22 March 2005

SR 520 Bridge Replacement and HOV Project Draft EIS

Appendix C

Air Quality

Discipline Report

Washington State Department of Transportation

SoundTransit

U.S. Department of Transportation
Federal Highway Administration

SR 520 Bridge Replacement and HOV Project Draft EIS

Air Quality
Discipline Report

Prepared for

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Federal Highway Administration
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Acronyms and Abbreviations

CO	carbon monoxide
CO_2	carbon dioxide
Ecology	Washington State Department of Ecology
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
HOV	high-occupancy vehicle
mph	miles per hour
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO_X	oxides of nitrogen
PM_{10}	particulate matter smaller than 10 microns in diameter
$PM_{2.5}$	particulate matter smaller than 2.5 microns in diameter
ppm	part per million
PSCAA	Puget Sound Clean Air Agency
RTP	Regional Transportation Plan
SEPA	State Environmental Policy Act
SIP	State Implementation Plan
SO_2	sulfur dioxide
TIP	Transportation Improvement Program
VMT	vehicle miles traveled
VOC	volatile organic compound
WSDOT	Washington State Department of Transportation

Introduction

Why is air quality considered in an EIS?

Clean air is vital to human health and is a resource protected by various federal, state, and local regulations. Pollutants in air can not only affect humans, but can negatively affect flora, fauna, and physical structures. National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) regulations require that the effects of a proposed project on air quality be evaluated in an environmental impact statement (EIS).

Ambient air quality is a function of many factors, including climate, topography, meteorological conditions, and the production of airborne pollutants by natural or artificial sources. Both the Federal Clean Air Act (42 U.S.C. §§ 7401 et seq. 1970) and its amendments, and the Washington State Clean Air Act (RCW 70.94) currently regulate air quality. The U.S. Environmental Protection Agency (EPA), the Washington State Department of Ecology (Ecology), and the local Puget Sound Clean Air Agency (PSCAA) enforce regulations developed to protect air quality.

EPA delegates authority to manage air quality issues to the states. In Washington state, EPA and Ecology further delegate authority to local air quality agencies. PSCAA has been delegated authority to regulate air quality in four counties, including King County where the project is located.

What are the key points of this report?

Effects on air quality would be few from either build alternative. Construction would cause most effects, which would be temporary. These include fugitive dust from excavation and earth moving and emissions from diesel-fueled construction equipment.

After the project has been completed, many of the effects would be positive; both build alternatives would improve the capacity of the roadway, particularly for the 6-Lane Alternative, resulting in lower vehicle emissions through reductions in traffic congestion. The installation of the lids in the 6-Lane Alternative would lead to a localized positive effect, serving to limit the dispersion of particulate matter generated by road dust, tire wear, and diesel exhaust in the vicinity of the lids.

The air quality discipline team evaluated the effects of the project by performing modeling of emissions from motor vehicles, both regionally and at specific intersections. Modeling was performed using EPA-approved models for the years 2016 and 2030. The results of the modeling indicated that the project would not violate ambient air quality standards.

What are the project alternatives?

The SR 520 Bridge Replacement and HOV Project area comprises neighborhoods in Seattle from I-5 to the Lake Washington shore, Lake Washington, and Eastside communities and neighborhoods from the Lake Washington shore to 124th Avenue Northeast just east of I-405. Exhibit 1 shows the general location of the project. Neighborhoods and communities in the project area are:

- Seattle neighborhoods—Portage Bay/Roanoke, North Capitol Hill, Montlake, University District, Laurelhurst, and Madison Park
- Eastside communities and neighborhoods—Medina, Hunts Point, Clyde Hill, Yarrow Point, Kirkland (the Lakeview neighborhood), and Bellevue (the North Bellevue, Bridle Trails, and Bel-Red/Northup neighborhoods).

The SR 520 Bridge Replacement and HOV Project Draft EIS evaluates the following three alternatives and one option:

- No Build Alternative
- 4-Lane Alternative
  - Option with pontoons without capacity to carry future high capacity transit
- 6-Lane Alternative

Each of these alternatives is described below. For more information, see the *Description of Alternatives and Construction Techniques Report* contained in Appendix A of this EIS.

Exhibit 1. Project Vicinity Map

What is the No Build Alternative?

All EISs provide an alternative to assess what would happen to the environment in the future if nothing were done to solve the project's identified problem. This alternative, called the No Build Alternative, means that the existing highway would remain the same as it is today (Exhibit 2). The No Build Alternative provides the basis for measuring and comparing the effects of all of the project's build alternatives.

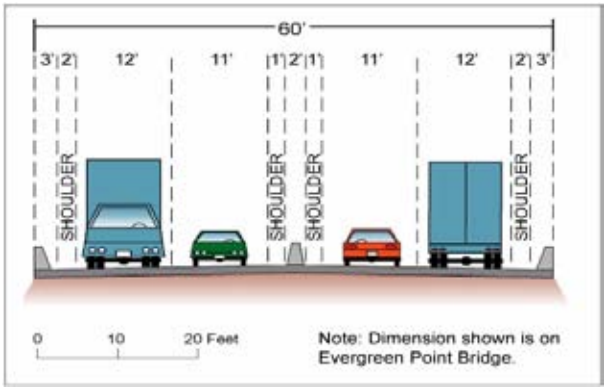


Exhibit 2. No Build Alternative

This project is unique because the existing SR 520 bridges may not remain intact through 2030, the project's design year. The fixed spans of the Portage Bay and Evergreen Point bridges are aging and are vulnerable to earthquakes; the floating portion of the Evergreen Point Bridge is vulnerable to wind and waves.

In 1999, the Washington State Department of Transportation (WSDOT) estimated the remaining service life of the Evergreen Point Bridge to be 20 to 25 years based on the existing structural integrity and the likelihood of severe windstorms. The floating portion of the Evergreen Point Bridge was originally designed for a sustained wind speed of 57.5 miles per hour (mph), and was rehabilitated in 1999 to withstand sustained winds of up to 77 mph. The current WSDOT design standard for bridges is to withstand a sustained wind speed of 92 mph. In order to bring the Evergreen Point Bridge up to current design standards to withstand at least 92 mph winds, the floating portion must be completely replaced.

The fixed structures of the Portage Bay and Evergreen Point bridges do not meet current seismic design standards because the bridge is supported on hollow-core piles. These hollow-core piles were not designed to withstand a large earthquake. They are difficult and cost prohibitive to retrofit to current seismic standards.

If nothing is done to replace the Portage Bay and Evergreen Point bridges, there is a high probability that both structures could fail and become unusable to the public before 2030. WSDOT cannot predict when or how these structures would fail, so it is difficult to determine the actual consequences of doing nothing. To illustrate what could happen, two scenarios representing the extremes of what is possible are

evaluated as part of the No Build Alternative. These are the Continued Operation and Catastrophic Failure scenarios.

Under the Continued Operation Scenario, SR 520 would continue to operate as it does today as a 4-lane highway with nonstandard shoulders and without a bicycle/pedestrian path. No new facilities would be added and no existing facilities (including the unused R.H. Thompson Expressway Ramps near the Arboretum) would be removed. WSDOT would continue to maintain SR 520 as it does today. This scenario assumes the Portage Bay and Evergreen Point bridges would remain standing and functional through 2030. No catastrophic events (such as earthquakes or high winds) would be severe enough to cause major damage to the SR 520 bridges. This scenario is the baseline the EIS team used to compare the other alternatives.

In the Catastrophic Failure Scenario, both the Portage Bay and Evergreen Point bridges would be lost due to some type of catastrophic event. Although in a catastrophic event, one bridge might fail while the other stands, this Draft EIS assumes the worst-case scenario—that both bridges would fail. This scenario assumes that both bridges would be seriously damaged and would be unavailable for use by the public for an unspecified length of time.

What is the 4-Lane Alternative?

The 4-Lane Alternative would have four lanes (two general purpose lanes in each direction), the same number of lanes as today (Exhibit 3). SR 520 would be rebuilt from I-5 to Bellevue Way. Both the Portage Bay and Evergreen Point bridges would be replaced. The bridges over SR 520 would also be rebuilt. Roadway shoulders would meet current standards (4-foot inside shoulder and 10-foot outside shoulder). A

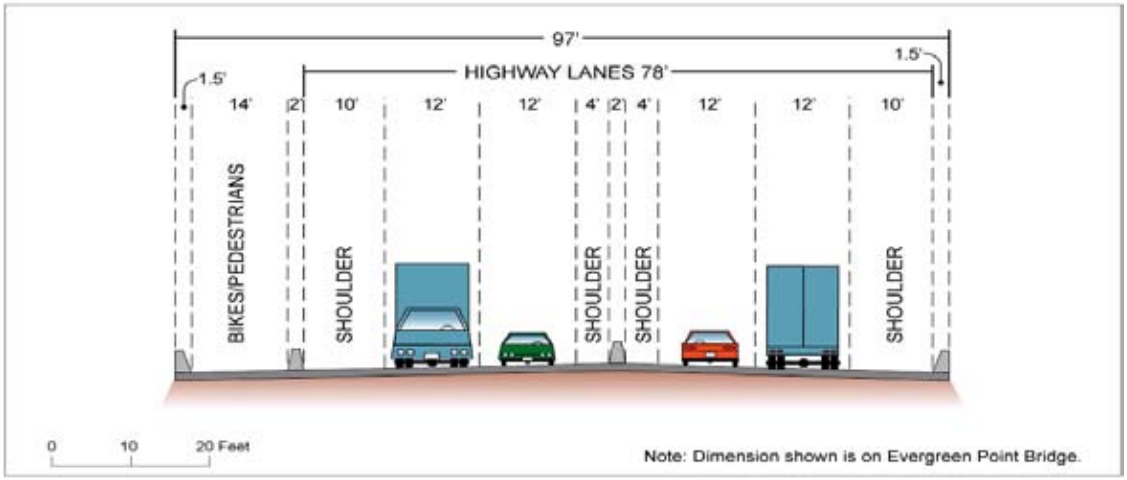


Exhibit 3. 4-Lane Alternative

14-foot-wide bicycle/pedestrian path would be built along the north side of SR 520 through Montlake, across the Evergreen Point Bridge, and along the south side of SR 520 through Medina, Hunts Point, Clyde Hill, and Yarrow Point to 96th Avenue Northeast, connecting to Northeast Points Drive. Sound walls would be built along much of SR 520 in Seattle and the Eastside. This alternative also includes stormwater treatment and electronic toll collection.

The floating bridge pontoons of the Evergreen Point Bridge would be sized to carry future high-capacity transit. An option with smaller pontoons that could not carry future high-capacity transit is also analyzed. The alternative does not include high-capacity transit.

A bridge operations facility would be built underground beneath the east roadway approach to the bridge as part of the new bridge abutment. A dock to moor two boats for maintenance of the Evergreen Point Bridge would be located under the bridge on the east shore of Lake Washington.

A flexible transportation plan would promote alternative modes of travel and increase the efficiency of the system. Programs include intelligent transportation and technology, traffic systems management, vanpools and transit, education and promotion, and land use as demand management.

What is the 6-Lane Alternative?

The 6-Lane Alternative would include six lanes (two outer general purpose lanes and one inside HOV lane in each direction; Exhibit 4). SR 520 would be rebuilt from I-5 to 108th Avenue Northeast in Bellevue, with an auxiliary lane added on SR 520 eastbound east of I-405 to 124th Avenue Northeast. Both the Portage Bay and Evergreen

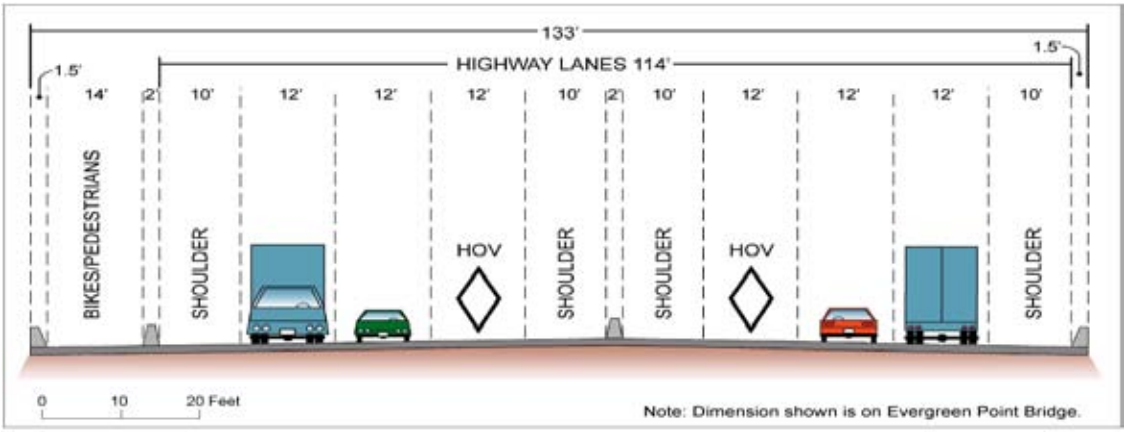


Exhibit 4. 6-Lane Alternative

Point bridges would be replaced. Bridges over SR 520 would also be rebuilt. Roadway shoulders would meet current standards (10-foot-wide inside shoulder and 10-foot-wide outside shoulder). A 14-foot-wide bicycle/pedestrian path would be built along the north side of SR 520 through Montlake, across the Evergreen Point Bridge, and along the south side of SR 520 through the Eastside to 96th Avenue Northeast, connecting to Northeast Points Drive. Sound walls would be built along much of SR 520 in Seattle and the Eastside. This alternative would also include stormwater treatment and electronic toll collection.

This alternative would also add five 500-foot-long landscaped lids to be built across SR 520 to help reconnect communities. These communities are Roanoke, North Capitol Hill, Portage Bay, Montlake, Medina, Hunts Point, Clyde Hill, and Yarrow Point. The lids are located at 10th Avenue East and Delmar Drive East, Montlake Boulevard, Evergreen Point Road, 84th Avenue Northeast, and 92nd Avenue Northeast.

The floating bridge pontoons of the Evergreen Point Bridge would be sized to carry future high-capacity transit. The alternative does not include high-capacity transit.

A bridge operations facility would be built underground beneath the east roadway approach to the bridge as part of the new bridge abutment. A dock to moor two boats and maintain the Evergreen Point Bridge would be located under the bridge on the east shore of Lake Washington.

A flexible transportation plan would promote alternative modes of travel and increase the efficiency of the system. Programs would include intelligent transportation and technology, traffic systems management, vanpools and transit, education and promotion, and land use as demand management.

Affected Environment

How was the information collected?

The air quality discipline team identified the air quality standards and regulations of EPA, Ecology, and PSCAA that apply to the project area. The team also reviewed information from the National Climatic Data Center to determine how climate and terrain affects the project area. Finally, the team evaluated the status of air quality in the project area

by comparing recent air monitoring data available from EPA, Ecology, and PSCAA to the applicable air quality standards.

How do climate and weather affect air quality?

The project area lies in the Puget Sound Lowland, which comprises a narrow strip of land along the western side of Puget Sound extending from the Strait of Juan de Fuca in the north to the southern cities of Centralia and Chehalis, and a somewhat wider strip along the eastern side of Puget Sound extending northward to the Canadian border. Buffered by the Olympic and Cascade mountain ranges and Puget Sound, the Puget Sound Lowland has a relatively mild, marine climate with cool summers and mild, wet, and cloudy winters.

Within the project area, weather conditions such as temperature, fog, rain, and snowfall can vary within short distances, influenced by such factors as the distance from Puget Sound, the rolling terrain, and air from the ocean moving through the Strait of Juan de Fuca and the Chehalis River valley.

During the summer, winds typically tend to be light and variable, with a prevailing wind direction from the north or northwest. The average wind velocity is less than 10 mph. Persistent high-pressure cells often dominate summer weather, creating stagnant air conditions. This weather pattern sometimes contributes to the formation of photochemical smog.

During the winter wet season, the prevailing wind direction is south or southwest. Cold air occasionally flows southward from the interior of Canada through the Fraser River canyon into the Puget Sound Lowland. In the fall and winter, severe storms can produce strong winds that cross the state from the southwest.

Although the Puget Sound Lowland area is the most densely populated and industrialized area in Washington, there is sufficient wind most of the year to disperse air pollutants released into the atmosphere. Air pollution is usually most noticeable in the late fall and winter, under conditions of clear skies, light wind, and a sharp temperature inversion. Temperature inversions occur when cold air is trapped under warm air, preventing vertical mixing in the atmosphere. Inversions can last several days and can prevent pollutants from being dispersed by the wind. Inversions are most likely to occur during the months of January, February, October, November,

Ozone
A compound consisting of three atoms of oxygen that can develop when oxides of nitrogen (NO_X), volatile organic compounds (VOCs), and sunlight interact in the lower atmosphere; ozone is the primary constituent of smog.

Photochemical Smog
A combination of primary pollutants, NO_X and VOC, and the secondary pollutants that are formed in the presence of sunlight. A brownish haze, caused by nitrogen dioxide, is often an indicator of smog.

and December. If poor dispersion persists for more than 24 hours, the PSCAA can declare an "air pollution episode" or local "impaired air quality."

What are the air pollutants generated by transportation projects?

The major airborne pollutants of interest for transportation projects are carbon monoxide (CO), particulate matter, ozone, and the ozone precursors, volatile organic compounds (VOCs), and oxides of nitrogen (NO_X). These are commonly referred to as criteria pollutants. Both federal and state standards regulate these, along with two other criteria pollutants, sulfur dioxide (SO_2) and lead. However, lead and SO_2 are not pollutants of concern for transportation projects, and therefore are not addressed in this analysis.

Toxic air pollutants in vehicle exhaust, particularly from diesel-fueled vehicles, have been addressed in both local and national studies. Toxic air pollutants are known or suspected to cause cancer or other serious health effects. For example, benzene is a known carcinogen found in gasoline. Diesel exhaust is of particular concern because it has been judged to pose a lung cancer risk for humans, and could also result in other noncarcinogenic respiratory effects. Toxic air pollutants can also cause other environmental effects, such as damage to plants and animals.

Another substance generated by fuel combustion in motor vehicles is carbon dioxide (CO_2), one of several pollutants classified as a "greenhouse gas" that traps heat within the earth's atmosphere. CO_2 accounts for more than 80 percent of the greenhouse gases emitted in the United States. CO_2 is not directly harmful to human health; however, increasing emissions of CO_2 and other greenhouse gases could result in changes to global temperatures, leading to environmental effects such as rising sea levels and altered weather patterns.

How is air quality regulated?

Washington state is subject to air quality regulations issued by EPA, Ecology, and PSCAA. EPA's National Ambient Air Quality Standards (NAAQS) set limits on concentration levels of certain pollutants, commonly referred to as the "criteria pollutants." Concentration levels of the criteria pollutants must not exceed the NAAQS over specified time periods. Ecology and PSCAA monitor air quality in the Puget

Sound region by measuring and comparing the levels of criteria pollutants found in the atmosphere with the NAAQS.

The NAAQS comprise two sets of standards: the primary standards are intended to protect public health; the secondary standards are intended to protect the natural environment. In addition to these standards, Ecology and PSCAA have adopted state and local ambient air quality standards that are equivalent to or more stringent than EPA's NAAQS. Exhibit 5 lists all of the national, state, and local air quality standards in effect for the criteria pollutants in the state of Washington.

Exhibit 5. National, State, and Local Ambient Air Quality Standards

Pollutant	National		Washington State	Puget Sound Region
	Primary	Secondary		
Nitrogen Dioxide				
Annual Average (ppm)	0.05	0.05	0.05	0.05
Carbon Monoxide (CO)				
8-Hour Average (ppm)	9	NS	9	9
1-Hour Average (ppm)	35	NS	35	35
Ozone				
1-Hour Average (ppm)	0.12	0.12	0.12	0.12
8-Hour Average (ppm)	0.08	0.08	NS	NS
Lead				
Maximum Arithmetic Mean ($\mu g/m^3$) (averaged over calendar quarter)	1.5	1.5	NS	1.5
Sulfur Dioxide				
Annual Arithmetic Average (ppm)	0.03	NS	0.02	0.02
24-Hour Average (ppm)	0.14	NS	0.10	0.10
3-Hour Average (ppm)	NS	0.5	NS	NS
1-Hour Average (ppm)	NS	NS	0.40	0.40
Particulate Matter (PM_{10})				
Annual Arithmetic Average ($\mu g/m^3$)	50	50	50	50
24-Hour Average ($\mu g/m^3$)	150	150	150	150
Particulate Matter ($PM_{2.5}$)				
Annual Arithmetic Average ($\mu g/m^3$)	15	15	NS	NS
24-Hour Average ($\mu g/m^3$)	65	65	NS	NS
Particulate Matter (Total Suspended Particulates)				
Annual Geometric Average ($\mu g/m^3$)	NS	NS	60	NS
24-Hour Average ($\mu g/m^3$)	NS	NS	150	NS

Source: U.S. EPA (2003), PSCAA (2002).
$\mu g/m^3$ = micrograms per cubic meter
NS = No standard established.
PM_{10} = particulate matter smaller than 10 microns in diameter
$PM_{2.5}$ = particulate matter smaller than 2.5 microns in diameter
ppm = parts per million

The Central Puget Sound region is currently in attainment for all criteria pollutants. EPA designated the Central Puget Sound region as maintenance attainment status for CO and for ground-level ozone in 1996. The SR 520 Bridge Replacement and HOV Project, therefore, is located in an area that is currently designated a maintenance area for CO and ozone. Exhibit 6 shows the air quality maintenance area in the Puget Sound region.

In 1997, EPA revised the ozone standard from 0.12 parts per million (ppm) (1-hour average) to 0.08 ppm (8-hour average), although implementation of this new standard was delayed due to legal action. The Central Puget Sound region attained maintenance status for the old ozone standard in 1996 and was recently designated attainment for the new 8-hour ozone standard (June 15, 2004). In addition to the current particulate matter smaller than 10 microns in diameter (PM_{10}), EPA recently adopted a new federal air quality standard for particulate matter that is less than 2.5 microns ($PM_{2.5}$) in diameter. Based on Ecology's recommendation, and preliminary review by the EPA, this region has received an "intended designation" of attainment of the EPA's standards for $PM_{2.5}$.

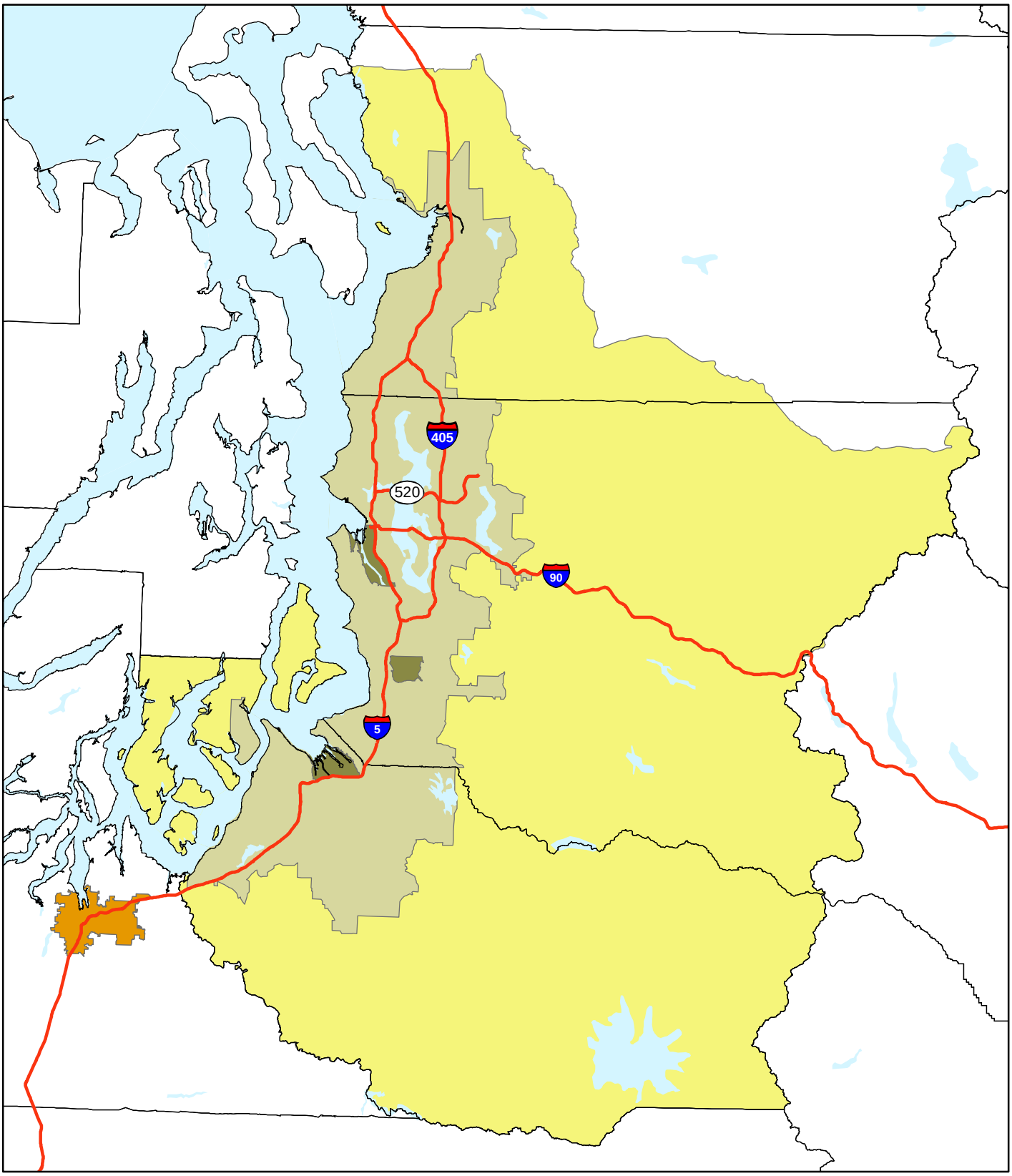
Currently, no standards establish allowable concentrations of toxic air pollutants in the air. Ecology conducted a study to monitor several air toxic compounds from 2000 to 2001. This study indicated that the primary contributors to air toxics are diesel exhaust and wood smoke (Ecology 2001). The National Air Toxic Assessment is an ongoing comprehensive evaluation of air toxics in the United States conducted by EPA. The assessment indicates that the air toxics risk in the Puget Sound region is in the top five percent in the nation (U.S. EPA 2004a), which is similar to other major urban areas. The diesel exhaust contribution to the area's toxic air pollutants should be reduced in the near future as a result of:

- A federal regulation that requires cleaner-burning diesel fuel for on-road vehicles by 2006
- A federal regulation that requires cleaner-burning diesel fuel for off-road diesel engines by 2010

Attainment Area
EPA gives this designation to an area where concentrations of a given pollutant are measured below the applicable standards. An area may be classified nonattainment for one (or more) pollutants, and attainment for all others.

Maintenance Area
EPA gives this designation to an area formerly designated nonattainment, but whose recent monitoring data show that pollutant levels have dropped below the applicable standard for a given pollutant. Although an area is considered attainment, it is subject to a 10-year maintenance period when special measures are adopted by the air agencies to ensure that the pollutant levels do not rise above the standards.

Nonattainment Area
EPA gives this designation to an area where concentrations of a given pollutant, such as CO or PM_{10}, are above the applicable standards over a period of 3 years.



Source: Ecology (2004a) GIS data (Carbon Monoxide, Ozone, and Particulates)

- Areas designated as Attainment or Unclassified for all Criteria Pollutants
- Ozone Maintenance Areas
- Ozone and Carbon Monoxide Maintenance Areas
- Ozone, Carbon Monoxide, and Particulate Matter Maintenance Areas
- Particulate Matter Maintenance Areas

N

0 5 10 Miles

Exhibit 6. **Air Quality Maintenance Areas**

SR 520 Bridge Replacement and HOV Project

File Path: P:\Parametrix\168395\180171 SR 520 Bridge Replacement\GIS\Layouts\AE\AirQuality.mxd

CO_2 is not currently subject to federal or state ambient air quality standards.

How is air quality measured?

Both Ecology and PSCAA operate ambient air quality monitors to assess the levels of regulated pollutants and to verify continued compliance with the NAAQS. Exhibit 7 shows the air quality monitoring locations in or near the project area. As shown in Exhibits 7 and 8, the Beacon Hill Reservoir monitor is the closest monitor to the

Exhibit 7. Air Quality Monitoring Locations near the Project Area

project area that measures ozone, NO_X, and SO_2. The Beacon Hill site is approximately 5 miles south of the western terminus of the project area. The Duwamish monitor is located in an industrial area approximately 5 miles southwest of the western terminus of the project area. PM_{10} and $PM_{2.5}$ have been measured at the Duwamish site for the last 3 years; this monitor is the closest location to the project area to measure these criteria pollutants. The nearest CO monitoring locations to the project are in the University District, approximately 1 mile north of SR 520, and in downtown Bellevue, approximately 1 mile south of SR 520.

How does air quality compare with current standards in the project area?

Ambient air concentrations of the monitored pollutants have been well below the NAAQS for the last several years, as shown in Exhibit 8.

Exhibit 8. Ambient Criteria Pollutant Concentration Levels Measured from 2001 to 2003

		Maximum Concentration			
Monitoring Location	**Parameter**	**2001 [a]**	**2002[a]**	**2003 [b]**	**NAAQS**
Particulate Matter (PM_{10})					
Duwamish	Annual Arithmetic Mean (µg/m^3)	23	23	22	**50**
	24-Hour Average (µg/m^3)	71	73	65	**150**
Carbon Monoxide					
Beacon Hill	8-Hour Average (ppm)	2.4	2.0	1.9	**9**
	1-Hour Average (ppm)	3.0	2.4	2.8	**35**
University District	8-Hour Average (ppm)	6.5	5.6	7.1	**9**
	1-Hour Average (ppm)	9.5	7.5	9.1	**35**
Downtown Bellevue	8-Hour Average (ppm)	4.7	4.2	4.2	**9**
	1-Hour Average (ppm)	6.9	6.2	6.2	**35**
Ozone					
Beacon Hill Reservoir	1-Hour Average (ppm)	0.059	0.053	0.072	**0.12**
	8-Hour Average (ppm)	0.045	0.046	0.055	**0.08**
Nitrogen Dioxide					
Beacon Hill Reservoir	Annual Arithmetic Average (ppm)	0.020	0.019	0.018	**0.05**
Sulfur Dioxide					
Beacon Hill Reservoir	Annual Arithmetic Average (ppm)	0.0037	0.0027	0.003	**0.02**
	24-Hour Average (ppm)	0.013	0.016	0.010	**0.10**
	3-Hour Average (ppm)	0.029	0.042	0.026	**0.40**

[a]Ecology (2004b).

[b]U.S. EPA (2004b).

CO concentrations are measured at three sites close to the project area—the University District, Beacon Hill, and Bellevue. As shown in Exhibit 9, the 8-hour CO concentrations for the last 3 years have been below the standards. In fact, the most recent exceedance of a CO standard was in 1992, when the CO 8-hour NAAQS was exceeded only once.

Exhibit 9. Carbon Monoxide Levels Measured in the Project Vicinity between 2001 and 2003

What is the trend for Puget Sound regional air quality?

Emission projections and ongoing monitoring throughout the Central Puget Sound region indicate that the ambient air pollution concentrations for CO and PM_{10} have been decreasing over the past decade. Measured ozone concentrations, in contrast, have remained fairly static. The decline of CO is due primarily to improvements made to emission controls on motor vehicles and the retirement of older, higher-polluting vehicles. Exhibit 10 shows, based on national data, progress that has been made in reducing emissions from motor vehicles in comparison to the changes in other demographics, such as population, over the same period.

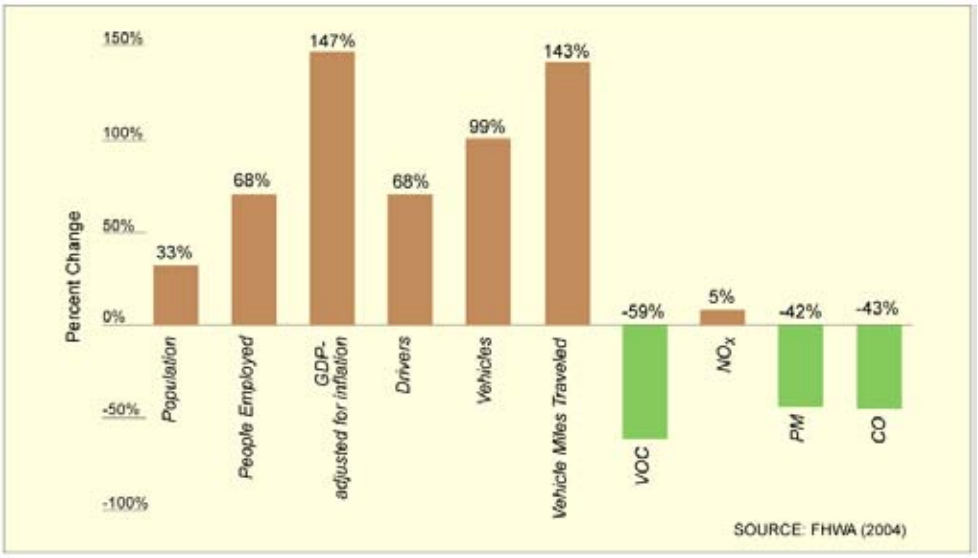


Exhibit 10. Percent Change in Amount of Vehicle Emissions Compared to Demographics and Transportation (1970 to 1999)

Voluntary programs, such as the local Diesel Solutions Program and the Department of Energy's Clean Cities Program, are in place to encourage public and private fleet operators to use ultra-low sulfur diesel and/or

to install retrofit devices to filter or oxidize vehicle exhaust (PSCAA 2004). Ecology and EPA support other voluntary programs that encourage diesel emission reductions.

Air monitor located in the University District in Seattle

Over time, however, other factors have the potential to counteract this downward emission trend. For example, each year more motor vehicles travel on the region's roadways, and people in the area are making more trips of greater distance. Estimates by the Puget Sound Regional Council (PSRC 2004b) project that VOC and PM_{10} emissions will gradually increase between 2010 and 2030, while CO and NO_X emissions are predicted to decline between 2010 and 2020, then gradually increase by 2030. If emissions increase to a point where local air monitoring data indicate that concentrations are again above the NAAQS, the region's nonattainment status could change, forcing more stringent constraints on travel and economic growth, and the possible loss of state transportation funds for highway expansion (PSRC 2001). See *What are conformity requirements?* below for a discussion of regulatory compliance and funding of transportation projects.

In contrast to most criteria pollutants, emissions of greenhouse gases have been rising from all types of sources (i.e., industrial, residential, commercial, and transportation). Transportation sources, which include all modes of travel, have shown the largest increase. From 1990 to 1998, carbon emissions from transportation grew by 13 percent, and overall, transportation contributes approximately one third of national carbon emissions (FHWA 2004).

What are conformity requirements?

In Washington state, transportation projects that are located in maintenance and nonattainment areas must meet the conformity requirements set out in the federal Clean Air Act (implemented by EPA regulations 40 CFR Parts 51 and 93) and the Washington Clean Air Act. The SR 520 Bridge Replacement and HOV Project is subject to these conformity requirements because it is a major transportation project that is located in a maintenance area for ozone and CO.

In nonattainment and maintenance areas, the federal Clean Air Act and the Washington Clean Air Act require transportation projects to conform with the State Implementation Plan (SIP), the state's plan for

meeting and maintaining compliance with the NAAQS. Conformity with the SIP means that transportation activities will not produce new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS.

In addition, the state's Growth Management Act requires that "regionally significant" projects be included in the Regional Transportation Plan (RTP) and the Transportation Improvement Program (TIP). The SR 520 Bridge Replacement and HOV Project is included in the RTP, *Destination 2030* (PSRC 2001), and in the 2003-2005 TIP (PSRC 2004a). Both the RTP and TIP have been found to conform to the SIP. The TIP lists all current transportation projects in King, Kitsap, Pierce, and Snohomish counties. PSRC updates this list every 2 years, identifying the priority projects and the amount of funding for which they qualify from federal, state, or local funds.

Because the project area is in a maintenance area for ozone, the inclusion of the SR 520 Bridge Replacement and HOV Project in the RTP and TIP is sufficient to demonstrate that it has met the conformity requirement for ozone.

Because the project is in a maintenance area for CO, a project-level analysis is necessary to verify that no localized effects would cause or contribute to a violation of the NAAQS. The analysis of effects must evaluate whether the project meets the project-level conformity requirements for CO. The analysis must also include air dispersion modeling to calculate CO concentrations in the vicinity of selected intersections chosen based on their high level of traffic and delay. The purpose for this is to demonstrate that the project would not cause a new violation or increase the frequency or severity of an existing violation of the air quality standards. The results of this analysis are discussed in the next section.

Potential Effects of the Project

What methods were used to evaluate the project's potential effects on regional air quality?

Air quality is a resource without boundaries. In general, actions that affect air quality do so on a regional basis, as pollutants released to the air are subject to dilution and mixing throughout the entire airshed. This is particularly true for mobile sources of emissions, such as the motor vehicles using the roads affected by this project. Exhaust from

motor vehicles is released during the entire trip of each vehicle and disperses to areas beyond the limits of the proposed project.

The air quality discipline team performed an emissions burden analysis to evaluate emissions effects on a regional basis. The team calculated the emissions from vehicles in the region for each alternative and compared them to the emission budget for the region, as calculated by PSRC. This budget, established and approved as a part of the SIP, is the allowed pollutant emission rate for motor vehicles within the region. Effects from greenhouse gases and toxic air pollutants are addressed qualitatively.

We performed the emission burden analysis for each alternative by assuming operating conditions in the year 2030. This year was chosen to be consistent with *Destination 2030* (PSRC 2001), which calculated regional emissions for the same year. Emissions, in tons per day, of NO_X, CO, and VOCs were estimated using regional emission factor data and forecasted vehicle miles traveled (VMT) on a daily basis. We obtained emission factors from the MOBILE6.2 model, in terms of grams per VMT. Calculations of emission factors for CO were based on an average winter day because vehicles produce more CO exhaust under cold operating conditions. We estimated NO_x and VOC factors based on an average summer day because warmer conditions result in higher emissions of these pollutants in vehicle exhaust.

The transportation analysis data for this project provided the daily VMT.

What methods were used to evaluate the project's potential localized effects on air quality?

Localized effects can occur in areas where heavy traffic congestion occurs, causing vehicles to slow down or even stop for some period of time. This phenomenon results in more pollutants emitted from vehicles in the congested area. Under certain meteorological conditions, the pollutants can build up to unhealthy concentrations near or above the ambient air quality standards. The air quality discipline team performed an analysis at intersections with the greatest potential for localized effects, sometimes called a "hot spots" analysis. We performed the analysis according to methodology prescribed in the federal conformity rule, the *Guidebook for Conformity, Air Quality Assistance for Nonattainment Areas* (KJS Associates, Inc. 1995) and EPA's *Guideline for Modeling Carbon Monoxide from Roadway Intersections* (U.S.

EPA 1992a). Our analysis used prescribed methodologies that are based on conservative assumptions designed to produce modeled results higher than what would be likely to occur under actual conditions in order to avoid violation of the standards.

Although many pollutants are present in vehicle exhaust, CO is the primary pollutant of regulatory concern for transportation projects. The analysis of localized effects involves estimating the CO emissions generated by vehicles and then using a dispersion model to estimate the ambient concentration at receptors placed around the intersections analyzed.

The team performed a screening analysis to identify the worst-case intersections for performing a CO hot spots analysis based on 2030 forecasts. Worst-case intersections are defined as the three with the worst, or longest, delay. The team performed the screening for both the 4-Lane and 6-Lane Alternatives, according to current federal and state guidance, using data compiled in the transportation analysis for 47 intersections. See Appendix R, *Transportation Discipline Report*, for more detailed information about traffic volumes and delay for these 47 intersections. The screening analysis indicated that the following three intersections have the longest delay under both alternatives. The intersections are:

- Mercer Street and the I-5 ramps, Seattle
- Montlake Boulevard and Lake Washington Boulevard, Seattle
- 108th Avenue Northeast and Northup Way, Bellevue

The discipline team calculated fleet-averaged CO emission factors using EPA MOBILE6.2 model (U.S. EPA, version 6.2, September 24, 2003), and then used the EPA CAL3QHC model (U.S. EPA 1992b) to calculate CO concentrations near the selected intersections.

MOBILE6.2 calculates emission factors for gasoline-fueled, light-duty vehicles, trucks, heavy-duty vehicles, and motorcycles, and for diesel-fueled light-duty vehicles, trucks, and heavy-duty vehicles. The model accounts for progressively more stringent tailpipe emission standards over the vehicle model years evaluated.

CAL3QHC is a dispersion model that calculates ambient concentrations of CO at specific locations, or receptors, near the roadway intersections. The team chose receptors at sites accessible to the public, according to EPA guidance (U.S. EPA 1992a). The receptors were placed, according to EPA guidance, no closer than 10 feet from the edge of the road, at the

corners, and at distances of 82 and 164 feet from each corner along each approach and departure.

Using EPA guidelines (U.S. EPA 1992b), the discipline team ran CAL3QHC with meteorological input parameters consisting of a 3-feet-per-second wind speed, a 3,250-foot mixing height, and a moderately stable (Class E) atmosphere to simulate winter conditions, when elevated CO concentrations most frequently occur. The team calculated 1-hour average ambient CO concentrations to estimate the effect during peak-hour traffic conditions and then converted the resulting data to an 8-hour concentration using a persistence factor of 0.7, as recommended by EPA. We used a background CO concentration to account for other CO emission sources in the project vicinity, such as home heating and train exhaust. This procedure is recommended for intersections located in rural, suburban, and urban areas in *Guidebook for Conformity, Air Quality Assistance for Nonattainment Areas* (KJS Associates, Inc. 1995). As indicated in Exhibit 11, we used an urban value for the two Seattle intersections and a suburban value for the Bellevue intersection; these values are based on land uses in the vicinity of those intersections.

Exhibit 11. Summary of CAL3QHC Inputs for Each Intersection Analyzed

Parameter	Mercer/I-5 Ramps	Montlake/Lake Washington Boulevard	108th Avenue North-east/Northup Way
Surface Roughness Coefficient	175 cm[a]	175 cm[a]	108 cm[b]
Background CO Concentration	5 ppm[c]	5 ppm[c]	3 ppm[d]
Signal Type	Actuated	Actuated	Actuated
Intersection Arrival Rate	Average progression	Average progression	Average progression
Saturation Flow Rate	As indicated in traffic model output	As indicated in traffic model output	As indicated in traffic model output
Clearance Lost Time	3 seconds	3 seconds	3 seconds

[a] Surface roughness recommended in guidance for office land use type (U.S. EPA 1992b).
[b] Surface roughness recommended in guidance for single-family residential (U.S. EPA 1992b).
[c] Background concentration recommended in guidance for urban areas (U.S. EPA 1992b).
[d] Background concentration recommended in guidance for suburban areas (U.S. EPA 1992b).

The team calculated concentrations at a receptor height of 6 feet. Exhibit 11 summarizes other CAL3QHC model inputs. The team performed the analysis using p.m. peak-hour traffic volumes for existing conditions, and years 2016 and 2030 for each alternative. Results of the analysis were used to determine CO conformity.

How would the project permanently affect regional and local air quality?

Regional Air Quality

Exhibit 12 shows the emissions projected for each of the project alternatives. Emissions are based on the regional travel demand model forecast data which, at a planning level, takes into account the effects of the project on the transportation system. The travel demand model assumptions are consistent with those of the local and regional land use plans. See Appendix R, *Transportation Discipline Report,* for more details on traffic modeling.

Exhibit 12. Burden Emissions Analysis—Daily Projected Emissions for the Region (tons per day)

Alternative	CO	VOC	NO_X
2030 No Build	1,391	49.4	42.2
2030 4-Lane	1,378	48.9	41.8
2030 6-Lane	1,378	48.9	41.8

Note: Emissions were calculated using the MOBILE6.2 emission factor for 30 mph and the daily VMT from the *Transportation Discipline Report*, which is available in Appendix R of this EIS.

Exhibit 12 shows that emissions would be lower for both build alternatives compared to the No Build Alternative (Continued Operation Scenario). Consequently, the project is anticipated to slightly improve regional air quality compared to the No Build Alternative. Both the 4-Lane and 6-Lane Alternatives are expected to result in higher use of HOV and transit than the No Build Alternative. Both of the build alternatives have a lower predicted VMT than the No Build Alternative. The 6-Lane Alternative has a slightly higher predicted VMT than the 4-Lane Alternative in the project area; however, this amount is so small that it is not reflected in the daily projected emissions.

We analyzed the results for these three pollutants (see Exhibit 12) and found that the roadway improvements proposed by this project would not adversely affect air quality from other pollutants, including greenhouse gases and toxic air pollutants. The roadway improvements would have an overall effect of improving traffic flow and reducing idling time.

There is no way to quantitatively estimate how the Catastrophic Failure Scenario of the No Build Alternative would affect air quality, but it is likely that air quality would degrade as traffic tries to cross or travel around Lake Washington along the remaining routes. As many of these

routes are near or at capacity, the region would experience an increase in vehicle emissions because many more vehicles would be traveling at reduced speeds and/or idling at congestion points.

Local Air Quality

One of the primary objectives of the project is to increase mobility on SR 520, which translates to fewer delays for motor vehicles and lower vehicle exhaust emissions. Regionwide, fewer delays and lower emissions are a positive effect of the project. However, shifts in traffic patterns could result in localized increases in concentrations of pollutants from motor vehicles. The discipline team performed a CO hot spots analysis at affected intersections to identify whether the emissions would cause a substantial effect.

Exhibits 13 and 14 summarize the CAL3QHC modeling results. Although the 2000 modeled concentrations are above the 8-hour NAAQS of 9 ppm at all three intersections evaluated, the results for the alternatives in subsequent years show a decreasing trend in CO concentrations. The project would neither cause new violations of the 1-hour or 8-hour CO NAAQS in future years, nor increase the frequency or severity of any existing violation.

Exhibit 13. Maximum 1-Hour Carbon Monoxide Concentrations (ppm)

Alternative	Mercer/I-5 Ramps	Montlake/Lake Washington Boulevard	108th Avenue North-east/Northup Way
2000 Existing Conditions	22.3	20.2	16.3
2016 – No Build	12.2	11.6	8.6
2016 – 4 Lane	11.8	11.6	8.6
2016 – 6 Lane	12.2	11.4	8.7
2030 – No Build	10.3	10.5	7.4
2030 – 4 Lane	10.3	10.3	7.3
2030 – 6 Lane	10.4	10.3	7.4
CO NAAQS		**35 ppm**	

Exhibit 14. Maximum 8-Hour Carbon Monoxide Concentrations (ppm)

Scenario	Mercer/I-5 Ramps	Montlake/Lake Washington Boulevard	108th Avenue North-east/Northup Way
2000 Existing Conditions	15.6	14.1	11.4
2016 – No Build	8.5	8.1	6.0
2016 – 4 Lane	8.3	8.1	6.0
2016 – 6 Lane	8.5	8.0	6.1
2030 – No Build	7.2	7.4	5.2
2030 – 4 Lane	7.2	7.2	5.1
2030 – 6 Lane	7.3	7.2	5.2
CO NAAQS		**9 ppm**	

The results for CO can be extrapolated to conclude that the roadway improvements proposed by this project would not result in adverse effects to air quality from other pollutants, including greenhouse gases and toxic air pollutants. Roadway improvements proposed by the project would have the overall effect of improving traffic flow and reducing idling time, when motor vehicle emissions are highest.

The Catastrophic Failure Scenario of the No Build Alternative would affect the three intersections with the longest delays, but it is difficult to estimate this quantitatively. Traffic patterns would shift as drivers try to cross or go around Lake Washington on other routes. However, it is likely that Montlake Boulevard/ Lake Washington Boulevard and 108th Avenue Northeast/Northup Way would experience lower traffic volumes as vehicles navigate toward either I-5 or I-405 via east-west routes other than SR 520. The Catastrophic Failure Scenario would likely have little effect on the Mercer Street and I-5 ramps intersection.

Installation of the lids under the 6-Lane Alternative would limit the dispersion of particulate matter generated by road dust, tire wear, and diesel exhaust in these localized areas. These lids are of a length that do not require active ventilation, and would simply be ventilated by airflow through either end of the lidded road section. Road dust stirred up under the lid would eventually hit the wall and/or ceiling, some of it falling back to the ground. Some would escape through either end of the tunnel, but there would be no concentration or direction of this dust towards populated areas.

Attachment 1 contains the CAL3QHC model output files for the air quality analysis.

Does the project meet project-level conformity requirements?

Because the project is not anticipated to create any new violations of the CO standard, nor increase the frequency of an existing violation, it is determined to conform with the purpose of the current SIP and the requirements of the Clean Air Act and the Washington Clean Air Act. The proposed project is included in the RTP, *Destination 2030* (PSRC 2001), and in the 2003-2005 TIP (PSRC 2004a). The RTP and the TIP meet the conformity requirements identified by federal and state regulations for both CO and ozone. Because the project is included in these plans, which conform to federal and state regulations, the project is also considered to demonstrate project-level conformity for ozone. This is supported by the estimated reduction in VOC emissions, calculated regionally, for both build alternatives as compared to the No Build Alternative.

How would project construction temporarily affect air quality?

The following sections provide a qualitative discussion of the SR 520 HOV and Bridge Replacement Project's effect on air quality due to construction. The air quality discipline team's analysis evaluates potential effects on air quality for both the 4-Lane and 6-Lane Alternatives. The No Build Alternative would not have construction effects and was, therefore, not evaluated.

Effects Common to the Entire Project Area

During construction of roadway projects, soil-disturbing activities, heavy-duty equipment, commuting workers, and the laying of asphalt may generate emissions that can temporarily affect air quality. The total emissions and the timing of the emissions from these sources would vary depending on the phasing of the project and options chosen for the project. When this report was written, little information was available regarding construction phasing, which will depend on the availability of funding.

Typical sources of emissions during construction of transportation projects include the following:

- Fugitive dust generated during excavation, grading, loading, and unloading activities
- Dust generated during demolition of structures and pavement
- Engine exhaust emissions from construction vehicles, worker vehicles, and diesel fuel-fired construction equipment
- Increased motor vehicle emissions associated with increased traffic congestion during construction
- VOC and odorous compounds emitted during asphalt paving

The regulated pollutant of concern for the first two source types is $PM_{2.5}$ and PM_{10}. Engine and motor vehicle exhaust would result in emissions of VOC, NO_x, PM_{10}, air toxics, and greenhouse gases. The quantity of emissions is difficult to estimate at this point, for several reasons. Construction would be phased over a period of approximately 8 years, and there is no detailed schedule identifying when specific activities would occur. Also, there is no estimate available for type and quantity of construction equipment that would be required, either by project area or as a whole over the entire period. The following sections address the relative differences in the potential construction emissions that could occur for the different alternatives.

Seattle

4-Lane Alternative

The effects for the 4-Lane Alternative are described in the *Effects Common to the Entire Project Area* section of this document.

6-Lane Alternative

The effects for the 6-Lane Alternative are described in the *Effects Common to the Entire Project Area* section of this document. The air quality effects of the 6-Lane Alternative would be greater than the 4-Lane Alternative because more area would need to be cleared, more materials would be used, more worker and truck trips would occur, and more equipment would be used. This alternative would also entail construction of two lids, which would require additional construction equipment and trucks delivering concrete.

Lake Washington

4-Lane Alternative

Construction effects on air quality in the Lake Washington project area would primarily result from the demolition and construction of the approaches to the Evergreen Point Bridge. Emissions would come from the equipment used to assemble the preconstructed sections of the bridge, such as barges and cranes.

6-Lane Alternative

The effects of construction of the 6-Lane Alternative on air quality in the Lake Washington project area would be similar to the 4-Lane Alternative described above, although the quantity of pollution emitted would be greater since it is assumed more diesel-fired equipment would be required to assemble the larger structure. Also, more worker, truck, and barge traffic would result in greater emissions from mobile sources.

Eastside

4-Lane Alternative

The effects from the 4-Lane Alternative are described in the *Effects Common to the Entire Project Area* section of this document.

6-Lane Alternative

The 6-Lane Alternative would have a greater effect on air quality than the 4-Lane Alternative because more area would need to be cleared, more materials would be used, more worker trips would occur, and more equipment would be used. This alternative would also entail construction of three lids, which would require additional construction equipment and trucks delivering concrete.

Mitigation

What has been done to avoid or minimize negative effects?

The build alternatives would reduce traffic congestion with shorter travel times along SR 520, fewer VMT, and increased use of HOV and transit, all of which would improve air quality.

For temporary effects during construction, state law requires construction site owners and/or operators to take reasonable precautions to prevent fugitive dust from becoming airborne. Fugitive

dust may become airborne during demolition, material transport, grading, driving of vehicles and machinery on and off the site, and through wind events. WSDOT will comply with the procedures outlined in the Memorandum of Agreement between WSDOT and the PSCAA for controlling fugitive dust (WSDOT 2004). Controlling fugitive dust emissions may require some of the following actions:

- Spray exposed soil with water or other suppressant to reduce emissions of PM_{10} and deposition of particulate matter.
- Use phased development to keep disturbed areas to a minimum.
- Use wind fencing to reduce disturbance to soils.
- Minimize dust emissions during transport of fill material or soil by wetting down or by ensuring adequate freeboard (space from the top of the material to the top of the truck bed) on trucks.
- Promptly clean up spills of transported material on public roads.
- Schedule work tasks to minimize disruption of the existing vehicle traffic on streets.
- Restrict traffic onsite to reduce soil upheaval and the transport of material to roadways.
- Locate construction equipment and truck staging areas away from sensitive receptors as practical and in consideration of potential effects on other resources.
- Provide wheel washers to remove particulate matter that would otherwise be carried offsite by vehicles to decrease deposition of particulate matter on area roadways.
- Cover dirt, gravel, and debris piles as needed to reduce dust and wind-blown debris.
- Minimize odors onsite by covering loads of hot asphalt.

Emissions of PM_{10}, VOCs, NO_x, SO_x, and CO would be minimized whenever reasonable and possible. Since these emissions primarily result from construction equipment, machinery engines would be kept in good mechanical condition to minimize exhaust emissions.

Federal regulations have been adopted that will require the use of ultra low-sulfur diesel fuel in both on-road trucks (by 2006) and construction equipment (by 2010). This will reduce the sulfur content of diesel fuel

from its current level of 500 ppm to 15 ppm million—a 97 percent reduction—and will result in a decrease in both SO_2 and PM emissions from these engines. Contractors will be encouraged by WSDOT to reduce idling time of equipment and vehicles and to use newer construction equipment or equipment with add-on emission controls.

How could the project compensate for unavoidable negative effects?

As no permanent effects on air quality are anticipated as a result of this project, no compensation is proposed.

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Attachment 1

Model Output Files

Mercer Street and I-5 Ramps

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Mercer St and I-5 Ramps RUN: 2000 Existing

DATE : 8/18/ 4
TIME : 19:11:39

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1. EBA	*	-1000.0	6.0	.0	6.0	*	1000.	90.	AG	4070.	32.2	.0	56.0		
2. EBD1	*	.0	6.0	100.0	6.0	*	100.	90.	AG	4510.	32.2	.0	56.0		
3. EBD2	*	100.0	6.0	975.0	315.0	*	928.	71.	AG	4510.	32.2	.0	56.0		
4. WBA1	*	986.0	354.0	125.0	45.0	*	915.	250.	AG	2520.	32.2	.0	56.0		
5. WBA2	*	125.0	45.0	24.0	150.0	*	146.	316.	AG	2040.	32.2	.0	44.0		
6. WBA3	*	125.0	45.0	32.0	12.0	*	99.	250.	AG	480.	32.2	.0	44.0		
7. NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1580.	32.2	.0	56.0		
8. NBD1	*	24.0	.0	24.0	150.0	*	150.	360.	AG	290.	32.2	.0	68.0		
9. NBD2	*	24.0	150.0	24.0	1000.0	*	850.	360.	AG	2330.	32.2	.0	68.0		
10. SBA	*	-6.0	1000.0	-6.0	.0	*	1000.	180.	AG	110.	32.2	.0	32.0		
11. SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	660.	32.2	.0	44.0		
12. SWD	*	.0	-80.0	1000.0	-80.0	*	1000.	90.	AG	780.	32.2	.0	44.0		
13. EBT	*	-24.0	.0	-5268.1	-1.3	*	5244.	270.	AG	803.	100.0	.0	36.0	1.74	266.4
14. EBR	*	-24.0	-18.0	-222.5	-18.0	*	198.	270.	AG	268.	100.0	.0	12.0	.86	10.1
15. WBL	*	41.0	15.0	868.4	310.5	*	879.	70.	AG	1070.	100.0	.0	24.0	1.40	44.6
16. WBR	*	38.0	136.0	1429.6	-1319.6	*	2014.	136.	AG	331.	100.0	.0	24.0	1.20	102.3
17. NBT	*	6.0	-92.0	6.0	-263.6	*	172.	180.	AG	477.	100.0	.0	12.0	.89	8.7
18. NBR	*	24.0	-92.0	24.0	-3339.3	*	3247.	180.	AG	749.	100.0	.0	24.0	1.82	165.0
19. SBT	*	-6.0	24.0	-6.0	82.9	*	59.								

360. AG 477. 100.0 .0 12.0 .31 3.0

JOB: Mercer St and I-5 Ramps RUN: 2000 Existing

DATE : 8/18/ 4
TIME : 19:11:39

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
13. EBT	130	55	3.0	3410	1215	235.74	2	3
14. EBR	130	55	3.0	660	1425	235.74	2	3
15. WBL	130	110	3.0	480	1494	235.74	2	3
16. WBR	130	34	3.0	2040	1212	235.74	2	3
17. NBT	130	98	3.0	290	1565	235.74	2	3
18. NBR	130	77	3.0	1290	964	235.74	2	3
19. SBT	130	98	3.0	110	1732	235.74	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-186.0	34.0	5.9
2. R2	-104.0	34.0	5.9
3. R3	-22.0	34.0	5.9
4. R4	-22.0	116.0	5.9
5. R5	-22.0	198.0	5.9
6. R6	58.0	314.0	5.9
7. R7	58.0	232.0	5.9
8. R8	58.0	150.0	5.9
9. R9	125.0	73.0	5.9
10. R10	202.0	101.0	5.9
11. R11	279.0	129.0	5.9
12. R12	200.0	-2.0	5.9
13. R13	123.0	-30.0	5.9
14. R14	46.0	-58.0	5.9
15. R15	128.0	-58.0	5.9
16. R16	210.0	-58.0	5.9
17. R17	210.0	-102.0	5.9
18. R18	128.0	-102.0	5.9
19. R19	46.0	-102.0	5.9
20. R20	46.0	-184.0	5.9
21. R21	46.0	-266.0	5.9
22. R22	-34.0	-198.0	5.9
23. R23	-34.0	-116.0	5.9

24. R24	*	-34.0	-34.0	5.9	*
25. R25	*	-116.0	-34.0	5.9	*
26. R26	*	-198.0	-34.0	5.9	*

JOB: Mercer St and I-5 Ramps RUN: 2000 Existing

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) * REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5. *	5.3	5.8	8.3	8.3	8.3	7.5	7.6	7.6	5.8	5.3	5.1	12.5	13.4	13.0	12.0	11.5	10.8	11.3	12.5	11.4
10. *	5.5	6.3	8.8	8.6	8.8	6.5	6.5	6.6	5.5	5.2	5.2	12.7	13.3	12.6	11.8	11.4	10.7	10.9	12.2	10.7
15. *	5.9	6.7	8.8	8.6	8.9	5.8	5.8	5.9	5.4	5.2	5.2	13.0	13.5	12.5	11.6	11.3	10.9	11.1	11.6	10.1
20. *	6.1	6.7	8.7	8.1	8.5	5.5	5.5	5.5	5.5	5.3	5.3	13.3	13.5	12.2	11.8	11.5	11.1	11.2	11.7	9.9
25. *	6.2	6.7	8.7	7.8	8.3	5.4	5.4	5.4	5.4	5.3	5.3	13.5	14.0	12.5	12.1	11.7	11.0	11.4	11.8	9.9
30. *	6.3	6.7	8.6	7.5	8.0	5.3	5.3	5.3	5.4	5.3	5.3	14.0	14.3	13.0	12.3	12.0	11.3	11.6	12.0	10.2
35. *	6.3	6.6	8.5	7.3	7.8	5.3	5.3	5.3	5.3	5.3	5.3	14.5	14.9	13.5	12.8	12.2	11.5	12.0	12.6	10.3
40. *	6.3	6.6	8.5	7.2	7.7	5.2	5.2	5.2	5.4	5.4	5.4	15.1	15.5	14.1	13.2	12.5	11.8	12.1	12.8	10.6
45. *	6.2	6.7	8.3	7.1	7.4	5.2	5.2	5.2	5.5	5.5	5.5	15.9	16.4	15.0	13.6	12.8	12.0	12.6	13.5	10.8
50. *	6.2	6.7	8.4	7.0	7.3	5.2	5.2	5.2	6.1	5.9	5.9	16.6	17.2	15.8	14.0	13.0	12.0	12.8	13.9	10.8
55. *	6.3	7.1	8.7	7.2	7.3	5.2	5.2	5.2	6.8	6.8	6.7	17.2	17.9	16.8	14.2	12.6	11.4	12.5	14.2	10.4
60. *	6.7	7.7	10.1	7.5	7.2	5.2	5.2	5.3	9.0	8.8	8.5	16.8	17.5	16.7	13.4	11.7	10.3	11.6	13.6	9.3
65. *	7.8	9.2	12.3	7.8	7.1	5.1	5.1	5.7	12.5	12.0	11.5	15.0	15.8	15.4	11.8	10.1	9.3	10.3	12.2	8.0
70. *	9.9	11.5	15.6	8.9	7.5	5.1	5.4	6.5	16.6	15.9	15.2	12.2	12.9	13.0	9.7	8.5	8.3	9.0	10.3	6.9
75. *	12.2	14.3	18.5	10.4	8.1	5.2	5.8	7.8	19.7	19.0	18.4	9.2	9.8	10.0	8.0	7.5	7.8	8.0	8.8	6.2
80. *	14.5	16.1	20.1	12.1	9.2	5.5	6.8	9.4	21.2	20.7	20.2	7.0	7.8	8.1	7.0	7.2	7.8	7.6	7.9	5.9
85. *	16.2	17.4	20.7	13.3	10.5	6.2	7.9	10.5	21.1	20.6	20.4	5.9	6.8	7.3	6.9	7.5	7.6	7.3	7.4	5.6
90. *	17.2	17.7	20.4	13.8	11.1	7.1	8.8	11.1	20.4	19.9	19.7	5.5	6.5	7.1	7.2	8.0	7.4	7.1	7.0	5.5
95. *	17.8	17.0	19.2	13.7	11.5	7.8	9.1	11.1	19.0	18.6	18.3	5.6	6.6	7.4	7.4	8.4	7.0	6.6	6.6	5.4

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 100.  *  17.6  16.7  18.1  13.4  11.5   8.2   9.1  10.9  18.0  17.6  17.5   5.6
6.7   7.4   7.6   8.6   6.6   6.2   6.1   5.3
 105.  *  17.7  16.2  17.4  13.2  11.4   8.2   9.2  10.8  17.3  16.9  16.7   5.7
6.7   7.3   7.4   8.6   6.4   6.0   5.8   5.4
 110.  *  17.0  16.1  16.3  12.9  11.6   8.3   9.1  10.6  16.7  16.3  16.2   5.7
6.8   7.1   7.3   8.6   6.2   5.8   5.8   5.5
 115.  *  16.7  15.6  15.5  12.2  11.9   8.3   9.1  10.7  16.3  15.8  15.6   5.7
6.8   7.1   7.2   8.7   6.2   5.8   5.7   5.5
 120.  *  16.2  15.8  14.8  11.9  12.2   8.4   9.1  10.7  16.1  15.3  15.3   5.8
6.9   6.9   7.1   8.9   6.4   5.8   5.7   5.5
 125.  *  16.0  15.5  14.2  11.5  12.8   8.3   9.0  10.9  16.3  15.1  14.9   6.1
6.8   6.8   7.0   9.2   6.4   5.8   5.7   5.5
 130.  *  15.6  15.4  13.6  11.1  13.1   8.4   9.0  11.5  16.7  14.8  14.7   6.4
6.8   6.7   7.0   9.5   6.4   5.7   5.6   5.4
 135.  *  15.1  15.1  12.9  10.7  13.3   8.5   9.3  12.4  16.9  14.7  14.5   7.0
6.5   6.5   6.7   9.3   6.1   5.6   5.6   5.3
 140.  *  14.7  15.0  12.7  10.4  12.8   8.5   9.6  13.3  17.0  14.6  14.2   7.3
6.1   6.3   6.3   8.7   5.8   5.3   5.4   5.3
 145.  *  14.3  14.9  12.7  10.1  12.0   8.7   9.6  13.6  17.1  14.6  14.3   7.5
5.8   6.2   6.1   7.9   5.4   5.2   5.3   5.2
 150.  *  14.0  15.0  12.9  10.1  10.9   8.9   9.7  13.7  17.2  14.7  14.2   7.4
5.7   6.0   5.9   7.1   5.1   5.0   5.2   5.2
 155.  *  13.6  14.6  13.3  10.7  10.5   8.9   9.8  13.5  17.0  14.7  14.4   7.3
5.6   6.2   5.8   6.6   5.0   5.0   5.4   5.4
 160.  *  13.5  14.5  14.3  11.1  10.3   8.9  10.1  13.5  16.9  14.9  14.4   7.1
5.6   6.4   5.8   6.3   5.0   5.0   5.6   5.6
 165.  *  13.3  14.5  15.4  12.4  10.8   9.6  10.4  13.5  16.9  14.7  14.3   7.0
5.7   7.0   5.8   6.1   5.0   5.0   6.3   6.3
 170.  *  13.1  14.4  16.5  13.3  11.2  10.3  11.5  13.9  16.6  14.6  14.1   6.9
5.9   8.5   6.1   6.1   5.1   5.2   7.7   7.7
 175.  *  12.8  13.9  16.7  13.8  11.6  11.8  12.7  14.9  16.8  14.7  14.4   7.1
6.4  10.8   6.6   6.3   5.3   5.8   9.9   9.8
 180.  *  12.6  13.3  16.3  13.0  11.4  13.0  13.7  15.8  17.9  15.3  14.7   7.5
7.3  13.3   7.5   6.8   5.7   6.6  12.4  12.0
 185.  *  11.8  12.3  14.4  11.3  10.1  13.3  14.0  16.3  18.7  16.1  15.4   8.0
8.1  14.6   8.3   7.3   6.3   7.5  13.8  13.3
 190.  *  11.5  11.6  12.7  10.1   8.8  12.9  13.1  15.4  19.2  17.0  16.2   8.4
8.7  14.9   8.7   7.6   6.6   7.9  14.2  13.7
 195.  *  11.3  11.3  11.9   9.0   7.9  11.9  12.5  14.1  19.7  17.5  16.4   8.7
9.0  14.3   8.9   7.9   7.0   8.1  13.9  13.4
 200.  *  11.4  11.4  11.6   8.5   7.5  10.8  11.3  13.0  19.6  18.0  17.0   8.7
9.0  13.4   8.9   7.9   7.0   8.0  13.3  12.8
 205.  *  11.5  11.6  11.6   8.5   7.5  10.4  10.7  12.2  19.6  18.3  17.6   8.7
8.8  12.4   8.9   7.9   7.0   8.0  12.7  12.2
 210.  *  11.8  11.9  11.9   8.5   7.5   9.9  10.5  11.9  19.4  18.6  17.9   8.6
8.8  11.5   8.8   7.8   6.9   7.9  12.2  11.8
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PAGE 4

JOB: Mercer St and I-5 Ramps RUN: 2000 Existing

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20
 REC21 REC22 REC23 REC24 REC25 REC26

------*-------------------------------------------------------------------------------
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 215.  *  12.0  12.2  12.1   8.6   7.6   9.8  10.3  11.8  18.7  18.9  18.6   8.6
8.6  10.8   8.8   7.9   7.0   7.8  12.0  11.6
 220.  *  12.4  12.7  12.5   8.7   7.6   9.9  10.1  12.0  18.4  18.8  18.9   8.5
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8.5  10.1   8.8   7.7   6.8   7.8  11.4  11.2
 225.   *  12.6  13.0  12.8   8.8   7.7   9.7   9.9  11.8  18.0  18.6  19.2   8.5
8.4   9.5   8.8   7.8   6.8   7.8  11.2  11.0
 230.   *  13.0  13.4  13.4   8.9   7.7   9.6  10.1  11.8  17.7  18.5  19.7   8.3
8.1   9.0   8.8   8.0   6.9   7.9  10.8  10.7
 235.   *  13.4  13.8  13.8   9.1   7.8   9.5  10.0  11.8  16.7  18.2  19.5   8.2
7.7   8.5   8.6   7.9   6.9   7.7  10.7  10.6
 240.   *  14.0  14.4  14.5   9.2   7.9   9.4   9.9  11.5  16.5  17.1  18.3   8.3
7.4   8.2   8.6   8.0   6.9   7.7  10.5  10.4
 245.   *  14.9  15.2  15.4   9.4   8.0   9.3   9.9  11.6  16.2  16.5  17.1   8.3
7.2   7.9   8.4   8.2   6.9   7.7  10.3  10.2
 250.   *  16.0  16.2  16.4   9.6   8.0   9.2   9.9  11.5  16.2  15.9  15.8   9.0
7.2   7.8   8.2   8.1   6.9   7.7  10.2  10.0
 255.   *  17.4  17.5  17.8   9.7   7.9   8.9   9.7  11.5  16.5  14.9  14.3  10.7
7.8   8.1   8.4   8.5   7.2   7.8  10.3  10.0
 260.   *  18.2  18.4  18.5   9.5   7.5   8.6   9.3  11.3  16.2  13.6  12.7  13.8
9.3   8.8   9.0   9.0   7.7   8.3  10.6  10.1
 265.   *  17.9  18.0  18.2   8.6   6.8   8.3   8.9  10.4  15.5  12.3  11.0  16.9
12.1  10.6  10.2  10.5   8.8   9.3  11.6  10.6
 270.   *  15.9  16.0  16.2   7.4   6.1   7.9   8.3   9.6  13.7  10.3   9.2  19.4
14.5  12.7  12.1  12.2  10.4  10.7  13.0  11.4
 275.   *  12.4  12.5  12.6   6.1   5.5   7.5   7.6   8.7  12.0   8.9   7.4  19.9
16.0  14.3  13.6  13.3  11.8  11.9  14.2  12.1
 280.   *   9.2   9.3   9.3   5.3   5.1   7.2   7.3   8.2  10.7   7.5   6.6  18.7
16.3  14.9  13.7  13.1  12.4  12.7  14.6  12.5
 285.   *   7.1   7.1   7.1   5.1   5.0   7.2   7.2   7.9  10.2   6.9   6.1  17.4
15.1  14.9  13.0  12.6  12.2  12.9  14.9  13.0
 290.   *   6.1   6.1   6.1   5.0   5.0   7.2   7.2   7.8  10.1   6.5   6.0  16.6
13.7  14.1  12.2  11.8  11.4  12.3  14.4  13.2
 295.   *   5.7   5.7   5.7   5.0   5.0   7.2   7.2   7.9  10.1   6.4   6.0  15.9
12.8  13.4  11.4  11.4  10.9  11.5  13.9  13.4
 300.   *   5.5   5.5   5.5   5.0   5.0   7.3   7.3   7.9  10.4   6.3   6.1  15.9
12.3  12.7  10.8  11.7  10.6  11.0  13.5  13.5
 305.   *   5.5   5.5   5.5   5.0   5.0   7.5   7.5   7.9  10.2   6.2   6.0  15.7
12.1  12.1  10.3  12.0  10.2  10.5  13.1  13.6
 310.   *   5.4   5.4   5.4   5.0   5.0   7.6   7.6   7.9   9.9   6.2   6.0  15.5
12.0  11.8  10.2  12.7  10.4  10.1  12.6  13.6
 315.   *   5.4   5.4   5.4   5.0   5.0   7.7   7.7   7.9   9.5   6.2   5.9  14.9
12.2  11.2  10.2  13.5  10.6   9.9  12.4  13.7
 320.   *   5.4   5.4   5.4   5.0   5.0   7.9   7.9   7.9   8.9   6.2   5.9  14.4
12.5  10.9  10.7  14.1  11.3   9.9  12.0  13.8
 325.   *   5.3   5.3   5.3   5.0   5.0   8.1   8.1   8.0   8.3   6.2   6.0  13.9
13.0  10.9  11.1  14.2  11.8  10.2  11.4  14.0
 330.   *   5.3   5.3   5.3   5.0   5.0   8.3   8.3   8.3   7.9   6.2   5.9  13.6
13.5  10.7  11.7  13.9  11.9  10.4  11.2  14.1
 335.   *   5.2   5.2   5.2   5.0   5.0   8.7   8.7   8.6   7.5   6.2   5.8  13.5
14.5  10.8  12.2  13.6  12.3  11.0  11.3  14.0
 340.   *   5.1   5.1   5.2   5.1   5.1   9.0   9.1   9.0   7.4   6.1   5.7  13.6
15.0  11.2  12.9  13.2  12.2  11.7  11.4  13.5
 345.   *   5.1   5.1   5.4   5.3   5.4   9.5   9.5   9.5   7.3   6.0   5.5  13.3
15.1  11.6  13.1  13.0  12.0  12.4  12.1  13.5
 350.   *   5.0   5.1   5.7   5.8   5.7   9.7   9.7   9.8   7.0   5.7   5.3  13.0
14.8  12.6  13.1  12.5  11.6  12.6  12.3  13.2
 355.   *   5.0   5.2   6.5   6.6   6.5   9.4   9.5   9.6   6.6   5.5   5.2  12.6
14.2  13.1  12.9  12.1  11.3  12.1  12.9  13.1
 360.   *   5.1   5.5   7.5   7.5   7.4   8.6   8.7   8.9   6.1   5.3   5.1  12.4
13.8  13.2  12.4  11.6  11.0  11.7  13.2  12.6
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REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26
5.	11.5	10.6	10.9	14.0	12.2	11.7
10.	10.1	11.3	11.2	13.9	12.4	11.7
15.	9.4	11.7	11.1	13.7	12.8	12.1
20.	9.3	12.5	11.3	13.3	12.7	12.3
25.	9.1	13.1	11.3	12.8	12.9	12.6
30.	9.1	13.7	12.1	12.6	13.2	12.9
35.	9.3	14.5	12.4	12.9	13.5	13.0
40.	9.4	15.1	13.5	13.1	13.7	13.3
45.	9.4	15.2	14.6	13.9	14.4	13.5
50.	9.1	15.3	15.6	15.3	15.0	14.2
55.	8.3	15.1	16.8	17.7	16.2	15.1
60.	7.3	14.2	16.6	20.4	18.4	16.7
65.	6.6	12.7	15.8	22.3	20.7	18.8
70.	6.0	11.1	14.1	22.2	22.2	20.9
75.	5.6	10.4	12.3	20.1	21.5	21.4
80.	5.5	9.9	11.2	16.4	18.4	19.5
85.	5.4	9.7	10.5	13.1	14.8	16.1
90.	5.3	9.5	10.2	10.6	11.4	12.4
95.	5.3	9.5	9.8	9.5	9.3	9.9
100.	5.3	9.4	9.7	8.8	8.2	8.3
105.	5.3	9.4	9.6	8.5	7.7	7.5
110.	5.4	9.3	9.4	8.3	7.4	7.1
115.	5.4	9.6	9.7	8.4	7.4	6.9
120.	5.4	9.6	9.7	8.4	7.5	7.1
125.	5.4	9.8	9.9	8.7	7.7	7.1
130.	5.3	9.8	9.9	8.7	7.9	7.0
135.	5.3	9.7	9.9	8.9	7.7	7.0
140.	5.2	9.8	10.1	9.3	7.8	6.8
145.	5.2	10.0	10.3	9.7	7.7	6.8
150.	5.2	10.0	10.5	10.2	7.8	6.9
155.	5.4	10.4	11.0	10.9	7.8	6.9
160.	5.6	10.5	11.2	11.4	7.9	6.9
165.	6.2	11.0	11.6	11.8	7.9	6.8
170.	7.7	11.0	11.5	11.9	7.6	6.5
175.	9.7	10.5	10.9	11.2	7.0	6.1
180.	11.9	9.3	9.5	9.8	6.3	5.6
185.	13.3	7.7	7.9	7.9	5.6	5.2
190.	13.5	6.4	6.4	6.5	5.1	5.1
195.	13.1	5.5	5.5	5.5	5.0	5.0
200.	12.4	5.2	5.2	5.2	5.0	5.0
205.	11.7	5.1	5.1	5.1	5.0	5.0
210.	11.1	5.1	5.1	5.1	5.0	5.0

JOB: Mercer St and I-5 Ramps RUN: 2000 Existing

WIND ANGLE RANGE: 5.-360.

WIND * CONCENTRATION

ANGLE (DEGR)	*	(PPM) REC21	REC22	REC23	REC24	REC25	REC26
215.	*	10.8	5.1	5.1	5.1	5.0	5.0
220.	*	10.3	5.1	5.1	5.1	5.0	5.0
225.	*	10.1	5.1	5.1	5.1	5.0	5.0
230.	*	9.8	5.1	5.1	5.1	5.0	5.0
235.	*	9.7	5.1	5.1	5.1	5.0	5.0
240.	*	9.5	5.0	5.0	5.0	5.0	5.0
245.	*	9.3	5.0	5.0	5.1	5.1	5.1
250.	*	9.2	5.0	5.0	5.3	5.3	5.3
255.	*	9.3	5.0	5.1	6.0	6.0	5.9
260.	*	9.4	5.1	5.3	7.6	7.5	7.3
265.	*	9.7	5.5	6.0	10.5	10.2	9.9
270.	*	10.4	6.0	7.2	13.7	13.2	12.7
275.	*	10.9	6.7	8.4	16.0	15.6	14.8
280.	*	11.5	7.4	9.2	17.0	16.6	15.8
285.	*	11.9	7.7	9.4	16.8	16.6	15.6
290.	*	12.2	7.9	9.5	15.8	15.7	14.9
295.	*	12.4	7.9	9.3	15.0	14.9	14.2
300.	*	12.8	7.8	9.1	14.1	14.1	13.5
305.	*	12.8	7.8	9.2	13.5	13.5	13.0
310.	*	13.0	7.8	9.0	13.2	13.1	12.8
315.	*	13.3	7.7	8.9	12.8	12.8	12.6
320.	*	13.5	7.7	8.7	12.4	12.3	12.2
325.	*	13.9	7.6	8.6	12.2	12.1	12.1
330.	*	14.2	7.6	8.6	12.0	11.9	11.9
335.	*	14.4	7.6	8.5	11.7	11.6	11.6
340.	*	14.7	7.5	8.3	11.6	11.5	11.4
345.	*	14.7	7.6	8.6	11.5	11.3	11.2
350.	*	14.6	8.1	8.9	11.8	11.2	11.2
355.	*	14.0	8.8	9.5	12.4	11.6	11.4
360.	*	12.9	9.8	10.4	13.2	11.9	11.6

THE HIGHEST CONCENTRATION OF 22.30 PPM OCCURRED AT RECEPTOR REC24.

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Mercer St and I-5 Ramps RUN: 2016 No Build

DATE : 8/18/ 4
TIME : 19:12: 4

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1.	EBA	*	-1000.0	6.0	.0	6.0	*	1000.	90.	AG	4270.	15.0	.0	56.0		
2.	EBD1	*	.0	6.0	100.0	6.0	*	100.	90.	AG	4580.	15.0	.0	56.0		
3.	EBD2	*	100.0	6.0	975.0	315.0	*	928.	71.	AG	4580.	15.0	.0	56.0		
4.	WBA1	*	986.0	354.0	125.0	45.0	*	915.	250.	AG	2410.	15.0	.0	56.0		
5.	WBA2	*	125.0	45.0	24.0	150.0	*	146.	316.	AG	1950.	15.0	.0	44.0		
6.	WBA3	*	125.0	45.0	32.0	12.0	*	99.	250.	AG	460.	15.0	.0	44.0		
7.	NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1710.	15.0	.0	56.0		
8.	NBD1	*	24.0	.0	24.0	150.0	*	150.	360.	AG	360.	15.0	.0	68.0		
9.	NBD2	*	24.0	150.0	24.0	1000.0	*	850.	360.	AG	2310.	15.0	.0	68.0		
10.	SBA	*	-6.0	1000.0	-6.0	.0	*	1000.	180.	AG	140.	15.0	.0	32.0		
11.	SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	690.	15.0	.0	44.0		
12.	SWD	*	.0	-80.0	1000.0	-80.0	*	1000.	90.	AG	950.	15.0	.0	44.0		
13.	EBT	*	-24.0	.0	-5690.5	-1.4	*	5666.	270.	AG	367.	100.0	.0	36.0	1.85	287.9
14.	EBR	*	-24.0	-18.0	-2247.4	-18.6	*	2223.	270.	AG	122.	100.0	.0	12.0	1.31	112.9
15.	WBL	*	41.0	15.0	151.1	54.3	*	117.	70.	AG	372.	100.0	.0	24.0	.92	5.9
16.	WBR	*	38.0	136.0	1364.6	-1251.6	*	1920.	136.	AG	133.	100.0	.0	24.0	1.21	97.5
17.	NBT	*	6.0	-92.0	6.0	-761.0	*	669.	180.	AG	178.	100.0	.0	12.0	1.15	34.0
18.	NBR	*	24.0	-92.0	24.0	-2326.2	*	2234.	180.	AG	245.	100.0	.0	24.0	1.42	113.5
19.	SBT	*	-6.0	24.0	-6.0	75.3	*	51.								

360. AG 178. 100.0 .0 12.0 .40 2.6

JOB: Mercer St and I-5 Ramps RUN: 2016 No Build

DATE : 8/18/ 4
TIME : 19:12: 4

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
13. EBT	90	46	3.0	3460	1442	89.24	2	3
14. EBR	90	46	3.0	810	1425	89.24	2	3
15. WBL	90	70	3.0	460	1494	89.24	2	3
16. WBR	90	25	3.0	1950	1212	89.24	2	3
17. NBT	90	67	3.0	360	1565	89.24	2	3
18. NBR	90	46	3.0	1350	1102	89.24	2	3
19. SBT	90	67	3.0	140	1732	89.24	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-186.0	34.0	5.9
2. R2	-104.0	34.0	5.9
3. R3	-22.0	34.0	5.9
4. R4	-22.0	116.0	5.9
5. R5	-22.0	198.0	5.9
6. R6	58.0	314.0	5.9
7. R7	58.0	232.0	5.9
8. R8	58.0	150.0	5.9
9. R9	125.0	73.0	5.9
10. R10	202.0	101.0	5.9
11. R11	279.0	129.0	5.9
12. R12	200.0	-2.0	5.9
13. R13	123.0	-30.0	5.9
14. R14	46.0	-58.0	5.9
15. R15	128.0	-58.0	5.9
16. R16	210.0	-58.0	5.9
17. R17	210.0	-102.0	5.9
18. R18	128.0	-102.0	5.9
19. R19	46.0	-102.0	5.9
20. R20	46.0	-184.0	5.9
21. R21	46.0	-266.0	5.9
22. R22	-34.0	-198.0	5.9
23. R23	-34.0	-116.0	5.9

24. R24	*	-34.0	-34.0	5.9	*
25. R25	*	-116.0	-34.0	5.9	*
26. R26	*	-198.0	-34.0	5.9	*

JOB: Mercer St and I-5 Ramps RUN: 2016 No Build

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	5.1	5.4	6.5	6.6	6.6	6.1	6.2	6.2	5.3	5.1	5.1	7.6	8.7	8.6	7.9	7.3	7.1	7.6	8.6	7.7
10.	*	5.3	5.6	6.7	6.7	6.8	5.7	5.7	5.7	5.2	5.1	5.1	7.7	8.5	8.2	7.7	7.2	7.1	7.4	8.0	7.6
15.	*	5.4	5.7	6.7	6.7	6.9	5.4	5.4	5.4	5.2	5.1	5.1	7.8	8.4	8.1	7.5	7.2	7.2	7.3	7.8	7.0
20.	*	5.6	5.8	6.5	6.4	6.6	5.2	5.2	5.2	5.2	5.1	5.1	7.9	8.5	8.2	7.4	7.3	7.2	7.3	7.9	6.9
25.	*	5.6	5.8	6.5	6.3	6.5	5.2	5.2	5.2	5.2	5.1	5.1	8.0	8.5	8.0	7.6	7.4	7.4	7.5	7.8	6.9
30.	*	5.6	5.7	6.5	6.1	6.4	5.1	5.1	5.1	5.1	5.1	5.1	8.2	8.5	8.2	7.6	7.5	7.4	7.6	8.1	6.9
35.	*	5.7	5.7	6.5	6.0	6.3	5.1	5.1	5.1	5.2	5.1	5.1	8.3	8.7	8.5	7.6	7.5	7.4	7.6	8.0	7.0
40.	*	5.6	5.7	6.5	6.1	6.2	5.1	5.1	5.1	5.2	5.2	5.2	8.6	8.9	8.7	7.8	7.7	7.6	7.7	8.1	7.0
45.	*	5.6	5.6	6.4	6.1	6.2	5.1	5.1	5.1	5.2	5.2	5.2	8.9	9.1	8.8	8.0	7.8	7.7	7.9	8.3	7.0
50.	*	5.5	5.7	6.4	6.0	6.1	5.1	5.1	5.1	5.3	5.3	5.3	9.2	9.5	9.1	8.2	7.8	7.7	8.0	8.3	7.1
55.	*	5.6	5.8	6.6	6.0	6.1	5.1	5.1	5.1	5.7	5.6	5.6	9.5	9.7	9.4	8.4	7.9	7.6	7.9	8.5	7.1
60.	*	5.7	6.1	6.8	6.0	6.1	5.1	5.1	5.1	6.3	6.2	6.2	9.4	9.7	9.4	8.2	7.5	7.3	7.7	8.4	6.8
65.	*	6.1	6.5	7.7	6.2	6.0	5.1	5.1	5.3	7.4	7.2	7.0	8.7	9.1	8.9	7.6	7.1	6.9	7.2	7.8	6.2
70.	*	6.7	7.4	8.7	6.6	6.2	5.0	5.1	5.4	8.6	8.4	8.2	7.8	8.1	8.0	6.8	6.4	6.6	6.8	7.2	5.8
75.	*	7.8	8.4	10.0	7.1	6.4	5.0	5.2	5.9	9.5	9.3	9.2	6.7	7.0	7.0	6.2	6.1	6.4	6.5	6.7	5.5
80.	*	8.7	9.3	10.8	7.6	6.7	5.2	5.6	6.4	10.0	9.9	9.7	5.8	6.2	6.4	5.9	6.0	6.3	6.4	6.4	5.4
85.	*	9.6	9.8	11.0	8.0	7.0	5.4	5.9	6.8	10.0	9.9	9.7	5.4	5.8	6.1	5.9	6.2	6.3	6.2	6.2	5.3
90.	*	10.1	10.2	11.4	8.3	7.3	5.7	6.2	7.0	9.7	9.6	9.5	5.3	5.7	6.2	6.1	6.5	6.2	6.1	6.1	5.2
95.	*	10.6	10.6	11.1	8.2	7.4	6.0	6.3	7.0	9.4	9.3	9.2	5.3	5.7	6.3	6.3	6.6	6.0	5.8	5.9	5.2

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 100.  *  10.8  10.5  11.1   8.2   7.5   6.1   6.4   7.0   9.2   9.0   8.9   5.3
5.8   6.3   6.4   6.7   5.8   5.6   5.6   5.1
 105.  *  10.9  10.4  10.5   8.2   7.6   6.1   6.4   7.0   9.2   8.7   8.7   5.4
5.8   6.2   6.3   6.8   5.6   5.4   5.4   5.1
 110.  *  10.7  10.1  10.1   8.0   7.5   6.2   6.4   7.0   9.1   8.6   8.5   5.4
5.9   6.1   6.2   6.7   5.5   5.3   5.3   5.2
 115.  *  10.6  10.2   9.7   8.1   7.6   6.2   6.4   6.9   8.8   8.4   8.4   5.4
5.9   6.0   6.1   6.7   5.6   5.4   5.3   5.2
 120.  *  10.3  10.0   9.7   7.9   7.9   6.2   6.4   7.1   9.1   8.3   8.3   5.4
5.8   6.0   6.1   6.8   5.6   5.4   5.4   5.3
 125.  *  10.0  10.1   9.4   7.8   8.1   6.1   6.3   7.3   9.3   8.2   8.1   5.5
5.8   5.9   6.0   6.9   5.6   5.4   5.4   5.2
 130.  *   9.8  10.0   9.0   7.7   8.4   6.1   6.4   7.4   9.5   8.2   8.1   5.7
5.8   5.9   5.9   7.0   5.5   5.3   5.3   5.2
 135.  *   9.6   9.7   8.9   7.5   8.4   6.2   6.5   8.0   9.9   8.1   8.0   5.9
5.7   5.8   5.9   6.9   5.4   5.2   5.2   5.2
 140.  *   9.4   9.5   8.7   7.5   8.4   6.3   6.6   8.3  10.1   8.1   8.0   6.0
5.6   5.7   5.7   6.6   5.3   5.1   5.1   5.1
 145.  *   9.4   9.7   8.5   7.3   8.1   6.3   6.8   8.5  10.2   8.2   7.9   6.1
5.5   5.6   5.6   6.3   5.1   5.0   5.1   5.1
 150.  *   9.2   9.5   8.6   7.4   7.7   6.3   6.7   8.7  10.2   8.1   7.9   6.1
5.4   5.6   5.5   6.0   5.0   5.0   5.1   5.1
 155.  *   9.2   9.4   9.0   7.0   7.4   6.5   6.9   8.6  10.2   8.2   8.0   6.0
5.3   5.6   5.5   5.8   5.0   5.0   5.1   5.1
 160.  *   9.1   9.5   9.4   7.6   7.4   6.5   7.2   8.5  10.1   8.2   8.1   5.9
5.3   5.7   5.4   5.6   5.0   5.0   5.3   5.3
 165.  *   8.9   9.6  10.0   8.2   7.5   6.9   7.4   8.5  10.0   8.1   8.0   5.9
5.3   5.9   5.4   5.5   5.0   5.0   5.5   5.5
 170.  *   8.8   9.4  10.5   8.7   7.9   7.2   7.7   8.9  10.0   8.0   7.9   5.8
5.4   6.5   5.5   5.5   5.0   5.1   6.1   6.1
 175.  *   8.6   9.2  10.5   9.0   8.0   7.8   8.4   9.3   9.9   8.1   7.9   5.9
5.6   7.6   5.8   5.7   5.1   5.3   7.1   7.1
 180.  *   8.4   9.0  10.2   8.6   7.8   8.3   8.9   9.8  10.4   8.4   8.1   6.1
6.0   8.7   6.0   5.7   5.1   5.5   8.1   8.1
 185.  *   8.2   8.5   9.2   8.0   7.3   8.8   8.9  10.0  10.8   8.6   8.2   6.2
6.4   9.3   6.5   6.0   5.4   6.0   8.8   8.8
 190.  *   8.1   8.1   8.6   7.3   6.8   8.4   8.7   9.6  11.2   9.1   8.4   6.5
6.7   9.3   6.7   6.2   5.6   6.3   9.1   9.0
 195.  *   8.1   8.1   8.3   6.8   6.3   7.8   8.3   9.1  11.3   9.4   8.8   6.6
6.8   9.2   6.9   6.3   5.9   6.4   8.9   8.8
 200.  *   8.1   8.1   8.0   6.6   6.2   7.6   7.9   8.4  11.3   9.5   9.1   6.8
6.9   8.6   6.9   6.3   5.8   6.5   8.4   8.4
 205.  *   8.1   8.1   8.2   6.6   6.2   7.3   7.6   8.3  11.3   9.6   9.1   6.7
6.8   8.3   6.9   6.5   6.0   6.4   8.2   8.2
 210.  *   8.3   8.3   8.2   6.6   6.3   7.3   7.3   8.0  10.9   9.8   9.2   6.7
6.7   8.0   6.8   6.5   6.0   6.3   7.9   7.9
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JOB: Mercer St and I-5 Ramps RUN: 2016 No Build

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20
 REC21 REC22 REC23 REC24 REC25 REC26

------*-----------------------------------------------------------------------------
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 215.  *   8.5   8.5   8.5   6.6   6.3   7.3   7.3   8.1  10.9   9.8   9.3   6.7
6.7   7.7   6.8   6.4   5.9   6.3   7.8   7.8
 220.  *   8.6   8.6   8.6   6.8   6.3   7.3   7.4   8.1  10.7   9.9   9.7   6.6
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6.7   7.4   6.8   6.4   5.9   6.3   7.6   7.6
 225.  *   8.8   8.8   8.7   6.8   6.3   7.2   7.3   8.2  10.5  10.0   9.7   6.6
6.6   7.2   6.9   6.5   5.9   6.3   7.6   7.6
 230.  *   9.0   9.0   8.9   6.9   6.3   7.2   7.4   8.2  10.3  10.1   9.8   6.4
6.5   6.9   6.6   6.4   5.8   6.0   7.3   7.3
 235.  *   9.2   9.2   9.2   6.9   6.5   7.1   7.4   8.0  10.1  10.0   9.9   6.4
6.2   6.8   6.6   6.3   5.8   6.1   7.2   7.2
 240.  *   9.6   9.6   9.6   7.2   6.5   7.1   7.3   8.0  10.0  10.0   9.8   6.4
6.0   6.6   6.7   6.4   5.8   6.1   7.2   7.1
 245.  *  10.0  10.0  10.0   7.3   6.5   7.1   7.4   8.0  10.3  10.0   9.6   6.5
6.0   6.4   6.5   6.4   5.8   6.1   7.2   7.0
 250.  *  10.6  10.6  10.6   7.4   6.6   7.0   7.4   8.2  10.1   9.9   9.4   6.8
5.9   6.4   6.5   6.5   5.8   6.1   7.1   7.0
 255.  *  11.2  11.2  11.2   7.4   6.5   7.0   7.2   8.1  10.3   9.5   8.8   7.6
6.4   6.6   6.6   6.7   5.9   6.1   7.1   7.0
 260.  *  11.7  11.8  11.8   7.3   6.2   6.8   7.1   8.0  10.4   9.2   8.4   9.1
7.1   7.0   7.1   7.2   6.2   6.4   7.3   7.1
 265.  *  11.5  11.5  11.6   7.0   6.0   6.5   6.8   7.6   9.9   8.4   7.8  10.5
8.6   7.9   7.7   7.8   6.9   7.0   7.9   7.2
 270.  *  10.5  10.6  10.7   6.2   5.6   6.3   6.5   7.1   9.1   7.5   7.0  11.9
9.9   8.9   8.6   8.6   7.7   7.8   8.8   7.7
 275.  *   8.8   8.9   8.9   5.5   5.2   6.1   6.1   6.7   8.1   7.0   6.2  11.8
10.4   9.8   9.2   9.0   8.4   8.5   9.2   8.0
 280.  *   7.1   7.1   7.2   5.2   5.1   6.0   6.0   6.3   7.4   6.0   5.7  11.5
10.3  10.0   9.4   9.1   8.8   9.0   9.7   8.5
 285.  *   6.0   6.0   6.1   5.0   5.0   6.0   6.0   6.3   7.3   5.7   5.5  10.4
9.8   9.9   8.9   8.4   8.6   8.9   9.6   8.5
 290.  *   5.6   5.6   5.6   5.0   5.0   6.0   6.0   6.2   7.3   5.7   5.4  10.0
9.3   9.4   8.3   8.2   8.2   8.6   9.2   8.7
 295.  *   5.3   5.3   5.3   5.0   5.0   6.0   6.0   6.3   7.3   5.5   5.4   9.6
8.6   9.2   8.1   8.0   7.9   8.3   9.3   8.5
 300.  *   5.3   5.3   5.3   5.0   5.0   6.0   6.0   6.2   7.4   5.6   5.5   9.6
8.4   8.8   7.6   7.9   7.4   8.0   9.0   8.6
 305.  *   5.2   5.2   5.2   5.0   5.0   6.1   6.1   6.3   7.3   5.5   5.5   9.7
8.1   8.4   7.5   8.1   7.4   7.7   8.8   8.7
 310.  *   5.2   5.2   5.2   5.0   5.0   6.2   6.2   6.2   7.1   5.6   5.5   9.3
7.9   8.2   7.4   8.3   7.6   7.6   8.7   8.5
 315.  *   5.2   5.2   5.2   5.0   5.0   6.2   6.2   6.3   6.9   5.6   5.5   9.0
8.2   7.8   7.2   8.6   7.6   7.4   8.5   8.8
 320.  *   5.2   5.2   5.2   5.0   5.0   6.3   6.3   6.3   6.8   5.5   5.4   8.8
8.2   7.7   7.4   8.7   7.8   7.2   8.4   8.8
 325.  *   5.2   5.2   5.2   5.0   5.0   6.4   6.4   6.3   6.4   5.5   5.4   8.5
8.3   7.8   7.7   8.6   8.0   7.4   8.2   8.9
 330.  *   5.1   5.1   5.1   5.0   5.0   6.6   6.6   6.5   6.2   5.5   5.4   8.3
8.8   7.6   7.8   8.5   8.1   7.5   8.0   8.9
 335.  *   5.1   5.1   5.1   5.0   5.0   6.7   6.7   6.7   6.1   5.5   5.4   8.2
9.1   7.6   8.1   8.5   8.1   7.8   7.9   8.7
 340.  *   5.1   5.1   5.1   5.0   5.1   6.9   6.9   6.9   6.0   5.5   5.3   8.1
9.2   7.9   8.4   8.3   8.0   8.0   8.1   8.7
 345.  *   5.0   5.0   5.1   5.1   5.1   7.1   7.1   7.1   6.0   5.4   5.2   8.0
9.5   8.1   8.5   8.1   7.8   8.3   8.2   8.6
 350.  *   5.0   5.0   5.4   5.4   5.4   7.2   7.2   7.3   5.9   5.3   5.1   7.9
9.2   8.5   8.7   7.8   7.6   8.3   8.4   8.9
 355.  *   5.0   5.1   5.7   5.7   5.7   7.0   7.0   7.1   5.6   5.2   5.1   7.7
9.0   8.8   8.5   7.6   7.4   8.3   8.9   8.6
 360.  *   5.1   5.2   6.2   6.1   6.1   6.6   6.7   6.7   5.5   5.1   5.0   7.7
9.0   8.6   8.0   7.4   7.2   7.8   8.8   8.4
```

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26
5.	7.7	7.6	7.9	9.0	8.4	8.1
10.	7.1	7.9	7.9	9.3	8.5	8.2
15.	6.8	8.2	8.0	9.0	8.5	8.4
20.	6.4	8.3	7.7	8.9	8.7	8.5
25.	6.6	8.5	7.8	8.6	8.7	8.6
30.	6.6	8.6	8.2	8.8	8.8	8.7
35.	6.6	8.9	8.5	8.5	8.8	8.8
40.	6.6	8.9	8.7	8.6	9.1	8.9
45.	6.7	9.0	9.0	8.9	9.1	9.1
50.	6.6	8.9	9.3	9.5	9.5	9.1
55.	6.4	8.9	9.6	10.1	10.0	9.6
60.	6.0	8.5	9.5	11.1	10.7	10.3
65.	5.6	8.0	9.2	11.9	11.7	10.9
70.	5.4	7.5	8.8	11.8	12.2	11.7
75.	5.3	7.2	8.2	11.1	11.7	11.7
80.	5.2	6.9	7.8	9.8	10.7	11.1
85.	5.2	6.9	7.4	8.4	9.2	9.8
90.	5.1	6.9	7.3	7.6	7.8	8.3
95.	5.1	6.7	7.0	7.2	7.0	7.2
100.	5.1	6.7	6.8	6.9	6.5	6.5
105.	5.1	6.7	6.8	6.7	6.3	6.0
110.	5.1	6.7	6.8	6.6	6.3	5.8
115.	5.1	6.7	6.8	6.6	6.3	5.9
120.	5.2	6.9	7.0	6.7	6.2	5.8
125.	5.2	7.0	7.0	6.8	6.1	5.8
130.	5.2	7.1	7.1	6.8	6.2	5.8
135.	5.1	7.0	7.1	6.9	6.2	5.8
140.	5.1	7.1	7.1	6.8	6.1	5.8
145.	5.1	7.3	7.3	7.1	6.1	5.9
150.	5.1	7.3	7.3	7.2	6.3	5.9
155.	5.1	7.6	7.6	7.6	6.3	5.9
160.	5.3	7.8	7.8	7.8	6.3	5.8
165.	5.5	8.0	8.0	8.0	6.3	5.8
170.	6.1	8.0	8.1	8.1	6.2	5.7
175.	7.0	7.6	7.7	7.7	5.9	5.3
180.	8.1	7.0	7.2	7.2	5.5	5.1
185.	8.7	6.3	6.3	6.4	5.2	5.0
190.	9.0	5.6	5.6	5.7	5.0	5.0
195.	8.8	5.2	5.2	5.3	5.0	5.0
200.	8.4	5.1	5.1	5.1	5.0	5.0
205.	8.2	5.1	5.1	5.1	5.0	5.0
210.	7.9	5.0	5.0	5.0	5.0	5.0

JOB: Mercer St and I-5 Ramps RUN: 2016 No Build

WIND ANGLE RANGE: 5.-360.

WIND * CONCENTRATION

ANGLE (DEGR)	*	(PPM) REC21	REC22	REC23	REC24	REC25	REC26
215.	*	7.8	5.0	5.0	5.0	5.0	5.0
220.	*	7.6	5.0	5.0	5.0	5.0	5.0
225.	*	7.6	5.0	5.0	5.0	5.0	5.0
230.	*	7.3	5.0	5.0	5.0	5.0	5.0
235.	*	7.2	5.0	5.0	5.0	5.0	5.0
240.	*	7.1	5.0	5.0	5.0	5.0	5.0
245.	*	7.0	5.0	5.0	5.0	5.0	5.0
250.	*	7.0	5.0	5.0	5.1	5.1	5.1
255.	*	7.0	5.0	5.0	5.6	5.5	5.5
260.	*	7.0	5.1	5.1	6.4	6.3	6.3
265.	*	7.1	5.2	5.6	7.8	7.8	7.7
270.	*	7.3	5.6	6.1	9.4	9.4	9.3
275.	*	7.6	6.0	6.8	10.5	10.5	10.4
280.	*	7.9	6.3	7.2	10.9	10.9	10.8
285.	*	8.0	6.5	7.3	10.6	10.6	10.6
290.	*	8.2	6.6	7.3	10.2	10.2	10.2
295.	*	8.2	6.5	7.2	9.7	9.7	9.7
300.	*	8.3	6.5	7.1	9.4	9.4	9.4
305.	*	8.4	6.4	7.0	9.0	9.0	9.0
310.	*	8.5	6.3	6.9	8.8	8.8	8.8
315.	*	8.6	6.3	6.9	8.7	8.7	8.7
320.	*	8.6	6.2	6.7	8.5	8.5	8.5
325.	*	8.8	6.2	6.6	8.4	8.4	8.4
330.	*	8.9	6.2	6.6	8.3	8.3	8.3
335.	*	9.1	6.3	6.7	8.2	8.1	8.1
340.	*	9.1	6.3	6.6	8.1	8.1	8.1
345.	*	9.0	6.2	6.8	8.2	8.0	8.0
350.	*	9.0	6.4	6.9	8.2	8.0	8.0
355.	*	8.6	6.8	6.9	8.5	8.1	8.0
360.	*	8.3	7.0	7.5	8.9	8.3	8.1

THE HIGHEST CONCENTRATION OF 12.20 PPM OCCURRED AT RECEPTOR REC25.

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Mercer St and I-5 Ramps RUN: 2030 No Build

DATE : 8/18/ 4
TIME : 19:12:13

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1. EBA	*	-1000.0	6.0	.0	6.0	*	1000.	90.	AG	4410.	11.2	.0	56.0		
2. EBD1	*	.0	6.0	100.0	6.0	*	100.	90.	AG	4620.	11.2	.0	56.0		
3. EBD2	*	100.0	6.0	975.0	315.0	*	928.	71.	AG	4620.	11.2	.0	56.0		
4. WBA1	*	986.0	354.0	125.0	45.0	*	915.	250.	AG	2300.	11.2	.0	56.0		
5. WBA2	*	125.0	45.0	24.0	150.0	*	146.	316.	AG	1860.	11.2	.0	44.0		
6. WBA3	*	125.0	45.0	32.0	12.0	*	99.	250.	AG	440.	11.2	.0	44.0		
7. NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1790.	11.2	.0	56.0		
8. NBD1	*	24.0	.0	24.0	150.0	*	150.	360.	AG	410.	11.2	.0	68.0		
9. NBD2	*	24.0	150.0	24.0	1000.0	*	850.	360.	AG	2270.	11.2	.0	68.0		
10. SBA	*	-6.0	1000.0	-6.0	.0	*	1000.	180.	AG	150.	11.2	.0	32.0		
11. SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	680.	11.2	.0	44.0		
12. SWD	*	.0	-80.0	1000.0	-80.0	*	1000.	90.	AG	1080.	11.2	.0	44.0		
13. EBT	*	-24.0	.0	-5989.5	-1.5	*	5966.	270.	AG	286.	100.0	.0	36.0	1.92	303.0
14. EBR	*	-24.0	-18.0	-2513.2	-18.6	*	2489.	270.	AG	95.	100.0	.0	12.0	1.36	126.5
15. WBL	*	41.0	15.0	138.0	49.7	*	103.	70.	AG	284.	100.0	.0	24.0	.88	5.2
16. WBR	*	38.0	136.0	1142.4	-1019.2	*	1598.	136.	AG	105.	100.0	.0	24.0	1.17	81.2
17. NBT	*	6.0	-92.0	6.0	-1109.9	*	1018.	180.	AG	134.	100.0	.0	12.0	1.24	51.7
18. NBR	*	24.0	-92.0	24.0	-2357.0	*	2265.	180.	AG	182.	100.0	.0	24.0	1.41	115.1
19. SBT	*	-6.0	24.0	-6.0	78.1	*	54.								

360. AG 134. 100.0 .0 12.0 .41 2.8

JOB: Mercer St and I-5 Ramps RUN: 2030 No Build

DATE : 8/18/ 4
TIME : 19:12:13

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
13. EBT	90	47	3.0	3500	1442	67.96	2	3
14. EBR	90	47	3.0	820	1425	67.96	2	3
15. WBL	90	70	3.0	440	1494	67.96	2	3
16. WBR	90	26	3.0	1860	1212	67.96	2	3
17. NBT	90	66	3.0	410	1565	67.96	2	3
18. NBR	90	45	3.0	1380	1102	67.96	2	3
19. SBT	90	66	3.0	150	1732	67.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-186.0	34.0	5.9
2. R2	-104.0	34.0	5.9
3. R3	-22.0	34.0	5.9
4. R4	-22.0	116.0	5.9
5. R5	-22.0	198.0	5.9
6. R6	58.0	314.0	5.9
7. R7	58.0	232.0	5.9
8. R8	58.0	150.0	5.9
9. R9	125.0	73.0	5.9
10. R10	202.0	101.0	5.9
11. R11	279.0	129.0	5.9
12. R12	200.0	-2.0	5.9
13. R13	123.0	-30.0	5.9
14. R14	46.0	-58.0	5.9
15. R15	128.0	-58.0	5.9
16. R16	210.0	-58.0	5.9
17. R17	210.0	-102.0	5.9
18. R18	128.0	-102.0	5.9
19. R19	46.0	-102.0	5.9
20. R20	46.0	-184.0	5.9
21. R21	46.0	-266.0	5.9
22. R22	-34.0	-198.0	5.9
23. R23	-34.0	-116.0	5.9

24. R24	*	-34.0	-34.0	5.9	*
25. R25	*	-116.0	-34.0	5.9	*
26. R26	*	-198.0	-34.0	5.9	*

JOB: Mercer St and I-5 Ramps RUN: 2030 No Build

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) * REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5. *	5.1	5.3	6.0	6.1	6.1	5.8	5.9	5.9	5.3	5.0	5.0	7.0	7.5	7.7	7.0	6.7	6.7	6.9	7.7	7.2
10. *	5.2	5.4	6.3	6.2	6.3	5.5	5.5	5.5	5.2	5.1	5.1	7.1	7.4	7.6	6.8	6.7	6.6	6.8	7.4	6.9
15. *	5.3	5.5	6.2	6.2	6.3	5.3	5.3	5.3	5.2	5.1	5.1	7.1	7.4	7.4	6.8	6.7	6.6	6.7	7.3	6.6
20. *	5.3	5.5	6.1	6.1	6.2	5.2	5.2	5.2	5.2	5.1	5.1	7.2	7.4	7.3	6.7	6.7	6.7	6.8	7.2	6.5
25. *	5.5	5.6	6.2	6.0	6.1	5.1	5.1	5.1	5.1	5.1	5.1	7.2	7.4	7.4	6.9	6.8	6.8	6.8	7.4	6.5
30. *	5.4	5.5	6.1	5.8	6.0	5.1	5.1	5.1	5.1	5.1	5.1	7.3	7.5	7.4	7.0	6.8	6.8	6.8	7.3	6.6
35. *	5.4	5.5	6.1	5.7	6.0	5.1	5.1	5.1	5.1	5.1	5.1	7.5	7.6	7.6	7.0	7.0	6.9	6.9	7.2	6.4
40. *	5.4	5.5	6.1	5.8	5.9	5.1	5.1	5.1	5.1	5.1	5.1	7.7	7.9	7.7	7.2	7.0	7.0	7.0	7.3	6.6
45. *	5.5	5.5	6.0	5.8	5.9	5.1	5.1	5.1	5.2	5.2	5.1	7.8	8.0	7.8	7.3	7.1	7.0	7.2	7.5	6.7
50. *	5.4	5.5	6.0	5.8	5.9	5.1	5.1	5.1	5.2	5.2	5.2	8.1	8.3	7.8	7.4	7.1	7.0	7.2	7.5	6.7
55. *	5.5	5.7	6.1	5.7	5.8	5.1	5.1	5.1	5.5	5.5	5.5	8.3	8.5	8.1	7.4	7.1	6.9	7.1	7.6	6.4
60. *	5.5	5.9	6.4	5.8	5.8	5.1	5.1	5.1	5.9	5.9	5.8	8.2	8.5	8.2	7.4	7.0	6.8	7.1	7.5	6.2
65. *	5.7	6.2	6.9	6.1	5.8	5.0	5.0	5.2	6.7	6.6	6.5	7.8	8.0	7.9	7.0	6.6	6.5	6.7	7.3	6.0
70. *	6.4	6.7	7.9	6.2	5.8	5.0	5.0	5.4	7.5	7.5	7.3	7.1	7.3	7.2	6.5	6.1	6.2	6.3	6.7	5.7
75. *	7.1	7.5	8.7	6.4	6.0	5.0	5.2	5.7	8.3	8.1	8.1	6.2	6.4	6.5	6.0	5.9	6.1	6.1	6.4	5.5
80. *	7.8	8.2	9.3	7.0	6.2	5.2	5.4	6.0	8.6	8.6	8.5	5.6	5.9	6.0	5.7	5.8	6.1	6.1	6.1	5.3
85. *	8.3	8.5	9.6	7.3	6.6	5.3	5.7	6.3	8.6	8.6	8.5	5.3	5.6	5.9	5.8	5.9	6.1	6.1	6.0	5.3
90. *	9.1	9.1	9.8	7.4	6.8	5.5	5.9	6.4	8.4	8.4	8.3	5.2	5.6	6.0	6.0	6.2	6.0	6.0	5.9	5.2
95. *	9.3	9.4	9.8	7.4	6.9	5.7	6.0	6.4	8.3	8.0	8.0	5.2	5.6	6.0	6.1	6.4	5.8	5.7	5.7	5.1

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 100.  *   9.4   9.1   9.3   7.4   6.9   5.8   6.0   6.5   8.0   7.9   7.8   5.3
5.7   6.1   6.1   6.5   5.6   5.5   5.4   5.1
 105.  *   9.4   8.8   9.3   7.4   6.7   5.8   5.9   6.4   7.9   7.7   7.7   5.3
5.8   6.0   6.0   6.4   5.5   5.4   5.3   5.1
 110.  *   9.4   9.1   9.0   7.4   6.8   5.8   6.0   6.4   7.8   7.7   7.6   5.3
5.7   5.9   5.9   6.4   5.4   5.3   5.2   5.1
 115.  *   9.2   8.8   8.8   7.3   7.0   5.9   6.0   6.4   7.6   7.6   7.5   5.3
5.7   5.9   6.0   6.4   5.5   5.3   5.3   5.1
 120.  *   9.1   9.0   8.4   7.4   7.1   6.0   6.1   6.3   7.7   7.5   7.4   5.4
5.7   5.8   5.9   6.5   5.5   5.3   5.3   5.1
 125.  *   9.0   8.7   8.4   7.2   7.5   5.9   6.0   6.5   7.8   7.4   7.3   5.4
5.7   5.7   5.8   6.5   5.4   5.2   5.1   5.1
 130.  *   8.6   8.7   8.1   6.9   7.4   5.8   6.1   6.8   7.9   7.3   7.2   5.6
5.6   5.7   5.8   6.6   5.4   5.2   5.2   5.2
 135.  *   8.5   8.6   8.0   6.8   7.9   5.9   6.1   7.1   8.2   7.3   7.1   5.6
5.5   5.7   5.7   6.5   5.3   5.1   5.2   5.1
 140.  *   8.5   8.5   7.9   6.8   7.5   5.9   6.2   7.5   8.3   7.3   7.2   5.8
5.5   5.6   5.6   6.4   5.2   5.1   5.1   5.1
 145.  *   8.4   8.6   7.8   6.7   7.4   6.0   6.4   7.5   8.5   7.3   7.2   5.8
5.4   5.5   5.4   6.0   5.1   5.0   5.1   5.1
 150.  *   8.3   8.6   7.8   6.5   6.9   6.0   6.4   7.8   8.6   7.3   7.2   5.8
5.3   5.5   5.4   5.8   5.0   5.0   5.1   5.1
 155.  *   8.2   8.6   8.1   6.8   6.7   6.1   6.5   7.8   8.7   7.3   7.3   5.8
5.3   5.5   5.4   5.6   5.0   5.0   5.1   5.1
 160.  *   8.0   8.4   8.1   7.2   6.7   6.2   6.5   7.7   8.6   7.3   7.2   5.7
5.3   5.6   5.4   5.6   5.0   5.0   5.2   5.2
 165.  *   7.8   8.3   8.6   7.5   7.0   6.3   6.6   7.7   8.5   7.3   7.2   5.7
5.3   5.8   5.4   5.5   5.0   5.0   5.4   5.4
 170.  *   7.9   8.3   9.0   7.9   7.3   6.6   6.9   8.1   8.5   7.3   7.2   5.6
5.3   6.3   5.4   5.5   5.0   5.0   5.9   5.9
 175.  *   7.8   8.1   9.3   8.0   7.5   7.0   7.6   8.3   8.6   7.3   7.1   5.7
5.5   7.1   5.6   5.5   5.0   5.2   6.7   6.7
 180.  *   7.6   8.0   9.0   7.6   7.2   7.5   8.0   8.6   9.1   7.5   7.3   5.7
5.9   7.8   5.9   5.6   5.1   5.4   7.4   7.4
 185.  *   7.4   7.6   8.3   7.3   6.8   7.8   8.1   8.5   9.4   7.7   7.4   6.0
6.2   8.3   6.2   5.8   5.3   5.8   8.0   8.0
 190.  *   7.3   7.3   7.8   6.7   6.3   7.6   7.8   8.4   9.6   8.1   7.7   6.3
6.4   8.4   6.5   6.0   5.6   6.1   8.1   8.1
 195.  *   7.2   7.2   7.5   6.4   6.0   7.2   7.4   8.1   9.8   8.3   8.0   6.3
6.5   8.3   6.5   6.1   5.7   6.1   8.0   8.0
 200.  *   7.4   7.4   7.4   6.3   5.9   7.0   7.2   7.7   9.6   8.3   8.0   6.3
6.5   7.8   6.5   6.2   5.8   6.1   7.6   7.6
 205.  *   7.5   7.5   7.4   6.3   6.0   6.6   7.0   7.3   9.6   8.2   8.2   6.2
6.3   7.5   6.4   6.1   5.7   6.0   7.4   7.4
 210.  *   7.6   7.6   7.6   6.3   6.0   6.7   6.8   7.5   9.5   8.4   8.2   6.2
6.3   7.2   6.4   6.1   5.7   6.0   7.2   7.2
```


JOB: Mercer St and I-5 Ramps RUN: 2030 No Build

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20
 REC21 REC22 REC23 REC24 REC25 REC26

------*-----------------------------------------------------------------------------
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 ------*-------------------------------------
 215.  *   7.8   7.8   7.7   6.3   6.0   6.7   6.8   7.3   9.5   8.5   8.4   6.2
6.3   7.1   6.4   6.1   5.7   6.0   7.1   7.1
 220.  *   7.8   7.8   7.8   6.3   6.0   6.6   6.7   7.4   9.5   8.5   8.4   6.2
```

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6.3   6.8   6.5   6.2   5.7   6.0   7.0   7.0
 225.  *   7.9   7.9   7.9   6.4   6.0   6.7   6.8   7.4   9.1   8.5   8.5   6.2
6.1   6.6   6.5   6.2   5.7   6.0   6.8   6.8
 230.  *   8.2   8.2   8.0   6.5   6.0   6.7   6.8   7.4   8.9   8.5   8.7   6.2
6.0   6.5   6.2   6.1   5.6   5.8   6.8   6.8
 235.  *   8.3   8.3   8.3   6.6   6.2   6.7   6.8   7.3   8.9   8.6   8.6   6.1
5.9   6.5   6.2   6.1   5.6   5.8   6.8   6.8
 240.  *   8.6   8.6   8.5   6.6   6.2   6.7   6.7   7.2   8.8   8.7   8.3   6.0
5.9   6.3   6.3   6.2   5.7   5.7   6.7   6.7
 245.  *   8.9   8.9   8.9   6.7   6.2   6.6   6.8   7.4   8.6   8.5   8.3   6.2
5.8   6.2   6.3   6.2   5.7   5.8   6.6   6.6
 250.  *   9.3   9.3   9.3   6.8   6.2   6.5   6.8   7.4   9.0   8.3   8.3   6.4
5.7   6.1   6.2   6.2   5.7   5.8   6.6   6.5
 255.  *   9.9   9.9   9.9   7.0   6.2   6.5   6.7   7.4   9.0   8.3   7.8   7.0
6.0   6.3   6.4   6.4   5.7   5.8   6.6   6.5
 260.  *  10.1  10.2  10.2   6.8   6.0   6.3   6.5   7.2   9.1   8.1   7.4   8.2
6.6   6.6   6.6   6.7   6.0   6.1   6.8   6.5
 265.  *  10.0  10.1  10.1   6.5   5.8   6.2   6.5   7.1   8.9   7.4   7.0   9.5
7.7   7.3   7.0   7.2   6.5   6.6   7.3   6.7
 270.  *   9.2   9.3   9.3   6.0   5.4   6.0   6.2   6.6   8.1   7.1   6.6  10.1
8.7   8.1   7.7   7.9   7.2   7.3   7.8   7.0
 275.  *   7.8   7.9   7.9   5.5   5.1   5.9   5.9   6.2   7.4   6.3   5.7  10.2
9.3   8.8   8.4   8.3   7.7   7.8   8.4   7.4
 280.  *   6.7   6.7   6.7   5.2   5.0   5.7   5.7   6.0   6.8   5.8   5.6   9.7
9.1   8.9   8.4   8.0   8.0   8.1   8.6   7.6
 285.  *   5.7   5.8   5.8   5.0   5.0   5.7   5.7   5.9   6.7   5.5   5.3   9.0
8.6   8.9   8.2   7.6   7.9   8.0   8.6   7.7
 290.  *   5.4   5.4   5.4   5.0   5.0   5.7   5.7   5.9   6.6   5.5   5.3   8.9
7.9   8.5   7.7   7.2   7.6   7.9   8.4   7.7
 295.  *   5.3   5.3   5.3   5.0   5.0   5.7   5.7   5.9   6.8   5.4   5.3   8.5
7.9   8.1   7.2   7.1   7.2   7.6   8.5   7.8
 300.  *   5.2   5.2   5.2   5.0   5.0   5.8   5.8   5.9   6.7   5.4   5.4   8.5
7.5   7.9   6.8   7.3   7.0   7.4   8.0   7.8
 305.  *   5.2   5.2   5.2   5.0   5.0   5.8   5.8   5.9   6.8   5.4   5.4   8.1
7.4   7.6   6.7   7.1   6.8   7.1   8.1   8.0
 310.  *   5.2   5.2   5.2   5.0   5.0   5.9   5.9   6.0   6.5   5.4   5.4   8.0
7.4   7.4   6.8   7.5   6.7   6.8   7.8   7.9
 315.  *   5.2   5.2   5.2   5.0   5.0   5.9   5.9   5.9   6.4   5.3   5.3   8.0
7.2   7.1   6.8   7.6   7.0   6.9   7.7   7.8
 320.  *   5.1   5.1   5.1   5.0   5.0   6.0   6.0   6.0   6.2   5.4   5.3   7.7
7.3   7.1   6.8   7.8   7.1   6.8   7.7   8.0
 325.  *   5.1   5.1   5.1   5.0   5.0   6.0   6.0   6.0   6.1   5.4   5.3   7.5
7.7   7.1   6.9   7.8   7.1   6.8   7.3   7.9
 330.  *   5.1   5.1   5.1   5.0   5.0   6.1   6.1   6.0   5.8   5.4   5.3   7.3
8.0   7.0   7.2   7.6   7.3   6.8   7.3   7.9
 335.  *   5.1   5.1   5.1   5.0   5.0   6.2   6.2   6.2   5.8   5.4   5.3   7.3
8.1   7.1   7.4   7.6   7.2   7.2   7.3   7.9
 340.  *   5.0   5.0   5.0   5.0   5.0   6.3   6.3   6.3   5.8   5.4   5.2   7.3
8.2   7.2   7.6   7.5   7.3   7.3   7.5   7.7
 345.  *   5.0   5.0   5.1   5.1   5.1   6.5   6.5   6.5   5.7   5.3   5.2   7.3
8.3   7.4   7.8   7.2   7.1   7.5   7.5   7.7
 350.  *   5.0   5.0   5.3   5.3   5.3   6.5   6.6   6.6   5.6   5.2   5.1   7.1
8.1   7.6   7.6   7.2   7.0   7.6   7.8   7.7
 355.  *   5.0   5.1   5.5   5.6   5.5   6.5   6.5   6.5   5.5   5.1   5.0   7.0
7.9   7.8   7.5   7.0   6.9   7.3   7.6   7.5
 360.  *   5.0   5.2   5.8   5.9   5.8   6.2   6.2   6.3   5.3   5.1   5.0   6.9
7.9   7.8   7.2   6.9   6.8   7.2   7.9   7.5
```

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26
5.	6.9	6.7	7.2	8.1	7.7	7.5
10.	6.5	7.2	7.1	8.1	7.7	7.5
15.	6.3	7.3	7.2	8.2	7.8	7.6
20.	6.1	7.3	7.2	7.9	7.9	7.7
25.	6.0	7.7	7.2	8.0	7.8	7.7
30.	6.2	7.8	7.3	7.8	7.8	7.8
35.	6.2	8.0	7.5	7.8	8.0	8.0
40.	6.2	8.0	7.8	7.6	8.1	8.0
45.	6.2	8.1	7.8	8.1	8.4	8.1
50.	6.3	8.1	8.2	8.3	8.6	8.2
55.	6.0	8.0	8.5	9.0	8.8	8.4
60.	5.7	7.7	8.5	9.6	9.4	8.9
65.	5.6	7.2	8.2	10.1	10.1	9.5
70.	5.4	6.9	7.9	10.2	10.2	10.0
75.	5.2	6.6	7.4	9.5	10.0	10.3
80.	5.2	6.5	7.1	8.6	9.3	9.8
85.	5.2	6.4	6.9	7.7	8.2	8.7
90.	5.1	6.5	6.8	7.1	7.2	7.6
95.	5.1	6.3	6.6	6.6	6.6	6.7
100.	5.1	6.3	6.4	6.5	6.2	6.4
105.	5.1	6.3	6.3	6.3	5.9	5.8
110.	5.1	6.3	6.3	6.2	5.8	5.7
115.	5.1	6.3	6.3	6.3	5.9	5.7
120.	5.1	6.5	6.5	6.4	5.9	5.7
125.	5.1	6.6	6.6	6.3	5.9	5.7
130.	5.1	6.5	6.6	6.3	5.8	5.6
135.	5.1	6.6	6.6	6.5	5.7	5.6
140.	5.1	6.6	6.6	6.5	5.8	5.6
145.	5.1	6.6	6.6	6.5	5.9	5.7
150.	5.1	6.8	6.8	6.8	6.1	5.7
155.	5.1	7.0	7.0	7.0	6.1	5.7
160.	5.2	7.1	7.1	7.0	6.1	5.6
165.	5.4	7.3	7.3	7.3	6.1	5.6
170.	5.9	7.3	7.4	7.4	5.9	5.5
175.	6.7	7.0	7.1	7.3	5.7	5.3
180.	7.4	6.6	6.7	6.7	5.5	5.1
185.	7.9	5.9	6.0	6.1	5.1	5.0
190.	8.0	5.5	5.5	5.5	5.0	5.0
195.	8.0	5.1	5.1	5.1	5.0	5.0
200.	7.6	5.1	5.1	5.1	5.0	5.0
205.	7.4	5.0	5.0	5.0	5.0	5.0
210.	7.2	5.0	5.0	5.0	5.0	5.0

JOB: Mercer St and I-5 Ramps RUN: 2030 No Build

WIND ANGLE RANGE: 5.-360.

WIND * CONCENTRATION

ANGLE (DEGR)	*	(PPM) REC21	REC22	REC23	REC24	REC25	REC26
215.	*	7.1	5.0	5.0	5.0	5.0	5.0
220.	*	7.0	5.0	5.0	5.0	5.0	5.0
225.	*	6.8	5.0	5.0	5.0	5.0	5.0
230.	*	6.8	5.0	5.0	5.0	5.0	5.0
235.	*	6.8	5.0	5.0	5.0	5.0	5.0
240.	*	6.7	5.0	5.0	5.0	5.0	5.0
245.	*	6.6	5.0	5.0	5.0	5.0	5.0
250.	*	6.5	5.0	5.0	5.1	5.1	5.1
255.	*	6.5	5.0	5.0	5.4	5.4	5.4
260.	*	6.5	5.0	5.1	6.1	6.1	6.1
265.	*	6.6	5.1	5.5	7.2	7.1	7.0
270.	*	6.7	5.5	5.9	8.4	8.4	8.3
275.	*	7.1	5.8	6.5	9.2	9.1	9.1
280.	*	7.2	6.0	6.7	9.5	9.4	9.4
285.	*	7.4	6.1	6.9	9.4	9.4	9.4
290.	*	7.5	6.1	6.8	9.1	9.1	9.1
295.	*	7.5	6.2	6.7	8.7	8.7	8.7
300.	*	7.6	6.2	6.5	8.4	8.4	8.4
305.	*	7.7	6.1	6.5	8.1	8.1	8.1
310.	*	7.7	6.0	6.5	8.0	8.0	8.0
315.	*	7.7	6.0	6.3	7.8	7.8	7.8
320.	*	7.9	6.0	6.3	7.7	7.7	7.7
325.	*	8.0	6.0	6.3	7.7	7.7	7.7
330.	*	8.0	6.0	6.2	7.5	7.5	7.5
335.	*	8.0	5.9	6.2	7.5	7.4	7.4
340.	*	8.1	6.0	6.3	7.4	7.4	7.4
345.	*	8.0	6.0	6.3	7.3	7.3	7.3
350.	*	7.9	6.0	6.4	7.5	7.3	7.3
355.	*	7.7	6.3	6.6	7.7	7.5	7.4
360.	*	7.5	6.5	6.9	8.2	7.6	7.5

THE HIGHEST CONCENTRATION OF 10.30 PPM OCCURRED AT RECEPTOR REC26.

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Mercer St and I-5 Ramps RUN: 2016 Build 4LT

DATE : 8/18/ 4
TIME : 19: 9: 2

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. EBA	*	-1000.0	6.0	.0	6.0	*	1000.	90.	AG	4240.	15.0	.0	56.0		
2. EBD1	*	.0	6.0	100.0	6.0	*	100.	90.	AG	4520.	15.0	.0	56.0		
3. EBD2	*	100.0	6.0	975.0	315.0	*	928.	71.	AG	4520.	15.0	.0	56.0		
4. WBA1	*	986.0	354.0	125.0	45.0	*	915.	250.	AG	2430.	15.0	.0	56.0		
5. WBA2	*	125.0	45.0	24.0	150.0	*	146.	316.	AG	1960.	15.0	.0	44.0		
6. WBA3	*	125.0	45.0	32.0	12.0	*	99.	250.	AG	470.	15.0	.0	44.0		
7. NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1690.	15.0	.0	56.0		
8. NBD1	*	24.0	.0	24.0	150.0	*	150.	360.	AG	360.	15.0	.0	68.0		
9. NBD2	*	24.0	150.0	24.0	1000.0	*	850.	360.	AG	2320.	15.0	.0	68.0		
10. SBA	*	-6.0	1000.0	-6.0	.0	*	1000.	180.	AG	140.	15.0	.0	32.0		
11. SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	700.	15.0	.0	44.0		
12. SWD	*	.0	-80.0	1000.0	-80.0	*	1000.	90.	AG	960.	15.0	.0	44.0		
13. EBT	*	-24.0	.0	-5557.3	-1.4	*	5533.	270.	AG	367.	100.0	.0	36.0	1.83	281.1
14. EBR	*	-24.0	-18.0	-2349.8	-18.6	*	2326.	270.	AG	122.	100.0	.0	12.0	1.33	118.2
15. WBR	*	38.0	136.0	1399.5	-1288.1	*	1970.	136.	AG	133.	100.0	.0	24.0	1.21	100.1
16. NBT	*	6.0	-92.0	6.0	-761.0	*	669.	180.	AG	178.	100.0	.0	12.0	1.15	34.0
17. NBR	*	24.0	-92.0	24.0	-2223.6	*	2132.	180.	AG	245.	100.0	.0	24.0	1.39	108.3
18. SBT	*	-6.0	24.0	-6.0	75.3	*	51.	360.	AG	178.	100.0	.0	12.0	.40	2.6

JOB: Mercer St and I-5 Ramps RUN: 2016 Build 4LT

DATE : 8/18/ 4
TIME : 19: 9: 2

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
13. EBT	90	46	3.0	3420	1442	89.24	2	3
14. EBR	90	46	3.0	820	1425	89.24	2	3
15. WBR	90	25	3.0	1960	1212	89.24	2	3
16. NBT	90	67	3.0	360	1565	89.24	2	3
17. NBR	90	46	3.0	1330	1102	89.24	2	3
18. SBT	90	67	3.0	140	1732	89.24	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-186.0	34.0	5.9
2. R2	-104.0	34.0	5.9
3. R3	-22.0	34.0	5.9
4. R4	-22.0	116.0	5.9
5. R5	-22.0	198.0	5.9
6. R6	58.0	314.0	5.9
7. R7	58.0	232.0	5.9
8. R8	58.0	150.0	5.9
9. R9	125.0	73.0	5.9
10. R10	202.0	101.0	5.9
11. R11	279.0	129.0	5.9
12. R12	200.0	-2.0	5.9
13. R13	123.0	-30.0	5.9
14. R14	46.0	-58.0	5.9
15. R15	128.0	-58.0	5.9
16. R16	210.0	-58.0	5.9
17. R17	210.0	-102.0	5.9
18. R18	128.0	-102.0	5.9
19. R19	46.0	-102.0	5.9
20. R20	46.0	-184.0	5.9
21. R21	46.0	-266.0	5.9
22. R22	-34.0	-198.0	5.9
23. R23	-34.0	-116.0	5.9
24. R24	-34.0	-34.0	5.9
25. R25	-116.0	-34.0	5.9
26. R26	-198.0	-34.0	5.9

JOB: Mercer St and I-5 Ramps RUN: 2016 Build 4LT

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	5.1	5.4	6.5	6.6	6.6	6.1	6.2	6.2	5.3	5.1	5.1	7.6	8.2	8.0	7.4	7.3	7.1	7.3	8.2	7.5
10.	*	5.3	5.6	6.7	6.7	6.8	5.7	5.7	5.7	5.2	5.1	5.1	7.7	8.1	7.7	7.4	7.2	7.2	7.3	7.7	7.3
15.	*	5.4	5.7	6.7	6.7	6.9	5.4	5.4	5.4	5.2	5.1	5.1	7.8	8.0	7.5	7.3	7.2	7.2	7.2	7.4	6.9
20.	*	5.6	5.8	6.5	6.4	6.6	5.2	5.2	5.2	5.2	5.1	5.1	7.9	8.1	7.6	7.3	7.3	7.2	7.2	7.5	6.7
25.	*	5.6	5.8	6.5	6.3	6.5	5.2	5.2	5.2	5.2	5.1	5.1	8.1	8.2	7.4	7.5	7.4	7.3	7.5	7.4	6.7
30.	*	5.6	5.7	6.5	6.1	6.4	5.1	5.1	5.1	5.1	5.1	5.1	8.2	8.3	7.6	7.5	7.4	7.4	7.5	7.7	6.8
35.	*	5.7	5.7	6.5	6.0	6.3	5.1	5.1	5.1	5.2	5.1	5.1	8.3	8.6	7.9	7.7	7.5	7.4	7.6	7.7	6.9
40.	*	5.6	5.7	6.5	6.1	6.2	5.1	5.1	5.1	5.2	5.2	5.2	8.6	8.9	8.1	7.8	7.7	7.6	7.7	7.9	7.0
45.	*	5.6	5.6	6.4	6.1	6.2	5.1	5.1	5.1	5.2	5.2	5.2	8.8	9.1	8.4	7.9	7.8	7.7	7.9	8.1	7.1
50.	*	5.5	5.7	6.4	6.0	6.1	5.1	5.1	5.1	5.3	5.3	5.3	9.2	9.4	8.8	8.1	7.8	7.7	8.0	8.3	7.1
55.	*	5.6	5.8	6.6	6.0	6.1	5.1	5.1	5.1	5.7	5.6	5.6	9.4	9.8	9.3	8.3	7.9	7.6	8.0	8.6	7.1
60.	*	5.7	6.1	6.8	6.0	6.1	5.1	5.1	5.1	6.3	6.2	6.2	9.4	9.6	9.3	8.1	7.6	7.3	7.7	8.3	6.8
65.	*	6.1	6.5	7.6	6.2	6.0	5.1	5.1	5.3	7.4	7.2	7.1	8.8	9.1	8.9	7.6	7.0	6.9	7.2	7.8	6.2
70.	*	6.7	7.3	8.5	6.6	6.2	5.0	5.1	5.4	8.6	8.4	8.2	7.8	8.1	8.0	6.8	6.4	6.6	6.8	7.2	5.8
75.	*	7.7	8.2	9.6	7.1	6.4	5.0	5.2	5.9	9.5	9.4	9.2	6.7	7.0	7.0	6.2	6.1	6.4	6.5	6.7	5.5
80.	*	8.5	9.0	10.2	7.6	6.7	5.2	5.6	6.4	10.0	9.8	9.7	5.8	6.2	6.4	5.9	6.0	6.4	6.4	6.4	5.4
85.	*	9.4	9.4	10.3	8.0	7.0	5.4	5.9	6.7	10.0	9.9	9.8	5.4	5.8	6.1	6.0	6.2	6.3	6.2	6.2	5.3
90.	*	9.9	9.7	10.6	8.2	7.3	5.7	6.2	7.1	9.7	9.7	9.5	5.3	5.7	6.2	6.1	6.5	6.2	6.1	6.1	5.2
95.	*	10.3	10.2	10.3	8.2	7.4	6.0	6.3	7.0	9.3	9.3	9.1	5.3	5.7	6.3	6.3	6.6	6.0	5.9	5.9	5.2
100.	*	10.6	10.2	10.4	8.1	7.5	6.0	6.3	7.0	9.1	8.9	8.9	5.3	5.8	6.3	6.4	6.8	5.8	5.6	5.6	5.1
105.	*	10.6	10.1	9.9	8.0	7.5	6.1	6.4	7.0	8.9	8.7	8.7	5.4	5.8	6.2	6.3	6.8	5.6	5.4	5.4	5.1

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 110.  *  10.7  10.0   9.7   7.7   7.5   6.2   6.4   6.9   8.7   8.6   8.5   5.4
5.9   6.1   6.2   6.7   5.5   5.3   5.3   5.2
 115.  *  10.6  10.2   9.4   7.7   7.6   6.2   6.5   6.9   8.5   8.4   8.4   5.4
5.9   6.0   6.1   6.7   5.6   5.4   5.3   5.2
 120.  *  10.3  10.0   9.5   7.5   7.9   6.2   6.3   7.1   8.6   8.3   8.3   5.4
5.8   6.0   6.1   6.8   5.6   5.4   5.4   5.3
 125.  *  10.0  10.1   9.2   7.4   8.0   6.1   6.3   7.1   8.7   8.1   8.1   5.5
5.8   6.0   6.1   7.0   5.6   5.4   5.4   5.2
 130.  *   9.8  10.0   8.9   7.3   8.2   6.1   6.4   7.3   8.8   8.2   8.1   5.7
5.8   5.9   5.9   7.0   5.5   5.3   5.3   5.2
 135.  *   9.5   9.7   8.9   7.1   8.2   6.2   6.5   7.8   9.0   8.1   8.0   5.9
5.7   5.8   5.9   6.9   5.4   5.2   5.2   5.2
 140.  *   9.4   9.5   8.7   7.1   8.1   6.3   6.6   8.0   9.2   8.1   8.0   6.0
5.6   5.7   5.7   6.6   5.3   5.1   5.1   5.1
 145.  *   9.3   9.7   8.5   6.9   7.8   6.3   6.7   8.1   9.2   8.1   8.0   6.1
5.5   5.6   5.6   6.3   5.1   5.0   5.1   5.1
 150.  *   9.3   9.5   8.6   7.2   7.4   6.3   6.6   8.3   9.1   8.1   8.0   6.1
5.4   5.6   5.5   6.0   5.0   5.0   5.1   5.1
 155.  *   9.2   9.4   9.0   6.9   7.2   6.3   6.7   8.2   9.2   8.1   7.9   6.0
5.3   5.6   5.5   5.8   5.0   5.0   5.1   5.1
 160.  *   9.1   9.6   9.3   7.5   7.1   6.4   6.9   8.1   9.1   8.3   8.1   5.9
5.3   5.7   5.4   5.6   5.0   5.0   5.3   5.3
 165.  *   8.9   9.6  10.0   8.2   7.4   6.7   7.1   8.1   9.0   8.1   7.9   5.9
5.3   5.9   5.4   5.5   5.0   5.0   5.5   5.5
 170.  *   8.8   9.4  10.4   8.7   7.8   6.9   7.4   8.4   8.9   8.0   7.9   5.8
5.4   6.6   5.6   5.6   5.0   5.1   6.1   6.1
 175.  *   8.6   9.2  10.5   9.0   8.0   7.6   8.1   8.9   9.0   8.1   7.9   5.9
5.6   7.6   5.8   5.7   5.1   5.3   7.1   7.1
 180.  *   8.4   9.0  10.2   8.6   7.8   8.1   8.7   9.5   9.4   8.3   8.0   6.1
6.0   8.6   6.0   5.7   5.1   5.5   8.1   8.1
 185.  *   8.2   8.5   9.3   8.0   7.3   8.6   8.7   9.7   9.7   8.6   8.2   6.2
6.4   9.3   6.5   6.0   5.3   6.0   8.8   8.8
 190.  *   8.1   8.1   8.6   7.3   6.8   8.3   8.6   9.4  10.2   9.1   8.5   6.5
6.7   9.3   6.8   6.3   5.6   6.3   9.0   9.0
 195.  *   8.1   8.1   8.3   6.8   6.3   7.8   8.2   9.0  10.2   9.2   8.8   6.6
6.8   9.1   6.8   6.3   5.9   6.4   8.9   8.9
 200.  *   8.1   8.1   8.0   6.6   6.2   7.7   7.9   8.3  10.2   9.6   9.0   6.8
6.9   8.5   6.9   6.2   5.8   6.5   8.4   8.4
 205.  *   8.1   8.1   8.1   6.6   6.2   7.3   7.6   8.3  10.0   9.5   9.1   6.7
6.8   8.4   6.9   6.5   6.0   6.4   8.2   8.2
 210.  *   8.3   8.3   8.2   6.6   6.2   7.3   7.3   8.0   9.8   9.7   9.3   6.7
6.7   8.0   6.8   6.5   6.0   6.3   7.9   7.9
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PAGE 4

JOB: Mercer St and I-5 Ramps RUN: 2016 Build 4LT

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20
 REC21 REC22 REC23 REC24 REC25 REC26

------*-------------------------------------------------------------------------------
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 215.  *   8.4   8.4   8.4   6.6   6.3   7.3   7.3   8.1   9.6   9.6   9.3   6.7
6.7   7.7   6.8   6.4   5.9   6.3   7.8   7.8
 220.  *   8.6   8.6   8.5   6.8   6.3   7.3   7.4   8.1   9.6   9.5   9.5   6.6
6.7   7.4   6.8   6.4   5.9   6.3   7.6   7.6
 225.  *   8.8   8.8   8.7   6.8   6.3   7.2   7.3   8.2   9.2   9.4   9.6   6.6
6.6   7.1   6.9   6.5   5.9   6.3   7.5   7.5
 230.  *   8.9   8.9   8.9   6.9   6.3   7.2   7.4   8.2   9.2   9.4   9.6   6.4
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6.5   6.9   6.6   6.4   5.8   6.0   7.3   7.3
 235.  *   9.2   9.2   9.2   6.9   6.5   7.1   7.4   8.0   9.2   9.2   9.6   6.4
6.2   6.8   6.6   6.4   5.8   6.1   7.3   7.2
 240.  *   9.6   9.6   9.6   7.2   6.5   7.1   7.3   8.0   9.4   9.2   9.4   6.4
6.0   6.6   6.7   6.4   5.8   6.1   7.2   7.1
 245.  *  10.0  10.0  10.0   7.3   6.5   7.1   7.4   8.0   9.8   9.3   9.1   6.5
6.0   6.4   6.5   6.4   5.8   6.1   7.2   7.0
 250.  *  10.6  10.6  10.6   7.4   6.6   7.0   7.4   8.2   9.8   9.4   9.1   6.8
5.9   6.3   6.5   6.5   5.8   6.1   7.0   6.9
 255.  *  11.2  11.2  11.2   7.4   6.5   7.0   7.2   8.1  10.2   9.2   8.6   7.6
6.4   6.5   6.6   6.7   5.9   6.1   7.0   6.9
 260.  *  11.7  11.7  11.8   7.3   6.2   6.8   7.1   8.0  10.3   9.1   8.3   9.0
7.1   7.0   7.1   7.2   6.2   6.4   7.3   7.1
 265.  *  11.5  11.5  11.6   7.0   6.0   6.6   6.8   7.6   9.8   8.4   7.8  10.4
8.5   7.9   7.7   7.8   6.9   7.0   7.9   7.2
 270.  *  10.4  10.6  10.6   6.2   5.6   6.3   6.5   7.1   9.1   7.5   7.0  11.5
9.9   8.9   8.6   8.6   7.7   7.8   8.8   7.7
 275.  *   8.8   8.8   8.9   5.5   5.2   6.1   6.1   6.8   8.1   7.0   6.2  11.4
10.3   9.8   9.2   8.9   8.4   8.5   9.2   8.0
 280.  *   7.1   7.1   7.2   5.2   5.0   6.0   6.0   6.3   7.4   6.0   5.7  10.8
10.4  10.0   9.4   8.9   8.8   9.0   9.7   8.5
 285.  *   6.0   6.0   6.0   5.0   5.0   6.0   6.0   6.3   7.3   5.7   5.5   9.8
9.6   9.9   8.9   8.3   8.6   8.8   9.5   8.5
 290.  *   5.6   5.6   5.6   5.0   5.0   6.0   6.0   6.2   7.3   5.7   5.4   9.4
9.0   9.4   8.3   7.9   8.2   8.6   9.2   8.6
 295.  *   5.3   5.3   5.3   5.0   5.0   6.0   6.0   6.3   7.3   5.5   5.4   9.0
8.3   9.2   8.0   7.7   7.8   8.3   9.3   8.5
 300.  *   5.3   5.3   5.3   5.0   5.0   6.0   6.0   6.2   7.4   5.6   5.5   8.9
8.0   8.8   7.5   7.5   7.3   8.0   9.0   8.6
 305.  *   5.2   5.2   5.2   5.0   5.0   6.1   6.1   6.3   7.3   5.5   5.5   9.1
7.6   8.4   7.3   7.7   7.3   7.7   8.7   8.7
 310.  *   5.2   5.2   5.2   5.0   5.0   6.2   6.2   6.3   7.1   5.6   5.5   8.8
7.4   8.1   7.0   7.9   7.2   7.5   8.7   8.5
 315.  *   5.2   5.2   5.2   5.0   5.0   6.2   6.2   6.3   6.9   5.6   5.5   8.6
7.4   7.8   6.8   8.2   7.3   7.3   8.5   8.8
 320.  *   5.2   5.2   5.2   5.0   5.0   6.3   6.3   6.3   6.8   5.5   5.4   8.4
7.6   7.7   7.0   8.3   7.5   7.0   8.4   8.8
 325.  *   5.2   5.2   5.2   5.0   5.0   6.4   6.4   6.3   6.4   5.5   5.4   8.3
7.8   7.8   7.2   8.3   7.7   7.2   8.2   8.9
 330.  *   5.1   5.1   5.1   5.0   5.0   6.6   6.6   6.5   6.2   5.5   5.4   8.2
8.1   7.5   7.3   8.3   7.8   7.2   8.0   8.9
 335.  *   5.1   5.1   5.1   5.0   5.0   6.7   6.7   6.7   6.1   5.5   5.4   8.2
8.5   7.6   7.7   8.3   7.9   7.5   8.0   8.7
 340.  *   5.1   5.1   5.1   5.0   5.1   6.9   6.9   6.9   6.0   5.5   5.3   8.0
8.6   7.8   7.8   8.1   7.8   7.6   8.1   8.6
 345.  *   5.0   5.0   5.1   5.1   5.1   7.1   7.2   7.2   6.0   5.4   5.2   8.0
8.9   8.0   8.0   7.9   7.7   7.9   8.1   8.6
 350.  *   5.0   5.0   5.4   5.4   5.4   7.2   7.2   7.3   5.9   5.3   5.1   7.9
8.6   8.3   8.2   7.7   7.6   8.0   8.4   8.8
 355.  *   5.0   5.1   5.7   5.7   5.7   7.0   7.0   7.1   5.6   5.2   5.1   7.6
8.4   8.5   8.0   7.6   7.4   7.8   8.6   8.4
 360.  *   5.1   5.2   6.2   6.1   6.1   6.7   6.7   6.7   5.5   5.1   5.0   7.7
8.3   8.2   7.7   7.4   7.2   7.4   8.4   8.1
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JOB: Mercer St and I-5 Ramps RUN: 2016 Build 4LT

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first

angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26
5.	7.5	7.6	7.9	9.0	8.4	8.1
10.	6.9	7.8	7.9	9.3	8.5	8.2
15.	6.7	8.1	7.9	9.0	8.5	8.3
20.	6.3	8.1	7.6	8.9	8.6	8.5
25.	6.5	8.1	7.6	8.7	8.7	8.6
30.	6.5	8.4	7.9	8.7	8.9	8.7
35.	6.6	8.7	8.2	8.4	8.8	8.8
40.	6.6	8.7	8.3	8.3	9.1	8.9
45.	6.6	8.9	8.6	8.6	9.1	9.0
50.	6.6	8.8	9.0	9.1	9.5	9.0
55.	6.4	9.0	9.4	9.5	9.8	9.5
60.	6.0	8.6	9.5	10.4	10.5	10.1
65.	5.6	8.0	9.2	11.3	11.5	10.8
70.	5.4	7.5	8.8	11.2	11.8	11.5
75.	5.3	7.1	8.1	10.8	11.3	11.4
80.	5.2	6.9	7.8	9.5	10.3	10.9
85.	5.2	6.9	7.4	8.2	9.0	9.6
90.	5.1	6.9	7.3	7.6	7.9	8.2
95.	5.1	6.7	7.0	7.2	7.1	7.2
100.	5.1	6.7	6.9	6.9	6.5	6.5
105.	5.1	6.7	6.8	6.7	6.3	6.0
110.	5.1	6.7	6.8	6.6	6.2	5.7
115.	5.1	6.7	6.8	6.6	6.3	5.9
120.	5.2	7.0	7.1	6.8	6.2	5.8
125.	5.2	7.0	7.0	6.8	6.1	5.8
130.	5.2	7.1	7.1	6.8	6.2	5.8
135.	5.1	7.0	7.1	6.9	6.2	5.8
140.	5.1	7.0	7.0	6.7	6.1	5.8
145.	5.1	7.3	7.3	7.1	6.1	5.9
150.	5.1	7.3	7.3	7.2	6.3	5.9
155.	5.1	7.6	7.6	7.6	6.3	5.9
160.	5.3	7.7	7.7	7.7	6.3	5.8
165.	5.5	8.0	8.0	8.0	6.3	5.8
170.	6.1	8.0	8.1	8.1	6.2	5.7
175.	7.0	7.7	7.7	7.7	5.8	5.4
180.	8.1	7.0	7.1	7.2	5.5	5.1
185.	8.7	6.3	6.3	6.3	5.2	5.0
190.	8.9	5.6	5.6	5.7	5.0	5.0
195.	8.8	5.2	5.2	5.3	5.0	5.0
200.	8.4	5.1	5.1	5.1	5.0	5.0
205.	8.2	5.1	5.1	5.1	5.0	5.0
210.	7.9	5.0	5.0	5.0	5.0	5.0

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26
215.	7.8	5.0	5.0	5.0	5.0	5.0

220.	*	7.6	5.0	5.0	5.0	5.0	5.0
225.	*	7.5	5.0	5.0	5.0	5.0	5.0
230.	*	7.3	5.0	5.0	5.0	5.0	5.0
235.	*	7.2	5.0	5.0	5.0	5.0	5.0
240.	*	7.1	5.0	5.0	5.0	5.0	5.0
245.	*	7.0	5.0	5.0	5.0	5.0	5.0
250.	*	6.9	5.0	5.0	5.1	5.1	5.1
255.	*	6.9	5.0	5.0	5.6	5.5	5.5
260.	*	7.0	5.0	5.1	6.3	6.3	6.3
265.	*	7.1	5.2	5.6	7.8	7.8	7.7
270.	*	7.3	5.6	6.1	9.4	9.3	9.3
275.	*	7.6	6.0	6.8	10.5	10.4	10.4
280.	*	7.9	6.3	7.2	10.9	10.8	10.8
285.	*	8.0	6.5	7.3	10.7	10.7	10.7
290.	*	8.1	6.5	7.3	10.1	10.1	10.1
295.	*	8.2	6.5	7.2	9.7	9.7	9.7
300.	*	8.3	6.5	7.1	9.4	9.4	9.4
305.	*	8.4	6.4	7.0	9.0	9.0	9.0
310.	*	8.5	6.3	6.9	8.8	8.8	8.8
315.	*	8.5	6.3	6.9	8.6	8.7	8.7
320.	*	8.6	6.2	6.7	8.5	8.5	8.5
325.	*	8.8	6.2	6.6	8.4	8.4	8.4
330.	*	8.8	6.2	6.5	8.3	8.3	8.3
335.	*	9.0	6.3	6.6	8.1	8.1	8.1
340.	*	9.1	6.2	6.6	8.1	8.1	8.1
345.	*	9.0	6.2	6.7	8.2	7.9	7.9
350.	*	8.9	6.4	6.9	8.2	8.0	8.0
355.	*	8.5	6.8	6.9	8.5	8.1	8.0
360.	*	8.2	7.0	7.5	9.0	8.2	8.0

THE HIGHEST CONCENTRATION OF 11.80 PPM OCCURRED AT RECEPTOR REC3 .

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Mercer St and I-5 Ramps RUN: 2030 Build 4LT

DATE : 8/18/ 4
TIME : 19: 9:53

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1. EBA	*	-1000.0	6.0	.0	6.0	*	1000.	90.	AG	4360.	11.2	.0	56.0		
2. EBD1	*	.0	6.0	100.0	6.0	*	100.	90.	AG	4520.	11.2	.0	56.0		
3. EBD2	*	100.0	6.0	975.0	315.0	*	928.	71.	AG	4520.	11.2	.0	56.0		
4. WBA1	*	986.0	354.0	125.0	45.0	*	915.	250.	AG	2330.	11.2	.0	56.0		
5. WBA2	*	125.0	45.0	24.0	150.0	*	146.	316.	AG	1880.	11.2	.0	44.0		
6. WBA3	*	125.0	45.0	32.0	12.0	*	99.	250.	AG	450.	11.2	.0	44.0		
7. NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1780.	11.2	.0	56.0		
8. NBD1	*	24.0	.0	24.0	150.0	*	150.	360.	AG	420.	11.2	.0	68.0		
9. NBD2	*	24.0	150.0	24.0	1000.0	*	850.	360.	AG	2300.	11.2	.0	68.0		
10. SBA	*	-6.0	1000.0	-6.0	.0	*	1000.	180.	AG	150.	11.2	.0	32.0		
11. SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	600.	11.2	.0	44.0		
12. SWD	*	.0	-80.0	1000.0	-80.0	*	1000.	90.	AG	1100.	11.2	.0	44.0		
13. EBT	*	-24.0	.0	-5723.0	-1.4	*	5699.	270.	AG	286.	100.0	.0	36.0	1.88	289.5
14. EBR	*	-24.0	-18.0	-3743.2	-18.9	*	3719.	270.	AG	95.	100.0	.0	12.0	1.56	188.9
15. WBL	*	41.0	15.0	144.2	51.9	*	110.	70.	AG	284.	100.0	.0	24.0	.90	5.6
16. WBR	*	38.0	136.0	1212.4	-1092.4	*	1699.	136.	AG	105.	100.0	.0	24.0	1.18	86.3
17. NBT	*	6.0	-92.0	6.0	-1213.9	*	1122.	180.	AG	134.	100.0	.0	12.0	1.27	57.0
18. NBR	*	24.0	-92.0	24.0	-2254.4	*	2162.	180.	AG	182.	100.0	.0	24.0	1.39	109.9
19. SBT	*	-6.0	24.0	-6.0	78.1	*	54.								

360. AG 134. 100.0 .0 12.0 .41 2.8

JOB: Mercer St and I-5 Ramps RUN: 2030 Build 4LT

DATE : 8/18/ 4
TIME : 19: 9:53

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
13. EBT	90	47	3.0	3420	1442	67.96	2	3
14. EBR	90	47	3.0	940	1425	67.96	2	3
15. WBL	90	70	3.0	450	1494	67.96	2	3
16. WBR	90	26	3.0	1880	1212	67.96	2	3
17. NBT	90	66	3.0	420	1565	67.96	2	3
18. NBR	90	45	3.0	1360	1102	67.96	2	3
19. SBT	90	66	3.0	150	1732	67.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-186.0	34.0	5.9
2. R2	-104.0	34.0	5.9
3. R3	-22.0	34.0	5.9
4. R4	-22.0	116.0	5.9
5. R5	-22.0	198.0	5.9
6. R6	58.0	314.0	5.9
7. R7	58.0	232.0	5.9
8. R8	58.0	150.0	5.9
9. R9	125.0	73.0	5.9
10. R10	202.0	101.0	5.9
11. R11	279.0	129.0	5.9
12. R12	200.0	-2.0	5.9
13. R13	123.0	-30.0	5.9
14. R14	46.0	-58.0	5.9
15. R15	128.0	-58.0	5.9
16. R16	210.0	-58.0	5.9
17. R17	210.0	-102.0	5.9
18. R18	128.0	-102.0	5.9
19. R19	46.0	-102.0	5.9
20. R20	46.0	-184.0	5.9
21. R21	46.0	-266.0	5.9
22. R22	-34.0	-198.0	5.9
23. R23	-34.0	-116.0	5.9

24. R24	*	-34.0	-34.0	5.9	*
25. R25	*	-116.0	-34.0	5.9	*
26. R26	*	-198.0	-34.0	5.9	*

JOB: Mercer St and I-5 Ramps RUN: 2030 Build 4LT

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	5.1	5.3	6.0	6.1	6.1	5.8	5.9	5.9	5.3	5.0	5.0	7.0	7.5	7.7	7.0	6.7	6.7	7.0	7.7	7.2
10.	*	5.2	5.4	6.3	6.2	6.3	5.5	5.5	5.5	5.2	5.1	5.1	7.0	7.4	7.6	7.0	6.7	6.6	6.8	7.3	6.9
15.	*	5.3	5.5	6.2	6.2	6.3	5.3	5.3	5.3	5.2	5.1	5.1	7.1	7.4	7.3	6.8	6.7	6.6	6.7	7.3	6.6
20.	*	5.3	5.5	6.1	6.1	6.2	5.2	5.2	5.2	5.2	5.1	5.1	7.1	7.4	7.3	6.8	6.7	6.8	6.7	7.2	6.5
25.	*	5.5	5.6	6.2	6.0	6.1	5.1	5.1	5.1	5.1	5.1	5.1	7.2	7.4	7.3	6.9	6.8	6.8	6.8	7.4	6.4
30.	*	5.5	5.5	6.2	5.8	6.1	5.1	5.1	5.1	5.1	5.1	5.1	7.3	7.6	7.5	6.9	6.8	6.8	6.8	7.2	6.5
35.	*	5.4	5.5	6.1	5.8	6.0	5.1	5.1	5.1	5.1	5.1	5.1	7.5	7.6	7.6	7.0	6.9	6.8	6.9	7.2	6.4
40.	*	5.4	5.5	6.1	5.8	5.9	5.1	5.1	5.1	5.1	5.1	5.1	7.6	7.8	7.6	7.1	7.0	7.0	7.1	7.3	6.6
45.	*	5.5	5.6	6.0	5.8	5.9	5.1	5.1	5.1	5.2	5.2	5.1	7.8	8.0	7.7	7.2	7.1	7.0	7.2	7.5	6.6
50.	*	5.5	5.5	6.0	5.8	5.9	5.1	5.1	5.1	5.2	5.2	5.2	8.1	8.3	7.9	7.3	7.1	7.0	7.2	7.6	6.6
55.	*	5.5	5.7	6.1	5.7	5.8	5.1	5.1	5.1	5.5	5.5	5.5	8.3	8.4	8.0	7.4	7.1	7.1	7.3	7.7	6.4
60.	*	5.5	5.9	6.4	5.8	5.8	5.1	5.1	5.1	5.9	5.9	5.8	8.2	8.4	8.1	7.4	6.9	6.8	7.0	7.5	6.2
65.	*	5.7	6.1	6.9	6.1	5.8	5.0	5.0	5.2	6.7	6.6	6.5	7.7	7.9	7.8	6.9	6.6	6.5	6.7	7.3	6.0
70.	*	6.4	6.8	7.8	6.2	6.0	5.0	5.0	5.4	7.6	7.5	7.4	7.0	7.2	7.1	6.4	6.1	6.2	6.3	6.7	5.7
75.	*	7.0	7.5	8.7	6.4	5.9	5.0	5.2	5.7	8.3	8.2	8.0	6.2	6.4	6.5	6.0	5.9	6.1	6.2	6.4	5.5
80.	*	7.7	8.2	9.3	7.0	6.3	5.2	5.4	6.0	8.6	8.5	8.5	5.6	5.9	6.1	5.7	5.8	6.1	6.1	6.1	5.3
85.	*	8.3	8.6	9.6	7.3	6.6	5.3	5.7	6.3	8.6	8.6	8.5	5.3	5.6	5.9	5.9	5.9	6.1	6.1	6.0	5.3
90.	*	9.0	9.0	9.7	7.4	6.8	5.5	5.8	6.4	8.5	8.3	8.3	5.2	5.6	6.0	6.0	6.3	6.1	6.0	5.9	5.2
95.	*	9.3	9.4	9.7	7.4	6.9	5.7	6.0	6.4	8.2	8.0	8.0	5.2	5.6	6.0	6.1	6.4	5.8	5.8	5.7	5.1

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 100.  *   9.4   9.0   9.3   7.5   6.8   5.8   6.0   6.4   7.9   7.9   7.8   5.3
5.7   6.1   6.1   6.5   5.6   5.5   5.5   5.1
 105.  *   9.3   8.8   9.3   7.4   6.9   5.8   6.0   6.5   7.8   7.7   7.7   5.3
5.8   6.1   6.1   6.4   5.5   5.4   5.3   5.1
 110.  *   9.4   9.0   9.1   7.5   6.9   5.8   6.0   6.5   7.9   7.7   7.6   5.3
5.7   5.9   5.9   6.4   5.4   5.3   5.2   5.1
 115.  *   9.2   8.9   8.7   7.4   7.0   5.9   6.0   6.3   7.8   7.6   7.5   5.3
5.7   5.9   6.0   6.4   5.5   5.3   5.3   5.1
 120.  *   9.1   9.0   8.4   7.4   7.1   6.0   6.1   6.3   7.7   7.4   7.4   5.4
5.7   5.8   5.9   6.5   5.5   5.3   5.3   5.1
 125.  *   8.9   8.7   8.3   7.2   7.4   5.8   6.0   6.5   8.0   7.4   7.3   5.4
5.7   5.8   5.9   6.6   5.4   5.2   5.1   5.1
 130.  *   8.6   8.8   8.1   7.0   7.4   5.8   6.1   6.9   8.1   7.3   7.2   5.6
5.6   5.7   5.8   6.6   5.4   5.2   5.2   5.2
 135.  *   8.5   8.6   8.0   6.7   7.9   5.9   6.1   7.1   8.3   7.3   7.1   5.8
5.6   5.7   5.7   6.5   5.3   5.1   5.2   5.1
 140.  *   8.5   8.5   7.8   6.8   7.6   5.9   6.2   7.4   8.5   7.3   7.2   5.8
5.5   5.6   5.6   6.4   5.2   5.1   5.1   5.1
 145.  *   8.3   8.5   7.8   6.7   7.3   6.0   6.4   7.5   8.7   7.2   7.1   5.8
5.4   5.5   5.4   6.0   5.1   5.0   5.1   5.1
 150.  *   8.2   8.5   7.8   6.5   6.9   6.0   6.4   7.8   8.7   7.2   7.2   5.8
5.3   5.5   5.4   5.8   5.0   5.0   5.1   5.1
 155.  *   8.2   8.6   8.1   6.8   6.7   6.2   6.5   7.8   8.9   7.3   7.2   5.8
5.3   5.5   5.4   5.6   5.0   5.0   5.1   5.1
 160.  *   8.0   8.4   8.1   7.2   6.6   6.2   6.5   7.7   8.7   7.3   7.2   5.7
5.3   5.6   5.4   5.6   5.0   5.0   5.2   5.2
 165.  *   7.8   8.3   8.6   7.5   7.0   6.3   6.6   7.7   8.6   7.3   7.1   5.7
5.3   5.8   5.4   5.5   5.0   5.0   5.4   5.4
 170.  *   7.9   8.2   9.0   7.9   7.2   6.5   6.9   8.0   8.5   7.2   7.1   5.6
5.3   6.3   5.4   5.5   5.0   5.0   5.9   5.9
 175.  *   7.8   8.2   9.1   7.9   7.4   7.0   7.5   8.3   8.7   7.3   7.1   5.7
5.5   7.1   5.6   5.5   5.0   5.2   6.7   6.7
 180.  *   7.6   8.0   8.9   7.5   7.2   7.5   8.1   8.6   8.9   7.4   7.3   5.7
5.8   7.8   5.9   5.6   5.1   5.4   7.4   7.4
 185.  *   7.4   7.6   8.3   7.3   6.7   7.9   8.0   8.6   9.4   7.7   7.4   6.0
6.2   8.3   6.2   5.9   5.4   5.8   8.0   8.0
 190.  *   7.3   7.3   7.8   6.6   6.3   7.6   7.8   8.4   9.6   8.0   7.6   6.2
6.4   8.4   6.5   5.9   5.5   6.1   8.1   8.0
 195.  *   7.2   7.2   7.5   6.4   6.0   7.3   7.4   8.1   9.8   8.3   7.9   6.3
6.5   8.2   6.5   6.1   5.7   6.1   7.9   7.9
 200.  *   7.3   7.3   7.4   6.3   5.9   6.9   7.2   7.7   9.6   8.3   8.0   6.3
6.5   7.8   6.5   6.2   5.8   6.1   7.6   7.6
 205.  *   7.5   7.5   7.3   6.3   6.0   6.7   7.0   7.3   9.7   8.1   8.1   6.2
6.3   7.5   6.4   6.1   5.7   6.0   7.4   7.4
 210.  *   7.5   7.5   7.6   6.3   6.0   6.7   6.8   7.5   9.6   8.4   8.2   6.2
6.3   7.2   6.4   6.1   5.7   6.0   7.2   7.2
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JOB: Mercer St and I-5 Ramps RUN: 2030 Build 4LT

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20
 REC21 REC22 REC23 REC24 REC25 REC26

------*-----------------------------------------------------------------------------
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 ------*-------------------------------------
 215.  *   7.7   7.7   7.6   6.3   6.0   6.7   6.8   7.3   9.5   8.4   8.3   6.2
6.3   7.0   6.4   6.1   5.7   6.0   7.0   7.0
 220.  *   7.8   7.8   7.8   6.3   6.0   6.7   6.8   7.4   9.5   8.6   8.4   6.2
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```
6.3   6.8   6.5   6.2   5.7   6.0   7.0   7.0
 225.  *   7.9   7.9   7.9   6.4   6.0   6.7   6.8   7.4   9.1   8.6   8.5   6.3
6.1   6.6   6.5   6.2   5.7   6.0   6.8   6.8
 230.  *   8.1   8.1   8.0   6.5   6.0   6.8   6.8   7.4   8.9   8.6   8.7   6.3
6.0   6.5   6.2   6.1   5.6   5.8   6.8   6.8
 235.  *   8.3   8.3   8.3   6.5   6.2   6.7   6.8   7.3   8.9   8.7   8.5   6.0
5.9   6.5   6.2   6.2   5.6   5.8   6.8   6.8
 240.  *   8.5   8.5   8.5   6.6   6.2   6.7   6.8   7.2   8.9   8.6   8.4   6.0
5.9   6.3   6.3   6.2   5.7   5.8   6.7   6.7
 245.  *   8.9   8.9   8.9   6.6   6.2   6.6   6.8   7.4   8.6   8.6   8.3   6.2
5.9   6.2   6.3   6.2   5.7   5.8   6.6   6.6
 250.  *   9.3   9.3   9.2   6.8   6.2   6.5   6.8   7.4   9.0   8.3   8.2   6.5
5.7   6.0   6.2   6.2   5.7   5.8   6.5   6.4
 255.  *   9.8   9.8   9.8   7.0   6.2   6.5   6.7   7.4   9.0   8.3   7.8   7.0
6.0   6.2   6.4   6.4   5.7   5.8   6.5   6.4
 260.  *  10.1  10.1  10.2   6.8   6.0   6.3   6.5   7.2   9.1   8.1   7.5   8.3
6.6   6.5   6.6   6.7   6.0   6.1   6.7   6.4
 265.  *  10.0  10.0  10.1   6.5   5.7   6.3   6.5   7.1   8.8   7.5   7.0   9.3
7.7   7.2   7.1   7.2   6.5   6.6   7.2   6.6
 270.  *   9.2   9.2   9.3   6.0   5.5   6.0   6.3   6.6   8.2   7.1   6.6  10.1
8.7   8.0   7.7   7.8   7.3   7.4   7.8   6.9
 275.  *   7.8   7.8   7.9   5.6   5.1   5.9   5.9   6.3   7.4   6.3   5.7  10.2
9.3   8.6   8.4   8.3   7.7   7.8   8.3   7.3
 280.  *   6.7   6.7   6.7   5.2   5.0   5.7   5.7   6.0   6.8   5.8   5.6   9.7
9.0   8.8   8.3   8.0   8.0   8.1   8.5   7.5
 285.  *   5.7   5.7   5.7   5.0   5.0   5.7   5.7   5.9   6.7   5.5   5.3   9.0
8.5   8.8   8.1   7.5   7.9   8.0   8.5   7.6
 290.  *   5.4   5.4   5.4   5.0   5.0   5.7   5.7   5.9   6.6   5.5   5.3   8.9
7.9   8.4   7.6   7.2   7.5   7.8   8.3   7.6
 295.  *   5.3   5.3   5.3   5.0   5.0   5.7   5.7   5.9   6.8   5.4   5.4   8.6
7.8   8.0   7.2   7.0   7.2   7.6   8.5   7.8
 300.  *   5.2   5.2   5.2   5.0   5.0   5.8   5.8   5.9   6.7   5.4   5.4   8.5
7.5   7.8   6.9   7.2   7.0   7.4   8.0   7.8
 305.  *   5.2   5.2   5.2   5.0   5.0   5.8   5.8   5.9   6.8   5.4   5.4   8.3
7.4   7.6   6.8   7.1   6.9   7.1   8.1   8.0
 310.  *   5.2   5.2   5.2   5.0   5.0   5.9   5.9   6.0   6.6   5.4   5.4   8.2
7.4   7.3   6.8   7.4   6.7   6.8   7.8   7.9
 315.  *   5.2   5.2   5.2   5.0   5.0   5.9   5.9   5.9   6.4   5.5   5.3   7.9
7.2   7.1   6.8   7.6   7.0   6.9   7.6   7.8
 320.  *   5.1   5.1   5.1   5.0   5.0   6.0   6.0   6.0   6.2   5.4   5.3   7.8
7.2   7.1   6.8   7.8   7.1   6.8   7.6   8.0
 325.  *   5.1   5.1   5.1   5.0   5.0   6.0   6.0   6.0   6.1   5.4   5.3   7.5
7.7   7.0   6.9   7.7   7.2   6.8   7.3   7.9
 330.  *   5.1   5.1   5.1   5.0   5.0   6.1   6.1   6.1   5.8   5.4   5.3   7.3
8.0   7.0   7.1   7.6   7.3   6.8   7.3   7.9
 335.  *   5.1   5.1   5.1   5.0   5.0   6.2   6.2   6.2   5.8   5.4   5.3   7.2
8.1   7.1   7.4   7.5   7.3   7.1   7.3   7.9
 340.  *   5.0   5.0   5.0   5.0   5.0   6.3   6.4   6.3   5.8   5.4   5.2   7.3
8.2   7.2   7.5   7.6   7.3   7.4   7.5   7.7
 345.  *   5.0   5.0   5.1   5.1   5.1   6.5   6.5   6.5   5.7   5.3   5.2   7.3
8.3   7.4   7.8   7.2   7.3   7.5   7.5   7.7
 350.  *   5.0   5.0   5.3   5.3   5.3   6.6   6.6   6.6   5.6   5.2   5.1   7.1
8.1   7.5   7.7   7.2   7.0   7.7   7.8   7.7
 355.  *   5.0   5.1   5.5   5.6   5.6   6.5   6.5   6.5   5.5   5.1   5.0   7.0
8.0   7.8   7.5   7.0   6.9   7.4   7.7   7.5
 360.  *   5.0   5.2   5.9   5.9   5.8   6.2   6.3   6.3   5.3   5.1   5.0   6.9
7.9   7.8   7.1   6.9   6.8   7.2   7.9   7.5
```

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26
5.	6.8	6.6	7.2	8.1	7.7	7.5
10.	6.5	7.2	7.1	8.1	7.7	7.5
15.	6.3	7.3	7.1	8.1	7.8	7.6
20.	6.2	7.3	7.1	7.8	7.9	7.7
25.	6.1	7.6	7.1	8.0	7.8	7.7
30.	6.2	7.6	7.4	7.8	7.8	7.8
35.	6.2	8.1	7.5	7.7	7.9	8.0
40.	6.2	8.0	7.8	7.5	8.1	8.0
45.	6.3	8.2	7.9	8.1	8.4	8.1
50.	6.3	8.0	8.2	8.3	8.6	8.1
55.	6.0	7.9	8.4	8.9	8.8	8.4
60.	5.7	7.5	8.4	9.6	9.4	9.0
65.	5.6	7.2	8.2	10.0	10.2	9.5
70.	5.4	6.9	7.9	10.2	10.2	9.9
75.	5.2	6.6	7.4	9.5	10.0	10.3
80.	5.2	6.5	7.1	8.5	9.2	9.8
85.	5.2	6.5	6.9	7.6	8.1	8.6
90.	5.1	6.4	6.7	7.0	7.2	7.7
95.	5.1	6.3	6.6	6.6	6.6	6.7
100.	5.1	6.3	6.4	6.5	6.2	6.4
105.	5.1	6.3	6.3	6.3	5.9	5.8
110.	5.1	6.3	6.3	6.3	5.8	5.7
115.	5.1	6.3	6.3	6.3	5.9	5.7
120.	5.1	6.4	6.4	6.3	5.9	5.7
125.	5.1	6.5	6.5	6.2	5.9	5.7
130.	5.1	6.5	6.6	6.3	5.8	5.7
135.	5.1	6.6	6.6	6.5	5.7	5.6
140.	5.1	6.6	6.6	6.5	5.8	5.6
145.	5.1	6.6	6.6	6.5	5.9	5.7
150.	5.1	6.7	6.7	6.7	6.0	5.7
155.	5.1	7.0	7.0	7.0	6.0	5.7
160.	5.2	7.0	7.0	6.9	6.0	5.6
165.	5.4	7.3	7.3	7.3	6.0	5.6
170.	5.9	7.2	7.3	7.3	5.9	5.5
175.	6.7	7.0	7.0	7.1	5.7	5.4
180.	7.4	6.5	6.6	6.6	5.5	5.1
185.	8.0	5.9	6.0	6.0	5.1	5.0
190.	8.0	5.5	5.5	5.5	5.0	5.0
195.	7.9	5.1	5.1	5.1	5.0	5.0
200.	7.6	5.1	5.1	5.1	5.0	5.0
205.	7.4	5.0	5.0	5.0	5.0	5.0
210.	7.2	5.0	5.0	5.0	5.0	5.0

JOB: Mercer St and I-5 Ramps RUN: 2030 Build 4LT

WIND ANGLE RANGE: 5.-360.

WIND * CONCENTRATION

ANGLE (DEGR)	*	(PPM) REC21	REC22	REC23	REC24	REC25	REC26
215.	*	7.0	5.0	5.0	5.0	5.0	5.0
220.	*	7.0	5.0	5.0	5.0	5.0	5.0
225.	*	6.8	5.0	5.0	5.0	5.0	5.0
230.	*	6.8	5.0	5.0	5.0	5.0	5.0
235.	*	6.8	5.0	5.0	5.0	5.0	5.0
240.	*	6.7	5.0	5.0	5.0	5.0	5.0
245.	*	6.6	5.0	5.0	5.0	5.0	5.0
250.	*	6.4	5.0	5.0	5.1	5.1	5.1
255.	*	6.4	5.0	5.0	5.4	5.4	5.4
260.	*	6.4	5.0	5.1	6.1	6.1	6.1
265.	*	6.5	5.1	5.5	7.1	7.1	7.0
270.	*	6.7	5.5	5.9	8.4	8.4	8.3
275.	*	6.9	5.7	6.5	9.3	9.2	9.2
280.	*	7.1	6.0	6.7	9.5	9.5	9.5
285.	*	7.3	6.1	6.9	9.4	9.3	9.3
290.	*	7.4	6.1	6.8	9.1	9.1	9.0
295.	*	7.5	6.2	6.7	8.7	8.7	8.7
300.	*	7.6	6.2	6.5	8.4	8.4	8.4
305.	*	7.7	6.1	6.5	8.1	8.1	8.1
310.	*	7.7	6.0	6.4	8.0	8.0	8.0
315.	*	7.7	6.0	6.3	7.8	7.8	7.8
320.	*	7.9	6.0	6.3	7.7	7.7	7.7
325.	*	7.9	6.0	6.2	7.7	7.7	7.7
330.	*	7.9	6.0	6.2	7.5	7.5	7.5
335.	*	8.0	5.9	6.2	7.4	7.4	7.4
340.	*	8.1	6.0	6.2	7.4	7.4	7.4
345.	*	7.9	6.0	6.3	7.3	7.3	7.3
350.	*	8.0	6.0	6.4	7.4	7.3	7.3
355.	*	7.7	6.3	6.6	7.7	7.5	7.4
360.	*	7.5	6.5	6.9	8.1	7.5	7.4

THE HIGHEST CONCENTRATION OF 10.30 PPM OCCURRED AT RECEPTOR REC26.

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Mercer St and I-5 Ramps RUN: 2016 Build 6LT

DATE : 8/18/ 4
TIME : 19:10:31

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. EBA	*	-1000.0	6.0	.0	6.0	*	1000.	90.	AG	4320.	15.0	.0	56.0		
2. EBD1	*	.0	6.0	100.0	6.0	*	100.	90.	AG	4620.	15.0	.0	56.0		
3. EBD2	*	100.0	6.0	975.0	315.0	*	928.	71.	AG	4620.	15.0	.0	56.0		
4. WBA1	*	986.0	354.0	125.0	45.0	*	915.	250.	AG	2460.	15.0	.0	56.0		
5. WBA2	*	125.0	45.0	24.0	150.0	*	146.	316.	AG	1990.	15.0	.0	44.0		
6. WBA3	*	125.0	45.0	32.0	12.0	*	99.	250.	AG	470.	15.0	.0	44.0		
7. NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1740.	15.0	.0	56.0		
8. NBD1	*	24.0	.0	24.0	150.0	*	150.	360.	AG	370.	15.0	.0	68.0		
9. NBD2	*	24.0	150.0	24.0	1000.0	*	850.	360.	AG	2360.	15.0	.0	68.0		
10. SBA	*	-6.0	1000.0	-6.0	.0	*	1000.	180.	AG	140.	15.0	.0	32.0		
11. SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	710.	15.0	.0	44.0		
12. SWD	*	.0	-80.0	1000.0	-80.0	*	1000.	90.	AG	970.	15.0	.0	44.0		
13. EBT	*	-24.0	.0	-5792.9	-1.4	*	5769.	270.	AG	367.	100.0	.0	36.0	1.86	293.1
14. EBR	*	-24.0	-18.0	-2452.2	-18.6	*	2428.	270.	AG	122.	100.0	.0	12.0	1.35	123.4
15. WBL	*	41.0	15.0	158.8	57.1	*	125.	70.	AG	372.	100.0	.0	24.0	.94	6.4
16. WBR	*	38.0	136.0	1504.4	-1397.8	*	2122.	136.	AG	133.	100.0	.0	24.0	1.23	107.8
17. NBT	*	6.0	-92.0	6.0	-865.2	*	773.	180.	AG	178.	100.0	.0	12.0	1.18	39.3
18. NBR	*	24.0	-92.0	24.0	-2428.9	*	2337.	180.	AG	245.	100.0	.0	24.0	1.44	118.7
19. SBT	*	-6.0	24.0	-6.0	75.3	*	51.								

360. AG 178. 100.0 .0 12.0 .40 2.6

JOB: Mercer St and I-5 Ramps RUN: 2016 Build 6LT

DATE : 8/18/ 4
TIME : 19:10:31

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
13. EBT	90	46	3.0	3490	1442	89.24	2	3
14. EBR	90	46	3.0	830	1425	89.24	2	3
15. WBL	90	70	3.0	470	1494	89.24	2	3
16. WBR	90	25	3.0	1990	1212	89.24	2	3
17. NBT	90	67	3.0	370	1565	89.24	2	3
18. NBR	90	46	3.0	1370	1102	89.24	2	3
19. SBT	90	67	3.0	140	1732	89.24	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-186.0	34.0	5.9
2. R2	-104.0	34.0	5.9
3. R3	-22.0	34.0	5.9
4. R4	-22.0	116.0	5.9
5. R5	-22.0	198.0	5.9
6. R6	58.0	314.0	5.9
7. R7	58.0	232.0	5.9
8. R8	58.0	150.0	5.9
9. R9	125.0	73.0	5.9
10. R10	202.0	101.0	5.9
11. R11	279.0	129.0	5.9
12. R12	200.0	-2.0	5.9
13. R13	123.0	-30.0	5.9
14. R14	46.0	-58.0	5.9
15. R15	128.0	-58.0	5.9
16. R16	210.0	-58.0	5.9
17. R17	210.0	-102.0	5.9
18. R18	128.0	-102.0	5.9
19. R19	46.0	-102.0	5.9
20. R20	46.0	-184.0	5.9
21. R21	46.0	-266.0	5.9
22. R22	-34.0	-198.0	5.9
23. R23	-34.0	-116.0	5.9

24.	R24	*	-34.0	-34.0	5.9 *
25.	R25	*	-116.0	-34.0	5.9 *
26.	R26	*	-198.0	-34.0	5.9 *

JOB: Mercer St and I-5 Ramps RUN: 2016 Build 6LT

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	5.1	5.4	6.5	6.6	6.6	6.2	6.2	6.2	5.3	5.1	5.1	7.7	8.8	8.6	7.9	7.3	7.2	7.6	8.7	7.8
10.	*	5.3	5.6	6.8	6.8	6.9	5.7	5.7	5.7	5.2	5.1	5.1	7.8	8.6	8.2	7.8	7.2	7.3	7.6	8.1	7.6
15.	*	5.4	5.7	6.7	6.7	6.9	5.4	5.4	5.4	5.2	5.1	5.1	7.8	8.5	8.2	7.7	7.3	7.2	7.4	7.9	7.2
20.	*	5.6	5.8	6.5	6.5	6.7	5.2	5.2	5.2	5.2	5.1	5.1	7.9	8.6	8.2	7.5	7.3	7.3	7.4	8.0	7.0
25.	*	5.6	5.8	6.6	6.3	6.5	5.2	5.2	5.2	5.2	5.1	5.1	8.1	8.6	8.2	7.6	7.4	7.4	7.5	7.8	6.9
30.	*	5.6	5.7	6.5	6.1	6.4	5.1	5.1	5.1	5.1	5.1	5.1	8.2	8.6	8.4	7.7	7.5	7.4	7.6	8.1	6.9
35.	*	5.7	5.7	6.5	6.0	6.3	5.1	5.1	5.1	5.2	5.2	5.1	8.4	8.7	8.5	7.8	7.6	7.5	7.6	8.0	7.0
40.	*	5.6	5.7	6.5	6.1	6.3	5.1	5.1	5.1	5.2	5.2	5.2	8.6	9.0	8.7	7.8	7.7	7.6	7.7	8.2	7.0
45.	*	5.6	5.6	6.4	6.1	6.2	5.1	5.1	5.1	5.2	5.2	5.2	9.0	9.2	8.9	8.0	7.8	7.7	8.0	8.3	7.1
50.	*	5.5	5.7	6.4	6.1	6.2	5.1	5.1	5.1	5.3	5.3	5.3	9.2	9.5	9.3	8.3	7.9	7.8	8.0	8.5	7.2
55.	*	5.6	5.8	6.6	6.0	6.1	5.1	5.1	5.1	5.7	5.6	5.6	9.6	9.9	9.6	8.4	7.9	7.7	8.0	8.6	7.1
60.	*	5.8	6.1	6.9	6.0	6.1	5.1	5.1	5.1	6.3	6.3	6.2	9.4	9.7	9.6	8.2	7.6	7.3	7.7	8.4	6.8
65.	*	6.1	6.5	7.7	6.2	6.0	5.1	5.1	5.3	7.4	7.2	7.1	8.8	9.1	8.9	7.6	7.1	6.9	7.2	7.8	6.2
70.	*	6.7	7.4	8.9	6.6	6.2	5.0	5.1	5.4	8.6	8.4	8.3	7.8	8.1	8.0	6.9	6.4	6.6	6.9	7.2	5.8
75.	*	7.8	8.4	10.0	7.1	6.4	5.0	5.2	5.9	9.6	9.4	9.2	6.7	7.0	7.0	6.2	6.1	6.4	6.5	6.7	5.5
80.	*	8.8	9.3	10.8	7.7	6.7	5.2	5.6	6.4	10.1	10.0	9.8	5.8	6.2	6.4	6.0	6.0	6.4	6.4	6.4	5.4
85.	*	9.6	9.9	11.2	8.1	7.0	5.4	5.9	6.9	10.1	9.9	9.9	5.4	5.8	6.2	6.0	6.2	6.3	6.3	6.2	5.3
90.	*	10.3	10.3	11.4	8.3	7.3	5.7	6.2	7.1	9.9	9.7	9.7	5.3	5.7	6.2	6.1	6.5	6.2	6.1	6.1	5.2
95.	*	10.6	10.6	11.2	8.3	7.4	6.0	6.3	7.0	9.6	9.3	9.2	5.3	5.8	6.3	6.4	6.6	6.0	5.9	5.9	5.2

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 100.  *  10.8  10.5  11.1   8.2   7.5   6.1   6.4   7.1   9.5   9.0   9.0   5.3
5.8   6.3   6.4   6.8   5.8   5.6   5.6   5.1
 105.  *  10.9  10.4  10.5   8.2   7.6   6.1   6.4   7.0   9.4   8.9   8.7   5.4
5.8   6.2   6.3   6.8   5.6   5.4   5.4   5.1
 110.  *  10.8  10.2  10.2   8.0   7.5   6.2   6.4   7.0   9.3   8.7   8.5   5.4
5.9   6.1   6.2   6.7   5.5   5.3   5.3   5.2
 115.  *  10.6  10.2   9.8   8.2   7.7   6.3   6.5   6.9   9.3   8.5   8.5   5.4
5.9   6.0   6.1   6.7   5.6   5.4   5.3   5.2
 120.  *  10.5  10.1   9.7   8.0   8.0   6.2   6.4   7.2   9.4   8.3   8.3   5.4
5.9   6.0   6.1   6.8   5.6   5.4   5.4   5.3
 125.  *  10.1  10.1   9.4   7.8   8.1   6.1   6.3   7.3   9.6   8.3   8.3   5.5
5.8   6.0   6.1   7.0   5.6   5.4   5.4   5.3
 130.  *   9.9  10.0   9.0   7.7   8.4   6.1   6.4   7.6   9.7   8.2   8.1   5.7
5.8   5.9   6.0   7.0   5.6   5.4   5.4   5.2
 135.  *   9.6   9.8   9.0   7.5   8.5   6.2   6.5   8.2  10.1   8.2   8.1   5.9
5.7   5.8   5.9   6.9   5.4   5.2   5.2   5.2
 140.  *   9.4   9.7   8.8   7.5   8.5   6.3   6.7   8.3  10.2   8.1   8.0   6.0
5.6   5.7   5.7   6.6   5.3   5.1   5.1   5.1
 145.  *   9.4   9.7   8.6   7.3   8.1   6.3   6.8   8.7  10.3   8.2   8.1   6.1
5.5   5.6   5.6   6.3   5.1   5.0   5.1   5.1
 150.  *   9.4   9.5   8.7   7.4   7.7   6.4   6.8   8.7  10.2   8.2   8.0   6.1
5.4   5.6   5.5   6.0   5.1   5.0   5.1   5.1
 155.  *   9.2   9.4   9.1   7.2   7.4   6.5   6.9   8.7  10.2   8.3   8.2   6.0
5.4   5.6   5.5   5.8   5.0   5.0   5.1   5.1
 160.  *   9.2   9.6   9.5   7.6   7.4   6.7   7.2   8.6  10.2   8.3   8.1   5.9
5.3   5.8   5.5   5.7   5.0   5.0   5.3   5.3
 165.  *   8.9   9.6  10.0   8.2   7.5   6.9   7.4   8.5  10.0   8.2   8.1   5.9
5.3   5.9   5.4   5.5   5.0   5.0   5.5   5.5
 170.  *   8.8   9.5  10.5   8.9   7.9   7.2   7.8   9.0  10.0   8.1   7.9   5.8
5.4   6.6   5.6   5.6   5.0   5.1   6.1   6.1
 175.  *   8.7   9.3  10.5   9.0   8.0   7.9   8.4   9.3  10.0   8.1   7.9   5.9
5.6   7.7   5.8   5.7   5.1   5.3   7.1   7.1
 180.  *   8.4   9.0  10.3   8.6   7.8   8.5   9.0   9.8  10.4   8.4   8.1   6.1
6.0   8.7   6.1   5.8   5.2   5.6   8.2   8.1
 185.  *   8.3   8.5   9.4   8.0   7.3   8.9   9.0  10.0  10.9   8.7   8.2   6.2
6.4   9.4   6.5   6.0   5.4   6.0   8.8   8.8
 190.  *   8.1   8.1   8.7   7.3   6.8   8.5   8.8   9.8  11.3   9.2   8.5   6.6
6.7   9.4   6.8   6.3   5.7   6.3   9.1   9.1
 195.  *   8.1   8.1   8.4   6.8   6.3   7.9   8.3   9.1  11.5   9.5   8.8   6.6
6.9   9.2   6.9   6.3   5.9   6.5   9.0   9.0
 200.  *   8.1   8.1   8.0   6.6   6.2   7.7   7.9   8.4  11.3   9.7   9.1   6.8
6.9   8.6   6.9   6.5   5.9   6.5   8.5   8.5
 205.  *   8.1   8.1   8.2   6.6   6.2   7.4   7.7   8.3  11.3   9.6   9.3   6.7
7.0   8.4   7.0   6.5   6.0   6.5   8.2   8.2
 210.  *   8.3   8.3   8.3   6.6   6.3   7.3   7.4   8.1  11.1   9.9   9.4   6.7
6.7   8.0   6.8   6.5   6.0   6.3   7.9   7.9
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JOB: Mercer St and I-5 Ramps RUN: 2016 Build 6LT

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20
 REC21 REC22 REC23 REC24 REC25 REC26

------*-----------------------------------------------------------------------------
-----------------------------------------
 ------*-------------------------------------
 215.  *   8.5   8.5   8.5   6.6   6.3   7.4   7.4   8.1  11.0   9.9   9.5   6.7
6.7   7.7   6.8   6.5   6.0   6.3   7.8   7.8
 220.  *   8.6   8.6   8.6   6.8   6.3   7.3   7.4   8.1  10.9  10.1   9.7   6.7
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6.7   7.4   6.8   6.4   5.9   6.3   7.6   7.6
 225.  *   8.8   8.8   8.8   6.9   6.3   7.2   7.3   8.3  10.6  10.3   9.7   6.6
6.6   7.2   6.9   6.5   5.9   6.3   7.6   7.6
 230.  *   9.0   9.0   8.9   6.9   6.3   7.2   7.4   8.2  10.3  10.2   9.9   6.4
6.5   6.9   6.7   6.4   5.9   6.2   7.3   7.3
 235.  *   9.3   9.3   9.2   7.0   6.5   7.1   7.4   8.1  10.1  10.2  10.0   6.4
6.3   6.8   6.6   6.4   5.8   6.1   7.3   7.2
 240.  *   9.7   9.7   9.7   7.2   6.5   7.3   7.3   8.0  10.2  10.1   9.8   6.5
6.0   6.6   6.7   6.4   5.8   6.1   7.2   7.1
 245.  *  10.1  10.1  10.1   7.3   6.5   7.1   7.4   8.1  10.4  10.0   9.7   6.5
6.0   6.4   6.5   6.5   5.8   6.1   7.2   7.0
 250.  *  10.7  10.7  10.7   7.4   6.6   7.0   7.4   8.3  10.1   9.9   9.5   6.8
5.9   6.4   6.5   6.5   5.8   6.1   7.1   7.0
 255.  *  11.2  11.3  11.3   7.4   6.5   7.0   7.3   8.1  10.3   9.7   8.8   7.7
6.4   6.6   6.6   6.8   5.9   6.1   7.1   7.0
 260.  *  11.8  11.8  11.9   7.3   6.3   6.8   7.1   8.1  10.4   9.2   8.4   9.2
7.2   7.0   7.1   7.2   6.2   6.4   7.3   7.1
 265.  *  11.5  11.6  11.7   7.0   6.0   6.6   6.8   7.6  10.0   8.6   7.9  10.5
8.6   7.9   7.7   8.0   6.9   7.0   8.0   7.2
 270.  *  10.6  10.6  10.7   6.2   5.6   6.3   6.5   7.1   9.2   7.6   7.0  12.0
9.9   8.9   8.6   8.6   7.7   7.8   8.8   7.7
 275.  *   8.8   8.9   8.9   5.6   5.2   6.1   6.1   6.8   8.2   7.0   6.2  11.8
10.4   9.8   9.2   9.2   8.5   8.5   9.3   8.1
 280.  *   7.1   7.2   7.2   5.2   5.1   6.0   6.0   6.3   7.4   6.0   5.7  11.5
10.4  10.0   9.4   9.1   8.8   9.0   9.7   8.5
 285.  *   6.0   6.1   6.1   5.0   5.0   6.0   6.0   6.3   7.3   5.7   5.5  10.7
9.8  10.0   9.0   8.6   8.7   8.9   9.7   8.6
 290.  *   5.6   5.6   5.6   5.0   5.0   6.0   6.0   6.2   7.3   5.7   5.4  10.1
9.3   9.6   8.3   8.2   8.2   8.6   9.4   8.7
 295.  *   5.3   5.3   5.3   5.0   5.0   6.0   6.0   6.3   7.3   5.5   5.4   9.7
8.7   9.2   8.1   8.1   8.0   8.3   9.3   8.6
 300.  *   5.3   5.3   5.3   5.0   5.0   6.1   6.1   6.2   7.4   5.6   5.5   9.8
8.4   8.8   7.6   7.9   7.4   8.0   9.0   8.6
 305.  *   5.2   5.2   5.2   5.0   5.0   6.1   6.1   6.3   7.3   5.5   5.5   9.7
8.2   8.5   7.5   8.2   7.5   7.7   8.9   8.7
 310.  *   5.2   5.2   5.2   5.0   5.0   6.2   6.2   6.3   7.1   5.6   5.5   9.4
7.9   8.2   7.5   8.4   7.6   7.6   8.7   8.6
 315.  *   5.2   5.2   5.2   5.0   5.0   6.2   6.2   6.3   7.0   5.6   5.5   9.2
8.2   7.8   7.2   8.6   7.6   7.4   8.6   8.9
 320.  *   5.2   5.2   5.2   5.0   5.0   6.3   6.3   6.3   6.8   5.6   5.4   8.9
8.2   7.7   7.4   8.9   7.8   7.2   8.4   8.8
 325.  *   5.2   5.2   5.2   5.0   5.0   6.4   6.4   6.4   6.5   5.5   5.4   8.7
8.5   7.8   7.7   8.8   8.0   7.4   8.2   8.9
 330.  *   5.1   5.1   5.1   5.0   5.0   6.6   6.6   6.6   6.2   5.5   5.4   8.4
8.8   7.6   7.8   8.8   8.1   7.6   8.1   9.0
 335.  *   5.1   5.1   5.1   5.0   5.0   6.8   6.8   6.7   6.1   5.6   5.4   8.3
9.1   7.6   8.3   8.6   8.2   7.8   8.1   8.7
 340.  *   5.1   5.1   5.1   5.0   5.1   7.0   7.0   6.9   6.1   5.5   5.3   8.4
9.4   7.9   8.4   8.4   8.1   8.0   8.1   8.7
 345.  *   5.0   5.0   5.1   5.1   5.1   7.2   7.2   7.2   6.1   5.5   5.2   8.1
9.6   8.1   8.5   8.1   7.8   8.3   8.4   8.7
 350.  *   5.0   5.0   5.4   5.4   5.4   7.2   7.3   7.3   5.9   5.3   5.1   7.9
9.2   8.5   8.7   7.8   7.8   8.5   8.7   8.9
 355.  *   5.0   5.1   5.7   5.7   5.7   7.0   7.1   7.1   5.7   5.2   5.1   7.8
9.0   8.9   8.6   7.6   7.5   8.3   8.9   8.6
 360.  *   5.1   5.2   6.2   6.2   6.1   6.7   6.7   6.8   5.5   5.1   5.0   7.7
9.0   8.6   8.3   7.4   7.2   7.9   8.8   8.4
```


JOB: Mercer St and I-5 Ramps RUN: 2016 Build 6LT

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26
5.	7.8	7.7	7.9	9.2	8.5	8.2
10.	7.2	7.9	8.0	9.3	8.5	8.3
15.	6.9	8.3	8.0	9.0	8.6	8.4
20.	6.7	8.4	7.8	8.9	8.7	8.6
25.	6.6	8.6	7.9	8.7	8.7	8.7
30.	6.6	8.7	8.4	8.8	8.9	8.8
35.	6.6	9.0	8.6	8.6	8.8	8.8
40.	6.6	9.1	8.7	8.6	9.1	8.9
45.	6.7	9.0	9.0	9.0	9.2	9.1
50.	6.6	9.0	9.3	9.5	9.5	9.1
55.	6.4	9.0	9.7	10.1	10.0	9.6
60.	6.1	8.6	9.8	11.2	10.7	10.3
65.	5.6	8.0	9.2	12.0	11.8	11.1
70.	5.4	7.5	8.8	11.8	12.2	11.7
75.	5.3	7.2	8.2	11.3	11.8	11.7
80.	5.2	6.9	7.8	9.8	10.7	11.1
85.	5.2	6.9	7.4	8.5	9.2	9.8
90.	5.1	6.9	7.3	7.6	8.0	8.3
95.	5.1	6.7	7.0	7.2	7.1	7.4
100.	5.1	6.7	6.9	6.9	6.5	6.5
105.	5.1	6.7	6.8	6.7	6.3	6.1
110.	5.1	6.7	6.8	6.6	6.3	5.8
115.	5.1	6.7	6.8	6.6	6.3	5.9
120.	5.2	7.0	7.1	6.8	6.2	5.8
125.	5.2	7.0	7.1	6.8	6.2	5.8
130.	5.2	7.1	7.1	6.8	6.2	5.8
135.	5.1	7.0	7.1	6.9	6.2	5.8
140.	5.1	7.2	7.2	6.8	6.1	5.8
145.	5.1	7.3	7.3	7.1	6.1	5.9
150.	5.1	7.4	7.4	7.3	6.3	5.9
155.	5.1	7.6	7.6	7.6	6.3	6.0
160.	5.3	7.8	7.8	7.8	6.4	5.9
165.	5.5	8.0	8.0	8.0	6.3	5.8
170.	6.1	8.1	8.1	8.1	6.2	5.7
175.	7.1	7.7	7.7	7.9	5.9	5.4
180.	8.1	7.2	7.2	7.2	5.5	5.1
185.	8.8	6.3	6.3	6.4	5.2	5.0
190.	9.0	5.6	5.7	5.7	5.0	5.0
195.	9.0	5.2	5.2	5.3	5.0	5.0
200.	8.5	5.1	5.1	5.1	5.0	5.0
205.	8.2	5.1	5.1	5.1	5.0	5.0
210.	7.9	5.0	5.0	5.0	5.0	5.0

JOB: Mercer St and I-5 Ramps RUN: 2016 Build 6LT

WIND ANGLE RANGE: 5.-360.

WIND * CONCENTRATION

ANGLE (DEGR)	*	(PPM) REC21	REC22	REC23	REC24	REC25	REC26
215.	*	7.8	5.0	5.0	5.0	5.0	5.0
220.	*	7.6	5.0	5.0	5.0	5.0	5.0
225.	*	7.6	5.0	5.0	5.0	5.0	5.0
230.	*	7.3	5.0	5.0	5.0	5.0	5.0
235.	*	7.2	5.0	5.0	5.0	5.0	5.0
240.	*	7.1	5.0	5.0	5.0	5.0	5.0
245.	*	7.0	5.0	5.0	5.0	5.0	5.0
250.	*	7.0	5.0	5.0	5.1	5.1	5.1
255.	*	7.0	5.0	5.0	5.6	5.5	5.5
260.	*	7.0	5.1	5.1	6.4	6.3	6.3
265.	*	7.1	5.2	5.6	7.8	7.8	7.7
270.	*	7.3	5.6	6.2	9.4	9.4	9.3
275.	*	7.6	6.0	6.9	10.6	10.5	10.4
280.	*	7.9	6.3	7.2	10.9	10.9	10.8
285.	*	8.1	6.5	7.3	10.8	10.7	10.7
290.	*	8.2	6.7	7.3	10.2	10.2	10.2
295.	*	8.2	6.5	7.2	9.8	9.8	9.8
300.	*	8.3	6.5	7.1	9.4	9.4	9.4
305.	*	8.4	6.4	7.0	9.0	9.0	9.0
310.	*	8.5	6.3	6.9	8.8	8.8	8.8
315.	*	8.7	6.3	6.9	8.7	8.7	8.7
320.	*	8.6	6.2	6.7	8.5	8.5	8.5
325.	*	8.8	6.2	6.6	8.4	8.4	8.4
330.	*	8.9	6.2	6.6	8.4	8.4	8.4
335.	*	9.1	6.3	6.7	8.2	8.2	8.2
340.	*	9.2	6.3	6.7	8.1	8.1	8.1
345.	*	9.0	6.2	6.8	8.2	8.0	8.0
350.	*	9.0	6.4	7.0	8.2	8.0	8.0
355.	*	8.7	6.8	6.9	8.5	8.2	8.1
360.	*	8.3	7.0	7.5	9.1	8.3	8.2

THE HIGHEST CONCENTRATION OF 12.20 PPM OCCURRED AT RECEPTOR REC25.

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Mercer St and I-5 Ramps RUN: 2030 Build 6LT

DATE : 8/18/ 4
TIME : 19:11:12

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1. EBA	*	-1000.0	6.0	.0	6.0	*	1000.	90.	AG	4510.	11.2	.0	56.0		
2. EBD1	*	.0	6.0	100.0	6.0	*	100.	90.	AG	4690.	11.2	.0	56.0		
3. EBD2	*	100.0	6.0	975.0	315.0	*	928.	71.	AG	4690.	11.2	.0	56.0		
4. WBA1	*	986.0	354.0	125.0	45.0	*	915.	250.	AG	2400.	11.2	.0	56.0		
5. WBA2	*	125.0	45.0	24.0	150.0	*	146.	316.	AG	1940.	11.2	.0	44.0		
6. WBA3	*	125.0	45.0	32.0	12.0	*	99.	250.	AG	460.	11.2	.0	44.0		
7. NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1850.	11.2	.0	56.0		
8. NBD1	*	24.0	.0	24.0	150.0	*	150.	360.	AG	440.	11.2	.0	68.0		
9. NBD2	*	24.0	150.0	24.0	1000.0	*	850.	360.	AG	2380.	11.2	.0	68.0		
10. SBA	*	-6.0	1000.0	-6.0	.0	*	1000.	180.	AG	150.	11.2	.0	32.0		
11. SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	720.	11.2	.0	44.0		
12. SWD	*	.0	-80.0	1000.0	-80.0	*	1000.	90.	AG	1120.	11.2	.0	44.0		
13. EBT	*	-24.0	.0	-6163.7	-1.5	*	6140.	270.	AG	286.	100.0	.0	36.0	1.95	311.9
14. EBR	*	-24.0	-18.0	-3948.2	-19.0	*	3924.	270.	AG	95.	100.0	.0	12.0	1.60	199.3
15. WBL	*	41.0	15.0	151.1	54.3	*	117.	70.	AG	284.	100.0	.0	24.0	.92	5.9
16. WBR	*	38.0	136.0	1422.2	-1311.9	*	2003.	136.	AG	105.	100.0	.0	24.0	1.22	101.8
17. NBT	*	6.0	-92.0	6.0	-1422.0	*	1330.	180.	AG	134.	100.0	.0	12.0	1.33	67.6
18. NBR	*	24.0	-92.0	24.0	-2510.9	*	2419.	180.	AG	182.	100.0	.0	24.0	1.44	122.9
19. SBT	*	-6.0	24.0	-6.0	78.1	*	54.								

360. AG 134. 100.0 .0 12.0 .41 2.8

JOB: Mercer St and I-5 Ramps RUN: 2030 Build 6LT

DATE : 8/18/ 4
TIME : 19:11:12

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
13. EBT	90	47	3.0	3550	1442	67.96	2	3
14. EBR	90	47	3.0	960	1425	67.96	2	3
15. WBL	90	70	3.0	460	1494	67.96	2	3
16. WBR	90	26	3.0	1940	1212	67.96	2	3
17. NBT	90	66	3.0	440	1565	67.96	2	3
18. NBR	90	45	3.0	1410	1102	67.96	2	3
19. SBT	90	66	3.0	150	1732	67.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-186.0	34.0	5.9
2. R2	-104.0	34.0	5.9
3. R3	-22.0	34.0	5.9
4. R4	-22.0	116.0	5.9
5. R5	-22.0	198.0	5.9
6. R6	58.0	314.0	5.9
7. R7	58.0	232.0	5.9
8. R8	58.0	150.0	5.9
9. R9	125.0	73.0	5.9
10. R10	202.0	101.0	5.9
11. R11	279.0	129.0	5.9
12. R12	200.0	-2.0	5.9
13. R13	123.0	-30.0	5.9
14. R14	46.0	-58.0	5.9
15. R15	128.0	-58.0	5.9
16. R16	210.0	-58.0	5.9
17. R17	210.0	-102.0	5.9
18. R18	128.0	-102.0	5.9
19. R19	46.0	-102.0	5.9
20. R20	46.0	-184.0	5.9
21. R21	46.0	-266.0	5.9
22. R22	-34.0	-198.0	5.9
23. R23	-34.0	-116.0	5.9

24.	R24	*	-34.0	-34.0	5.9 *
25.	R25	*	-116.0	-34.0	5.9 *
26.	R26	*	-198.0	-34.0	5.9 *

JOB: Mercer St and I-5 Ramps RUN: 2030 Build 6LT

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	5.1	5.3	6.1	6.2	6.2	5.9	5.9	5.9	5.3	5.1	5.0	7.0	7.6	7.8	7.1	6.7	6.7	7.0	7.8	7.2
10.	*	5.2	5.4	6.4	6.3	6.3	5.5	5.5	5.6	5.2	5.1	5.1	7.1	7.6	7.6	7.0	6.7	6.6	6.8	7.4	6.9
15.	*	5.3	5.5	6.3	6.3	6.4	5.3	5.3	5.3	5.2	5.1	5.1	7.2	7.6	7.4	7.0	6.7	6.8	6.8	7.4	6.6
20.	*	5.4	5.6	6.2	6.1	6.3	5.2	5.2	5.2	5.2	5.1	5.1	7.2	7.5	7.4	6.9	6.7	6.8	6.8	7.2	6.5
25.	*	5.5	5.6	6.2	6.0	6.2	5.1	5.1	5.1	5.1	5.1	5.1	7.3	7.6	7.4	7.0	6.8	6.8	6.8	7.4	6.5
30.	*	5.5	5.6	6.2	5.9	6.1	5.1	5.1	5.1	5.1	5.1	5.1	7.5	7.6	7.5	7.0	6.9	6.8	6.9	7.4	6.6
35.	*	5.5	5.5	6.2	5.8	6.0	5.1	5.1	5.1	5.1	5.1	5.1	7.6	7.8	7.6	7.1	7.0	6.9	6.9	7.4	6.5
40.	*	5.4	5.5	6.2	5.9	6.0	5.1	5.1	5.1	5.1	5.1	5.1	7.7	7.9	7.8	7.2	7.0	7.0	7.2	7.3	6.6
45.	*	5.5	5.6	6.0	5.8	5.9	5.1	5.1	5.1	5.2	5.2	5.2	8.0	8.2	7.9	7.3	7.1	7.0	7.2	7.6	6.7
50.	*	5.5	5.5	6.0	5.8	5.9	5.1	5.1	5.1	5.3	5.2	5.2	8.2	8.3	8.0	7.4	7.1	7.1	7.2	7.6	6.7
55.	*	5.5	5.7	6.1	5.9	5.9	5.1	5.1	5.1	5.5	5.5	5.5	8.4	8.6	8.3	7.5	7.1	7.1	7.3	7.8	6.6
60.	*	5.5	5.9	6.4	5.8	5.8	5.1	5.1	5.1	5.9	5.9	5.9	8.3	8.5	8.3	7.5	7.0	6.8	7.1	7.6	6.3
65.	*	5.7	6.2	7.0	6.1	5.8	5.0	5.0	5.2	6.8	6.6	6.6	7.8	8.1	8.0	7.0	6.6	6.6	6.8	7.3	6.0
70.	*	6.4	6.9	8.0	6.2	6.0	5.0	5.0	5.4	7.7	7.6	7.4	7.1	7.3	7.3	6.5	6.1	6.3	6.4	6.8	5.7
75.	*	7.1	7.6	8.8	6.6	6.1	5.0	5.2	5.7	8.4	8.3	8.2	6.3	6.5	6.5	6.0	5.9	6.2	6.3	6.5	5.5
80.	*	8.0	8.2	9.3	7.0	6.3	5.2	5.4	6.0	8.8	8.7	8.5	5.6	5.9	6.1	5.8	5.8	6.1	6.1	6.1	5.3
85.	*	8.4	8.8	9.7	7.4	6.6	5.3	5.7	6.3	8.8	8.7	8.6	5.3	5.6	5.9	5.9	6.0	6.1	6.1	6.0	5.3
90.	*	9.1	9.1	9.8	7.5	6.8	5.5	6.0	6.5	8.5	8.5	8.5	5.2	5.6	6.0	6.0	6.3	6.1	6.0	5.9	5.2
95.	*	9.4	9.4	9.9	7.4	6.9	5.7	6.0	6.4	8.3	8.2	8.1	5.2	5.6	6.0	6.1	6.4	5.9	5.8	5.7	5.1

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 100.  *   9.5   9.1   9.4   7.5   6.9   5.8   6.1   6.5   8.2   8.1   7.9   5.3
5.8   6.1   6.1   6.5   5.6   5.6   5.5   5.1
 105.  *   9.5   8.9   9.4   7.4   7.0   5.8   6.1   6.5   8.1   7.9   7.8   5.3
5.8   6.1   6.1   6.5   5.5   5.4   5.3   5.1
 110.  *   9.5   9.1   9.1   7.5   6.9   5.8   6.0   6.5   8.1   7.8   7.7   5.3
5.7   6.0   6.0   6.5   5.4   5.3   5.2   5.1
 115.  *   9.3   9.0   8.8   7.4   7.1   5.9   6.0   6.5   8.0   7.6   7.5   5.3
5.7   5.9   6.0   6.4   5.5   5.3   5.3   5.1
 120.  *   9.1   9.1   8.4   7.4   7.1   6.0   6.1   6.4   8.1   7.6   7.6   5.4
5.7   5.8   5.9   6.5   5.5   5.3   5.3   5.1
 125.  *   9.0   8.9   8.4   7.2   7.5   5.9   6.1   6.6   8.3   7.4   7.4   5.5
5.8   5.9   5.9   6.6   5.4   5.2   5.3   5.2
 130.  *   8.7   8.9   8.1   7.1   7.5   5.9   6.2   6.9   8.5   7.5   7.3   5.6
5.7   5.8   5.8   6.6   5.4   5.2   5.2   5.2
 135.  *   8.7   8.6   8.0   6.9   7.9   6.0   6.2   7.2   8.7   7.4   7.3   5.8
5.6   5.7   5.7   6.6   5.3   5.1   5.2   5.1
 140.  *   8.6   8.8   8.1   7.0   7.7   5.9   6.2   7.6   8.7   7.3   7.2   5.8
5.5   5.7   5.6   6.4   5.2   5.1   5.1   5.1
 145.  *   8.4   8.7   7.9   6.7   7.4   6.0   6.5   7.6   8.9   7.3   7.2   5.8
5.4   5.5   5.5   6.0   5.1   5.0   5.1   5.1
 150.  *   8.3   8.7   7.9   6.6   7.0   6.0   6.4   7.8   9.0   7.3   7.3   5.8
5.3   5.5   5.4   5.8   5.0   5.0   5.1   5.1
 155.  *   8.2   8.6   8.2   6.8   6.7   6.2   6.6   7.8   9.0   7.3   7.3   5.8
5.3   5.5   5.4   5.6   5.0   5.0   5.1   5.1
 160.  *   8.2   8.5   8.3   7.2   6.7   6.2   6.5   7.8   8.8   7.4   7.3   5.7
5.3   5.6   5.4   5.6   5.0   5.0   5.2   5.2
 165.  *   8.0   8.5   8.8   7.5   7.0   6.3   6.7   7.7   8.7   7.3   7.2   5.7
5.3   5.8   5.4   5.5   5.0   5.0   5.4   5.4
 170.  *   7.9   8.5   9.2   7.9   7.3   6.7   7.1   8.1   8.8   7.3   7.2   5.6
5.3   6.3   5.4   5.5   5.0   5.0   5.9   5.9
 175.  *   8.0   8.4   9.3   8.2   7.5   7.1   7.6   8.5   8.9   7.4   7.2   5.7
5.5   7.1   5.6   5.5   5.0   5.2   6.7   6.7
 180.  *   7.6   8.0   9.0   7.8   7.2   7.7   8.1   8.6   9.2   7.5   7.3   5.8
5.9   8.0   5.9   5.6   5.1   5.4   7.5   7.4
 185.  *   7.5   7.8   8.4   7.3   6.9   7.9   8.2   8.8   9.6   7.7   7.4   6.0
6.3   8.4   6.3   5.9   5.4   5.9   8.1   8.1
 190.  *   7.3   7.3   7.8   6.8   6.3   7.6   7.9   8.6   9.7   8.1   7.8   6.3
6.4   8.5   6.5   6.0   5.6   6.1   8.2   8.2
 195.  *   7.3   7.3   7.5   6.4   6.1   7.3   7.6   8.2   9.9   8.3   8.0   6.3
6.5   8.3   6.5   6.1   5.7   6.1   8.0   8.0
 200.  *   7.4   7.4   7.4   6.3   5.9   7.0   7.3   7.8   9.7   8.5   8.1   6.4
6.5   8.0   6.6   6.2   5.8   6.2   7.8   7.8
 205.  *   7.5   7.5   7.4   6.3   6.0   6.7   7.1   7.4   9.8   8.3   8.2   6.2
6.4   7.5   6.4   6.1   5.7   6.0   7.4   7.4
 210.  *   7.6   7.6   7.6   6.3   6.0   6.8   6.8   7.6   9.6   8.5   8.3   6.2
6.3   7.3   6.4   6.1   5.7   6.0   7.3   7.3
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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20
 REC21 REC22 REC23 REC24 REC25 REC26

------*-------------------------------------------------------------------------------
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 215.  *   7.8   7.8   7.7   6.3   6.0   6.7   6.9   7.4   9.5   8.7   8.4   6.2
6.3   7.1   6.4   6.1   5.7   6.0   7.1   7.1
 220.  *   7.9   7.9   7.9   6.3   6.0   6.8   6.8   7.4   9.5   8.7   8.5   6.2
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6.3   6.8   6.5   6.2   5.7   6.0   7.0   7.0
 225.  *   8.0   8.0   7.9   6.4   6.0   6.7   6.9   7.5   9.1   8.7   8.7   6.3
6.1   6.7   6.5   6.2   5.7   6.0   6.9   6.9
 230.  *   8.2   8.2   8.1   6.5   6.1   6.8   6.8   7.4   8.9   8.6   8.8   6.3
6.1   6.5   6.2   6.2   5.7   5.8   6.8   6.8
 235.  *   8.4   8.4   8.3   6.6   6.2   6.7   6.8   7.3   9.0   8.8   8.7   6.2
5.9   6.5   6.3   6.2   5.6   5.8   6.8   6.8
 240.  *   8.6   8.6   8.6   6.6   6.2   6.7   6.8   7.4   9.0   8.8   8.5   6.1
5.9   6.4   6.3   6.2   5.7   5.8   6.8   6.8
 245.  *   9.0   9.0   8.9   6.7   6.2   6.7   7.0   7.5   8.7   8.6   8.4   6.2
5.9   6.2   6.3   6.3   5.7   5.8   6.7   6.6
 250.  *   9.3   9.4   9.3   6.8   6.2   6.5   6.8   7.4   9.0   8.6   8.3   6.5
5.7   6.2   6.2   6.2   5.7   5.8   6.6   6.5
 255.  *   9.9   9.9  10.0   7.0   6.2   6.5   6.7   7.4   9.0   8.4   8.0   7.1
6.0   6.3   6.4   6.4   5.7   5.8   6.6   6.5
 260.  *  10.2  10.2  10.3   6.9   6.0   6.5   6.6   7.3   9.2   8.1   7.6   8.3
6.7   6.6   6.6   6.7   6.0   6.1   6.8   6.5
 265.  *  10.1  10.1  10.2   6.6   5.8   6.3   6.5   7.1   8.9   7.7   7.0   9.5
7.7   7.3   7.1   7.2   6.5   6.6   7.3   6.7
 270.  *   9.3   9.3   9.4   6.0   5.5   6.0   6.3   6.8   8.2   7.1   6.6  10.3
8.8   8.3   7.9   7.9   7.3   7.4   8.0   7.1
 275.  *   7.9   7.9   8.0   5.6   5.1   5.9   5.9   6.3   7.4   6.3   5.7  10.3
9.3   8.8   8.4   8.3   7.7   7.8   8.4   7.4
 280.  *   6.7   6.7   6.7   5.2   5.0   5.8   5.8   6.1   6.9   5.8   5.6   9.8
9.1   9.0   8.4   8.2   8.0   8.1   8.6   7.6
 285.  *   5.8   5.8   5.8   5.0   5.0   5.7   5.7   5.9   6.7   5.6   5.4   9.2
8.6   8.9   8.2   7.7   7.9   8.0   8.6   7.7
 290.  *   5.4   5.4   5.4   5.0   5.0   5.7   5.7   5.9   6.7   5.5   5.3   8.9
8.1   8.5   7.7   7.3   7.6   7.9   8.5   7.7
 295.  *   5.3   5.3   5.3   5.0   5.0   5.8   5.8   6.0   6.8   5.5   5.4   8.6
7.9   8.3   7.2   7.2   7.3   7.7   8.5   7.8
 300.  *   5.2   5.2   5.2   5.0   5.0   5.8   5.8   5.9   6.8   5.4   5.4   8.7
7.7   7.9   7.0   7.3   7.0   7.4   8.0   7.9
 305.  *   5.2   5.2   5.2   5.0   5.0   5.8   5.8   6.0   6.8   5.4   5.4   8.3
7.4   7.8   6.8   7.2   6.9   7.2   8.1   8.0
 310.  *   5.2   5.2   5.2   5.0   5.0   5.9   5.9   6.0   6.6   5.5   5.4   8.4
7.4   7.4   6.8   7.6   6.7   6.9   7.8   8.0
 315.  *   5.2   5.2   5.2   5.0   5.0   5.9   5.9   5.9   6.5   5.5   5.3   8.1
7.2   7.2   6.8   7.6   7.0   6.9   7.9   7.9
 320.  *   5.1   5.1   5.1   5.0   5.0   6.0   6.0   6.0   6.2   5.4   5.3   7.9
7.4   7.3   6.8   7.9   7.2   6.8   7.8   8.0
 325.  *   5.1   5.1   5.1   5.0   5.0   6.1   6.1   6.0   6.1   5.4   5.3   7.6
7.8   7.2   6.9   7.9   7.2   6.8   7.4   8.0
 330.  *   5.1   5.1   5.1   5.0   5.0   6.1   6.1   6.1   6.0   5.4   5.3   7.5
8.0   7.0   7.2   7.7   7.4   6.8   7.3   8.0
 335.  *   5.1   5.1   5.1   5.0   5.0   6.3   6.3   6.2   5.8   5.4   5.3   7.3
8.2   7.1   7.4   7.6   7.3   7.3   7.4   8.0
 340.  *   5.1   5.1   5.1   5.0   5.0   6.4   6.4   6.4   5.8   5.4   5.2   7.3
8.3   7.2   7.7   7.6   7.3   7.5   7.5   7.8
 345.  *   5.0   5.0   5.1   5.1   5.1   6.6   6.6   6.6   5.7   5.3   5.2   7.3
8.5   7.5   7.8   7.3   7.3   7.5   7.6   7.8
 350.  *   5.0   5.0   5.3   5.3   5.3   6.6   6.6   6.7   5.7   5.2   5.1   7.2
8.3   7.6   7.7   7.2   7.0   7.7   7.8   7.9
 355.  *   5.0   5.1   5.5   5.6   5.6   6.5   6.6   6.6   5.5   5.1   5.0   7.0
8.1   7.9   7.7   7.0   6.9   7.5   7.8   7.7
 360.  *   5.0   5.2   5.9   5.9   5.9   6.3   6.3   6.3   5.3   5.1   5.0   7.1
7.9   7.8   7.4   6.9   6.8   7.3   8.0   7.7
```

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26
5.	6.9	6.8	7.2	8.2	7.8	7.6
10.	6.7	7.4	7.2	8.3	7.7	7.5
15.	6.3	7.4	7.2	8.3	7.8	7.6
20.	6.2	7.4	7.2	8.1	7.9	7.7
25.	6.1	7.7	7.2	8.0	7.9	7.9
30.	6.2	7.8	7.5	7.8	7.9	7.8
35.	6.2	8.2	7.7	7.8	8.1	8.0
40.	6.2	8.0	7.9	7.7	8.3	8.1
45.	6.4	8.2	8.0	8.1	8.4	8.1
50.	6.3	8.2	8.3	8.5	8.7	8.2
55.	6.1	8.0	8.5	9.1	8.9	8.5
60.	5.7	7.7	8.7	9.8	9.4	9.1
65.	5.6	7.3	8.4	10.3	10.4	9.5
70.	5.4	7.1	7.9	10.3	10.4	10.1
75.	5.2	6.6	7.4	9.8	10.3	10.4
80.	5.2	6.6	7.2	8.7	9.4	9.8
85.	5.2	6.6	7.0	7.8	8.2	8.7
90.	5.1	6.5	6.8	7.1	7.3	7.7
95.	5.1	6.4	6.7	6.7	6.6	6.8
100.	5.1	6.4	6.5	6.6	6.2	6.4
105.	5.1	6.3	6.3	6.4	6.0	5.8
110.	5.1	6.4	6.4	6.4	5.9	5.7
115.	5.1	6.4	6.4	6.4	5.9	5.7
120.	5.1	6.5	6.5	6.4	5.9	5.7
125.	5.2	6.6	6.6	6.5	5.9	5.7
130.	5.2	6.7	6.7	6.4	5.8	5.7
135.	5.1	6.6	6.6	6.5	5.7	5.6
140.	5.1	6.6	6.6	6.5	5.8	5.7
145.	5.1	6.7	6.7	6.6	6.1	5.7
150.	5.1	6.8	6.8	6.8	6.1	5.7
155.	5.1	7.0	7.0	7.0	6.1	5.7
160.	5.2	7.2	7.2	7.1	6.1	5.7
165.	5.4	7.4	7.4	7.4	6.1	5.6
170.	5.9	7.4	7.4	7.4	6.0	5.5
175.	6.7	7.2	7.3	7.3	5.7	5.4
180.	7.4	6.7	6.7	6.7	5.5	5.1
185.	8.0	6.1	6.1	6.1	5.1	5.0
190.	8.1	5.5	5.5	5.5	5.0	5.0
195.	8.0	5.1	5.1	5.1	5.0	5.0
200.	7.8	5.1	5.1	5.1	5.0	5.0
205.	7.4	5.0	5.0	5.0	5.0	5.0
210.	7.3	5.0	5.0	5.0	5.0	5.0

JOB: Mercer St and I-5 Ramps RUN: 2030 Build 6LT

WIND ANGLE RANGE: 5.-360.

WIND * CONCENTRATION

ANGLE (DEGR)	*	(PPM) REC21	REC22	REC23	REC24	REC25	REC26
215.	*	7.1	5.0	5.0	5.0	5.0	5.0
220.	*	7.0	5.0	5.0	5.0	5.0	5.0
225.	*	6.9	5.0	5.0	5.0	5.0	5.0
230.	*	6.8	5.0	5.0	5.0	5.0	5.0
235.	*	6.8	5.0	5.0	5.0	5.0	5.0
240.	*	6.8	5.0	5.0	5.0	5.0	5.0
245.	*	6.6	5.0	5.0	5.0	5.0	5.0
250.	*	6.5	5.0	5.0	5.1	5.1	5.1
255.	*	6.5	5.0	5.0	5.4	5.4	5.4
260.	*	6.5	5.0	5.1	6.1	6.1	6.1
265.	*	6.6	5.1	5.5	7.3	7.3	7.3
270.	*	6.9	5.5	5.9	8.5	8.4	8.4
275.	*	7.1	5.8	6.5	9.3	9.3	9.2
280.	*	7.2	6.0	6.7	9.6	9.6	9.5
285.	*	7.4	6.1	6.9	9.4	9.4	9.4
290.	*	7.5	6.2	6.8	9.1	9.1	9.1
295.	*	7.6	6.2	6.7	8.7	8.7	8.7
300.	*	7.8	6.2	6.6	8.5	8.5	8.5
305.	*	7.7	6.2	6.5	8.1	8.1	8.1
310.	*	7.7	6.0	6.5	8.0	8.0	8.0
315.	*	7.8	6.0	6.3	7.8	7.8	7.8
320.	*	7.9	6.0	6.3	7.8	7.8	7.8
325.	*	8.0	6.0	6.3	7.7	7.7	7.7
330.	*	8.0	6.0	6.3	7.6	7.5	7.5
335.	*	8.0	6.0	6.2	7.5	7.5	7.5
340.	*	8.2	6.0	6.3	7.4	7.4	7.4
345.	*	8.0	6.0	6.4	7.3	7.3	7.3
350.	*	8.1	6.1	6.4	7.5	7.3	7.3
355.	*	7.8	6.3	6.6	7.8	7.6	7.5
360.	*	7.5	6.5	7.0	8.2	7.6	7.5

THE HIGHEST CONCENTRATION OF 10.40 PPM OCCURRED AT RECEPTOR REC25.

Montlake Boulevard and
Lake Washington Boulevard

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Montlake and Lake Wash RUN: 2000 No Build

DATE : 8/18/ 4
TIME : 17:22: 0

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1.	EBA1	*	-1000.0	-192.0	-204.0	-192.0	*	796.	90.	AG	930.	32.2	.0	32.0		
2.	EBA2	*	-204.0	-192.0	-6.0	.0	*	276.	46.	AG	930.	32.2	.0	32.0		
3.	EBD	*	.0	-6.0	1000.0	-6.0	*	1000.	90.	AG	370.	32.2	.0	32.0		
4.	WBA	*	1000.0	6.0	.0	6.0	*	1000.	270.	AG	570.	32.2	.0	32.0		
5.	WBD1	*	-48.0	.0	-180.0	-132.0	*	187.	225.	AG	890.	32.2	.0	44.0		
6.	WBD2	*	-180.0	-132.0	-240.0	-72.0	*	85.	315.	AG	890.	32.2	.0	44.0		
7.	WBD3	*	-240.0	-72.0	-120.0	48.0	*	170.	45.	DP	890.	32.2	.0	44.0		
8.	NBA	*	736.0	-700.0	36.0	.0	*	990.	315.	AG	1250.	32.2	.0	44.0		
9.	NBD1	*	36.0	.0	-168.0	204.0	*	288.	315.	AG	2150.	32.2	.0	44.0		
10.	NBD2	*	-168.0	204.0	-168.0	1000.0	*	796.	360.	AG	2150.	32.2	.0	44.0		
11.	SBA1	*	-216.0	1000.0	-216.0	204.0	*	796.	180.	AG	1730.	32.2	.0	44.0		
12.	SBA2	*	-216.0	204.0	-12.0	.0	*	288.	135.	AG	1730.	32.2	.0	44.0		
13.	SBD	*	-12.0	.0	688.0	-700.0	*	990.	135.	AG	1070.	32.2	.0	44.0		
14.	EBL	*	-30.0	-12.0	-535.6	-517.6	*	715.	225.	AG	974.	100.0	.0	24.0	1.20	36.3
15.	EBT	*	-18.0	-12.0	-78.7	-72.7	*	86.	225.	AG	487.	100.0	.0	12.0	.77	4.4
16.	WBT	*	48.0	6.0	86.4	6.0	*	38.	90.	AG	493.	100.0	.0	12.0	.36	2.0
17.	WBR	*	48.0	18.0	2788.8	18.0	*	2741.	90.	AG	493.	100.0	.0	12.0	2.05	139.2
18.	NBL	*	30.0	-12.0	102.2	-84.2	*	102.	135.	AG	512.	100.0	.0	12.0	.88	5.2
19.	NBT	*	48.0	-12.0	1076.5	-1040.5	*	1455.								

```
135. AG    873. 100.0    .0 24.0 1.29  73.9
      20. SBL                 *    -18.0      24.0    -178.5     184.5 *     227.
315. AG    512. 100.0    .0 12.0 1.03  11.5
      21. SBT                 *    -36.0      24.0    -178.3     166.3 *     201.
315. AG    873. 100.0    .0 24.0  .97  10.2
      22. SBR                 *    -54.0      24.0   -3617.0    3587.0 *    5039.
315. AG    487. 100.0    .0 12.0 2.98 256.0
```


JOB: Montlake and Lake Wash RUN: 2000 No Build

DATE : 8/18/ 4
TIME : 17:22: 0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
14. EBL	100	77	3.0	630	1463	235.74	2	3
15. EBT	100	77	3.0	200	1448	235.74	2	3
16. WBT	100	78	3.0	90	1486	235.74	2	3
17. WBR	100	78	3.0	480	1377	235.74	2	3
18. NBL	100	81	3.0	190	1540	235.74	2	3
19. NBT	100	69	3.0	1060	1587	235.74	2	3
20. SBL	100	81	3.0	230	1593	235.74	2	3
21. SBT	100	69	3.0	800	1593	235.74	2	3
22. SBR	100	77	3.0	700	1309	235.74	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-58.0	12.0	5.9
2. R2	-116.0	70.0	5.9
3. R3	-174.0	128.0	5.9
4. R4	-85.0	146.0	5.9
5. R5	-27.0	88.0	5.9
6. R6	31.0	34.0	5.9
7. R7	113.0	34.0	5.9
8. R8	195.0	34.0	5.9
9. R9	234.0	-22.0	5.9
10. R10	152.0	-22.0	5.9
11. R11	70.0	-22.0	5.9
12. R12	128.0	-80.0	5.9
13. R13	186.0	-138.0	5.9

14. R14	*	104.0	-135.0	5.9	*
15. R15	*	46.0	-77.0	5.9	*
16. R16	*	-12.0	-19.0	5.9	*
17. R17	*	-70.0	-77.0	5.9	*
18. R18	*	-128.0	-135.0	5.9	*
19. R19	*	-174.0	-104.0	5.9	*
20. R20	*	-116.0	-46.0	5.9	*

JOB: Montlake and Lake Wash RUN: 2000 No Build

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	14.2	15.2	16.7	5.8	5.4	5.3	5.0	5.0	6.8	6.8	8.8	7.0	6.7	10.3	10.8	10.0	17.7	15.5	10.1	10.5
10.	*	13.6	14.4	15.8	5.4	5.3	5.2	5.0	5.0	6.8	6.8	8.6	7.0	6.7	10.0	11.1	9.7	17.3	15.4	9.6	9.9
15.	*	13.1	13.9	14.9	5.3	5.3	5.2	5.0	5.0	6.8	6.8	8.5	6.8	6.5	9.7	11.2	9.5	17.3	15.3	9.2	9.6
20.	*	12.7	13.5	14.0	5.2	5.2	5.1	5.0	5.0	6.7	6.7	8.2	6.8	6.4	9.7	11.2	9.3	16.8	15.5	8.8	9.3
25.	*	12.2	13.2	13.5	5.2	5.2	5.1	5.0	5.0	6.8	6.8	8.1	6.8	6.5	9.7	11.0	9.1	16.3	15.5	8.6	9.3
30.	*	11.9	13.0	13.2	5.1	5.1	5.1	5.0	5.0	6.9	6.9	8.1	6.7	6.4	9.5	11.0	8.8	15.7	15.4	8.7	9.3
35.	*	11.7	13.0	13.0	5.1	5.1	5.0	5.0	5.0	7.0	7.0	7.9	6.6	6.4	9.6	10.9	9.0	14.5	14.6	8.9	9.5
40.	*	11.6	13.1	13.1	5.0	5.0	5.0	5.0	5.0	7.1	7.1	8.0	6.7	6.5	9.7	11.0	9.1	13.2	13.7	9.2	9.4
45.	*	11.4	13.2	13.2	5.0	5.0	5.0	5.0	5.0	7.1	7.1	8.0	6.8	6.6	9.7	10.9	9.4	11.8	12.4	9.6	9.3
50.	*	11.1	13.1	13.1	5.0	5.0	5.0	5.0	5.0	7.3	7.3	8.0	6.8	6.6	9.8	11.2	9.5	10.9	11.1	10.2	9.3
55.	*	10.7	13.0	13.0	5.1	5.1	5.0	5.0	5.0	7.4	7.4	7.9	6.9	6.5	9.7	11.1	9.9	10.2	9.9	11.5	9.5
60.	*	10.3	13.0	13.0	5.1	5.1	5.0	5.0	5.0	7.6	7.6	8.2	7.0	6.7	9.8	11.2	10.5	9.9	9.2	12.3	10.5
65.	*	10.1	13.2	13.2	5.2	5.2	5.1	5.0	5.0	7.8	7.8	8.5	7.2	6.8	10.0	11.4	11.0	9.8	8.9	13.2	11.5
70.	*	10.0	13.5	13.5	5.2	5.2	5.2	5.1	5.1	8.1	8.1	8.8	7.3	6.9	10.1	11.5	11.7	9.8	8.5	13.6	12.3
75.	*	10.7	13.9	13.8	5.3	5.4	5.6	5.5	5.5	8.4	8.4	9.4	7.5	7.0	10.1	11.6	12.5	9.8	8.3	13.9	13.8
80.	*	11.7	14.3	14.0	5.4	5.5	6.4	6.3	6.3	8.6	8.6	9.7	7.7	7.0	10.3	11.9	13.2	9.7	8.2	13.5	14.6
85.	*	12.6	15.2	14.7	5.5	6.0	7.6	7.3	7.3	8.4	8.6	9.7	7.4	6.8	10.0	11.5	13.3	9.4	7.8	12.9	15.0

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  90.  *  13.2  16.3  15.6   6.0   6.6   8.7   8.5   8.5   7.8   7.8   9.0   7.1
6.7  10.0  11.3  13.2   8.9   7.6  12.1  14.5
  95.  *  13.2  17.3  16.5   6.4   7.1   9.5   9.2   9.2   6.8   6.8   8.0   6.8
6.5   9.9  11.0  12.6   8.5   7.3  11.7  13.7
 100.  *  12.7  17.9  17.2   6.5   7.2   9.7   9.3   9.2   6.0   6.0   7.4   6.5
6.5  10.1  10.6  12.3   8.1   7.1  11.1  12.9
 105.  *  12.6  18.0  17.9   6.8   7.5   9.5   9.1   9.0   5.4   5.4   7.2   6.8
6.8  10.5  10.9  12.1   7.9   7.1  11.1  12.8
 110.  *  13.0  18.2  18.7   6.9   7.6   9.4   8.6   8.6   5.1   5.1   7.7   7.6
7.6  11.0  11.2  12.2   8.0   7.1  11.0  12.5
 115.  *  13.6  17.9  19.3   7.4   7.8   9.3   8.3   8.3   5.1   5.1   8.7   8.6
8.6  11.5  11.6  12.6   8.2   7.2  10.9  12.4
 120.  *  14.0  18.0  19.7   8.3   8.7  10.1   8.2   8.1   5.1   5.2  10.7  10.6
10.6  12.2  12.3  13.1   8.2   6.9  10.7  12.4
 125.  *  14.4  17.5  19.3   9.9  10.5  11.6   8.2   8.0   5.1   5.4  13.4  13.1
13.1  12.4  12.6  13.2   7.8   6.4  10.3  11.8
 130.  *  14.2  15.7  17.7  12.0  12.8  13.7   8.7   8.0   5.4   6.2  16.4  16.2
16.0  12.0  12.2  12.7   7.1   5.9   9.6  11.0
 135.  *  13.1  13.6  15.2  14.0  14.5  15.8   9.4   8.4   5.9   7.4  18.7  18.3
18.3  10.8  11.1  11.5   6.3   5.5   9.3  10.1
 140.  *  11.7  11.2  11.8  14.9  15.3  16.9  10.4   8.9   6.7   8.5  19.6  19.1
18.9   9.2   9.3   9.6   5.7   5.1   9.0   9.4
 145.  *  10.5   9.4   9.5  15.1  14.8  16.9  11.1   9.5   7.3   9.2  19.0  18.3
18.3   7.6   7.7   8.0   5.3   5.0   9.1   9.1
 150.  *   9.9   8.4   8.2  14.5  13.7  15.9  11.4  10.0   7.7   9.3  17.9  17.0
16.9   6.6   6.6   6.8   5.1   5.1   9.1   8.9
 155.  *   9.7   7.9   7.7  14.4  12.0  14.6  11.0   9.8   7.8   9.3  16.4  15.3
15.3   5.9   5.9   6.1   5.1   5.1   9.1   8.9
 160.  *   9.6   7.6   7.3  14.5  11.5  13.2  10.8   9.8   7.6   8.9  15.4  14.1
14.1   5.6   5.6   5.8   5.1   5.1   9.2   8.9
 165.  *   9.8   7.8   7.2  14.7  11.1  12.1  10.7   9.7   7.6   8.8  14.7  13.3
13.3   5.4   5.4   5.6   5.1   5.1   9.3   9.1
 170.  *   9.9   7.7   7.2  15.1  11.6  11.4  10.5   9.5   7.5   8.5  14.0  12.5
12.5   5.3   5.3   5.5   5.2   5.1   9.3   9.1
 175.  *   9.9   7.8   7.2  15.0  11.7  10.7  10.4   9.5   7.4   8.4  13.2  11.7
11.7   5.3   5.3   5.5   5.2   5.2   9.4   9.2
 180.  *  10.2   7.8   7.2  15.1  12.2  10.2  10.3   9.3   7.3   8.2  12.3  10.9
10.9   5.3   5.3   5.5   5.2   5.2   9.6   9.5
 185.  *  10.4   8.0   7.2  14.8  13.2   9.7  10.4   9.3   7.1   8.1  12.3  10.9
10.9   5.2   5.2   5.5   5.2   5.2   9.8   9.7
 190.  *  10.6   8.3   7.2  14.8  13.8   9.5  10.3   9.2   7.1   8.0  11.9  10.6
10.6   5.2   5.2   5.5   5.3   5.2  10.0  10.0
 195.  *  10.9   8.4   7.1  14.6  14.4   9.3  10.3   9.1   7.1   7.8  11.6  10.3
10.3   5.2   5.2   5.6   5.3   5.3  10.2  10.3
 200.  *  11.0   8.4   6.6  14.3  14.8   9.5  10.5   9.1   7.1   7.8  11.4  10.1
10.1   5.2   5.2   6.0   5.6   5.5  10.4  10.6
 205.  *  11.2   8.5   6.4  14.4  15.2   9.7  10.4   9.2   6.9   7.8  11.3  10.0
10.0   5.1   5.1   6.6   6.0   5.9  10.5  10.9
 210.  *  11.6   8.3   5.9  14.1  15.3  10.8  10.7   9.4   7.0   7.9  11.1   9.8
9.8   5.1   5.1   7.4   6.7   6.5  10.6  11.1
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PAGE 4

JOB: Montlake and Lake Wash RUN: 2000 No Build

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
-----------------------------------------
 215.  *  11.2   8.0   5.6  13.3  15.1  12.2  11.0   9.5   7.0   8.0  11.3   9.8
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9.8   5.1   5.2   9.3   8.1   7.7  10.5  10.8
 220.  *  10.7   7.6   5.4  13.0  14.5  13.9  11.6   9.8   7.0   8.2  11.5  10.0
9.9   5.2   5.4  11.8  10.1   9.4   9.9  10.3
 225.  *   9.7   7.0   5.3  12.5  13.9  15.3  12.5  10.1   7.1   8.5  12.1  10.1
9.9   5.3   5.7  14.2  11.9  11.2   9.0   9.4
 230.  *   8.5   6.6   5.3  12.2  13.4  15.4  13.6  10.9   7.3   9.0  12.9  10.3
10.0   5.4   6.3  16.3  13.5  12.6   8.3   8.3
 235.  *   7.4   6.2   5.3  12.0  13.1  14.7  14.2  11.8   7.7   9.7  13.8  10.6
10.1   5.6   6.7  17.3  14.3  13.4   7.5   7.3
 240.  *   6.8   5.9   5.2  12.0  12.9  13.3  14.3  12.5   8.4  10.3  14.5  11.2
10.3   5.9   7.2  17.6  14.5  13.4   7.1   6.8
 245.  *   6.6   5.7   5.2  12.0  12.7  12.3  14.1  13.0   8.7  10.7  15.2  11.7
10.7   6.2   7.6  16.9  14.0  13.2   6.9   6.6
 250.  *   6.3   5.5   5.1  12.0  12.5  11.6  13.1  12.9   9.1  11.0  15.6  12.3
11.1   6.7   8.1  15.8  13.7  12.8   6.9   6.4
 255.  *   6.4   5.5   5.2  12.3  12.7  11.4  12.3  12.5   9.7  11.4  15.7  13.0
11.5   6.8   8.2  15.2  13.2  12.5   6.8   6.3
 260.  *   6.1   5.3   5.1  12.3  12.7  11.4  11.0  11.7  10.2  11.6  15.9  13.5
11.9   7.0   8.4  14.2  12.7  12.2   6.7   6.1
 265.  *   6.0   5.1   5.1  12.4  12.7  11.7  10.4  10.9  10.4  11.7  15.7  14.0
12.6   7.3   8.5  13.7  12.3  11.8   6.5   6.0
 270.  *   5.9   5.1   5.1  12.6  13.0  12.2  10.0  10.3  10.5  11.8  15.5  14.4
12.5   7.4   8.6  12.8  11.9  11.3   6.4   5.9
 275.  *   5.8   5.1   5.1  12.7  13.4  13.0   9.7   9.2  10.8  11.8  15.6  15.4
13.5   7.2   8.4  12.0  11.6  11.0   6.3   5.8
 280.  *   5.7   5.1   5.1  12.8  14.0  13.6   9.8   8.8  11.2  11.7  16.1  16.0
14.3   7.3   8.5  11.7  11.2  10.9   6.3   5.7
 285.  *   5.8   5.2   5.1  12.6  14.2  14.2   9.9   8.5  11.4  12.2  16.4  16.8
15.2   7.4   8.5  11.5  11.2  10.6   6.3   5.7
 290.  *   5.8   5.3   5.3  12.5  14.3  14.5   9.9   8.4  11.1  12.7  17.1  17.9
16.2   7.6   8.7  11.1  11.0  10.8   6.3   5.7
 295.  *   6.1   5.5   5.4  12.2  14.4  15.1   9.6   7.7  10.9  12.7  17.7  19.0
17.3   8.1   8.8  11.5  11.0  10.6   6.4   5.7
 300.  *   6.6   6.1   5.9  11.9  14.1  15.0   8.8   7.3  10.3  12.5  19.0  20.7
19.5   8.8   9.6  12.0  11.1  10.5   6.3   5.7
 305.  *   8.2   7.4   6.9  11.6  13.6  14.3   8.2   7.0   9.7  11.7  19.3  21.6
20.9  10.2  11.3  13.7  11.5  10.6   6.3   5.9
 310.  *  10.3   9.2   8.2  11.2  12.8  13.3   7.5   6.7   9.2  10.5  19.3  21.3
21.1  11.9  13.1  16.0  11.9  10.7   6.4   6.1
 315.  *  13.1  11.3   9.5  10.9  11.7  11.7   7.0   6.5   8.6   9.6  18.0  19.8
20.1  13.4  14.6  18.1  12.6  11.0   6.6   6.5
 320.  *  15.4  13.4  10.5  10.0  10.4  10.0   6.6   6.2   8.2   8.7  16.2  17.4
17.5  14.2  15.3  19.0  13.1  11.0   6.6   6.9
 325.  *  17.4  15.0  11.1   9.3   9.1   8.5   6.3   6.1   8.0   8.3  14.3  14.7
14.8  14.2  14.7  19.1  13.8  11.0   6.6   7.0
 330.  *  18.5  16.3  11.5   8.8   8.4   7.7   6.2   6.0   7.8   8.0  13.0  12.5
12.3  14.1  14.1  18.5  14.8  10.9   6.5   7.6
 335.  *  18.7  17.3  12.1   8.6   8.0   7.2   6.1   5.8   7.5   7.8  11.7  10.8
10.3  13.8  13.1  17.1  15.9  11.3   6.5   8.4
 340.  *  18.9  18.1  13.1   8.4   7.6   7.0   5.9   5.5   7.2   7.5  11.2   9.7
8.9  13.3  12.2  15.7  17.3  12.3   6.9   9.4
 345.  *  18.3  18.5  14.3   8.2   7.2   6.5   5.6   5.3   7.0   7.3  10.2   8.5
8.0  12.7  11.4  14.6  18.3  13.3   7.4  10.4
 350.  *  17.4  18.4  15.6   7.7   6.7   6.1   5.3   5.1   6.9   7.1   9.7   7.8
7.3  12.1  11.2  13.0  18.9  14.5   8.4  11.5
 355.  *  16.3  17.7  16.7   7.1   6.2   5.7   5.1   5.0   6.8   6.9   9.3   7.4
7.1  11.5  10.8  11.8  18.5  15.5   9.4  11.7
 360.  *  15.1  16.6  17.0   6.3   5.8   5.4   5.0   5.0   6.8   6.8   9.1   7.2
6.9  10.8  10.9  11.0  18.2  15.7  10.0  11.2
 THE HIGHEST CONCENTRATION OF   21.60 PPM OCCURRED AT RECEPTOR REC12.
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Montlake and Lake Wash RUN: 2016 No Build

DATE : 8/18/ 4
TIME : 18: 0:15

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1.	EBA1	*	-1000.0	-192.0	-204.0	-192.0	*	796.	90.	AG	910.	15.0	.0	32.0		
2.	EBA2	*	-204.0	-192.0	-6.0	.0	*	276.	46.	AG	910.	15.0	.0	32.0		
3.	EBD	*	.0	-6.0	1000.0	-6.0	*	1000.	90.	AG	380.	15.0	.0	32.0		
4.	WBA	*	1000.0	6.0	.0	6.0	*	1000.	270.	AG	610.	15.0	.0	32.0		
5.	WBD1	*	-48.0	.0	-180.0	-132.0	*	187.	225.	AG	970.	15.0	.0	44.0		
6.	WBD2	*	-180.0	-132.0	-240.0	-72.0	*	85.	315.	AG	970.	15.0	.0	44.0		
7.	WBD3	*	-240.0	-72.0	-120.0	48.0	*	170.	45.	DP	970.	15.0	.0	44.0		
8.	NBA	*	736.0	-700.0	36.0	.0	*	990.	315.	AG	1280.	15.0	.0	44.0		
9.	NBD1	*	36.0	.0	-168.0	204.0	*	288.	315.	AG	2170.	15.0	.0	44.0		
10.	NBD2	*	-168.0	204.0	-168.0	1000.0	*	796.	360.	AG	2170.	15.0	.0	44.0		
11.	SBA1	*	-216.0	1000.0	-216.0	204.0	*	796.	180.	AG	1810.	15.0	.0	44.0		
12.	SBA2	*	-216.0	204.0	-12.0	.0	*	288.	135.	AG	1810.	15.0	.0	44.0		
13.	SBD	*	-12.0	.0	688.0	-700.0	*	990.	135.	AG	1090.	15.0	.0	44.0		
14.	EBL	*	-30.0	-12.0	-131.9	-113.9	*	144.	225.	AG	346.	100.0	.0	24.0	.94	7.3
15.	EBT	*	-18.0	-12.0	-116.8	-110.8	*	140.	225.	AG	173.	100.0	.0	12.0	.93	7.1
16.	WBT	*	48.0	6.0	139.6	6.0	*	92.	90.	AG	210.	100.0	.0	12.0	1.01	4.7
17.	WBR	*	48.0	18.0	4598.2	18.0	*	4550.	90.	AG	210.	100.0	.0	12.0	5.60	231.2
18.	NBL	*	30.0	-12.0	58.8	-40.8	*	41.	135.	AG	378.	100.0	.0	24.0	.44	2.1
19.	NBT	*	48.0	-12.0	770.1	-734.1	*	1021.								

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135. AG    314. 100.0    .0 24.0 1.17  51.9
      20. SBL                 *    -18.0      24.0    -115.9     121.9 *     139.
315. AG    189. 100.0    .0 12.0  .97   7.0
      21. SBT                 *    -36.0      24.0    -165.1     153.1 *     183.
315. AG    314. 100.0    .0 24.0  .96   9.3
      22. SBR                 *    -54.0      24.0   -3544.7    3514.7 *    4937.
315. AG    173. 100.0    .0 12.0 2.57 250.8
```


JOB: Montlake and Lake Wash RUN: 2016 No Build

DATE : 8/18/ 4
TIME : 18: 0:15

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
14. EBL	90	65	3.0	610	1463	89.24	2	3
15. EBT	90	65	3.0	300	1449	89.24	2	3
16. WBT	90	79	3.0	100	1497	89.24	2	3
17. WBR	90	79	3.0	510	1378	89.24	2	3
18. NBL	90	71	3.0	210	1540	89.24	2	3
19. NBT	90	59	3.0	1070	1587	89.24	2	3
20. SBL	90	71	3.0	240	1593	89.24	2	3
21. SBT	90	59	3.0	820	1475	89.24	2	3
22. SBR	90	65	3.0	750	1318	89.24	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-58.0	12.0	5.9
2. R2	-116.0	70.0	5.9
3. R3	-174.0	128.0	5.9
4. R4	-85.0	146.0	5.9
5. R5	-27.0	88.0	5.9
6. R6	31.0	34.0	5.9
7. R7	113.0	34.0	5.9
8. R8	195.0	34.0	5.9
9. R9	234.0	-22.0	5.9
10. R10	152.0	-22.0	5.9
11. R11	70.0	-22.0	5.9
12. R12	128.0	-80.0	5.9
13. R13	186.0	-138.0	5.9

14. R14	*	104.0	-135.0	5.9	*
15. R15	*	46.0	-77.0	5.9	*
16. R16	*	-12.0	-19.0	5.9	*
17. R17	*	-70.0	-77.0	5.9	*
18. R18	*	-128.0	-135.0	5.9	*
19. R19	*	-174.0	-104.0	5.9	*
20. R20	*	-116.0	-46.0	5.9	*

JOB: Montlake and Lake Wash RUN: 2016 No Build

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	8.7	9.1	9.0	5.4	5.2	5.1	5.0	5.0	5.9	5.9	6.7	5.9	5.8	7.3	7.8	7.3	10.0	8.9	7.1	7.2
10.	*	8.4	8.7	8.6	5.2	5.1	5.1	5.0	5.0	5.9	5.9	6.7	5.9	5.8	7.3	8.0	7.2	9.8	9.1	6.7	6.9
15.	*	8.3	8.6	8.4	5.1	5.1	5.1	5.0	5.0	5.9	5.9	6.6	5.8	5.7	7.1	7.8	7.1	9.9	9.0	6.7	6.7
20.	*	8.1	8.3	8.0	5.1	5.1	5.1	5.0	5.0	5.9	5.9	6.6	5.7	5.7	7.1	7.7	7.0	9.6	9.2	6.6	6.8
25.	*	7.9	8.3	7.9	5.1	5.1	5.0	5.0	5.0	5.9	5.9	6.7	5.7	5.7	7.0	7.5	7.0	9.4	9.4	6.5	6.8
30.	*	7.9	8.2	7.8	5.1	5.1	5.0	5.0	5.0	5.9	5.9	6.7	5.7	5.7	6.9	7.4	6.9	9.2	9.3	6.6	6.9
35.	*	7.7	8.2	7.8	5.0	5.0	5.0	5.0	5.0	5.9	5.9	6.6	5.8	5.7	6.9	7.4	6.9	8.8	9.3	6.6	6.9
40.	*	7.8	8.3	7.9	5.0	5.0	5.0	5.0	5.0	5.9	5.9	6.6	5.8	5.6	7.0	7.5	6.9	8.2	9.0	6.8	6.9
45.	*	7.7	8.3	8.0	5.0	5.0	5.0	5.0	5.0	5.9	5.9	6.7	5.9	5.7	7.0	7.4	7.0	8.0	8.4	7.2	6.9
50.	*	7.6	8.3	8.0	5.0	5.0	5.0	5.0	5.0	6.1	6.1	6.8	5.8	5.6	7.0	7.3	7.2	7.7	8.0	7.2	6.8
55.	*	7.4	8.2	7.9	5.0	5.0	5.0	5.0	5.0	6.1	6.1	6.9	5.9	5.7	6.9	7.2	7.4	7.3	7.3	7.8	6.9
60.	*	7.3	8.2	7.9	5.1	5.1	5.0	5.0	5.0	6.2	6.2	6.9	5.9	5.7	7.0	7.2	7.6	7.4	6.9	8.3	7.4
65.	*	7.3	8.3	8.0	5.1	5.1	5.0	5.0	5.0	6.3	6.3	7.0	5.9	5.8	7.1	7.2	8.0	7.3	6.8	8.5	7.8
70.	*	7.2	8.4	8.0	5.1	5.1	5.1	5.1	5.1	6.4	6.4	7.0	6.0	5.8	7.1	7.3	8.2	7.0	6.6	8.9	8.5
75.	*	7.7	8.6	8.2	5.1	5.1	5.3	5.2	5.2	6.6	6.6	7.1	6.0	5.8	7.2	7.5	8.8	7.2	6.3	8.8	8.6
80.	*	8.0	8.7	8.3	5.1	5.2	5.6	5.5	5.5	6.7	6.7	7.3	6.2	5.9	7.3	7.6	9.0	7.0	6.3	8.7	9.2
85.	*	8.8	9.1	8.6	5.3	5.5	6.2	6.1	6.1	6.7	6.7	7.3	6.0	5.8	7.2	7.5	9.1	6.9	6.3	8.4	9.4

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  90.  *   8.9   9.8   9.1   5.5   5.8   6.8   6.5   6.5   6.3   6.3   6.8   6.0
5.7   7.0   7.3   9.1   6.6   6.0   8.0   9.0
  95.  *   9.0  10.1   9.5   5.7   6.0   7.2   6.9   6.9   5.9   5.9   6.4   5.7
5.6   7.2   7.3   8.8   6.4   5.9   7.5   8.5
 100.  *   8.9  10.4   9.9   5.8   6.0   7.3   6.9   6.9   5.5   5.5   6.1   5.7
5.6   7.2   7.3   8.3   6.3   5.8   7.1   8.1
 105.  *   8.5  10.5  10.2   5.9   6.1   7.3   6.8   6.8   5.2   5.2   6.0   5.8
5.8   7.3   7.3   8.3   6.2   5.9   7.0   8.0
 110.  *   8.8  10.3  10.7   5.9   6.1   7.1   6.6   6.6   5.1   5.1   6.1   6.0
6.0   7.5   7.5   8.2   6.4   5.8   6.9   8.0
 115.  *   8.7  10.4  10.9   6.1   6.5   7.2   6.5   6.5   5.0   5.0   6.5   6.5
6.5   7.7   7.7   8.1   6.3   5.8   6.7   8.1
 120.  *   9.0  10.4  11.0   6.4   6.8   7.4   6.5   6.4   5.0   5.0   7.1   7.1
7.1   7.9   8.1   8.3   6.2   5.7   6.6   8.1
 125.  *   9.0   9.9  11.0   7.1   7.4   7.9   6.5   6.3   5.0   5.2   8.3   8.3
8.2   8.1   8.1   8.3   6.0   5.5   6.3   7.8
 130.  *   8.7   9.4  10.1   8.1   8.3   8.7   6.7   6.2   5.1   5.5   9.5   9.4
9.2   7.9   7.9   8.3   5.8   5.3   6.1   7.5
 135.  *   8.2   8.4   9.1   8.8   9.2   9.3   7.1   6.4   5.2   5.8  10.3  10.2
10.1   7.4   7.5   7.7   5.5   5.0   5.7   7.1
 140.  *   7.6   7.4   7.8   9.4   9.4  10.0   7.5   6.5   5.6   6.2  10.6  10.5
10.5   6.9   6.9   7.0   5.2   5.0   5.8   7.0
 145.  *   7.2   6.7   6.8   9.1   9.2  10.0   7.9   6.8   5.8   6.6  10.4  10.3
10.3   6.2   6.2   6.3   5.0   5.0   5.8   6.8
 150.  *   6.9   6.4   6.2   9.1   8.7   9.5   7.9   7.0   6.0   6.8   9.8   9.8
9.8   5.6   5.7   5.8   5.0   5.0   5.8   6.9
 155.  *   6.9   6.1   6.0   9.1   8.2   9.3   7.9   7.0   6.1   6.8   9.2   9.1
9.1   5.4   5.4   5.5   5.0   5.0   5.8   6.9
 160.  *   6.9   6.2   6.0   9.2   7.9   8.7   7.9   7.0   6.2   6.6   8.6   8.7
8.7   5.3   5.3   5.4   5.1   5.0   5.8   6.9
 165.  *   6.9   6.2   5.9   9.0   8.0   8.4   7.8   7.0   6.0   6.5   8.3   8.3
8.3   5.2   5.2   5.3   5.1   5.1   5.9   6.9
 170.  *   6.9   6.1   5.8   9.0   7.7   8.0   7.7   6.9   6.0   6.5   8.0   8.0
8.0   5.2   5.2   5.3   5.1   5.1   6.0   6.9
 175.  *   7.1   6.2   5.6   9.2   7.9   7.9   7.7   6.9   5.9   6.4   7.7   7.7
7.7   5.1   5.1   5.2   5.1   5.1   6.0   6.8
 180.  *   7.2   6.3   5.8   9.1   8.3   7.6   7.7   6.9   5.9   6.3   7.5   7.4
7.4   5.1   5.1   5.2   5.1   5.1   6.0   6.9
 185.  *   7.3   6.1   5.6   9.2   8.4   7.5   7.6   6.9   5.9   6.3   7.5   7.4
7.4   5.1   5.1   5.2   5.1   5.1   5.9   6.8
 190.  *   7.3   6.0   5.4   8.9   8.8   7.2   7.6   6.9   5.9   6.3   7.5   7.3
7.3   5.1   5.1   5.2   5.1   5.1   6.1   6.8
 195.  *   7.4   5.9   5.4   8.7   9.0   7.0   7.5   6.9   5.9   6.2   7.4   7.1
7.1   5.1   5.1   5.3   5.2   5.1   6.1   6.6
 200.  *   7.3   5.9   5.3   8.4   9.0   7.0   7.5   6.9   5.9   6.2   7.3   7.0
7.0   5.1   5.1   5.4   5.2   5.2   5.9   6.5
 205.  *   7.3   6.0   5.2   8.5   9.0   7.1   7.7   6.8   5.9   6.2   7.4   7.0
7.0   5.1   5.1   5.7   5.3   5.2   6.0   6.3
 210.  *   7.2   5.9   5.2   8.3   8.8   7.4   7.8   6.7   5.9   6.2   7.5   7.0
7.0   5.1   5.1   5.9   5.6   5.3   6.0   6.4
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 WIND   * CONCENTRATION
 ANGLE *       (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
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 215.  *   6.9   5.9   5.1   8.2   8.7   7.9   7.7   6.8   5.9   6.2   7.6   6.9
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6.9   5.1   5.1   6.4   5.9   5.4   6.0   6.3
 220.  *   6.6   5.9   5.1   8.0   8.4   8.3   7.7   6.8   5.9   6.2   7.7   6.9
6.9   5.1   5.1   7.2   6.4   5.7   6.0   6.0
 225.  *   6.3   5.9   5.1   7.8   8.2   8.9   8.2   6.9   5.9   6.2   7.8   6.9
6.9   5.1   5.1   8.0   7.0   5.8   6.0   6.2
 230.  *   6.1   5.7   5.1   7.8   8.2   9.1   8.6   7.1   5.9   6.2   8.1   6.9
6.9   5.1   5.1   8.8   7.5   5.9   6.1   6.0
 235.  *   5.9   5.5   5.1   7.6   8.2   8.8   8.6   7.5   5.9   6.2   8.5   6.9
6.9   5.1   5.2   9.2   8.1   6.0   6.1   5.9
 240.  *   5.8   5.4   5.1   7.7   8.2   8.4   8.9   8.0   5.9   6.5   8.7   7.0
7.0   5.1   5.3   9.5   8.6   6.0   5.9   5.7
 245.  *   5.8   5.3   5.1   7.7   8.2   8.3   8.9   8.4   6.2   6.8   9.4   7.2
7.0   5.1   5.4   9.4   8.9   6.1   5.9   5.7
 250.  *   5.8   5.2   5.1   7.6   8.1   8.0   8.6   8.7   6.4   7.0   9.6   7.2
7.0   5.2   5.8   9.3   8.9   6.3   5.9   5.7
 255.  *   5.5   5.2   5.0   7.6   8.2   7.8   8.1   8.5   6.7   7.5   9.9   7.6
7.2   5.3   6.0   9.1   9.0   6.3   5.9   5.6
 260.  *   5.5   5.0   5.0   7.8   8.3   7.8   7.8   8.1   6.8   7.6   9.8   8.1
7.6   5.4   6.2   8.7   8.8   6.3   5.9   5.5
 265.  *   5.5   5.1   5.1   7.7   8.3   7.8   7.3   7.9   7.2   7.9  10.1   8.3
7.8   5.6   6.4   8.3   8.7   6.2   5.8   5.5
 270.  *   5.5   5.1   5.1   7.8   8.4   8.1   7.0   7.0   7.5   7.9   9.9   8.5
7.9   5.7   6.5   7.9   8.3   6.2   5.7   5.4
 275.  *   5.5   5.1   5.1   7.8   8.5   8.4   7.0   6.7   7.9   8.1  10.0   8.6
8.3   5.8   6.4   7.9   8.1   6.1   5.7   5.4
 280.  *   5.5   5.1   5.1   7.8   8.7   8.7   7.0   6.5   7.8   8.3  10.1   8.9
8.6   5.9   6.4   7.7   8.1   6.2   5.6   5.4
 285.  *   5.4   5.1   5.1   7.8   8.7   8.8   7.0   6.4   7.8   8.4  10.3   9.3
8.8   5.9   6.4   7.5   7.9   6.1   5.7   5.4
 290.  *   5.3   5.1   5.1   7.9   8.9   8.9   6.9   6.4   7.6   8.4  10.4   9.7
9.3   6.0   6.5   7.7   7.8   6.1   5.6   5.4
 295.  *   5.4   5.2   5.2   7.8   8.8   9.1   6.7   6.0   7.7   8.6  10.7  10.3
10.0   6.1   6.6   7.5   7.7   6.3   5.6   5.3
 300.  *   5.6   5.4   5.3   7.8   8.6   9.2   6.4   5.8   7.3   8.6  11.0  11.0
10.7   6.5   7.0   7.9   7.7   6.3   5.7   5.3
 305.  *   6.2   6.0   5.7   7.9   8.6   8.9   6.3   5.8   7.1   8.2  11.2  11.6
11.2   6.9   7.6   8.4   7.8   6.1   5.6   5.4
 310.  *   7.0   6.6   6.3   7.9   8.2   8.5   6.0   5.6   6.8   7.8  10.8  11.5
11.4   8.0   8.3   9.4   7.9   6.3   5.6   5.5
 315.  *   7.8   7.4   6.8   7.7   7.8   8.0   5.8   5.7   6.5   7.3  10.6  11.1
11.1   8.6   9.0  10.2   8.0   6.3   5.8   5.6
 320.  *   9.0   8.2   7.2   7.3   7.4   7.1   5.6   5.6   6.4   7.0   9.7  10.0
10.2   8.8   9.1  10.6   8.2   6.4   5.7   5.7
 325.  *   9.8   8.7   7.4   7.0   7.0   6.6   5.5   5.5   6.4   6.8   9.1   9.1
9.1   8.8   8.8  10.8   8.5   6.4   5.7   5.9
 330.  *  10.3   9.2   7.5   6.8   6.6   6.2   5.5   5.5   6.3   6.7   8.4   8.1
8.1   8.8   9.0  10.5   8.9   6.5   5.6   5.9
 335.  *  10.6   9.7   7.8   6.7   6.5   6.0   5.5   5.3   6.2   6.6   8.1   7.5
7.4   8.9   8.7  10.1   9.3   6.8   5.6   6.3
 340.  *  10.8  10.1   8.1   6.6   6.3   5.9   5.5   5.3   6.1   6.4   7.8   7.1
6.8   8.5   8.4   9.8  10.0   7.1   5.7   6.8
 345.  *  10.5  10.3   8.4   6.5   6.1   5.8   5.3   5.1   6.0   6.2   7.3   6.7
6.5   8.1   8.2   9.3  10.4   7.8   6.0   7.4
 350.  *  10.2  10.3   9.1   6.3   5.8   5.5   5.1   5.0   5.9   6.1   7.1   6.4
6.1   8.0   7.9   8.6  10.5   8.2   6.5   7.6
 355.  *   9.6  10.1   9.3   6.0   5.6   5.3   5.0   5.0   5.9   5.9   6.9   6.1
5.9   7.6   7.9   8.0  10.5   8.7   7.0   7.9
 360.  *   9.1   9.6   9.4   5.6   5.3   5.2   5.0   5.0   5.9   5.9   6.8   6.1
5.9   7.4   7.8   7.6  10.2   9.2   7.2   7.5
 THE HIGHEST CONCENTRATION OF   11.60 PPM OCCURRED AT RECEPTOR REC12.
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Montlake and Lake Wash RUN: 2030 No Build

DATE : 8/18/ 4
TIME : 18: 0:24

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1.	EBA1	*	-1000.0	-192.0	-204.0	-192.0	*	796.	90.	AG	590.	11.2	.0	32.0		
2.	EBA2	*	-204.0	-192.0	-6.0	.0	*	276.	46.	AG	590.	11.2	.0	32.0		
3.	EBD	*	.0	-6.0	1000.0	-6.0	*	1000.	90.	AG	540.	11.2	.0	32.0		
4.	WBA	*	1000.0	6.0	.0	6.0	*	1000.	270.	AG	570.	11.2	.0	32.0		
5.	WBD1	*	-48.0	.0	-180.0	-132.0	*	187.	225.	AG	970.	11.2	.0	44.0		
6.	WBD2	*	-180.0	-132.0	-240.0	-72.0	*	85.	315.	AG	970.	11.2	.0	44.0		
7.	WBD3	*	-240.0	-72.0	-120.0	48.0	*	170.	45.	DP	970.	11.2	.0	44.0		
8.	NBA	*	736.0	-700.0	36.0	.0	*	990.	315.	AG	1550.	11.2	.0	44.0		
9.	NBD1	*	36.0	.0	-168.0	204.0	*	288.	315.	AG	2270.	11.2	.0	44.0		
10.	NBD2	*	-168.0	204.0	-168.0	1000.0	*	796.	360.	AG	2270.	11.2	.0	44.0		
11.	SBA1	*	-216.0	1000.0	-216.0	204.0	*	796.	180.	AG	2120.	11.2	.0	44.0		
12.	SBA2	*	-216.0	204.0	-12.0	.0	*	288.	135.	AG	2120.	11.2	.0	44.0		
13.	SBD	*	-12.0	.0	688.0	-700.0	*	990.	135.	AG	1050.	11.2	.0	44.0		
14.	EBL	*	-30.0	-12.0	-108.4	-90.4	*	111.	225.	AG	275.	100.0	.0	24.0	.89	5.6
15.	EBT	*	-18.0	-12.0	-44.3	-38.3	*	37.	225.	AG	138.	100.0	.0	12.0	.36	1.9
16.	WBT	*	48.0	6.0	151.9	6.0	*	104.	90.	AG	164.	100.0	.0	12.0	1.06	5.3
17.	WBR	*	48.0	18.0	4840.3	18.0	*	4792.	90.	AG	164.	100.0	.0	12.0	8.20	243.4
18.	NBL	*	30.0	-12.0	65.7	-47.7	*	50.	135.	AG	288.	100.0	.0	24.0	.54	2.6
19.	NBT	*	48.0	-12.0	1472.9	-1436.9	*	2015.								

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135. AG    235. 100.0    .0 24.0 1.37 102.4
      20. SBL                 *    -18.0      24.0   -1542.5    1548.5 *    2156.
315. AG    138. 100.0    .0 12.0 1.63 109.5
      21. SBT                 *    -36.0      24.0    -157.3     145.3 *     172.
315. AG    223. 100.0    .0 24.0  .92   8.7
      22. SBR                 *    -54.0      24.0   -3715.8    3685.8 *    5179.
315. AG    142. 100.0    .0 12.0 3.20 263.1
```


JOB: Montlake and Lake Wash RUN: 2030 No Build

DATE : 8/18/ 4
TIME : 18: 0:24

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
14. EBL	*	90	68	3.0	490	1463	67.96	2	3
15. EBT	*	90	68	3.0	100	1462	67.96	2	3
16. WBT	*	90	81	3.0	70	1501	67.96	2	3
17. WBR	*	90	81	3.0	500	1378	67.96	2	3
18. NBL	*	90	71	3.0	260	1540	67.96	2	3
19. NBT	*	90	58	3.0	1290	1576	67.96	2	3
20. SBL	*	90	68	3.0	490	1593	67.96	2	3
21. SBT	*	90	55	3.0	930	1513	67.96	2	3
22. SBR	*	90	70	3.0	700	1318	67.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT) X	Y	Z
1. R1	*	-58.0	12.0	5.9
2. R2	*	-116.0	70.0	5.9
3. R3	*	-174.0	128.0	5.9
4. R4	*	-85.0	146.0	5.9
5. R5	*	-27.0	88.0	5.9
6. R6	*	31.0	34.0	5.9
7. R7	*	113.0	34.0	5.9
8. R8	*	195.0	34.0	5.9
9. R9	*	234.0	-22.0	5.9
10. R10	*	152.0	-22.0	5.9
11. R11	*	70.0	-22.0	5.9
12. R12	*	128.0	-80.0	5.9
13. R13	*	186.0	-138.0	5.9

14. R14	*	104.0	-135.0	5.9	*
15. R15	*	46.0	-77.0	5.9	*
16. R16	*	-12.0	-19.0	5.9	*
17. R17	*	-70.0	-77.0	5.9	*
18. R18	*	-128.0	-135.0	5.9	*
19. R19	*	-174.0	-104.0	5.9	*
20. R20	*	-116.0	-46.0	5.9	*

JOB: Montlake and Lake Wash RUN: 2030 No Build

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	8.0	8.4	8.5	5.2	5.1	5.1	5.0	5.0	5.7	5.8	6.3	5.9	5.6	6.8	7.3	6.8	8.2	7.0	6.6	6.8
10.	*	7.7	8.0	8.1	5.1	5.1	5.1	5.0	5.0	5.7	5.8	6.4	5.8	5.6	6.8	7.4	6.6	8.0	7.0	6.6	6.5
15.	*	7.7	7.9	7.8	5.1	5.1	5.1	5.0	5.0	5.7	5.8	6.3	5.8	5.6	6.7	7.4	6.6	8.0	7.2	6.3	6.4
20.	*	7.5	7.8	7.4	5.1	5.1	5.1	5.0	5.0	5.7	5.7	6.3	5.8	5.6	6.7	7.5	6.4	7.7	7.3	6.2	6.4
25.	*	7.3	7.6	7.2	5.1	5.1	5.0	5.0	5.0	5.7	5.7	6.4	5.7	5.6	6.6	7.4	6.4	7.5	7.0	6.1	6.5
30.	*	7.2	7.4	7.0	5.0	5.0	5.0	5.0	5.0	5.7	5.7	6.4	5.7	5.6	6.6	7.3	6.4	7.6	7.2	6.2	6.4
35.	*	7.2	7.5	7.1	5.0	5.0	5.0	5.0	5.0	5.7	5.7	6.3	5.6	5.6	6.6	7.1	6.2	7.1	7.2	6.2	6.4
40.	*	7.2	7.6	7.3	5.0	5.0	5.0	5.0	5.0	5.7	5.7	6.3	5.6	5.6	6.6	7.0	6.3	6.9	6.8	6.4	6.5
45.	*	7.0	7.6	7.3	5.0	5.0	5.0	5.0	5.0	5.8	5.8	6.4	5.6	5.6	6.6	6.9	6.4	6.9	6.9	6.4	6.4
50.	*	7.0	7.6	7.4	5.0	5.0	5.0	5.0	5.0	5.9	5.9	6.5	5.6	5.6	6.6	6.8	6.6	6.7	6.8	6.6	6.4
55.	*	6.8	7.5	7.4	5.0	5.0	5.0	5.0	5.0	5.9	5.9	6.5	5.6	5.6	6.6	6.7	6.8	6.7	6.4	6.7	6.5
60.	*	6.7	7.4	7.3	5.0	5.0	5.0	5.0	5.0	6.0	6.0	6.7	5.7	5.7	6.7	6.8	6.8	6.6	6.2	7.5	6.9
65.	*	6.7	7.6	7.6	5.1	5.1	5.0	5.0	5.0	6.1	6.1	6.7	5.8	5.7	6.7	6.8	7.3	6.5	6.2	7.6	7.2
70.	*	6.9	7.8	7.7	5.1	5.1	5.0	5.0	5.0	6.2	6.2	6.8	5.9	5.7	6.7	7.0	7.6	6.7	6.1	7.3	7.4
75.	*	7.1	7.9	7.9	5.1	5.1	5.2	5.1	5.1	6.3	6.3	6.8	5.9	5.8	6.8	7.0	7.9	6.7	6.1	7.4	7.8
80.	*	7.4	8.0	7.9	5.1	5.2	5.5	5.4	5.4	6.4	6.4	6.8	5.9	5.8	6.9	7.1	8.3	6.7	6.1	7.1	8.4
85.	*	8.0	8.3	8.1	5.2	5.3	6.0	5.9	5.8	6.4	6.4	6.8	5.8	5.5	6.7	6.9	8.2	6.5	6.0	7.0	8.3

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  90.  *   8.1   8.7   8.4   5.3   5.6   6.5   6.3   6.2   6.1   6.1   6.5   6.0
5.7   6.7   7.0   8.3   6.4   5.7   6.6   8.1
  95.  *   8.1   9.2   8.8   5.5   5.7   6.8   6.5   6.5   5.7   5.8   6.2   5.5
5.5   6.7   6.7   7.9   5.9   5.7   6.3   7.6
 100.  *   8.1   9.2   8.9   5.7   5.8   6.8   6.5   6.5   5.4   5.4   5.9   5.6
5.5   6.6   6.7   7.7   5.9   5.7   6.2   7.3
 105.  *   7.7   9.3   9.3   5.7   6.0   6.7   6.4   6.4   5.1   5.1   5.8   5.7
5.7   6.8   6.8   7.4   5.9   5.7   6.3   7.1
 110.  *   7.7   9.4   9.5   5.7   5.9   6.7   6.4   6.3   5.1   5.1   6.0   5.9
5.9   7.0   7.0   7.6   6.0   5.7   6.3   7.2
 115.  *   8.0   9.4   9.7   5.9   6.1   6.8   6.3   6.2   5.0   5.0   6.2   6.2
6.2   7.1   7.1   7.4   6.0   5.7   6.3   7.2
 120.  *   8.0   9.4  10.0   6.2   6.5   7.0   6.3   6.1   5.0   5.0   6.8   6.8
6.7   7.4   7.4   7.7   6.0   5.6   6.1   7.1
 125.  *   8.0   9.0   9.6   6.9   7.0   7.3   6.3   6.0   5.0   5.2   7.7   7.7
7.7   7.6   7.6   7.7   5.9   5.5   6.0   6.8
 130.  *   8.0   8.5   9.0   7.6   7.9   8.0   6.6   6.1   5.1   5.4   8.6   8.6
8.6   7.4   7.4   7.6   5.7   5.4   5.9   6.7
 135.  *   7.4   7.9   8.2   8.3   8.3   8.7   6.9   6.2   5.3   5.9   9.4   9.3
9.2   7.0   7.0   7.0   5.4   5.1   5.6   6.5
 140.  *   7.1   7.0   7.3   8.6   8.7   9.1   7.1   6.4   5.6   6.2   9.5   9.5
9.5   6.4   6.4   6.6   5.2   5.0   5.6   6.2
 145.  *   6.5   6.4   6.4   8.2   8.5   9.0   7.4   6.6   5.7   6.4   9.2   9.2
9.2   5.9   5.9   5.9   5.0   5.0   5.6   6.1
 150.  *   6.4   5.9   5.8   8.3   8.0   8.8   7.5   6.7   5.8   6.5   8.9   8.8
8.7   5.5   5.5   5.5   5.0   5.0   5.6   6.1
 155.  *   6.4   5.7   5.6   8.1   7.5   8.3   7.5   6.8   5.9   6.4   8.4   8.3
8.3   5.3   5.3   5.3   5.0   5.0   5.6   6.1
 160.  *   6.5   5.7   5.7   8.0   7.4   8.1   7.2   6.7   5.9   6.4   7.9   7.9
7.8   5.2   5.2   5.2   5.0   5.0   5.6   6.1
 165.  *   6.4   5.8   5.6   8.2   7.1   7.7   7.2   6.6   5.9   6.2   7.9   7.6
7.6   5.2   5.2   5.3   5.0   5.0   5.6   6.0
 170.  *   6.3   5.8   5.6   8.2   7.2   7.4   7.2   6.6   5.8   6.1   7.6   7.4
7.4   5.1   5.1   5.1   5.0   5.0   5.6   6.0
 175.  *   6.3   5.8   5.5   8.1   7.2   7.3   7.1   6.6   5.8   6.1   7.4   7.1
7.1   5.1   5.1   5.1   5.0   5.0   5.7   5.9
 180.  *   6.3   5.8   5.5   8.0   7.4   7.1   7.0   6.5   5.8   6.1   7.3   7.0
7.0   5.1   5.1   5.2   5.0   5.0   5.7   5.8
 185.  *   6.3   5.6   5.4   8.0   7.5   6.9   7.0   6.4   5.8   6.0   7.2   6.8
6.8   5.1   5.1   5.2   5.1   5.0   5.7   5.8
 190.  *   6.4   5.7   5.3   7.8   7.8   6.7   7.0   6.4   5.8   6.0   7.2   6.7
6.7   5.1   5.1   5.2   5.1   5.0   5.6   5.8
 195.  *   6.4   5.5   5.2   7.8   7.9   6.6   7.0   6.4   5.6   6.0   7.3   6.7
6.7   5.1   5.1   5.2   5.1   5.1   5.6   5.7
 200.  *   6.4   5.6   5.1   7.6   7.8   6.5   7.1   6.4   5.6   6.0   7.3   6.6
6.6   5.1   5.1   5.2   5.1   5.1   5.7   5.7
 205.  *   6.3   5.7   5.1   7.5   7.6   6.6   7.2   6.5   5.6   6.0   7.3   6.6
6.6   5.0   5.0   5.3   5.1   5.1   5.7   5.8
 210.  *   6.3   5.6   5.0   7.4   7.5   6.6   7.3   6.5   5.6   5.9   7.4   6.6
6.6   5.0   5.0   5.4   5.2   5.1   5.6   5.7
```



```
 WIND   * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
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 215.  *   6.1   5.7   5.1   7.3   7.5   7.1   7.4   6.5   5.6   5.9   7.4   6.6
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6.6   5.0   5.0   5.7   5.3   5.2   5.6   5.8
 220.  *   6.0   5.7   5.1   7.3   7.6   7.1   7.4   6.5   5.6   5.9   7.4   6.6
6.6   5.1   5.1   6.1   5.5   5.3   5.6   5.8
 225.  *   6.0   5.6   5.1   7.3   7.5   7.5   7.4   6.6   5.6   5.9   7.5   6.6
6.6   5.1   5.1   6.5   5.6   5.3   5.7   5.7
 230.  *   5.7   5.5   5.1   7.3   7.5   7.4   7.6   6.8   5.6   5.9   7.4   6.6
6.6   5.1   5.1   6.9   5.9   5.5   5.6   5.6
 235.  *   5.7   5.4   5.1   7.2   7.4   7.6   7.9   6.8   5.6   5.9   7.6   6.6
6.6   5.0   5.0   7.4   6.1   5.5   5.6   5.6
 240.  *   5.6   5.3   5.1   7.2   7.4   7.6   7.7   7.2   5.6   6.0   7.8   6.6
6.6   5.0   5.0   7.7   6.4   5.5   5.6   5.5
 245.  *   5.6   5.3   5.0   7.1   7.5   7.3   7.7   7.6   5.6   6.3   7.9   6.6
6.6   5.0   5.2   7.9   6.5   5.6   5.5   5.4
 250.  *   5.4   5.2   5.0   7.3   7.5   7.2   7.5   7.9   6.0   6.7   8.3   6.7
6.6   5.1   5.4   7.9   6.7   5.7   5.5   5.4
 255.  *   5.4   5.1   5.0   7.4   7.5   7.1   7.2   7.6   6.2   6.8   8.6   6.9
6.7   5.2   5.5   7.8   6.8   5.6   5.6   5.4
 260.  *   5.3   5.0   5.0   7.4   7.5   7.0   6.9   7.4   6.3   6.9   8.7   7.1
6.8   5.2   5.7   7.4   6.7   5.7   5.6   5.5
 265.  *   5.3   5.0   5.0   7.4   7.6   7.3   6.6   7.3   6.6   7.1   8.7   7.2
6.9   5.3   5.7   7.3   6.9   5.7   5.5   5.4
 270.  *   5.4   5.1   5.1   7.3   7.6   7.4   6.5   6.4   6.8   7.3   8.7   7.3
7.1   5.4   5.9   7.3   6.8   5.7   5.5   5.3
 275.  *   5.4   5.1   5.1   7.4   7.7   7.7   6.5   6.5   7.2   7.2   8.7   7.7
7.4   5.5   5.8   7.1   6.8   5.8   5.4   5.3
 280.  *   5.3   5.1   5.1   7.5   8.0   7.9   6.7   6.2   7.3   7.7   9.3   7.9
7.7   5.4   5.9   7.0   6.6   5.7   5.4   5.3
 285.  *   5.3   5.1   5.1   7.6   8.0   8.1   6.7   6.2   7.3   7.6   9.2   8.3
8.1   5.6   5.9   6.8   6.5   5.6   5.4   5.2
 290.  *   5.3   5.1   5.1   7.6   8.2   8.3   6.6   6.2   7.2   8.0   9.3   8.9
8.4   5.7   6.0   6.8   6.5   5.8   5.5   5.2
 295.  *   5.3   5.2   5.2   7.7   8.2   8.3   6.6   6.1   7.3   7.9   9.4   9.2
8.9   5.8   6.1   7.0   6.4   5.8   5.5   5.2
 300.  *   5.5   5.4   5.3   7.8   8.3   8.4   6.4   5.9   7.2   8.0   9.9   9.8
9.3   6.1   6.5   7.3   6.4   5.8   5.4   5.2
 305.  *   6.1   5.8   5.7   7.8   8.3   8.4   6.3   5.8   6.8   7.7  10.1  10.3
9.9   6.7   7.0   7.9   6.6   5.8   5.5   5.2
 310.  *   6.8   6.6   6.2   7.8   8.1   8.0   6.2   5.8   6.7   7.5  10.0  10.5
10.4   7.3   7.8   8.6   6.7   5.8   5.6   5.4
 315.  *   7.8   7.3   6.9   7.4   7.7   7.6   5.9   5.6   6.4   7.3   9.6  10.1
10.1   7.8   8.2   9.2   6.9   5.9   5.6   5.5
 320.  *   8.7   8.1   7.3   7.1   7.2   6.9   5.6   5.5   6.2   6.8   9.0   9.3
9.6   8.1   8.5   9.7   7.1   5.9   5.6   5.7
 325.  *   9.1   8.5   7.6   6.7   6.7   6.4   5.5   5.4   6.1   6.5   8.2   8.4
8.4   8.3   8.6   9.8   7.3   6.0   5.7   5.9
 330.  *   9.5   8.8   7.7   6.4   6.2   6.0   5.5   5.4   6.0   6.5   7.7   7.5
7.5   8.2   8.1   9.6   7.6   6.0   5.7   5.9
 335.  *   9.6   9.0   7.7   6.3   6.1   5.9   5.4   5.3   6.0   6.4   7.4   7.1
6.9   8.2   8.1   9.1   8.0   6.2   5.6   6.2
 340.  *   9.6   9.4   8.0   6.2   6.0   5.7   5.3   5.2   5.9   6.3   7.3   6.8
6.5   7.6   7.7   8.8   8.4   6.4   5.7   6.6
 345.  *   9.5   9.6   8.4   6.2   5.9   5.6   5.2   5.1   5.8   6.2   6.8   6.5
6.2   7.6   7.6   8.2   8.5   6.7   6.0   6.9
 350.  *   9.0   9.5   8.6   6.1   5.7   5.4   5.1   5.0   5.7   6.1   6.7   6.2
6.0   7.3   7.3   7.7   8.7   6.8   6.1   7.4
 355.  *   8.7   9.3   8.8   5.7   5.4   5.2   5.0   5.0   5.7   5.9   6.5   6.0
5.7   7.1   7.5   7.3   8.7   7.2   6.6   7.4
 360.  *   8.3   8.8   8.8   5.5   5.2   5.1   5.0   5.0   5.7   5.9   6.5   6.1
5.8   6.8   7.2   6.9   8.5   7.3   6.7   7.2
 THE HIGHEST CONCENTRATION OF   10.50 PPM OCCURRED AT RECEPTOR REC12.
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Montlake and Lake Wash RUN: 2016 Build 4LT

DATE : 8/18/ 4
TIME : 17:57:52

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1.	EBA1	*	-1000.0	-192.0	-204.0	-192.0	*	796.	90.	AG	1100.	15.0	.0	32.0		
2.	EBA2	*	-204.0	-192.0	-6.0	.0	*	276.	46.	AG	1100.	15.0	.0	32.0		
3.	EBD	*	.0	-6.0	1000.0	-6.0	*	1000.	90.	AG	400.	15.0	.0	32.0		
4.	WBA	*	1000.0	6.0	.0	6.0	*	1000.	270.	AG	580.	15.0	.0	32.0		
5.	WBD1	*	-48.0	.0	-180.0	-132.0	*	187.	225.	AG	920.	15.0	.0	44.0		
6.	WBD2	*	-180.0	-132.0	-240.0	-72.0	*	85.	315.	AG	920.	15.0	.0	44.0		
7.	WBD3	*	-240.0	-72.0	-120.0	48.0	*	170.	45.	DP	920.	15.0	.0	44.0		
8.	NBA	*	736.0	-700.0	36.0	.0	*	990.	315.	AG	1240.	15.0	.0	44.0		
9.	NBD1	*	36.0	.0	-168.0	204.0	*	288.	315.	AG	2250.	15.0	.0	44.0		
10.	NBD2	*	-168.0	204.0	-168.0	1000.0	*	796.	360.	AG	2250.	15.0	.0	44.0		
11.	SBA1	*	-216.0	1000.0	-216.0	204.0	*	796.	180.	AG	1730.	15.0	.0	44.0		
12.	SBA2	*	-216.0	204.0	-12.0	.0	*	288.	135.	AG	1730.	15.0	.0	44.0		
13.	SBD	*	-12.0	.0	688.0	-700.0	*	990.	135.	AG	1080.	15.0	.0	44.0		
14.	EBL	*	-36.0	-12.0	-3436.3	-3412.3	*	4809.	225.	AG	180.	100.0	.0	12.0	2.48	244.3
15.	EBT	*	-18.0	-12.0	-614.3	-608.3	*	843.	225.	AG	180.	100.0	.0	12.0	1.21	42.8
16.	WBT	*	48.0	6.0	92.3	6.0	*	44.	90.	AG	194.	100.0	.0	12.0	.48	2.3
17.	WBR	*	48.0	18.0	406.2	18.0	*	358.	90.	AG	146.	100.0	.0	12.0	1.03	18.2
18.	NBL	*	24.0	-12.0	846.6	-834.6	*	1163.	135.	AG	213.	100.0	.0	12.0	2.13	59.1
19.	NBT	*	48.0	-12.0	810.5	-774.5	*	1078.								

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135. AG    321. 100.0    .0 24.0 1.18  54.8
      20. SBL                 *    -18.0      24.0    -178.5     184.5 *     227.
315. AG    194. 100.0    .0 12.0 1.03  11.5
      21. SBT                 *    -36.0      24.0    -125.0     113.0 *     126.
315. AG    282. 100.0    .0 24.0  .73   6.4
      22. SBR                 *    -54.0      24.0   -3500.3    3470.3 *    4874.
315. AG    180. 100.0    .0 12.0 2.66 247.6
```


JOB: Montlake and Lake Wash RUN: 2016 Build 4LT

DATE : 8/18/ 4
TIME : 17:57:52

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
14. EBL	100	75	3.0	740	1494	89.24	2	3
15. EBT	100	75	3.0	360	1487	89.24	2	3
16. WBT	100	81	3.0	100	1497	89.24	2	3
17. WBR	100	61	3.0	480	1378	89.24	2	3
18. NBL	100	89	3.0	190	1494	89.24	2	3
19. NBT	100	67	3.0	1050	1587	89.24	2	3
20. SBL	100	81	3.0	230	1593	89.24	2	3
21. SBT	100	59	3.0	780	1475	89.24	2	3
22. SBR	100	75	3.0	720	1356	89.24	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-58.0	12.0	5.9
2. R2	-116.0	70.0	5.9
3. R3	-174.0	128.0	5.9
4. R4	-85.0	146.0	5.9
5. R5	-27.0	88.0	5.9
6. R6	31.0	34.0	5.9
7. R7	113.0	34.0	5.9
8. R8	195.0	34.0	5.9
9. R9	234.0	-22.0	5.9
10. R10	152.0	-22.0	5.9
11. R11	70.0	-22.0	5.9
12. R12	128.0	-80.0	5.9
13. R13	186.0	-138.0	5.9

14. R14	*	104.0	-135.0	5.9	*
15. R15	*	46.0	-77.0	5.9	*
16. R16	*	-12.0	-19.0	5.9	*
17. R17	*	-70.0	-77.0	5.9	*
18. R18	*	-128.0	-135.0	5.9	*
19. R19	*	-174.0	-104.0	5.9	*
20. R20	*	-116.0	-46.0	5.9	*

JOB: Montlake and Lake Wash RUN: 2016 Build 4LT

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	8.7	9.2	9.3	5.4	5.2	5.1	5.0	5.0	5.7	5.7	6.5	5.8	5.7	7.6	7.5	7.4	9.2	9.1	7.1	7.2
10.	*	8.4	8.7	8.7	5.2	5.1	5.1	5.0	5.0	5.7	5.7	6.5	5.8	5.7	7.6	7.6	7.3	9.1	9.2	6.9	7.1
15.	*	8.4	8.6	8.3	5.1	5.1	5.1	5.0	5.0	5.7	5.7	6.4	5.7	5.6	7.5	7.5	7.1	9.0	9.0	6.6	6.7
20.	*	8.1	8.4	8.0	5.1	5.1	5.1	5.0	5.0	5.6	5.6	6.4	5.7	5.6	7.4	7.5	7.0	8.9	9.1	6.5	6.8
25.	*	7.8	8.2	7.7	5.1	5.1	5.0	5.0	5.0	5.8	5.8	6.5	5.7	5.6	7.3	7.4	7.0	8.5	9.1	6.3	6.7
30.	*	7.9	8.3	7.6	5.1	5.1	5.0	5.0	5.0	5.8	5.8	6.4	5.7	5.6	7.3	7.4	7.0	8.4	8.9	6.4	6.8
35.	*	7.8	8.3	7.6	5.0	5.0	5.0	5.0	5.0	5.8	5.8	6.3	5.7	5.6	7.3	7.4	7.0	8.1	8.9	6.5	6.8
40.	*	7.7	8.3	7.5	5.0	5.0	5.0	5.0	5.0	5.8	5.8	6.2	5.7	5.5	7.2	7.4	7.0	7.7	8.4	6.7	6.9
45.	*	7.7	8.4	7.6	5.0	5.0	5.0	5.0	5.0	5.9	5.9	6.4	5.8	5.6	7.2	7.4	7.1	7.7	7.9	7.0	6.9
50.	*	7.4	8.3	7.5	5.0	5.0	5.0	5.0	5.0	5.9	5.9	6.2	5.7	5.5	7.2	7.4	7.1	7.5	7.7	7.0	6.8
55.	*	7.3	8.3	7.5	5.0	5.0	5.0	5.0	5.0	5.9	5.9	6.3	5.8	5.6	7.3	7.5	7.3	7.1	7.1	7.5	6.7
60.	*	7.2	8.3	7.5	5.1	5.1	5.0	5.0	5.0	6.0	6.0	6.4	5.8	5.5	7.3	7.5	7.3	7.1	6.7	7.8	7.3
65.	*	7.1	8.2	7.4	5.1	5.1	5.0	5.0	5.0	6.1	6.2	6.5	5.8	5.5	7.4	7.6	7.9	7.1	6.4	7.8	7.4
70.	*	7.1	8.4	7.6	5.1	5.1	5.0	5.0	5.0	6.1	6.2	6.5	5.8	5.5	7.3	7.7	7.8	7.0	6.4	8.3	8.0
75.	*	7.5	8.6	7.7	5.1	5.1	5.2	5.1	5.1	6.1	6.2	6.7	5.8	5.5	7.4	7.7	8.3	6.9	6.4	8.2	8.3
80.	*	7.5	8.6	7.7	5.1	5.1	5.4	5.3	5.2	6.1	6.2	6.7	5.7	5.6	7.5	7.8	8.5	6.9	6.3	8.3	8.4
85.	*	8.2	9.0	8.0	5.2	5.2	5.7	5.6	5.5	6.0	6.1	6.6	5.6	5.5	7.5	7.5	8.3	6.7	6.2	8.1	8.4

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  90.  *   8.2   9.1   8.1   5.2   5.5   6.1   5.9   5.8   5.8   5.8   6.4   5.7
5.5   7.4   7.6   8.2   6.6   6.0   7.7   8.1
  95.  *   8.3   9.4   8.6   5.3   5.6   6.3   6.2   6.1   5.5   5.6   6.0   5.5
5.5   7.5   7.5   8.1   6.5   6.0   7.5   8.0
 100.  *   8.5   9.8   8.9   5.5   5.7   6.6   6.4   6.2   5.3   5.3   5.9   5.6
5.6   7.8   7.8   7.9   6.5   6.0   7.5   7.9
 105.  *   8.4  10.2   9.3   5.6   5.8   6.6   6.3   6.3   5.1   5.1   5.9   5.8
5.8   7.9   7.9   8.2   6.5   6.1   7.6   8.0
 110.  *   8.6  10.2   9.7   5.7   5.9   6.5   6.3   6.2   5.1   5.1   6.1   6.0
6.0   8.0   8.0   8.2   6.6   6.1   7.6   8.0
 115.  *   8.8  10.4  10.1   5.9   6.3   6.8   6.2   6.2   5.0   5.0   6.5   6.5
6.5   8.4   8.4   8.5   6.6   6.0   7.4   7.9
 120.  *   9.1  10.3  10.7   6.3   6.6   7.1   6.2   6.2   5.0   5.0   7.3   7.3
7.3   8.8   8.8   8.9   6.5   5.9   7.3   7.9
 125.  *   9.3  10.2  10.8   7.1   7.5   7.8   6.1   6.0   5.0   5.2   8.4   8.4
8.4   8.9   9.0   9.1   6.4   5.7   7.1   7.8
 130.  *   9.0   9.8  10.1   8.3   8.3   8.9   6.4   6.1   5.1   5.5   9.8   9.8
9.7   8.6   8.6   8.8   6.0   5.4   6.9   7.4
 135.  *   8.6   8.7   9.1   9.2   9.5   9.8   6.9   6.3   5.4   6.1  11.0  11.0
10.8   8.1   8.1   8.3   5.6   5.1   6.6   7.0
 140.  *   7.6   7.5   8.0   9.6   9.9  10.4   7.5   6.7   5.7   6.6  11.4  11.4
11.4   7.2   7.3   7.4   5.3   5.0   6.6   6.8
 145.  *   6.9   6.6   6.7   9.5   9.6  10.5   7.8   6.8   6.0   7.0  11.3  11.2
11.2   6.4   6.4   6.5   5.0   5.0   6.6   6.5
 150.  *   6.5   6.2   5.9   9.3   9.1  10.2   7.9   7.2   6.3   7.3  10.7  10.7
10.7   5.8   5.8   5.9   5.0   5.0   6.5   6.4
 155.  *   6.5   5.9   5.9   8.9   8.4   9.2   7.8   7.2   6.3   7.1   9.9   9.8
9.8   5.4   5.4   5.5   5.1   5.0   6.5   6.4
 160.  *   6.5   6.0   5.9   9.1   8.1   8.7   7.5   7.0   6.4   7.0   9.4   9.4
9.4   5.3   5.3   5.4   5.1   5.1   6.6   6.6
 165.  *   6.6   6.0   5.9   9.1   7.9   8.2   7.4   6.9   6.3   6.8   9.1   9.1
9.1   5.2   5.2   5.3   5.1   5.1   6.6   6.6
 170.  *   6.6   6.0   5.8   9.0   7.8   7.8   7.3   6.8   6.2   6.8   8.6   8.6
8.6   5.2   5.2   5.3   5.1   5.1   6.7   6.6
 175.  *   6.6   6.1   5.7   9.2   7.9   7.5   7.3   6.8   6.2   6.6   8.3   8.3
8.3   5.1   5.1   5.2   5.1   5.1   6.7   6.6
 180.  *   6.7   6.1   6.0   9.1   8.2   7.4   7.3   6.8   6.1   6.6   8.0   8.0
8.0   5.1   5.1   5.2   5.1   5.1   6.7   6.6
 185.  *   6.7   6.2   6.1   9.1   8.4   7.3   7.2   6.8   6.1   6.6   7.9   7.9
7.9   5.1   5.1   5.2   5.1   5.1   6.8   6.8
 190.  *   7.0   6.2   5.9   9.0   8.5   7.1   7.1   6.8   6.1   6.6   7.9   7.8
7.8   5.1   5.1   5.3   5.1   5.1   7.0   7.0
 195.  *   7.0   6.4   5.8   9.1   8.8   7.0   7.0   6.8   6.1   6.6   7.6   7.6
7.6   5.1   5.1   5.3   5.2   5.2   6.9   7.1
 200.  *   7.1   6.4   5.7   8.9   8.9   7.0   7.0   6.7   6.1   6.5   7.5   7.5
7.5   5.1   5.1   5.4   5.3   5.2   6.9   7.0
 205.  *   7.4   6.5   5.6   8.9   8.9   7.1   7.2   6.9   6.0   6.5   7.5   7.5
7.5   5.1   5.1   5.6   5.4   5.4   7.1   7.3
 210.  *   7.5   6.3   5.4   8.7   9.2   7.3   7.2   6.9   6.1   6.5   7.5   7.5
7.5   5.1   5.1   6.1   5.9   5.8   7.2   7.4
```

PAGE 4

JOB: Montlake and Lake Wash RUN: 2016 Build 4LT

```
 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
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 215.  *   7.6   6.5   5.5   8.6   9.2   8.1   7.5   6.9   6.1   6.5   7.6   7.5
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7.5   5.1   5.2   6.7   6.5   6.3   7.2   7.3
 220.  *   7.4   6.3   5.3   8.3   9.1   8.7   7.7   7.0   6.2   6.6   7.8   7.6
7.5   5.2   5.3   7.6   7.3   7.1   7.1   7.3
 225.  *   7.1   6.3   5.3   8.0   8.9   9.3   8.1   7.3   6.3   6.8   8.1   7.7
7.6   5.3   5.5   8.5   8.2   7.8   7.0   7.0
 230.  *   6.7   5.8   5.2   7.8   8.5   9.3   8.6   7.5   6.4   6.9   8.3   7.9
7.7   5.4   5.7   8.9   8.6   8.3   6.5   6.5
 235.  *   6.2   5.6   5.1   7.5   8.3   8.8   8.7   7.6   6.5   7.1   8.6   8.0
7.8   5.5   5.9   9.2   8.9   8.4   6.2   6.1
 240.  *   5.9   5.5   5.1   7.4   8.2   8.5   8.7   8.0   6.5   7.2   8.8   8.0
7.8   5.5   5.9   9.0   8.9   8.4   6.0   5.8
 245.  *   5.7   5.4   5.1   7.4   8.1   8.4   8.6   8.1   6.7   7.5   8.9   8.1
7.8   5.5   6.0   8.8   8.7   8.3   6.0   5.8
 250.  *   5.7   5.2   5.1   7.5   8.2   7.8   8.3   8.1   6.9   7.5   9.0   8.1
8.0   5.6   6.2   8.6   8.5   8.1   5.9   5.8
 255.  *   5.6   5.2   5.0   7.5   8.2   7.8   7.7   8.1   7.1   7.4   9.2   8.5
8.1   5.8   6.5   8.4   8.4   8.2   5.9   5.5
 260.  *   5.5   5.0   5.0   7.5   8.2   7.8   7.6   7.5   7.2   7.4   9.3   8.6
8.5   5.8   6.4   8.0   8.2   8.0   5.9   5.6
 265.  *   5.6   5.1   5.1   7.6   8.2   8.0   7.1   7.5   7.1   7.7   9.0   8.9
8.4   5.9   6.3   7.7   8.0   7.8   5.8   5.5
 270.  *   5.5   5.1   5.1   7.7   8.3   7.9   6.9   6.7   7.5   7.6   9.1   9.0
8.6   6.1   6.3   7.5   7.7   7.7   5.7   5.5
 275.  *   5.5   5.1   5.1   7.9   8.4   8.3   7.0   6.6   7.6   7.8   9.3   9.2
8.8   6.0   6.2   7.3   7.4   7.5   5.6   5.4
 280.  *   5.4   5.1   5.1   8.0   8.4   8.7   6.8   6.5   7.4   8.0   9.5   9.3
9.3   6.2   6.2   7.2   7.5   7.5   5.5   5.4
 285.  *   5.4   5.1   5.1   7.9   8.4   8.7   6.9   6.3   7.5   8.1   9.7   9.6
9.3   5.9   6.2   7.1   7.3   7.3   5.6   5.4
 290.  *   5.3   5.1   5.1   8.1   8.5   9.0   6.9   6.2   7.4   7.9   9.9  10.0
9.9   5.9   6.3   7.4   7.2   7.2   5.6   5.4
 295.  *   5.4   5.2   5.2   8.0   8.6   9.1   6.8   6.0   7.2   7.9  10.1  10.5
10.4   6.0   6.5   7.2   7.1   7.3   5.6   5.3
 300.  *   5.5   5.4   5.3   8.1   8.8   9.1   6.4   5.9   7.1   7.9  10.5  11.0
11.2   6.3   6.7   7.7   7.0   7.2   5.6   5.3
 305.  *   6.1   5.8   5.7   8.0   8.7   8.8   6.3   5.8   6.9   7.6  11.1  11.5
11.4   7.0   7.4   8.5   7.2   7.2   5.6   5.4
 310.  *   7.1   6.5   6.4   7.8   8.4   8.6   6.1   5.6   6.7   7.3  10.8  11.4
11.6   7.7   8.2   9.3   7.3   7.4   5.6   5.5
 315.  *   7.9   7.2   6.8   7.7   8.0   7.9   5.8   5.7   6.5   6.9  10.4  11.2
11.2   8.5   8.7  10.0   7.4   7.4   5.7   5.6
 320.  *   8.8   7.9   7.2   7.3   7.4   7.3   5.6   5.6   6.4   6.5   9.9  10.0
10.3   8.6   9.1  10.5   7.6   7.5   5.7   5.7
 325.  *   9.5   8.4   7.4   7.0   6.9   6.6   5.5   5.5   6.3   6.3   9.0   8.9
9.0   9.2   9.0  10.7   7.8   7.4   5.7   5.9
 330.  *  10.2   9.0   7.5   6.7   6.6   6.2   5.5   5.5   6.2   6.3   8.4   7.8
7.9   8.8   9.0  10.6   8.2   7.4   5.7   6.0
 335.  *  10.5   9.2   7.7   6.7   6.5   6.0   5.5   5.3   6.1   6.3   8.2   7.3
7.2   8.9   8.7  10.1   8.6   7.6   5.6   6.2
 340.  *  10.6   9.7   8.1   6.6   6.2   5.9   5.5   5.3   5.8   5.9   7.6   7.0
6.6   8.9   8.4   9.9   9.2   7.8   5.8   6.8
 345.  *  10.5  10.1   8.6   6.6   6.1   5.8   5.3   5.1   5.8   6.0   7.2   6.6
6.3   8.6   8.1   9.4   9.8   8.5   6.0   7.3
 350.  *  10.1  10.2   9.2   6.3   5.8   5.6   5.1   5.0   5.7   5.8   7.0   6.2
6.0   8.2   7.8   8.7   9.9   8.9   6.5   7.6
 355.  *   9.5  10.0   9.4   6.0   5.6   5.3   5.0   5.0   5.7   5.7   6.6   5.9
5.8   7.9   7.5   8.3   9.7   9.3   6.9   7.8
 360.  *   9.2   9.6   9.6   5.7   5.3   5.2   5.0   5.0   5.7   5.7   6.6   5.9
5.8   7.7   7.6   7.8   9.5   9.3   7.1   7.4
 THE HIGHEST CONCENTRATION OF   11.60 PPM OCCURRED AT RECEPTOR REC13.
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Montlake and Lake Wash RUN: 2030 Build 4LT

DATE : 8/18/ 4
TIME : 17:58:13

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1.	EBA1	*	-1000.0	-192.0	-204.0	-192.0	*	796.	90.	AG	1210.	11.2	.0	32.0		
2.	EBA2	*	-204.0	-192.0	-6.0	.0	*	276.	46.	AG	1210.	11.2	.0	32.0		
3.	EBD	*	.0	-6.0	1000.0	-6.0	*	1000.	90.	AG	400.	11.2	.0	32.0		
4.	WBA	*	1000.0	6.0	.0	6.0	*	1000.	270.	AG	580.	11.2	.0	32.0		
5.	WBD1	*	-48.0	.0	-180.0	-132.0	*	187.	225.	AG	920.	11.2	.0	44.0		
6.	WBD2	*	-180.0	-132.0	-240.0	-72.0	*	85.	315.	AG	920.	11.2	.0	44.0		
7.	WBD3	*	-240.0	-72.0	-120.0	48.0	*	170.	45.	DP	920.	11.2	.0	44.0		
8.	NBA	*	736.0	-700.0	36.0	.0	*	990.	315.	AG	1230.	11.2	.0	44.0		
9.	NBD1	*	36.0	.0	-168.0	204.0	*	288.	315.	AG	2320.	11.2	.0	44.0		
10.	NBD2	*	-168.0	204.0	-168.0	1000.0	*	796.	360.	AG	2320.	11.2	.0	44.0		
11.	SBA1	*	-216.0	1000.0	-216.0	204.0	*	796.	180.	AG	1700.	11.2	.0	44.0		
12.	SBA2	*	-216.0	204.0	-12.0	.0	*	288.	135.	AG	1700.	11.2	.0	44.0		
13.	SBD	*	-12.0	.0	688.0	-700.0	*	990.	135.	AG	1080.	11.2	.0	44.0		
14.	EBL	*	-36.0	-12.0	-3645.6	-3621.6	*	5105.	225.	AG	131.	100.0	.0	12.0	2.32	259.3
15.	EBT	*	-18.0	-12.0	-474.7	-468.7	*	646.	225.	AG	131.	100.0	.0	12.0	1.12	32.8
16.	WBT	*	48.0	6.0	97.8	6.0	*	50.	90.	AG	151.	100.0	.0	12.0	.53	2.5
17.	WBR	*	48.0	18.0	858.1	18.0	*	810.	90.	AG	118.	100.0	.0	12.0	1.13	41.2
18.	NBL	*	24.0	-12.0	85.9	-73.9	*	88.	135.	AG	325.	100.0	.0	24.0	1.00	4.4
19.	NBT	*	48.0	-12.0	665.2	-629.2	*	873.								

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135. AG    242. 100.0    .0 24.0 1.13  44.3
      20. SBL                 *    -18.0      24.0    -260.2     266.2 *     343.
315. AG    151. 100.0    .0 12.0 1.09  17.4
      21. SBT                 *    -36.0      24.0    -133.0     121.0 *     137.
315. AG    219. 100.0    .0 24.0  .73   7.0
      22. SBR                 *    -54.0      24.0   -3166.3    3136.3 *    4402.
315. AG    131. 100.0    .0 12.0 2.26 223.6
```


JOB: Montlake and Lake Wash RUN: 2030 Build 4LT

DATE : 8/18/ 4
TIME : 17:58:13

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
14. EBL	110	79	3.0	820	1494	67.96	2	3
15. EBT	110	79	3.0	390	1480	67.96	2	3
16. WBT	110	91	3.0	100	1497	67.96	2	3
17. WBR	110	71	3.0	480	1377	67.96	2	3
18. NBL	110	98	3.0	190	1494	67.96	2	3
19. NBT	110	73	3.0	1040	1587	67.96	2	3
20. SBL	110	91	3.0	220	1593	67.96	2	3
21. SBT	110	66	3.0	760	1475	67.96	2	3
22. SBR	110	79	3.0	720	1350	67.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-58.0	12.0	5.9
2. R2	-116.0	70.0	5.9
3. R3	-174.0	128.0	5.9
4. R4	-85.0	146.0	5.9
5. R5	-27.0	88.0	5.9
6. R6	31.0	34.0	5.9
7. R7	113.0	34.0	5.9
8. R8	195.0	34.0	5.9
9. R9	234.0	-22.0	5.9
10. R10	152.0	-22.0	5.9
11. R11	70.0	-22.0	5.9
12. R12	128.0	-80.0	5.9
13. R13	186.0	-138.0	5.9

14. R14	*	104.0	-135.0	5.9	*
15. R15	*	46.0	-77.0	5.9	*
16. R16	*	-12.0	-19.0	5.9	*
17. R17	*	-70.0	-77.0	5.9	*
18. R18	*	-128.0	-135.0	5.9	*
19. R19	*	-174.0	-104.0	5.9	*
20. R20	*	-116.0	-46.0	5.9	*

JOB: Montlake and Lake Wash RUN: 2030 Build 4LT

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	7.8	8.2	8.2	5.2	5.1	5.1	5.0	5.0	5.6	5.6	6.2	5.6	5.6	6.7	7.4	6.9	8.3	8.2	6.6	7.0
10.	*	7.6	7.9	7.9	5.1	5.1	5.1	5.0	5.0	5.5	5.5	6.1	5.6	5.6	6.6	7.5	6.7	8.2	8.0	6.4	6.6
15.	*	7.5	7.7	7.5	5.1	5.1	5.1	5.0	5.0	5.5	5.5	6.0	5.5	5.5	6.6	7.4	6.7	8.1	8.0	6.1	6.4
20.	*	7.3	7.5	7.2	5.1	5.1	5.1	5.0	5.0	5.5	5.5	6.0	5.5	5.5	6.5	7.5	6.7	7.8	8.1	6.2	6.3
25.	*	7.3	7.5	7.0	5.1	5.1	5.0	5.0	5.0	5.6	5.6	6.1	5.5	5.5	6.5	7.4	6.4	7.7	8.1	6.1	6.4
30.	*	7.2	7.5	6.9	5.0	5.0	5.0	5.0	5.0	5.6	5.6	6.1	5.5	5.5	6.5	7.4	6.5	7.6	8.0	6.2	6.3
35.	*	7.1	7.4	6.8	5.0	5.0	5.0	5.0	5.0	5.6	5.6	6.0	5.4	5.4	6.5	7.4	6.4	7.4	7.8	6.2	6.3
40.	*	7.1	7.4	6.8	5.0	5.0	5.0	5.0	5.0	5.6	5.6	6.0	5.5	5.5	6.5	7.3	6.5	7.0	7.5	6.2	6.4
45.	*	7.0	7.5	6.9	5.0	5.0	5.0	5.0	5.0	5.6	5.6	6.0	5.6	5.5	6.5	7.4	6.6	7.0	7.4	6.4	6.4
50.	*	6.9	7.5	6.9	5.0	5.0	5.0	5.0	5.0	5.7	5.7	6.0	5.6	5.5	6.5	7.4	6.7	7.0	6.9	6.5	6.2
55.	*	6.8	7.4	6.9	5.0	5.0	5.0	5.0	5.0	5.7	5.7	6.0	5.5	5.4	6.5	7.4	6.8	6.9	6.7	6.5	6.4
60.	*	6.6	7.5	6.9	5.0	5.0	5.0	5.0	5.0	5.8	5.8	6.1	5.6	5.5	6.5	7.4	7.1	6.7	6.3	7.2	6.6
65.	*	6.7	7.5	6.9	5.1	5.1	5.0	5.0	5.0	5.9	5.9	6.1	5.6	5.5	6.5	7.4	7.1	6.7	6.3	7.3	7.0
70.	*	6.8	7.5	6.9	5.1	5.1	5.0	5.0	5.0	5.9	5.9	6.2	5.6	5.5	6.5	7.4	7.4	6.8	6.1	7.5	7.2
75.	*	6.6	7.6	7.0	5.1	5.1	5.2	5.1	5.1	5.9	5.9	6.3	5.6	5.5	6.6	7.5	7.5	6.8	5.9	7.5	7.7
80.	*	7.0	7.8	7.2	5.1	5.1	5.4	5.3	5.3	6.0	6.0	6.3	5.7	5.6	6.6	7.3	7.9	6.5	5.9	7.4	7.7
85.	*	7.3	8.0	7.2	5.1	5.2	5.7	5.6	5.6	6.0	6.0	6.3	5.6	5.3	6.3	7.1	7.9	6.4	5.7	7.2	7.8

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  90.  *   7.5   8.2   7.4   5.1   5.3   5.9   5.8   5.8   5.7   5.7   6.1   5.7
5.4   6.4   7.1   8.0   6.3   5.7   7.2   7.6
  95.  *   7.6   8.5   7.8   5.3   5.5   6.2   6.1   6.1   5.4   5.5   5.9   5.4
5.4   6.5   6.8   7.9   5.9   5.7   6.9   7.5
 100.  *   7.6   8.6   8.3   5.5   5.6   6.3   6.1   6.1   5.2   5.3   5.8   5.4
5.4   6.6   6.8   7.9   5.9   5.8   6.9   7.1
 105.  *   7.8   9.0   8.5   5.6   5.7   6.3   6.1   6.1   5.1   5.1   5.7   5.6
5.6   6.7   6.8   7.7   6.0   5.8   6.9   6.9
 110.  *   7.6   8.9   8.8   5.7   5.7   6.3   6.0   6.0   5.0   5.0   5.8   5.8
5.8   6.9   7.0   8.0   6.1   5.7   6.8   7.1
 115.  *   8.0   9.0   9.1   5.8   5.8   6.5   6.0   6.0   5.0   5.0   6.1   6.1
6.1   7.0   7.1   7.8   6.0   5.7   6.6   6.9
 120.  *   8.2   9.1   9.3   6.0   6.2   6.7   5.9   5.9   5.0   5.0   6.6   6.6
6.6   7.2   7.2   7.9   6.0   5.5   6.5   7.0
 125.  *   8.0   8.7   9.3   6.6   6.8   6.9   5.7   5.7   5.0   5.1   7.4   7.4
7.4   7.2   7.3   7.8   5.8   5.3   6.4   6.8
 130.  *   7.8   8.3   8.7   7.5   7.5   7.5   5.9   5.7   5.0   5.2   8.3   8.2
8.2   7.1   7.3   7.7   5.5   5.3   6.3   6.6
 135.  *   7.3   7.6   7.9   8.3   8.2   8.4   6.2   5.9   5.2   5.6   8.9   8.8
8.8   6.7   6.8   7.1   5.3   5.0   6.1   6.4
 140.  *   6.8   6.9   7.1   8.2   8.5   8.9   6.5   6.1   5.4   6.0   9.3   9.0
9.0   6.3   6.4   6.6   5.1   5.0   6.1   6.1
 145.  *   6.4   6.2   6.4   8.2   8.3   8.8   6.7   6.2   5.6   6.2   9.1   8.9
8.9   5.8   5.9   6.0   5.0   5.0   6.2   6.1
 150.  *   6.1   5.7   5.8   8.3   8.1   8.7   6.8   6.2   5.7   6.3   8.9   8.6
8.6   5.4   5.4   5.5   5.0   5.0   6.2   6.1
 155.  *   6.0   5.7   5.6   8.1   7.7   8.3   6.7   6.4   5.9   6.3   8.5   8.1
8.1   5.3   5.3   5.4   5.0   5.0   6.2   6.1
 160.  *   6.0   5.7   5.6   8.0   7.5   8.2   6.6   6.4   5.9   6.3   8.4   7.9
7.9   5.2   5.2   5.3   5.1   5.0   6.2   6.1
 165.  *   6.1   5.8   5.7   8.1   7.0   7.9   6.6   6.4   5.8   6.1   8.2   7.5
7.5   5.2   5.2   5.3   5.1   5.1   6.2   6.1
 170.  *   6.1   5.7   5.6   7.9   7.1   7.7   6.6   6.3   5.8   6.0   8.1   7.3
7.3   5.1   5.1   5.2   5.1   5.1   6.2   6.2
 175.  *   6.1   5.7   5.6   8.1   7.2   7.5   6.5   6.3   5.7   6.0   7.9   7.1
7.1   5.1   5.1   5.2   5.1   5.1   6.2   6.2
 180.  *   6.3   5.9   5.7   8.0   7.2   7.2   6.6   6.3   5.7   6.0   7.8   6.8
6.8   5.1   5.1   5.2   5.1   5.1   6.4   6.4
 185.  *   6.4   6.0   5.6   8.0   7.5   7.1   6.6   6.2   5.7   6.0   7.7   6.7
6.7   5.1   5.1   5.2   5.1   5.1   6.4   6.4
 190.  *   6.4   6.1   5.6   8.0   7.8   6.8   6.7   6.2   5.7   5.9   7.6   6.6
6.6   5.1   5.1   5.2   5.1   5.1   6.4   6.5
 195.  *   6.6   5.9   5.5   7.9   7.9   6.7   6.8   6.2   5.7   5.9   7.6   6.6
6.6   5.1   5.1   5.3   5.2   5.1   6.6   6.6
 200.  *   6.6   6.2   5.4   8.0   8.0   6.7   6.9   6.2   5.6   5.9   7.5   6.6
6.6   5.1   5.1   5.4   5.2   5.2   6.4   6.6
 205.  *   6.7   6.2   5.5   8.0   8.0   6.7   7.0   6.2   5.6   5.9   7.4   6.5
6.5   5.0   5.0   5.5   5.4   5.3   6.5   6.5
 210.  *   6.9   6.0   5.4   7.8   7.9   7.1   7.1   6.2   5.6   5.9   7.4   6.5
6.5   5.0   5.0   5.9   5.7   5.6   6.6   6.7
```


JOB: Montlake and Lake Wash RUN: 2030 Build 4LT

```
 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
-----------------------------------------
 215.  *   6.8   6.1   5.3   7.7   8.1   7.4   7.1   6.4   5.6   5.9   7.5   6.5
```

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6.5   5.0   5.0   6.4   6.2   5.9   6.6   6.7
 220.  *   6.8   6.0   5.3   7.5   8.2   7.9   7.4   6.5   5.7   6.1   7.6   6.6
6.5   5.2   5.2   7.1   6.7   6.7   6.4   6.6
 225.  *   6.6   5.8   5.2   7.5   7.9   8.3   7.6   6.8   5.7   6.2   7.7   6.6
6.6   5.2   5.4   7.7   7.4   7.2   6.4   6.6
 230.  *   6.2   5.6   5.2   7.3   7.6   8.2   7.7   6.8   5.8   6.4   8.0   6.7
6.6   5.3   5.5   8.0   7.8   7.5   6.1   6.1
 235.  *   5.9   5.4   5.1   7.1   7.5   7.8   8.0   7.0   5.9   6.5   8.2   6.8
6.7   5.3   5.6   8.2   8.0   7.6   5.9   5.7
 240.  *   5.7   5.3   5.1   7.0   7.4   7.6   8.1   7.3   6.0   6.8   8.4   6.8
6.7   5.3   5.7   8.1   8.0   7.5   5.8   5.5
 245.  *   5.7   5.2   5.1   7.0   7.4   7.3   7.7   7.6   6.2   6.9   8.5   7.0
6.7   5.3   5.6   7.8   7.8   7.4   5.7   5.5
 250.  *   5.5   5.2   5.1   7.1   7.5   7.0   7.5   7.3   6.2   7.1   8.4   7.2
6.8   5.4   6.0   7.9   7.7   7.5   5.7   5.5
 255.  *   5.4   5.2   5.0   7.0   7.5   6.9   7.1   7.3   6.4   7.4   8.7   7.2
6.9   5.5   6.0   7.6   7.4   7.3   5.7   5.5
 260.  *   5.4   5.0   5.0   6.9   7.5   7.1   6.9   7.2   6.5   7.1   8.8   7.4
7.0   5.6   6.1   7.2   7.3   7.3   5.8   5.4
 265.  *   5.3   5.0   5.0   7.0   7.4   7.1   6.5   7.0   6.7   7.2   8.7   7.6
7.2   5.6   6.1   7.1   7.1   7.1   5.6   5.4
 270.  *   5.3   5.0   5.0   7.0   7.5   7.2   6.5   6.3   6.9   7.3   8.4   7.7
7.3   5.7   6.1   6.8   7.1   7.1   5.5   5.3
 275.  *   5.3   5.0   5.0   7.1   7.5   7.6   6.5   6.3   7.0   7.2   8.6   8.1
7.5   5.6   6.0   6.9   6.8   6.8   5.5   5.3
 280.  *   5.2   5.0   5.0   7.2   7.6   7.7   6.4   6.1   7.1   7.4   9.0   8.5
7.7   5.5   5.9   6.6   6.7   6.8   5.4   5.3
 285.  *   5.3   5.1   5.0   7.4   7.7   7.9   6.5   5.9   6.9   7.3   8.7   8.7
8.1   5.7   5.8   6.6   6.7   6.7   5.4   5.2
 290.  *   5.3   5.1   5.1   7.6   7.8   8.1   6.5   6.0   6.8   7.5   8.9   9.3
8.3   5.7   5.9   6.5   6.7   6.7   5.5   5.2
 295.  *   5.3   5.2   5.2   7.4   8.0   8.1   6.4   5.9   7.0   7.5   9.1   9.6
9.0   5.8   5.9   6.8   6.5   6.8   5.5   5.2
 300.  *   5.5   5.3   5.3   7.5   8.0   8.2   6.3   5.8   6.8   7.4   9.2   9.9
9.3   6.1   6.2   7.0   6.5   6.7   5.4   5.2
 305.  *   5.9   5.6   5.6   7.4   7.8   8.1   6.0   5.6   6.5   7.2   9.5  10.3
9.6   6.8   6.8   7.5   6.5   6.7   5.5   5.2
 310.  *   6.4   6.1   5.9   7.5   7.7   7.7   5.8   5.5   6.3   6.6   9.5  10.2
10.0   7.1   7.4   8.2   6.6   6.7   5.5   5.3
 315.  *   7.3   6.6   6.4   7.2   7.4   7.3   5.7   5.4   6.0   6.4   9.0   9.6
9.7   7.6   7.8   8.9   6.7   6.7   5.5   5.4
 320.  *   8.0   7.2   6.6   6.9   6.9   6.9   5.5   5.4   6.0   6.2   8.8   8.9
9.2   8.1   8.1   9.2   6.9   6.7   5.5   5.5
 325.  *   8.6   7.7   6.9   6.5   6.5   6.2   5.5   5.3   5.9   6.0   8.2   8.1
8.2   8.2   8.3   9.6   7.1   6.7   5.5   5.5
 330.  *   8.9   8.1   7.1   6.4   6.2   5.9   5.5   5.3   5.9   6.0   7.5   7.2
7.1   8.3   8.2   9.3   7.5   6.7   5.4   5.8
 335.  *   9.1   8.4   7.3   6.2   6.1   5.8   5.5   5.3   5.9   5.9   7.1   6.9
6.7   8.4   7.9   9.0   7.9   6.9   5.4   6.0
 340.  *   9.1   8.7   7.5   6.2   6.0   5.7   5.3   5.2   5.7   5.8   7.1   6.4
6.4   8.2   8.0   8.7   8.3   7.3   5.5   6.2
 345.  *   9.2   9.0   8.0   6.2   5.8   5.5   5.2   5.1   5.6   5.7   6.6   6.3
6.1   7.7   7.8   8.2   8.6   7.5   5.9   6.8
 350.  *   8.9   9.1   8.2   6.1   5.6   5.4   5.1   5.0   5.5   5.6   6.4   5.8
5.8   7.6   7.5   7.7   8.7   7.8   6.1   7.1
 355.  *   8.5   8.9   8.4   5.7   5.4   5.2   5.0   5.0   5.6   5.6   6.4   5.7
5.7   7.2   7.4   7.6   8.7   8.1   6.4   7.2
 360.  *   8.0   8.5   8.5   5.5   5.2   5.1   5.0   5.0   5.6   5.6   6.3   5.7
5.7   6.9   7.5   7.1   8.4   8.2   6.5   7.0
 THE HIGHEST CONCENTRATION OF   10.30 PPM OCCURRED AT RECEPTOR REC12.
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                    CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated
95221                   PAGE  1

      JOB: Montlake and Lake Wash                              RUN: 2016 Build 6LT


      DATE :  8/18/ 4
      TIME : 17:58:32

         The MODE flag has been set to C for calculating CO averages.

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 175. CM
        U =  1.0 M/S         CLAS =   5  (E)     ATIM =  60. MINUTES     MIXH =
1000. M   AMB =  5.0 PPM  BRG =   5. DEGREES

       LINK VARIABLES
       --------------
         LINK DESCRIPTION     *         LINK COORDINATES (FT)          *    LENGTH
BRG TYPE   VPH    EF      H   W    V/C QUEUE
                              *   X1        Y1        X2        Y2     *     (FT)
(DEG)            (G/MI)  (FT) (FT)       (VEH)

------------------------*----------------------------------------*------------------
----------------------------------------
       1. EBA1                *  -1000.0    -192.0    -204.0    -192.0 *     796.
90. AG   1030.  15.0    .0 32.0
       2. EBA2                *   -204.0    -192.0      -6.0        .0 *     276.
46. AG   1030.  15.0    .0 32.0
       3. EBD                 *       .0      -6.0    1000.0      -6.0 *    1000.
90. AG    380.  15.0    .0 32.0
       4. WBA                 *   1000.0       6.0        .0       6.0 *    1000.
270. AG    580.  15.0    .0 32.0
       5. WBD1                *    -48.0        .0    -180.0    -132.0 *     187.
225. AG   1050.  15.0    .0 44.0
       6. WBD2                *   -180.0    -132.0    -240.0     -72.0 *      85.
315. AG   1050.  15.0    .0 44.0
       7. WBD3                *   -240.0     -72.0    -120.0      48.0 *     170.
45. DP   1050.  15.0    .0 44.0
       8. NBA                 *    736.0    -700.0      36.0        .0 *     990.
315. AG   1240.  15.0    .0 44.0
       9. NBD1                *     36.0        .0    -168.0     204.0 *     288.
315. AG   2170.  15.0    .0 44.0
      10. NBD2                *   -168.0     204.0    -168.0    1000.0 *     796.
360. AG   2170.  15.0    .0 44.0
      11. SBA1                *   -216.0    1000.0    -216.0     204.0 *     796.
180. AG   1800.  15.0    .0 44.0
      12. SBA2                *   -216.0     204.0     -12.0        .0 *     288.
135. AG   1800.  15.0    .0 44.0
      13. SBD                 *    -12.0        .0     688.0    -700.0 *     990.
135. AG   1050.  15.0    .0 44.0
      14. EBL                 *    -36.0     -12.0   -3086.1   -3062.1 *    4313.
225. AG    181. 100.0    .0 12.0 2.32 219.1
      15. EBT                 *    -18.0     -12.0    -483.0    -477.0 *     658.
225. AG    181. 100.0    .0 12.0 1.15  33.4
      16. WBT                 *     48.0       6.0      97.8       6.0 *      50.
90. AG    198. 100.0    .0 12.0  .53   2.5
      17. WBR                 *     48.0      18.0     604.5      18.0 *     556.
90. AG    150. 100.0    .0 12.0 1.07  28.3
      18. NBL                 *     24.0     -12.0     942.0    -930.0 *    1298.
135. AG    211. 100.0    .0 12.0 2.04  65.9
      19. NBT                 *     48.0     -12.0     384.1    -348.1 *     475.
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135. AG    309. 100.0    .0 24.0 1.04  24.1
      20. SBL                 *    -18.0      24.0    -118.8     124.8 *     143.
315. AG    194. 100.0    .0 12.0  .95   7.2
      21. SBT                 *    -36.0      24.0    -128.6     116.6 *     131.
315. AG    274. 100.0    .0 24.0  .67   6.7
      22. SBR                 *    -54.0      24.0   -4278.7    4248.7 *    5975.
315. AG    181. 100.0    .0 12.0 3.05 303.5
```


JOB: Montlake and Lake Wash RUN: 2016 Build 6LT

DATE : 8/18/ 4
TIME : 17:58:32

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
14. EBL	110	83	3.0	690	1494	89.24	2	3
15. EBT	110	83	3.0	340	1482	89.24	2	3
16. WBT	110	91	3.0	100	1497	89.24	2	3
17. WBR	110	69	3.0	480	1378	89.24	2	3
18. NBL	110	97	3.0	220	1494	89.24	2	3
19. NBT	110	71	3.0	1020	1587	89.24	2	3
20. SBL	110	89	3.0	220	1593	89.24	2	3
21. SBT	110	63	3.0	760	1475	89.24	2	3
22. SBR	110	83	3.0	820	1350	89.24	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-58.0	12.0	5.9
2. R2	-116.0	70.0	5.9
3. R3	-174.0	128.0	5.9
4. R4	-85.0	146.0	5.9
5. R5	-27.0	88.0	5.9
6. R6	31.0	34.0	5.9
7. R7	113.0	34.0	5.9
8. R8	195.0	34.0	5.9
9. R9	234.0	-22.0	5.9
10. R10	152.0	-22.0	5.9
11. R11	70.0	-22.0	5.9
12. R12	128.0	-80.0	5.9
13. R13	186.0	-138.0	5.9

14. R14	*	104.0	-135.0	5.9	*
15. R15	*	46.0	-77.0	5.9	*
16. R16	*	-12.0	-19.0	5.9	*
17. R17	*	-70.0	-77.0	5.9	*
18. R18	*	-128.0	-135.0	5.9	*
19. R19	*	-174.0	-104.0	5.9	*
20. R20	*	-116.0	-46.0	5.9	*

JOB: Montlake and Lake Wash RUN: 2016 Build 6LT

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	8.6	9.0	8.9	5.4	5.2	5.1	5.0	5.0	5.7	5.7	6.5	5.8	5.7	7.6	7.5	7.4	9.2	9.1	7.0	7.1
10.	*	8.3	8.5	8.3	5.2	5.1	5.1	5.0	5.0	5.7	5.7	6.5	5.8	5.7	7.4	7.6	7.3	9.1	9.2	6.8	6.8
15.	*	8.2	8.4	8.0	5.1	5.1	5.1	5.0	5.0	5.7	5.7	6.4	5.7	5.6	7.3	7.6	7.0	8.9	8.9	6.8	6.7
20.	*	8.0	8.2	7.5	5.1	5.1	5.1	5.0	5.0	5.7	5.7	6.4	5.7	5.6	7.3	7.5	7.0	8.9	9.0	6.5	6.8
25.	*	7.8	8.2	7.3	5.1	5.1	5.0	5.0	5.0	5.8	5.8	6.5	5.7	5.6	7.2	7.5	7.0	8.5	9.2	6.5	6.7
30.	*	7.9	8.3	7.2	5.1	5.1	5.0	5.0	5.0	5.8	5.8	6.5	5.7	5.6	7.2	7.4	7.0	8.4	9.0	6.5	6.8
35.	*	7.7	8.3	7.1	5.0	5.0	5.0	5.0	5.0	5.8	5.8	6.3	5.7	5.6	7.2	7.4	6.8	8.2	8.8	6.6	6.8
40.	*	7.8	8.4	7.2	5.0	5.0	5.0	5.0	5.0	5.8	5.8	6.3	5.7	5.5	7.2	7.5	6.9	7.6	8.3	6.8	7.0
45.	*	7.7	8.4	7.2	5.0	5.0	5.0	5.0	5.0	5.8	5.8	6.3	5.8	5.6	7.2	7.4	6.9	7.6	7.8	7.1	6.9
50.	*	7.5	8.4	7.2	5.0	5.0	5.0	5.0	5.0	5.9	5.9	6.3	5.7	5.6	7.3	7.4	7.2	7.5	7.8	7.1	6.9
55.	*	7.3	8.3	7.1	5.0	5.0	5.0	5.0	5.0	5.9	5.9	6.3	5.8	5.7	7.3	7.4	7.3	7.0	7.0	7.7	6.8
60.	*	7.2	8.3	7.1	5.1	5.1	5.0	5.0	5.0	6.1	6.1	6.5	5.8	5.6	7.3	7.4	7.3	7.1	6.8	7.9	7.4
65.	*	7.1	8.2	7.1	5.1	5.1	5.0	5.0	5.0	6.1	6.1	6.4	5.8	5.6	7.3	7.5	7.8	7.0	6.5	8.0	7.3
70.	*	7.1	8.3	7.1	5.1	5.1	5.0	5.0	5.0	6.2	6.2	6.5	5.8	5.6	7.3	7.5	7.9	6.8	6.5	8.5	8.0
75.	*	7.5	8.4	7.2	5.1	5.1	5.2	5.1	5.1	6.2	6.2	6.6	5.8	5.6	7.3	7.6	8.2	6.9	6.4	8.4	8.2
80.	*	7.7	8.5	7.3	5.1	5.1	5.4	5.3	5.3	6.2	6.3	6.8	5.8	5.6	7.4	7.7	8.4	6.8	6.3	8.3	8.5
85.	*	8.4	8.9	7.6	5.2	5.3	5.8	5.7	5.6	6.2	6.2	6.7	5.7	5.5	7.4	7.6	8.4	6.7	6.3	8.1	8.5

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  90.  *   8.3   9.2   8.1   5.2   5.5   6.2   6.0   5.9   5.9   5.9   6.4   5.7
5.5   7.3   7.6   8.3   6.6   6.0   7.8   8.1
  95.  *   8.3   9.5   8.4   5.4   5.7   6.5   6.3   6.3   5.6   5.6   6.0   5.5
5.5   7.5   7.5   8.3   6.5   6.0   7.6   8.2
 100.  *   8.5  10.0   8.9   5.5   5.8   6.7   6.5   6.3   5.3   5.3   6.0   5.6
5.6   7.7   7.7   8.0   6.4   6.0   7.6   8.0
 105.  *   8.2  10.2   9.5   5.7   5.8   6.7   6.3   6.3   5.1   5.1   5.9   5.8
5.8   7.8   7.8   8.1   6.4   6.0   7.5   7.9
 110.  *   8.5  10.1   9.7   5.7   5.9   6.6   6.3   6.3   5.1   5.1   6.1   6.0
6.0   8.0   8.0   8.2   6.4   5.9   7.4   7.9
 115.  *   8.7  10.2  10.3   5.9   6.3   6.8   6.2   6.2   5.0   5.0   6.5   6.5
6.4   8.3   8.3   8.4   6.5   5.8   7.3   7.8
 120.  *   9.0  10.1  10.6   6.3   6.5   7.1   6.2   6.2   5.0   5.0   7.2   7.1
7.1   8.5   8.6   8.6   6.3   5.7   7.3   7.8
 125.  *   8.9  10.1  10.6   7.0   7.3   7.7   6.1   6.1   5.0   5.1   8.2   8.2
8.1   8.5   8.6   8.6   6.1   5.4   7.0   7.7
 130.  *   8.5   9.4  10.0   8.1   8.2   8.6   6.3   6.0   5.0   5.4   9.5   9.3
9.2   8.2   8.3   8.6   5.7   5.3   6.9   7.3
 135.  *   8.2   8.5   9.0   8.9   9.2   9.5   6.7   6.2   5.2   5.8  10.6  10.5
10.4   7.6   7.7   8.0   5.4   5.1   6.7   6.9
 140.  *   7.4   7.5   7.9   9.5   9.6  10.1   7.1   6.4   5.5   6.2  11.0  11.0
10.7   6.9   7.0   7.1   5.2   5.0   6.7   6.8
 145.  *   6.9   6.6   6.7   9.3   9.4  10.1   7.5   6.5   5.7   6.7  11.0  10.8
10.7   6.2   6.3   6.4   5.0   5.0   6.7   6.6
 150.  *   6.5   6.2   6.1   9.2   8.9   9.8   7.6   6.8   6.0   6.9  10.5  10.5
10.3   5.7   5.7   5.8   5.0   5.0   6.7   6.6
 155.  *   6.6   5.9   5.9   8.8   8.2   9.1   7.6   6.9   6.1   6.9   9.7   9.7
9.7   5.4   5.4   5.5   5.0   5.0   6.6   6.5
 160.  *   6.5   6.0   5.8   9.0   7.9   8.5   7.4   6.9   6.1   6.9   9.3   9.3
9.3   5.3   5.3   5.4   5.1   5.1   6.7   6.6
 165.  *   6.6   6.0   5.8   9.0   7.9   8.2   7.3   6.8   6.2   6.8   8.9   8.9
8.9   5.2   5.2   5.3   5.1   5.1   6.8   6.6
 170.  *   6.7   6.2   5.9   8.9   7.7   7.7   7.3   6.8   6.1   6.8   8.5   8.6
8.5   5.2   5.2   5.3   5.1   5.1   6.8   6.7
 175.  *   6.7   6.2   6.0   9.1   7.8   7.5   7.3   6.8   6.1   6.6   8.3   8.3
8.3   5.1   5.1   5.2   5.1   5.1   6.8   6.7
 180.  *   6.7   6.3   6.1   9.1   8.1   7.3   7.2   6.8   6.1   6.6   8.0   8.0
8.0   5.1   5.1   5.2   5.1   5.1   6.8   6.7
 185.  *   6.9   6.3   6.2   9.1   8.2   7.3   7.2   6.8   6.1   6.6   7.8   7.8
7.8   5.1   5.1   5.2   5.1   5.1   7.0   6.9
 190.  *   7.0   6.2   5.9   9.1   8.5   7.0   7.0   6.8   6.1   6.6   7.7   7.7
7.7   5.1   5.1   5.3   5.1   5.1   7.0   7.0
 195.  *   7.1   6.4   5.8   8.9   8.9   6.9   7.0   6.8   6.1   6.4   7.5   7.5
7.5   5.1   5.1   5.3   5.2   5.1   7.0   7.1
 200.  *   7.2   6.5   5.7   8.9   8.9   7.0   7.0   6.7   6.1   6.4   7.5   7.5
7.5   5.1   5.1   5.4   5.2   5.2   7.0   7.1
 205.  *   7.5   6.6   5.5   8.9   9.0   7.1   7.2   6.7   6.0   6.4   7.5   7.5
7.5   5.1   5.1   5.6   5.4   5.3   7.3   7.4
 210.  *   7.6   6.4   5.5   8.7   9.1   7.3   7.2   6.7   6.1   6.4   7.4   7.4
7.4   5.1   5.1   6.1   5.9   5.6   7.2   7.5
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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
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 215.  *   7.7   6.5   5.3   8.5   9.2   8.0   7.3   6.8   6.1   6.4   7.5   7.4
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7.4   5.1   5.2   6.7   6.5   6.3   7.2   7.3
 220.  *   7.5   6.4   5.3   8.3   8.9   8.8   7.7   6.9   6.2   6.5   7.7   7.5
7.4   5.2   5.2   7.5   7.2   7.0   7.1   7.2
 225.  *   7.1   6.1   5.2   7.9   8.6   9.3   8.2   7.2   6.2   6.7   8.0   7.6
7.5   5.3   5.5   8.5   8.1   7.7   6.9   7.0
 230.  *   6.7   5.8   5.2   7.7   8.5   9.3   8.6   7.3   6.3   6.8   8.2   7.8
7.6   5.3   5.7   9.0   8.5   8.1   6.6   6.5
 235.  *   6.3   5.7   5.1   7.4   8.2   8.9   8.7   7.5   6.4   6.9   8.5   7.8
7.6   5.5   5.8   9.0   8.8   8.3   6.3   6.2
 240.  *   6.0   5.5   5.1   7.4   8.1   8.5   8.7   7.9   6.4   7.0   8.7   7.9
7.7   5.4   5.9   9.1   8.8   8.3   6.1   5.9
 245.  *   5.8   5.3   5.1   7.3   8.2   8.1   8.6   8.2   6.7   7.2   9.1   8.1
7.8   5.5   6.0   8.8   8.7   8.2   6.0   5.8
 250.  *   5.8   5.2   5.1   7.3   8.2   8.0   8.5   8.0   6.9   7.3   8.9   8.1
7.9   5.6   6.2   8.6   8.6   8.2   5.9   5.7
 255.  *   5.5   5.2   5.0   7.1   8.2   7.8   7.6   7.9   7.0   7.5   9.2   8.3
8.0   5.8   6.4   8.4   8.5   8.1   5.9   5.8
 260.  *   5.5   5.0   5.0   7.2   8.2   7.8   7.6   7.5   7.0   7.6   9.2   8.6
8.4   5.8   6.4   8.1   8.2   8.1   5.9   5.6
 265.  *   5.6   5.1   5.1   7.2   8.2   7.8   7.1   7.4   7.0   7.8   8.9   8.8
8.3   5.9   6.5   7.8   8.0   7.7   5.9   5.6
 270.  *   5.5   5.1   5.1   7.3   8.3   8.1   6.8   6.7   7.3   7.6   9.1   9.1
8.6   6.1   6.3   7.4   7.7   7.6   5.8   5.4
 275.  *   5.5   5.1   5.1   7.4   8.3   8.3   7.0   6.5   7.6   7.6   9.1   9.3
8.9   6.0   6.2   7.4   7.6   7.4   5.7   5.4
 280.  *   5.5   5.1   5.1   7.5   8.5   8.5   6.9   6.4   7.4   7.8   9.3   9.3
9.1   6.2   6.2   7.3   7.6   7.5   5.7   5.4
 285.  *   5.5   5.1   5.1   7.6   8.4   8.8   6.9   6.2   7.5   8.1   9.6   9.4
9.3   6.1   6.2   7.0   7.2   7.3   5.8   5.4
 290.  *   5.3   5.1   5.1   7.8   8.5   8.8   6.9   6.3   7.3   7.8   9.8  10.0
9.7   6.0   6.2   7.3   7.1   7.3   5.7   5.4
 295.  *   5.4   5.2   5.2   7.8   8.5   9.0   6.6   6.0   7.3   8.0  10.1  10.4
10.4   6.0   6.4   7.3   7.1   7.4   5.6   5.3
 300.  *   5.6   5.4   5.3   7.9   8.5   9.0   6.4   5.9   7.1   8.0  10.6  11.0
11.1   6.3   6.8   7.7   7.1   7.3   5.7   5.3
 305.  *   6.1   5.8   5.7   7.9   8.4   8.7   6.2   5.8   6.8   7.7  10.9  11.4
11.3   6.9   7.4   8.5   7.2   7.3   5.6   5.4
 310.  *   7.0   6.6   6.4   7.9   8.1   8.4   6.0   5.7   6.7   7.3  10.7  11.4
11.4   7.8   8.1   9.3   7.3   7.4   5.8   5.5
 315.  *   7.7   7.2   6.9   7.7   7.8   7.9   5.9   5.7   6.4   6.8  10.4  11.0
11.1   8.5   8.6  10.0   7.4   7.4   5.8   5.6
 320.  *   8.7   7.9   7.2   7.3   7.4   7.1   5.6   5.6   6.3   6.5   9.7   9.9
10.3   8.6   9.0  10.5   7.6   7.5   5.8   5.7
 325.  *   9.6   8.3   7.5   7.0   6.9   6.6   5.5   5.5   6.3   6.4   9.0   8.8
9.0   9.0   8.7  10.5   7.8   7.4   5.7   5.9
 330.  *  10.2   8.7   7.6   6.8   6.6   6.2   5.5   5.5   6.2   6.3   8.3   7.8
7.8   8.8   8.8  10.4   8.3   7.4   5.7   5.9
 335.  *  10.3   9.0   7.7   6.7   6.5   6.0   5.5   5.3   6.1   6.3   8.1   7.4
7.2   8.9   8.6  10.1   8.6   7.5   5.7   6.2
 340.  *  10.5   9.5   8.1   6.6   6.3   5.9   5.5   5.3   5.9   6.0   7.6   7.0
6.6   8.9   8.3   9.8   9.1   7.7   5.7   6.6
 345.  *  10.3   9.9   8.5   6.5   6.1   5.8   5.3   5.1   5.8   5.9   7.2   6.6
6.3   8.5   8.0   9.4   9.6   8.4   6.0   7.3
 350.  *  10.0   9.9   9.0   6.3   5.8   5.5   5.1   5.0   5.7   5.8   6.9   6.3
6.0   8.2   7.5   8.7   9.8   9.0   6.5   7.5
 355.  *   9.5   9.9   9.2   6.0   5.6   5.3   5.0   5.0   5.7   5.7   6.7   5.9
5.8   7.8   7.5   8.0   9.8   9.2   6.9   7.7
 360.  *   9.0   9.3   9.2   5.6   5.3   5.2   5.0   5.0   5.7   5.7   6.6   5.9
5.8   7.7   7.6   7.6   9.5   9.5   7.1   7.5
 THE HIGHEST CONCENTRATION OF   11.40 PPM OCCURRED AT RECEPTOR REC12.
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: Montlake and Lake Wash RUN: 2030 Build 6LT

DATE : 8/18/ 4
TIME : 18: 0: 2

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 PPM BRG = 5. DEGREES

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1.	EBA1	*	-1000.0	-192.0	-204.0	-192.0	*	796.	90.	AG	1080.	11.2	.0	32.0		
2.	EBA2	*	-204.0	-192.0	-6.0	.0	*	276.	46.	AG	1080.	11.2	.0	32.0		
3.	EBD	*	.0	-6.0	1000.0	-6.0	*	1000.	90.	AG	370.	11.2	.0	32.0		
4.	WBA	*	1000.0	6.0	.0	6.0	*	1000.	270.	AG	580.	11.2	.0	32.0		
5.	WBD1	*	-48.0	.0	-180.0	-132.0	*	187.	225.	AG	1160.	11.2	.0	44.0		
6.	WBD2	*	-180.0	-132.0	-240.0	-72.0	*	85.	315.	AG	1160.	11.2	.0	44.0		
7.	WBD3	*	-240.0	-72.0	-120.0	48.0	*	170.	45.	DP	1160.	11.2	.0	44.0		
8.	NBA	*	736.0	-700.0	36.0	.0	*	990.	315.	AG	1220.	11.2	.0	44.0		
9.	NBD1	*	36.0	.0	-168.0	204.0	*	288.	315.	AG	2170.	11.2	.0	44.0		
10.	NBD2	*	-168.0	204.0	-168.0	1000.0	*	796.	360.	AG	2170.	11.2	.0	44.0		
11.	SBA1	*	-216.0	1000.0	-216.0	204.0	*	796.	180.	AG	1830.	11.2	.0	44.0		
12.	SBA2	*	-216.0	204.0	-12.0	.0	*	288.	135.	AG	1830.	11.2	.0	44.0		
13.	SBD	*	-12.0	.0	688.0	-700.0	*	990.	135.	AG	1010.	11.2	.0	44.0		
14.	EBL	*	-36.0	-12.0	-3184.7	-3160.7	*	4453.	225.	AG	134.	100.0	.0	12.0	2.25	226.2
15.	EBT	*	-18.0	-12.0	-371.4	-365.4	*	500.	225.	AG	134.	100.0	.0	12.0	1.09	25.4
16.	WBT	*	48.0	6.0	97.8	6.0	*	50.	90.	AG	151.	100.0	.0	12.0	.53	2.5
17.	NBL	*	24.0	-12.0	94.4	-82.4	*	100.	135.	AG	318.	100.0	.0	24.0	.98	5.1
18.	NBT	*	48.0	-12.0	444.5	-408.5	*	561.	135.	AG	242.	100.0	.0	24.0	1.06	28.5
19.	SBL	*	-18.0	24.0	-106.4	112.4	*	125.								

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315. AG    147. 100.0    .0 12.0  .91   6.4
      20. SBT                 *    -36.0      24.0    -126.6     114.6 *     128.
315. AG    219. 100.0    .0 24.0  .34   6.5
      21. SBR                 *    -54.0      24.0   -4760.3    4730.3 *    6656.
315. AG    134. 100.0    .0 12.0 3.10 338.1
```


JOB: Montlake and Lake Wash RUN: 2030 Build 6LT

DATE : 8/18/ 4
TIME : 18: 0: 2

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
14. EBL	110	81	3.0	730	1494	67.96	2	3
15. EBT	110	81	3.0	350	1478	67.96	2	3
16. WBT	110	91	3.0	100	1497	67.96	2	3
17. NBL	110	96	3.0	240	1494	67.96	2	3
18. NBT	110	73	3.0	980	1587	67.96	2	3
19. SBL	110	89	3.0	210	1593	67.96	2	3
20. SBT	110	66	3.0	710	2950	67.96	2	3
21. SBR	110	81	3.0	910	1350	67.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-58.0	12.0	5.9
2. R2	-116.0	70.0	5.9
3. R3	-174.0	128.0	5.9
4. R4	-85.0	146.0	5.9
5. R5	-27.0	88.0	5.9
6. R6	31.0	34.0	5.9
7. R7	113.0	34.0	5.9
8. R8	195.0	34.0	5.9
9. R9	234.0	-22.0	5.9
10. R10	152.0	-22.0	5.9
11. R11	70.0	-22.0	5.9
12. R12	128.0	-80.0	5.9
13. R13	186.0	-138.0	5.9
14. R14	104.0	-135.0	5.9
15. R15	46.0	-77.0	5.9
16. R16	-12.0	-19.0	5.9
17. R17	-70.0	-77.0	5.9

18. R18	*	-128.0	-135.0	5.9	*
19. R19	*	-174.0	-104.0	5.9	*
20. R20	*	-116.0	-46.0	5.9	*

JOB: Montlake and Lake Wash RUN: 2030 Build 6LT

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) * REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	* 7.9	8.0	7.9	5.2	5.1	5.1	5.0	5.0	5.3	5.3	5.9	5.5	5.5	6.6	7.3	6.8	8.4	8.1	6.6	6.6
10.	* 7.6	7.7	7.6	5.1	5.1	5.1	5.0	5.0	5.3	5.3	5.8	5.5	5.5	6.6	7.4	6.6	8.1	8.1	6.4	6.5
15.	* 7.6	7.7	7.3	5.1	5.1	5.1	5.0	5.0	5.3	5.3	5.8	5.4	5.3	6.4	7.3	6.6	8.0	8.0	6.0	6.3
20.	* 7.2	7.3	6.8	5.1	5.1	5.0	5.0	5.0	5.3	5.3	5.8	5.4	5.3	6.3	7.3	6.5	7.7	8.1	6.2	6.4
25.	* 7.2	7.3	6.7	5.1	5.1	5.0	5.0	5.0	5.3	5.3	5.8	5.4	5.4	6.3	7.2	6.4	7.7	8.1	6.1	6.3
30.	* 7.1	7.3	6.6	5.0	5.0	5.0	5.0	5.0	5.3	5.3	5.8	5.4	5.4	6.3	7.2	6.5	7.5	8.0	6.2	6.4
35.	* 7.1	7.4	6.5	5.0	5.0	5.0	5.0	5.0	5.4	5.4	5.8	5.3	5.3	6.3	7.2	6.4	7.3	7.9	6.3	6.4
40.	* 7.1	7.5	6.6	5.0	5.0	5.0	5.0	5.0	5.4	5.4	5.8	5.4	5.4	6.3	7.1	6.5	7.0	7.5	6.3	6.5
45.	* 7.0	7.5	6.6	5.0	5.0	5.0	5.0	5.0	5.4	5.4	5.8	5.4	5.4	6.3	7.1	6.5	6.9	7.3	6.5	6.5
50.	* 7.0	7.5	6.6	5.0	5.0	5.0	5.0	5.0	5.4	5.4	5.7	5.4	5.4	6.3	7.1	6.4	6.8	6.8	6.7	6.4
55.	* 6.7	7.4	6.5	5.0	5.0	5.0	5.0	5.0	5.4	5.4	5.7	5.3	5.3	6.3	7.1	6.5	6.8	6.6	6.6	6.6
60.	* 6.6	7.4	6.5	5.0	5.0	5.0	5.0	5.0	5.5	5.5	5.8	5.4	5.4	6.3	7.1	6.8	6.5	6.2	7.3	6.6
65.	* 6.6	7.4	6.5	5.1	5.1	5.0	5.0	5.0	5.5	5.5	5.7	5.4	5.4	6.3	7.1	6.8	6.5	6.1	7.4	6.8
70.	* 6.6	7.4	6.5	5.1	5.1	5.0	5.0	5.0	5.6	5.6	5.8	5.4	5.4	6.4	7.3	7.1	6.6	6.0	7.5	7.1
75.	* 6.4	7.8	6.8	5.1	5.1	5.0	5.0	5.0	5.6	5.6	5.9	5.4	5.4	6.5	7.4	7.2	6.5	5.9	7.5	7.5
80.	* 6.8	7.8	6.8	5.1	5.1	5.2	5.1	5.1	5.6	5.6	5.9	5.5	5.4	6.5	7.3	7.5	6.4	5.8	7.3	7.6
85.	* 7.2	7.9	7.0	5.1	5.1	5.4	5.3	5.3	5.6	5.6	5.9	5.5	5.3	6.3	7.2	7.4	6.3	5.7	7.3	7.6
90.	* 7.2	8.1	7.1	5.1	5.2	5.4	5.3	5.3	5.5	5.5	5.9	5.5	5.4	6.4	7.3	7.7	6.3	5.6	7.0	7.5
95.	* 7.4	8.4	7.4	5.2	5.3	5.5	5.4	5.4	5.3	5.4	5.8	5.4	5.4	6.5	7.1	7.7	6.0	5.6	6.9	7.5

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 100.  *   7.6   8.5   7.7   5.4   5.4   5.7   5.5   5.5   5.2   5.2   5.6   5.4
5.4   6.5   6.9   7.8   5.9   5.7   6.8   7.2
 105.  *   7.7   8.9   8.0   5.4   5.5   5.7   5.5   5.5   5.1   5.1   5.7   5.6
5.6   6.7   7.0   7.7   6.0   5.7   6.9   7.0
 110.  *   7.7   8.8   8.4   5.4   5.5   5.8   5.5   5.5   5.0   5.0   5.8   5.8
5.8   6.8   7.0   7.7   6.0   5.6   6.8   7.0
 115.  *   8.0   8.8   9.0   5.5   5.5   6.0   5.4   5.4   5.0   5.0   6.1   6.1
6.1   6.9   7.0   7.8   5.9   5.6   6.8   6.9
 120.  *   7.8   9.0   9.1   5.9   5.9   6.2   5.4   5.4   5.0   5.0   6.6   6.6
6.6   7.0   7.1   7.8   5.8   5.3   6.5   6.9
 125.  *   7.9   8.6   9.0   6.5   6.6   6.5   5.3   5.3   5.0   5.0   7.4   7.3
7.3   7.0   7.1   7.6   5.6   5.2   6.5   6.8
 130.  *   7.8   8.1   8.5   7.1   7.2   7.2   5.5   5.3   5.0   5.2   8.2   8.1
8.1   6.9   7.0   7.5   5.4   5.2   6.3   6.6
 135.  *   7.3   7.6   7.9   7.8   7.9   7.9   5.8   5.4   5.1   5.5   8.8   8.7
8.6   6.6   6.6   7.0   5.2   5.0   6.2   6.4
 140.  *   7.0   6.9   7.1   8.0   8.3   8.4   6.0   5.6   5.3   5.8   9.1   8.9
8.8   6.2   6.2   6.4   5.0   5.0   6.3   6.2
 145.  *   6.4   6.1   6.4   8.0   8.2   8.7   6.2   5.7   5.4   6.0   9.2   8.8
8.8   5.8   5.8   5.9   5.0   5.0   6.3   6.2
 150.  *   6.2   5.7   5.8   8.2   8.0   8.6   6.4   5.8   5.5   6.1   8.9   8.5
8.5   5.4   5.4   5.5   5.0   5.0   6.3   6.2
 155.  *   6.1   5.6   5.7   8.0   7.4   8.4   6.4   6.0   5.8   6.2   8.7   7.9
7.9   5.3   5.3   5.4   5.0   5.0   6.3   6.2
 160.  *   6.1   5.8   5.7   8.0   7.4   8.2   6.3   6.0   5.8   6.2   8.4   7.7
7.6   5.2   5.2   5.3   5.0   5.0   6.3   6.2
 165.  *   6.2   5.8   5.7   8.0   6.9   7.8   6.3   6.0   5.7   6.1   8.4   7.5
7.5   5.1   5.1   5.2   5.1   5.0   6.3   6.2
 170.  *   6.2   5.8   5.7   7.9   7.0   7.6   6.3   6.0   5.7   6.0   8.2   7.3
7.3   5.1   5.1   5.2   5.1   5.1   6.4   6.3
 175.  *   6.2   5.8   5.6   8.0   7.2   7.5   6.3   6.0   5.7   6.0   8.0   7.0
7.0   5.1   5.1   5.2   5.1   5.1   6.4   6.3
 180.  *   6.3   5.9   5.7   7.9   7.2   7.2   6.3   5.9   5.7   6.0   7.7   6.7
6.7   5.1   5.1   5.2   5.1   5.1   6.5   6.4
 185.  *   6.4   6.1   5.7   8.0   7.5   6.9   6.4   5.9   5.6   6.0   7.7   6.7
6.7   5.1   5.1   5.2   5.1   5.1   6.5   6.5
 190.  *   6.5   6.0   5.6   8.0   7.8   6.8   6.5   5.9   5.6   5.9   7.6   6.6
6.6   5.1   5.1   5.2   5.1   5.1   6.5   6.5
 195.  *   6.7   6.2   5.6   7.8   7.8   6.7   6.6   5.9   5.6   5.9   7.5   6.6
6.6   5.1   5.1   5.3   5.1   5.1   6.6   6.6
 200.  *   6.8   6.3   5.5   7.9   8.0   6.7   6.7   5.9   5.6   5.9   7.5   6.6
6.6   5.1   5.1   5.3   5.2   5.1   6.6   6.7
 205.  *   6.8   6.2   5.5   8.0   8.1   6.7   6.7   5.9   5.6   5.9   7.4   6.5
6.5   5.0   5.0   5.5   5.4   5.3   6.5   6.7
 210.  *   6.9   6.1   5.3   7.8   8.1   6.9   6.8   6.0   5.6   6.0   7.4   6.5
6.5   5.0   5.0   5.8   5.7   5.6   6.8   6.9
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PAGE 4

JOB: Montlake and Lake Wash RUN: 2030 Build 6LT

```
 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
-------------------------------------------
 215.  *   7.0   6.2   5.3   7.7   8.4   7.2   6.7   6.0   5.6   6.0   7.5   6.5
6.5   5.0   5.0   6.3   6.0   5.9   6.7   6.9
 220.  *   6.9   6.0   5.3   7.5   8.3   7.7   7.0   6.2   5.6   6.2   7.5   6.6
6.5   5.2   5.2   7.0   6.7   6.4   6.6   6.6
 225.  *   6.7   5.9   5.2   7.1   8.1   8.1   7.2   6.3   5.7   6.4   7.7   6.6
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6.6   5.2   5.3   7.6   7.4   7.0   6.5   6.5
 230.  *   6.3   5.7   5.1   7.0   7.9   8.1   7.3   6.5   5.8   6.5   8.0   6.7
6.6   5.3   5.5   7.9   7.7   7.4   6.3   6.3
 235.  *   5.9   5.5   5.1   6.8   7.7   8.0   7.5   6.6   5.9   6.6   8.1   6.8
6.7   5.2   5.4   8.2   7.9   7.5   5.9   5.9
 240.  *   5.6   5.4   5.1   6.7   7.6   7.7   7.4   6.9   6.0   6.8   8.4   6.9
6.7   5.3   5.7   8.1   8.0   7.4   5.8   5.7
 245.  *   5.6   5.3   5.1   6.7   7.5   7.4   7.3   7.0   6.3   7.0   8.4   7.0
6.7   5.3   5.6   7.9   7.8   7.4   5.9   5.7
 250.  *   5.5   5.2   5.1   6.6   7.5   7.0   7.2   6.9   6.3   7.2   8.7   7.3
6.8   5.5   6.0   7.8   7.7   7.4   5.8   5.7
 255.  *   5.5   5.2   5.0   6.5   7.4   7.1   6.8   6.8   6.5   7.3   8.8   7.5
6.9   5.5   6.1   7.5   7.6   7.4   5.8   5.5
 260.  *   5.5   5.0   5.0   6.6   7.4   7.2   6.7   6.8   6.5   7.2   8.8   7.5
7.0   5.6   6.1   7.4   7.5   7.3   5.7   5.5
 265.  *   5.4   5.0   5.0   6.6   7.3   7.2   6.4   6.6   6.8   7.3   8.6   7.7
7.2   5.6   6.1   7.2   7.3   7.2   5.8   5.5
 270.  *   5.4   5.0   5.0   6.6   7.3   7.1   6.4   6.1   6.8   7.2   8.5   8.0
7.2   5.8   6.2   7.0   7.2   7.1   5.7   5.3
 275.  *   5.3   5.0   5.0   6.8   7.6   7.5   6.3   6.0   6.8   7.3   8.7   8.1
7.5   5.7   6.1   6.9   7.0   6.9   5.5   5.4
 280.  *   5.4   5.1   5.0   6.8   7.6   7.7   6.2   5.9   6.8   7.3   9.0   8.6
7.8   5.7   6.0   6.7   6.8   6.8   5.5   5.4
 285.  *   5.4   5.1   5.1   7.1   7.6   7.7   6.3   5.8   6.7   7.3   8.7   8.9
8.1   5.6   5.9   6.7   6.8   6.8   5.6   5.4
 290.  *   5.3   5.1   5.1   7.1   7.6   7.9   6.3   6.0   6.5   7.2   8.8   9.4
8.4   5.7   6.0   6.4   6.7   6.8   5.6   5.3
 295.  *   5.4   5.2   5.2   7.0   7.5   8.0   6.4   5.7   6.6   7.1   9.0   9.7
9.1   5.8   6.1   6.8   6.7   6.9   5.5   5.3
 300.  *   5.5   5.4   5.3   7.0   7.6   7.9   6.1   5.6   6.2   7.0   9.2   9.8
9.4   6.1   6.3   7.1   6.6   6.8   5.6   5.3
 305.  *   5.9   5.7   5.6   7.2   7.4   7.8   5.9   5.6   6.1   6.8   9.4  10.2
9.7   6.7   6.8   7.5   6.7   6.7   5.6   5.2
 310.  *   6.4   6.1   6.0   7.2   7.4   7.5   6.0   5.5   5.9   6.4   9.4  10.3
10.0   7.1   7.4   8.2   6.8   6.9   5.6   5.3
 315.  *   7.2   6.6   6.4   7.0   7.1   7.1   5.7   5.5   5.8   6.2   8.7   9.6
9.6   7.7   7.7   8.7   7.0   7.0   5.5   5.5
 320.  *   7.9   7.0   6.7   6.7   6.7   6.6   5.5   5.5   5.8   6.0   8.6   9.0
8.9   7.9   8.1   9.0   7.1   7.0   5.6   5.5
 325.  *   8.4   7.5   6.9   6.5   6.4   6.2   5.4   5.4   5.7   5.8   7.8   7.9
8.1   8.2   8.2   9.3   7.1   6.8   5.5   5.5
 330.  *   8.9   7.8   6.9   6.3   6.2   5.9   5.4   5.3   5.6   5.7   7.3   7.1
7.1   8.2   8.1   9.2   7.3   6.8   5.6   5.7
 335.  *   9.0   8.0   7.1   6.3   6.0   5.7   5.4   5.3   5.5   5.6   7.0   6.7
6.6   8.2   8.0   9.1   7.8   7.0   5.5   5.9
 340.  *   9.1   8.2   7.3   6.2   5.9   5.7   5.3   5.2   5.5   5.6   6.9   6.3
6.2   7.9   7.9   8.8   8.2   7.3   5.7   6.2
 345.  *   9.1   8.4   7.6   6.1   5.8   5.6   5.2   5.1   5.4   5.5   6.4   6.1
5.9   7.8   7.8   8.2   8.6   7.6   5.9   6.7
 350.  *   8.7   8.6   8.0   6.1   5.7   5.4   5.1   5.0   5.3   5.4   6.2   5.7
5.7   7.6   7.5   7.7   8.6   7.9   6.1   6.9
 355.  *   8.4   8.5   8.2   5.7   5.4   5.2   5.0   5.0   5.3   5.3   6.1   5.6
5.6   7.3   7.4   7.5   8.7   8.3   6.4   7.1
 360.  *   8.1   8.3   8.2   5.5   5.2   5.1   5.0   5.0   5.3   5.3   6.0   5.6
5.6   6.9   7.4   7.0   8.5   8.1   6.5   6.9
 THE HIGHEST CONCENTRATION OF   10.30 PPM OCCURRED AT RECEPTOR REC12.
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108th Avenue Northeast/Northup Way

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                    CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated
95221                   PAGE  1

      JOB: 108th and Northup                                    RUN: 2000 No Build


      DATE :  8/19/ 4
      TIME :  9:23:44

         The MODE flag has been set to C for calculating CO averages.

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   5  (E)     ATIM =  60. MINUTES     MIXH =
1000. M   AMB =  3.0 PPM  BRG =   5. DEGREES

       LINK VARIABLES
       --------------
         LINK DESCRIPTION     *         LINK COORDINATES (FT)          *    LENGTH
BRG TYPE   VPH    EF      H   W    V/C QUEUE
                              *   X1        Y1        X2        Y2     *     (FT)
(DEG)            (G/MI)  (FT) (FT)       (VEH)

------------------------*----------------------------------------*------------------
----------------------------------------
       1. EBA                 *  -1000.0     -18.0        .0     -18.0 *    1000.
90. AG    760.  32.1    .0 32.0
       2. EBD                 *       .0     -18.0    1000.0     -18.0 *    1000.
90. AG    510.  32.1    .0 32.0
       3. WBA                 *   1000.0      12.0        .0      12.0 *    1000.
270. AG   1080.  32.1    .0 32.0
       4. WBD                 *       .0      12.0   -1000.0      12.0 *    1000.
270. AG   1040.  32.1    .0 32.0
       5. NBA                 *     18.0   -1000.0      18.0        .0 *    1000.
360. AG   1330.  32.2    .0 32.0
       6. NBD                 *     18.0        .0      18.0    1000.0 *    1000.
360. AG   1070.  32.2    .0 32.0
       7. SBA                 *    -12.0    1000.0     -12.0        .0 *    1000.
180. AG    580.  32.2    .0 44.0
       8. SBD                 *    -12.0        .0     -12.0   -1000.0 *    1000.
180. AG   1130.  32.2    .0 44.0
       9. EBL                 *    -24.0      -6.0    -157.2      -6.0 *     133.
270. AG    540. 100.0    .0 12.0  .89   6.8
      10. EBT                 *    -24.0     -18.0    -137.0     -18.0 *     113.
270. AG    516. 100.0    .0 12.0  .70   5.7
      11. EBR                 *    -24.0     -30.0    -146.5     -30.0 *     122.
270. AG    272. 100.0    .0 12.0  .48   6.2
      12. WBL                 *     36.0      -6.0    1220.2      -5.7 *    1184.
90. AG    516. 100.0    .0 12.0 1.34  60.2
      13. WBT                 *     36.0      12.0     899.7      12.2 *     864.
90. AG    983. 100.0    .0 24.0 1.19  43.9
      14. NBT                 *     12.0     -36.0      12.0    -358.4 *     322.
180. AG    788. 100.0    .0 24.0  .95  16.4
      15. NBR                 *     30.0     -36.0      30.0     -94.2 *      58.
180. AG    272. 100.0    .0 12.0  .23   3.0
      16. SBL                 *      6.0      24.0       6.0      95.8 *      72.
360. AG    491. 100.0    .0 12.0  .39   3.6
      17. SBT                 *    -12.0      24.0     -12.0     148.9 *     125.
360. AG    983. 100.0    .0 24.0  .69   6.3

                          PAGE  2
      JOB: 108th and Northup                                    RUN: 2000 No Build
```

DATE : 8/19/ 4
TIME : 9:23:44

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. EBL	130	111	3.0	170	1770	235.74	1	3
10. EBT	130	106	3.0	190	1863	235.74	1	3
11. EBR	130	56	3.0	400	1583	235.74	1	3
12. WBL	130	106	3.0	350	1787	235.74	1	3
13. WBT	130	101	3.0	730	1669	235.74	1	3
14. NBT	130	81	3.0	1140	1770	235.74	1	3
15. NBR	130	56	3.0	190	1583	235.74	1	3
16. SBL	130	101	3.0	130	1823	235.74	1	3
17. SBT	130	101	3.0	450	1781	235.74	1	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-198.0	34.0	5.9
2. R2	-116.0	34.0	5.9
3. R3	-34.0	34.0	5.9
4. R4	-34.0	116.0	5.9
5. R5	-34.0	198.0	5.9
6. R6	34.0	198.0	5.9
7. R7	34.0	116.0	5.9
8. R8	34.0	34.0	5.9
9. R9	116.0	34.0	5.9
10. R10	198.0	34.0	5.9
11. R11	210.0	-34.0	5.9
12. R12	128.0	-34.0	5.9
13. R13	46.0	-34.0	5.9
14. R14	46.0	-116.0	5.9
15. R15	46.0	-198.0	5.9
16. R16	-34.0	-210.0	5.9
17. R17	-34.0	-128.0	5.9
18. R18	-34.0	-46.0	5.9
19. R19	-116.0	-46.0	5.9
20. R20	-198.0	-46.0	5.9

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

(DEGR)	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	3.2	3.6	7.4	5.6	5.3	5.0	5.1	5.2	3.1	3.0	7.5	7.6	8.4	6.3	6.3	9.0	9.4	11.8	7.9	4.6
10.	*	3.4	3.9	8.5	5.9	5.5	4.2	4.2	4.2	3.0	3.0	7.4	7.4	7.9	5.7	5.6	9.9	9.6	12.2	8.3	4.8
15.	*	3.5	4.0	9.1	6.1	5.5	3.6	3.6	3.6	3.0	3.0	7.5	7.5	7.6	5.3	5.0	9.9	9.3	12.0	8.4	4.9
20.	*	3.7	4.0	9.4	6.3	5.3	3.3	3.3	3.3	3.0	3.0	7.5	7.5	7.5	5.3	4.8	9.8	8.8	10.7	8.7	5.1
25.	*	3.7	4.1	9.3	6.5	5.0	3.2	3.2	3.2	3.0	3.0	7.6	7.6	7.6	5.5	4.8	10.0	9.0	9.8	9.0	5.2
30.	*	3.7	4.2	9.4	6.8	4.9	3.2	3.2	3.2	3.0	3.0	7.6	7.6	7.6	5.6	4.8	9.9	9.3	9.1	9.5	5.4
35.	*	3.7	4.3	9.2	7.1	4.8	3.1	3.1	3.1	3.0	3.0	7.7	7.7	7.7	5.6	4.9	9.7	9.4	8.5	9.8	5.6
40.	*	3.6	4.5	9.2	7.3	4.7	3.1	3.1	3.1	3.0	3.0	8.0	8.0	8.0	5.7	5.0	9.7	9.9	8.0	10.0	5.9
45.	*	3.7	4.7	8.9	7.4	4.5	3.1	3.1	3.1	3.0	3.0	8.3	8.3	8.3	5.7	5.1	9.3	10.0	8.1	10.1	6.6
50.	*	3.8	5.0	8.7	7.5	4.5	3.1	3.1	3.1	3.0	3.0	8.5	8.5	8.5	5.9	5.1	9.3	10.0	8.5	10.2	7.2
55.	*	3.9	5.1	8.7	7.6	4.5	3.1	3.1	3.1	3.0	3.0	8.8	8.8	8.8	5.9	5.2	9.0	10.0	8.7	10.1	7.5
60.	*	4.1	5.2	8.5	7.4	4.4	3.1	3.1	3.1	3.0	3.0	9.3	9.3	9.3	6.1	5.2	9.0	9.9	9.4	10.4	8.4
65.	*	4.3	5.3	8.3	7.3	4.4	3.0	3.0	3.0	3.0	3.0	9.7	9.7	9.8	6.3	5.3	9.1	10.1	10.6	10.9	9.1
70.	*	4.6	5.5	8.4	7.2	4.4	3.0	3.0	3.2	3.2	3.2	10.3	10.3	10.4	6.5	5.2	8.9	10.1	11.5	11.0	10.2
75.	*	5.1	6.0	8.8	7.1	4.3	3.0	3.0	3.8	3.8	3.8	10.9	11.0	11.0	6.4	4.8	8.5	10.0	12.2	11.5	11.0
80.	*	6.1	7.2	10.2	7.2	4.3	3.0	3.1	5.3	5.3	5.2	11.0	11.1	11.1	5.8	4.2	7.8	9.3	12.6	11.7	11.4
85.	*	7.8	8.9	12.3	7.7	4.3	3.0	3.4	7.7	7.5	7.4	10.0	10.2	10.3	4.9	3.6	7.3	8.4	12.2	10.9	10.8
90.	*	9.9	10.7	14.9	8.5	4.6	3.3	4.3	10.4	10.2	10.0	8.1	8.4	8.6	4.0	3.2	6.9	7.5	10.8	9.2	9.2
95.	*	10.5	11.6	16.3	9.6	5.2	3.7	5.2	12.5	12.4	12.1	6.1	6.2	6.3	3.4	3.0	6.7	7.0	9.1	7.4	7.2
100.	*	10.5	10.9	16.0	10.5	5.8	4.4	6.1	13.3	13.2	13.0	4.5	4.5	4.5	3.0	3.0	6.6	6.6	7.9	6.1	5.6
105.	*	10.2	10.1	14.5	11.0	6.4	5.1	6.7	13.1	12.9	12.8	3.5	3.5	3.5	3.0	3.0	6.7	6.7	7.3	5.4	4.9
110.	*	9.8	8.7	12.2	11.2	6.9	5.5	6.7	12.0	12.0	12.0	3.2	3.2	3.2	3.0	3.0	6.7	6.7	7.1	5.1	4.5

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 115.  *   9.5   8.8  10.6  11.3   6.9   5.4   6.5  11.3  11.3  11.3   3.1   3.1
3.1   3.0   3.0   6.8   6.8   7.1   5.1   4.5
 120.  *   8.9   8.7   9.3  11.5   6.8   5.5   6.5  10.7  10.6  10.6   3.1   3.1
3.1   3.0   3.0   6.8   6.8   7.1   5.2   4.5
 125.  *   8.6   8.7   8.5  11.5   6.8   5.4   6.3  10.1  10.0  10.0   3.1   3.1
3.1   3.0   3.0   6.9   6.9   7.1   5.2   4.5
 130.  *   8.2   9.3   8.1  11.4   6.8   5.3   6.0   9.6   9.6   9.6   3.1   3.1
3.1   3.0   3.0   7.2   7.2   7.4   5.2   4.5
 135.  *   7.9   9.6   7.9  11.5   6.8   5.2   6.0   9.3   9.3   9.3   3.1   3.1
3.1   3.0   3.0   7.3   7.3   7.4   5.2   4.7
 140.  *   7.3   9.5   8.1  11.5   7.3   5.1   5.8   9.0   9.0   9.0   3.0   3.0
3.0   3.0   3.0   7.6   7.7   7.8   5.4   4.6
 145.  *   6.9   9.4   8.4  11.4   7.7   5.1   5.7   8.8   8.9   8.9   3.0   3.0
3.0   3.0   3.0   7.8   7.9   7.9   5.4   4.5
 150.  *   6.3   9.3   9.0  11.7   8.4   5.1   5.7   8.6   8.7   8.7   3.0   3.0
3.0   3.0   3.0   7.9   8.1   8.2   5.4   4.3
 155.  *   6.0   9.3   9.7  11.6   8.9   5.1   5.7   8.3   8.4   8.4   3.0   3.0
3.0   3.0   3.0   8.1   8.5   8.6   5.3   4.2
 160.  *   5.7   9.0  10.6  11.7  10.1   5.3   5.8   8.3   8.3   8.3   3.0   3.0
3.1   3.1   3.1   8.1   8.8   9.0   5.0   4.1
 165.  *   5.5   8.6  11.5  11.8  11.2   5.6   6.3   8.4   8.1   8.1   3.0   3.0
3.3   3.3   3.2   8.2   8.9   9.2   4.8   3.8
 170.  *   5.1   8.3  11.8  11.9  11.6   6.5   7.1   9.3   8.1   8.1   3.0   3.0
3.9   3.8   3.7   7.9   8.5   9.1   4.4   3.5
 175.  *   4.8   7.7  11.2  10.8  11.0   7.8   8.5  10.7   8.5   8.2   3.0   3.2
5.2   4.8   4.5   7.3   7.8   8.2   3.9   3.3
 180.  *   4.7   7.3  10.4   9.3   9.4   9.6  10.0  12.3   8.9   8.4   3.1   3.5
6.9   6.2   5.7   6.3   6.6   7.0   3.5   3.1
 185.  *   4.5   6.8   8.8   7.6   7.4  10.9  11.0  13.1   9.5   8.5   3.3   3.9
8.4   7.7   7.1   5.1   5.2   5.4   3.2   3.0
 190.  *   4.5   6.5   7.8   6.3   6.0  11.1  11.0  12.9  10.1   8.8   3.5   4.4
9.5   8.7   8.0   4.0   4.3   4.3   3.0   3.0
 195.  *   4.5   6.3   7.0   5.6   4.9  10.7  10.6  11.7  10.5   9.1   3.8   5.0
10.2   9.2   8.6   3.5   3.5   3.5   3.0   3.0
 200.  *   4.5   6.3   6.9   5.2   4.5  10.3  10.1  10.2  11.0   9.7   4.1   5.3
10.0   9.0   8.7   3.3   3.3   3.3   3.0   3.0
 205.  *   4.6   6.0   6.9   5.0   4.2   9.7  10.2   9.2  11.4  10.0   4.3   5.4
9.7   8.7   8.5   3.2   3.2   3.2   3.0   3.0
 210.  *   4.6   5.8   6.9   5.0   4.0   9.1  10.5   8.6  11.5  10.5   4.5   5.5
9.3   8.4   8.3   3.1   3.1   3.1   3.0   3.0
```

PAGE 4

JOB: 108th and Northup RUN: 2000 No Build

```
 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
-----------------------------------------
 215.  *   4.7   5.8   6.9   4.9   3.9   8.5  10.4   8.1  11.7  10.8   4.5   5.5
8.9   8.0   8.0   3.1   3.1   3.1   3.0   3.0
 220.  *   4.7   5.5   7.1   4.6   3.9   7.9  10.4   8.0  11.8  10.8   4.6   5.4
8.6   7.7   7.7   3.1   3.1   3.1   3.0   3.0
 225.  *   4.9   5.5   7.3   4.4   3.8   7.1  10.0   8.3  11.7  11.1   4.8   5.4
8.6   7.6   7.6   3.1   3.1   3.1   3.0   3.0
 230.  *   5.0   5.4   7.4   4.4   3.8   6.4   9.7   8.3  11.8  11.4   4.8   5.4
8.1   7.3   7.3   3.1   3.1   3.1   3.0   3.0
 235.  *   5.0   5.3   7.3   4.1   3.7   5.9   9.2   9.0  11.7  11.7   4.8   5.3
8.1   7.2   7.2   3.1   3.1   3.1   3.0   3.0
 240.  *   5.3   5.4   7.4   4.0   3.7   5.6   8.7   9.5  11.7  11.9   4.7   5.4
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7.9   7.1   7.1   3.1   3.1   3.1   3.0   3.0
 245.  *   5.4   5.5   7.1   4.1   3.8   5.6   8.4  10.2  11.7  12.4   4.7   5.4
7.8   7.1   7.1   3.1   3.1   3.1   3.0   3.0
 250.  *   5.7   5.7   6.9   4.1   3.7   5.4   8.0  10.4  11.5  13.0   4.6   5.4
7.7   7.0   7.0   3.0   3.0   3.0   3.0   3.0
 255.  *   6.0   6.0   6.9   4.1   3.6   5.1   7.8  10.9  11.2  12.9   4.8   5.9
7.7   6.9   6.9   3.0   3.0   3.1   3.1   3.1
 260.  *   6.0   6.0   6.6   3.9   3.4   5.0   7.4  10.7  11.0  12.4   5.7   6.3
8.3   6.9   6.9   3.0   3.0   3.5   3.4   3.4
 265.  *   5.7   5.8   6.0   3.6   3.2   4.9   7.3  10.5   9.7  10.9   6.7   7.3
9.2   7.1   6.9   3.0   3.1   4.2   3.9   3.8
 270.  *   5.0   5.1   5.3   3.3   3.1   4.8   7.1   9.9   8.3   9.3   8.3   8.1
10.4   7.3   7.0   3.0   3.3   5.2   4.5   4.4
 275.  *   4.2   4.3   4.4   3.1   3.0   4.6   6.7   9.0   7.1   7.3   9.3   9.1
11.0   7.6   7.1   3.2   3.6   6.4   5.1   5.0
 280.  *   3.6   3.6   3.7   3.0   3.0   4.5   6.5   8.1   6.3   5.9   9.9   8.9
10.8   7.9   7.3   3.4   3.8   7.3   5.4   5.3
 285.  *   3.2   3.2   3.2   3.0   3.0   4.5   6.5   7.9   5.7   4.9  10.2   9.1
10.3   8.4   7.5   3.6   4.0   7.9   5.6   5.4
 290.  *   3.1   3.1   3.1   3.0   3.0   4.6   6.5   7.8   5.2   4.7  10.7   9.1
9.1   8.7   7.7   3.7   4.1   8.4   5.6   5.2
 295.  *   3.0   3.0   3.0   3.0   3.0   4.7   6.4   7.9   5.2   4.3  10.3   9.5
8.3   9.0   7.8   3.8   4.2   8.5   5.6   5.0
 300.  *   3.0   3.0   3.0   3.0   3.0   4.7   6.2   7.9   5.2   4.0  10.4   9.8
7.7   9.3   7.8   3.8   4.1   8.5   5.7   4.9
 305.  *   3.0   3.0   3.0   3.0   3.0   4.8   6.0   8.0   5.0   3.8  10.0  10.3
7.5   9.5   8.2   3.8   4.3   8.4   5.8   4.7
 310.  *   3.0   3.0   3.1   3.1   3.1   4.9   5.7   8.3   4.7   3.7   9.6  10.3
7.6   9.7   8.5   3.8   4.6   8.1   6.1   4.7
 315.  *   3.0   3.0   3.1   3.1   3.1   5.0   5.6   8.5   4.4   3.6   9.1  10.2
7.9   9.9   9.0   3.7   4.8   8.0   6.3   4.6
 320.  *   3.0   3.0   3.1   3.1   3.1   5.2   5.5   8.7   4.2   3.6   8.6   9.7
8.2   9.8   9.3   3.8   5.0   7.7   6.6   4.5
 325.  *   3.0   3.0   3.1   3.1   3.1   5.3   5.5   8.7   4.0   3.6   8.3   9.2
9.0   9.8   9.4   4.0   5.2   7.6   6.9   4.5
 330.  *   3.0   3.0   3.1   3.1   3.1   5.4   5.5   8.5   4.0   3.7   8.2   8.9
9.5  10.2   9.6   4.2   5.2   7.5   7.0   4.5
 335.  *   3.0   3.0   3.1   3.1   3.1   5.7   5.7   8.3   4.1   3.7   8.3   8.7
9.9  10.0  10.1   4.5   5.2   7.4   7.0   4.4
 340.  *   3.0   3.0   3.1   3.1   3.1   6.0   6.0   8.0   4.2   3.7   8.2   8.5
9.9  10.2  10.2   4.7   5.2   7.6   7.1   4.4
 345.  *   3.0   3.0   3.4   3.3   3.3   6.5   6.5   7.8   4.2   3.6   8.1   8.5
10.0   9.9  10.2   5.1   5.5   7.8   7.2   4.4
 350.  *   3.0   3.0   3.9   3.6   3.6   6.6   6.7   7.5   4.0   3.4   7.8   8.3
9.9   9.3   9.7   5.6   6.2   8.4   7.2   4.4
 355.  *   3.0   3.2   5.0   4.1   4.1   6.5   6.6   7.0   3.7   3.3   7.8   8.1
9.5   8.4   8.8   6.9   7.2   9.4   7.4   4.4
 360.  *   3.0   3.2   6.2   5.0   4.8   5.9   6.1   6.2   3.4   3.1   7.6   7.8
9.1   7.6   7.3   7.9   8.4  10.7   7.6   4.4
 THE HIGHEST CONCENTRATION OF   16.30 PPM OCCURRED AT RECEPTOR REC3 .
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                    CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated
95221                   PAGE  1

      JOB: 108th and Northup                                  RUN: 2016 No Build


      DATE :  8/19/ 4
      TIME :  9:23:53

         The MODE flag has been set to C for calculating CO averages.

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   5  (E)     ATIM =  60. MINUTES     MIXH =
1000. M   AMB =  3.0 PPM  BRG =   5. DEGREES

       LINK VARIABLES
       --------------
         LINK DESCRIPTION     *         LINK COORDINATES (FT)          *    LENGTH
BRG TYPE   VPH    EF      H   W    V/C QUEUE
                              *   X1        Y1        X2        Y2     *     (FT)
(DEG)            (G/MI)  (FT) (FT)       (VEH)

------------------------*----------------------------------------*------------------
----------------------------------------
       1. EBA                 *  -1000.0     -18.0        .0     -18.0 *    1000.
90. AG    890.  15.0    .0 32.0
       2. EBD                 *       .0     -18.0    1000.0     -18.0 *    1000.
90. AG    590.  15.0    .0 32.0
       3. WBA                 *   1000.0      12.0        .0      12.0 *    1000.
270. AG   1260.  15.0    .0 32.0
       4. WBD                 *       .0      12.0   -1000.0      12.0 *    1000.
270. AG   1190.  15.0    .0 32.0
       5. NBA                 *     18.0   -1000.0      18.0        .0 *    1000.
360. AG   1480.  15.0    .0 32.0
       6. NBD                 *     18.0        .0      18.0    1000.0 *    1000.
360. AG   1230.  15.0    .0 32.0
       7. SBA                 *    -12.0    1000.0     -12.0        .0 *    1000.
180. AG    690.  15.0    .0 44.0
       8. SBD                 *    -12.0        .0     -12.0   -1000.0 *    1000.
180. AG   1310.  15.0    .0 44.0
       9. EBL                 *    -24.0      -6.0    -762.7      -6.2 *     739.
270. AG    208. 100.0    .0 12.0 1.42  37.5
      10. EBT                 *    -24.0     -18.0    -520.2     -18.1 *     496.
270. AG    203. 100.0    .0 12.0 1.18  25.2
      11. EBR                 *    -24.0     -30.0    -139.6     -30.0 *     116.
270. AG    108. 100.0    .0 12.0  .59   5.9
      12. WBL                 *     36.0      -6.0     698.6      -5.8 *     663.
90. AG    180. 100.0    .0 12.0 1.12  33.7
      13. WBT                 *     36.0      12.0     907.8      12.2 *     872.
90. AG    349. 100.0    .0 24.0 1.17  44.3
      14. NBT                 *     12.0     -36.0      12.0   -1001.7 *     966.
180. AG    292. 100.0    .0 24.0 1.12  49.1
      15. NBR                 *     30.0     -36.0      30.0     -76.2 *      40.
180. AG     84. 100.0    .0 12.0  .22   2.0
      16. SBL                 *      6.0      24.0       6.0      97.1 *      73.
360. AG    199. 100.0    .0 12.0  .73   3.7
      17. SBT                 *    -12.0      24.0     -12.0     782.5 *     759.
360. AG    397. 100.0    .0 24.0 1.28  38.5

                         PAGE  2
      JOB: 108th and Northup                                  RUN: 2016 No Build
```

DATE : 8/19/ 4
TIME : 9:23:53

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. EBL	100	87	3.0	200	1770	89.24	2	3
10. EBT	100	85	3.0	220	1863	89.24	2	3
11. EBR	100	45	3.0	470	1583	89.24	2	3
12. WBL	100	75	3.0	400	1787	89.24	2	3
13. WBT	100	73	3.0	860	1669	89.24	2	3
14. NBT	100	61	3.0	1270	1671	89.24	2	3
15. NBR	100	35	3.0	210	1583	89.24	2	3
16. SBL	100	83	3.0	160	1823	89.24	2	3
17. SBT	100	83	3.0	530	1733	89.24	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-198.0	34.0	5.9
2. R2	-116.0	34.0	5.9
3. R3	-34.0	34.0	5.9
4. R4	-34.0	116.0	5.9
5. R5	-34.0	198.0	5.9
6. R6	34.0	198.0	5.9
7. R7	34.0	116.0	5.9
8. R8	34.0	34.0	5.9
9. R9	116.0	34.0	5.9
10. R10	198.0	34.0	5.9
11. R11	210.0	-34.0	5.9
12. R12	128.0	-34.0	5.9
13. R13	46.0	-34.0	5.9
14. R14	46.0	-116.0	5.9
15. R15	46.0	-198.0	5.9
16. R16	-34.0	-210.0	5.9
17. R17	-34.0	-128.0	5.9
18. R18	-34.0	-46.0	5.9
19. R19	-116.0	-46.0	5.9
20. R20	-198.0	-46.0	5.9

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND * CONCENTRATION
ANGLE * (PPM)
(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

(DEGR)	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	3.2	3.7	6.4	6.3	6.3	4.4	4.5	4.5	3.1	3.0	4.8	4.9	5.6	4.7	4.6	6.5	6.6	8.1	5.7	4.9
10.	*	3.4	4.1	6.6	6.6	6.6	3.8	3.8	3.9	3.0	3.0	4.8	4.8	5.1	4.2	4.0	6.5	6.5	8.0	6.0	5.0
15.	*	3.6	4.2	6.5	6.5	6.5	3.3	3.3	3.3	3.0	3.0	4.8	4.8	4.9	4.0	3.8	6.2	6.1	7.6	6.1	5.3
20.	*	3.7	4.3	6.3	6.2	6.2	3.2	3.2	3.2	3.0	3.0	4.8	4.8	4.8	3.9	3.7	6.2	6.1	7.0	6.2	5.5
25.	*	3.8	4.2	6.2	6.0	6.0	3.1	3.1	3.1	3.0	3.0	4.8	4.8	4.8	3.9	3.7	6.0	5.9	6.5	6.1	5.5
30.	*	3.8	4.2	5.9	5.7	5.7	3.1	3.1	3.1	3.0	3.0	4.9	4.9	4.9	4.0	3.7	6.1	5.6	5.9	6.2	5.5
35.	*	3.8	4.2	5.9	5.6	5.6	3.1	3.1	3.1	3.0	3.0	5.0	5.0	5.0	4.0	3.8	5.9	5.9	5.5	6.2	5.5
40.	*	3.7	4.1	5.7	5.4	5.4	3.1	3.1	3.1	3.0	3.0	5.1	5.1	5.1	4.1	3.8	5.8	5.9	5.4	6.2	5.4
45.	*	3.7	4.1	5.6	5.2	5.2	3.1	3.1	3.1	3.0	3.0	5.2	5.2	5.2	4.1	3.9	5.8	6.1	5.5	6.3	5.5
50.	*	3.7	4.0	5.6	5.2	5.2	3.1	3.1	3.1	3.0	3.0	5.3	5.3	5.3	4.2	3.9	5.8	6.0	5.6	6.2	5.6
55.	*	3.7	4.0	5.5	5.1	5.1	3.0	3.0	3.0	3.0	3.0	5.3	5.3	5.3	4.2	3.9	5.7	6.0	5.7	6.2	5.8
60.	*	3.7	4.1	5.4	5.0	5.0	3.0	3.0	3.0	3.0	3.0	5.6	5.6	5.6	4.3	3.9	5.7	6.0	6.0	6.2	6.0
65.	*	3.7	4.0	5.3	4.9	4.9	3.0	3.0	3.0	3.0	3.0	5.7	5.7	5.8	4.4	3.9	5.6	6.0	6.2	6.4	6.1
70.	*	3.8	4.1	5.2	4.9	4.9	3.0	3.0	3.1	3.1	3.0	6.0	6.0	6.1	4.4	3.8	5.5	6.1	6.8	6.5	6.4
75.	*	4.1	4.3	5.5	4.8	4.8	3.0	3.0	3.3	3.3	3.3	6.3	6.3	6.3	4.2	3.7	5.4	5.9	6.9	6.7	6.7
80.	*	4.4	4.8	5.9	4.8	4.8	3.0	3.0	3.9	3.9	3.8	6.1	6.4	6.4	4.1	3.5	5.2	5.8	7.1	6.7	6.7
85.	*	5.1	5.6	6.9	5.1	4.9	3.0	3.2	4.8	4.8	4.7	5.7	6.0	6.0	3.7	3.2	4.9	5.4	6.8	6.2	6.2
90.	*	5.7	6.2	8.0	5.3	5.1	3.0	3.3	5.9	5.9	5.8	5.0	5.2	5.2	3.4	3.0	4.8	5.1	6.3	5.7	5.5
95.	*	6.5	6.7	8.6	5.8	5.1	3.2	3.8	6.8	6.6	6.6	4.2	4.3	4.4	3.0	3.0	4.7	4.7	5.7	5.0	4.7
100.	*	6.5	6.6	8.4	6.1	5.5	3.5	4.2	7.1	7.1	7.1	3.6	3.6	3.6	3.0	3.0	4.7	4.7	5.2	4.3	4.2
105.	*	6.1	6.0	8.0	6.4	5.6	3.7	4.4	7.0	6.9	6.9	3.1	3.1	3.1	3.0	3.0	4.7	4.7	4.8	3.9	3.7
110.	*	6.0	5.9	7.1	6.6	5.8	3.9	4.5	6.7	6.7	6.7	3.1	3.1	3.1	3.0	3.0	4.7	4.7	4.8	3.9	3.7

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 115.  *   5.8   5.4   6.5   6.7   5.9   4.0   4.4   6.4   6.4   6.4   3.1   3.1
3.1   3.0   3.0   4.7   4.7   4.8   4.0   3.7
 120.  *   5.9   5.7   5.9   6.5   5.9   3.9   4.3   6.1   6.1   6.1   3.0   3.0
3.0   3.0   3.0   4.8   4.8   4.8   4.0   3.7
 125.  *   5.9   5.8   5.5   6.6   6.0   3.9   4.2   5.8   5.8   5.8   3.0   3.0
3.0   3.0   3.0   4.8   4.8   4.8   4.0   3.7
 130.  *   5.7   5.7   5.3   6.5   6.1   4.0   4.3   5.8   5.7   5.7   3.0   3.0
3.0   3.0   3.0   4.9   4.9   4.9   4.0   3.7
 135.  *   5.6   5.8   5.3   6.6   6.1   4.0   4.2   5.6   5.5   5.6   3.0   3.0
3.0   3.0   3.0   5.0   5.0   5.0   4.0   3.7
 140.  *   5.6   6.0   5.5   6.7   6.2   3.9   4.2   5.5   5.5   5.5   3.0   3.0
3.0   3.0   3.0   5.1   5.1   5.1   4.1   3.8
 145.  *   5.5   5.9   5.7   6.6   6.4   3.9   4.2   5.4   5.4   5.4   3.0   3.0
3.0   3.0   3.0   5.3   5.3   5.3   4.1   3.9
 150.  *   5.5   6.1   6.0   6.8   6.6   3.8   4.2   5.2   5.2   5.2   3.0   3.0
3.0   3.0   3.0   5.4   5.4   5.4   4.3   3.9
 155.  *   5.5   6.1   6.0   6.8   6.7   3.8   4.2   5.2   5.2   5.2   3.0   3.0
3.0   3.0   3.0   5.7   5.7   5.7   4.3   3.9
 160.  *   5.4   5.9   6.4   6.9   7.1   3.9   4.1   5.2   5.1   5.1   3.0   3.0
3.0   3.0   3.0   5.8   5.8   5.8   4.3   3.9
 165.  *   5.3   6.0   7.1   7.1   7.2   4.1   4.4   5.3   5.1   5.1   3.0   3.0
3.2   3.2   3.2   6.2   6.2   6.2   4.3   3.7
 170.  *   5.0   5.7   7.5   7.4   7.3   4.6   4.9   5.8   5.1   5.1   3.0   3.0
3.5   3.5   3.5   6.2   6.2   6.3   4.1   3.5
 175.  *   4.9   5.5   7.5   6.7   7.0   5.5   5.8   6.7   5.3   5.1   3.0   3.2
4.2   4.2   4.2   5.9   6.0   6.0   3.8   3.3
 180.  *   4.6   5.1   6.8   6.1   6.3   6.4   6.6   7.6   5.6   5.2   3.0   3.4
5.1   5.0   4.9   5.2   5.3   5.3   3.4   3.0
 185.  *   4.6   4.9   6.0   5.5   5.2   6.9   6.8   8.0   6.0   5.4   3.3   3.8
5.9   5.7   5.7   4.4   4.4   4.4   3.1   3.0
 190.  *   4.5   4.6   5.3   4.7   4.4   6.9   7.1   7.8   6.3   5.6   3.5   4.1
6.3   6.1   6.0   3.7   3.7   3.7   3.0   3.0
 195.  *   4.5   4.6   4.8   4.1   3.9   6.8   6.6   7.4   6.6   5.9   3.7   4.2
6.2   6.1   6.1   3.3   3.3   3.3   3.0   3.0
 200.  *   4.5   4.6   4.8   4.0   3.8   6.6   6.3   6.5   6.6   6.1   3.8   4.3
6.0   5.8   5.8   3.2   3.2   3.2   3.0   3.0
 205.  *   4.6   4.7   4.8   4.0   3.8   6.2   6.4   6.1   6.6   6.2   3.9   4.2
5.8   5.6   5.6   3.1   3.1   3.1   3.0   3.0
 210.  *   4.6   4.6   4.8   4.0   3.7   6.1   6.3   5.6   6.4   6.2   3.8   4.2
5.7   5.5   5.5   3.1   3.1   3.1   3.0   3.0
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JOB: 108th and Northup RUN: 2016 No Build

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
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 215.  *   4.6   4.6   4.8   4.0   3.7   5.9   6.6   5.7   6.6   6.2   3.8   4.2
5.5   5.2   5.2   3.1   3.1   3.1   3.0   3.0
 220.  *   4.8   4.8   5.0   3.9   3.7   5.8   6.4   5.6   6.5   6.3   3.8   4.1
5.5   5.2   5.2   3.1   3.1   3.1   3.0   3.0
 225.  *   4.8   4.8   5.0   3.9   3.7   5.7   6.4   5.6   6.7   6.3   3.8   4.0
5.4   5.1   5.1   3.1   3.1   3.1   3.0   3.0
 230.  *   4.9   4.9   5.0   3.9   3.7   5.6   6.2   5.7   6.6   6.5   3.7   4.0
5.2   5.0   5.0   3.1   3.1   3.1   3.0   3.0
 235.  *   5.1   5.1   5.2   4.0   3.8   5.7   6.0   6.0   6.5   6.5   3.7   4.0
5.1   5.0   5.0   3.0   3.0   3.0   3.0   3.0
 240.  *   5.1   5.1   5.2   4.0   3.7   5.6   6.1   6.3   6.7   6.6   3.7   4.0
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5.1   4.9   4.9   3.0   3.0   3.0   3.0   3.0
 245.  *   5.3   5.4   5.5   4.1   3.7   5.4   6.0   6.5   6.8   6.8   3.7   4.0
4.9   4.7   4.7   3.0   3.0   3.0   3.0   3.0
 250.  *   5.4   5.5   5.5   4.1   3.7   5.4   5.8   6.9   6.9   7.2   3.8   4.0
5.0   4.7   4.7   3.0   3.0   3.0   3.0   3.0
 255.  *   5.6   5.8   5.8   4.0   3.4   5.1   5.7   7.3   7.2   7.3   3.9   4.2
5.2   4.7   4.7   3.0   3.0   3.1   3.1   3.0
 260.  *   5.5   5.6   5.7   3.8   3.3   5.0   5.4   7.4   7.1   7.3   4.2   4.9
5.5   4.7   4.7   3.0   3.0   3.5   3.4   3.4
 265.  *   5.2   5.3   5.3   3.4   3.1   4.7   5.1   7.2   6.5   7.0   5.0   5.3
6.2   4.7   4.7   3.0   3.0   4.1   3.8   3.8
 270.  *   4.5   4.7   4.8   3.3   3.0   4.8   5.1   7.0   5.9   6.1   5.8   5.9
7.0   5.1   4.7   3.0   3.3   4.8   4.6   4.4
 275.  *   3.9   4.0   4.0   3.1   3.0   4.6   4.7   6.0   5.2   5.1   6.4   6.3
7.5   5.4   4.9   3.1   3.5   5.6   5.3   5.0
 280.  *   3.4   3.5   3.5   3.0   3.0   4.6   4.6   5.5   4.6   4.5   6.3   6.4
7.3   5.8   5.0   3.3   3.7   5.9   5.5   5.4
 285.  *   3.1   3.1   3.1   3.0   3.0   4.6   4.6   5.1   4.1   4.0   6.5   6.0
6.9   5.9   5.4   3.5   4.1   6.0   5.6   5.6
 290.  *   3.0   3.0   3.0   3.0   3.0   4.7   4.7   5.1   4.1   3.8   6.4   5.9
6.1   6.0   5.5   3.7   4.2   5.8   5.5   5.4
 295.  *   3.0   3.0   3.0   3.0   3.0   4.7   4.7   5.1   4.0   3.7   6.2   6.0
5.7   6.0   5.5   3.7   4.2   5.8   5.4   5.3
 300.  *   3.0   3.0   3.0   3.0   3.0   4.8   4.8   5.2   4.0   3.7   6.1   5.9
5.6   6.2   5.7   3.8   4.1   5.5   5.3   5.1
 305.  *   3.0   3.0   3.0   3.0   3.0   4.9   4.9   5.4   4.1   3.7   6.1   6.1
5.3   6.1   5.8   3.8   4.1   5.4   5.2   5.0
 310.  *   3.0   3.0   3.0   3.0   3.0   4.9   4.9   5.4   4.0   3.7   6.0   6.2
5.3   6.1   5.8   3.9   4.2   5.4   5.1   4.9
 315.  *   3.0   3.0   3.0   3.0   3.0   5.1   5.1   5.6   4.0   3.7   5.9   6.2
5.4   6.1   6.0   3.9   4.0   5.3   5.1   4.8
 320.  *   3.0   3.0   3.0   3.0   3.0   5.1   5.1   5.6   4.1   3.7   5.8   6.1
5.5   6.0   6.1   3.8   4.0   5.1   5.0   4.7
 325.  *   3.0   3.0   3.0   3.0   3.0   5.2   5.2   5.6   4.1   3.7   5.6   6.0
5.9   5.9   6.0   3.8   4.0   5.1   5.0   4.7
 330.  *   3.0   3.0   3.0   3.0   3.0   5.4   5.4   5.8   4.2   3.7   5.5   5.9
6.3   6.0   6.0   3.8   4.0   5.1   5.0   4.7
 335.  *   3.0   3.0   3.1   3.1   3.1   5.7   5.7   6.0   4.2   3.8   5.5   6.0
6.3   6.2   6.2   3.9   4.0   5.0   4.9   4.6
 340.  *   3.0   3.0   3.2   3.2   3.2   5.9   5.9   6.1   4.2   3.8   5.5   6.0
6.8   6.3   6.2   3.8   4.0   5.1   4.9   4.6
 345.  *   3.0   3.0   3.3   3.3   3.3   6.1   6.1   6.3   4.2   3.6   5.4   5.9
7.0   6.4   6.4   4.0   4.3   5.3   4.9   4.6
 350.  *   3.0   3.0   3.9   3.9   3.9   6.2   6.3   6.4   4.0   3.4   5.2   5.6
7.0   6.4   6.6   4.5   4.8   5.9   4.9   4.6
 355.  *   3.0   3.1   4.7   4.7   4.6   5.9   6.0   6.1   3.7   3.2   5.0   5.3
6.7   6.1   6.2   5.0   5.6   6.5   5.0   4.6
 360.  *   3.0   3.4   5.7   5.7   5.5   5.1   5.4   5.4   3.3   3.0   4.8   5.0
6.2   5.5   5.6   6.0   6.3   7.4   5.3   4.6
 THE HIGHEST CONCENTRATION OF    8.60 PPM OCCURRED AT RECEPTOR REC3 .
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: 108th and Northup RUN: 2030 No Build

DATE : 8/19/ 4
TIME : 9:24: 3

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 108. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 3.0 PPM BRG = 5. DEGREES

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. EBA	*	-1000.0	-18.0	.0	-18.0	*	1000.	90.	AG	980.	11.2	.0	32.0		
2. EBD	*	.0	-18.0	1000.0	-18.0	*	1000.	90.	AG	630.	11.2	.0	32.0		
3. WBA	*	1000.0	12.0	.0	12.0	*	1000.	270.	AG	1400.	11.2	.0	32.0		
4. WBD	*	.0	12.0	-1000.0	12.0	*	1000.	270.	AG	1300.	11.2	.0	32.0		
5. NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1590.	11.2	.0	32.0		
6. NBD	*	18.0	.0	18.0	1000.0	*	1000.	360.	AG	1340.	11.2	.0	32.0		
7. SBA	*	-12.0	1000.0	-12.0	.0	*	1000.	180.	AG	740.	11.2	.0	44.0		
8. SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	1440.	11.2	.0	44.0		
9. EBL	*	-24.0	-6.0	-975.3	-6.2	*	951.	270.	AG	159.	100.0	.0	12.0	1.56	48.3
10. EBT	*	-24.0	-18.0	-731.7	-18.2	*	708.	270.	AG	155.	100.0	.0	12.0	1.29	36.0
11. EBR	*	-24.0	-30.0	-154.8	-30.0	*	131.	270.	AG	84.	100.0	.0	12.0	.67	6.6
12. WBL	*	36.0	-6.0	934.5	-5.8	*	899.	90.	AG	135.	100.0	.0	12.0	1.17	45.6
13. WBT	*	36.0	12.0	1267.1	12.3	*	1231.	90.	AG	262.	100.0	.0	24.0	1.25	62.5
14. NBT	*	12.0	-36.0	12.0	-1690.5	*	1655.	180.	AG	226.	100.0	.0	24.0	1.24	84.1
15. NBR	*	30.0	-36.0	30.0	-78.1	*	42.	180.	AG	64.	100.0	.0	12.0	.23	2.1
16. SBL	*	6.0	24.0	6.0	104.9	*	81.	360.	AG	151.	100.0	.0	12.0	.78	4.1
17. SBT	*	-12.0	24.0	-12.0	983.5	*	959.	360.	AG	303.	100.0	.0	24.0	1.37	48.7

JOB: 108th and Northup RUN: 2030 No Build

DATE : 8/19/ 4
TIME : 9:24: 3

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. EBL	100	87	3.0	220	1770	67.96	2	3
10. EBT	100	85	3.0	240	1863	67.96	2	3
11. EBR	100	46	3.0	520	1583	67.96	2	3
12. WBL	100	74	3.0	440	1787	67.96	2	3
13. WBT	100	72	3.0	960	1669	67.96	2	3
14. NBT	100	62	3.0	1370	1671	67.96	2	3
15. NBR	100	35	3.0	220	1583	67.96	2	3
16. SBL	100	83	3.0	170	1823	67.96	2	3
17. SBT	100	83	3.0	570	1737	67.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-198.0	34.0	5.9
2. R2	-116.0	34.0	5.9
3. R3	-34.0	34.0	5.9
4. R4	-34.0	116.0	5.9
5. R5	-34.0	198.0	5.9
6. R6	34.0	198.0	5.9
7. R7	34.0	116.0	5.9
8. R8	34.0	34.0	5.9
9. R9	116.0	34.0	5.9
10. R10	198.0	34.0	5.9
11. R11	210.0	-34.0	5.9
12. R12	128.0	-34.0	5.9
13. R13	46.0	-34.0	5.9
14. R14	46.0	-116.0	5.9
15. R15	46.0	-198.0	5.9
16. R16	-34.0	-210.0	5.9
17. R17	-34.0	-128.0	5.9
18. R18	-34.0	-46.0	5.9
19. R19	-116.0	-46.0	5.9
20. R20	-198.0	-46.0	5.9

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	3.1	3.6	5.6	5.6	5.6	4.2	4.2	4.2	3.1	3.0	4.3	4.3	5.1	4.4	4.4	5.7	5.8	6.9	5.0	4.4
10.	*	3.4	3.9	5.9	5.8	5.8	3.6	3.6	3.6	3.0	3.0	4.3	4.3	4.6	3.9	3.8	6.0	6.0	7.0	5.3	4.7
15.	*	3.5	4.1	5.8	5.8	5.8	3.2	3.3	3.3	3.0	3.0	4.5	4.5	4.5	3.8	3.5	5.7	5.6	6.6	5.5	4.7
20.	*	3.7	4.1	5.6	5.5	5.5	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.5	3.7	3.6	5.4	5.3	6.3	5.5	4.9
25.	*	3.7	4.1	5.5	5.4	5.4	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.5	3.7	3.6	5.5	5.1	5.7	5.5	4.9
30.	*	3.7	3.9	5.3	5.1	5.1	3.1	3.1	3.1	3.0	3.0	4.6	4.6	4.6	3.7	3.6	5.4	5.3	5.2	5.3	4.9
35.	*	3.7	3.9	5.2	5.0	5.0	3.1	3.1	3.1	3.0	3.0	4.6	4.6	4.6	3.8	3.6	5.4	5.3	5.0	5.7	5.1
40.	*	3.6	3.9	5.1	4.9	4.9	3.1	3.1	3.1	3.0	3.0	4.6	4.6	4.6	3.8	3.7	5.3	5.4	5.1	5.5	5.0
45.	*	3.6	3.8	5.1	4.8	4.8	3.1	3.1	3.1	3.0	3.0	4.6	4.6	4.6	3.9	3.7	5.2	5.3	5.0	5.5	5.0
50.	*	3.6	3.7	4.9	4.6	4.6	3.0	3.0	3.0	3.0	3.0	4.8	4.8	4.8	3.9	3.7	5.2	5.3	5.0	5.4	5.0
55.	*	3.5	3.8	4.9	4.6	4.6	3.0	3.0	3.0	3.0	3.0	4.8	4.8	4.8	3.9	3.7	5.2	5.4	5.1	5.5	5.1
60.	*	3.5	3.8	4.9	4.6	4.6	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	4.0	3.7	5.1	5.3	5.4	5.5	5.2
65.	*	3.5	3.8	4.8	4.5	4.5	3.0	3.0	3.0	3.0	3.0	5.1	5.1	5.1	4.0	3.7	5.1	5.4	5.5	5.9	5.5
70.	*	3.6	3.8	4.8	4.5	4.5	3.0	3.0	3.0	3.0	3.0	5.4	5.5	5.5	4.2	3.7	5.1	5.4	5.9	5.6	5.7
75.	*	3.9	4.0	5.0	4.5	4.5	3.0	3.0	3.2	3.2	3.2	5.5	5.5	5.6	4.2	3.6	5.0	5.4	6.1	5.8	5.8
80.	*	4.1	4.5	5.6	4.5	4.5	3.0	3.0	3.8	3.8	3.7	5.6	5.6	5.7	3.9	3.5	4.9	5.3	6.3	5.8	5.7
85.	*	4.6	4.9	6.3	4.7	4.5	3.0	3.1	4.6	4.5	4.5	5.4	5.4	5.4	3.6	3.1	4.5	5.0	6.2	5.7	5.6
90.	*	5.3	5.7	6.9	4.9	4.6	3.1	3.4	5.4	5.4	5.2	4.7	4.8	4.9	3.5	3.0	4.4	4.7	5.8	5.1	5.2
95.	*	5.8	5.8	7.4	5.4	4.8	3.3	3.8	6.1	6.1	6.0	4.1	4.1	4.1	3.1	3.0	4.4	4.5	5.2	4.4	4.6
100.	*	5.6	5.7	7.3	5.7	5.0	3.5	4.1	6.3	6.2	6.1	3.5	3.5	3.5	3.0	3.0	4.4	4.4	4.9	4.1	4.1
105.	*	5.5	5.4	6.9	5.8	5.2	3.7	4.1	6.1	6.1	6.1	3.1	3.1	3.1	3.0	3.0	4.4	4.4	4.5	3.8	3.6
110.	*	5.4	5.2	6.4	5.8	5.3	3.8	4.1	5.8	5.8	5.8	3.1	3.1	3.1	3.0	3.0	4.4	4.4	4.5	3.7	3.6

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 115.  *   5.4   5.1   5.7   5.8   5.2   3.7   4.1   5.6   5.6   5.6   3.0   3.0
3.0   3.0   3.0   4.4   4.4   4.5   3.7   3.6
 120.  *   5.4   5.0   5.3   6.0   5.3   3.7   4.1   5.3   5.3   5.3   3.0   3.0
3.0   3.0   3.0   4.4   4.4   4.4   3.8   3.6
 125.  *   5.3   5.0   5.2   5.9   5.3   3.7   4.0   5.2   5.2   5.2   3.0   3.0
3.0   3.0   3.0   4.5   4.5   4.5   3.8   3.6
 130.  *   5.2   5.2   5.0   5.9   5.3   3.7   4.0   5.1   5.1   5.1   3.0   3.0
3.0   3.0   3.0   4.5   4.5   4.5   3.8   3.6
 135.  *   5.2   5.4   4.8   5.9   5.5   3.8   4.1   5.1   5.0   5.0   3.0   3.0
3.0   3.0   3.0   4.5   4.5   4.5   3.8   3.6
 140.  *   5.0   5.3   4.9   5.8   5.6   3.8   3.9   5.1   5.0   5.0   3.0   3.0
3.0   3.0   3.0   4.7   4.7   4.7   3.9   3.6
 145.  *   5.0   5.3   5.1   5.9   5.7   3.8   3.9   4.9   4.9   4.9   3.0   3.0
3.0   3.0   3.0   4.8   4.8   4.8   3.9   3.6
 150.  *   5.0   5.4   5.3   6.1   5.8   3.8   3.9   4.9   4.8   4.8   3.0   3.0
3.0   3.0   3.0   4.9   4.9   4.9   4.0   3.7
 155.  *   4.9   5.3   5.4   6.1   6.0   3.8   3.9   4.7   4.7   4.7   3.0   3.0
3.0   3.0   3.0   5.1   5.1   5.1   4.0   3.7
 160.  *   4.8   5.3   5.8   6.1   6.3   3.8   3.8   4.8   4.7   4.7   3.0   3.0
3.0   3.0   3.0   5.3   5.3   5.3   4.1   3.7
 165.  *   4.8   5.3   6.2   6.2   6.3   4.0   4.1   4.9   4.7   4.7   3.0   3.0
3.2   3.2   3.2   5.5   5.5   5.6   4.1   3.7
 170.  *   4.6   5.2   6.6   6.4   6.3   4.4   4.7   5.2   4.6   4.6   3.0   3.0
3.5   3.5   3.5   5.6   5.6   5.8   3.9   3.4
 175.  *   4.6   5.0   6.6   6.1   6.1   4.9   5.2   6.0   4.8   4.6   3.0   3.1
4.1   4.0   3.9   5.5   5.5   5.5   3.7   3.3
 180.  *   4.3   4.7   6.1   5.7   5.5   5.8   5.9   6.8   5.2   4.7   3.1   3.4
4.8   4.8   4.7   4.9   4.9   5.1   3.4   3.1
 185.  *   4.2   4.5   5.5   4.8   4.7   6.0   6.2   7.1   5.5   5.0   3.3   3.7
5.4   5.3   5.3   4.2   4.2   4.2   3.2   3.0
 190.  *   4.1   4.2   4.8   4.2   4.2   6.1   6.3   7.0   5.8   5.2   3.5   3.9
5.6   5.5   5.4   3.6   3.6   3.6   3.0   3.0
 195.  *   4.1   4.2   4.3   3.9   3.8   6.1   5.9   6.5   5.7   5.4   3.7   4.2
5.6   5.5   5.5   3.2   3.2   3.2   3.0   3.0
 200.  *   4.1   4.2   4.3   3.8   3.5   5.7   5.7   5.9   5.9   5.4   3.7   4.1
5.4   5.3   5.3   3.1   3.1   3.1   3.0   3.0
 205.  *   4.2   4.4   4.4   3.8   3.5   5.6   5.8   5.5   5.8   5.4   3.7   4.0
5.3   5.1   5.1   3.1   3.1   3.1   3.0   3.0
 210.  *   4.3   4.4   4.4   3.8   3.5   5.4   5.6   5.2   5.8   5.5   3.7   4.0
5.1   4.9   4.9   3.1   3.1   3.1   3.0   3.0
```

PAGE 4

JOB: 108th and Northup RUN: 2030 No Build

```
 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
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 215.  *   4.3   4.3   4.4   3.8   3.5   5.3   5.6   4.9   5.9   5.6   3.7   4.0
5.0   4.8   4.8   3.1   3.1   3.1   3.0   3.0
 220.  *   4.3   4.3   4.4   3.7   3.5   5.1   5.8   5.4   5.9   5.7   3.6   3.8
4.9   4.7   4.7   3.1   3.1   3.1   3.0   3.0
 225.  *   4.5   4.5   4.6   3.8   3.5   5.0   5.8   5.2   5.8   5.6   3.6   3.8
4.8   4.6   4.6   3.1   3.1   3.1   3.0   3.0
 230.  *   4.5   4.5   4.6   3.8   3.5   5.0   5.7   5.2   5.8   5.7   3.6   3.8
4.8   4.6   4.6   3.0   3.0   3.0   3.0   3.0
 235.  *   4.6   4.6   4.7   3.9   3.6   5.1   5.6   5.3   5.9   5.8   3.6   3.8
4.8   4.6   4.6   3.0   3.0   3.0   3.0   3.0
 240.  *   4.7   4.7   4.8   3.9   3.6   4.9   5.4   5.6   5.7   5.9   3.6   3.8
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4.7   4.5   4.5   3.0   3.0   3.0   3.0   3.0
 245.  *   4.9   4.9   5.0   3.9   3.6   4.9   5.4   5.8   6.2   6.1   3.6   3.8
4.6   4.5   4.5   3.0   3.0   3.0   3.0   3.0
 250.  *   5.1   5.1   5.1   3.9   3.6   4.9   5.3   6.4   6.0   6.2   3.7   3.8
4.5   4.5   4.5   3.0   3.0   3.0   3.0   3.0
 255.  *   5.2   5.2   5.2   3.9   3.5   4.8   5.3   6.5   6.3   6.5   3.7   3.9
4.8   4.4   4.4   3.0   3.0   3.0   3.0   3.0
 260.  *   5.2   5.3   5.3   3.7   3.3   4.6   5.2   6.6   6.4   6.7   4.2   4.2
5.1   4.3   4.3   3.0   3.0   3.3   3.3   3.3
 265.  *   4.9   4.9   4.9   3.5   3.1   4.4   4.8   6.4   5.8   6.2   4.6   4.9
5.8   4.3   4.3   3.0   3.0   3.9   3.8   3.7
 270.  *   4.4   4.4   4.4   3.2   3.0   4.3   4.6   5.9   5.3   5.5   5.3   5.3
6.3   4.7   4.3   3.0   3.4   4.5   4.3   4.3
 275.  *   3.8   3.9   3.9   3.0   3.0   4.3   4.3   5.5   4.7   4.8   5.6   5.8
6.6   5.0   4.6   3.0   3.4   5.0   4.8   4.8
 280.  *   3.3   3.3   3.3   3.0   3.0   4.3   4.3   4.9   4.1   3.9   5.7   5.6
6.5   5.1   4.7   3.4   3.8   5.5   5.2   5.1
 285.  *   3.1   3.1   3.1   3.0   3.0   4.3   4.3   4.7   3.8   3.8   5.8   5.4
6.2   5.4   4.9   3.4   3.8   5.5   5.3   5.2
 290.  *   3.0   3.0   3.0   3.0   3.0   4.3   4.3   4.6   3.7   3.7   5.5   5.3
5.4   5.7   5.3   3.6   3.8   5.2   5.1   4.9
 295.  *   3.0   3.0   3.0   3.0   3.0   4.3   4.3   4.6   3.8   3.6   5.6   5.4
5.0   5.5   5.3   3.7   3.8   5.1   5.0   4.8
 300.  *   3.0   3.0   3.0   3.0   3.0   4.3   4.3   4.6   3.8   3.6   5.6   5.4
5.0   5.4   5.2   3.7   3.8   5.1   5.0   4.8
 305.  *   3.0   3.0   3.0   3.0   3.0   4.5   4.5   4.8   3.8   3.6   5.5   5.3
4.8   5.5   5.3   3.7   3.8   4.9   4.9   4.6
 310.  *   3.0   3.0   3.0   3.0   3.0   4.5   4.5   4.9   3.7   3.6   5.3   5.4
4.7   5.5   5.1   3.5   3.9   4.7   4.7   4.4
 315.  *   3.0   3.0   3.0   3.0   3.0   4.5   4.5   4.9   3.8   3.6   5.2   5.4
5.0   5.5   5.2   3.6   4.0   4.8   4.7   4.4
 320.  *   3.0   3.0   3.0   3.0   3.0   4.7   4.7   5.1   3.8   3.6   5.2   5.4
5.0   5.3   5.3   3.5   4.0   4.8   4.7   4.4
 325.  *   3.0   3.0   3.0   3.0   3.0   4.8   4.8   5.2   3.8   3.6   5.2   5.4
5.3   5.3   5.3   3.5   4.0   4.8   4.6   4.4
 330.  *   3.0   3.0   3.0   3.0   3.0   4.9   4.9   5.2   3.9   3.6   5.2   5.3
5.4   5.5   5.4   3.5   4.0   4.5   4.4   4.2
 335.  *   3.0   3.0   3.0   3.0   3.0   5.1   5.1   5.4   4.0   3.7   5.1   5.4
5.8   5.5   5.5   3.6   4.0   4.5   4.4   4.2
 340.  *   3.0   3.0   3.2   3.2   3.1   5.3   5.3   5.5   4.0   3.6   5.1   5.5
5.8   5.7   5.7   3.6   3.9   4.5   4.4   4.2
 345.  *   3.0   3.0   3.3   3.2   3.2   5.5   5.6   5.7   4.0   3.6   5.1   5.3
6.1   5.6   5.9   3.8   4.0   4.7   4.4   4.2
 350.  *   3.0   3.0   3.7   3.7   3.7   5.6   5.6   5.8   3.8   3.4   4.7   5.1
6.1   5.7   5.7   4.2   4.4   5.2   4.4   4.2
 355.  *   3.0   3.1   4.4   4.3   4.3   5.4   5.5   5.5   3.6   3.2   4.5   4.8
5.9   5.5   5.5   4.9   5.0   5.9   4.5   4.2
 360.  *   3.0   3.4   5.1   5.1   5.1   4.9   4.9   4.9   3.2   3.0   4.4   4.6
5.7   5.2   5.0   5.4   5.6   6.5   4.8   4.3
 THE HIGHEST CONCENTRATION OF    7.40 PPM OCCURRED AT RECEPTOR REC3 .
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: 108th and Northup RUN: 2016 Build 4LT

DATE : 8/19/ 4
TIME : 10:53:25

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 108. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 3.0 PPM BRG = 5. DEGREES

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1. EBA	*	-1000.0	-18.0	.0	-18.0	*	1000.	90.	AG	930.	15.0	.0	32.0		
2. EBD	*	.0	-18.0	1000.0	-18.0	*	1000.	90.	AG	560.	15.0	.0	32.0		
3. WBA	*	1000.0	12.0	.0	12.0	*	1000.	270.	AG	1280.	15.0	.0	32.0		
4. WBD	*	.0	12.0	-1000.0	12.0	*	1000.	270.	AG	1140.	15.0	.0	32.0		
5. NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1400.	15.0	.0	32.0		
6. NBD	*	18.0	.0	18.0	1000.0	*	1000.	360.	AG	1160.	15.0	.0	32.0		
7. SBA	*	-12.0	1000.0	-12.0	.0	*	1000.	180.	AG	740.	15.0	.0	44.0		
8. SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	1490.	15.0	.0	44.0		
9. EBL	*	-24.0	-6.0	-656.3	-6.2	*	632.	270.	AG	208.	100.0	.0	12.0	1.35	32.1
10. EBT	*	-24.0	-18.0	-788.2	-18.2	*	764.	270.	AG	208.	100.0	.0	12.0	1.41	38.8
11. EBR	*	-24.0	-30.0	-166.0	-30.0	*	142.	270.	AG	117.	100.0	.0	12.0	.73	7.2
12. WBL	*	36.0	-6.0	961.4	-5.8	*	925.	90.	AG	175.	100.0	.0	12.0	1.17	47.0
13. WBT	*	36.0	12.0	699.3	12.2	*	663.	90.	AG	349.	100.0	.0	24.0	1.12	33.7
14. NBT	*	12.0	-36.0	12.0	-984.3	*	948.	180.	AG	302.	100.0	.0	24.0	1.12	48.2
15. NBR	*	30.0	-36.0	30.0	-74.3	*	38.	180.	AG	84.	100.0	.0	12.0	.21	1.9
16. SBL	*	6.0	24.0	6.0	90.4	*	66.	360.	AG	194.	100.0	.0	12.0	.59	3.4
17. SBT	*	-12.0	24.0	-12.0	735.1	*	711.	360.	AG	388.	100.0	.0	24.0	1.21	36.1

JOB: 108th and Northup RUN: 2016 Build 4LT

DATE : 8/19/ 4
TIME : 10:53:25

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. EBL	100	87	3.0	190	1770	89.24	2	3
10. EBT	100	87	3.0	210	1863	89.24	2	3
11. EBR	100	49	3.0	530	1583	89.24	2	3
12. WBL	100	73	3.0	460	1787	89.24	2	3
13. WBT	100	73	3.0	820	1669	89.24	2	3
14. NBT	100	63	3.0	1200	1671	89.24	2	3
15. NBR	100	35	3.0	200	1583	89.24	2	3
16. SBL	100	81	3.0	150	1823	89.24	2	3
17. SBT	100	81	3.0	590	1738	89.24	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-198.0	34.0	5.9
2. R2	-116.0	34.0	5.9
3. R3	-34.0	34.0	5.9
4. R4	-34.0	116.0	5.9
5. R5	-34.0	198.0	5.9
6. R6	34.0	198.0	5.9
7. R7	34.0	116.0	5.9
8. R8	34.0	34.0	5.9
9. R9	116.0	34.0	5.9
10. R10	198.0	34.0	5.9
11. R11	210.0	-34.0	5.9
12. R12	128.0	-34.0	5.9
13. R13	46.0	-34.0	5.9
14. R14	46.0	-116.0	5.9
15. R15	46.0	-198.0	5.9
16. R16	-34.0	-210.0	5.9
17. R17	-34.0	-128.0	5.9
18. R18	-34.0	-46.0	5.9
19. R19	-116.0	-46.0	5.9
20. R20	-198.0	-46.0	5.9

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	3.2	3.7	6.4	6.2	6.2	4.3	4.3	4.5	3.1	3.0	4.8	4.8	5.6	4.7	4.6	6.6	6.6	8.0	5.6	4.8
10.	*	3.4	3.9	6.7	6.6	6.6	3.7	3.8	3.8	3.0	3.0	4.8	4.8	5.1	4.2	4.0	6.7	6.6	7.9	5.9	4.9
15.	*	3.6	4.2	6.5	6.5	6.5	3.3	3.3	3.3	3.0	3.0	4.8	4.8	4.9	4.0	3.7	6.4	6.3	7.7	6.1	5.1
20.	*	3.8	4.2	6.3	6.3	6.2	3.2	3.2	3.2	3.0	3.0	4.8	4.8	4.8	3.9	3.7	6.5	6.1	7.0	6.1	5.3
25.	*	3.9	4.2	6.0	5.9	5.9	3.1	3.1	3.1	3.0	3.0	4.9	4.9	4.9	4.0	3.7	6.2	6.0	6.4	6.1	5.5
30.	*	3.9	4.2	5.9	5.7	5.7	3.1	3.1	3.1	3.0	3.0	4.9	4.9	4.9	4.0	3.7	6.2	5.7	5.9	6.1	5.5
35.	*	3.8	4.1	5.7	5.5	5.5	3.1	3.1	3.1	3.0	3.0	5.0	5.0	5.0	4.0	3.7	6.0	6.0	5.7	6.2	5.4
40.	*	3.7	4.1	5.7	5.4	5.4	3.1	3.1	3.1	3.0	3.0	5.0	5.0	5.0	4.0	3.8	5.8	6.1	5.6	6.4	5.5
45.	*	3.7	4.0	5.5	5.2	5.2	3.1	3.1	3.1	3.0	3.0	5.1	5.1	5.1	4.1	3.9	5.9	6.2	5.6	6.2	5.5
50.	*	3.7	3.9	5.5	5.1	5.1	3.1	3.1	3.1	3.0	3.0	5.3	5.3	5.3	4.1	3.9	5.9	6.2	5.7	6.2	5.7
55.	*	3.7	3.9	5.5	5.1	5.1	3.0	3.0	3.0	3.0	3.0	5.3	5.3	5.3	4.2	3.9	5.8	6.0	5.7	6.1	5.9
60.	*	3.7	4.0	5.4	5.0	5.0	3.0	3.0	3.0	3.0	3.0	5.5	5.5	5.5	4.2	3.9	5.8	6.1	6.1	6.2	6.2
65.	*	3.7	4.0	5.4	5.0	5.0	3.0	3.0	3.0	3.0	3.0	5.7	5.7	5.7	4.4	3.8	5.6	6.1	6.3	6.6	6.1
70.	*	3.7	4.0	5.2	4.9	4.9	3.0	3.0	3.2	3.2	3.2	6.0	6.0	6.0	4.3	3.8	5.6	6.1	6.6	6.4	6.6
75.	*	4.1	4.3	5.3	4.8	4.8	3.0	3.0	3.3	3.3	3.2	6.2	6.2	6.3	4.3	3.6	5.3	5.9	7.0	6.7	6.9
80.	*	4.3	4.8	6.0	4.8	4.8	3.0	3.0	3.8	3.8	3.8	6.1	6.2	6.2	4.0	3.4	5.1	5.7	7.0	6.6	7.1
85.	*	5.0	5.6	6.9	5.1	4.9	3.0	3.2	4.8	4.7	4.7	5.7	5.7	5.8	3.7	3.2	4.9	5.4	6.7	6.1	6.3
90.	*	5.7	6.3	7.9	5.4	4.9	3.0	3.3	6.0	5.7	5.7	5.0	5.0	5.1	3.4	3.0	4.8	5.2	6.3	5.6	5.6
95.	*	6.5	6.5	8.6	5.8	5.2	3.2	3.8	6.7	6.6	6.6	4.1	4.2	4.3	3.0	3.0	4.7	4.7	5.6	4.9	4.7
100.	*	6.4	6.6	8.5	6.0	5.4	3.4	4.2	7.2	7.0	7.0	3.6	3.6	3.6	3.0	3.0	4.7	4.7	5.2	4.3	4.2
105.	*	6.1	5.8	7.8	6.2	5.5	3.6	4.4	7.0	6.9	6.9	3.1	3.1	3.1	3.0	3.0	4.7	4.7	4.8	3.9	3.7
110.	*	6.0	5.9	7.1	6.4	5.9	3.9	4.4	6.7	6.7	6.7	3.1	3.1	3.1	3.0	3.0	4.8	4.8	4.9	3.8	3.7

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 115.  *   6.0   5.4   6.6   6.4   6.0   4.0   4.3   6.4   6.4   6.4   3.0   3.0
3.0   3.0   3.0   4.8   4.8   4.9   4.0   3.8
 120.  *   6.0   5.7   5.9   6.5   6.0   4.0   4.3   6.0   6.0   6.0   3.0   3.0
3.0   3.0   3.0   4.9   4.9   4.9   4.0   3.8
 125.  *   6.0   5.7   5.3   6.5   6.0   3.9   4.2   5.8   5.8   5.8   3.0   3.0
3.0   3.0   3.0   4.9   4.9   5.0   4.1   3.8
 130.  *   5.9   5.8   5.5   6.5   6.0   4.0   4.3   5.8   5.7   5.7   3.0   3.0
3.0   3.0   3.0   5.0   5.0   5.0   4.1   3.8
 135.  *   5.8   6.0   5.3   6.5   6.1   4.0   4.2   5.6   5.5   5.6   3.0   3.0
3.0   3.0   3.0   5.1   5.1   5.1   4.1   3.8
 140.  *   5.7   5.9   5.3   6.6   6.2   3.9   4.2   5.4   5.4   5.4   3.0   3.0
3.0   3.0   3.0   5.3   5.3   5.3   4.1   3.8
 145.  *   5.5   5.9   5.7   6.6   6.1   3.9   4.2   5.4   5.4   5.4   3.0   3.0
3.0   3.0   3.0   5.4   5.4   5.4   4.1   3.8
 150.  *   5.6   6.1   5.8   6.7   6.4   3.8   4.2   5.2   5.2   5.2   3.0   3.0
3.0   3.0   3.0   5.5   5.5   5.5   4.3   3.8
 155.  *   5.6   6.1   6.1   6.9   6.7   3.8   4.2   5.2   5.2   5.2   3.0   3.0
3.0   3.0   3.0   5.7   5.7   5.7   4.4   4.0
 160.  *   5.4   6.1   6.8   6.9   7.0   3.8   4.1   5.2   5.1   5.1   3.0   3.0
3.0   3.0   3.0   6.1   6.1   6.1   4.4   3.8
 165.  *   5.3   6.1   7.1   7.1   7.4   4.1   4.4   5.3   5.1   5.1   3.0   3.0
3.2   3.2   3.2   6.3   6.3   6.4   4.3   3.8
 170.  *   5.0   5.9   7.5   7.4   7.3   4.6   4.9   5.8   5.1   5.1   3.0   3.0
3.5   3.5   3.5   6.4   6.4   6.4   4.1   3.5
 175.  *   4.8   5.5   7.5   6.8   7.1   5.5   5.8   6.8   5.3   5.1   3.0   3.2
4.2   4.2   4.2   6.1   6.2   6.2   3.8   3.3
 180.  *   4.5   5.1   7.0   6.3   6.4   6.4   6.7   7.6   5.6   5.2   3.0   3.4
5.1   5.0   5.0   5.4   5.4   5.5   3.4   3.0
 185.  *   4.5   4.9   6.0   5.5   5.2   6.7   6.8   8.0   6.0   5.4   3.3   3.8
5.8   5.7   5.7   4.5   4.5   4.5   3.1   3.0
 190.  *   4.5   4.7   5.5   4.7   4.4   6.8   7.1   7.9   6.4   5.7   3.5   4.2
6.3   6.1   6.1   3.8   3.8   3.8   3.0   3.0
 195.  *   4.5   4.7   5.0   4.1   3.9   6.8   6.6   7.4   6.6   5.9   3.7   4.3
6.3   6.2   6.2   3.3   3.3   3.3   3.0   3.0
 200.  *   4.5   4.7   4.8   4.0   3.9   6.3   6.3   6.6   6.6   6.1   4.0   4.3
6.1   5.9   5.9   3.2   3.2   3.2   3.0   3.0
 205.  *   4.5   4.6   4.7   4.0   3.9   6.1   6.4   6.2   6.6   6.2   4.0   4.3
5.9   5.7   5.7   3.1   3.1   3.1   3.0   3.0
 210.  *   4.6   4.7   4.8   4.0   3.7   6.0   6.2   5.7   6.5   6.2   4.0   4.3
5.7   5.5   5.5   3.1   3.1   3.1   3.0   3.0
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JOB: 108th and Northup RUN: 2016 Build 4LT

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
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 215.  *   4.6   4.7   4.8   4.0   3.7   5.9   6.3   5.9   6.7   6.4   3.9   4.3
5.6   5.3   5.3   3.1   3.1   3.1   3.0   3.0
 220.  *   4.7   4.8   4.9   4.0   3.7   5.9   6.3   5.6   6.6   6.4   3.8   4.0
5.6   5.3   5.3   3.1   3.1   3.1   3.0   3.0
 225.  *   4.8   4.8   5.0   3.9   3.7   5.6   6.2   5.6   6.5   6.3   3.7   4.0
5.4   5.1   5.1   3.1   3.1   3.1   3.0   3.0
 230.  *   5.0   5.0   5.2   3.9   3.8   5.7   6.0   5.6   6.5   6.4   3.7   4.0
5.2   5.0   5.0   3.1   3.1   3.1   3.0   3.0
 235.  *   5.0   5.0   5.2   4.0   3.8   5.6   6.0   6.0   6.5   6.5   3.7   4.0
5.2   5.0   5.0   3.1   3.1   3.1   3.0   3.0
 240.  *   5.1   5.1   5.2   4.1   3.8   5.5   5.9   6.4   6.8   6.6   3.7   4.0
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5.0   4.9   4.9   3.0   3.0   3.0   3.0   3.0
 245.  *   5.3   5.4   5.5   4.1   3.8   5.5   5.8   6.5   6.8   6.9   3.7   4.0
5.0   4.9   4.9   3.0   3.0   3.0   3.0   3.0
 250.  *   5.6   5.6   5.7   4.2   3.7   5.5   5.9   7.0   6.8   7.2   3.8   4.2
5.1   4.9   4.9   3.0   3.0   3.0   3.0   3.0
 255.  *   5.7   5.7   5.7   4.0   3.5   5.2   5.9   7.4   7.2   7.4   4.0   4.3
5.3   4.8   4.8   3.0   3.0   3.1   3.1   3.1
 260.  *   5.6   5.7   5.8   3.9   3.3   5.2   5.6   7.6   7.1   7.3   4.2   4.9
5.7   4.8   4.8   3.0   3.0   3.6   3.5   3.3
 265.  *   5.2   5.4   5.4   3.5   3.1   4.8   5.2   7.3   6.6   7.0   5.1   5.5
6.4   4.9   4.8   3.0   3.0   4.1   3.9   3.8
 270.  *   4.6   4.7   4.8   3.2   3.0   4.7   5.1   6.9   5.8   6.1   5.7   6.1
7.3   5.2   4.8   3.0   3.3   4.8   4.7   4.6
 275.  *   3.8   3.9   4.0   3.1   3.0   4.7   4.8   6.1   5.3   5.3   6.1   6.2
7.7   5.5   5.1   3.1   3.6   5.6   5.4   5.2
 280.  *   3.4   3.5   3.6   3.0   3.0   4.7   4.7   5.7   4.8   4.6   6.4   6.5
7.6   5.9   5.2   3.3   3.8   6.1   5.9   5.5
 285.  *   3.1   3.1   3.1   3.0   3.0   4.7   4.7   5.2   4.2   4.0   6.5   5.9
6.8   6.1   5.5   3.6   4.1   6.2   5.8   5.6
 290.  *   3.0   3.0   3.0   3.0   3.0   4.7   4.7   5.1   3.9   3.8   6.2   5.8
6.2   6.2   5.7   3.7   4.2   6.0   5.8   5.5
 295.  *   3.0   3.0   3.0   3.0   3.0   4.7   4.7   5.1   4.1   3.7   6.3   6.0
5.6   6.2   5.7   3.8   4.2   5.9   5.8   5.3
 300.  *   3.0   3.0   3.0   3.0   3.0   4.7   4.7   5.1   4.1   3.7   6.1   5.7
5.5   6.2   5.7   3.8   4.2   5.7   5.6   5.2
 305.  *   3.0   3.0   3.0   3.0   3.0   4.8   4.8   5.2   4.0   3.7   6.0   6.0
5.3   6.3   5.8   3.9   4.3   5.5   5.4   5.0
 310.  *   3.0   3.0   3.0   3.0   3.0   4.9   4.9   5.4   4.0   3.7   6.0   6.2
5.2   6.2   5.9   3.9   4.1   5.4   5.3   4.9
 315.  *   3.0   3.0   3.0   3.0   3.0   4.9   4.9   5.4   4.0   3.7   5.8   6.2
5.3   5.9   5.9   3.9   4.1   5.3   5.2   4.8
 320.  *   3.0   3.0   3.0   3.0   3.0   5.1   5.1   5.5   4.0   3.7   5.7   6.1
5.5   6.0   6.2   3.9   4.0   5.3   5.2   4.8
 325.  *   3.0   3.0   3.0   3.0   3.0   5.2   5.2   5.6   4.1   3.7   5.7   5.9
5.9   6.0   6.1   3.9   4.0   5.2   5.1   4.7
 330.  *   3.0   3.0   3.0   3.0   3.0   5.4   5.4   5.7   4.1   3.7   5.6   6.0
6.1   6.0   6.1   3.9   4.0   5.0   4.9   4.6
 335.  *   3.0   3.0   3.1   3.1   3.1   5.6   5.6   5.9   4.2   3.7   5.6   6.0
6.3   6.2   6.2   3.9   4.0   5.0   4.9   4.6
 340.  *   3.0   3.0   3.2   3.2   3.2   5.8   5.8   6.0   4.2   3.6   5.4   6.0
6.8   6.2   6.2   3.9   4.0   5.0   4.8   4.5
 345.  *   3.0   3.0   3.4   3.4   3.4   6.1   6.2   6.3   4.1   3.5   5.3   5.9
6.9   6.3   6.5   4.0   4.3   5.2   4.8   4.5
 350.  *   3.0   3.0   3.9   3.9   3.8   6.1   6.1   6.4   3.9   3.3   5.1   5.7
6.9   6.5   6.4   4.5   4.7   5.8   4.8   4.5
 355.  *   3.0   3.1   4.7   4.6   4.6   5.8   5.9   5.9   3.5   3.1   4.9   5.3
6.7   5.9   6.0   5.1   5.6   6.5   4.9   4.5
 360.  *   3.0   3.4   5.6   5.5   5.4   5.2   5.2   5.3   3.3   3.0   4.8   5.1
6.0   5.4   5.4   6.0   6.4   7.4   5.2   4.5
 THE HIGHEST CONCENTRATION OF    8.60 PPM OCCURRED AT RECEPTOR REC3 .
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: 108th and Northup RUN: 2030 Build 4LT

DATE : 8/19/ 4
TIME : 9:22:59

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 108. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 3.0 PPM BRG = 5. DEGREES

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1. EBA	*	-1000.0	-18.0	.0	-18.0	*	1000.	90.	AG	1050.	11.2	.0	32.0		
2. EBD	*	.0	-18.0	1000.0	-18.0	*	1000.	90.	AG	580.	11.2	.0	32.0		
3. WBA	*	1000.0	12.0	.0	12.0	*	1000.	270.	AG	1430.	11.2	.0	32.0		
4. WBD	*	.0	12.0	-1000.0	12.0	*	1000.	270.	AG	1200.	11.2	.0	32.0		
5. NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1440.	11.2	.0	32.0		
6. NBD	*	18.0	.0	18.0	1000.0	*	1000.	360.	AG	1220.	11.2	.0	32.0		
7. SBA	*	-12.0	1000.0	-12.0	.0	*	1000.	180.	AG	840.	11.2	.0	44.0		
8. SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	1760.	11.2	.0	44.0		
9. EBL	*	-24.0	-6.0	-762.7	-6.2	*	739.	270.	AG	159.	100.0	.0	12.0	1.42	37.5
10. EBT	*	-24.0	-18.0	-894.5	-18.2	*	870.	270.	AG	159.	100.0	.0	12.0	1.48	44.2
11. EBR	*	-24.0	-30.0	-209.5	-30.0	*	185.	270.	AG	91.	100.0	.0	12.0	.88	9.4
12. WBL	*	36.0	-6.0	1612.6	-5.6	*	1577.	90.	AG	131.	100.0	.0	12.0	1.31	80.1
13. WBT	*	36.0	12.0	902.5	12.2	*	866.	90.	AG	262.	100.0	.0	24.0	1.16	44.0
14. NBT	*	12.0	-36.0	12.0	-1353.4	*	1317.	180.	AG	233.	100.0	.0	24.0	1.20	66.9
15. NBR	*	30.0	-36.0	30.0	-74.3	*	38.	180.	AG	64.	100.0	.0	12.0	.21	1.9
16. SBL	*	6.0	24.0	6.0	94.9	*	71.	360.	AG	148.	100.0	.0	12.0	.63	3.6
17. SBT	*	-12.0	24.0	-12.0	1198.4	*	1174.	360.	AG	295.	100.0	.0	24.0	1.39	59.7

JOB: 108th and Northup RUN: 2030 Build 4LT

DATE : 8/19/ 4
TIME : 9:22:59

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. EBL	100	87	3.0	200	1770	67.96	2	3
10. EBT	100	87	3.0	220	1863	67.96	2	3
11. EBR	100	50	3.0	630	1583	67.96	2	3
12. WBL	100	72	3.0	540	1787	67.96	2	3
13. WBT	100	72	3.0	890	1669	67.96	2	3
14. NBT	100	64	3.0	1240	1671	67.96	2	3
15. NBR	100	35	3.0	200	1583	67.96	2	3
16. SBL	100	81	3.0	160	1823	67.96	2	3
17. SBT	100	81	3.0	680	1744	67.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-198.0	34.0	5.9
2. R2	-116.0	34.0	5.9
3. R3	-34.0	34.0	5.9
4. R4	-34.0	116.0	5.9
5. R5	-34.0	198.0	5.9
6. R6	34.0	198.0	5.9
7. R7	34.0	116.0	5.9
8. R8	34.0	34.0	5.9
9. R9	116.0	34.0	5.9
10. R10	198.0	34.0	5.9
11. R11	210.0	-34.0	5.9
12. R12	128.0	-34.0	5.9
13. R13	46.0	-34.0	5.9
14. R14	46.0	-116.0	5.9
15. R15	46.0	-198.0	5.9
16. R16	-34.0	-210.0	5.9
17. R17	-34.0	-128.0	5.9
18. R18	-34.0	-46.0	5.9
19. R19	-116.0	-46.0	5.9
20. R20	-198.0	-46.0	5.9

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	3.2	3.6	5.8	5.7	5.7	4.1	4.2	4.2	3.1	3.0	4.4	4.5	5.1	4.4	4.3	6.0	6.0	7.1	5.1	4.8
10.	*	3.5	4.0	5.9	5.9	5.8	3.5	3.6	3.7	3.0	3.0	4.4	4.4	4.7	3.9	3.8	6.2	6.0	7.2	5.5	5.0
15.	*	3.6	4.0	5.9	5.9	5.9	3.2	3.2	3.2	3.0	3.0	4.5	4.5	4.5	3.7	3.5	5.7	5.7	6.6	5.5	5.1
20.	*	3.7	4.0	5.5	5.5	5.5	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.5	3.7	3.6	5.6	5.4	6.2	5.5	5.2
25.	*	3.7	4.0	5.4	5.3	5.3	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.5	3.7	3.6	5.6	5.4	5.8	5.5	5.2
30.	*	3.7	3.9	5.3	5.2	5.2	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.5	3.7	3.6	5.5	5.4	5.4	5.6	5.4
35.	*	3.6	3.9	5.2	5.0	5.0	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.5	3.7	3.6	5.5	5.5	5.2	5.6	5.3
40.	*	3.5	3.9	5.0	4.8	4.8	3.0	3.0	3.0	3.0	3.0	4.6	4.6	4.6	3.8	3.7	5.4	5.5	5.1	5.6	5.2
45.	*	3.5	3.8	5.1	4.8	4.8	3.0	3.0	3.0	3.0	3.0	4.6	4.6	4.6	3.9	3.7	5.5	5.5	5.1	5.6	5.2
50.	*	3.5	3.8	5.0	4.7	4.7	3.0	3.0	3.0	3.0	3.0	4.7	4.7	4.7	3.9	3.7	5.3	5.4	5.1	5.4	5.2
55.	*	3.5	3.8	4.9	4.6	4.6	3.0	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.0	3.7	5.3	5.4	5.3	5.6	5.4
60.	*	3.5	3.8	4.9	4.5	4.5	3.0	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.0	3.7	5.3	5.6	5.5	5.4	5.6
65.	*	3.5	3.8	4.8	4.5	4.5	3.0	3.0	3.0	3.0	3.0	5.1	5.1	5.1	4.0	3.7	5.2	5.5	5.6	5.9	5.8
70.	*	3.5	3.8	4.8	4.5	4.5	3.0	3.0	3.0	3.0	3.0	5.4	5.4	5.4	4.0	3.8	5.3	5.4	5.9	5.7	6.0
75.	*	3.8	4.0	5.0	4.4	4.4	3.0	3.0	3.2	3.2	3.2	5.5	5.5	5.5	4.0	3.7	5.1	5.4	6.2	5.9	6.2
80.	*	4.1	4.5	5.4	4.4	4.4	3.0	3.0	3.8	3.7	3.7	5.5	5.7	5.7	3.8	3.4	4.8	5.2	6.2	6.1	5.9
85.	*	4.7	5.0	6.1	4.7	4.5	3.0	3.1	4.5	4.5	4.5	5.2	5.3	5.4	3.7	3.2	4.6	5.0	6.0	5.7	5.8
90.	*	5.3	5.5	6.8	4.9	4.5	3.0	3.4	5.3	5.3	5.3	4.7	4.8	4.8	3.4	3.0	4.5	4.8	5.8	5.1	5.2
95.	*	5.7	5.9	7.3	5.3	4.8	3.3	3.8	6.0	6.0	6.0	4.0	4.1	4.1	3.0	3.0	4.4	4.4	5.1	4.6	4.5
100.	*	5.7	5.6	7.2	5.4	4.8	3.4	4.0	6.3	6.2	6.2	3.5	3.5	3.5	3.0	3.0	4.4	4.4	4.9	4.1	4.0
105.	*	5.4	5.4	6.8	5.5	5.2	3.7	4.1	6.1	6.1	6.1	3.1	3.1	3.1	3.0	3.0	4.4	4.4	4.5	3.8	3.5
110.	*	5.4	5.1	6.2	5.7	5.3	3.7	4.1	5.8	5.8	5.8	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.6	3.8	3.6

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 115.  *   5.3   5.0   5.6   5.7   5.2   3.7   4.1   5.6   5.6   5.6   3.0   3.0
3.0   3.0   3.0   4.5   4.5   4.5   3.8   3.6
 120.  *   5.3   5.2   5.2   5.8   5.2   3.7   4.1   5.4   5.4   5.4   3.0   3.0
3.0   3.0   3.0   4.6   4.6   4.6   3.8   3.6
 125.  *   5.3   5.2   5.1   5.8   5.3   3.7   4.0   5.2   5.2   5.2   3.0   3.0
3.0   3.0   3.0   4.6   4.6   4.6   3.8   3.6
 130.  *   5.1   5.2   4.8   5.9   5.4   3.7   4.0   5.1   5.1   5.1   3.0   3.0
3.0   3.0   3.0   4.6   4.6   4.6   3.8   3.6
 135.  *   5.1   5.3   4.8   5.8   5.5   3.7   4.0   5.0   5.0   5.0   3.0   3.0
3.0   3.0   3.0   4.8   4.8   4.8   3.8   3.6
 140.  *   5.2   5.4   5.0   5.8   5.5   3.7   3.9   4.9   4.9   4.9   3.0   3.0
3.0   3.0   3.0   4.8   4.8   4.8   3.9   3.7
 145.  *   5.3   5.4   5.2   5.8   5.6   3.8   3.9   4.8   4.9   4.9   3.0   3.0
3.0   3.0   3.0   4.9   4.9   4.9   3.9   3.8
 150.  *   5.2   5.5   5.2   6.0   5.8   3.8   3.9   4.7   4.6   4.6   3.0   3.0
3.0   3.0   3.0   5.2   5.2   5.2   4.1   3.8
 155.  *   5.2   5.5   5.5   6.1   6.0   3.8   3.9   4.6   4.6   4.6   3.0   3.0
3.0   3.0   3.0   5.3   5.3   5.3   4.1   3.8
 160.  *   5.1   5.4   6.0   6.1   6.1   3.8   3.8   4.7   4.6   4.6   3.0   3.0
3.0   3.0   3.0   5.5   5.5   5.5   4.1   3.8
 165.  *   5.1   5.4   6.4   6.4   6.2   4.0   4.0   4.8   4.6   4.6   3.0   3.0
3.2   3.2   3.2   5.8   5.8   5.8   4.1   3.6
 170.  *   4.7   5.2   6.8   6.4   6.4   4.4   4.5   5.2   4.6   4.6   3.0   3.0
3.5   3.5   3.5   5.8   5.8   5.9   4.0   3.5
 175.  *   4.5   5.0   6.8   6.4   6.2   5.1   5.2   6.0   4.8   4.6   3.0   3.1
4.0   4.0   4.0   5.6   5.7   5.8   3.7   3.2
 180.  *   4.3   4.7   6.1   5.7   5.7   5.5   6.0   6.8   5.0   4.7   3.1   3.4
4.7   4.7   4.6   5.1   5.1   5.2   3.5   3.0
 185.  *   4.2   4.4   5.5   4.9   4.9   5.9   6.2   7.1   5.4   5.0   3.3   3.7
5.4   5.3   5.2   4.3   4.4   4.4   3.2   3.0
 190.  *   4.2   4.2   4.9   4.3   4.2   6.0   6.3   7.0   5.7   5.1   3.4   4.0
5.8   5.6   5.5   3.7   3.7   3.7   3.0   3.0
 195.  *   4.2   4.3   4.5   3.9   3.8   6.0   5.8   6.5   5.8   5.3   3.7   4.1
5.7   5.6   5.5   3.3   3.3   3.3   3.0   3.0
 200.  *   4.2   4.3   4.4   3.8   3.6   5.8   5.9   5.8   5.9   5.4   3.7   4.1
5.5   5.3   5.3   3.2   3.2   3.2   3.0   3.0
 205.  *   4.3   4.4   4.4   3.8   3.5   5.5   5.7   5.5   5.7   5.4   3.7   4.0
5.3   5.1   5.1   3.1   3.1   3.1   3.0   3.0
 210.  *   4.3   4.4   4.4   3.9   3.5   5.3   5.6   5.3   5.7   5.4   3.7   4.0
5.3   5.1   5.1   3.1   3.1   3.1   3.0   3.0
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JOB: 108th and Northup RUN: 2030 Build 4LT

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

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 215.  *   4.4   4.5   4.5   3.9   3.4   5.3   5.6   5.0   5.9   5.6   3.7   4.0
5.0   4.8   4.8   3.1   3.1   3.1   3.0   3.0
 220.  *   4.4   4.5   4.5   3.9   3.5   5.2   5.8   5.2   5.8   5.6   3.7   3.9
5.0   4.8   4.8   3.1   3.1   3.1   3.0   3.0
 225.  *   4.4   4.5   4.5   3.9   3.5   5.1   5.8   5.2   5.9   5.7   3.6   3.9
5.0   4.8   4.8   3.1   3.1   3.1   3.0   3.0
 230.  *   4.4   4.5   4.5   3.8   3.5   5.0   5.5   5.4   5.9   5.7   3.6   3.8
4.8   4.6   4.6   3.1   3.1   3.1   3.0   3.0
 235.  *   4.6   4.7   4.8   3.8   3.5   4.9   5.5   5.2   5.8   5.8   3.6   3.8
4.8   4.6   4.6   3.0   3.0   3.0   3.0   3.0
 240.  *   4.6   4.7   4.7   3.9   3.7   5.0   5.3   5.9   5.9   5.9   3.6   3.8
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4.8   4.6   4.6   3.0   3.0   3.0   3.0   3.0
 245.  *   4.9   4.9   5.0   3.9   3.6   5.0   5.3   5.9   6.1   6.2   3.6   3.8
4.7   4.5   4.5   3.0   3.0   3.0   3.0   3.0
 250.  *   5.1   5.1   5.2   3.9   3.5   4.8   5.1   6.2   6.1   6.3   3.7   3.7
4.5   4.5   4.5   3.0   3.0   3.0   3.0   3.0
 255.  *   5.2   5.2   5.3   3.9   3.5   4.7   5.1   6.4   6.3   6.5   3.7   4.1
4.7   4.4   4.4   3.0   3.0   3.0   3.0   3.0
 260.  *   5.1   5.2   5.2   3.8   3.3   4.7   5.2   6.6   6.4   6.6   4.1   4.5
5.2   4.4   4.4   3.0   3.0   3.4   3.3   3.3
 265.  *   4.8   4.8   4.8   3.5   3.1   4.4   4.8   6.5   5.9   6.1   4.6   4.9
5.8   4.5   4.5   3.0   3.0   4.0   3.9   3.7
 270.  *   4.2   4.4   4.4   3.2   3.0   4.3   4.7   5.8   5.3   5.3   5.3   5.3
6.5   4.9   4.5   3.0   3.3   4.6   4.4   4.2
 275.  *   3.7   3.7   3.8   3.0   3.0   4.3   4.3   5.4   4.7   4.6   5.6   5.7
6.6   5.1   4.7   3.0   3.4   5.3   5.1   4.8
 280.  *   3.3   3.3   3.3   3.0   3.0   4.3   4.3   4.9   4.3   4.0   5.6   5.5
6.4   5.2   4.8   3.4   3.8   5.5   5.4   5.0
 285.  *   3.1   3.1   3.1   3.0   3.0   4.2   4.2   4.6   3.8   3.7   5.6   5.3
6.0   5.5   4.9   3.4   3.8   5.5   5.4   5.1
 290.  *   3.0   3.0   3.0   3.0   3.0   4.3   4.3   4.6   3.7   3.5   5.5   5.2
5.4   5.6   5.3   3.6   3.8   5.5   5.4   5.0
 295.  *   3.0   3.0   3.0   3.0   3.0   4.3   4.3   4.6   3.8   3.5   5.6   5.2
5.0   5.5   5.3   3.7   3.8   5.2   5.2   4.8
 300.  *   3.0   3.0   3.0   3.0   3.0   4.3   4.3   4.6   3.8   3.5   5.5   5.3
5.0   5.5   5.4   3.8   3.9   5.2   5.1   4.8
 305.  *   3.0   3.0   3.0   3.0   3.0   4.4   4.4   4.7   3.7   3.5   5.3   5.2
4.8   5.5   5.5   3.6   3.9   4.8   4.8   4.5
 310.  *   3.0   3.0   3.0   3.0   3.0   4.5   4.5   4.8   3.7   3.6   5.2   5.3
4.8   5.5   5.3   3.5   4.0   4.8   4.7   4.5
 315.  *   3.0   3.0   3.0   3.0   3.0   4.6   4.6   5.0   3.7   3.6   5.2   5.4
5.0   5.5   5.3   3.5   4.0   4.8   4.7   4.5
 320.  *   3.0   3.0   3.0   3.0   3.0   4.6   4.6   4.9   3.8   3.6   5.2   5.4
4.9   5.3   5.3   3.6   4.0   4.8   4.7   4.5
 325.  *   3.0   3.0   3.0   3.0   3.0   4.8   4.8   5.1   3.9   3.6   5.1   5.3
5.1   5.4   5.3   3.6   4.0   4.8   4.7   4.6
 330.  *   3.0   3.0   3.0   3.0   3.0   4.8   4.8   5.1   4.0   3.6   5.1   5.2
5.3   5.4   5.4   3.6   4.0   4.8   4.7   4.6
 335.  *   3.0   3.0   3.0   3.0   3.0   5.0   5.0   5.2   4.0   3.7   5.1   5.5
5.7   5.6   5.5   3.6   4.0   4.6   4.5   4.4
 340.  *   3.0   3.0   3.2   3.2   3.2   5.3   5.3   5.5   4.0   3.7   5.1   5.5
5.8   5.7   5.7   3.6   4.0   4.6   4.5   4.4
 345.  *   3.0   3.0   3.3   3.3   3.2   5.5   5.5   5.7   4.0   3.6   5.1   5.4
6.2   5.6   5.9   3.8   4.2   4.8   4.5   4.4
 350.  *   3.0   3.0   3.8   3.7   3.6   5.6   5.7   5.8   3.9   3.4   4.8   5.1
6.1   5.7   5.8   4.3   4.6   5.4   4.5   4.4
 355.  *   3.0   3.1   4.4   4.3   4.3   5.3   5.4   5.4   3.6   3.2   4.6   5.0
6.1   5.6   5.5   4.9   5.2   6.0   4.6   4.4
 360.  *   3.1   3.4   5.2   5.2   5.1   4.8   4.9   4.9   3.3   3.0   4.4   4.7
5.6   4.9   5.0   5.6   5.8   6.6   5.0   4.6
 THE HIGHEST CONCENTRATION OF    7.30 PPM OCCURRED AT RECEPTOR REC3 .
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: 108th and Northup RUN: 2016 Build 6LT

DATE : 8/19/ 4
TIME : 9:23:14

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 108. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 3.0 PPM BRG = 5. DEGREES

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1. EBA	*	-1000.0	-18.0	.0	-18.0	*	1000.	90.	AG	940.	15.0	.0	32.0		
2. EBD	*	.0	-18.0	1000.0	-18.0	*	1000.	90.	AG	590.	15.0	.0	32.0		
3. WBA	*	1000.0	12.0	.0	12.0	*	1000.	270.	AG	1300.	15.0	.0	32.0		
4. WBD	*	.0	12.0	-1000.0	12.0	*	1000.	270.	AG	1170.	15.0	.0	32.0		
5. NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1430.	15.0	.0	32.0		
6. NBD	*	18.0	.0	18.0	1000.0	*	1000.	360.	AG	1190.	15.0	.0	32.0		
7. SBA	*	-12.0	1000.0	-12.0	.0	*	1000.	180.	AG	740.	15.0	.0	44.0		
8. SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	1460.	15.0	.0	44.0		
9. EBL	*	-24.0	-6.0	-762.7	-6.2	*	739.	270.	AG	208.	100.0	.0	12.0	1.42	37.5
10. EBT	*	-24.0	-18.0	-712.0	-18.2	*	688.	270.	AG	206.	100.0	.0	12.0	1.32	35.0
11. EBR	*	-24.0	-30.0	-157.6	-30.0	*	134.	270.	AG	113.	100.0	.0	12.0	.69	6.8
12. WBL	*	36.0	-6.0	857.2	-5.8	*	821.	90.	AG	175.	100.0	.0	12.0	1.15	41.7
13. WBT	*	36.0	12.0	855.7	12.2	*	820.	90.	AG	349.	100.0	.0	24.0	1.16	41.6
14. NBT	*	12.0	-36.0	12.0	-915.6	*	880.	180.	AG	297.	100.0	.0	24.0	1.11	44.7
15. NBR	*	30.0	-36.0	30.0	-76.2	*	40.	180.	AG	84.	100.0	.0	12.0	.22	2.0
16. SBL	*	6.0	24.0	6.0	95.7	*	72.	360.	AG	196.	100.0	.0	12.0	.68	3.6
17. SBT	*	-12.0	24.0	-12.0	864.2	*	840.	360.	AG	393.	100.0	.0	24.0	1.29	42.7

JOB: 108th and Northup RUN: 2016 Build 6LT

DATE : 8/19/ 4
TIME : 9:23:14

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. EBL	100	87	3.0	200	1770	89.24	2	3
10. EBT	100	86	3.0	220	1863	89.24	2	3
11. EBR	100	47	3.0	520	1583	89.24	2	3
12. WBL	100	73	3.0	450	1787	89.24	2	3
13. WBT	100	73	3.0	850	1671	89.24	2	3
14. NBT	100	62	3.0	1220	1671	89.24	2	3
15. NBR	100	35	3.0	210	1583	89.24	2	3
16. SBL	100	82	3.0	160	1823	89.24	2	3
17. SBT	100	82	3.0	580	1738	89.24	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-198.0	34.0	5.9
2. R2	-116.0	34.0	5.9
3. R3	-34.0	34.0	5.9
4. R4	-34.0	116.0	5.9
5. R5	-34.0	198.0	5.9
6. R6	34.0	198.0	5.9
7. R7	34.0	116.0	5.9
8. R8	34.0	34.0	5.9
9. R9	116.0	34.0	5.9
10. R10	198.0	34.0	5.9
11. R11	210.0	-34.0	5.9
12. R12	128.0	-34.0	5.9
13. R13	46.0	-34.0	5.9
14. R14	46.0	-116.0	5.9
15. R15	46.0	-198.0	5.9
16. R16	-34.0	-210.0	5.9
17. R17	-34.0	-128.0	5.9
18. R18	-34.0	-46.0	5.9
19. R19	-116.0	-46.0	5.9
20. R20	-198.0	-46.0	5.9

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	3.3	3.8	6.5	6.3	6.3	4.4	4.4	4.6	3.1	3.0	4.8	4.9	5.6	4.7	4.6	6.7	6.7	8.1	5.7	4.8
10.	*	3.4	4.0	6.8	6.7	6.7	3.8	3.9	3.9	3.0	3.0	4.8	4.8	5.1	4.2	4.0	6.6	6.6	8.0	6.0	5.0
15.	*	3.7	4.2	6.6	6.6	6.6	3.3	3.3	3.3	3.0	3.0	4.8	4.8	4.9	4.0	3.7	6.3	6.2	7.7	6.3	5.3
20.	*	3.9	4.3	6.4	6.3	6.3	3.2	3.2	3.2	3.0	3.0	4.9	4.9	4.9	3.9	3.7	6.4	6.1	7.1	6.3	5.5
25.	*	3.9	4.2	6.0	5.9	5.9	3.1	3.1	3.1	3.0	3.0	4.9	4.9	4.9	4.0	3.7	6.2	6.0	6.4	6.1	5.5
30.	*	3.9	4.2	5.9	5.7	5.7	3.1	3.1	3.1	3.0	3.0	4.9	4.9	4.9	4.0	3.7	6.2	5.7	6.0	6.2	5.6
35.	*	3.8	4.1	5.9	5.6	5.6	3.1	3.1	3.1	3.0	3.0	5.0	5.0	5.0	4.0	3.7	6.1	6.0	5.6	6.3	5.6
40.	*	3.7	4.1	5.7	5.4	5.4	3.1	3.1	3.1	3.0	3.0	5.1	5.1	5.1	4.1	3.8	5.8	6.1	5.6	6.4	5.5
45.	*	3.7	4.1	5.5	5.2	5.2	3.1	3.1	3.1	3.0	3.0	5.1	5.1	5.1	4.1	3.9	5.9	6.2	5.6	6.2	5.5
50.	*	3.7	4.0	5.5	5.1	5.1	3.1	3.1	3.1	3.0	3.0	5.3	5.3	5.3	4.2	3.9	5.9	6.1	5.7	6.2	5.6
55.	*	3.7	3.9	5.5	5.1	5.1	3.0	3.0	3.0	3.0	3.0	5.4	5.4	5.4	4.2	3.9	5.8	6.1	5.7	6.1	5.9
60.	*	3.7	4.0	5.5	5.1	5.1	3.0	3.0	3.0	3.0	3.0	5.6	5.6	5.6	4.2	3.9	5.7	6.0	6.1	6.2	6.1
65.	*	3.7	4.0	5.4	5.0	5.0	3.0	3.0	3.0	3.0	3.0	5.7	5.7	5.7	4.4	3.9	5.7	6.0	6.4	6.5	6.2
70.	*	3.8	4.0	5.2	4.9	4.9	3.0	3.0	3.1	3.1	3.1	6.0	6.0	6.0	4.5	3.8	5.6	6.2	6.8	6.5	6.5
75.	*	4.1	4.3	5.4	4.8	4.8	3.0	3.0	3.3	3.3	3.3	6.3	6.3	6.3	4.3	3.7	5.5	6.0	7.0	6.9	6.9
80.	*	4.4	4.8	6.0	4.8	4.8	3.0	3.0	3.9	3.8	3.8	6.2	6.3	6.4	4.1	3.4	5.3	5.8	7.1	6.7	7.1
85.	*	5.2	5.6	7.0	5.1	4.9	3.0	3.2	4.8	4.8	4.8	5.8	5.9	6.0	3.7	3.2	4.9	5.3	6.8	6.2	6.5
90.	*	5.8	6.3	8.0	5.5	5.0	3.0	3.4	6.0	5.9	5.8	5.0	5.2	5.3	3.4	3.0	4.7	5.1	6.2	5.6	5.6
95.	*	6.5	6.8	8.7	5.8	5.1	3.2	3.9	6.9	6.7	6.6	4.3	4.3	4.4	3.0	3.0	4.7	4.7	5.7	5.0	4.7
100.	*	6.5	6.6	8.5	6.1	5.4	3.6	4.2	7.1	7.1	7.0	3.6	3.6	3.6	3.0	3.0	4.8	4.8	5.3	4.3	4.2
105.	*	6.2	6.0	7.9	6.4	5.6	3.7	4.4	7.1	7.0	7.0	3.1	3.1	3.1	3.0	3.0	4.8	4.8	4.9	3.9	3.7
110.	*	6.0	5.9	7.2	6.6	5.9	4.0	4.6	6.7	6.7	6.7	3.1	3.1	3.1	3.0	3.0	4.8	4.8	4.9	3.9	3.7

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 115.  *   6.0   5.4   6.6   6.6   6.0   4.0   4.4   6.4   6.4   6.4   3.1   3.1
3.1   3.0   3.0   4.8   4.8   4.9   4.0   3.7
 120.  *   5.9   5.7   5.9   6.6   6.1   4.0   4.3   6.1   6.1   6.1   3.0   3.0
3.0   3.0   3.0   4.8   4.8   4.8   4.0   3.8
 125.  *   6.1   5.7   5.5   6.6   6.0   3.9   4.2   5.8   5.8   5.8   3.0   3.0
3.0   3.0   3.0   4.9   4.9   4.9   4.1   3.8
 130.  *   6.0   5.8   5.5   6.5   6.0   4.0   4.3   5.8   5.7   5.7   3.0   3.0
3.0   3.0   3.0   5.0   5.0   5.0   4.1   3.8
 135.  *   5.8   5.9   5.3   6.6   6.1   4.0   4.2   5.6   5.5   5.6   3.0   3.0
3.0   3.0   3.0   5.1   5.1   5.1   4.1   3.8
 140.  *   5.6   5.9   5.5   6.7   6.2   3.9   4.2   5.4   5.4   5.4   3.0   3.0
3.0   3.0   3.0   5.1   5.1   5.1   4.1   3.8
 145.  *   5.5   5.9   5.8   6.6   6.3   3.9   4.2   5.4   5.4   5.4   3.0   3.0
3.0   3.0   3.0   5.4   5.4   5.4   4.1   3.8
 150.  *   5.6   6.0   5.9   6.8   6.5   3.8   4.2   5.2   5.2   5.2   3.0   3.0
3.0   3.0   3.0   5.5   5.5   5.5   4.2   3.9
 155.  *   5.5   6.2   6.1   6.8   6.7   3.8   4.2   5.2   5.2   5.2   3.0   3.0
3.0   3.0   3.0   5.7   5.7   5.7   4.4   3.9
 160.  *   5.4   6.1   6.7   7.0   7.1   3.8   4.1   5.2   5.1   5.1   3.0   3.0
3.0   3.0   3.0   6.0   6.1   6.1   4.4   3.8
 165.  *   5.3   6.1   7.2   7.1   7.4   4.1   4.4   5.3   5.1   5.1   3.0   3.0
3.2   3.2   3.2   6.3   6.3   6.3   4.4   3.7
 170.  *   5.0   5.8   7.5   7.4   7.4   4.6   4.9   5.8   5.1   5.1   3.0   3.0
3.5   3.5   3.5   6.4   6.4   6.4   4.1   3.4
 175.  *   4.8   5.5   7.4   6.8   7.2   5.4   5.8   6.7   5.3   5.1   3.0   3.2
4.2   4.2   4.1   6.0   6.1   6.2   3.7   3.3
 180.  *   4.6   5.2   7.0   6.3   6.5   6.5   6.6   7.6   5.6   5.1   3.0   3.3
5.0   5.0   5.0   5.3   5.4   5.4   3.4   3.0
 185.  *   4.5   4.8   5.9   5.4   5.2   6.8   6.8   8.1   6.0   5.4   3.3   3.8
5.9   5.7   5.7   4.5   4.5   4.5   3.1   3.0
 190.  *   4.5   4.7   5.3   4.7   4.4   6.8   7.1   7.9   6.4   5.7   3.5   4.1
6.3   6.1   6.0   3.8   3.8   3.8   3.0   3.0
 195.  *   4.5   4.6   5.0   4.1   3.9   6.8   6.6   7.5   6.6   5.9   3.7   4.3
6.3   6.1   6.1   3.3   3.3   3.3   3.0   3.0
 200.  *   4.5   4.6   4.8   4.0   3.9   6.3   6.3   6.5   6.6   6.1   3.9   4.3
6.1   5.9   5.8   3.2   3.2   3.2   3.0   3.0
 205.  *   4.6   4.7   4.8   4.1   3.9   6.1   6.5   6.1   6.6   6.2   4.0   4.3
6.0   5.8   5.8   3.1   3.1   3.1   3.0   3.0
 210.  *   4.6   4.7   4.8   4.0   3.7   5.9   6.3   5.6   6.5   6.2   4.0   4.3
5.7   5.5   5.5   3.1   3.1   3.1   3.0   3.0
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JOB: 108th and Northup RUN: 2016 Build 6LT

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
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 215.  *   4.6   4.7   4.8   4.0   3.7   6.0   6.6   5.8   6.7   6.3   3.9   4.3
5.6   5.3   5.3   3.1   3.1   3.1   3.0   3.0
 220.  *   4.7   4.7   4.9   4.0   3.7   5.8   6.4   5.7   6.6   6.3   3.9   4.1
5.6   5.3   5.3   3.1   3.1   3.1   3.0   3.0
 225.  *   4.8   4.8   5.0   3.9   3.7   5.7   6.4   5.7   6.6   6.4   3.7   4.0
5.3   5.0   5.0   3.1   3.1   3.1   3.0   3.0
 230.  *   5.0   5.0   5.2   3.9   3.8   5.7   6.2   5.8   6.5   6.4   3.7   4.0
5.2   5.0   5.0   3.1   3.1   3.1   3.0   3.0
 235.  *   5.1   5.1   5.3   4.0   3.8   5.6   6.1   6.1   6.5   6.5   3.7   4.0
5.2   5.0   5.0   3.1   3.1   3.1   3.0   3.0
 240.  *   5.1   5.1   5.2   4.1   3.8   5.5   6.0   6.4   6.8   6.6   3.7   4.0
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5.1   5.0   5.0   3.0   3.0   3.0   3.0   3.0
 245.  *   5.4   5.4   5.5   4.2   3.8   5.5   6.0   6.5   6.8   6.9   3.7   4.0
5.0   4.9   4.9   3.0   3.0   3.0   3.0   3.0
 250.  *   5.6   5.6   5.7   4.2   3.7   5.5   6.0   7.0   6.9   7.2   3.8   4.1
5.1   4.8   4.8   3.0   3.0   3.0   3.0   3.0
 255.  *   5.7   5.7   5.7   4.1   3.5   5.2   5.8   7.4   7.2   7.5   4.0   4.3
5.3   4.8   4.8   3.0   3.0   3.1   3.1   3.1
 260.  *   5.7   5.8   5.8   3.9   3.3   5.2   5.6   7.6   7.1   7.4   4.2   4.9
5.7   4.8   4.8   3.0   3.0   3.6   3.5   3.3
 265.  *   5.3   5.4   5.4   3.5   3.1   4.8   5.2   7.4   6.8   7.2   5.1   5.5
6.4   4.9   4.8   3.0   3.0   4.1   3.9   3.9
 270.  *   4.6   4.7   4.9   3.3   3.0   4.7   5.0   6.9   6.0   6.1   5.8   6.1
7.2   5.2   4.8   3.0   3.4   4.9   4.7   4.6
 275.  *   3.9   4.0   4.0   3.1   3.0   4.7   4.8   6.1   5.2   5.2   6.3   6.4
7.7   5.6   5.0   3.1   3.5   5.7   5.4   5.2
 280.  *   3.4   3.5   3.5   3.0   3.0   4.7   4.7   5.7   4.8   4.6   6.3   6.5
7.5   6.0   5.2   3.4   3.8   6.2   5.8   5.5
 285.  *   3.1   3.1   3.1   3.0   3.0   4.7   4.7   5.2   4.2   4.0   6.5   6.0
6.9   6.0   5.6   3.6   4.2   6.2   5.9   5.7
 290.  *   3.0   3.0   3.0   3.0   3.0   4.7   4.7   5.1   4.1   3.8   6.4   6.0
6.2   6.1   5.6   3.8   4.2   6.0   5.7   5.5
 295.  *   3.0   3.0   3.0   3.0   3.0   4.7   4.7   5.1   4.1   3.7   6.3   6.0
5.7   6.2   5.7   3.8   4.2   5.9   5.7   5.4
 300.  *   3.0   3.0   3.0   3.0   3.0   4.7   4.7   5.1   4.1   3.7   6.2   5.8
5.6   6.3   5.8   3.8   4.2   5.6   5.5   5.2
 305.  *   3.0   3.0   3.0   3.0   3.0   4.8   4.8   5.2   4.1   3.7   6.1   6.1
5.3   6.3   5.8   3.9   4.3   5.5   5.4   5.0
 310.  *   3.0   3.0   3.0   3.0   3.0   4.9   4.9   5.4   4.0   3.7   6.0   6.2
5.3   6.2   5.9   3.9   4.1   5.4   5.3   4.9
 315.  *   3.0   3.0   3.0   3.0   3.0   5.0   5.0   5.5   4.0   3.7   5.8   6.2
5.4   6.0   5.9   3.9   4.0   5.3   5.2   4.8
 320.  *   3.0   3.0   3.0   3.0   3.0   5.1   5.1   5.6   4.0   3.7   5.8   6.2
5.6   6.1   6.2   3.9   4.0   5.2   5.1   4.8
 325.  *   3.0   3.0   3.0   3.0   3.0   5.2   5.2   5.6   4.1   3.7   5.7   5.9
5.9   6.0   6.1   3.8   4.0   5.2   5.1   4.8
 330.  *   3.0   3.0   3.0   3.0   3.0   5.4   5.4   5.8   4.1   3.7   5.6   6.0
6.3   6.0   6.1   3.9   4.0   5.1   5.0   4.7
 335.  *   3.0   3.0   3.1   3.1   3.1   5.7   5.7   6.0   4.2   3.7   5.6   6.0
6.3   6.2   6.2   3.9   4.0   5.0   4.9   4.6
 340.  *   3.0   3.0   3.2   3.2   3.2   5.9   5.9   6.1   4.2   3.7   5.6   6.1
6.8   6.4   6.3   3.9   4.0   5.1   4.9   4.6
 345.  *   3.0   3.0   3.4   3.4   3.4   6.2   6.2   6.4   4.2   3.6   5.4   6.0
7.0   6.3   6.5   4.0   4.3   5.3   4.9   4.6
 350.  *   3.0   3.0   3.9   3.9   3.9   6.2   6.2   6.4   4.0   3.5   5.2   5.7
6.9   6.5   6.5   4.5   4.8   5.8   4.8   4.5
 355.  *   3.0   3.1   4.7   4.7   4.7   5.9   6.0   6.0   3.7   3.2   5.0   5.4
6.7   6.0   6.2   5.1   5.6   6.6   4.9   4.5
 360.  *   3.0   3.4   5.7   5.6   5.5   5.3   5.3   5.4   3.3   3.0   4.8   5.1
6.1   5.5   5.6   6.1   6.3   7.4   5.3   4.6
 THE HIGHEST CONCENTRATION OF    8.70 PPM OCCURRED AT RECEPTOR REC3 .
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: 108th and Northup RUN: 2030 Build 6LT

DATE : 8/19/ 4
TIME : 9:23:30

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 108. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 3.0 PPM BRG = 5. DEGREES

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)	(VEH)	
1. EBA	*	-1000.0	-18.0	.0	-18.0	*	1000.	90.	AG	1050.	11.2	.0	32.0		
2. EBD	*	.0	-18.0	1000.0	-18.0	*	1000.	90.	AG	610.	11.2	.0	32.0		
3. WBA	*	1000.0	12.0	.0	12.0	*	1000.	270.	AG	1470.	11.2	.0	32.0		
4. WBD	*	.0	12.0	-1000.0	12.0	*	1000.	270.	AG	1250.	11.2	.0	32.0		
5. NBA	*	18.0	-1000.0	18.0	.0	*	1000.	360.	AG	1490.	11.2	.0	32.0		
6. NBD	*	18.0	.0	18.0	1000.0	*	1000.	360.	AG	1270.	11.2	.0	32.0		
7. SBA	*	-12.0	1000.0	-12.0	.0	*	1000.	180.	AG	830.	11.2	.0	44.0		
8. SBD	*	-12.0	.0	-12.0	-1000.0	*	1000.	180.	AG	1710.	11.2	.0	44.0		
9. EBL	*	-24.0	-6.0	-869.0	-6.2	*	845.	270.	AG	159.	100.0	.0	12.0	1.49	42.9
10. EBT	*	-24.0	-18.0	-1000.7	-18.2	*	977.	270.	AG	159.	100.0	.0	12.0	1.54	49.6
11. EBR	*	-24.0	-30.0	-194.9	-30.0	*	171.	270.	AG	91.	100.0	.0	12.0	.86	8.7
12. WBL	*	36.0	-6.0	1508.5	-5.6	*	1473.	90.	AG	131.	100.0	.0	12.0	1.29	74.8
13. WBT	*	36.0	12.0	1153.0	12.3	*	1117.	90.	AG	262.	100.0	.0	24.0	1.22	56.7
14. NBT	*	12.0	-36.0	12.0	-1560.4	*	1524.	180.	AG	233.	100.0	.0	24.0	1.24	77.4
15. NBR	*	30.0	-36.0	30.0	-76.2	*	40.	180.	AG	64.	100.0	.0	12.0	.22	2.0
16. SBL	*	6.0	24.0	6.0	99.3	*	75.	360.	AG	148.	100.0	.0	12.0	.67	3.8
17. SBT	*	-12.0	24.0	-12.0	1103.3	*	1079.	360.	AG	295.	100.0	.0	24.0	1.36	54.8

JOB: 108th and Northup RUN: 2030 Build 6LT

DATE : 8/19/ 4
TIME : 9:23:30

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. EBL	100	87	3.0	210	1770	67.96	2	3
10. EBT	100	87	3.0	230	1863	67.96	2	3
11. EBR	100	50	3.0	610	1583	67.96	2	3
12. WBL	100	72	3.0	530	1787	67.96	2	3
13. WBT	100	72	3.0	940	1671	67.96	2	3
14. NBT	100	64	3.0	1280	1671	67.96	2	3
15. NBR	100	35	3.0	210	1583	67.96	2	3
16. SBL	100	81	3.0	170	1823	67.96	2	3
17. SBT	100	81	3.0	660	1742	67.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. R1	-198.0	34.0	5.9
2. R2	-116.0	34.0	5.9
3. R3	-34.0	34.0	5.9
4. R4	-34.0	116.0	5.9
5. R5	-34.0	198.0	5.9
6. R6	34.0	198.0	5.9
7. R7	34.0	116.0	5.9
8. R8	34.0	34.0	5.9
9. R9	116.0	34.0	5.9
10. R10	198.0	34.0	5.9
11. R11	210.0	-34.0	5.9
12. R12	128.0	-34.0	5.9
13. R13	46.0	-34.0	5.9
14. R14	46.0	-116.0	5.9
15. R15	46.0	-198.0	5.9
16. R16	-34.0	-210.0	5.9
17. R17	-34.0	-128.0	5.9
18. R18	-34.0	-46.0	5.9
19. R19	-116.0	-46.0	5.9
20. R20	-198.0	-46.0	5.9

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 5.-360.

WIND ANGLE (DEGR)	*	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
5.	*	3.1	3.6	5.7	5.7	5.7	4.1	4.2	4.3	3.1	3.0	4.4	4.4	5.1	4.4	4.3	6.0	6.0	7.0	5.1	4.5
10.	*	3.5	3.9	5.9	5.9	5.9	3.5	3.7	3.7	3.0	3.0	4.4	4.4	4.7	3.9	3.9	6.1	6.0	7.2	5.5	4.8
15.	*	3.5	4.0	5.9	5.9	5.9	3.2	3.2	3.2	3.0	3.0	4.5	4.5	4.5	3.7	3.6	5.7	5.7	6.7	5.5	5.0
20.	*	3.7	4.0	5.7	5.6	5.6	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.5	3.7	3.6	5.6	5.5	6.2	5.6	5.1
25.	*	3.7	4.0	5.4	5.3	5.3	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.5	3.7	3.6	5.6	5.3	5.8	5.5	5.1
30.	*	3.7	3.9	5.4	5.2	5.2	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.5	3.7	3.6	5.5	5.4	5.6	5.6	5.3
35.	*	3.6	3.9	5.2	5.0	5.0	3.1	3.1	3.1	3.0	3.0	4.6	4.6	4.6	3.7	3.6	5.5	5.5	5.1	5.7	5.3
40.	*	3.6	3.9	5.1	4.9	4.9	3.1	3.1	3.1	3.0	3.0	4.6	4.6	4.6	3.8	3.7	5.4	5.5	5.3	5.6	5.3
45.	*	3.6	3.8	5.1	4.8	4.8	3.0	3.0	3.0	3.0	3.0	4.6	4.6	4.6	3.9	3.7	5.5	5.5	5.1	5.6	5.3
50.	*	3.5	3.8	5.0	4.7	4.7	3.0	3.0	3.0	3.0	3.0	4.7	4.7	4.7	3.9	3.7	5.3	5.4	5.1	5.5	5.2
55.	*	3.5	3.8	4.9	4.6	4.6	3.0	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.0	3.7	5.3	5.5	5.3	5.6	5.4
60.	*	3.5	3.8	4.9	4.5	4.5	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	4.0	3.7	5.2	5.5	5.5	5.5	5.6
65.	*	3.5	3.8	4.8	4.5	4.5	3.0	3.0	3.0	3.0	3.0	5.1	5.1	5.1	4.0	3.7	5.2	5.5	5.6	5.9	5.8
70.	*	3.5	3.8	4.8	4.5	4.5	3.0	3.0	3.0	3.0	3.0	5.5	5.5	5.5	4.1	3.8	5.3	5.5	5.9	5.7	6.0
75.	*	3.8	4.0	5.0	4.4	4.4	3.0	3.0	3.2	3.2	3.2	5.5	5.5	5.5	4.2	3.8	5.2	5.5	6.2	5.9	6.2
80.	*	4.2	4.5	5.5	4.4	4.4	3.0	3.0	3.8	3.8	3.8	5.6	5.6	5.7	3.9	3.5	5.0	5.3	6.3	6.1	5.9
85.	*	4.7	5.0	6.1	4.7	4.5	3.0	3.1	4.6	4.5	4.5	5.4	5.4	5.4	3.8	3.2	4.6	5.1	6.1	5.7	5.9
90.	*	5.3	5.7	6.8	4.9	4.6	3.1	3.4	5.4	5.4	5.3	4.8	4.9	4.9	3.4	3.0	4.5	4.8	5.9	5.2	5.1
95.	*	5.8	5.8	7.4	5.4	4.9	3.3	3.9	6.1	6.1	6.0	4.1	4.2	4.2	3.1	3.0	4.4	4.4	5.2	4.7	4.5
100.	*	5.7	5.6	7.2	5.5	4.9	3.4	4.1	6.3	6.2	6.2	3.5	3.5	3.5	3.0	3.0	4.5	4.5	5.0	4.1	4.1
105.	*	5.5	5.5	6.8	5.7	5.1	3.7	4.1	6.2	6.2	6.2	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.6	3.8	3.6
110.	*	5.4	5.3	6.3	5.7	5.3	3.7	4.1	5.8	5.8	5.8	3.1	3.1	3.1	3.0	3.0	4.5	4.5	4.6	3.8	3.6

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 115.  *   5.3   5.1   5.7   5.8   5.2   3.7   4.1   5.7   5.7   5.7   3.0   3.0
3.0   3.0   3.0   4.5   4.5   4.5   3.8   3.6
 120.  *   5.3   5.1   5.2   5.8   5.2   3.7   4.1   5.4   5.4   5.4   3.0   3.0
3.0   3.0   3.0   4.5   4.5   4.5   3.8   3.6
 125.  *   5.3   5.2   5.2   5.8   5.3   3.7   4.0   5.2   5.2   5.2   3.0   3.0
3.0   3.0   3.0   4.6   4.6   4.6   3.8   3.6
 130.  *   5.2   5.3   4.9   5.9   5.4   3.7   4.0   5.2   5.2   5.2   3.0   3.0
3.0   3.0   3.0   4.6   4.6   4.6   3.8   3.6
 135.  *   5.1   5.3   4.8   5.8   5.5   3.7   4.0   5.0   5.0   5.0   3.0   3.0
3.0   3.0   3.0   4.8   4.8   4.8   3.8   3.6
 140.  *   5.1   5.3   5.0   5.9   5.6   3.8   4.0   5.0   5.0   5.0   3.0   3.0
3.0   3.0   3.0   4.8   4.8   4.8   3.8   3.6
 145.  *   5.3   5.5   5.2   5.8   5.6   3.8   4.0   4.9   4.9   4.9   3.0   3.0
3.0   3.0   3.0   4.9   4.9   4.9   4.0   3.8
 150.  *   5.3   5.6   5.3   6.1   5.8   3.8   3.9   4.7   4.6   4.6   3.0   3.0
3.0   3.0   3.0   5.1   5.1   5.1   4.1   3.8
 155.  *   5.2   5.5   5.5   6.0   6.1   3.8   3.9   4.6   4.6   4.6   3.0   3.0
3.0   3.0   3.0   5.2   5.2   5.2   4.1   3.8
 160.  *   5.1   5.4   6.0   6.1   6.1   3.8   3.8   4.7   4.6   4.6   3.0   3.0
3.0   3.0   3.0   5.5   5.5   5.5   4.1   3.8
 165.  *   5.0   5.3   6.4   6.3   6.4   4.0   4.1   4.8   4.6   4.6   3.0   3.0
3.2   3.2   3.2   5.8   5.8   5.8   4.1   3.7
 170.  *   4.7   5.2   6.8   6.4   6.4   4.4   4.6   5.2   4.6   4.6   3.0   3.0
3.5   3.5   3.5   5.9   6.0   6.0   4.0   3.5
 175.  *   4.6   5.0   6.8   6.3   6.3   5.0   5.2   6.1   4.8   4.6   3.0   3.1
4.1   4.1   4.0   5.6   5.8   5.8   3.7   3.2
 180.  *   4.3   4.7   6.1   5.8   5.7   5.7   6.0   6.8   5.0   4.7   3.1   3.4
4.8   4.7   4.7   5.1   5.1   5.2   3.4   3.1
 185.  *   4.1   4.4   5.5   4.9   4.9   6.0   6.2   7.2   5.5   5.0   3.4   3.7
5.3   5.3   5.3   4.3   4.4   4.4   3.2   3.0
 190.  *   4.1   4.2   4.9   4.3   4.2   6.2   6.3   7.0   5.7   5.2   3.5   4.0
5.8   5.6   5.6   3.7   3.7   3.7   3.0   3.0
 195.  *   4.2   4.3   4.5   3.9   3.8   6.1   5.8   6.5   5.8   5.3   3.7   4.1
5.7   5.6   5.6   3.3   3.3   3.3   3.0   3.0
 200.  *   4.2   4.3   4.4   3.8   3.6   5.8   5.8   5.8   5.9   5.3   3.7   4.0
5.4   5.3   5.3   3.2   3.2   3.2   3.0   3.0
 205.  *   4.3   4.4   4.4   3.8   3.5   5.5   5.8   5.6   5.7   5.4   3.7   4.0
5.3   5.1   5.1   3.1   3.1   3.1   3.0   3.0
 210.  *   4.4   4.5   4.5   3.9   3.4   5.3   5.6   5.3   5.6   5.3   3.7   4.0
5.2   5.0   5.0   3.1   3.1   3.1   3.0   3.0
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PAGE 4

JOB: 108th and Northup RUN: 2030 Build 6LT

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 WIND  * CONCENTRATION
 ANGLE *      (PPM)
 (DEGR)* REC1  REC2  REC3  REC4  REC5  REC6  REC7  REC8  REC9  REC10 REC11 REC12
REC13 REC14 REC15 REC16 REC17 REC18 REC19 REC20

------*-------------------------------------------------------------------------------
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 215.  *   4.4   4.5   4.5   3.9   3.4   5.3   5.7   5.0   5.9   5.6   3.7   4.0
5.0   4.8   4.8   3.1   3.1   3.1   3.0   3.0
 220.  *   4.4   4.5   4.5   3.9   3.5   5.2   5.8   5.2   5.8   5.7   3.7   3.9
5.0   4.8   4.8   3.1   3.1   3.1   3.0   3.0
 225.  *   4.4   4.5   4.5   3.9   3.5   5.1   5.8   5.2   5.9   5.7   3.6   3.9
5.0   4.8   4.8   3.1   3.1   3.1   3.0   3.0
 230.  *   4.5   4.6   4.6   3.8   3.5   5.1   5.7   5.4   6.0   5.8   3.6   3.9
4.7   4.5   4.5   3.1   3.1   3.1   3.0   3.0
 235.  *   4.6   4.7   4.7   3.8   3.5   4.9   5.5   5.2   5.9   5.8   3.6   3.8
4.7   4.5   4.5   3.0   3.0   3.0   3.0   3.0
 240.  *   4.7   4.7   4.8   3.9   3.7   5.0   5.4   5.9   5.8   6.0   3.6   3.8
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4.7   4.5   4.5   3.0   3.0   3.0   3.0   3.0
 245.  *   4.9   4.9   5.0   3.9   3.7   5.0   5.3   5.8   6.2   6.2   3.6   3.8
4.7   4.5   4.5   3.0   3.0   3.0   3.0   3.0
 250.  *   5.1   5.1   5.2   3.9   3.5   5.0   5.3   6.4   6.2   6.5   3.7   3.8
4.5   4.5   4.5   3.0   3.0   3.0   3.0   3.0
 255.  *   5.2   5.2   5.2   3.9   3.5   4.8   5.2   6.5   6.3   6.5   3.7   4.0
4.9   4.5   4.5   3.0   3.0   3.0   3.0   3.0
 260.  *   5.2   5.2   5.2   3.9   3.4   4.7   5.2   6.6   6.5   6.7   4.2   4.4
5.3   4.5   4.5   3.0   3.0   3.4   3.3   3.3
 265.  *   4.9   4.9   5.0   3.5   3.1   4.4   4.8   6.5   6.0   6.2   4.8   4.9
5.9   4.5   4.5   3.0   3.0   4.0   3.9   3.8
 270.  *   4.4   4.4   4.4   3.4   3.0   4.3   4.7   6.0   5.4   5.4   5.4   5.3
6.5   4.9   4.5   3.0   3.4   4.7   4.4   4.3
 275.  *   3.7   3.8   3.9   3.0   3.0   4.3   4.3   5.4   4.7   4.8   5.6   5.8
6.7   5.1   4.8   3.1   3.5   5.3   5.2   4.9
 280.  *   3.3   3.3   3.3   3.0   3.0   4.3   4.3   5.0   4.3   4.1   5.7   5.5
6.6   5.4   4.9   3.4   3.8   5.5   5.3   5.1
 285.  *   3.1   3.1   3.1   3.0   3.0   4.3   4.3   4.7   3.8   3.7   5.7   5.4
6.1   5.8   5.0   3.4   3.9   5.6   5.4   5.1
 290.  *   3.0   3.0   3.0   3.0   3.0   4.3   4.3   4.6   3.7   3.6   5.6   5.2
5.6   5.8   5.3   3.7   3.9   5.5   5.4   5.1
 295.  *   3.0   3.0   3.0   3.0   3.0   4.3   4.3   4.6   3.8   3.6   5.6   5.4
5.1   5.5   5.3   3.8   3.8   5.2   5.1   4.8
 300.  *   3.0   3.0   3.0   3.0   3.0   4.3   4.3   4.6   3.8   3.6   5.6   5.4
5.1   5.4   5.3   3.8   3.9   5.2   5.1   4.8
 305.  *   3.0   3.0   3.0   3.0   3.0   4.4   4.4   4.7   3.8   3.6   5.4   5.2
4.9   5.4   5.3   3.6   3.9   4.9   4.9   4.6
 310.  *   3.0   3.0   3.0   3.0   3.0   4.6   4.6   4.9   3.7   3.6   5.2   5.3
4.7   5.4   5.2   3.6   4.0   4.8   4.7   4.4
 315.  *   3.0   3.0   3.0   3.0   3.0   4.6   4.6   5.0   3.7   3.6   5.2   5.4
5.0   5.5   5.4   3.5   4.0   4.8   4.7   4.4
 320.  *   3.0   3.0   3.0   3.0   3.0   4.6   4.6   5.0   3.7   3.6   5.2   5.4
4.9   5.3   5.3   3.5   4.0   4.8   4.7   4.4
 325.  *   3.0   3.0   3.0   3.0   3.0   4.8   4.8   5.1   3.9   3.6   5.2   5.3
5.2   5.4   5.3   3.6   4.0   4.8   4.7   4.4
 330.  *   3.0   3.0   3.0   3.0   3.0   4.9   4.9   5.2   4.0   3.6   5.1   5.3
5.4   5.5   5.5   3.6   4.0   4.8   4.7   4.4
 335.  *   3.0   3.0   3.0   3.0   3.0   5.0   5.0   5.3   4.0   3.7   5.1   5.5
5.7   5.6   5.5   3.6   4.0   4.6   4.5   4.2
 340.  *   3.0   3.0   3.2   3.2   3.1   5.3   5.4   5.6   4.0   3.6   5.1   5.5
5.8   5.7   5.7   3.6   4.0   4.6   4.5   4.2
 345.  *   3.0   3.0   3.3   3.2   3.2   5.5   5.5   5.6   4.0   3.6   5.1   5.4
6.2   5.6   5.9   3.8   4.2   4.8   4.5   4.2
 350.  *   3.0   3.0   3.7   3.7   3.6   5.6   5.6   5.7   3.8   3.4   4.8   5.2
6.1   5.8   5.8   4.2   4.6   5.4   4.5   4.2
 355.  *   3.0   3.1   4.3   4.3   4.3   5.4   5.4   5.4   3.6   3.2   4.6   5.0
6.1   5.5   5.4   5.0   5.1   6.0   4.6   4.2
 360.  *   3.1   3.4   5.2   5.2   5.2   4.8   4.8   5.0   3.3   3.0   4.4   4.6
5.7   4.9   4.9   5.5   5.7   6.6   4.9   4.4
 THE HIGHEST CONCENTRATION OF    7.40 PPM OCCURRED AT RECEPTOR REC3 .
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