (81041706)	0.00004 (81041706)	0.00004 (81071006)
3773140.8	0.00003 (81041706)	0.00003 (81041706)	0.00003 (81041706)	0.00004 (81071006)	0.00004 (81071006)
3773120.3	0.00003 (81041706)	0.00003 (81071006)	0.00003 (81071006)	0.00004 (81071006)	0.00004 (81071006)
3773099.8	0.00002 (81071006)	0.00003 (81071006)	0.00003 (81071006)	0.00003 (81071006)	0.00003 (81071006)
3773079.3	0.00003 (81071006)	0.00003 (81071006)	0.00003 (81071006)	0.00002 (81071006)	0.00002 (81071006)
3773058.8	0.00002 (81071006)	0.00002 (81071006)	0.00002 (81071006)	0.00002 (81071006)	0.00002 (81061906)
3773038.3	0.00002 (81071006)	0.00002 (81071006)	0.00001 (81071006)	0.00001 (81061906)	0.00002 (81061906)
3773017.8	0.00002 (81071006)	0.00001 (81071006)	0.00001 (81061906)	0.00001 (81061906)	0.00001 (81061906)
3772997.3	0.00001 (81061906)	0.00001 (81061906)	0.00001 (81061906)	0.00001 (81061906)	0.00002 (81050206)

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**MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE 1ST HIGHEST 6-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF ACUTEHI IN /RISK/PER/MILLION/

Y-COORD (METERS)	435277.44	435297.84	435318.25	435338.66	435359.06
3773407.3	0.00004 (81090706)	0.00005 (81090706)	0.00005 (81090706)	0.00006 (81090706)	0.00006 (81090706)
3773386.8	0.00003 (81090706)	0.00004 (81090706)	0.00005 (81090706)	0.00007 (81090706)	0.00008 (81090706)
3773366.3	0.00002 (81050206)	0.00003 (81050206)	0.00003 (81031112)	0.00004 (81031112)	0.00005 (81090706)
3773345.8	0.00003 (81030312)	0.00003 (81012224)	0.00004 (81012224)	0.00005 (81012224)	0.00006 (81012224)
3773325.3	0.00003 (81012224)	0.00003 (81012224)	0.00004 (81012224)	0.00005 (81081506)	0.00006 (81032306)
3773304.8	0.00003 (81081506)	0.00004 (81081506)	0.00005 (81032306)	0.00006 (81032306)	0.00007 (81032306)
3773284.3	0.00004 (81032306)	0.00004 (81032106)	0.00005 (81032106)	0.00007 (81032106)	0.00008 (81070206)
3773263.8	0.00004 (81032106)	0.00005 (81032106)	0.00005 (81080606)	0.00007 (81080606)	0.00009 (81041706)
3773243.3	0.00004 (81080606)	0.00005 (81080606)	0.00006 (81041706)	0.00008 (81041706)	0.00009 (81041706)
3773222.8	0.00004 (81041706)	0.00006 (81041706)	0.00006 (81041706)	0.00007 (81041706)	0.00009 (81071006)
3773202.3	0.00005 (81041706)	0.00006 (81071006)	0.00006 (81071006)	0.00007 (81071006)	0.00007 (81071006)
3773181.8	0.00004 (81041706)	0.00005 (81071006)	0.00005 (81071006)	0.00006 (81071006)	0.00004 (81071006)
3773161.3	0.00005 (81071006)	0.00005 (81071006)	0.00005 (81071006)	0.00004 (81071006)	0.00004 (81061906)
3773140.8	0.00004 (81071006)	0.00004 (81071006)	0.00003 (81061906)	0.00003 (81061906)	0.00003 (81061906)
3773120.3	0.00003 (81071006)	0.00003 (81071006)	0.00002 (81061906)	0.00003 (81061906)	0.00004 (81050206)
3773099.8	0.00002 (81071006)	0.00002 (81061906)	0.00002 (81061906)	0.00003 (81050206)	0.00003 (81050206)
3773079.3	0.00002 (81061906)	0.00002 (81061906)	0.00002 (81050206)	0.00003 (81050206)	0.00003 (81050206)
3773058.8	0.00002 (81061906)	0.00002 (81061906)	0.00002 (81050206)	0.00003 (81050206)	0.00003 (81022824)
3773038.3	0.00002 (81061906)	0.00002 (81050206)	0.00002 (81050206)	0.00002 (81022824)	0.00003 (81022824)
3773017.8	0.00002 (81050206)	0.00002 (81050206)	0.00002 (81050206)	0.00003 (81022824)	0.00003 (81022824)
3772997.3	0.00002 (81050206)	0.00002 (81050206)	0.00002 (81022824)	0.00003 (81022824)	0.00003 (81022824)

*** ISCST3 - VERSION 02035 ***
*** College Park Acute Non-Cancer Risk
*** Benzene Sources - Sensitive Receptors

*** 05/12/09
10:41:01
PAGE 12

**MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE 1ST HIGHEST 6-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF ACUTEHI IN /RISK/PER/MILLION/

Y-COORD (METERS)	435379.47	435399.88	435420.28	435440.72	435461.13
3773407.3	0.00007 (81070906)	0.00011 (81070906)	0.00015 (81070906)	0.00014 (81040706)	0.00014 (81091312)

3773386.8 0.00010 (81090706) 0.00012 (81090706) 0.00012 (81090706) 0.00020 (81070906) 0.00030 (81070906)

*** ISCST3 - VERSION 02035 *** *** College Park Acute Non-Cancer Risk *** 05/12/09

**MODELOPTs: CONC URBAN FLAT NOCALM 10:41:01 PAGE 13

*** THE 1ST HIGHEST 6-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL INCLUDING SOURCE(S): SSL, SSBL, SSRF, SSSP

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF ACUTEHI IN /RISK/PER/MILLION/ **

Y-COORD (METERS) 435481.53 435501.94 435522.34 435542.75 435563.16

*** ISCST3 - VERSION 02035 *** *** College Park Acute Non-Cancer Risk *** 05/12/09

**MODELOPTs: CONC URBAN FLAT NOCALM 10:41:01 PAGE 14

*** THE 1ST HIGHEST 6-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL INCLUDING SOURCE(S): SSL, SSBL, SSRF, SSSP

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF ACUTEHI IN /RISK/PER/MILLION/ **

Y-COORD (METERS) 435583.56

*** ISCST3 - VERSION 02035 *** *** College Park Acute Non-Cancer Risk *** 05/12/09

**MODELOPTs: CONC URBAN FLAT NOCALM 10:41:01 PAGE 15

*** THE 1ST HIGHEST 6-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL INCLUDING SOURCE(S): SSL, SSBL, SSRF, SSSP

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF ACUTEHI IN /RISK/PER/MILLION/ **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC (YYMMDDHH)

*** ISCST3 - VERSION 02035 *** *** College Park Acute Non-Cancer Risk *** 05/12/09

**MODELOPTs:
CONC

URBAN FLAT

NOCALM

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*** THE SUMMARY OF HIGHEST 6-HR RESULTS ***

** CONC OF ACUTEHI IN /RISK/PER/MILLION/

**

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS 0.00184	ON 81121206: AT (	435542.75, 3773325.25,	0.00, 0.00)	GC UCART1

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

*** ISCST3 - VERSION 02035 ***
*** College Park Acute Non-Cancer Risk
*** Benzene Sources - Sensitive Receptors

*** 05/12/09
10:41:01
PAGE 17

**MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 490 Informational Message(s)
A Total of 490 Calm Hours Identified

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

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST3 Finishes Successfully ***

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 09:50:17
**MODELOPTs: URBAN FLAT NOCALM PAGE 1
CONC

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**NO GAS DRY DEPOSITION Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates PERIOD Averages Only

**This Run Includes: 4 Source(s); 1 Source Group(s); and 455 Receptor(s)

**The Model Assumes A Pollutant Type of: CNSRSR

**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
 Emission Units = /GRAMS/PER/SECOND/ ; Emission Rate Unit Factor = 0.29000E+08
 Output Units = /RISK/PER/MILLION/

**Approximate Storage Requirements of Model = 1.2 MB of RAM.

**Input Runstream File: CPBenzSR.INP

**Output Print File: CPBenzSR.OUT

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 09:50:17
**MODELOPTs: URBAN FLAT NOCALM PAGE 2
CONC

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
SSL	0	0.58300E-04	435523.8	3773350.8	0.0	3.66	0.00	0.00	0.05	NO	
SSBL	0	0.34700E-05	435523.8	3773350.8	0.0	3.66	0.00	0.00	0.05	NO	

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 09:50:17
**MODELOPTs: URBAN FLAT NOCALM PAGE 3
CONC

*** 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)	EMISSION RATE SCALAR VARY BY
SSRF	0	0.44500E-04	435523.7	3773350.8	0.0	1.00	3.02	2.33	
SSSP	0	0.19420E-03	435523.7	3773350.8	0.0	0.00	3.02	2.33	

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 09:50:17
**MODELOPTs: URBAN FLAT NOCALM PAGE 4
CONC

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID

SOURCE IDs

ALL SSL , SSBL , SSRF , SSSP , *** College Park Cancer Risk *** 05/12/09
*** ISCST3 - VERSION 02035 *** *** Benzene Sources - Sensitive Receptors *** 09:50:17
**MODELOPTs: URBAN FLAT NOCALM PAGE 5
CONC

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

435175.4	435195.8	435216.2	435236.6	435257.0	435277.4	435297.8	435318.3	435338.7	435359.1
435379.5	435399.9	435420.3	435440.7	435461.1	435481.5	435501.9	435522.3	435542.8	435563.2

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING RURAL	HEIGHT (M) URBAN	USTAR (M/S)	M-O (M)	LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.00	284.3	7	522.6	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	02	147.4	1.00	284.3	7	507.0	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	03	152.5	1.34	283.1	7	491.4	170.0	0.0000		0.0	0.0000	0	0.00

81	01	01	04	166.0	0.00	283.1	7	475.8	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	05	151.5	0.00	282.6	7	460.3	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	06	139.5	1.34	283.1	7	444.7	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	07	162.0	1.34	285.4	6	1.4	170.7	0.0000	0.0	0.0000	0	0.00
81	01	01	08	157.1	0.00	287.6	5	47.0	192.0	0.0000	0.0	0.0000	0	0.00
81	01	01	09	344.0	1.00	289.8	4	92.5	213.3	0.0000	0.0	0.0000	0	0.00
81	01	01	10	346.6	0.00	291.5	3	138.0	234.7	0.0000	0.0	0.0000	0	0.00
81	01	01	11	314.1	1.00	294.3	2	183.5	256.0	0.0000	0.0	0.0000	0	0.00
81	01	01	12	238.1	1.34	297.6	2	229.0	277.3	0.0000	0.0	0.0000	0	0.00
81	01	01	13	357.2	1.79	298.7	3	274.5	298.7	0.0000	0.0	0.0000	0	0.00
81	01	01	14	34.2	2.24	299.8	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	15	44.8	3.13	299.3	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	16	75.7	3.13	298.7	4	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	17	65.1	1.79	295.4	5	325.6	318.5	0.0000	0.0	0.0000	0	0.00
81	01	01	18	97.6	1.34	291.5	6	357.2	310.3	0.0000	0.0	0.0000	0	0.00
81	01	01	19	133.0	1.00	289.8	7	388.8	302.1	0.0000	0.0	0.0000	0	0.00
81	01	01	20	145.7	0.00	287.0	7	420.4	293.9	0.0000	0.0	0.0000	0	0.00
81	01	01	21	223.6	1.00	286.5	7	452.0	285.7	0.0000	0.0	0.0000	0	0.00
81	01	01	22	159.5	1.00	287.0	7	483.5	277.4	0.0000	0.0	0.0000	0	0.00
81	01	01	23	158.2	1.34	285.9	7	515.1	269.2	0.0000	0.0	0.0000	0	0.00
81	01	01	24	134.7	1.00	285.4	7	546.7	261.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** ISCST3 - VERSION 02035 ***

*** College Park Cancer Risk
*** Benzene Sources - Sensitive Receptors

*** 05/12/09
09:50:17
PAGE 10

**MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE PERIOD (. 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435175.38	435195.78	435216.19	435236.59	435257.00	435277.44	435297.84	435318.25	435338.66
3773407.25	0.01439	0.01600	0.01791	0.02021	0.02302	0.02654	0.03102	0.03686	0.04473
3773386.75	0.01534	0.01705	0.01909	0.02153	0.02450	0.02818	0.03279	0.03872	0.04655
3773366.25	0.01652	0.01843	0.02071	0.02345	0.02680	0.03094	0.03616	0.04285	0.05166
3773345.75	0.01774	0.01988	0.02245	0.02556	0.02939	0.03418	0.04028	0.04822	0.05882
3773325.25	0.01903	0.02143	0.02434	0.02790	0.03233	0.03795	0.04522	0.05487	0.06804
3773304.75	0.02070	0.02347	0.02685	0.03105	0.03632	0.04308	0.05188	0.06359	0.07950
3773284.25	0.02281	0.02600	0.02990	0.03470	0.04069	0.04824	0.05783	0.07010	0.08587
3773263.75	0.02495	0.02842	0.03257	0.03758	0.04366	0.05103	0.05994	0.07064	0.08325
3773243.25	0.02656	0.03001	0.03405	0.03877	0.04426	0.05060	0.05779	0.06578	0.07439
3773222.75	0.02729	0.03048	0.03410	0.03815	0.04264	0.04754	0.05275	0.05820	0.06394
3773202.25	0.02714	0.02989	0.03289	0.03610	0.03950	0.04303	0.04669	0.05058	0.05489
3773181.75	0.02622	0.02845	0.03079	0.03321	0.03570	0.03830	0.04107	0.04418	0.04787
3773161.25	0.02475	0.02645	0.02826	0.03009	0.03200	0.03408	0.03640	0.03915	0.04284
3773140.75	0.02298	0.02433	0.02571	0.02718	0.02878	0.03057	0.03266	0.03543	0.03980
3773120.25	0.02116	0.02224	0.02340	0.02466	0.02607	0.02771	0.02983	0.03305	0.03849
3773099.75	0.01945	0.02038	0.02140	0.02253	0.02384	0.02550	0.02794	0.03190	0.03823
3773079.25	0.01793	0.01877	0.01969	0.02075	0.02208	0.02307	0.02463	0.02693	0.03027
3773058.75	0.01661	0.01738	0.01825	0.01933	0.02082	0.02209	0.02361	0.02561	0.02827
3773038.25	0.01546	0.01619	0.01708	0.01827	0.02005	0.02275	0.02665	0.03169	0.03729
3773017.75	0.01447	0.01521	0.01619	0.01760	0.01971	0.02275	0.02676	0.03141	0.03602
3772997.25	0.01365	0.01446	0.01560	0.01727	0.01967	0.02287	0.02671	0.03074	0.03437

*** ISCST3 - VERSION 02035 ***

*** College Park Cancer Risk
*** Benzene Sources - Sensitive Receptors

*** 05/12/09
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**MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE PERIOD (. 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435359.06	435379.47	435399.88	435420.28	435440.72	435461.13	435481.53	435501.94	435522.34
3773407.25	0.05571	0.07155	0.09463	0.12644	0.16239	0.20011	0.29540	0.46418	0.71115
3773386.75	0.05725	0.07251	0.09557	0.13293	0.19745	0.30316	0.43754	0.79377	1.56646
3773366.25	0.06358	0.08032	0.10495	0.14351	0.20971	0.33970	0.65398	1.51506	5.68913
3773345.75	0.07346	0.09447	0.12623	0.17755	0.26885	0.45471	0.92611	2.64659	0.00202
3773325.25	0.08669	0.11425	0.15714	0.22794	0.35224	0.57635	0.94286	1.67206	4.34750
3773304.75	0.10159	0.13281	0.17729	0.23970	0.32194	0.42001	0.59416	1.22721	1.75227
3773284.25	0.10602	0.13128	0.16160	0.19586	0.23510	0.30167	0.52018	0.76655	0.93967
3773263.75	0.09767	0.11352	0.13063	0.15059	0.18292	0.27197	0.42938	0.52534	0.58501
3773243.25	0.08351	0.09338	0.10510	0.12317	0.16068	0.25292	0.33010	0.37231	0.39957
3773222.75	0.07024	0.07777	0.08891	0.11231	0.16080	0.21859	0.25526	0.27657	0.29072
3773202.25	0.06005	0.06740	0.08145	0.10975	0.14992	0.18192	0.20234	0.21319	0.22140
3773181.75	0.05299	0.06204	0.07952	0.10653	0.13343	0.15099	0.16418	0.16929	0.17452
3773161.25	0.04901	0.06036	0.07859	0.09971	0.11599	0.12672	0.13579	0.13772	0.14131
3773140.75	0.04751	0.06003	0.07602	0.09055	0.10935	0.10784	0.11409	0.11431	0.11692
3773120.25	0.04729	0.05920	0.07152	0.08090	0.08724	0.09293	0.09715	0.09648	0.09846
3773099.75	0.04712	0.05716	0.06588	0.07192	0.07648	0.08095	0.08369	0.08259	0.08414
3773079.25	0.04630	0.05405	0.05997	0.06404	0.06763	0.07115	0.07282	0.07156	0.07281
3773058.75	0.04470	0.05033	0.05433	0.05731	0.06028	0.06302	0.06394	0.06266	0.06368
3773038.25	0.04247	0.04644	0.04923	0.05160	0.05411	0.05620	0.05660	0.05536	0.05621
3773017.75	0.03987	0.04267	0.04474	0.04674	0.04885	0.05042	0.05046	0.04931	0.05002
3772997.25	0.03717	0.03917	0.04083	0.04257	0.04434	0.04548	0.04529	0.04423	0.04483

*** ISCST3 - VERSION 02035 ***

*** College Park Cancer Risk
*** Benzene Sources - Sensitive Receptors

*** 05/12/09
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PAGE 12

**MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE PERIOD (. 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435542.75	435563.16	435583.56
3773407.25	1.08308	1.04538	0.92916

```

3773386.75 2.39520 2.09566 1.98533
3773366.25 7.96563 4.77956 2.36849
3773345.75 8.03335 2.62351 1.33862
3773325.25 9.76389 3.69265 1.45489
3773304.75 4.73394 3.88672 2.10244
3773284.25 2.30226 2.65858 2.03556
3773263.75 1.24590 1.74466 1.59199
3773243.25 0.74912 1.16320 1.19580
3773222.75 0.49088 0.79646 0.89889
3773202.25 0.34391 0.56220 0.68163
3773181.75 0.25371 0.40930 0.52266
3773161.25 0.19485 0.30689 0.40584
3773140.75 0.15448 0.23638 0.31938
3773120.25 0.12565 0.18651 0.25482
3773099.75 0.10434 0.15034 0.20610
3773079.25 0.08816 0.12347 0.16890
3773058.75 0.07557 0.10308 0.14016
3773038.25 0.06558 0.08731 0.11769
3773017.75 0.05751 0.07489 0.09991
3772997.25 0.05089 0.06495 0.08568
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 09:50:17
**MODELOPTS: URBAN FLAT NOCALM PAGE 13
*** THE PERIOD ( 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,
*** DISCRETE CARTESIAN RECEPTOR POINTS ***
** CONC OF CNSRSR IN /RISK/PER/MILLION/ **
X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
-----
435422.09 3773260.25 0.14665 435440.19 3772988.00 0.04247
435419.38 3772985.75 0.04040 435399.28 3772982.75 0.03833
435379.19 3772981.00 0.03663 435358.72 3772978.50 0.03470
435340.44 3772975.75 0.03259 435318.91 3772973.25 0.02963
435297.38 3772971.00 0.02620 435277.28 3772968.25 0.02291
435256.84 3772965.25 0.01982 435235.31 3772962.00 0.01710
435217.00 3772960.00 0.01526 435196.19 3772955.50 0.01366
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 09:50:17
**MODELOPTS: URBAN FLAT NOCALM PAGE 14
*** THE SUMMARY OF MAXIMUM PERIOD ( 8760 HRS) RESULTS ***
** CONC OF CNSRSR IN /RISK/PER/MILLION/ **
GROUP ID AVERAGE CONC RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE NETWORK GRID-ID
-----
ALL 1ST HIGHEST VALUE IS 9.76389 AT ( 435542.75, 3773325.25, 0.00, 0.00) GC UCART1
2ND HIGHEST VALUE IS 8.03335 AT ( 435542.75, 3773345.75, 0.00, 0.00) GC UCART1
3RD HIGHEST VALUE IS 7.96563 AT ( 435542.75, 3773366.25, 0.00, 0.00) GC UCART1
4TH HIGHEST VALUE IS 5.68913 AT ( 435522.34, 3773366.25, 0.00, 0.00) GC UCART1
5TH HIGHEST VALUE IS 4.77956 AT ( 435563.16, 3773366.25, 0.00, 0.00) GC UCART1
6TH HIGHEST VALUE IS 4.73394 AT ( 435542.75, 3773304.75, 0.00, 0.00) GC UCART1
7TH HIGHEST VALUE IS 4.34750 AT ( 435522.34, 3773325.25, 0.00, 0.00) GC UCART1
8TH HIGHEST VALUE IS 3.88672 AT ( 435563.16, 3773304.75, 0.00, 0.00) GC UCART1
9TH HIGHEST VALUE IS 3.69265 AT ( 435563.16, 3773325.25, 0.00, 0.00) GC UCART1
10TH HIGHEST VALUE IS 2.65858 AT ( 435563.16, 3773284.25, 0.00, 0.00) GC UCART1
*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 09:50:17
**MODELOPTS: URBAN FLAT NOCALM PAGE 15
*** Message Summary : ISCST3 Model Execution ***
----- Summary of Total Messages -----
A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 490 Informational Message(s)
A Total of 490 Calm Hours Identified
***** FATAL ERROR MESSAGES *****
*** NONE ***
***** WARNING MESSAGES *****
*** NONE ***
*****
*** ISCST3 Finishes Successfully ***
*****

```

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Worker Receptors *** 09:52:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 1
CONC

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**NO GAS DRY DEPOSITION Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates PERIOD Averages Only

**This Run Includes: 4 Source(s); 1 Source Group(s); and 455 Receptor(s)

**The Model Assumes A Pollutant Type of: CNSRSR

**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
 Emission Units = /GRAMS/PER/SECOND/ ; Emission Rate Unit Factor = 0.57000E+07
 Output Units = /RISK/PER/MILLION/

**Approximate Storage Requirements of Model = 1.2 MB of RAM.

**Input Runstream File: CPBenzWR.INP

**Output Print File: CPBenzWR.OUT

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Worker Receptors *** 09:52:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 2
CONC

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
SSL	0	0.58300E-04	435523.8	3773350.8	0.0	3.66	0.00	0.00	0.05	NO	
SSBL	0	0.34700E-05	435523.8	3773350.8	0.0	3.66	0.00	0.00	0.05	NO	

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Worker Receptors *** 09:52:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 3
CONC

*** 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)	EMISSION RATE SCALAR VARY BY
SSRF	0	0.44500E-04	435523.7	3773350.8	0.0	1.00	3.02	2.33	
SSSP	0	0.19420E-03	435523.7	3773350.8	0.0	0.00	3.02	2.33	

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Worker Receptors *** 09:52:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 4
CONC

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL SSL , SSBL , SSRF , SSSP , *** College Park Cancer Risk *** 05/12/09
*** ISCST3 - VERSION 02035 *** *** Benzene Sources - Worker Receptors *** 09:52:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 5
CONC

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

435175.4	435195.8	435216.2	435236.6	435257.0	435277.4	435297.8	435318.3	435338.7	435359.1
435379.5	435399.9	435420.3	435440.7	435461.1	435481.5	435501.9	435522.3	435542.8	435563.2

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING RURAL	HEIGHT (M) URBAN	USTAR (M/S)	M-O (M)	LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.00	284.3	7	522.6	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	02	147.4	1.00	284.3	7	507.0	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	03	152.5	1.34	283.1	7	491.4	170.0	0.0000		0.0	0.0000	0	0.00

81	01	01	04	166.0	0.00	283.1	7	475.8	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	05	151.5	0.00	282.6	7	460.3	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	06	139.5	1.34	283.1	7	444.7	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	07	162.0	1.34	285.4	6	1.4	170.7	0.0000	0.0	0.0000	0	0.00
81	01	01	08	157.1	0.00	287.6	5	47.0	192.0	0.0000	0.0	0.0000	0	0.00
81	01	01	09	344.0	1.00	289.8	4	92.5	213.3	0.0000	0.0	0.0000	0	0.00
81	01	01	10	346.6	0.00	291.5	3	138.0	234.7	0.0000	0.0	0.0000	0	0.00
81	01	01	11	314.1	1.00	294.3	2	183.5	256.0	0.0000	0.0	0.0000	0	0.00
81	01	01	12	238.1	1.34	297.6	2	229.0	277.3	0.0000	0.0	0.0000	0	0.00
81	01	01	13	357.2	1.79	298.7	3	274.5	298.7	0.0000	0.0	0.0000	0	0.00
81	01	01	14	34.2	2.24	299.8	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	15	44.8	3.13	299.3	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	16	75.7	3.13	298.7	4	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	17	65.1	1.79	295.4	5	325.6	318.5	0.0000	0.0	0.0000	0	0.00
81	01	01	18	97.6	1.34	291.5	6	357.2	310.3	0.0000	0.0	0.0000	0	0.00
81	01	01	19	133.0	1.00	289.8	7	388.8	302.1	0.0000	0.0	0.0000	0	0.00
81	01	01	20	145.7	0.00	287.0	7	420.4	293.9	0.0000	0.0	0.0000	0	0.00
81	01	01	21	223.6	1.00	286.5	7	452.0	285.7	0.0000	0.0	0.0000	0	0.00
81	01	01	22	159.5	1.00	287.0	7	483.5	277.4	0.0000	0.0	0.0000	0	0.00
81	01	01	23	158.2	1.34	285.9	7	515.1	269.2	0.0000	0.0	0.0000	0	0.00
81	01	01	24	134.7	1.00	285.4	7	546.7	261.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** ISCST3 - VERSION 02035 ***

*** College Park Cancer Risk
*** Benzene Sources - Worker Receptors

*** 05/12/09
09:52:15
PAGE 10

**MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE PERIOD (. 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435175.38	435195.78	435216.19	435236.59	435257.00	435277.44	435297.84	435318.25	435338.66
3773407.25	0.00283	0.00314	0.00352	0.00397	0.00453	0.00522	0.00610	0.00724	0.00879
3773386.75	0.00301	0.00335	0.00375	0.00423	0.00482	0.00554	0.00645	0.00761	0.00915
3773366.25	0.00325	0.00362	0.00407	0.00461	0.00527	0.00608	0.00711	0.00842	0.01015
3773345.75	0.00349	0.00391	0.00441	0.00502	0.00578	0.00672	0.00792	0.00948	0.01156
3773325.25	0.00374	0.00421	0.00478	0.00548	0.00635	0.00746	0.00889	0.01078	0.01337
3773304.75	0.00407	0.00461	0.00528	0.00610	0.00714	0.00847	0.01020	0.01250	0.01563
3773284.25	0.00448	0.00511	0.00588	0.00682	0.00800	0.00948	0.01137	0.01378	0.01688
3773263.75	0.00490	0.00559	0.00640	0.00739	0.00858	0.01003	0.01178	0.01388	0.01636
3773243.25	0.00522	0.00599	0.00693	0.00762	0.00870	0.00995	0.01136	0.01293	0.01462
3773222.75	0.00536	0.00599	0.00670	0.00750	0.00838	0.00934	0.01037	0.01144	0.01257
3773202.25	0.00533	0.00588	0.00646	0.00710	0.00776	0.00846	0.00918	0.00994	0.01079
3773181.75	0.00515	0.00559	0.00605	0.00653	0.00702	0.00753	0.00807	0.00868	0.00941
3773161.25	0.00487	0.00521	0.00555	0.00591	0.00629	0.00670	0.00715	0.00769	0.00842
3773140.75	0.00452	0.00478	0.00505	0.00534	0.00566	0.00601	0.00642	0.00696	0.00782
3773120.25	0.00416	0.00437	0.00460	0.00485	0.00512	0.00545	0.00586	0.00650	0.00756
3773099.75	0.00382	0.00401	0.00421	0.00443	0.00469	0.00501	0.00549	0.00627	0.00751
3773079.25	0.00353	0.00369	0.00387	0.00408	0.00434	0.00471	0.00529	0.00621	0.00752
3773058.75	0.00327	0.00342	0.00359	0.00380	0.00409	0.00454	0.00523	0.00623	0.00748
3773038.25	0.00304	0.00318	0.00336	0.00359	0.00394	0.00447	0.00524	0.00623	0.00733
3773017.75	0.00285	0.00299	0.00318	0.00340	0.00387	0.00447	0.00526	0.00617	0.00708
3772997.25	0.00268	0.00284	0.00307	0.00340	0.00387	0.00450	0.00525	0.00604	0.00675

*** ISCST3 - VERSION 02035 ***

*** College Park Cancer Risk
*** Benzene Sources - Worker Receptors

*** 05/12/09
09:52:15
PAGE 11

**MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE PERIOD (. 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435359.06	435379.47	435399.88	435420.28	435440.72	435461.13	435481.53	435501.94	435522.34
3773407.25	0.01095	0.01406	0.01860	0.02485	0.03192	0.03933	0.05806	0.09124	0.13978
3773386.75	0.01125	0.01425	0.01878	0.02613	0.03881	0.05959	0.08600	0.15602	0.30789
3773366.25	0.01250	0.01579	0.02063	0.02821	0.04122	0.06677	0.12854	0.29779	1.11821
3773345.75	0.01444	0.01857	0.02481	0.03490	0.05284	0.08937	0.18203	0.52019	0.00040
3773325.25	0.01704	0.02246	0.03089	0.04480	0.06923	0.11328	0.18532	0.32865	0.85451
3773304.75	0.01997	0.02610	0.03485	0.04711	0.06328	0.08255	0.11678	0.24121	0.34441
3773284.25	0.02084	0.02580	0.03176	0.03850	0.04621	0.05929	0.10224	0.15460	0.18473
3773263.75	0.01920	0.02231	0.02568	0.02960	0.03595	0.05346	0.08440	0.10326	0.11498
3773243.25	0.01641	0.01835	0.02066	0.02421	0.03264	0.04971	0.06488	0.07318	0.07854
3773222.75	0.01381	0.01529	0.01748	0.02208	0.03161	0.04296	0.05017	0.05436	0.05714
3773202.25	0.01180	0.01325	0.01601	0.02157	0.02947	0.03576	0.03977	0.04190	0.04352
3773181.75	0.01041	0.01219	0.01563	0.02094	0.02623	0.02968	0.03227	0.03327	0.03430
3773161.25	0.00963	0.01186	0.01545	0.01960	0.02280	0.02491	0.02669	0.02707	0.02777
3773140.75	0.00934	0.01180	0.01494	0.01780	0.01972	0.02120	0.02243	0.02247	0.02298
3773120.25	0.00929	0.01164	0.01406	0.01590	0.01715	0.01827	0.01910	0.01896	0.01935
3773099.75	0.00926	0.01124	0.01295	0.01414	0.01503	0.01591	0.01645	0.01623	0.01654
3773079.25	0.00910	0.01062	0.01179	0.01259	0.01329	0.01398	0.01431	0.01407	0.01431
3773058.75	0.00879	0.00989	0.01068	0.01127	0.01185	0.01239	0.01257	0.01232	0.01252
3773038.25	0.00835	0.00913	0.00968	0.01014	0.01063	0.01105	0.01112	0.01088	0.01105
3773017.75	0.00784	0.00839	0.00879	0.00919	0.00960	0.00991	0.00992	0.00969	0.00983
3772997.25	0.00730	0.00770	0.00802	0.00837	0.00872	0.00894	0.00890	0.00869	0.00881

*** ISCST3 - VERSION 02035 ***

*** College Park Cancer Risk
*** Benzene Sources - Worker Receptors

*** 05/12/09
09:52:15
PAGE 12

**MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE PERIOD (. 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435542.75	435563.16	435583.56
3773407.25	0.21288	0.20547	0.18263

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3773386.75 | 0.47078 0.41191 0.39022
3773366.25 | 1.56566 0.93943 0.46553
3773345.75 | 1.57897 0.51565 0.26311
3773325.25 | 1.91910 0.72580 0.28596
3773304.75 | 0.93046 0.76394 0.41324
3773284.25 | 0.45251 0.52255 0.40009
3773263.75 | 0.24488 0.34292 0.31291
3773243.25 | 0.14724 0.22863 0.23594
3773222.75 | 0.09648 0.15655 0.17668
3773202.25 | 0.06760 0.11050 0.13397
3773181.75 | 0.04987 0.08045 0.10273
3773161.25 | 0.03830 0.06032 0.07977
3773140.75 | 0.03036 0.04646 0.06277
3773120.25 | 0.02470 0.03666 0.05009
3773099.75 | 0.02051 0.02955 0.04051
3773079.25 | 0.01733 0.02427 0.03320
3773058.75 | 0.01485 0.02026 0.02755
3773038.25 | 0.01289 0.01716 0.02313
3773017.75 | 0.01130 0.01472 0.01964
3772997.25 | 0.01000 0.01277 0.01684
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Worker Receptors *** 09:52:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 13
CONC
*** THE PERIOD ( 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,
*** DISCRETE CARTESIAN RECEPTOR POINTS ***
** CONC OF CNSRSR IN /RISK/PER/MILLION/ **
X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
435422.09 3773260.25 0.02882 435440.19 3772988.00 0.00835
435419.38 3772985.75 0.00794 435399.28 3772982.75 0.00753
435379.19 3772981.00 0.00720 435358.72 3772978.50 0.00682
435340.44 3772975.75 0.00641 435318.91 3772973.25 0.00582
435297.38 3772971.00 0.00515 435277.28 3772968.25 0.00450
435256.84 3772965.25 0.00390 435235.31 3772962.00 0.00336
435217.00 3772960.00 0.00300 435196.19 3772955.50 0.00268
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Worker Receptors *** 09:52:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 14
CONC
*** THE SUMMARY OF MAXIMUM PERIOD ( 8760 HRS) RESULTS ***
** CONC OF CNSRSR IN /RISK/PER/MILLION/ **
GROUP ID AVERAGE CONC RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE NETWORK GRID-ID
ALL 1ST HIGHEST VALUE IS 1.91910 AT ( 435542.75, 3773325.25, 0.00, 0.00) GC UCART1
2ND HIGHEST VALUE IS 1.57897 AT ( 435542.75, 3773345.75, 0.00, 0.00) GC UCART1
3RD HIGHEST VALUE IS 1.56566 AT ( 435542.75, 3773366.25, 0.00, 0.00) GC UCART1
4TH HIGHEST VALUE IS 1.11821 AT ( 435522.34, 3773366.25, 0.00, 0.00) GC UCART1
5TH HIGHEST VALUE IS 0.93943 AT ( 435563.16, 3773366.25, 0.00, 0.00) GC UCART1
6TH HIGHEST VALUE IS 0.93946 AT ( 435542.75, 3773304.75, 0.00, 0.00) GC UCART1
7TH HIGHEST VALUE IS 0.85451 AT ( 435522.34, 3773325.25, 0.00, 0.00) GC UCART1
8TH HIGHEST VALUE IS 0.76394 AT ( 435563.16, 3773304.75, 0.00, 0.00) GC UCART1
9TH HIGHEST VALUE IS 0.72580 AT ( 435563.16, 3773325.25, 0.00, 0.00) GC UCART1
10TH HIGHEST VALUE IS 0.52255 AT ( 435563.16, 3773284.25, 0.00, 0.00) GC UCART1
*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** Benzene Sources - Worker Receptors *** 09:52:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 15
CONC
*** Message Summary : ISCST3 Model Execution ***
----- Summary of Total Messages -----
A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 490 Informational Message(s)
A Total of 490 Calm Hours Identified
***** FATAL ERROR MESSAGES *****
*** NONE ***
***** WARNING MESSAGES *****
*** NONE ***
*****
*** ISCST3 Finishes Successfully ***
*****

```

*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 10:35:19
**MODELOPTs: URBAN FLAT NOCALM PAGE 1
CONC

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**NO GAS DRY DEPOSITION Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates PERIOD Averages Only

**This Run Includes: 4 Source(s); 1 Source Group(s); and 455 Receptor(s)

**The Model Assumes A Pollutant Type of: CHRNCHI

**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = /GRAMS/PER/SECOND/ ; Emission Rate Unit Factor = 16667.
Output Units = /RISK/PER/MILLION/

**Approximate Storage Requirements of Model = 1.2 MB of RAM.

**Input Runstream File: CPBenSRC.INP

**Output Print File: CPBenSRC.OUT

*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 10:35:19
**MODELOPTs: URBAN FLAT NOCALM PAGE 2
CONC

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
SSL	0	0.58300E-04	435523.8	3773350.8	0.0	3.66	0.00	0.00	0.05	NO	
SSBL	0	0.34700E-05	435523.8	3773350.8	0.0	3.66	0.00	0.00	0.05	NO	

*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 10:35:19
**MODELOPTs: URBAN FLAT NOCALM PAGE 3
CONC

*** 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)	EMISSION RATE SCALAR VARY BY
SSRF	0	0.44500E-04	435523.7	3773350.8	0.0	1.00	3.02	2.33	
SSSP	0	0.19420E-03	435523.7	3773350.8	0.0	0.00	3.02	2.33	

*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 10:35:19
**MODELOPTs: URBAN FLAT NOCALM PAGE 4
CONC

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID

SOURCE IDs

ALL SSL , SSBL , SSRF , SSSP , ***
*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** Benzene Sources - Sensitive Receptors *** 10:35:19
**MODELOPTs: URBAN FLAT NOCALM PAGE 5
CONC

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

435175.4	435195.8	435216.2	435236.6	435257.0	435277.4	435297.8	435318.3	435338.7	435359.1
435379.5	435399.9	435420.3	435440.7	435461.1	435481.5	435501.9	435522.3	435542.8	435563.2

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING RURAL	HEIGHT (M) URBAN	USTAR (M/S)	M-O (M)	LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.00	284.3	7	522.6	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	02	147.4	1.00	284.3	7	507.0	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	03	152.5	1.34	283.1	7	491.4	170.0	0.0000		0.0	0.0000	0	0.00

81 01 01 04 166.0 0.00 283.1 7 475.8 170.0 0.0000 0.0 0.0000 0 0.00
81 01 01 05 151.5 0.00 282.6 7 460.3 170.0 0.0000 0.0 0.0000 0 0.00
81 01 01 06 139.5 1.34 283.1 7 444.7 170.0 0.0000 0.0 0.0000 0 0.00
81 01 01 07 162.0 1.34 285.4 6 1.4 170.7 0.0000 0.0 0.0000 0 0.00
81 01 01 08 157.1 0.00 287.6 5 47.0 192.0 0.0000 0.0 0.0000 0 0.00
81 01 01 09 344.0 1.00 289.8 4 92.5 213.3 0.0000 0.0 0.0000 0 0.00
81 01 01 10 346.6 0.00 291.5 3 138.0 234.7 0.0000 0.0 0.0000 0 0.00
81 01 01 11 314.1 1.00 294.3 2 183.5 256.0 0.0000 0.0 0.0000 0 0.00
81 01 01 12 238.1 1.34 297.6 2 229.0 277.3 0.0000 0.0 0.0000 0 0.00
81 01 01 13 357.2 1.79 298.7 3 274.5 298.7 0.0000 0.0 0.0000 0 0.00
81 01 01 14 34.2 2.24 299.8 3 320.0 320.0 0.0000 0.0 0.0000 0 0.00
81 01 01 15 44.8 3.13 299.3 3 320.0 320.0 0.0000 0.0 0.0000 0 0.00
81 01 01 16 75.7 3.13 298.7 4 320.0 320.0 0.0000 0.0 0.0000 0 0.00
81 01 01 17 65.1 1.79 295.4 5 325.6 318.5 0.0000 0.0 0.0000 0 0.00
81 01 01 18 97.6 1.34 291.5 6 357.2 310.3 0.0000 0.0 0.0000 0 0.00
81 01 01 19 133.0 1.00 289.8 7 388.8 302.1 0.0000 0.0 0.0000 0 0.00
81 01 01 20 145.7 0.00 287.0 7 420.4 293.9 0.0000 0.0 0.0000 0 0.00
81 01 01 21 223.6 1.00 286.5 7 452.0 285.7 0.0000 0.0 0.0000 0 0.00
81 01 01 22 159.5 1.00 287.0 7 483.5 277.4 0.0000 0.0 0.0000 0 0.00
81 01 01 23 158.2 1.34 285.9 7 515.1 269.2 0.0000 0.0 0.0000 0 0.00
81 01 01 24 134.7 1.00 285.4 7 546.7 261.0 0.0000 0.0 0.0000 0 0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.

FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** ISCST3 - VERSION 02035 ***

*** College Park Chronic Non-Cancer Risk
Benzene Sources - Sensitive Receptors

05/12/09

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**MODELOPTs:

CONC

URBAN FLAT

NOCALM

*** THE PERIOD (. 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CHRNCI IN /RISK/PER/MILLION/

**

Y-COORD (METERS)	435175.38	435195.78	435216.19	435236.59	X-COORD (METERS) 435257.00	435277.44	435297.84	435318.25	435338.66
3773407.25	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00003
3773386.75	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00003
3773366.25	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00003
3773345.75	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00003
3773325.25	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00003	0.00003
3773304.75	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004
3773284.25	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004
3773263.75	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004
3773243.25	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00003	0.00003	0.00004
3773222.75	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00003	0.00003	0.00004
3773202.25	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00003	0.00003	0.00003
3773181.75	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
3773161.25	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002
3773140.75	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002
3773120.25	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002
3773099.75	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002
3773079.25	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002
3773058.75	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002
3773038.25	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002
3773017.75	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002
3772997.25	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002

*** ISCST3 - VERSION 02035 ***

*** College Park Chronic Non-Cancer Risk
Benzene Sources - Sensitive Receptors

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**MODELOPTs:

CONC

URBAN FLAT

NOCALM

*** THE PERIOD (. 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CHRNCI IN /RISK/PER/MILLION/

**

Y-COORD (METERS)	435359.06	435379.47	435399.88	435420.28	X-COORD (METERS) 435440.72	435461.13	435481.53	435501.94	435522.34
3773407.25	0.00003	0.00004	0.00005	0.00007	0.00009	0.00012	0.00017	0.00027	0.00041
3773386.75	0.00003	0.00004	0.00005	0.00008	0.00011	0.00017	0.00025	0.00046	0.00090
3773366.25	0.00004	0.00005	0.00006	0.00008	0.00012	0.00020	0.00038	0.00087	0.00327
3773345.75	0.00004	0.00005	0.00007	0.00010	0.00015	0.00026	0.00053	0.00152	0.00000
3773325.25	0.00005	0.00007	0.00009	0.00013	0.00020	0.00033	0.00054	0.00096	0.00250
3773304.75	0.00006	0.00008	0.00010	0.00014	0.00019	0.00024	0.00034	0.00071	0.00101
3773284.25	0.00006	0.00008	0.00009	0.00011	0.00014	0.00017	0.00030	0.00045	0.00054
3773263.75	0.00006	0.00007	0.00008	0.00009	0.00011	0.00016	0.00025	0.00030	0.00034
3773243.25	0.00005	0.00005	0.00006	0.00007	0.00010	0.00015	0.00019	0.00021	0.00023
3773222.75	0.00004	0.00004	0.00005	0.00006	0.00009	0.00013	0.00015	0.00016	0.00017
3773202.25	0.00003	0.00004	0.00005	0.00006	0.00009	0.00010	0.00012	0.00012	0.00013
3773181.75	0.00003	0.00004	0.00005	0.00006	0.00008	0.00009	0.00009	0.00010	0.00010
3773161.25	0.00003	0.00003	0.00005	0.00006	0.00007	0.00007	0.00008	0.00008	0.00008
3773140.75	0.00003	0.00003	0.00004	0.00005	0.00006	0.00007	0.00007	0.00007	0.00007
3773120.25	0.00003	0.00003	0.00004	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006
3773099.75	0.00003	0.00003	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005
3773079.25	0.00003	0.00003	0.00003	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004
3773058.75	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003
3773038.25	0.00002	0.00002	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003
3773017.75	0.00002	0.00002	0.00002	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003
3772997.25	0.00002	0.00002	0.00002	0.00002	0.00003	0.00003	0.00003	0.00003	0.00003

*** ISCST3 - VERSION 02035 ***

*** College Park Chronic Non-Cancer Risk
Benzene Sources - Sensitive Receptors

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**MODELOPTs:

CONC

URBAN FLAT

NOCALM

*** THE PERIOD (. 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): SSL , SSBL , SSRF , SSSP ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CHRNCI IN /RISK/PER/MILLION/

**

Y-COORD (METERS)	435542.75	435563.16	435583.56
3773407.25	0.00062	0.00060	0.00053

```

3773386.75      0.00138      0.00120      0.00114
3773366.25      0.00458      0.00275      0.00136
3773345.75      0.00462      0.00151      0.00077
3773325.25      0.00561      0.00212      0.00084
3773304.75      0.00272      0.00223      0.00121
3773284.25      0.00132      0.00153      0.00117
3773263.75      0.00072      0.00100      0.00091
3773243.25      0.00043      0.00067      0.00069
3773222.75      0.00028      0.00046      0.00052
3773202.25      0.00020      0.00032      0.00039
3773181.75      0.00015      0.00024      0.00030
3773161.25      0.00011      0.00018      0.00023
3773140.75      0.00009      0.00014      0.00018
3773120.25      0.00007      0.00011      0.00015
3773099.75      0.00006      0.00009      0.00012
3773079.25      0.00005      0.00007      0.00010
3773058.75      0.00004      0.00006      0.00008
3773038.25      0.00004      0.00005      0.00007
3773017.75      0.00003      0.00004      0.00006
3772997.25      0.00003      0.00004      0.00005
*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer Risk
*** Benzene Sources - Sensitive Receptors
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**MODELOPTS:
CONC      URBAN FLAT      NOCALM

*** THE PERIOD ( 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S):      SSL      , SSBL      , SSRF      , SSSP      ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CHRNCI IN /RISK/PER/MILLION/

X-COORD (M)      Y-COORD (M)      CONC      X-COORD (M)      Y-COORD (M)      CONC
-----
435422.09      3773260.25      0.00008      435440.19      3772988.00      0.00002
435419.38      3772985.75      0.00002      435399.28      3772982.75      0.00002
435379.19      3772981.00      0.00002      435358.72      3772978.50      0.00002
435340.44      3772975.75      0.00002      435318.91      3772973.25      0.00002
435297.38      3772971.00      0.00002      435277.28      3772968.25      0.00001
435256.84      3772965.25      0.00001      435235.31      3772962.00      0.00001
435217.00      3772960.00      0.00001      435196.19      3772955.50      0.00001
*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer Risk
*** Benzene Sources - Sensitive Receptors
05/12/99
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**MODELOPTS:
CONC      URBAN FLAT      NOCALM

*** THE SUMMARY OF MAXIMUM PERIOD ( 8760 HRS) RESULTS ***

** CONC OF CHRNCI IN /RISK/PER/MILLION/

GROUP ID      AVERAGE CONC      RECEPTOR (XR, YR, ZELEV, ZFLAG)      OF TYPE      NETWORK GRID-ID
-----
ALL      1ST HIGHEST VALUE IS      0.00561 AT ( 435542.75, 3773325.25, 0.00, 0.00)      GC      UCART1
      2ND HIGHEST VALUE IS      0.00462 AT ( 435542.75, 3773345.75, 0.00, 0.00)      GC      UCART1
      3RD HIGHEST VALUE IS      0.00458 AT ( 435542.75, 3773366.25, 0.00, 0.00)      GC      UCART1
      4TH HIGHEST VALUE IS      0.00327 AT ( 435522.34, 3773366.25, 0.00, 0.00)      GC      UCART1
      5TH HIGHEST VALUE IS      0.00275 AT ( 435563.16, 3773366.25, 0.00, 0.00)      GC      UCART1
      6TH HIGHEST VALUE IS      0.00272 AT ( 435542.75, 3773304.75, 0.00, 0.00)      GC      UCART1
      7TH HIGHEST VALUE IS      0.00250 AT ( 435522.34, 3773325.25, 0.00, 0.00)      GC      UCART1
      8TH HIGHEST VALUE IS      0.00223 AT ( 435563.16, 3773304.75, 0.00, 0.00)      GC      UCART1
      9TH HIGHEST VALUE IS      0.00212 AT ( 435563.16, 3773325.25, 0.00, 0.00)      GC      UCART1
      10TH HIGHEST VALUE IS      0.00153 AT ( 435563.16, 3773284.25, 0.00, 0.00)      GC      UCART1

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

*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer Risk
*** Benzene Sources - Sensitive Receptors
05/12/99
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**MODELOPTS:
CONC      URBAN FLAT      NOCALM

*** Message Summary : ISCST3 Model Execution ***

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

A Total of      0 Fatal Error Message(s)
A Total of      0 Warning Message(s)
A Total of      490 Informational Message(s)

A Total of      490 Calm Hours Identified

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

***** WARNING MESSAGES *****
*** NONE ***

*****
*** ISCST3 Finishes Successfully ***
*****

```

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 09:33:41
**MODELOPTs: URBAN FLAT NOCALM PAGE 1
CONC

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**NO GAS DRY DEPOSITION Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates PERIOD Averages Only

**This Run Includes: 264 Source(s); 1 Source Group(s); and 455 Receptor(s)

**The Model Assumes A Pollutant Type of: CNSRSR

**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = /GRAMS/PER/SECOND/ ; Emission Rate Unit Factor = 0.31850E+09
Output Units = /RISK/PER/MILLION/

**Approximate Storage Requirements of Model = 1.5 MB of RAM.

**Input Runstream File:

CPDPMSR.INP

**Output Print File:

CPDPMSR.OUT

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 09:33:41

**MODELOPTs: URBAN FLAT NOCALM PAGE 2
CONC

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG. K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
TRKIDL	0	0.72400E-04	435205.9	3772868.5	0.0	4.15	366.48	51.70	0.10	NO	HROFDY
GASIDL	0	0.90600E-06	435550.9	3773343.8	0.0	4.15	366.48	51.70	0.10	NO	HROFDY
H2OII	0	0.23700E-05	435257.7	3772814.8	0.0	4.15	366.48	51.70	0.10	NO	HROFDY

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 09:33:41

**MODELOPTs: URBAN FLAT NOCALM PAGE 3
CONC

*** 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)	EMISSION RATE SCALAR VARY BY
L0003357	0	0.28898E-05	435575.0	3772933.8	0.0	4.15	3.33	0.23	HROFDY
L0003358	0	0.28898E-05	435567.9	3772932.8	0.0	4.15	3.33	0.23	HROFDY
L0003359	0	0.28898E-05	435560.8	3772931.5	0.0	4.15	3.33	0.23	HROFDY
L0003360	0	0.28898E-05	435553.8	3772930.5	0.0	4.15	3.33	0.23	HROFDY
L0003361	0	0.28898E-05	435546.7	3772929.5	0.0	4.15	3.33	0.23	HROFDY
L0003362	0	0.28898E-05	435539.6	3772928.3	0.0	4.15	3.33	0.23	HROFDY
L0003363	0	0.28898E-05	435532.5	3772927.3	0.0	4.15	3.33	0.23	HROFDY
L0003364	0	0.28898E-05	435525.4	3772926.3	0.0	4.15	3.33	0.23	HROFDY
L0003365	0	0.28898E-05	435518.3	3772925.0	0.0	4.15	3.33	0.23	HROFDY
L0003366	0	0.28898E-05	435511.2	3772924.0	0.0	4.15	3.33	0.23	HROFDY
L0003367	0	0.28898E-05	435504.2	3772923.0	0.0	4.15	3.33	0.23	HROFDY
L0003368	0	0.28898E-05	435497.1	3772921.8	0.0	4.15	3.33	0.23	HROFDY
L0003369	0	0.28898E-05	435490.0	3772920.8	0.0	4.15	3.33	0.23	HROFDY
L0003370	0	0.28898E-05	435482.9	3772919.8	0.0	4.15	3.33	0.23	HROFDY
L0003371	0	0.28898E-05	435475.8	3772918.5	0.0	4.15	3.33	0.23	HROFDY
L0003372	0	0.28898E-05	435468.7	3772917.5	0.0	4.15	3.33	0.23	HROFDY
L0003373	0	0.28898E-05	435462.2	3772915.0	0.0	4.15	3.29	0.23	HROFDY
L0003374	0	0.28898E-05	435455.9	3772911.8	0.0	4.15	3.29	0.23	HROFDY
L0003375	0	0.28898E-05	435449.6	3772908.5	0.0	4.15	3.29	0.23	HROFDY
L0003376	0	0.28898E-05	435443.3	3772905.3	0.0	4.15	3.29	0.23	HROFDY
L0003377	0	0.28898E-05	435437.0	3772902.0	0.0	4.15	3.29	0.23	HROFDY
L0003378	0	0.28898E-05	435430.7	3772899.0	0.0	4.15	3.29	0.23	HROFDY
L0003379	0	0.28898E-05	435424.3	3772895.8	0.0	4.15	3.29	0.23	HROFDY
L0003380	0	0.28898E-05	435418.0	3772892.5	0.0	4.15	3.29	0.23	HROFDY
L0003381	0	0.28898E-05	435411.7	3772889.3	0.0	4.15	3.29	0.23	HROFDY
L0003382	0	0.28898E-05	435405.4	3772886.3	0.0	4.15	3.29	0.23	HROFDY
L0003383	0	0.28898E-05	435399.1	3772883.0	0.0	4.15	3.29	0.23	HROFDY
L0003384	0	0.28898E-05	435392.8	3772879.8	0.0	4.15	3.29	0.23	HROFDY
L0003385	0	0.28898E-05	435386.4	3772876.5	0.0	4.15	3.29	0.23	HROFDY
L0003386	0	0.28898E-05	435380.1	3772873.3	0.0	4.15	3.29	0.23	HROFDY
L0003387	0	0.28898E-05	435373.8	3772870.3	0.0	4.15	3.29	0.23	HROFDY

L0003388	0	0.28898E-05	435367.5	3772867.0	0.0	4.15	3.29	0.23	HROFDY
L0003389	0	0.28898E-05	435361.2	3772863.8	0.0	4.15	3.29	0.23	HROFDY
L0003390	0	0.28898E-05	435354.8	3772860.5	0.0	4.15	3.29	0.23	HROFDY
L0003391	0	0.28898E-05	435351.8	3772855.0	0.0	4.15	3.19	0.23	HROFDY
L0003392	0	0.28898E-05	435349.8	3772848.5	0.0	4.15	3.19	0.23	HROFDY
L0003393	0	0.28898E-05	435347.8	3772841.8	0.0	4.15	3.19	0.23	HROFDY
L0003394	0	0.28898E-05	435345.8	3772835.3	0.0	4.15	3.19	0.23	HROFDY
L0003395	0	0.28898E-05	435341.2	3772830.3	0.0	4.15	3.28	0.23	HROFDY
L0003396	0	0.28898E-05	435335.7	3772826.0	0.0	4.15	3.28	0.23	HROFDY

*** ISCST3 - VERSION 02035 *** College Park Cancer Risk
*** DPM Sources - Sensitive Receptors (2009 to 2079)

**MODELOPTs:
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*** 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)	EMISSION RATE SCALAR VARY BY
L0003397	0	0.28898E-05	435330.2	3772821.5	0.0	4.15	3.28	0.23	HROFDY
L0003398	0	0.28898E-05	435324.6	3772817.3	0.0	4.15	3.28	0.23	HROFDY
L0003399	0	0.28898E-05	435318.3	3772815.8	0.0	4.15	3.10	0.23	HROFDY
L0003400	0	0.28898E-05	435311.7	3772815.3	0.0	4.15	3.10	0.23	HROFDY
L0003401	0	0.28898E-05	435305.0	3772814.8	0.0	4.15	3.10	0.23	HROFDY
L0003402	0	0.28898E-05	435298.4	3772814.5	0.0	4.15	3.10	0.23	HROFDY
L0003403	0	0.28898E-05	435291.7	3772814.0	0.0	4.15	3.10	0.23	HROFDY
L0003404	0	0.28898E-05	435285.1	3772813.5	0.0	4.15	3.10	0.23	HROFDY
L0003405	0	0.28898E-05	435278.4	3772813.3	0.0	4.15	3.10	0.23	HROFDY
L0003406	0	0.28898E-05	435271.8	3772812.8	0.0	4.15	3.10	0.23	HROFDY
L0003407	0	0.28898E-05	435265.1	3772812.3	0.0	4.15	3.10	0.23	HROFDY
L0003408	0	0.28898E-05	435258.8	3772813.3	0.0	4.15	2.97	0.23	HROFDY
L0003409	0	0.28898E-05	435252.6	3772814.8	0.0	4.15	2.97	0.23	HROFDY
L0003410	0	0.28898E-05	435246.4	3772816.3	0.0	4.15	2.97	0.23	HROFDY
L0003411	0	0.28898E-05	435240.1	3772817.5	0.0	4.15	2.97	0.23	HROFDY
L0003412	0	0.28898E-05	435233.9	3772819.0	0.0	4.15	2.97	0.23	HROFDY
L0003413	0	0.28898E-05	435227.7	3772820.5	0.0	4.15	2.97	0.23	HROFDY
L0003414	0	0.28898E-05	435221.5	3772821.8	0.0	4.15	2.97	0.23	HROFDY
L0003415	0	0.28898E-05	435216.9	3772825.3	0.0	4.15	2.73	0.23	HROFDY
L0003416	0	0.28898E-05	435212.8	3772829.5	0.0	4.15	2.73	0.23	HROFDY
L0003417	0	0.28898E-05	435208.8	3772833.8	0.0	4.15	2.73	0.23	HROFDY
L0003418	0	0.28898E-05	435204.7	3772838.0	0.0	4.15	2.73	0.23	HROFDY
L0003419	0	0.28898E-05	435204.2	3772843.8	0.0	4.15	2.96	0.23	HROFDY
L0003420	0	0.28898E-05	435205.1	3772850.0	0.0	4.15	2.96	0.23	HROFDY
L0003421	0	0.28898E-05	435206.1	3772856.3	0.0	4.15	2.96	0.23	HROFDY
L0003422	0	0.28898E-05	435207.0	3772862.8	0.0	4.15	2.96	0.23	HROFDY
L0003423	0	0.28898E-05	435208.0	3772869.0	0.0	4.15	2.96	0.23	HROFDY
L0003424	0	0.28898E-05	435209.1	3772875.5	0.0	4.15	3.07	0.23	HROFDY
L0003425	0	0.28898E-05	435210.2	3772882.0	0.0	4.15	3.07	0.23	HROFDY
L0003426	0	0.28898E-05	435211.3	3772888.5	0.0	4.15	3.07	0.23	HROFDY
L0003427	0	0.28898E-05	435212.4	3772895.0	0.0	4.15	3.07	0.23	HROFDY
L0003428	0	0.28898E-05	435213.5	3772901.5	0.0	4.15	3.07	0.23	HROFDY
L0003429	0	0.28898E-05	435214.7	3772908.0	0.0	4.15	3.07	0.23	HROFDY
L0003430	0	0.28898E-05	435215.8	3772914.5	0.0	4.15	3.07	0.23	HROFDY
L0003431	0	0.28898E-05	435216.9	3772921.0	0.0	4.15	3.07	0.23	HROFDY
L0003432	0	0.28898E-05	435222.1	3772924.5	0.0	4.15	3.31	0.23	HROFDY
L0003433	0	0.28898E-05	435228.8	3772927.0	0.0	4.15	3.31	0.23	HROFDY
L0003434	0	0.28898E-05	435235.4	3772929.5	0.0	4.15	3.31	0.23	HROFDY
L0003435	0	0.28898E-05	435242.1	3772932.0	0.0	4.15	3.31	0.23	HROFDY
L0003436	0	0.28898E-05	435248.7	3772932.8	0.0	4.15	3.11	0.23	HROFDY

*** ISCST3 - VERSION 02035 *** College Park Cancer Risk
*** DPM Sources - Sensitive Receptors (2009 to 2079)

**MODELOPTs:
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*** 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)	EMISSION RATE SCALAR VARY BY
L0003437	0	0.28898E-05	435255.3	3772933.0	0.0	4.15	3.11	0.23	HROFDY
L0003438	0	0.28898E-05	435262.0	3772933.3	0.0	4.15	3.11	0.23	HROFDY
L0003439	0	0.28898E-05	435268.7	3772933.3	0.0	4.15	3.11	0.23	HROFDY
L0003440	0	0.28898E-05	435275.4	3772933.5	0.0	4.15	3.11	0.23	HROFDY
L0003441	0	0.28898E-05	435282.1	3772933.8	0.0	4.15	3.11	0.23	HROFDY
L0003442	0	0.28898E-05	435288.8	3772933.8	0.0	4.15	3.11	0.23	HROFDY
L0003443	0	0.28898E-05	435295.5	3772934.0	0.0	4.15	3.11	0.23	HROFDY
L0003444	0	0.28898E-05	435302.2	3772934.3	0.0	4.15	3.11	0.23	HROFDY
L0003445	0	0.28898E-05	435308.8	3772934.3	0.0	4.15	3.11	0.23	HROFDY
L0003446	0	0.28898E-05	435315.5	3772934.5	0.0	4.15	3.11	0.23	HROFDY
L0003447	0	0.28898E-05	435322.4	3772934.0	0.0	4.15	3.21	0.23	HROFDY
L0003448	0	0.28898E-05	435329.3	3772933.5	0.0	4.15	3.21	0.23	HROFDY
L0003449	0	0.28898E-05	435336.2	3772933.0	0.0	4.15	3.21	0.23	HROFDY
L0003450	0	0.28898E-05	435343.0	3772932.5	0.0	4.15	3.21	0.23	HROFDY
L0003451	0	0.28898E-05	435349.9	3772932.0	0.0	4.15	3.21	0.23	HROFDY
L0003452	0	0.28898E-05	435356.8	3772931.3	0.0	4.15	3.21	0.23	HROFDY
L0003453	0	0.28898E-05	435363.7	3772930.8	0.0	4.15	3.21	0.23	HROFDY
L0003454	0	0.28898E-05	435370.6	3772930.3	0.0	4.15	3.21	0.23	HROFDY
L0003455	0	0.28898E-05	435377.4	3772929.8	0.0	4.15	3.21	0.23	HROFDY
L0003456	0	0.28898E-05	435384.3	3772929.3	0.0	4.15	3.21	0.23	HROFDY
L0003457	0	0.28898E-05	435391.2	3772928.5	0.0	4.15	3.21	0.23	HROFDY
L0003458	0	0.28898E-05	435398.1	3772928.0	0.0	4.15	3.21	0.23	HROFDY
L0003459	0	0.28898E-05	435405.0	3772927.5	0.0	4.15	3.21	0.23	HROFDY
L0003460	0	0.28898E-05	435411.8	3772927.0	0.0	4.15	3.21	0.23	HROFDY
L0003461	0	0.28898E-05	435418.8	3772926.5	0.0	4.15	3.21	0.23	HROFDY
L0003462	0	0.28898E-05	435425.8	3772926.5	0.0	4.15	3.27	0.23	HROFDY
L0003463	0	0.28898E-05	435432.8	3772926.8	0.0	4.15	3.27	0.23	HROFDY
L0003464	0	0.28898E-05	435439.8	3772927.3	0.0	4.15	3.27	0.23	HROFDY
L0003465	0	0.28898E-05	435446.8	3772927.5	0.0	4.15	3.27	0.23	HROFDY
L0003466	0	0.28898E-05	435453.9	3772928.0	0.0	4.15	3.27	0.23	HROFDY
L0003467	0	0.28898E-05	435460.9	3772928.3	0.0	4.15	3.27	0.23	HROFDY
L0003468	0	0.28898E-05	435467.9	3772928.5	0.0	4.15	3.27	0.23	HROFDY
L0003469	0	0.28898E-05	435474.9	3772929.0	0.0	4.15	3.27	0.23	HROFDY
L0003470	0	0.28898E-05	435482.0	3772929.3	0.0	4.15	3.27	0.23	HROFDY
L0003471	0	0.28898E-05	435489.0	3772929.8	0.0	4.15	3.27	0.23	HROFDY
L0003472	0	0.28898E-05	435496.0	3772930.0	0.0	4.15	3.27	0.23	HROFDY
L0003473	0	0.28898E-05	435503.0	3772930.5	0.0	4.15	3.27	0.23	HROFDY
L0003474	0	0.28898E-05	435510.1	3772930.8	0.0	4.15	3.27	0.23	HROFDY
L0003475	0	0.28898E-05	435517.1	3772931.0	0.0	4.15	3.27	0.23	HROFDY
L0003476	0	0.28898E-05	435524.1	3772931.5	0.0	4.15	3.27	0.23	HROFDY

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk
*** DPM Sources - Sensitive Receptors (2009 to 2079)
**MODELOPTs: URBAN FLAT NOCALM
CONC

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*** 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)	EMISSION RATE SCALAR VARY BY
L0003477	0	0.28898E-05	435531.2	3772931.8	0.0	4.15	3.27	0.23	HROFDY
L0003478	0	0.28898E-05	435538.2	3772932.3	0.0	4.15	3.27	0.23	HROFDY
L0003479	0	0.28898E-05	435545.2	3772932.5	0.0	4.15	3.27	0.23	HROFDY
L0003480	0	0.28898E-05	435552.2	3772932.8	0.0	4.15	3.27	0.23	HROFDY
L0003481	0	0.28898E-05	435559.3	3772933.3	0.0	4.15	3.27	0.23	HROFDY
L0003482	0	0.28898E-05	435566.3	3772933.5	0.0	4.15	3.27	0.23	HROFDY
L0003483	0	0.28898E-05	435573.3	3772934.0	0.0	4.15	3.27	0.23	HROFDY
LOADER	0	0.70000E-02	435504.1	3772670.3	0.0	5.00	13.95	1.16	HROFDY
L0003484	0	0.13228E-05	435572.8	3772935.3	0.0	4.15	3.24	0.32	HROFDY
L0003485	0	0.13228E-05	435566.0	3772934.3	0.0	4.15	3.24	0.32	HROFDY
L0003486	0	0.13228E-05	435559.1	3772933.0	0.0	4.15	3.24	0.32	HROFDY
L0003487	0	0.13228E-05	435552.2	3772932.0	0.0	4.15	3.24	0.32	HROFDY
L0003488	0	0.13228E-05	435545.3	3772931.0	0.0	4.15	3.24	0.32	HROFDY
L0003489	0	0.13228E-05	435538.4	3772930.0	0.0	4.15	3.24	0.32	HROFDY
L0003490	0	0.13228E-05	435531.6	3772928.8	0.0	4.15	3.24	0.32	HROFDY
L0003491	0	0.13228E-05	435524.7	3772927.8	0.0	4.15	3.24	0.32	HROFDY
L0003492	0	0.13228E-05	435517.8	3772926.8	0.0	4.15	3.24	0.32	HROFDY
L0003493	0	0.13228E-05	435510.9	3772925.8	0.0	4.15	3.24	0.32	HROFDY
L0003494	0	0.13228E-05	435504.1	3772924.5	0.0	4.15	3.24	0.32	HROFDY
L0003495	0	0.13228E-05	435497.2	3772923.5	0.0	4.15	3.24	0.32	HROFDY
L0003496	0	0.13228E-05	435490.3	3772922.5	0.0	4.15	3.24	0.32	HROFDY
L0003497	0	0.13228E-05	435483.4	3772921.5	0.0	4.15	3.24	0.32	HROFDY
L0003498	0	0.13228E-05	435476.5	3772920.3	0.0	4.15	3.24	0.32	HROFDY
L0003499	0	0.13228E-05	435469.7	3772919.3	0.0	4.15	3.24	0.32	HROFDY
L0003500	0	0.13228E-05	435463.2	3772916.5	0.0	4.15	3.30	0.32	HROFDY
L0003501	0	0.13228E-05	435456.8	3772913.5	0.0	4.15	3.30	0.32	HROFDY
L0003502	0	0.13228E-05	435450.5	3772910.3	0.0	4.15	3.30	0.32	HROFDY
L0003503	0	0.13228E-05	435444.2	3772907.0	0.0	4.15	3.30	0.32	HROFDY
L0003504	0	0.13228E-05	435437.8	3772903.8	0.0	4.15	3.30	0.32	HROFDY
L0003505	0	0.13228E-05	435431.5	3772900.5	0.0	4.15	3.30	0.32	HROFDY
L0003506	0	0.13228E-05	435425.2	3772897.3	0.0	4.15	3.30	0.32	HROFDY
L0003507	0	0.13228E-05	435418.8	3772894.3	0.0	4.15	3.30	0.32	HROFDY
L0003508	0	0.13228E-05	435412.5	3772891.0	0.0	4.15	3.30	0.32	HROFDY
L0003509	0	0.13228E-05	435406.2	3772887.8	0.0	4.15	3.30	0.32	HROFDY
L0003510	0	0.13228E-05	435399.9	3772884.5	0.0	4.15	3.30	0.32	HROFDY
L0003511	0	0.13228E-05	435393.5	3772881.3	0.0	4.15	3.30	0.32	HROFDY
L0003512	0	0.13228E-05	435387.2	3772878.0	0.0	4.15	3.30	0.32	HROFDY
L0003513	0	0.13228E-05	435380.9	3772875.0	0.0	4.15	3.30	0.32	HROFDY
L0003514	0	0.13228E-05	435374.6	3772871.8	0.0	4.15	3.30	0.32	HROFDY
L0003515	0	0.13228E-05	435368.5	3772868.5	0.0	4.15	3.30	0.32	HROFDY

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk
*** DPM Sources - Sensitive Receptors (2009 to 2079)
**MODELOPTs: URBAN FLAT NOCALM
CONC

*** 05/12/09
*** 09:33:41
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*** 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)	EMISSION RATE SCALAR VARY BY
L0003516	0	0.13228E-05	435361.9	3772865.3	0.0	4.15	3.30	0.32	HROFDY
L0003517	0	0.13228E-05	435355.6	3772862.0	0.0	4.15	3.30	0.32	HROFDY
L0003518	0	0.13228E-05	435352.4	3772857.0	0.0	4.15	2.91	0.32	HROFDY
L0003519	0	0.13228E-05	435350.2	3772851.3	0.0	4.15	2.91	0.32	HROFDY
L0003520	0	0.13228E-05	435347.9	3772845.5	0.0	4.15	2.91	0.32	HROFDY
L0003521	0	0.13228E-05	435345.7	3772839.5	0.0	4.15	2.91	0.32	HROFDY
L0003522	0	0.13228E-05	435343.5	3772833.8	0.0	4.15	2.91	0.32	HROFDY
L0003523	0	0.13228E-05	435339.3	3772829.0	0.0	4.15	3.06	0.32	HROFDY
L0003524	0	0.13228E-05	435334.3	3772824.8	0.0	4.15	3.06	0.32	HROFDY
L0003525	0	0.13228E-05	435329.3	3772820.5	0.0	4.15	3.06	0.32	HROFDY
L0003526	0	0.13228E-05	435323.2	3772817.5	0.0	4.15	3.14	0.32	HROFDY
L0003527	0	0.13228E-05	435316.9	3772815.3	0.0	4.15	3.14	0.32	HROFDY
L0003528	0	0.13228E-05	435310.5	3772814.3	0.0	4.15	3.04	0.32	HROFDY
L0003529	0	0.13228E-05	435304.0	3772814.3	0.0	4.15	3.04	0.32	HROFDY
L0003530	0	0.13228E-05	435297.4	3772814.0	0.0	4.15	3.04	0.32	HROFDY
L0003531	0	0.13228E-05	435290.9	3772813.8	0.0	4.15	3.04	0.32	HROFDY
L0003532	0	0.13228E-05	435284.4	3772813.5	0.0	4.15	3.04	0.32	HROFDY
L0003533	0	0.13228E-05	435277.8	3772813.5	0.0	4.15	3.04	0.32	HROFDY
L0003534	0	0.13228E-05	435271.3	3772813.3	0.0	4.15	3.04	0.32	HROFDY
L0003535	0	0.13228E-05	435264.8	3772813.0	0.0	4.15	3.04	0.32	HROFDY
L0003536	0	0.13228E-05	435258.3	3772814.0	0.0	4.15	3.06	0.32	HROFDY
L0003537	0	0.13228E-05	435251.8	3772815.3	0.0	4.15	3.06	0.32	HROFDY
L0003538	0	0.13228E-05	435245.4	3772816.5	0.0	4.15	3.06	0.32	HROFDY
L0003539	0	0.13228E-05	435238.9	3772817.8	0.0	4.15	3.06	0.32	HROFDY
L0003540	0	0.13228E-05	435232.5	3772819.0	0.0	4.15	3.06	0.32	HROFDY
L0003541	0	0.13228E-05	435226.0	3772820.5	0.0	4.15	3.06	0.32	HROFDY
L0003542	0	0.13228E-05	435220.3	3772824.3	0.0	4.15	3.27	0.32	HROFDY
L0003543	0	0.13228E-05	435214.9	3772828.8	0.0	4.15	3.27	0.32	HROFDY
L0003544	0	0.13228E-05	435209.6	3772833.3	0.0	4.15	3.27	0.32	HROFDY
L0003545	0	0.13228E-05	435204.3	3772837.8	0.0	4.15	3.27	0.32	HROFDY
L0003546	0	0.13228E-05	435203.6	3772844.0	0.0	4.15	3.22	0.32	HROFDY
L0003547	0	0.13228E-05	435204.6	3772851.0	0.0	4.15	3.22	0.32	HROFDY
L0003548	0	0.13228E-05	435205.6	3772857.8	0.0	4.15	3.22	0.32	HROFDY
L0003549	0	0.13228E-05	435206.5	3772864.5	0.0	4.15	3.22	0.32	HROFDY
L0003550	0	0.13228E-05	435207.5	3772871.5	0.0	4.15	3.22	0.32	HROFDY
L0003551	0	0.13228E-05	435208.5	3772878.3	0.0	4.15	3.22	0.32	HROFDY
L0003552	0	0.13228E-05	435209.5	3772885.3	0.0	4.15	3.22	0.32	HROFDY
L0003553	0	0.13228E-05	435210.5	3772892.0	0.0	4.15	3.22	0.32	HROFDY
L0003554	0	0.13228E-05	435211.5	3772899.0	0.0	4.15	3.22	0.32	HROFDY
L0003555	0	0.13228E-05	435212.5	3772905.8	0.0	4.15	3.22	0.32	HROFDY

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk
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CONC

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*** 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)	EMISSION RATE SCALAR VARY BY
L0003556	0	0.13228E-05	435213.5	3772912.5	0.0	4.15	3.22	0.32	HROFDY
L0003557	0	0.13228E-05	435214.5	3772919.5	0.0	4.15	3.22	0.32	HROFDY
L0003558	0	0.13228E-05	435218.9	3772923.0	0.0	4.15	2.94	0.32	HROFDY
L0003559	0	0.13228E-05	435224.7	3772925.3	0.0	4.15	2.94	0.32	HROFDY
L0003560	0	0.13228E-05	435230.6	3772927.8	0.0	4.15	2.94	0.32	HROFDY
L0003561	0	0.13228E-05	435236.4	3772930.3	0.0	4.15	2.94	0.32	HROFDY
L0003562	0	0.13228E-05	435242.3	3772932.5	0.0	4.15	2.94	0.32	HROFDY
L0003563	0	0.13228E-05	435249.0	3772933.5	0.0	4.15	3.21	0.32	HROFDY
L0003564	0	0.13228E-05	435255.9	3772933.5	0.0	4.15	3.21	0.32	HROFDY
L0003565	0	0.13228E-05	435262.8	3772933.8	0.0	4.15	3.21	0.32	HROFDY
L0003566	0	0.13228E-05	435269.8	3772934.0	0.0	4.15	3.21	0.32	HROFDY
L0003567	0	0.13228E-05	435276.7	3772934.3	0.0	4.15	3.21	0.32	HROFDY
L0003568	0	0.13228E-05	435283.6	3772934.5	0.0	4.15	3.21	0.32	HROFDY
L0003569	0	0.13228E-05	435290.5	3772934.8	0.0	4.15	3.21	0.32	HROFDY
L0003570	0	0.13228E-05	435297.4	3772934.8	0.0	4.15	3.21	0.32	HROFDY
L0003571	0	0.13228E-05	435304.3	3772935.0	0.0	4.15	3.21	0.32	HROFDY
L0003572	0	0.13228E-05	435311.2	3772935.3	0.0	4.15	3.21	0.32	HROFDY
L0003573	0	0.13228E-05	435318.1	3772935.5	0.0	4.15	3.21	0.32	HROFDY
L0003574	0	0.13228E-05	435324.9	3772935.0	0.0	4.15	3.19	0.32	HROFDY
L0003575	0	0.13228E-05	435331.8	3772934.5	0.0	4.15	3.19	0.32	HROFDY
L0003576	0	0.13228E-05	435338.6	3772934.0	0.0	4.15	3.19	0.32	HROFDY
L0003577	0	0.13228E-05	435345.4	3772933.3	0.0	4.15	3.19	0.32	HROFDY
L0003578	0	0.13228E-05	435352.3	3772932.8	0.0	4.15	3.19	0.32	HROFDY
L0003579	0	0.13228E-05	435359.1	3772932.3	0.0	4.15	3.19	0.32	HROFDY
L0003580	0	0.13228E-05	435365.9	3772931.8	0.0	4.15	3.19	0.32	HROFDY
L0003581	0	0.13228E-05	435372.8	3772931.0	0.0	4.15	3.19	0.32	HROFDY
L0003582	0	0.13228E-05	435379.6	3772930.5	0.0	4.15	3.19	0.32	HROFDY
L0003583	0	0.13228E-05	435386.5	3772930.0	0.0	4.15	3.19	0.32	HROFDY
L0003584	0	0.13228E-05	435393.3	3772929.3	0.0	4.15	3.19	0.32	HROFDY
L0003585	0	0.13228E-05	435400.1	3772928.8	0.0	4.15	3.19	0.32	HROFDY
L0003586	0	0.13228E-05	435407.0	3772928.3	0.0	4.15	3.19	0.32	HROFDY
L0003587	0	0.13228E-05	435413.8	3772927.8	0.0	4.15	3.19	0.32	HROFDY
L0003588	0	0.13228E-05	435420.5	3772927.8	0.0	4.15	3.13	0.32	HROFDY
L0003589	0	0.13228E-05	435427.3	3772927.8	0.0	4.15	3.13	0.32	HROFDY
L0003590	0	0.13228E-05	435434.0	3772928.0	0.0	4.15	3.13	0.32	HROFDY
L0003591	0	0.13228E-05	435440.7	3772928.3	0.0	4.15	3.13	0.32	HROFDY
L0003592	0	0.13228E-05	435447.4	3772928.3	0.0	4.15	3.13	0.32	HROFDY
L0003593	0	0.13228E-05	435454.2	3772928.5	0.0	4.15	3.13	0.32	HROFDY
L0003594	0	0.13228E-05	435460.9	3772928.8	0.0	4.15	3.13	0.32	HROFDY
L0003595	0	0.13228E-05	435467.6	3772928.8	0.0	4.15	3.13	0.32	HROFDY

*** ISCST3 - VERSION 02035 *** College Park Cancer Risk
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**MODELOPTs:
 CONC

URBAN FLAT

NOCALM

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*** 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)	EMISSION RATE SCALAR VARY BY
L0003596	0	0.13228E-05	435474.3	3772929.0	0.0	4.15	3.13	0.32	HROFDY
L0003597	0	0.13228E-05	435481.1	3772929.3	0.0	4.15	3.13	0.32	HROFDY
L0003598	0	0.13228E-05	435487.8	3772929.5	0.0	4.15	3.15	0.32	HROFDY
L0003599	0	0.13228E-05	435494.6	3772930.0	0.0	4.15	3.15	0.32	HROFDY
L0003600	0	0.13228E-05	435501.3	3772930.5	0.0	4.15	3.15	0.32	HROFDY
L0003601	0	0.13228E-05	435508.1	3772931.0	0.0	4.15	3.15	0.32	HROFDY
L0003602	0	0.13228E-05	435514.8	3772931.5	0.0	4.15	3.15	0.32	HROFDY
L0003603	0	0.13228E-05	435521.6	3772932.0	0.0	4.15	3.15	0.32	HROFDY
L0003604	0	0.13228E-05	435528.3	3772932.5	0.0	4.15	3.15	0.32	HROFDY
L0003605	0	0.13228E-05	435535.1	3772933.0	0.0	4.15	3.15	0.32	HROFDY
L0003606	0	0.13228E-05	435541.8	3772933.5	0.0	4.15	3.15	0.32	HROFDY
L0003607	0	0.13228E-05	435548.6	3772934.0	0.0	4.15	3.15	0.32	HROFDY
L0003608	0	0.13228E-05	435555.3	3772934.5	0.0	4.15	3.15	0.32	HROFDY
L0003609	0	0.13228E-05	435562.1	3772935.0	0.0	4.15	3.15	0.32	HROFDY
L0003610	0	0.13228E-05	435568.9	3772935.3	0.0	4.15	3.15	0.32	HROFDY
L0003611	0	0.32167E-06	435572.1	3773322.8	0.0	4.15	2.36	0.32	HROFDY
L0003612	0	0.32167E-06	435567.0	3773323.0	0.0	4.15	2.36	0.32	HROFDY
L0003613	0	0.32167E-06	435561.9	3773323.3	0.0	4.15	2.36	0.32	HROFDY
L0003614	0	0.32167E-06	435557.6	3773327.3	0.0	4.15	3.02	0.32	HROFDY
L0003615	0	0.32167E-06	435554.0	3773332.5	0.0	4.15	3.02	0.32	HROFDY
L0003616	0	0.32167E-06	435550.4	3773338.0	0.0	4.15	3.02	0.32	HROFDY

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URBAN FLAT

NOCALM

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*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID

SOURCE IDs

ALL L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363, L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375, L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, L0003387, L0003388, L0003389, L0003390, L0003391, L0003392, L0003393, L0003394, L0003395, L0003396, L0003397, L0003398, L0003399, L0003400, L0003401, L0003402, L0003403, L0003404, L0003405, L0003406, L0003407, L0003408, L0003409, L0003410, L0003411, L0003412, L0003413, L0003414, L0003415, L0003416, L0003417, L0003418, L0003419, L0003420, L0003421, L0003422, L0003423, L0003424, L0003425, L0003426, L0003427, L0003428, L0003429, L0003430, L0003431, L0003432, L0003433, L0003434, L0003435, L0003436, L0003437, L0003438, L0003439, L0003440, L0003441, L0003442, L0003443, L0003444, L0003445, L0003446, L0003447, L0003448, L0003449, L0003450, L0003451, L0003452, L0003453, L0003454, L0003455, L0003456, L0003457, L0003458, L0003459, L0003460, L0003461, L0003462, L0003463, L0003464, L0003465, L0003466, L0003467, L0003468, L0003469, L0003470, L0003471, L0003472, L0003473, L0003474, L0003475, L0003476, L0003477, L0003478, L0003479, L0003480, L0003481, L0003482, L0003483, TRKIDL, , LOADER, , L0003484, L0003485, L0003486, L0003487, L0003488, L0003489, L0003490, L0003491, L0003492, L0003493, L0003494, L0003495, L0003496, L0003497, L0003498,

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L0003571, L0003572, L0003573, L0003574, L0003575, L0003576, L0003577, L0003578, L0003579, L0003580, L0003581, L0003582,
L0003583, L0003584, L0003585, L0003586, L0003587, L0003588, L0003589, L0003590, L0003591, L0003592, L0003593, L0003594,
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 09:33:41
**MODELOPTs: URBAN FLAT NOCALM
CONC

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs
L0003595, L0003596, L0003597, L0003598, L0003599, L0003600, L0003601, L0003602, L0003603, L0003604, L0003605, L0003606,
L0003607, L0003608, L0003609, L0003610, L0003611, L0003612, L0003613, L0003614, L0003615, L0003616, GASIDL, H2OI
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
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**MODELOPTs: URBAN FLAT NOCALM
CONC
* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

GROUP ID	SCALAR	GROUP ID	SCALAR	GROUP ID	SCALAR	GROUP ID	SCALAR	GROUP ID	SCALAR	GROUP ID	SCALAR
SOURCE ID = L0003357 ;		SOURCE TYPE = VOLUME :									
1 .00000E+00		2 .00000E+00		3 .00000E+00		4 .00000E+00		5 .00000E+00		6 .00000E+00	
7 .00000E+00		8 .12000E+01		9 .12000E+01		10 .12000E+01		11 .12000E+01		12 .12000E+01	
13 .67000E+00		14 .67000E+00		15 .67000E+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 = L0003358 ;		SOURCE TYPE = VOLUME :									
1 .00000E+00		2 .00000E+00		3 .00000E+00		4 .00000E+00		5 .00000E+00		6 .00000E+00	
7 .00000E+00		8 .12000E+01		9 .12000E+01		10 .12000E+01		11 .12000E+01		12 .12000E+01	
13 .67000E+00		14 .67000E+00		15 .67000E+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 = L0003359 ;		SOURCE TYPE = VOLUME :									
1 .00000E+00		2 .00000E+00		3 .00000E+00		4 .00000E+00		5 .00000E+00		6 .00000E+00	
7 .00000E+00		8 .12000E+01		9 .12000E+01		10 .12000E+01		11 .12000E+01		12 .12000E+01	
13 .67000E+00		14 .67000E+00		15 .67000E+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 = L0003360 ;		SOURCE TYPE = VOLUME :									
1 .00000E+00		2 .00000E+00		3 .00000E+00		4 .00000E+00		5 .00000E+00		6 .00000E+00	
7 .00000E+00		8 .12000E+01		9 .12000E+01		10 .12000E+01		11 .12000E+01		12 .12000E+01	
13 .67000E+00		14 .67000E+00		15 .67000E+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 = L0003361 ;		SOURCE TYPE = VOLUME :									
1 .00000E+00		2 .00000E+00		3 .00000E+00		4 .00000E+00		5 .00000E+00		6 .00000E+00	
7 .00000E+00		8 .12000E+01		9 .12000E+01		10 .12000E+01		11 .12000E+01		12 .12000E+01	
13 .67000E+00		14 .67000E+00		15 .67000E+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	

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
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CONC
* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

GROUP ID	SCALAR	GROUP ID	SCALAR	GROUP ID	SCALAR	GROUP ID	SCALAR	GROUP ID	SCALAR	GROUP ID	SCALAR
SOURCE ID = L0003362 ;		SOURCE TYPE = VOLUME :									
1 .00000E+00		2 .00000E+00		3 .00000E+00		4 .00000E+00		5 .00000E+00		6 .00000E+00	
7 .00000E+00		8 .12000E+01		9 .12000E+01		10 .12000E+01		11 .12000E+01		12 .12000E+01	
13 .67000E+00		14 .67000E+00		15 .67000E+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 = L0003363 ;		SOURCE TYPE = VOLUME :									
1 .00000E+00		2 .00000E+00		3 .00000E+00		4 .00000E+00		5 .00000E+00		6 .00000E+00	
7 .00000E+00		8 .12000E+01		9 .12000E+01		10 .12000E+01		11 .12000E+01		12 .12000E+01	
13 .67000E+00		14 .67000E+00		15 .67000E+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 = L0003364 ;		SOURCE TYPE = VOLUME :									
1 .00000E+00		2 .00000E+00		3 .00000E+00		4 .00000E+00		5 .00000E+00		6 .00000E+00	
7 .00000E+00		8 .12000E+01		9 .12000E+01		10 .12000E+01		11 .12000E+01		12 .12000E+01	
13 .67000E+00		14 .67000E+00		15 .67000E+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 = L0003365 ;		SOURCE TYPE = VOLUME :									
1 .00000E+00		2 .00000E+00		3 .00000E+00		4 .00000E+00		5 .00000E+00		6 .00000E+00	
7 .00000E+00		8 .12000E+01		9 .12000E+01		10 .12000E+01		11 .12000E+01		12 .12000E+01	
13 .67000E+00		14 .67000E+00		15 .67000E+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 = L0003366 ; SOURCE TYPE = VOLUME :

SOURCE ID = L0003378 ; SOURCE TYPE = VOLUME :

SOURCE ID = L0003391 ; SOURCE TYPE = VOLUME :													
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	7	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	13	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+00	16	.00000E+00	17	.00000E+00	18	.00000E+00	19	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00	25	.00000E+00

SOURCE ID = L0003396 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003401 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003403 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

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*** ISCST3 - VERSION 02035 ***      *** College Park Cancer Risk      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***      09:33:41
**MODELOPTS:                        PAGE 24
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* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

[illegible]

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*** ISC3 - VERSION 02035 ***          *** College Park Cancer Risk ***          05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***          09:33:41
***                                     ***                                     PAGE 31

**MODELOPTS:
CONC                                URBAN FLAT                                NOCALM

* 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 = L0003452 ; SOURCE TYPE = VOLUME :
  1 .00000E+00    2 .00000E+00    3 .00000E+00    4 .00000E+00    5 .00000E+00    6 .00000E+00
  7 .00000E+00    8 .12000E+01    9 .12000E+01   10 .12000E+01   11 .12000E+01   12 .12000E+01
 13 .67000E+00   14 .67000E+00   15 .67000E+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 = L0003453 ; SOURCE TYPE = VOLUME :
  1 .00000E+00    2 .00000E+00    3 .00000E+00    4 .00000E+00    5 .00000E+00    6 .00000E+00
  7 .00000E+00    8 .12000E+01    9 .12000E+01   10 .12000E+01   11 .12000E+01   12 .12000E+01
 13 .67000E+00   14 .67000E+00   15 .67000E+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 = L0003454 ; SOURCE TYPE = VOLUME :
  1 .00000E+00    2 .00000E+00    3 .00000E+00    4 .00000E+00    5 .00000E+00    6 .00000E+00
  7 .00000E+00    8 .12000E+01    9 .12000E+01   10 .12000E+01   11 .12000E+01   12 .12000E+01
 13 .67000E+00   14 .67000E+00   15 .67000E+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

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HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
SOURCE ID = L0003480 ; SOURCE TYPE = VOLUME :
1 .000000E+00 2 .000000E+00 3 .000000E+00 4 .000000E+00 5 .000000E+00 6 .000000E+00
7 .000000E+00 8 .120000E+01 9 .120000E+01 10 .120000E+01 11 .120000E+01 12 .120000E+01
```


1	2	3	4	5	6	7	8	9	10	11	12
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SOURCE ID = L0003490 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.00000E+00	10	.00000E+00	11	.00000E+00	12	.00000E+00

SOURCE ID = L0003503 ;	SOURCE TYPE = VOLUME :								
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00				
7 .00000E+00	8 .10000E+01	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 = L0003529 ; SOURCE TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.10000E+01	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	

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SOURCE	ID = L0003541 ;	SOURCE	TYPE = VOLUME :
1	.00000E+00 ;	2	.00000E+00
7	.00000E+00	8	.10000E+01
13	.00000E+00	14	.00000E+00
		15	.00000E+00
		4	.00000E+00
		10	.00000E+00
		16	.00000E+00
		5	.00000E+00
		11	.00000E+00
		17	.00000E+00
		6	.00000E+00
		12	.00000E+00
		18	.00000E+00

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*** ISCT3 - VERSION 02035 ***      *** College Park Cancer Risk      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***      09:33:41
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[illegible]

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*** ISCS*3 - VERSION 02035 ***      *** College Park Cancer RIsK      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***      ***      09:33:41
*MODELOPTS:                        ***      ***      PAGE 53
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HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

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*** ISCS*3 - VERSION 02035 ***      *** College Park Cancer RIsK      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***      ***      09:33:41
*MODEL OPTS:                                     PAGE 54
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[illegible]

SOURCE ID = L0003567 ; SOURCE TYPE = VOLUME :

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

SOURCE ID = L0003592 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00


```
SOURCE ID = H2OI      ;  SOURCE TYPE = POINT      :
1  .00000E+00      2  .00000E+00      3  .00000E+00      4  .00000E+00      5  .00000E+00      6  .00000E+00
```


*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 09:33:41
**MODELOPTs: CONC URBAN FLAT NOCALM PAGE 69
*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***
FILE: C:\MBA\COLLEG-1\UPLAND.ASC
FORMAT: (412,2F9.4,F6.1,I2,2F7.1,F9.4,f10.1,f8.4,i4,f7.2)
STATION NO.: 54147 UPPER AIR STATION NO.: 99999
NAME: UNKNOWN NAME: UNKNOWN
YEAR: 1981 YEAR: 1981

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING RURAL	HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.00	284.3	7	522.6	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	02	147.4	1.00	284.3	7	507.0	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	03	152.5	1.34	283.1	7	491.4	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	04	166.0	0.00	283.1	7	475.8	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	05	151.5	0.00	282.6	7	460.3	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	06	139.5	1.34	283.1	7	444.7	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	07	162.0	1.34	285.4	6	1.4	170.7	0.0000	0.0	0.0000	0	0.00
81	01	01	08	157.1	0.00	287.6	5	47.0	192.0	0.0000	0.0	0.0000	0	0.00
81	01	01	09	344.0	1.00	289.8	4	92.5	213.3	0.0000	0.0	0.0000	0	0.00
81	01	01	10	346.6	0.00	291.5	3	138.0	234.7	0.0000	0.0	0.0000	0	0.00
81	01	01	11	314.1	1.00	294.3	2	183.5	256.0	0.0000	0.0	0.0000	0	0.00
81	01	01	12	238.1	1.34	297.6	2	229.0	277.3	0.0000	0.0	0.0000	0	0.00
81	01	01	13	357.2	1.79	298.7	3	274.5	298.7	0.0000	0.0	0.0000	0	0.00
81	01	01	14	34.2	2.24	299.8	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	15	44.8	3.13	299.3	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	16	75.7	3.13	298.7	4	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	17	65.1	1.79	295.4	5	325.6	318.5	0.0000	0.0	0.0000	0	0.00
81	01	01	18	97.6	1.34	291.5	6	357.2	310.3	0.0000	0.0	0.0000	0	0.00
81	01	01	19	133.0	1.00	289.8	7	388.8	302.1	0.0000	0.0	0.0000	0	0.00
81	01	01	20	145.7	0.00	287.0	7	420.4	293.9	0.0000	0.0	0.0000	0	0.00
81	01	01	21	223.6	1.00	286.5	7	452.0	285.7	0.0000	0.0	0.0000	0	0.00
81	01	01	22	159.5	1.00	287.0	7	483.5	277.4	0.0000	0.0	0.0000	0	0.00
81	01	01	23	158.2	1.34	285.9	7	515.1	269.2	0.0000	0.0	0.0000	0	0.00
81	01	01	24	134.7	1.00	285.4	7	546.7	261.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 09:33:41
**MODELOPTs: CONC URBAN FLAT NOCALM PAGE 70

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435175.38	435195.78	435216.19	435236.59	X-COORD (METERS) 435257.00	435277.44	435297.84	435318.25	435338.66
3773407.25	0.54894	0.54814	0.54206	0.53270	0.52255	0.51352	0.50626	0.49993	0.49311
3773386.75	0.58934	0.59014	0.58470	0.57509	0.56411	0.55408	0.54585	0.53861	0.53082
3773366.25	0.63403	0.63689	0.63242	0.62270	0.61087	0.59972	0.59038	0.58208	0.57315
3773345.75	0.68361	0.68911	0.68603	0.67639	0.66370	0.65127	0.64063	0.63107	0.62079
3773325.25	0.73876	0.74762	0.74649	0.73723	0.72369	0.70981	0.69764	0.68654	0.67462
3773304.75	0.80031	0.81339	0.81495	0.80649	0.79217	0.77666	0.76266	0.74968	0.73576
3773284.25	0.86926	0.88765	0.89286	0.88581	0.87086	0.85354	0.83733	0.82203	0.80567
3773263.75	0.94684	0.97181	0.98194	0.97714	0.96185	0.94254	0.92368	0.90553	0.88615
3773243.25	1.03456	1.06771	1.08437	1.08302	1.06784	1.04632	1.02427	1.00254	0.97939
3773222.75	1.13441	1.17752	1.20283	1.20658	1.19231	1.16846	1.14249	1.11619	1.08826
3773202.25	1.24887	1.30405	1.34062	1.35179	1.33965	1.31345	1.28263	1.25049	1.21645
3773181.75	1.38123	1.45094	1.50205	1.52386	1.51574	1.48731	1.45052	1.41080	1.36881
3773161.25	1.53607	1.62302	1.69279	1.72971	1.72838	1.69817	1.65392	1.60420	1.55181
3773140.75	1.71950	1.82687	1.92032	1.97817	1.98810	1.95721	1.90354	1.84042	1.77420
3773120.25	1.93938	2.07128	2.19500	2.28292	2.30980	2.28020	2.21444	2.13310	2.04794
3773099.75	2.20699	2.36970	2.53161	2.65876	2.71436	2.68978	2.60853	2.50194	2.39021
3773079.25	2.53710	2.73974	2.95105	3.13391	3.23287	3.21948	3.11826	2.97597	2.82568
3773058.75	2.95220	3.20818	3.48540	3.74695	3.91105	3.92069	3.79497	3.59981	3.39123
3773038.25	3.48702	3.81606	4.18363	4.55575	4.82330	4.87584	4.71740	4.44518	4.14386
3773017.75	4.19279	4.62789	5.12765	5.62663	6.09173	6.22372	6.02882	5.63420	5.17558
3772997.25	5.12333	5.74557	6.45877	7.24970	7.93411	8.21465	7.98642	7.38505	6.64587

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 09:33:41
**MODELOPTs: CONC URBAN FLAT NOCALM PAGE 71

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435359.06	435379.47	435399.88	435420.28	X-COORD (METERS) 435440.72	435461.13	435481.53	435501.94	435522.34
3773407.25	0.48487	0.47538	0.46578	0.45733	0.45049	0.44472	0.43865	0.43081	0.42022
3773386.75	0.52149	0.51094	0.50045	0.49133	0.48386	0.47717	0.46974	0.46022	0.44776
3773366.25	0.56257	0.55082	0.53937	0.52948	0.52113	0.51304	0.50351	0.49161	0.47773
3773345.75	0.60878	0.59570	0.58321	0.57246	0.56308	0.55328	0.54112	0.52565	0.50846
3773325.25	0.66091	0.64625	0.63250	0.62005	0.60982	0.59780	0.58254	0.56352	0.54242
3773304.75	0.71997	0.70343	0.68815	0.67476	0.66171	0.64629	0.62639	0.60160	0.57321
3773284.25	0.78738	0.76863	0.75143	0.73598	0.71986	0.69992	0.67417	0.64278	0.60779
3773263.75	0.86485	0.84341	0.82384	0.80557	0.78524	0.75949	0.72687	0.68862	0.64744
3773243.25	0.95438	0.92969	0.90704	0.88487	0.85890	0.82585	0.78520	0.73934	0.69148
3773222.75	1.05862	1.02987	1.00319	0.97559	0.94208	0.89984	0.84972	0.79533	0.74061
3773202.25	1.18101	1.14703	1.11476	1.07959	1.03601	0.98238	0.92136	0.85779	0.79630
3773181.75	1.32596	1.28501	1.24486	1.19910	1.14230	1.07478	1.00153	0.92857	0.86076
3773161.25	1.49921	1.44874	1.39727	1.33669	1.26283	1.17905	1.09264	1.01067	0.93723
3773140.75	1.70846	1.64470	1.57661	1.49568	1.40030	1.29809	1.19845	1.10842	1.03042

3773120.25	1.96394	1.88068	1.78861	1.68014	1.55878	1.43660	1.32494	1.22862	1.14711
3773099.75	2.27976	2.16731	2.04059	1.89582	1.74440	1.60281	1.48142	1.36109	1.29684
3773079.25	2.67608	2.51881	2.34231	2.15196	1.96780	1.80972	1.68253	1.58046	1.49338
3773058.75	3.17987	2.95387	2.70793	2.46291	2.24830	2.07905	1.95065	1.84850	1.75666
3773038.25	3.83192	3.49993	3.16191	2.85778	2.61882	2.44627	2.32066	2.21726	2.11542
3773017.75	4.69430	4.20146	3.74821	3.38891	3.13682	2.96847	2.84565	2.73524	2.61253
3772997.25	5.87222	5.14899	4.56375	4.15683	3.90001	3.73517	3.60786	3.47745	3.31899

*** ISCST3 - VERSION 02035 *** College Park Cancer Risk
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***
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***MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435542.75	435563.16	435583.56	X-COORD (METERS)
3773407.25	0.40611	0.38876	0.37045	
3773386.75	0.43154	0.41102	0.38959	
3773366.25	0.46120	0.43663	0.41067	
3773345.75	0.49343	0.46724	0.43457	
3773325.25	0.51838	0.48298	0.45782	
3773304.75	0.54220	0.51553	0.49091	
3773284.25	0.57129	0.53848	0.51067	
3773263.75	0.60573	0.56749	0.53520	
3773243.25	0.64466	0.60225	0.56609	
3773222.75	0.68896	0.64298	0.60378	
3773202.25	0.74017	0.69111	0.64943	
3773181.75	0.80059	0.74885	0.70491	
3773161.25	0.87359	0.81929	0.77276	
3773140.75	0.96372	0.90649	0.85633	
3773120.25	1.07723	1.01579	0.96003	
3773099.75	1.22273	1.15455	1.08967	
3773079.25	1.41237	1.33278	1.25283	
3773058.75	1.66344	1.56390	1.45775	
3773038.25	2.00024	1.86522	1.71318	
3773017.75	2.45892	2.26296	2.03096	
3772997.25	3.10876	2.81582	2.44095	

*** ISCST3 - VERSION 02035 *** College Park Cancer Risk
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***
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***MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
435422.09	3773260.25	0.81665	435440.19	3772988.00	4.36996
435419.38	3772985.75	4.77072	435399.28	3772982.75	5.39752
435379.19	3772981.00	6.20933	435358.72	3772978.50	7.42076
435340.44	3772975.75	8.85841	435318.91	3772973.25	10.70107
435297.38	3772971.00	12.33401	435277.28	3772968.25	13.21992
435256.84	3772965.25	13.10830	435235.31	3772962.00	12.18870
435217.00	3772960.00	10.79658	435196.19	3772955.50	9.34537

*** ISCST3 - VERSION 02035 *** College Park Cancer Risk
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***
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***MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	13.21992 AT (435277.28, 3772968.25, 0.00, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	13.10830 AT (435256.84, 3772965.25, 0.00, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	12.33401 AT (435297.38, 3772971.00, 0.00, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	12.18870 AT (435235.31, 3772962.00, 0.00, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	10.79658 AT (435217.00, 3772960.00, 0.00, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	10.70107 AT (435318.91, 3772973.25, 0.00, 0.00)	DC	NA
	7TH HIGHEST VALUE IS	9.34537 AT (435196.19, 3772955.50, 0.00, 0.00)	DC	NA
	8TH HIGHEST VALUE IS	8.85841 AT (435340.44, 3772975.75, 0.00, 0.00)	DC	NA
	9TH HIGHEST VALUE IS	8.21465 AT (435277.44, 3772997.25, 0.00, 0.00)	GC	UCART1
	10TH HIGHEST VALUE IS	7.98642 AT (435297.84, 3772997.25, 0.00, 0.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCPOLR
DP = DISCPOLR
BD = BOUNDARY

*** ISCST3 - VERSION 02035 *** College Park Cancer Risk
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***
05/12/09
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***MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 490 Informational Message(s)
A Total of 490 Calm Hours Identified

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

***** WARNING MESSAGES *****
SO W320 499 PPARM :Input Parameter May Be Out-of-Range for Parameter VS
SO W320 634 PPARM :Input Parameter May Be Out-of-Range for Parameter VS
SO W320 635 PPARM :Input Parameter May Be Out-of-Range for Parameter VS

*** ISCST3 Finishes Successfully ***

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*** ISCST3 - VERSION 02035 ***      *** College Park Cancer Risk (with mitigation on Front end loader)      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:11:46
**MODELOPTS:      URBAN FLAT      NOCALM      PAGE 1
CONC

*** MODEL SETUP OPTIONS SUMMARY ***
-----
**Intermediate Terrain Processing is Selected
**Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.
**Model Assumes No FLAGPOLE Receptor Heights.
**Model Calculates PERIOD Averages Only

**This Run Includes: 264 Source(s); 1 Source Group(s); and 455 Receptor(s)
**The Model Assumes A Pollutant Type of: CNSRSR
**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = /GRAMS/PER/SECOND/ ; Emission Rate Unit Factor = 0.31850E+09
Output Units = /RISK/PER/MILLION/

**Approximate Storage Requirements of Model = 1.5 MB of RAM.

**Input Runstream File: CPDPMSTRM.INP
**Output Print File: CPDPMSTRM.OUT
*** ISCST3 - VERSION 02035 ***      *** College Park Cancer Risk (with mitigation on Front end loader)      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:11:46
**MODELOPTS:      URBAN FLAT      NOCALM      PAGE 2
CONC

*** POINT SOURCE DATA ***

SOURCE ID      NUMBER PART. EMISSION RATE      X      Y      BASE      STACK      STACK      STACK      STACK      BUILDING EMISSION RATE
ID      CATS.      (GRAMS/SEC)      (METERS)      (METERS)      ELEV.      HEIGHT      TEMP.      EXIT VEL.      DIAMETER      EXISTS      SCALAR VARY
(METERS)      (METERS)      (METERS)      (METERS)      (DEG.K)      (M/SEC)      (METERS)      BY

-----
TRKIDL      0      0.72400E-04      435205.9      3772868.5      0.0      4.15      366.48      51.70      0.10      NO      HROFDY
GASIDL      0      0.90600E-06      435550.9      3773343.8      0.0      4.15      366.48      51.70      0.10      NO      HROFDY
H2OI      0      0.23700E-05      435257.7      3772814.8      0.0      4.15      366.48      51.70      0.10      NO      HROFDY
*** ISCST3 - VERSION 02035 ***      *** College Park Cancer Risk (with mitigation on Front end loader)      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:11:46
**MODELOPTS:      URBAN FLAT      NOCALM      PAGE 3
CONC

*** VOLUME SOURCE DATA ***

SOURCE ID      NUMBER PART. EMISSION RATE      X      Y      BASE      RELEASE      INIT.      INIT.      EMISSION RATE
ID      CATS.      (GRAMS/SEC)      (METERS)      (METERS)      ELEV.      HEIGHT      SY      SZ      SCALAR VARY
(METERS)      (METERS)      (METERS)      (METERS)      (METERS)      (METERS)      BY

-----
L0003357      0      0.28898E-05      435575.0      3772933.8      0.0      4.15      3.33      0.23      HROFDY
L0003358      0      0.28898E-05      435567.9      3772932.8      0.0      4.15      3.33      0.23      HROFDY
L0003359      0      0.28898E-05      435560.8      3772931.5      0.0      4.15      3.33      0.23      HROFDY
L0003360      0      0.28898E-05      435553.8      3772930.5      0.0      4.15      3.33      0.23      HROFDY
L0003361      0      0.28898E-05      435546.7      3772929.5      0.0      4.15      3.33      0.23      HROFDY
L0003362      0      0.28898E-05      435539.6      3772928.3      0.0      4.15      3.33      0.23      HROFDY
L0003363      0      0.28898E-05      435532.5      3772927.3      0.0      4.15      3.33      0.23      HROFDY
L0003364      0      0.28898E-05      435525.4      3772926.3      0.0      4.15      3.33      0.23      HROFDY
L0003365      0      0.28898E-05      435518.3      3772925.0      0.0      4.15      3.33      0.23      HROFDY
L0003366      0      0.28898E-05      435511.2      3772924.0      0.0      4.15      3.33      0.23      HROFDY
L0003367      0      0.28898E-05      435504.2      3772923.0      0.0      4.15      3.33      0.23      HROFDY
L0003368      0      0.28898E-05      435497.1      3772921.8      0.0      4.15      3.33      0.23      HROFDY
L0003369      0      0.28898E-05      435490.0      3772920.8      0.0      4.15      3.33      0.23      HROFDY
L0003370      0      0.28898E-05      435482.9      3772919.8      0.0      4.15      3.33      0.23      HROFDY
L0003371      0      0.28898E-05      435475.8      3772918.5      0.0      4.15      3.33      0.23      HROFDY
L0003372      0      0.28898E-05      435468.7      3772917.5      0.0      4.15      3.33      0.23      HROFDY
L0003373      0      0.28898E-05      435462.2      3772915.0      0.0      4.15      3.29      0.23      HROFDY
L0003374      0      0.28898E-05      435455.9      3772911.8      0.0      4.15      3.29      0.23      HROFDY
L0003375      0      0.28898E-05      435449.6      3772908.5      0.0      4.15      3.29      0.23      HROFDY
L0003376      0      0.28898E-05      435443.3      3772905.3      0.0      4.15      3.29      0.23      HROFDY
L0003377      0      0.28898E-05      435437.0      3772902.0      0.0      4.15      3.29      0.23      HROFDY
L0003378      0      0.28898E-05      435430.7      3772899.0      0.0      4.15      3.29      0.23      HROFDY
L0003379      0      0.28898E-05      435424.3      3772895.8      0.0      4.15      3.29      0.23      HROFDY
L0003380      0      0.28898E-05      435418.0      3772892.5      0.0      4.15      3.29      0.23      HROFDY
L0003381      0      0.28898E-05      435411.7      3772889.3      0.0      4.15      3.29      0.23      HROFDY
L0003382      0      0.28898E-05      435405.4      3772886.3      0.0      4.15      3.29      0.23      HROFDY
L0003383      0      0.28898E-05      435399.1      3772883.0      0.0      4.15      3.29      0.23      HROFDY
L0003384      0      0.28898E-05      435392.8      3772879.8      0.0      4.15      3.29      0.23      HROFDY
L0003385      0      0.28898E-05      435386.4      3772876.5      0.0      4.15      3.29      0.23      HROFDY
L0003386      0      0.28898E-05      435380.1      3772873.3      0.0      4.15      3.29      0.23      HROFDY
L0003387      0      0.28898E-05      435373.8      3772870.3      0.0      4.15      3.29      0.23      HROFDY

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**MODELOPTS:
CONC
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URBAN FLAT

NOCALM

*** VOLUME SOURCE DATA ***

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**MODELOPTS:
CONC

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URBAN FLAT

NOCAI M

*** VOLUME SOURCE DATA ***

*** ISCST3

05/12/09

*** 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)	EMISSION RATE SCALAR VARY BY
L0003477	0	0.28898E-05	435531.2	3772931.8	0.0	4.15	3.27	0.23	HROFDY
L0003478	0	0.28898E-05	435538.2	3772932.3	0.0	4.15	3.27	0.23	HROFDY
L0003479	0	0.28898E-05	435545.2	3772932.5	0.0	4.15	3.27	0.23	HROFDY
L0003480	0	0.28898E-05	435552.2	3772932.8	0.0	4.15	3.27	0.23	HROFDY
L0003481	0	0.28898E-05	435559.3	3772933.3	0.0	4.15	3.27	0.23	HROFDY
L0003482	0	0.28898E-05	435566.3	3772933.5	0.0	4.15	3.27	0.23	HROFDY
L0003483	0	0.28898E-05	435573.3	3772934.0	0.0	4.15	3.27	0.23	HROFDY
LOADER	0	0.10000E-02	435304.1	3772870.3	0.0	5.00	13.95	1.16	HROFDY
L0003484	0	0.13228E-05	435572.8	3772935.3	0.0	4.15	3.24	0.32	HROFDY
L0003485	0	0.13228E-05	435566.0	3772934.3	0.0	4.15	3.24	0.32	HROFDY
L0003486	0	0.13228E-05	435559.1	3772933.0	0.0	4.15	3.24	0.32	HROFDY
L0003487	0	0.13228E-05	435552.2	3772932.0	0.0	4.15	3.24	0.32	HROFDY
L0003488	0	0.13228E-05	435545.3	3772931.0	0.0	4.15	3.24	0.32	HROFDY
L0003489	0	0.13228E-05	435538.4	3772930.0	0.0	4.15	3.24	0.32	HROFDY
L0003490	0	0.13228E-05	435531.6	3772928.8	0.0	4.15	3.24	0.32	HROFDY
L0003491	0	0.13228E-05	435524.7	3772927.8	0.0	4.15	3.24	0.32	HROFDY
L0003492	0	0.13228E-05	435517.8	3772926.8	0.0	4.15	3.24	0.32	HROFDY
L0003493	0	0.13228E-05	435510.9	3772925.8	0.0	4.15	3.24	0.32	HROFDY
L0003494	0	0.13228E-05	435504.1	3772924.5	0.0	4.15	3.24	0.32	HROFDY
L0003495	0	0.13228E-05	435497.2	3772923.5	0.0	4.15	3.24	0.32	HROFDY
L0003496	0	0.13228E-05	435490.3	3772922.5	0.0	4.15	3.24	0.32	HROFDY
L0003497	0	0.13228E-05	435483.4	3772921.5	0.0	4.15	3.24	0.32	HROFDY
L0003498	0	0.13228E-05	435476.5	3772920.3	0.0	4.15	3.24	0.32	HROFDY
L0003499	0	0.13228E-05	435469.7	3772919.3	0.0	4.15	3.24	0.32	HROFDY
L0003500	0	0.13228E-05	435463.2	3772916.5	0.0	4.15	3.30	0.32	HROFDY
L0003501	0	0.13228E-05	435456.8	3772913.5	0.0	4.15	3.30	0.32	HROFDY
L0003502	0	0.13228E-05	435450.5	3772910.3	0.0	4.15	3.30	0.32	HROFDY
L0003503	0	0.13228E-05	435444.2	3772907.0	0.0	4.15	3.30	0.32	HROFDY
L0003504	0	0.13228E-05	435437.8	3772903.8	0.0	4.15	3.30	0.32	HROFDY
L0003505	0	0.13228E-05	435431.5	3772900.5	0.0	4.15	3.30	0.32	HROFDY
L0003506	0	0.13228E-05	435425.2	3772897.3	0.0	4.15	3.30	0.32	HROFDY
L0003507	0	0.13228E-05	435418.8	3772894.3	0.0	4.15	3.30	0.32	HROFDY
L0003508	0	0.13228E-05	435412.5	3772891.0	0.0	4.15	3.30	0.32	HROFDY
L0003509	0	0.13228E-05	435406.2	3772887.8	0.0	4.15	3.30	0.32	HROFDY
L0003510	0	0.13228E-05	435399.9	3772884.5	0.0	4.15	3.30	0.32	HROFDY
L0003511	0	0.13228E-05	435393.5	3772881.3	0.0	4.15	3.30	0.32	HROFDY
L0003512	0	0.13228E-05	435387.2	3772878.0	0.0	4.15	3.30	0.32	HROFDY
L0003513	0	0.13228E-05	435380.9	3772875.0	0.0	4.15	3.30	0.32	HROFDY
L0003514	0	0.13228E-05	435374.6	3772871.8	0.0	4.15	3.30	0.32	HROFDY
L0003515	0	0.13228E-05	435368.2	3772868.5	0.0	4.15	3.30	0.32	HROFDY

*** ISCST3 - VERSION 02035 *** College Park Cancer Risk (with mitigation on Front end loader)

*** 05/12/09
10:11:46
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**MODELOPTS: CONC URBAN FLAT NOCALM

*** 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)	EMISSION RATE SCALAR VARY BY
L0003516	0	0.13228E-05	435361.9	3772865.3	0.0	4.15	3.30	0.32	HROFDY
L0003517	0	0.13228E-05	435355.6	3772862.0	0.0	4.15	3.30	0.32	HROFDY
L0003518	0	0.13228E-05	435352.4	3772857.0	0.0	4.15	2.91	0.32	HROFDY
L0003519	0	0.13228E-05	435350.2	3772851.3	0.0	4.15	2.91	0.32	HROFDY
L0003520	0	0.13228E-05	435347.9	3772845.5	0.0	4.15	2.91	0.32	HROFDY
L0003521	0	0.13228E-05	435345.7	3772839.5	0.0	4.15	2.91	0.32	HROFDY
L0003522	0	0.13228E-05	435343.5	3772833.8	0.0	4.15	2.91	0.32	HROFDY
L0003523	0	0.13228E-05	435339.3	3772829.0	0.0	4.15	3.06	0.32	HROFDY
L0003524	0	0.13228E-05	435334.3	3772824.8	0.0	4.15	3.06	0.32	HROFDY
L0003525	0	0.13228E-05	435329.3	3772820.5	0.0	4.15	3.06	0.32	HROFDY
L0003526	0	0.13228E-05	435323.2	3772817.5	0.0	4.15	3.14	0.32	HROFDY
L0003527	0	0.13228E-05	435316.9	3772815.3	0.0	4.15	3.14	0.32	HROFDY
L0003528	0	0.13228E-05	435310.5	3772814.3	0.0	4.15	3.04	0.32	HROFDY
L0003529	0	0.13228E-05	435304.0	3772814.3	0.0	4.15	3.04	0.32	HROFDY
L0003530	0	0.13228E-05	435297.4	3772814.0	0.0	4.15	3.04	0.32	HROFDY
L0003531	0	0.13228E-05	435290.9	3772813.8	0.0	4.15	3.04	0.32	HROFDY
L0003532	0	0.13228E-05	435284.4	3772813.5	0.0	4.15	3.04	0.32	HROFDY
L0003533	0	0.13228E-05	435277.8	3772813.5	0.0	4.15	3.04	0.32	HROFDY
L0003534	0	0.13228E-05	435271.3	3772813.3	0.0	4.15	3.04	0.32	HROFDY
L0003535	0	0.13228E-05	435264.8	3772813.0	0.0	4.15	3.04	0.32	HROFDY
L0003536	0	0.13228E-05	435258.3	3772814.0	0.0	4.15	3.06	0.32	HROFDY
L0003537	0	0.13228E-05	435251.8	3772815.3	0.0	4.15	3.06	0.32	HROFDY
L0003538	0	0.13228E-05	435245.4	3772816.5	0.0	4.15	3.06	0.32	HROFDY
L0003539	0	0.13228E-05	435238.9	3772817.8	0.0	4.15	3.06	0.32	HROFDY
L0003540	0	0.13228E-05	435232.5	3772819.0	0.0	4.15	3.06	0.32	HROFDY
L0003541	0	0.13228E-05	435226.0	3772820.5	0.0	4.15	3.06	0.32	HROFDY
L0003542	0	0.13228E-05	435220.3	3772824.3	0.0	4.15	3.27	0.32	HROFDY
L0003543	0	0.13228E-05	435214.9	3772828.8	0.0	4.15	3.27	0.32	HROFDY
L0003544	0	0.13228E-05	435209.6	3772833.3	0.0	4.15	3.27	0.32	HROFDY
L0003545	0	0.13228E-05	435204.3	3772837.8	0.0	4.15	3.27	0.32	HROFDY
L0003546	0	0.13228E-05	435203.6	3772844.0	0.0	4.15	3.22	0.32	HROFDY
L0003547	0	0.13228E-05	435204.6	3772851.0	0.0	4.15	3.22	0.32	HROFDY
L0003548	0	0.13228E-05	435205.6	3772857.8	0.0	4.15	3.22	0.32	HROFDY
L0003549	0	0.13228E-05	435206.5	3772864.5	0.0	4.15	3.22	0.32	HROFDY
L0003550	0	0.13228E-05	435207.5	3772871.5	0.0	4.15	3.22	0.32	HROFDY
L0003551	0	0.13228E-05	435208.5	3772878.3	0.0	4.15	3.22	0.32	HROFDY
L0003552	0	0.13228E-05	435209.5	3772885.3	0.0	4.15	3.22	0.32	HROFDY
L0003553	0	0.13228E-05	435210.5	3772892.0	0.0	4.15	3.22	0.32	HROFDY
L0003554	0	0.13228E-05	435211.5	3772899.0	0.0	4.15	3.22	0.32	HROFDY
L0003555	0	0.13228E-05	435212.5	3772905.8	0.0	4.15	3.22	0.32	HROFDY

*** ISCST3 - VERSION 02035 *** College Park Cancer Risk (with mitigation on Front end loader)

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**MODELOPTS: CONC URBAN FLAT NOCALM

*** VOLUME SOURCE DATA ***

SOURCE	NUMBER PART.	EMISSION RATE (GRAMS/SEC)	X	Y	BASE ELEV.	RELEASE HEIGHT	INIT. SY	INIT. SZ	EMISSION RATE SCALAR VARY

ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	BY
L0003556	0	0.13228E-05	435213.5	3772912.5	0.0	4.15	3.22	0.32 HROFDY
L0003557	0	0.13228E-05	435214.5	3772919.5	0.0	4.15	3.22	0.32 HROFDY
L0003558	0	0.13228E-05	435218.9	3772923.0	0.0	4.15	2.94	0.32 HROFDY
L0003559	0	0.13228E-05	435224.7	3772925.3	0.0	4.15	2.94	0.32 HROFDY
L0003560	0	0.13228E-05	435230.6	3772927.8	0.0	4.15	2.94	0.32 HROFDY
L0003561	0	0.13228E-05	435236.4	3772930.3	0.0	4.15	2.94	0.32 HROFDY
L0003562	0	0.13228E-05	435242.3	3772932.5	0.0	4.15	2.94	0.32 HROFDY
L0003563	0	0.13228E-05	435249.0	3772933.5	0.0	4.15	3.21	0.32 HROFDY
L0003564	0	0.13228E-05	435255.9	3772933.5	0.0	4.15	3.21	0.32 HROFDY
L0003565	0	0.13228E-05	435262.8	3772933.8	0.0	4.15	3.21	0.32 HROFDY
L0003566	0	0.13228E-05	435269.8	3772934.0	0.0	4.15	3.21	0.32 HROFDY
L0003567	0	0.13228E-05	435276.7	3772934.3	0.0	4.15	3.21	0.32 HROFDY
L0003568	0	0.13228E-05	435283.6	3772934.5	0.0	4.15	3.21	0.32 HROFDY
L0003569	0	0.13228E-05	435290.5	3772934.8	0.0	4.15	3.21	0.32 HROFDY
L0003570	0	0.13228E-05	435297.4	3772934.8	0.0	4.15	3.21	0.32 HROFDY
L0003571	0	0.13228E-05	435304.3	3772935.0	0.0	4.15	3.21	0.32 HROFDY
L0003572	0	0.13228E-05	435311.2	3772935.3	0.0	4.15	3.21	0.32 HROFDY
L0003573	0	0.13228E-05	435318.1	3772935.5	0.0	4.15	3.21	0.32 HROFDY
L0003574	0	0.13228E-05	435324.9	3772935.0	0.0	4.15	3.19	0.32 HROFDY
L0003575	0	0.13228E-05	435331.8	3772934.5	0.0	4.15	3.19	0.32 HROFDY
L0003576	0	0.13228E-05	435338.6	3772934.0	0.0	4.15	3.19	0.32 HROFDY
L0003577	0	0.13228E-05	435345.4	3772933.3	0.0	4.15	3.19	0.32 HROFDY
L0003578	0	0.13228E-05	435352.3	3772932.8	0.0	4.15	3.19	0.32 HROFDY
L0003579	0	0.13228E-05	435359.1	3772932.3	0.0	4.15	3.19	0.32 HROFDY
L0003580	0	0.13228E-05	435365.9	3772931.8	0.0	4.15	3.19	0.32 HROFDY
L0003581	0	0.13228E-05	435372.8	3772931.0	0.0	4.15	3.19	0.32 HROFDY
L0003582	0	0.13228E-05	435379.6	3772930.5	0.0	4.15	3.19	0.32 HROFDY
L0003583	0	0.13228E-05	435386.5	3772930.0	0.0	4.15	3.19	0.32 HROFDY
L0003584	0	0.13228E-05	435393.3	3772929.3	0.0	4.15	3.19	0.32 HROFDY
L0003585	0	0.13228E-05	435400.1	3772928.8	0.0	4.15	3.19	0.32 HROFDY
L0003586	0	0.13228E-05	435407.0	3772928.3	0.0	4.15	3.19	0.32 HROFDY
L0003587	0	0.13228E-05	435413.8	3772927.8	0.0	4.15	3.19	0.32 HROFDY
L0003588	0	0.13228E-05	435420.5	3772927.8	0.0	4.15	3.13	0.32 HROFDY
L0003589	0	0.13228E-05	435427.3	3772927.8	0.0	4.15	3.13	0.32 HROFDY
L0003590	0	0.13228E-05	435434.0	3772928.0	0.0	4.15	3.13	0.32 HROFDY
L0003591	0	0.13228E-05	435440.7	3772928.3	0.0	4.15	3.13	0.32 HROFDY
L0003592	0	0.13228E-05	435447.4	3772928.3	0.0	4.15	3.13	0.32 HROFDY
L0003593	0	0.13228E-05	435454.2	3772928.5	0.0	4.15	3.13	0.32 HROFDY
L0003594	0	0.13228E-05	435460.9	3772928.8	0.0	4.15	3.13	0.32 HROFDY
L0003595	0	0.13228E-05	435467.6	3772928.8	0.0	4.15	3.13	0.32 HROFDY
*** ISCST3 - VERSION 02035 ***								
*** College Park Cancer Risk (with mitigation on Front end loader)								
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***								

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**MODELOPTS:								
CONC								
URBAN FLAT								
NOCALM								

*** 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)	EMISSION RATE SCALAR VARY BY
L0003596	0	0.13228E-05	435474.3	3772929.0	0.0	4.15	3.13	0.32	HROFDY
L0003597	0	0.13228E-05	435481.1	3772929.3	0.0	4.15	3.13	0.32	HROFDY
L0003598	0	0.13228E-05	435487.8	3772929.5	0.0	4.15	3.15	0.32	HROFDY
L0003599	0	0.13228E-05	435494.6	3772930.0	0.0	4.15	3.15	0.32	HROFDY
L0003600	0	0.13228E-05	435501.3	3772930.5	0.0	4.15	3.15	0.32	HROFDY
L0003601	0	0.13228E-05	435508.1	3772931.0	0.0	4.15	3.15	0.32	HROFDY
L0003602	0	0.13228E-05	435514.8	3772931.5	0.0	4.15	3.15	0.32	HROFDY
L0003603	0	0.13228E-05	435521.6	3772932.0	0.0	4.15	3.15	0.32	HROFDY
L0003604	0	0.13228E-05	435528.3	3772932.5	0.0	4.15	3.15	0.32	HROFDY
L0003605	0	0.13228E-05	435535.1	3772933.0	0.0	4.15	3.15	0.32	HROFDY
L0003606	0	0.13228E-05	435541.8	3772933.5	0.0	4.15	3.15	0.32	HROFDY
L0003607	0	0.13228E-05	435548.6	3772934.0	0.0	4.15	3.15	0.32	HROFDY
L0003608	0	0.13228E-05	435555.3	3772934.5	0.0	4.15	3.15	0.32	HROFDY
L0003609	0	0.13228E-05	435562.1	3772935.0	0.0	4.15	3.15	0.32	HROFDY
L0003610	0	0.13228E-05	435568.9	3772935.3	0.0	4.15	3.15	0.32	HROFDY
L0003611	0	0.32167E-06	435572.1	3773322.8	0.0	4.15	2.36	0.32	HROFDY
L0003612	0	0.32167E-06	435567.0	3773323.0	0.0	4.15	2.36	0.32	HROFDY
L0003613	0	0.32167E-06	435561.9	3773323.3	0.0	4.15	2.36	0.32	HROFDY
L0003614	0	0.32167E-06	435557.6	3773327.3	0.0	4.15	3.02	0.32	HROFDY
L0003615	0	0.32167E-06	435554.0	3773332.5	0.0	4.15	3.02	0.32	HROFDY
L0003616	0	0.32167E-06	435550.4	3773338.0	0.0	4.15	3.02	0.32	HROFDY
*** ISCST3 - VERSION 02035 ***					*** College Park Cancer Risk (with mitigation on Front end loader)				***
					*** DPM Sources - Sensitive Receptors (2009 to 2079)				***
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									PAGE 10
**MODELOPTS:									
CONC									
URBAN FLAT									
NOCALM									

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363, L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375, L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, L0003387, L0003388, L0003389, L0003390, L0003391, L0003392, L0003393, L0003394, L0003395, L0003396, L0003397, L0003398, L0003399, L0003400, L0003401, L0003402, L0003403, L0003404, L0003405, L0003406, L0003407, L0003408, L0003409, L0003410, L0003411, L0003412, L0003413, L0003414, L0003415, L0003416, L0003417, L0003418, L0003419, L0003420, L0003421, L0003422, L0003423, L0003424, L0003425, L0003426, L0003427, L0003428, L0003429, L0003430, L0003431, L0003432, L0003433, L0003434, L0003435, L0003436, L0003437, L0003438, L0003439, L0003440, L0003441, L0003442, L0003443, L0003444, L0003445, L0003446, L0003447, L0003448, L0003449, L0003450, L0003451, L0003452, L0003453, L0003454, L0003455, L0003456, L0003457, L0003458, L0003459, L0003460, L0003461, L0003462, L0003463, L0003464, L0003465, L0003466, L0003467, L0003468, L0003469, L0003470, L0003471, L0003472, L0003473, L0003474, L0003475, L0003476, L0003477, L0003478, L0003479, L0003480, L0003481, L0003482, L0003483, TRKIDL, LOADER, L0003484, L0003485, L0003486, L0003487, L0003488, L0003489, L0003490, L0003491, L0003492, L0003493, L0003494, L0003495, L0003496, L0003497, L0003498, L0003499, L0003500, L0003501, L0003502, L0003503, L0003504, L0003505, L0003506, L0003507, L0003508, L0003509, L0003510, L0003511, L0003512, L0003513, L0003514, L0003515, L0003516, L0003517, L0003518, L0003519, L0003520, L0003521, L0003522,

L0003523, L0003524, L0003525, L0003526, L0003527, L0003528, L0003529, L0003530, L0003531, L0003532, L0003533, L0003534,
L0003535, L0003536, L0003537, L0003538, L0003539, L0003540, L0003541, L0003542, L0003543, L0003544, L0003545, L0003546,
L0003547, L0003548, L0003549, L0003550, L0003551, L0003552, L0003553, L0003554, L0003555, L0003556, L0003557, L0003558,
L0003559, L0003560, L0003561, L0003562, L0003563, L0003564, L0003565, L0003566, L0003567, L0003568, L0003569, L0003570,
L0003571, L0003572, L0003573, L0003574, L0003575, L0003576, L0003577, L0003578, L0003579, L0003580, L0003581, L0003582,
L0003583, L0003584, L0003585, L0003586, L0003587, L0003588, L0003589, L0003590, L0003591, L0003592, L0003593, L0003594,
*** ISCST3 - VERSION 02035 *** *** College Park Cancer RIsk (with mitigation on Front end loader) *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:11:46
**MODELOPTS: PAGE 11
CONC URBAN FLAT NOCALM

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs
L0003595, L0003596, L0003597, L0003598, L0003599, L0003600, L0003601, L0003602, L0003603, L0003604, L0003605, L0003606,
L0003607, L0003608, L0003609, L0003610, L0003611, L0003612, L0003613, L0003614, L0003615, L0003616, GASIDL , H2OI ,
*** ISCST3 - VERSION 02035 *** *** College Park Cancer RIsk (with mitigation on Front end loader) *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:11:46
**MODELOPTS: PAGE 12
CONC URBAN FLAT NOCALM
* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR
SOURCE ID = L0003357 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003358 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003359 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003360 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003361 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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
*** ISCST3 - VERSION 02035 *** *** College Park Cancer RIsk (with mitigation on Front end loader) *** 05/12/09 *** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:11:46 **MODELOPTS: PAGE 13 CONC URBAN FLAT NOCALM * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *											

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR
SOURCE ID = L0003362 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003363 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003364 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003365 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003366 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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

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*** ISC33 - VERSION 02035 ***          *** College Park Cancer Risk (with mitigation on Front end loader) ***          05/12/99
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***          10:11:46
***                                     ***          PAGE 15

**MODELOPTS:
CONC                                URBAN FLAT                                NOCALM

* 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 = L0003372 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .12000E+01 9 .12000E+01 10 .12000E+01 11 .12000E+01 12 .12000E+01
13 .67000E+00 14 .67000E+00 15 .67000E+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 = L0003373 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .12000E+01 9 .12000E+01 10 .12000E+01 11 .12000E+01 12 .12000E+01
13 .67000E+00 14 .67000E+00 15 .67000E+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 = L0003374 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .12000E+01 9 .12000E+01 10 .12000E+01 11 .12000E+01 12 .12000E+01
13 .67000E+00 14 .67000E+00 15 .67000E+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 = L0003375 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .12000E+01 9 .12000E+01 10 .12000E+01 11 .12000E+01 12 .12000E+01
13 .67000E+00 14 .67000E+00 15 .67000E+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 = L0003376 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .12000E+01 9 .12000E+01 10 .12000E+01 11 .12000E+01 12 .12000E+01
13 .67000E+00 14 .67000E+00 15 .67000E+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

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**MODELOPTs:
CONC          URBAN FLAT          NOCALM

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HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR
SOURCE_ID = L0003392 ; SOURCE_TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003393 ; SOURCE_TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003394 ; SOURCE_TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003395 ; SOURCE_TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003396 ; SOURCE_TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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

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*** ISCST3 - VERSION 02035 ***      *** College Park Cancer Risk (with mitigation on Front end loader)      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:11:46
**MODELOPTs:      ***      PAGE 20
CONC      URBAN FLAT      NOCALM

      * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

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SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003397 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003398 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003399 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003400 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003401 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

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*** ISCS3 - VERSION 02035 ***      *** College Park Cancer Risk (with mitigation on Front end loader) ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***      10:11:46
**MODELOPTS:                                                                ***      PAGE 21
CONC          URBAN FLAT                                                    NOCALM

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HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SOURCE_ID = L0003402 ; SOURCE_TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003403 ; SOURCE_TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003404 ; SOURCE_TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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

[illegible]

SOURCE ID = L0003430 ; SOURCE TYPE = VOLUME :																																					
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	7	.00000E+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		
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	7	.00000E+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		
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	13	.12000E+01	14	.12000E+01	15	.12000E+01	16	.12000E+01	17	.12000E+01	18	.12000E+01	19	.12000E+01	20	.12000E+01	21	.12000E+01	22	.12000E+01	23	.12000E+01	24	.12000E+01	25	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+00	16	.67000E+00	17	.67000E+00	18	.67000E+00	19	.67000E+00	20	.67000E+00	21	.67000E+00	22	.67000E+00	23	.67000E+00	24	.67000E+00	25	.67000E+00	26	.67000E+00	27	.67000E+00	28	.67000E+00	29	.67000E+00	30	.67000E+00		

19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00
SOURCE ID = L0003431 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk (with mitigation on Front end loader) *** 05/12/09											
MODELOPTS: DPM Sources - Sensitive Receptors (2009 to 2079) * 10:11:46											
PAGE 27											
CONC URBAN FLAT NOCALM											
* 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 = L0003432 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003433 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003434 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003435 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003436 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk (with mitigation on Front end loader) *** 05/12/09											
MODELOPTS: DPM Sources - Sensitive Receptors (2009 to 2079) * 10:11:46											
PAGE 28											
CONC URBAN FLAT NOCALM											
* 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 = L0003437 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10					

SOURCE ID = L0003456 ; SOURCE TYPE = VOLUME												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	

13	.67000E+00	14	.67000E+00	15	.67000E+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	
*** ISCST3 - VERSION 02035 ***				*** College Park Cancer Risk (with mitigation on Front end loader)						***		05/12/09
MODELOPTS:				* DPM Sources - Sensitive Receptors (2009 to 2079)						***		10:11:46
CONC				NOCALM								PAGE 32
* 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 = L0003457 ; SOURCE_TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003458 ; SOURCE_TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003459 ; SOURCE_TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003460 ; SOURCE_TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003461 ; SOURCE_TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	
13	.67000E+00	14	.67000E+00	15	.67000E+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	
*** ISCST3 - VERSION 02035 ***				*** College Park Cancer Risk (with mitigation on Front end loader)						***		05/12/09
MODELOPTS:				* DPM Sources - Sensitive Receptors (2009 to 2079)						***		10:11:46
CONC				NOCALM								PAGE 33
* 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 = L0003462 ; SOURCE_TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	
13	.67000E+00	14	.67000E+00	15	.67000E+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	.00	

[illegible]

HOUR		SCALAR		HOUR		SCALAR		HOUR		SCALAR		HOUR		SCALAR	
SOURCE ID = L0003530 ; SOURCE TYPE = VOLUME :															
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	7	.00000E+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

SOURCE ID = L0003544 ; SOURCE TYPE = VOLUME :

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*** ISCSST3 - VERSION 02035 ***      *** College Park Cancer RiSk (with mitigation on Front end loader)      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:11:46
*MODELOPTS:      ***      PAGE 50
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**MODELOPTs:
CONC
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URBAN FLAT

NOCALM

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOUR	SCALAR

HOUR	SCALAR

HOUR	SCALAR

HOUR	SCALAR

HOUR	SCALAR

HOUR	SCALAP
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
27	1
28	1
29	1
30	1
31	1
32	1
33	1
34	1
35	1
36	1
37	1
38	1
39	1
40	1
41	1
42	1
43	1
44	1
45	1
46	1
47	1
48	1
49	1
50	1
51	1
52	1
53	1
54	1
55	1
56	1
57	1
58	1
59	1
60	1
61	1
62	1
63	1
64	1
65	1
66	1
67	1
68	1
69	1
70	1
71	1
72	1
73	1
74	1
75	1
76	1
77	1
78	1
79	1
80	1
81	1
82	1
83	1
84	1
85	1
86	1
87	1
88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1
101	1
102	1
103	1
104	1
105	1
106	1
107	1
108	1
109	1
110	1
111	1
112	1
113	1
114	1
115	1
116	1
117	1
118	1
119	1
120	1
121	1
122	1
123	1
124	1
125	1
126	1
127	1
128	1
129	1
130	1
131	1
132	1
133	1
134	1
135	1
136	1
137	1
138	1
139	1
140	1
141	1
142	1
143	1
144	1
145	1
146	1
147	1
148	1
149	1
150	1
151	1
152	1
153	1
154	1
155	1
156	1
157	1
158	1
159	1
160	1
161	1
162	1
163	1
164	1
165	1
166	1
167	1
168	1
169	1
170	1
171	1
172	1
173	1
174	1
175	1
176	1
177	1
178	1
179	1
180	1
181	1

SOURCE ID = L0003545 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.10000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003546 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.10000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003547 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003548 ; SOURCE TYPE = VOLUME											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.10000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003549 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.10000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

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*** ISCS3 - VERSION 02035 ***      *** College Park Cancer RiSk (with mitigation on Front end loader)      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:11:46
*MODELOPTS:      ***      PAGE 51
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**MODELOPTs:
CONC
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URBAN FLAT

NOCALM

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOUR	SCALAR

HOUR	SCALAR

HOUR	SCALAR

HOUR	SCALAR

HOUR	SCALAR

HOUR	SCALAR
0	0.000000
1	0.000000
2	0.000000
3	0.000000
4	0.000000
5	0.000000
6	0.000000
7	0.000000
8	0.000000
9	0.000000
10	0.000000
11	0.000000
12	0.000000
13	0.000000
14	0.000000
15	0.000000
16	0.000000
17	0.000000
18	0.000000
19	0.000000
20	0.000000
21	0.000000
22	0.000000
23	0.000000
24	0.000000
25	0.000000
26	0.000000
27	0.000000
28	0.000000
29	0.000000
30	0.000000
31	0.000000
32	0.000000
33	0.000000
34	0.000000
35	0.000000
36	0.000000
37	0.000000
38	0.000000
39	0.000000
40	0.000000
41	0.000000
42	0.000000
43	0.000000
44	0.000000
45	0.000000
46	0.000000
47	0.000000
48	0.000000
49	0.000000
50	0.000000
51	0.000000
52	0.000000
53	0.000000
54	0.000000
55	0.000000
56	0.000000
57	0.000000
58	0.000000
59	0.000000
60	0.000000
61	0.000000
62	0.000000
63	0.000000
64	0.000000
65	0.000000
66	0.000000
67	0.000000
68	0.000000
69	0.000000
70	0.000000
71	0.000000
72	0.000000
73	0.000000
74	0.000000
75	0.000000
76	0.000000
77	0.000000
78	0.000000
79	0.000000
80	0.000000
81	0.000000
82	0.000000
83	0.000000
84	0.000000
85	0.000000
86	0.000000
87	0.000000
88	0.000000
89	0.000000
90	0.000000
91	0.000000
92	0.000000
93	0.000000
94	0.000000
95	0.000000
96	0.000000
97	0.000000
98	0.000000
99	0.000000

SOURCE ID = L0003550 ;		SOURCE TYPE = VOLUME :									
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003551 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE	ID = L0003552	SOURCE	TYPE =	VOLUME	:								
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00		
7	.00000E+00	8	.10000E+01	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 = L0003553 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003554 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

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*** ISCS T3 - VERSION 02035 ***      *** College Park Cancer RIsK (with mitigation on Front end loader)      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:11:46
*MODELOPTS:      ***      PAGE 52
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**MODELOPTS:
CONC
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URBAN FLAT

NOCALM

* 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 = L0003555 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003556 ; SOURCE TYPE = VOLUME :

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*** ISCST3 - VERSION 02035 ***      *** College Park Cancer RiSk (with mitigation on Front end loader)      ***      05/12/09
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*** ISCST3 - VERSION 02035 ***      *** College Park Cancer Risk (with mitigation on Front end loader)      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:11:46
**MODELOPTs:      ***      PAGE 60
CONC      URBAN FLAT      NOCALM

      * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

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SOURCE ID = L0003608 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003609 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk (with mitigation on Front end loader) *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:11:46
**MODELOPTS: PAGE 63
CONC

URBAN FLAT

NOCALM

* 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 = L0003610 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003611 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003612 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003613 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003614 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk (with mitigation on Front end loader) *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:11:46
**MODELOPTS: PAGE 64
CONC

URBAN FLAT

NOCALM

* 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 = L0003615 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003616 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = GASIDL ; SOURCE TYPE = POINT :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = H2OI ; SOURCE TYPE = POINT :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk (with mitigation on Front end loader) *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:11:46
**MODELOPTS: PAGE 65
CONC

URBAN FLAT

NOCALM

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

435175.4, 435195.8, 435216.2, 435236.6, 435257.0, 435277.4, 435297.8, 435318.3, 435338.7, 435359.1,
435379.5, 435399.9, 435420.3, 435440.7, 435461.1, 435481.5, 435501.9, 435522.3, 435542.8, 435563.2,
435583.6,

*** Y-COORDINATES OF GRID ***
(METERS)

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81 01 01 09 344.0 1.00 289.8 4 92.5 213.3 0.0000 0.0 0.0000 0 0.00
81 01 01 10 346.6 0.00 291.5 3 138.0 234.7 0.0000 0.0 0.0000 0 0.00
81 01 01 11 314.1 1.00 294.3 2 183.5 256.0 0.0000 0.0 0.0000 0 0.00
81 01 01 12 238.1 1.34 297.6 2 229.0 277.3 0.0000 0.0 0.0000 0 0.00
81 01 01 13 357.2 1.79 298.7 3 274.5 298.7 0.0000 0.0 0.0000 0 0.00
81 01 01 14 34.2 2.24 299.8 3 320.0 320.0 0.0000 0.0 0.0000 0 0.00
81 01 01 15 44.8 3.13 299.3 3 320.0 320.0 0.0000 0.0 0.0000 0 0.00
81 01 01 16 75.7 3.13 298.7 4 320.0 320.0 0.0000 0.0 0.0000 0 0.00
81 01 01 17 65.1 1.79 295.4 5 325.6 318.5 0.0000 0.0 0.0000 0 0.00
81 01 01 18 97.6 1.34 291.5 6 357.2 310.3 0.0000 0.0 0.0000 0 0.00
81 01 01 19 133.0 1.00 289.8 7 388.8 302.1 0.0000 0.0 0.0000 0 0.00
81 01 01 20 145.7 0.00 287.0 7 420.4 293.9 0.0000 0.0 0.0000 0 0.00
81 01 01 21 223.6 1.00 286.5 7 452.0 285.7 0.0000 0.0 0.0000 0 0.00
81 01 01 22 159.5 1.00 287.0 7 483.5 277.4 0.0000 0.0 0.0000 0 0.00
81 01 01 23 158.2 1.34 285.9 7 515.1 269.2 0.0000 0.0 0.0000 0 0.00
81 01 01 24 134.7 1.00 285.4 7 546.7 261.0 0.0000 0.0 0.0000 0 0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk (with mitigation on Front end loader) ***
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***

**MODELOPTS:
CONC

URBAN FLAT

NOCALM

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*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435175.38	435195.78	435216.19	435236.59	435257.00	435277.44	435297.84	435318.25	435338.66
3773407.25	0.16467	0.16768	0.16993	0.17173	0.17343	0.17527	0.17727	0.17926	0.18095
3773386.75	0.17627	0.17990	0.18265	0.18483	0.18683	0.18896	0.19123	0.19347	0.19534
3773366.25	0.18910	0.19348	0.19683	0.19948	0.20186	0.20432	0.20693	0.20946	0.21154
3773345.75	0.20332	0.20860	0.21269	0.21592	0.21876	0.22162	0.22461	0.22748	0.22980
3773325.25	0.21911	0.22549	0.23049	0.23443	0.23783	0.24117	0.24458	0.24781	0.25037
3773304.75	0.23674	0.24445	0.25058	0.25540	0.25948	0.26338	0.26728	0.27089	0.27367
3773284.25	0.25649	0.26582	0.27335	0.27930	0.28423	0.28881	0.29327	0.29729	0.30028
3773263.75	0.27873	0.29004	0.29935	0.30673	0.31275	0.31817	0.32327	0.32772	0.33088
3773243.25	0.30391	0.31764	0.32918	0.33840	0.34583	0.35227	0.35813	0.36302	0.36629
3773222.75	0.33257	0.34926	0.36362	0.37524	0.38449	0.39224	0.39894	0.40424	0.40749
3773202.25	0.36541	0.38572	0.40366	0.41841	0.43007	0.43946	0.44713	0.45278	0.45585
3773181.75	0.40332	0.42808	0.45057	0.46944	0.48431	0.49583	0.50459	0.51044	0.51306
3773161.25	0.44752	0.47776	0.50605	0.53040	0.54957	0.56385	0.57382	0.57959	0.58142
3773140.75	0.49962	0.53665	0.57240	0.60405	0.62913	0.64702	0.65823	0.66349	0.66397
3773120.25	0.56173	0.60739	0.65282	0.69431	0.72751	0.75019	0.76255	0.76657	0.76492
3773099.75	0.63678	0.69375	0.75190	0.80683	0.85138	0.88037	0.89355	0.89516	0.89020
3773079.25	0.72870	0.80095	0.87637	0.95006	1.01072	1.04802	1.06129	1.05866	1.04848
3773058.75	0.84324	0.93693	1.03666	1.13720	1.22099	1.26937	1.28144	1.27170	1.25322
3773038.25	0.98890	1.11384	1.24943	1.39020	1.50792	1.57098	1.57986	1.55837	1.52618
3773017.75	1.17794	1.35099	1.54337	1.74762	1.91641	1.99927	2.00241	1.96147	1.90447
3772997.25	1.42442	1.67963	1.97116	2.28534	2.53253	2.64359	2.63866	2.56248	2.45728

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk (with mitigation on Front end loader) ***
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***

**MODELOPTS:
CONC

URBAN FLAT

NOCALM

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*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435359.06	435379.47	435399.88	435420.28	435440.72	435461.13	435481.53	435501.94	435522.34
3773407.25	0.18212	0.18270	0.18280	0.18258	0.18216	0.18152	0.18054	0.17902	0.17677
3773386.75	0.19660	0.19717	0.19719	0.19684	0.19623	0.19535	0.19417	0.19261	0.19051
3773366.25	0.21290	0.21348	0.21342	0.21293	0.21205	0.21074	0.20899	0.20714	0.20602
3773345.75	0.23127	0.23187	0.23177	0.23118	0.23013	0.22848	0.22611	0.22329	0.22168
3773325.25	0.25194	0.25250	0.25232	0.25157	0.25028	0.24825	0.24544	0.24223	0.23996
3773304.75	0.27527	0.27574	0.27535	0.27430	0.27247	0.26961	0.26554	0.26036	0.25451
3773284.25	0.30187	0.30218	0.30153	0.30007	0.29754	0.29358	0.28791	0.28066	0.27229
3773263.75	0.33240	0.33250	0.33151	0.32950	0.32608	0.32082	0.31356	0.30465	0.29460
3773243.25	0.36764	0.36741	0.36599	0.36329	0.35880	0.35210	0.34323	0.33260	0.32065
3773222.75	0.40855	0.40789	0.40592	0.40235	0.39658	0.38824	0.37750	0.36487	0.35087
3773202.25	0.45643	0.45519	0.45248	0.44779	0.44041	0.43011	0.41723	0.40239	0.38624
3773181.75	0.51292	0.51088	0.50715	0.50096	0.49158	0.47898	0.46372	0.44650	0.42803
3773161.25	0.58021	0.57702	0.57183	0.56364	0.55182	0.53663	0.51880	0.49908	0.47801
3773140.75	0.66122	0.65638	0.64906	0.63826	0.62351	0.60548	0.58499	0.56269	0.53871
3773120.25	0.75989	0.75260	0.74234	0.72812	0.70999	0.68895	0.66593	0.64103	0.61379
3773099.75	0.88175	0.87087	0.85647	0.83788	0.81594	0.79212	0.76695	0.73962	0.70869
3773079.25	1.03491	1.01852	0.99822	0.97427	0.94848	0.92259	0.89621	0.86696	0.83182
3773058.75	1.23133	1.20622	1.17752	1.14743	1.11881	1.09261	1.06674	1.03647	0.99663
3773038.25	1.48989	1.45036	1.41024	1.37430	1.34554	1.32262	1.30025	1.27065	1.22576
3773017.75	1.84181	1.77877	1.72395	1.68448	1.66107	1.64793	1.63477	1.60942	1.56019
3772997.25	2.34515	2.24566	2.17345	2.13470	2.12589	2.13454	2.14263	2.13031	2.08212

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk (with mitigation on Front end loader) ***
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***

**MODELOPTS:
CONC

URBAN FLAT

NOCALM

*** 05/12/09
10:11:46
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*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435542.75	435563.16	435583.56
3773407.25	0.17317	0.16807	0.16303

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**MODELOPTS:
CONC
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URBAN FLAT

NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361,

INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . .

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/

★ ★

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**MODELOPTs:
CONC
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URBAN FLAT

NOCALM

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/

★ ★

```

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

```

```
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk (with mitigation on Front end loader)
*** DPM Sources - Sensitive Receptors (2009 to 2079)
```

```
**MODELOPTS:
CONC
```

URBAN FLAT

NOCALM

*** Message Summary : ISCST3 Model Execution ***

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

```

A Total of          0 Fatal Error Message(s)
A Total of          3 Warning Message(s)
A Total of        490 Informational Message(s)

A Total of        490 Calm Hours Identified

```

```
***** FATAL ERROR MESSAGES *****
          ***      NONE      ***
```

```

***** WARNING MESSAGES *****
SO W320 499 PPARM :Input Parameter May Be Out-of-Range for Parameter VS
SO W320 634 PPARM :Input Parameter May Be Out-of-Range for Parameter VS
SO W320 635 PPARM :Input Parameter May Be Out-of-Range for Parameter VS

```

```

*****
***  ISCST3 Finishes Successfully  ***
*****

```

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**NO GAS DRY DEPOSITION Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates PERIOD Averages Only

**This Run Includes: 264 Source(s); 1 Source Group(s); and 455 Receptor(s)

**The Model Assumes A Pollutant Type of: CNSRSR

**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = /GRAMS/PER/SECOND/ ; Emission Rate Unit Factor = 0.62900E+08
Output Units = /RISK/PER/MILLION/

**Approximate Storage Requirements of Model = 1.5 MB of RAM.

**Input Runstream File: CPDPMWR.INP

**Output Print File: CPDPMWR.OUT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
TRKIDL	0	0.10600E-03	435205.9	3772868.5	0.0	4.15	366.48	51.70	0.10	NO	HROFDY
GASIDL	0	0.13200E-05	435550.9	3773343.8	0.0	4.15	366.48	51.70	0.10	NO	HROFDY
H2OI	0	0.24000E-05	435257.7	3772814.8	0.0	4.15	366.48	51.70	0.10	NO	HROFDY

*** 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)	EMISSION RATE SCALAR VARY BY
L0003617	0	0.42913E-05	435575.0	3772933.8	0.0	4.15	3.33	0.23	HROFDY
L0003618	0	0.42913E-05	435567.9	3772932.8	0.0	4.15	3.33	0.23	HROFDY
L0003619	0	0.42913E-05	435560.8	3772931.5	0.0	4.15	3.33	0.23	HROFDY
L0003620	0	0.42913E-05	435553.8	3772930.5	0.0	4.15	3.33	0.23	HROFDY
L0003621	0	0.42913E-05	435546.7	3772929.5	0.0	4.15	3.33	0.23	HROFDY
L0003622	0	0.42913E-05	435539.6	3772928.3	0.0	4.15	3.33	0.23	HROFDY
L0003623	0	0.42913E-05	435532.5	3772927.3	0.0	4.15	3.33	0.23	HROFDY
L0003624	0	0.42913E-05	435525.4	3772926.3	0.0	4.15	3.33	0.23	HROFDY
L0003625	0	0.42913E-05	435518.3	3772925.0	0.0	4.15	3.33	0.23	HROFDY
L0003626	0	0.42913E-05	435511.2	3772924.0	0.0	4.15	3.33	0.23	HROFDY
L0003627	0	0.42913E-05	435504.2	3772923.0	0.0	4.15	3.33	0.23	HROFDY
L0003628	0	0.42913E-05	435497.1	3772921.8	0.0	4.15	3.33	0.23	HROFDY
L0003629	0	0.42913E-05	435490.0	3772920.8	0.0	4.15	3.33	0.23	HROFDY
L0003630	0	0.42913E-05	435482.9	3772919.8	0.0	4.15	3.33	0.23	HROFDY
L0003631	0	0.42913E-05	435475.8	3772918.5	0.0	4.15	3.33	0.23	HROFDY
L0003632	0	0.42913E-05	435468.7	3772917.5	0.0	4.15	3.33	0.23	HROFDY
L0003633	0	0.42913E-05	435462.2	3772915.0	0.0	4.15	3.29	0.23	HROFDY
L0003634	0	0.42913E-05	435455.9	3772911.8	0.0	4.15	3.29	0.23	HROFDY
L0003635	0	0.42913E-05	435449.6	3772908.5	0.0	4.15	3.29	0.23	HROFDY
L0003636	0	0.42913E-05	435443.3	3772905.3	0.0	4.15	3.29	0.23	HROFDY
L0003637	0	0.42913E-05	435437.0	3772902.0	0.0	4.15	3.29	0.23	HROFDY
L0003638	0	0.42913E-05	435430.7	3772899.0	0.0	4.15	3.29	0.23	HROFDY
L0003639	0	0.42913E-05	435424.3	3772895.8	0.0	4.15	3.29	0.23	HROFDY
L0003640	0	0.42913E-05	435418.0	3772892.5	0.0	4.15	3.29	0.23	HROFDY
L0003641	0	0.42913E-05	435411.7	3772889.3	0.0	4.15	3.29	0.23	HROFDY
L0003642	0	0.42913E-05	435405.4	3772886.3	0.0	4.15	3.29	0.23	HROFDY
L0003643	0	0.42913E-05	435399.1	3772883.0	0.0	4.15	3.29	0.23	HROFDY
L0003644	0	0.42913E-05	435392.8	3772879.8	0.0	4.15	3.29	0.23	HROFDY
L0003645	0	0.42913E-05	435386.4	3772876.5	0.0	4.15	3.29	0.23	HROFDY
L0003646	0	0.42913E-05	435380.1	3772873.3	0.0	4.15	3.29	0.23	HROFDY
L0003647	0	0.42913E-05	435373.8	3772870.3	0.0	4.15	3.29	0.23	HROFDY

L0003648	0	0.42913E-05	435367.5	3772867.0	0.0	4.15	3.29	0.23	HROFDY
L0003649	0	0.42913E-05	435361.2	3772863.8	0.0	4.15	3.29	0.23	HROFDY
L0003650	0	0.42913E-05	435354.8	3772860.5	0.0	4.15	3.29	0.23	HROFDY
L0003651	0	0.42913E-05	435351.8	3772855.0	0.0	4.15	3.19	0.23	HROFDY
L0003652	0	0.42913E-05	435349.8	3772848.5	0.0	4.15	3.19	0.23	HROFDY
L0003653	0	0.42913E-05	435347.8	3772841.8	0.0	4.15	3.19	0.23	HROFDY
L0003654	0	0.42913E-05	435345.8	3772835.3	0.0	4.15	3.19	0.23	HROFDY
L0003655	0	0.42913E-05	435341.2	3772830.3	0.0	4.15	3.28	0.23	HROFDY
L0003656	0	0.42913E-05	435335.7	3772826.0	0.0	4.15	3.28	0.23	HROFDY

*** ISCST3 - VERSION 02035 ***
*** College Park Cancer Risk
*** DPM Sources - Worker Receptors (2009 to 2049)

05/12/09
07:13:54
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**MODELOPTS:
CONC

URBAN FLAT

NOCALM

*** 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)	EMISSION RATE SCALAR VARY BY
L0003657	0	0.42913E-05	435330.2	3772821.5	0.0	4.15	3.28	0.23	HROFDY
L0003658	0	0.42913E-05	435324.6	3772817.3	0.0	4.15	3.28	0.23	HROFDY
L0003659	0	0.42913E-05	435318.3	3772815.8	0.0	4.15	3.10	0.23	HROFDY
L0003660	0	0.42913E-05	435311.7	3772815.3	0.0	4.15	3.10	0.23	HROFDY
L0003661	0	0.42913E-05	435305.0	3772814.8	0.0	4.15	3.10	0.23	HROFDY
L0003662	0	0.42913E-05	435298.4	3772814.5	0.0	4.15	3.10	0.23	HROFDY
L0003663	0	0.42913E-05	435291.7	3772814.0	0.0	4.15	3.10	0.23	HROFDY
L0003664	0	0.42913E-05	435285.1	3772813.5	0.0	4.15	3.10	0.23	HROFDY
L0003665	0	0.42913E-05	435278.4	3772813.3	0.0	4.15	3.10	0.23	HROFDY
L0003666	0	0.42913E-05	435271.8	3772812.8	0.0	4.15	3.10	0.23	HROFDY
L0003667	0	0.42913E-05	435265.1	3772812.3	0.0	4.15	3.10	0.23	HROFDY
L0003668	0	0.42913E-05	435258.8	3772813.3	0.0	4.15	2.97	0.23	HROFDY
L0003669	0	0.42913E-05	435252.6	3772814.8	0.0	4.15	2.97	0.23	HROFDY
L0003670	0	0.42913E-05	435246.4	3772816.3	0.0	4.15	2.97	0.23	HROFDY
L0003671	0	0.42913E-05	435240.1	3772817.5	0.0	4.15	2.97	0.23	HROFDY
L0003672	0	0.42913E-05	435233.9	3772819.0	0.0	4.15	2.97	0.23	HROFDY
L0003673	0	0.42913E-05	435227.7	3772820.5	0.0	4.15	2.97	0.23	HROFDY
L0003674	0	0.42913E-05	435221.5	3772821.8	0.0	4.15	2.97	0.23	HROFDY
L0003675	0	0.42913E-05	435216.9	3772825.3	0.0	4.15	2.73	0.23	HROFDY
L0003676	0	0.42913E-05	435212.8	3772829.5	0.0	4.15	2.73	0.23	HROFDY
L0003677	0	0.42913E-05	435208.8	3772833.8	0.0	4.15	2.73	0.23	HROFDY
L0003678	0	0.42913E-05	435204.7	3772838.0	0.0	4.15	2.73	0.23	HROFDY
L0003679	0	0.42913E-05	435204.2	3772843.8	0.0	4.15	2.96	0.23	HROFDY
L0003680	0	0.42913E-05	435205.1	3772850.0	0.0	4.15	2.96	0.23	HROFDY
L0003681	0	0.42913E-05	435206.1	3772856.3	0.0	4.15	2.96	0.23	HROFDY
L0003682	0	0.42913E-05	435207.0	3772862.8	0.0	4.15	2.96	0.23	HROFDY
L0003683	0	0.42913E-05	435208.0	3772869.0	0.0	4.15	2.96	0.23	HROFDY
L0003684	0	0.42913E-05	435209.1	3772875.5	0.0	4.15	3.07	0.23	HROFDY
L0003685	0	0.42913E-05	435210.2	3772882.0	0.0	4.15	3.07	0.23	HROFDY
L0003686	0	0.42913E-05	435211.3	3772888.5	0.0	4.15	3.07	0.23	HROFDY
L0003687	0	0.42913E-05	435212.4	3772895.0	0.0	4.15	3.07	0.23	HROFDY
L0003688	0	0.42913E-05	435213.5	3772901.5	0.0	4.15	3.07	0.23	HROFDY
L0003689	0	0.42913E-05	435214.7	3772908.0	0.0	4.15	3.07	0.23	HROFDY
L0003690	0	0.42913E-05	435215.8	3772914.5	0.0	4.15	3.07	0.23	HROFDY
L0003691	0	0.42913E-05	435216.9	3772921.0	0.0	4.15	3.07	0.23	HROFDY
L0003692	0	0.42913E-05	435222.1	3772924.5	0.0	4.15	3.31	0.23	HROFDY
L0003693	0	0.42913E-05	435228.8	3772927.0	0.0	4.15	3.31	0.23	HROFDY
L0003694	0	0.42913E-05	435235.4	3772929.5	0.0	4.15	3.31	0.23	HROFDY
L0003695	0	0.42913E-05	435242.1	3772932.0	0.0	4.15	3.31	0.23	HROFDY
L0003696	0	0.42913E-05	435248.7	3772932.8	0.0	4.15	3.11	0.23	HROFDY

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*** College Park Cancer Risk
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URBAN FLAT

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*** 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)	EMISSION RATE SCALAR VARY BY
L0003697	0	0.42913E-05	435255.3	3772933.0	0.0	4.15	3.11	0.23	HROFDY
L0003698	0	0.42913E-05	435262.0	3772933.3	0.0	4.15	3.11	0.23	HROFDY
L0003699	0	0.42913E-05	435268.7	3772933.3	0.0	4.15	3.11	0.23	HROFDY
L0003700	0	0.42913E-05	435275.4	3772933.5	0.0	4.15	3.11	0.23	HROFDY
L0003701	0	0.42913E-05	435282.1	3772933.8	0.0	4.15	3.11	0.23	HROFDY
L0003702	0	0.42913E-05	435288.8	3772933.8	0.0	4.15	3.11	0.23	HROFDY
L0003703	0	0.42913E-05	435295.5	3772934.0	0.0	4.15	3.11	0.23	HROFDY
L0003704	0	0.42913E-05	435302.2	3772934.3	0.0	4.15	3.11	0.23	HROFDY
L0003705	0	0.42913E-05	435308.8	3772934.3	0.0	4.15	3.11	0.23	HROFDY
L0003706	0	0.42913E-05	435315.5	3772934.5	0.0	4.15	3.11	0.23	HROFDY
L0003707	0	0.42913E-05	435322.4	3772934.0	0.0	4.15	3.21	0.23	HROFDY
L0003708	0	0.42913E-05	435329.3	3772933.5	0.0	4.15	3.21	0.23	HROFDY
L0003709	0	0.42913E-05	435336.2	3772933.0	0.0	4.15	3.21	0.23	HROFDY
L0003710	0	0.42913E-05	435343.0	3772932.5	0.0	4.15	3.21	0.23	HROFDY
L0003711	0	0.42913E-05	435349.9	3772932.0	0.0	4.15	3.21	0.23	HROFDY
L0003712	0	0.42913E-05	435356.8	3772931.3	0.0	4.15	3.21	0.23	HROFDY
L0003713	0	0.42913E-05	435363.7	3772930.8	0.0	4.15	3.21	0.23	HROFDY
L0003714	0	0.42913E-05	435370.6	3772930.3	0.0	4.15	3.21	0.23	HROFDY
L0003715	0	0.42913E-05	435377.4	3772929.8	0.0	4.15	3.21	0.23	HROFDY
L0003716	0	0.42913E-05	435384.3	3772929.3	0.0	4.15	3.21	0.23	HROFDY
L0003717	0	0.42913E-05	435391.2	3772928.5	0.0	4.15	3.21	0.23	HROFDY
L0003718	0	0.42913E-05	435398.1	3772928.0	0.0	4.15	3.21	0.23	HROFDY
L0003719	0	0.42913E-05	435405.0	3772927.5	0.0	4.15	3.21	0.23	HROFDY
L0003720	0	0.42913E-05	435411.8	3772927.0	0.0	4.15	3.21	0.23	HROFDY
L0003721	0	0.42913E-05	435418.8	3772926.5	0.0	4.15	3.21	0.23	HROFDY
L0003722	0	0.42913E-05	435425.8	3772926.5	0.0	4.15	3.27	0.23	HROFDY
L0003723	0	0.42913E-05	435432.8	3772926.8	0.0	4.15	3.27	0.23	HROFDY
L0003724	0	0.42913E-05	435439.8	3772927.3	0.0	4.15	3.27	0.23	HROFDY
L0003725	0	0.42913E-05	435446.8	3772927.5	0.0	4.15	3.27	0.23	HROFDY
L0003726	0	0.42913E-05	435453.9	3772928.0	0.0	4.15	3.27	0.23	HROFDY
L0003727	0	0.42913E-05	435460.9	3772928.3	0.0	4.15	3.27	0.23	HROFDY
L0003728	0	0.42913E-05	435467.9	3772928.5	0.0	4.15	3.27	0.23	HROFDY
L0003729	0	0.42913E-05	435474.9	3772929.0	0.0	4.15	3.27	0.23	HROFDY
L0003730	0	0.42913E-05	435482.0	3772929.3	0.0	4.15	3.27	0.23	HROFDY
L0003731	0	0.42913E-05	435489.0	3772929.8	0.0	4.15	3.27	0.23	HROFDY
L0003732	0	0.42913E-05	435496.0	3772930.0	0.0	4.15	3.27	0.23	HROFDY
L0003733	0	0.42913E-05	435503.0	3772930.5	0.0	4.15	3.27	0.23	HROFDY
L0003734	0	0.42913E-05	435510.1	3772930.8	0.0	4.15	3.27	0.23	HROFDY
L0003735	0	0.42913E-05	435517.1	3772931.0	0.0	4.15	3.27	0.23	HROFDY
L0003736	0	0.42913E-05	435524.1	3772931.5	0.0	4.15	3.27	0.23	HROFDY

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*** 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)	EMISSION RATE SCALAR VARY BY
L0003737	0	0.42913E-05	435531.2	3772931.8	0.0	4.15	3.27	0.23	HROFDY
L0003738	0	0.42913E-05	435538.2	3772932.3	0.0	4.15	3.27	0.23	HROFDY
L0003739	0	0.42913E-05	435545.2	3772932.5	0.0	4.15	3.27	0.23	HROFDY
L0003740	0	0.42913E-05	435552.2	3772932.8	0.0	4.15	3.27	0.23	HROFDY
L0003741	0	0.42913E-05	435559.3	3772933.3	0.0	4.15	3.27	0.23	HROFDY
L0003742	0	0.42913E-05	435566.3	3772933.5	0.0	4.15	3.27	0.23	HROFDY
L0003743	0	0.42913E-05	435573.3	3772934.0	0.0	4.15	3.27	0.23	HROFDY
LOADER	0	0.70000E-02	435304.1	3772870.3	0.0	5.00	13.95	1.16	HROFDY
L0003744	0	0.14331E-05	435572.8	3772935.3	0.0	4.15	3.24	0.32	HROFDY
L0003745	0	0.14331E-05	435566.0	3772934.3	0.0	4.15	3.24	0.32	HROFDY
L0003746	0	0.14331E-05	435559.1	3772933.0	0.0	4.15	3.24	0.32	HROFDY
L0003747	0	0.14331E-05	435552.2	3772932.0	0.0	4.15	3.24	0.32	HROFDY
L0003748	0	0.14331E-05	435545.3	3772931.0	0.0	4.15	3.24	0.32	HROFDY
L0003749	0	0.14331E-05	435538.4	3772930.0	0.0	4.15	3.24	0.32	HROFDY
L0003750	0	0.14331E-05	435531.6	3772928.8	0.0	4.15	3.24	0.32	HROFDY
L0003751	0	0.14331E-05	435524.7	3772927.8	0.0	4.15	3.24	0.32	HROFDY
L0003752	0	0.14331E-05	435517.8	3772926.8	0.0	4.15	3.24	0.32	HROFDY
L0003753	0	0.14331E-05	435510.9	3772925.8	0.0	4.15	3.24	0.32	HROFDY
L0003754	0	0.14331E-05	435504.1	3772924.5	0.0	4.15	3.24	0.32	HROFDY
L0003755	0	0.14331E-05	435497.2	3772923.5	0.0	4.15	3.24	0.32	HROFDY
L0003756	0	0.14331E-05	435490.3	3772922.5	0.0	4.15	3.24	0.32	HROFDY
L0003757	0	0.14331E-05	435483.4	3772921.5	0.0	4.15	3.24	0.32	HROFDY
L0003758	0	0.14331E-05	435476.5	3772920.3	0.0	4.15	3.24	0.32	HROFDY
L0003759	0	0.14331E-05	435469.7	3772919.3	0.0	4.15	3.24	0.32	HROFDY
L0003760	0	0.14331E-05	435463.2	3772916.5	0.0	4.15	3.30	0.32	HROFDY
L0003761	0	0.14331E-05	435456.8	3772913.5	0.0	4.15	3.30	0.32	HROFDY
L0003762	0	0.14331E-05	435450.5	3772910.3	0.0	4.15	3.30	0.32	HROFDY
L0003763	0	0.14331E-05	435444.2	3772907.0	0.0	4.15	3.30	0.32	HROFDY
L0003764	0	0.14331E-05	435437.8	3772903.8	0.0	4.15	3.30	0.32	HROFDY
L0003765	0	0.14331E-05	435431.5	3772900.5	0.0	4.15	3.30	0.32	HROFDY
L0003766	0	0.14331E-05	435425.2	3772897.3	0.0	4.15	3.30	0.32	HROFDY
L0003767	0	0.14331E-05	435418.8	3772894.3	0.0	4.15	3.30	0.32	HROFDY
L0003768	0	0.14331E-05	435412.5	3772891.0	0.0	4.15	3.30	0.32	HROFDY
L0003769	0	0.14331E-05	435406.2	3772887.8	0.0	4.15	3.30	0.32	HROFDY
L0003770	0	0.14331E-05	435399.9	3772884.5	0.0	4.15	3.30	0.32	HROFDY
L0003771	0	0.14331E-05	435393.5	3772881.3	0.0	4.15	3.30	0.32	HROFDY
L0003772	0	0.14331E-05	435387.2	3772878.0	0.0	4.15	3.30	0.32	HROFDY
L0003773	0	0.14331E-05	435380.9	3772875.0	0.0	4.15	3.30	0.32	HROFDY
L0003774	0	0.14331E-05	435374.6	3772871.8	0.0	4.15	3.30	0.32	HROFDY
L0003775	0	0.14331E-05	435368.2	3772868.5	0.0	4.15	3.30	0.32	HROFDY

*** ISCST3 - VERSION 02035 ***

*** College Park Cancer Risk
*** DPM Sources - Worker Receptors (2009 to 2049)

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*** 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)	EMISSION RATE SCALAR VARY BY
L0003776	0	0.14331E-05	435361.9	3772865.3	0.0	4.15	3.30	0.32	HROFDY
L0003777	0	0.14331E-05	435355.6	3772862.0	0.0	4.15	3.30	0.32	HROFDY
L0003778	0	0.14331E-05	435352.4	3772857.0	0.0	4.15	2.91	0.32	HROFDY
L0003779	0	0.14331E-05	435350.2	3772851.3	0.0	4.15	2.91	0.32	HROFDY
L0003780	0	0.14331E-05	435347.9	3772845.5	0.0	4.15	2.91	0.32	HROFDY
L0003781	0	0.14331E-05	435345.7	3772839.5	0.0	4.15	2.91	0.32	HROFDY
L0003782	0	0.14331E-05	435343.5	3772833.8	0.0	4.15	2.91	0.32	HROFDY
L0003783	0	0.14331E-05	435339.3	3772829.0	0.0	4.15	3.06	0.32	HROFDY
L0003784	0	0.14331E-05	435334.3	3772824.8	0.0	4.15	3.06	0.32	HROFDY
L0003785	0	0.14331E-05	435329.3	3772820.5	0.0	4.15	3.06	0.32	HROFDY
L0003786	0	0.14331E-05	435323.2	3772817.5	0.0	4.15	3.14	0.32	HROFDY
L0003787	0	0.14331E-05	435316.9	3772815.3	0.0	4.15	3.14	0.32	HROFDY
L0003788	0	0.14331E-05	435310.5	3772814.3	0.0	4.15	3.04	0.32	HROFDY
L0003789	0	0.14331E-05	435304.0	3772814.3	0.0	4.15	3.04	0.32	HROFDY
L0003790	0	0.14331E-05	435297.4	3772814.0	0.0	4.15	3.04	0.32	HROFDY
L0003791	0	0.14331E-05	435290.9	3772813.8	0.0	4.15	3.04	0.32	HROFDY
L0003792	0	0.14331E-05	435284.4	3772813.5	0.0	4.15	3.04	0.32	HROFDY
L0003793	0	0.14331E-05	435277.8	3772813.5	0.0	4.15	3.04	0.32	HROFDY
L0003794	0	0.14331E-05	435271.3	3772813.3	0.0	4.15	3.04	0.32	HROFDY
L0003795	0	0.14331E-05	435264.8	3772813.0	0.0	4.15	3.04	0.32	HROFDY
L0003796	0	0.14331E-05	435258.3	3772814.0	0.0	4.15	3.06	0.32	HROFDY
L0003797	0	0.14331E-05	435251.8	3772815.3	0.0	4.15	3.06	0.32	HROFDY
L0003798	0	0.14331E-05	435245.4	3772816.5	0.0	4.15	3.06	0.32	HROFDY
L0003799	0	0.14331E-05	435238.9	3772817.8	0.0	4.15	3.06	0.32	HROFDY
L0003800	0	0.14331E-05	435232.5	3772819.0	0.0	4.15	3.06	0.32	HROFDY
L0003801	0	0.14331E-05	435226.0	3772820.5	0.0	4.15	3.06	0.32	HROFDY
L0003802	0	0.14331E-05	435220.3	3772824.3	0.0	4.15	3.27	0.32	HROFDY
L0003803	0	0.14331E-05	435214.9	3772828.8	0.0	4.15	3.27	0.32	HROFDY
L0003804	0	0.14331E-05	435209.6	3772833.3	0.0	4.15	3.27	0.32	HROFDY
L0003805	0	0.14331E-05	435204.3	3772837.8	0.0	4.15	3.27	0.32	HROFDY
L0003806	0	0.14331E-05	435203.6	3772844.0	0.0	4.15	3.22	0.32	HROFDY
L0003807	0	0.14331E-05	435204.6	3772851.0	0.0	4.15	3.22	0.32	HROFDY
L0003808	0	0.14331E-05	435205.6	3772857.8	0.0	4.15	3.22	0.32	HROFDY
L0003809	0	0.14331E-05	435206.5	3772864.5	0.0	4.15	3.22	0.32	HROFDY
L0003810	0	0.14331E-05	435207.5	3772871.5	0.0	4.15	3.22	0.32	HROFDY
L0003811	0	0.14331E-05	435208.5	3772878.3	0.0	4.15	3.22	0.32	HROFDY
L0003812	0	0.14331E-05	435209.5	3772885.3	0.0	4.15	3.22	0.32	HROFDY
L0003813	0	0.14331E-05	435210.5	3772892.0	0.0	4.15	3.22	0.32	HROFDY
L0003814	0	0.14331E-05	435211.5	3772899.0	0.0	4.15	3.22	0.32	HROFDY
L0003815	0	0.14331E-05	435212.5	3772905.8	0.0	4.15	3.22	0.32	HROFDY

*** ISCST3 - VERSION 02035 ***

*** College Park Cancer Risk
*** DPM Sources - Worker Receptors (2009 to 2049)

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*** VOLUME SOURCE DATA ***

SOURCE	NUMBER PART.	EMISSION RATE (GRAMS/SEC)	X	Y	BASE ELEV.	RELEASE HEIGHT	INIT. SY	INIT. SZ	EMISSION RATE SCALAR VARY

*** 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)	EMISSION RATE SCALAR VARY BY	
L0003856	0	0.14331E-05	435474.3	3772929.0	0.0	4.15	3.13	0.32	HROFDY	
L0003857	0	0.14331E-05	435481.1	3772929.3	0.0	4.15	3.13	0.32	HROFDY	
L0003858	0	0.14331E-05	435487.8	3772929.5	0.0	4.15	3.15	0.32	HROFDY	
L0003859	0	0.14331E-05	435494.6	3772930.0	0.0	4.15	3.15	0.32	HROFDY	
L0003860	0	0.14331E-05	435501.3	3772930.5	0.0	4.15	3.15	0.32	HROFDY	
L0003861	0	0.14331E-05	435508.1	3772931.0	0.0	4.15	3.15	0.32	HROFDY	
L0003862	0	0.14331E-05	435514.8	3772931.5	0.0	4.15	3.15	0.32	HROFDY	
L0003863	0	0.14331E-05	435521.6	3772932.0	0.0	4.15	3.15	0.32	HROFDY	
L0003864	0	0.14331E-05	435528.3	3772932.5	0.0	4.15	3.15	0.32	HROFDY	
L0003865	0	0.14331E-05	435535.1	3772933.0	0.0	4.15	3.15	0.32	HROFDY	
L0003866	0	0.14331E-05	435541.8	3772933.5	0.0	4.15	3.15	0.32	HROFDY	
L0003867	0	0.14331E-05	435548.6	3772934.0	0.0	4.15	3.15	0.32	HROFDY	
L0003868	0	0.14331E-05	435555.3	3772934.5	0.0	4.15	3.15	0.32	HROFDY	
L0003869	0	0.14331E-05	435562.1	3772935.0	0.0	4.15	3.15	0.32	HROFDY	
L0003870	0	0.14331E-05	435568.9	3772935.3	0.0	4.15	3.15	0.32	HROFDY	
L0003871	0	0.34833E-06	435572.1	3773322.8	0.0	4.15	2.36	0.32	HROFDY	
L0003872	0	0.34833E-06	435567.0	3773323.0	0.0	4.15	2.36	0.32	HROFDY	
L0003873	0	0.34833E-06	435561.9	3773323.3	0.0	4.15	2.36	0.32	HROFDY	
L0003874	0	0.34833E-06	435557.6	3773327.3	0.0	4.15	3.02	0.32	HROFDY	
L0003875	0	0.34833E-06	435554.0	3773332.5	0.0	4.15	3.02	0.32	HROFDY	
L0003876	0	0.34833E-06	435550.4	3773338.0	0.0	4.15	3.02	0.32	HROFDY	
*** ICS5T3 - VERSION 02035 ***			*** College Park Cancer Risk			***			05/12/09	
			*** DPM Sources - Worker Receptors (2009 to 2049)			***			07:13:54	
**MODELOPTS:									PAGE 10	
CONC			URBAN FLAT			NOCALM				

L0003783, L0003784, L0003785, L0003786, L0003787, L0003788, L0003789, L0003790, L0003791, L0003792, L0003793, L0003794,
L0003795, L0003796, L0003797, L0003798, L0003799, L0003800, L0003801, L0003802, L0003803, L0003804, L0003805, L0003806,
L0003807, L0003808, L0003809, L0003810, L0003811, L0003812, L0003813, L0003814, L0003815, L0003816, L0003817, L0003818,
L0003819, L0003820, L0003821, L0003822, L0003823, L0003824, L0003825, L0003826, L0003827, L0003828, L0003829, L0003830,
L0003831, L0003832, L0003833, L0003834, L0003835, L0003836, L0003837, L0003838, L0003839, L0003840, L0003841, L0003842,
L0003843, L0003844, L0003845, L0003846, L0003847, L0003848, L0003849, L0003850, L0003851, L0003852, L0003853, L0003854, L0003855,
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Worker Receptors (2009 to 2049) *** 07:13:54
**MODELOPTS: PAGE 11
CONC URBAN FLAT NOCALM

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs
L0003855, L0003856, L0003857, L0003858, L0003859, L0003860, L0003861, L0003862, L0003863, L0003864, L0003865, L0003866,
L0003867, L0003868, L0003869, L0003870, L0003871, L0003872, L0003873, L0003874, L0003875, L0003876, GASIDL , H2OI ,
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Worker Receptors (2009 to 2049) *** 07:13:54
**MODELOPTS: PAGE 12
CONC URBAN FLAT NOCALM
* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR
SOURCE ID = L0003617 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003618 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003619 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003620 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003621 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09 *** DPM Sources - Worker Receptors (2009 to 2049) *** 07:13:54 **MODELOPTS: PAGE 13 CONC URBAN FLAT NOCALM * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *											
HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR
SOURCE ID = L0003622 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003623 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003624 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003625 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003626 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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


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*** ISCST3 - VERSION 02035 ***          *** College Park Cancer Risk
***                                     *** DPM Sources - Worker Receptors (2009 to 2049)
***                                     ***
**MODELOPTS:
CONC                                URBAN FLAT                                NOCALM
* 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 = L0003632 ; SOURCE TYPE = VOLUME :
  1 .00000E+00      2 .00000E+00      3 .00000E+00      4 .00000E+00      5 .00000E+00      6 .00000E+00
  7 .00000E+00      8 .12000E+01      9 .12000E+01     10 .12000E+01     11 .12000E+01     12 .12000E+01
 13 .67000E+00     14 .67000E+00     15 .67000E+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 = L0003633 ; SOURCE TYPE = VOLUME :
  1 .00000E+00      2 .00000E+00      3 .00000E+00      4 .00000E+00      5 .00000E+00      6 .00000E+00
  7 .00000E+00      8 .12000E+01      9 .12000E+01     10 .12000E+01     11 .12000E+01     12 .12000E+01
 13 .67000E+00     14 .67000E+00     15 .67000E+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 = L0003634 ; SOURCE TYPE = VOLUME :
  1 .00000E+00      2 .00000E+00      3 .00000E+00      4 .00000E+00      5 .00000E+00      6 .00000E+00
  7 .00000E+00      8 .12000E+01      9 .12000E+01     10 .12000E+01     11 .12000E+01     12 .12000E+01
 13 .67000E+00     14 .67000E+00     15 .67000E+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 = L0003635 ; SOURCE TYPE = VOLUME :
  1 .00000E+00      2 .00000E+00      3 .00000E+00      4 .00000E+00      5 .00000E+00      6 .00000E+00
  7 .00000E+00      8 .12000E+01      9 .12000E+01     10 .12000E+01     11 .12000E+01     12 .12000E+01
 13 .67000E+00     14 .67000E+00     15 .67000E+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 = L0003636 ; SOURCE TYPE = VOLUME :
  1 .00000E+00      2 .00000E+00      3 .00000E+00      4 .00000E+00      5 .00000E+00      6 .00000E+00
  7 .00000E+00      8 .12000E+01      9 .12000E+01     10 .12000E+01     11 .12000E+01     12 .12000E+01
 13 .67000E+00     14 .67000E+00     15 .67000E+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

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**MODELOPTS:
CONC          URBAN FLAT          NOCALM

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SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR
1	2	3	4	5	6	7	8	9	10	11	12
SOURCE ID = L0003652 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003653 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003654 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003655 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003656 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

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*** ISCS3 - VERSION 02035 ***      *** College Park - Cancer Risk ***      *** 05/12/09
*** DPM Sources - Worker Receptors (2009 to 2049) ***      *** 07:13:54
**MODELOPTS:
CONC          URBAN FLAT          NOCALM          PAGE 20

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SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003657 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003658 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003659 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003660 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
SOURCE ID = L0003661 ; SOURCE TYPE = VOLUME :											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

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*** ISCS3 - VERSION 02035 ***      *** College Park - Cancer Risk ***      *** 05/12/09
*** DPM Sources - Worker Receptors (2009 to 2049) ***      *** 07:13:54
**MODELOPTS:                                                                *** PAGE 21
CONC          URBAN FLAT          NOCALM

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	HOUR	SCALAR		HOUR	SCALAR		HOUR	SCALAR		HOUR	SCALAR		HOUR	SCALAR		HOUR	SCALAR		HOUR	SCALAR		HOUR	SCALAR
SOURCE_ID = L0003662 ; SOURCE_TYPE = VOLUME :																							
	1	.00000E+00		2	.00000E+00		3	.00000E+00		4	.00000E+00		5	.00000E+00		6	.00000E+00						
	7	.00000E+00		8	.12000E+01		9	.12000E+01		10	.12000E+01		11	.12000E+01		12	.12000E+01						
	13	.67000E+00		14	.67000E+00		15	.67000E+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 = L0003663 ; SOURCE_TYPE = VOLUME :																							
	1	.00000E+00		2	.00000E+00		3	.00000E+00		4	.00000E+00		5	.00000E+00		6	.00000E+00						
	7	.00000E+00		8	.12000E+01		9	.12000E+01		10	.12000E+01		11	.12000E+01		12	.12000E+01						
	13	.67000E+00		14	.67000E+00		15	.67000E+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 = L0003664 ; SOURCE_TYPE = VOLUME :																							
	1	.00000E+00		2	.00000E+00		3	.00000E+00		4	.00000E+00		5	.00000E+00		6	.00000E+00						
	7	.00000E+00		8	.12000E+01		9	.12000E+01		10	.12000E+01		11	.12000E+01		12	.12000E+01						
	13	.67000E+00		14	.67000E+00		15	.67000E+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						

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

SOURCE ID = L0003690 ; SOURCE TYPE = VOLUME ;															
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	7	.00000E+00	8	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	13	.12000E+01	14	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+00	16	.67000E+00	17	.67000E+00	18	.67000E+00	19	.67000E+00	20	.67000E+00

SOURCE ID = L0003716 ; SOURCE TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	

SOURCE	ID = L0003728 ;	SOURCE	TYPE = VOLUME :
1	.00000E+00	2	.00000E+00
3	.00000E+00	4	.00000E+00
5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01
9	.00000E+00	10	.12000E+01
11	.00000E+00	12	.12000E+01
13	.67000E+00	14	.67000E+00
15	.00000E+00	16	.00000E+00
17	.00000E+00	18	.00000E+00


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*** ISCST3 - VERSION 02035 ***      *** College Park Cancer Risk      ***      05/12/99
*** DPM Sources - Worker Receptors (2009 to 2049) ***      07:13:54
**MODELOPTS:                        PAGE 37
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CONC		URBAN FLAT				NOCALM			
* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
SOURCE ID = L0003742 ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .00000E+00	9 .00000E+00	10 .00000E+00
13 .67000E+00	14 .67000E+00	15 .67000E+00	16 .00000E+00	17 .00000E+00	18 .00000E+00	19 .00000E+00	20 .00000E+00	21 .00000E+00	22 .00000E+00
SOURCE ID = L0003743 ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .12000E+01	9 .12000E+01	10 .12000E+01
13 .67000E+00	14 .67000E+00	15 .67000E+00	16 .00000E+00	17 .00000E+00	18 .00000E+00	19 .00000E+00	20 .00000E+00	21 .00000E+00	22 .00000E+00
SOURCE ID = TRKIDL ; SOURCE TYPE = POINT :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .12000E+01	9 .12000E+01	10 .12000E+01
13 .67000E+00	14 .67000E+00	15 .67000E+00	16 .00000E+00	17 .00000E+00	18 .00000E+00	19 .00000E+00	20 .00000E+00	21 .00000E+00	22 .00000E+00
SOURCE ID = LOADER ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .10000E+01	8 .10000E+01	9 .00000E+00	10 .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
SOURCE ID = L0003744 ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .10000E+01	9 .00000E+00	10 .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
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09									
*** DPM Sources - Worker Receptors (2009 to 2049) *** 07:13:54									
**MODELOPTS: PAGE 38									

CONC		URBAN FLAT				NOCALM			
* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
SOURCE ID = L0003745 ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .10000E+01	9 .00000E+00	10 .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
SOURCE ID = L0003746 ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .10000E+01	9 .00000E+00	10 .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
SOURCE ID = L0003747 ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .10000E+01	9 .00000E+00	10 .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
SOURCE ID = L0003748 ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .10000E+01	9 .00000E+00	10 .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
SOURCE ID = L0003749 ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .10000E+01	9 .00000E+00	10 .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
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09									
*** DPM Sources - Worker Receptors (2009 to 2049) *** 07:13:54									
**MODELOPTS: PAGE 39									

CONC		URBAN FLAT				NOCALM			
* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
SOURCE ID = L0003750 ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .10000E+01	9 .00000E+00	10 .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
SOURCE ID = L0003751 ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .10000E+01	9 .00000E+00	10 .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
SOURCE ID = L0003752 ; SOURCE TYPE = VOLUME :									
1 .00000E+00	2 .00000E+00	3 .00000E+00	4 .00000E+00	5 .00000E+00	6 .00000E+00	7 .00000E+00	8 .10000E+01	9 .00000E+00	10 .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

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

SOURCE ID = L0003778 ; SOURCE TYPE = VOLUME :

1	2	3	4	5	6	7	8	9	10	11	12
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SOURCE ID = L0003790 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.00000E+00	10	.00000E+00	11	.00000E+00	12	.00000E+00

SOURCE ID = L0003804 ; SOURCE TYPE = VOLUME :

*** ISCST3 - VERSION 02035 *** *** College Park Cancer RiSk *** 05/12/09


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**MODELOPTS:
CONC          URBAN FLAT          NOCALM
               * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

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SOURCE ID = L0003868 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003869 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Worker Receptors (2009 to 2049) *** 07:13:54
**MODELOPTS: PAGE 63
CONC

URBAN FLAT

NOCALM

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HO	UR	HO	UR	HO	UR	HO	UR	HO	UR	HO	UR
UR	FL	UR	FL	UR	FL	UR	FL	UR	FL	UR	FL

SOURCE ID = L0003870 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003871 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003872 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003873 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003874 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Worker Receptors (2009 to 2049) *** 07:13:54
**MODELOPTS: PAGE 64
CONC

URBAN FLAT

NOCALM

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HO	UR	HO	UR	HO	UR	HO	UR	HO	UR	HO	UR
UR	FL	UR	FL	UR	FL	UR	FL	UR	FL	UR	FL

SOURCE ID = L0003875 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = L0003876 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = GASIDL ; SOURCE TYPE = POINT :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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 = H2OI ; SOURCE TYPE = POINT :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00 5 .00000E+00 6 .00000E+00
7 .00000E+00 8 .10000E+01 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

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Worker Receptors (2009 to 2049) *** 07:13:54
**MODELOPTS: PAGE 65
CONC

URBAN FLAT

NOCALM

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

435175.4, 435195.8, 435216.2, 435236.6, 435257.0, 435277.4, 435297.8, 435318.3, 435338.7, 435359.1,
435379.5, 435399.9, 435420.3, 435440.7, 435461.1, 435481.5, 435501.9, 435522.3, 435542.8, 435563.2,
435583.6,

*** Y-COORDINATES OF GRID ***
(METERS)

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[illegible]

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

1.54, 3.09, 5.14, 8.23, 10.80,

STABILITY CATEGORY	WIND SPEED CATEGORY					
	1	2	3	4	5	6
A	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
B	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
C	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00	.20000E+00
D	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00	.25000E+00
E	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00
F	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00	.30000E+00

STABILITY CATEGORY	WIND SPEED CATEGORY					
	1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

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FILE:      C:\MBA\COLLEG-1\UPLAND.ASC
FORMAT:    (4I2,F9.4,F6.1,I2,F7.1,f9.4,f10.1,f8.4,i4,f7.2)
SURFACE    STATION NO.: 54147      UPPER AIR STATION NO.: 99999
          NAME: UNKNOWN              NAME: UNKNOWN
          YEAR: 1981                YEAR: 1981

```

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING RURAL	HEIGHT (M) URBAN	USTAR (M/S)	M-O (M)	LENGTH (M)	Z-O (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.00	284.3	7	522.6	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	02	147.4	1.00	284.3	7	507.0	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	03	152.5	1.34	283.1	7	491.4	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	04	166.0	0.00	283.1	7	475.8	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	05	151.5	0.00	282.6	7	460.3	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	06	139.5	1.34	283.1	7	444.7	170.0	0.0000		0.0	0.0000	0	0.00
81	01	01	07	162.0	1.34	285.4	6	1.4	170.7	0.0000		0.0	0.0000	0	0.00
81	01	01	08	157.1	0.00	287.6	5	47.0	192.0	0.0000		0.0	0.0000	0	0.00

81 01 01 09 344.0 1.00 289.8 4 92.5 213.3 0.0000 0.0 0.0000 0 0.00
81 01 01 10 346.6 0.00 291.5 3 138.0 234.7 0.0000 0.0 0.0000 0 0.00
81 01 01 11 314.1 1.00 294.3 2 183.5 256.0 0.0000 0.0 0.0000 0 0.00
81 01 01 12 238.1 1.34 297.6 2 229.0 277.3 0.0000 0.0 0.0000 0 0.00
81 01 01 13 357.2 1.79 298.7 3 274.5 298.7 0.0000 0.0 0.0000 0 0.00
81 01 01 14 34.2 2.24 299.8 3 320.0 320.0 0.0000 0.0 0.0000 0 0.00
81 01 01 15 44.8 3.13 299.3 3 320.0 320.0 0.0000 0.0 0.0000 0 0.00
81 01 01 16 75.7 3.13 298.7 4 320.0 320.0 0.0000 0.0 0.0000 0 0.00
81 01 01 17 65.1 1.79 295.4 5 325.6 318.5 0.0000 0.0 0.0000 0 0.00
81 01 01 18 97.6 1.34 291.5 6 357.2 310.3 0.0000 0.0 0.0000 0 0.00
81 01 01 19 133.0 1.00 289.8 7 388.8 302.1 0.0000 0.0 0.0000 0 0.00
81 01 01 20 145.7 0.00 287.0 7 420.4 293.9 0.0000 0.0 0.0000 0 0.00
81 01 01 21 223.6 1.00 286.5 7 452.0 285.7 0.0000 0.0 0.0000 0 0.00
81 01 01 22 159.5 1.00 287.0 7 483.5 277.4 0.0000 0.0 0.0000 0 0.00
81 01 01 23 158.2 1.34 285.9 7 515.1 269.2 0.0000 0.0 0.0000 0 0.00
81 01 01 24 134.7 1.00 285.4 7 546.7 261.0 0.0000 0.0 0.0000 0 0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk
*** DPM Sources - Worker Receptors (2009 to 2049) ***

**MODELOPTS:
CONC

URBAN FLAT

NOCALM

*** 05/12/09
07:13:54
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*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003617, L0003618, L0003619, L0003620, L0003621, L0003622, L0003623,
L0003624, L0003625, L0003626, L0003627, L0003628, L0003629, L0003630, L0003631, L0003632, L0003633, L0003634, L0003635,
L0003636, L0003637, L0003638, L0003639, L0003640, L0003641, L0003642, L0003643, L0003644, L0003645, L0003646, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435175.38	435195.78	435216.19	435236.59	435257.00	435277.44	435297.84	435318.25	435338.66
3773407.25	0.11739	0.11758	0.11673	0.11524	0.11359	0.11216	0.11106	0.11014	0.10909
3773386.75	0.12597	0.12652	0.12584	0.12434	0.12258	0.12100	0.11976	0.11870	0.11749
3773366.25	0.13547	0.13647	0.13603	0.13456	0.13268	0.13093	0.12953	0.12831	0.12692
3773345.75	0.14600	0.14758	0.14748	0.14608	0.14410	0.14216	0.14056	0.13914	0.13754
3773325.25	0.15771	0.16002	0.16037	0.15913	0.15705	0.15490	0.15306	0.15141	0.14953
3773304.75	0.17079	0.17401	0.17497	0.17397	0.17182	0.16944	0.16733	0.16536	0.16315
3773284.25	0.18543	0.18980	0.19158	0.19095	0.18878	0.18614	0.18369	0.18135	0.17872
3773263.75	0.20192	0.20770	0.21057	0.21051	0.20839	0.20548	0.20261	0.19980	0.19664
3773243.25	0.22056	0.22809	0.23239	0.23126	0.23122	0.22802	0.22465	0.22124	0.21740
3773222.75	0.24178	0.25143	0.25761	0.25957	0.25799	0.25451	0.25052	0.24633	0.24162
3773202.25	0.26609	0.27834	0.28695	0.29061	0.28968	0.28594	0.28118	0.27596	0.27012
3773181.75	0.29421	0.30958	0.32134	0.32737	0.32752	0.32360	0.31787	0.31129	0.30397
3773161.25	0.32709	0.34619	0.36197	0.37135	0.37320	0.36925	0.36229	0.35388	0.34459
3773140.75	0.36602	0.38957	0.41047	0.42446	0.42899	0.42530	0.41676	0.40587	0.39391
3773120.25	0.41265	0.44161	0.46906	0.48940	0.49806	0.49512	0.48452	0.47018	0.45456
3773099.75	0.46935	0.50511	0.54088	0.57000	0.58495	0.58361	0.57026	0.55108	0.53027
3773079.25	0.53921	0.58388	0.63053	0.67182	0.69639	0.69798	0.68102	0.65490	0.62650
3773058.75	0.62695	0.68364	0.74492	0.80328	0.84240	0.84936	0.82766	0.79131	0.75141
3773038.25	0.73979	0.81314	0.89477	0.97776	1.03916	1.05557	1.02778	0.97599	0.91771
3773017.75	0.88839	0.98614	1.09797	1.21749	1.31386	1.34693	1.31190	1.23567	1.14607
3772997.25	1.08393	1.22452	1.38596	1.56396	1.71541	1.77866	1.73662	1.61889	1.47294

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk
*** DPM Sources - Worker Receptors (2009 to 2049) ***

**MODELOPTS:
CONC

URBAN FLAT

NOCALM

*** 05/12/09
07:13:54
PAGE 71

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003617, L0003618, L0003619, L0003620, L0003621, L0003622, L0003623,
L0003624, L0003625, L0003626, L0003627, L0003628, L0003629, L0003630, L0003631, L0003632, L0003633, L0003634, L0003635,
L0003636, L0003637, L0003638, L0003639, L0003640, L0003641, L0003642, L0003643, L0003644, L0003645, L0003646, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435359.06	435379.47	435399.88	435420.28	435440.72	435461.13	435481.53	435501.94	435522.34
3773407.25	0.10773	0.10607	0.10435	0.10279	0.10150	0.10037	0.09915	0.09752	0.09532
3773386.75	0.11594	0.11409	0.11220	0.11051	0.10909	0.10777	0.10626	0.10429	0.10170
3773366.25	0.12516	0.12309	0.12102	0.11918	0.11757	0.11595	0.11400	0.11154	0.10866
3773345.75	0.13552	0.13322	0.13095	0.12894	0.12712	0.12516	0.12266	0.11946	0.11588
3773325.25	0.14721	0.14462	0.14211	0.13988	0.13777	0.13535	0.13222	0.12829	0.12391
3773304.75	0.16046	0.15752	0.15471	0.15218	0.14961	0.14650	0.14241	0.13728	0.13138
3773284.25	0.17558	0.17222	0.16904	0.16610	0.16291	0.15887	0.15358	0.14710	0.13982
3773263.75	0.19295	0.18909	0.18544	0.18193	0.17789	0.17267	0.16599	0.15809	0.14953
3773243.25	0.21302	0.20853	0.20429	0.20001	0.19484	0.18814	0.17982	0.17036	0.16040
3773222.75	0.23638	0.23111	0.22608	0.22072	0.21405	0.20550	0.19527	0.18405	0.17263
3773202.25	0.26377	0.25751	0.25139	0.24454	0.23586	0.22504	0.21259	0.19947	0.18660
3773181.75	0.29620	0.28859	0.28094	0.27199	0.26070	0.24711	0.23219	0.21711	0.20285
3773161.25	0.33495	0.32548	0.31561	0.30376	0.28910	0.27228	0.25470	0.23773	0.22216
3773140.75	0.38171	0.36964	0.35652	0.34068	0.32180	0.30133	0.28106	0.26237	0.24567
3773120.25	0.43878	0.42290	0.40510	0.38388	0.35990	0.33549	0.31278	0.29266	0.27500
3773099.75	0.50932	0.48775	0.46318	0.43488	0.40502	0.37678	0.35210	0.33101	0.31248
3773079.25	0.59786	0.56752	0.53325	0.49607	0.45986	0.42840	0.40253	0.38096	0.36149
3773058.75	0.71061	0.66679	0.61897	0.57116	0.52910	0.49559	0.46959	0.44791	0.42711
3773038.25	0.85702	0.79233	0.72648	0.66725	0.62073	0.58698	0.56187	0.54010	0.51701
3773017.75	1.05170	0.95516	0.86670	0.79703	0.74868	0.71672	0.69313	0.67057	0.64329
3772997.25	1.32002	1.17758	1.06316	0.98487	0.93718	0.90820	0.88607	0.86128	0.82767

*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk
*** DPM Sources - Worker Receptors (2009 to 2049) ***

**MODELOPTS:
CONC

URBAN FLAT

NOCALM

*** 05/12/09
07:13:54
PAGE 72

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003617, L0003618, L0003619, L0003620, L0003621, L0003622, L0003623,
L0003624, L0003625, L0003626, L0003627, L0003628, L0003629, L0003630, L0003631, L0003632, L0003633, L0003634, L0003635,
L0003636, L0003637, L0003638, L0003639, L0003640, L0003641, L0003642, L0003643, L0003644, L0003645, L0003646, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

Y-COORD (METERS)	435542.75	435563.16	435583.56
3773407.25	0.09237	0.08873	0.08489

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3773386.75 | 0.09831 0.09401 0.08951
3773366.25 | 0.10521 0.10006 0.09460
3773345.75 | 0.11277 0.10728 0.10038
3773325.25 | 0.11889 0.11143 0.10612
3773304.75 | 0.12490 0.11931 0.11409
3773284.25 | 0.13217 0.12526 0.11937
3773263.75 | 0.14077 0.13266 0.12571
3773243.25 | 0.15053 0.14148 0.13361
3773222.75 | 0.16170 0.15179 0.14315
3773202.25 | 0.17463 0.16394 0.15459
3773181.75 | 0.18989 0.17844 0.16838
3773161.25 | 0.20828 0.19602 0.18510
3773140.75 | 0.23087 0.21764 0.20557
3773120.25 | 0.25917 0.24461 0.23084
3773099.75 | 0.29529 0.27872 0.26236
3773079.25 | 0.34230 0.32254 0.30206
3773058.75 | 0.40467 0.37965 0.35226
3773038.25 | 0.48918 0.45516 0.41588
3773017.75 | 0.60665 0.55749 0.49743
3772997.25 | 0.77874 0.70536 0.60713
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Worker Receptors (2009 to 2049) *** 07:13:54
**MODELOPTS: URBAN FLAT NOCALM PAGE 73
CONC
*** THE PERIOD ( 8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003617, L0003618, L0003619, L0003620, L0003621, L0003622, L0003623,
L0003624, L0003625, L0003626, L0003627, L0003628, L0003629, L0003630, L0003631, L0003632, L0003633, L0003634, L0003635,
L0003636, L0003637, L0003638, L0003639, L0003640, L0003641, L0003642, L0003643, L0003644, L0003645, L0003646, . . . ,
*** DISCRETE CARTESIAN RECEPTOR POINTS ***
** CONC OF CNSRSR IN /RISK/PER/MILLION/ **

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X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
435422.09	3773260.25	0.18451	435440.19	3772988.00	1.05339
435419.38	3772985.75	1.13441	435399.28	3772982.75	1.26423
435379.19	3772981.00	1.42880	435358.72	3772978.50	1.67682
435340.44	3772975.75	1.97289	435318.91	3772973.25	2.35011
435297.38	3772971.00	2.68437	435277.28	3772968.25	2.87283
435256.84	3772965.25	2.86091	435235.31	3772962.00	2.66578
435217.00	3772960.00	2.34261	435196.19	3772955.50	2.00155

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*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Worker Receptors (2009 to 2049) *** 07:13:54
**MODELOPTS: URBAN FLAT NOCALM PAGE 74
CONC
*** THE SUMMARY OF MAXIMUM PERIOD ( 8760 HRS) RESULTS ***

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** CONC OF CNSRSR IN /RISK/PER/MILLION/ **
GROUP ID AVERAGE CONC RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE NETWORK GRID-ID
ALL 1ST HIGHEST VALUE IS 2.87283 AT ( 435277.28, 3772968.25, 0.00, 0.00) DC NA
2ND HIGHEST VALUE IS 2.86091 AT ( 435256.84, 3772965.25, 0.00, 0.00) DC NA
3RD HIGHEST VALUE IS 2.68437 AT ( 435297.38, 3772971.00, 0.00, 0.00) DC NA
4TH HIGHEST VALUE IS 2.66578 AT ( 435235.31, 3772962.00, 0.00, 0.00) DC NA
5TH HIGHEST VALUE IS 2.35011 AT ( 435318.91, 3772973.25, 0.00, 0.00) DC NA
6TH HIGHEST VALUE IS 2.34261 AT ( 435217.00, 3772960.00, 0.00, 0.00) DC NA
7TH HIGHEST VALUE IS 2.00155 AT ( 435196.19, 3772955.50, 0.00, 0.00) DC NA
8TH HIGHEST VALUE IS 1.97289 AT ( 435340.44, 3772975.75, 0.00, 0.00) DC NA
9TH HIGHEST VALUE IS 1.77866 AT ( 435277.44, 3772997.25, 0.00, 0.00) GC UCART1
10TH HIGHEST VALUE IS 1.73662 AT ( 435297.84, 3772997.25, 0.00, 0.00) GC UCART1

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*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY
*** ISCST3 - VERSION 02035 *** *** College Park Cancer Risk *** 05/12/09
*** DPM Sources - Worker Receptors (2009 to 2049) *** 07:13:54
**MODELOPTS: URBAN FLAT NOCALM PAGE 75
CONC

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*** Message Summary : ISCST3 Model Execution ***
----- Summary of Total Messages -----
A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 490 Informational Message(s)
A Total of 490 Calm Hours Identified

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

***** WARNING MESSAGES *****
SO W320 499 PPARM :Input Parameter May Be Out-of-Range for Parameter VS
SO W320 634 PPARM :Input Parameter May Be Out-of-Range for Parameter VS
SO W320 635 PPARM :Input Parameter May Be Out-of-Range for Parameter VS

***** ISCST3 Finishes Successfully *****

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*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 1
CONC

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**NO GAS DRY DEPOSITION Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Not Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates PERIOD Averages Only

**This Run Includes: 264 Source(s); 1 Source Group(s); and 455 Receptor(s)

**The Model Assumes A Pollutant Type of: CHRONHI

**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = /GRAMS/PER/SECOND ; Emission Rate Unit Factor = 0.20000E+06
Output Units = /CHRONIC/HAZARD/INDEX/

**Approximate Storage Requirements of Model = 1.5 MB of RAM.

**Input Runstream File: CPDPMSRC.INP

**Output Print File: CPDPMSRC.OUT

*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 2
CONC

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG. K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
TRKIDL	0	0.72400E-04	435205.9	3772868.5	0.0	4.15	366.48	51.70	0.10	NO	HROFDY
GASIDL	0	0.90600E-06	435550.9	3773343.8	0.0	4.15	366.48	51.70	0.10	NO	HROFDY
H2O1	0	0.23700E-05	435257.7	3772814.8	0.0	4.15	366.48	51.70	0.10	NO	HROFDY

*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 3
CONC

*** 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)	EMISSION RATE SCALAR VARY BY
L0003357	0	0.28898E-05	435575.0	3772933.8	0.0	4.15	3.33	0.23	HROFDY
L0003358	0	0.28898E-05	435567.9	3772932.8	0.0	4.15	3.33	0.23	HROFDY
L0003359	0	0.28898E-05	435560.8	3772931.5	0.0	4.15	3.33	0.23	HROFDY
L0003360	0	0.28898E-05	435553.8	3772930.5	0.0	4.15	3.33	0.23	HROFDY
L0003361	0	0.28898E-05	435546.7	3772929.5	0.0	4.15	3.33	0.23	HROFDY
L0003362	0	0.28898E-05	435539.6	3772928.3	0.0	4.15	3.33	0.23	HROFDY
L0003363	0	0.28898E-05	435532.5	3772927.3	0.0	4.15	3.33	0.23	HROFDY
L0003364	0	0.28898E-05	435525.4	3772926.3	0.0	4.15	3.33	0.23	HROFDY
L0003365	0	0.28898E-05	435518.3	3772925.0	0.0	4.15	3.33	0.23	HROFDY
L0003366	0	0.28898E-05	435511.2	3772924.0	0.0	4.15	3.33	0.23	HROFDY
L0003367	0	0.28898E-05	435504.2	3772923.0	0.0	4.15	3.33	0.23	HROFDY
L0003368	0	0.28898E-05	435497.1	3772921.8	0.0	4.15	3.33	0.23	HROFDY
L0003369	0	0.28898E-05	435490.0	3772920.8	0.0	4.15	3.33	0.23	HROFDY
L0003370	0	0.28898E-05	435482.9	3772919.8	0.0	4.15	3.33	0.23	HROFDY
L0003371	0	0.28898E-05	435475.8	3772918.5	0.0	4.15	3.33	0.23	HROFDY
L0003372	0	0.28898E-05	435468.7	3772917.5	0.0	4.15	3.33	0.23	HROFDY
L0003373	0	0.28898E-05	435462.2	3772915.0	0.0	4.15	3.29	0.23	HROFDY
L0003374	0	0.28898E-05	435455.9	3772911.8	0.0	4.15	3.29	0.23	HROFDY
L0003375	0	0.28898E-05	435449.6	3772908.5	0.0	4.15	3.29	0.23	HROFDY
L0003376	0	0.28898E-05	435443.3	3772905.3	0.0	4.15	3.29	0.23	HROFDY
L0003377	0	0.28898E-05	435437.0	3772902.0	0.0	4.15	3.29	0.23	HROFDY
L0003378	0	0.28898E-05	435430.7	3772899.0	0.0	4.15	3.29	0.23	HROFDY
L0003379	0	0.28898E-05	435424.3	3772895.8	0.0	4.15	3.29	0.23	HROFDY
L0003380	0	0.28898E-05	435418.0	3772892.5	0.0	4.15	3.29	0.23	HROFDY
L0003381	0	0.28898E-05	435411.7	3772889.3	0.0	4.15	3.29	0.23	HROFDY
L0003382	0	0.28898E-05	435405.4	3772886.3	0.0	4.15	3.29	0.23	HROFDY
L0003383	0	0.28898E-05	435399.1	3772883.0	0.0	4.15	3.29	0.23	HROFDY
L0003384	0	0.28898E-05	435392.8	3772879.8	0.0	4.15	3.29	0.23	HROFDY
L0003385	0	0.28898E-05	435386.4	3772876.5	0.0	4.15	3.29	0.23	HROFDY
L0003386	0	0.28898E-05	435380.1	3772873.3	0.0	4.15	3.29	0.23	HROFDY

L0003387 0 0.28898E-05 435373.8 3772870.3 0.0 4.15 3.29 0.23 HROFDY
L0003388 0 0.28898E-05 435367.5 3772867.0 0.0 4.15 3.29 0.23 HROFDY
L0003389 0 0.28898E-05 435361.2 3772863.8 0.0 4.15 3.29 0.23 HROFDY
L0003390 0 0.28898E-05 435354.8 3772860.5 0.0 4.15 3.29 0.23 HROFDY
L0003391 0 0.28898E-05 435351.8 3772855.0 0.0 4.15 3.19 0.23 HROFDY
L0003392 0 0.28898E-05 435349.8 3772848.5 0.0 4.15 3.19 0.23 HROFDY
L0003393 0 0.28898E-05 435347.8 3772841.8 0.0 4.15 3.19 0.23 HROFDY
L0003394 0 0.28898E-05 435345.8 3772835.3 0.0 4.15 3.19 0.23 HROFDY
L0003395 0 0.28898E-05 435341.2 3772830.0 0.0 4.15 3.28 0.23 HROFDY
L0003396 0 0.28898E-05 435335.7 3772826.0 0.0 4.15 3.28 0.23 HROFDY
*** ISCST3 - VERSION 02035 *** College Park Chronic Non-Cancer Risk
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***

**MODELOPTs:
CONC

URBAN FLAT

NOCALM

05/12/09
10:27:15
PAGE 4

*** 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)	EMISSION RATE SCALAR VARY BY
L0003397	0	0.28898E-05	435330.2	3772821.5	0.0	4.15	3.28	0.23	HROFDY
L0003398	0	0.28898E-05	435324.6	3772817.3	0.0	4.15	3.28	0.23	HROFDY
L0003399	0	0.28898E-05	435318.3	3772815.8	0.0	4.15	3.10	0.23	HROFDY
L0003400	0	0.28898E-05	435311.7	3772815.3	0.0	4.15	3.10	0.23	HROFDY
L0003401	0	0.28898E-05	435305.0	3772814.8	0.0	4.15	3.10	0.23	HROFDY
L0003402	0	0.28898E-05	435298.4	3772814.5	0.0	4.15	3.10	0.23	HROFDY
L0003403	0	0.28898E-05	435291.7	3772814.0	0.0	4.15	3.10	0.23	HROFDY
L0003404	0	0.28898E-05	435285.1	3772813.5	0.0	4.15	3.10	0.23	HROFDY
L0003405	0	0.28898E-05	435278.4	3772813.3	0.0	4.15	3.10	0.23	HROFDY
L0003406	0	0.28898E-05	435271.8	3772812.8	0.0	4.15	3.10	0.23	HROFDY
L0003407	0	0.28898E-05	435265.1	3772812.3	0.0	4.15	3.10	0.23	HROFDY
L0003408	0	0.28898E-05	435258.8	3772813.3	0.0	4.15	2.97	0.23	HROFDY
L0003409	0	0.28898E-05	435252.6	3772814.8	0.0	4.15	2.97	0.23	HROFDY
L0003410	0	0.28898E-05	435246.4	3772816.3	0.0	4.15	2.97	0.23	HROFDY
L0003411	0	0.28898E-05	435240.1	3772817.5	0.0	4.15	2.97	0.23	HROFDY
L0003412	0	0.28898E-05	435233.9	3772819.0	0.0	4.15	2.97	0.23	HROFDY
L0003413	0	0.28898E-05	435227.7	3772820.5	0.0	4.15	2.97	0.23	HROFDY
L0003414	0	0.28898E-05	435221.5	3772821.8	0.0	4.15	2.97	0.23	HROFDY
L0003415	0	0.28898E-05	435216.9	3772825.3	0.0	4.15	2.73	0.23	HROFDY
L0003416	0	0.28898E-05	435212.8	3772829.5	0.0	4.15	2.73	0.23	HROFDY
L0003417	0	0.28898E-05	435208.8	3772833.8	0.0	4.15	2.73	0.23	HROFDY
L0003418	0	0.28898E-05	435204.7	3772838.0	0.0	4.15	2.73	0.23	HROFDY
L0003419	0	0.28898E-05	435204.2	3772843.8	0.0	4.15	2.96	0.23	HROFDY
L0003420	0	0.28898E-05	435205.1	3772850.0	0.0	4.15	2.96	0.23	HROFDY
L0003421	0	0.28898E-05	435206.1	3772856.3	0.0	4.15	2.96	0.23	HROFDY
L0003422	0	0.28898E-05	435207.0	3772862.8	0.0	4.15	2.96	0.23	HROFDY
L0003423	0	0.28898E-05	435208.0	3772869.0	0.0	4.15	2.96	0.23	HROFDY
L0003424	0	0.28898E-05	435209.1	3772875.5	0.0	4.15	3.07	0.23	HROFDY
L0003425	0	0.28898E-05	435210.2	3772882.0	0.0	4.15	3.07	0.23	HROFDY
L0003426	0	0.28898E-05	435211.3	3772888.5	0.0	4.15	3.07	0.23	HROFDY
L0003427	0	0.28898E-05	435212.4	3772895.0	0.0	4.15	3.07	0.23	HROFDY
L0003428	0	0.28898E-05	435213.5	3772901.5	0.0	4.15	3.07	0.23	HROFDY
L0003429	0	0.28898E-05	435214.7	3772908.0	0.0	4.15	3.07	0.23	HROFDY
L0003430	0	0.28898E-05	435215.8	3772914.5	0.0	4.15	3.07	0.23	HROFDY
L0003431	0	0.28898E-05	435216.9	3772921.0	0.0	4.15	3.07	0.23	HROFDY
L0003432	0	0.28898E-05	435222.1	3772924.5	0.0	4.15	3.31	0.23	HROFDY
L0003433	0	0.28898E-05	435228.8	3772927.0	0.0	4.15	3.31	0.23	HROFDY
L0003434	0	0.28898E-05	435235.4	3772929.5	0.0	4.15	3.31	0.23	HROFDY
L0003435	0	0.28898E-05	435242.1	3772932.0	0.0	4.15	3.31	0.23	HROFDY
L0003436	0	0.28898E-05	435248.7	3772932.8	0.0	4.15	3.11	0.23	HROFDY

*** ISCST3 - VERSION 02035 *** College Park Chronic Non-Cancer Risk
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***

**MODELOPTs:
CONC

URBAN FLAT

NOCALM

05/12/09
10:27:15
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*** 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)	EMISSION RATE SCALAR VARY BY
L0003437	0	0.28898E-05	435255.3	3772933.0	0.0	4.15	3.11	0.23	HROFDY
L0003438	0	0.28898E-05	435262.0	3772933.3	0.0	4.15	3.11	0.23	HROFDY
L0003439	0	0.28898E-05	435268.7	3772933.3	0.0	4.15	3.11	0.23	HROFDY
L0003440	0	0.28898E-05	435275.4	3772933.5	0.0	4.15	3.11	0.23	HROFDY
L0003441	0	0.28898E-05	435282.1	3772933.8	0.0	4.15	3.11	0.23	HROFDY
L0003442	0	0.28898E-05	435288.8	3772933.8	0.0	4.15	3.11	0.23	HROFDY
L0003443	0	0.28898E-05	435295.5	3772934.0	0.0	4.15	3.11	0.23	HROFDY
L0003444	0	0.28898E-05	435302.2	3772934.3	0.0	4.15	3.11	0.23	HROFDY
L0003445	0	0.28898E-05	435308.8	3772934.3	0.0	4.15	3.11	0.23	HROFDY
L0003446	0	0.28898E-05	435315.5	3772934.5	0.0	4.15	3.11	0.23	HROFDY
L0003447	0	0.28898E-05	435322.4	3772934.0	0.0	4.15	3.21	0.23	HROFDY
L0003448	0	0.28898E-05	435329.3	3772933.5	0.0	4.15	3.21	0.23	HROFDY
L0003449	0	0.28898E-05	435336.2	3772933.0	0.0	4.15	3.21	0.23	HROFDY
L0003450	0	0.28898E-05	435343.0	3772932.5	0.0	4.15	3.21	0.23	HROFDY
L0003451	0	0.28898E-05	435349.9	3772932.0	0.0	4.15	3.21	0.23	HROFDY
L0003452	0	0.28898E-05	435356.8	3772931.3	0.0	4.15	3.21	0.23	HROFDY
L0003453	0	0.28898E-05	435363.7	3772930.8	0.0	4.15	3.21	0.23	HROFDY
L0003454	0	0.28898E-05	435370.6	3772930.3	0.0	4.15	3.21	0.23	HROFDY
L0003455	0	0.28898E-05	435377.4	3772929.8	0.0	4.15	3.21	0.23	HROFDY
L0003456	0	0.28898E-05	435384.3	3772929.3	0.0	4.15	3.21	0.23	HROFDY
L0003457	0	0.28898E-05	435391.2	3772928.5	0.0	4.15	3.21	0.23	HROFDY
L0003458	0	0.28898E-05	435398.1	3772928.0	0.0	4.15	3.21	0.23	HROFDY
L0003459	0	0.28898E-05	435405.0	3772927.5	0.0	4.15	3.21	0.23	HROFDY
L0003460	0	0.28898E-05	435411.8	3772927.0	0.0	4.15	3.21	0.23	HROFDY
L0003461	0	0.28898E-05	435418.8	3772926.5	0.0	4.15	3.21	0.23	HROFDY
L0003462	0	0.28898E-05	435425.8	3772926.5	0.0	4.15	3.27	0.23	HROFDY
L0003463	0	0.28898E-05	435432.8	3772926.8	0.0	4.15	3.27	0.23	HROFDY
L0003464	0	0.28898E-05	435439.8	3772927.3	0.0	4.15	3.27	0.23	HROFDY
L0003465	0	0.28898E-05	435446.8	3772927.5	0.0	4.15	3.27	0.23	HROFDY
L0003466	0	0.28898E-05	435453.9	3772928.0	0.0	4.15	3.27	0.23	HROFDY
L0003467	0	0.28898E-05	435460.9	3772928.3	0.0	4.15	3.27	0.23	HROFDY
L0003468	0	0.28898E-05	435467.9	3772928.5	0.0	4.15	3.27	0.23	HROFDY
L0003469	0	0.28898E-05	435474.9	3772929.0	0.0	4.15	3.27	0.23	HROFDY
L0003470	0	0.28898E-05	435482.0	3772929.3	0.0	4.15	3.27	0.23	HROFDY
L0003471	0	0.28898E-05	435489.0	3772929.8	0.0	4.15	3.27	0.23	HROFDY
L0003472	0	0.28898E-05	435496.0	3772930.0	0.0	4.15	3.27	0.23	HROFDY
L0003473	0	0.28898E-05	435503.0	3772930.5	0.0	4.15	3.27	0.23	HROFDY
L0003474	0	0.28898E-05	435510.1	3772930.8	0.0	4.15	3.27	0.23	HROFDY
L0003475	0	0.28898E-05	435517.1	3772931.0	0.0	4.15	3.27	0.23	HROFDY

L0003476 0 0.28898E-05 435524.1 3772931.5 0.0 4.15 3.27 0.23 HROFDY *** 05/12/09
*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 10:27:15
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** PAGE 6

**MODELOPTs:
CONC

URBAN FLAT

NOCALM

*** 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)	EMISSION RATE SCALAR VARY BY
L0003477	0	0.28898E-05	435531.2	3772931.8	0.0	4.15	3.27	0.23	HROFDY
L0003478	0	0.28898E-05	435538.2	3772932.3	0.0	4.15	3.27	0.23	HROFDY
L0003479	0	0.28898E-05	435545.2	3772932.5	0.0	4.15	3.27	0.23	HROFDY
L0003480	0	0.28898E-05	435552.2	3772932.8	0.0	4.15	3.27	0.23	HROFDY
L0003481	0	0.28898E-05	435559.3	3772933.3	0.0	4.15	3.27	0.23	HROFDY
L0003482	0	0.28898E-05	435566.3	3772933.5	0.0	4.15	3.27	0.23	HROFDY
L0003483	0	0.28898E-05	435573.3	3772934.0	0.0	4.15	3.27	0.23	HROFDY
LOADER	0	0.70000E-02	435504.1	3772870.3	0.0	5.00	13.95	1.16	HROFDY
L0003484	0	0.13228E-05	435572.8	3772935.3	0.0	4.15	3.24	0.32	HROFDY
L0003485	0	0.13228E-05	435566.0	3772934.3	0.0	4.15	3.24	0.32	HROFDY
L0003486	0	0.13228E-05	435559.1	3772933.0	0.0	4.15	3.24	0.32	HROFDY
L0003487	0	0.13228E-05	435552.2	3772932.0	0.0	4.15	3.24	0.32	HROFDY
L0003488	0	0.13228E-05	435545.3	3772931.0	0.0	4.15	3.24	0.32	HROFDY
L0003489	0	0.13228E-05	435538.4	3772930.0	0.0	4.15	3.24	0.32	HROFDY
L0003490	0	0.13228E-05	435531.6	3772928.8	0.0	4.15	3.24	0.32	HROFDY
L0003491	0	0.13228E-05	435524.7	3772927.8	0.0	4.15	3.24	0.32	HROFDY
L0003492	0	0.13228E-05	435517.8	3772926.8	0.0	4.15	3.24	0.32	HROFDY
L0003493	0	0.13228E-05	435510.9	3772925.8	0.0	4.15	3.24	0.32	HROFDY
L0003494	0	0.13228E-05	435504.1	3772924.5	0.0	4.15	3.24	0.32	HROFDY
L0003495	0	0.13228E-05	435497.2	3772923.5	0.0	4.15	3.24	0.32	HROFDY
L0003496	0	0.13228E-05	435490.3	3772922.5	0.0	4.15	3.24	0.32	HROFDY
L0003497	0	0.13228E-05	435483.4	3772921.5	0.0	4.15	3.24	0.32	HROFDY
L0003498	0	0.13228E-05	435476.5	3772920.3	0.0	4.15	3.24	0.32	HROFDY
L0003499	0	0.13228E-05	435469.7	3772919.3	0.0	4.15	3.24	0.32	HROFDY
L0003500	0	0.13228E-05	435463.2	3772916.5	0.0	4.15	3.30	0.32	HROFDY
L0003501	0	0.13228E-05	435456.8	3772913.5	0.0	4.15	3.30	0.32	HROFDY
L0003502	0	0.13228E-05	435449.5	3772910.3	0.0	4.15	3.30	0.32	HROFDY
L0003503	0	0.13228E-05	435444.2	3772907.0	0.0	4.15	3.30	0.32	HROFDY
L0003504	0	0.13228E-05	435437.8	3772903.8	0.0	4.15	3.30	0.32	HROFDY
L0003505	0	0.13228E-05	435431.5	3772900.5	0.0	4.15	3.30	0.32	HROFDY
L0003506	0	0.13228E-05	435425.2	3772897.3	0.0	4.15	3.30	0.32	HROFDY
L0003507	0	0.13228E-05	435418.8	3772894.3	0.0	4.15	3.30	0.32	HROFDY
L0003508	0	0.13228E-05	435412.5	3772891.0	0.0	4.15	3.30	0.32	HROFDY
L0003509	0	0.13228E-05	435406.2	3772887.8	0.0	4.15	3.30	0.32	HROFDY
L0003510	0	0.13228E-05	435399.9	3772884.5	0.0	4.15	3.30	0.32	HROFDY
L0003511	0	0.13228E-05	435393.5	3772881.3	0.0	4.15	3.30	0.32	HROFDY
L0003512	0	0.13228E-05	435387.2	3772878.0	0.0	4.15	3.30	0.32	HROFDY
L0003513	0	0.13228E-05	435380.9	3772875.0	0.0	4.15	3.30	0.32	HROFDY
L0003514	0	0.13228E-05	435374.6	3772871.8	0.0	4.15	3.30	0.32	HROFDY
L0003515	0	0.13228E-05	435368.2	3772868.5	0.0	4.15	3.30	0.32	HROFDY

*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: CONC URBAN FLAT NOCALM PAGE 7

*** 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)	EMISSION RATE SCALAR VARY BY
L0003516	0	0.13228E-05	435361.9	3772865.3	0.0	4.15	3.30	0.32	HROFDY
L0003517	0	0.13228E-05	435355.6	3772862.0	0.0	4.15	3.30	0.32	HROFDY
L0003518	0	0.13228E-05	435352.4	3772857.0	0.0	4.15	2.91	0.32	HROFDY
L0003519	0	0.13228E-05	435350.2	3772851.3	0.0	4.15	2.91	0.32	HROFDY
L0003520	0	0.13228E-05	435347.9	3772845.5	0.0	4.15	2.91	0.32	HROFDY
L0003521	0	0.13228E-05	435345.7	3772839.5	0.0	4.15	2.91	0.32	HROFDY
L0003522	0	0.13228E-05	435343.5	3772833.8	0.0	4.15	2.91	0.32	HROFDY
L0003523	0	0.13228E-05	435339.3	3772829.0	0.0	4.15	3.06	0.32	HROFDY
L0003524	0	0.13228E-05	435334.3	3772824.8	0.0	4.15	3.06	0.32	HROFDY
L0003525	0	0.13228E-05	435329.3	3772820.5	0.0	4.15	3.06	0.32	HROFDY
L0003526	0	0.13228E-05	435323.2	3772817.5	0.0	4.15	3.14	0.32	HROFDY
L0003527	0	0.13228E-05	435316.9	3772815.3	0.0	4.15	3.14	0.32	HROFDY
L0003528	0	0.13228E-05	435310.5	3772814.3	0.0	4.15	3.04	0.32	HROFDY
L0003529	0	0.13228E-05	435304.0	3772814.3	0.0	4.15	3.04	0.32	HROFDY
L0003530	0	0.13228E-05	435297.4	3772814.0	0.0	4.15	3.04	0.32	HROFDY
L0003531	0	0.13228E-05	435290.9	3772813.8	0.0	4.15	3.04	0.32	HROFDY
L0003532	0	0.13228E-05	435284.4	3772813.5	0.0	4.15	3.04	0.32	HROFDY
L0003533	0	0.13228E-05	435277.8	3772813.5	0.0	4.15	3.04	0.32	HROFDY
L0003534	0	0.13228E-05	435271.3	3772813.3	0.0	4.15	3.04	0.32	HROFDY
L0003535	0	0.13228E-05	435264.8	3772813.0	0.0	4.15	3.04	0.32	HROFDY
L0003536	0	0.13228E-05	435258.3	3772814.0	0.0	4.15	3.06	0.32	HROFDY
L0003537	0	0.13228E-05	435251.8	3772815.3	0.0	4.15	3.06	0.32	HROFDY
L0003538	0	0.13228E-05	435245.4	3772816.5	0.0	4.15	3.06	0.32	HROFDY
L0003539	0	0.13228E-05	435238.9	3772817.8	0.0	4.15	3.06	0.32	HROFDY
L0003540	0	0.13228E-05	435232.5	3772819.0	0.0	4.15	3.06	0.32	HROFDY
L0003541	0	0.13228E-05	435226.0	3772820.5	0.0	4.15	3.06	0.32	HROFDY
L0003542	0	0.13228E-05	435220.3	3772824.3	0.0	4.15	3.27	0.32	HROFDY
L0003543	0	0.13228E-05	435214.9	3772828.8	0.0	4.15	3.27	0.32	HROFDY
L0003544	0	0.13228E-05	435209.6	3772833.3	0.0	4.15	3.27	0.32	HROFDY
L0003545	0	0.13228E-05	435204.3	3772837.8	0.0	4.15	3.27	0.32	HROFDY
L0003546	0	0.13228E-05	435203.6	3772844.0	0.0	4.15	3.22	0.32	HROFDY
L0003547	0	0.13228E-05	435204.6	3772851.0	0.0	4.15	3.22	0.32	HROFDY
L0003548	0	0.13228E-05	435205.6	3772857.8	0.0	4.15	3.22	0.32	HROFDY
L0003549	0	0.13228E-05	435206.5	3772864.5	0.0	4.15	3.22	0.32	HROFDY
L0003550	0	0.13228E-05	435207.5	3772871.5	0.0	4.15	3.22	0.32	HROFDY
L0003551	0	0.13228E-05	435208.5	3772878.3	0.0	4.15	3.22	0.32	HROFDY
L0003552	0	0.13228E-05	435209.5	3772885.3	0.0	4.15	3.22	0.32	HROFDY
L0003553	0	0.13228E-05	435210.5	3772892.0	0.0	4.15	3.22	0.32	HROFDY
L0003554	0	0.13228E-05	435211.5	3772899.0	0.0	4.15	3.22	0.32	HROFDY
L0003555	0	0.13228E-05	435212.5	3772905.8	0.0	4.15	3.22	0.32	HROFDY

*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: CONC URBAN FLAT NOCALM PAGE 8

*** 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)	EMISSION RATE SCALAR VARY BY
L0003556	0	0.13228E-05	435213.5	3772912.5	0.0	4.15	3.22	0.32	HROFDY
L0003557	0	0.13228E-05	435214.5	3772919.5	0.0	4.15	3.22	0.32	HROFDY
L0003558	0	0.13228E-05	435218.9	3772923.0	0.0	4.15	2.94	0.32	HROFDY
L0003559	0	0.13228E-05	435224.7	3772925.3	0.0	4.15	2.94	0.32	HROFDY
L0003560	0	0.13228E-05	435230.6	3772927.8	0.0	4.15	2.94	0.32	HROFDY
L0003561	0	0.13228E-05	435236.4	3772930.3	0.0	4.15	2.94	0.32	HROFDY
L0003562	0	0.13228E-05	435242.3	3772932.5	0.0	4.15	2.94	0.32	HROFDY
L0003563	0	0.13228E-05	435249.0	3772933.5	0.0	4.15	3.21	0.32	HROFDY
L0003564	0	0.13228E-05	435255.9	3772933.5	0.0	4.15	3.21	0.32	HROFDY
L0003565	0	0.13228E-05	435262.8	3772933.8	0.0	4.15	3.21	0.32	HROFDY
L0003566	0	0.13228E-05	435269.8	3772934.0	0.0	4.15	3.21	0.32	HROFDY
L0003567	0	0.13228E-05	435276.7	3772934.3	0.0	4.15	3.21	0.32	HROFDY
L0003568	0	0.13228E-05	435283.6	3772934.5	0.0	4.15	3.21	0.32	HROFDY
L0003569	0	0.13228E-05	435290.5	3772934.8	0.0	4.15	3.21	0.32	HROFDY
L0003570	0	0.13228E-05	435297.4	3772934.8	0.0	4.15	3.21	0.32	HROFDY
L0003571	0	0.13228E-05	435304.3	3772935.0	0.0	4.15	3.21	0.32	HROFDY
L0003572	0	0.13228E-05	435311.2	3772935.3	0.0	4.15	3.21	0.32	HROFDY
L0003573	0	0.13228E-05	435318.1	3772935.5	0.0	4.15	3.21	0.32	HROFDY
L0003574	0	0.13228E-05	435324.9	3772935.0	0.0	4.15	3.19	0.32	HROFDY
L0003575	0	0.13228E-05	435331.8	3772934.5	0.0	4.15	3.19	0.32	HROFDY
L0003576	0	0.13228E-05	435338.6	3772934.0	0.0	4.15	3.19	0.32	HROFDY
L0003577	0	0.13228E-05	435345.4	3772933.3	0.0	4.15	3.19	0.32	HROFDY
L0003578	0	0.13228E-05	435352.3	3772932.8	0.0	4.15	3.19	0.32	HROFDY
L0003579	0	0.13228E-05	435359.1	3772932.3	0.0	4.15	3.19	0.32	HROFDY
L0003580	0	0.13228E-05	435365.9	3772931.8	0.0	4.15	3.19	0.32	HROFDY
L0003581	0	0.13228E-05	435372.8	3772931.0	0.0	4.15	3.19	0.32	HROFDY
L0003582	0	0.13228E-05	435379.6	3772930.5	0.0	4.15	3.19	0.32	HROFDY
L0003583	0	0.13228E-05	435386.5	3772930.0	0.0	4.15	3.19	0.32	HROFDY
L0003584	0	0.13228E-05	435393.3	3772929.3	0.0	4.15	3.19	0.32	HROFDY
L0003585	0	0.13228E-05	435400.1	3772928.8	0.0	4.15	3.19	0.32	HROFDY
L0003586	0	0.13228E-05	435407.0	3772928.3	0.0	4.15	3.19	0.32	HROFDY
L0003587	0	0.13228E-05	435413.8	3772927.8	0.0	4.15	3.19	0.32	HROFDY
L0003588	0	0.13228E-05	435420.5	3772927.8	0.0	4.15	3.13	0.32	HROFDY
L0003589	0	0.13228E-05	435427.3	3772927.8	0.0	4.15	3.13	0.32	HROFDY
L0003590	0	0.13228E-05	435434.0	3772928.0	0.0	4.15	3.13	0.32	HROFDY
L0003591	0	0.13228E-05	435440.7	3772928.3	0.0	4.15	3.13	0.32	HROFDY
L0003592	0	0.13228E-05	435447.4	3772928.3	0.0	4.15	3.13	0.32	HROFDY
L0003593	0	0.13228E-05	435454.2	3772928.5	0.0	4.15	3.13	0.32	HROFDY
L0003594	0	0.13228E-05	435460.9	3772928.8	0.0	4.15	3.13	0.32	HROFDY
L0003595	0	0.13228E-05	435467.6	3772928.8	0.0	4.15	3.13	0.32	HROFDY
*** ISCST3 - VERSION 02035 *** College Park Chronic Non-Cancer Risk ***									
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***									
**MODELOPTs: CONC URBAN FLAT NOCALM									

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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)	EMISSION RATE SCALAR VARY BY
L0003596	0	0.13228E-05	435474.3	3772929.0	0.0	4.15	3.13	0.32	HROFDY
L0003597	0	0.13228E-05	435481.1	3772929.3	0.0	4.15	3.13	0.32	HROFDY
L0003598	0	0.13228E-05	435487.8	3772929.5	0.0	4.15	3.15	0.32	HROFDY
L0003599	0	0.13228E-05	435494.6	3772930.0	0.0	4.15	3.15	0.32	HROFDY
L0003600	0	0.13228E-05	435501.3	3772930.5	0.0	4.15	3.15	0.32	HROFDY
L0003601	0	0.13228E-05	435508.1	3772931.0	0.0	4.15	3.15	0.32	HROFDY
L0003602	0	0.13228E-05	435514.8	3772931.5	0.0	4.15	3.15	0.32	HROFDY
L0003603	0	0.13228E-05	435521.6	3772932.0	0.0	4.15	3.15	0.32	HROFDY
L0003604	0	0.13228E-05	435528.3	3772932.5	0.0	4.15	3.15	0.32	HROFDY
L0003605	0	0.13228E-05	435535.1	3772933.0	0.0	4.15	3.15	0.32	HROFDY
L0003606	0	0.13228E-05	435541.8	3772933.5	0.0	4.15	3.15	0.32	HROFDY
L0003607	0	0.13228E-05	435548.6	3772934.0	0.0	4.15	3.15	0.32	HROFDY
L0003608	0	0.13228E-05	435555.3	3772934.5	0.0	4.15	3.15	0.32	HROFDY
L0003609	0	0.13228E-05	435562.1	3772935.0	0.0	4.15	3.15	0.32	HROFDY
L0003610	0	0.13228E-05	435568.9	3772935.3	0.0	4.15	3.15	0.32	HROFDY
L0003611	0	0.32167E-06	435572.1	3773322.8	0.0	4.15	2.36	0.32	HROFDY
L0003612	0	0.32167E-06	435567.0	3773323.0	0.0	4.15	2.36	0.32	HROFDY
L0003613	0	0.32167E-06	435561.9	3773323.3	0.0	4.15	2.36	0.32	HROFDY
L0003614	0	0.32167E-06	435555.6	3773327.3	0.0	4.15	3.02	0.32	HROFDY
L0003615	0	0.32167E-06	435554.0	3773332.5	0.0	4.15	3.02	0.32	HROFDY
L0003616	0	0.32167E-06	435550.4	3773338.0	0.0	4.15	3.02	0.32	HROFDY
*** ISCST3 - VERSION 02035 *** College Park Chronic Non-Cancer Risk ***									
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***									
**MODELOPTs: CONC URBAN FLAT NOCALM									

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*** SOURCE IDs DEFINING SOURCE GROUPS ***									
GROUP ID	SOURCE IDs								
ALL	L0003357,	L0003358,	L0003359,	L0003360,	L0003361,	L0003362,	L0003363,	L0003364,	L0003365,
	L0003366,	L0003367,	L0003368,	L0003369,	L0003370,	L0003371,	L0003372,	L0003373,	L0003374,
	L0003375,	L0003376,	L0003377,	L0003378,	L0003379,	L0003380,	L0003381,	L0003382,	L0003383,
	L0003384,	L0003385,	L0003386,	L0003387,	L0003388,	L0003389,	L0003390,	L0003391,	L0003392,
	L0003393,	L0003394,	L0003395,	L0003396,	L0003397,	L0003398,	L0003399,	L0003400,	L0003401,
	L0003402,	L0003403,	L0003404,	L0003405,	L0003406,	L0003407,	L0003408,	L0003409,	L0003410,
	L0003411,	L0003412,	L0003413,	L0003414,	L0003415,	L0003416,	L0003417,	L0003418,	L0003419,
	L0003420,	L0003421,	L0003422,	L0003423,	L0003424,	L0003425,	L0003426,	L0003427,	L0003428,
	L0003429,	L0003430,	L0003431,	L0003432,	L0003433,	L0003434,	L0003435,	L0003436,	L0003437,
	L0003438,	L0003439,	L0003440,	L0003441,	L0003442,	L0003443,	L0003444,	L0003445,	L0003446,
	L0003447,	L0003448,	L0003449,	L0003450,	L0003451,	L0003452,	L0003453,	L0003454,	L0003455,
	L0003456,	L0003457,	L0003458,	L0003459,	L0003460,	L0003461,	L0003462,	L0003463,	L0003464,
	L0003465,	L0003466,	L0003467,	L0003468,	L0003469,	L0003470,	L0003471,	L0003472,	L0003473,
	L0003474,	L0003475,	L0003476,	L0003477,	L0003478,	L0003479,	L0003480,	L0003481,	L0003482,
	L0003483,	L0003484,	L0003485,	L0003486,	L0003487,	L0003488,	L0003489,	L0003490,	L0003491,
	L0003492,	L0003493,	L0003494,	L0003495,	L0003496,	L0003497,	L0003498,	L0003499,	L0003500,

L0003499, L0003500, L0003501, L0003502, L0003503, L0003504, L0003505, L0003506, L0003507, L0003508, L0003509, L0003510,
L0003511, L0003512, L0003513, L0003514, L0003515, L0003516, L0003517, L0003518, L0003519, L0003520, L0003521, L0003522,
L0003523, L0003524, L0003525, L0003526, L0003527, L0003528, L0003529, L0003530, L0003531, L0003532, L0003533, L0003534,
L0003535, L0003536, L0003537, L0003538, L0003539, L0003540, L0003541, L0003542, L0003543, L0003544, L0003545, L0003546,
L0003547, L0003548, L0003549, L0003550, L0003551, L0003552, L0003553, L0003554, L0003555, L0003556, L0003557, L0003558,
L0003559, L0003560, L0003561, L0003562, L0003563, L0003564, L0003565, L0003566, L0003567, L0003568, L0003569, L0003570,
L0003571, L0003572, L0003573, L0003574, L0003575, L0003576, L0003577, L0003578, L0003579, L0003580, L0003581, L0003582,
L0003583, L0003584, L0003585, L0003586, L0003587, L0003588, L0003589, L0003590, L0003591, L0003592, L0003593, L0003594,
*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: CONC URBAN FLAT NOCALM PAGE 11

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs
L0003595, L0003596, L0003597, L0003598, L0003599, L0003600, L0003601, L0003602, L0003603, L0003604, L0003605, L0003606,
L0003607, L0003608, L0003609, L0003610, L0003611, L0003612, L0003613, L0003614, L0003615, L0003616, GASIDL, H2OI
*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: CONC URBAN FLAT NOCALM PAGE 12

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR
SOURCE ID = L0003357 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003358 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003359 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003360 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003361 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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

*** ISCST3 - VERSION 02035 *** *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: CONC URBAN FLAT NOCALM PAGE 13

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR
SOURCE ID = L0003362 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003363 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003364 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003365 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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

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*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer Risk      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:27:15
**MODELOPTs:      ***      PAGE 14
CONC      URBAN FLAT      NOCALM

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SOURCE ID = L0003367 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003369 ; SOURCE TYPE = VOLUME :												
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00	
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01	
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00	
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00	

SOURCE ID = L0003370 ; SOURCE TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003371 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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

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*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer Risk      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:27:15
**MODELOPTS:
CONC                                URBAN FLAT                                NOCALM                                PAGE 15

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* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *											
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	1.00	13	1.00	25	1.00	37	1.00	49	1.00	61	1.00
2	1.00	14	1.00	26	1.00	38	1.00	50	1.00	62	1.00
3	1.00	15	1.00	27	1.00	39	1.00	51	1.00	63	1.00
4	1.00	16	1.00	28	1.00	40	1.00	52	1.00	64	1.00
5	1.00	17	1.00	29	1.00	41	1.00	53	1.00	65	1.00
6	1.00	18	1.00	30	1.00	42	1.00	54	1.00	66	1.00
7	1.00	19	1.00	31	1.00	43	1.00	55	1.00	67	1.00
8	1.00	20	1.00	32	1.00	44	1.00	56	1.00	68	1.00
9	1.00	21	1.00	33	1.00	45	1.00	57	1.00	69	1.00
10	1.00	22	1.00	34	1.00	46	1.00	58	1.00	70	1.00
11	1.00	23	1.00	35	1.00	47	1.00	59	1.00	71	1.00
12	1.00	24	1.00	36	1.00	48	1.00	60	1.00	72	1.00

SOURCE ID = L0003372 ; SOURCE TYPE = VOLUME :												
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00	
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01	
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00	
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00	

SOURCE ID = L0003373 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003374 ; SOURCE TYPE = VOLUME :												
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00	
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01	
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00	
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00	

SOURCE ID = L0003375 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003376 ; SOURCE TYPE = VOLUME :												
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00	
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01	
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00	
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00	

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*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer Risk      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:27:15
**MODELOPTs:      ***      PAGE 16
CONC      URBAN FLAT      NOCALM
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* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *											
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	1.00	13	1.00	25	1.00	37	1.00	49	1.00	61	1.00
2	1.00	14	1.00	26	1.00	38	1.00	50	1.00	62	1.00
3	1.00	15	1.00	27	1.00	39	1.00	51	1.00	63	1.00
4	1.00	16	1.00	28	1.00	40	1.00	52	1.00	64	1.00
5	1.00	17	1.00	29	1.00	41	1.00	53	1.00	65	1.00
6	1.00	18	1.00	30	1.00	42	1.00	54	1.00	66	1.00
7	1.00	19	1.00	31	1.00	43	1.00	55	1.00	67	1.00
8	1.00	20	1.00	32	1.00	44	1.00	56	1.00	68	1.00
9	1.00	21	1.00	33	1.00	45	1.00	57	1.00	69	1.00
10	1.00	22	1.00	34	1.00	46	1.00	58	1.00	70	1.00
11	1.00	23	1.00	35	1.00	47	1.00	59	1.00	71	1.00
12	1.00	24	1.00	36	1.00	48	1.00	60	1.00	72	1.00

SOURCE ID = L0003377 ; SOURCE TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003391 ; SOURCE TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	
13	.67000E+00	14	.67000E+00	15	.67000E+00	16	.00000E+00	17	.00000E+00	18	.00000E+00	

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SOURCE	ID	=	L0003403	;	SOURCE	TYPE	=	VOLUME	:							
1	.000000E+00		2	.000000E+00		3	.000000E+00		4	.000000E+00		5	.000000E+00		6	.000000E+00
7	.000000E+00		8	.120000E+01		9	.120000E+01		10	.120000E+01		11	.120000E+01		12	.120000E+01
13	.670000E+00		14	.670000E+00		15	.670000E+00		16	.000000E+00		17	.000000E+00		18	.000000E+00

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*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer Risk      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***      10:27:15
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[illegible]

SOURCE ID = L0003421 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

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*** 10:27:15
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PAGE 25[illegible]

SOURCE ID = L0003245 ; SOURCE TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01	
13	.67000E+00	14	.67000E+00	15	.67000E+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	

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*** 10:27:15
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[illegible]

SOURCE ID = L0003429 ; SOURCE TYPE = VOLUME :

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOUR		SCALAR		HOUR		SCALAR		HOUR		SCALAR		HOUR		SCALAR	
SOURCE_ID = L0003442 ; SOURCE_TYPE = VOLUME :															
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00	7	.000000E+00	8	.000000E+00
9	.000000E+00	10	.120000E+01	11	.120000E+01	12	.120000E+01	13	.120000E+01	14	.120000E+01	15	.120000E+01	16	.120000E+01
17	.670000E+00	18	.670000E+00	19	.670000E+00	20	.670000E+00	21	.670000E+00	22	.670000E+00	23	.670000E+00	24	.670000E+00
25	.000000E+00	26	.000000E+00	27	.000000E+00	28	.000000E+00	29	.000000E+00	30	.000000E+00	31	.000000E+00	32	.000000E+00

SOURCE ID = L0003444 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003445 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003446 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

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*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer Risk      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:27:15
**MODELOPTs:      ***      PAGE 30
CONC      URBAN FLAT      NOCALM

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HOUR		SCALAR		HOUR		SCALAR		HOUR		SCALAR		HOUR		SCALAR	
SOURCE_ID = L0003447 ; SOURCE TYPE = VOLUME :															
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00	7	.000000E+00	8	.000000E+00
9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00	13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00
17	.000000E+00	18	.000000E+00	19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003449 ; SOURCE TYPE = VOLUME :												
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00	
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01	
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00	
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00	

SOURCE ID = L0003450 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003451 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

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*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer RiSk      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:27:15
**MODELOPTS:      ***      PAGE 31
CONC      URBAN FLAT      NOCALM

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HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR
SOURCE_ID = L0003452 ; SOURCE_TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.12000E+01	9	.12000E+01	10	.12000E+01	11	.12000E+01	12	.12000E+01
13	.67000E+00	14	.67000E+00	15	.67000E+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 = L0003454 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.120000E+01	9	.120000E+01	10	.120000E+01	11	.120000E+01	12	.120000E+01
13	.670000E+00	14	.670000E+00	15	.670000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003480 ; SOURCE TYPE = VOLUME :

SOURCE ID = L0003490 ; SOURCE TYPE = VOLUME :

SOURCE ID = L0003503 ; SOURCE TYPE = VOLUME :												
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00	
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00	
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00	
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00	

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*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer RiSk      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:27:15
**MODELOPTS:      ***      PAGE 42

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HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

SOURCE ID = L0003509 ; SOURCE TYPE = VOLUME :												
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00	
7	.000000E+00	8	.10000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00	
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00	
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00	

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*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer Risk      ***      05/12/99
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:27:15
**MODELOPTS:      ***      PAGE 43
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[illegible]

SOURCE ID = L0003513 ;		SOURCE TYPE = VOLUME :									
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	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 = L0003514 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

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*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer Risk      ***      05/12/99
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:27:15
**MODELOPTS:      ***      PAGE 44
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[illegible]

SOURCE ID = L0003515 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	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


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SOURCE ID = L0003529 ; SOURCE TYPE = VOLUME :
1 .000000E+00 2 .000000E+00 3 .000000E+00 4 .000000E+00 5 .000000E+00 6 .000000E+00
7 .000000E+00 8 .100000E+01 9 .000000E+00 10 .000000E+00 11 .000000E+00 12 .000000E+00

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* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

[illegible]

SOURCE ID = L0003530 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	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 = L0003531 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003532 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003533 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	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 = L0003534 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	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

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*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer RiSk      ***      05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:27:15
**MODELOPTS:      ***      PAGE 48

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CONC URBAN FLAT NOCALM

* 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 = L0003535 ; SOURCE TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.10000E+01	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 = L0003536 ; SOURCE TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.10000E+01	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 = L0003537 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	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 = L0003538 ; SOURCE TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.10000E+01	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 = L0003539 ; SOURCE TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.10000E+01	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	

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*** ISCST3 - VERSION 02035 ***      *** College Park Chronic Non-Cancer Risk      ***      05/12/99
*** DPM Sources - Sensitive Receptors (2009 to 2079)      ***      10:27:15
**MODELOPTS:      ***      PAGE 49
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MODEL OF TS. CONC URBAN FLAT NOCALM PAGE 49

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

[illegible]

SOURCE ID = L0003540 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003541 ; SOURCE TYPE = VOLUME :												
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00	
7	.00000E+00	8	.10000E+01	9	.00000E+00	10	.00000E+00	11	.00000E+00	12	.00000E+00	

*** 05/12/09


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*** ISCST3 - VERSION 02035 ***          *** College Park Chronic Non-Cancer Risk          ***           05/12/99
*** DPM Sources - Sensitive Receptors (2009 to 2079) ***                               ***           10:27:15
**MODELOPTS:                                CONC              URBAN FLAT                NOCALM                                     PAGE   57
```

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR
SOURCE_ID = L0003580 ; SOURCE_TYPE = VOLUME :													
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00	7	.000000E+00
7	.000000E+00	8	.000000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00	13	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00	19	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00		

SOURCE ID = L0003582 ; SOURCE TYPE = VOLUME :									
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00
								24	.000000E+00

SOURCE ID = L0003584 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	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 EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

SOURCE ID = L0003586 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	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 = L0003588 ; SOURCE TYPE = VOLUME :											
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	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 EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

SOURCE ID = L0003591 ; SOURCE TYPE = VOLUME :											
1	.000000E+00	2	.000000E+00	3	.000000E+00	4	.000000E+00	5	.000000E+00	6	.000000E+00
7	.000000E+00	8	.100000E+01	9	.000000E+00	10	.000000E+00	11	.000000E+00	12	.000000E+00
13	.000000E+00	14	.000000E+00	15	.000000E+00	16	.000000E+00	17	.000000E+00	18	.000000E+00
19	.000000E+00	20	.000000E+00	21	.000000E+00	22	.000000E+00	23	.000000E+00	24	.000000E+00

SOURCE ID = L0003592 ;		SOURCE TYPE = VOLUME ;									
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	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

[illegible]

SOURCE ID = H20I ; SOURCE TYPE = POINT ;

[illegible]

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: C:\MBA\COLLEG-1\UPLAND.ASC
FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,F9.4,f10.1,f8.4,i4,f7.2)
SURFACE STATION NO.: 54147 UPPER AIR STATION NO.: 99999
NAME: UNKNOWN NAME: UNKNOWN
YEAR: 1981 YEAR: 1981

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING RURAL	HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.00	284.3	7	522.6	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	02	147.4	1.00	284.3	7	507.0	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	03	152.5	1.34	283.1	7	491.4	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	04	166.0	0.00	283.1	7	475.8	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	05	151.5	0.00	282.6	7	460.3	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	06	139.5	1.34	283.1	7	444.7	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	07	162.0	1.34	285.4	6	1.4	170.7	0.0000	0.0	0.0000	0	0.00
81	01	01	08	157.1	0.00	287.6	5	47.0	192.0	0.0000	0.0	0.0000	0	0.00
81	01	01	09	344.0	1.00	289.8	4	92.5	213.3	0.0000	0.0	0.0000	0	0.00
81	01	01	10	346.6	0.00	291.5	3	138.0	234.7	0.0000	0.0	0.0000	0	0.00
81	01	01	11	314.1	1.00	294.3	2	183.5	256.0	0.0000	0.0	0.0000	0	0.00
81	01	01	12	238.1	1.34	297.6	2	229.0	277.3	0.0000	0.0	0.0000	0	0.00
81	01	01	13	357.2	1.79	298.7	3	274.5	298.7	0.0000	0.0	0.0000	0	0.00
81	01	01	14	34.2	2.24	299.8	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	15	44.8	3.13	299.3	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	16	75.7	3.13	298.7	4	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	17	65.1	1.79	295.4	5	325.6	318.5	0.0000	0.0	0.0000	0	0.00
81	01	01	18	97.6	1.34	291.5	6	357.2	310.3	0.0000	0.0	0.0000	0	0.00
81	01	01	19	133.0	1.00	289.8	7	388.8	302.1	0.0000	0.0	0.0000	0	0.00
81	01	01	20	145.7	0.00	287.0	7	420.4	293.9	0.0000	0.0	0.0000	0	0.00
81	01	01	21	223.6	1.00	286.5	7	452.0	285.7	0.0000	0.0	0.0000	0	0.00
81	01	01	22	159.5	1.00	287.0	7	483.5	277.4	0.0000	0.0	0.0000	0	0.00
81	01	01	23	158.2	1.34	285.9	7	515.1	269.2	0.0000	0.0	0.0000	0	0.00
81	01	01	24	134.7	1.00	285.4	7	546.7	261.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CHRONHI IN /CHRONIC/HAZARD/INDEX/ **

Y-COORD (METERS)	435175.38	435195.78	435216.19	435236.59	435257.00	435277.44	435297.84	435318.25	435338.66
3773407.25	0.00034	0.00034	0.00034	0.00033	0.00033	0.00032	0.00032	0.00031	0.00031
3773386.75	0.00037	0.00037	0.00037	0.00036	0.00035	0.00035	0.00034	0.00034	0.00033
3773366.25	0.00040	0.00040	0.00040	0.00039	0.00038	0.00038	0.00037	0.00037	0.00036
3773345.75	0.00043	0.00043	0.00043	0.00042	0.00042	0.00041	0.00040	0.00040	0.00039
3773325.25	0.00046	0.00046	0.00047	0.00046	0.00045	0.00045	0.00044	0.00043	0.00042
3773304.75	0.00050	0.00051	0.00051	0.00051	0.00050	0.00049	0.00048	0.00047	0.00046
3773284.25	0.00055	0.00056	0.00056	0.00056	0.00055	0.00054	0.00053	0.00052	0.00051
3773263.75	0.00059	0.00061	0.00062	0.00061	0.00060	0.00059	0.00058	0.00057	0.00056
3773243.25	0.00065	0.00067	0.00068	0.00068	0.00067	0.00066	0.00064	0.00063	0.00061
3773222.75	0.00071	0.00074	0.00076	0.00076	0.00075	0.00073	0.00072	0.00070	0.00068
3773202.25	0.00078	0.00082	0.00084	0.00085	0.00084	0.00082	0.00081	0.00079	0.00076
3773181.75	0.00087	0.00091	0.00094	0.00096	0.00095	0.00093	0.00091	0.00089	0.00086
3773161.25	0.00096	0.00102	0.00106	0.00109	0.00109	0.00107	0.00104	0.00101	0.00097
3773140.75	0.00108	0.00115	0.00121	0.00124	0.00125	0.00123	0.00120	0.00116	0.00111
3773120.25	0.00122	0.00130	0.00138	0.00143	0.00145	0.00143	0.00139	0.00134	0.00129
3773099.75	0.00139	0.00149	0.00159	0.00167	0.00170	0.00169	0.00164	0.00157	0.00150
3773079.25	0.00159	0.00172	0.00185	0.00197	0.00203	0.00202	0.00196	0.00187	0.00177
3773058.75	0.00185	0.00201	0.00219	0.00235	0.00246	0.00246	0.00238	0.00226	0.00213
3773038.25	0.00219	0.00240	0.00263	0.00286	0.00303	0.00306	0.00296	0.00279	0.00260
3773017.75	0.00263	0.00291	0.00322	0.00356	0.00383	0.00391	0.00379	0.00354	0.00325
3772997.25	0.00322	0.00361	0.00406	0.00455	0.00498	0.00516	0.00501	0.00464	0.00417

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CHRONHI IN /CHRONIC/HAZARD/INDEX/ **

Y-COORD (METERS)	435359.06	435379.47	435399.88	435420.28	435440.72	435461.13	435481.53	435501.94	435522.34
3773407.25	0.00030	0.00030	0.00029	0.00029	0.00028	0.00028	0.00028	0.00027	0.00026
3773386.75	0.00033	0.00032	0.00031	0.00031	0.00030	0.00030	0.00029	0.00029	0.00028
3773366.25	0.00035	0.00035	0.00034	0.00033	0.00033	0.00032	0.00032	0.00031	0.00030
3773345.75	0.00038	0.00037	0.00037	0.00036	0.00035	0.00035	0.00034	0.00033	0.00032
3773325.25	0.00042	0.00041	0.00040	0.00039	0.00038	0.00038	0.00037	0.00035	0.00034
3773304.75	0.00045	0.00044	0.00043	0.00042	0.00042	0.00041	0.00039	0.00038	0.00036
3773284.25	0.00049	0.00048	0.00047	0.00046	0.00045	0.00044	0.00042	0.00040	0.00038
3773263.75	0.00054	0.00053	0.00052	0.00051	0.00049	0.00048	0.00046	0.00043	0.00041
3773243.25	0.00060	0.00058	0.00057	0.00056	0.00054	0.00052	0.00049	0.00046	0.00043
3773222.75	0.00066	0.00065	0.00063	0.00061	0.00059	0.00057	0.00053	0.00050	0.00047
3773202.25	0.00074	0.00072	0.00070	0.00068	0.00065	0.00062	0.00058	0.00054	0.00050
3773181.75	0.00083	0.00081	0.00078	0.00075	0.00072	0.00067	0.00063	0.00058	0.00054
3773161.25	0.00094	0.00091	0.00088	0.00084	0.00079	0.00074	0.00069	0.00063	0.00059

3773140.75 | 0.00107 0.00103 0.00099 0.00094 0.00088 0.00082 0.00075 0.00070 0.00065
3773120.25 | 0.00123 0.00118 0.00112 0.00106 0.00098 0.00090 0.00083 0.00077 0.00072
3773099.75 | 0.00143 0.00136 0.00128 0.00119 0.00110 0.00101 0.00093 0.00087 0.00081
3773079.25 | 0.00168 0.00158 0.00147 0.00135 0.00124 0.00114 0.00106 0.00099 0.00094
3773058.75 | 0.00200 0.00185 0.00170 0.00155 0.00141 0.00131 0.00122 0.00116 0.00110
3773038.25 | 0.00241 0.00220 0.00199 0.00179 0.00164 0.00154 0.00146 0.00139 0.00133
3773017.75 | 0.00295 0.00264 0.00235 0.00213 0.00197 0.00186 0.00179 0.00172 0.00164
3772997.25 | 0.00369 0.00323 0.00287 0.00261 0.00245 0.00235 0.00227 0.00218 0.00208

*** ISCST3 - VERSION 02035 *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 72

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF CHRONHI IN /CHRONIC/HAZARD/INDEX/ **

Y-COORD (METERS)	435542.75	435563.16	435583.56	X-COORD (METERS)
3773407.25	0.00026	0.00024	0.00023	
3773386.75	0.00027	0.00026	0.00024	
3773366.25	0.00029	0.00027	0.00026	
3773345.75	0.00031	0.00029	0.00027	
3773325.25	0.00033	0.00032	0.00029	
3773304.75	0.00034	0.00032	0.00031	
3773284.25	0.00036	0.00034	0.00032	
3773263.75	0.00038	0.00036	0.00034	
3773243.25	0.00040	0.00038	0.00036	
3773222.75	0.00043	0.00040	0.00038	
3773202.25	0.00046	0.00043	0.00041	
3773181.75	0.00050	0.00047	0.00044	
3773161.25	0.00055	0.00051	0.00049	
3773140.75	0.00061	0.00057	0.00054	
3773120.25	0.00068	0.00064	0.00060	
3773099.75	0.00077	0.00073	0.00068	
3773079.25	0.00089	0.00084	0.00079	
3773058.75	0.00104	0.00098	0.00092	
3773038.25	0.00126	0.00117	0.00108	
3773017.75	0.00154	0.00142	0.00128	
3772997.25	0.00195	0.00177	0.00153	

*** ISCST3 - VERSION 02035 *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 73

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0003357, L0003358, L0003359, L0003360, L0003361, L0003362, L0003363,
L0003364, L0003365, L0003366, L0003367, L0003368, L0003369, L0003370, L0003371, L0003372, L0003373, L0003374, L0003375,
L0003376, L0003377, L0003378, L0003379, L0003380, L0003381, L0003382, L0003383, L0003384, L0003385, L0003386, . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CHRONHI IN /CHRONIC/HAZARD/INDEX/ **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
435422.09	3773260.25	0.00051	435440.19	3772988.00	0.00274
435419.38	3772985.75	0.00300	435399.28	3772982.75	0.00339
435379.19	3772981.00	0.00390	435358.72	3772978.50	0.00466
435340.44	3772975.75	0.00556	435318.91	3772973.25	0.00672
435297.38	3772971.00	0.00774	435277.28	3772968.25	0.00830
435256.84	3772965.25	0.00823	435235.31	3772962.00	0.00765
435217.00	3772960.00	0.00678	435196.19	3772955.50	0.00587

*** ISCST3 - VERSION 02035 *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 74

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF CHRONHI IN /CHRONIC/HAZARD/INDEX/ **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS 0.00830 AT (435277.28, 3772968.25, 0.00, 0.00)	DC	NA	
	2ND HIGHEST VALUE IS 0.00823 AT (435256.84, 3772965.25, 0.00, 0.00)	DC	NA	
	3RD HIGHEST VALUE IS 0.00774 AT (435297.38, 3772971.00, 0.00, 0.00)	DC	NA	
	4TH HIGHEST VALUE IS 0.00765 AT (435235.31, 3772962.00, 0.00, 0.00)	DC	NA	
	5TH HIGHEST VALUE IS 0.00678 AT (435217.00, 3772960.00, 0.00, 0.00)	DC	NA	
	6TH HIGHEST VALUE IS 0.00672 AT (435318.91, 3772973.25, 0.00, 0.00)	DC	NA	
	7TH HIGHEST VALUE IS 0.00587 AT (435196.19, 3772955.50, 0.00, 0.00)	DC	NA	
	8TH HIGHEST VALUE IS 0.00556 AT (435340.44, 3772975.75, 0.00, 0.00)	DC	NA	
	9TH HIGHEST VALUE IS 0.00516 AT (435277.44, 3772997.25, 0.00, 0.00)	GC	UCART1	
	10TH HIGHEST VALUE IS 0.00501 AT (435297.84, 3772997.25, 0.00, 0.00)	GC	UCART1	

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

*** ISCST3 - VERSION 02035 *** College Park Chronic Non-Cancer Risk *** 05/12/09
*** DPM Sources - Sensitive Receptors (2009 to 2079) *** 10:27:15
**MODELOPTs: URBAN FLAT NOCALM PAGE 75

*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 490 Informational Message(s)
A Total of 490 Calm Hours Identified

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

***** WARNING MESSAGES *****

SO	W320	499	PPARM	:Input	Parameter	May	Be	Out-of-Range	for	Parameter	VS
SO	W320	634	PPARM	:Input	Parameter	May	Be	Out-of-Range	for	Parameter	VS
SO	W320	635	PPARM	:Input	Parameter	May	Be	Out-of-Range	for	Parameter	VS

*** ISCST3 Finishes Successfully ***

Appendix B: Traffic Generation Assessment

October 21, 2009

Mr. Savoy Bellavia
Hutton Development Company, Inc.
2520 North Santiago Boulevard
Orange, CA 92867

LLG Reference: 2.03.2466.1

Subject: **Revised Traffic Generation Assessment**
College Park Specific Plan Amendment
Upland, California

Dear Mr. Bellavia:

As requested, Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit this **Revised** Traffic Generation Assessment associated with a proposed Amendment to the College Park Specific Plan Project that has been updated to address applicable comments of City staff as summarized in a memorandum dated October 13, 2009. The project site is a 38.69-acre parcel of land located at the southwest corner of Arrow Route and Monte Vista Avenue in the City of Upland, California.

The traffic generation assessment focuses on the potential traffic impacts associated with the replacement of the previously approved single-family residential homes with additional multi-family apartment units. The *Traffic Impact Analysis Report for the College Park Project* dated December 17, 2003 and the *Traffic Impact Analysis Addendum for the College Park Project* dated March 30, 2005 served as the databases for this evaluation.

OVERVIEW AND PROJECT DESCRIPTION

This Traffic Generation Assessment evaluates the potential off-site traffic impacts of the Amended Development Plan relative to the previously approved development plan that were evaluated in December 2003 traffic study and the March 2005 traffic addendum.

The Approved EIR Development Plan for the College Park Project included a proposed mixed-use project that consisted of three components: retail, commercial, and residential. As indicated in the December 2003 traffic study, the retail component of the project includes a service station/mini mart, a retail center that will include a variety of retail shops, office suites, and/or food uses with a total floor area of 44,335 square-foot (SF). The commercial component of the project included a 48,000 SF, two-level office building, a 51,080 SF, 3-story business hotel with 102 rooms. The residential component

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included 50 single-family detached (patio/courtyard-style) homes and 448 apartment units. In addition, a 1.05-acre community park was approved.

The approved Alternative Development Plan, which was evaluated in the March 2005 traffic addendum, considered potential impacts associated with the development 47 additional single-family detached (patio/courtyard-style) homes (for a total of 97 homes) in place of the “approved” 48,000 SF, two-level office building and a 51,080 SF, 3-story, 102-room business hotel.

Based on our understanding of the proposed amendment, Hutton Development Company, Inc., now proposes to construct an additional 230 apartment units in place of the 97 single-family detached (patio/courtyard-style) homes. **Table 1**, attached at the end of this letter report, presents the Amended Project Development Summary for the College Park Project.

TRAFFIC ANALYSIS

Trip Generation Sensitivity Analysis

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. To remain consistent with both the December 2003 traffic study and the March 2005 traffic addendum, generation factors and equations used in this traffic forecasting procedure for this assessment are based on the 6th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington, D.C., 1997]

Table 2 summarizes the trip generation equations used in forecasting the impact of the College Park Project. Trips generated by the residential component of the proposed project were estimated using ITE Land Use 220: Apartment trip rates. The project’s retail component’s trip generation potential was estimated using ITE Land Use 814: Specialty Retail Center, ITE Land Use 832: High-Turnover (Sit-Down) Restaurant, ITE Land Use 834: Fast-Food Restaurant with Drive-Through Window, ITE Land Use 845: Gasoline Service Station with Convenience Market trip rates and ITE Land Use 710: General Office Building trip rates.

Table 3 summarizes the trip updated generation forecast for the amended College Park Project, with the development of 230 apartment units in place of 97 single-family detached homes. As shown in *Table 3*, the retail component of the amended College Park Project is projected to generate approximately 9,480 daily trips, with 769 trips (401 inbound, 368 outbound) produced in the AM peak hour and 778 trips (379 inbound, 399 outbound) produced in the PM peak hour on a “typical” weekday.

The lower portion of the *Table 3* indicates that the residential component of the amended College Park Project is projected to generate approximately 4,495 daily trips, with 346 trips (55 inbound, 291 outbound) produced in the AM peak hour and 421 trips (284 inbound, 137 outbound) produced in the PM peak hour on a “typical” weekday.

Combined, the retail and residential components of the amended College Park Project have a trip generation potential of 13,975 daily trips, with 1,115 trips (456 inbound, 659 outbound) produced in the AM peak hour and 1,199 trips (663 inbound, 536 outbound) produced in the PM peak hour on a “typical” weekday. (See bottom on *Table 3*).

Project Internal Capture and Pass-by Reductions

Consistent with the December 2003 traffic study and March 2005 traffic addendum, internal capture and pass-by adjustments to trip generation potential of the amended College Park Project were made to account for the trip interactions between the uses of Project.

Internal capture is a legitimate reduction of external trips for mixed-use developments such as the College Park Project, especially where trips can be made by either walking or riding a bike. The Internal Capture Reduction rates for the College Park Project were estimated based on the methodology outlines in *Chapter 7 – Multi-Use Development of Trip Generation Handbook*, published by ITE, October 1998.

The ITE methodology for calculating internal capture applies percentages for interactions between pair of land uses to both the trips originating from each land use, as well as the trips destined for each land use; compares the resulting trips between each pair; then selects the lesser of the two.

Consistent with the prior project traffic analyses, the pass-by factors used in this report were based on information published in the *Chapter 5 – Pass-by, Primary, and Diverted Linked Trips* of the *Trip Generation Handbook*, published by ITE, October 1998. For this analysis, the following pass-by reduction factors were used:

- Special Retail Center: AM & PM Peak Hour – estimated to be 10%
- High-Turnover Restaurant: AM Peak Hour – estimated to be 10% PM Peak Hour - 43%
- Fast-food with Drive-Thru: AM Peak Hour – 49% PM Peak Hour – 50%
- Gas Station with Mini Mart AM Peak Hour - 62% PM peak Hour - 56%
- Daily pass-by percentage estimated to be for all above referenced land uses estimated to be 10%.

After adjustment for internal capture and pass-by, the amended College Park Project is projected to generate approximately 11,211 daily trips, with 622 trips (207 inbound, 415 outbound) produced in the AM peak hour and 593 trips (348 inbound, 245 outbound) produced in the PM peak hour on a “typical” weekday (See last row of figures on *Table 3*).

Trip Generation Comparison and Conclusions

Table 4 summarizes a comparison of the trip generation potential for the now-proposed Amended College Park Project and repeats the forecast of the December 2003 traffic study and March 2005 traffic addendum. The upper portion of *Table 4* again summarizes the trip generation projections of the Proposed Amended Development Plan (detailed previously in *Table 3*) on a “typical” weekday.

The middle and lower portions of this table presents a summary of the traffic generation potential for the Approved Alternative Development Plan and the Approved EIR Development Plan on a daily basis, as well as on an AM and PM commuter hour basis. These prior forecasts equate to a mitigated “trip budget” for the College Park Project from which the traffic implications of refinements/revisions (like those now proposed) to the project development tabulation or land use mix might be evaluated.

As indicated on the bottom portion of *Table 4*, the Amended Development Plan could generate 109 to 238 fewer AM peak hour trips, 35 to 206 fewer PM peak hour trips, and 81 to 1,183 more daily trips, when compared against the prior approved development plans evaluated in the December 2003 traffic study and March 2005 traffic addendum for the College Park Project.

When compared specifically to the Approved EIR Development Plan, as assessed in the December 2003 traffic study, the Amended Development Plan is forecast to 238 fewer AM peak hour trips, 206 fewer PM peak hour trips, and 81 more daily trips. The difference peak hour trips can be attributed to the change in land uses from office/hotel/single family homes to additional apartments and Project’s increased potential for internal capture between the retail and residential components of the amended Project. The minor increase in daily trips (less than 1% increase) is due to the change in land use and trip generation potential of each Project component.

Based on this comparison, we conclude that the traffic impact potential associated with the change from “single-family” land uses to additional “multi-family residential” land uses will be insignificant and negligible.

Further, the results and findings of the traffic analysis included in the *Traffic Impact Analysis Report for the College Park Project* dated December 17, 2003, and *Traffic Impact Analysis Addendum for the College Park Project* dated March 30, 2005 are still valid.

* * * * *

Mr. Savoy Bellavia
October 21, 2009
Page 5

This completes our traffic analysis. If there are any further questions, or you require any additional information, please do not hesitate to call me.

Very truly yours,
Linscott, Law & Greenspan, Engineers



Richard E. Barretto, P.E.
Principal

Attachments



TABLE 1
AMENDED PROJECT DEVELOPMENT SUMMARY ¹

Project Use	Square-Feet (SF) / No. of Units (DU)	Acres (AC)
<i>Retail Component</i>		
• Office Suites	6,240 SF	
• Retail Shops	12,490 SF	
• In-line Food Uses/Restaurants	12,480 SF	
• Fast-Food Restaurants	9,225 SF	5.24 AC
• Gas Station/Mini-Mart (16 fueling positions)	3,900 SF	1.25 AC
Total Retail/Commercial Floor Area	44,335 SF	6.49 AC
<i>Residential Component</i>		
• Multi-Family Apartments	448 DU	18.90 AC
• Additional Multi-Family/Apartments ²	230 DU	8.67 AC
Total Residential Units	678 DU	27.57 AC
<i>Recreational Component</i>		
• Community Park	N/A	1.05 AC
• Streets and Dedication	155,887 SF	3.58 AC
Project Total	N/A	38.69 AC

¹ Source: Hutton Development Co., Inc.

² As proposed by the Hutton Development Co., Inc, a 230 DU multi-family apartment complex is now proposed in place of the 97 DU single-family component of the Project.

TABLE 2
PROJECT TRAFFIC GENERATION EQUATIONS³

ITE Land Use Code	Time Period	Equations	Percent Entering	Percent Exiting
• 210: Single Family Detached Housing (TE/DU)	Daily	$T = 9.57 \text{ (DU)}$	50%	50%
	AM Peak	$T = 0.75 \text{ (DU)}$	25%	75%
	PM Peak	$T = 1.01 \text{ (DU)}$	64%	36%
• 220: Apartment (TE/DU)	Daily	$T = 6.63 \text{ (DU)}$	50%	50%
	AM Peak	$T = 0.51 \text{ (DU)}$	16%	84%
	PM Peak	$T = 0.62 \text{ (DU)}$	67%	33%
• 710: General Office Building (TE/1000 SF)	Daily	$LN(T) = 0.768 LN(X) + 3.654$	50%	50%
	AM Peak	$LN(T) = 0.797 LN(X) + 1.558$	88%	12%
	PM Peak	$T = 1.121(X) + 79.295$	17%	83%
• 814: Specialty Retail Center (TE/1000 SF) ⁴	Daily	$T = 40.67(X)$	50%	50%
	AM Peak	$T = 1.03(X)$	61%	39%
	PM Peak	$T = 2.59(X)$	43%	57%
• 832: High-Turnover (Sit-down) Restaurant (TE/1000 SF)	Daily	$T = 130.34(X)$	50%	50%
	AM Peak	$T = 9.27(X)$	52%	48%
	PM Peak	$T = 10.86(X)$	60%	40%
• 834: Fast-Food Rest. with Drive-Through Window (TE/1000 SF)	Daily	$T = 496.12(X)$	50%	50%
	AM Peak	$T = 49.86(X)$	51%	49%
	PM Peak	$T = 33.48(X)$	52%	48%
• 845: Gasoline/Service Station with Conv. Market (TE/VFP)	Daily	$T = 162.78 \text{ (VFP)}$	50%	50%
	AM Peak	$T = 10.06 \text{ (VFP)}$	50%	50%
	PM Peak	$T = 13.38 \text{ (VFP)}$	50%	50%

TE/DU = Trip ends per dwelling unit (residential)

TE/1000 SF = Trip ends per 1000 square-feet (SF) of development

TE/VFP = Trip ends per vehicle fueling position for gas station

³ Source: *Trip Generation, 6th Edition*, Institute of Transportation Engineers (ITE), Washington, D.C. (1997).

⁴ AM peak hour trip generation rate for ITE Land Use 814: Specialty Retail Center based on average AM peak hour trip rate of ITE Land Use 820: Shopping Center.

TABLE 3
AMENDED PROJECT TRAFFIC GENERATION FORECAST

Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Retail Component							
• Office Suites (6,240 SF)	160	18	2	20	15	72	87
Less Internal Capture Reduction ⁵	<u>-32</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>-5</u>	<u>-8</u>	<u>-13</u>
Net Trip Generation	128	18	2	20	10	64	74
• Specialty Retail Shops (12,490 SF)	510	8	5	13	14	18	32
Less Internal Capture Reduction	<u>-48</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>-2</u>	<u>-2</u>	<u>-4</u>
Subtotal	462	8	5	13	12	16	28
Less Pass-By Reduction ⁶	<u>-46</u>	<u>-1</u>	<u>-1</u>	<u>-2</u>	<u>-1</u>	<u>-2</u>	<u>-3</u>
Net Trip Generation	416	7	4	11	11	14	25
• High-Turnover Rest. (12,480 SF)	1,630	60	56	116	82	54	136
Less Internal Capture Reduction ⁵	<u>-164</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>-8</u>	<u>-9</u>	<u>-17</u>
Subtotal	1,466	60	56	116	74	45	119
Less Pass-By Reduction ⁶	<u>-147</u>	<u>-6</u>	<u>-6</u>	<u>-12</u>	<u>-32</u>	<u>-19</u>	<u>-51</u>
Net Trip Generation	1,319	54	50	104	42	26	68
• Fast-Food w/Drive-Thru (9,225 SF)	4,580	235	225	460	161	148	309
Less Internal Capture Reduction ⁵	<u>-471</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>-18</u>	<u>-20</u>	<u>-38</u>
Subtotal	4,109	235	225	460	143	128	271
Less Pass-By Reduction ⁶	<u>-411</u>	<u>-115</u>	<u>-110</u>	<u>-225</u>	<u>-72</u>	<u>-64</u>	<u>-136</u>
Net Trip Generation	3,698	120	115	235	71	64	135
• Gas Station w/Mini-Mart (16 VFP)	2,600	80	80	160	107	107	214
Less Internal Capture Reduction ⁵	<u>-279</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>-12</u>	<u>-13</u>	<u>-25</u>
Subtotal	2,321	80	80	160	95	94	189
Less Pass-By Reduction ⁶	<u>-232</u>	<u>-50</u>	<u>-50</u>	<u>-100</u>	<u>-53</u>	<u>-53</u>	<u>-106</u>
Net Trip Generation	2,089	30	30	60	42	41	83
Total Retail Center Trip Generation	9,480	401	368	769	379	399	778
Less Total Internal Capture/Pass-By	<u>-1,830</u>	<u>-249</u>	<u>-244</u>	<u>-493</u>	<u>-275</u>	<u>-258</u>	<u>-533</u>
Net Retail Trip Generation	7,650	152	124	276	104	141	245

⁵ Source: Internal Capture rates were estimated based on the methodology outlines in *Chapter 7 – Multi-Use Development of Trip Generation Handbook*, published by ITE, October 1998

⁶ Pass-By Trips are trips made as intermediate stops on the way from an origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on adjacent streets, which contain direct access to the generator. For this analysis, the following pass-by reduction factors were used (Source: *Trip Generation Handbook*, ITE October 1998).

Special Retail Center:	AM & PM Peak Hour – estimated to be 10% (Source: SANDAG Traffic Generators)
High-Turnover Restaurant:	AM Peak Hour – estimated to be 10% PM Peak Hour - 43%
Fast-food with Drive-Thru:	AM Peak Hour – 49% PM Peak Hour – 50%
Gas Station with Mini Mart	AM Peak Hour - 62% PM peak Hour - 56%

Daily pass-by percentage estimated to be for all above referenced land uses estimated to be 10%.

TABLE 3 (CONTINUED)
AMENDED PROJECT TRAFFIC GENERATION FORECAST

Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Residential Component							
• Additional Apartments (230 DU)	1,525	19	98	117	96	47	143
Less Internal Capture Reduction ⁷	<u>-318</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>-14</u>	<u>-11</u>	<u>-25</u>
Net Trip Generation	1,207	19	98	117	82	36	118
• Apartments (448 DU)	2,970	36	193	229	188	90	278
Less Internal Capture Reduction ⁷	<u>-616</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>-26</u>	<u>-22</u>	<u>-48</u>
Net Trip Generation	2,354	36	193	229	162	68	230
Total Residential Trip Generation	4,495	55	291	346	284	137	421
Less Total Internal Capture	<u>-934</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>-40</u>	<u>-33</u>	<u>-73</u>
Net Residential Trip Generation	3,561	55	291	346	244	104	348
Total Amended Project Trip Generation	13,975	456	659	1,115	663	536	1,199
Less Total Internal Capture/Pass-By	<u>-2,764</u>	<u>-249</u>	<u>-244</u>	<u>-493</u>	<u>-315</u>	<u>-291</u>	<u>-606</u>
Total Amended College Park Mixed-Use Master Plan Trip Generation (Net)	11,211	207	415	622	348	245	593

⁷ Source: Internal Capture rates were estimated based on the methodology outlines in *Chapter 7 – Multi-Use Development of Trip Generation Handbook*, published by ITE, October 1998

TABLE 4
PROJECT TRAFFIC GENERATION COMPARISON

Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
<i>Proposed Amended Development Plan (A)</i>							
• Retail Center (44,335 SF)	7,650	152	124	276	104	141	245
• Residential Development (678 MFDU)	<u>3,561</u>	<u>55</u>	<u>291</u>	<u>346</u>	<u>244</u>	<u>104</u>	<u>348</u>
Net Trip Generation Potential – Updated Project Development	11,211	207	415	622	348	245	593
<i>Approved Alternative Development Plan (B) ⁸</i>							
• Retail Center (44,335 SF)	7,372	229	201	430	166	198	364
• Residential Development (97 SFDU & 448 MFDU)	<u>2,656</u>	<u>54</u>	<u>247</u>	<u>301</u>	<u>191</u>	<u>73</u>	<u>264</u>
Net Trip Generation Potential – Updated Project Development	10,028	283	448	731	357	271	628
<i>Approved EIR Development Plan (C) ⁸</i>							
• Retail Center (44,335 SF)	7,427	229	202	431	175	204	379
• Office Building (48,000 SF)	608	91	12	104	17	103	120
• Hotel Component (102 Rooms)	740	35	24	59	38	26	64
• Residential Development (50 SFDU & 448 MFDU)	<u>2,355</u>	<u>46</u>	<u>221</u>	<u>267</u>	<u>167</u>	<u>69</u>	<u>236</u>
Net Trip Generation Potential – Approved EIR Development	11,130	401	459	860	397	402	799
Net Difference In Trip Generation Potential – Amended Development Plans vs. Approved EIR Development Plan (A minus C)	81	-194	-44	-238	-49	-157	-206
Net Difference In Trip Generation Potential – Amended Development Plans vs. Approved Alternative Development Plan (A minus B)	1,183	-76	-33	-109	-9	-26	-35

⁸ Source: Traffic Impact Analysis Addendum for the College Park Project, prepared by LLG, dated March 2005.

Appendix C: Climate Change Analysis Report

Climate Change Analysis Report College Park Project City of Upland, California

Lead Agency:



City of Upland
Community Development Department
460 N. Euclid Avenue
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June 10, 2009

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Climate Change Analysis Report Technical Appendices
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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ARB	California Air Resources Control Board
CAPCOA	California Air Pollution Control Officers Association
CAT	Climate Action Team (Report)
CCX	Chicago Climate Exchange
CEQA	California Environmental Quality Act
CFC	chlorofluorocarbons
CH ₄	methane
CO ₂	carbon dioxide
EPA	U.S. Environmental Protection Agency
EU ETS	European Union Greenhouse Gas Emission Trading Scheme
GWP	global warming potential
HCFC	hydrochlorofluorocarbons
HFC	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
LEED	Leadership in Energy and Environmental Design
MTCO ₂ e	metric tons of carbon dioxide equivalent
MMTCO ₂ e	million metric tons of carbon dioxide equivalent
NO _x	nitrogen oxides
N ₂ O	nitrous oxide
OPR	Governor's Office of Planning and Research
PFC	perfluorocarbons
ppm	parts per million
ppt	parts per trillion
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
URBEMIS	Urban Emissions Computer Model
VOC	volatile organic compound
Wm ⁻²	watts per square meter

SECTION 1: INTRODUCTION

1.1 - Purpose of the Analysis

This Climate Change Analysis Report has been prepared in support of a Second Initial Study/Addendum (IS/Addendum) to the certified Final Environmental Impact Report (EIR) to address the proposed modifications to the College Park Project. This analysis was prepared to evaluate whether the new project would result in new significant impacts to climate change. The 2004 EIR and the first Addendum did not address impacts to climate change.

This document assesses the impact of the College Park Project (project) on climate change. In 2006, Governor Arnold Schwarzenegger signed AB 32 (CA 2006), which charged the California Air Resources Board (ARB) with developing regulations on how the State would address climate change (also known as global warming). In the absence of published CEQA thresholds, this analysis evaluates the potential impact of the proposed project relative to its contribution to greenhouse gases.

The primary intent of the IS/Addendum is to address the environmental effects of amending the College Park Specific Plan (Specific Plan) and modifying Conditional Use Permit No. CUP-04-06 (CUP). Changes to the Specific Plan and CUP will address:

- Revision to the Specific Plan to allow a maximum 230 dwelling units within the current 9-acre single-family residential site within the College Park Project property
- Revision to the Infrastructure, Utilities, and Public Services section of the Specific Plan to be consistent with the land use change as described above

As a result of these changes, this Second Addendum to the certified Final EIR (State Clearinghouse No. 2003081156) for the College Park Project is being prepared.

1.2 - Executive Summary

The project would emit greenhouse gases during construction and operation. Construction of the proposed project would generate approximately 3,773 metric tons of carbon dioxide equivalents (MTCO₂e). Mitigation measures contained in the 2004 EIR analysis would reduce greenhouse gas emissions from construction equipment, although they are not necessary to reduce this potential impact. Construction emissions would be short-term in nature and would occur before the year 2020. AB 32 requires that the “emissions level,” or annual emissions, in the State of California be reduced to 1990 levels by the year 2020. Although some greenhouse gases can remain in the atmosphere for long periods, AB 32 does not regulate concentrations. Therefore, emissions during construction are less than significant.

After project buildout, operation of the proposed project would result in greenhouse gas emissions of approximately 17,494 MTCO₂e per year. If the original project as assessed in the 2004 EIR were constructed, emissions would be 17,720 MTCO₂e per year. The quantity of emissions is similar to those for the Proposed 2009 Alternative Development Plan (see Exhibits 1 and 2).

The project is high-density, mixed-use development located near transit. As explained in Section 4.3, the project is smart land use. The project would incorporate project design features that reduce greenhouse gas emissions from electricity generation, waste generation, water use, and transportation. The project is consistent with the ARB Scoping Plan measures. The project would not significantly hinder or delay implementation of AB 32. The greenhouse gas emissions from construction and operation would result in a less than significant impact to climate change.

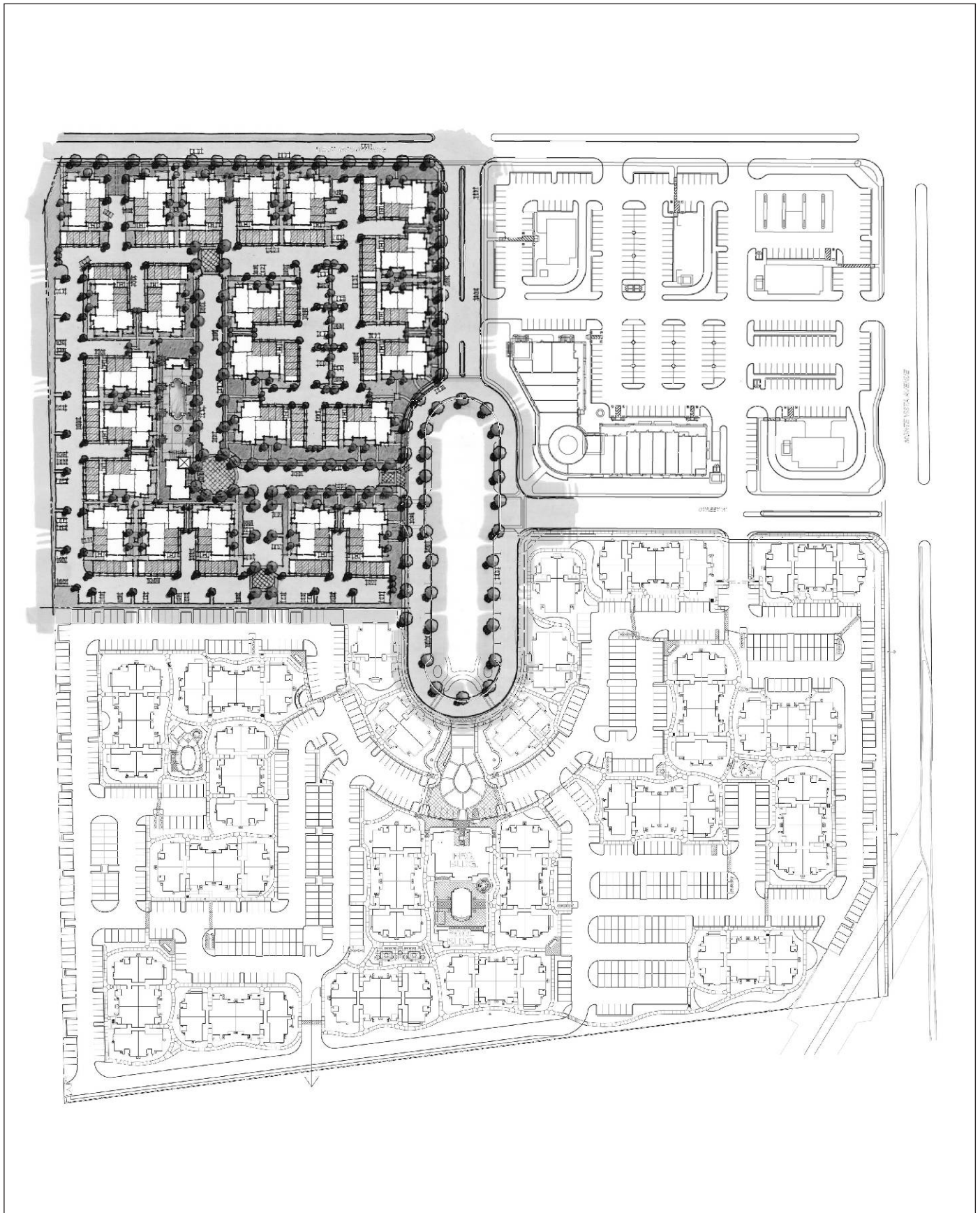
1.3 - Project Description

The project site encompasses 39.7 acres located in the western portion of the City of Upland in San Bernardino County. The site is located southwest of the intersection of W. Arrow Route and Monte Vista Avenue. The site is within the City of Upland but is bordered by the City of Claremont and Los Angeles County line on the west, a San Bernardino County unincorporated island to the north, Upland to the east, and the City of Montclair to the south. The Claremont Colleges lie northwest of the project site. The San Antonio Channel, an improved stormwater flood control facility, lies southeast of the site. Regional freeway access to the site is provided by the San Bernardino Freeway (I-10) and the Foothill Freeway (SR-210). Major arterial access to the site is provided by Mills Avenue, Claremont Boulevard, Foothill Boulevard (SR-66), W. Arrow Route, Arrow Highway, and Monte Vista Avenue.

The proposed action is to amend the College Park Specific Plan and modify Conditional Use Permit No. CUP-04-06 to reflect the revised Site Plan (see Exhibit 1). Changes to the Specific Plan and CUP will address the following items:

- Revision to the Specific Plan to allow a maximum 230 dwelling units (Courtyard Villas) within the current 9-acre, single-family residential site within the College Park Project property.
- Revision to the Infrastructure, Utilities, and Public Services section of the Specific Plan to be consistent with the land use change as described above.

A land use summary for the modified College Park Project (referred to as the “Proposed 2009 Alternative Development Plan”) is presented in Table 1.



Source: KTG Group, Inc., August 2009.



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Exhibit 1 Proposed 2009 Alternative Development Plan

COLLEGE PARK PROPERTIES • COLLEGE PARK

Table 1: Proposed 2009 Alternative Development Plan - Land Use Summary

Project Use	Square-Feet (SF) No. of Units (DU)	Acres	Status/Expected Date of Completion
Retail Component			
Retail Shops and Inline Food Uses/Restaurants	32,100 SF	—	Completed. Tenants moving in now.
Fast-Food Restaurants	8,400 SF	—	One 4,000-SF fast food restaurant completed. Tenant moving in now. Remaining 4,400 SF for two fast food restaurants to be completed in 2010.
Gas Station/Mini-Mart (16 fueling positions)	4,000 SF	1.11	Not yet begun. Estimated completion is mid-2010.
Retail (not including Gas Station/Mini-Mart)/Commercial Floor Area	44,500 SF	5.82	—
Residential Component			
Multi-Family/Courtyard Villas	230 DU	9.03	Now under review through this Second Addendum to the Final EIR. Completion is expected in 2011.
Multi-Family/Apartments	448 DU	20.73	All 448 DUs are under construction or completed. Twenty-five percent or approximately 112 DUs are now open and ready for occupancy. Seventy-five percent or approximately 336 DUs are being completed, to be ready for occupancy now through October 2009.
Total Residential	678 DU	29.76	—
Greenbelt/Recreational Areas	N/A	1.08	Completed.
Streets and Dedication	229,561 SF	1.91	Completed.
Project Total	N/A	39.68	—
Notes: DU = dwelling unit SF = square feet N/A = not applicable Source: College Park Properties, L.P., April 2009.			

Project History

In October 2004, the City of Upland approved the College Park Specific Plan and certified the EIR for the College Park Project (SCH # 2003081156), which evaluated the environmental impacts of the College Park Project pursuant to the approved Specific Plan. Also approved in October 2004 were (1) the Conditional Use Permit No. CUP-04-06, to allow a mixed-use development consisting of

Tentative Parcel Map No. TPM-16716, to create 6 separate parcels within the project site. The EIR for the project was prepared to address the potential construction and operational level impacts associated with implementation of the College Park Specific Plan.

As indicated in the 2004 Certified Final EIR, the project was expected to be developed in two phases (see Exhibit 2):

- Phase 1: Retail commercial with restaurants and service station/mini mart totaling 44,335 square feet of floor space, office buildings totaling 48,000 square feet of floor space, 50 single-family homes, 224 apartment units, a 1.05-acre community park, and all primary access and internal roadway improvements.
- Phase 2: A 102-room hotel totaling 51,080 square feet of floor space, and 224 apartment units.

In August 2005, an Addendum to the Certified Final EIR was approved to remove the hotel and office-professional uses in the northwestern portion of the site, and to substitute 39 single-family detached patio/courtyard-style homes, resulting in a total of 89 single-family detached homes. Circulation was also revised. In addition, there were (1) modifications to CUP-04-06, (2) a modification to Tentative Parcel Map No. TPM-16716, and (3) approval of a Tentative Tract Map for subdivision of the single-family area.

Environmental Setting

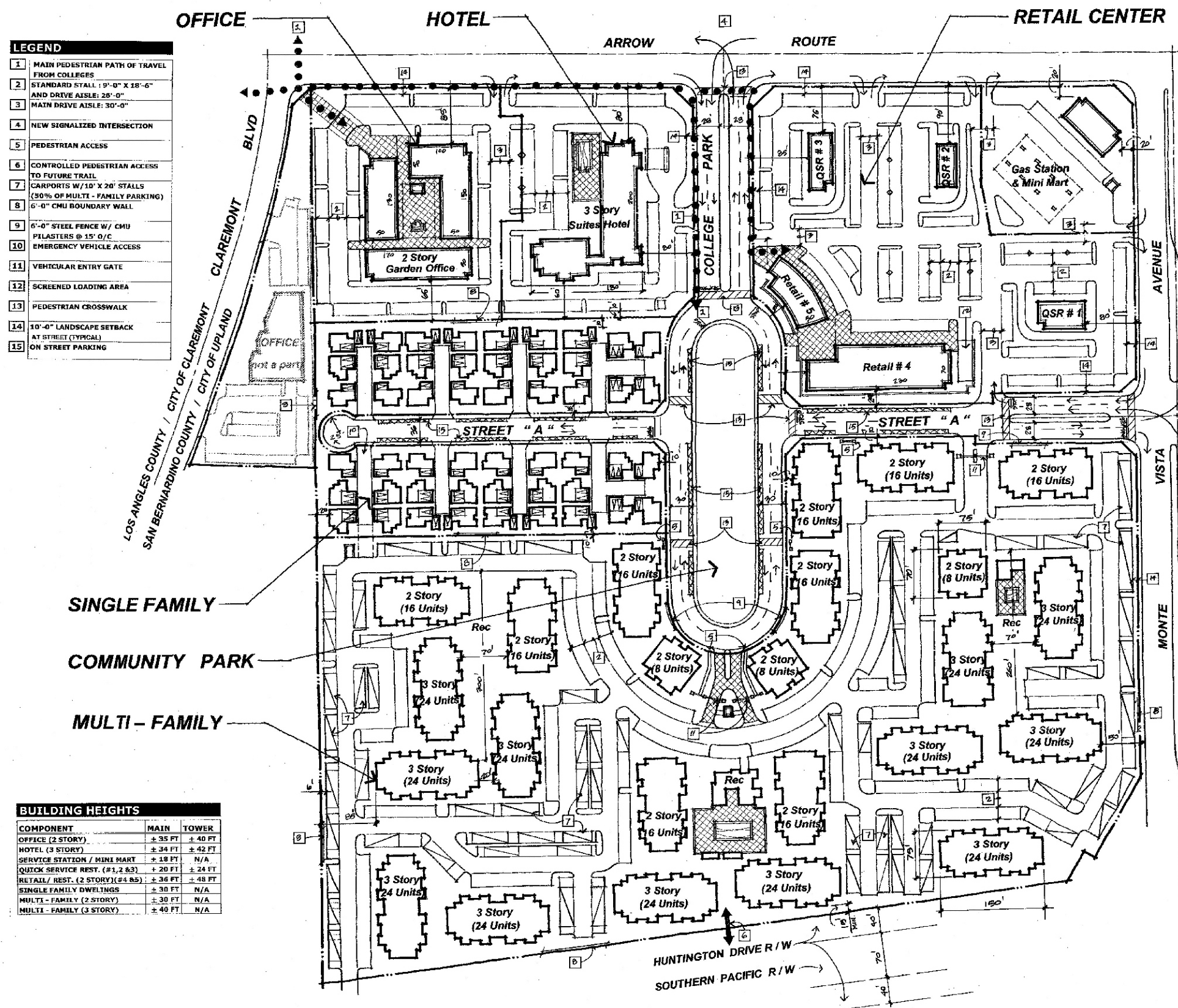
The site was a former sand and gravel quarry, which has been completely filled in with engineered compacted fill by others under a separate permit. The EIR analysis evaluated environmental impacts of the Approved EIR Development Plan using the filled site as the baseline environmental condition. As identified in Table 1, portions of the project site have been constructed and are operational.

The City of Upland owns another former sand and gravel site directly across Monte Vista Avenue to the east, which has been excavated for a retention basin. The excavated soils were transported to the project site as fill, as part of a separately permitted project. The property immediately to the north is a closed sand and gravel extraction site that is owned and controlled by the Claremont Colleges.

The Vulcan asphalt batch plant, located to the south of the project site, is scheduled for relocation. Since plant relocation plans have not been finalized; however, the potential exists that the plant will continue to operate for a period of 2 to 4 years.

LEGEND	
1	MAIN PEDESTRIAN PATH OF TRAVEL FROM COLLEGES
2	STANDARD STALL: 9'-0" X 18'-6" AND DRIVE AISLE: 28'-0"
3	MAIN DRIVE AISLE: 30'-0"
4	NEW SIGNALIZED INTERSECTION
5	PEDESTRIAN ACCESS
6	CONTROLLED PEDESTRIAN ACCESS TO FUTURE TRAIL
7	CARPORTS W/10' X 20' STALLS (50% OF MULTI-FAMILY PARKING)
8	6'-0" CMU BOUNDARY WALL
9	6'-0" STEEL FENCE W/ CMU PILASTERS @ 15' O/C
10	EMERGENCY VEHICLE ACCESS
11	VEHICULAR ENTRY GATE
12	SCREENED LOADING AREA
13	PEDESTRIAN CROSSWALK
14	10'-0" LANDSCAPE SETBACK AT STREET (TYPICAL)
15	ON STREET PARKING

BUILDING HEIGHTS		
COMPONENT	MAIN	TOWER
OFFICE (2 STORY)	± 35 FT	± 40 FT
HOTEL (3 STORY)	± 34 FT	± 42 FT
SERVICE STATION / MINI MART	± 18 FT	N/A
QUICK SERVICE REST. (#1, 2 & 3)	± 20 FT	± 24 FT
RETAIL / REST. (2 STORY) (#4 & 5)	± 36 FT	± 48 FT
SINGLE FAMILY DWELLINGS	± 30 FT	N/A
MULTI-FAMILY (2 STORY)	± 30 FT	N/A
MULTI-FAMILY (3 STORY)	± 40 FT	N/A



PROJECT SUMMARY			
COLLEGE PARK, UPLAND, CA			
COMMERCIAL COMPONENT			
SERVICE STATION / MINI MART			
LAND	54,558 SF	1.252 Acres	
BUILDING	5,940 SF		
F.A.R.	0.071		
PARKING REQUIRED	3,900 SF at 1 per 250	15.6 Stalls	
PARKING PROVIDED		37.0 Stalls	
PARKING RATIO		4.36 / 1000	
RETAIL CENTER			
LAND	228,483 SF	5.245 Acres	
BUILDING	40,435 SF		
F.A.R.	0.177		
PARKING REQUIRED			
Industry Standard			
RESTAURANT #1	3,375 SF at 1 per 100	33.8 Stalls	
RESTAURANT #2	2,300 SF at 1 per 100	23.0 Stalls	
RESTAURANT #3	3,600 SF at 1 per 100	36.0 Stalls	
1st FLR. RETAIL / REST. #4	9,270 SF at 1 per 100	92.7 Stalls	
40% RETAIL	6,180 SF at 1 per 200	30.9 Stalls	
TOTAL	15,435 SF		
2nd FLR. OFF. / RETAIL #4	4,800 SF at 1 per 250	19.2 Stalls	
40% RETAIL	3,200 SF at 1 per 200	16.0 Stalls	
TOTAL	8,000 SF		
1st FLR. RETAIL / REST. #5	3,210 SF at 1 per 100	32.1 Stalls	
40% RETAIL	2,130 SF at 1 per 200	10.6 Stalls	
TOTAL	5,360 SF		
2nd FLR. OFF. / RETAIL #5	2,440 SF at 1 per 250	9.8 Stalls	
40% RETAIL	960 SF at 1 per 200	4.8 Stalls	
TOTAL	3,400 SF		
City Code	40,435 SF at 1 per 200	202.2 Stalls	
PARKING PROVIDED		213.0 Stalls	
PARKING RATIO		7.74 / 1000	
HOTEL			
LAND	109,571 SF	2.52 Acres	
BUILDING	51,080 SF		
F.A.R.	0.468		
PARKING REQUIRED	112 rms at 1 per room	112 Stalls	
PARKING PROVIDED		117 Stalls	
PARKING RATIO		1.05	
OFFICE			
LAND	103,630 SF	2.38 Acres	
BUILDING			
FIRST FLOOR	24,000 SF		
SECOND FLOOR	24,000 SF		
TOTAL	48,000 SF		
F.A.R.	0.463		
PARKING REQUIRED	48,000 SF at 1 per 250	192 Stalls	
PARKING PROVIDED		150 Stalls	
SHARED PARKING BY HOTEL (20%)		39 Stalls	
TOTAL		189 Stalls	
PARKING RATIO	On site	3.15 / 1000	
	Adjusted	4.00 / 1000	
RESIDENTIAL COMPONENT			
SINGLE FAMILY			
LAND	164,276 SF	3.771 Acres	
UNITS	50		
DENSITY	15.3 D.U./ACRE		
MULTI-FAMILY			
LAND	623,345 SF	14.301 Acres	
UNITS	448		
DENSITY	23.7 D.U./ACRE		
PARKING PROVIDED		865 Stalls	
ON SITE		21 Stalls	
STREET		896 Stalls	
TOTAL		896 Stalls	
PARKING RATIO		2.00 per Unit	
RECREATIONAL COMPONENT			
COMMUNITY PARK			
LAND	45,817 SF	1.05 Acres	

TOTAL PROJECT SUMMARY			
LAND			
COMMERCIAL	29%	496,234 SF	11.39 ACRES
RESIDENTIAL	59%	987,615 SF	22.67 ACRES
RECREATIONAL	3%	45,817 SF	1.05 ACRES
STREETS	9%	155,887 SF	3.58 ACRES
% DEDICATIONS			
TOTAL	100%	1,685,553 SF	38.69 ACRES
COMMERCIAL			
SERVICE STATION		3,900 SF	0.071 F.A.R.
RETAIL / REST.		40,435 SF	0.17697 F.A.R.
HOTEL		51,080 SF	
OFFICE		48,000 SF	0.463 F.A.R.
TOTAL		143,415 SF	
RESIDENTIAL			
SINGLE FAMILY		50 DU 13.3 DU / ACRE	
MULTI-FAMILY		448 DU 23.7 DU / ACRE	
TOTAL		498 DU 22.0 DU / ACRE	

Source: Hutton Development Company; KTGy Group, Inc.; Lundstrom & Associates, June 2003.



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Exhibit 2
Approved EIR Development Plan

COLLEGE PARK PROPERTIES • COLLEGE PARK

Immediately west of the project site is an older residential neighborhood with long-term established residents, and an office building. Some of the older residences abut the batch plant. Northwest of the site, diagonally across the intersection of Claremont Boulevard, is the campus of the Claremont Colleges.

Land uses in the general vicinity (approximately 1 mile) of the site are a mixture of residential, commercial, institutional, and heavy industrial. Principal land uses in the vicinity of the site are sand and gravel facilities; the Claremont Colleges; the Montclair MetroLink Station and Transcenter; the MetroLink railroad line; Cable Airport; the San Bernardino Freeway (I-10); the San Antonio Channel; and Montclair Plaza, a regional shopping center. Additional land uses within approximately 1 mile of the site are two neighborhood shopping centers, five public schools, a mobile home park, a cemetery, six parks, three municipal buildings, and portions of a botanical garden and golf course.

SECTION 2: CLIMATE CHANGE

Briefly stated, climate change is a change in the average weather of the earth that may be measured by changes in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes that have occurred in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance—specifically focusing on temperature records from the last 150 years (the Industrial Age)—that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of greenhouse gases needed to stabilize global temperatures and climate change impacts. The IPCC predicted that global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios (IPCC 2007).

In California, climate change may result in consequences such as the following:

- A reduction in the quality and supply of water to the State from the Sierra snow pack;
- Increased risk of large wildfires;
- Reductions in the quality and quantity of certain agricultural products;
- Exacerbation of air quality problems;
- A rise in sea levels resulting in the displacement of coastal businesses and residences;
- Damage to marine ecosystems and the natural environment;
- An increase in infections, disease, asthma, and other health-related problems; and
- A decrease in the health and productivity of California's forests (CCCC 2006).

2.1 - Greenhouse Gases

Gases that trap heat in the atmosphere are called greenhouse gases. The effect is analogous to the way a greenhouse retains heat. Common greenhouse gases include water vapor, carbon dioxide, methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit greenhouse gas. The presence of greenhouse gases in the atmosphere affects the earth's temperature. Without the natural heat-trapping effect of greenhouse gas, the earth's surface would be about 34°C cooler (CAT 2006). However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Climate change is driven by forcings and feedbacks. Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. Positive forcing tends to warm the surface while negative forcing tends to cool it. Radiative forcing values are typically expressed in

watts per square meter (W m^{-2}). A feedback is “an internal climate process that amplifies or dampens the climate response to a specific forcing” (NRC 2005). The global warming potential (GWP) is the potential of a gas or aerosol to trap heat in the atmosphere; it is the “cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas” (EPA 2006a). The GWP of a gas is essentially a measurement of the radiative forcing of a greenhouse gas compared with the reference gas, carbon dioxide.

Individual greenhouse gas compounds have varying GWP and atmospheric lifetimes. Carbon dioxide, the reference gas for GWP, has a GWP of 1. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing greenhouse gas emissions since it normalizes various greenhouse gas emissions to a consistent metric. Methane’s warming potential of 21 indicates that methane has a 21 times greater warming affect than carbon dioxide on a molecule per molecule basis. A carbon dioxide equivalent is the mass emissions of an individual greenhouse gas multiplied by its GWP.

The greenhouse gases and sources are summarized in Table 2.

Table 2: Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Water Vapor	Water vapor is the most abundant, important, and variable greenhouse gas. In the atmosphere, it maintains the climate necessary for life.	Sources include evaporation from the ocean and other water bodies, sublimation of ice and snow, and transpiration from plants.
Ozone (O_3)	Ozone is a short-lived local greenhouse gas and photochemical pollutant. Tropospheric ozone changes contribute to radiative forcing on a global scale. GWPs for short-lived greenhouse gases, such as ozone and aerosols, are not defined by the IPCC.	Ozone is formed from reactions of ozone precursors (nitrogen oxides [NO_x] and volatile organic compounds [VOC]) and sunlight in the atmosphere. VOC and NO_x are emitted from automobiles, solvents, and fuel combustion.
Aerosols	Aerosols are particulate matter suspended in the air. They are short-lived and remain in the atmosphere for about a week. Aerosols warm the atmosphere by absorbing heat and cool the atmosphere by reflecting light, with radiative forcing (RF) cooling effects of -1.2 W m^{-2} . There is a low scientific understanding of the RF of individual aerosols, such as black carbon. Black carbon can cause warming from deposition on snow ($+0.1 \text{ W m}^{-2}$) and from suspensions in air ($+0.2 \text{ W m}^{-2}$). Reddy and Boucher (2007) identified a GWP of 761 for black carbon. Global cooling potentials for other aerosols in a metric similar to the GWP are not available.	Sulfate aerosols are emitted when fuel with sulfur is burned. Black carbon (or soot) is emitted during biomass burning and incomplete combustion of fossil fuels (such as diesel fuel).

Table 2 (Cont.): Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Methane (CH ₄)	Methane is a flammable gas and is the main component of natural gas. GWP = 21.	A natural source of methane is from the anaerobic decay of organic matter. Methane is extracted from geological deposits (natural gas fields). Other sources are from landfills, fermentation of manure, and cattle.
Nitrous oxide (N ₂ O)	Nitrous oxide is also known as laughing gas and is a colorless greenhouse gas. GWP = 310.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Carbon dioxide (CO ₂)	Carbon dioxide is an odorless, colorless, natural greenhouse gas. GWP = 1.	Carbon dioxide is emitted from natural and anthropogenic sources. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The concentration in 2005 was 379 ppm, which is an increase of about 1.4 ppm per year since 1960.
Chloro-fluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane 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). GWPs range from 3,800 to 8,100.	CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer stopped their production in 1987.
Hydro-fluorocarbons (HFCs)	The HFCs with the largest measured atmospheric concentrations are HFC-23 and HFC-134a (10 ppt) and HFC-152a (1 ppt). GWPs: HFC-23 = 11,700, HFC-134a = 1,300, HFC-152a = 140.	HFCs are synthetic manmade chemicals that are used as a substitute for CFCs in applications such as automobile air conditioners and refrigerants.
Per-fluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. GWPs range from 6,500 to 9,200.	Two main sources of PFCs are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. Concentrations in the 1990s were about 4 ppt. It has the highest GWP of any gas evaluated, 23,900.	It is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.
Notes: Measure of concentrations in atmosphere: ppm = parts per million; ppt = parts per trillion GWP = global warming potential Compiled from a variety of sources, including EPA 2006b, IPCC 2007.		

There are no adverse health effects from the concentration of greenhouse gases in the atmosphere, with the exception of ozone and aerosols (EPA 2003). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses. At very high concentrations, carbon dioxide, methane, sulfur hexafluoride, and some CFCs can cause suffocation as the gases can displace oxygen (NIOSH 2005, OSHA 2003).

2.1.1 - Emissions Inventory and Trends

In 2004, total worldwide greenhouse gas emissions were estimated to be 20,135 million metric tons of carbon dioxide equivalents (MMTCO₂e), excluding emissions/removals from land use, land use change, and forestry (UNFCCC 2006). (Note that sinks, or removal processes of greenhouse gas, play an important role in the greenhouse gas inventory as forest and other land uses absorb carbon.) In 2004, greenhouse gas emissions in the U.S. were 7,074.4 MMTCO₂e (EPA 2006a). In 2005, total U.S. greenhouse gas emissions were 7,260.4 MMTCO₂e, a 16.3 percent increase from 1990 emissions, while U.S. gross domestic product has increased by 55 percent over the same period (EPA 2007). Emissions rose from 2004 to 2005, increasing by 0.8 percent. The main causes of the increase are believed to be (1) strong economic growth in 2005, leading to increased demand for electricity, and (2) an increase in the demand for electricity due to warmer summer conditions (EPA 2007). However, a decrease in demand for fuels due to warmer winter conditions and higher fuel prices moderated the increase in emissions.

In 2006, emissions in the U.S. were 7,054.2 MMTCO₂e, which is a decrease from 2005 emissions. The decrease in emissions from 2005 is attributable to (1) reduced electricity demand for heating in the winter and cooling in the summer, (2) rising fuel prices in the transportation sector leading to decreased fuel use, and (3) the increased use of natural gas and renewable energy (EPA 2008).

California is the second largest contributor in the U.S. of greenhouse gases and the sixteenth largest in the world (CEC 2006). In 2004, California emitted 484.4 MMTCO₂e, with transportation as the largest sector contributing 38 percent of the emissions (ARB 2009).

2.2 - Regulatory Environment

2.2.1 - International and Federal

International and federal agreements have been enacted to deal with global climate change issues. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess “the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation” (IPCC 2004).

On March 21, 1994, the United States joined a number of countries around the world in signing the United Nations Framework Convention on Climate Change. Under the Convention, governments do the following: gather and share information on greenhouse gas emissions, national policies, and best

practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change (UNFCCC 2007).

A particularly notable result of the United Nations Framework Convention on Climate Change efforts is a treaty known as the Kyoto Protocol, which went into effect on February 16, 2005. When countries sign the treaty, they demonstrate their commitment to reduce their emissions of greenhouse gases or engage in emissions trading. More than 170 countries are currently participating in the Protocol. Industrialized countries are required to reduce their greenhouse gas emissions by an average of five percent below their 1990 levels by 2012. In 1998, United States Vice President Al Gore symbolically signed the Protocol; however, in order for the Protocol to be formally ratified, the United States Congress must approve it. Congress did not do this during the Clinton Administration.

In October 1993, President Clinton announced his Climate Change Action Plan, which had a goal to return greenhouse gas emissions to 1990 levels by the year 2000. This was to be accomplished through 50 initiatives that relied on innovative voluntary partnerships between the private sector and government aimed at producing cost-effective reductions in greenhouse gas emissions.

The U.S. EPA currently does not regulate greenhouse gas emissions from motor vehicles. *Massachusetts v. EPA* (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which the State of Massachusetts petitioned that the EPA regulate four greenhouse gases, including carbon dioxide, under Section 202(a)(1) of the Clean Air Act. A decision was made on April 2, 2007, in which the Supreme Court held that petitioners have a standing to challenge the EPA and that the EPA has statutory authority to regulate emissions of greenhouse gases from new motor vehicles.

Former President Bush attended the Group of Eight (G8) 2008 Summit, which is an annual meeting attended by the leaders of eight countries—Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States of America—and the President of the European Commission. The summit resolved with a broad pledge to work toward cutting greenhouse gas emissions by 50 percent by 2050. However, five developing nations at the meeting—China, India, Brazil, Mexico, and South Africa—issued their own statement rejecting this pledge.

2.2.2 - California

There has been significant legislative and regulatory activity that affects climate change and greenhouse gases in California, as discussed below.

Title 24. Although it was not originally intended to reduce greenhouse gases, California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce

California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. The latest amendments were made in October 2005 and currently require new homes to use half the energy they used only a decade ago. The 2005 standards are in effect through July 31, 2009. The 2008 standards will become effective August 1, 2009. The requirement for when the 2008 standards must be followed is dependent on when the application for the building permit is submitted. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

AB 1493. California Assembly Bill 1493 (Pavley), enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. The regulation has been stalled by automaker lawsuits and by the U.S. EPA's denial of an implementation waiver. California is suing the federal government over the unprecedented failure to grant the waiver. Therefore, AB 1493 is not currently in effect. However, President Obama has asked the EPA to review its denial of the waiver.

Executive Order S-3-05. California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for greenhouse gas emissions:

- By 2010, reduce greenhouse gas emissions to 2000 levels;
- By 2020, reduce greenhouse gas emissions to 1990 levels; and
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels (CA 2005).

The 2050 reduction goal represents what scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be an aggressive, but achievable, mid-term target. To meet these targets, the Governor directed the Secretary of the California EPA to lead a Climate Action Team (CAT) made up of representatives from the Business, Transportation, and Housing Agency; the Department of Food and Agriculture; the Resources Agency; the Air Resources Board; the Energy Commission; and the Public Utilities Commission. The CAT's Report to the Governor in 2006 contains recommendations and strategies to help ensure the targets in Executive Order S-3-05 are met (CAT 2006).

Executive Order S-01-07. The Governor signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. It also requires that a Low Carbon Fuel Standard for transportation fuels be established for California.

SB 1368. In 2006, the State Legislature adopted Senate Bill 1368 (SB 1368), which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for greenhouse gas emissions 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 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Because of 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's energy demand, as SB 1368 will effectively prohibit California utilities from purchasing power from out of state producers that cannot satisfy the performance standard for greenhouse gas emissions required by SB 1368.

SB 97 was passed in August 2007 and added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)." Section 21097 was also added to the Public Resources Code. It provides CEQA protection for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to adequately analyze the effects of greenhouse gases would not violate CEQA. However, the CEQA protection section of SB 97 remains in effect only until January 1, 2010.

AB 32. In 2006, the California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing greenhouse gas emissions in California. Greenhouse gases, as defined under AB 32, include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. ARB is the State agency charged with monitoring and regulating sources of emissions of greenhouse gases that cause global warming in order to reduce emissions of greenhouse gases.

The ARB Board approved the 1990 greenhouse gas emissions level of 427 million metric tons of carbon dioxide equivalent (MMTCO₂e) on December 6, 2007. Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO₂e.

Under the current "business as usual" scenario, statewide emissions are increasing at a rate of approximately 1 percent per year, as noted below. Also shown are the average reductions needed from all statewide sources (including all existing sources) to reduce greenhouse gas emissions back to 1990 levels.

- 1990: 427 MMTCO₂e
- 2004: 480 MMTCO₂e (an average 11 percent reduction needed to achieve 1990 base)
- 2008: 495 MMTCO₂e (an average 14 percent reduction needed to achieve 1990 base)
- 2020: 596 MMTCO₂e “Business As Usual” (an average 28 percent reduction needed to achieve 1990 base)

Under AB 32, the ARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California (ARB 2007). Discrete early action measures are currently underway or are enforceable by January 1, 2010. Early action measures are regulatory or non-regulatory and are currently in progress or to be initiated by the ARB in the 2007–2012 timeframe. The ARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of those early action measures, nine are considered discrete early action measures, as they are regulatory and enforceable by January 1, 2010. The ARB estimates that the 44 recommendations are expected to result in reductions of at least 42 MMTCO₂e by 2020, representing approximately 25 percent of the 2020 target.

The ARB Board approved the Climate Change Proposed Scoping Plan in December 2008. The Plan “proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health” (ARB 2008). The measures in the Scoping Plan will be developed over the next 2 years and will be in place by 2012.

SB 375 passed the Senate on August 30, 2008 and was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of greenhouse gas emissions, which emits over 40 percent of the total greenhouse gas emissions in California. Automobiles and light trucks alone contribute almost 30 percent. SB 375 indicates that greenhouse gases from automobiles and light trucks can be reduced by new vehicle technology, but significant reductions from changed land use patterns and improved transportation are necessary. SB 375 states that “Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32.” SB 375 does the following: (1) it requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing greenhouse gas emissions, (2) it aligns planning for transportation and housing, and (3) it creates specified incentives for the implementation of the strategies. Concerning the California Environmental Quality Act (CEQA), SB 375 Section 21159.28 states that CEQA findings determinations for certain projects are not required to reference, describe, or discuss (1) growth-inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that the ARB accepts as achieving the greenhouse gas emission reduction targets;
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies); and
3. Incorporates the mitigation measures required by an applicable prior environmental document.

2.2.3 - Local and Regional

South Coast Air Quality Management District (SCAQMD) Regulation XXVII, Climate Change

The SCAQMD Board adopted Rule 2700 and Rule 2701 on December 5, 2008. The purpose of Rule 2700, General, is to define terms and post global warming potentials. The purpose of Rule 2701, SoCal Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high-quality, certified greenhouse gas reductions in the SCAQMD. Amendments to Rule 2701 were proposed on January 9, 2009, which would include the Manure Management Project Protocol with some local requirements to the list of approved greenhouse gas emission reduction protocols.

Rule 2702, Greenhouse Gas Reduction Program, was proposed on January 9, 2009. The purpose of the rule is to create a Greenhouse Gas Reduction Program for greenhouse gas reductions in the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties. Reductions obtained by the program may be purchased by persons for a variety of uses. Projects funded through this program may also reduce criteria or toxic pollutants that can help local and regional air quality.

2.3 - Emissions Trading and Carbon Offset Programs

An emissions trading (or cap and trade) program is an approach for controlling emissions by providing economic incentives for reducing emissions. Typically, a limit (or cap) is placed on the quantity of greenhouse gases that can be emitted per year. The source emitters are then issued permits by the governing authority for a certain allowance of emissions. Source emitters can reduce their own emissions and sell the excess or they can continue to emit high levels and purchase credits from another facility (a trade). There are several uncertainties regarding trading programs. Allowances need to be set at proper levels when a cap and trade program is initialized. Another uncertainty is deciding who is regulated (for example, power plants, transportation sector).

2.3.1 - Current Programs

Three current trading programs are discussed below to demonstrate that trading programs are feasible in a large geographical area. These programs would not necessarily reduce emissions in California; therefore, they are not applicable to the project.

European Union Greenhouse Gas Emission Trading Scheme

An example of a trading program that works is the European Union Greenhouse Gas Emission Trading Scheme (EU ETS). It is one of three mechanisms under the Kyoto Protocol to reduce emissions in the European Union. The other two mechanisms are called Joint Implementation, and the Clean Development Mechanism. The EU ETS is examined herein to provide background information on how a trading system in California or the United States may work or end up over time. Note that the EU ETS does not apply to or reduce emissions generated in the United States (EU ETS 2007).

Chicago Climate Exchange

The Chicago Climate Exchange (CCX) operates North America's only cap and trade system for all six greenhouse gases, with global affiliates and projects worldwide (CCX 2009). The commodity traded at CCX is the CFI contract, each of which represents one MTCO₂e. Trading volumes have increased since the CCX was established in 2003. The price of a CFI has ranged from \$1 to \$4.50 per MTCO₂e. The price on January 21, 2009 was \$2.

Regional Greenhouse Gas Initiative

The Regional Greenhouse Gas Initiative is the first mandatory, market-based effort in the United States to reduce greenhouse gas emissions. Ten Northeastern and Mid-Atlantic states will cap and then reduce carbon dioxide emissions from the power sector by 10 percent by 2018 (RGGI 2009). States will sell emission allowances through auctions and invest proceeds in consumer benefits: energy efficiency, renewable energy, and other clean energy technologies.

2.3.2 - Possible Future Programs

Western Climate Initiative

The Western Climate Initiative was launched on February 26, 2007. Current partners include Arizona, British Columbia, California, Manitoba, Montana, New Mexico, Ontario, Oregon, Quebec, Utah, and Washington. Members of the Initiative plan on collaborating to identify, evaluate, and implement ways to reduce greenhouse gases in the states collectively and to achieve related co-benefits. A multi-state registry will track, manage, and credit entities that reduce greenhouse gases. The Initiative published its regional greenhouse gas reduction goals on August 22, 2007, which include a reduction of 15 percent below 2005 levels by 2020 (WCI 2007). The WCI prepared design recommendations for the WCI Regional Cap-and-Trade Program (WCI 2008).

Cap and Trade Program in California

California is exploring the possibility of a cap and trade system for greenhouse gases. The program could include the upstream transportation sector, which would regulate petroleum refiners and importers of refined products. It could also cover the distribution of natural gas. The Market Advisory Committee to the ARB published recommendations for designing a mandatory greenhouse gas cap and trade system for California (MAC 2007), as follows:

- The program should eventually include all major greenhouse gas-emitting sectors of the economy in the cap-and-trade program.
- To address emissions associated with imported electricity within a state-based cap-and-trade program, the Committee recommends a “first-seller approach.” Under this approach, the entity that first sells electricity in the State is responsible to meet the compliance obligation established under the greenhouse gas cap-and-trade program.
- The Committee recommends a combined approach in which some share of allowances is allocated free of charge initially, while the remaining allowances are auctioned. The percentage of allowances auctioned should then increase over time.
- The Committee recommends that California’s cap-and-trade program recognize offsets generated both within and outside the State’s borders.
- California should encourage linkages with other mandatory greenhouse gas cap-and-trade systems.
- The Committee recommends the use of very stringent criteria for determining whether activities qualify as offsets. (MAC 2007)

SECTION 3: THRESHOLD OF SIGNIFICANCE

CEQA requires that Lead Agencies inform decision makers and the public regarding potential significant environmental effects of proposed projects and feasible ways that environmental damage can be avoided or reduced, through feasible mitigation measures and/or project alternatives. The Lead Agencies must also disclose the reasons why a project is approved if significant environmental effects are involved (CEQA Guidelines Section 15002). CEQA also requires Lead Agencies to evaluate potential environmental effects based on, to the fullest extent possible, scientific and factual data (CEQA Guidelines Section 15064(b)). Significance conclusions must be based on substantial evidence, which includes facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts (CEQA Guidelines Section 15064(f)(5)).

There are currently no adopted thresholds of significance established by any state or regional regulatory agency for measuring the impact of climate change on or from a project. The ARB, the Governor's Office of Planning and Research (OPR), and the SCAQMD are currently in the process of devising thresholds of significance and/or guidance in addressing climate change in CEQA documents. However, nothing has been finalized as of the date this Climate Change Analysis Report for College Park was written.

On January 8, 2008, the California Air Pollution Control Officers Association (CAPCOA) released a paper to provide a common platform of information and tools for public agencies. The disclaimer states that it is not a guidance document but a resource to enable local decision makers to make the best decisions they can in the face of incomplete information during a period of change. The paper indicates that it is an interim resource and does not endorse any particular approach. It discusses three groups of potential thresholds, including a no significance threshold, a threshold of zero, and non-zero thresholds (CAPCOA 2008). Non-zero quantitative thresholds identified in the paper range from 900 to 50,000 metric tons per year. The CAPCOA paper also identified non-zero qualitative thresholds.

OPR is planning to publish new CEQA Guidelines pursuant to SB 97 by July 1, 2009, which will provide regulatory guidance on the analysis and mitigation of greenhouse gas emissions in CEQA documents. In the interim, OPR published a Technical Advisory, which offers informal guidance regarding the steps Lead Agencies should take to address climate change in their CEQA documents (OPR 2008). The paper indicates that each public agency needs to develop its own approach for climate change analyses. The steps for the analysis include the following: identify and quantify greenhouse gas emissions, assess the significance of impact, and identify alternatives and/or mitigation measures to reduce the impacts. The advisory does not specify thresholds or approaches for the analysis.

Pursuant to CEQA Guidelines Section 15064(h)(3), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located.

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, a Scoping Plan was adopted. The Scoping Plan outlines actions recommended to obtain that goal.

The Scoping Plan states that "The 2020 goal was established to be an aggressive, but achievable, mid-term target, and the 2050 greenhouse gas emissions reduction goal represents the level scientists believe is necessary to reach levels that will stabilize climate" (ARB 2008, page 4). The 2050 goal is in Executive Order S-3-05.

The year 2020 greenhouse gas emission reduction goal of AB 32 corresponds with the mid-term target established by S-3-05, which aims to reduce California's fair-share contribution of greenhouse gases in 2050 to levels that will stabilize the climate. Therefore, the threshold to be used for this project is as follows:

Does the project comply with the provisions of an adopted Greenhouse Gas Reduction Plan or Strategy? If no such Plan or Strategy is applicable, would the project significantly hinder or delay California's ability to meet the reduction targets contained in AB 32?

SECTION 4: IMPACT ANALYSIS

4.1 - Greenhouse Gas Inventories

The threshold of significance used in this report is based on AB 32; therefore, this analysis is restricted to greenhouse gases identified by AB 32, which include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

The project would generate a variety of greenhouse gases during construction and operation, including several defined by AB 32 such as carbon dioxide, methane, and nitrous oxide.

The project may also emit greenhouse gases that are not defined by AB 32. For example, the project may generate aerosols. Aerosols are short-lived greenhouse gases, as they remain in the atmosphere for about 1 week. Black carbon is a component of aerosol. A couple of studies have indicated that black carbon has a high global warming potential; however, the IPCC states that it has a low level of scientific certainty (IPCC 2007). Water vapor could be emitted from evaporated water used for landscaping, but this is not a significant impact because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emissions from project-related activities. The project would emit nitrogen oxides and volatile organic compounds, which are ozone precursors. Ozone is a greenhouse gas; however, unlike the other greenhouse gases, ozone in the troposphere is relatively short-lived and can be reduced in the troposphere on a daily basis.

Certain greenhouse gases defined by AB 32 would not be emitted by the project. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Therefore, it is not anticipated that the project would emit perfluorocarbons or sulfur hexafluoride.

4.1.1 - Construction

The project would emit greenhouse gases from upstream emission sources and direct sources (combustion of fuels from worker vehicles and construction equipment). An upstream emission source (also known as life cycle emissions) refers to emissions that were generated during the manufacture of products to be used for construction of the project. Upstream emission sources for the project include but are not limited to the following: emissions from the manufacture of cement; emissions from the manufacture of steel; and/or emissions from the transportation of building materials in other countries. The upstream emissions were not estimated because they are not within the control of the project and to do so would be speculative at this time. Additionally, the CAPCOA White Paper on CEQA & Climate Change supports this conclusion by stating, “The full life-cycle of GHG [greenhouse gas] emissions from construction activities is not accounted for. . . and the information needed to characterize [life-cycle emissions] would be speculative at the CEQA analysis level” (CAPCOA 2008). Therefore, pursuant to CEQA Guidelines Sections 15144 and 15145, upstream/life cycle emissions are speculative and no further discussion is necessary.

Greenhouse gas emissions during construction were not estimated in the 2004 EIR. However, criteria pollutants were estimated in the 2004 EIR using the URBEMIS2002 emissions model. The current version is the URBEMIS2007 model. Therefore, carbon dioxide emissions are estimated.

The 2004 EIR assumed the project would be developed in two phases, with full occupancy expected by year 2006. It is assumed for purposes of this analysis that the same equipment fleet assumed in the 2004 EIR would be used for this project. The construction dates were changed to reflect construction of Phase 1 in 2008 and construction of Phase 2 in 2010.

The emissions of carbon dioxide from project construction equipment and worker vehicles are shown in Table 3. Emissions of nitrous oxide and methane are negligible. The emissions are from all phases of construction. As shown in the table, emissions during construction would be approximately 3,773 MTCO₂e.

Table 3: Construction Exhaust Carbon Dioxide Emissions

Phase	Activity	Carbon Dioxide Emissions (total tons)	Emissions (MTCO ₂ e)
1	Mass grading	632	573
	Building	2,149	1,950
	Coating	9	8
	Asphalt paving	44	40
2	Fine grading	48	44
	Building	1,273	1,155
	Coating	4	4
All	Total	4,159	3,773
Notes: MTCO ₂ e = metric tons of carbon dioxide equivalent, converted from tons by multiplying by 0.9072 and the global warming potential of 1. Source of carbon dioxide emissions: URBEMIS2007 output in Appendix C.			

4.1.2 - Operation

Operational or long-term emissions occur over the life of the project. Mobile, area source, and indirect sources generate operational emissions. Mobile sources are exhaust emissions from the employee vehicles and heavy-duty trucks that would access the project site. Area source emissions include natural gas exhaust and refrigeration leakage. Indirect sources refer to the electricity required for the project and the electricity required to transport and treat the water that would be used for the project.

Operational Emissions - 2004 Approved EIR Development Plan

The operational emissions for the 2004 Approved EIR Development Plan are shown in Table 4. The estimation contains the major sources of emissions and does not include minor sources such as emissions from landscaping equipment.

Table 4: 2004 Approved EIR Development Plan Operational Greenhouse Gases

Source	Emissions (MTCO ₂ e per year)
Motor vehicles	9,659
Natural gas (Commercial)	580
Natural gas (Residential)	825
Indirect electricity	3,171
Water transport	588
Refrigerants	2,897
Total	17,720
Notes: MTCO ₂ e = metric tons of carbon dioxide equivalents (includes carbon dioxide, methane, and nitrous oxide). Source: See spreadsheets in Appendix A.	

Carbon dioxide emissions from motor vehicles were estimated using URBEMIS2007, utilizing the trip generation rates from the Traffic Impact Analysis Report used in the 2004 EIR (LLG 2003). Emissions are presented at buildout. The year of buildout was assumed to be 2010, even though some units may be constructed in 2011; the majority of the project will be operational by 2010. A 20-percent pass-by rate was applied using the URBEMIS pass-by trip routine. The trip lengths are from the 2004 EIR analysis. For all other assumptions used to generate the emissions, please refer to Appendix A.

Operational Emissions - Proposed 2009 Alternative Development Plan

The operational emissions for the Proposed 2009 Alternative Development Plan are shown in Table 5. The estimation contains the major sources of emissions and does not include minor sources such as emissions from landscaping equipment. The base emissions refer to the emissions as would be estimated for a typical project - without incorporation of the reduction from project design features. As shown in the table, with implementation of project design features (see Section 4.3), the emissions for the Proposed 2009 Alternative Development Plan are less than the emissions for the 2004 Approved EIR Development Plan.

Table 5: Proposed 2009 Alternative Development Plan Operational Greenhouse Gases

Source	Base Emissions (MTCO ₂ e per year)	Reduction (%)	Emissions with Project Design Feature Reductions (MTCO ₂ e per year)
Motor vehicles	9,644	2	9,451
Natural gas (commercial)	304	0	304
Natural gas (apartments)	463	0	463
Natural gas (courtyard villas)	718	15	610
Electricity (other uses)	2,372	0	2,372
Electricity (courtyard villas)	979	15	832
Water transport	588	5	559
Refrigerants	3,225	10	2,903
Total - 2009 Alternative Development Plan	18,293	5	17,494
Total - 2004 Approved EIR Development Plan	17,720	0	17,720
Notes: MTCO ₂ e = metric tons of carbon dioxide equivalents (includes carbon dioxide, methane, nitrous oxide) Source: Spreadsheets contained in Appendix A.			

Carbon dioxide emissions from motor vehicles were estimated using URBEMIS2007, utilizing the trip generation rates from the Traffic Generation Assessment (LLG 2008). A 20-percent pass-by rate was applied using the URBEMIS pass-by trip routine. The trip lengths were taken from the 2004 EIR analysis. For all other assumptions used to generate the emissions, please refer to Appendix B.

4.2 - Mitigation Measures in the 2004 Certified Final EIR

There are several mitigation measures contained in the 2004 Certified Final EIR that also have the benefit of reducing greenhouse gas emissions. The ways in which each measure reduces greenhouse gas emissions are identified under each measure.

- AQ-2** Prior to construction of the proposed project, the project proponent will provide a traffic control plan that will describe in detail safe detour routes around the project construction site and provide temporary traffic control (i.e. flag person) during construction related truck hauling activities.
- Benefits** AQ-2 would reduce greenhouse gas emissions by reducing traffic during construction on the surrounding roadway network.
- AQ-3** During construction of the proposed improvements, mobile construction equipment will be properly maintained at an offsite location, including proper tuning and timing

of engines. Equipment maintenance records and equipment design specification data sheets shall be kept onsite during construction.

Benefits Proper tuning and timing of engines allows the construction equipment to run more efficiently, thereby reducing greenhouse gas emissions.

AQ-4 During construction of the proposed improvements, all contractors will be advised not to idle trucks on site for more than ten minutes.

Benefits A reduction in unnecessary idling reduces greenhouse gas emissions.

AQ-9 The Applicant shall submit to the City of Upland project site plans that include pedestrian safety infrastructure improvements including street lighting, pedestrian paths and sidewalks that link residential land uses with commercial and office land uses within the project, and provide shade trees along sidewalks and pedestrian paths as deemed appropriate by the City of Upland Planning Department Staff.

Benefits AQ-9 would encourage pedestrian access in lieu of driving.

AQ-10 The Applicant shall contact local transit agencies to determine the feasibility of bus stops at the project site and determine the need for passenger benches, shelters, and signage at that location.

Benefits The proximity of bus stops encourages people to utilize the public transportation system, thereby reducing vehicle miles traveled.

4.3 - Project Design Features that Reduce Operational Emissions

The project has incorporated the following design features that would reduce greenhouse emissions.

Landscaping

The project would have onsite landscaping. There are two 24-inch or larger box trees to every residential unit currently being constructed. The shade provided would reduce the heat island effect, thereby potentially reducing the cooling requirements for the buildings. The onsite landscaping helps to counter-balance the project's contribution of greenhouse gases by providing onsite carbon storage. The trees and shrubs take in carbon dioxide and store it.

Smart Land Use

The project consists of commercial and residential uses and is considered a mixed-use development. The project has features to reduce transportation-related greenhouse gas emissions. The residential units currently under construction have bicycle storage for each unit. The Proposed 2009 Alternative Development Plan, planned to construct a maximum 230 dwelling units within the current 9-acre

single family residential site within the College Park Project property, is located a short walking distance (10 minutes or less) to a retail center, the Claremont Colleges, and a MetroLink station. A walkway system has been designed and constructed to link these amenities to the proposed project.

The following analysis attempts to determine whether the smart growth project design features would reduce vehicle miles traveled and the associated greenhouse gas emissions. Smart growth is also known as “walkable communities,” “new urbanist neighborhoods,” “compact development,” and “transit-oriented developments” (Ewing et al. 2007). Smart growth advocates for better access and less traffic by mixing land uses, clustering development, and providing transit options. It creates safe, convenient, attractive, and affordable neighborhoods. Because smart growth is typically denser, it leaves room for open space, which conserves natural resources and provides communities with more parks and recreation.

Urban sprawl is the opposite of smart growth. It is the dispersion of a city over rural land and the fringes of the urban land. Sprawl is typically lower-density, single-family residential units, with a lack of activity centers and a lack of connectedness of the street network. The main differences between smart growth and sprawl are displayed in Table 6.

Table 6: Smart Growth vs. Sprawl

Smart Growth	Sprawl
Medium to high density	Low density
Mixed uses	Single uses
Centered development	Strip development
Interconnected streets	Poorly connected streets
Pedestrian and transit friendly design	Auto-oriented design
Source: Ewing et al. 2007.	

People who live in sprawl typically have to drive more miles to get to work, school, and shopping centers. For example, sprawling Atlanta had an average of 34 vehicle-miles each day for every person living in the region. In condensed Portland, Oregon, there were fewer than 24 vehicle-miles per person per day (Ewing et al. 2007). Another study found that residents of most walkable neighborhoods drive 26 percent fewer miles per day compared with those living in sprawling areas (Ewing et al. 2007).

Multidimensional sprawl indices were developed for the U.S. EPA and Smart Growth America, where sprawl is defined as any environment with (1) a population widely dispersed in low density residential development; (2) a rigid separation of homes, shops, and workplaces; (3) a lack of major employment and population concentrations downtown and in suburban town centers and other activity centers; and (4) a network of roads marked by very large block size and poor access from one place to another (Ewing et al. 2007).

The blended average density in the United States in 2003 was about 7.6 units per net acre (acre of developed land not including parks and streets). By 2025, it is projected that there will be a greater demand in higher density housing with a blended density of 9 dwelling units per acre. However, since there is enough low density residential housing already constructed, it has been projected that all new net housing between now and 2025 would need to be attached or small-lot detached units, with an average blending density of at least 13 dwelling units per net acre (Ewing et al. 2007).

The approximate density for the project is shown in Table 7. The average density is 23 dwelling units per acre, which is above the average blended density needed to supply density demand in 2025 (13 dwelling units per acre).

Table 7: Residential Net Density of Project

Type of Residential Density	Units (du)	Acres	Density (du/acre)
Multi-Family/Courtyard Villas	230	9.0	26
Multi-Family/Apartments	448	22.7	20
Notes: du/acre = dwelling unit per acre Source: Calculated from information contained in Table 1.			

It is anticipated that the residents would utilize public transportation, walk, and/or bike to reach many of their destinations. Additionally, the project density meets the density recommended to supply demand in 2025. Therefore, the project is considered smart land use.

Alternative Transportation

To reduce vehicle miles traveled and emissions associated with trucks and vehicles, the project would implement the following features:

- Onsite short-term bicycle storage parking would be provided at the park.
- Long-term, covered, secure, Class I bicycle parking would be provided for residents of the Courtyard Villas (such as garage, bicycle lockers, etc.).
- Exterior electricity outlets will be provided to be accessible to charge electric vehicles.

Energy Efficiency

The residential units currently under construction have Energy Star appliances and high efficiency space heating.

The Courtyard Villa residential units would exceed the 2008 Building Energy Efficiency Standards for Residential and Nonresidential Buildings by 5 percent. The Courtyard Villas will implement the following energy efficiency features:

- a) The roofing will have a solar reflectance index of 78 or greater. The solar reflectance index is a measure of the reflectance and emittance of a roof. A higher rating means that more sunlight will be reflected, which reduces cooling demand and emissions associated with electricity generation.
- b) Cool paints will be used on the exterior of the units. Cool paints also increase the solar reflectance and reduce cooling demand.
- c) Cool pavements will be used in the driveway areas. Cool pavements reduce the urban heat island effect.
- d) A minimum of two deciduous shade trees will be planted on the south and west sides of each of the residential units, where feasible. Shade trees block sunlight during the summer months, thereby reducing cooling demand and electricity usage.
- e) Fluorescent or equivalently efficient lighting will be used.
- f) Energy Star skylights will be incorporated in those residential units on the top floors of the buildings, as possible.
- g) Point of use tankless and/or solar water heaters will be installed in the residential units in lieu of conventional water heaters. Tankless (or demand) water heaters provide hot water only as it is needed. For homes that use 41 gallons or less of hot water daily, demand water heaters can be 24 to 34 percent more energy efficient than conventional storage tank water heaters. They can be 8 to 14 percent more energy efficient for homes that use a lot of hot water—around 86 gallons per day. Greater energy savings of 27 to 50 percent can be observed if a demand water heater is installed at each hot water outlet (EERE 2009a). There are various types of solar water heaters; the basic premise is that the sun's energy is used to heat the water, thereby saving electricity.
- h) Energy Star or equivalent energy efficient appliances will be installed where the developer/applicant is installing the equipment.
- i) Any swimming pool to be constructed as part of the development with a heating system will utilize a solar powered heating system. The pool will also utilize a pool cover. Solar pool heating is a cost-effective use of solar energy in many climates. Utilizing a solar pool heating system would reduce energy use to heat the pool. In hot climates, the system can also be used to cool the pool during peak summer months by circulating the water through the system at night. Swimming pools with covers have the following benefits: they conserve water by reducing the amount of make-up water needed by 30 to 50 percent, they reduce the pool's chemical consumption by 35 to 60 percent, and they reduce energy usage by 80 to 90 percent (EERE 2009b).

Waste Reduction

During construction of Phase 2, the project will reduce and/or salvage at least 25 percent of non-hazardous construction debris. This feature would reduce emissions from material acquisition and product manufacturing.

The project will integrate spaces for storage of recyclables during project operation. The storage will be located near trash receptacles to encourage recycling. This feature would reduce emissions from material acquisition, product manufacturing, and trash hauling.

Refrigerants

The project will perform maintenance on the heating, ventilation, and air conditioning units and the refrigeration units at least once per year to ensure minimal refrigerant leakage.

Water Efficiency

All fixtures within the residential units are low-flow and each unit is separately metered which results in larger water savings. Water efficient fixtures and appliances will be installed inside the Courtyard Villas.

In addition, the irrigation system for the entire project has weather-driven controls, which monitors evapotranspiration (plant water lost). The only turf areas are in the project park and limited areas within the apartments. No other turf was planted in any landscape areas within the retail component. The landscaping in the open space areas will use drought-resistant, low-water-use plants (with the exception of grass/turf in the park area and small turf areas within the apartments).

4.4 - Consistency with Scoping Plan

Emission reductions in only California would not be able to stabilize the concentration of greenhouse gases in the atmosphere. However, California's actions set an example and drive progress towards a reduction in greenhouse gases. If other countries were to follow California's emission reduction targets, this could avoid medium or higher ranges of global temperature increases as discussed by the IPCC (IPCC 2007). Thus, severe consequences of climate change could also be avoided.

The ARB Board approved a Climate Change Proposed Scoping Plan in December 2008. The Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (ARB 2008). The measures in the Scoping Plan will be developed over the next 2 years and will be in place by 2012.

This Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14

tons of carbon dioxide for every man, woman, and child in California down to about 10 tons per person by 2020.

Project consistency or applicability with the measures in the Plan is assessed in Table 8. As shown, most of the reduction measures are not applicable to the project. The project is consistent with the remainder of the measures.

Table 8: Consistency with Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Project Consistency or Applicability
1. California Cap-and-Trade Program Linked to Western Climate Initiative. Implement a broad-based California Cap-and-Trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.	Not applicable. When this cap-and-trade system begins, products or services (such as electricity) would be covered and the cost of the cap-and-trade system would be transferred to the consumers.
2. California Light-Duty Vehicle Greenhouse Gas Standards Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Not applicable. When this measure is initiated, the standards would be applicable to the light-duty vehicles that would access the project site.
3. Energy Efficiency Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	Consistent with project design features. The buildings that have already been constructed complied with the applicable Title 24 requirements.
4. Renewable Portfolio Standard Achieve 33 percent renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	Not applicable. However, Southern California Edison, which would provide electricity to the project, currently has 16 percent of its energy mix from wind, solar, biomass, small hydropower, and geothermal sources.
5. Low Carbon Fuel Standard Develop and adopt the Low Carbon Fuel Standard.	Not applicable. When this measure is initiated, the standard would be applicable to the fuel used by vehicles that would access the project site.

Table 8 (Cont.): Consistency with Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Project Consistency or Applicability
6. Regional Transportation Transportation-Related Greenhouse Gas Targets Develop regional greenhouse gas emissions reduction targets for passenger vehicles. This measure refers to SB 375.	Not applicable.
7. Vehicle Efficiency Measures Implement light-duty vehicle efficiency measures.	Not applicable. When this measure is initiated, the standards would be applicable to the light-duty vehicles that would access the project site.
8. Goods Movement Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	Not applicable.
9. Million Solar Roofs Program Install 3,000 MW of solar-electric capacity under California's existing solar programs.	Consistent with implementation of project design features—solar and/or tankless water heaters and a solar-powered heating system for any swimming pool to be constructed as part of the development.
10. Medium Medium/Heavy /Heavy-Duty Vehicles Adopt medium and heavy-duty vehicle efficiency measures.	Not applicable. When this measure is initiated, the standards would be applicable to the vehicles that would access the project site.
11. Industrial Emissions Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	Not applicable.
12. High Speed Rail Support implementation of a high-speed rail system.	Not applicable.
13. Green Building Strategy Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Consistent with implementation of project design features. The existing buildings incorporated the applicable version of Title 24 energy efficiency requirements, which require energy efficiency beyond what is required throughout the majority of the United States.
14. High Global Warming Potential Gases Adopt measures to reduce high global warming potential gases.	Not applicable. When this measure is initiated, it would be applicable to the high GWP gases that would be used by the project (such as in air conditioning and refrigerators).

Table 8 (Cont.): Consistency with Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Project Consistency or Applicability
15. Recycling and Waste Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Consistent with implementation of project design features.
16. Sustainable Forests Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	Not applicable.
17. Water Continue efficiency programs and use cleaner energy sources to move and treat water.	Consistent with the implementation of project design features.
18. Agriculture In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	Not applicable.
Source of ARB Scoping Plan Reduction Measure: ARB 2008. Source of Project Consistency or Applicability: Michael Brandman Associates, May 2009.	

4.5 - Level of Significance

The threshold used in the analysis is as follows:

Does the project comply with the provisions of an adopted Greenhouse Gas Reduction Plan or Strategy? If no such Plan or Strategy is applicable, would the project significantly hinder or delay California's ability to meet the reduction targets contained in AB 32?

Because there is no adopted greenhouse gas reduction plan or strategy, the level of significance is based on whether or not the project would significantly hinder or delay California's ability to meet the reduction targets in AB 32.

4.5.1 - Construction

Less than significant impact.

Construction emissions would be short term in nature and would occur before the year 2020. AB 32 requires that annual emissions in the State of California be reduced to 1990 levels by the year 2020. Although some greenhouse gases can remain in the atmosphere for long periods, AB 32 does not regulate concentrations. Therefore, emissions resulting from project construction are less than significant.

4.5.2 - Operation

Less than significant.

The project is high-density, mixed-use development located near transit. It is smart land use. The project is incorporating project design features to reduce greenhouse gas emissions from electricity generation, waste generation, water use, and transportation. The project is consistent with the ARB Scoping Plan measures. There is no adopted greenhouse gas reduction plan or strategy in the project area. The above analysis concludes that the project would not significantly hinder or delay California's ability to meet the reduction targets contained in AB 32. This potential impact is less than significant.

SECTION 5: REFERENCES

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Appendix A: Original Project Greenhouse Gas Emission Spreadsheets and URBEMIS 2007 Model Output

Summary of Operational Greenhouse Gases

2004 EIR Analysis

College Park

Prepared by Michael Brandman Associates

Buildout Year 2010

Source	<i>Emissions (tons per year)</i>				Metric Tons CO ₂ e
	Carbon Dioxide	Nitrous Oxide	Methane	Other	
Motor vehicles	10,053	1.71	3.02		9,659
Natural gas (Commercial)	639	0.00	0.04		580
Natural gas (Residential)	906	0.00	0.14		825
Indirect electricity	3,491	0.01	0.03		3,171
Water transport	647	0.00	0.00		588
Refrigerants				2.46	2,897
Total	15,736	1.73	3.23	2.46	17,721
Total	14,276	1.57	2.93	2.23 metric tons per year	
GWP	1	310	21	varies	
Total	14,276	486	62	2,897 MTCO ₂ E per year	
Total	0.0143	0.0005	0.0001	0.0029 MMTCO ₂ E per year	

Total - all gases 17,721 MTCO₂e per year
 0.0177 MMTCO₂e per year

California emissions in 2004 500 MMTCO₂e per year
 Project percent of emissions 0.003544%

U.S. emissions in 2005 7,260.4
 Project percent of emissions 0.000244%

Global emissions in 2004 20135
 Project percent of emissions 0.000088%

Emissions converted from tons per year to metric tons of carbon dioxide equivalents (MTCO₂e) per year by using the formula: (tons of gas) x (global warming potential) x (0.9072 metric tons)

Emissions converted to million metric tons of carbon dioxide equivalents (MMTCO₂E) using the formula: MMTCO₂E = (metric tons of gas) / (1,000,000).

Mobile Emissions - Methane**2004 EIR Analysis**

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College Park

16-Apr-09

Prepared by Michael Brandman Associates

Buildout Year 2010

Vehicle Miles Traveled

53,656

Starting Emissions	1.55 lbs/day	0.0008 tons/day	0.28 tons/year
Running Emissions	14.99 lbs/day	0.0075 tons/day	2.74 tons/year
Total	16.54 lbs/day	0.0083 tons/day	3.02 tons/year

Vehicle Percentages

Vehicle Type	Percent	Non-Catalyst	Catalyst	Diesel
Light Auto	54.7%	1.1%	98.7%	0.2%
Light Truck < 3,750 lbs	15.2%	2.0%	96.0%	2.0%
Light Truck 3,751- 5,750	16.2%	1.2%	98.1%	0.7%
Med Truck 5,751- 8,500	7.3%	1.4%	95.9%	2.7%
Lite-Heavy 8,501-10,000	1.1%	0.0%	81.8%	18.2%
Lite-Heavy 10,001-14,000	0.3%	0.0%	66.7%	33.3%
Med-Heavy 14,001-33,000	1.0%	0.0%	20.0%	80.0%
Heavy-Heavy 33,001-60,000	0.9%	0.0%	11.1%	88.9%
Line Haul > 60,000 lbs	0.0%	0.0%	0.0%	100.0%
Urban Bus	0.2%	0.0%	50.0%	50.0%
Motorcycle	1.6%	68.8%	31.2%	0.0%
School Bus	0.1%	0.0%	0.0%	100.0%
Motor Home	1.4%	7.1%	85.7%	7.2%

Running Emission Factors (g/mile)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.1931	0.1127	0.0161
Light Truck < 3,750 lbs	LDT1	0.2253	0.1448	0.0161
Light Truck 3,751- 5,750	LDT2	0.2253	0.1448	0.0161
Med Truck 5,751- 8,500	MDV	0.2253	0.1448	0.0161
Lite-Heavy 8,501-10,000	LHDT1	0.2012	0.1448	0.0805
Lite-Heavy 10,001-14,000	LHDT2	0.2012	0.1448	0.0805
Med-Heavy 14,001-33,000	MHDT	0.2012	0.1448	0.0805
Heavy-Heavy 33,001-60,000	HHDT	0.2012	0.1448	0.0805
Line Haul > 60,000 lbs	LHV	0.2012	0.1448	0.0805
Urban Bus	UB	0.2012	0.1448	0.0805
Motorcycle	MCY	0.2092	0.2092	0.2092
School Bus	SBUS	0.2012	0.1448	0.0805
Motor Home	MH	0.2012	0.1448	0.0805

Running Emissions (pounds per day)

Vehicle Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.14	7.18	0.00
Light Truck < 3,750 lbs	0.08	2.49	0.01
Light Truck 3,751- 5,750	0.05	2.72	0.00
Med Truck 5,751- 8,500	0.03	1.20	0.00
Lite-Heavy 8,501-10,000	0.00	0.15	0.02
Lite-Heavy 10,001-14,000	0.00	0.03	0.01
Med-Heavy 14,001-33,000	0.00	0.03	0.08
Heavy-Heavy 33,001-60,000	0.00	0.02	0.08
Line Haul > 60,000 lbs	0.00	0.00	0.00
Urban Bus	0.00	0.02	0.01
Motorcycle	0.27	0.12	0.00
School Bus	0.00	0.00	0.01
Motor Home	0.02	0.21	0.01
Total	0.59	14.17	0.22

Mobile Emissions - Methane

Page 2

College Park

Prepared by Michael Brandman Associates

Buildout Year 2010

Total Trips

14421

Starting Emission Factors (g/start)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.059	0.009	-0.003
Light Truck < 3,750 lbs	LDT1	0.067	0.099	-0.004
Light Truck 3,751- 5,750	LDT2	0.067	0.099	-0.004
Med Truck 5,751- 8,500	MDV	0.067	0.099	-0.004
Lite-Heavy 8,501-10,000	LHDT1	0.147	0.215	-0.004
Lite-Heavy 10,001-14,000	LHDT2	0.147	0.215	-0.004
Med-Heavy 14,001-33,000	MHDT	0.147	0.215	-0.004
Heavy-Heavy 33,001-60,000	HHDT	0.147	0.215	-0.004
Line Haul > 60,000 lbs	LHV	0.147	0.215	-0.004
Urban Bus	UB	0.147	0.215	-0.004
Motorcycle	MCY	0.024	0.024	0.033
School Bus	SBUS	0.147	0.215	-0.004
Motor Home	MH	0.147	0.215	-0.004

Trip Distribution

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	86.8	7785.7	15.8
Light Truck < 3,750 lbs	LDT1	43.8	2104.3	43.8
Light Truck 3,751- 5,750	LDT2	28.0	2291.8	16.4
Med Truck 5,751- 8,500	MDV	14.7	1009.6	28.4
Lite-Heavy 8,501-10,000	LHDT1	0.0	129.8	28.9
Lite-Heavy 10,001-14,000	LHDT2	0.0	28.9	14.4
Med-Heavy 14,001-33,000	MHDT	0.0	28.8	115.4
Heavy-Heavy 33,001-60,000	HHDT	0.0	14.4	115.4
Line Haul > 60,000 lbs	LHV	0.0	0.0	0.0
Urban Bus	UB	0.0	14.4	14.4
Motorcycle	MCY	158.7	72.0	0.0
School Bus	SBUS	0.0	0.0	14.4
Motor Home	MH	14.3	173.0	14.5
Total		346.5	13652.7	421.8

Starting Emissions (pounds per day)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.0113	0.1542	-0.0001
Light Truck < 3,750 lbs	LDT1	0.0065	0.4583	-0.0004
Light Truck 3,751- 5,750	LDT2	0.0041	0.4992	-0.0001
Med Truck 5,751- 8,500	MDV	0.0022	0.2199	-0.0003
Lite-Heavy 8,501-10,000	LHDT1	0.0000	0.0614	-0.0003
Lite-Heavy 10,001-14,000	LHDT2	0.0000	0.0136	-0.0001
Med-Heavy 14,001-33,000	MHDT	0.0000	0.0136	-0.0010
Heavy-Heavy 33,001-60,000	HHDT	0.0000	0.0068	-0.0010
Line Haul > 60,000 lbs	LHV	0.0000	0.0000	0.0000
Urban Bus	UB	0.0000	0.0068	-0.0001
Motorcycle	MCY	0.0084	0.0038	0.0000
School Bus	SBUS	0.0000	0.0000	-0.0001
Motor Home	MH	0.0046	0.0818	-0.0001
Total		0.0370	1.5195	-0.0037

- Source of running emission factors: U.S. Environmental Protection Agency. Climate Leaders Greenhouse Gas Inventory Protocol, Core Module Guidance. Direct Emissions from Mobile Combustion Sources. October 2004.

- Source of vehicle percentages: URBEMIS default values.

- Source of starting emissions: U.S. Environmental Protection Agency. Prepared by ICF Consulting. EPA420-P-04-016. Update of Methane and Nitrous Oxide Emission Factors for On-Highway Vehicles. November 2004.

Vehicle Miles Traveled 53,656

Starting Emissions	2.52 lbs/day	0.0013 tons/day	0.46 tons/year
Running Emissions	6.85 lbs/day	0.0034 tons/day	1.25 tons/year
Total	9.37 lbs/day	0.0047 tons/day	1.71 tons/year

Vehicle Percentages

Vehicle Type	Percent	Non-Catalyst	Catalyst	Diesel
Light Auto	54.7%	1.1%	98.7%	0.2%
Light Truck < 3,750 lbs	15.2%	2.0%	96.0%	2.0%
Light Truck 3,751- 5,750	16.2%	1.2%	98.1%	0.7%
Med Truck 5,751- 8,500	7.3%	1.4%	95.9%	2.7%
Lite-Heavy 8,501-10,000	1.1%	0.0%	81.8%	18.2%
Lite-Heavy 10,001-14,000	0.3%	0.0%	66.7%	33.3%
Med-Heavy 14,001-33,000	1.0%	0.0%	20.0%	80.0%
Heavy-Heavy 33,001-60,000	0.9%	0.0%	11.1%	88.9%
Line Haul > 60,000 lbs	0.0%	0.0%	0.0%	100.0%
Urban Bus	0.2%	0.0%	50.0%	50.0%
Motorcycle	1.6%	68.8%	31.2%	0.0%
School Bus	0.1%	0.0%	0.0%	100.0%
Motor Home	1.4%	7.1%	85.7%	7.2%

Running Emission Factors (g/mile)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.0166	0.0518	0.0161
Light Truck < 3,750 lbs	LDT1	0.0208	0.0649	0.0322
Light Truck 3,751- 5,750	LDT2	0.0208	0.0649	0.0322
Med Truck 5,751- 8,500	MDV	0.0208	0.0649	0.0322
Lite-Heavy 8,501-10,000	LHDT1	0.0480	0.1499	0.0483
Lite-Heavy 10,001-14,000	LHDT2	0.0480	0.1499	0.0483
Med-Heavy 14,001-33,000	MHDT	0.0480	0.1499	0.0483
Heavy-Heavy 33,001-60,000	HHDT	0.0480	0.1499	0.0483
Line Haul > 60,000 lbs	LHV	0.0480	0.1499	0.0483
Urban Bus	UB	0.0480	0.1499	0.0483
Motorcycle	MCY	0.0073	0.0073	0.0073
School Bus	SBUS	0.0480	0.1499	0.0483
Motor Home	MH	0.0480	0.1499	0.0483

Running Emissions (pounds per day)

Vehicle Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.01	3.30	0.00
Light Truck < 3,750 lbs	0.01	1.12	0.01
Light Truck 3,751- 5,750	0.00	1.22	0.00
Med Truck 5,751- 8,500	0.00	0.54	0.01
Lite-Heavy 8,501-10,000	0.00	0.16	0.01
Lite-Heavy 10,001-14,000	0.00	0.04	0.01
Med-Heavy 14,001-33,000	0.00	0.04	0.05
Heavy-Heavy 33,001-60,000	0.00	0.02	0.05
Line Haul > 60,000 lbs	0.00	0.00	0.00
Urban Bus	0.00	0.02	0.01
Motorcycle	0.01	0.00	0.00
School Bus	0.00	0.00	0.01
Motor Home	0.01	0.21	0.01
Total	0.04	6.65	0.15

Mobile Emissions - Nitrous Oxide

Page 2

College Park

Prepared by Michael Brandman Associates

Buildout Year 2010

Total Trips

14421

Starting Emission Factors (g/start)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.028	0.072	0.000
Light Truck < 3,750 lbs	LDT1	0.032	0.093	-0.001
Light Truck 3,751- 5,750	LDT2	0.032	0.093	-0.001
Med Truck 5,751- 8,500	MDV	0.032	0.093	-0.001
Lite-Heavy 8,501-10,000	LHDT1	0.070	0.194	-0.002
Lite-Heavy 10,001-14,000	LHDT2	0.070	0.194	-0.002
Med-Heavy 14,001-33,000	MHDT	0.070	0.194	-0.002
Heavy-Heavy 33,001-60,000	HHDT	0.070	0.194	-0.002
Line Haul > 60,000 lbs	LHV	0.070	0.194	-0.002
Urban Bus	UB	0.070	0.194	-0.002
Motorcycle	MCY	0.012	0.012	0.012
School Bus	SBUS	0.070	0.194	-0.002
Motor Home	MH	0.070	0.194	-0.002

Trip Distribution

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	86.8	7785.7	15.8
Light Truck < 3,750 lbs	LDT1	43.8	2104.3	43.8
Light Truck 3,751- 5,750	LDT2	28.0	2291.8	16.4
Med Truck 5,751- 8,500	MDV	14.7	1009.6	28.4
Lite-Heavy 8,501-10,000	LHDT1	0.0	129.8	28.9
Lite-Heavy 10,001-14,000	LHDT2	0.0	28.9	14.4
Med-Heavy 14,001-33,000	MHDT	0.0	28.8	115.4
Heavy-Heavy 33,001-60,000	HHDT	0.0	14.4	115.4
Line Haul > 60,000 lbs	LHV	0.0	0.0	0.0
Urban Bus	UB	0.0	14.4	14.4
Motorcycle	MCY	158.7	72.0	0.0
School Bus	SBUS	0.0	0.0	14.4
Motor Home	MH	14.3	173.0	14.5
Total		346.5	13652.7	421.8

Starting Emissions (pounds per day)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.0053	1.2333	0.0000
Light Truck < 3,750 lbs	LDT1	0.0031	0.4305	-0.0001
Light Truck 3,751- 5,750	LDT2	0.0020	0.4689	0.0000
Med Truck 5,751- 8,500	MDV	0.0010	0.2066	-0.0001
Lite-Heavy 8,501-10,000	LHDT1	0.0000	0.0554	-0.0001
Lite-Heavy 10,001-14,000	LHDT2	0.0000	0.0123	-0.0001
Med-Heavy 14,001-33,000	MHDT	0.0000	0.0123	-0.0005
Heavy-Heavy 33,001-60,000	HHDT	0.0000	0.0061	-0.0005
Line Haul > 60,000 lbs	LHV	0.0000	0.0000	0.0000
Urban Bus	UB	0.0000	0.0062	-0.0001
Motorcycle	MCY	0.0042	0.0019	0.0000
School Bus	SBUS	0.0000	0.0000	-0.0001
Motor Home	MH	0.0022	0.0738	-0.0001
Total		0.0178	2.5073	-0.0016

- Source of running emission factors: U.S. Environmental Protection Agency. Climate Leaders Greenhouse Gas Inventory Protocol, Core Module Guidance. Direct Emissions from Mobile Combustion Sources. October 2004.

- Source of vehicle percentages: URBEMIS default values.

- Source of starting emissions: U.S. Environmental Protection Agency. Prepared by ICF Consulting. EPA420-P-04-016. Update of Methane and Nitrous Oxide Emission Factors for On-Highway Vehicles. November 2004.

Electricity - Indirect Emissions

Project: College Park
 Prepared by: Michael Brandman Associates
 Prepared on: 4/16/2009

Land Use	square feet or units (sf)	Electricity Use (kWh/sf-year)*	Electricity Use (kWh/year)
Office suites	6240	13.1	81744
Specialty retail	12490	14.06	175609
High turnover restaurant	12480	40.2	501696
Fast food with drive thru	9225	40.2	370845
Gas station	4000	9.84	39360
General office	48000	17.7	849600
Business hotel	51080	12.13	619600
Single family homes	50	10656	532800
Apartments	448	10656	4773888
Total			7945143 kWh/year 7945 MWh/year

Greenhouse Gas	Emission Factor (pounds per MWh/year)	Emissions (pounds/year)	Emissions (tons/year)
Carbon dioxide	878.71	6,981,476	3,491
Methane	0.0067	53	0.03
Nitrous oxide	0.0037	29	0.01

Emission factor source: California Climate Action Registry. General Reporting Protocol. Reporting Entity-Wide Greenhouse Gas Emissions. Version 3.1, January 2009.
www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf, Table E1 and Table E3.

* Residential from: U.S. Energy Information Administration. U.S. Household Electricity Report. July 14, 2005. Table US-1, Electricity Consumption by End Use in U.S. Households, 2001, Annual Electricity Consumption per household. www.eia.doe.gov/emeu/repus/enduse/er01_us_tab1.html

* Commercial from: California Energy Commission. California Commercial End-Use Survey. Consultant Report. March 2006. CEC-400-2006-005 www.energy.ca.gov/2006publications/CEC-400-2006-005/CEC-400-2006-005.PDF

Electricity Use in Typical Urban Water Systems

Project: College Park
 Prepared by: Michael Brandman Associates
 Prepared on: 4/16/2009

	kWh/MG	
	Northern California	Southern California
Water Supply and Conveyance	2,117	9,727
Water Treatment	111	111
Water Distribution	1,272	1,272
Wastewater Treatment	1,911	1,911
Totals	5,411	13,021

From CEC 2006

	Gallons per day	Millions Gallons (MG) per year	
Water Usage	310000	113.15	
		kWh	MWh
Energy Usage		1,473,326	1,473

	Indirect Electricity Emission Factor		
Greenhouse Gas	(pounds per MWh/year)	Emissions (pounds/year)	Emissions (tons/year)
Carbon dioxide	878.71	1,294,626	647
Methane	0.0067	9.87	0.005
Nitrous oxide	0.0037	5.45	0.003

Emission factor for electricity source:

California Climate Action Registry. General Reporting Protocol. Reporting Entity-Wide Greenhouse Gas Emissions. Version 3.1, January 2009.
www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf, Table E1 and Table E3.

CEC 2006. Navigant Consulting, Inc. 2006. Refining Estimates of Water-Related Energy Use in California. California Energy Commission, PIER Industrial/Agricultural/Water End Use Energy Efficiency Program. CEC-500-2006-118. www.energy.ca.gov/pier/project_reports/CEC-500-2006-118.html

Natural Gas Combustion

College Park

Prepared by Michael Brandman Associates

4/16/2009

Gas	Type of Land Use	Square Feet	Annual Natural Gas Usage Factor* (kBtu/sf)	Natural Gas Usage for Project (MMBTU/year)	Emission Factor (g/MMBTU)**	Emissions (g/year)	Emissions (tons/year)	Emissions (pounds/day)
Methane	Office suites	6240	10.54	66	4.75	312	0.00	0.00
	Specialty retail	12490	4.62	58	4.75	274	0.00	0.00
	High turnover rest	12480	209.96	2620	4.75	12446	0.01	0.08
	Fast food with driv	9225	209.96	1937	4.75	9200	0.01	0.06
	Gas station	4000	23.34	93	4.75	443	0.00	0.00
	General office	48000	21.9	1053	4.75	5000	0.01	0.03
	Business hotel	51080	42.4	2166	4.75	10288	0.01	0.06
Nitrous Oxide	Office suites	6240	10.54	66	0.095	6	0.00	0.00
	Specialty retail	12490	4.62	58	0.095	5	0.00	0.00
	High turnover rest	12480	209.96	2620	0.095	249	0.00	0.00
	Fast food with driv	9225	209.96	1937	0.095	184	0.00	0.00
	Gas station	4000	23.34	93	0.095	9	0.00	0.00
	General office	48000	21.93	1053	0.095	100	0.00	0.00
	Business hotel	51080	42.40	2166	0.095	206	0.00	0.00

Units	Methane	Nitrous Oxide
pounds per day	0.23	0.00
tons per year	0	0
GWP	21	310
MTCO2 Eq/year	0.80	0.23

Table E-1: Overview of Energy Usage in the Statewide Service Area

Building Type	Floor Stock (kft ²)	Annual Energy Intensities			Total Annual Usage	
		Electricity (kWh/ft ²)	Natural Gas (therms/ft ²)	Natural Gas (kBtu/ft ²)	Electricity (GWh)	Natural Gas (MMtherms)
All Commercial	4,920,114	13.63	0.26	25.99	67077	1278.60
Small Office (<30k ft ²)	361,584	13.10	0.11	10.54	4738	38.10
Large Office (>=30k ft ²)	660,429	17.70	0.22	21.93	11691	144.80
Restaurant	148,892	40.20	2.10	209.98	5986	312.60
Retail	702,053	14.06	0.05	4.62	9871	32.50
Food Store	144,209	40.99	0.28	27.60	5911	39.80
Refrigerated Warehouse	95,540	20.02	0.06	5.60	1913	5.30
Unrefrigerated Warehouse	554,166	4.45	0.03	3.07	2457	17.00
School	445,106	7.46	0.16	15.97	3322	71.10
College	205,942	12.26	0.34	34.24	2524	70.50
Health	232,606	19.61	0.76	75.53	4561	175.70
Lodging	270,044	12.13	0.42	42.40	3275	114.50
Miscellaneous	1,099,544	9.84	0.23	23.34	10617	256.60
All Offices	1,022,012	16.08	0.18	17.90	16430	182.90
All Warehouses	649,706	6.74	0.03	3.44	4380	22.40

* **Table E-1 from California Energy Commission. California Commercial End-Use Survey. Consultant Report. March 2006. CEC-400-2006-005

** USEPA, 2004: Direct Emissions from Stationary Combustion Sources, Climate Leaders Greenhouse Inventory Protocol, Core Model Guidance, October 2004

Natural Gas Combustion

Residential Developments

Prepared by Michael Brandman Associates

Gas	Type of Residential	Units	Natural Gas Usage Factor* (SCF/unit/month)	Natural Gas Usage for Project (SCF/month)	Natural Gas usage for Project (SCF/year)	Emission Factor (g/MMBTU)**	Heating Value of Natural Gas (BTU/SCF)**	Emissions (tons per year)	Emissions (pounds per day)
Methane	Single family	50	6665	333250	3999000	4.75	1020	0.021	0.12
	Multi family	448	4011.5	1797152	21565824	4.75	1020	0.115	0.63
Nitrous Oxide	Single family	50	6665	333250	3999000	0.095	1020	0.000	0.00
	Multi family	148	4011.5	593702	7124424	0.095	1020	0.001	0.00

Total

Units	Nitrous Oxide	Methane
pounds per day	0.01	0.75
tons per year	0.001	0.136
Global warming potential	310	21
MTCO2e/year	0.368	2.861

* Natural gas usage factor from URBEMIS2007 default: 6665 SCF/unit/month for single family residential units; 4011.5 for multi-family residential units

**USEPA, 2004: Direct Emissions from Stationary Combustion Sources, Climate Leaders Greenhouse Inventory Protocol, Core Model Guidance, October 2004

Air Conditioning and Refrigeration Fugitive Emissions

Project: College Park
 Prepared by: Michael Brandman Associates
 Prepared on: 4/16/2009

Type of Unit	Units	Capacity of Unit (kg)	Annual Leak Rate in percent of capacity	Emissions (kg/year)	Emissions (tons/year)	Global Warming Potential	Metric Tons CO2 Equiv./year
Domestic Refrigeration	498	0.5	0.5%	1.245	0.001	1300	2
Commercial Refrigeration	4	500	35.0%	700	0.770	1300	908
Residential A/C	498	25	10%	1245	1.3695	1300	1,615
Commercial A/C	29	100	10%	287.03	0.315733	1300	372
Total					2.457		2,897

Source:

U.S. Environmental Protection Agency, Climate Leaders. May 2008. Direct HFC and PFC Emissions from Use of Refrigeration and Air Conditioning Equipment. EPA430-K-03-004. <http://www.epa.gov/stateply/documents/resources/mfgrfg.pdf>, Accessed in July 2008.

Note: One A/C unit was assumed per 5,000 square feet of commercial.

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\MBA\Client\35450001 College Park\Climate Change\College Park Buildout Original EIR.urb924

Project Name: College Park - Operation Buildout - Original EIR

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	1,552.04

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	10,052.52

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	11,604.56

4/16/2009 7:21:30 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Natural Gas	1,545.44
Hearth	1.85
Landscape	4.75
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	1,552.04

Area Source Changes to Defaults

- Percentage of residences with wood stoves changed from 10% to 0%
- Percentage of residences with wood fireplaces changed from 5% to 0%
- Percentage of residences with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	CO2
Single family housing	495.29
Apartments low rise	3,074.45
High turnover (sit-down) rest.	881.29
Fast food rest. w/ drive thru	2,478.26
Hotel	457.57
Strip mall	268.12
Gasoline/service station	1,534.96
General office building	139.83
Office park	722.75
TOTALS (tons/year, unmitigated)	10,052.52

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

<u>Summary of Land Uses</u>						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	16.67	9.57	dwelling units	50.00	478.50	2,647.81
Apartments low rise	28.00	6.63	dwelling units	448.00	2,970.24	16,436.00

<u>Summary of Land Uses</u>						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
High turnover (sit-down) rest.		130.34	1000 sq ft	12.48	1,626.64	4,687.14
Fast food rest. w/ drive thru		496.12	1000 sq ft	9.22	4,574.23	13,180.54
Hotel		7.25	rooms	102.00	739.50	2,449.21
Strip mall		40.67	1000 sq ft	12.49	507.97	1,426.98
Gasoline/service station		162.78	pumps	16.00	2,604.48	8,212.83
General office building		25.64	1000 sq ft	6.24	159.99	748.99
Office park		15.83	1000 sq ft	48.00	759.84	3,866.22
					14,421.39	53,655.72

<u>Vehicle Fleet Mix</u>				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.7	1.2	98.6	0.2
Light Truck < 3750 lbs	7.3	2.7	94.6	2.7
Light Truck 3751-5750 lbs	22.9	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.6	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	67.9	32.1	0.0

<u>Vehicle Fleet Mix</u>				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
High turnover (sit-down) rest.				5.0	2.5	92.5
Fast food rest. w/ drive thru				5.0	2.5	92.5
Hotel				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Gasoline/service station				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Office park				48.0	24.0	28.0

Appendix B: New Project Greenhouse Gas Emission Spreadsheets and URBEMIS 2007 Model Output

Summary of Operational Greenhouse Gases

New analysis

College Park

Prepared by Michael Brandman Associates

Buildout Year 2010

Source	<i>Emissions (tons per year)</i>				Metric Tons CO ₂ e
	Carbon Dioxide	Nitrous Oxide	Methane	Other	
Motor vehicles	10,053	1.66	2.94		9,644
Natural gas (Commercial)	334	0.00	0.02		304
Natural gas (apartments)	508	0.00	0.11		463
Natural gas (courtyard villas)	790	0.00	0.06		718
Electricity (all other uses)	2,611	0.01	0.02		2,372
Electricity (courtyard villas)	1,077	0.01	0.00		979
Water transport	647	0.00	0.00		588
Refrigerants				2.73	3,225
Total	16,020	1.69	3.17	2.73	18,293
Total	14,534	1.53	2.87	2.48 metric tons per year	
GWP	1	310	21	varies	
Total	14,534	475	60	3,225 MTCO ₂ E per year	
Total	0.0145	0.0005	0.0001	0.0032 MMTCO ₂ E per year	

Total - all gases 18,293 MTCO₂e per year
 0.0183 MMTCO₂e per year

California emissions in 2004 500 MMTCO₂e per year
 Project percent of emissions 0.003659%

U.S. emissions in 2005 7,260.4
 Project percent of emissions 0.000252%

Global emissions in 2004 20135
 Project percent of emissions 0.000091%

Emissions converted from tons per year to metric tons of carbon dioxide equivalents (MTCO₂e) per year by using the formula: (tons of gas) x (global warming potential) x (0.9072 metric tons)

Emissions converted to million metric tons of carbon dioxide equivalents (MMTCO₂E) using the formula: MMTCO₂E = (metric tons of gas) / (1,000,000).

Mobile Emissions - Methane**New analysis**

Page 1

College Park

16-Apr-09

Prepared by Michael Brandman Associates

Buildout Year 2010

Vehicle Miles Traveled

52,246

Starting Emissions	1.50 lbs/day	0.0008 tons/day	0.27 tons/year
Running Emissions	14.60 lbs/day	0.0073 tons/day	2.66 tons/year
Total	16.10 lbs/day	0.0081 tons/day	2.94 tons/year

Vehicle Percentages

Vehicle Type	Percent	Non-Catalyst	Catalyst	Diesel
Light Auto	54.7%	1.1%	98.7%	0.2%
Light Truck < 3,750 lbs	15.2%	2.0%	96.0%	2.0%
Light Truck 3,751- 5,750	16.2%	1.2%	98.1%	0.7%
Med Truck 5,751- 8,500	7.3%	1.4%	95.9%	2.7%
Lite-Heavy 8,501-10,000	1.1%	0.0%	81.8%	18.2%
Lite-Heavy 10,001-14,000	0.3%	0.0%	66.7%	33.3%
Med-Heavy 14,001-33,000	1.0%	0.0%	20.0%	80.0%
Heavy-Heavy 33,001-60,000	0.9%	0.0%	11.1%	88.9%
Line Haul > 60,000 lbs	0.0%	0.0%	0.0%	100.0%
Urban Bus	0.2%	0.0%	50.0%	50.0%
Motorcycle	1.6%	68.8%	31.2%	0.0%
School Bus	0.1%	0.0%	0.0%	100.0%
Motor Home	1.4%	7.1%	85.7%	7.2%

Running Emission Factors (g/mile)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.1931	0.1127	0.0161
Light Truck < 3,750 lbs	LDT1	0.2253	0.1448	0.0161
Light Truck 3,751- 5,750	LDT2	0.2253	0.1448	0.0161
Med Truck 5,751- 8,500	MDV	0.2253	0.1448	0.0161
Lite-Heavy 8,501-10,000	LHDT1	0.2012	0.1448	0.0805
Lite-Heavy 10,001-14,000	LHDT2	0.2012	0.1448	0.0805
Med-Heavy 14,001-33,000	MHDT	0.2012	0.1448	0.0805
Heavy-Heavy 33,001-60,000	HHDT	0.2012	0.1448	0.0805
Line Haul > 60,000 lbs	LHV	0.2012	0.1448	0.0805
Urban Bus	UB	0.2012	0.1448	0.0805
Motorcycle	MCY	0.2092	0.2092	0.2092
School Bus	SBUS	0.2012	0.1448	0.0805
Motor Home	MH	0.2012	0.1448	0.0805

Running Emissions (pounds per day)

Vehicle Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.13	6.99	0.00
Light Truck < 3,750 lbs	0.08	2.43	0.01
Light Truck 3,751- 5,750	0.05	2.65	0.00
Med Truck 5,751- 8,500	0.03	1.17	0.00
Lite-Heavy 8,501-10,000	0.00	0.15	0.02
Lite-Heavy 10,001-14,000	0.00	0.03	0.01
Med-Heavy 14,001-33,000	0.00	0.03	0.07
Heavy-Heavy 33,001-60,000	0.00	0.02	0.07
Line Haul > 60,000 lbs	0.00	0.00	0.00
Urban Bus	0.00	0.02	0.01
Motorcycle	0.26	0.12	0.00
School Bus	0.00	0.00	0.01
Motor Home	0.02	0.20	0.01
Total	0.58	13.80	0.22

Mobile Emissions - Methane

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College Park

Prepared by Michael Brandman Associates

Buildout Year 2010

Total Trips

13973

Starting Emission Factors (g/start)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.059	0.009	-0.003
Light Truck < 3,750 lbs	LDT1	0.067	0.099	-0.004
Light Truck 3,751- 5,750	LDT2	0.067	0.099	-0.004
Med Truck 5,751- 8,500	MDV	0.067	0.099	-0.004
Lite-Heavy 8,501-10,000	LHDT1	0.147	0.215	-0.004
Lite-Heavy 10,001-14,000	LHDT2	0.147	0.215	-0.004
Med-Heavy 14,001-33,000	MHDT	0.147	0.215	-0.004
Heavy-Heavy 33,001-60,000	HHDT	0.147	0.215	-0.004
Line Haul > 60,000 lbs	LHV	0.147	0.215	-0.004
Urban Bus	UB	0.147	0.215	-0.004
Motorcycle	MCY	0.024	0.024	0.033
School Bus	SBUS	0.147	0.215	-0.004
Motor Home	MH	0.147	0.215	-0.004

Trip Distribution

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	84.1	7543.9	15.3
Light Truck < 3,750 lbs	LDT1	42.5	2038.9	42.5
Light Truck 3,751- 5,750	LDT2	27.2	2220.6	15.8
Med Truck 5,751- 8,500	MDV	14.3	978.2	27.5
Lite-Heavy 8,501-10,000	LHDT1	0.0	125.7	28.0
Lite-Heavy 10,001-14,000	LHDT2	0.0	28.0	14.0
Med-Heavy 14,001-33,000	MHDT	0.0	27.9	111.8
Heavy-Heavy 33,001-60,000	HHDT	0.0	14.0	111.8
Line Haul > 60,000 lbs	LHV	0.0	0.0	0.0
Urban Bus	UB	0.0	14.0	14.0
Motorcycle	MCY	153.8	69.8	0.0
School Bus	SBUS	0.0	0.0	14.0
Motor Home	MH	13.9	167.6	14.1
Total		335.7	13228.6	408.7

Starting Emissions (pounds per day)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.0109	0.1494	-0.0001
Light Truck < 3,750 lbs	LDT1	0.0063	0.4441	-0.0004
Light Truck 3,751- 5,750	LDT2	0.0040	0.4837	-0.0001
Med Truck 5,751- 8,500	MDV	0.0021	0.2131	-0.0002
Lite-Heavy 8,501-10,000	LHDT1	0.0000	0.0595	-0.0002
Lite-Heavy 10,001-14,000	LHDT2	0.0000	0.0132	-0.0001
Med-Heavy 14,001-33,000	MHDT	0.0000	0.0132	-0.0010
Heavy-Heavy 33,001-60,000	HHDT	0.0000	0.0066	-0.0010
Line Haul > 60,000 lbs	LHV	0.0000	0.0000	0.0000
Urban Bus	UB	0.0000	0.0066	-0.0001
Motorcycle	MCY	0.0081	0.0037	0.0000
School Bus	SBUS	0.0000	0.0000	-0.0001
Motor Home	MH	0.0045	0.0793	-0.0001
Total		0.0359	1.4723	-0.0036

- Source of running emission factors: U.S. Environmental Protection Agency. Climate Leaders Greenhouse Gas Inventory Protocol, Core Module Guidance. Direct Emissions from Mobile Combustion Sources. October 2004.

- Source of vehicle percentages: URBEMIS default values.

- Source of starting emissions: U.S. Environmental Protection Agency. Prepared by ICF Consulting. EPA420-P-04-016. Update of Methane and Nitrous Oxide Emission Factors for On-Highway Vehicles. November 2004.

Vehicle Miles Traveled 52,246

Starting Emissions	2.45 lbs/day	0.0012 tons/day	0.45 tons/year
Running Emissions	6.67 lbs/day	0.0033 tons/day	1.22 tons/year
Total	9.11 lbs/day	0.0046 tons/day	1.66 tons/year

Vehicle Percentages

Vehicle Type	Percent	Non-Catalyst	Catalyst	Diesel
Light Auto	54.7%	1.1%	98.7%	0.2%
Light Truck < 3,750 lbs	15.2%	2.0%	96.0%	2.0%
Light Truck 3,751- 5,750	16.2%	1.2%	98.1%	0.7%
Med Truck 5,751- 8,500	7.3%	1.4%	95.9%	2.7%
Lite-Heavy 8,501-10,000	1.1%	0.0%	81.8%	18.2%
Lite-Heavy 10,001-14,000	0.3%	0.0%	66.7%	33.3%
Med-Heavy 14,001-33,000	1.0%	0.0%	20.0%	80.0%
Heavy-Heavy 33,001-60,000	0.9%	0.0%	11.1%	88.9%
Line Haul > 60,000 lbs	0.0%	0.0%	0.0%	100.0%
Urban Bus	0.2%	0.0%	50.0%	50.0%
Motorcycle	1.6%	68.8%	31.2%	0.0%
School Bus	0.1%	0.0%	0.0%	100.0%
Motor Home	1.4%	7.1%	85.7%	7.2%

Running Emission Factors (g/mile)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.0166	0.0518	0.0161
Light Truck < 3,750 lbs	LDT1	0.0208	0.0649	0.0322
Light Truck 3,751- 5,750	LDT2	0.0208	0.0649	0.0322
Med Truck 5,751- 8,500	MDV	0.0208	0.0649	0.0322
Lite-Heavy 8,501-10,000	LHDT1	0.0480	0.1499	0.0483
Lite-Heavy 10,001-14,000	LHDT2	0.0480	0.1499	0.0483
Med-Heavy 14,001-33,000	MHDT	0.0480	0.1499	0.0483
Heavy-Heavy 33,001-60,000	HHDT	0.0480	0.1499	0.0483
Line Haul > 60,000 lbs	LHV	0.0480	0.1499	0.0483
Urban Bus	UB	0.0480	0.1499	0.0483
Motorcycle	MCY	0.0073	0.0073	0.0073
School Bus	SBUS	0.0480	0.1499	0.0483
Motor Home	MH	0.0480	0.1499	0.0483

Running Emissions (pounds per day)

Vehicle Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.01	3.21	0.00
Light Truck < 3,750 lbs	0.01	1.09	0.01
Light Truck 3,751- 5,750	0.00	1.19	0.00
Med Truck 5,751- 8,500	0.00	0.52	0.01
Lite-Heavy 8,501-10,000	0.00	0.16	0.01
Lite-Heavy 10,001-14,000	0.00	0.03	0.01
Med-Heavy 14,001-33,000	0.00	0.03	0.04
Heavy-Heavy 33,001-60,000	0.00	0.02	0.04
Line Haul > 60,000 lbs	0.00	0.00	0.00
Urban Bus	0.00	0.02	0.01
Motorcycle	0.01	0.00	0.00
School Bus	0.00	0.00	0.01
Motor Home	0.01	0.21	0.01
Total	0.04	6.48	0.15

Mobile Emissions - Nitrous Oxide

Page 2

College Park

Prepared by Michael Brandman Associates

Buildout Year 2010

Total Trips

13973

Starting Emission Factors (g/start)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.028	0.072	0.000
Light Truck < 3,750 lbs	LDT1	0.032	0.093	-0.001
Light Truck 3,751- 5,750	LDT2	0.032	0.093	-0.001
Med Truck 5,751- 8,500	MDV	0.032	0.093	-0.001
Lite-Heavy 8,501-10,000	LHDT1	0.070	0.194	-0.002
Lite-Heavy 10,001-14,000	LHDT2	0.070	0.194	-0.002
Med-Heavy 14,001-33,000	MHDT	0.070	0.194	-0.002
Heavy-Heavy 33,001-60,000	HHDT	0.070	0.194	-0.002
Line Haul > 60,000 lbs	LHV	0.070	0.194	-0.002
Urban Bus	UB	0.070	0.194	-0.002
Motorcycle	MCY	0.012	0.012	0.012
School Bus	SBUS	0.070	0.194	-0.002
Motor Home	MH	0.070	0.194	-0.002

Trip Distribution

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	84.1	7543.9	15.3
Light Truck < 3,750 lbs	LDT1	42.5	2038.9	42.5
Light Truck 3,751- 5,750	LDT2	27.2	2220.6	15.8
Med Truck 5,751- 8,500	MDV	14.3	978.2	27.5
Lite-Heavy 8,501-10,000	LHDT1	0.0	125.7	28.0
Lite-Heavy 10,001-14,000	LHDT2	0.0	28.0	14.0
Med-Heavy 14,001-33,000	MHDT	0.0	27.9	111.8
Heavy-Heavy 33,001-60,000	HHDT	0.0	14.0	111.8
Line Haul > 60,000 lbs	LHV	0.0	0.0	0.0
Urban Bus	UB	0.0	14.0	14.0
Motorcycle	MCY	153.8	69.8	0.0
School Bus	SBUS	0.0	0.0	14.0
Motor Home	MH	13.9	167.6	14.1
Total		335.7	13228.6	408.7

Starting Emissions (pounds per day)

Vehicle Type	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	LDA	0.0052	1.1949	0.0000
Light Truck < 3,750 lbs	LDT1	0.0030	0.4172	-0.0001
Light Truck 3,751- 5,750	LDT2	0.0019	0.4543	0.0000
Med Truck 5,751- 8,500	MDV	0.0010	0.2001	-0.0001
Lite-Heavy 8,501-10,000	LHDT1	0.0000	0.0537	-0.0001
Lite-Heavy 10,001-14,000	LHDT2	0.0000	0.0119	-0.0001
Med-Heavy 14,001-33,000	MHDT	0.0000	0.0119	-0.0005
Heavy-Heavy 33,001-60,000	HHDT	0.0000	0.0060	-0.0005
Line Haul > 60,000 lbs	LHV	0.0000	0.0000	0.0000
Urban Bus	UB	0.0000	0.0060	-0.0001
Motorcycle	MCY	0.0041	0.0018	0.0000
School Bus	SBUS	0.0000	0.0000	-0.0001
Motor Home	MH	0.0021	0.0716	-0.0001
Total		0.0173	2.4294	-0.0015

- Source of running emission factors: U.S. Environmental Protection Agency. Climate Leaders Greenhouse Gas Inventory Protocol, Core Module Guidance. Direct Emissions from Mobile Combustion Sources. October 2004.

- Source of vehicle percentages: URBEMIS default values.

- Source of starting emissions: U.S. Environmental Protection Agency. Prepared by ICF Consulting. EPA420-P-04-016. Update of Methane and Nitrous Oxide Emission Factors for On-Highway Vehicles. November 2004.

Electricity - Indirect Emissions

Project: College Park
 Prepared by: Michael Brandman Associates
 Prepared on: 4/16/2009

Land Use	square feet or units	Electricity Use (kWh/sf-year)*	Electricity Use (kWh/year)
Office suites	6240	13.1	81744
Specialty retail	12490	14.06	175609
High turnover restaurant	12480	40.2	501696
Fast food with drive thru	9225	40.2	370845
Gas station	4000	9.84	39360
Apartments	448	10656	4773888
Total			5943142 kWh/year 5943 MWh/year

Greenhouse Gas	Emission Factor (pounds per MWh/year)	Emissions (pounds/year)	Emissions (tons/year)
Carbon dioxide	878.71	5,222,299	2,611
Methane	0.0067	40	0.02
Nitrous oxide	0.0037	22	0.01

Emission factor source: California Climate Action Registry. General Reporting Protocol. Reporting Entity-Wide Greenhouse Gas Emissions. Version 3.1, January 2009.
www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf, Table E1 and Table E3.

* Residential from: U.S. Energy Information Administration. U.S. Household Electricity Report. July 14, 2005. Table US-1, Electricity Consumption by End Use in U.S. Households, 2001, Annual Electricity Consumption per household. www.eia.doe.gov/emeu/repse/enduse/er01_us_tab1.html

* Commercial from: California Energy Commission. California Commercial End-Use Survey. Consultant Report. March 2006. CEC-400-2006-005 www.energy.ca.gov/2006publications/CEC-400-2006-005/CEC-400-2006-005.PDF

Electricity - Indirect Emissions

Project: College Park
 Prepared by: Michael Brandman Associates
 Prepared on: 4/16/2009

Land Use	Units	Electricity Use (kWh/unit-year)*	Electricity Use (kWh/year)
Courtyard villas	230	10656	2450880
Total			2450880 kWh/year 2451 MWh/year

Greenhouse Gas	Emission Factor (pounds per MWh/year)	Emissions (pounds/year)	Emissions (tons/year)
Carbon dioxide	878.71	2,153,613	1,077
Methane	0.0067	16	0.01
Nitrous oxide	0.0037	9	0.00

Emission factor source: California Climate Action Registry. General Reporting Protocol. Reporting Entity-Wide Greenhouse Gas Emissions. Version 3.1, January 2009.
www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf, Table E1 and Table E3.

* Residential from: U.S. Energy Information Administration. U.S. Household Electricity Report. July 14, 2005. Table US-1, Electricity Consumption by End Use in U.S. Households, 2001, Annual Electricity Consumption per household. www.eia.doe.gov/emeu/repse/enduse/er01_us_tab1.html

* Commercial from: California Energy Commission. California Commercial End-Use Survey. Consultant Report. March 2006. CEC-400-2006-005 www.energy.ca.gov/2006publications/CEC-400-2006-005/CEC-400-2006-005.PDF

Electricity Use in Typical Urban Water Systems

Project: College Park
 Prepared by: Michael Brandman Associates
 Prepared on: 4/16/2009

	kWh/MG	
	Northern California	Southern California
Water Supply and Conveyance	2,117	9,727
Water Treatment	111	111
Water Distribution	1,272	1,272
Wastewater Treatment	1,911	1,911
Totals	5,411	13,021

From CEC 2006

	Gallons per day	Millions Gallons (MG) per year	
Water Usage	310000	113.15	
		kWh	MWh
Energy Usage		1,473,326	1,473

	Indirect Electricity Emission Factor		
Greenhouse Gas	(pounds per MWh/year)	Emissions (pounds/year)	Emissions (tons/year)
Carbon dioxide	878.71	1,294,626	647
Methane	0.0067	9.87	0.005
Nitrous oxide	0.0037	5.45	0.003

Emission factor for electricity source:

California Climate Action Registry. General Reporting Protocol. Reporting Entity-Wide Greenhouse Gas Emissions. Version 3.1, January 2009.
www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf, Table E1 and Table E3.

CEC 2006. Navigant Consulting, Inc. 2006. Refining Estimates of Water-Related Energy Use in California. California Energy Commission, PIER Industrial/Agricultural/Water End Use Energy Efficiency Program. CEC-500-2006-118. www.energy.ca.gov/pier/project_reports/CEC-500-2006-118.html

Natural Gas Combustion

College Park

Prepared by Michael Brandman Associates

4/16/2009

Gas	Type of Land Use	Square Feet	Annual Natural Gas Usage Factor* (kBtu/sf)	Natural Gas Usage for Project (MMBTU/year)	Emission Factor (g/MMBTU)**	Emissions (g/year)	Emissions (tons/year)	Emissions (pounds/day)
Methane	Office suites	6240	10.54	66	4.75	312	0.00	0.00
	Specialty retail	12490	4.62	58	4.75	274	0.00	0.00
	High turnover rest	12480	209.96	2620	4.75	12446	0.01	0.08
	Fast food with driv	9225	209.96	1937	4.75	9200	0.01	0.06
	Gas station	4000	23.34	93	4.75	443	0.00	0.00
Nitrous Oxide	Office suites	6240	10.54	66	0.095	6	0.00	0.00
	Specialty retail	12490	4.62	58	0.095	5	0.00	0.00
	High turnover rest	12480	209.96	2620	0.095	249	0.00	0.00
	Fast food with driv	9225	209.96	1937	0.095	184	0.00	0.00
	Gas station	4000	23.34	93	0.095	9	0.00	0.00

Units	Methane	Nitrous Oxide
pounds per day	0.14	0.00
tons per year	0	0
GWP	21	310
MTCO2 Eq/year	0.48	0.14

* **Table E-1 from California Energy Commission. California Commercial End-Use Survey. Consultant Report. March 2006. CEC-400-2006-005

** USEPA, 2004: Direct Emissions from Stationary Combustion Sources, Climate Leaders Greenhouse Inventory Protocol, Core Model Guidance, October 2004

Table E-1: Overview of Energy Usage in the Statewide Service Area

Building Type	Floor Stock (kft ²)	Annual Energy Intensities			Total Annual Usage	
		Electricity (kWh/ft ²)	Natural Gas (therms/ft ²)	Natural Gas (kBtu/ft ²)	Electricity (GWh)	Natural Gas (Mtherms)
All Commercial	4,920,114	13.63	0.26	25.99	67077	1278.60
Small Office (<30k ft ²)	361,584	13.10	0.11	10.54	4738	38.10
Large Office (>=30k ft ²)	660,429	17.70	0.22	21.93	11691	144.80
Restaurant	148,892	40.20	2.10	209.96	5986	312.60
Retail	702,053	14.06	0.05	4.62	9871	32.50
Food Store	144,209	40.99	0.28	27.60	5911	39.80
Refrigerated Warehouse	95,540	20.02	0.06	5.60	1913	5.30
Unrefrigerated Warehouse	554,166	4.45	0.03	3.07	2467	17.00
School	445,106	7.46	0.16	15.97	3322	71.10
College	205,942	12.26	0.34	34.24	2524	70.50
Health	232,606	19.61	0.76	75.53	4561	175.70
Lodging	270,044	12.13	0.42	42.40	3275	114.50
Miscellaneous	1,099,544	9.84	0.23	23.34	10817	256.60
All Offices	1,022,012	16.08	0.18	17.90	16430	182.90
All Warehouses	649,706	6.74	0.03	3.44	4380	22.40

Natural Gas Combustion

Residential Developments

Prepared by Michael Brandman Associates

Gas	Type of Residential	Units	Natural Gas Usage Factor* (SCF/unit/month)	Natural Gas Usage for Project (SCF/month)	Natural Gas usage for Project (SCF/year)	Emission Factor (g/MMBTU)**	Heating Value of Natural Gas (BTU/SCF)**	Emissions (tons per year)	Emissions (pounds per day)
Methane	Courtyard	230	4011.5	922645	11071740	4.75	1020	0.059	0.32
	Multi family	448	4011.5	1797152	21565824	4.75	1020	0.115	0.63
Nitrous Oxide	Courtyard	230	4011.5	922645	11071740	0.095	1020	0.001	0.01
	Multi family	148	4011.5	593702	7124424	0.095	1020	0.001	0.00

Total

Units	Nitrous Oxide	Methane
pounds per day	0.01	0.95
tons per year	0.002	0.174
Global warming potential	310	21
MTCO2e/year	0.601	3.653

* Natural gas usage factor from URBEMIS2007 default: 6665 SCF/unit/month for single family residential units; 4011.5 for multi-family residential units

**USEPA, 2004: Direct Emissions from Stationary Combustion Sources, Climate Leaders Greenhouse Inventory Protocol, Core Model Guidance, October 2004

Air Conditioning and Refrigeration Fugitive Emissions

Project: College Park
 Prepared by: Michael Brandman Associates
 Prepared on: 4/16/2009

Type of Unit	Units	Capacity of Unit (kg)	Annual Leak Rate in percent of capacity	Emissions (kg/year)	Emissions (tons/year)	Global Warming Potential	Metric Tons CO2 Equiv./year
Domestic Refrigeration	678	0.5	0.5%	1.695	0.002	1300	2
Commercial Refrigeration	4	500	35.0%	700	0.770	1300	908
Residential A/C	678	25	10%	1695	1.8645	1300	2,199
Commercial A/C	9	100	10%	88.87	0.097757	1300	115
Total					2.734		3,225

Source:

U.S. Environmental Protection Agency, Climate Leaders. May 2008. Direct HFC and PFC Emissions from Use of Refrigeration and Air Conditioning Equipment. EPA430-K-03-004. <http://www.epa.gov/stateply/documents/resources/mfgrfg.pdf>, Accessed in July 2008.

Note: One A/C unit was assumed per 5,000 square feet of commercial.

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\MBA\Client\35450001 College Park\College Park Buildout New.urb924

Project Name: College Park - Operation Buildout - New

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	6.87	1.31	2.54	0.00	0.01	0.01	1,638.24

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	12.46	13.60	117.25	0.09	16.51	3.24	9,797.36

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	19.33	14.91	119.79	0.09	16.52	3.25	11,435.60

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.10	1.28	0.57	0.00	0.00	0.00	1,632.26
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	2.39
Landscape	0.16	0.03	1.97	0.00	0.01	0.01	3.59
Consumer Products	6.35						
Architectural Coatings	0.26						
TOTALS (tons/year, unmitigated)	6.87	1.31	2.54	0.00	0.01	0.01	1,638.24

Area Source Changes to Defaults

- Percentage of residences with wood stoves changed from 10% to 0%
- Percentage of residences with wood fireplaces changed from 5% to 0%
- Percentage of residences with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments low rise	3.67	4.01	35.40	0.03	5.19	1.02	3,074.45
Apartments mid rise	1.88	2.06	18.17	0.02	2.67	0.52	1,578.40
High turnover (sit-down) rest.	1.19	1.29	10.95	0.01	1.48	0.29	883.12
Fast food rest. w/ drive thru	3.32	3.63	30.74	0.02	4.17	0.82	2,480.05
Strip mall	0.38	0.40	3.34	0.00	0.45	0.09	269.17
Gasoline/service station	1.86	2.02	17.03	0.01	2.31	0.45	1,372.34
General office building	0.16	0.19	1.62	0.00	0.24	0.05	139.83
TOTALS (tons/year, unmitigated)	12.46	13.60	117.25	0.09	16.51	3.24	9,797.36

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments low rise	28.00	6.63	dwelling units	448.00	2,970.24	16,436.00
Apartments mid rise	6.05	6.63	dwelling units	230.00	1,524.90	8,438.13
High turnover (sit-down) rest.		130.61	1000 sq ft	12.48	1,630.01	4,696.85
Fast food rest. w/ drive thru		496.48	1000 sq ft	9.22	4,577.55	13,190.11

<u>Summary of Land Uses</u>						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		40.83	1000 sq ft	12.49	509.97	1,432.59
Gasoline/service station		162.50	pumps	16.00	2,600.00	7,303.90
General office building		25.64	1000 sq ft	6.24	159.99	748.99
					13,972.66	52,246.57

<u>Vehicle Fleet Mix</u>				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.7	1.2	98.6	0.2
Light Truck < 3750 lbs	7.3	2.7	94.6	2.7
Light Truck 3751-5750 lbs	22.9	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.6	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	67.9	32.1	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
High turnover (sit-down) rest.				5.0	2.5	92.5
Fast food rest. w/ drive thru				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Gasoline/service station				2.0	1.0	97.0
General office building				35.0	17.5	47.5

Appendix C: Construction URBEMIS2007 Output

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\MBA\Client\35450001 College Park\Air Quality\College Park Construction.urb924

Project Name: College Park - Construction of Phase 1

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

<u>CO2</u>	
2008	2,833.60
Mass Grading 01/01/2008-02/28/2008	632.10
Mass Grading Dust	0.00
Mass Grading Off Road Diesel	606.67
Mass Grading On Road Diesel	0.00
Mass Grading Worker Trips	25.43
Building 03/03/2008-11/28/2008	2,148.88
Building Off Road Diesel	1,516.77
Building Vendor Trips	212.56
Building Worker Trips	419.55
Coating 09/15/2008-11/28/2008	8.56
Architectural Coating	0.00
Coating Worker Trips	8.56
Asphalt 12/01/2008-12/26/2008	44.06
Paving Off-Gas	0.00
Paving Off Road Diesel	34.84
Paving On Road Diesel	7.36
Paving Worker Trips	1.87

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Phase Assumptions

Phase: Mass Grading 1/1/2008 - 2/28/2008 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 38.69

Maximum Daily Acreage Disturbed: 9.67

Fugitive Dust Level of Detail: Default

10 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

19 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

19 Tractors/Loaders/Backhoes (79 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Paving 12/1/2008 - 12/26/2008 - Default Paving Description

Acres to be Paved: 9.67

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 8 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day

Phase: Building Construction 3/3/2008 - 11/28/2008 - Default Building Construction Description

Off-Road Equipment:

8 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

17 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day

8 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day

Phase: Architectural Coating 9/15/2008 - 11/28/2008 - Default Architectural Coating Description

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

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

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

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

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

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

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\MBA\Client\35450001 College Park\College Park Construction Phase 2.urb924

Project Name: College Park - Construction of Phase 2

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	<u>CO2</u>
2010	1,324.73
Fine Grading 01/04/2010-02/26/2010	47.43
Fine Grading Dust	0.00
Fine Grading Off Road Diesel	44.95
Fine Grading On Road Diesel	0.00
Fine Grading Worker Trips	2.49
Building 03/03/2010-11/28/2010	1,273.11
Building Off Road Diesel	964.75
Building Vendor Trips	105.42
Building Worker Trips	202.94
Coating 09/01/2010-11/28/2010	4.19
Architectural Coating	0.00
Coating Worker Trips	4.19

Phase Assumptions

Phase: Fine Grading 1/4/2010 - 2/26/2010 - Fine grading

Total Acres Disturbed: 10

Maximum Daily Acreage Disturbed: 5

Fugitive Dust Level of Detail: Default

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10 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

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

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

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

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

Phase: Building Construction 3/3/2010 - 11/28/2010 - Building Phase 2

Off-Road Equipment:

5 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

11 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day

5 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day

Phase: Architectural Coating 9/1/2010 - 11/28/2010 - Default Architectural Coating Description

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

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

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

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

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

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

Appendix D: Technical Noise Memorandum

Technical Memorandum

Date: August 21, 2009

To: Savoy Bellavia, Vice-President, College Park Properties

From: Greg Tonkovich, INCE, Sr. Noise Analyst

Subject: **Cable Airport Noise Impacts to the Proposed College Park Project**

Fresno
559.497.0310

Irvine
714.508.4100

Palm Springs
760.322.8847

Sacramento
916.447.1100

San Bernardino
909.884.2255

San Ramon
925.830.2733

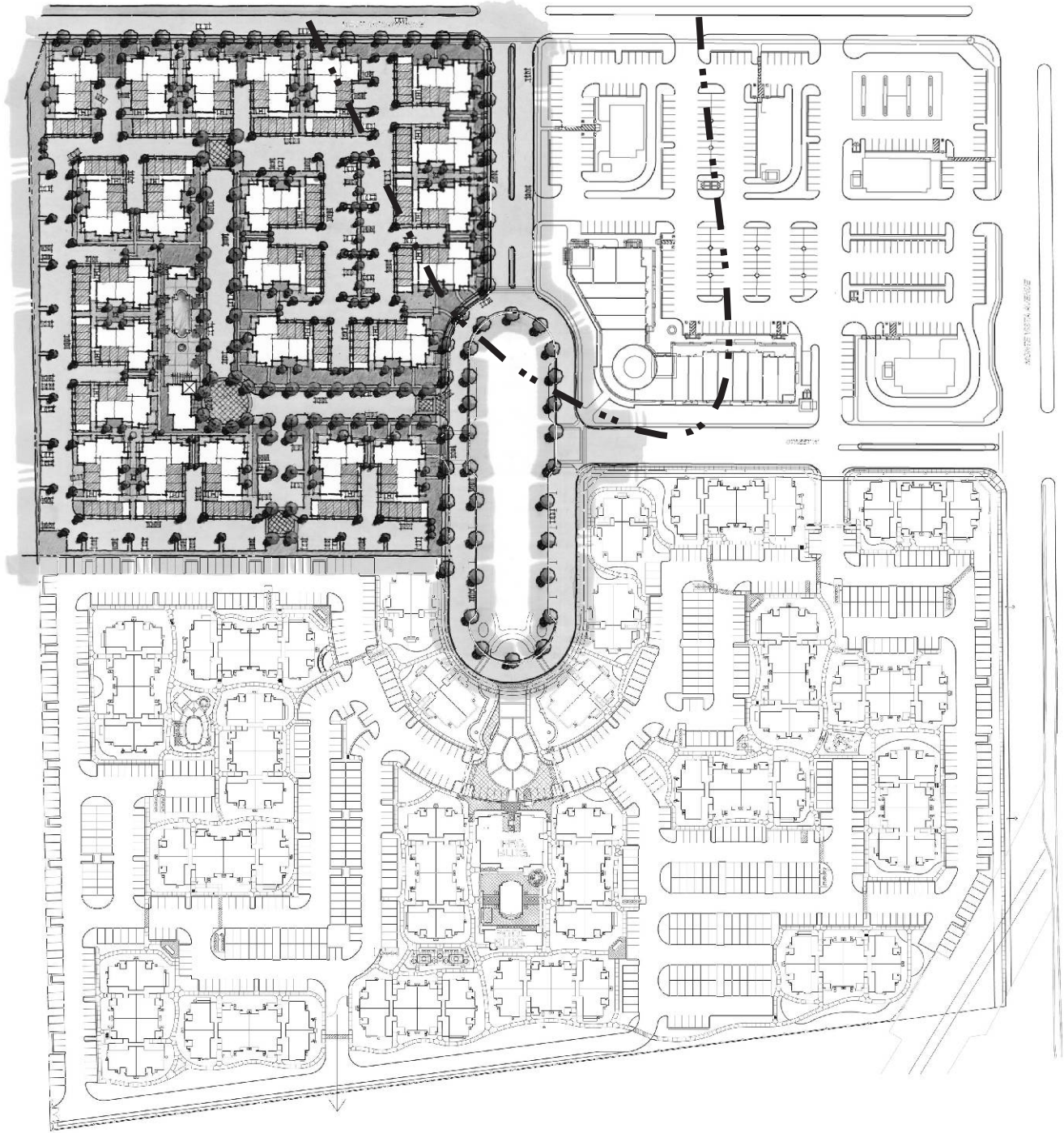
Revision to the Specific Plan would allow a maximum 230 dwelling units in the northwest portion of the project site comprising 9 acres. For this northwest portion of the site, the 2009 Plan would increase the unit density and concentration of people over the EIR Plan and the 2005 Plan in this location. Some of the proposed multi-family dwelling units may be exposed to noise impacts from Cable Airport. Cable Airport has one runway and two helipads. In 2007, the airport had 92,189 take-offs or landings, which averages to 252 per day. According to the *Cable Airport Comprehensive Airport Land Use Plan*, adopted December 9, 1981, the northern portion of the College Park project site is located within Zone B, which indicates a moderate noise impact between 60 to 65 dB CNEL. Exhibit 1 displays the noise contour from Cable Airport relevant to the project site. As indicated in Exhibit 1, an estimated 44 of the total 230 residences within the northwest portion of the site would be affected by airport noise.

A supplemental analysis of noise impacts under the 2005 Alternative Development Plan, analyzed in the First Addendum, was conducted by Giroux and Associates when substitution of residential uses for the hotel and office building was first proposed. The results of the supplemental analysis have been reviewed and are still considered applicable. The results are presented in the following paragraphs.

Traffic noise will exceed 65 dB CNEL at ground level of the homes facing Arrow Route. (City of Upland noise standards for noise sensitive land uses specify 65 dB CNEL for exterior noise levels for residential uses and 70 dB CNEL for commercial uses.) The contribution of the airport noise signature superimposed upon traffic noise impacts is predicted to add 1.5 dB CNEL or less to the onsite traffic noise at the proposed homes in the northwest portion of the site. The predicted build-out traffic noise level at 50 feet south of the Arrow Route centerline (C.L.) is predicted to be 68.3 dB CNEL. The traffic noise level drops off quickly with distance particularly with mitigation of sound walls, but the airport noise will remain near 60 dB CNEL over a larger area of the project site. The superposition of roadway traffic and Cable Airport noise in this location yields the following combined levels:

- 50 feet to C.L.: 68.3 dB (traffic) + 60.0 dB (airport) = 68.9 dB CNEL combined.
- 100 feet to C.L.: 65.3 dB (traffic) + 60.0 dB (airport) = 66.4 dB CNEL combined.

Increases of 0.6 dB (at 50 feet from C.L.) or 1.1 dB (at 100 feet from C.L.) are imperceptible by human ears even under laboratory conditions. Superposition of the airport noise upon unmitigated traffic noise impacts will not perceptibly increase the total noise. However, mitigation is proposed that would reduce the traffic noise through the use of sound walls. Sound walls provide no attenuation of aircraft noise due to the location of the aircraft noise source. Due to this, aircraft noise impacts onto the residential area within the 60 dBA CNEL noise contour shown in Exhibit 1 may result in a potentially significant noise impact.



Legend
 - - - - 60 dBA CNEL

Source: Source: KTGy Group, Inc., August 2009. San Bernardino County Official Land Use Plan, General Plan Hazards Overlays.



No scale

Michael Brandman Associates

35450001 • 08/2009 | 1_noise.cdr

Exhibit 1 Cable Airport Noise Contour

COLLEGE PARK PROPERTIES • COLLEGE PARK

The California Building Code requires that residential development planned for areas exceeding 60 dB CNEL due to aircraft noise must demonstrate an ability to meet the 45 dB CNEL interior standard through adequate structural noise attenuation. Since aircraft noise will exceed 60 dB CNEL on the northern portion of the project site within the 60 dBA CNEL contour shown in Exhibit 1, the following Mitigation Measures N-6 and N-7 shall be implemented to: 1) ensure that residential interior living areas do not exceed 45 dB CNEL; and 2) to provide notification to potential residents of the aircraft over flights. Noise impacts from aircraft overflights are thereby reduced to less than significant.

N-6 An acoustical study shall be performed for ground level, second and third stories of residential units within 735 feet of Monte Vista Avenue and 285 feet of Arrow Route, and second and third stories of all other onsite buildings also require an acoustical study to verify that the structural features are adequate to meet the 45 dB CNEL interior standard. The study shall be completed and submitted prior to final plan check approval. Noise attenuation features recommended in the study such as dual-paned windows, deck balcony enclosures, and/or additional insulation requirements sufficient to reduce interior noise levels to 45 dB CNEL or less shall be implemented.

N-7 A notice or sign regarding aircraft noise impacts shall be posted in all sales or leasing offices for the proposed project. The notice shall include a site map that shows the portion of the project site within the 60 dB CNEL airport noise contour.