RECIRCULATED DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

Indian Wells
Garden of Champions Tournament Center
and the
Indian Wells Town Center Project
(State Clearinghouse Number # 2006111097)

Prepared for:

CITY OF INDIAN WELLS
Community Development Department
44-950 El Dorado Drive
Indian Wells, CA 92210-7497

Prepared by:

EPC Inc.
5225 Canyon Crest Drive, Suite 71-325
Riverside, CA 92507
Contact: Ernest Perea
Phone: (951) 653-2891

February 7, 2008

RECIRCULATED DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT (SEIR)

(State Clearinghouse Number # 2006111097)

Indian Wells Town Center

Supplement to
Garden of Champions Tournament Center Final EIR

(State Clearinghouse Number 1998041039)

February 7, 2008

(Original Draft SEIR Circulated August 24, 2007)

Prepared for:

CITY OF INDIAN WELLS
Community Development Department
44-950 El Dorado Drive
Indian Wells, CA 92210-7497

Contact: Corrie Kates
Phone: (760) 346-2489

Prepared by:

EPC Inc.
5225 Canyon Crest Drive, # 71-325
Riverside, CA 92507
Contact: Ernest Perea, AICP
PHONE: (951) 653-2891

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1.0 INTRODUCTION

1.1 BACKGROUND

The Draft Supplemental Environmental Impact Report (DSEIR), Indian Wells Garden of Champions Tournament Center and the Indian Wells Town Center Project (State Clearinghouse Number 2006111097) was circulated for a 30-day review period from August 24, 2007 to September 24, 2007 consistent with CEQA regulations and guidelines. The 30-day shortened review period was approved by the State Clearinghouse. Copies of the DSEIR were distributed to the State Clearinghouse, regional and local agencies, and interested organizations and individuals, for their review and comment.

Thirteen (13) letters of comment on the DSEIR were received during the review period ending September 24, 2007 from the following:

State/Federal Agencies (1)

A. Native American Heritage Commission (NAHC)

Native American Tribes (1)

B. Soboba Band of Luiseño Indians

Regional Agencies (3)

C. Southern California Association of Governments
D. South Coast Air Quality Management District
E. Sunline Transit Agency

County Agencies (0)

Local Agencies (1)

F. City of La Quinta

Private Organizations/Individuals (7)

G. La Quinta Del Oro Community Association-Mark Johnson, President (LQDO-1)
H. Mark & Shirley Johnson (LQDO-2)
I. Leonie Farber (LQDO-3)
J. Michelle Mulleneaux (LQDO-4)
K. Pauline Mulleneaux (LQDO-5)
L. Daniel Ingel (LQDO-6)
M. Reginald & Cheryl VanSleet (LQDO-7)

Three (3) letters of comment on the DSEIR were received after the end of the review period ending September 24, 2007 from the following:

N. County of Riverside Transportation and Land Management Agency, Transportation Department (October 2, 2007).
O. Aqua Caliente Band of Cahuilla Indians (December 19, 2007).
P. Aqua Caliente Band of Cahuilla Indians (February 8, 2008).

1.2 DRAFT SEIR RECIRCULATION

This document revises the Executive Summary (Section ES-1), Aesthetics (Section 3.1), Air Quality (Section 3.2), Cultural Resources (Section 3.5), Transportation and Traffic (Section 3.15), and Unavoidable and Adverse Impacts (Section 6.0). These sections of the DSEIR are being recirculated for public review in accordance with State CEQA Guidelines Section 15088.5. Upon completion of the public review period, a Final Supplemental EIR will be completed that includes responses to comments received on the recirculated sections identified above.

This Recirculated DSEIR has been prepared in accordance with State CEQA Guidelines Section 15088.5. which requires a lead agency to recirculate an SEIR when significant new information is presented. CEQA Guidelines Section 15088.5 also allows the Lead Agency to recirculate only the chapters or portions of the Draft SEIR that have been revised. **The City of Indian Wells is requesting reviewers to limit their comments to the revised sections. All previous comment letters received of the DSEIR circulated from August 24, 2007 to September 24, 2007 will be included in the Final SEIR as well as comment letters received on the Recirculated SEIR.**

1.3 DRAFT SEIR REVISIONS

This Revised DSEIR includes revisions to the Sections identified above. Following is a summary of the revisions:

Section	Revisions	Impact Conclusions
ES-1	Revises Executive Summary to reflect overall changes.	Revised conclusions as described below
3.1 Aesthetics	Added additional information in regard to view impacts on the Santa Rosa Mountains caused by the hotel.	Remain significant and unavoidable.
3.3 Air Quality	Added a Localized Significance Analysis; changed short-term emissions for VOC from less than significant to significant; changed operational emissions for PM10 from less than significant to significant; Added new mitigation measures recommended by SCAQMD	Short-term emissions for VOC and NOx are significant; Operational Emissions for VOC. NOx, CO, and PM10 are significant; Cumulative Impacts for Ozone and PM10 are significant.
3.5 Cultural Resources	Added additional analysis and mitigation	Less than significant
3.15 Traffic and Transportation	Added a warrant analysis and mitigation measure for installation of a traffic signal at the intersection of Washington St. & Via Sevilla/Project Entrance; added delay and Level of Service for Existing + Project Conditions; added information on the CVAG Transportation Project Prioritization Study in regard to potential timing/ implementation of traffic mitigation measures.	Short-term impacts remain significant and unavoidable. Long-term impacts are now considered significant and unavoidable.
6.0 Unavoidable and Irreversible Impacts	Identifies Long-term traffic impacts as significant and unavoidable	Added Long-term traffic impacts as significant and unavoidable

All changes to the August 15, 2007 version of the DSEIR are shown in this document as:

Added Text: *Underlined and* Italicized.

Deleted Text: ~~Strikethrough~~

All other sections of the DSEIR dated August 15, 2007 remain unchanged and are not subject to recirculation. Also, please note the project description has not changed and the land uses, intensity, project characteristics etc. remain the same.

Section 2.0 of this document provides background information on the project.

1.4 PUBLIC REVIEW

In accordance with State CEQA Guidelines, the Recirculated DSEIR will be available for public review during the dates identified on the Notice of Completion transmitted with this document. During this period reviewers may submit written comments on the Sections identified above. The City of Indian Wells will respond to ***new*** comments received on the Recirculated DSEIR as well as comments on the DSEIR dated August 15, 2007 which were previously submitted.

1.5 LEAD AGENCY AND CONTACT PERSONS

The City of Indian Wells is the lead agency directing the environmental review of the proposed project. EPC Inc., a private consulting firm, has compiled this SEIR. Preparers and contributors to this Document are listed in Section 8.0, *Organizations and Persons Consulted.*

Key contact persons are as follows:

Lead Agency	**Contact**
City of Indian Wells Community Development Department 44-950 El Dorado Drive Indian Wells, CA 92210-7497	Corrie Kates, Director (760) 776-0229
Environmental Consultants	**Contact**
EPC, Inc. 5225 Canyon Crest Drive, # 71-325 Riverside, CA 92507	Ernest Perea, AICP (951) 653-2891 epcland@charter.net

ES. EXECUTIVE SUMMARY

INTRODUCTION – In 1998, the County of Riverside approved a Programmatic Environmental Impact Report (EIR) for the proposed Garden of Champions Tennis Center (SCH# 1998041039) on unincorporated land on the westside of Washington Street both north and south of Miles Avenue next to the City of Indian Wells. This area was subsequently annexed into the City and this Draft Supplemental Environmental Impact Report (SEIR) is a project-specific document intended to evaluate the environmental impacts of the proposed Indian Wells Town Center Project and an additional 1,632 space City owned parking lot (SCH# 2006111097) under the California Environmental Quality Act (CEQA). The City of Indian Wells is the Lead Agency for this project.

PROJECT DESCRIPTION - The Indian Wells Town Center project proposes to develop the approximately remaining 79 acres of vacant land into a mixed use project of retail, office, theater, shops, restaurants, 300 room resort hotel, and 65 single-family homes. (A maximum of 400,000 SF of commercial allowed under the Town Center Specific Plan including theater). In addition, the project considered in the SEIR includes 13 acres used to provide a 1,632 space parking lot for the adjacent Indian Wells Tennis Garden.

POTENTIAL AREAS OF CONTROVERSY – During the NOP period and discussions with City staff, the following environmental issues have been raised regarding the proposed project:

Aesthetics

Concerns have been raised regarding whether or not the proposed project will have a significant impact on aesthetics in regard to architecture, lighting, and views. This issue is addressed in Section 3.1, *Aesthetics.*

Air Quality

Construction and occupancy of the project will result in substantial amounts of air pollutants both during construction and also during operation or occupancy of the project. These increases may further degrade the air quality in the area. This issue is addressed in Section 3.3, *Air Quality.*

Biological Resources

Since the original biological surveys were done on the project site, the Coachella Valley Association of Governments (CVAG) ~~is in the process of finalizing~~ *has prepared* a Multiple Species Habitat Conservation Plan (MSHCP) for the Coachella Valley. ~~. The plan is currently being recirculated for review.~~ *The Final Recirculated Coachella Valley Multiple Species Habitat Conservation Plan was approved by the CVAG Executive Committee and the Coachella Valley Conservation Commission (CVCC) on September 10, 2007. The Plan has also been approved by the eight participating cities, Riverside County, the Coachella Valley Water District, and the Imperial Irrigation District. Final Plan approval by the State and Federal Wildlife agencies is expected by early 2008.* A new Biological Constraints Analysis and surveys for Rare Plants and the Burrowing Owl was conducted to update the reports prepared in 1998. The potential impacts of the project on Biological Resources and the MSHCP are addressed in Section 3.4, *Biological Resources.*

Cultural Resources

Concerns have been raised by the Native American Heritage Commission about the potential for impacts to cultural resources pertaining to Native Americans and appropriate mitigation measures in the event they are found on the site. Consultation pursuant to Senate Bill 18 with affected Native American Tribes was conducted. *In a letter dated December 19, 2007 (see attachments), the Aqua Caliente Band of Cahuilla Indians commented that according to their records, there are additional cultural sites within the project boundaries that need further analysis.* This issue is addressed in Section 3.5, *Cultural Resources.*

Transportation and Traffic

The project will generate traffic that will cause congestion at local intersections and along local roadways, especially along Washington Street and Miles Avenue. Willdan ~~and Associates~~ has prepared a "*Supplemental Traffic Impact Analysis for Draft Supplemental EIR for Indian Wells Town Center*", dated June 18, 2007. These issues are addressed in Section 3.16, *Transportation and Traffic*.

SIGNIFICANT AND UNAVOIDABLE IMPACTS - The project will produce the following significant impacts, even after implementation of all feasible mitigation measures: 1) short-term air quality impacts from construction activities; 2) long-term air quality impacts from project occupancy; 2) impacts to views of the mountains for some residences located immediately east of the site, and 3) traffic impacts.

ALTERNATIVES TO THE PROPOSED PROJECT - The following alternatives were evaluated for potential impacts compared to the proposed project: 1) No Project – No Development; 2) No Project – Existing General Plan; 3) Reduced Scale Alternative. After detailed environmental review, Alternative 3 was determined to be environmentally superior to the proposed project, but it would not meet the project's objectives to nearly the same degree as the proposed project.

ENVIRONMENTAL ANALYSIS - Table ES-1 provides a summary of the significant impacts of the project, measures identified in the 1998 EIR and Supplemental EIR to mitigate the significant impacts, and the level of significance after implementation of the mitigation measures. Sections 3.1 through 3.14 provide a comprehensive analysis of all impacts related to the project. The 1998 EIR and the Supplemental EIR analysis determined that there were no impacts to Agricultural Resources, Mineral Resources and Population and Housing so those issues are not included in Table ES-1. Impacts to Recreation are addressed under Public Services (Parks).

MITIGATION MEASURES – The Mitigation measures referenced in Table ES-1 are based on the 1998 EIR which is still applicable to the project. Some of the 1998 EIR mitigation measures have been modified or replaced with new equivalent measures to reflect changes in circumstances. Any mitigation measures that reference the County of Riverside and its agencies or departments will be implemented by the City of Indian Wells as appropriate.

Table ES-1
Summary of Impacts and Mitigation (SEIR Sections 3.1 - 3.14)

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
AESTHETICS: **The project will impact:** Views of the Santa Rosa Mountains to some homes on Via Pavion; Visual character of the site during construction; and Light and glare.	Potentially Significant Potentially Significant Potentially Significant	**AES-1** Prior to the issuance of building permits, the project shall demonstrate that the hotel has been designed to incorporate a "terraced" design to minimize building bulk and massing and that building placement provides a "view corridor: through the site. **Short-term Construction** **AES-2** Equipment storage and soil stockpiling shall be at least 100 feet from adjacent property lines. (Ref. 1998 5.9-1a). **AES-3** Construction related rubbish and debris shall be removed as required by the City of Indian Wells Building and Safety Department Inspectors. (Ref. 1998 5.9-1b). **Light and Glare** **AES-4** Construction and security lighting shall adhere to the City of Indian Wells Lighting Standards, which specifies the usage of low pressure sodium lighting for security purposes. (ref. 1998 5.10-1). **AES-5** Prior to the issuance of building permits an outdoor lighting plan for the Indian Wells Town Center project shall be approved by the Community Development Department which contains the following provisions:	Views: Significant and Unavoidable. Visual Character: Less Than Significant. Light and Glare: Less Than Significant

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
AESTHETICS CONT.		• Use of low pressure sodium lights; • Exterior lighting shall be fully shielded and directed away from adjoining properties; • Architectural and accent lighting shall be turned off by 11:00 PM and sunrise; • Glare free type opaque fixtures shall be provided for general lighting; • Path lighting shall have concealed source post top fixtures, bollard fixtures, and surface mounted building fixtures; and • Parking lot lighting shall not exceed 25 feet in height.	
AIR QUALITY: The project will result in the following impacts: Exceed SCAQMD thresholds for CO, NOx, *PM10, PM2.5* ***and*** VOC during construction ~~and operation.~~	Significant	**AQ-1** The proposed project shall comply with City of Indian Wells conditions to prevent dust and blowsand as follows: • Graded but undeveloped land shall be maintained in a condition so as to prevent a dust and/or blowsand nuisance, and shall be planted either with interim landscaping or provided with other wind and water erosion control measures as approved by the Director of Building and Safety and the state air quality management standards. • Notwithstanding any section of the ordinance to the contrary, the permit holder(s) shall comply with the requirements of City of Indian Wells	NOx and VOC. Significant and Unavoidable

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
AIR QUALITY CONTINUED.		Municipal Code Section 8.20 (Fugitive Dust). (Ref. 1998 5.7-1a). **AQ-2** In accordance with City of Indian Wells conditions, all necessary measures to control dust shall be implemented during grading. Such measures shall include the following: • The project shall comply with State, County and UBC dust control regulations, so as to prevent the soil from being eroded by wind, creating dust, or blowing onto a public road or roads or other public or private property. • SCAQMD Rule 403.1 as amended, shall be adhered to, ensuring the clean up on the construction-related dirt on approach routes to the site, and the application of water and/or chemical dust retardants that solidify loose soils shall be implemented for construction vehicle access, as directed by the Community Development Department. This shall include covering, watering or otherwise stabilizing all inactive soil piles (left more than 10 days) and inactive graded areas (left more than 10 days). • Any vegetative ground cover to be utilized onsite will be planted as soon as possible to reduce the amount of open space subject to wind erosion; Irrigation will be installed as soon as possible to maintain the ground cover and minimize blowsand. • Grading activity will be suspended when local	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
AIR QUALITY CONTINUED.		winds exceed 30 miles per hour and during first and second state smog alerts. • All trucks hauling dirt, soil or other loose dirt material will be covered. • Pursuant to City of Indian Wells Municipal Code Section 8.24 (Blowing Sand and Dirt) blowsand shall be controlled by the measures contained in Section 8.24. Furthermore, pursuant to the Coachella Valley Fugitive Dust Control Handbook, measures to control PM10 shall be approved by the Community Development Department. (Ref. 1998 5.7-1b). **AQ-3** To limit emissions from project-related vehicle trips, the project shall, at a minimum, incorporate the following: • Provide marked pedestrian lanes and driver warning signs. • Provide bicycle racks for employees and customers of commercial areas. • Site access shall be prepared so as to avoid queuing in driveways. • Prepare mulch, ground cover and native vegetation to reduce energy for pumping water. • Provide preferential parking for High Occupancy Vehicles and shuttle services. (Ref. 1998 5.7-2a).	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
AIR QUALITY CONTINUED.		**AQ-4** In order to reduce emissions from the power plant providing electricity to the site and from natural gas consumed by the project's users, on-site buildings shall, at a minimum, be constructed to comply with State Energy Efficiency Standards (Title 24). (Ref. 1998 5.7-2b). **AQ-5** Reduce the maximum acreage graded on any one day to 20 acres. **AQ-6** During project construction, onsite electrical hook ups shall be provided for electric construction tools including saws, drills and compressors, to eliminate the need for diesel powered electric generators. **AQ-7** During project construction, the developer shall require all contractors not to idle construction equipment onsite for more than 5 minutes. **AQ-8** A minimum of three Transportation Demand Management (TDM) measures shall be implemented. TDMs may include having showers and locker facilities for employees, providing at least one secure bike parking spot for every 20 vehicle parking spaces, providing preferential parking for carpool/vanpool vehicles, and installing kiosks with alternative transit information.	
BIOLOGICAL RESOURCES: The project will impact the following:		**BIO-1** Prior to issuance of a grading permit, the developer shall pay the CVMSHCP mitigation fee to the Coachella Valley Association of Governments (CVAG).	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
BIOLOGICAL RESOURCES CONT.		**BIO-2** A pre-grading survey shall be conducted on the project site and the area for the concrete lining and access road within the CVSC right-of-way within 30 days prior to any ground disturbance to avoid a direct take of Burrowing Owls (BUOW). The biologist conducting the 30-day pre grading BUOW survey must submit a letter report to the City of Indian Wells documenting the results of the survey.	
Although no Burrowing Owls were found on the site, a pre-grading survey is required to ensure that Burrowing Owls have not occupied the site.	Less Than Significant		Burrowing Owl: Less Than Significant
Construction of the concrete lining and access road on the northern bank of the Coachella Valley Storm Channel (CVSC) may impact wetlands.	Potentially Significant		Wetlands: Less Than Significant
Potential to disrupt nesting birds during removal of trees and shrubs	Potentially Significant	**BIO-3** Prior to the disturbance of any land within the Coachella Valley Storm Drain Channel, the project shall secure any necessary permits from the Army Corps of Engineers and the California Department of Fish and Game. The project will be required to mitigate any impacts to jurisdictional waters at a ratio of 1:1. This can be accomplished by purchasing local mitigation credits or funding creation of a comparable amount of habitat. This amount of mitigation is the City's baseline requirement, but the City will accept a greater mitigation ratio if required by the responsible regulatory agency. **BIO-4** If tree removal will occur during the bird nesting season (March 1 to September 15) a nesting bird survey shall be conducted by a qualified biologist prior to cutting trees or shrubs down.	Nesting Birds: Less Than Significant

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
CULTURAL RESOURCES:			
The project may impact the following during site grading:		**CUL-1** Prior to issuance of grading permits, a qualified paleontologist shall be retained by the developer to monitor onsite grading, especially in the vicinity of CA-RIV-5876. Any fossiliferous materials found during excavation shall be retained and curated in an appropriate manner at an appropriate facility. The recovery of any fossils shall be coordinated with the County Archaeological Information Center. This measure shall be implemented to the satisfaction of the Community Development Department.	
Paleontological Resources	Potentially Significant		Paleontological Resources: Less Than Significant
Archaeological Resources	Potentially Significant		Archaeological Resources: Less Than Significant
		CUL-2 Prior to the issuance of grading permits, a qualified archaeologist shall be retained by the developer to monitor earth grading or any ground disturbance activities to ensure protection of significant cultural resources. A report of findings shall be prepared and the City shall require that the report have a peer review by an archaeologist qualified to meet the requirements established by the California Secretary of the Interior' Standards and Guidelines. The report and the peer review of the report shall be submitted to the Eastern Information Center, University of California Riverside and the Aqua Caliente Band of Cahuilla Indians or any other Native American Tribe identified during the SB 18 consultation if requested by said tribe(s).	
		CUL-3 During grading, a qualified archaeologist shall be retained by the developer to monitor onsite grading. The monitor(s) shall have the authority to temporarily halt work until the artifacts can be surveyed, recovered, and/or handled in an appropriate manner. If archaeological resources are discovered, all work in that area shall be halted and qualified personnel shall be	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
CULTURAL RESOURCES CONT.		retained to examine, evaluate, and determine the most appropriate disposition of the resource(s). This measure shall be implemented to the satisfaction of the City's Community Development Director in consultation with the Archaeological Information Center (AIC) at UCR. If artifacts of Native American (NA) origin are discovered, official representatives of the NA group shall be consulted to determine the most appropriate disposition of the artifacts, to the satisfaction of the AIC and the NA group. If fossils are found onsite, the AIC shall be contacted to determine disposition, to be funded by the developer. **CUL-4** The project developer shall enter into a Pre-Excavation Agreement with the most appropriate local Native American (NA) group to fund up to 2 NA representatives to have access to the site during grading activities. The designation of monitors shall be coordinated with the following Tribes: Augustine Band of Cahuilla Mission Indians, Aqua Caliente Band of Cahuilla Indians, Morongo Band of Mission Indians, Soboba Band of Luiseno. It is the intent of this Mitigation Measure to avoid duplication of monitoring efforts and to designate the most appropriate Tribe to conduct the monitoring. **CUL-5** If human remains are found during excavation, work shall be halted and the appropriate local Native American (NA) group shall be contacted. If the County Coroner's office determines the remains to be Native American, and it is determined by the Native American Heritage Commission that member(s) of the local NA	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
CULTURAL RESOURCES CONT.		group is (are) the most likely descendants, the developer shall allow reburial of the remains and associated goods at an appropriate offsite location which shall be "capped" to prevent further disturbances in the future. The site of such burial shall not be disclosed to the public, pursuant to Government Code §6254. Details of the reburial shall be negotiated between the developer and the appropriate representatives of the local NA group. If human remains are found, and not determined by the County Coroner's office to be Native American, but believed by the local NA group to be so, the developer shall be required to pay reasonable costs to determine whether the remains are Native American. All NA cultural items and associated grave goods found on site, other than human remains, are to be avoided, relocated, salvaged, returned to the NA group, or any other option decided by the NA group to be appropriate, before development of the area in which the item was found is resumed. The developer shall provide for NA tribal archaeological monitors to be present during any Phase II and potential Phase III surveys of all sites within the project. *CUL-6. Prior to any earth disturbing activities, a final surface collection shall be completed to mitigate additional impacts to surface artifacts that may have been exposed as a result of sand migration within the project boundaries (undeveloped portion). The surface collection shall be conducted using the transit-controlled method All finds recovered shall be catalogued and analyzed. An illustrated, narrative report describing the field investigation and laboratory work shall be prepared*	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
GEOLOGY AND SOILS: The following impacts have been identified: • Potential for soil erosion. • Potential seismic related impacts.	Potentially Significant Potentially Significant	*and submitted to the City and the Eastern Information Center at UCR.* **GEO-1** Geotechnical/soils reports shall be submitted to the Engineering Department for approval prior to issuance of a grading permit. All grading shall be in conformance with the recommendations of the geotechnical/soils reports as approved by the Engineering Department. Recommendations to be addressed within the geotechnical/soils report shall address, at minimum the following issue areas. The geotechnical study shall be approved by the Engineering Department, and applicable recommendations shall be incorporated into the final. grading plan, including: • Site Clearing and Preparation; • Seismic Design Criteria; • Over-excavation, Re-compaction and Fill Placement; • Foundation Design; and • Retaining Walls, Utility Trench Backfill ad Drainage (Ref. 1998 5.5-2a). **GEO-2** An Erosion Control Plan shall be submitted for approval to the City Engineer, prior to issuance of a grading permit. The Erosion Control Plan shall outline methods that shall be implemented to control erosion from graded or cleared portions of the site. The erosion control measures may include one or more of the following: • Placing sandbags along the perimeter of the project site prior to initial grading if grading is to be undertaken during the rainy season (October to March).	Soil Erosion: Less Than Significant Seismic: Less Than Significant

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
GEOLOGY AND SOILS CONT.		• Minimizing the length of time that soils lie exposed after grading. • Landscaping, hydro seeding or any other method of providing soil stabilization to graded areas, in a manner approved by the City Engineer if determined to be required for erosion control in areas not planned for development until subsequent phases. Landscaping and hydro seeding should be under the direction of a licensed landscape architect and approved by the Community Development Department. (Ref. 1998 5.5-2b). **GEO-3** Prior to issuance of a grading permit, the project applicant shall comply with the City of Indian Wells Municipal Code. (Ref. 1998 5.5-2c). **GEO-4** Due to the potential for ground shaking in a seismic event, the applicant shall comply with the standards set forth in the Uniform Building Code to assure seismic safety to the satisfaction of the Community Development Department. (Ref. 1998 5.5-3a). **GEO-5** A structural engineer, civil engineer or architect experienced with earthquake-resistant design shall approve all building plans to determine the adequacy of seismic criteria for project structures, and to recommend appropriate design changes, if needed prior to issuance of building permits. The building plans shall incorporate design measures outlined within the Geotechnical/Soils Report prepared for the project site. (Ref. 1998 5.5-3b).	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
HAZARDS AND HAZARDOUS MATERIALS The following impact has been identified: Potential for accidental release of hazardous substances during construction.	Potentially Significant	**HAZ-1** If waste materials are spilled during construction by the contractor and are believed to involve hazardous waste materials, the contractor shall: • Immediately stop work in the vicinity of the suspected contaminant, remove workers and the public from the area; • Notify the City of Indian Wells Building and Safety Official. • Secure the area as directed by the City of Indian Wells Building and Safety Official; and • Notify the Director, Riverside County Environmental Health. Division (or designee) or appropriate approval authority. The Director shall follow procedures for site assessment, initiate coordination with local, State and regulatory agencies as required, and take remedial action as appropriate. (Ref. 1998 5.1-11)	Accidental Spills: Less Than Significant
HYDROLOGY AND WATER QUALITY: The following impacts have been identified: • ncreased storm water runoff due to converting vacant land to developed land.	Potentially Significant	**HWQ-1** Refer to mitigation measures GEO-2 and GEO-3 identified in Section 3.6 Geology and Soils. (Ref.1998 5.3-1a) **HWQ-2** Prior to grading within the CVWD Whitewater River easement area, the applicant shall obtain an encroachment permit from CVWD. (Ref. 5.3-1b). **HWQ-3** Drainage improvements shall be required	Increased Storm Water Runoff: Less Than Significant

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
HYDROLOGY AND WATER QUALITY CONT. • otential for increased pollutants due to storm water runoff.	Potentially Significant	pursuant to Coachella Valley Water District's requirements. All required drainage improvements, including the retention basins, shall be designed by a California Registered Engineer and shall be submitted for approval to Coachella Valley Water District prior to issuance of grading permits. (Ref. 1998 5.3-2a). **HWQ-4** Prior to grading permit issuance, drainage hydrology and hydraulic calculations shall be prepared in accordance with City of Indian Wells conditions, in order to ensure that post-project runoff does not exceed existing site runoff velocities. (Ref. 1998 5.3-2b). **HWQ-5** In order to prevent exposed soil from erosion during periods of heavy rainfall, the project applicant shall be required to meet all erosion control measures to the satisfaction of the City of Indian Wells Building and Safety Department. Refer to Section 3.6 Geology and Soils for discussion regarding the erosion control plan. (Ref. 1998 5.3-2c). **HWQ-6** The project is required. to meet Storm Water Management regulations. In accordance with City of Indian Wells conditions, prior to grading permit issuance, the project applicant/owner shall file for a National Pollutant Discharge Elimination System (NPDES) permit with the California State Water Resources Control Board and abide by the conditions of the permit as issued. A copy of the NOI, Storm Water Pollution Prevention Plan, and Monitoring Plan shall be submitted to the Engineering Department a minimum of thirty (30) days prior to commencing grading operations. (Ref. 1998 5.3-3a). **HWQ-7** The project applicant shall be required to comply with the City of Indian Wells Engineering	Storm Water Pollutants: Less Than Significant

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
LAND USE AND PLANNING: The following impacts have been identified: • Compatibility with surrounding uses	Potentially Significant	Department requirements contained in the conditions of approval on file in the Community Development Department with respect to urban and general construction stormwater management. (Ref. 1998 5.3-3b). Note: Development of Parcel 1 (hotel site) will require concrete reinforcement of the Whitewater Channel (aka Coachella Valley Storm Channel) slope adjacent to the site, which will require relatively nominal grading. Refer to mitigation measures BIO-3, HWQ-1, HWQ-2 **LUP-1** Refer to mitigation measures TT-1 through TT-3 identified in Sections 3.15 Transportation and Traffic; HWQ-5, 3.8 Hydrology and Water Quality; GEO-2, 3.6 Geology and Soils; NOI-1 through NOI-4, 3.11 Noise; AQ-1 and AQ-2, 3.3 Air Quality,AES-1, AES-2 and AES-3, 3.1 Aesthetics, for additional mitigation related to the land use impacts. (Ref. 1998 5.1.-1) **LUP-2** Refer to mitigation measures NOI-5 identified in Sections 3.11 Noise; AQ-8, 3.3 Air Quality, and AES-3 and AES-5, 3.1, Aesthetics. (Ref. 1998 5.1-2). **LUP-3** The residential area and the hotel/commercial site shall incorporate all feasible design measures to minimize the potential land use compatibility impacts to the satisfaction of the Community Development Department. The following components and design considerations shall be implemented. • Orient truck delivery/loading areas away from existing residential areas and the Southwest Community Church (church). Require equipment storage areas and waste receptacles to be screened and/or designed away from existing	Land Use Compatibility: Less Than Significant

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
LAND USE AND PLANNING CONT.		residential uses. • Limit hours of operation on deliveries of goods, where applicable. • Precise Plans for the proposed project shall demonstrate that the site plan has incorporated appropriate design standards such as architectural treatments, buffers (i.e., landscaping and walkways), setbacks between proposed commercial hotel uses an orientation/design of condominiums and commercial hotel facilities. (Ref. 1998 5.1-4)	
NOISE: The following impacts have been identified: • Short-term construction noise may impact adjacent properties. • Operation of Tennis Garden may impact surrounding properties.	Potentially Significant	**NOI-1** Construction activities shall comply with City of Indian Wells Noise Chapter 9.06 relating to construction noise. If problems arise from construction noise, enforcement of the City's Municipal Code relating to construction-related noise discernible at residential boundaries will help minimize any potential noise impacts. Such noise is prohibited between the hours of Monday through Friday 7:00 am to 5:00 pm Saturday 8:00 am to 5:00 p.m. No Sundays or national holidays. (Ref. 1998 5.6-1a). **NOI-2** All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the City Community Development (Ref. 1998 5.6-lb). **NOI-3** Stationary construction equipment shall be placed such that emitted noise is directed away from	Construction Noise: Less Than Significant Operational Noise: Less Than Significant

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
NOISE CONT.		sensitive noise receivers, to the satisfaction of the Community Development Department. (Ref. 1998 5.6-lb). **NOI-4** Stockpiling and vehicle staging areas shall be located as far as practical from noise sensitive receptors during construction activities, to the satisfaction of the Community Development Department. (Ref. 1998 5.6-1d). **NOI-5 Noise** related to the Tennis Garden shall be regulated by Indian Wells City Council Resolution No. 2001-38 which provides for noise monitoring through the temporary use permit process to ensure that noise from events does not exceed City Noise Standards.	
PUBLIC SERVICES: The project will result in increased demand for the following services: • Police • Fire • Schools	Potentially Significant	**PS-1** Prior to issuance of building permits, the developer, and City of Indian Wells Police Department shall agree upon the procedures required to provide adequate police service to the project. (Ref. 1998 5.4-1). **PS-2** The applicant shall comply with the existing City of Indian Wells Development Impact Fees for fire protection prior to the issuance of building permits for each development phase. These funds are to be used for the purchase of land and to build, equip, or remodel fire stations when necessary as development occurs. (Ref. 1998 5.4-3a). **PS-3** The project applicant shall comply with all applicable sections of the City of Indian Wells Municipal Code for construction, access, water mains, fire flows, and fire hydrants, as required, subject to approval by the Fire Department. (Ref. 1998 5.4-3b).	Police, Fire, School Services: Less Than Significant

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
PUBLIC SERVICES CONT.		**PS-4** Prior to the recordation of a final tract/parcel map (except for a conveyance map), water improvement plans shall be submitted to and approved by the Fire Department for adequate fire protection and financial security posted for the installation. The adequacy arid reliability of water system design, location of valves, and the distribution of fire hydrants is to be evaluated and approved by the Fire Department. (Ref. 1998 5.4-3c). **PS-5** Prior to the issuance of building permits, a construction phasing plan shall be submitted to and approved by the Fire Department. The purpose of this review is to evaluate the adequacy of emergency vehicle access for the type of land use served. (Ref. 1998 5.4-3d). **PS-6** Prior to the issuance of any certificates of use and occupancy, all fire hydrants shall have a "Blue Reflective Pavement Marker" indicating its location on the street or drive per Fire Department Standards. (Ref. 1998 5.4-3e). **PS-7** Prior to final building inspection, the applicant shall satisfy all Fire Department requirements regarding sprinkler systems, fire lanes and extinguishers. (Ref. 5.4-3f). **PS-8** The proposed project shall be in compliance with the City requirements and Fire Department requirements regarding hazardous materials as contained in the conditions of approval on file in the Community Development Department. (Ref. 5.4-3g). **PS-9** The applicant shall pay the prevailing school assessment mitigation fees pursuant to California State	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
		law, prior to issuance of building permits. (Ref. 1998 5.4-21).	
RECREATION: The following impact has been identified: Increased demand for recreational services.	Potentially Significant	**REC-1** The project shall pay in-lieu fees for park services as required by the Coachella Valley Parks and Recreation District or dedicate a portion of the site to the District for public uses. (Ref. 1998 5.4-18a). **REC-2** Prior to issuance of occupancy permits, the project applicant shall construct a Class I bike trail on the south side of Miles Avenue along the project frontage (Parcels 1 and 2). (Ref. 1998 5.4-l8b). **REC-3** Prior to issuance of occupancy permits, the project applicant shall construct a Class. I bike trail along the Washington Street project frontage (Parcels 3 and 4). (Ref. 1998 5.4-19).	Increased Demand for Recreational Services: Less Than Significant.
TRAFFIC AND TRANSPORTATION: The project will result in the following impact: • Increased traffic will have a short-term *and long-term* impact on the existing deficient Level of Service at area intersections until such time that the CVAG Regional Arterial System improvements are fully constructed.	Significant	**TT-1** Prior to the issuance of building permits, the developer shall pay the TUMF to fund its fair share contributions for the following improvements. • Washington St. at Fred Waring: Add a westbound right turn lane on Fred Waring Dr., an additional southbound through lane on Washington Street, and an additional eastbound through lane of Fred Waring Dr. (With regard to the eastbound through lane, the City of Indian Wells is currently completing a street improvement project for Fred Waring Dr. that will be adding an eastbound through lane). • Washington St. at Miles Avenue: Add an additional southbound left turn lane on Washington Street and a westbound right	Short-term *and Long-term* Traffic Impacts: Significant and Unavoidable

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
TRAFFIC AND TRANSPORTATION CONT.		turn lane on Miles Avenue. • Washington St. at Hwy. 111: Add a southbound right turn lane on Washington. • Washington St. at Avenue 48: Add a northbound right turn lane on Washington Street. • Adams St. at Hwy. 111: Add an additional westbound left turn lane and an additional eastbound left turn lane on Highway 111. *The City shall submit the "Supplemental Traffic Impact Analysis for Draft Supplemental EIR for Indian Wells Town Center" prepared by Willdan dated June 18, 2007 to the Coachella Valley Association of Governments for consideration of inclusion of specific improvements contained in Mitigation Measure TT-1 into the ongoing Transportation Project Prioritization Study.* **TT-2** A Traffic Management Plan (TMP) shall be prepared and implemented to the satisfaction of the City of Indian Wells. The TMP shall include, but not be limited to, the following measures: • Provision of continued access to residential properties adjacent to the construction site. • Provide alternate bicycle routes where existing bicycle routes are disrupted by construction activities. • Submit a truck routing plan, for approval. by the City of Indian Wells and other responsible	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
TRAFFIC AND TRANSPORTATION CONT.		public agencies in order to minimize impacts from truck traffic during material delivery and disposal. • The TMP will demonstrate that all inbound vehicle stacking is accommodated on-site with no spill-over onto miles Avenue, and that outbound traffic peaks can be moderated to such an extent that the Level of Service LOS) does not deteriorate below LOS "E" for more than 30 consecutive minutes per day. (Ref. 1998 5.2-1a). **TT-3** Construction related activities will be subject to, and comply with, standard street use requirements imposed by the City of Indian Wells and other public agencies, including the use of flag men to assist with haul truck ingress and egress of construction areas and limiting of large size vehicles to off-peak commute traffic periods. (Ref. 1998 5.2-1b). **TT-4** During periods of heavy equipment access or truck hauling, the project contractor will provide construction traffic signage and a construction traffic flag man to control construction and general project traffic at points of ingress and egress. (Ref. 1998 5.2-1c). **TT-5** Existing Plus Phase 1 Project Conditions assume improvement of the currently deficient Fred Waring Drive/Washington Street intersection to LOS D operation through the addition of two southbound through lanes on Washington Street and one northbound through lane on Washington Street. As such, the project applicant shall pay a fair share of the costs of the Fred Waring Drive/Washington Street intersection improvement through payment of TUMF	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
TRANSPORTATION AND TRAFFIC CONT.		traffic impact mitigation fees for Existing Plus Phase 1 Project Conditions: • Fred Waring Drive/Washington Street - fair share payment of TUMF traffic mitigation fees for the addition of two southbound through lanes on Washington Street and one northbound through lane on Washington Street due to existing deficient condition. (Ref. 1998 5.2-2a). **TT-6** Existing Plus Phase 1 Project Plus Cumulative Conditions assume improvement of the currently deficient Fred Waring Drive/Washington Street intersection to LOS D operation. Despite the implementation of the improvements required for the existing deficiency at the Fred Waring Drive/Washington Street intersection, additional mitigation is required for Existing Plus Phase 1 Project Plus Cumulative Conditions. As such, the project applicant shall pay a fair share of the costs of the following improvements at the Fred Waring Drive/Washington Street intersection through payment of TUMF traffic impact mitigation fees for Existing Plus Project Plus Phase 1 Project Plus Cumulative Conditions: • Fred Waring Drive/Washington Street – fair share payment of TUMF traffic mitigation fees for an addition northbound left turn lane on Washington Street, an addition southbound left turn lane on Washington Street, and an additional northbound through lane on Washington Street for Existing Plus Phase 1 Project Plus Cumulative Conditions. **(Ref. 1998 5.2-2b).** **TT-7** The Highway 111/Cook Street intersection is forecast to operate deficiently with the addition of project	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
TRAFFIC AND TRANSPORTATION CONT.		and cumulative traffic growth for Existing Plus Phase 1 Project Plus Cumulative Conditions. As such, the project applicant shall pay a fair share of the costs of the Highway 111/Cook Street intersection improvement through payment of TUMF traffic impact mitigation fees for Existing Plus Phase 1 Project Plus Cumulative Conditions. • Highway 111/Cook Street- fair share payment of TUMF traffic mitigation fees for the addition of an eastbound right turn lane on Highway 111 at Cook Street due Existing Plus Phase 1 Project Plus Cumulative Conditions. (Ref. 1998 5-2.2c). **TT-8** Existing Plus Phase 1 Project Annual Tennis Event Conditions; "Special Event" coordination between the project applicant and the affected agencies is recommended, including the use of temporary signage, flagmen and shuttle systems. (Ref. 1998 5.2-2d). **TT-9** Existing Plus Project Buildout Conditions assume improvement of the Fred Waring Drive/Washington Street intersection and Highway 111/Cooke Street intersection for Existing Conditions and Existing Plus Phase 1 Plus Cumulative Conditions as discussed above. The Miles Avenue/Highway 111 intersection is forecast to operate deficiently for Existing Plus Project Buildout Conditions. As such, the project applicant shall pay a fair share of the costs of the Miles Avenue/Washington Street intersection improvement through payment of TUMF traffic impact mitigation fees for Existing Plus Project Buildout Conditions: • Miles Avenue/Washington Street - fair share payment of TUMF traffic mitigation fees for the	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
TRAFFIC AND TRANSPORTATION CONT.		addition of an southbound through lane and southbound right turn lane on Washington Street at Miles Avenue, and an eastbound right turn lane on Miles Avenue at Washington Street, for existing plus project buildout conditions. (Ref. 1998 5.2-3a). **TT-10** Existing Plus Project Buildout Plus Cumulative Conditions assume improvement of the Fred Waring Drive/Washington Street intersection recommended for Existing Conditions and for Existing Plus Phase 1 Plus Cumulative Conditions as discussed in TT-9 above. Existing Plus Project Buildout Plus Cumulative Conditions result in a forecast deficiency at the Highway 111/Cook Street intersection. As such, the project applicant shall pay a fair share of the costs of the Highway 11/Cook Street intersection improvement through payment of TUMF traffic impact mitigation fees for Existing Plus Project Plus Buildout Plus Cumulative Conditions: • Highway 111/CookStreet- fair share payment of TUMF traffic mitigation fees for conversion of the eastbound right turn lane added on Highway 111 at Cook Street for existing plus phase 1 project plus cumulative conditions to an eastbound through lane. Additionally, fair share payment of TUMF traffic mitigation fees for an additional northbound left turn lane on Cook Street, an additional southbound left turn lane on Cook Street, an additional eastbound left turn lane on Highway 111, an additional westbound left turn lane on Highway 111, an additional eastbound through lane on Highway 111, and an additional westbound through lane on Highway 111. (Ref.	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
		1998 5.2-3b).	
TRAFFIC AND TRANSPORTATION CONT.		**TT-11** The 42nd Avenue/Highway 111 intersection is forecast to operate deficiently for Existing Plus Project Buildout Plus Cumulative Conditions. The project applicant shall pay a fair share of the costs of an additional southbound left run lane on Washington Street at 42nd Avenue, and restriping of northbound Washington Street at 42nd Avenue to one northbound left turn lane and two northbound through lanes, through payment of TUMF traffic impact mitigation fees for Existing Plus Project Buildout Plus Cumulative Conditions: • 42nd Avenue/Washington Street - fair share payment of TUMF traffic mitigation fees for the additional southbound left turn lane on Washington Street at 42nd Avenue, and re-striping of northbound Washington Street at 42nd Avenue, and restriping of northbound Washington Street at 42nd Avenue to one left turn lane and two through lanes, for existing plus project buildout plus cumulative conditions. (Ref. 1998 5.2-3c). **TT-12** The Miles Avenue/Jefferson Street intersection is forecast to operate deficiently for Existing Plus Project Buildout Plus Cumulative Conditions. The project applicant shall pay a fair share of the costs of an additional northbound left turn lane on Jefferson Street at Miles Avenue, and re-striping of southbound Jefferson Street at Miles Avenue to one southbound left run lane and one southbound through/right turn lane, through payment of TUMF traffic impact mitigation fees	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
TRAFFIC AND TRANSPORTATION CONT.		for Existing Plus Project Buildout Plus Cumulative Conditions: • Miles Avenue/Jefferson Street - fair share payment of TUMF traffic mitigation fees for the additional northbound left turn lane on Jefferson Street at Miles Avenue, and restriping of southbound Jefferson Street at Miles Avenue to one left turn lane and one through/right turn lane, for existing plus project buildout plus cumulative conditions. (Ref. 1998 5.2-3d). **TT-13** Existing Plus Project Buildout Annual Tennis Event Conditions: Refer to Mitigation Measure No. TT-8. (Ref. 1998 1998 5.2-4a). **TT-14** Existing Plus Project Buildout Annual Tennis Event Plus Cumulative Conditions: Refer to Mitigation Measure No. TT-7 (Ref. 1998 5.2-2d). *TT-15 Prior to the issuance of the first occupancy permit for the area north of Miles Avenue, a traffic signal shall be installed at the intersection of Washington Street and Via Sevilla/Project Entrance.*	
UTILITIES: The project (Town Center) will result in an increased demand for the following utilities and services: • Electricity • Natural Gas • Water	Potentially Significant for all utilities except Natural Gas	**UTL-1** All final development plans shall be conditioned to require that all services and facilities shall be built in accordance with Imperial Irrigation District (IID) and Southern California Edison (SCE) policies and extension rules on file with the California Public Utilities Commission. (Ref. 1998 5.4-6a). **UTL-2** All building plans shall comply with the Energy Conservation Standards set forth in Title 24 of the' California Administrative Code and local building and	Increased demand for electricity, water, wastewater treatment, solid waste disposal: Less Than Significant

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
• Wastewater treatment • Solid Waste disposal **UTILITIES CONT.**		safety codes. (Ref. 1998 5.4-6b). **UTL-3** The developer shall consult with IID and SCE regarding participation in programs designed to increase the efficiency of operation and decrease energy costs. These programs may include new construction programs and off-peak cooling/thermal storage. Design criteria shall include the utilization of energy-efficient architectural and landscaping design concepts that would contribute to a reduction in the demand for energy. These concepts may include natural heating and/or cooling through sun and wind exposure and solar energy collection systems. (Ref. 1998 5.4-6c). **UTL-4** Water system design and all public water mains, meters, and appurtenances shall be installed and constructed in compliance with the applicable standards, specifications, policies, and regulations of the CVWD and a construction phasing plan shall be approved, prior to project final or occupancy permits. (Ref. 1998 5.4-12a). **UTL-5** All water mains shall be sized to convey peak hour demands or maximum day demands with fire flows, prior to occupancy permits. All public streets and easements must be capable of containing and conveying the design fire flow capacity, as determined by the Fire Department. (Ref. 1998 5.4-12b). **UTL-6** Prior to building permit issuance a clearance letter from the Coachella Valley Water District shall be provided to the Community Development Department verifying compliance with the conditions as follows: Stormwater and drainage, protection and control, water and sewer utility clearance, and low water efficient landscaping and irrigation. (Ref. 1998 5.4-12c).	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
UTILITIES CONT.		**UTL-7** Prior to the issuance of building permits, the developer shall demonstrate use of low water use fixtures, plumbing fixtures and appliances, to the satisfaction of the Community Development Department and CVWD, which may include the following: Interior: • Supply line pressure: Reduce water pressure greater than 60 psi to 60 psi or less by means of a pressure-reducing valve. • Drinking fountains: Equip drinking fountains with self-closing valves. • Ultra-low flush toilets: Install 1.6 gallon per flush toilets in all new construction. Exterior: • Landscape with low water-consuming plants wherever feasible. • Minimize use of lawn by limiting it to lawn-dependent uses. • Group plants of similar water use to reduce over irrigation of low-water-using plants. • Use mulch extensively in all landscaped areas. Mulch applied on top of soil would improve the water-holding capacity of the soil by reducing evaporation and soil compaction.	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
UTILITIES CONT.		• Install efficient irrigation systems which minimize runoff and evaporation, and maximize the water which would reach the plant roots. Drip irrigation, soil moisture sensors, and automatic irrigation systems are a few methods to consider in increasing irrigation efficiency and may be feasible for the project. • Use pervious paving material whenever feasible to reduce surface water runoff. • Investigate the feasibility of utilizing reclaimed wastewater, stored rain water, or gray water for irrigation. (Ref. 1998 5.4-12d). **UTL-8** The project, applicant shall comply with the CVWD requirements for water service. (Ref. 1998 5.4-12e). **UTL-9** The applicant shall submit a construction phasing plan for review and approval by the Community Development Department prior to final design plan approval. (Ref. 1998 5.4-14a). **UTL-10** Prior to map recordation the applicant shall comply with City of Indian Wells Municipal Code Chapter 14.04 (Sewage System) and CVWD requirements as contained within the conditions of approval on file in the Community Development Department for sewer service. (Ref. 1998 5.4-14b). **UTL-11** Prior to issuance of occupancy permits, the project applicant shall provide the Community Development Department with evidence of compliance with guidelines set forth by the State of California	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
UTILITIES CONT.		accordance with the California Integrated Waste Management Act of 1989 (AB 939), which requires jurisdictions to divert 50 percent of solid waste from landfills. This shall include consideration for offering marketable materials, such as concrete, asphalt and steel, to recyclables. (Ref. 1998 5.4-16a). **UTL-12** Prior to issuance of building permits, the applicant shall submit 3 copies of a site plan, which includes the final design for the recyclable collection and storage area to Community Development Department review and approval. The storage area for recyclable materials shall comply with the following standards: • The design, construction and location of recycling areas shall not conflict with any applicable federal, state or local laws relating to fire, building access, transportation, circulation or safety and shall be designed to be architecturally compatible with affected structures and existing topography; • The recycling storage areas shall be conveniently located at or near solid waste collection areas, where feasible, but maintain adequate separation, fencing and landscaping to ensure that adjacent areas are not impacted by any associated noise, odor, vectors or glare for the storage areas; • The recycling storage areas, bins and containers shall be adequate in capacity number and distribution to achieve fifty-percent recycling of the total waste generated by the project; • The recycling storage areas shall be sufficiently	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation
UTILITIES CONT.		protected from rain which might render the collected materials unmarketable and shall be secure from theft; • Collection vehicles and personnel shall have unobstructed access to the storage area; and • All recycling bins shall be labeled with the universal recycling symbol and with signage indicating to the users the type of material to be deposited in each bin. (Ref. 1998 5.4-16b). **UTL-13** Items to be collected for recycling from a residential or commercial establishment depend on the types of materials available for recycling and the hauler's collection system. The project proponent should work with his permitted refuse hauler to identify which materials may be collected for recycling and on what schedule. (Ref. 1998 5.4-16c).	

Issue/Existing Conditions	Environmental Impacts Before Mitigation	Mitigation Proposed	Project Impacts After Mitigation

2.0 PROJECT DESCRIPTION

The following information is from the Draft SEIR dated August 15, 2007 and is provided for reference purposes. There have been no changes to the project.

2.1 LOCATION

The total project area consists of approximately 179 acres of land located on the west side of Washington Street both north and south of Miles Avenue in the northeast portion of the City of Indian Wells. The site is located in Section 19, Range 7 East, Township 5 South in Riverside County. It can be found on pages 819 and 849 of the Thomas Brothers Map for Riverside County. The regional location of the project site is shown in Exhibit 1. The project site boundary is shown in Exhibit 2, while an aerial photograph of the project area is shown in Exhibit 3.

2.2 PROJECT SETTING

The Indian Wells Tennis Garden was constructed in 2000 on approximately 54 acres of the overall 179-acre site. The remainder of the site has remained vacant. There is a small pump house at the southwest corner of Washington Street and Miles Avenue and an area on the south side of Miles Avenue being used as a sod farm. In addition, approximately 39 acres south of Miles Avenue is used for interim overflow parking for the Tennis Garden. Otherwise, there are no improved uses on the remainder of the proposed project site. The acreage summary for the Indian Wells Town Center project and additional parking lot is described as follows:

LAND USE	ACRES
Indian Wells Tennis Garden (existing)	54
Proposed 1,632 space parking lot (City Owned)	13
Planning Area One (Retail/Entertainment/Commercial)	29
Planning Area Two (Resort or Condominium Hotel)	22
Planning Area Three (Resort Residential)	25
Planning Area Four (Retail/Restaurant)	3
Coachella Valley Storm Channel	33
TOTAL	**179**

Note: All acreage figures have been rounded.

The site is currently designated as "Resort Commercial" and "Sports Complex" by the Indian Wells Land Use/Zoning Map. Surrounding land uses are as follows:

Site: Existing Indian Wells Tennis Gardens and vacant land.
North: Southwest Community Church.
West: Vacant land.
East: Single-family residences (City of La Quinta)
South: Coachella Valley Storm Channel.

Exhibit 1

Regional Location Map
Indian WellsTown Center SEIR

EPC Land Planning

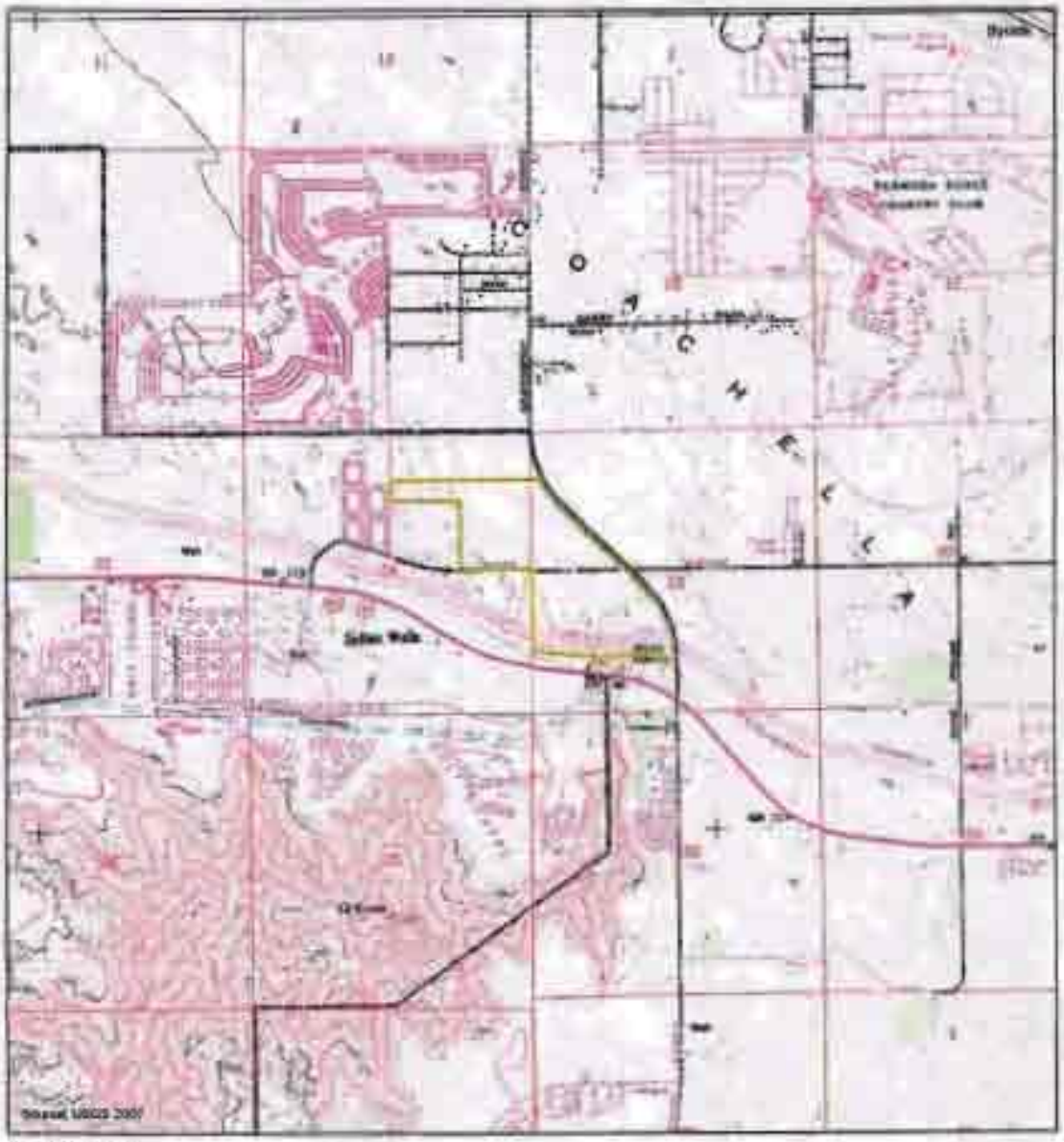
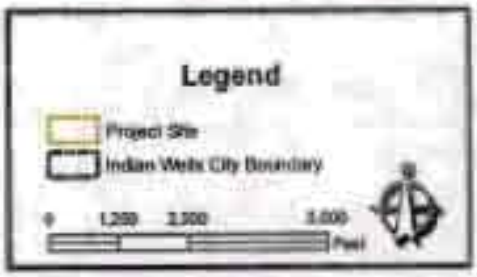


Exhibit 2

Project Location Map
Indian Wells Town Center SEIR

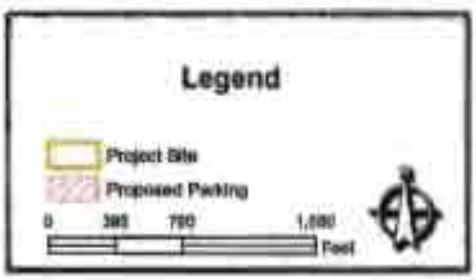


EPC Land Planning

Exhibit 3

Aerial Photograph
Indian Wells Town Center SEIR

EPC Land Planning



2.3 PROJECT CHARACTERISTICS

2.3.1 Proposed Uses

The land that is currently vacant, (92 acres developable), was addressed under the 1998 EIR. It is located immediately east of the Indian Wells Tennis Garden and on the north and south side of Miles Avenue, and is being proposed for development as the "Indian Wells Town Center".

North of Miles Avenue, the project proposes to construct the following uses: 32 acres of mixed use consisting of retail, restaurants, offices and a 2,400 seat theater for a total of 362,510. (Note: 400,000 square feet is allowed provided all development code requirements are met). (See Exhibit 5). There is also proposed a 13-acre City owned parcel that will be developed into 1,632 permanent parking spaces for use by the Tennis Garden. (See Exhibits 3).

The portion of the project south of Miles Avenue includes a 300-room condominium or resort hotel on 22 acres and 65 single-family detached homes on 25 acres. The Coachella Valley Storm Channel encompasses approximately 33 acres. Table 1 provides a detailed breakdown of the proposed land uses compared to the project evaluated in the 1998 EIR and the specific uses of the proposed project. Table 2 summarizes the differences between what was approved in the 1998 EIR and the uses being evaluated in the SEIR.

Overall, the proposed plan is similar in nature and character of the approved project because it contains similar types of uses. The main differences from the approved to the proposed plan are: more restaurants; less hotels; no service station/mini-mart; more mixed use retail commercial; and less residential units. The SEIR also evaluates 13 acres of land for additional permanent parking for the Tennis Garden. The land use plan of the previously approved project analyzed in the 1998 EIR is shown in Exhibit 4, *Composite Site Plan (Original Approved Project)*. The new plan for the proposed "Indian Wells Town Center" is shown in Exhibit 5. Photographs of the project site are shown in Exhibit 6.

Table 1. Approved and Proposed Land Uses

Land Use	Per 1998 EIR	SIZE	Per Supplemental EIR	Size	Notes
Tennis Complex	Stadium #1 – 16,000 seats Stadium #2 – 8,050 seats Stadium #3 – 3,000 seats (Includes practice courts, clubhouses, commissary, support facilities, parking)	61 acs	N/A	54	Tennis Garden is existing and no changes are proposed to the facility
Commercial	Gas Station, Mini-Market, Restaurants	9 acs. 95,000 SF	Major Retail. General Retail, Offices; Restaurants/Food, Theater	32 acs. 296,860 SF	Max. of 400,000 s.f. allowed
Movie Theater	None	N/A	Movie Theater	2,400 seats 65,650 SF	Acreage included within 32 acre Commercial area above
Hotel	Hotel (Two) -350 rooms each)	28 acs. 700 Rooms	Condominium or Resort Hotel (One)	22 acs. 300 Rooms	
Residential	Attached "Casitas"	13 acs. 140 units	Single-family detached	65 units 25 acs.	
Temporary Parking	Unimproved area s/o Miles Avenue	39	N/A	N/A	
Additional Parking for Tennis Garden	N/A	N/A	Additional Parking Area	1,632 sps. 13 acs.	
Easements	Whitewater River Channel	33 acs.	Whitewater River Channel	33 acs.	
TOTAL	**Acreage** **Square Feet (SF)** **Additional Parking Spaces** **Stadium Seats** **Hotel Rooms** **Theater Seats** **Housing Units**	**183** **95,000** **N/A** **16,000** **700** **N/A** **140**		**179** **362,510** **1,632** **N/A** **300** **2,400** **65**	**Max. 400,000 SF**

Source: 1998 EIR Table 1and site plan for Indian Wells Town Center, Keisker & Wiggle Architects 5/28//07

Notes: -Acres rounded

Table 2. Land Use Changes 1998 EIR vs. Supplemental EIR

Land Use	Previous EIR	Supplemental EIR	Change
Tennis Complex	Stadium #1 – 16,000 seats Stadium #2 – 8,050 seats Stadium #3 – 3,000 seats (Includes practice courts, clubhouses, commissary, support facilities, parking)	Stadium #1 – 16,000 seats Stadium #2 – 8,050 seats Stadium #3 – 3,000 seats (Includes practice courts, clubhouses, commissary, support facilities, parking)	None. Tennis Garden is an existing facility.
Commercial-Mixed Use & Theater	95,000 sq. ft.	362,510 (Max. of 400,000 sq. ft. allowed if Zoning Code requirements are met)	+ 267,500 sq. ft. (+305,000 if max. SF of 400,000 is allowed)
Residential	140 units	65 units	- 75 units
Hotel	Two- 700 rooms	One- 300 rooms	- 400 rooms

Source: 1998 EIR and site plan for Indian Wells Town Center, Keisker & Wiggle Architects 5/28/07

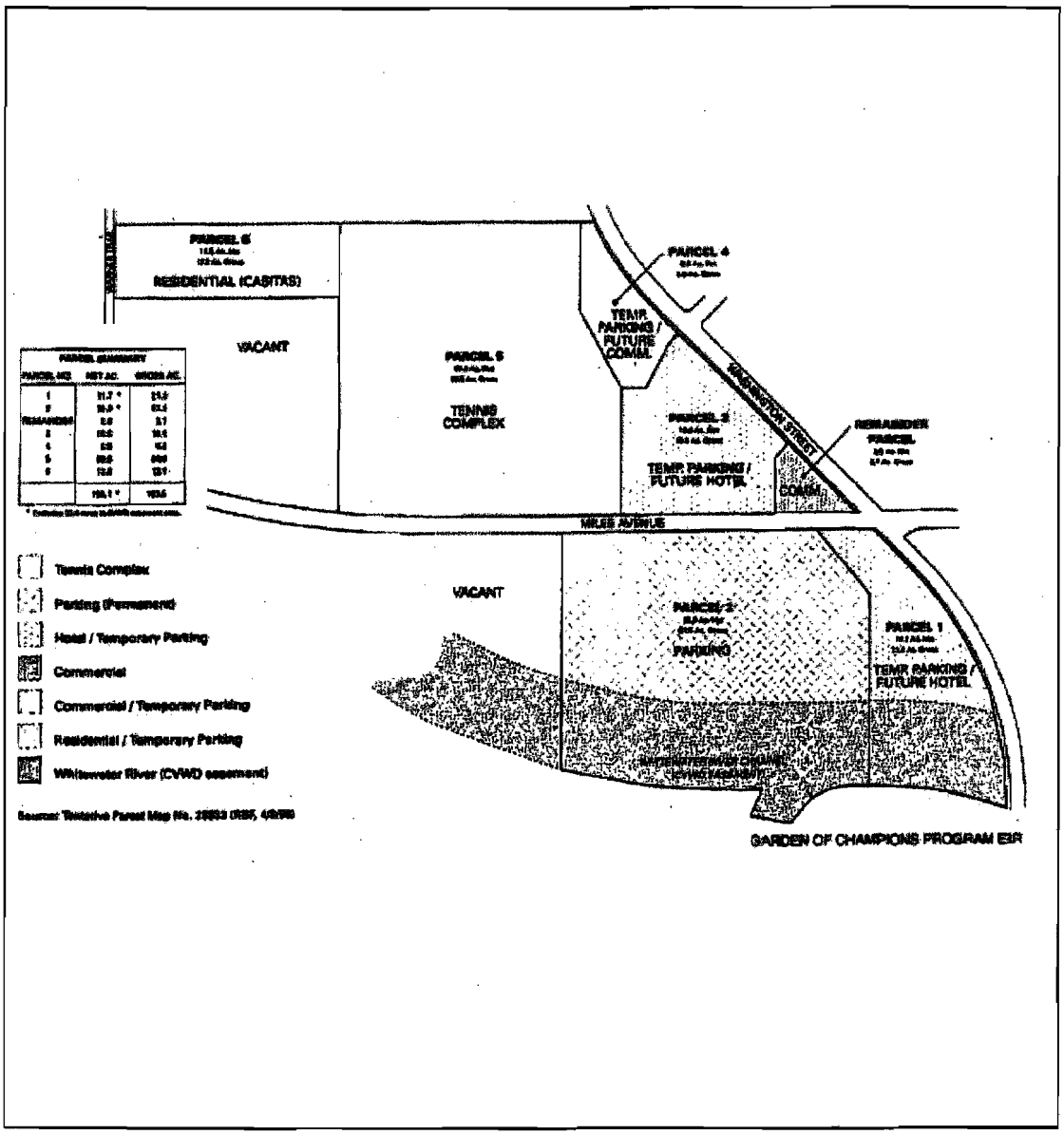


Exhibit 4

1998 Project Site Plan
Indian Wells Town Center SEIR

EPC Land Planning

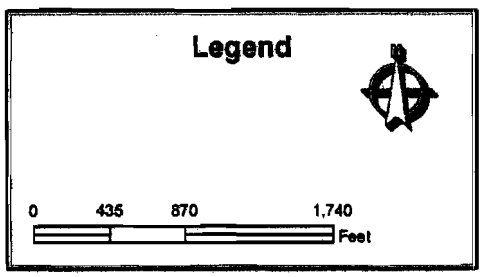


Exhibit 5

IWTC Site Plan
Indian Wells Town Center SEIR

EPC Land Planning

Exhibit 6. Site Photographs

a. Looking west, south of Miles Avenue from Washington Street

b. Looking northwest, south of Miles Avenue from Washington Street

Exhibit 6. Site Photographs (cont'd)

c. Looking north from south of Miles Avenue and west of Washington Street (intersection in upper right, Indian Wells Tennis Garden in upper left)

d. Looking north from southwest corner of Miles Avenue and Washington Street

Exhibit 6. Site Photographs (cont'd)

e. Looking northwest from southwest corner of Miles Avenue and Washington Street

f. Looking northwest toward Indian Wells Tennis Garden from the southwest corner of Miles Avenue and Washington Street

2.3.2 Improvements

The developer will construct water and sewer connections and a network of pipelines to adequately serve the proposed uses of the project. The developer will install electrical and natural gas connections and infrastructure to provide energy to the proposed uses. All utility improvements will be underground as required by the City Public Works Department and the General Plan. The developer will install storm drains to connect to the existing system of down drains and storm drain lines in major streets, including Miles Avenue and Washington Street. At this time, no offsite improvements are planned other than connections to adjacent lines.

2.3.3 Maintenance

The various improvements, infrastructure, parking lots, etc. will be installed by the developer and maintained until a Property Owners Association (POA) can be established to take over maintenance of the development.

2.3.4 Phasing

The project does not have any specific phases or construction timeframe at this time except for the hotel. The Commercial and residential uses are expected to built out based on market conditions.

Hotel Phase One: 150 condo units or rooms are in this phase, plus the freestanding restaurant/banquet space and the spa. The hotel is multi story - three, four, five, six and seven stories. It is layered and stepped.

Hotel Phase Two: This phase will also have 150 condo units or rooms. This Phase Two has the same number of floors as Phase One. The hotel is multi story - three, four, five, six and seven stories. It is layered and stepped.

2.3.5 Grading

Exact grading quantities are not known at this time but the site is relatively flat with only a slight slope toward the Whitewater River Channel to the south. Grading is expected to be balanced onsite to eliminate offsite soil import or export. Approximately ~~10~~ ***20*** acres is anticipated to be graded per day.

3.1 AESTHETICS

3.1.1 ENVIRONMENTAL SETTING

a. Visual Character and Scenic Resources

The site is vacant, except for the Indian Wells Tennis Garden which is located on the north side of Miles Avenue and west of Washington Street. The vacant areas of the project site (92 +/- acres), both north and south of Miles Avenue contain sparse vegetation and the terrain is relatively flat. South of Miles Avenue, a 39 acre portion of this vacant land is being used for interim overflow parking for the Indian Wells Tennis Garden and a portion of the site south of Miles Avenue is being used for a sod farm. Section 2.0, *Project Description*, of this document provides various views of the site and surrounding area as illustrated in Exhibit 6, *Site Photographs*, while Exhibit 3 provides an aerial photo of the site. The Santa Rosa Mountains are located nearby to the southwest of the site and the San Jacinto Mountains are located further to the southwest near Highway 74.

Existing land uses surrounding the site include the following:

North: Southwest Community Church.
South: Coachella Valley Storm Channel (residential south of the channel).
East: Residential north of Miles Avenue and Commercial south of Miles Avenue in the City of La Quinta.
West: Vacant Land (residential further to the west)

b. Light and Glare

The general area is not nearly as dark as outlying desert land as a result of nearby uses such as the Southwest Community Church to the north, housing to the east, commercial to the southeast in the City of La Quinta, and operations at the Indian Wells Tennis Garden.

3.1.2 PROJECT IMPACTS

a. Summary of Conclusions in the 1998 EIR:

The 1998 EIR found that:

- Project construction would create temporary aesthetic nuisances associated with site grading and construction activities but would be less than significant with mitigation.

- Operation of the commercial and residential uses in addition to the Tennis Garden would alter views on-site and across, and the viewshed from neighboring properties but would be less than significant with mitigation.

b. SEIR Analysis:

1. CEQA Significance Criteria Ia: Would the project have a substantial adverse effect on a scenic vista?

The proposed project has changed as follows:

- The original project proposed two (2) multi-story hotels, one on the north side of Miles Avenue and one on the south side of Miles Avenue. Both hotels were to be located adjacent to the west side of Washington Street. The proposed project has eliminated the hotel on the north side of Miles Avenue and is proposing mixed-use retail instead.

- There will be more mixed-use retail on the north side of Miles Avenue with the elimination of the hotel. The project will be a retail/entertainment center with a movie theater, open-air restaurants, and office and shops surrounding two large plazas.

- The 1998 EIR did not have specific information in regard to the building heights for the future uses so the analysis primarily focused on the Tennis Garden facility. Now that more detailed information is available, the height of the hotel will impact some views of the mountains to the southwest of the site.

Currently the site is vacant and surrounding properties to the east and north have a partially obstructed view of the Santa Rosa Mountains to the southwest (primarily the lower elevations of the ~~mountain areas southwest~~ of the Coachella Valley Storm Channel). The foreground views from the homes on Via Pavion within the Palm Royale Country Club are obstructed to some degree at ground level because of the existing block wall adjacent to Washington Street. ~~(See Exhibit 7).~~ However, development of the site would introduce structures on vacant land and the existing view will be further obstructed.

Hotel

The proposed hotel on the south side of Miles Avenue is proposed to be a 300-unit condominium or resort hotel in a multi-level "terrace "design. The overall building from the street grade at the Washington Miles intersection is lower than 7 stories in vertical, measured height. Only a small portion of the hotel has a seventh floor, sixth floor, and fifth floor.

Building heights range from forty-six (46) feet to ninety (90) feet including some of the accent elements. The City of Indian Wells allows structures to exceed the height limit of fifty-two (52) feet for the Resort Commercial zone in which the hotel is located with the approval of a Conditional Use Permit or Specific Plan. ~~See Exhibits 7 and 8 for a photo representation of "before" and "after" views.~~

Exhibits 8a-d illustrates 4 locations from where photographs of the project site were taken to evaluate the impacts of the hotel on views of the Santa Rosa Mountains. The 4 locations are looking westerly from Washington Avenue between Via Sevilla and south of Miles Avenue.

Exhibits 8a through 8d shows before and after views of project site in regard to the hotel.

View 1 is from a vantage point on the northeast corner of Washington Street and Miles Avenue. From this view, the hotel blocks the higher peaks of the foothills of the Santa Rosa Mountains, but views of the foothills are still visible to the north and south of the hotel.

View 2 is from a vantage point on the east side of Washington Street approximately 550 feet north of Miles Avenue. From this vantage point, the lower portions of the foothills of the Santa Rosa Mountains to the west of the hotel are blocked but a prominent portion of the higher elevations are clearly visible to the north of the hotel.

View 3 is from a vantage point on the north side of Miles Avenue approximately 950 feet east of Washington Street. From this vantage point a significant portion of the Santa Rosa Mountain foothills are blocked by the hotel. In addition, the existing hotel located on the southeast corner of Miles Avenue and Washington Street in the City of La Quinta block the lower elevations of the Santa Rosa Mountain foothills to the south of the proposed hotel.

View 4 is from a vantage point on the east side of Washington Street approximately 800 feet south of Miles Avenue. From this vantage point, only the northern portion of the Santa Rosa Mountain foothills are partially blocked. A significant portion of the foothills remains visible.

Indian Wells General Plan Policy IIIA1.6 states: "*Locate and site development to preserve public and private views of hillside areas, the Santa Rosa Mountains, and other scenic vistas*". As stated above, the 1998 EIR analyzed the impact of two (2) multi-story hotels, one on the north side of Miles Avenue and one on the south side of Miles Avenue. Both hotels were to be located adjacent to the westside of Washington Avenue. The proposed project has eliminated the hotel on the north side of Miles Avenue and is proposing a retail and entertainment center instead.

Based on the above analysis, ~~S~~*some* views of the mountains from the homes within the Palm Royale Country Club will be partially blocked by the taller portions of the hotel building (particularly those immediately adjacent to Washington Street on Via Pavion). This is an expected occurrence when vacant land in close proximity to existing homes is developed. The impacts to views can be partially lessened by the following design features that are included in the project:

- The architectural design of the hotel (building is terraced) to reduce mass and bulk;
- Building setbacks range from 400 to 600 feet plus from the homes on Via Pavion;
- A 300- foot wide "view corridor" is provided between Building A5 and Building C *(See Exhibit 9). In addition, an additional view corridor is provided in the area north of the hotel across the area where the single-family homes are proposed.*

Indian Wells General Plan Policy IIIA1.6 has been complied with to the maximum extent feasible, absent leaving the site vacant or constructing single-story buildings, by incorporating the design features as described above. *Although views of the Santa Rosa Mountains are not totally blocked,* ~~However~~, impacts in regard to CEQA Significance Criteria Ia will be significant for ~~those~~ ***some*** homes in the immediate foreground of the project site on Via Pavion.

Single-Family Residential

The area immediately west of the hotel is proposed for single-family detached residential development and will not have any significant impact on views. No mitigation is required in regard to CEQA Significance Criteria Ia.

Retail and Entertainment Center

The area north of Miles Avenue is proposed for the retail/entertainment portion of the project and includes retail, office, restaurants and a theater. The retail buildings will be one (1) and two (2) story buildings arranged around "courts" and "plazas". Office buildings may be up to four stories in height. The building heights are consistent with the City of Indian Wells Municipal Code requirements (52 feet). *In order to reduce impacts in regard to height along Washington Street, the Town Center Specific Plan is restricting the height of buildings located on Pad S and T along Washington Street, south of Via Sevilla to one (1) story with a maximum height of twenty-four (24) feet and Pad C along Miles Avenue, adjacent to the intersection of Planning Area 4 to one (1) story with a maximum height of twenty-four (24) feet.* The retail/entertainment area will be comparable to other commercial developments in the area.

Development of the retail/entertainment area will also serve as a buffer between the Indian Wells Tennis Garden and the residential uses to the east. Although development of the mixed-use area north of Miles Avenue will have some impact to views of the mountains to the west, those views are already impacted by the existing tennis facility which reaches heights of approximately sixty-five (65) for the stadiums and 100 +/- feet for the light standards. The impact ~~on views to~~ existing homes in close proximity to vacant land is typical when the land is ultimately developed into its planned use (i.e. commercial). Based on the above analysis, no mitigation measures are proposed for CEQA Significance Criteria Ia in regard to the commercial area north of Miles Avenue.

2. CEQA Significance Criteria Ib: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The 1998 EIR stated that "the Western Coachella Valley Plan designates Washington Street as a scenic highway between Interstate 10 and Indian Wells" (1998 EIR Page 5.9-7). However, according to the updated Western Coachella Valley Area Plan adopted October 7, 2003, Washington Street is not listed as a County Eligible, State Designated, nor State Eligible highway. (Riverside County Integrated Project (RCIP), Figure 9 of Western Coachella Valley Area Plan).

Highway 111 is considered to be "State Eligible" for a Scenic Highway. However, according to the RCIP, the "State Eligible" designation applies to Highway 111 basically between Interstate 10 and Highway 74. Thus, the closest point of Highway 111 to the project site is Highway 74 in the City of Palm Desert. Given the distance from the project site to this intersection, the project will not have an impact on Highway 111. Therefore, there will not be a significant impact to a scenic corridor or scenic highway by development of the project site. There are no significant trees or rock outcroppings on the site that will be impacted. Based on the above analysis, no mitigation is proposed for CEQA Significance Criteria Ib.

3. CEQA Significance Criteria Ic: Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Currently the site is vacant except for the Indian Wells Tennis Garden to the west. The following analysis addresses the project's visual impact on the surrounding area and the project's compatibility with other structures in the vicinity. In this regard, landscaping and architecture play an important role in determining a structure's visual impact. In addition, visual impact is based on the impact of the development to the site itself. A site with unique visual features or topography would be more impacted than a site that does not have unique features.

The hotel, retail/entertainment center, and the single family-residences are proposed on a site that is relatively flat and has no unique features. Some portions of the site south of Miles Avenue are used for interim parking for the Tennis Garden and a sod farm. Both portions of the site (north and south of Miles Avenue) have been disturbed by human activity (walking, off-road vehicles etc.).

In regard to the proposed structures, Architectural Guidelines are contained in the Town Center Specific Plan document to ensure that the aesthetic character of the hotel, retail/entertainment center, and residential uses embodies the "*Desert Lifestyle Architecture*" theme. Because of this, the site is proposed to be developed comprehensively under one set of guidelines into a high quality center with landscaping, building design elements, and signage that are compatible with the surrounding area.

With the Mitigation Measures in Section 3.1.3, the impacts for CEQA Significance Criteria Ic will be less than significant.

4. CEQA Significance Criteria Id: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The requirements for lamp source and shielding of light emissions for outdoor light fixtures is regulated by City of Indian Wells Municipal Code Section 22.12.050 which requires adherence to the following objectives in regard to outdoor lighting:

- Avoid interference with reasonable use of adjoining properties.
- Minimize on-site and off-site glare.
- Limit luminaries height to avoid excessive illumination.

In addition, the California Energy Commission adopted changes to Title 24, Parts 1 and 6, Building Energy Efficiency Standards (Standards), on November 5, 2003. These new Standards became effective on October 1, 2005. Included in the changes to the Standards are new requirements for outdoor lighting. The requirements vary according to which "Lighting Zone" the equipment is in. The Standards contain lighting power allowances for newly installed equipment and specific alterations that are dependent on which Lighting Zone the project is located in. Existing outdoor lighting systems (Tennis Garden) are not required to meet these lighting power allowances; however, the Indian Wells Town Center portion of the project is as well as the additional parking lot for the Tennis Garden.

An important part of the Standards is to base the lighting power that is allowed on how bright the surrounding conditions are. The eyes adapt to darker surrounding conditions, and less light is needed to properly see. When the surrounding conditions get brighter, more light is needed to see. The least power is allowed in Lighting Zone 1 and increasingly more power is allowed in Lighting Zones 2, 3, and 4. The project site is located in Lighting Zone 3. Providing greater power than is needed potentially leads to debilitating glare, to an increasing spiral of brightness as over-bright projects become the surrounding conditions for future projects causing future projects to unnecessarily require greater power, and to wasting of energy. Compliance with the mandatory requirements of Title 24 will reduce the impacts of adding new sources of lights to the surrounding area.

Title 24 Standards also address reducing glare from windows and to provide for energy efficiency. This can be accomplished by glazing of exterior windows and using architectural elements (i.e. overhangs, eaves, etc.) to shield exterior windows from direct sunlight. The proposed project is similar or equivalent to the approved project in that it contains various uses that will create additional sources of light and some glare, but to a lesser extent than the Tennis Garden. The 1998 EIR contained several mitigation measures to address light and glare; Mitigation Measure 5.9-1 (construction and security lighting shall use low pressure sodium lighting); Mitigation Measure 5.9-2a (lighting shall be hooded and directed so as not to shine on adjoining properties); Mitigation Measure 5.9-2b (lighting plans to include low pressure sodium lights, lighting be shielded and filtered). Based on the above analysis, no additional mitigation other than the 1998 EIR mitigation measures is proposed for CEQA Significance Criteria Id.

c. Impact Conclusions 1998 EIR v. SEIR

The 1998 EIR primarily addressed Aesthetics as they pertained to the Tennis Garden because more detailed plans were known at that time for that facility. The remaining vacant portion of the site slated for future development was intended to undergo further environmental review and analysis. The 1998 EIR did address the height of the Tennis Garden stadium exceeding the County's 50 foot height limit with approval of a Conditional Use Permit. The 1998 EIR concluded that the height of the Tennis Garden stadium "would result in a loss of the existing open views and desert habitat, such impacts are considered less than significant due to the site's lack of unique visual features and because it is not a prominent landmark" (Ref. 1998 EIR, Page 5.9-5)

Now that the site has been annexed into the City of Indian Wells, the City's Development Code requirements apply. The Resort Commercial Zone allows buildings to be a maximum of 52 feet high. That height limit may be exceeded upon approval of a Specific Plan (i.e. Indian Wells Town Center Specific Plan). As stated above, the hotel height is proposed to be up to ninety (90) feet high is some places.

Although the hotel portion of the project has been designed to reduce the impact on the views of the foothills of the Santa Rosa Mountains to the residences most impacted (located immediately east of the site in the Palm Royale Country Club on Via Pavion), some views will be blocked. This impact is considered to be Significant.

Based on the above analysis, the impacts related to Aesthetics as analyzed in the 1998 EIR and the SEIR remain the same (except for the hotel's impact on the views of the foothills of the Santa Rosa Mountains for some residences).

d. NOP Comments

During the NOP period, the City of La Quinta requested that the SEIR examine impacts of building heights and the potential to obstruct views of the mountains for residents living east of the project (primarily in the Palm Royale Country Club). In addition, issues were raised about future signage.

3.1.3 MITIGATION MEASURES

a. 1998 EIR: The following mitigation measures were adopted for Aesthetic related impacts:

- **Short-Term Impacts:** Mitigation Measures 5.9-1a (equipment storage to be 100 feet away from property lines), 5.9-1b (remove construction debri)

- **Long-Term Impacts:** Mitigation Measures 5.9-2a (compliance with Design Guidelines for Western Coachella Valley Plan), 5.9-2b (landscaping, architecture, and signage to comply with Riverside County Ordinances), 5.9-2c (maintain landscaping), 5.9-2d (landscaping to comply with Riverside County Agricultural Commissioner).

- **Light and Glare: Mitigation** Measures 5.10-1 (construction lighting to comply with Riverside County standards), 5.9-2a (lighting hooded and directed away from adjoining properties), 5.10-2b (Lighting Plans in compliance with Riverside County Standards).

(See Section 8.0 for a complete list of 1998 EIR Mitigation Measures and Revisions)

b. Supplemental EIR Mitigation Measures:

Note: Mitigation Measures 5.9-2a is deleted because Washington Street is no longer a scenic highway.

Mitigati0n Measure AES-3 replaces Mitigation Measure 5.10-1 with City of Indian Wells equivalent lighting requirements:

AES-3 Prior to the issuance of building permits an outdoor lighting plan for the Indian Wells Town Center project shall be approved by the Community Development Department which contains the following provisions:

- Use of low pressure sodium lights;
- Exterior lighting shall be fully shielded and directed away from adjoining properties;
- Architectural and accent lighting shall be turned off by 11:00 PM and sunrise;
- Glare free type opaque fixtures shall be provided for general lighting;
- Path lighting shall have concealed source post top fixtures, bollard fixtures, and surface mounted building fixtures; and
- Parking lot lighting shall not exceed 25 feet in height.

Mitigation Measure AES-5 is added to address the view impacts of the hotel:

AES-5 Prior to the issuance of building permits, the project shall demonstrate that the hotel has been designed to incorporate a "terraced " design to minimize building bulk and massing and that building placement provides a "view corridor" through the site.

3.1.4 SUMMARY OF IMPACT AFTER MITIGATION

a. 1998 EIR:

- **Short-Term Impacts (Construction):** Less than significant.

- **Long-Term Impacts (Operations):** Less than significant.

- **Light and Glare:** Less than significant.

b. SEIR:

- **Short-Term Impacts (Construction):** Less than significant.
- **Long-Term Impacts (Operations):** Significant for views to single-family homes west of project site homes on Via Pavion St...
- **Light and Glare:** Less than significant.

Exhibit 7

View Locations

Indian Wells Town Center SEIR

EPC Land Planning

Existing Condition

Proposed Condition

Remington Resorts
Indian Wells, California

FOCUS

Exhibit 8a

View 1
Indian Wells Town Center SEIR

EPC Land Planning

Legend

View from northeast corner of Washington Street and Miles Avenue

Existing Condition

Proposed Condition

Indian Wells Town Center Resort Hotel and Spa
Indian Wells, California

Exhibit 8b

View 2
Indian Wells Town Center SEIR

EPC Land Planning

Legend

View from the eastside of Washington Street approximately 550 feet north of Miles Avenue

Existing Condition

Proposed Condition

Indian Wells Town Center Resort Hotel and Spa

Indian Wells, California

Exhibit 8c

View 3

Indian Wells Town Center SEIR

EPC Land Planning

Legend

View from the northside of Miles Avenue approximately 950 feet east of Washington Street

Existing Condition

Proposed Condition

Indian Wells Town Center Resort Hotel and Spa

Indian Wells, California

Exhibit 8d

View 4

Indian Wells Town Center SEIR

EPC Land Planning

Legend

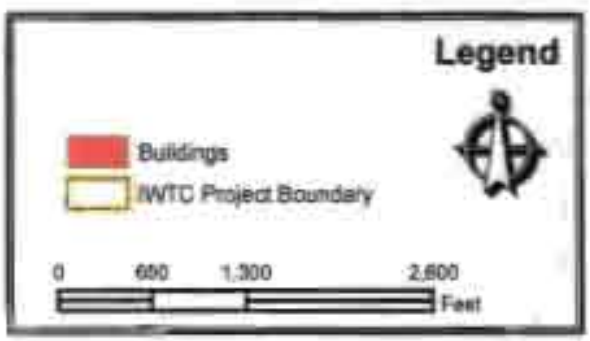
View from the eastside of Washington Street approximately 800 feet south of Miles Avenue

Exhibit 9

View Corridors

Indian Wells Town Center SEIR

EPC Land Planning



3.3 Air Quality

3.3.1 ENVIRONMENTAL SETTING

a. Climate

The project area is located in the Salton Sea Air Basin, a part of the Coachella Valley. The basin receives approximately 3 inches of rainfall annually, although it can range from 1 to 5 inches depending on seasonal precipitation. Most of the precipitation comes in the winter months and during occasional summer thunderstorms. The mean daily minimum temperature in the winter is 28 degrees Fahrenheit (°F) with the mean daily maximum temperature during summer can range to over 110°F. Temperatures can vary widely, both during the day and seasonally, and daily temperatures can vary up to 10 degrees from mean values. The west Coachella Valley area experiences hot, dry summers and cool winters, and is influenced by a Pacific Subtropical High cell off the coast during the summer.

Prevailing winds in the Indian Wells area average 10 to 20 miles per hour from the west most of the year. However, wind speed and directionality can change throughout the day. The San Bernardino and San Jacinto Mountains to the west and northwest effectively block cool, moisture laden air from the Pacific Ocean. The mountains also force onshore air moving toward the desert upward, causing moisture to fall on the south-facing slopes. This "rain shadow" effect causes arid conditions throughout the study area.

Regional pollutants are often transported into the desert areas from Los Angeles and the Inland Empire through the Banning Pass. Regional air quality can also be affected by inversion conditions that inhibit the normal vertical mixing of air. As the desert is heated by the sun, a low pressure area is created, drawing cooler ocean air through mountain passes into the desert, sometimes carrying pollutants with it.

b. Background Air Quality Information

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 (U.S. EPA) regulates at the national level. The California Air Resources Board (CARB) regulates at the state level. The SCAQMD regulates at the air basin level.

The U.S. EPA handles global, international, national, and interstate air pollution issues and policies. The U.S. EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans (SIP), provides research and guidance in 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 resulting from provisions of the Clean Air Act of 1970. The six criteria pollutants are ozone, particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide, carbon monoxide (CO), lead, and sulfur dioxide. The NAAQS were set to protect the health of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants.

CARB has overall responsibility for statewide air quality maintenance and air pollution prevention. The SIP for the State of California is administered by CARB. A SIP is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain NAAQS. CARB also administers California ambient air quality

standards, or state standards, for the ten air pollutants designated in the California Clean Air Act. The ten state air pollutants are visibility reducing particulates, hydrogen sulfide, sulfates, vinyl chloride, and the six criteria pollutants.

The criteria pollutants and applicable CAAQS and NAAQS are displayed in Table 3. These standards establish the context for local air quality management plans. They are set to protect the health of sensitive individuals.

Table 3. Ambient Air Quality Standards

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects
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.
	8 Hour	0.070 ppm	0.08 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.
	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 and pulmonary structural changes; (c) Contribution to atmospheric discoloration.
	Mean	0.030 ppm*	0.053 ppm	

Table 3. Ambient Air Quality Standards (Cont.)

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects
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.
	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.
	Mean	20 µg/m^3	—	
Particulate Matter ($PM_{2.5}$)	24 Hour	—	35 µg/m^3	
	Mean	12 µg/m^3	15 µg/m^3	
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.
Lead	30-day	1.5 µg/m^3	—	(a) Learning disabilities; (b) Impairment of blood formation and nerve conduction.
	Quarter	—	1.5 µg/m^3	

Abbreviations:
ppm = parts per million (concentration) µg/m^3 = micrograms per cubic meter
Mean = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

* The nitrogen dioxide ambient air quality standard was amended on February 22, 2007. These changes become effective after regulatory changes are submitted and approved by the Office of Administrative Law, expected in 2007.

Source: South Coast Air Quality Management District, 2007c. California Air Resources Board, Ambient Air Quality Standards, 2007b.

A brief description of the criteria pollutants and additional pollutants of concern are contained below.

Carbon monoxide (CO): A colorless, odorless toxic gas produced by incomplete combustion of carbon-containing fuels (e.g., gasoline or diesel fuel). CO levels tend to be highest during the winter months, when the meteorological conditions favor the accumulation of the pollutants.

Ozone: A photochemical oxidant that is formed when reactive organic gases and oxides of nitrogen (both byproducts of internal combustion engines) react in the presence of ultraviolet sunlight. Ozone is an energetic combination of three oxygen atoms that, when it comes into contact with a surface, releases its force as chemical energy. When this happens to biological systems (i.e., the respiratory tract and plants), this energy can cause damage to sensitive tissues.

Oxides of nitrogen (NOx): NOx is a mixture of nitric oxide and nitrogen dioxide in the atmosphere. Nitric oxide is formed as a byproduct of fuel combustion and quickly reacts with oxygen to form nitrogen dioxide. NOx emissions contribute to the formation of ozone

and particulate matter. Nitrogen dioxide is the only form of NOx that exists ~~at a level sufficient~~ to cause public health concerns. *The main human health concerns of nitrogen dioxide include lung damage, increased incidence of chronic bronchitis, eye, and mucus membrane damage, negative effects on the respiratory system, pulmonary dysfunction, and premature death. Small particles can penetrate deeply into the sensitive tissue of the lungs and can cause or worsen respiratory disease such as emphysema, asthma, and bronchitis, and can also aggravate existing heart disease (EPA 2005).*

Sulfur dioxide and sulfates: In California, sulfur is emitted during the combustion of petroleum-derived fuels (i.e., gasoline and diesel fuel) that contain sulfur. During combustion, sulfur is oxidized to sulfur dioxide (a colorless pungent gas). The sulfur dioxide is then converted to sulfate compounds in the atmosphere. *Symptoms include wheezing, shortness of breath and chest tightness, which are apparent especially during exercise and in people with asthma (EPA 2004).*

Lead: Lead is a heavy metal that can accumulate in bone, soft tissue, and blood; can damage the kidneys, liver, and nervous system; and can result in learning disabilities, ~~seizures, and death~~. Lead concentrations once exceeded the state and national air quality standards by a wide margin, but have not exceeded state or national air quality standards in the area for at least 10 years. Lead is no longer an additive in gasoline, which is the main reason the concentration of lead in the air is low.

Suspended particulate matter (PM_{10} and $PM_{2.5}$): Particulate matter is a mixture of small particles that consists 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. Sources include road dust, diesel soot, erosion of soil, combustion particles (ashes and soot), and tire and brake abrasion. *Breathing particulate matter can cause or aggravate problems associated with asthma, can increase coughing and cause breathing to be difficult or painful (EPA 2007). Breathing particulate matter has been associated with chronic bronchitis and decreases lung function (EPA 2007).*

Volatile organic compounds (VOCs): VOCs are organic compounds that readily evaporate. Reactive organic gases (ROGs) consist of non-methane and oxygenated hydrocarbons. Although all VOCs are not necessarily ROGs, the terms are often interchanged. There are no state or national ambient air quality standards for VOCs; however, they are regulated because they are involved in chemical reactions that contribute to the formation of ozone. In addition, some hydrocarbon components classified as VOCs (i.e., benzene) are thought or known to be hazardous. Sources of VOCs include adhesives, solvents, paints, cooking, fuel, and combustion. VOCs can interfere with oxygen uptake and can cause coughing, sneezing, headaches, weakness, laryngitis, and bronchitis.

Diesel particulate matter (DPM): Diesel exhaust is a mixture of many particles and gases that is produced when an engine burns diesel fuel. Many compounds found in diesel exhaust are carcinogenic. DPM includes the particles in diesel exhaust. Some of the health effects of DPM include eye, nose, and throat irritation as well as cough, nausea, and phlegm.

Visibility reducing particles are suspended particulate matter. Visibility is the distance through the air that can be seen without the use of instrumental assistance. The 8-hour state standard is the extinction coefficient of 0.23 kilometers – visibility of ten miles or

more due to particles when relative humidity is less than 70 percent. Visibility reducing particles are not assessed in this report; however, particulate matter is assessed.

Vinyl chloride is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride is a known carcinogen. The 24-hour state standard for vinyl chloride is 0.01 ppm. The proposed 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. Therefore, it is not assessed in this report.

Hydrogen sulfide is a flammable, colorless, poisonous gas that smells like rotten eggs. It can irritate the eyes and respiratory tract and cause symptoms like headache, nausea, vomiting, and cough. The 1-hour state standard for hydrogen sulfide is 0.03 ppm. Sources include the combustion of sulfur containing fuels (oil and coal) and organic matter that undergoes putrefaction. It is used in the production of heavy water for nuclear reactors, the manufacture of chemicals, in metallurgy, and as an analytical reagent. The proposed project is not expected to cause exposure to hydrogen sulfide because it will not generate hydrogen sulfide in any substantial quantity. Therefore, hydrogen sulfide is not assessed in this report.

Greenhouse gases help to regulate the climate by absorbing infrared radiation in the atmosphere and allowing incoming solar radiation to pass through the atmosphere. Greenhouse gases include water vapor, methane, carbon dioxide, nitrous oxide, ozone, halogenated fluorocarbons, perfluorinated carbons, and hydrofluorocarbons. Increased production of greenhouse gases can contribute to global warming. Global climate change is an average rise in the earth's temperature, which can cause changes in climate.

The air pollution control agency for the Riverside County portion of the Salton Sea Air Basin (basin) is the 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, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the basin. An AQMP is a plan prepared by an air pollution control district for a county or region designated as a non attainment area for bringing the area into compliance with the requirements of the national and/or California ambient air quality standards. The term non-attainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

The current AQMP for SCAQMD is the 2003 AQMP. The purpose of the 2003 AQMP is to set forth a comprehensive program that will lead the basin and those portions of the Salton Sea Air Basin under SCAQMD jurisdiction into compliance with all federal and state air quality planning requirements (SCAQMD 2003b).

The Final 2007 AQMP was adopted by the SCAQMD Governing Board on June 1, 2007. The new 2007 AQMP incorporates significant new emissions inventories, ambient measurements, scientific data, control strategies, and air quality modeling. The 2007 AQMP is designed to meet the state and federal Clean Air Act planning requirements and focuses on ozone and $PM_{2.5}$. The new 2007 AQMP for the basin has been adopted by SCAQMD, however it is pending EPA approval. Until the 2007 AQMP is formally adopted through the EPA, the older 2003 AQMP is still valid.

3.3.2 AIR QUALITY SIGNIFICANCE THRESHOLDS

Regional significance thresholds have been established by SCAQMD specific to the Coachella Valley. Note that the regional construction and operational emissions thresholds are the same. Projects with construction or operation related emissions in excess of any of the thresholds presented in Table 4 are considered significant.

Table 4. SCAQMD Thresholds

Pollutant	Regional Construction (pounds per day)	Regional Operation (pounds per day)
Oxides of Nitrogen (NO_x)	100	100
Volatile Organic Compounds (VOC)	75	75
Particulate Matter (PM_{10})	150	150
Particulate Matter ($PM_{2.5}$)	55	55
Oxides of Sulfur (SO_x)	150	150
Carbon Monoxide (CO)	550	550
Regional thresholds from: South Coast Air Quality Management District, 2007		

3.3.3 PROJECT IMPACTS

a. Summary of Conclusions in the 1998 EIR:

The 1998 EIR found that:

- Significant short-term air quality impacts would occur during site preparation and project construction and would be significant.
- The project would result in an overall increase in the local and regional pollutant load due to direct impacts from vehicle emissions and indirect impacts from electricity and natural gas consumption and was considered significant.
- The project was consistent with applicable regional air quality and growth management plans in 1998. No impact

b. SEIR Analysis:

1. **CEQA Significance Criteria IIIa: Would the project conflict with or obstruct implementation of the applicable air quality plan?**

As discussed above, the current AQMP for the area is the 2007 AQMP; however, the 2007 AQMP has only been approved by the SCAQMD and the U.S. EPA. This assessment determines consistency with both the 2003 and the 2007 AQMP. The AQMP sets forth a comprehensive program that will lead the basin into compliance with all federal ambient air

quality standards. This assessment will use the following two criteria for determining project consistency with the current AQMP:

1. Whether the project will contribute to air quality violations.
2. Compliance with AQMP Control Measures.

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). The project has the potential to cumulatively contribute to a violation of the air quality standards for ozone because it exceeds the VOC and NOx thresholds during construction and operation of the project. *Additionally, the project has the potential to contribute to a new violation of PM_{10} because VOCs and nitrates are a portion of PM_{10} and the PM_{10} regional threshold is exceeded during operation.* Therefore, the project does not meet the first indicator. ~~(See Table 5).~~

The second criterion is compliance with the control measures in the AQMP. The 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 CARB; and Transportation Control Measures provided by Southern California Association of Governments (SCAG) (SCAQMD 2003b, Page 4-3). CARB'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 (SCAQMD 2003b, Page 4-25). Transportation control measures provided by SCAG include those contained in the Regional Transportation Plans (RTP). 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 (SCAQMD 2003b, Page 4-19). The measures implemented by CARB and SCAG effect 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 CARB and SCAG. The project will comply with all of the SCAQMD applicable rules and regulations. Therefore, the project complies with this criterion.

Based on the above analysis, the project is not in compliance with the Air Quality Management Plan for emissions. Therefore, impacts are significant for CEQA Significance Criteria IIIa.

2. CEQA Significance Criteria IIIb: Would the project violate any air quality standards or contribute substantially to an existing or projected air quality violation?

a. Short-Term Emissions

Short-term impacts will include fugitive dust and other particulate matter, as well as exhaust emissions generated by earth moving activities and operation of grading equipment during site preparation. Construction emissions are caused by onsite or offsite activities. Onsite emissions principally consist of exhaust emissions (NO_x, SO_x, CO, VOC, PM_{10}, ~~and~~ $PM_{2.5}$ *and* CO_2) from heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10} and $PM_{2.5}$) from disturbed soil. Offsite emissions are caused by motor vehicle exhaust from delivery vehicles, as well as worker traffic, but also include road dust (PM_{10}). Major construction-related activities include the following: Mass grading and fine grading; Trenching and excavation and

earth moving for construction of utilities, both on and offsite; Building construction; Asphalt paving of access roads throughout the development; and Application of architectural coatings on exterior and interior surfaces.

Construction activities will be phased by grading, utility installation, paving and then building construction. Grading is anticipated to start in 2008 and be completed by 2009. Based on the quantities of cut and fill, it is estimated that approximately 485,000 cubic yards (cy) of material may be exported. The "low" level of detail to estimate fugitive dust was used, which assumed that the total onsite cut would be divided by the approximate number of work days (674000 cy / 124 days = 5435 cy/day). The URBEMIS *2007, version 9.2.2* defaults were used for the types and number of construction equipment. Unmitigated emissions during construction are displayed in Table 5.

Table 5. Short-Term Emissions (Unmitigated)

Construction Phase	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
~~Regional Threshold~~	~~75~~	~~100~~	~~550~~	~~150~~	~~150~~	~~55~~	~~None~~
~~2008 Construction Activity~~							
Mass Grading	21.09	230.20	101.65	0.16	965.06	209.20	24,072.41
Fine Grading	10.42	87.78	45.99	0.00	629.48	134.64	7,496.63
Trenching	2.37	20.19	9.68	0.00	1.01	0.92	1,839.12
Asphalt **and Building**	~~13.47~~ *19.04*	~~67.82~~ *83.54*	~~30.2197~~ *88*	~~0.050~~ *11*	~~3.96~~ *5.43*	~~3.52~~ *4.73*	~~7,112.06~~ *14.013.93*
Building	~~7.09~~ *6.79*	~~35.65~~ *31.87*	~~76.81~~ *73.98*	~~0.08~~ *0.07*	~~2.43~~ *2.24*	~~2.03~~ *1.87*	~~9,396.42~~ *8.782.30*
Max Daily Emissions	~~21.09~~ *164.00*	**230.20**	101.65	0.16	**965.06**	**209.20**	24,072.41
Regional Threshold	***75***	***100***	***550***	***150***	***150***	***55***	***None***
Significant Impact?	~~No~~ *Yes*	**Yes**	No	No	**Yes**	**Yes**	-
~~2009 Construction Activity~~							
~~Building~~	~~6.65~~	~~33.62~~	~~71.98~~	~~0.08~~	~~2.33~~	~~1.94~~	~~9,394.07~~
~~Architectural Coatings~~	~~157.64~~	~~0.15~~	~~2.48~~	~~0.00~~	~~0.02~~	~~0.01~~	~~274.05~~
~~Max Daily Emissions~~	~~157.64~~	~~33.62~~	~~71.98~~	~~0.08~~	~~2.33~~	~~1.94~~	~~9,394.07~~
~~Significant Impact?~~	~~Yes~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~	-

Source: URBEMIS2007 model output, see attachments

None = There is no threshold for CO_2.

Note: Each of the above activities does not occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.

b. Long-Term Emission Analysis

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 emissions analysis included the trip generation rates from Table 7 of the Traffic Study prepared by Willdan, dated June 18, 2007. In addition, the Traffic Study's pass-by rate of 34% was applied to the Shopping Center portion of the project. The URBEMIS2007 version 9.2 default pass-by rates were applied to the remaining land uses. MBA analyzed both winter and summer emissions for the project. It is estimated that the project will be operational by 2009. As shown in Table 6, the project's operational emissions would exceed the SCAQMD's regional thresholds. All emission rates are from winter except SO_2 and CO_2, which had higher rates in the summer.

Table 6. Operational Emissions (Unmitigated)

	Emissions (pounds per day)						
Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
MOBILE (VEHICLE)	165.19	211.13	1,475.16	1.22	198.37	39.35	119,690.47
AREA	17.52	7.86	33.65	—	4.39	4.23	8,407.97
TOTAL	**182.71**	**218.99**	**1,508.81**	**1.22**	**202.76**	**43.58**	**128,098.44**
REGIONAL THRESHOLD	**75**	**100**	**550**	**150**	**150**	**55**	None
SIGNIFICANT IMPACT?	YES	YES	YES	**NO**	~~NO~~ *YES*	**NO**	—

Source: URBEMIS2007 **version 9.2.2** model output, see attachments; winter emissions are shown for all pollutants except for SOx and CO2, where summer emissions are shown.

Based on the above analysis, impacts are significant in regard to CEQA Significance Criteria IIIa.

3. CEQA Significance Criteria IIIc: Would the project 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 would exceed quantitative thresholds for ozone precursors)?

~~The project has the potential to cumulatively contribute to a violation of the air quality standards for ozone because it exceeds the VOC and NOx thresholds during construction and operation of the project.~~ Based on the analysis contained in this Section of the SEIR, *the project would result in cumulatively significant impacts from ozone exposure from emissions during construction and ozone and PM_{10} exposure during operation*. Impacts in regard to CEQA Significance Criteria IIIc are significant.

4. CEQA Significance Criteria IIId: Would the project expose sensitive receptors to substantial pollutant concentrations?

Localized Significance Analysis - Construction

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 South Coast Air Quality Management District (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. There are residences located approximately 500 feet (152 meters) south of the southern boundary of the project site and across from Washington Street approximately 180 feet (55 meters) from the project site. There is a small commercial development at the corner of Washington Street and Highway 111 that likely contains workers, which is approximately 500 feet (152 meters) south of the southern boundary of the project site.

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 NOx, CO, PM_{10}, and $PM_{2.5}$.

The LST for PM_{10} and $PM_{2.5}$ for construction are identified in the SCAQMD Air Quality Significance Thresholds in its CEQA Handbook and are 10.4 µg/m3. LSTs for nitrogen dioxide and CO are derived using the equation: LST = S - C; where, LST is the localized threshold for the project in micrograms per cubic meter; S is the most stringent state or national standard in micrograms per cubic meter; and C is the maximum background concentration that occurred in the past three years at the closest air quality monitoring station in micrograms per cubic meter. The LSTs are summarized in Table 5a.

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 to the localized significance thresholds. The estimated concentrations do not represent actual occurrences nor do they necessarily predict future levels.

The modeling assumptions are from the SCAQMD LST guidance (SCAQMD 2003). To represent fugitive dust, an area source covering approximately 20 acres was placed on the project in the emissions model, which is the maximum amount of land that would be disturbed per day pursuant to mitigation measure AQ-1. To represent exhaust emission sources, 49 volume sources were placed onsite. A variable emission rate assumed the emissions would be generated during the hours of 8:00 am to 4:00 pm. The receptors included a fenceline grid with 40 meter spacing with intervals of 20, 50, 100, 200, 500, and 1,000 meters from the project site boundary for carbon monoxide and NOx. For PM_{10} and $PM_{2.5}$, the fenceline concentrations were converted to concentrations at the sensitive receptors using a formula provided in the SCAQMD LST guidance (SCAQMD 2003).

Table 6a: Localized Significance Thresholds

Pollutant, Averaging Time	Most Stringent Air Quality Standard, Units	Maximum Background Concentration	Localized Significance Threshold
Nitrogen dioxide - 1 hour	*0.18 ppm*	*0.10*	*0.08*
Carbon monoxide			
1 hour	*20 ppm*	*2*	*18*
8 hour	*9 ppm*	*1.0*	*8*
Particulate matter (PM_{10}) - 24 hour	*50 $\mu g/m^3$*	*122*	*10.4*
Particulate matter ($PM_{2.5}$) - 24 hour	*35 $\mu g/m^3$*	*44.4*	*10.4*

** From Table 3*

*** South Coast Air Quality Management District (SCAQMD 2007b), the highest concentration from 2004-2006 from either the Coachella Valley 1 or 2 station.*

**** PM10 and PM2.5 thresholds are predefined; others are derived by subtracting the background concentration from the air quality standard.*

Combustion produces NOx, which contains primarily nitric oxide immediately after emitted from the source. 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. The concentrations of NOx as estimated by the dispersion model are converted to nitrogen dioxide based on the receptor's distance from the source.

The onsite mitigated 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 5b.

Table 6b: Localized Significance Analysis (Construction, with Mitigation)

Location	24-hour PM_{10} ($\mu g/m^3$)	24-hour $PM_{2.5}$ ($\mu g/m^3$)	1-hour NO_2 (ppm)	1-hour CO (ppm)	8-hour CO (ppm)
Maximum Concentration	*98.6*	*22.8*	*0.006*	*0.11*	*0.07*
Nearest Sensitive Receptor	*7.3*	*1.7*	*0.005*	*0.07*	*0.03*
Nearest Worker	*N/A*	*N/A*	*0.005*	*0.04*	*0.02*
Localized Significance Threshold	*10.4*	*10.4*	*0.08*	*18*	*8*
Exceed Localized Threshold at sensitive receptor?	*No*	*No*	*No*	*No*	*No*

Source: ISC dispersion model output (see attachments).
N/A = not applicable because workers would not be onsite for 24 hours.

Co Hot Spot Analysis

A CO hot spot 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 Traffic Report prepared for this project), and proximity to sensitive receptors. This analysis follows guidelines recommended by the CO Protocol (CALT 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.

Using the CALINE4 model, potential CO hotspots were analyzed at the intersections listed in Table 8. These intersections were chosen because they operate at LOS D or worse. There were several inputs to the CALINE4 model. One input is the traffic volumes, which is from the project-specific Traffic Report (Willdan 2007). The traffic volumes with the project were used for the buildout scenario as well as emission factors generated using the EMFAC2007 model for the year 2009.

Project emissions may also be considered significant if a CO hotspot intersection analysis determines that project generated emissions 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.

Table 7 displays the background levels of CO. As shown in Table 7, the estimated 1-hour and 8-hour average CO concentrations at build-out in combination with background concentrations are below the state and national ambient air quality standards. No CO hotspots are anticipated

as a result of traffic-generated emissions by the proposed project in combination with other anticipated development in the area. Therefore, the mobile emissions of CO from the project are not anticipated to contribute substantially to an existing or projected air quality violation of CO.

Table 7. Background Levels of Carbon Monoxide

Carbon Monoxide Averaging Time and Units	2004	2005	2006
1-hour, ppm	2.0	2.0	2.0
8-hour, ppm	1.0	0.8	1.0
Source: SCAQMD 2007b, Data is from Station Number 4137 (Source Receptor 30).			

Table 8. Carbon Monoxide Localized Concentrations

Intersection	1 Hour Estimated CO Concentration (ppm)*	8 Hour Estimated CO Concentration (ppm)**	Significant Impact?***
Washington Street at Fred Waring Drive	4.5	2.8	No
Washington Street at Miles Avenue	4.1	2.5	No
Washington Street at Highway 111	4.5	2.8	No
Washington Street at Avenue 48	5.1	3.2	No
Adams Street at Highway 111	4.0	2.4	No

* Caline4 output (see enclosures for model output) plus the 1 hour background concentration of 2 ppm (Table).
** The 8-hour project increment was calculated by multiplying the 1-hour Caline4 output by 0.7 (persistence factor), then adding the 8 hour background concentration of 1 ppm (from Table).
*** Comparison of the 1-hour concentration to the state standard of 20 ppm and the 8-hour concentration to the state/national standard of 9 ppm.

Based on the above analysis, *the project does not exceed the SCAQMD localized thresholds for CO, nitrogen dioxide, PM_{10}, or $PM_{2.5}$, therefore, the project will not exceed the applicable air quality standards for those pollutants and will not expose sensitive receptors to substantial quantities of those pollutants*. No mitigation is required for CEQA Significance Criteria IIId.

5. CEQA Significance Criteria IIIe: Would the project create objectionable odors affecting a substantial number of people?

During construction, the proposed project will contain operations that will have odors associated with equipment and materials. None of these odors are permanent, nor are they normally considered so offensive as to cause sensitive receptors to complain. Diesel fuel odors from construction equipment and new asphalt paving fall into this category. Both based on the short-term of the emissions and that characteristics of these emissions, no significant odor impacts are forecast to result from implementing the proposed project. The project itself will not cause the emission of toxic pollutants. Mobile source emissions have been identified as containing some toxic components (volatile organic compounds and carbon monoxide), however, traffic congestion along Miles Avenue and Washington Street is not expected to reach levels that would cause harmful buildup of these pollutants. The proposed project consists of commercial and residential land uses which do not typically generate significant odors except for occasionally the exhaust from restaurants. The primary causes of objectionable odors in residential areas is from those activities typically associated within developments such as household and automobile cleaning and maintenance, lawn care, etc. Project uses are not expected to generate odors that will be objectionable at a significant level. Based on the above analysis, no mitigation is proposed for CEQA Significance Criteria IIIe.

6. Added CEQA Criteria: (Global Climate Change)

Introduction

Global Climate Change refers to alterations in weather features which occur across the Earth as a whole, such as temperature, wind patterns, precipitation, and storms. Global temperatures are modulated by naturally occurring atmospheric gases, such as water vapor, carbon dioxide, methane, and nitrous oxide. These gases allow sunlight into the Earth's atmosphere, but prevent radiative heat from escaping into outer space, thus altering the Earth's energy balance in a phenomenon called the greenhouse effect.

The global climate is continuously changing, as evidenced by repeated episodes of warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. Scientists have observed, however, an unprecedented increase in the rate of warming in the past 150 years.

Regulatory Context for Global Climate Change

Global climate change resulting from greenhouse gas emissions is an emerging environmental concern being raised and discussed at the international, national, and statewide level. At each level, agencies are considering strategies to control emissions of gases that contribute to global warming. However, no agency has yet assumed jurisdiction to regulate greenhouse gases and there are no established standards for gauging the significance of greenhouse gas emissions. Neither CEQA nor the CEQA Guidelines provide any methodology for analysis of greenhouse gases.

In the fall of 2006, Governor Schwarzenegger signed AB 32, the global warming bill, into law. The Bill requires the state Air Resources Board (ARB) to adopt regulations by January 1, 2008 to require reporting and verification of statewide greenhouse gas emissions and to monitor and

enforce compliance with that program. The bill requires achievement by 2020 of a statewide greenhouse gas emissions limit equivalent to 1990 emissions, and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions.

Project Impacts

To provide a context for greenhouse gas emissions, it is useful to consider the state of California as a whole. California is a substantial producer of greenhouse gas emissions. Carbon dioxide accounts for approximately 85% of total emissions, and methane and nitrous oxide account for almost an additional 14%. Each gas contributes to global warming at a different relative rate. Methane has a global warming potential 21 times that of carbon dioxide, while nitrous oxide is 310 times that of the same amount of carbon dioxide.

According to the California Climate Action Team, in 2002, total carbon dioxide emissions in California from fossil fuel combustion were 360 million tons, accounting for approximately seven percent of U.S. emissions from this source. According to the California Energy Commission, California is the second largest emitter of greenhouse gases in the U.S. (trailing only Texas). In 2004, California produced 492 million metric tons of total carbon dioxide-equivalent emissions. California has relatively low carbon emissions intensity, however, ranking fourth lowest of the 50 states in carbon dioxide emissions per capita from fossil fuel combustion in 2001. California was also the fifth lowest of the 50 states in carbon dioxide emission from fossil fuel combustion per unit of gross state product in 2001, largely as a result of the state's energy efficiency and renewable energy programs.

The primary sources of greenhouse gas emissions from the project are anticipated to be combustion of fossil fuels from grid-delivered electricity use and from vehicles. Individual project emissions can be measured, for example by using the California Climate Action Registry website, however, the significance of the project's impacts on global climate change cannot be determined because no specific thresholds exist at the present time to quantify impacts. For this reason, calculating emissions without an identified threshold is speculative. Notwithstanding this fact, actions can be taken to reduce impacts on global climate change in the absence of specific criteria.

Strategies to Reduce Greenhouse Gas Emissions

Given the global nature of climate change, the ultimate solution is a national policy addressing greenhouse gas emissions, rather than piecemeal state-by-state or city-by-city approaches. Given the predominant contribution of emissions from vehicles and electricity generation, efforts to reduce the project's greenhouse gas emissions should focus on reducing vehicle trips and on reducing electricity demand through energy efficient building design and operations.

~~The proposed project is limited in scale and has minimal potential to influence area temperatures or the regional climate.~~ The City has recently amended its General Plan to include the following policies pertaining to global climate change:

Policy IIA1.18

(1). *The City will encourage green building design which could include conserving non-renewable energy and materials, promoting water efficient landscaping and other methods to support environmental conservation and to assist in the concerns of global warming.*

(2) *The City will provide public information on Sustainable Development Practices which will assist in acceptable levels of global resource depletion and environmental pollution.*

The project will be required to comply with this policy.

In addition, the following mitigation measures which are required for Air Quality and Utilities will implemented which will assist is reducing greenhouse gas emissions:

AQ-3 (limit emissions from project related construction trips);
AQ-4 (reduce emissions form on-site power plant);
AQ-8 (Transportation Demand Management Measures)
UTL-2 (compliance with energy conservation standards)
UTL-3 (participate in programs to reduce energy consumption and costs)

See the Executive Summary, Section ES-1 for details of these measures

~~Based on the above analysis, no mitigation is proposed for project impacts to Global Warming.~~

c. Impact Conclusions 1998 EIR v. SEIR

Based on the above analysis, the impacts to Air Quality as analyzed in the 1998 EIR and the SEIR remain significant.

d. NOP Comments

No letters were received regarding the NOP in regard to Air Quality.

e. SEIR Review Comments

During the 30 day review period, a letter was received from the South Coast Air Quality Management District.

3.3.4 MITIGATION MEASURES

a. 1998 EIR: The following mitigation measures were adopted for Air Quality related impacts:

- **Short-Term Construction:** Mitigation Measures 5.7-1a (compliance with Riverside County requirements to control dust and blowsand), 5.7-1b (compliance with Riverside County, State, Uniform Building Codes, and South Coast Air Quality Management District Rule 403.1 to control dust).

- **Operations:** Mitigation Measures 5.7-2a (on-site vehicle control measures and adequate landscaping), 5.7-2b (compliance with State Energy Standards).

- **Sensitive Receptors:** No Mitigation Measures required.

(See Section 8.0 for a complete list of 1998 EIR Mitigation Measures and Revisions)

b. Supplemental EIR Mitigation Measures:

The following mitigation measure are in addition to the 1998 EIR Mitigation Measures 5.7-1a, 5.7-1b, 5.7-2a and 5.7-2b above).

To reduce construction emissions, the following mitigation measures ~~should~~ **shall** be implemented:

AQ-1 Reduce the maximum acreage graded on any one day to 20 acres.

AQ-2 During project construction, onsite electrical hook ups shall be provided for electric construction tools including saws, drills and compressors, to eliminate the need for diesel powered electric generators.

AQ-3 During project construction, the developer shall require all contractors not to idle construction equipment onsite for more than 5 minutes.

AQ-4 During construction, require to the maximum extent feasible, that trucks and other vehicles that would be transporting materials and other supplies to the project site, to use alternative fuels such as compressed natural gas.

AQ-5 During construction, for construction equipment require the use of oxidation catalysts and alternative clean fuel such as natural gas instead of gasoline or diesel powered engines. However, where diesel equipment has to be used because there are no practical alternatives, the construction contractor should use particulate filters was well as oxidation catalysts.

AQ-6 During construction, to reduce volatile organic compounds (VOC) emissions, restrict the number of gallons of architectural coatings used per day. Where feasible, paint contractors should use hand applications instead of spray guns; encourage the use of water-based coatings or coatings with a lower VOC content than 100 grams per liter; and consider using materials that do not need to be painted or are painted prior to transport to the site.

~~As shown in the Tables 9 and 10, emissions are below the significance thresholds for all pollutants except VOC, NO_x, CO, and PM_{10}. Even with the implementation of all feasible mitigation measures, these emissions cannot be reduced to less than significant impacts. Therefore, air quality impacts from the project in regard to Air Quality remain significant, as was the case in the 1998 EIR.~~

Table 9 *(Revised)*. Short-Term Emissions (Mitigated)

Construction Phase	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Mass Grading	*21.09*	*230.20*	*101.65*	*0.16*	*139.38*	*36.76*	*24,072.41*
Fine Grading	*10.42*	*87.78*	*45.99*	*0.00*	*48.03*	*13.21*	*7,496.63*
Trenching	*2.37*	*20.19*	*9.68*	*0.00*	*1.01*	*0.92*	*1,839.12*

Construction Phase	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Asphalt and Building	*19.04*	*83.54*	*97.88*	*0.11*	*5.43*	*4.73*	*14,013.93*
Building	*6.79*	*31.87*	*73.98*	*0.07*	*2.24*	*1.87*	*8,782.30*
Building and Coating	*164.00*	*30.22*	*71.82*	*0.08*	*2.18*	*1.80*	*9,053.95*
Max Daily Emissions	*164.00*	*230.20*	*101.65*	*0.16*	*139.39*	*36.76*	*24,072.41*
Regional Threshold	*75*	*100*	*550*	*150*	*150*	*55*	*None*
Significant Impact?	*Yes*	*Yes*	*No*	*No*	*No*	*No*	*-*

Source: URBEMIS2007, version 9.2.2 model output, see attachments
None = There is no threshold for CO_2.
Note: Each of the above activities does not occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.

Construction Phase	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
~~Regional Threshold~~	~~75~~	~~100~~	~~550~~	~~150~~	~~150~~	~~55~~	~~None~~
~~**2008 Construction Activity**~~							
~~Mass Grading~~	~~21.09~~	~~230.20~~	~~101.65~~	~~0.16~~	~~139.38~~	~~36.76~~	~~24,072.41~~
~~Fine Grading~~	~~10.42~~	~~87.78~~	~~45.99~~	~~0.00~~	~~48.03~~	~~13.21~~	~~7,496.63~~
~~Trenching~~	~~2.37~~	~~20.19~~	~~9.68~~	~~0.00~~	~~1.01~~	~~0.92~~	~~1,839.12~~
~~Asphalt~~	~~13.47~~	~~67.82~~	~~30.21~~	~~0.05~~	~~3.96~~	~~3.52~~	~~7,112.06~~
~~Building~~	~~7.09~~	~~35.65~~	~~76.81~~	~~0.08~~	~~2.43~~	~~2.03~~	~~9,396.42~~
~~Max Daily Emissions~~	~~*21.09*~~	~~*230.20*~~	~~*101.65*~~	~~*0.16*~~	~~*139.38*~~	~~*36.76*~~	~~*24,072.41*~~
~~Significant Impact?~~	~~No~~	~~Yes~~	~~No~~	~~No~~	~~No~~	~~No~~	—
~~**2009 Construction Activity**~~							
~~Building~~	~~6.65~~	~~33.62~~	~~71.98~~	~~0.08~~	~~2.33~~	~~1.94~~	~~9,394.07~~
~~Architectural Coatings~~	~~157.64~~	~~0.15~~	~~2.48~~	~~0.00~~	~~0.02~~	~~0.01~~	~~274.05~~
~~Max Daily Emissions~~	~~*157.64*~~	~~*33.62*~~	~~*71.98*~~	~~*0.08*~~	~~*2.33*~~	~~*1.94*~~	~~*9,394.07*~~
~~Significant Impact?~~	~~Yes~~	~~No~~	~~No~~	~~No~~	~~Yes~~	~~No~~	~~-~~

~~None = There is no threshold for CO_2.~~
~~Note: Each of the above activities does not occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.~~
~~Source: URBEMIS2007 model output, see attachments~~

To reduce operational emissions, the following mitigation measures shall be implemented:

AQ-4 7A minimum of three Transportation Demand Management (TDM) measures shall be implemented. TDMs may include having showers and locker facilities for employees, providing at least one secure bike parking spot for every 20 vehicle parking spaces, providing preferential parking for carpool/vanpool vehicles, and installing kiosks with alternative transit information.

~~As shown in the Table 10, emissions are below the significance thresholds for SO_2, and $PM_{2.5}$. However, the project impacts remain significant for VOC, NO_x, and CO.~~

Table 10. Operational Emissions (Mitigated)

	Emissions (pounds per day)						
Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
MOBILE (VEHICLE)	160.44	204.94	1,431.84	1.19	192.55	38.19	116,173.01
AREA	17.52	7.86	33.65	—	4.39	4.23	8,407.97
TOTAL	*177.96*	*212.80*	*1,465.49*	*1.19*	*196.94*	*42.42*	*124,580.98*
REGIONAL THRESHOLD	**75**	**100**	**550**	**150**	**150**	**55**	None
SIGNIFICANT IMPACT?	YES	YES	YES	**NO**	**NO**	**NO**	—

Source: URBEMIS2007 model output, see attachments; winter emissions are shown for all pollutants except for SO_x and CO_2, where summer emissions are shown.

The project exceeds the regional thresholds during construction for VOC and NOx. The basin is in non-attainment for ozone and PM_{10}. This means that the background concentrations of those pollutants are already high. The project will emit significant emissions of VOC, which is an ozone precursor. Therefore, the project will significantly contribute to a cumulatively considerable impact regarding ozone. High ozone concentrations could result in health impacts to sensitive individuals in the Coachella Valley as ozone can form miles away from the source. Exposure to high concentrations of ozone over the ambient air quality standards may cause effects such as the following: (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; and (f) property damage.

The project exceeds the regional thresholds during operation for VOC, NOx, CO, and PM_{10}. The basin is in non-attainment for ozone and PM10. This means that the background concentrations of those pollutants are already high. The project will emit significant emissions of VOC and NOx, which are ozone precursors. Therefore, the project will significantly contribute to a cumulatively considerable impact regarding ozone. High ozone concentrations could result in health impacts to sensitive individuals in the Coachella Valley as ozone can form miles away

from the source. Exposure to high concentrations of ozone over the ambient air quality standards may cause effects such as the following: (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; and (f) property damage.

Similarly to ozone, the project would contribute to a cumulatively significant impact to PM_{10}. concentrations and may result in health impacts to sensitive individuals in the Coachella Valley. High concentrations of PM_{10} over the ambient air quality standards may result in the following effects: (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.

3.3.7 IMPACT OF MITIGATION MEASURES

Implementation of the above Mitigation Measures will not impact environmental resources.

3.3.8 SUMMARY OF IMPACT AFTER MITIGATION

1998 EIR:

- **Short-Term Emissions:** Significant
- **Long Term Emissions:** Significant.
- **Sensitive Receptors:** Less than significant.
- **Odors:** Less than significant.

SEIR:

- **Short-term Emissions:** Significant *for VOV and NOX during construction*.
- **Long-Term Emissions:** Significant *for VOC, NOx, CO, and PM_{10} during operation*.
- **Cumulative Emissions:** *Significant for ozone during construction and ozone and PM_{10} during operation.*
- **Sensitive Receptors:** Less than significant.
- **Odors:** Less than significant.

3.5 CULTURAL RESOURCES

3.5.1 ENVIRONMENTAL SETTING

a. Paleontological Resources

The West Coachella Valley has yielded a variety of fossils in the past, but are mainly found in the sedimentary formations typical of lower upland areas. The valley floors in the project area are underlain by deep alluvial, fluvian, and aeolian deposits, mainly sand, silt, and gravel, which in some areas are hundreds of feet thick. These deposits have a low potential for yielding fossils. However, a recorded paleontological site (CA-RIV-5876) was found on an adjacent site and extends into the project site.

b. Archeological Resources

A Cultural Resources Record Search was conducted by Department of Anthropology, University of California Riverside Eastern Information Center on March 27, 2007. The report determined the following:

- Four cultural resources studies have been conducted within the boundaries of the project area (EIC Report Numbers RI-1930, RI-1933, RI-1934, and RI-6722).
- Three cultural resources properties are recorded within the boundaries of the project area. (CA-RIV-3005, CA-RIV-3008, and CA-RIV-5876)

c. Historical Resources

Based on the cultural reports and filed surveys identified above, there are no historical resources on the site.

3.5.2 PROJECT IMPACTS

a. Summary of Conclusions in the 1998 EIR:

The 1998 EIR found that:

Archaeological Resources:

- Cultural reports prepared by RMW Paleo Associates Inc. (RMW), indicted the site was a highly sensitive area for prehistoric cultural resources but was *a less than significant impact with mitigation.*
- Two prehistoric archaeological sites, CA-RIV-3005 and CA-RIV-3008 were recorded within the current project boundaries. During reconnaissance by RMW, ceramic fragments, lithic debitage, and milling stone fragments were observed with CA-RIV-3005 and ceramic fragments were found in CA-RIV-3008.
- CA-RIV-5876, a prehistoric archaeological site recorded on an adjacent parcel extended into the project site boundaries. The material found in this area consisted primarily of ceramic shreds and quartzite debitage;

- The area south of Miles Avenue was observed to contain numerous artifactual remains. Subsequent test excavations and laboratory analysis conducted in June 1998, in consultation with Riverside County Planning Department and Native American representatives, found the resources to be "isolates" but nonetheless considered "important" under CEQA Appendix K criteria.

Paleontological Resources

- There is a low to moderate potential for the discovery of fossils on the project site but was *a less than significant impact with mitigation.*

Historic Resources

- No historic resources were identified on the project site.

b. SEIR Analysis:

1. CEQA Significance Criteria Va: Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

The portion of the site for the Indian Wells Town Center project and additional City parking lot site is vacant with few improvements. The project area does not contain any potential historical structures resources. Based on the above analysis no significant adverse impacts to historical or cultural resources are anticipated for CEQA Significance Criteria Va, therefore no mitigation is required.

2. CEQA Significance Criteria Vb: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

The 1998 EIR identified two archaeological resources on the project site, identified as CA-RIV-3005 and CA-RIV-3008, and a portion of a third site, CA-RIV-5876 extended into the project site (1998 EIR Section 5.11). The 1998 EIR recommended monitoring Phase 2 testing and Phase 3 recovery of artifacts where necessary prior to grading.

As noted above, a Cultural Resources Record Search was conducted by Department of Anthropology, University of California Riverside Eastern Information Center on March 27, 2007. The report noted that two of the cultural resources studies conducted within the project area (RI-1934 and RI-6772) involved field and laboratory investigations to evaluate the significance of archaeological resources sites CA-RIV 3005, CA-RIV 3008 and CA-RIV 5876. These efforts resulted in the recommendation that although the three sites referenced above did contain and yield important archaeological and cultural heritage information further study was not necessary. It was however, recommended in report RI-6722 that construction activities in the portion of the project area north of Miles Avenue, including the area around site CA-RIV-3008 be monitored to ensure protection of any significant subsurface cultural resources.

In addition to the Cultural Records Research Report conducted by the Eastern Information Center referenced above, per the requirements of Senate Bill 18 (SB 18), the City of Indian Wells notified Native American Tribes identified by the Native American Heritage Commission (NAHC) of the opportunity for "Consultation" on the project., Tribes have a 90 day period from the date of notification by the City (February 8, 2007) in which to indicate whether or not they want Consultation.

Table 18 below summarized the results of the SB 18 Consultation Request:

Table 11. SB 18 CONSULTATION SUMMARY

Native American Contact	Results of Consultation
Augustine Band of Cahuilla Mission Indians	Requested Native American Monitors during site grading.
Aqua Caliente Band of Cahuilla Indians	Requested copies of all cultural resources documentation; Native American Monitors during site grading; additional testing and peer review of test results by State approved Archaeologist. Consultation on-going.
Cabazon Band of Mission Indians	No Consultation requested..
Morongo Band of Mission Indians	Requested Native American Monitors during site grading.
Ramona Band of Mission Indians	No Consultation requested.
Soboba Band of Luiseno Indians	Requested Native American Monitors during site grading
Torres-Martinez Desert Cahuilla Indians	No Consultation requested.

SB 18 allows for Consultation to continue through City Council deliberation of the project. In addition, at least 45 days before the City Council public hearing on the project, the SEIR will be submitted to the Tribes identified above for review and comment whether or not Consultation was requested.

During the SB 18 Consultation, the Aqua Caliente Band of Cahuilla Indians expressed concerns about the potential for additional cultural resources to be encountered during grading and requested additional studies. ~~A mitigation measure is recommended in Section 3.5.6 below to address this concern.~~ *As a result, the City provided two additional reports and met with representatives of the Aqua Caliente Tribe and it was determined that all areas of the site have been adequately surveyed. However, because of the amount of time that has passed since the last survey and the changing dune environment, a final survey archaeological surface collection will be conducted.*

Based on the analysis above, the project site may have significant impacts on archaeological resources for CEQA Significance Criteria Vb. Mitigation is recommended in Section 3.5.6 below.

3. CEQA Significance Criteria Vc: Would the project directly or indirectly destroys a unique paleontological resource or site or unique geologic feature?

Data indicates that the project site is underlain by deep alluvial deposits, which have little or no potential to yield fossilerous materials. However, the 1998 EIR identified low to moderate potential for paleontological resources on the project site (1998 EIR Section 5.11), including the new parking lot, and recommended monitoring during grading. Based on the above analysis, the project has the potential to significantly impact paleontological resources.

The proposed project would have similar impacts compared to the approved project, and the project would implement the Mitigation Measures identified in section 3.5.6 below. With implementation of this Mitigation Measure, the project will have less than significant impacts on paleontological resources for CEQA Significance Criteria Vc.

4. CEQA Significance Criteria Vd: Would the project disturb any human remains, including those interred outside of formal cemeteries?

The site is partially developed with the Indian Wells Tennis Garden. The remaining vacant land has no known formal cemeteries nor have burial locations have been identified by the cultural reports referenced above. In the event that suspected human remains are uncovered, California Health and Safety Code 7050.5 and Public Resources Code Section 5097.98 require that all earthwork in the area be stopped and the County Corner and the Native American Heritage Commission be notified. This is a mandatory requirement. No mitigation is required in regard to CEQA Significance Criteria Vd.

c. Impact Conclusions 1998 EIR v. SEIR

Based on the above analysis, the impacts related to Cultural Resources as analyzed in the 1998 EIR and the SEIR remain the same except for the SB 18 Consultation and the need for additional mitigation measures.

d. NOP Comments

During the NOP period, a letter was received from the California Native American Heritage Commission (NAHC) in Sacramento. The letter requested the project contact local Native American groups to review the proposed development.

e. SEIR Review Comments

On December 19, 2007 and February 8, 2008 letters were received from the Aqua Caliente Band of Cahuilla Indians. See Appendix A.

3.5.6 MITIGATION MEASURES

a. 1998 EIR: The following mitigation measures were adopted for Cultural Resource related impacts:

- **Paleontological Resources:** Mitigation Measures 5.11-1a (paleontological monitoring), 5.10-1b (paleontological resource recovery).
- **Archaeological Resources:** Mitigation Measures 5.11-2a (Phase 2 Archaeological Study), 5.11-2b (procedures for handling human remains), 5.11-2c-e (archaeological monitoring), 5.11-2f (archaeological resource recovery), 5.11-2g (retention of archaeological resources).
- **Historic Resources:** No mitigation measures required.

(See Section 8.0 for a complete list of 1998 EIR Mitigation Measures and Revisions)

b. Supplemental EIR Mitigation Measures:

The following mitigation measures supersede 1998 EIR Mitigation Measures 5.11-1a, 5.11-1b, 5.11-2a, 5.11-2b, 5.11-2c-e, 5.11-2f, and 5.11-2g because they are based on more recent information and reflect the results of the SB 18 Consultations with Native American Tribes.

CUL-1 Prior to issuance of grading permits, a qualified paleontologist shall be retained by the developer to monitor onsite grading, especially in the vicinity of CA-RIV-5876. Any fossiliferous materials found during excavation shall be retained and curated in an appropriate manner at an appropriate facility. The recovery of any fossils shall be coordinated with the County Archaeological Information Center. This measure shall be implemented to the satisfaction of the Community Development of Indian Wells Director.

CUL-2 Prior to the issuance of grading permits, a qualified archaeologist shall be retained by the developer to monitor earth grading or any ground disturbance activities to ensure protection of significant cultural resources. ~~A report of findings shall be prepared and the City shall require that the report have a peer review by an archaeologist qualified to meet the requirements established by the California Secretary of the Interior' Standards and Guidelines. The report and the peer review of~~ ~~t~~The report shall be submitted to the Eastern Information Center, University of California Riverside and the Aqua Caliente Band of Cahuilla Indians or any other Native American Tribe identified during the SB 18 consultation if requested by said tribe(s).

CUL-3 During grading, a qualified archaeologist shall be retained by the developer to monitor onsite grading. The monitor(s) shall have the authority to temporarily halt work until the artifacts can be surveyed, recovered, and/or handled in an appropriate manner. If archaeological resources are discovered, all work in that area shall be halted and qualified personnel shall be retained to examine, evaluate, and determine the most appropriate disposition of the resource(s). This measure shall be implemented to the satisfaction of the City's Community Development Director in consultation with the Archaeological Information Center (AIC) at UCR.

If artifacts of Native American (NA) origin are discovered, official representatives of the NA group shall be consulted to determine the most appropriate disposition of the artifacts, to the satisfaction of the AIC and the NA group. If fossils are found onsite, the AIC shall be contacted to determine disposition, to be funded by the developer.

CUL-4 The project developer shall enter into a Pre-Excavation Agreement with the most appropriate local Native American (NA) group to fund up to 2 NA representatives to have access to the site during grading activities. The designation of monitors shall be coordinated with the following Tribes: Augustine Band of Cahuilla Mission Indians, Aqua Caliente Band of Cahuilla Indians, Morongo Band of Mission Indians, Soboba Band of Luiseno. It is the intent of this Mitigation Measure to avoid duplication of monitoring efforts and to designate the most appropriate Tribe to conduct the monitoring.

CUL-5 If human remains are found during excavation, work shall be halted and the appropriate local Native American (NA) group shall be contacted. If the County Coroner's office determines the remains to be Native American, and it is determined by the Native American Heritage Commission that member(s) of the local NA group is (are) the most likely descendants, the developer shall allow reburial of the remains and associated goods at an appropriate offsite location which shall be "capped" to prevent further disturbances in the future. The site of such burial shall not be disclosed to the public, pursuant to Government Code §6254. Details of the reburial shall be negotiated between the developer and the appropriate representatives of the local NA group.

If human remains are found, and not determined by the County Coroner's office to be Native American, but believed by the local NA group to be so, the developer shall be required to pay reasonable costs to determine whether the remains are Native American.

All NA cultural items and associated grave goods found on site, other than human remains, are to be avoided, relocated, salvaged, returned to the NA group, or any other option decided by the NA group to be appropriate, before development of the area in which the item was found is resumed.

The developer shall provide for NA tribal archaeological monitors to be present during any Phase II and potential Phase III surveys of all sites within the project.

CUL-6 *Prior to any earth disturbing activities, a final surface collection shall be completed to mitigate additional impacts to surface artifacts that may have been exposed as a result of sand migration within the project boundaries (undeveloped portion). The surface collection shall be conducted using the transit-controlled method. All finds recovered shall be catalogued and analyzed. An illustrated, narrative report describing the field investigation and laboratory work shall be prepared and submitted to the City and the Eastern Information Center at UCR.*

3.5.7 SUMMARY OF IMPACTS AFTER MITIGATION

a. 1998 EIR:

- **Paleontological Resources:** Less than significant.
- **Archaeological Resources:** Less than significant.
- **Historical Resources:** No impact.

b. SEIR:

- **Paleontological Resources:** Less than significant.
- **Archaeological Resources:** Less than significant.
- **Historical Resources:** No impact.

3.15 TRANSPORTATION AND TRAFFIC

3.15.1 ENVIRONMENTAL SETTING

a. Roadway Network

The project area is served by a grid system of roads and intersections that provide regional and local access. Highway 111 is a half-mile south of the site and provides regional access to the southern and western portions of the Coachella Valley, including Rancho Mirage to the west, Palm Springs to the northwest, and La Quinta, Coachella, and Indio to the east. Interstate 10 is located 3 miles north of the site via Washington Street. Fred Waring Drive is immediately north of the site and provides east-west access through this portion of the Coachella Valley. Miles Avenue bisects the project site and provides connections between La Quinta and the portion of Indian Wells south of the Coachella Valley Storm Channel via a bridge over the channel.

b. Level of Service (LOS)

Traffic measures on a roadway link (i.e., point between 2 intersections) are measured in Average Daily Traffic (ADT). In contrast, intersection traffic is measured by the Level of Service (LOS) based on vehicular delay at each leg of the intersection. The definitions of LOS for interrupted traffic flow (i.e., flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. Table 19 describes the general LOS values for intersections using the Highway Capacity Manual (HCM) value method.

The project site currently generates a limited amount of traffic during most of the year. The major traffic generator at present is the Pacific Life Open Tennis Tournament that is scheduled one time per year for a two week period, typically in early March. Under existing conditions without the project and not during a tennis event, the following intersections are already operating at unacceptable LOS. (Note: LOS D or better is considered the acceptable standard).

- Washington St. at Fred Waring (LOS E both AM and PM)
- Washington St. at Hwy. 111 (LOS F both AM and PM)
- Washington St. at Avenue 48 (LOS F both AM and PM)
- Adams St. at Hwy. 111 (LOS E at PM only)

The above results are indicative of the traffic resulting from areawide development that has occurred in the vicinity of Washington Street and Highway 111, primarily to the south and east of the project site. (See Table 24, Section 5.0, *Cumulative Impacts*).

c. Parking

The vacant portion of the project site does not contain any uses that require parking. The existing Tennis Garden contains improved parking for participants and spectators. A 39-acre portion of the site south of Miles Avenue is also used for overflow parking and is not paved.

d. Emergency Access

The project site is easily accessible to emergency vehicles via Washington Street and Miles Avenue.

e. Alternative Transportation

The project site currently consists of the existing Indian Wells Tennis Garden and land that is presently vacant and unpaved. Routes 111 and 70 of Sunline Transit currently provide bus service to the project area. Route 111 travels along Highway 111 and provides transit between Indio and Palm Springs. Route 70 travels along Washington Street and provides access to the north and south of the site.

There are no navigable rivers located in the vicinity of the project site. The Coachella Storm Channel is just south of the project site, it is dry except during significant rain events. The proposed development would slightly increase the demand for air transportation by adding population to this area, which is served regionally by the Palm Springs International Airport 6 miles to the west.

Table 19. Level of Service Definitions

LOS	Description of Traffic Flow/Intersection Delay	HCM - Seconds of Delay*	
		Signalized	Unsignalized
A	"Free Flow" - Excellent operation on all approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	<10	<10
B	"Rural Design" - Very good operation or relatively stable flow. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	>10 and <20	>10 and <15
C	"Urban Design" - Good operation and stable but with occasional delay. Some drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	>20 and <35	>15 and <25
D	"Maximum Urban Design" - Fair operation with high-density but stable flow. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues.	>35 and <55	>25 and <35
E	"At Capacity" - Poor operation approaching capacity. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	>55 and <80	>25 and <50
F	"Forced Flow" - Breakdown of traffic flow that represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	<80	<50

Source: Highway Capacity Manual, *Delay Values per 2000 HCM

3.15.2 PROJECT IMPACTS

a. Summary of Conclusions in the 1998 EIR:

The 1998 EIR found that:

- During construction activities, temporary impacts to traffic would be created by haul trucks, construction equipment, and construction workers accessing the project site, but impacts would be *less than significant with mitigation.*

- Implementation of the Tennis Garden would result in an increase in a.m. and p.m. peak hour trips during the annual tennis event, but impacts would be less than significant with mitigation. (Note: The Tennis Garden facility was opened in 2000 and has been in operation since that time, consistent with the analysis contained in the 1998 EIR and will continue to do so. The SEIR analysis focuses on the changes between the development proposed on the "future development areas" (i.e. existing vacant land in the project site) vs. the changes proposed by the Indian Wells Town Center Project).

- Buildout of the proposed project (without annual tennis event), would result in an increase Average Daily Trips (ADT) on adjacent roadways and decrease in Levels of Service (LOS) at intersections in the immediate area, but impacts would be *less than significant with mitigation.*

b. SEIR Analysis:

Note: The 1998 EIR noted that the annual event conditions would have significant impacts on all of the study intersections but that those impacts would be mitigated by the proposed non-event mitigation measures augmented by "special event coordination". Therefore, no additional analysis has been done for the Tennis Garden as the resulting conditions and mitigation are similar. The SEIR analysis focuses on the changed conditions between Phase 2 of the original project and the Indian Wells Town Center project.

For purposes of this analysis, the following terms are used to describe traffic impacts:

- *Existing:* Traffic that currently exists now without the project;

- *Cumulative:* Traffic volumes were obtained from the Coachella Valley Association of Governments (CVAG). Traffic volumes trend from 2003 to 2007 were analyzed to determine the average change in traffic volumes on each segment adjacent to each study intersection. This change was then applied to the 2007 turning movements counts for the study intersections and then distributed through the study intersections.

- *Baseline:* Existing + Cumulative traffic.

- *Project:* Traffic generated by development of the project.

1. CEQA Significance Criteria XVa: Would the project 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?

A Traffic Impact Analysis (TIA), was prepared by Willdan ~~and Associates~~ to compare the changes in traffic impacts between what was proposed in the original project (Phase 2, the current vacant portion of the site without the Tennis Garden complex), and the proposed project. Table 20 below provides a summary of this comparison.

Table 20. Trip Generation

Land Uses	AM Peak Hour Trips			PM Peak Hour Trips			Daily Trips
	In	Out	Total	In	Out	Total	
Approved GOC Phase 2 Project							
Hotels (2, 700 rooms)	203	181	364	245	182	427	5,768
Casitas Suites (140)	31	25	56	25	31	56	686
Quality Restaurants (68,000 SF)	311	68	379	380	233	613	6,117
Service Station (12 pumps)	65	62	127	79	79	158	1,834
Total	**610**	**316**	**926**	**729**	**525**	**1,254**	**14,405**
Proposed Town Center Project							
Condo Hotel (1total of 300 rooms)	102	66	168	93	84	177	2,451
Theater (2,400 seats,60,000SF)	0	0	0	72	120	192	4,440
Offices (85,700 SF)	117	16	133	21	107	128	944
Resort Residential (65 units)	12	36	48	42	24	66	622
Shopping Center (254,300 SF)	160	102	262	458	496	954	10,920
Pass-By Trip Reduction (-34%)*	N/A	N/A	N/A	-156	-169	-325	-325
Total	**391**	**220**	**611**	**530**	**662**	**1,192**	**19,052**
Difference (Proposed v. Approved)	-219	-96	-315	-199	137	-62	4,647

* 34% Internal Trip Reduction based on ITE Trip Generation Manual.

Source: GOC FEIR 1998, Willdan TIA 2007

Table 20 shows that that the total number of trips has increased by 4,647 trips, which represents a 32.2% increase over the overall average daily trips generated by the original Phase 2 of the project. The total a.m and p.m peak hour trips have been reduced (except for the PM Peak Out Trips).

Since the 1998 EIR analysis, traffic conditions and patterns have changed in the immediate surrounding area, therefore, the TIA analyzed traffic impacts based on current traffic conditions and patterns. Based on a meeting with City of La Quinta staff, the following intersections were determined to be most appropriate to evaluate and conduct new traffic counts. This determination was based the intersections most impacted by recent trip generation data.

- Washington Street at Fred Waring Drive

- Washington Street at Via Sevilla (La Quinta)
- Washington Street at Miles Avenue
- Washington Street at Highway 111
- Washington Street at 48th Avenue (La Quinta)
- Adams Street at Highway 111 (La Quinta)

Cumulative conditions were included in the traffic counts for the study intersections identified above by taking data from the 2007 traffic volume data published by the Coachella Valley Association of Governments (CVAG). The traffic volume trends from 2003 to 2007 were analyzed to determine the average change in traffic volumes.

The analysis scenarios used in determining the traffic impacts were the following:

- Existing Conditions (2007)
- Existing Conditions + Cumulative Conditions (Baseline Conditions)
- Existing + Cumulative + Project
- Existing + Cumulative + Project with Mitigation

Table 21. Projected LOS Impacts

Intersection	Existing		Existing + Project		Exist + Cumulative (Baseline)		Exist + Cumulative + Project		Exist + Cumulative + Project + Mitigation	
	Delay - LOS		Delay-LOS		Delay - LOS		Delay - LOS		Delay - LOS	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Washington St at Fred Waring	56.5-E	51.2-D	***56.7-E***	***52.2-D***	70.5- E	56.4- E	70.5- E	59.7- E	52.2 - D	50.1 -D
Washington St at Via Sevilla	27.8 - C	29.2 - C	***27.9-C***	***29.3-C***	29.4 - C	30.2 -C	29.4- C	30.4 - C	N/A	N/A
Washington St. at Miles Ave	50.0 - D	51.7 - D	***51.6-D***	***59.0-E***	51.9 - D	59.9 - E	53.6 -D	76.9 -E	51.7 - D	59. 3-E
Washington St. at Hwy. 111	212.8 -F	62.4 - E	***209.0-F***	***69.3-E***	436.3 -F	103.8 -F	435.9- F	128.3 -F	435.5 -F	101.5-F
Washington St. at Avenue 48	454.3 -F	36.7 -D	***456.7-F***	***38.3-D***	976.3 -F	183.9-F	977.6 -F	195.7-F	498.9 -F	82.3- F
Adams St. at Hwy. 111	48.0 -D	50.2 -D	***48.2-D***	***50.7-D***	49.9 -D	55.2 -E	50.1-D	56.6- E	50.0- D	54.1-D

Source: Willdan TIA 2007

As Table 21 indicates, under Baseline Conditions (Existing + Cumulative), the following intersections are already operating at unacceptable LOS without the project: Note: LOS D or better is considered the acceptable standard).

- Washington St. at Fred Waring (LOS E)
- Washington St. at Hwy. 111 (LOS F)
- Washington St. at Avenue 48 (LOS F)
- Adams St. at Hwy. 111 (LOS E at PM only)

The above results are indicative of the traffic resulting from areawide development that has occurred in the vicinity of the project site, primarily to the south and east. (See Table 24, Section 5.0, *Cumulative Impacts*).

Table 21a. Change in Delay- LOS Existing + Project

Intersection	Existing		Existing + Project		Change in Delay	
	Delay - LOS		Delay-LOS		Delay - LOS	
	AM	PM	AM	PM	AM	PM
Washington St at Fred Waring	56.5-E	51.2-D	56.7-E	52.2-D	+0.2	+4.3
Washington St at Via Sevilla	27.8 - C	29.2 - C	27.9-C	29.3-C	+0.1	+0.1
Washington St. at Miles Ave	50.0 - D	51.7 - D	51.6-D	59.0-E	+1.6	+7.3
Washington St. at Hwy. 111	212.8 -F	62.4 - E	209.0-F	69.3-E	-3.8	+6.9
Washington St. at Avenue 48	454.3 -F	36.7 -D	456.7-F	38.3-D	+2.4	+1.6
Adams St. at Hwy. 111	48.0 -D	50.2 -D	48.2-D	50.7-D	+.0.2	+0.5

As shown in Table 21a, the project will incrementally change the delay (in seconds) from the existing conditions plus adding the project traffic. Delays will increase from less than 1 second to up to 7.3 seconds depending on the intersection. The delay at Washington Street and Highway 111 will decrease by 3.8 seconds in the AM Peak Hour. The Level of Service (LOS) will not deteriorate because of new traffic added by the project to existing conditions

However, ~~T~~the project will incrementally contribute additional traffic to these intersections under the Existing + Cumulative + Project conditions *which is the Baseline Condition for purposes of determining traffic impacts.* Table 22 below summarizes the change in LOS from the Baseline Condition by adding the Existing + Cumulative + Project traffic.

Table 22. Change in LOS

Intersection	Change in LOS
Washington St. at Fred Waring Dr.	None
Washington St. at Via Sevilla	None
Washington St. at Miles Ave.	None AM D to E - PM
Washington St. at Hwy. 111.	None None
Washington St. at Avenue 48	None
Adams St. at Hwy. 111	D to E – AM None - PM

Source: Willdan TIA, 2007

As Table 22 shows, additional traffic from the project will increase delays but LOS will only decrease at Washington St. / Miles Avenue in the PM and at Adams St. /Hwy. 111 in the AM. The LOS for all the other intersections will be worse but it will not lower the LOS to the next letter grade down.

The City of Indian Wells collects funds under the CVAG's Transportation Uniform Mitigation Fee (TUMF). The purpose of the TUMF is to provide a funding mechanism to address the existing lack of capacity and unacceptable Levels of Service on the CVAG Regional Arterial System in order to accommodate anticipated future growth and relieve congestion consistent with the Riverside County Congestion Management Program. The TUMF program will provide significant additional funds from new development to make improvements to the CVAG Regional Arterial System, complementing funds generated by Measure A and other potential funding sources.

The Transportation Prioritization Study (TPPS) is used by CVAG to prioritize the use of funds for construction of the arterial road projects that are most in need. The TPPS identifies factors that may alter recommended priorities and develops a continuing monitoring program, which will allow CVAG to address changing conditions over time. The system is set up so that participating jurisdictions provide CVAG with traffic information based on bona fide traffic studies so that roadway improvements can be considered for inclusion in the TPPS or reprioritized. The TPPS is updated on a regular basis (2005 was the last update) based on input from jurisdictions. Table 22 shows the status of the improvements required per Mitigation Measure TT-1

Table 22a.

TRANSPORTATION PROJECT PRIORITIZATION STUDY (TPPS) ANALYSIS

Intersection	Intersection Has One or More Approaches on a TPPS Segment	TPPS Segment Includes Proposed Mitigation per Mitigation Measure TT-1	Mitigation That Needs to be Added to TPPS	Location
Washington St. at Fred Waring Dr	YES	NO	Add Right Turn Lane on Westbound Fred Waring Through Lane to Southbound Washington	La Quinta La Quinta
Washington St. at Via Sevilla	NO	N/A		N/A
Washington St. at Miles Ave.	YES	NO	Add Left Turn Lane on Southbound Washington Add Westbound Right Turn Lane to Miles	Indian Wells La Quinta
Washington St. at Hwy. 111.	YES	NO	Add Right Turn Lane on Southbound Washington	La Quinta
Washington St. at Avenue 48	YES	NO	Add Right Turn Lane on Northbound Washington	La Quinta
Adams St. at Hwy. 111	NO	NO	Add Left Turn Lane to Both Approaches on Highway 111	La Quinta

Reduction of the traffic congestion will require regional improvements to be constructed per the CVAG Regional Arterial System. Payment of TUMF is considered to be the projects fair share mitigation to help alleviate the existing traffic conditions. Based on the above analysis, short-term impacts to Level of Service are significant because it is uncertain if the improvements to the CVAG Regional System will be in place upon opening of the project. *Long term impacts are also considered significant until such time that the improvements identified in Mitigation Measure TT-1 are prioritized in the TPPS as requested by the City of Indian Wells. Please note that according to Table 22a the City of Indian Wells only has the ability to implement mitigation measures within their jurisdiction, and that the majority of improvements required to mitigate areawide traffic are for improvements in the City of La Quinta and the most viable method for the project to contribute to these measures is through the payment of TUMF and coordination with CVAG.* ~~mitigated through payment of TUMF for CEQA Significance Criteria XVa~~.

In addition, a traffic signal warrant analysis was conducted by Willdan dated November 1, 2007 which indicated that the intersection of Washington Street and Via Sevilla/Project Entrance meets two established warrants contained in the California Manual on Uniform Traffic Control Devices with the Project Conditions. These warrants are; Minimum Vehicular Volume; and Interruption of Continuous Traffic and Warrant 3-Peak Hour. As such, Mitigation Measure TT-15 is recommended which requires signalization of the intersection.

2. CEQA Significance Criteria XVb: Would the project exceed either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

The Riverside County Transportation Commission (RCTC) was designated as the Congestion Management Agency (CMA) in 1990 and holds responsibility for the development and implementation of the Riverside County CMP. The current CMP was adopted by RCTC in November 2003 and updated in 2006. According to the 2006 update for the Riverside County Congestion Management Program (CMP), Highway 111 between Interstate 10 to the Imperial County line is a designated CMP roadway. The Level of Service standard established by the CMA for CMP roadways is Level of Service "E". According to the 2006 CMP Update. Highway 111 in the vicinity of the project site is operating at Level of Service "C".

In addition, Table 4-1 and Exhibit 4-1 of the 2006 CMP Update identifies facilities (roadway segments or intersections) along the CMP System of Highways and Roadways that had a LOS of "F" in 1991. As a result, these facilities continue to be "exempt" from CMP requirements in accordance with CMP Statutes. Highway 111 between State Route 74 to the border of Caltrans District 11 (south to Imperial County) has been identified as an "exempt" roadway. This segment of Highway 111 passes near the project site. Therefore, the impacts to Highway111 are exempt *even though the roadway is operating at an acceptable Level of Service.* Based on the above analysis no mitigation is required for CEQA Significance Criteria XVb.

3. CEQA Significance Criteria XVc: Would the project 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?

The site is not within the two-mile Airport Influence Zone (AIZ) of any public airport, nor is it within two miles of a private airstrip. Therefore, no mitigation is proposed for Significance Criteria XVc.

4. CEQA Significance Criteria XVd: Would the project substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

Access to the project site is from Washington Street and Miles Avenue. Both roadways are relatively straight and do not contain sharp curves or dangerous intersections. The project is designed with driveways that are spaced an appropriate distance apart (i.e. in excess of 480 feet in all cases) and are designed to align with existing streets across Washington Street (Via Sevilla) and the driveways will be aligned on both the north and south sides of Miles Avenue. In addition, through the City's Development Review process, adequate lines of sight will be maintained at all driveway intersections with Washington Street and Miles Avenue. There are no permanent agricultural uses in the immediate project vicinity which would introduce farm equipment on area roadways. Based on the above, no mitigation is required for CEQA Significance Criteria XVd.

5. CEQA Significance Criteria XVe: Would the project result in inadequate emergency access?

The project will improve long-term emergency vehicle access to the project site and surrounding areas. During construction, access may be impaired temporarily, but will cease at the end of construction. During construction, there may be temporary delays especially during construction at the intersection of Washington Street and Miles Avenue. Some type of congestion management would be required by the City to keep construction-related impacts from becoming significant, and there were mitigation measures in the 1998 EIR to address potential impacts from construction, including emergency services.

Both major access routes (Washington Street and Miles Avenue) are relatively straight with no intervening intersections to be improved at this time. Upon completion, the project will improve overall safety for drivers traveling through this area, and the mitigation measures in the 1998 EIR will help assure that peak traffic during annual events will continue to have adequate and safe access to and around the site. Based on the above analysis, no additional mitigation measures are required for CEQA Significance Criteria XVe.

6. CEQA Significance Criteria XVf: Would the project result in inadequate parking capacity?

The 1998 EIR identified a need for additional parking to serve future tennis uses. The existing tennis complex has the amount of parking required by the City and identified in the 1998 EIR, and the City is proposing an additional permanent lot for 1,632 spaces adjacent to Warner Trail to accommodate parking for large events at the Tennis Garden. The proposed project will generate a need for additional parking, including the restaurants and retail uses. The required number of spaces per City code is being provided

In addition, temporary parking will be needed for construction workers. Adequate area for parking is available on-site and at several nearby locations for construction workers, so no adverse parking capacity impacts are forecast to occur. Based on the above analysis, no mitigation is required for CEQA Significance Criteria XVf.

7. CEQA Significance Criteria XVfg: Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?

The 1998 EIR examined non-vehicular impacts of the project and found them to be less than significant with the proposed mitigation. The roadway and intersections of the proposed project are designed to meet City standards. All necessary alternative transportation systems, bus stops and areas for pedestrian and biking requirements will be incorporated into the project design. Since the proposed project is similar to the approved project in this regard, the proposed project is not expected to create any conflicts with alternative transportation policies. Based on the above analysis, no additional mitigation is required for CEQA Significance Criteria XVg.

c. NOP Comments

During the NOP period, the City of La Quinta recommended that the SEIR examine the traffic impacts on local intersections and roads relative to the proposed project. These issues were addressed in the SEIR.

In addition, The Planning Associates requested that minor access changes to a portion of the proposed project be made to accommodate their proposed development. As proposed, access to the site referenced by the Planning Associates is provided via a driveway on the north side of Miles Avenue. No other comments were received on traffic and circulation.

3.15.3 MITIGATION MEASURES

a. 1998 EIR: The following mitigation measures were adopted for Transportation and Traffic related impacts:

1. Short Term Construction:

- **Tennis Complex:** Mitigation Measures 5.2-1a (compliance with traffic management plan), 5.2-1b (construction traffic management), 5.2-1c (construction traffic signage and control).

- **Project Buildout:** Mitigation Measures 5.2-1a (compliance with traffic management plan), 5.2-1b (construction traffic management), 5.2-1c (construction traffic signage and control).

2. Operations

<u>Phase 1 Tennis Complex (Annual Event Trip Generation)</u>

- **Existing + Phase 1 Project Conditions:** Mitigation Measure 5.2-2a for Fred Warring Drive/Washington Street (fair share payment of *<u>TUMF</u>* ~~CVAG~~ mitigation fee for the addition of two southbound through lanes on Washington Street and one northbound through lane on Washington Street due to existing deficient condition).

- **Existing + Phase 1 Project + Cumulative Conditions:** Mitigation Measure 5.2-2b for Fred Waring/Washington Street (fair share payment of *TUMF* ~~CVAG~~ mitigation fee for the addition of a northbound left turn lane on Washington Street and an additional northbound through lane on Washington Street). Mitigation Measure 5.2-2c for Highway 111 and Cook Street (fair share payment of *TUMF* ~~CVAG~~ mitigation fee for the conversion of the eastbound right turn lane on Highway 111 at Cook Street, additional northbound left turn lane on Cook Street, additional southbound left turn lane on Cook Street, an additional eastbound left turn lane on Highway 111, an additional westbound left turn lane on Highway 111, an additional eastbound through lane on Highway 111, and an additional westbound through lane on Highway 111).

- **Existing + Phase 1 Project Annual Tennis Event Condition:** Mitigation Measure 5.2-2d requires "special event" coordination including temporary signage, flagmen and shuttle service.

Project Buildout (Without Annual Tennis Tournament)

- **Existing + Project Buildout Conditions:** Mitigation Measure 5.2-3a for Miles Avenue/Washington Street (fair share payment of *TUMF* ~~CVAG~~ mitigation fee for addition of a southbound through lane on Washington Street and Miles Avenue, and an eastbound right turn lane on Miles Avenue at Washington Street).

- **Existing + Project Buildout + Cumulative Conditions:** Mitigation Measure 5.2-3b for Highway 111/Cook Street (fair share payment of *TUMF* ~~CVAG~~ mitigation fee for conversion of eastbound right turn lane added on Highway 111 at Cook Street, an additional northbound left turn lane on Cook Street, an additional southbound left turn lane on Cook Street, an additional eastbound left turn lane on Highway 111, an additional westbound left turn lane on Highway 111, an additional eastbound through lane on Highway 111, and an additional westbound through lane on Highway 111).

  Mitigation Measure 5.2-3c for 42nd Avenue/Washington Street (fair share payment of *TUMF* ~~CVAG~~ mitigation fee for the additional southbound left turn lane on Washington Street at 42nd Avenue, restriping of northbound Washington Street at 42nd Avenue, restriping of northbound Washington Street at 42nd Street to one left turn lane and two through lanes).

  Mitigation Measure 5.2-3d for Miles Avenue/Jefferson Street (fair share payment of *TUMF* ~~CVAG~~ mitigation fee for additional left northbound left turn lane for Jefferson Street at Miles Avenue, restriping of southbound Jefferson Street at Miles Avenue to one left turn lane and one through/right turn lane).

Project Buildout (With Annual Tennis Tournament)

- **Existing + Project Buildout Annual Tennis Event Conditions:** Mitigation Measure 5-2-4a refers to Mitigation Measure 5.2-2d (Special Event traffic coordination)

- **Existing + Project Buildout Annual Tennis Event Conditions + Cumulative Conditions:** Mitigation Measure 5-2-4b refers to Mitigation Measure 5.2-2d (Special Event traffic coordination)

(See Section 8.0 for a complete list of 1998 EIR Mitigation Measures and Revisions)

b. Supplemental EIR Mitigation Measures:

Mitigation Measure TT-1 is proposed in addition to 1998 EIR Mitigation Measures *TT-2* ~~5.2-1a,~~ *TT-3* ~~5.2-1b~~, *TT-4* ~~5.2-1c~~, *TT-5* ~~5.2-2a~~, *TT-6* ~~5.2-2b~~, *TT-7* ~~5.2-2c~~, *TT-8* ~~5.2-2d~~, *TT-9* ~~5.2-3a,~~ *TT-10* ~~5.2-3b~~, ***TT-11*** ~~5.2-3c~~, ***TT-12*** ~~5.2-3d~~, ***TT-13*** ~~5.2-4a~~ and *TT-14* ~~5.2-4b~~ above in order to address changes in circumstances since preparation of the 1998 EIR.

Short-Term Construction:

1998 EIR Mitigation Measures *TT-2* ~~5.2-1a~~, *TT-3* ~~5.2-1b~~. and *TT-4* ~~5.2-1c~~ apply.

Operations: ***The following Mitigation Measures have been added for Phase 2 of the project:***

TT-1 Prior to the issuance of building permits, the developer shall pay the Transportation Uniform Mitigation Fee (TUMF) to fund its fair share contributions for the following improvements.

a) Washington St. at Fred Waring Drive: Add a westbound right turn lane on Fred Waring Drive, an additional southbound through lane on Washington Street, and an additional eastbound through lane of Fred Waring Drive. (With regard to the eastbound through lane, the City of Indian Wells is currently completing a street improvement project for Fred Waring Drive that will be adding an eastbound through lane).

b) Washington St. at Miles Avenue: Add an additional southbound left turn lane on Washington Street and a westbound right turn lane on Miles Avenue.

c) Washington St. at Hwy. 111: Add a southbound right turn lane on Washington Street.

d) Washington St. at Avenue 48: Add a northbound right turn lane on Washington Street.

e) Adams St. at Hwy. 111: Add an additional westbound left turn lane and an additional eastbound left turn lane on Highway 111.

The City shall submit the "Supplemental Traffic Impact Analysis for Draft Supplemental EIR for Indian Wells Town Center" prepared by Willdan dated June 18, 2007 to the Coachella Valley Association of Governments for consideration of inclusion of specific improvements contained in Mitigation Measure TT-1 into the ongoing Transportation Project Prioritization Study.

TT-15 Prior to the issuance of the first occupancy permit for the area north of Miles Avenue, a traffic signal shall be installed at the intersection of Washington Street and Via Sevilla/Project Entrance.

3.15.3 Impact of Mitigation Measures

Implementation of the various proposed roadway and intersection improvements may cause minor temporary congestion and delay, depending on timing and extent of construction. These measures will reduce potential traffic congestion and safety hazards to a less than significant level, to the satisfaction of the City. In addition, warning signs will be used in advance of construction areas encouraging drivers to take alternate routes during construction. Impacts from the construction of roadways will have temporary impacts on noise and air quality but are mitigated through mandatory requirements for air quality control and City noise standards. These measures include such items as construction equipment emission control for air quality and a limitation on construction hours for noise.

3.15.4 SUMMARY OF IMPACT AFTER MITIGATION

1998 EIR:

Short-term Construction: Less than significant

Operations: Less than significant

SEIR:

Short-term Construction: Less than significant.

Operations (short-term): Significant and Unavoidable

Operations (long-term); ~~Less than significant~~ *Significant and Unavoidable*

6.0 UNAVOIDABLE AND IRREVERSIBLE IMPACTS

6.1 SUMMARY OF ADVERSE IMPACTS

The proposed project will create the following significant impacts that cannot be mitigated to less than significant levels even with implementation of all feasible mitigation measures:

Air Quality: The project will exceed SCAQMD significance thresholds for VOC and NOx during construction after implementation of all feasible mitigation measures. The project will exceed SCAQMD significance thresholds for VOC, NOx, CO and *PM10* during operation after implementation of all feasible mitigation measures. Exceeding these thresholds would not comply with the SCAQMD Air Quality Plan. Although a Transportation Demand Management program has been identified in the SEIR as Mitigation Measures AQ-8 impacts to air quality for the above referenced emissions remain significant and unavoidable.

Transportation (Traffic Short-Term *and Long-Term*): Even without the project, the LOS at some of the study intersections are operating at unacceptable levels (greater than LOS D). The project will incrementally add to traffic, but will mitigate its long-term impacts by payment of the Transportation Uniform Mitigation Fee (TUMF) so that LOS will be improved for Washington Street and Fred Waring Drive for both the AM and PM peak hour and Adams Street and Highway 111 in the PM peak hour (AM peak hour delay for Adams and Highway 111 will be essentially the same). Delays will be reduced for all other intersections for both the AM and PM peak hours. However, until improvements are constructed to the Coachella Valley Regional Arterial System with TUMF and Measure A funds, short-term *and long-term* impacts ~~remains~~ *are* significant due to existing traffic congestion in the area.

Aesthetics (Scenic Vista): Although the hotel has been designed to reduce the impact of the hotel height to those residences most impacted (located immediately east of the site in the Palm Royale Country Club on Via Pavion in La Quinta), through the building design (terraced and stepped to reduce building mass), increasing the building setbacks, and providing a view corridor, some views of the mountains to southwest would still be wholly or partially blocked. This impact would remain significant and unavoidable.

6.2 IRREVERSIBLE IMPACTS

The CEQA Guidelines describe three distinct categories of significant irreversible changes described as follows: Changes in Land Use That Would Commit Future Generations
The project proposes to construct a hotel, shops, theater, offices, single-family homes, and an additional permanent parking lot adjacent to the Indian Wells Tennis Garden. Development of the site into these uses (except the residential uses and parking lot) was analyzed in the Program EIR for the Garden of Champions (1998) now known as the Indian Wells Tennis Garden. The City of Indian Wells General Plan designates the site as Resort Commercial and Sports Complex. The project proposes to change the Sports Complex land use designation to Low Density Residential to accommodate 65 single-family homes as opposed to constructing an additional sports complex. This change in land use is more compatible with the surrounding area and is more environmentally compatible with the biological resources that may occur in the Coachella Valley Storm Channel and the Santa Rosa Mountains Conservation Area located approximately 1,400 feet south of the site. Therefore, the change in land use would not commit future generations to a significant change in land use.

Irreversible Changes from Environmental Actions

Irreversible changes to the environment could occur if hazardous substances are released associated with development of the Project. Compliance with the requirements and mitigation measures contained in Section 3.7 of this SEIR would reduce impact to less than significant. No other sources of irreversible changes from environmental actions are forecast to occur.

Consumption of Non-Renewable Resources

Consumption of non-renewable resources would be the conversion of agricultural land to urban uses, consumption of energy resources such as electricity and natural gas, and the loss of potential mining resources.

The site is not designated as Prime, Unique, or Farmland of Statewide Importance by the California Conservation Department and is not being used for agricultural purposes.

The site is not identified as a mineral resource site and as described in Section 3.10 of this SEIR, more suitable locations currently are being used as mineral resource sites. Given the sites proximity to a church, school, and residential uses, it would not be a logical site for mining of mineral resources in the future.

The project will consume non-renewable energy resources during construction and operation such as petroleum products, construction materials, electricity and natural gas. Construction impacts to non-renewable would be short-term. Operation of the Project is required to comply with mandatory requirements of Title 24 in regard to energy efficient building design and is required to utilize energy conservation measures during operations of the facilities within the project.

APPENDIX A

RESPONSE LETTERS

COUNTY OF RIVERSIDE

TRANSPORTATION AND LAND MANAGEMENT AGENCY

Transportation Department

George A. Johnson, P.E.
Director of Transportation

Post-it® Fax Note 7671	Date 10-12-07	# of pages ▶ 1
To Ms. Kates	From Transportation	
Co./Dept. City of Indian Wells	Co. County of Riverside	
Phone #	Phone # 951-955-6769	
Fax # 760-346-0407	Fax #	

October 2, 2007

Ms. Corrie Kates
Community Development Director
City of Indian Wells
44-950 Eldorado Drive
Indian Wells, CA 92210

RE: Review of the Draft Supplement Environmental Impact Report for the Indian Wells Garden of Champions Tournament Center and Indian Wells Town Center Project (SCH No. 2006111097)

Ms. Kates:

Thank you for the opportunity to review the traffic study for the Draft Supplemental Environmental Initial Report for the GOC and Indian Wells Town Center project. We have completed our review of the Draft Supplemental EIR. We have no comments on the analysis or findings in the traffic study included in the Draft Supplemental EIR.

Based on the analysis and findings in the study, with the implementation of recommended mitigation program the project as proposed should have no significant impacts on the County roadways in the vicinity.

Thank you again for the opportunity to review the report for this project. If you have any questions or comments regarding this review, please feel free to call me at 951-955-2091 or email FKHORASH@rctlma.org.

Sincerely,

Farah Khorashadi

Farah Khorashadi
Engineering Division Manager

cc: Juan C. Perez
Deputy Director of Transportation

10 12 '07 PM02 13 City OF IN

4080 Lemon Street, 8th Floor • Riverside, California 92501 • (951) 955-6740
P.O. Box 1090 • Riverside, California 92502-1090 • FAX (951) 955-3198

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

December 19, 2007

Corrie Kates
City of Indian Wells
44-950 Eldorado Drive
Indian Wells, CA 92210

RE: Comments on the Draft Supplemental Environmental Impact Report for Indian Wells Garden of Champions Tournament Center and Indian Wells Town Center Project, Indian Wells, California, Riverside County, California

Dear Mr. Kates:

The Agua Caliente Band of Cahuilla Indians (ACBCI) is an active partner in the development of the Coachella Valley, but it is also concerned about the preservation and management of its cultural heritage. The Draft Supplemental Environmental Impact Report (SEIR) is a tool in the planning process to identify, manage and minimize significant effect on environmental resources, including cultural resources, within the City's boundaries and Tribe's Traditional Use Area. Thank you for allowing the Tribe to comment on the Draft SEIR. I have some general concerns which I discuss below.

Draft SEIR Comments

The RMW report *An Exploratory Investigation of CA-RIV-3005 and CA-RIV-5876, Located Near Indian Wells, Riverside County, California* dated July 1998 covered only a portion of the currently proposed project area. It excludes the proposed parking area for the current project known as the Indian Wells Garden of Champions Tournament Center and Indian Wells Town Center. Therefore the THPO recommends a new Phase I study.

3.5.1b Archaeological resources

This section mentions three sites which will be impacted by the proposed project. According to the Agua Caliente Cultural register there are twelve cultural resources located within the Proposed Project Area and Parking Lot Area. Two cultural resources are located in the Proposed Parking Lot (33-3007 and 33-3008) and 10 are located with the boundaries of the project area (33-3005, 33-9014, 33-9015, 33-9016, 33-09017, 33-9020, 33-9021, 33-9022, 33-9023, and 33-9556). These recorded resources are likely associated the Cahuilla village of *Kavinish*. *Kavinish* has been documented in traditional oral histories of the Cahuilla people and ethnographically documented. The village was

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occupied from at least the time of European contact until its abandonment in the early 1850s-1890s. The area was reoccupied by non-Indians and became known as Indian Wells. The likelihood of encountering subsurface cultural deposits including cremation burials is extremely high. Because of this the Agua Caliente THPO recommends the following:

1. A new Phase I study and Phase II Testing and Evaluation with appropriate analysis (artifacts, faunal, vertebrates, invertebrates, floral remains, macro botanical identifications, pollen/phytolith, organic resides, and other technical analysis as necessary) for sites not previously tested and evaluated. In addition for the Phase II study the Agua Caliente THPO makes the following recommendation:

    a. Approved Cultural Resource Monitor(s) be present during any archaeological survey and/or any ground disturbing activities by the developer. Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the Agua Caliente Tribal Historic Preservation Officer.

3.5.2 Project Impacts
Although the summary of conclusions indicates there will be no impacts to Archaeological resources this conclusion is based on a report from 1998. The desert environment is dynamic in nature and surface visibility in 1998 may be drastically different at this time.

3.5.6 Mitigation Measures
Based on the new Phase I and Phase II studies proposed mitigation measures may include the following:

1. Sufficient recordation of resources
2. If sites are significant, preservation in open space, capping or data recovery (Phase III)
3. Avoidance and or Conservation Easements
4. Monitoring (archaeological and Native American)
5. Protection mechanisms (fencing, landscaping)
6. Recovery

Additionally, in accordance with State law, the County Coroner should be contacted if any human remains are found during earthmoving activities. If the remains are determined to be of Native American origin, the Native American Heritage Commission (NAHC) shall be contacted. The NAHC will make a determination of the Most Likely

Descendent (MLD). The City will work with the designated MLD to determine the final disposition of the remains.

Again, we appreciate the opportunity to review the Draft EIR. The review of documents is to improve the quality of archaeological reports in this region. You may contact me at (760) 699-6907 if you have any questions or concerns. You may also email at ptuck@aguacaliente.net. Thank you.

Sincerely,

Patricia Tuck, Archaeologist
Tribal Historic Preservation Office
AGUA CALIENTE BAND OF CAHUILLA INDIANS

pat

c: Agua Caliente Cultural Register
Augustine Band of Mission Indians
Cabazon Band of Indians
Cahuilla band of Mission Indians
Morongo Band of Mission Indians
Ramona Band of Cahuilla Indians
Santa Rosa Band of Mission Indians
Soboba Band of Luiseno Indians
Torres-Martinez Desert Cahuilla Indians

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AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

February 8, 2008

Corrie Kates
City of Indian Wells
44-950 Eldorado Drive
Indian Wells, CA 92210

RE: Comments on the Draft Supplemental Environmental Impact Report for Indian Wells Garden of Champions Tournament Center and Indian Wells Town Center Project, Indian Wells, California, Riverside County, California

Dear Mr. Kates:

The Agua Caliente Band of Cahuilla Indians (ACBCI) thanks you for allowing the Tribe to comment on the Draft SEIR. The THPO submitted a letter of comment and recommendation regarding this project dated December 19, 2007. In the letter we expressed concern regarding the survey coverage and evaluations of archaeological sites impacted by this project. Subsequently a meeting was arranged by the City, with its contracted Archaeologist and staff members of the THPO. The City provided two additional reports which provided clarification of the survey coverage (all areas were adequately surveyed) and proper evaluation and data recovery of the two sites deemed significant per CEQA.

Although the documentation and evaluation of the sites in the report meet CEQA requirements the Tribe is very concerned about the amount of time which has passed and the changing dune environment (potentially exposing previously undiscovered resources). Additionally, all recorded resources are likely associated the Cahuilla village of *Kavinish* which has been documented in traditional oral histories of the Cahuilla people and ethnographies. Furthermore, the Tribe is greatly concerned regarding the potential for inadvertent discovery of human remains within the project area. Therefore the City and the THPO have agreed to the following:

1. Prior to grading or any earth disturbing activities an archaeological surface collection of all cultural resources will commence. All artifacts discovered will be collected mapped and curated to current standards.
2. Prior to grading or any earth disturbing activities an archaeological survey of APNs 633-360-029, -018, and 604-040-089 is to be completed. All new sites are to be recorded on the proper DPR forms and if necessary evaluated for significance per CEQA.
3. Approved Cultural Resource Monitor(s) be present during all archaeological (surface collection and survey) and ground disturbing activities. Experience has shown that there is always a possibility of encountering

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buried cultural resources during construction related excavations, or archaeological testing/data recovery. Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified (Secretary of the Interior's Standards and Guidelines) Archaeologist to investigate and, if necessary, prepare a mitigation plan for submission to the City and the Agua Caliente THPO.

4. Archaeological Monitor(s) be present during any ground disturbing activities related to the project. Should buried cultural deposits (including human remains), be encountered, the Archaeological Monitor shall notify a Qualified (Secretary of the Interior's Standards and Guidelines) Archaeologist to investigate and, if necessary, prepare a mitigation plan for implementation.
5. Additionally, in accordance with State law, the County Coroner should be contacted if any human remains are found during earthmoving activities. If the remains are determined to be of Native American origin, the Native American Heritage Commission (NAHC) shall be contacted. The NAHC will make a determination of the Most Likely Descendent (MLD). The City will work with the designated MLD to determine the final disposition of the remains.
6. Copies of any cultural resource documentation (reports and site records) that might be generated in connection with these efforts for permanent inclusion in the Agua Caliente Cultural Register.

Again, we appreciate the opportunity to review the Draft EIR. The review of documents is to improve the quality of archaeological reports in this region. You may contact me at (760) 699-6907 if you have any questions or concerns. You may also email at ptuck@aguacaliente.net. Thank you.

Sincerely,

Patricia Tuck, Archaeologist
Tribal Historic Preservation Office
AGUA CALIENTE BAND OF CAHUILLA INDIANS

pat

c: Agua Caliente Cultural Register
Augustine Band of Mission Indians
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Santa Rosa Band of Mission Indians
Soboba Band of Luiseno Indians
Torres-Martinez Desert Cahuilla Indians

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APPENDIX B

AIR QUALITY ANALYSIS (REVISED)

November 5, 2007

Michael Brandman Associates

Bakersfield 661.334.2755
Fresno 559.497.0310
Irvine 714.508.4100
Palm Springs 760.322.8847
Sacramento 916.383.0944
San Bernardino 909.884.2255
San Ramon 925.830.2733

EPC Land Planning Consultants
Mr. Ernest Perea
5225 Canyon Crest Drive, Suite 71-325
Riverside, CA 92507

Subject: Brief Air Quality Analysis for the Indian Wells Town Center (Revised)

Dear Mr. Perea:

The following is a brief air quality analysis for the Indian Wells Town Center (project). This analysis is limited in scope and only contains the following components: limited background air quality information; a quantification of air pollutant emissions from the project; a construction localized significance analysis; a carbon monoxide hotspot analysis; and a determination of whether or not the project is consistent with the current Air Quality Management Plan.

Project Description

The project consists of approximately 125 acres of land located on the west side of Washington Street north and south of Miles Avenue in the northeast portion of the City of Indian Wells, Riverside County. The project consists of the development of a maximum of 400,000 square feet of retail, restaurants, office, and a theater. The project also consists of a hotel, 65 residential units, and additional parking for the existing Indian Wells Tennis Garden.

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 South Coast Air Quality Management District (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. There are residences located approximately 500 feet (152 meters) south of the southern boundary of the project site and across from Washington Street approximately 180 feet (55 meters) from the project site. There is a small commercial development at the corner of Washington Street and Highway 111 that likely contains workers, which is approximately 500 feet (152 meters) south of the southern boundary of the project site.

Background Air Quality Information

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 (U.S. EPA) regulates at the national level. The California Air Resources Board (CARB) regulates at the state level. The SCAQMD regulates at the air basin level.

The U.S. EPA handles global, international, national, and interstate air pollution issues and policies. The U.S. EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans (SIP), provides research and guidance in 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 resulting from provisions of the

Clean Air Act of 1970. The six criteria pollutants are ozone, particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide, carbon monoxide (CO), lead, and sulfur dioxide. The NAAQS were set to protect the health of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants.

CARB has overall responsibility for statewide air quality maintenance and air pollution prevention. The SIP for the State of California is administered by CARB. A SIP is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain NAAQS. CARB also administers California ambient air quality standards, or state standards, for the ten air pollutants designated in the California Clean Air Act. The ten state air pollutants are visibility reducing particulates, hydrogen sulfide, sulfates, vinyl chloride, and the six criteria pollutants.

The criteria pollutants and applicable CAAQS and NAAQS are displayed in Table 1. These standards establish the context for local air quality management plans. They are set to protect the health of sensitive individuals.

Table 1: Ambient Air Quality Standards

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects
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.
	8 Hour	0.070 ppm	0.08 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.
	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 and pulmonary structural changes; (c) Contribution to atmospheric discoloration.
	Mean	0.030 ppm*	0.053 ppm	
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm	—	Bronchoconstriction accompanied by symptoms that may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
	24 Hour	0.04 ppm	0.14 ppm	
	Mean	—	0.030 ppm	
Particulate Matter (PM_{10})	24 hour	50 μg/m³	150 μg/m³	(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.
	Mean	20 μg/m³	—	
Particulate Matter ($PM_{2.5}$)	24 Hour	—	35 μg/m³	
	Mean	12 μg/m³	15 μg/m³	

Table 1: Ambient Air Quality Standards (Cont.)

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects
Sulfates	24 Hour	25 µg/m³	—	(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.
Lead	30-day	1.5 µg/m³	—	(a) Learning disabilities; (b) Impairment of blood formation and nerve conduction.
	Quarter	—	1.5 µg/m³	

Abbreviations:
ppm = parts per million (concentration) µg/m³ = micrograms per cubic meter
Mean = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

* The nitrogen dioxide ambient air quality standard was amended on February 22, 2007. These changes become effective after regulatory changes are submitted and approved by the Office of Administrative Law, expected in 2007.
Source: South Coast Air Quality Management District, 2007c. California Air Resources Board, Ambient Air Quality Standards, 2007b.

A brief description of the criteria pollutants and additional pollutants of concern are contained below.

- **Carbon monoxide (CO):** A colorless, odorless toxic gas produced by incomplete combustion of carbon-containing fuels (e.g., gasoline or diesel fuel). CO levels tend to be highest during the winter months, when the meteorological conditions favor the accumulation of the pollutants.
- **Ozone:** A photochemical oxidant that is formed when reactive organic gases and oxides of nitrogen (both byproducts of internal combustion engines) react in the presence of ultraviolet sunlight. Ozone is an energetic combination of three oxygen atoms that, when it comes into contact with a surface, releases its force as chemical energy. When this happens to biological systems (i.e., the respiratory tract and plants), this energy can cause damage to sensitive tissues.
- **Oxides of nitrogen (NOx):** NOx is a mixture of nitric oxide and nitrogen dioxide in the atmosphere. Nitric oxide is formed as a byproduct of fuel combustion and quickly reacts with oxygen to form nitrogen dioxide. NOx emissions contribute to the formation of ozone and particulate matter. Nitrogen dioxide is the only form of NOx to cause public health concerns. The main human health concerns of nitrogen dioxide include lung damage, increased incidence of chronic bronchitis, eye, and mucus membrane damage, negative effects on the respiratory system, pulmonary dysfunction, and premature death. Small particles can penetrate deeply into the sensitive tissue of the lungs and can cause or worsen respiratory disease such as emphysema, asthma, and bronchitis, and can also aggravate existing heart disease (EPA 2005).
- **Sulfur dioxide and sulfates:** In California, sulfur is emitted during the combustion of petroleum-derived fuels (i.e., gasoline and diesel fuel) that contain sulfur. During combustion, sulfur is oxidized to sulfur dioxide (a colorless pungent gas). The sulfur dioxide is then converted to sulfate compounds in the atmosphere. Symptoms include wheezing, shortness of breath and chest tightness, which are apparent especially during exercise and in people with asthma (EPA 2004).
- **Lead:** Lead is a heavy metal that can accumulate in bone, soft tissue, and blood; can damage the kidneys, liver, and nervous system; and can result in learning disabilities, seizures, and death. Lead concentrations once exceeded the state and national air quality standards by a wide margin, but have not exceeded state or national air quality standards in the area for at least 10 years. Lead is no longer an additive in gasoline, which is the main reason the concentration of lead in the air is low.

- **Suspended particulate matter (PM_{10} and $PM_{2.5}$):** Particulate matter is a mixture of small particles that consists 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. Sources include road dust, diesel soot, erosion of soil, combustion particles (ashes and soot), and tire and brake abrasion. Breathing particulate matter can cause or aggravate problems associated with asthma, can increase coughing and cause breathing to be difficult or painful (EPA 2007). Breathing particulate matter has been associated with chronic bronchitis and decreases lung function (EPA 2007).
- **Volatile organic compounds (VOCs):** VOCs are organic compounds that readily evaporate. Reactive organic gases (ROGs) consist of non-methane and oxygenated hydrocarbons. Although all VOCs are not necessarily ROGs, the terms are often interchanged. There are no state or national ambient air quality standards for VOCs; however, they are regulated because they are involved in chemical reactions that contribute to the formation of ozone. In addition, some hydrocarbon components classified as VOCs (i.e., benzene) are thought or known to be hazardous. Sources of VOCs include adhesives, solvents, paints, cooking, fuel, and combustion. VOCs can interfere with oxygen uptake and can cause coughing, sneezing, headaches, weakness, laryngitis, and bronchitis.
- **Diesel particulate matter (DPM):** Diesel exhaust is a mixture of many particles and gases that is produced when an engine burns diesel fuel. Many compounds found in diesel exhaust are carcinogenic. DPM includes the particles in diesel exhaust. Some of the health effects of DPM include eye, nose, and throat irritation as well as cough, nausea, and phlegm.
- **Visibility reducing particles are suspended particulate matter:** Visibility is the distance through the air that can be seen without the use of instrumental assistance. The 8-hour state standard is the extinction coefficient of 0.23 kilometer – visibility of ten miles or more due to particles when relative humidity is less than 70 percent. Visibility reducing particles are not assessed in this report; however, particulate matter is assessed.
- **Vinyl chloride** is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride is a known carcinogen. The 24-hour state standard for vinyl chloride is 0.01 ppm. The proposed 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. Therefore, it is not assessed in this report.
- **Hydrogen sulfide** is a flammable, colorless, poisonous gas that smells like rotten eggs. It can irritate the eyes and respiratory tract and cause symptoms like headache, nausea, vomiting, and cough. The 1-hour state standard for hydrogen sulfide is 0.03 ppm. Sources include the combustion of sulfur containing fuels (oil and coal) and organic matter that undergoes putrefaction. It is used in the production of heavy water for nuclear reactors, the manufacture of chemicals, in metallurgy, and as an analytical reagent. The proposed project is not expected to cause exposure to hydrogen sulfide because it will not generate hydrogen sulfide in any substantial quantity. Therefore, hydrogen sulfide is not assessed in this report.
- **Greenhouse gases** help to regulate the climate by absorbing infrared radiation in the atmosphere and allowing incoming solar radiation to pass through the atmosphere. Greenhouse gases include water vapor, methane, carbon dioxide, nitrous oxide, ozone, halogenated fluorocarbons, perfluorinated carbons, and hydrofluorocarbons. Increased production of greenhouse gases can contribute to global warming. Global climate change is an average rise in the earth's temperature, which can cause changes in climate. Note that a global climate change analysis is not within the scope of this analysis; therefore, it is not assessed herein.

The air pollution control agency for the Riverside County portion of the Salton Sea Air Basin (basin) is the 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, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the basin. An AQMP is a plan prepared by an air pollution control district for a county or region designated as a nonattainment area for bringing the area into compliance with the requirements 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 current AQMP for SCAQMD is the 2003 AQMP. The purpose of the 2003 AQMP is to set forth a comprehensive program that will lead the basin and those portions of the Salton Sea Air Basin under SCAQMD jurisdiction into compliance with all federal and state air quality planning requirements (SCAQMD 2003b).

The Final 2007 AQMP was adopted by the SCAQMD Governing Board on June 1, 2007. The new 2007 AQMP incorporates significant new emissions inventories, ambient measurements, scientific data, control strategies, and air quality modeling. The 2007 AQMP is designed to meet the state and federal Clean Air Act planning requirements and focuses on ozone and $PM_{2.5}$. The new 2007 AQMP for the basin has been adopted by SCAQMD, however it is pending EPA approval. Until the 2007 AQMP is formally adopted through the EPA, the older 2003 AQMP is still valid.

Thresholds

Regional significance thresholds have been established by SCAQMD specific to the Coachella Valley. Note that the regional construction and operational emissions thresholds are the same. Projects with construction or operation related emissions in excess of any of the thresholds presented in Table 2 are considered significant.

Table 2: SCAQMD Thresholds

Pollutant	Regional Construction (pounds per day)	Regional Operation (pounds per day)
Oxides of Nitrogen (NO_x)	100	100
Volatile Organic Compounds (VOC)	75	75
Particulate Matter (PM_{10})	150	150
Particulate Matter ($PM_{2.5}$)	55	55
Oxides of Sulfur (SO_x)	150	150
Carbon Monoxide (CO)	550	550
Regional thresholds from: South Coast Air Quality Management District, 2007		

Short-Term Emission Analysis

Short-term impacts will include fugitive dust and other particulate matter, as well as exhaust emissions generated by earthmoving activities and operation of grading equipment during site preparation. Construction emissions are caused by onsite or offsite activities. Onsite emissions principally consist of exhaust emissions (NO_x, SO_x, CO, VOC, PM_{10}, $PM_{2.5}$, and CO_2) from heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil. Offsite emissions are caused by motor vehicle exhaust from delivery vehicles, as well as worker traffic, but also include road dust (PM_{10} and $PM_{2.5}$). Major construction-related activities include the following:

- Mass grading and fine grading;
- Trenching and excavation and earth moving for construction of utilities, both on and offsite;
- Building construction;

- Asphalt paving of access roads throughout the development; and
- Application of architectural coatings on exterior and interior surfaces.

Construction activities will be phased by grading, utility installation, paving and then building construction. Grading is anticipated to start in 2008 and be completed by 2009. Based on the quantities of cut and fill, it is estimated that approximately 485,000 cubic yards (cy) of material may be exported. The "low" level of detail to estimate fugitive dust was used, which assumed that the total onsite cut would be divided by the approximate number of work days (674000 cy / 124 days = 5435 cy/day). The URBEMIS2007, version 9.2.2 defaults were used for the types and number of construction equipment. Unmitigated emissions during construction are displayed in Table 3.

Table 3: Short-Term Emissions (Unmitigated)

Construction Phase	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Mass Grading	21.09	230.20	101.65	0.16	965.06	209.20	24,072.41
Fine Grading	10.42	87.78	45.99	0.00	629.48	134.64	7,496.63
Trenching	2.37	20.19	9.68	0.00	1.01	0.92	1,839.12
Asphalt and Building	19.04	83.54	97.88	0.11	5.43	4.73	14,013.93
Building	6.79	31.87	73.98	0.07	2.24	1.87	8,782.30
Building and Coating	164.00	30.22	71.82	0.08	2.18	1.80	9,053.95
Max Daily Emissions	*164.00*	*230.20*	*101.65*	*0.16*	*965.06*	*209.20*	*24,072.41*
Regional Threshold	75	100	550	150	150	55	None
Significant Impact?	Yes	Yes	No	No	Yes	Yes	-

Source: URBEMIS2007, version 9.2.2 model output, see attachments
None = There is no threshold for CO_2.
Note: Each of the above activities does not occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.

To reduce construction emissions, the following mitigation measures should be implemented:

AQ-1 Prior to construction of the project, the project proponent will comply with the requirements of South Coast Air Quality Management District Rule 403 to provide a Fugitive Dust Control Plan that will describe the application of standard best management practices to control dust during construction. Best management practices shall include application of water on disturbed soils a minimum of two times per day, managing hauling road dust, covering haul vehicles, replanting disturbed areas as soon as practical, and restricting vehicle speeds on unpaved roads to 15 mph, applying soil stabilizers to inactive areas, and other measures, as deemed appropriate to the site, to control fugitive dust. In addition, during grading, no more than five acres should be graded per day. The Fugitive Dust Control Plan shall be submitted to the City of Indian Wells and SCAQMD for approval and be approved prior to construction.

AQ-2 The maximum acreage graded on any one day shall be reduced to 20 acres.

AQ-3 During project construction, onsite electrical hook ups shall be provided for electric construction tools including saws, drills and compressors, to eliminate the need for diesel powered electric generators.

AQ-4 During project construction, the developer shall require all contractors not to idle construction equipment onsite for more than 5 minutes.

The calculated mitigated construction emissions are listed below in Table 4. As shown in the table, emissions are below the significance thresholds for all pollutants except VOC and NO_X.

Table 4: Short-Term Emissions (Mitigated)

Construction Phase	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Mass Grading	21.09	230.20	101.65	0.16	139.38	36.76	24,072.41
Fine Grading	10.42	87.78	45.99	0.00	48.03	13.21	7,496.63
Trenching	2.37	20.19	9.68	0.00	1.01	0.92	1,839.12
Asphalt and Building	19.04	83.54	97.88	0.11	5.43	4.73	14,013.93
Building	6.79	31.87	73.98	0.07	2.24	1.87	8,782.30
Building and Coating	164.00	30.22	71.82	0.08	2.18	1.80	9,053.95
Max Daily Emissions	*164.00*	*230.20*	*101.65*	*0.16*	*139.39*	*36.76*	*24,072.41*
Regional Threshold	75	100	550	150	150	55	None
Significant Impact?	Yes	Yes	No	No	No	No	-

Source: URBEMIS2007, version 9.2.2 model output, see attachments
None = There is no threshold for CO_2.
Note: Each of the above activities does not occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.

The project exceeds the regional thresholds during construction for VOC and NOx. The basin is in non-attainment for ozone and PM_{10}. This means that the background concentrations of those pollutants are already high. The project will emit significant emissions of VOC, which is an ozone precursor. Therefore, the project will significantly contribute to a cumulatively considerable impact regarding ozone. High ozone concentrations could result in health impacts to sensitive individuals in the Coachella Valley as ozone can form miles away from the source. Exposure to high concentrations of ozone over the ambient air quality standards may cause effects such as the following: (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; and (f) property damage.

Localized Significance 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. The LSTs are developed based on the ambient concentrations of that pollutant for each source receptor area and are applicable to NOx, CO, PM_{10}, and $PM_{2.5}$.

The LST for PM_{10} and $PM_{2.5}$ for construction are identified in the SCAQMD Air Quality Significance Thresholds in its CEQA Handbook and are 10.4 $\mu g/m^3$. LSTs for nitrogen dioxide and CO are derived using the equation: LST = S - C; where, LST is the localized threshold for the project in micrograms per cubic meter; S is the most

stringent state or national standard in micrograms per cubic meter; and C is the maximum background concentration that occurred in the past three years at the closest air quality monitoring station in micrograms per cubic meter. The LSTs are summarized in Table 5.

Table 5: Localized Significance Thresholds

Pollutant, Averaging Time	Most Stringent Air Quality Standard, Units*	Maximum Background Concentration**	Localized Significance Threshold***
Nitrogen dioxide - 1 hour	0.18 ppm	0.10	0.08
Carbon monoxide			
1 hour	20 ppm	2	18
8 hour	9 ppm	1.0	8
Particulate matter (PM_{10}) - 24 hour	50 µg/m³	122	10.4
Particulate matter ($PM_{2.5}$) - 24 hour	35 µg/m³	44.4	10.4

* From Table 1
** South Coast Air Quality Management District (SCAQMD 2007b), the highest concentration from 2004-2006 from either the Coachella Valley 1 or 2 station.
*** PM10 and PM2.5 thresholds are predefined; others are derived by subtracting the background concentration from the air quality standard.

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 to the localized significance thresholds. The estimated concentrations do not represent actual occurrences nor do they necessarily predict future levels.

The modeling assumptions are from the SCAQMD LST guidance (SCAQMD 2003). To represent fugitive dust, an area source covering approximately 20 acres was placed on the project in the emissions model, which is the maximum amount of land that would be disturbed per day pursuant to mitigation measure AQ-2. To represent exhaust emission sources, 49 volume sources were placed onsite. A variable emission rate assumed the emissions would be generated during the hours of 8:00 am to 4:00 pm. The receptors included a fenceline grid with 40 meter spacing with intervals of 20, 50, 100, 200, 500, and 1,000 meters from the project site boundary for carbon monoxide and NOx. For PM_{10} and $PM_{2.5}$, the fenceline concentrations were converted to concentrations at the sensitive receptors using a formula provided in the SCAQMD LST guidance (SCAQMD 2003).

Combustion produces NOx, which contains primarily nitric oxide immediately after emitted from the source. 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. The concentrations of NOx as estimated by the dispersion model are converted to nitrogen dioxide based on the receptor's distance from the source.

The onsite mitigated 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 6.

Table 6: Localized Significance Analysis (Construction, with Mitigation)

Location	24-hour PM_{10} ($\mu g/m^3$)	24-hour $PM_{2.5}$ ($\mu g/m^3$)	1-hour NO_2 (ppm)	1-hour CO (ppm)	8-hour CO (ppm)
Maximum Concentration	98.6	22.8	0.006	0.11	0.07
Nearest Sensitive Receptor	7.3	1.7	0.005	0.07	0.03
Nearest Worker	N/A	N/A	0.005	0.04	0.02
Localized Significance Threshold	10.4	10.4	0.08	18	8
Exceed Localized Threshold at sensitive receptor?	No	No	No	No	No

Source: ISC dispersion model output (see attachments).
N/A = not applicable because workers would not be onsite for 24 hours.

The nearest sensitive receptor represents the maximum exposed residence of the residences located across Washington Street, approximately 55 meters from the project site. As shown in the table, the concentrations during grading (with mitigation) do not exceed the localized significance thresholds at the nearest sensitive receptors. The concentrations are greatest near the boundary of the project site, immediately adjacent to the area being graded and disperse rapidly. Therefore, the CO, nitrogen dioxide, PM_{10}, and $PM_{2.5}$ concentrations during grading will not result in significant adverse effects to the nearby sensitive receptors and are not anticipated to cause or contribute significantly to an exceedance of the applicable standards for those pollutants.

Long-Term Emissions Analysis

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 emissions analysis included the trip generation rates from Table 7 (W) of the Traffic Study prepared by Willdan, dated June 18, 2007. In addition, the Traffic Study's pass-by rate of 34% was applied to the Shopping Center portion of the project. The URBEMIS2007 version 9.2.2 default pass-by rates were applied to the remaining land uses. MBA analyzed both winter and summer emissions for the project. It is estimated that the project will be operational by 2009.

As shown in Table 7, the project's operational emissions would exceed the SCAQMD's regional thresholds. The highest emission rate in pounds per day (lbs/day) for each pollutant is shown in Table 7. All emission rates are from winter except SO_2 and CO_2, which had higher rates in the summer.

Table 7: Operational Emissions (Unmitigated)

Source	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Mobile (vehicle)	165.19	211.13	1,475.16	1.22	198.37	39.35	119,690.47
Area	17.52	7.86	33.65	–	4.39	4.23	8,407.97
Total	*182.71*	*218.99*	*1,508.81*	*1.22*	*202.76*	*43.58*	*128,098.44*
Regional Threshold	75	100	550	150	150	55	None
Significant Impact?	Yes	Yes	Yes	No	Yes	No	–

Source: URBEMIS2007 version 9.2.2 model output, see attachments; winter emissions are shown for all pollutants except for SOx and CO_2, where summer emissions are shown.

To reduce operational emissions, the following mitigation measures should be implemented:

AQ-5 A minimum of three Transportation Demand Management (TDM) measures shall be implemented. TDMs may include having showers and locker facilities for employees, providing at least one secure bike parking spot for every 20 vehicle parking spaces, providing preferential parking for carpool/vanpool vehicles, and installing kiosks with alternative transit information.

The calculated mitigated operational emissions are listed below in Table 8. As shown in the table, emissions are below the significance thresholds for SO_2 and $PM_{2.5}$. However, the project remains significant for VOC, NO_x, CO, and PM_{10}.

Table 8: Operational Emissions (Mitigated)

Source	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Mobile (vehicle)	160.44	204.94	1,431.84	1.19	192.55	38.19	116,173.01
Area	17.52	7.86	33.65	–	4.39	4.23	8,407.97
Total	*177.96*	*212.80*	*1,465.49*	*1.19*	*196.94*	*42.42*	*124,580.98*
Regional Threshold	75	100	550	150	150	55	None
Significant Impact?	Yes	Yes	Yes	No	Yes	No	–
Source: URBEMIS2007, version 9.2.2 model output, see attachments; winter emissions are shown for all pollutants except for SO_x and CO_2, where summer emissions are shown.							

The project exceeds the regional thresholds during operation for VOC, NOx, CO, and PM_{10}. The basin is in non-attainment for ozone and PM_{10}. This means that the background concentrations of those pollutants are already high. The project will emit significant emissions of VOC and NOx, which are ozone precursors. Therefore, the project will significantly contribute to a cumulatively considerable impact regarding ozone. High ozone concentrations could result in health impacts to sensitive individuals in the Coachella Valley as ozone can form miles away from the source. Exposure to high concentrations of ozone over the ambient air quality standards may cause effects such as the following: (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; and (f) property damage.

Similarly to ozone, the project would contribute to a cumulatively significant impact to PM_{10} concentrations and may result in health impacts to sensitive individuals in the Coachella Valley. High concentrations of PM_{10} over the ambient air quality standards may result in the following effects: (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.

Carbon Monoxide Hotspot Analysis

A CO hot spot 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 Traffic Report prepared for this project), and proximity to sensitive receptors. This analysis follows guidelines recommended by the CO

Protocol (CALT 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.

Using the CALINE4 model, potential CO hotspots were analyzed at the intersections listed in Table 10. These intersections were chosen because they operate at LOS D or worse. There were several inputs to the CALINE4 model. One input is the traffic volumes, which is from the project-specific Traffic Report (Willdan 2007). The traffic volumes with the project were used for the buildout scenario as well as emission factors generated using the EMFAC2007 model for the year 2009.

Project emissions may also be considered significant if a CO hotspot intersection analysis determines that project generated emissions 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.

Table 9 displays the background levels of CO. As shown in Table 10, the estimated 1-hour and 8-hour average CO concentrations at build-out in combination with background concentrations are below the state and national ambient air quality standards. No CO hotspots are anticipated as a result of traffic-generated emissions by the proposed project in combination with other anticipated development in the area. Therefore, the mobile emissions of CO from the project are not anticipated to contribute substantially to an existing or projected air quality violation of CO.

Table 9: Background Levels of Carbon Monoxide

Carbon Monoxide Averaging Time and units	2004	2005	2006
1-hour, ppm	2.0	2.0	2.0
8-hour, ppm	1.0	0.8	1.0
Source: SCAQMD 2007b, Data is from Station Number 4137 (Source Receptor 30).			

Table 10: Carbon Monoxide Localized Concentrations

Intersection	1 Hour Estimated CO Concentration (ppm)*	8 Hour Estimated CO Concentration (ppm)**	Significant Impact?***
Washington Street at Fred Waring Drive	4.5	2.8	No
Washington Street at Miles Avenue	4.1	2.5	No
Washington Street at Highway 111	4.5	2.8	No
Washington Street at Avenue 48	5.1	3.2	No
Adams Street at Highway 111	4.0	2.4	No

* Caline4 output (see enclosures for model output) plus the 1 hour background concentration of 2 ppm (Table 9).
** The 8-hour project increment was calculated by multiplying the 1-hour Caline4 output by 0.7 (persistence factor), then adding the 8 hour background concentration of 1 ppm (from Table 9).
*** Comparison of the 1-hour concentration to the state standard of 20 ppm and the 8-hour concentration to the state/national standard of 9 ppm.

Air Quality Management Plan Consistency

As discussed above, the current AQMP for the area is the 2007 AQMP; however, the 2007 AQMP has only been approved by the SCAQMD and not the U.S. EPA. This assessment determines consistency with both the 2003 and the 2007 AQMP. The AQMP sets forth a comprehensive program that will lead the basin into compliance with all federal ambient air quality standards. This assessment will use the following two criteria for determining project consistency with the current AQMP:

1. Whether the project will contribute to air quality violations; and
2. Compliance with AQMP Control Measures.

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). The project has the potential to cumulatively contribute to a violation of the air quality standards for ozone because it exceeds the VOC and NOx thresholds during construction and operation of the project. Additionally, the project has the potential to contribute to a new violation of PM_{10} because VOCs and nitrates are a portion of PM_{10} and the PM_{10} regional threshold is exceeded during operation. Therefore, the project does not meet the first indicator.

Compliance with AQMP Control Measures

The second criterion is compliance with the control measures in the AQMP. The 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 CARB; and Transportation Control Measures provided by Southern California Association of Governments (SCAG) (SCAQMD 2003b, Page 4-3). CARB'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 (SCAQMD 2003b, Page 4-25). Transportation control measures provided by SCAG include those contained in the Regional Transportation Plans (RTP). 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 (SCAQMD 2003b, Page 4-19). The measures implemented by CARB and SCAG effect 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 CARB and SCAG. The project will comply with all of the SCAQMD applicable rules and regulations. Therefore, the project complies with this criterion.

Summary

The analysis supports the following conclusions:

- The project exceeds the SCAQMD regional thresholds for VOC and NOx during construction after mitigation;
- The project does not exceed the SCAQMD localized thresholds for CO, nitrogen dioxide, PM_{10}, or PM2.5; therefore, the project will not exceed the applicable air quality standards for those pollutants and will not expose sensitive receptors to substantial quantities of those pollutants;
- The project would result in cumulatively significant impacts from ozone exposure from emissions during construction;
- The project exceeds the SCAQMD regional thresholds for VOC, NOx, PM_{10}, and CO during operation after mitigation;

- The project would result in cumulatively significant impacts from ozone and PM10 exposure during operation;
- The project would not result in a carbon dioxide hotspot at project impacted intersections; and
- The project is not consistent with the AQMP.

If you have any questions or concerns regarding this letter, please call me at 909-884-2255.

Sincerely,

Cori Wilson, Assistant Project Manager
Michael Brandman Associates
621 E. Carnegie Drive, Suite 100
San Bernardino, CA 92408

Enclosures: URBEMIS2007, Version 9.2.2 Output
Caline4 Output
ISCST3 Output

CW/CM:sep
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Contributing Staff

Chrystal Meier, Air Quality Analyst
Max Rees, Air Quality Analyst

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Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\URBEMIS\Indian Wells Town Center_Construction_Nov2007.urb9

Project Name: Indian Wells Town Center Construction

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	21.09	230.20	101.65	0.16	954.39	10.67	965.06	199.38	9.82	209.20	24,072.41
2008 TOTALS (lbs/day mitigated)	21.09	230.20	101.65	0.16	128.71	10.67	139.38	26.95	9.82	36.76	24,072.41
2009 TOTALS (lbs/day unmitigated)	164.00	30.22	71.82	0.08	0.33	1.85	2.18	0.12	1.69	1.80	9,053.95
2009 TOTALS (lbs/day mitigated)	164.00	30.22	71.82	0.08	0.33	1.85	2.18	0.12	1.69	1.80	9,053.95

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

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

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Time Slice 1/1/2008-6/20/2008 Active Days: 124	21.09	230.20	101.65	0.16	954.39	10.67	965.06	199.38	9.82	209.20	24,072.41
Mass Grading 01/01/2008-06/20/2008	21.09	230.20	101.65	0.16	954.39	10.67	965.06	199.38	9.82	209.20	24,072.41
Mass Grading Dust	0.00	0.00	0.00	0.00	953.83	0.00	953.83	199.20	0.00	199.20	0.00
Mass Grading Off Road Diesel	10.33	87.62	43.26	0.00	0.00	4.46	4.46	0.00	4.10	4.10	7,216.54
Mass Grading On Road Diesel	10.67	142.42	55.66	0.16	0.55	6.20	6.75	0.18	5.71	5.89	16,575.77
Mass Grading Worker Trips	0.09	0.17	2.73	0.00	0.01	0.01	0.02	0.00	0.01	0.01	280.09
Time Slice 6/23/2008-8/1/2008 Active Days: 30	10.42	87.78	45.99	0.00	625.01	4.47	629.48	130.53	4.11	134.64	7,496.63
Fine Grading 06/23/2008-08/01/2008	10.42	87.78	45.99	0.00	625.01	4.47	629.48	130.53	4.11	134.64	7,496.63
Fine Grading Dust	0.00	0.00	0.00	0.00	625.00	0.00	625.00	130.53	0.00	130.53	0.00
Fine Grading Off Road Diesel	10.33	87.62	43.26	0.00	0.00	4.46	4.46	0.00	4.10	4.10	7,216.54
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	0.09	0.17	2.73	0.00	0.01	0.01	0.02	0.00	0.01	0.01	280.09
Time Slice 8/4/2008-8/15/2008 Active Days: 10	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching 08/04/2008-08/15/2008	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching Off Road Diesel	2.33	20.12	8.46	0.00	0.00	1.00	1.00	0.00	0.92	0.92	1,714.64
Trenching Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49

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Time Slice 8/18/2008-8/29/2008 Active Days: 10	19.04	83.54	97.88	0.11	0.45	4.98	5.43	0.16	4.57	4.73	14,013.93
Asphalt 08/18/2008-08/29/2008	12.26	51.67	23.90	0.04	0.13	3.06	3.19	0.04	2.81	2.86	5,231.63
Paving Off-Gas	6.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.21	18.89	9.61	0.00	0.00	1.63	1.63	0.00	1.50	1.50	1,272.41
Paving On Road Diesel	2.45	32.68	12.77	0.04	0.13	1.42	1.55	0.04	1.31	1.35	3,803.61
Paving Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61
Building 08/18/2008-04/24/2009	6.79	31.87	73.98	0.07	0.31	1.93	2.24	0.11	1.76	1.87	8,782.30
Building Off Road Diesel	4.23	19.62	12.39	0.00	0.00	1.39	1.39	0.00	1.28	1.28	1,746.33
Building Vendor Trips	0.77	8.93	7.12	0.01	0.05	0.39	0.44	0.02	0.36	0.38	1,443.85
Building Worker Trips	1.79	3.32	54.47	0.06	0.26	0.14	0.41	0.10	0.12	0.22	5,592.12
Time Slice 9/1/2008-12/31/2008 Active Days: 88	6.79	31.87	73.98	0.07	0.31	1.93	2.24	0.11	1.76	1.87	8,782.30
Building 08/18/2008-04/24/2009	6.79	31.87	73.98	0.07	0.31	1.93	2.24	0.11	1.76	1.87	8,782.30
Building Off Road Diesel	4.23	19.62	12.39	0.00	0.00	1.39	1.39	0.00	1.28	1.28	1,746.33
Building Vendor Trips	0.77	8.93	7.12	0.01	0.05	0.39	0.44	0.02	0.36	0.38	1,443.85
Building Worker Trips	1.79	3.32	54.47	0.06	0.26	0.14	0.41	0.10	0.12	0.22	5,592.12
Time Slice 1/1/2009-1/30/2009 Active Days: 22	6.36	30.07	69.34	0.07	0.31	1.84	2.15	0.11	1.68	1.79	8,779.89
Building 08/18/2008-04/24/2009	6.36	30.07	69.34	0.07	0.31	1.84	2.15	0.11	1.68	1.79	8,779.89
Building Off Road Diesel	4.02	18.66	12.06	0.00	0.00	1.33	1.33	0.00	1.23	1.23	1,746.33
Building Vendor Trips	0.72	8.38	6.65	0.01	0.05	0.35	0.41	0.02	0.33	0.34	1,443.93
Building Worker Trips	1.63	3.03	50.63	0.06	0.26	0.15	0.42	0.10	0.13	0.22	5,589.63

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Time Slice 2/2/2009-4/24/2009 Active Days: 60	164.00	30.22	71.82	0.08	0.33	1.85	2.18	0.12	1.69	1.80	9,053.95
Building 08/18/2008-04/24/2009	6.36	30.07	69.34	0.07	0.31	1.84	2.15	0.11	1.68	1.79	8,779.89
Building Off Road Diesel	4.02	18.66	12.06	0.00	0.00	1.33	1.33	0.00	1.23	1.23	1,746.33
Building Vendor Trips	0.72	8.38	6.65	0.01	0.05	0.35	0.41	0.02	0.33	0.34	1,443.93
Building Worker Trips	1.63	3.03	50.63	0.06	0.26	0.15	0.42	0.10	0.13	0.22	5,589.63
Coating 02/01/2009-05/22/2009	157.64	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05
Architectural Coating	157.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.08	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05
Time Slice 4/27/2009-5/22/2009 Active Days: 20	157.64	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05
Coating 02/01/2009-05/22/2009	157.64	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05
Architectural Coating	157.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.08	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05

Phase Assumptions

Phase: Fine Grading 6/23/2008 - 8/1/2008 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 125

Maximum Daily Acreage Disturbed: 31.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

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

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

2 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 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: Mass Grading 1/1/2008 - 6/20/2008 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 125

Maximum Daily Acreage Disturbed: 31.25

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 5435 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 3910.85

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

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

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

2 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

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

Phase: Trenching 8/4/2008 - 8/15/2008 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 8/18/2008 - 8/29/2008 - Default Paving Description

Acres to be Paved: 25

Off-Road Equipment:

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

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 8/18/2008 - 4/24/2009 - Default Building Construction Description

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Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 7 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 2/1/2009 - 5/22/2009 - Default Architectural Coating Description

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

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

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

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

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

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

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 1/1/2008-6/20/2008 Active Days: 124	21.09	230.20	101.65	0.16	128.71	10.67	139.38	26.95	9.82	36.76	24,072.41
Mass Grading 01/01/2008-06/20/2008	21.09	230.20	101.65	0.16	128.71	10.67	139.38	26.95	9.82	36.76	24,072.41
Mass Grading Dust	0.00	0.00	0.00	0.00	128.15	0.00	128.15	26.76	0.00	26.76	0.00
Mass Grading Off Road Diesel	10.33	87.62	43.26	0.00	0.00	4.46	4.46	0.00	4.10	4.10	7,216.54
Mass Grading On Road Diesel	10.67	142.42	55.66	0.16	0.55	6.20	6.75	0.18	5.71	5.89	16,575.77
Mass Grading Worker Trips	0.09	0.17	2.73	0.00	0.01	0.01	0.02	0.00	0.01	0.01	280.09

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Time Slice 6/23/2008-8/1/2008 Active Days: 30	10.42	87.78	45.99	0.00	43.56	4.47	48.03	9.10	4.11	13.21	7,496.63
Fine Grading 06/23/2008-08/01/2008	10.42	87.78	45.99	0.00	43.56	4.47	48.03	9.10	4.11	13.21	7,496.63
Fine Grading Dust	0.00	0.00	0.00	0.00	43.54	0.00	43.54	9.09	0.00	9.09	0.00
Fine Grading Off Road Diesel	10.33	87.62	43.26	0.00	0.00	4.46	4.46	0.00	4.10	4.10	7,216.54
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	0.09	0.17	2.73	0.00	0.01	0.01	0.02	0.00	0.01	0.01	280.09
Time Slice 8/4/2008-8/15/2008 Active Days: 10	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching 08/04/2008-08/15/2008	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching Off Road Diesel	2.33	20.12	8.46	0.00	0.00	1.00	1.00	0.00	0.92	0.92	1,714.64
Trenching Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 8/18/2008-8/29/2008 Active Days: 10	19.04	83.54	97.88	0.11	0.45	4.98	5.43	0.16	4.57	4.73	14,013.93
Asphalt 08/18/2008-08/29/2008	12.26	51.67	23.90	0.04	0.13	3.06	3.19	0.04	2.81	2.86	5,231.63
Paving Off-Gas	6.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.21	18.89	9.61	0.00	0.00	1.63	1.63	0.00	1.50	1.50	1,272.41
Paving On Road Diesel	2.45	32.68	12.77	0.04	0.13	1.42	1.55	0.04	1.31	1.35	3,803.61
Paving Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61
Building 08/18/2008-04/24/2009	6.79	31.87	73.98	0.07	0.31	1.93	2.24	0.11	1.76	1.87	8,782.30
Building Off Road Diesel	4.23	19.62	12.39	0.00	0.00	1.39	1.39	0.00	1.28	1.28	1,746.33
Building Vendor Trips	0.77	8.93	7.12	0.01	0.05	0.39	0.44	0.02	0.36	0.38	1,443.85
Building Worker Trips	1.79	3.32	54.47	0.06	0.26	0.14	0.41	0.10	0.12	0.22	5,592.12

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Time Slice 9/1/2008-12/31/2008 Active Days: 88	6.79	31.87	73.98	0.07	0.31	1.93	2.24	0.11	1.76	1.87	8,782.30
Building 08/18/2008-04/24/2009	6.79	31.87	73.98	0.07	0.31	1.93	2.24	0.11	1.76	1.87	8,782.30
Building Off Road Diesel	4.23	19.62	12.39	0.00	0.00	1.39	1.39	0.00	1.28	1.28	1,746.33
Building Vendor Trips	0.77	8.93	7.12	0.01	0.05	0.39	0.44	0.02	0.36	0.38	1,443.85
Building Worker Trips	1.79	3.32	54.47	0.06	0.26	0.14	0.41	0.10	0.12	0.22	5,592.12
Time Slice 1/1/2009-1/30/2009 Active Days: 22	6.36	30.07	69.34	0.07	0.31	1.84	2.15	0.11	1.68	1.79	8,779.89
Building 08/18/2008-04/24/2009	6.36	30.07	69.34	0.07	0.31	1.84	2.15	0.11	1.68	1.79	8,779.89
Building Off Road Diesel	4.02	18.66	12.06	0.00	0.00	1.33	1.33	0.00	1.23	1.23	1,746.33
Building Vendor Trips	0.72	8.38	6.65	0.01	0.05	0.35	0.41	0.02	0.33	0.34	1,443.93
Building Worker Trips	1.63	3.03	50.63	0.06	0.26	0.15	0.42	0.10	0.13	0.22	5,589.63
Time Slice 2/2/2009-4/24/2009 Active Days: 60	164.00	30.22	71.82	0.08	0.33	1.85	2.18	0.12	1.69	1.80	9,053.95
Building 08/18/2008-04/24/2009	6.36	30.07	69.34	0.07	0.31	1.84	2.15	0.11	1.68	1.79	8,779.89
Building Off Road Diesel	4.02	18.66	12.06	0.00	0.00	1.33	1.33	0.00	1.23	1.23	1,746.33
Building Vendor Trips	0.72	8.38	6.65	0.01	0.05	0.35	0.41	0.02	0.33	0.34	1,443.93
Building Worker Trips	1.63	3.03	50.63	0.06	0.26	0.15	0.42	0.10	0.13	0.22	5,589.63
Coating 02/01/2009-05/22/2009	157.64	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05
Architectural Coating	157.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.08	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05
Time Slice 4/27/2009-5/22/2009 Active Days: 20	157.64	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05
Coating 02/01/2009-05/22/2009	157.64	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05
Architectural Coating	157.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.08	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05

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Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 6/23/2008 - 8/1/2008 - Default Fine Site Grading/Excavation Description

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

PM10: 84% PM25: 84%

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

PM10: 5% PM25: 5%

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

PM10: 55% PM25: 55%

For Soil Stablizing 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%

The following mitigation measures apply to Phase: Mass Grading 1/1/2008 - 6/20/2008 - Default Mass Site Grading/Excavation Description

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

PM10: 84% PM25: 84%

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

PM10: 5% PM25: 5%

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

PM10: 55% PM25: 55%

For Soil Stablizing 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%

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Combined Summer Emissions Reports (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\URBEMIS\Indian Wells Town Center_Operation_Nov2007.urb9

Project Name: Indian Wells Town Center Operation

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	8.40	7.03	14.81	0.00	0.04	0.04	8,407.97

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	144.24	177.35	1,476.22	1.22	198.90	39.46	120,011.20
TOTALS (lbs/day, mitigated)	140.18	172.14	1,432.81	1.19	193.06	38.29	116,482.68
Percent Reduction	2.81	2.94	2.94	2.46	2.94	2.97	2.94

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	152.64	184.38	1,491.03	1.22	198.94	39.50	128,419.17

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.51	6.93	5.38	0.00	0.01	0.01	8,392.34
Hearth - No Summer Emissions							
Landscape	1.07	0.10	9.43	0.00	0.03	0.03	15.63
Consumer Products	3.33						
Architectural Coatings	3.49						
TOTALS (lbs/day, unmitigated)	8.40	7.03	14.81	0.00	0.04	0.04	8,407.97

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summar Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	6.39	8.23	70.90	0.06	9.56	1.90	5,782.43
Hotel	20.25	23.55	195.40	0.16	26.60	5.27	16,023.33
Regnl shop. center	69.69	77.58	646.26	0.52	83.59	16.61	50,733.49
Office park	9.99	13.03	111.26	0.09	15.17	3.01	9,156.67
Movie Theater	37.92	54.96	452.40	0.39	63.98	12.67	38,315.28
TOTALS (lbs/day, unmitigated)	144.24	177.35	1,476.22	1.22	198.90	39.46	120,011.20

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Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	6.22	7.99	68.87	0.06	9.28	1.84	5,616.79
Hotel	19.73	22.86	189.66	0.16	25.82	5.12	15,552.85
Regnl shop. center	67.73	75.34	627.55	0.50	81.18	16.13	49,265.41
Office park	9.67	12.58	107.42	0.09	14.65	2.90	8,841.02
Movie Theater	36.83	53.37	439.31	0.38	62.13	12.30	37,206.61
TOTALS (lbs/day, mitigated)	140.18	172.14	1,432.81	1.19	193.06	38.29	116,482.68

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
Single family housing	25.00	9.57	dwelling units	65.00	622.05	5,502.03
Hotel		8.17	rooms	300.00	2,451.00	15,315.71
Regnl shop. center		42.94	1000 sq ft	254.30	10,919.64	48,099.34
Office park		11.42	1000 sq ft	85.70	978.69	8,736.19

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Movie Theater		67.63	1000 sq ft	65.65	4,439.91	36,851.36
					19,411.29	114,504.63

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.0	2.0	97.6	0.4
Light Truck < 3750 lbs	10.9	3.7	90.8	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	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	3.5	77.1	22.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	10.0	80.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
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)						
Hotel				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0
Office park				48.0	24.0	28.0
Movie Theater				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.2

Combined Winter Emissions Reports (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\URBEMIS\Indian Wells Town Center_Operation_Nov2007.urb9

Project Name: Indian Wells Town Center Operation

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	17.52	7.86	33.65	0.08	4.39	4.23	9,629.20

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	165.57	211.68	1,478.98	1.04	198.90	39.46	109,223.04
TOTALS (lbs/day, mitigated)	160.80	205.47	1,435.52	1.00	193.06	38.29	106,011.66
Percent Reduction	2.88	2.93	2.94	3.85	2.94	2.97	2.94

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	183.09	219.54	1,512.63	1.12	203.29	43.69	118,852.24

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.51	6.93	5.38	0.00	0.01	0.01	8,392.34
Hearth	10.19	0.93	28.27	0.08	4.38	4.22	1,236.86
Landscaping - No Winter Emissions							
Consumer Products	3.33						
Architectural Coatings	3.49						
TOTALS (lbs/day, unmitigated)	17.52	7.86	33.65	0.08	4.39	4.23	9,629.20

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	7.00	9.84	69.55	0.05	9.56	1.90	5,264.05
Hotel	22.07	28.11	195.23	0.14	26.60	5.27	14,580.35
Regnl shop. center	81.87	92.45	658.83	0.44	83.59	16.61	46,201.76
Office park	11.09	15.59	108.86	0.08	15.17	3.01	8,333.58
Movie Theater	43.54	65.69	446.51	0.33	63.98	12.67	34,843.30
TOTALS (lbs/day, unmitigated)	165.57	211.68	1,478.98	1.04	198.90	39.46	109,223.04

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Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	6.80	9.56	67.55	0.05	9.28	1.84	5,113.26
Hotel	21.46	27.29	189.50	0.13	25.82	5.12	14,152.22
Regnl shop. center	79.53	89.78	639.77	0.42	81.18	16.13	44,864.80
Office park	10.72	15.05	105.11	0.08	14.65	2.90	8,046.30
Movie Theater	42.29	63.79	433.59	0.32	62.13	12.30	33,835.08
TOTALS (lbs/day, mitigated)	160.80	205.47	1,435.52	1.00	193.06	38.29	106,011.66

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
Single family housing	25.00	9.57	dwelling units	65.00	622.05	5,502.03
Hotel		8.17	rooms	300.00	2,451.00	15,315.71
Regnl shop. center		42.94	1000 sq ft	254.30	10,919.64	48,099.34
Office park		11.42	1000 sq ft	85.70	978.69	8,736.19

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Movie Theater		67.63	1000 sq ft	65.65	4,439.91	36,851.36
					19,411.29	114,504.63

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.0	2.0	97.6	0.4
Light Truck < 3750 lbs	10.9	3.7	90.8	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	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	3.5	77.1	22.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	10.0	80.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
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)						
Hotel				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0
Office park				48.0	24.0	28.0
Movie Theater				2.0	1.0	97.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Washington at Fred Waring
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	24. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	18.3 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	15	0	15	600	AG	1382	4.6	.0	17.9
B. NB Approach	15	600	15	756	AG	1016	7.9	.0	17.9
C. NB Depart	15	756	15	913	AG	1388	7.9	.0	17.9
D. NB External	15	913	15	1513	AG	1388	4.6	.0	17.9
E. NB Left	15	600	7	756	AG	366	7.9	.0	17.9
F. SB Left	0	913	7	756	AG	372	7.9	.0	17.9
G. SB External	0	1513	0	913	AG	2052	4.6	.0	17.9
H. SB Approach	0	913	0	756	AG	1680	7.9	.0	17.9
I. SB Depart	0	756	0	600	AG	2092	7.9	.0	17.9
J. SB External	0	600	0	0	AG	2092	4.6	.0	17.9
K. EB External	-750	750	-150	750	AG	1610	4.6	.0	15.7
L. EB Approach	-150	750	7	750	AG	1345	7.9	.0	15.7
M. EB Depart	7	750	165	750	AG	1324	7.9	.0	15.7
N. EB External	165	750	765	750	AG	1324	4.6	.0	15.7
O. WB External	765	763	165	763	AG	854	4.6	.0	15.7
P. WB Approach	165	763	7	763	AG	757	7.9	.0	15.7
Q. WB Depart	7	763	-150	763	AG	1094	7.9	.0	15.7
R. WB External	-150	763	-750	763	AG	1094	4.6	.0	15.7
S. EB Left	-150	750	7	756	AG	265	7.9	.0	15.7
T. WB Left	165	763	7	756	AG	97	7.9	.0	15.7

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-10	741	2.0
2. Receptor	25	741	2.0
3. Receptor	25	772	2.0
4. Receptor	-10	772	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	7.	2.4	.0	.0	.2	.2	.0	.2	.0	1.0
2. Receptor	277.	2.2	.0	.3	.0	.0	.0	.0	.0	.0
3. Receptor	263.	2.1	.0	.0	.4	.0	.0	.0	.0	.3
4. Receptor	173.	2.5	.2	.1	.0	.0	.0	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.2	.0	.0	.4	.0	.0	.0	.0	.2	.0	.0	.0
2. Receptor	.4	.0	.0	.8	.2	.0	.0	.0	.2	.1	.1	.0
3. Receptor	.0	.0	.2	.2	.0	.0	.0	.1	.7	.0	.0	.0
4. Receptor	1.2	.0	.0	.2	.0	.0	.0	.0	.3	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Washington at Miles
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	24. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	18.3 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	15	0	15	600	AG	1473	4.6	.0	17.9
B. NB Approach	15	600	15	755	AG	1355	7.9	.0	17.9
C. NB Depart	15	755	15	911	AG	1439	7.9	.0	17.9
D. NB External	15	911	15	1511	AG	1439	4.6	.0	17.9
E. NB Left	15	600	7	755	AG	118	7.9	.0	17.9
F. SB Left	0	911	7	755	AG	299	7.9	.0	17.9
G. SB External	0	1511	0	911	AG	2116	4.6	.0	17.9
H. SB Approach	0	911	0	755	AG	1817	7.9	.0	17.9
I. SB Depart	0	755	0	600	AG	1968	7.9	.0	17.9
J. SB External	0	600	0	0	AG	1968	4.6	.0	17.9
K. EB External	-750	750	-150	750	AG	519	4.6	.0	13.5
L. EB Approach	-150	750	7	750	AG	388	7.9	.0	13.5
M. EB Depart	7	750	165	750	AG	764	7.9	.0	13.5
N. EB External	165	750	765	750	AG	764	4.6	.0	13.5
O. WB External	765	761	165	761	AG	373	4.6	.0	13.5
P. WB Approach	165	761	7	761	AG	271	7.9	.0	13.5
Q. WB Depart	7	761	-150	761	AG	310	7.9	.0	13.5
R. WB External	-150	761	-750	761	AG	310	4.6	.0	13.5
S. EB Left	-150	750	7	755	AG	131	7.9	.0	13.5
T. WB Left	165	761	7	755	AG	102	7.9	.0	13.5

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-10	742	2.0
2. Receptor	25	742	2.0
3. Receptor	25	769	2.0
4. Receptor	-10	769	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	7.	2.1	.0	.0	.2	.2	.0	.1	.0	1.1
2. Receptor	351.	1.9	.0	.1	.9	.0	.0	.1	.2	.3
3. Receptor	187.	1.8	.0	.8	.1	.0	.0	.0	.0	.0
4. Receptor	173.	2.0	.2	.2	.0	.0	.0	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.1	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
3. Receptor	.2	.2	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
4. Receptor	1.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Washington at Highway 111
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	24. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	18.3 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	16	0	16	600	AG	1731	4.6	.0	18.6
B. NB Approach	16	600	16	759	AG	1159	7.9	.0	18.6
C. NB Depart	16	759	16	919	AG	1705	7.9	.0	18.6
D. NB External	16	919	16	1519	AG	1705	4.6	.0	18.6
E. NB Left	16	600	8	759	AG	572	7.9	.0	18.6
F. SB Left	0	919	8	759	AG	518	7.9	.0	18.6
G. SB External	0	1519	0	919	AG	1855	4.6	.0	18.6
H. SB Approach	0	919	0	759	AG	1337	7.9	.0	18.6
I. SB Depart	0	759	0	600	AG	2149	7.9	.0	18.6
J. SB External	0	600	0	0	AG	2149	4.6	.0	18.6
K. EB External	-750	750	-150	750	AG	2098	4.6	.0	21.8
L. EB Approach	-150	750	8	750	AG	1844	7.9	.0	21.8
M. EB Depart	8	750	166	750	AG	1761	7.9	.0	21.8
N. EB External	166	750	766	750	AG	1761	4.6	.0	21.8
O. WB External	766	769	166	769	AG	1362	4.6	.0	21.8
P. WB Approach	166	769	8	769	AG	1140	7.9	.0	21.8
Q. WB Depart	8	769	-150	769	AG	1431	7.9	.0	21.8
R. WB External	-150	769	-750	769	AG	1431	4.6	.0	21.8
S. EB Left	-150	750	8	759	AG	254	7.9	.0	21.8
T. WB Left	166	769	8	759	AG	222	7.9	.0	21.8

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-11	738	2.0
2. Receptor	26	738	2.0
3. Receptor	26	781	2.0
4. Receptor	-11	781	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	83.	2.4	.0	.2	.0	.0	.1	.0	.0	.0
2. Receptor	277.	2.5	.0	.3	.0	.0	.1	.0	.0	.0
3. Receptor	187.	2.4	.0	.7	.3	.0	.2	.0	.0	.0
4. Receptor	172.	2.5	.2	.2	.0	.0	.2	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.6	.0	.0	.2	.9	.0	.2	.0	.0	.0	.0	.0
2. Receptor	.4	.0	.1	1.0	.2	.0	.0	.0	.0	.2	.1	.0
3. Receptor	.3	.2	.0	.0	.3	.0	.0	.3	.0	.0	.0	.0
4. Receptor	1.1	.0	.0	.3	.0	.0	.0	.0	.4	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Washington at Avenue 48
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	24. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	18.3 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	14	0	14	600	AG	2685	4.6	.0	16.6
B. NB Approach	14	600	14	756	AG	2685	7.9	.0	16.6
C. NB Depart	14	756	14	912	AG	2498	7.9	.0	16.6
D. NB External	14	912	14	1512	AG	2498	4.6	.0	16.6
E. NB Left	14	600	7	756	AG	0	7.9	.0	16.6
F. SB Left	0	912	7	756	AG	329	7.9	.0	16.6
G. SB External	0	1512	0	912	AG	2794	4.6	.0	16.6
H. SB Approach	0	912	0	756	AG	2465	7.9	.0	16.6
I. SB Depart	0	756	0	600	AG	3079	7.9	.0	16.6
J. SB External	0	600	0	0	AG	3079	4.6	.0	16.6
K. EB External	-750	750	-150	750	AG	0	4.6	.0	14.7
L. EB Approach	-150	750	7	750	AG	0	7.9	.0	14.7
M. EB Depart	7	750	164	750	AG	804	7.9	.0	14.7
N. EB External	164	750	764	750	AG	804	4.6	.0	14.7
O. WB External	764	762	164	762	AG	902	4.6	.0	14.7
P. WB Approach	164	762	7	762	AG	288	7.9	.0	14.7
Q. WB Depart	7	762	-150	762	AG	0	7.9	.0	14.7
R. WB External	-150	762	-750	762	AG	0	4.6	.0	14.7
S. EB Left	-150	750	7	756	AG	0	7.9	.0	14.7
T. WB Left	164	762	7	756	AG	614	7.9	.0	14.7

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-10	741	2.0
2. Receptor	23	741	2.0
3. Receptor	23	771	2.0
4. Receptor	-10	771	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	170.	2.5	.2	.4	.0	.0	.0	.0	.0	.0
2. Receptor	353.	3.1	.0	.4	1.5	.0	.0	.1	.3	.3
3. Receptor	187.	3.1	.0	1.6	.4	.0	.0	.0	.0	.0
4. Receptor	172.	2.5	.2	.4	.0	.0	.0	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	1.9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.1
3. Receptor	.4	.3	.0	.0	.2	.0	.0	.0	.0	.0	.0	.1
4. Receptor	1.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Adams at Highway 111
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	24. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	18.3 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	12	0	12	600	AG	545	4.6	.0	14.9
B. NB Approach	12	600	12	759	AG	349	7.9	.0	14.9
C. NB Depart	12	759	12	918	AG	772	7.9	.0	14.9
D. NB External	12	918	12	1518	AG	772	4.6	.0	14.9
E. NB Left	12	600	6	759	AG	196	7.9	.0	14.9
F. SB Left	0	918	6	759	AG	317	7.9	.0	14.9
G. SB External	0	1518	0	918	AG	841	4.6	.0	14.9
H. SB Approach	0	918	0	759	AG	524	7.9	.0	14.9
I. SB Depart	0	759	0	600	AG	882	7.9	.0	14.9
J. SB External	0	600	0	0	AG	882	4.6	.0	14.9
K. EB External	-750	750	-150	750	AG	2071	4.6	.0	21.5
L. EB Approach	-150	750	6	750	AG	1812	7.9	.0	21.5
M. EB Depart	6	750	162	750	AG	1849	7.9	.0	21.5
N. EB External	162	750	762	750	AG	1849	4.6	.0	21.5
O. WB External	762	768	162	768	AG	1548	4.6	.0	21.5
P. WB Approach	162	768	6	768	AG	1375	7.9	.0	21.5
Q. WB Depart	6	768	-150	768	AG	1502	7.9	.0	21.5
R. WB External	-150	768	-750	768	AG	1502	4.6	.0	21.5
S. EB Left	-150	750	6	759	AG	259	7.9	.0	21.5
T. WB Left	162	768	6	759	AG	173	7.9	.0	21.5

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-9	738	2.0
2. Receptor	21	738	2.0
3. Receptor	21	781	2.0
4. Receptor	-9	781	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	83.	1.9	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	277.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
3. Receptor	259.	1.7	.0	.0	.2	.0	.0	.0	.0	.1
4. Receptor	100.	1.7	.0	.0	.1	.0	.0	.0	.0	.1

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.2	.0	.0	.1	1.0	.1	.2	.1	.0	.0	.0	.0
2. Receptor	.2	.0	.1	1.0	.1	.0	.0	.0	.1	.2	.1	.0
3. Receptor	.0	.0	.1	.3	.0	.0	.0	.0	.8	.0	.0	.0
4. Receptor	.0	.0	.0	.0	.3	.2	.0	.7	.0	.0	.0	.0

Indian Wells
LST Analysis
Prepared by Michael Brandman Associates

Exhaust PM2.5	92% percent of PM10
Fugitive Dust PM2.5	21% percent of PM10

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	43.26		49	8		0.014
Grading	NOx	87.62		49	8		0.028
Grading - Mitigated	PM10 Exhaust	4.46		49	8		0.0014
Grading - Mitigated	PM10 Fugitive	128.15	80940.4		8	2.49E-05	
Grading - Mitigated	PM2.5 Exhaust	4.10		49	8		0.0013
Grading - Mitigated	PM2.5 Fugitive	26.76	80940.4		8	5.21E-06	

CO Results

Location	1-hour CO (ug/m3)	1-hour CO (ppm)	8-hour CO (ug/m3)	8-hour CO (ppm)
Maximum concentration	126	0.11	80	0.07
Receptors east of Washington St.	83	0.07	40	0.03
Nearest worker	43	0.04	18	0.02

NOx Conversion to Nitrogen Dioxide - Construction

Distance to Construction Source (m)	NO2/NOx Ratio	NOx (ug/m3)	NO2 (ppm)
20	0.053	216	0.006
50	0.059	174	0.005
100	0.074	128	0.005
200	0.114	86	0.005
500	0.258	40	0.005
1000	0.467	18	0.004

Note regarding NOx modeling: As shown in the emissions above, NOx emissions are exactly twice that of the CO emissions. Therefore, the CO (1-hour) concentrations were multiplied by two to obtain the NOx 1-hour concentrations to save time and paper.

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 Output)	98.6	22.80
55	7.30	1.69
152	0.08	0.02

**MODELOPTs:
CONC URBAN FLAT FLGPOL NOCALM

*** 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

**This Run Includes: 50 Source(s); 1 Source Group(s); and 524 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 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: CO.OUT

**MODELOPTs:
CONC URBAN FLAT FLGPOL 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
VOL1	0	0.14000E-01	-112.7	228.5	0.0	5.00	9.30	1.16	HROFDY
VOL2	0	0.14000E-01	-72.6	228.7	0.0	5.00	9.30	1.16	HROFDY
VOL3	0	0.14000E-01	-32.5	229.0	0.0	5.00	9.30	1.16	HROFDY
VOL4	0	0.14000E-01	7.6	229.0	0.0	5.00	9.30	1.16	HROFDY
VOL5	0	0.14000E-01	47.9	229.0	0.0	5.00	9.30	1.16	HROFDY
VOL6	0	0.14000E-01	87.9	228.8	0.0	5.00	9.30	1.16	HROFDY
VOL7	0	0.14000E-01	-112.8	188.3	0.0	5.00	9.30	1.16	HROFDY
VOL8	0	0.14000E-01	-72.7	188.6	0.0	5.00	9.30	1.16	HROFDY
VOL9	0	0.14000E-01	-32.5	188.8	0.0	5.00	9.30	1.16	HROFDY
VOL10	0	0.14000E-01	7.6	188.9	0.0	5.00	9.30	1.16	HROFDY
VOL11	0	0.14000E-01	47.8	188.7	0.0	5.00	9.30	1.16	HROFDY
VOL12	0	0.14000E-01	88.0	188.7	0.0	5.00	9.30	1.16	HROFDY
VOL13	0	0.14000E-01	-112.8	148.3	0.0	5.00	9.30	1.16	HROFDY
VOL14	0	0.14000E-01	-72.6	148.4	0.0	5.00	9.30	1.16	HROFDY
VOL15	0	0.14000E-01	-32.5	148.7	0.0	5.00	9.30	1.16	HROFDY
VOL16	0	0.14000E-01	7.6	148.7	0.0	5.00	9.30	1.16	HROFDY
VOL17	0	0.14000E-01	47.9	148.8	0.0	5.00	9.30	1.16	HROFDY
VOL18	0	0.14000E-01	88.1	148.7	0.0	5.00	9.30	1.16	HROFDY
VOL19	0	0.14000E-01	-112.5	108.2	0.0	5.00	9.30	1.16	HROFDY
VOL20	0	0.14000E-01	-112.5	67.9	0.0	5.00	9.30	1.16	HROFDY
VOL21	0	0.14000E-01	-112.5	27.7	0.0	5.00	9.30	1.16	HROFDY
VOL22	0	0.14000E-01	-72.4	107.9	0.0	5.00	9.30	1.16	HROFDY
VOL23	0	0.14000E-01	-72.7	67.8	0.0	5.00	9.30	1.16	HROFDY
VOL24	0	0.14000E-01	-72.3	27.8	0.0	5.00	9.30	1.16	HROFDY
VOL25	0	0.14000E-01	-32.4	108.6	0.0	5.00	9.30	1.16	HROFDY
VOL26	0	0.14000E-01	-32.4	68.2	0.0	5.00	9.30	1.16	HROFDY
VOL27	0	0.14000E-01	-32.7	28.0	0.0	5.00	9.30	1.16	HROFDY
VOL28	0	0.14000E-01	7.2	108.6	0.0	5.00	9.30	1.16	HROFDY
VOL29	0	0.14000E-01	7.3	68.9	0.0	5.00	9.30	1.16	HROFDY
VOL30	0	0.14000E-01	7.3	28.5	0.0	5.00	9.30	1.16	HROFDY
VOL31	0	0.14000E-01	47.4	108.9	0.0	5.00	9.30	1.16	HROFDY
VOL32	0	0.14000E-01	47.4	69.0	0.0	5.00	9.30	1.16	HROFDY
VOL33	0	0.14000E-01	47.4	28.8	0.0	5.00	9.30	1.16	HROFDY
VOL34	0	0.14000E-01	87.9	108.8	0.0	5.00	9.30	1.16	HROFDY
VOL35	0	0.14000E-01	88.1	68.2	0.0	5.00	9.30	1.16	HROFDY
VOL36	0	0.14000E-01	87.6	28.6	0.0	5.00	9.30	1.16	HROFDY
VOL37	0	0.14000E-01	127.3	228.1	0.0	5.00	9.30	1.16	HROFDY
VOL38	0	0.14000E-01	127.3	188.1	0.0	5.00	9.30	1.16	HROFDY
VOL39	0	0.14000E-01	127.3	148.2	0.0	5.00	9.30	1.16	HROFDY
VOL40	0	0.14000E-01	127.6	108.5	0.0	5.00	9.30	1.16	HROFDY

**MODELOPTs:

CONC URBAN FLAT FLGPOL 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
VOL41	0	0.14000E-01	127.8	68.3	0.0	5.00	9.40	1.16	HROFDY
VOL42	0	0.14000E-01	128.6	28.1	0.0	5.00	9.30	1.16	HROFDY
VOL43	0	0.14000E-01	-112.3	-13.0	0.0	5.00	9.30	1.16	HROFDY
VOL44	0	0.14000E-01	-71.9	-12.5	0.0	5.00	9.30	1.16	HROFDY
VOL45	0	0.14000E-01	-32.0	-12.5	0.0	5.00	9.30	1.16	HROFDY
VOL46	0	0.14000E-01	7.7	-11.3	0.0	5.00	9.30	1.16	HROFDY
VOL47	0	0.14000E-01	47.9	-11.1	0.0	5.00	9.30	1.16	HROFDY
VOL48	0	0.14000E-01	88.1	-11.8	0.0	5.00	9.30	1.16	HROFDY
VOL49	0	0.14000E-01	129.3	-12.5	0.0	5.00	9.30	1.16	HROFDY

*** 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	0.00000E+00	-133.0	-32.4	0.0	5.00	284.50	284.50	0.00	0.00	HROFDY

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 , VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 , VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , VOL31 , VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 , VOL38 , VOL39 , VOL40 , VOL41 , VOL42 , VOL43 , VOL44 , VOL45 , VOL46 , VOL47 , VOL48 , VOL49 , AREA1

* 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	.00000E+00	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL2 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL3 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL4 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL5 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

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SOURCE ID = VOL6     ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL7     ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL8     ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL9     ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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   .00000E+00     9   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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  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 = VOL11    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL12    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL13    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL14    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL15    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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  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 = VOL16    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL17    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL18    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
```

13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL19 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL20 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

SOURCE ID = VOL21 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL22 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL23 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL24 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL25 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

SOURCE ID = VOL26 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL27 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL28 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL29 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL30 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

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 = VOL31 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL32 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL33 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL34 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL35 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

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 = VOL36 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL37 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL38 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL39 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL40 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

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 = VOL41 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL42 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL43 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL44 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL45 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

SOURCE ID = VOL46 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL47 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL48 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL49 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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	.00000E+00	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

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

(151.0,	-52.7,	0.0,	2.0);	(115.5,	-52.7,	0.0,	2.0);
(80.0,	-52.7,	0.0,	2.0);	(44.5,	-52.7,	0.0,	2.0);
(9.0,	-52.7,	0.0,	2.0);	(-26.5,	-52.7,	0.0,	2.0);
(-62.0,	-52.7,	0.0,	2.0);	(-97.5,	-52.7,	0.0,	2.0);
(-133.0,	-52.7,	0.0,	2.0);	(168.7,	-75.3,	0.0,	2.0);
(193.7,	-50.3,	0.0,	2.0);	(151.0,	-82.7,	0.0,	2.0);
(115.5,	-82.7,	0.0,	2.0);	(80.0,	-82.7,	0.0,	2.0);
(44.5,	-82.7,	0.0,	2.0);	(9.0,	-82.7,	0.0,	2.0);
(-26.5,	-82.7,	0.0,	2.0);	(-62.0,	-82.7,	0.0,	2.0);
(-97.5,	-82.7,	0.0,	2.0);	(-133.0,	-82.7,	0.0,	2.0);
(174.6,	-122.9,	0.0,	2.0);	(198.1,	-113.1,	0.0,	2.0);
(231.5,	-79.8,	0.0,	2.0);	(241.2,	-56.2,	0.0,	2.0);
(151.0,	-132.7,	0.0,	2.0);	(115.5,	-132.7,	0.0,	2.0);
(80.0,	-132.7,	0.0,	2.0);	(44.5,	-132.7,	0.0,	2.0);
(9.0,	-132.7,	0.0,	2.0);	(-26.5,	-132.7,	0.0,	2.0);
(-62.0,	-132.7,	0.0,	2.0);	(-97.5,	-132.7,	0.0,	2.0);
(-133.0,	-132.7,	0.0,	2.0);	(179.3,	-220.9,	0.0,	2.0);
(207.6,	-209.2,	0.0,	2.0);	(235.9,	-197.5,	0.0,	2.0);
(264.1,	-185.8,	0.0,	2.0);	(304.1,	-145.8,	0.0,	2.0);
(315.9,	-117.5,	0.0,	2.0);	(327.6,	-89.2,	0.0,	2.0);
(339.3,	-60.9,	0.0,	2.0);	(151.0,	-232.7,	0.0,	2.0);
(115.5,	-232.7,	0.0,	2.0);	(80.0,	-232.7,	0.0,	2.0);
(44.5,	-232.7,	0.0,	2.0);	(9.0,	-232.7,	0.0,	2.0);
(-26.5,	-232.7,	0.0,	2.0);	(-62.0,	-232.7,	0.0,	2.0);
(-97.5,	-232.7,	0.0,	2.0);	(-133.0,	-232.7,	0.0,	2.0);
(183.1,	-519.3,	0.0,	2.0);	(215.3,	-506.0,	0.0,	2.0);
(247.4,	-492.7,	0.0,	2.0);	(279.6,	-479.4,	0.0,	2.0);
(311.7,	-466.1,	0.0,	2.0);	(343.9,	-452.8,	0.0,	2.0);
(376.0,	-439.5,	0.0,	2.0);	(408.1,	-426.1,	0.0,	2.0);
(440.3,	-412.8,	0.0,	2.0);	(472.4,	-399.5,	0.0,	2.0);
(517.9,	-354.1,	0.0,	2.0);	(531.2,	-321.9,	0.0,	2.0);
(544.5,	-289.8,	0.0,	2.0);	(557.8,	-257.6,	0.0,	2.0);
(571.1,	-225.5,	0.0,	2.0);	(584.4,	-193.4,	0.0,	2.0);

(597.8,	-161.2,	0.0,	2.0);	(611.1,	-129.1,	0.0,	2.0);
(624.4,	-96.9,	0.0,	2.0);	(637.7,	-64.8,	0.0,	2.0);
(151.0,	-532.7,	0.0,	2.0);	(115.5,	-532.7,	0.0,	2.0);
(80.0,	-532.7,	0.0,	2.0);	(44.5,	-532.7,	0.0,	2.0);
(9.0,	-532.7,	0.0,	2.0);	(-26.5,	-532.7,	0.0,	2.0);
(-62.0,	-532.7,	0.0,	2.0);	(-97.5,	-532.7,	0.0,	2.0);
(-133.0,	-532.7,	0.0,	2.0);	(183.1,	-1019.3,	0.0,	2.0);
(215.3,	-1006.0,	0.0,	2.0);	(247.4,	-992.7,	0.0,	2.0);
(279.6,	-979.4,	0.0,	2.0);	(311.7,	-966.1,	0.0,	2.0);
(343.9,	-952.8,	0.0,	2.0);	(376.0,	-939.5,	0.0,	2.0);
(408.1,	-926.2,	0.0,	2.0);	(440.3,	-912.8,	0.0,	2.0);
(472.4,	-899.5,	0.0,	2.0);	(504.5,	-886.2,	0.0,	2.0);

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

(536.7,	-872.9,	0.0,	2.0);	(568.8,	-859.6,	0.0,	2.0);
(601.0,	-846.3,	0.0,	2.0);	(633.1,	-833.0,	0.0,	2.0);
(665.3,	-819.7,	0.0,	2.0);	(697.4,	-806.3,	0.0,	2.0);
(729.5,	-793.0,	0.0,	2.0);	(761.7,	-779.7,	0.0,	2.0);
(793.8,	-766.4,	0.0,	2.0);	(826.0,	-753.1,	0.0,	2.0);
(871.4,	-707.6,	0.0,	2.0);	(884.7,	-675.5,	0.0,	2.0);
(898.0,	-643.3,	0.0,	2.0);	(911.4,	-611.2,	0.0,	2.0);
(924.7,	-579.1,	0.0,	2.0);	(938.0,	-546.9,	0.0,	2.0);
(951.3,	-514.8,	0.0,	2.0);	(964.6,	-482.6,	0.0,	2.0);
(977.9,	-450.5,	0.0,	2.0);	(991.2,	-418.4,	0.0,	2.0);
(1004.5,	-386.2,	0.0,	2.0);	(1017.9,	-354.1,	0.0,	2.0);
(1031.2,	-321.9,	0.0,	2.0);	(1044.5,	-289.8,	0.0,	2.0);
(1057.8,	-257.6,	0.0,	2.0);	(1071.1,	-225.5,	0.0,	2.0);
(1084.4,	-193.4,	0.0,	2.0);	(1097.8,	-161.2,	0.0,	2.0);
(1111.1,	-129.1,	0.0,	2.0);	(1124.4,	-96.9,	0.0,	2.0);
(1137.7,	-64.8,	0.0,	2.0);	(151.0,	-1032.7,	0.0,	2.0);
(115.5,	-1032.7,	0.0,	2.0);	(80.0,	-1032.7,	0.0,	2.0);
(44.5,	-1032.7,	0.0,	2.0);	(9.0,	-1032.7,	0.0,	2.0);
(-26.5,	-1032.7,	0.0,	2.0);	(-62.0,	-1032.7,	0.0,	2.0);
(-97.5,	-1032.7,	0.0,	2.0);	(-133.0,	-1032.7,	0.0,	2.0);
(-153.0,	-32.7,	0.0,	2.0);	(-153.0,	2.9,	0.0,	2.0);
(-153.0,	38.4,	0.0,	2.0);	(-153.0,	73.9,	0.0,	2.0);
(-153.0,	109.5,	0.0,	2.0);	(-153.0,	145.0,	0.0,	2.0);
(-153.0,	180.6,	0.0,	2.0);	(-153.0,	216.1,	0.0,	2.0);
(-153.0,	251.6,	0.0,	2.0);	(-175.7,	-50.3,	0.0,	2.0);
(-150.7,	-75.3,	0.0,	2.0);	(-183.0,	-32.7,	0.0,	2.0);
(-183.0,	2.9,	0.0,	2.0);	(-183.0,	38.4,	0.0,	2.0);
(-183.0,	73.9,	0.0,	2.0);	(-183.0,	109.5,	0.0,	2.0);
(-183.0,	145.0,	0.0,	2.0);	(-183.0,	180.6,	0.0,	2.0);
(-183.0,	216.1,	0.0,	2.0);	(-183.0,	251.6,	0.0,	2.0);
(-223.2,	-56.2,	0.0,	2.0);	(-213.5,	-79.8,	0.0,	2.0);
(-180.1,	-113.1,	0.0,	2.0);	(-156.6,	-122.9,	0.0,	2.0);
(-233.0,	-32.7,	0.0,	2.0);	(-233.0,	2.9,	0.0,	2.0);
(-233.0,	38.4,	0.0,	2.0);	(-233.0,	73.9,	0.0,	2.0);
(-233.0,	109.5,	0.0,	2.0);	(-233.0,	145.0,	0.0,	2.0);
(-233.0,	180.6,	0.0,	2.0);	(-233.0,	216.1,	0.0,	2.0);
(-233.0,	251.6,	0.0,	2.0);	(-321.3,	-60.9,	0.0,	2.0);
(-309.6,	-89.2,	0.0,	2.0);	(-297.9,	-117.5,	0.0,	2.0);
(-286.1,	-145.8,	0.0,	2.0);	(-246.1,	-185.8,	0.0,	2.0);
(-217.9,	-197.5,	0.0,	2.0);	(-189.6,	-209.2,	0.0,	2.0);
(-161.3,	-220.9,	0.0,	2.0);	(-333.0,	-32.7,	0.0,	2.0);
(-333.0,	2.9,	0.0,	2.0);	(-333.0,	38.4,	0.0,	2.0);
(-333.0,	73.9,	0.0,	2.0);	(-333.0,	109.5,	0.0,	2.0);
(-333.0,	145.0,	0.0,	2.0);	(-333.0,	180.6,	0.0,	2.0);
(-333.0,	216.1,	0.0,	2.0);	(-333.0,	251.6,	0.0,	2.0);

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

(-619.7,	-64.8,	0.0,	2.0);	(-606.4,	-96.9,	0.0,	2.0);
(-593.1,	-129.1,	0.0,	2.0);	(-579.8,	-161.2,	0.0,	2.0);
(-566.4,	-193.4,	0.0,	2.0);	(-553.1,	-225.5,	0.0,	2.0);
(-539.8,	-257.6,	0.0,	2.0);	(-526.5,	-289.8,	0.0,	2.0);
(-513.2,	-321.9,	0.0,	2.0);	(-499.9,	-354.1,	0.0,	2.0);
(-454.4,	-399.5,	0.0,	2.0);	(-422.3,	-412.8,	0.0,	2.0);
(-390.1,	-426.1,	0.0,	2.0);	(-358.0,	-439.5,	0.0,	2.0);
(-325.9,	-452.8,	0.0,	2.0);	(-293.7,	-466.1,	0.0,	2.0);
(-261.6,	-479.4,	0.0,	2.0);	(-229.4,	-492.7,	0.0,	2.0);
(-197.3,	-506.0,	0.0,	2.0);	(-165.1,	-519.3,	0.0,	2.0);
(-633.0,	-32.7,	0.0,	2.0);	(-633.0,	2.9,	0.0,	2.0);
(-633.0,	38.4,	0.0,	2.0);	(-633.0,	73.9,	0.0,	2.0);
(-633.0,	109.5,	0.0,	2.0);	(-633.0,	145.0,	0.0,	2.0);
(-633.0,	180.6,	0.0,	2.0);	(-633.0,	216.1,	0.0,	2.0);
(-633.0,	251.6,	0.0,	2.0);	(-1119.7,	-64.8,	0.0,	2.0);
(-1106.4,	-96.9,	0.0,	2.0);	(-1093.1,	-129.1,	0.0,	2.0);
(-1079.8,	-161.2,	0.0,	2.0);	(-1066.4,	-193.4,	0.0,	2.0);
(-1053.1,	-225.5,	0.0,	2.0);	(-1039.8,	-257.6,	0.0,	2.0);
(-1026.5,	-289.8,	0.0,	2.0);	(-1013.2,	-321.9,	0.0,	2.0);
(-999.9,	-354.1,	0.0,	2.0);	(-986.5,	-386.2,	0.0,	2.0);
(-973.2,	-418.4,	0.0,	2.0);	(-959.9,	-450.5,	0.0,	2.0);
(-946.6,	-482.6,	0.0,	2.0);	(-933.3,	-514.8,	0.0,	2.0);
(-920.0,	-546.9,	0.0,	2.0);	(-906.7,	-579.1,	0.0,	2.0);
(-893.4,	-611.2,	0.0,	2.0);	(-880.0,	-643.3,	0.0,	2.0);
(-866.7,	-675.5,	0.0,	2.0);	(-853.4,	-707.6,	0.0,	2.0);
(-808.0,	-753.1,	0.0,	2.0);	(-775.8,	-766.4,	0.0,	2.0);
(-743.7,	-779.7,	0.0,	2.0);	(-711.5,	-793.0,	0.0,	2.0);
(-679.4,	-806.3,	0.0,	2.0);	(-647.3,	-819.7,	0.0,	2.0);
(-615.1,	-833.0,	0.0,	2.0);	(-583.0,	-846.3,	0.0,	2.0);
(-550.8,	-859.6,	0.0,	2.0);	(-518.7,	-872.9,	0.0,	2.0);
(-486.5,	-886.2,	0.0,	2.0);	(-454.4,	-899.5,	0.0,	2.0);
(-422.3,	-912.8,	0.0,	2.0);	(-390.1,	-926.2,	0.0,	2.0);
(-358.0,	-939.5,	0.0,	2.0);	(-325.9,	-952.8,	0.0,	2.0);
(-293.7,	-966.1,	0.0,	2.0);	(-261.6,	-979.4,	0.0,	2.0);
(-229.4,	-992.7,	0.0,	2.0);	(-197.3,	-1006.0,	0.0,	2.0);

(-165.1,	-1019.3,	0.0,	2.0);	(-1133.0,	-32.7,	0.0,	2.0);
(-1133.0,	2.9,	0.0,	2.0);	(-1133.0,	38.4,	0.0,	2.0);
(-1133.0,	73.9,	0.0,	2.0);	(-1133.0,	109.5,	0.0,	2.0);
(-1133.0,	145.0,	0.0,	2.0);	(-1133.0,	180.6,	0.0,	2.0);
(-1133.0,	216.1,	0.0,	2.0);	(-1133.0,	251.6,	0.0,	2.0);
(-133.0,	271.6,	0.0,	2.0);	(-97.5,	271.6,	0.0,	2.0);
(-62.0,	271.6,	0.0,	2.0);	(-26.5,	271.6,	0.0,	2.0);
(9.0,	271.6,	0.0,	2.0);	(44.5,	271.6,	0.0,	2.0);
(80.0,	271.6,	0.0,	2.0);	(115.5,	271.6,	0.0,	2.0);
(151.0,	271.6,	0.0,	2.0);	(-150.7,	294.3,	0.0,	2.0);

**MODELOPTs:
CONC URBAN FLAT FLGPOL NOCALM

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

(-175.7,	269.3,	0.0,	2.0);	(-133.0,	301.6,	0.0,	2.0);
(-97.5,	301.6,	0.0,	2.0);	(-62.0,	301.6,	0.0,	2.0);
(-26.5,	301.6,	0.0,	2.0);	(9.0,	301.6,	0.0,	2.0);
(44.5,	301.6,	0.0,	2.0);	(80.0,	301.6,	0.0,	2.0);
(115.5,	301.6,	0.0,	2.0);	(151.0,	301.6,	0.0,	2.0);
(-156.6,	341.9,	0.0,	2.0);	(-180.1,	332.1,	0.0,	2.0);
(-213.5,	298.8,	0.0,	2.0);	(-223.2,	275.2,	0.0,	2.0);
(-133.0,	351.6,	0.0,	2.0);	(-97.5,	351.6,	0.0,	2.0);
(-62.0,	351.6,	0.0,	2.0);	(-26.5,	351.6,	0.0,	2.0);
(9.0,	351.6,	0.0,	2.0);	(44.5,	351.6,	0.0,	2.0);
(80.0,	351.6,	0.0,	2.0);	(115.5,	351.6,	0.0,	2.0);
(151.0,	351.6,	0.0,	2.0);	(-161.3,	439.9,	0.0,	2.0);
(-189.6,	428.2,	0.0,	2.0);	(-217.9,	416.5,	0.0,	2.0);
(-246.1,	404.8,	0.0,	2.0);	(-286.1,	364.8,	0.0,	2.0);
(-297.9,	336.5,	0.0,	2.0);	(-309.6,	308.2,	0.0,	2.0);
(-321.3,	279.9,	0.0,	2.0);	(-133.0,	451.6,	0.0,	2.0);
(-97.5,	451.6,	0.0,	2.0);	(-62.0,	451.6,	0.0,	2.0);
(-26.5,	451.6,	0.0,	2.0);	(9.0,	451.6,	0.0,	2.0);
(44.5,	451.6,	0.0,	2.0);	(80.0,	451.6,	0.0,	2.0);
(115.5,	451.6,	0.0,	2.0);	(151.0,	451.6,	0.0,	2.0);
(-165.1,	738.3,	0.0,	2.0);	(-197.3,	725.0,	0.0,	2.0);
(-229.4,	711.7,	0.0,	2.0);	(-261.6,	698.4,	0.0,	2.0);
(-293.7,	685.0,	0.0,	2.0);	(-325.9,	671.7,	0.0,	2.0);
(-358.0,	658.4,	0.0,	2.0);	(-390.1,	645.1,	0.0,	2.0);
(-422.3,	631.8,	0.0,	2.0);	(-454.4,	618.5,	0.0,	2.0);
(-499.9,	573.0,	0.0,	2.0);	(-513.2,	540.9,	0.0,	2.0);
(-526.5,	508.8,	0.0,	2.0);	(-539.8,	476.6,	0.0,	2.0);
(-553.1,	444.5,	0.0,	2.0);	(-566.4,	412.3,	0.0,	2.0);
(-579.8,	380.2,	0.0,	2.0);	(-593.1,	348.0,	0.0,	2.0);
(-606.4,	315.9,	0.0,	2.0);	(-619.7,	283.8,	0.0,	2.0);
(-133.0,	751.6,	0.0,	2.0);	(-97.5,	751.6,	0.0,	2.0);
(-62.0,	751.6,	0.0,	2.0);	(-26.5,	751.6,	0.0,	2.0);
(9.0,	751.6,	0.0,	2.0);	(44.5,	751.6,	0.0,	2.0);
(80.0,	751.6,	0.0,	2.0);	(115.5,	751.6,	0.0,	2.0);
(151.0,	751.6,	0.0,	2.0);	(-165.1,	1238.3,	0.0,	2.0);
(-197.3,	1225.0,	0.0,	2.0);	(-229.4,	1211.7,	0.0,	2.0);
(-261.6,	1198.4,	0.0,	2.0);	(-293.7,	1185.1,	0.0,	2.0);
(-325.9,	1171.7,	0.0,	2.0);	(-358.0,	1158.4,	0.0,	2.0);
(-390.1,	1145.1,	0.0,	2.0);	(-422.3,	1131.8,	0.0,	2.0);
(-454.4,	1118.5,	0.0,	2.0);	(-486.5,	1105.2,	0.0,	2.0);
(-518.7,	1091.9,	0.0,	2.0);	(-550.8,	1078.6,	0.0,	2.0);
(-583.0,	1065.2,	0.0,	2.0);	(-615.1,	1051.9,	0.0,	2.0);
(-647.3,	1038.6,	0.0,	2.0);	(-679.4,	1025.3,	0.0,	2.0);
(-711.5,	1012.0,	0.0,	2.0);	(-743.7,	998.7,	0.0,	2.0);
(-775.8,	985.3,	0.0,	2.0);	(-808.0,	972.0,	0.0,	2.0);

**MODELOPTs:
CONC URBAN FLAT FLGPOL NOCALM

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

(-853.4,	926.6,	0.0,	2.0);	(-866.7,	894.4,	0.0,	2.0);
(-880.0,	862.3,	0.0,	2.0);	(-893.4,	830.2,	0.0,	2.0);
(-906.7,	798.0,	0.0,	2.0);	(-920.0,	765.9,	0.0,	2.0);
(-933.3,	733.7,	0.0,	2.0);	(-946.6,	701.6,	0.0,	2.0);
(-959.9,	669.5,	0.0,	2.0);	(-973.2,	637.3,	0.0,	2.0);
(-986.5,	605.2,	0.0,	2.0);	(-999.9,	573.0,	0.0,	2.0);
(-1013.2,	540.9,	0.0,	2.0);	(-1026.5,	508.8,	0.0,	2.0);
(-1039.8,	476.6,	0.0,	2.0);	(-1053.1,	444.5,	0.0,	2.0);
(-1066.4,	412.3,	0.0,	2.0);	(-1079.8,	380.2,	0.0,	2.0);
(-1093.1,	348.0,	0.0,	2.0);	(-1106.4,	315.9,	0.0,	2.0);
(-1119.7,	283.8,	0.0,	2.0);	(-133.0,	1251.6,	0.0,	2.0);
(-97.5,	1251.6,	0.0,	2.0);	(-62.0,	1251.6,	0.0,	2.0);
(-26.5,	1251.6,	0.0,	2.0);	(9.0,	1251.6,	0.0,	2.0);
(44.5,	1251.6,	0.0,	2.0);	(80.0,	1251.6,	0.0,	2.0);
(115.5,	1251.6,	0.0,	2.0);	(151.0,	1251.6,	0.0,	2.0);
(171.0,	251.6,	0.0,	2.0);	(171.0,	216.1,	0.0,	2.0);
(171.0,	180.6,	0.0,	2.0);	(171.0,	145.0,	0.0,	2.0);
(171.0,	109.5,	0.0,	2.0);	(171.0,	73.9,	0.0,	2.0);
(171.0,	38.4,	0.0,	2.0);	(171.0,	2.9,	0.0,	2.0);
(171.0,	-32.7,	0.0,	2.0);	(193.7,	269.3,	0.0,	2.0);
(168.7,	294.3,	0.0,	2.0);	(201.0,	251.6,	0.0,	2.0);
(201.0,	216.1,	0.0,	2.0);	(201.0,	180.6,	0.0,	2.0);
(201.0,	145.0,	0.0,	2.0);	(201.0,	109.5,	0.0,	2.0);
(201.0,	73.9,	0.0,	2.0);	(201.0,	38.4,	0.0,	2.0);
(201.0,	2.9,	0.0,	2.0);	(201.0,	-32.7,	0.0,	2.0);
(241.2,	275.2,	0.0,	2.0);	(231.5,	298.8,	0.0,	2.0);
(198.1,	332.1,	0.0,	2.0);	(174.6,	341.9,	0.0,	2.0);
(251.0,	251.6,	0.0,	2.0);	(251.0,	216.1,	0.0,	2.0);
(251.0,	180.6,	0.0,	2.0);	(251.0,	145.0,	0.0,	2.0);
(251.0,	109.5,	0.0,	2.0);	(251.0,	73.9,	0.0,	2.0);
(251.0,	38.4,	0.0,	2.0);	(251.0,	2.9,	0.0,	2.0);
(251.0,	-32.7,	0.0,	2.0);	(339.3,	279.9,	0.0,	2.0);
(327.6,	308.2,	0.0,	2.0);	(315.9,	336.5,	0.0,	2.0);
(304.1,	364.8,	0.0,	2.0);	(264.1,	404.8,	0.0,	2.0);
(235.9,	416.5,	0.0,	2.0);	(207.6,	428.2,	0.0,	2.0);
(179.3,	439.9,	0.0,	2.0);	(351.0,	251.6,	0.0,	2.0);
(351.0,	216.1,	0.0,	2.0);	(351.0,	180.6,	0.0,	2.0);

(351.0,	145.0,	0.0,	2.0);	(351.0,	109.5,	0.0,	2.0);
(351.0,	73.9,	0.0,	2.0);	(351.0,	38.4,	0.0,	2.0);
(351.0,	2.9,	0.0,	2.0);	(351.0,	-32.7,	0.0,	2.0);
(637.7,	283.8,	0.0,	2.0);	(624.4,	315.9,	0.0,	2.0);
(611.1,	348.0,	0.0,	2.0);	(597.8,	380.2,	0.0,	2.0);
(584.4,	412.3,	0.0,	2.0);	(571.1,	444.5,	0.0,	2.0);
(557.8,	476.6,	0.0,	2.0);	(544.5,	508.8,	0.0,	2.0);
(531.2,	540.9,	0.0,	2.0);	(517.9,	573.0,	0.0,	2.0);

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

(472.4,	618.5,	0.0,	2.0);	(440.3,	631.8,	0.0,	2.0);
(408.1,	645.1,	0.0,	2.0);	(376.0,	658.4,	0.0,	2.0);
(343.9,	671.7,	0.0,	2.0);	(311.7,	685.0,	0.0,	2.0);
(279.6,	698.4,	0.0,	2.0);	(247.4,	711.7,	0.0,	2.0);
(215.3,	725.0,	0.0,	2.0);	(183.1,	738.3,	0.0,	2.0);
(651.0,	251.6,	0.0,	2.0);	(651.0,	216.1,	0.0,	2.0);
(651.0,	180.6,	0.0,	2.0);	(651.0,	145.0,	0.0,	2.0);
(651.0,	109.5,	0.0,	2.0);	(651.0,	73.9,	0.0,	2.0);
(651.0,	38.4,	0.0,	2.0);	(651.0,	2.9,	0.0,	2.0);
(651.0,	-32.7,	0.0,	2.0);	(1137.7,	283.8,	0.0,	2.0);
(1124.4,	315.9,	0.0,	2.0);	(1111.1,	348.0,	0.0,	2.0);
(1097.8,	380.2,	0.0,	2.0);	(1084.4,	412.3,	0.0,	2.0);
(1071.1,	444.5,	0.0,	2.0);	(1057.8,	476.6,	0.0,	2.0);
(1044.5,	508.8,	0.0,	2.0);	(1031.2,	540.9,	0.0,	2.0);
(1017.9,	573.0,	0.0,	2.0);	(1004.5,	605.2,	0.0,	2.0);
(991.2,	637.3,	0.0,	2.0);	(977.9,	669.5,	0.0,	2.0);
(964.6,	701.6,	0.0,	2.0);	(951.3,	733.7,	0.0,	2.0);
(938.0,	765.9,	0.0,	2.0);	(924.7,	798.0,	0.0,	2.0);
(911.4,	830.2,	0.0,	2.0);	(898.0,	862.3,	0.0,	2.0);
(884.7,	894.4,	0.0,	2.0);	(871.4,	926.6,	0.0,	2.0);
(826.0,	972.0,	0.0,	2.0);	(793.8,	985.3,	0.0,	2.0);
(761.7,	998.7,	0.0,	2.0);	(729.5,	1012.0,	0.0,	2.0);
(697.4,	1025.3,	0.0,	2.0);	(665.3,	1038.6,	0.0,	2.0);
(633.1,	1051.9,	0.0,	2.0);	(601.0,	1065.2,	0.0,	2.0);
(568.8,	1078.6,	0.0,	2.0);	(536.7,	1091.9,	0.0,	2.0);
(504.5,	1105.2,	0.0,	2.0);	(472.4,	1118.5,	0.0,	2.0);
(440.3,	1131.8,	0.0,	2.0);	(408.1,	1145.1,	0.0,	2.0);
(376.0,	1158.4,	0.0,	2.0);	(343.9,	1171.7,	0.0,	2.0);
(311.7,	1185.1,	0.0,	2.0);	(279.6,	1198.4,	0.0,	2.0);
(247.4,	1211.7,	0.0,	2.0);	(215.3,	1225.0,	0.0,	2.0);
(183.1,	1238.3,	0.0,	2.0);	(1151.0,	251.6,	0.0,	2.0);
(1151.0,	216.1,	0.0,	2.0);	(1151.0,	180.6,	0.0,	2.0);
(1151.0,	145.0,	0.0,	2.0);	(1151.0,	109.5,	0.0,	2.0);
(1151.0,	73.9,	0.0,	2.0);	(1151.0,	38.4,	0.0,	2.0);
(1151.0,	2.9,	0.0,	2.0);	(1151.0,	-32.7,	0.0,	2.0);
(-133.0,	251.6,	0.0,	2.0);	(-133.0,	-32.7,	0.0,	2.0);
(151.0,	-32.7,	0.0,	2.0);	(151.0,	251.6,	0.0,	2.0);

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1			

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

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

1.54, 3.09, 5.14, 8.23, 10.80,

*** 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

*** 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

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

FILE: PALMSPR.ASC
FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
SURFACE STATION NO.: 54145 UPPER AIR STATION NO.: 99999
NAME: PALM_SPRINGS NAME: UNKNOWN
YEAR: 1981 YEAR: 1981

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.79	284.3	6	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	143.5	1.34	283.1	7	475.8	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	05	129.0	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	139.5	1.79	285.4	6	1.4	170.7	0.0000	0.0	0.0000	0	0.00
81	01	01	08	134.6	0.00	287.6	5	47.0	192.0	0.0000	0.0	0.0000	0	0.00
81	01	01	09	164.0	1.00	289.8	4	92.5	213.3	0.0000	0.0	0.0000	0	0.00
81	01	01	10	144.1	1.34	291.5	3	138.0	234.7	0.0000	0.8	0.0000	0	0.00
81	01	01	11	336.6	1.00	294.3	2	183.5	256.0	0.0000	0.0	0.0000	0	0.00
81	01	01	12	260.6	1.00	297.6	2	229.0	277.3	0.0000	0.0	0.0000	0	0.00
81	01	01	13	334.7	1.34	298.7	2	274.5	298.7	0.0000	0.0	0.0000	0	0.00
81	01	01	14	304.2	2.24	299.8	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	15	314.8	2.24	299.3	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	16	323.2	0.00	298.7	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	17	65.1	1.00	295.4	4	325.6	325.6	0.0000	0.0	0.0000	0	0.00
81	01	01	18	120.1	1.00	291.5	5	357.2	310.3	0.0000	0.0	0.0000	0	0.00
81	01	01	19	133.0	1.34	289.8	6	388.8	302.1	0.0000	0.0	0.0000	0	0.00
81	01	01	20	145.7	1.79	287.0	6	420.4	293.9	0.0000	0.0	0.0000	0	0.00
81	01	01	21	133.6	0.00	286.5	7	452.0	285.7	0.0000	0.0	0.0000	0	0.00
81	01	01	22	159.5	1.34	287.0	7	483.5	277.4	0.0000	0.0	0.0000	0	0.00
81	01	01	23	135.7	1.79	285.9	6	515.1	269.2	0.0000	0.0	0.0000	0	0.00
81	01	01	24	157.2	1.79	285.4	6	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.

**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 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
151.00	-52.66	106.74844	(81011909)	115.50	-52.66	104.03563	(81121409)
80.00	-52.66	101.71554	(81030709)	44.50	-52.66	104.45178	(81121509)
9.00	-52.66	105.57722	(81122609)	-26.50	-52.66	105.63010	(81030111)
-62.00	-52.66	102.81226	(81030113)	-97.50	-52.66	105.52452	(81122909)
-133.00	-52.66	107.90783	(81112712)	168.68	-75.34	85.62566	(81011909)
193.68	-50.34	85.15262	(81121809)	151.00	-82.66	83.67900	(81020209)
115.50	-82.66	83.69205	(81011509)	80.00	-82.66	83.12434	(81010109)
44.50	-82.66	83.13460	(81110509)	9.00	-82.66	83.58117	(81122609)
-26.50	-82.66	83.87413	(81121509)	-62.00	-82.66	84.03939	(81112209)
-97.50	-82.66	84.60747	(81030113)	-133.00	-82.66	84.62945	(81122909)
174.57	-122.90	64.25509	(81120209)	198.14	-113.13	64.08777	(81011909)
231.47	-79.80	64.08223	(81020109)	241.24	-56.23	63.95718	(81112309)
151.00	-132.66	62.48577	(81010909)	115.50	-132.66	63.02830	(81110909)
80.00	-132.66	63.09509	(81120909)	44.50	-132.66	63.12814	(81110509)
9.00	-132.66	63.27715	(81121509)	-26.50	-132.66	63.19921	(81121509)
-62.00	-132.66	63.66906	(81022309)	-97.50	-132.66	63.59823	(81031109)
-133.00	-132.66	63.09831	(81030113)	179.28	-220.94	42.78318	(81010909)
207.57	-209.23	43.28060	(81020209)	235.85	-197.51	43.09898	(81121909)
264.14	-185.80	41.96257	(81011409)	304.14	-145.80	42.19469	(81020109)
315.85	-117.51	43.02708	(81121809)	327.57	-89.23	42.98741	(81112309)
339.28	-60.94	42.19132	(81120709)	151.00	-232.66	41.74453	(81020409)
115.50	-232.66	42.45009	(81010109)	80.00	-232.66	42.73990	(81112810)
44.50	-232.66	42.93139	(81041709)	9.00	-232.66	43.01904	(81121509)
-26.50	-232.66	42.46720	(81121509)	-62.00	-232.66	42.63483	(81022309)
-97.50	-232.66	42.75005	(81112209)	-133.00	-232.66	42.20164	(81031109)
183.14	-519.35	19.92237	(81010109)	215.28	-506.03	20.14221	(81110909)
247.42	-492.72	20.25529	(81020409)	279.56	-479.41	20.36176	(81011509)
311.71	-466.09	20.34568	(81102510)	343.85	-452.78	20.24427	(81121409)
375.99	-439.47	20.04498	(81120409)	408.13	-426.15	19.74789	(81011909)
440.27	-412.84	18.94138	(81011909)	472.41	-399.53	18.95995	(81011409)
517.87	-354.07	18.88305	(81102710)	531.18	-321.93	19.37318	(81020109)
544.49	-289.79	19.71524	(81121809)	557.81	-257.65	20.02111	(81121009)
571.12	-225.51	20.12294	(81112309)	584.43	-193.37	19.10522	(81112309)
597.75	-161.22	19.96003	(81120709)	611.06	-129.08	20.23929	(81030209)
624.37	-96.94	20.05298	(81112409)	637.69	-64.80	19.78801	(81020509)
151.00	-532.66	19.61797	(81120909)	115.50	-532.66	19.90541	(81112810)
80.00	-532.66	20.07200	(81110509)	44.50	-532.66	20.17151	(81030709)
9.00	-532.66	20.20517	(81121509)	-26.50	-532.66	19.68696	(81121509)
-62.00	-532.66	17.96298	(81121509)	-97.50	-532.66	19.03357	(81022309)
-133.00	-532.66	19.68354	(81022309)	183.14	-1019.35	8.88580	(81112810)

**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 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
215.28	-1006.03	9.11748	(81120909)	247.42	-992.72	9.28546	(81120309)
279.56	-979.41	9.41026	(81120309)	311.71	-966.09	9.33841	(81010109)
343.85	-952.78	9.25595	(81010109)	375.99	-939.47	9.14275	(81110909)
408.13	-926.15	9.22917	(81020409)	440.27	-912.84	9.28432	(81020409)
472.41	-899.53	9.28314	(81011509)	504.55	-886.21	9.25621	(81010909)
536.69	-872.90	9.24865	(81021909)	568.84	-859.59	9.35267	(81121409)
600.98	-846.27	9.22860	(81121409)	633.12	-832.96	9.06945	(81120409)
665.26	-819.65	8.94975	(81121909)	697.40	-806.33	8.89127	(81011909)
729.54	-793.02	8.64888	(81011909)	761.68	-779.71	8.38517	(81011409)
793.82	-766.39	8.52259	(81011409)	825.97	-753.08	8.40560	(81111709)
871.42	-707.63	8.15500	(81102710)	884.73	-675.48	8.52454	(81102710)
898.05	-643.34	8.61873	(81102710)	911.36	-611.20	8.77528	(81020109)
924.67	-579.06	8.82574	(81121809)	937.99	-546.92	8.95748	(81121809)
951.30	-514.78	9.06280	(81121009)	964.61	-482.64	9.13221	(81112309)
977.93	-450.50	9.05440	(81112309)	991.24	-418.35	8.63369	(81112309)
1004.55	-386.21	8.37183	(81120709)	1017.87	-354.07	9.05094	(81120709)
1031.18	-321.93	9.39997	(81120709)	1044.49	-289.79	9.38157	(81120709)
1057.81	-257.65	9.25972	(81112409)	1071.12	-225.51	9.16474	(81020509)
1084.43	-193.37	9.14949	(81020509)	1097.75	-161.22	8.79038	(81020509)
1111.06	-129.08	8.78384	(81030109)	1124.37	-96.94	8.94851	(81030109)
1137.69	-64.80	8.79025	(81030109)	151.00	-1032.66	8.78819	(81112713)
115.50	-1032.66	8.83113	(81041709)	80.00	-1032.66	8.85890	(81030709)
44.50	-1032.66	8.84391	(81122609)	9.00	-1032.66	8.89730	(81121509)
-26.50	-1032.66	8.76409	(81121509)	-62.00	-1032.66	8.29989	(81121509)
-97.50	-1032.66	7.55555	(81121509)	-133.00	-1032.66	7.13599	(81022309)
-153.00	-32.66	106.90147	(81030114)	-153.00	2.88	105.01785	(81102713)
-153.00	38.41	102.45859	(81102713)	-153.00	73.94	105.00674	(81022814)
-153.00	109.48	106.13941	(81122009)	-153.00	145.01	105.83657	(81012814)
-153.00	180.55	102.66321	(81122009)	-153.00	216.08	104.99342	(81030210)
-153.00	251.62	107.08611	(81020811)	-175.68	-50.34	85.15323	(81030114)
-150.68	-75.34	86.52293	(81030112)	-183.00	-32.66	83.84968	(81102713)
-183.00	2.88	84.18916	(81020810)	-183.00	38.41	83.39818	(81020911)
-183.00	73.94	83.57697	(81040109)	-183.00	109.48	83.81663	(81012814)
-183.00	145.01	83.83178	(81022814)	-183.00	180.55	83.74052	(81020909)
-183.00	216.08	84.39630	(81111309)	-183.00	251.62	84.21335	(81030210)
-223.24	-56.23	64.54765	(81030114)	-213.47	-79.80	62.55390	(81030114)
-180.14	-113.13	64.89529	(81030112)	-156.57	-122.90	64.78166	(81112712)
-233.00	-32.66	62.48473	(81102713)	-233.00	2.88	63.03662	(81020810)
-233.00	38.41	63.38309	(81020911)	-233.00	73.94	63.38847	(81040109)
-233.00	109.48	63.38019	(81012814)	-233.00	145.01	63.45338	(81022814)

CONC URBAN FLAT FLGPOL NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
-233.00	180.55	63.52499	(81020909)	-233.00	216.08	63.30467	(81081309)
-233.00	251.62	62.83355	(81020812)	-321.28	-60.94	42.53272	(81020810)
-309.57	-89.23	43.27106	(81102713)	-297.85	-117.51	42.91811	(81030114)
-286.14	-145.80	38.25632	(81030114)	-246.14	-185.80	42.64456	(81112809)
-217.85	-197.51	43.24403	(81112712)	-189.57	-209.23	43.58758	(81122909)
-161.28	-220.94	43.13017	(81030113)	-333.00	-32.66	41.88930	(81020810)
-333.00	2.88	41.87692	(81020911)	-333.00	38.41	42.87618	(81020911)
-333.00	73.94	42.96225	(81040109)	-333.00	109.48	43.03793	(81012814)
-333.00	145.01	43.00910	(81022814)	-333.00	180.55	42.92977	(81050109)
-333.00	216.08	42.18459	(81020909)	-333.00	251.62	42.03758	(81081309)
-619.69	-64.80	18.64473	(81020911)	-606.37	-96.94	19.21315	(81020810)
-593.06	-129.08	20.31230	(81020810)	-579.75	-161.22	20.08078	(81020810)
-566.43	-193.37	20.38493	(81102713)	-553.12	-225.51	20.02258	(81030114)
-539.81	-257.65	20.04212	(81030114)	-526.49	-289.79	18.67030	(81030114)
-513.18	-321.93	16.17891	(81030114)	-499.87	-354.07	15.73862	(81112809)
-454.41	-399.53	18.87843	(81112809)	-422.27	-412.84	19.48310	(81030112)
-390.13	-426.15	19.22620	(81030112)	-357.99	-439.47	20.12623	(81112712)
-325.85	-452.78	20.20867	(81122909)	-293.71	-466.09	20.19966	(81122909)
-261.56	-479.41	20.39828	(81030113)	-229.42	-492.72	20.21139	(81031109)
-197.28	-506.03	20.06856	(81031109)	-165.14	-519.35	20.00170	(81112209)
-633.00	-32.66	19.54952	(81020911)	-633.00	2.88	19.80872	(81020911)
-633.00	38.41	20.09400	(81040109)	-633.00	73.94	19.90188	(81012814)
-633.00	109.48	20.16266	(81012814)	-633.00	145.01	20.16305	(81122009)
-633.00	180.55	20.08670	(81022814)	-633.00	216.08	19.92876	(81020815)
-633.00	251.62	19.67710	(81020909)	-1119.69	-64.80	8.79259	(81112009)
-1106.37	-96.94	8.99071	(81020911)	-1093.06	-129.08	8.94123	(81020911)
-1079.75	-161.22	8.56502	(81020911)	-1066.43	-193.37	7.89327	(81020911)
-1053.12	-225.51	8.15604	(81020810)	-1039.81	-257.65	8.86085	(81020810)
-1026.49	-289.79	9.25532	(81020810)	-1013.18	-321.93	9.29191	(81020810)
-999.87	-354.07	8.96359	(81020810)	-986.55	-386.21	9.14711	(81102713)
-973.24	-418.35	9.26644	(81102713)	-959.93	-450.50	9.02363	(81102713)
-946.61	-482.64	9.13073	(81030114)	-933.30	-514.78	9.03651	(81030114)
-919.99	-546.92	8.60960	(81030114)	-906.67	-579.06	7.90170	(81030114)
-893.36	-611.20	6.99054	(81030114)	-880.05	-643.34	6.33203	(81052509)
-866.73	-675.48	6.39089	(81052509)	-853.42	-707.63	6.80910	(81112809)
-807.97	-753.08	8.05771	(81112809)	-775.82	-766.39	8.50360	(81112809)
-743.68	-779.71	8.67959	(81112809)	-711.54	-793.02	8.76982	(81030112)
-679.40	-806.33	8.57344	(81030112)	-647.26	-819.65	8.80076	(81112712)
-615.12	-832.96	9.08816	(81112712)	-582.98	-846.27	9.03482	(81112712)
-550.84	-859.59	9.18710	(81122909)	-518.69	-872.90	9.21348	(81122909)

CONC URBAN FLAT FLGPOL NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
-486.55	-886.21	9.20665	(81030113)	-454.41	-899.53	9.30521	(81030113)
-422.27	-912.84	9.03758	(81030113)	-390.13	-926.15	9.21196	(81031109)
-357.99	-939.47	9.28220	(81031109)	-325.85	-952.78	9.02850	(81112209)
-293.71	-966.09	9.30270	(81112209)	-261.56	-979.41	9.22214	(81112209)
-229.42	-992.72	9.04307	(81022309)	-197.28	-1006.03	8.66448	(81022309)
-165.14	-1019.35	8.00496	(81022309)	-1133.00	-32.66	8.79519	(81042409)
-1133.00	2.88	8.78750	(81040109)	-1133.00	38.41	8.50595	(81012814)
-1133.00	73.94	8.84672	(81012814)	-1133.00	109.48	8.84629	(81012814)
-1133.00	145.01	8.85670	(81122009)	-1133.00	180.55	8.80803	(81122009)
-1133.00	216.08	8.81304	(81022814)	-1133.00	251.62	8.72665	(81022814)
-133.00	271.62	104.93645	(81020910)	-97.50	271.62	103.32164	(81102009)
-62.00	271.62	100.79404	(81102109)	-26.50	271.62	103.16096	(81111509)
9.00	271.62	104.20784	(81111509)	44.50	271.62	103.43584	(81052910)
80.00	271.62	100.85427	(81081809)	115.50	271.62	103.34202	(81112109)
151.00	271.62	104.52526	(81012009)	-150.68	294.30	84.71713	(81022812)
-175.68	269.30	85.62472	(81020811)	-133.00	301.62	82.68924	(81102009)
-97.50	301.62	82.89761	(81092509)	-62.00	301.62	82.43403	(81122509)
-26.50	301.62	82.52435	(81020813)	9.00	301.62	82.89056	(81012709)
44.50	301.62	82.50204	(81112715)	80.00	301.62	82.56760	(81123109)
115.50	301.62	83.16837	(81042510)	151.00	301.62	82.73025	(81041509)
-156.57	341.86	63.54742	(81102009)	-180.14	332.09	63.95291	(81060109)
-213.47	298.76	63.94675	(81020811)	-223.24	275.19	64.46807	(81030210)
-133.00	351.62	62.05935	(81122716)	-97.50	351.62	62.64683	(81022709)
-62.00	351.62	62.74611	(81010310)	-26.50	351.62	62.75551	(81020813)
9.00	351.62	62.75771	(81120509)	44.50	351.62	62.76714	(81112715)
80.00	351.62	62.83570	(81110109)	115.50	351.62	62.47765	(81123109)
151.00	351.62	62.21880	(81081809)	-161.28	439.90	42.64791	(81122716)
-189.57	428.19	43.10029	(81102009)	-217.85	416.47	43.05869	(81022812)
-246.14	404.76	42.28106	(81060110)	-286.14	364.76	41.43394	(81110309)
-297.85	336.47	43.23445	(81012310)	-309.57	308.19	43.36373	(81030210)
-321.28	279.90	42.95489	(81020812)	-133.00	451.62	41.74928	(81031809)
-97.50	451.62	42.32143	(81122509)	-62.00	451.62	42.59752	(81030409)
-26.50	451.62	42.72873	(81020813)	9.00	451.62	42.77358	(81102409)
44.50	451.62	42.74980	(81020814)	80.00	451.62	42.64133	(81102711)
115.50	451.62	42.34155	(81123109)	151.00	451.62	40.76176	(81042510)
-165.14	738.31	19.90459	(81122509)	-197.28	724.99	20.12370	(81022709)
-229.42	711.68	20.27123	(81060209)	-261.56	698.37	20.33979	(81060211)
-293.71	685.05	20.30949	(81011809)	-325.85	671.74	20.06982	(81102009)
-357.99	658.43	19.94103	(81020910)	-390.13	645.11	19.63026	(81022812)
-422.27	631.80	19.38760	(81060109)	-454.41	618.49	18.96821	(81111909)

**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 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
-499.87	573.03	18.77874	(81110309)	-513.18	540.89	18.69951	(81020811)
-526.49	508.75	19.77704	(81020811)	-539.81	476.61	20.06110	(81021809)
-553.12	444.47	20.24394	(81030210)	-566.43	412.33	20.37783	(81123009)
-579.75	380.18	20.39167	(81020812)	-593.06	348.04	20.33469	(81081309)
-606.37	315.90	19.58505	(81081309)	-619.69	283.76	19.12259	(81020909)
-133.00	751.62	19.61896	(81010310)	-97.50	751.62	19.85270	(81041909)
-62.00	751.62	19.93909	(81122109)	-26.50	751.62	20.00269	(81020813)
9.00	751.62	20.12494	(81102409)	44.50	751.62	20.09808	(81111509)
80.00	751.62	20.00020	(81112715)	115.50	751.62	19.84304	(81022009)
151.00	751.62	19.60139	(81110109)	-165.14	1238.31	8.87037	(81102809)
-197.28	1224.99	8.96306	(81110209)	-229.42	1211.68	9.03851	(81010310)
-261.56	1198.37	9.10931	(81032209)	-293.71	1185.05	9.14855	(81122509)
-325.85	1171.74	9.21151	(81022709)	-357.99	1158.43	9.18831	(81022709)
-390.13	1145.11	9.28742	(81060209)	-422.27	1131.80	9.29759	(81092509)
-454.41	1118.49	9.29104	(81122716)	-486.55	1105.17	9.26564	(81102109)
-518.69	1091.86	9.23596	(81011809)	-550.84	1078.55	9.14085	(81102009)
-582.98	1065.23	8.72420	(81102009)	-615.12	1051.92	8.99967	(81020910)
-647.26	1038.61	8.98466	(81022812)	-679.40	1025.29	8.72449	(81022812)
-711.54	1011.98	8.77786	(81060109)	-743.68	998.67	8.67310	(81060110)
-775.82	985.35	8.53313	(81111909)	-807.97	972.04	8.36916	(81111909)
-853.42	926.59	8.41313	(81110309)	-866.73	894.44	8.31900	(81110309)
-880.05	862.30	7.95417	(81110309)	-893.36	830.16	8.52610	(81020811)
-906.67	798.02	8.88003	(81020811)	-919.99	765.88	8.98866	(81012310)
-933.30	733.74	9.07372	(81021809)	-946.61	701.60	9.12688	(81030210)
-959.93	669.46	9.17858	(81111609)	-973.24	637.31	9.21746	(81123009)
-986.55	605.17	9.23555	(81123009)	-999.87	573.03	9.30671	(81020812)
-1013.18	540.89	9.30514	(81111309)	-1026.49	508.75	9.30224	(81081309)
-1039.81	476.61	9.06143	(81081309)	-1053.12	444.47	8.48691	(81081309)
-1066.43	412.33	8.33719	(81020909)	-1079.75	380.18	8.85596	(81020909)
-1093.06	348.04	9.05274	(81020909)	-1106.37	315.90	8.98699	(81042410)
-1119.69	283.76	8.87551	(81020815)	-133.00	1251.62	8.76960	(81122109)
-97.50	1251.62	8.75780	(81020813)	-62.00	1251.62	8.81167	(81020813)
-26.50	1251.62	8.85267	(81052910)	9.00	1251.62	8.85600	(81102409)
44.50	1251.62	8.85791	(81012709)	80.00	1251.62	8.81977	(81111509)
115.50	1251.62	8.80436	(81022815)	151.00	1251.62	8.76493	(81121709)
171.00	251.62	104.08130	(81122409)	171.00	216.09	102.89628	(81030809)
171.00	180.55	100.42944	(81110809)	171.00	145.02	103.21401	(81102612)
171.00	109.48	103.60712	(81111009)	171.00	73.95	102.34206	(81110809)
171.00	38.41	100.35104	(81120709)	171.00	2.88	102.33960	(81121009)
171.00	-32.66	105.65457	(81121809)	193.68	269.30	83.30135	(81122409)

**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 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
168.68	294.30	83.72867	(81012009)	201.00	251.62	82.50181	(81030809)
201.00	216.09	82.39325	(81011009)	201.00	180.55	82.38576	(81011009)
201.00	145.02	82.31264	(81110809)	201.00	109.48	82.44949	(81102612)
201.00	73.95	82.05961	(81122709)	201.00	38.41	82.23570	(81020509)
201.00	2.88	82.96534	(81120709)	201.00	-32.66	82.83660	(81112309)
241.24	275.19	63.63612	(81030809)	231.47	298.76	61.92559	(81122409)
198.14	332.09	62.37364	(81012009)	174.57	341.86	63.73071	(81112109)
251.00	251.62	60.49982	(81030809)	251.00	216.09	62.61224	(81011009)
251.00	180.55	62.33615	(81011009)	251.00	145.02	62.41094	(81110809)
251.00	109.48	62.63788	(81111009)	251.00	73.95	62.57061	(81122709)
251.00	38.41	62.55011	(81030109)	251.00	2.88	62.59126	(81112409)
251.00	-32.66	61.76151	(81120709)	339.28	279.90	40.03532	(81030809)
327.57	308.19	42.80906	(81030809)	315.85	336.47	42.67814	(81122409)
304.14	364.76	40.54115	(81111710)	264.14	404.76	40.27989	(81111710)
235.85	416.47	42.84786	(81012009)	207.57	428.19	42.77113	(81041509)
179.28	439.90	42.65905	(81081809)	351.00	251.62	41.19472	(81011009)
351.00	216.09	42.12805	(81011009)	351.00	180.55	40.85843	(81011009)
351.00	145.02	42.23969	(81110809)	351.00	109.48	42.70867	(81111009)
351.00	73.95	42.59764	(81122709)	351.00	38.41	42.53764	(81030109)
351.00	2.88	42.18262	(81020509)	351.00	-32.66	41.73283	(81010209)
637.69	283.76	19.64981	(81011009)	624.37	315.90	19.98844	(81011009)
611.06	348.04	19.01861	(81011009)	597.75	380.18	16.80629	(81011009)
584.43	412.33	18.86040	(81030809)	571.12	444.47	20.00940	(81030809)
557.81	476.61	19.96930	(81122409)	544.49	508.75	19.04149	(81122409)
531.18	540.89	17.34023	(81111710)	517.87	573.03	18.44457	(81111710)
472.41	618.49	18.27936	(81111710)	440.27	631.80	17.38396	(81012009)
408.13	645.11	19.29744	(81012009)	375.99	658.43	19.96313	(81112109)
343.85	671.74	19.71438	(81112109)	311.71	685.05	20.27253	(81041509)
279.56	698.37	20.28518	(81042510)	247.42	711.68	19.34777	(81042510)
215.28	724.99	19.02991	(81123109)	183.14	738.31	19.82491	(81123109)
651.00	251.62	18.15431	(81011009)	651.00	216.09	16.23111	(81011009)
651.00	180.55	18.34674	(81110809)	651.00	145.02	19.80948	(81110809)
651.00	109.48	20.11164	(81111009)	651.00	73.95	20.09446	(81120609)
651.00	38.41	19.98615	(81122709)	651.00	2.88	19.79460	(81030109)
651.00	-32.66	19.29572	(81030109)	1137.69	283.76	6.52634	(81052610)
1124.37	315.90	6.90429	(81011009)	1111.06	348.04	7.85098	(81011009)
1097.75	380.18	8.59966	(81011009)	1084.43	412.33	9.07060	(81011009)
1071.12	444.47	9.20748	(81011009)	1057.81	476.61	8.98941	(81011009)
1044.49	508.75	8.43504	(81011009)	1031.18	540.89	7.60067	(81011009)
1017.87	573.03	6.72250	(81030809)	1004.55	605.17	7.69959	(81030809)

**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 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
991.24	637.31	8.47216	(81030809)	977.93	669.46	8.96133	(81030809)
964.61	701.60	9.11648	(81030809)	951.30	733.74	9.04849	(81122409)
937.99	765.88	8.81438	(81122409)	924.67	798.02	8.27323	(81122409)
911.36	830.16	7.48761	(81122409)	898.05	862.30	7.61237	(81111710)
884.73	894.44	8.08826	(81111710)	871.42	926.59	8.30897	(81111710)
825.97	972.04	8.23676	(81111710)	793.82	985.35	7.94771	(81111710)
761.68	998.67	7.41376	(81111710)	729.54	1011.98	8.24401	(81012009)
697.40	1025.29	8.96788	(81012009)	665.26	1038.61	9.40852	(81012009)
633.12	1051.92	9.51251	(81012009)	600.98	1065.23	9.26162	(81012009)
568.84	1078.55	8.94972	(81041509)	536.69	1091.86	9.22302	(81041509)
504.55	1105.17	9.15690	(81081809)	472.41	1118.49	9.27427	(81042510)
440.27	1131.80	9.04288	(81042510)	408.13	1145.11	8.47446	(81042510)
375.99	1158.43	7.96358	(81123109)	343.85	1171.74	8.66285	(81123109)
311.71	1185.05	9.05709	(81123109)	279.56	1198.37	9.10984	(81123109)
247.42	1211.68	9.03185	(81110109)	215.28	1224.99	8.95380	(81010809)
183.14	1238.31	8.85933	(81123110)	1151.00	251.62	7.02853	(81110809)
1151.00	216.09	7.88777	(81110809)	1151.00	180.55	8.50949	(81110809)
1151.00	145.02	8.82630	(81110809)	1151.00	109.48	9.02155	(81120609)
1151.00	73.95	9.43689	(81120609)	1151.00	38.41	9.49217	(81120609)
1151.00	2.88	9.18286	(81120609)	1151.00	-32.66	8.74073	(81122709)
-133.00	251.62	124.94879	(81111909)	-133.00	-32.66	126.43960	(81112809)
151.00	-32.66	125.23405	(81102710)	151.00	251.62	122.91105	(81111710)

**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 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
151.00	-52.66	56.20547	(81011116)	115.50	-52.66	54.52217	(81030116)
80.00	-52.66	66.38158	(81030116)	44.50	-52.66	73.03261	(81030116)
9.00	-52.66	77.34779	(81030116)	-26.50	-52.66	79.53051	(81030116)
-62.00	-52.66	78.01468	(81030116)	-97.50	-52.66	71.92801	(81030116)
-133.00	-52.66	54.57509	(81030116)	168.68	-75.34	41.81467	(81011116)
193.68	-50.34	42.24340	(81011116)	151.00	-82.66	39.27081	(81011116)
115.50	-82.66	37.12291	(81011116)	80.00	-82.66	44.82734	(81030116)
44.50	-82.66	50.90901	(81030116)	9.00	-82.66	54.95487	(81030116)
-26.50	-82.66	57.02267	(81030116)	-62.00	-82.66	56.49630	(81030116)
-97.50	-82.66	51.72693	(81030116)	-133.00	-82.66	41.32317	(81030116)
174.57	-122.90	27.30212	(81011116)	198.14	-113.13	28.81702	(81011116)
231.47	-79.80	29.06855	(81011116)	241.24	-56.23	27.92575	(81011116)
151.00	-132.66	24.37879	(81011116)	115.50	-132.66	23.90446	(81030116)
80.00	-132.66	27.95821	(81030116)	44.50	-132.66	31.82020	(81030116)
9.00	-132.66	34.79968	(81030116)	-26.50	-132.66	36.29861	(81030116)

-62.00	-132.66	35.80004	(81030116)	-97.50	-132.66	32.83439	(81030116)
-133.00	-132.66	28.11213	(81030116)	179.28	-220.94	13.01726	(81011116)
207.57	-209.23	15.02028	(81011116)	235.85	-197.51	16.39310	(81011116)
264.14	-185.80	16.86202	(81011116)	304.14	-145.80	16.85356	(81011116)
315.85	-117.51	16.46065	(81011116)	327.57	-89.23	15.29991	(81011116)
339.28	-60.94	13.59291	(81011116)	151.00	-232.66	12.63631	(81030116)
115.50	-232.66	14.42712	(81030116)	80.00	-232.66	15.49678	(81030116)
44.50	-232.66	16.37376	(81030116)	9.00	-232.66	17.17233	(81030116)
-26.50	-232.66	17.62569	(81030116)	-62.00	-232.66	17.41204	(81030116)
-97.50	-232.66	16.41297	(81030116)	-133.00	-232.66	15.10350	(81030116)
183.14	-519.35	5.00017	(81030116)	215.28	-506.03	4.66889	(81030116)
247.42	-492.72	4.25665	(81030116)	279.56	-479.41	4.12320	(81011116)
311.71	-466.09	4.84009	(81011116)	343.85	-452.78	5.46561	(81011116)
375.99	-439.47	5.95149	(81011116)	408.13	-426.15	6.26664	(81011116)
440.27	-412.84	6.40152	(81011116)	472.41	-399.53	6.36758	(81011116)
517.87	-354.07	6.26774	(81011116)	531.18	-321.93	6.22048	(81011116)
544.49	-289.79	6.04309	(81011116)	557.81	-257.65	5.74410	(81011116)
571.12	-225.51	5.34517	(81011116)	584.43	-193.37	4.87324	(81011116)
597.75	-161.22	4.35435	(81011116)	611.06	-129.08	3.81217	(81011116)
624.37	-96.94	3.26741	(81011116)	637.69	-64.80	2.73924	(81011116)
151.00	-532.66	5.19765	(81030116)	115.50	-532.66	5.42171	(81030116)
80.00	-532.66	5.45482	(81030116)	44.50	-532.66	5.31286	(81030116)
9.00	-532.66	5.03582	(81030116)	-26.50	-532.66	4.67657	(81030116)
-62.00	-532.66	4.30158	(81030116)	-97.50	-532.66	3.98987	(81030116)
-133.00	-532.66	3.81448	(81030116)	183.14	-1019.35	2.16154	(81030116)

CONC URBAN FLAT FLGPOL NOCALM

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
215.28	-1006.03	2.08918	(81030116)	247.42	-992.72	1.97755	(81030116)
279.56	-979.41	1.84336	(81030116)	311.71	-966.09	1.70493	(81030116)
343.85	-952.78	1.57892	(81030116)	375.99	-939.47	1.47704	(81030116)
408.13	-926.15	1.52395	(81011116)	440.27	-912.84	1.79306	(81011116)
472.41	-899.53	2.06349	(81011116)	504.55	-886.21	2.32420	(81011116)
536.69	-872.90	2.56392	(81011116)	568.84	-859.59	2.77265	(81011116)
600.98	-846.27	2.94239	(81011116)	633.12	-832.96	3.06807	(81011116)
665.26	-819.65	3.14812	(81011116)	697.40	-806.33	3.18420	(81011116)
729.54	-793.02	3.18065	(81011116)	761.68	-779.71	3.14375	(81011116)
793.82	-766.39	3.08068	(81011116)	825.97	-753.08	2.99844	(81011116)
871.42	-707.63	2.88284	(81011116)	884.73	-675.48	2.85457	(81011116)
898.05	-643.34	2.81873	(81011116)	911.36	-611.20	2.77511	(81011116)
924.67	-579.06	2.72337	(81011116)	937.99	-546.92	2.66340	(81011116)
951.30	-514.78	2.59565	(81011116)	964.61	-482.64	2.52074	(81011116)
977.93	-450.50	2.43933	(81011116)	991.24	-418.35	2.35185	(81011116)
1004.55	-386.21	2.25806	(81011116)	1017.87	-354.07	2.15697	(81011116)
1031.18	-321.93	2.04726	(81011116)	1044.49	-289.79	1.92741	(81011116)
1057.81	-257.65	1.79643	(81011116)	1071.12	-225.51	1.65438	(81011116)
1084.43	-193.37	1.50250	(81011116)	1097.75	-161.22	1.34338	(81011116)
1111.06	-129.08	1.18087	(81011116)	1124.37	-96.94	1.11856	(81030116)
1137.69	-64.80	1.09878	(81030116)	151.00	-1032.66	2.18254	(81030116)
115.50	-1032.66	2.18401	(81030116)	80.00	-1032.66	2.11790	(81030116)
44.50	-1032.66	1.98944	(81030116)	9.00	-1032.66	1.81233	(81030116)
-26.50	-1032.66	1.60659	(81030116)	-62.00	-1032.66	1.39556	(81030116)
-97.50	-1032.66	1.25265	(81122616)	-133.00	-1032.66	1.21088	(81030416)
-153.00	-32.66	44.01043	(81030116)	-153.00	2.88	41.54036	(81030116)
-153.00	38.41	50.30951	(81020816)	-153.00	73.94	56.59178	(81020816)
-153.00	109.48	59.74765	(81020816)	-153.00	145.01	61.03347	(81020816)
-153.00	180.55	60.61435	(81020816)	-153.00	216.08	57.42752	(81020816)
-153.00	251.62	54.37592	(81123016)	-175.68	-50.34	32.17671	(81030116)
-150.68	-75.34	38.19346	(81030116)	-183.00	-32.66	28.80866	(81030116)
-183.00	2.88	26.55560	(81030116)	-183.00	38.41	35.69179	(81020816)
-183.00	73.94	41.47177	(81020816)	-183.00	109.48	44.50744	(81020816)
-183.00	145.01	45.70477	(81020816)	-183.00	180.55	45.20525	(81020816)
-183.00	216.08	42.46343	(81020816)	-183.00	251.62	41.44610	(81123016)
-223.24	-56.23	19.30512	(81030116)	-213.47	-79.80	21.65141	(81030116)
-180.14	-113.13	25.46523	(81030116)	-156.57	-122.90	27.03032	(81030116)
-233.00	-32.66	16.39337	(81030116)	-233.00	2.88	15.60401	(81020816)
-233.00	38.41	22.12863	(81020816)	-233.00	73.94	27.13897	(81020816)
-233.00	109.48	30.13090	(81020816)	-233.00	145.01	31.30853	(81020816)

CONC URBAN FLAT FLGPOL NOCALM

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
-233.00	180.55	30.91043	(81020816)	-233.00	216.08	29.39573	(81020816)
-233.00	251.62	28.75464	(81123016)	-321.28	-60.94	7.91217	(81030116)
-309.57	-89.23	9.66481	(81030116)	-297.85	-117.51	11.21250	(81030116)
-286.14	-145.80	12.28103	(81030116)	-246.14	-185.80	14.29395	(81030116)
-217.85	-197.51	15.23636	(81030116)	-189.57	-209.23	15.44185	(81030116)
-161.28	-220.94	15.23817	(81030116)	-333.00	-32.66	7.12125	(81031916)
-333.00	2.88	8.61731	(81012216)	-333.00	38.41	11.01681	(81020816)
-333.00	73.94	13.47854	(81020816)	-333.00	109.48	15.34875	(81020816)
-333.00	145.01	16.51021	(81020816)	-333.00	180.55	17.16288	(81020816)
-333.00	216.08	17.49556	(81020816)	-333.00	251.62	17.17139	(81020816)
-619.69	-64.80	2.77620	(81012216)	-606.37	-96.94	2.54533	(81020816)
-593.06	-129.08	2.59704	(81020816)	-579.75	-161.22	2.53001	(81020816)
-566.43	-193.37	2.73105	(81030116)	-553.12	-225.51	3.16792	(81030116)
-539.81	-257.65	3.52646	(81030116)	-526.49	-289.79	3.79496	(81030116)
-513.18	-321.93	3.98388	(81030116)	-499.87	-354.07	4.11644	(81030116)

-454.41	-399.53	4.62365	(81030116)	-422.27	-412.84	5.02724	(81030116)
-390.13	-426.15	5.37490	(81030116)	-357.99	-439.47	5.60554	(81030116)
-325.85	-452.78	5.66349	(81030116)	-293.71	-466.09	5.52129	(81030116)
-261.56	-479.41	5.19997	(81030116)	-229.42	-492.72	4.77274	(81030116)
-197.28	-506.03	4.34214	(81030116)	-165.14	-519.35	4.00361	(81030116)
-633.00	-32.66	3.05185	(81012216)	-633.00	2.88	3.36840	(81012216)
-633.00	38.41	3.59436	(81012216)	-633.00	73.94	3.77823	(81042416)
-633.00	109.48	3.93730	(81042416)	-633.00	145.01	4.34510	(81020816)
-633.00	180.55	4.99322	(81020816)	-633.00	216.08	5.56362	(81020816)
-633.00	251.62	5.97769	(81020816)	-1119.69	-64.80	1.20347	(81042416)
-1106.37	-96.94	1.17293	(81020916)	-1093.06	-129.08	1.14660	(81020916)
-1079.75	-161.22	1.08665	(81020916)	-1066.43	-193.37	0.99495	(81020916)
-1053.12	-225.51	1.03130	(81020816)	-1039.81	-257.65	1.11324	(81020816)
-1026.49	-289.79	1.15941	(81020816)	-1013.18	-321.93	1.16251	(81020816)
-999.87	-354.07	1.12084	(81020816)	-986.55	-386.21	1.14339	(81102716)
-973.24	-418.35	1.15831	(81102716)	-959.93	-450.50	1.19648	(81030116)
-946.61	-482.64	1.27646	(81030116)	-933.30	-514.78	1.32979	(81030116)
-919.99	-546.92	1.35999	(81030116)	-906.67	-579.06	1.37361	(81030116)
-893.36	-611.20	1.37850	(81030116)	-880.05	-643.34	1.38229	(81030116)
-866.73	-675.48	1.39074	(81030116)	-853.42	-707.63	1.40688	(81030116)
-807.97	-753.08	1.52794	(81030116)	-775.82	-766.39	1.63443	(81030116)
-743.68	-779.71	1.74624	(81030116)	-711.54	-793.02	1.85809	(81030116)
-679.40	-806.33	1.96407	(81030116)	-647.26	-819.65	2.05783	(81030116)
-615.12	-832.96	2.13284	(81030116)	-582.98	-846.27	2.18246	(81030116)
-550.84	-859.59	2.20034	(81030116)	-518.69	-872.90	2.18121	(81030116)

CONC URBAN FLAT FLGPOL NOCALM

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
-486.55	-886.21	2.12172	(81030116)	-454.41	-899.53	2.02170	(81030116)
-422.27	-912.84	1.88519	(81030116)	-390.13	-926.15	1.72060	(81030116)
-357.99	-939.47	1.54047	(81030116)	-325.85	-952.78	1.40952	(81103116)
-293.71	-966.09	1.37285	(81103116)	-261.56	-979.41	1.32419	(81112716)
-229.42	-992.72	1.30740	(81112716)	-197.28	-1006.03	1.27863	(81112716)
-165.14	-1019.35	1.24158	(81112716)	-1133.00	-32.66	1.26016	(81042416)
-1133.00	2.88	1.32147	(81042416)	-1133.00	38.41	1.36225	(81042416)
-1133.00	73.94	1.41667	(81012016)	-1133.00	109.48	1.52319	(81012016)
-1133.00	145.01	1.62871	(81012016)	-1133.00	180.55	1.73105	(81012016)
-1133.00	216.08	1.82818	(81012016)	-1133.00	251.62	1.91865	(81012016)
-133.00	271.62	55.19173	(81112616)	-97.50	271.62	58.76461	(81112616)
-62.00	271.62	60.33529	(81021016)	-26.50	271.62	59.97501	(81021016)
9.00	271.62	58.18243	(81021016)	44.50	271.62	54.90327	(81021016)
80.00	271.62	49.39431	(81021016)	115.50	271.62	41.91946	(81111116)
151.00	271.62	33.58697	(81110116)	-150.68	294.30	40.72444	(81112616)
-175.68	269.30	42.14992	(81123016)	-133.00	301.62	42.31736	(81112616)
-97.50	301.62	44.49317	(81112616)	-62.00	301.62	45.17439	(81021016)
-26.50	301.62	44.60292	(81021016)	9.00	301.62	42.80510	(81021016)
44.50	301.62	39.86426	(81021016)	80.00	301.62	35.21149	(81031416)
115.50	301.62	30.52204	(81031416)	151.00	301.62	26.41496	(81110116)
-156.57	341.86	29.82696	(81112616)	-180.14	332.09	27.82094	(81112616)
-213.47	298.76	30.36765	(81123016)	-223.24	275.19	30.74679	(81123016)
-133.00	351.62	29.70531	(81112616)	-97.50	351.62	30.11799	(81112616)
-62.00	351.62	31.14184	(81021016)	-26.50	351.62	30.91986	(81021016)
9.00	351.62	29.50998	(81021016)	44.50	351.62	26.97200	(81021016)
80.00	351.62	24.51635	(81031416)	115.50	351.62	20.91079	(81031416)
151.00	351.62	18.96472	(81110116)	-161.28	439.90	17.58874	(81112616)
-189.57	428.19	17.94517	(81112616)	-217.85	416.47	17.29644	(81112616)
-246.14	404.76	15.73569	(81112616)	-286.14	364.76	18.53330	(81123016)
-297.85	336.47	19.57485	(81123016)	-309.57	308.19	19.10835	(81123016)
-321.28	279.90	17.43133	(81123016)	-133.00	451.62	16.86093	(81121016)
-97.50	451.62	17.28297	(81021016)	-62.00	451.62	18.39022	(81021016)
-26.50	451.62	18.31464	(81021016)	9.00	451.62	17.22467	(81021016)
44.50	451.62	15.80330	(81031416)	80.00	451.62	14.74731	(81031416)
115.50	451.62	13.48264	(81123116)	151.00	451.62	11.42112	(81123116)
-165.14	738.31	6.59001	(81122716)	-197.28	724.99	6.96522	(81122716)
-229.42	711.68	6.99962	(81122716)	-261.56	698.37	6.68098	(81122716)
-293.71	685.05	6.37425	(81112616)	-325.85	671.74	6.43653	(81112616)
-357.99	658.43	6.34731	(81112616)	-390.13	645.11	6.12599	(81112616)
-422.27	631.80	6.01842	(81060116)	-454.41	618.49	5.84605	(81060116)

CONC URBAN FLAT FLGPOL NOCALM

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
-499.87	573.03	6.96970	(81123016)	-513.18	540.89	7.58851	(81123016)
-526.49	508.75	7.91686	(81123016)	-539.81	476.61	7.90603	(81123016)
-553.12	444.47	7.55559	(81123016)	-566.43	412.33	6.90989	(81123016)
-579.75	380.18	6.39870	(81020816)	-593.06	348.04	6.61827	(81020816)
-606.37	315.90	6.62646	(81020816)	-619.69	283.76	6.40657	(81020816)
-133.00	751.62	6.02858	(81021016)	-97.50	751.62	6.28249	(81021016)
-62.00	751.62	6.36463	(81021016)	-26.50	751.62	6.25127	(81021016)
9.00	751.62	6.00905	(81031416)	44.50	751.62	6.03697	(81031416)
80.00	751.62	6.22376	(81123116)	115.50	751.62	6.26309	(81123116)
151.00	751.62	5.95519	(81123116)	-165.14	1238.31	2.14507	(81021016)
-197.28	1224.99	2.13426	(81021016)	-229.42	1211.68	2.34272	(81122716)
-261.56	1198.37	2.54460	(81122716)	-293.71	1185.05	2.70612	(81122716)
-325.85	1171.74	2.81901	(81122716)	-357.99	1158.43	2.87712	(81122716)
-390.13	1145.11	2.87632	(81122716)	-422.27	1131.80	2.81479	(81122716)
-454.41	1118.49	2.69367	(81122716)	-486.55	1105.17	2.51740	(81122716)

-518.69	1091.86	2.42564	(81010216)	-550.84	1078.55	2.39119	(81010216)
-582.98	1065.23	2.30069	(81010216)	-615.12	1051.92	2.26745	(81112616)
-647.26	1038.61	2.34643	(81060116)	-679.40	1025.29	2.49668	(81060116)
-711.54	1011.98	2.56962	(81060116)	-743.68	998.67	2.56164	(81060116)
-775.82	985.35	2.47737	(81060116)	-807.97	972.04	2.32847	(81060116)
-853.42	926.59	2.62560	(81123016)	-866.73	894.44	2.83954	(81123016)
-880.05	862.30	3.01270	(81123016)	-893.36	830.16	3.13444	(81123016)
-906.67	798.02	3.19750	(81123016)	-919.99	765.88	3.19888	(81123016)
-933.30	733.74	3.14009	(81123016)	-946.61	701.60	3.02640	(81123016)
-959.93	669.46	2.92628	(81012016)	-973.24	637.31	2.90747	(81012016)
-986.55	605.17	2.86722	(81012016)	-999.87	573.03	2.81009	(81012016)
-1013.18	540.89	2.74063	(81012016)	-1026.49	508.75	2.66272	(81012016)
-1039.81	476.61	2.57936	(81012016)	-1053.12	444.47	2.51948	(81020816)
-1066.43	412.33	2.51398	(81020816)	-1079.75	380.18	2.47162	(81020816)
-1093.06	348.04	2.38713	(81020816)	-1106.37	315.90	2.25903	(81020816)
-1119.69	283.76	2.09040	(81020816)	-133.00	1251.62	2.15266	(81021016)
-97.50	1251.62	2.20133	(81021016)	-62.00	1251.62	2.23033	(81021016)
-26.50	1251.62	2.22964	(81021016)	9.00	1251.62	2.25757	(81031416)
44.50	1251.62	2.30238	(81031416)	80.00	1251.62	2.31571	(81123116)
115.50	1251.62	2.46923	(81123116)	151.00	1251.62	2.55834	(81123116)
171.00	251.62	25.51189	(81110116)	171.00	216.09	24.60189	(81110116)
171.00	180.55	29.53828	(81030216)	171.00	145.02	35.78776	(81011116)
171.00	109.48	42.54373	(81011116)	171.00	73.95	47.95645	(81011116)
171.00	38.41	51.96844	(81011116)	171.00	2.88	55.26768	(81011116)
171.00	-32.66	56.55882	(81011116)	193.68	269.30	17.19039	(81110116)

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
168.68	294.30	23.27757	(81110116)	201.00	251.62	14.74554	(81110116)
201.00	216.09	15.20621	(81121216)	201.00	180.55	18.04780	(81030216)
201.00	145.02	21.51972	(81030216)	201.00	109.48	26.97534	(81011116)
201.00	73.95	31.89805	(81011116)	201.00	38.41	35.73667	(81011116)
201.00	2.88	38.70185	(81011116)	201.00	-32.66	40.22022	(81011116)
241.24	275.19	9.15840	(81121216)	231.47	298.76	10.48614	(81110116)
198.14	332.09	14.69288	(81110116)	174.57	341.86	17.44170	(81110116)
251.00	251.62	9.75894	(81121216)	251.00	216.09	10.31549	(81121216)
251.00	180.55	10.13891	(81121216)	251.00	145.02	11.32528	(81042716)
251.00	109.48	13.29987	(81011116)	251.00	73.95	17.26307	(81011116)
251.00	38.41	20.69114	(81011116)	251.00	2.88	23.51213	(81011116)
251.00	-32.66	25.43185	(81011116)	339.28	279.90	5.97169	(81121216)
327.57	308.19	5.50211	(81121216)	315.85	336.47	5.35585	(81122416)
304.14	364.76	5.42620	(81110116)	264.14	404.76	7.32835	(81110116)
235.85	416.47	8.71883	(81110116)	207.57	428.19	10.05884	(81110116)
179.28	439.90	11.00862	(81110116)	351.00	251.62	6.04861	(81121216)
351.00	216.09	6.07864	(81121216)	351.00	180.55	5.74484	(81121216)
351.00	145.02	5.98483	(81012416)	351.00	109.48	6.50597	(81012416)
351.00	73.95	6.87098	(81032716)	351.00	38.41	8.07425	(81011116)
351.00	2.88	9.93697	(81011116)	351.00	-32.66	11.55481	(81011116)
637.69	283.76	2.45625	(81011016)	624.37	315.90	2.49870	(81011016)
611.06	348.04	2.37790	(81011016)	597.75	380.18	2.33031	(81121216)
584.43	412.33	2.35756	(81030816)	571.12	444.47	2.50117	(81030816)
557.81	476.61	2.49619	(81122416)	544.49	508.75	2.38028	(81122416)
531.18	540.89	2.16753	(81111716)	517.87	573.03	2.30557	(81111716)
472.41	618.49	2.28492	(81111716)	440.27	631.80	2.35179	(81110116)
408.13	645.11	2.57150	(81110116)	375.99	658.43	2.80105	(81110116)
343.85	671.74	3.05728	(81110116)	311.71	685.05	3.34216	(81110116)
279.56	698.37	3.63070	(81110116)	247.42	711.68	3.92308	(81123116)
215.28	724.99	4.81656	(81123116)	183.14	738.31	5.52296	(81123116)
651.00	251.62	2.26929	(81011016)	651.00	216.09	2.02889	(81011016)
651.00	180.55	2.29334	(81110816)	651.00	145.02	2.47619	(81110816)
651.00	109.48	2.51395	(81111016)	651.00	73.95	2.51585	(81112816)
651.00	38.41	2.49827	(81122716)	651.00	2.88	2.47433	(81030116)
651.00	-32.66	2.49156	(81051916)	1137.69	283.76	0.81768	(81052616)
1124.37	315.90	0.86304	(81011016)	1111.06	348.04	0.98137	(81011016)
1097.75	380.18	1.07496	(81011016)	1084.43	412.33	1.13383	(81011016)
1071.12	444.47	1.15093	(81011016)	1057.81	476.61	1.12368	(81011016)
1044.49	508.75	1.05438	(81011016)	1031.18	540.89	0.95009	(81011016)
1017.87	573.03	0.87798	(81121216)	1004.55	605.17	0.96245	(81030816)

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** 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)
991.24	637.31	1.05902	(81030816)	977.93	669.46	1.12017	(81030816)
964.61	701.60	1.13956	(81030816)	951.30	733.74	1.13106	(81122416)
937.99	765.88	1.10180	(81122416)	924.67	798.02	1.03415	(81122416)
911.36	830.16	0.93595	(81122416)	898.05	862.30	0.95155	(81111716)
884.73	894.44	1.01103	(81111716)	871.42	926.59	1.03862	(81111716)
825.97	972.04	1.02959	(81111716)	793.82	985.35	0.99346	(81111716)
761.68	998.67	0.92672	(81111716)	729.54	1011.98	1.03050	(81012016)
697.40	1025.29	1.12098	(81012016)	665.26	1038.61	1.17607	(81012016)
633.12	1051.92	1.18906	(81012016)	600.98	1065.23	1.15770	(81012016)
568.84	1078.55	1.13494	(81041516)	536.69	1091.86	1.17544	(81041516)
504.55	1105.17	1.17293	(81041516)	472.41	1118.49	1.19832	(81111116)
440.27	1131.80	1.23750	(81111116)	408.13	1145.11	1.39143	(81123116)
375.99	1158.43	1.67887	(81123116)	343.85	1171.74	1.95656	(81123116)
311.71	1185.05	2.20557	(81123116)	279.56	1198.37	2.40842	(81123116)
247.42	1211.68	2.55099	(81123116)	215.28	1224.99	2.62448	(81123116)

183.14	1238.31	2.62592	(81123116)	1151.00	251.62	0.87857	(81110816)
1151.00	216.09	0.98597	(81110816)	1151.00	180.55	1.06369	(81110816)
1151.00	145.02	1.10329	(81110816)	1151.00	109.48	1.12769	(81120616)
1151.00	73.95	1.17961	(81120616)	1151.00	38.41	1.18652	(81120616)
1151.00	2.88	1.14786	(81120616)	1151.00	-32.66	1.09259	(81122716)
-133.00	251.62	65.83044	(81112616)	-133.00	-32.66	62.22721	(81030116)
151.00	-32.66	72.47936	(81011116)	151.00	251.62	39.06514	(81110116)

*** 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	126.43960	ON 81112809: AT (	-133.00, -32.66, 0.00, 2.00)	DC	NA

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

*** 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	79.53051	ON 81030116: AT (	-26.50, -52.66, 0.00, 2.00)	DC	NA

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

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

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

A Total of 0 Fatal Error Message(s)
A Total of 1 Warning Message(s)
A Total of 563 Informational Message(s)

A Total of 563 Calm Hours Identified

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

******** WARNING MESSAGES ********
SO W320 137 APARM :Input Parameter May Be Out-of-Range for Parameter QS

****
*** ISCST3 Finishes Successfully ***
****

```
**MODELOPTs:
CONC                    URBAN FLAT  FLGPOL                          NOCALM

                                        ***    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:    50 Source(s);      1 Source Group(s); and      40 Receptor(s)

**The Model Assumes A Pollutant Type of:  PM_10

**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 Tables of Overall Maximum Short Term Values (MAXTABLE 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:             PM10MIT.OUT
```



```
**MODELOPTs:
CONC                    URBAN FLAT  FLGPOL                          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
VOL1	0	0.14000E-02	-112.7	228.5	0.0	5.00	9.30	1.16	HROFDY
VOL2	0	0.14000E-02	-72.6	228.7	0.0	5.00	9.30	1.16	HROFDY
VOL3	0	0.14000E-02	-32.5	229.0	0.0	5.00	9.30	1.16	HROFDY
VOL4	0	0.14000E-02	7.6	229.0	0.0	5.00	9.30	1.16	HROFDY
VOL5	0	0.14000E-02	47.9	229.0	0.0	5.00	9.30	1.16	HROFDY
VOL6	0	0.14000E-02	87.9	228.8	0.0	5.00	9.30	1.16	HROFDY
VOL7	0	0.14000E-02	-112.8	188.3	0.0	5.00	9.30	1.16	HROFDY
VOL8	0	0.14000E-02	-72.7	188.6	0.0	5.00	9.30	1.16	HROFDY
VOL9	0	0.14000E-02	-32.5	188.8	0.0	5.00	9.30	1.16	HROFDY
VOL10	0	0.14000E-02	7.6	188.9	0.0	5.00	9.30	1.16	HROFDY
VOL11	0	0.14000E-02	47.8	188.7	0.0	5.00	9.30	1.16	HROFDY
VOL12	0	0.14000E-02	88.0	188.7	0.0	5.00	9.30	1.16	HROFDY
VOL13	0	0.14000E-02	-112.8	148.3	0.0	5.00	9.30	1.16	HROFDY
VOL14	0	0.14000E-02	-72.6	148.4	0.0	5.00	9.30	1.16	HROFDY
VOL15	0	0.14000E-02	-32.5	148.7	0.0	5.00	9.30	1.16	HROFDY
VOL16	0	0.14000E-02	7.6	148.7	0.0	5.00	9.30	1.16	HROFDY
VOL17	0	0.14000E-02	47.9	148.8	0.0	5.00	9.30	1.16	HROFDY
VOL18	0	0.14000E-02	88.1	148.7	0.0	5.00	9.30	1.16	HROFDY
VOL19	0	0.14000E-02	-112.5	108.2	0.0	5.00	9.30	1.16	HROFDY
VOL20	0	0.14000E-02	-112.5	67.9	0.0	5.00	9.30	1.16	HROFDY
VOL21	0	0.14000E-02	-112.5	27.7	0.0	5.00	9.30	1.16	HROFDY
VOL22	0	0.14000E-02	-72.4	107.9	0.0	5.00	9.30	1.16	HROFDY
VOL23	0	0.14000E-02	-72.7	67.8	0.0	5.00	9.30	1.16	HROFDY
VOL24	0	0.14000E-02	-72.3	27.8	0.0	5.00	9.30	1.16	HROFDY
VOL25	0	0.14000E-02	-32.4	108.6	0.0	5.00	9.30	1.16	HROFDY
VOL26	0	0.14000E-02	-32.4	68.2	0.0	5.00	9.30	1.16	HROFDY
VOL27	0	0.14000E-02	-32.7	28.0	0.0	5.00	9.30	1.16	HROFDY
VOL28	0	0.14000E-02	7.2	108.6	0.0	5.00	9.30	1.16	HROFDY
VOL29	0	0.14000E-02	7.3	68.9	0.0	5.00	9.30	1.16	HROFDY
VOL30	0	0.14000E-02	7.3	28.5	0.0	5.00	9.30	1.16	HROFDY
VOL31	0	0.14000E-02	47.4	108.9	0.0	5.00	9.30	1.16	HROFDY
VOL32	0	0.14000E-02	47.4	69.0	0.0	5.00	9.30	1.16	HROFDY
VOL33	0	0.14000E-02	47.4	28.8	0.0	5.00	9.30	1.16	HROFDY
VOL34	0	0.14000E-02	87.9	108.8	0.0	5.00	9.30	1.16	HROFDY
VOL35	0	0.14000E-02	88.1	68.2	0.0	5.00	9.30	1.16	HROFDY
VOL36	0	0.14000E-02	87.6	28.6	0.0	5.00	9.30	1.16	HROFDY
VOL37	0	0.14000E-02	127.3	228.1	0.0	5.00	9.30	1.16	HROFDY
VOL38	0	0.14000E-02	127.3	188.1	0.0	5.00	9.30	1.16	HROFDY
VOL39	0	0.14000E-02	127.3	148.2	0.0	5.00	9.30	1.16	HROFDY
VOL40	0	0.14000E-02	127.6	108.5	0.0	5.00	9.30	1.16	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
VOL41	0	0.14000E-02	127.8	68.3	0.0	5.00	9.40	1.16	HROFDY
VOL42	0	0.14000E-02	128.6	28.1	0.0	5.00	9.30	1.16	HROFDY
VOL43	0	0.14000E-02	-112.3	-13.0	0.0	5.00	9.30	1.16	HROFDY
VOL44	0	0.14000E-02	-71.9	-12.5	0.0	5.00	9.30	1.16	HROFDY
VOL45	0	0.14000E-02	-32.0	-12.5	0.0	5.00	9.30	1.16	HROFDY
VOL46	0	0.14000E-02	7.7	-11.3	0.0	5.00	9.30	1.16	HROFDY
VOL47	0	0.14000E-02	47.9	-11.1	0.0	5.00	9.30	1.16	HROFDY
VOL48	0	0.14000E-02	88.1	-11.8	0.0	5.00	9.30	1.16	HROFDY
VOL49	0	0.14000E-02	129.3	-12.5	0.0	5.00	9.30	1.16	HROFDY

*** 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	0.24897E-04	-133.0	-32.4	0.0	5.00	284.50	284.50	0.00	0.00	HROFDY

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 , VOL8 , VOL9 , VOL10 , VOL11 , VOL12 ,
	VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 , VOL20 , VOL21 , VOL22 , VOL23 , VOL24 ,
	VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , VOL31 , VOL32 , VOL33 , VOL34 , VOL35 , VOL36 ,
	VOL37 , VOL38 , VOL39 , VOL40 , VOL41 , VOL42 , VOL43 , VOL44 , VOL45 , VOL46 , VOL47 , VOL48 ,
	VOL49 , AREA1 ,

* 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	.00000E+00	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL2 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL3 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL4 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL5 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

SOURCE ID = VOL6 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL7 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL8 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL9 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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	.00000E+00	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

**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 = VOL11 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL12 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL13 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL14 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL15 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

**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 = VOL16 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL17 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL18 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL19 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL20 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

**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 = VOL21 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL22 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL23 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL24 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL25 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

**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 = VOL26 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL27 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL28 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL29 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL30 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SOURCE ID = VOL31 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL32 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL33 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL34 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL35 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SOURCE ID = VOL36 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL37 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL38 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL39 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL40 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SOURCE ID = VOL41 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL42 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL43 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL44 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL45 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

SOURCE ID = VOL46 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL47 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL48 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL49 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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	.00000E+00	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

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

(151.0,	-33.7,	0.0,	2.0);	(115.5,	-33.7,	0.0,	2.0);
(80.0,	-33.7,	0.0,	2.0);	(44.5,	-33.7,	0.0,	2.0);
(9.0,	-33.7,	0.0,	2.0);	(-26.5,	-33.7,	0.0,	2.0);
(-62.0,	-33.7,	0.0,	2.0);	(-97.5,	-33.7,	0.0,	2.0);
(-133.0,	-33.7,	0.0,	2.0);	(-134.0,	-32.7,	0.0,	2.0);
(-134.0,	2.9,	0.0,	2.0);	(-134.0,	38.4,	0.0,	2.0);
(-134.0,	73.9,	0.0,	2.0);	(-134.0,	109.5,	0.0,	2.0);
(-134.0,	145.0,	0.0,	2.0);	(-134.0,	180.6,	0.0,	2.0);
(-134.0,	216.1,	0.0,	2.0);	(-134.0,	251.6,	0.0,	2.0);
(-133.0,	252.6,	0.0,	2.0);	(-97.5,	252.6,	0.0,	2.0);
(-62.0,	252.6,	0.0,	2.0);	(-26.5,	252.6,	0.0,	2.0);
(9.0,	252.6,	0.0,	2.0);	(44.5,	252.6,	0.0,	2.0);
(80.0,	252.6,	0.0,	2.0);	(115.5,	252.6,	0.0,	2.0);
(151.0,	252.6,	0.0,	2.0);	(152.0,	251.6,	0.0,	2.0);
(152.0,	216.1,	0.0,	2.0);	(152.0,	180.6,	0.0,	2.0);
(152.0,	145.0,	0.0,	2.0);	(152.0,	109.5,	0.0,	2.0);
(152.0,	73.9,	0.0,	2.0);	(152.0,	38.4,	0.0,	2.0);
(152.0,	2.9,	0.0,	2.0);	(152.0,	-32.7,	0.0,	2.0);
(-133.0,	251.6,	0.0,	2.0);	(-133.0,	-32.7,	0.0,	2.0);
(151.0,	-32.7,	0.0,	2.0);	(151.0,	251.6,	0.0,	2.0);

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

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1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
                      1 1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

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

1.54, 3.09, 5.14, 8.23, 10.80,

*** 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

*** 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

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

FILE: PALMSPR.ASC
FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
SURFACE STATION NO.: 54145 UPPER AIR STATION NO.: 99999
NAME: PALM_SPRINGS NAME: UNKNOWN
YEAR: 1981 YEAR: 1981

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.79	284.3	6	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	143.5	1.34	283.1	7	475.8	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	05	129.0	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	139.5	1.79	285.4	6	1.4	170.7	0.0000	0.0	0.0000	0	0.00
81	01	01	08	134.6	0.00	287.6	5	47.0	192.0	0.0000	0.0	0.0000	0	0.00
81	01	01	09	164.0	1.00	289.8	4	92.5	213.3	0.0000	0.0	0.0000	0	0.00
81	01	01	10	144.1	1.34	291.5	3	138.0	234.7	0.0000	0.0	0.0000	0	0.00
81	01	01	11	336.6	1.00	294.3	2	183.5	256.0	0.0000	0.0	0.0000	0	0.00
81	01	01	12	260.6	1.00	297.6	2	229.0	277.3	0.0000	0.0	0.0000	0	0.00
81	01	01	13	334.7	1.34	298.7	2	274.5	298.7	0.0000	0.0	0.0000	0	0.00
81	01	01	14	304.2	2.24	299.8	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	15	314.8	2.24	299.3	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	16	323.2	0.00	298.7	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	17	65.1	1.00	295.4	4	325.6	325.6	0.0000	0.0	0.0000	0	0.00
81	01	01	18	120.1	1.00	291.5	5	357.2	310.3	0.0000	0.0	0.0000	0	0.00
81	01	01	19	133.0	1.34	289.8	6	388.8	302.1	0.0000	0.0	0.0000	0	0.00
81	01	01	20	145.7	1.79	287.0	6	420.4	293.9	0.0000	0.0	0.0000	0	0.00
81	01	01	21	133.6	0.00	286.5	7	452.0	285.7	0.0000	0.0	0.0000	0	0.00
81	01	01	22	159.5	1.34	287.0	7	483.5	277.4	0.0000	0.0	0.0000	0	0.00
81	01	01	23	135.7	1.79	285.9	6	515.1	269.2	0.0000	0.0	0.0000	0	0.00
81	01	01	24	157.2	1.79	285.4	6	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): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
151.00	-33.66	11.81896	115.50	-33.66	13.74231
80.00	-33.66	14.39180	44.50	-33.66	14.45704
9.00	-33.66	14.06320	-26.50	-33.66	13.30195
-62.00	-33.66	11.90381	-97.50	-33.66	9.41088
-133.00	-33.66	5.26406	-134.00	-32.66	5.34992
-134.00	2.88	14.93623	-134.00	38.41	20.37229

-134.00	73.94	23.48359	-134.00	109.48	25.33495
-134.00	145.01	26.55699	-134.00	180.55	27.16718
-134.00	216.08	27.02056	-134.00	251.62	25.30566
-133.00	252.62	25.50234	-97.50	252.62	29.62687
-62.00	252.62	30.05448	-26.50	252.62	29.60420
9.00	252.62	28.50542	44.50	252.62	26.93574
80.00	252.62	23.98172	115.50	252.62	18.71425
151.00	252.62	7.19882	152.00	251.62	6.89820
152.00	216.09	10.91405	152.00	180.55	13.26807
152.00	145.02	14.46574	152.00	109.48	15.01764
152.00	73.95	15.12612	152.00	38.41	14.78029
152.00	2.88	13.69546	152.00	-32.66	11.85883
-133.00	251.62	25.66469	-133.00	-32.66	5.43886
151.00	-32.66	11.93433	151.00	251.62	7.25387

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
151.00	-33.66	75.24412	(81011124)	115.50	-33.66	75.04046	(81030124)
80.00	-33.66	88.14487	(81030124)	44.50	-33.66	94.71533	(81030124)
9.00	-33.66	98.02282	(81030124)	-26.50	-33.66	98.60957	(81030124)
-62.00	-33.66	95.66512	(81030124)	-97.50	-33.66	87.47088	(81030124)
-133.00	-33.66	63.82314	(81030124)	-134.00	-32.66	62.52415	(81030124)
-134.00	2.88	59.93264	(81030124)	-134.00	38.41	62.29554	(81020824)
-134.00	73.94	69.92990	(81020824)	-134.00	109.48	74.42521	(81020824)
-134.00	145.01	75.96953	(81020824)	-134.00	180.55	75.98512	(81020824)
-134.00	216.08	73.29652	(81020824)	-134.00	251.62	69.90279	(81121024)
-133.00	252.62	70.81806	(81121024)	-97.50	252.62	76.93912	(81121024)
-62.00	252.62	77.43320	(81021024)	-26.50	252.62	76.12009	(81021024)
9.00	252.62	74.08784	(81021024)	44.50	252.62	70.48790	(81021024)
80.00	252.62	65.13979	(81120524)	115.50	252.62	56.95334	(81111124)
151.00	252.62	47.18227	(81110124)	152.00	251.62	46.40228	(81110124)
152.00	216.09	53.30888	(81110124)	152.00	180.55	57.60045	(81110124)
152.00	145.02	58.65060	(81110124)	152.00	109.48	63.67873	(81011124)
152.00	73.95	68.58672	(81011124)	152.00	38.41	72.18008	(81011124)
152.00	2.88	74.86935	(81011124)	152.00	-32.66	76.15910	(81011124)
-133.00	251.62	70.84534	(81121024)	-133.00	-32.66	63.76842	(81030124)
151.00	-32.66	76.14862	(81011124)	151.00	251.62	47.13823	(81110124)

*** THE MAXIMUM 10 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

** CONC OF PM_10 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	98.60957	(81030124)	AT (	-26.50,	-33.66)	DC	6.	87.47088	(81030124)	AT (	-97.50,	-33.66)	DC
2.	98.02282	(81030124)	AT (	9.00,	-33.66)	DC	7.	77.43320	(81021024)	AT (	-62.00,	252.62)	DC
3.	95.66512	(81030124)	AT (	-62.00,	-33.66)	DC	8.	76.93912	(81121024)	AT (	-97.50,	252.62)	DC
4.	94.71533	(81030124)	AT (	44.50,	-33.66)	DC	9.	76.87887	(81021024)	AT (	-97.50,	252.62)	DC
5.	88.14487	(81030124)	AT (	80.00,	-33.66)	DC	10.	76.79096	(81121024)	AT (	-62.00,	252.62)	DC

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

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

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	30.05448	AT (	-62.00,	252.62,	0.00,	2.00)	DC	NA
	2ND HIGHEST VALUE IS	29.62687	AT (	-97.50,	252.62,	0.00,	2.00)	DC	NA
	3RD HIGHEST VALUE IS	29.60420	AT (	-26.50,	252.62,	0.00,	2.00)	DC	NA
	4TH HIGHEST VALUE IS	28.50542	AT (	9.00,	252.62,	0.00,	2.00)	DC	NA
	5TH HIGHEST VALUE IS	27.16718	AT (	-134.00,	180.55,	0.00,	2.00)	DC	NA
	6TH HIGHEST VALUE IS	27.02056	AT (	-134.00,	216.08,	0.00,	2.00)	DC	NA
	7TH HIGHEST VALUE IS	26.93574	AT (	44.50,	252.62,	0.00,	2.00)	DC	NA
	8TH HIGHEST VALUE IS	26.55699	AT (	-134.00,	145.01,	0.00,	2.00)	DC	NA
	9TH HIGHEST VALUE IS	25.66469	AT (	-133.00,	251.62,	0.00,	2.00)	DC	NA
	10TH HIGHEST VALUE IS	25.50234	AT (	-133.00,	252.62,	0.00,	2.00)	DC	NA

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

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

** CONC OF PM_10 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	98.60957	ON 81030124: AT (	-26.50,	-33.66,	0.00,	2.00)	DC	NA

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


**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        563 Informational Message(s)

A Total of        563 Calm Hours Identified
```

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

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

****
*** ISCST3 Finishes Successfully ***
****

**MODELOPTs:
CONC   URBAN FLAT FLGPOL   NOCALM

*** 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: 50 Source(s); 1 Source Group(s); and 40 Receptor(s)

**The Model Assumes A Pollutant Type of: PM_25

**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 Tables of Overall Maximum Short Term Values (MAXTABLE 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: PM25MITI.OUT

**MODELOPTs:
CONC   URBAN FLAT FLGPOL   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
VOL1	0	0.13000E-02	-112.7	228.5	0.0	5.00	9.30	1.16	HROFDY
VOL2	0	0.13000E-02	-72.6	228.7	0.0	5.00	9.30	1.16	HROFDY
VOL3	0	0.13000E-02	-32.5	229.0	0.0	5.00	9.30	1.16	HROFDY
VOL4	0	0.13000E-02	7.6	229.0	0.0	5.00	9.30	1.16	HROFDY
VOL5	0	0.13000E-02	47.9	229.0	0.0	5.00	9.30	1.16	HROFDY
VOL6	0	0.13000E-02	87.9	228.8	0.0	5.00	9.30	1.16	HROFDY
VOL7	0	0.13000E-02	-112.8	188.3	0.0	5.00	9.30	1.16	HROFDY
VOL8	0	0.13000E-02	-72.7	188.6	0.0	5.00	9.30	1.16	HROFDY
VOL9	0	0.13000E-02	-32.5	188.8	0.0	5.00	9.30	1.16	HROFDY
VOL10	0	0.13000E-02	7.6	188.9	0.0	5.00	9.30	1.16	HROFDY
VOL11	0	0.13000E-02	47.8	188.7	0.0	5.00	9.30	1.16	HROFDY
VOL12	0	0.13000E-02	88.0	188.7	0.0	5.00	9.30	1.16	HROFDY
VOL13	0	0.13000E-02	-112.8	148.3	0.0	5.00	9.30	1.16	HROFDY
VOL14	0	0.13000E-02	-72.6	148.4	0.0	5.00	9.30	1.16	HROFDY
VOL15	0	0.13000E-02	-32.5	148.7	0.0	5.00	9.30	1.16	HROFDY
VOL16	0	0.13000E-02	7.6	148.7	0.0	5.00	9.30	1.16	HROFDY
VOL17	0	0.13000E-02	47.9	148.8	0.0	5.00	9.30	1.16	HROFDY
VOL18	0	0.13000E-02	88.1	148.7	0.0	5.00	9.30	1.16	HROFDY
VOL19	0	0.13000E-02	-112.5	108.2	0.0	5.00	9.30	1.16	HROFDY
VOL20	0	0.13000E-02	-112.5	67.9	0.0	5.00	9.30	1.16	HROFDY
VOL21	0	0.13000E-02	-112.5	27.7	0.0	5.00	9.30	1.16	HROFDY
VOL22	0	0.13000E-02	-72.4	107.9	0.0	5.00	9.30	1.16	HROFDY
VOL23	0	0.13000E-02	-72.7	67.8	0.0	5.00	9.30	1.16	HROFDY
VOL24	0	0.13000E-02	-72.3	27.8	0.0	5.00	9.30	1.16	HROFDY
VOL25	0	0.13000E-02	-32.4	108.6	0.0	5.00	9.30	1.16	HROFDY
VOL26	0	0.13000E-02	-32.4	68.2	0.0	5.00	9.30	1.16	HROFDY
VOL27	0	0.13000E-02	-32.7	28.0	0.0	5.00	9.30	1.16	HROFDY
VOL28	0	0.13000E-02	7.2	108.6	0.0	5.00	9.30	1.16	HROFDY
VOL29	0	0.13000E-02	7.3	68.9	0.0	5.00	9.30	1.16	HROFDY
VOL30	0	0.13000E-02	7.3	28.5	0.0	5.00	9.30	1.16	HROFDY
VOL31	0	0.13000E-02	47.4	108.9	0.0	5.00	9.30	1.16	HROFDY
VOL32	0	0.13000E-02	47.4	69.0	0.0	5.00	9.30	1.16	HROFDY
VOL33	0	0.13000E-02	47.4	28.8	0.0	5.00	9.30	1.16	HROFDY
VOL34	0	0.13000E-02	87.9	108.8	0.0	5.00	9.30	1.16	HROFDY
VOL35	0	0.13000E-02	88.1	68.2	0.0	5.00	9.30	1.16	HROFDY
VOL36	0	0.13000E-02	87.6	28.6	0.0	5.00	9.30	1.16	HROFDY
VOL37	0	0.13000E-02	127.3	228.1	0.0	5.00	9.30	1.16	HROFDY
VOL38	0	0.13000E-02	127.3	188.1	0.0	5.00	9.30	1.16	HROFDY
VOL39	0	0.13000E-02	127.3	148.2	0.0	5.00	9.30	1.16	HROFDY
VOL40	0	0.13000E-02	127.6	108.5	0.0	5.00	9.30	1.16	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
VOL41	0	0.13000E-02	127.8	68.3	0.0	5.00	9.40	1.16	HROFDY
VOL42	0	0.13000E-02	128.6	28.1	0.0	5.00	9.30	1.16	HROFDY
VOL43	0	0.13000E-02	-112.3	-13.0	0.0	5.00	9.30	1.16	HROFDY
VOL44	0	0.13000E-02	-71.9	-12.5	0.0	5.00	9.30	1.16	HROFDY
VOL45	0	0.13000E-02	-32.0	-12.5	0.0	5.00	9.30	1.16	HROFDY
VOL46	0	0.13000E-02	7.7	-11.3	0.0	5.00	9.30	1.16	HROFDY
VOL47	0	0.13000E-02	47.9	-11.1	0.0	5.00	9.30	1.16	HROFDY
VOL48	0	0.13000E-02	88.1	-11.8	0.0	5.00	9.30	1.16	HROFDY
VOL49	0	0.13000E-02	129.3	-12.5	0.0	5.00	9.30	1.16	HROFDY

*** 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	0.52100E-05	-133.0	-32.4	0.0	5.00	284.50	284.50	0.00	0.00	HROFDY

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 , VOL8 , VOL9 , VOL10 , VOL11 , VOL12 ,
	VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 , VOL20 , VOL21 , VOL22 , VOL23 , VOL24 ,
	VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , VOL31 , VOL32 , VOL33 , VOL34 , VOL35 , VOL36 ,
	VOL37 , VOL38 , VOL39 , VOL40 , VOL41 , VOL42 , VOL43 , VOL44 , VOL45 , VOL46 , VOL47 , VOL48 ,
	VOL49 , AREA1 !

* 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	.00000E+00	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL2 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL3 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL4 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL5 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

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   HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

SOURCE ID = VOL6     ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL7     ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL8     ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL9     ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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   .00000E+00     9   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

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   HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

SOURCE ID = VOL11    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL12    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL13    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL14    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL15    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 *

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   HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR      HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

SOURCE ID = VOL16    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL17    ;  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   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    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 = VOL18 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL19 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL20 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

SOURCE ID = VOL21 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL22 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL23 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL24 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL25 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

SOURCE ID = VOL26 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL27 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL28 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL29 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL30 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

**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 = VOL31 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL32 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL33 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL34 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL35 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

**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 = VOL36 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL37 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL38 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL39 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL40 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

**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 = VOL41 ; 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	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	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 = VOL42 ; 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  .10000E+01    10  .10000E+01    11  .10000E+01    12  .10000E+01
   13  .10000E+01    14  .10000E+01    15  .10000E+01    16  .10000E+01    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 = VOL43    ;  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  .10000E+01    10  .10000E+01    11  .10000E+01    12  .10000E+01
   13  .10000E+01    14  .10000E+01    15  .10000E+01    16  .10000E+01    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 = VOL44    ;  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  .10000E+01    10  .10000E+01    11  .10000E+01    12  .10000E+01
   13  .10000E+01    14  .10000E+01    15  .10000E+01    16  .10000E+01    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 = VOL45    ;  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  .10000E+01    10  .10000E+01    11  .10000E+01    12  .10000E+01
   13  .10000E+01    14  .10000E+01    15  .10000E+01    16  .10000E+01    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 ***      *** INDIAN WELLS 26400008 CONSTRUCTION LST                    ***       11/02/07
                                      *** PM2.5 MITIGATED                                           ***       12:24:20
**MODELOPTs:                                                                                                  PAGE  15
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 = VOL46    ;  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  .10000E+01    10  .10000E+01    11  .10000E+01    12  .10000E+01
   13  .10000E+01    14  .10000E+01    15  .10000E+01    16  .10000E+01    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 = VOL47    ;  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  .10000E+01    10  .10000E+01    11  .10000E+01    12  .10000E+01
   13  .10000E+01    14  .10000E+01    15  .10000E+01    16  .10000E+01    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 = VOL48    ;  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  .10000E+01    10  .10000E+01    11  .10000E+01    12  .10000E+01
   13  .10000E+01    14  .10000E+01    15  .10000E+01    16  .10000E+01    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 = VOL49    ;  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  .10000E+01    10  .10000E+01    11  .10000E+01    12  .10000E+01
   13  .10000E+01    14  .10000E+01    15  .10000E+01    16  .10000E+01    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  .00000E+00     9  .10000E+01    10  .10000E+01    11  .10000E+01    12  .10000E+01
   13  .10000E+01    14  .10000E+01    15  .10000E+01    16  .10000E+01    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 ***      *** INDIAN WELLS 26400008 CONSTRUCTION LST                    ***       11/02/07
                                      *** PM2.5 MITIGATED                                           ***       12:24:20
**MODELOPTs:                                                                                                  PAGE  16
CONC                    URBAN FLAT  FLGPOL                       NOCALM

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

      (    151.0,    -33.7,      0.0,      2.0);        (    115.5,    -33.7,      0.0,      2.0);
      (     80.0,    -33.7,      0.0,      2.0);        (     44.5,    -33.7,      0.0,      2.0);
      (      9.0,    -33.7,      0.0,      2.0);        (    -26.5,    -33.7,      0.0,      2.0);
      (    -62.0,    -33.7,      0.0,      2.0);        (    -97.5,    -33.7,      0.0,      2.0);
      (   -133.0,    -33.7,      0.0,      2.0);        (   -134.0,    -32.7,      0.0,      2.0);
      (   -134.0,      2.9,      0.0,      2.0);        (   -134.0,     38.4,      0.0,      2.0);
      (   -134.0,     73.9,      0.0,      2.0);        (   -134.0,    109.5,      0.0,      2.0);
      (   -134.0,    145.0,      0.0,      2.0);        (   -134.0,    180.6,      0.0,      2.0);
      (   -134.0,    216.1,      0.0,      2.0);        (   -134.0,    251.6,      0.0,      2.0);
      (   -133.0,    252.6,      0.0,      2.0);        (    -97.5,    252.6,      0.0,      2.0);
      (    -62.0,    252.6,      0.0,      2.0);        (    -26.5,    252.6,      0.0,      2.0);
      (      9.0,    252.6,      0.0,      2.0);        (     44.5,    252.6,      0.0,      2.0);
      (     80.0,    252.6,      0.0,      2.0);        (    115.5,    252.6,      0.0,      2.0);
      (    151.0,    252.6,      0.0,      2.0);        (    152.0,    251.6,      0.0,      2.0);
      (    152.0,    216.1,      0.0,      2.0);        (    152.0,    180.6,      0.0,      2.0);
      (    152.0,    145.0,      0.0,      2.0);        (    152.0,    109.5,      0.0,      2.0);
      (    152.0,     73.9,      0.0,      2.0);        (    152.0,     38.4,      0.0,      2.0);
      (    152.0,      2.9,      0.0,      2.0);        (    152.0,    -32.7,      0.0,      2.0);
      (   -133.0,    251.6,      0.0,      2.0);        (   -133.0,    -32.7,      0.0,      2.0);
      (    151.0,    -32.7,      0.0,      2.0);        (    151.0,    251.6,      0.0,      2.0);
  *** ISCST3 - VERSION 02035 ***      *** INDIAN WELLS 26400008 CONSTRUCTION LST                    ***       11/02/07
                                      *** PM2.5 MITIGATED                                           ***       12:24:20
**MODELOPTs:                                                                                                  PAGE  17
CONC                    URBAN FLAT  FLGPOL                       NOCALM

                                 *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                (1=YES; 0=NO)

        1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
```

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

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

1.54, 3.09, 5.14, 8.23, 10.80,

*** 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

*** 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

**MODELOPTS:
CONC URBAN FLAT FLGPOL NOCALM

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

FILE: PALMSPR.ASC
FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
SURFACE STATION NO.: 54145 UPPER AIR STATION NO.: 99999
NAME: PALM_SPRINGS NAME: UNKNOWN
YEAR: 1981 YEAR: 1981

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
81	01	01	01	134.8	1.79	284.3	6	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	143.5	1.34	283.1	7	475.8	170.0	0.0000	0.0	0.0000	0	0.00
81	01	01	05	129.0	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	139.5	1.79	285.4	6	1.4	170.7	0.0000	0.0	0.0000	0	0.00
81	01	01	08	134.6	0.00	287.6	5	47.0	192.0	0.0000	0.0	0.0000	0	0.00
81	01	01	09	164.0	1.00	289.8	4	92.5	213.3	0.0000	0.0	0.0000	0	0.00
81	01	01	10	144.1	1.34	291.5	3	138.0	234.7	0.0000	0.0	0.0000	0	0.00
81	01	01	11	336.6	1.00	294.3	2	183.5	256.0	0.0000	0.0	0.0000	0	0.00
81	01	01	12	260.6	1.00	297.6	2	229.0	277.3	0.0000	0.0	0.0000	0	0.00
81	01	01	13	334.7	1.34	298.7	2	274.5	298.7	0.0000	0.0	0.0000	0	0.00
81	01	01	14	304.2	2.24	299.8	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	15	314.8	2.24	299.3	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	16	323.2	0.00	298.7	3	320.0	320.0	0.0000	0.0	0.0000	0	0.00
81	01	01	17	65.1	1.00	295.4	4	325.6	325.6	0.0000	0.0	0.0000	0	0.00
81	01	01	18	120.1	1.00	291.5	5	357.2	310.3	0.0000	0.0	0.0000	0	0.00
81	01	01	19	133.0	1.34	289.8	6	388.8	302.1	0.0000	0.0	0.0000	0	0.00
81	01	01	20	145.7	1.79	287.0	6	420.4	293.9	0.0000	0.0	0.0000	0	0.00
81	01	01	21	133.6	0.00	286.5	7	452.0	285.7	0.0000	0.0	0.0000	0	0.00
81	01	01	22	159.5	1.34	287.0	7	483.5	277.4	0.0000	0.0	0.0000	0	0.00
81	01	01	23	135.7	1.79	285.9	6	515.1	269.2	0.0000	0.0	0.0000	0	0.00
81	01	01	24	157.2	1.79	285.4	6	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.

**MODELOPTS:
CONC URBAN FLAT FLGPOL NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_25 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
151.00	-33.66	2.73927	115.50	-33.66	3.16733
80.00	-33.66	3.31200	44.50	-33.66	3.32076
9.00	-33.66	3.22685	-26.50	-33.66	3.05326
-62.00	-33.66	2.76232	-97.50	-33.66	2.19362
-133.00	-33.66	1.21975	-134.00	-32.66	1.23839
-134.00	2.88	3.45203	-134.00	38.41	4.68667

-134.00	73.94	5.37440	-134.00	109.48	5.78275
-134.00	145.01	6.06028	-134.00	180.55	6.22108
-134.00	216.08	6.21371	-134.00	251.62	5.83846
-133.00	252.62	5.88307	-97.50	252.62	6.81612
-62.00	252.62	6.90827	-26.50	252.62	6.80366
9.00	252.62	6.55833	44.50	252.62	6.20877
80.00	252.62	5.54338	115.50	252.62	4.31449
151.00	252.62	1.64405	152.00	251.62	1.57740
152.00	216.09	2.50546	152.00	180.55	3.04640
152.00	145.02	3.31079	152.00	109.48	3.42813
152.00	73.95	3.45603	152.00	38.41	3.38073
152.00	2.88	3.14180	152.00	-32.66	2.74704
-133.00	251.62	5.92245	-133.00	-32.66	1.25801
151.00	-32.66	2.76594	151.00	251.62	1.65640

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_25 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
151.00	-33.66	17.46634	(81011124)	115.50	-33.66	17.39711	(81030124)
80.00	-33.66	20.44005	(81030124)	44.50	-33.66	21.90945	(81030124)
9.00	-33.66	22.62899	(81030124)	-26.50	-33.66	22.83288	(81030124)
-62.00	-33.66	22.18295	(81030124)	-97.50	-33.66	20.28156	(81030124)
-133.00	-33.66	14.83968	(81030124)	-134.00	-32.66	14.55237	(81030124)
-134.00	2.88	13.94824	(81030124)	-134.00	38.41	14.51509	(81020824)
-134.00	73.94	16.30704	(81020824)	-134.00	109.48	17.23796	(81020824)
-134.00	145.01	17.54409	(81020824)	-134.00	180.55	17.50121	(81020824)
-134.00	216.08	16.93606	(81020824)	-134.00	251.62	16.15240	(81121024)
-133.00	252.62	16.36015	(81121024)	-97.50	252.62	17.73561	(81121024)
-62.00	252.62	17.87457	(81021024)	-26.50	252.62	17.60381	(81021024)
9.00	252.62	17.25855	(81021024)	44.50	252.62	16.41774	(81021024)
80.00	252.62	15.15967	(81120524)	115.50	252.62	13.13361	(81111124)
151.00	252.62	10.80436	(81110124)	152.00	251.62	10.62756	(81110124)
152.00	216.09	12.16226	(81110124)	152.00	180.55	12.96606	(81110124)
152.00	145.02	13.19952	(81110124)	152.00	109.48	14.59540	(81011124)
152.00	73.95	15.70926	(81011124)	152.00	38.41	16.56687	(81011124)
152.00	2.88	17.27641	(81011124)	152.00	-32.66	17.65713	(81011124)
-133.00	251.62	16.37915	(81121024)	-133.00	-32.66	14.83637	(81030124)
151.00	-32.66	17.67291	(81011124)	151.00	251.62	10.80094	(81110124)

*** THE MAXIMUM 10 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 ,
VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

** CONC OF PM_25 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)	OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)	OF TYPE
1.	22.83288	(81030124)	AT (	-26.50, -33.66)	DC	6.	20.28156	(81030124)	AT (	-97.50, -33.66)	DC
2.	22.62899	(81030124)	AT (	9.00, -33.66)	DC	7.	17.87457	(81021024)	AT (	-62.00, 252.62)	DC
3.	22.18295	(81030124)	AT (	-62.00, -33.66)	DC	8.	17.73561	(81121024)	AT (	-97.50, 252.62)	DC
4.	21.90945	(81030124)	AT (	44.50, -33.66)	DC	9.	17.72478	(81021024)	AT (	-97.50, 252.62)	DC
5.	20.44005	(81030124)	AT (	80.00, -33.66)	DC	10.	17.67291	(81011124)	AT (	151.00, -32.66)	DC

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

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

** CONC OF PM_25 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS 6.90827 AT	(-62.00, 252.62, 0.00, 2.00)	DC	NA
	2ND HIGHEST VALUE IS 6.81612 AT	(-97.50, 252.62, 0.00, 2.00)	DC	NA
	3RD HIGHEST VALUE IS 6.80366 AT	(-26.50, 252.62, 0.00, 2.00)	DC	NA
	4TH HIGHEST VALUE IS 6.55833 AT	(9.00, 252.62, 0.00, 2.00)	DC	NA
	5TH HIGHEST VALUE IS 6.22108 AT	(-134.00, 180.55, 0.00, 2.00)	DC	NA
	6TH HIGHEST VALUE IS 6.21371 AT	(-134.00, 216.08, 0.00, 2.00)	DC	NA
	7TH HIGHEST VALUE IS 6.20877 AT	(44.50, 252.62, 0.00, 2.00)	DC	NA
	8TH HIGHEST VALUE IS 6.06028 AT	(-134.00, 145.01, 0.00, 2.00)	DC	NA
	9TH HIGHEST VALUE IS 5.92245 AT	(-133.00, 251.62, 0.00, 2.00)	DC	NA
	10TH HIGHEST VALUE IS 5.88307 AT	(-133.00, 252.62, 0.00, 2.00)	DC	NA

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

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

```
                                   ** CONC OF PM_25    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      22.83288  ON 81030124: AT (     -26.50,      -33.66,      0.00,      2.00)  DC      NA

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
                      BD = BOUNDARY
  *** ISCST3 - VERSION 02035 ***    *** INDIAN WELLS 26400008 CONSTRUCTION LST                                  ***        11/02/07
                                  *** PM2.5 MITIGATED                                                            ***       12:24:20
**MODELOPTs:                                                                                                               PAGE  24
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          563 Informational Message(s)

A Total of          563 Calm Hours Identified

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

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

   ************************************
   *** ISCST3 Finishes Successfully ***
   ************************************
```

APPENDIX C

TRAFFIC SIGNAL WARRANT ANALYSIS

WILLDAN
Serving Public Agencies

13191 Crossroads Parkway North, Suite 405
Industry, California 91746-3497
562/908-6200 fax 562/695-2120
www.willdan.com

November 1, 2007

Mr. Corrie Kates
Community Development Director
City of Indian Wells
44-950 Eldorado Drive
Indian Wells, CA 92210

Subject: Traffic Signal Warrant Analysis for Washington Street at Via Sevilla

Dear Mr. Kates:

In follow up to our recent telephone conversation attached for your reference and use is the traffic signal warrant analysis prepared by Willdan in conjunction with the draft supplemental EIR (SEIR) for the Indian Wells Town Center.

Based on the traffic signal warrant analysis procedures and criteria contained in the California Manual on Uniform Traffic Control Devices two of the established warrants are satisfied for this intersection for the With Project Conditions. These are the Warrant 1, Minimum Vehicular Volume and Interruption of Continuous Traffic and Warrant 3, Peak Hour.

Thank you for this opportunity to be of continuing service to the City of Indian Wells. Please contact me at (562) 908-6291, should you have any questions or require additional information.

Sincerely,

WILLDAN

Lew Gluesing, P.E. T.E.
Vice President

Enclosure

LG:mec (06-160)
16176/0307/L01

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

COUNT DATE 5/3/07

CALC _____ DATE _____
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

Major St: WASHINGTON ST. Critical Approach Speed 50 mph
Minor St: VIA SEVILLA Critical Approach Speed 25 mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)..... ☒ or } RURAL (R)
In built up area of isolated community of < 10,000 population..... ☐ }
☐ URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN..... RURAL..✓.....	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume Satisfied ✓ Not Satisfied _____	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach Major Street / Minor Street	Urban	Rural	Urban	Rural
1 / 1	8,000	5,600	2,400	1,680
2 or More / 1	9,600	~~6,720~~	2,400	~~1,680~~
2 or More / 2 or More (34290 / 2650)	9,600	6,720	3,200	2,240
1 / 2 or More	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic Satisfied ✓ Not Satisfied _____	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach Major Street / Minor Street	Urban	Rural	Urban	Rural
1 / 1	12,000	8,400	1,200	850
2 or More / 1	14,400	~~10,080~~	1,200	~~850~~
2 or More / 2 or More (34290 / 2650)	14,400	10,080	1,600	1,120
1 / 2 or More	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B Satisfied ✓ Not Satisfied _____ No one condition satisfied, but following conditions fulfilled 80% or more..... A ____ B ____	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More				Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the curves in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR. All plotted points fall above the curves in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☒**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach. or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B **SATISFIED YES ☒ NO ☐**

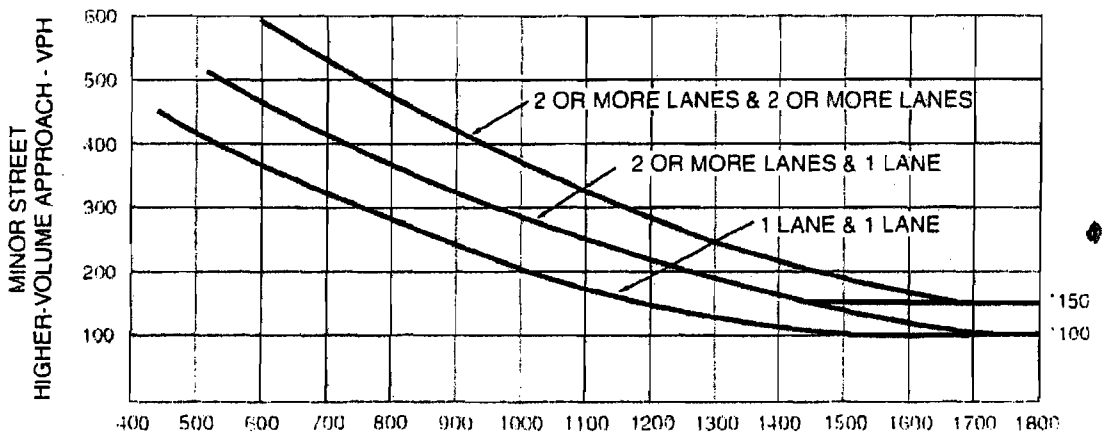
APPROACH LANES	One	2 or More	Q	Hour
Both Approaches - Major Street		X	3429	
Higher Approach - Minor Street		X	265	

The plotted point falls above the curve in Figure 4C-3.	Yes ☐ No ☐
OR. The plotted point falls above the curve in Figure 4C-4.	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

50 MPH IN [illegible]

Figure 4C-3. Warrant 3, Peak Hour

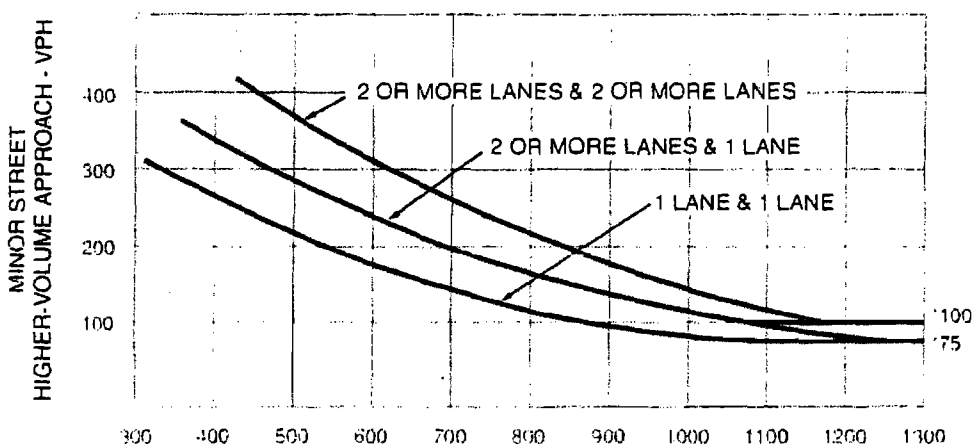


MAJOR STREET—TOTAL OF BOTH APPROACHES—
VEHICLES PER HOUR (VPH)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE ~~70~~ 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



MAJOR STREET—TOTAL OF BOTH APPROACHES—
VEHICLES PER HOUR (VPH)

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

2005 TPPS Update and IWTC Phase II Proposed Mitigation Comparison

Intersection	Intersection has one or more approaches on a TPPS Segment	TSSP Segment includes proposed Mitigation	Mitigation that needs to be added to TPPS
Washington St at Fred Waring Dr	Yes	No	Add RT lane to WB Fred Waring Add Thru lane to SB Washington
Washington St at Via Sevilla	No	N/A	N/A
Washington St at Miles Ave	Yes	No	Add LT lane to SB Washington Add RT lane to WB Miles
Washington St at Highway 111	Yes	No	Add RT lane to SB Washington
Washington St at Avenue 48	Yes	No	Add RT lane to NB Washington
Adams St at Highway 111	No	No	Add LT lane to both approaches on HWY 111

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/1/2007
Period: PM Peak Hour
Project ID: Existing+Project
E/W St: Highway 111

Inter.: Adams St & HWY 111
Area Type: All other areas
Jurisd: La Quinta
Year : 2007

N/S St: Adams Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	1	1	3	1	2	2	1	2	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	220	1279	268	147	1005	168	169	269	29	271	338	110
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			64			42			7			28

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		25.0	50.0					20.0	40.0		
Yellow		3.5	5.0					3.5	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 155.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	288	1787	0.76	0.16	74.6	E		
T	1637	5074	0.78	0.32	50.1	D	52.2	D
R	516	1599	0.40	0.32	41.3	D		
Westbound								
L	288	1787	0.51	0.16	60.9	E		
T	1637	5074	0.61	0.32	45.0	D	46.3	D
R	516	1599	0.24	0.32	38.9	D		
Northbound								
L	452	3505	0.37	0.13	62.3	E		
T	934	3618	0.29	0.26	46.3	D	52.0	D
R	417	1615	0.05	0.26	43.3	D		
Southbound								
L	452	3505	0.60	0.13	66.0	E		
T	934	3618	0.36	0.26	47.3	D	54.4	D
R	417	1615	0.20	0.26	45.2	D		

Intersection Delay = 50.7 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/2/2007
Period: AM Peak Hour
Project ID: Existing+Project
E/W St: Highway 111

Inter.: Adams St & HWY 111
Area Type: All other areas
Jurisd: La Quinta
Year : 2007

N/S St: Adams Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	1	1	3	1	2	2	1	2	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	118	675	70	54	966	120	286	519	58	158	321	124
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			17			31			15			31

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		25.0	50.0	0.0				20.0	40.0		
Yellow		3.5	5.0					3.5	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 155.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	288	1787	0.41	0.16	59.3	E		
T	1637	5074	0.41	0.32	41.2	D	43.4	D
R	516	1599	0.10	0.32	36.9	D		
Westbound								
L	288	1787	0.19	0.16	56.5	E		
T	1637	5074	0.59	0.32	44.5	D	44.5	D
R	516	1599	0.17	0.32	37.8	D		
Northbound								
L	452	3505	0.63	0.13	66.9	E		
T	934	3618	0.56	0.26	50.5	D	55.7	E
R	417	1615	0.10	0.26	43.9	D		
Southbound								
L	452	3505	0.35	0.13	62.0	E		
T	934	3618	0.34	0.26	47.0	D	50.9	D
R	417	1615	0.22	0.26	45.5	D		

Intersection Delay = 48.2 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/2/2007
Period: PM Peak Hour
Project ID: Existing+Project
E/W St: Avenue 48

Inter.: Washington St & Avenue 48
Area Type: All other areas
Jurisd: La Quinta
Year : 2007

N/S St: Washington Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	0	1	0	3	0	1	3	0
LGConfig				L		R		TR		L	T	
Volume				614		288		1692	363	259	1912	
Lane Width				12.0		12.0		12.0		12.0	12.0	
RTOR Vol						72			0			

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left					NB Left				
Thru					Thru		A		
Right					Right		A		
Peds					Peds				
WB Left	A				SB Left	A			
Thru					Thru		A		
Right	A				Right				
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	30.0					20.0	60.0		
Yellow	4.0					4.0	5.0		
All Red	1.0					1.0	2.0		

Cycle Length: 127.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
L	828	3505	0.74	0.24	48.6	D		
							47.6	D
R	381	1615	0.57	0.24	44.8	D		
Northbound								
TR	2342	4957	0.88	0.47	34.6	C	34.6	C
Southbound								
L	284	1805	0.91	0.16	96.9	F		
T	2397	5074	0.80	0.47	30.4	C	38.3	D

Intersection Delay = 38.3 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/2/2007
Period: AM Peak Hour
Project ID: Existing+Project
E/W St: Avenue 48

Inter.: Washington St & Avenue 48
Area Type: All other areas
Jurisd: La Quinta
Year : 2007

N/S St: Washington Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	2	0	1	0	3	0	1	3	0
LGConfig				L		R		TR		L	T	
Volume				346		452		2668	520	87	945	
Lane Width				12.0		12.0		12.0		12.0	12.0	
RTOR Vol						113			0			

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left					NB	Left				
	Thru						Thru		A		
	Right						Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru						Thru		A		
	Right	A					Right				
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		30.0						20.0	60.0		
Yellow		4.0						4.0	5.0		
All Red		1.0						1.0	2.0		

Cycle Length: 127.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
L	828	3505	0.42	0.24	41.4	D		
							57.9	E
R	381	1615	0.89	0.24	74.6	E		
Northbound								
TR	2346	4966	1.36	0.47	682.4	F	682.4	F
Southbound								
L	284	1805	0.31	0.16	48.0	D		
T	2397	5074	0.39	0.47	21.8	C	24.0	C

Intersection Delay = 456.7 (sec/veh) Intersection LOS = F

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/2/2007
Period: PM Peak Hour
Project ID: Existing+Project
E/W St: Highway 111

Inter.: Washington St & HWY 111
Area Type: All other areas
Jurisd: La Quinta
Year : 2007

N/S St: Washington Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	0	2	3	1	2	3	0
LGConfig	L	T	R	L	TR		L	T	R	L	TR	
Volume	228	953	649	188	596	380	443	791	113	464	1042	146
Lane Width	12.0	12.0	12.0	12.0	15.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vol			162			82			28			20

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		25.0	55.0					25.0	40.0		
Yellow		3.5	4.5					3.5	4.5		
All Red		1.5	1.5					1.5	1.5		

Cycle Length: 167.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	520	3471	0.44	0.15	65.2	E		
T	1671	5074	0.57	0.33	46.7	D	60.1	E
R	527	1599	0.92	0.33	84.0	F		
Westbound								
L	520	3471	0.36	0.15	64.3	E		
TR	1752	5320	0.51	0.33	45.4	D	48.7	D
Northbound								
L	520	3471	0.85	0.15	83.7	F		
T	1215	5074	0.65	0.24	58.5	E	66.5	E
R	383	1599	0.22	0.24	51.3	D		
Southbound								
L	520	3471	0.89	0.15	91.2	F		
TR	1197	4997	0.98	0.24	96.1	F	94.7	F

Intersection Delay = 69.3 (sec/veh) Intersection LOS = E

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/2/2007
Period: AM Peak Hour
Project ID: Existing+Project
E/W St: Highway 111

Inter.: Washington St & HWY 111
Area Type: All other areas
Jurisd: La Quinta
Year : 2007

N/S St: Washington Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	0	2	3	1	2	3	0
LGConfig	L	T	R	L	TR		L	T	R	L	TR	
Volume	81	439	319	83	752	338	786	1116	65	299	763	65
Lane Width	12.0	12.0	12.0	12.0	15.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vol			80			75			16			11

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		25.0	55.0					25.0	40.0		
Yellow		3.5	4.5					3.5	4.5		
All Red		1.5	1.5					1.5	1.5		

Cycle Length: 167.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	520	3471	0.16	0.15	62.0	E		
T	1671	5074	0.26	0.33	41.2	D	44.5	D
R	527	1599	0.45	0.33	44.8	D		
Westbound								
L	520	3471	0.16	0.15	62.0	E		
TR	1771	5378	0.57	0.33	46.8	D	47.9	D
Northbound								
L	520	3471	1.51	0.15	1002	F		
T	1215	5074	0.92	0.24	75.3	E	447.9	F
R	383	1599	0.13	0.24	50.0	D		
Southbound								
L	520	3471	0.57	0.15	67.6	E		
TR	1204	5027	0.68	0.24	59.2	E	61.5	E

Intersection Delay = 209.0 (sec/veh) Intersection LOS = F

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/2/2007
Period: PM Peak Hour
Project ID: Existing+Project
E/W St: Miles Avenue

Inter.: Washington St & Miles Ave
Area Type: All other areas
Jurisd: Indian Wells & La Quinta
Year : 2007

N/S St: Washington Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	2	2	0	1	3	1	1	3	1
LGConfig	L	TR		L	TR		L	T	R	L	T	R
Volume	126	252	96	98	131	130	113	1038	160	266	1559	53
Lane Width	12.0	12.0		12.0	15.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			26			40			5

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		25.0	35.0					25.0	60.0		
Yellow		4.0	4.0					4.0	5.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 166.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	269	1787	0.47	0.15	65.7	E		
TR	719	3409	0.48	0.21	58.1	E	60.1	E
Westbound								
L	523	3471	0.19	0.15	61.8	E		
TR	771	3658	0.30	0.21	55.5	E	57.3	E
Northbound								
L	269	1787	0.42	0.15	65.0	E		
T	1834	5074	0.57	0.36	43.0	D	44.3	D
R	578	1599	0.21	0.36	36.8	D		
Southbound								
L	269	1787	0.99	0.15	169.0	F		
T	1834	5074	0.85	0.36	53.1	D	69.0	E
R	578	1599	0.08	0.36	35.0-	C		

Intersection Delay = 59.0 (sec/veh) Intersection LOS = E

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/2/2007
Period: AM Peak Hour
Project ID: Existing+Project
E/W St: Miles Avenue

Inter.: Washington St & Miles Ave
Area Type: All other areas
Jurisd: Indian Wells & La Quinta
Year : 2007

N/S St: Washington Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	2	2	0	1	3	1	1	3	1
LGConfig	L	TR		L	TR		L	T	R	L	T	R
Volume	69	95	68	69	485	213	119	1300	48	112	1033	83
Lane Width	12.0	12.0		12.0	15.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			48			12			18

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		25.0	35.0					25.0	60.0		
Yellow		4.0	4.0					4.0	5.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 166.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	269	1787	0.26	0.15	62.8	E		
TR	704	3338	0.23	0.21	54.5	D	57.0	E
Westbound								
L	523	3471	0.13	0.15	61.2	E		
TR	793	3762	0.82	0.21	69.7	E	68.9	E
Northbound								
L	269	1787	0.44	0.15	65.3	E		
T	1834	5074	0.71	0.36	46.8	D	48.0	D
R	578	1599	0.06	0.36	34.7	C		
Southbound								
L	269	1787	0.42	0.15	64.9	E		
T	1834	5074	0.56	0.36	42.9	D	44.5	D
R	578	1599	0.11	0.36	35.4	D		

Intersection Delay = 51.6 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/2/2007
Period: PM Peak Hour
Project ID: Existing+Project
E/W St: Via Sevilla

Inter.: Washington St & Via Sevilla
Area Type: All other areas
Jurisd: La Quinta
Year : 2007

N/S St: Washington Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	0	1	0	1	3	1	1	3	1
LGConfig	L	T	R		LTR		L	T	R	L	T	R
Volume	166	33	66	6	27	31	106	1213	10	48	1640	133
Lane Width	12.0	12.0	12.0		12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			17			8			3			34

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru	A					Thru		A		
Right	A					Right		A		
Peds						Peds				
WB Left	A				SB	Left	A			
Thru	A					Thru		A		
Right	A					Right		A		
Peds						Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	30.0						25.0	55.0		
Yellow	3.5						3.0	4.5		
All Red	1.0						1.0	1.0		

Cycle Length: 124.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	338	1397	0.49	0.24	41.6	D		
T	460	1900	0.07	0.24	36.3	D	39.9	D
R	391	1615	0.13	0.24	36.9	D		
Westbound								
LTR	427	1764	0.13	0.24	36.9	D	36.9	D
Northbound								
L	364	1805	0.29	0.20	42.4	D		
T	2251	5074	0.54	0.44	25.5	C	26.8	C
R	716	1615	0.01	0.44	19.3	B		
Southbound								
L	364	1805	0.13	0.20	40.8	D		
T	2251	5074	0.73	0.44	29.6	C	29.4	C
R	716	1615	0.14	0.44	20.5	C		

Intersection Delay = 29.3 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/2/2007
Period: AM Peak Hour
Project ID: Existing+Project
E/W St: Via Sevilla

Inter.: Washington St & Via Sevilla
Area Type: All other areas
Jurisd: La Quinta
Year : 2007

N/S St: Washington Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	0	1	0	1	3	1	1	3	1
LGConfig	L	T	R		LTR		L	T	R	L	T	R
Volume	55	11	22	3	20	66	78	1541	7	31	1182	98
Lane Width	12.0	12.0	12.0		12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			6			17			2			25

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru	A					Thru		A		
	Right	A					Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru	A					Thru		A		
	Right	A					Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		30.0						25.0	55.0		
Yellow		3.5						3.0	4.5		
All Red		1.0						1.0	1.0		

Cycle Length: 124.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	326	1348	0.17	0.24	37.4	D		
T	460	1900	0.02	0.24	35.9	D	36.9	D
R	391	1615	0.04	0.24	36.0	D		
Westbound								
LTR	415	1717	0.17	0.24	37.4	D	37.4	D
Northbound								
L	364	1805	0.21	0.20	41.6	D		
T	2251	5074	0.68	0.44	28.4	C	29.1	C
R	716	1615	0.01	0.44	19.3	B		
Southbound								
L	364	1805	0.09	0.20	40.3	D		
T	2251	5074	0.53	0.44	25.3	C	25.3	C
R	716	1615	0.10	0.44	20.2	C		

Intersection Delay = 27.9 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/2/2007
Period: PM Peak Hour
Project ID: Existing+Project
E/W St: Fred Waring Drive

Inter.: Washington St & Fred Waring Dr
Area Type: All other areas
Jurisd: Indian Wells & La Quinta
Year : 2007

N/S St: Washington Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	1	2	0	2	3	1	2	3	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	240	744	482	94	484	222	349	832	127	316	1256	177
Lane Width	12.0	12.0	12.0	12.0	16.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			202			56			15			44

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		20.0	40.0					25.0	45.0		
Yellow		4.0	4.0					4.0	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 150.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	463	3471	0.52	0.13	61.6	E		
T	946	3547	0.79	0.27	55.7	E	56.1	E
R	426	1599	0.66	0.27	52.7	D		
Westbound								
L	238	1787	0.39	0.13	60.5	E		
TR	1033	3875	0.63	0.27	49.7	D	51.1	D
Northbound								
L	579	3471	0.60	0.17	59.7	E		
T	1522	5074	0.55	0.30	44.4	D	48.1	D
R	480	1599	0.23	0.30	39.8	D		
Southbound								
L	579	3471	0.55	0.17	58.4	E		
T	1522	5074	0.83	0.30	52.9	D	52.9	D
R	480	1599	0.28	0.30	40.4	D		

Intersection Delay = 52.2 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.2

Analyst: JL
Agency: Willdan
Date: 11/2/2007
Period: AM Peak Hour
Project ID: Existing+Project
E/W St: Fred Waring Drive

Inter.: Washington St & Fred Waring Dr
Area Type: All other areas
Jurisd: Indian Wells & La Quinta
Year : 2007

N/S St: Washington Street

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	1	2	0	2	3	1	2	3	1
LGConfig	L	T	R	L	TR		L	T	R	L	T	R
Volume	147	346	236	121	771	298	428	1086	61	190	941	212
Lane Width	12.0	12.0	12.0	12.0	16.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			90			75			10			53

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		20.0	40.0					25.0	45.0		
Yellow		4.0	4.0					4.0	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 150.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	463	3471	0.32	0.13	59.2	E		
T	946	3547	0.37	0.27	44.9	D	48.2	D
R	426	1599	0.34	0.27	44.9	D		
Westbound								
L	238	1787	0.51	0.13	62.2	E		
TR	1038	3893	0.96	0.27	81.2	F	79.1	E
Northbound								
L	579	3471	0.74	0.17	64.6	E		
T	1522	5074	0.71	0.30	48.4	D	52.5	D
R	480	1599	0.11	0.30	38.1	D		
Southbound								
L	579	3471	0.33	0.17	55.4	E		
T	1522	5074	0.62	0.30	45.9	D	46.7	D
R	480	1599	0.33	0.30	41.2	D		

Intersection Delay = 56.7 (sec/veh) Intersection LOS = E

TABLE 8
DELAY AND LOS SUMMARY

Intersection	Existing		Exist+Project		Exist+Cumulative		Exist+Cumulative +Project		Exist+Cumulative +Project +Mitigation	
	Delay / LOS		Delay/LOS		Delay / LOS		Delay / LOS		Delay / LOS	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Washington St at Fred Waring Dr	56.5 - E	51.2 - D	56.7 - E	52.2 - D	70.5 - E	56.4 - E	70.5 - E	59.7 - E	52.2 - D	50.1 - D
Washington St at Via Sevilla	27.8 - C	29.2 - C	27.9 - C	29.3 - C	29.4 - C	30.2 - C	29.4 - C	30.4 - C	N/A	N/A
Washington St at Miles Ave	50.0 - D	51.7 - D	51.6 - D	59.0 - E	51.9 - D	59.9 - E	53.6 - D	76.9 - E	51.7 - D	59.3 - E
Washington St at Highway 111	212.8 - F	62.4 - F	209.0 - F	69.3 - E	436.3 - F	103.8 - F	435.9 - F	128.3 - F	435.5 - F	101.5 - F
Washington St at Avenue 48	454.3 - F	36.7 - D	456.7 - F	38.3 - D	976.3 - F	183.9 - F	977.6 - F	195.7 - F	498.9 - F	82.3 - F
Adams St at Highway 111	48.0 - D	50.2 - D	48.2 - D	50.7 - D	49.9 - D	55.2 - E	50.1 - D	56.6 - E	50.0 - D	54.1 - D

APPENDIX D

CULTURAL RESOURCES REPORT

A REVIEW OF PREVIOUS CULTURAL RESOURCE INVESTIGATIONS WITHIN THE INDIAN WELLS GARDEN OF CHAMPIONS TOURNAMENT CENTER AND INDIAN WELLS TOWN CENTER PROJECT SITE, CITY OF INDIAN WELLS, RIVERSIDE COUNTY

by

Laura S. White, M.A.
Robert S. White

Archaeological Associates
P.O. Box 180
Sun City, CA 92586

TEL (951) 244-1783
FAX (951) 244-0084

for

Mr. Corrie Kates
Community Development Director
City of Indian Wells
44-950 El Dorado Drive
Indian Wells, CA 92210-7497

Study Area USGS 7.5' Topographic Quadrangle:

La Quinta

Study Area Acreage: 150± acres

Section 24, Township 5 South, Range 6 East, SBBM
Section 19, Township 5 South, Range 7 East, SBBM

January 31, 2008

I. PREVIOUS RESEARCH

A. Introduction

The following research comprises a comprehensive summary of the various archaeological studies that have been previously conducted within the boundaries of the Indian Wells Garden of Champions Tournament Center and the Indian Wells Town Center project sites in the City of Indian Wells, Riverside County. The study area comprises150±acres of partially developed land located south of Fred Waring Drive, north of the Whitewater River Channel, east of Warner Trail and west of Washington Street. Miles Avenue bisects the property from east to west. Legally, the subject property comprises portions of the Northeast 1/4 of Section 24, Township 5 South, Range 6 East and the West 1/2 of Section 19, Township 5 South, Range 7 East, San Bernardino Base Meridian.

B. The Archaeological Studies

The following information has been compiled from archaeological records on file with the Eastern Information Center (EIC) at the University of California at Riverside. The EIC is part of the California Historical Resources Information System (CHRIS) and is the state repository for all prehistoric and historic site records in Riverside County. The Information Center also archives all survey and excavation reports conducted within the County. Additionally, the EIC maintains an inventory of all County properties that are listed on the National Register of Historic Places (NRHP), California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), and the Office of Historic Preservation's Directory of Properties.

1. Sutton (1985)

The whole of the 150-acre study area was initially surveyed for cultural resources by Mark Sutton of the Archaeological Research Unit (ARU) at the University of California at Riverside in 1985. At that time, the property was investigated in conjunction with a larger, 350-acre parcel for the proposed Desert Classic Resort (Sutton 1985). Sutton's survey resulted in the identification of four prehistoric archaeological sites, two of which (RIV-3005 and RIV-3008) were located within the subject 150-acres.

RIV-3005 was described as a rather extensive site consisting of ceramics (brown and buff wares), various types of lithic debitage (obsidian, jasper, chert, quartzite, and basalt), a projectile point (jasper Desert Side-Notched), milling stones, and bone (fish and mammal). He concluded that the site appeared to contain an intact subsurface deposit and therefore, a test program (Phase II significance evaluation) was recommended. In so far as we can determine, Sutton did not initiate any further work at RIV-3005.

RIV-3008 was characterized as a small ceramic scatter consisting of approximately 12 brown ware sherds. Sutton determined that the site did not appear to have any further research potential and "no further consideration of the site is necessary" (Sutton 1985:5).

2. McKenna (1990)

Five years later, the northwestern portion of the study area (situated within the Northeast 1/4 of Section 24, Township 5 South, Range 6 East) was re-surveyed by Jeanette McKenna as part of a 120-acre investigation for Tract 25617 (McKenna 1990). Having performed a records search at the EIC, McKenna was aware that Mark Sutton had recorded RIV-3008 (small ceramic scatter) within the boundaries of Tract 25617. However, she was unable to relocate the site during her field study and concluded that the ceramic scatter had either been recovered by non-archaeologists or had become buried under the accumulation of sand (McKenna 1990:16).

McKenna concurred with Sutton's previous findings that the recovery of these sherds was not necessary and no additional investigation was warranted (ibid). Although the survey was completely negative for both historic and prehistoric cultural material, McKenna did recommend avoidance of sensitive areas (i.e. vicinity of tree concentration and the southern boundary) due to possible sub-surface deposits at these locations. In the event that avoidance was not possible, then grading monitoring by a qualified archaeologist was suggested.

3. Brown (1998a)

In 1998, Joan Brown of RMW Paleo Associates, Inc. conducted a Phase I cultural resources assessment for the Garden of Champions Tennis Facility in Indian Wells (Brown 1998a). The 150-acre project area coincides with the acreage and boundaries detailed in the introduction of this

section (the Northeast 1/4 of Section 24, Township 5 South, Range 6 East and the West 1/2 of Section 19, Township 5 South, Range 7 East, San Bernardino Base Meridian). Background research and a literature review conducted at the Eastern Information Center at UC Riverside indicated that two prehistoric sites (RIV-3005 and RIV-3008) had been previously recorded on the property.

During RMW's systematic walkover survey, the area of RIV-3005 was relocated as well as the locale of RIV-3008 which McKenna failed to relocate in 1990. RIV-3005 was estimated to measure 366 meters (E-W) by 183 meters (N-S). Artifacts observed at the site included 100+ ceramic sherds (mostly brown ware), 20 flakes (basalt and chert), 20 groundstone fragments (granite and schist), and fire altered rock. At RIV-3008, a total of seventeen potsherds were found over an area measuring 94 meters (E-W) by 23 meters (N-S).

The survey also resulted in the discovery of a portion of a third site (RIV-5876) which extended onto the property from an adjacent parcel. RIV-5876 was first reported by Jim Brock in 1997 while surveying a 5-acre parcel south of Miles Avenue for a proposed golf driving range (1997a). The site was described as containing an extensive surface scatter of prehistoric pottery sherds (brown and buff wares, burnt and unburnt), a small amount of chipped stone and thermally affected rock, and faunal material (Brock 1997b). That portion of RIV-5876 situated within RMW's project boundaries was estimated to measure 183 meters (N-S) by 90 meters (E-W). According to Brown, 100+ potsherds, 6-8 basalt and quartzite flakes, and a few fire affected rocks were observed.

In addition to the three prehistoric archaeological sites described above (RIV-3005, RIV-3008, and RIV-5876), RMW also identified a total of nine isolate locations. Isolates are generally one or two artifacts that are found in a context not associated with any other cultural material or features. Although none of these finds were discussed in RMW's survey report, isolate records were filed with the EIC and included with the updated site record forms in Appendix B of the Confidential Appendix. Table 1 below lists the nine finds along with their assigned Primary # on file with the Eastern Information Center at UC Riverside.

Brown concluded that the 150-acre study area was highly sensitive for prehistoric cultural resources. Although the artifact assemblage observed at RIV-3005 differed slightly from that

described by Sutton in 1985, Brown suggested that the differences in site configuration was a result of time (13 years between studies) and the dynamic shifting sand dunes which regularly cover and expose prehistoric scatters of artifacts throughout the Coachella Valley (Brown 1998a:13). This scenario could also be true for the small pottery scatter at RIV-3008 which Sutton (1985) and Brown (1998a) observed but not McKenna (1990).

Table 1. List of Isolated Finds Identified by Brown (1998a, Appendix B).

Isolate No.	Primary # (33-)	Description
#1	9015	1 brown ware sherd
#2	9016	1 brown ware sherd
#3	9017	1 basalt flake, 2 brown ware sherds
#4	9018	1 brown ware sherd
#5	9019	1 brown ware sherd
#6	9020	1 brown ware sherd
#7	9021	3 brown ware sherds
#8	9022	1 unifacial granitic mano fragment
#9	9023	2 brown ware sherds

Based upon the variety of surface artifacts, Brown suggested that RIV-3005 and RIV-5876 represented either habitation sites or camp sites. In the event that avoidance of the sites was not possible, RMW recommended "... that a Phase II test excavation be undertaken to determine the presence and integrity of possible subsurface deposits" (Brown 1998a:iii).

4. Brown (1998b)

Immediately following the Phase I cultural resources survey for the 150-acre Garden of Champions Tennis Facility, RMW conducted "an exploratory investigation" of RIV-3005 and RIV-5876 (Brown 1998b). Although excluded from the report title, investigations were also

conducted at RIV-3008. It is important to note that in the two short months that had transpired between the survey and this field program, the shifting sands had already obscured some of the artifact concentrations. This exploratory phase of archaeological investigation at the three sites included collection of surface artifacts, excavation of shovel test pits (STPs), excavation of 1 x 1 meter units, and backhoe trenching. Consultation with both the Cabazon Band of Mission Indians and the Agua Caliente Band of Cahuilla Indians was also initiated.

RIV-3008

At RIV-3008 exploratory investigations included a collection of surface artifacts and the excavation of four shovel test pits (STPs). A total of 48 finds (exclusively pottery sherds) were collected from the surface of RIV-3008. After measuring the dimensions of the four collection areas, a single STP was excavated within each of the four locations. The STPs ranged in diameter from 35-60 cm. and 35-62 cm. in depth. A total of 16 sherds were recovered from STP "A", 21 from STP "B", 2 from STP "C", and 19 from STP "D". The condition of the sherds was quite poor as they had been heavily sandblasted. Only three fragments retained evidence of their interior and exterior surfaces. Based upon the fact that all of the sherds were similar in deterioration, color, and temper, it was hypothesized that they were probably from a "pot drop" represented by one or two vessels. No additional work was recommended for RIV-3008 beyond grading monitoring during ground disturbance activities (Brown 1998b:19).

RIV-3005 and RIV-5876

Exploratory investigations at RIV-3005 and RIV-5876 included surface collection, the excavation of ten (1 x 1 meter) hand units (4 at RIV-5876; 6 at RIV-3005), and machine trenching (3 trenches at RIV-5876; 5 trenches at RIV-3005). All hand units were dug in arbitrary 10 cm. levels and extended to depths of 50-60 cm. Trenches six feet deep were excavated using a backhoe fitted with a 24" wide bucket.

Artifacts from RIV-3005 and RIV-5876 included pottery sherds (ranging from 132-184 specimens), chipped stone tools (i.e.utilized flake, chopper), lithic debitage (flakes), groundstone (intact or fragmented manos and metates), faunal remains (shell and bone) and manuports (lithic

material not indigenous to the area). By far, the predominate find included pottery sherds found on the surface of both sites. Subsurface finds were sparse with only four potsherds found below 10 cm. in the hand units. Trenches 4 and 8 yielded two finds (metate fragment and a potsherd respectively) from RIV-3005 while a chert flake and one potsherd were recovered from Trench 1 at RIV-5876.

Findings and Recommendations

RMW stated that "The primary purpose of this study ...was to conduct exploratory investigations at CA-RIV-3005 and CA-RIV-5876 to establish reasonable methods for use during Phase 2 archaeological evaluation of the two prehistoric sites" (Brown 1998b:ii). There is some question as to what "reasonable methods for use" was intended to mean. Furthermore, the scope and breadth of the work performed at RIV-3005, 5876 and 3008 would under most circumstances constituted a Phase II test program intended to determine site significance as opposed to "exploratory investigations". In any event, at the completion of exploratory investigations, RMW recommended a Phase II (2) test evaluation of RIV-3005 and RIV-5876. This Phase II program would include: 1) the excavation of 10 cm. surface scrapes, 2) the removal of large quantities of sand with leaf blowers in an effort to expose features such as hearths, midden deposits, post holes of prehistoric structures, and human coprolites (dried fecal matter), 3) perform a geomorphology study to see how dune formation and movement influence the displacement of artifactual remains, and 4) a ceramic analysis of pottery sherds incorporating potsherds collected during this investigation with those from the test phase (Brown 1998b:iii).

5. Brown (2000)

Additional work at RIV-3005 and RIV-5876 was conducted between November1998 and April 1999. The investigation also included a geologic and geomorphic study of the dune field environment. The title of RMW's report indicates that the study not only included an Evaluation phase (Phase II) but also a Data Recovery phase also known as a Phase III Salvage program. Data Recovery or Salvage programs comprise the final phase of archaeological investigation other than grading monitoring.

RIV-3008

The evaluation/data recovery program did not include any additional field work at RIV-3008, merely the analysis of the ceramic fragments collected during the "exploratory investigation" of the site. The collection included 106 body sherds; no rim or decorated sherds were recovered. Interestingly, all of the 106 sherds were classified as Salton Buff ware and thought to have originated from a single pot (Brown 2000:20).

RIV-3005 and RIV-5876

Field methods conducted at RIV-3005 and RIV-5876 included the hand excavation of surface scrapes. Surface scrapes provide a check of the accuracy of surface collections due to the problem of migrating sand. They can also assist in determining the placement of test units as well providing information on site stratigraphy. A total of 19 surface scrapes were hand excavated at RIV-3005. Each surface scrape measured 2 x 2 meters in size and 15 cm. in depth. Two of these scrapers (#s 3 and 17) were expanded to include "complex artifactual deposits". Eleven scrapes were excavated at RIV-5876. All recovered artifacts were combined with the finds from the prior exploratory investigation (Brown 1998b) for further analysis.

RIV-3005 and RIV-5876 were found to contain similar artifactual and ecofactual material to other sites in the Indian Wells area. Ceramic fragments were the predominant artifact in the collections with the vast majority of pottery comprising body sherds of Salton Buff Ware. Rim sherd counts were rather small (8 at RIV-3005 and 15 at RIV-5876), and only two sherds from RIV-3005 exhibited decoration. Lithic material largely comprised flakes and a few nameable chipped stone tools. No projectile points were recovered. Milling equipment was also present (some of which was fire affected). Manuports or non-native materials were predominately collected from RIV-3005 (195 specimens) while RIV-5876 yielded only11.

Freshwater mussels *(Anodonta dejecta)* were locally available and represented at both sites. Three of these shell fragments from RIV-3005 appeared to exhibit edge modification and may actually represent pendants or ornaments. A shell bead was also recovered from RIV-3005. In addition to shell, faunal remains primarily consisted of unidentifiable fragments of modern animals (rodents, rabbits and birds).

The results of the ceramic study indicated that there was a correlation between site activity and the proportion of burned sherds from the sites. Forty-one percent of the pottery sherds from RIV-3005 were burned while fifty-nine percent comprised unburned fragments suggesting that RIV-3005 was a habitation site. At RIV-5876, seventeen percent of the sherds were burned as opposed to eighty-three percent unburned. These numbers indicated that RIV-5876 was a special use or campsite (Brown 1998b:21). RMW submitted a small shell sample (from a disintegrating pendant) from RIV-3005 to Beta Analytic Inc. in Miami, Florida (commercial C-14 dating laboratory) for Accelerator Mass Spectrometry (AMS) dating. The AMS analysis of the shell placed the prehistoric occupation of RIV-3005 between A.D. 980 and A.D. 1150. This date was found to be commensurate with other prehistoric sites in the area located along the shoreline of ancient Lake Cahuilla (Brown 2000:23).

RMW stated that "RIV-3005 and RIV-5876 were deemed significant according to CEQA; however, the excavations conducted at the sites recovered the majority of the cultural remains and the site areas were subsequently graded. Therefore, no further cultural resources study within the project area is required" (ibid:ii). Regarding grading of the two site areas, RMW concluded that due to the possibility of subsurface deposits, grading monitoring was warranted for the project area (50± acres south of Miles Avenue containing RIV-3005 and RIV-5876; Brown 2000:fig. 2). RMW archaeologists appear to have monitored this area within the same time frame as the site evaluation field program (between November 1998 and April 1999). The monitoring resulted in the recovery of only seven artifacts. These finds included a mano fragment and two pottery sherds from the area north of Miles Avenue and four pottery sherd from RIV-3005 (ibid.:14).

6. Tuma (2004)

In 2004, SWCA Environmental Consultants conducted a Phase I cultural resources assessment of a 12-acre parcel proposed for the Garden Villas Affordable Housing Project (Tuma 2004). The parcel is located within the "pan handle' of the 150-acre footprint presently under study. Legally, it is located in the South 1/2 of the Northwest 1/4 of the Northeast 1/4 of Section 24, Township 5 South, Range 6 East, San Bernardino Base Meridian.

The results of a records search revealed that this parcel had been previously surveyed on

three different occasions (Sutton 1985, McKenna 1990, and Brown 1998a) and that one prehistoric site (RIV-3008) had been previously recorded within its boundaries. Supplemental information also indicated that the site had been previous explored by RMW Paleo Associates, Inc. during a limited test excavation in 1998. RIV-3008 was found not to be a significant site within the meaning of CEQA and no additional work beyond grading monitoring during ground disturbance activities was recommended (Brown 1998b:19).

The 12-acre parcel was systematically surveyed by SWCA using 15-meter intervals. The results of the field study were completely negative. No new archaeological resources or any additional material associated with RIV-3008 were observed. However, it was recommended that a qualified archaeologist monitor the brushing/grubbing and rough grading phase of the proposed development.

II. CONCLUSIONS AND RECOMMENDATIONS

It is clear that a great deal of time and effort have been expended over the years surveying the 150-acre study area for cultural resources and investigating the three archaeological sites that lie therein. A review of the various studies indicates that all three sites have been evaluated and the finds recovered adequately analyzed and reported. As stated in the documents, no additional work, including grading monitoring, was recommended at RIV-3005 and RIV-5876. Furthermore, only monitoring of future earth disturbing activities was recommended for RIV-3008.

The dynamic wind situation in the Coachella Valley resulting in the fine-grained dunes of sand to migrate has been a problem that has nagged archaeologist for decades. Prehistoric sites in the valley are initially discovered only to be obscured by the "shifting sands". They inevitably re-materialize at some point later in time but in many instances the scatters of surface finds have grown larger or smaller than originally reported. Since it appears that new finds have emerged at one or more of the three site locations as a result of both time and wind, we would propose the following as a final course of mitigation prior to the onset of future earth-disturbing activities at the site locations:

Final Surface Collection

The final surface collection would serve the purpose of mitigating impacts to additional surface artifacts that have been exposed as a result of sand migration within the 150-acre study area. It would also provide a concept of the configuration of surface material that may be compared with previous mapping projects. The surface collection should be conducted using the transit-controlled method. Briefly, this consists of locating each surface artifact with a surveyor's transit. The collection crew bags and numbers the artifacts, the numerical designation corresponding to the number on the transit coordinate entry. In this way, it is possible to map the configuration of surface finds to scale and the original provenience of each item is permanently recorded. All finds recovered should be catalogued and analyzed. An illustrated, narrative report describing the field investigation and the laboratory work should also be produced.

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