Aurora Avenue North Transit, Pedestrian, and Safety Improvements, North 110th Street to North 145th Street NEPA Documented Categorical Exclusion

Final

Air Quality Discipline Report

Prepared for

Seattle Department of Transportation

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Summary

Introduction

The Aurora Avenue North Improvements project would provide transit, pedestrian, and safety improvements to Aurora Avenue North between North 110th Street and North 145th Street. This report was prepared in support of a National Environmental Policy Act (NEPA) Documented Categorical Exclusion (DCE) and a State Environmental Policy Act (SEPA) Determination of Nonsignificance.

Air quality, which is a general term used to describe pollutant levels in the atmosphere, is affected by emissions generated by vehicular traffic. Potential air quality impacts of the Build and No Build Alternatives could result from the following:

- Changes in the quantity of emissions released
- Changes in the location where emissions are released
- Emissions released from construction activities

This Air Quality Discipline Report discusses potential air quality impacts associated with the proposed project Build Alternative. The air quality studies included estimates of the following:

- Pollutant levels near heavily traveled roadways and congested intersections that may be affected by the redesign or relocation of roadways
- Potential impacts associated with changes in traffic patterns on congested intersections of the local street network

In addition, changes in vehicular emissions generated in the study area under the Build Alternative were estimated and evaluated as to whether this alternative conforms to the requirements of the State Implementation Plan (SIP). Potential impacts associated with the construction phase of the proposed Build Alternative were also considered.

Methodology

The impacts on air quality during construction were assessed qualitatively based on the expected construction activities and potential mitigation.

The impacts of project operation were quantified by modeling carbon monoxide (CO) concentrations from tailpipe exhaust in the vicinity of intersections affected by the project. A significant impact is defined as a predicted violation of an air quality standard.

Affected Environment

The proposed project is located between North 110th Street and North 145th Street in North Seattle. The project area is predominantly commercial in nature.

The affected environment is the airshed in the vicinity of the project site. Although the airshed has no physical boundaries, arbitrary boundaries were established for purposes of this analysis. To assess the affected environment, the area within King County was searched for ambient air monitoring data. The monitoring data support the current status of air quality in the region, which is designated by the U.S. Environmental Protection Agency (USEPA) as being in the attainment category for the ambient air quality standards for all regulated pollutants. USEPA designated the Central Puget Sound region as maintenance attainment status for CO in 1996.

Project Construction Impacts and Mitigation

Construction activities may have short-term impacts on air quality. During construction, there is a potential for generation of fugitive dust during excavation, demolition, and any activity that involves the movement or disturbance of soil.

Air pollutants are emitted from the exhaust of vehicles traveling to and from the site as well as vehicles and construction equipment operating onsite. Emissions also may increase in the vicinity of a transportation project as a result of detours and delays of local traffic traveling in the vicinity of construction areas.

Paving of roadways results in emissions from the paving material and the equipment applying the new pavement. Where asphalt is used, these emissions may result in temporary odors in the vicinity of the project.

Mitigation measures are well established for the minimization of dust released from construction sites, and include watering or covering exposed soil surfaces.

Project Operation Impacts and Mitigation

Direct impacts on air quality would result from changes in emissions from motor vehicles using the roadways affected by the project. The results of the air quality modeling indicate that the roadway improvements proposed by this project would not violate any air quality standards

Potential project impacts on localized concentrations of CO were evaluated in the vicinity of several signalized intersections. In all of the

scenarios analyzed (Build Alternative, No Build Alternative, and existing conditions), CO concentrations were well below applicable ambient air quality standards. Model results also show that CO concentrations decreased with time, which is largely due to predicted improvements in motor vehicle emission control systems. For the 2030 build scenario, CO concentrations were equal to or slightly greater than those for the No Build Alternative, but still well below the air quality standards.

Acronyms and Abbreviations Used in This Report

$\mu g/m^3$	micrograms per cubic meter
ADA	Americans with Disabilities Act
BAT	business access and transit
CO	carbon monoxide
CO_2	carbon dioxide
Ecology	Washington State Department of Ecology
FHWA	Federal Highway Administration
HCM	Highway Capacity Manual
LOS	level of service
mph	miles per hour
MSAT	Mobile Source Air Toxics
NA	no data available
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO_x	oxides of nitrogen
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
PSCAA	Puget Sound Clean Air Agency
PSRC	Puget Sound Regional Council
RDP	Route Development Plan
RTP	Regional Transportation Plan

SDOT	Seattle Department of Transportation
SIP	State Implementation Plan
SO_2	sulfur dioxide
TIP	Transportation Improvement Program
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compound
WSDOT	Washington State Department of Transportation

Glossary

Attainment area – A geographic area in which levels of a criteria air pollutant meet the health-based primary standard (National Ambient Air Quality Standard [NAAQS]) for the pollutant. An area may have an acceptable level for one criteria air pollutant, but may have unacceptable levels for others. Thus, an area could be both attainment and nonattainment at the same time. Attainment areas are defined using federal pollutant limits set by the U.S. Environmental Protection Agency (USEPA).

Clean Air Act – The original Clean Air Act was passed in 1963, but our national air pollution control program is actually based on the 1970 version of the law. The 1990 Clean Air Act Amendments are the most far-reaching revisions of the 1970 law. In this summary, we refer to the 1990 amendments as the 1990 Clean Air Act.

Criteria air pollutants – a group of very common air pollutants regulated by USEPA on the basis of criteria (information on health and/or environmental impacts of pollution). Criteria air pollutants are widely distributed all over the country.

Mobile sources – moving objects that release pollution. Mobile sources include cars, trucks, buses, planes, trains, motorcycles, and gasoline-powered lawn mowers. Mobile sources are divided into two groups: road vehicles, which includes cars, trucks and buses, and nonroad vehicles, which includes trains, planes, and lawn mowers. Fuel-burning equipment used during construction, such as bulldozers, graders and cranes, are also considered mobile sources.

Nonattainment area – a geographic area in which the level of a criteria air pollutant is higher than the level allowed by the federal standards. A single geographic area may have acceptable levels of one criteria air pollutant but unacceptable levels of one or more other criteria air pollutants; thus, an area can be both attainment and nonattainment at the same time. It has been estimated that 60 percent of Americans live in nonattainment areas.

Pollutants (pollution) – unwanted chemicals or other materials found in the air. Pollutants can harm health, the environment, and property. Many air pollutants occur as gases or vapors, but some are very tiny solid particles, such as dust, smoke, and soot.

Primary standard – a pollution limit based on health impacts. Primary standards are set for criteria air pollutants.

Secondary standard – a pollution limit based on environmental impacts such as damage to property, plants, visibility, or other elements of the environment. Secondary standards are set for criteria air pollutants.

Smog – a mixture of pollutants, principally ground-level ozone, produced by chemical reactions in the air involving smog-forming chemicals. A major portion of smog-formers comes from burning of petroleum-based fuels such as gasoline. Other smog-formers, volatile organic compounds, are found in products such as paints and solvents. Smog can harm health, damage the environment, and cause poor visibility. Major smog occurrences are often linked to heavy motor vehicle traffic, sunshine, high temperatures, and calm winds or temperature inversions (a weather condition in which stagnant air is trapped close to the ground instead of rising). Smog is often worse away from the source of the smog-forming chemicals, since the chemical reactions that result in smog occur in the sky while the reacting chemicals are being blown away from their sources by winds.

State Implementation Plan (SIP) – a detailed description of the programs a state will use to carry out its responsibilities under the Clean Air Act. State implementation plans are collections of the regulations used by a state to reduce air pollution. The Clean Air Act requires that USEPA approve each state implementation plan. Members of the public are given opportunities to participate in review and approval of state implementation plans.

Glossary source: USEPA 2006b.

1. Introduction

The Aurora Avenue North project is intended to provide improvements to transit, pedestrian access, and safety. The purpose of this Air Quality Discipline Report is to describe existing air quality characteristics and evaluate both positive and negative impacts the project would have on these characteristics. National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) regulations require analysis of a proposed project's impacts on various environmental resources, including air quality. This report discusses the potential impacts of the project Build Alternative.

This report begins with a brief description of the Build Alternative. The methodology used to assess the affected environment and evaluate the potential air quality impacts of the project is presented in Section 3. Section 4 provides a description of the affected environment in terms of the existing air quality in the project vicinity.

Section 5 discusses direct and indirect impacts from the project. This addresses both short-term impacts, associated with construction, and long-term impacts attributed to tail-pipe emissions from motor vehicles traveling on roadways within the study area.

2. Project Description

The Aurora Avenue North project is located within the City of Seattle in King County, Washington. Aurora Avenue North is a major north/south urban highway that serves both local and regional traffic within the City of Seattle. Aurora Avenue North, as named within the City of Seattle, is a portion of signed State Route 99 (SR 99) that extends from north Pierce County to north Snohomish County and serves as a regional link between cities within the Puget Sound Region. Within the project limits, Aurora Avenue serves as a major traffic artery for the City of Seattle, with links to I-5 through connections at North 130th Street and North 145th Street.

The City of Seattle, in cooperation with the Washington Department of Transportation (WSDOT) and the Federal Highway Administration (FHWA), proposes to make improvements to Aurora Avenue North between North 110th Street and North 145th Street (approximately 1.6 miles; see Exhibit 2-1). The project improvements are described in greater detail below. These improvements are consistent with the Route Development Plan (RDP) (WSDOT 2003) prepared by WSDOT for Aurora Avenue North between the north end of the Battery Street Tunnel and North 145th Street in the City of Seattle, Washington (milepost 32.44 to milepost 40.47). The RDP is a 25-year plan intended to assist WSDOT, the City of Seattle, and King County Metro in making informed decisions on future improvements to the SR 99 corridor.

The RDP listed the following six long-term improvement recommendations for what was referred to as the North Focus Area, from North 110th Street to North 145th Street (see Exhibit 2-2):

- Widen existing lanes
- Add a southbound business access and transit (BAT) lane
- Add a raised median with controlled access points
- Construct a continuous amenity zone on both sides of SR 99
- Improve pedestrian crossings
- Driveway consolidation at logical locations

This project has been designed with the intent of fulfilling those recommendations.

2.1 Major Design Elements

2.1.1 Widen the Roadway

The existing roadway consists of four general-purpose lanes, a continuous two-way left turn lane and/or a delineated left turn lane, and paved shoulders where width allows. There is also a BAT lane in the northbound direction. Sidewalks exist at spot locations throughout the project limits.

Cemetery

Park

Project Footprint

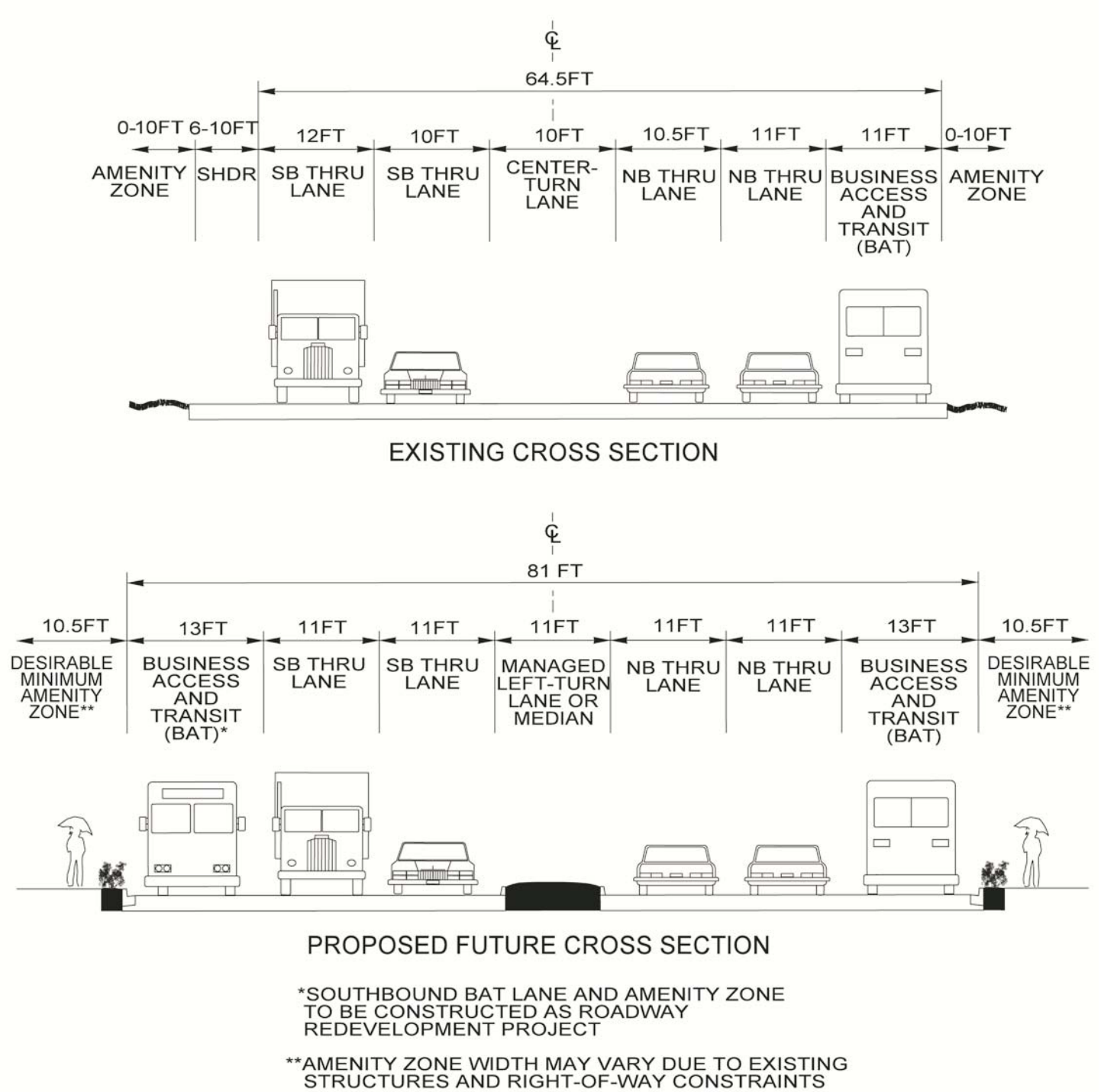
0 500 1,000 Feet

N

Exhibit 2-1. **Vicinity Map**

Aurora Avenue N 110th to 145th

File Path: \\simba\proj\SeattleWaCityOf\324876\GIS\Layouts\VicinityMap.mxd, Date: February 28, 2006 2:43:53 PM



Source: WSDOT 2003.

Exhibit 2-2. **Proposed Future Cross Section**

Aurora Avenue N 110th to 145th

Numerous commercial and retail driveways with undefined limits exist along both sides of the roadway.

Seattle Department of Transportation (SDOT) is proposing to widen the Aurora roadway by adding a new southbound 13-foot BAT Lane (see Exhibit 2-2). The proposed improvements would create a seven-lane roadway section (measuring roughly 81 feet as compared to the existing 64 feet) composed of the following:

- 13-foot BAT lanes in both directions, with a new southbound BAT lane
- Two 11-foot general purpose lanes in each direction
- An 11-foot left turn lane/landscaped center median, or access management features, between North 110th Street and North 145th Street
- Revisions to U-turns and left turns between North 110th Street and North 145th Street
- New curbs and gutters

Where the Evergreen-Washelli Cemetery is located within the project corridor, from North 110th Street to roughly North 116th Street, the proposed project improvements would create a reduced section (measuring 90 feet as compared to the 105 feet proposed for the remainder of the project) to eliminate the need to acquire right-of-way from the cemetery. Modifications to the proposed full section would be as follows:

- 11.5-foot BAT lanes in both directions
- Two 10.5-foot general purpose lanes in each direction
- A 10-foot left turn lane/landscaped center median, or access management features
- An 8-foot sidewalk on the west side of Aurora along the entire length of the cemetery property, from North 110th Street to the vicinity of North 118th Street
- A 7-foot sidewalk on the east side of Aurora along the cemetery property from North 110th Street to North 115th Street.

2.1.2 Build Sidewalks and ADA Ramps

- In general, a 12-foot sidewalk would be added on both sides of the road to include sidewalks, landscaping strips or tree pits, utility poles with mounted lighting, and fire hydrants. Ultimately, where there are existing structures and right-of-way constraints, the sidewalk may be reduced. Refer to Exhibit 2-2 for details. For the purposes of this analysis, a 12-foot sidewalk was evaluated for impacts.

- Americans with Disabilities Act (ADA) ramps would be provided throughout the project area.

2.1.3 Upgrade Storm Drainage Facilities

The existing drainage along the project area consists primarily of enclosed pipes and catch basins that collect and convey stormwater runoff from the roadway, driveways, and adjacent properties to the main trunk line running parallel to Aurora Avenue.

The project would direct all runoff to a new storm drain system and six new underground vaults, which would discharge to the existing trunk line parallel to Aurora Avenue North before ultimately discharging to Green Lake to the south. It has not been determined whether the detention vaults would be located in the right-of-way of Aurora Avenue North or in adjacent side streets. The six discharge points would be located at:

- North 145th Street
- North Roosevelt Way
- North 137th Street
- South of North 135th Street through K-Mart
- North 115th Street
- North 110th Street

Runoff that enters the project site from offsite areas would be collected and conveyed in a separate drainage system and would not be routed through the underground vaults. The treatment of stormwater runoff for the project would meet the criteria in WSDOT's 2004 *Highway Runoff Manual*.

2.1.4 Replace Lighting

Existing lighting in the corridor consists of utility poles with street lights along both sides of Aurora Avenue North. The poles are currently staggered with spacing from 120 to 170 feet. In addition to the current lighting scheme for the corridor, four additional lights would be added at each of the existing signalized intersections. The same luminaire type, mounting height, and arm length that currently exist along the corridor is proposed for the project. The exact location of the new staggered utility poles has yet to be determined. The potential spacing between poles is anticipated to be between 120 and 170 feet. The utility lines would not be placed underground as part of this project.

2.1.5 Install Landscaped Medians and Sidewalk Zone with Landscaped Strips

The existing corridor consists mainly of commercial development with few pedestrian or landscape improvements. Overhead power lines, asphalt

shoulders, cars, and adjacent businesses dominate much of the visual appearance through the corridor.

The following elements would be implemented for the project:

- The median would be approximately 11 feet wide, including the curb. The median would be approximately 12 inches in height and include hardy low-maintenance plants; no trees would be included.
- The sidewalk zone, in general, would be 12 feet wide where practicable, as mentioned in Section 2.1.2.
- The planting strip, included as part of the total sidewalk zone where feasible, would be a preferred 3 feet wide with "bulb-outs" where trees are located.
- At some parcels along the study area, onsite compliant parking spaces (consistent with Seattle Municipal Code) are likely to be removed as a result of the proposed sidewalk zone. In addition, existing noncompliant parking spaces, which are located within City of Seattle right-of-way, would be affected. Where feasible, the City will help identify other parking opportunities for affected businesses along the corridor that lose onsite compliant parking spaces as a result of the project. Where feasible, onsite compliant stalls will also be rearranged to regain parking capacity.

2.1.6 Upgrade Traffic Signalizations

No new signalized intersections are proposed for the project corridor. The seven existing signalized intersections would be upgraded to include new interconnected equipment and poles.

2.1.7 Upgrade Metro Bus Stops

Existing transit stops will be upgraded with lighting and shelters. No new stops are proposed.

2.2 Phased Construction

Right-of-way acquisition could start as early as fall 2007. Construction is expected to be completed in several phases, as funding becomes available, over the next 8 to 10 years. Improvements between North 137th Street and North 145th Street could begin in late 2008.

Construction for each phase is anticipated to last approximately 1.5 to 2 years. Potential environmental impacts and mitigation for all phases are analyzed in this NEPA document but are not currently funded. Future phases may require further environmental analysis at the time they are funded if significant changes occur in the project design.

3. Methodology

Impacts on air quality during construction of the project were evaluated qualitatively by describing the types of sources and typical pollutants expected from construction activities proposed for this project. Particulate matter is the primary pollutant of concern arising from earth-moving activities. Exhaust emissions from diesel-fueled trucks and construction equipment also are of concern.

During operation of the project, vehicle exhaust would be the only source of air emissions. Air quality impacts associated with changes in traffic patterns and volumes were modeled according to the guidelines provided in the U.S. Environmental Protection Agency (USEPA) document *Guideline for Modeling Carbon Monoxide from Roadway Intersections* (USEPA 1992a).

3.1 Methods of Analysis

This Air Quality Discipline Report was prepared using the guidance outlined in Section 425 of the WSDOT document titled *WSDOT Environmental Procedures Manual M 31-11* (WSDOT 2006).

3.1.1 Construction Impacts Method of Analysis

Impacts on air quality from construction were qualitatively addressed by considering emission sources from typical roadway project construction activities. Emissions were considered for soil-disturbing activities, heavy-duty equipment, commuting workers, and the laying of asphalt.

3.1.2 Operational Impacts Method of Analysis

Although many pollutants are present in vehicle exhaust, carbon monoxide (CO) is the major pollutant of concern for transportation projects. The analysis of impacts involves estimating the CO emissions generated by vehicles in the project vicinity and then using a dispersion model to estimate the ambient concentration at receptors placed around the intersections analyzed. Impacts from toxic air pollutants in vehicle exhaust were addressed qualitatively.

A screening analysis was performed to identify the worst intersections within the study area affected by the project. Only the intersections with a level of service (LOS) of D, E, or F were subject to the screen, according to current guidelines. On a scale of A to F, intersections designated LOS A have the shortest delays and those designated F have the longest delays. Longer delay results in greater pollutant emissions from vehicle exhaust while the vehicles are moving slowly or idling. Exhibit 3-1 lists the LOS ratings for the signalized intersections in the study area.

EXHIBIT 3-1. PM PEAK-HOUR LOS FOR SIGNALIZED INTERSECTIONS				
Intersection	**2005 Existing**	**2010 (Year of Opening) Build**	**2030 (Horizon Year) No Build**	**2030 (Horizon Year) Build**
Aurora Ave & N 112th Street	A	A	A	A
Aurora Ave & N 115th Street	B	B	C	C
Aurora Ave & N 117th Street	B	B	C/D	E
Aurora Ave & N 125th Street	D/E	D	**F**	**F**
Aurora Ave & N 130th Street	E	E	**F**	**F**
Aurora Ave & N 135th Street	B	B	D	D
Aurora Ave & N 145th Street	E	D	**F**	**F**

Source: CH2M HILL 2006.

The three intersections with the highest volumes and the three with the worst LOS were then identified for each 2030 alternative. The results of the screening analysis indicated that the worst three intersections in terms of LOS and traffic volume would be as follows:

- Aurora Avenue and North 125th Street
- Aurora Avenue and North 130th Street
- Aurora Avenue and North 145th Street

Therefore, these intersections were analyzed quantitatively in a “hot spots” analysis as the top three project-affected intersections.

CO concentrations were analyzed in the vicinity of these intersections for the Build and No Build Alternatives. PM peak-hour traffic volumes were estimated using current traffic model and forecast data, as described in the Transportation Analysis Technical Memorandum (CH2M HILL 2006). Traffic volumes were used in the air quality model to estimate a 1-hour maximum CO concentration. The analysis was performed for three years: existing 2005, year of opening 2010, and horizon year 2030.

Emission factors in grams per vehicle mile traveled were estimated for each vehicle speed evaluated in the analysis using USEPA's MOBILE6.2 model (version 6.2, September 24, 2003). MOBILE6.2 calculates emission factors for each type of vehicle typically present in the fleet, including gasoline-fueled light-duty vehicles, trucks, and heavy-duty vehicles; motorcycles; and 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.

MOBILE6.2 model output data were obtained from the Puget Sound Regional Council (PSRC) (C. Peak, PSRC, email to R. King, CH2M HILL, March 24, 2006).

For MOBILE6.2 emission factors at various travel speeds, the USEPA CAL3QHC dispersion model was used to calculate ambient concentrations of CO near the roadway intersections (USEPA 1992b). Modeled receptors were located at sites accessible to the public, generally near intersection corners and near each approach and departure link, according to USEPA guidance (USEPA 1992a). The receptors were placed no closer than 3 meters (10 feet) from the edge of the road, at the corners and at distances of 25 and 50 meters (82 and 164 feet) from each corner along each approach and departure (Exhibit 3-2).

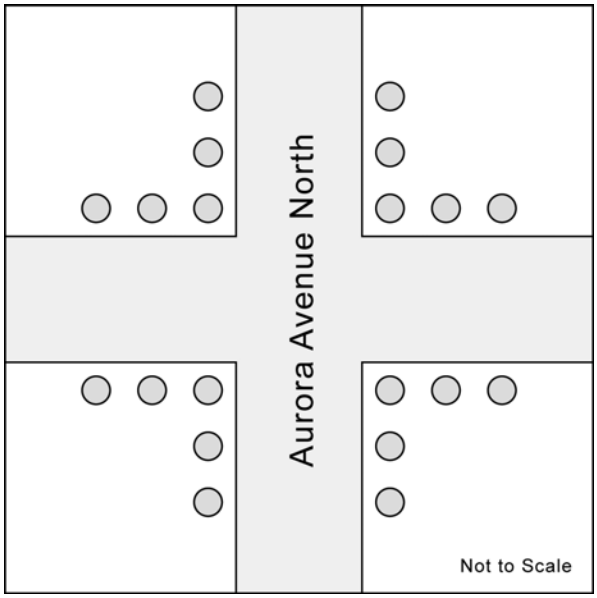


Exhibit 3-2. Typical Receptor Locations at Hot Spot Intersections

As specified in the USEPA guidelines (USEPA 1992b), CAL3QHC was run with meteorological input parameters consisting of a 1-meter (3-foot) per-second wind speed, 1,000-meter (3,250-foot) mixing height, and a moderately stable (Class E) atmosphere to simulate winter conditions, when elevated CO concentrations most frequently occur. One-hour average ambient CO concentrations were calculated to estimate the impact during peak-hour traffic conditions. A background CO concentration of 3 parts per million (ppm) was used, which accounts for other common CO emission sources in a suburban area, such as home heating and train exhaust. This value is recommended in *Guidebook for Conformity: Air Quality Assistance for Nonattainment Areas* (KJS Associates, Inc. 1995).

Concentrations were calculated at a receptor height of 1.8 meters (6 feet). Other CAL3QHC model inputs are summarized in Exhibit 3-3.

Because the 8-hour average CO national ambient air quality standard is lower and more limiting than the 1-hour standard, the results of the air quality analyses of traffic emissions are typically reported for this averaging period. Regulatory guidance recommends adjusting the 1-hour concentrations to 8-hour concentrations using a factor of 0.7, which conservatively accounts for variations in meteorology over an 8-hour period. Results are reported here for both 1-hour and 8-hour CO concentrations.

EXHIBIT 3-3. SUMMARY OF CAL3QHC INPUTS

Description	Value
Surface roughness coefficient	175 cm[1]
Background CO concentration	3 ppm[2]
Signal type	Actuated[3]
Intersection arrival rate	Average progression[3]
Saturation flow rate	1600 vehicles per hour per lane[3]
Clearance lost time	2 seconds[3]

[1] Surface roughness recommended in guidance for office land use type (USEPA 1992b).
[2] Background concentration recommended in guidance for suburban areas (USEPA 1992b).
[3] Values recommended by USEPA guidance (USEPA 1992a).

3.2 Studies and Coordination

Air quality resources are managed and regulated by multiple agencies. Governing air quality plans and policies, as well as applicable regulations and regulatory agencies, are summarized in Exhibit 3-4.

EXHIBIT 3-4. AIR QUALITY POLICIES, REGULATIONS, AND COORDINATING AGENCIES

Guiding Plans/Policies	Regulations	Regulatory Agency
Federal Clean Air Act	42 USC. 7401 et seq. 1970	USEPA/ Ecology/PSCAA
Washington Clean Air Act	Chapter 70.94 RCW	Ecology/PSCAA
Ambient Air Quality Standards	40 CFR Part 52.21, WAC 173-400	USEPA/Ecology/PSCAA

Ecology = Washington State Department of Ecology
PSCAA = Puget Sound Clean Air Agency

4. Affected Environment

The air quality discipline team identified the air quality standards and regulations of USEPA, 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 affect the project area. Finally, the team evaluated the status of air quality in the project area by comparing recent air monitoring data available from USEPA, Ecology, and PSCAA to the applicable air quality standards.

4.1 Regulatory Background

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. Air quality is currently regulated by both the Federal Clean Air Act (42 USC. 7401 et seq. 1970) and its amendments and the Washington State Clean Air Act (RCW 70.94). Regulations have been developed to protect air quality, and are enforced by USEPA, the Washington State Department of Ecology (Ecology), and locally by the Puget Sound Clean Air Agency (PSCAA).

USEPA delegates authority to manage air quality issues to the states. In Washington state, USEPA and Ecology further delegate 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.

4.2 Climate and Topography

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.

Ozone

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

Photochemical Smog

A combination of primary pollutants, NOX 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.

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

4.3 Air Pollutants

The major airborne pollutants of interest for transportation projects are 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 impacts.

FHWA has determined that this project, as a National Environmental Policy Act (NEPA) Documented Categorical Exclusion, will generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special Mobile Source Air Toxics (MSAT) concerns. Consequently, this effort is exempt from analysis for MSATs. Moreover, USEPA regulations for vehicle engines and fuels will cause overall MSATs to decline significantly over the next 20 years. Even after accounting for a 64 percent increase in vehicle miles traveled (VMT), FHWA predicts MSATs will decline in the range of 57 percent to 87 percent, from 2000 to 2020, based on regulations now in effect, even with

a projected 64 percent increase in VMT. This will both reduce the background level of MSATs as well as the possibility of even minor MSAT emissions from this project (FHWA 2006).

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 in global temperatures, leading to environmental impacts such as rising sea levels and altered weather patterns.

4.4 Air Quality Standards

Washington is subject to air quality regulations issued by USEPA, Ecology, and PSCAA. USEPA'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 levels of criteria pollutants found in the atmosphere and comparing them with the NAAQS.

The NAAQS consist of 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 USEPA's NAAQS. Exhibit 4-1 lists all of the national, state, and local air quality standards in effect for the criteria pollutants in the state of Washington.

The Central Puget Sound region is currently in attainment for all criteria pollutants. USEPA designated the Central Puget Sound region as maintenance attainment status for CO in 1996. The Aurora Avenue North Improvements project, therefore, is located in an area that is currently designated a maintenance area for CO. Exhibit 4-2 shows the air quality maintenance area for CO in the Puget Sound region.

Attainment Area
USEPA 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) pollutant, and attainment for all others.

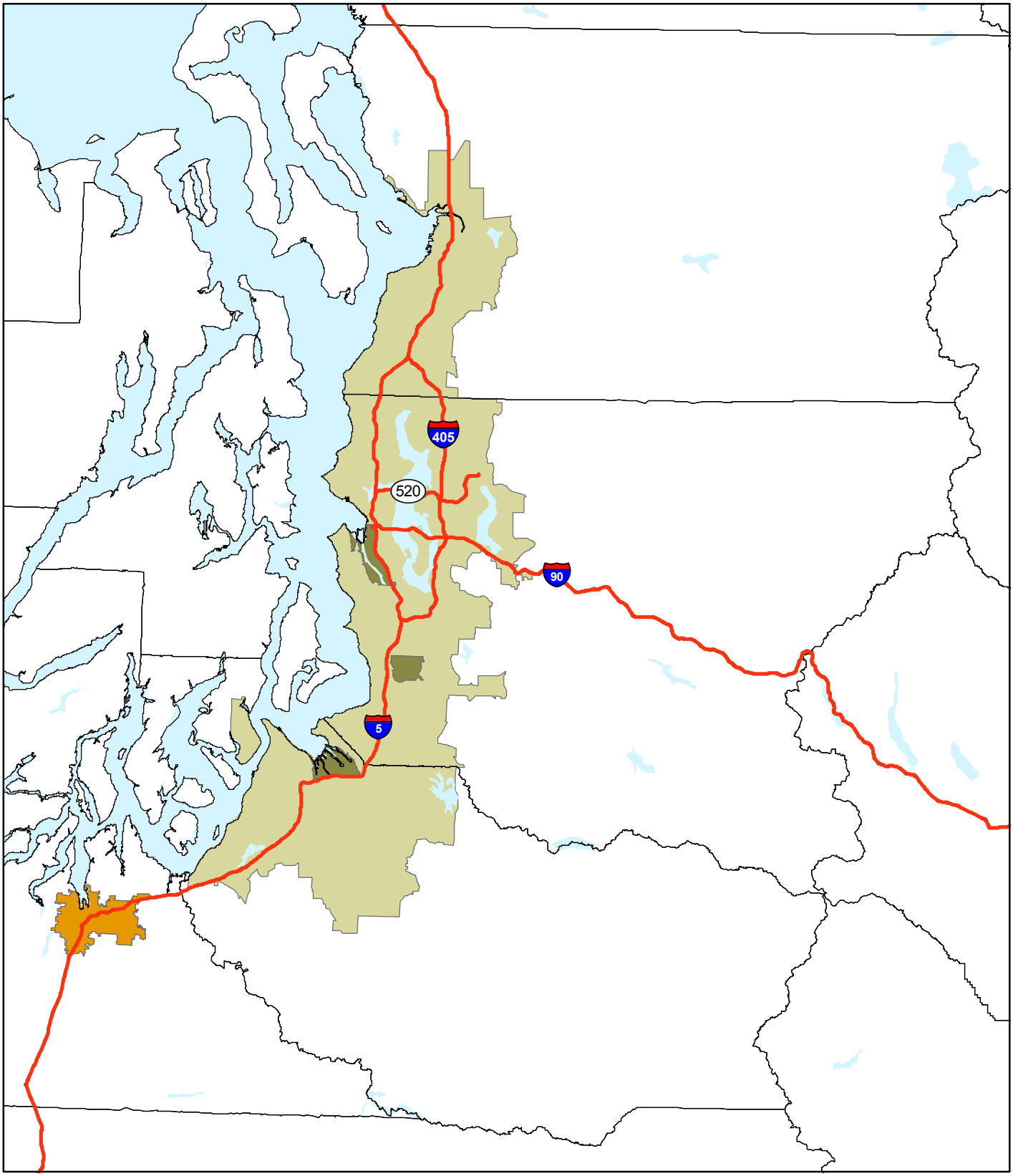
Maintenance Area
USEPA gives this designation to an area formerly designated nonattainment, but whose recent monitoring data show that pollutant levels have dropped below the applicable standard for a given pollutant. Although an area is considered attainment, it is subject to a 10-year maintenance period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

Nonattainment Area
USEPA 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.

EXHIBIT 4-1. NATIONAL, STATE, AND LOCAL AMBIENT AIR QUALITY STANDARDS				
Pollutant	**National (NAAQS)**		**Washington State**	**Puget Sound Region**
	Primary	**Secondary**		
Nitrogen Dioxide				
Annual Average (ppm)	0.05	0.05	0.05	0.05
Carbon Monoxide				
8-Hour Average (ppm)	9	NS	9	9
1-Hour Average (ppm)	35	NS	35	35
Ozone				
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: USEPA 2006a.

$\mu g/m^3$ = micrograms per cubic meter
NS = no standard established
$PM_{2.5}$ = particulate matter smaller than 2.5 microns in diameter
PM_{10} = particulate matter smaller than 10 microns in diameter
ppm = parts per million



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

N

0 5 10 Miles

Area designated as Attainment or Unclassified for all Criteria Pollutants

Carbon Monoxide Maintenance Area

Carbon Monoxide and Particulate Matter Maintenance Area

Particulate Matter Maintenance Area

Exhibit 4-2. **Air Quality Maintenance Areas**

Aurora Avenue N 110th to 145th

File Path: P:\SeattleWaCityOf\324876\GIS\Layouts\AirQuality.mxd

diesel exhaust contribution to the area's toxic air pollutants should be reduced in the near future as a result of the following:

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

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

4.5 Existing Conditions

4.5.1 Monitoring Data

Both Ecology and PSCAA operate ambient air quality monitors to assess the levels of regulated pollutants and to verify continued compliance with the NAAQS. Photo 1 is a picture of an air monitor in Seattle. The University District monitor is the CO monitoring site closest to the project area, and it is located approximately 4.3 miles from the project area. CO is also measured at monitoring sites in Lynnwood and at 4th and Pike in downtown Seattle. A Mountlake Terrace site is located about 5.2 miles from the project site and measures $PM_{2.5}$. Monitoring sites at Beacon Hill and Duwamish sites are approximately 10 miles south of the project area.

Photo 1. **Air Monitor Located in the University District in Seattle**

Ambient air concentrations of the monitored pollutants have been well below the NAAQS for the last several years, as shown in Exhibit 4-3.

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 4-4 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 4-3. AMBIENT CRITERIA POLLUTANT CONCENTRATION LEVELS MEASURED FROM 2003 TO 2005					
		Maximum Concentration			
Monitoring Location	**Parameter**	**2003**	**2004**	**2005**	**NAAQS**
Particulate Matter (PM_{10})					
Duwamish	Annual Arithmetic Mean ($\mu g/m^3$)	22	25	24	**50**
	24-Hour Average ($\mu g/m^3$)	65	57	76	**150**
Particulate Matter ($PM_{2.5}$)					
Duwamish	Annual Arithmetic Mean ($\mu g/m^3$)	10.7	11.7	11.3	**50**
	24-Hour Average ($\mu g/m^3$)	37	43	31	**150**
Mountlake Terrace	Annual Arithmetic Mean ($\mu g/m^3$)	9.2	NA	8.9	**50**
	24-Hour Average ($\mu g/m^3$)	34	NA	35	**150**
Carbon Monoxide					
University District	8-Hour Average (ppm)	7.1	3.4	3.8	**9**
	1-Hour Average (ppm)	9.1	4.9	4.6	**35**
Lynnwood	8-Hour Average (ppm)	4.5	3.1	3.6	**9**
	1-Hour Average (ppm)	6.0	5.1	5.1	**35**
4th and Pike	8-Hour Average (ppm)	3.0	2.5	2.7	**9**
	1-Hour Average (ppm)	5.0	3.6	3.6	**35**
Ozone					
Beacon Hill Reservoir	8-Hour Average (ppm)	0.055	0.058	0.049	**0.08**
Nitrogen Dioxide					
Beacon Hill Reservoir	Annual Arithmetic Average (ppm)	0.018	0.018	0.018	**0.05**
Sulfur Dioxide					
Beacon Hill Reservoir	Annual Arithmetic Average (ppm)	0.003	0.003	0.004	**0.02**
	24-Hour Average (ppm)	0.010	0.019	0.014	**0.10**
	3-Hour Average (ppm)	0.026	0.045	0.028	**0.40**

Source: USEPA 2004.
$\mu g/m^3$ = micrograms per cubic mater
$PM_{2.5}$ = particulate matter smaller than $PM_{2.5}$ microns in diameter
PM_{10} = particulate matter smaller than PM_{10} microns in diameter
ppm = parts per million
NA = no data available

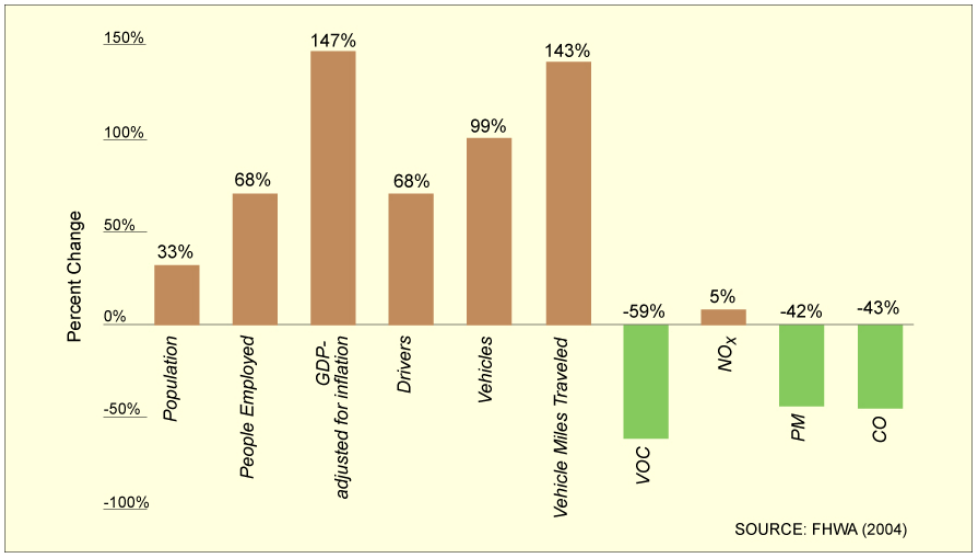


Exhibit 4-4. Percent Change in Amount of Vehicle Emissions Compared to Demographics and Transportation (1970 to 1999)

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 install retrofit devices to filter or oxidize vehicle exhaust (PSCAA 2004). Other voluntary programs which encourage diesel emission reductions are supported by Ecology and USEPA.

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 PSRC (2004) 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 at which local air monitoring data indicate that concentrations are again above the NAAQS, the region's attainment 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). Section 4.5.2 discusses 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).

4.5.2 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 USEPA regulations 40 CFR Parts 51 and 93) and the Washington Clean Air Act. The Aurora Avenue North Improvements project is subject to these conformity requirements because it is a transportation project that is located in a maintenance area for 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 project is included in the RTP, *Destination 2030* (PSRC 2006a), and in the 2005-2007 TIP (PSRC 2006b). 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 is in a maintenance area for CO, a project-level analysis is necessary to verify that no localized impacts would cause or contribute to a violation of the NAAQS. The analysis of impacts 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 of 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.

5. Environmental Consequences

This section discusses the direct and indirect impacts, both positive and negative, of construction and operation of the Build Alternative on air quality elements in the study area. The Build Alternative is described in Section 2. Mitigation is discussed where applicable.

5.1 Impacts During Construction

5.1.1 Direct Impacts

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.

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 pollutants of concern for the first two source types (dust) are $PM_{2.5}$ and PM_{10}. Engine and motor vehicle exhaust would result in emissions of VOCs, NO_x, $PM_{2.5}$, PM_{10}, air toxics, and greenhouse gases.

5.1.2 Indirect Impacts

Indirect impacts are those that are later in time or further removed in distance, but are still reasonably foreseeable. The Build Alternative would cause no indirect air quality impacts during construction.

5.1.3 Mitigation

For temporary impacts during construction, state law requires construction site owners and/or operators to take reasonable precautions to prevent fugitive dust from becoming airborne (WSDOT 1999). Fugitive dust may become airborne during demolition, material transport, grading, driving of vehicles and machinery on and off the site, and wind events. 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 impacts 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 $PM_{2.5}$, $PM_{10,}$ 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 require the use of ultra-low-sulfur diesel fuel in on-road trucks by 2006. 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 to reduce idling time of equipment and vehicles and to use newer construction equipment or equipment with add-on emission controls.

5.2 Impacts During Operation

5.2.1 Direct Impacts

One of the primary objectives of the project is to increase mobility on Aurora Avenue North, which would result in fewer delays for motor vehicles and lower vehicle exhaust emissions. Region wide, fewer delays and lower emissions are a positive impact 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 (see Section 3.1) at affected intersections to identify whether the emissions would cause a substantial impact.

Exhibits 5-1 and 5-2 summarize the CAL3QHC modeling results for CO under existing conditions, the No Build Alternative, and the Build Alternative. All modeled concentrations are below the 1-hour and 8-hour NAAQS. 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 5-1. MAXIMUM 1-HOUR CO CONCENTRATIONS AT HOT SPOT INTERSECTIONS

	Concentration (ppm)			
Scenario	**Aurora/125th**	**Aurora/130th**	**Aurora/145th**	**NAAQS**
2005 Existing	11.4	11.3	11.6	35
2010 – Build	8.6	8.8	8.6	35
2030 – No Build	6.7	6.9	6.9	35
2030 – Build	6.8	6.9	6.7	35

Source: CAL3QHC Model Results. See Appendix A.

EXHIBIT 5-2. MAXIMUM 8-HOUR CO CONCENTRATIONS AT HOT SPOT INTERSECTIONS				
	Concentration (ppm)			
Scenario	**Aurora/125th**	**Aurora/130th**	**Aurora/145th**	**NAAQS**
2005 Existing	8.0	7.9	8.1	9
2010 – Build	6.0	6.2	6.0	9
2030 – No Build	4.7	4.8	4.8	9
2030 – Build	4.8	4.8	4.7	9

Source: CAL3QHC Model Results. See Appendix A.

Because the project is not anticipated to create any new violations nor increase the frequency of an existing violation of the CO standard, 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 2006a), and in the 2005-2007 TIP (PSRC 2006b). The RTP and the TIP meet the conformity requirements identified by federal and state regulations for CO.

5.2.2 Indirect Impacts

The project would have no indirect air quality impacts from operation of the Build Alternative.

5.2.3 Mitigation

No mitigation is proposed.

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Appendix A
Model Output Files

JOB: 125th Avenue & North Aurora 2005 RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 13:34:34

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 = 3.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	*	LENGTH (M)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (M)	W (M)	V/C QUEUE (VEH)
1. EBA	*	-304.8	-3.7	.0	-3.7	*	305.	90.	AG	425.	22.7	.0	9.8	
2. EBD	*	.0	-3.7	304.8	-3.7	*	305.	90.	AG	380.	22.7	.0	9.8	
3. WBA	*	304.8	3.7	.0	3.7	*	305.	270.	AG	265.	22.7	.0	9.8	
4. WBD	*	.0	3.7	-304.8	3.7	*	305.	270.	AG	415.	22.7	.0	9.8	
5. NBA	*	3.7	-304.8	3.7	.0	*	305.	360.	AG	1985.	23.3	.0	13.4	
6. NBD	*	3.7	.0	3.7	304.8	*	305.	360.	AG	1870.	23.3	.0	13.4	
7. SBA	*	-7.3	304.8	-7.3	.0	*	305.	180.	AG	1285.	23.3	.0	13.4	
8. SBD	*	-7.3	.0	-7.3	-304.8	*	305.	180.	AG	1295.	23.3	.0	13.4	
9. EBL	*	-11.0	.0	-34.5	.0	*	23.	270.	AG	351.	100.0	.0	3.7	.75 3.9
10. EBT	*	-11.0	-3.7	-49.7	-3.7	*	39.	270.	AG	304.	100.0	.0	3.7	.75 6.5
11. WBL	*	11.0	.0	19.5	.0	*	8.	90.	AG	373.	100.0	.0	3.7	.45 1.4
12. WBT	*	11.0	3.7	42.9	3.7	*	32.	90.	AG	326.	100.0	.0	3.7	.74 5.3
13. NBL	*	-1.8	-5.5	-1.8	-31.3	*	26.	180.	AG	344.	100.0	.0	3.7	.74 4.3
14. NBT	*	3.7	-5.5	3.7	-636.4	*	631.	180.	AG	454.	100.0	.0	7.3	1.25 105.1
15. NBR	*	9.1	-5.5	9.1	-20.5	*	15.	180.	AG	227.	100.0	.0	3.7	.22 2.5
16. SBL	*	-1.8	5.5	-1.8	14.2	*	9.	360.	AG	381.	100.0	.0	3.7	.60 1.4
17. SBT	*	-7.3	5.5	-7.3	374.8	*	369.	360.	AG	527.	100.0	.0	7.3	1.17 61.6

North (Seattle)

DATE : 4/18/ 6
TIME : 13:34:34

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	115	96	3.0	145	1600	156.90	2	3
10. EBT	115	83	3.0	280	1600	156.90	2	3
11. WBL	115	102	3.0	50	1600	156.90	2	3
12. WBT	115	89	3.0	215	1600	156.90	2	3
13. NBL	115	94	3.0	165	1600	156.90	2	3
14. NBT	115	62	3.0	1675	1600	156.90	2	3
15. NBR	115	62	3.0	145	1600	156.90	2	3
16. SBL	115	104	3.0	50	1600	156.90	2	3
17. SBT	115	72	3.0	1235	1600	156.90	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. REC 1	-14.0	8.5	1.8
2. REC 2	10.4	8.5	1.8
3. REC 3	14.0	-8.5	1.8
4. REC 4	-14.0	-8.5	1.8
5. REC 5	-14.0	33.5	1.8
6. REC 6	-14.0	58.5	1.8
7. REC 7	10.4	33.5	1.8
8. REC 8	10.4	58.5	1.8
9. REC 9	14.0	-33.5	1.8
10. REC 10	14.0	-58.5	1.8
11. REC 11	-14.0	-33.5	1.8
12. REC 12	-14.0	-58.5	1.8
13. REC 13	-39.0	8.5	1.8
14. REC 14	-64.0	8.5	1.8
15. REC 15	35.4	8.5	1.8
16. REC 16	60.4	8.5	1.8
17. REC 17	39.0	-8.5	1.8
18. REC 18	64.0	-8.5	1.8
19. REC 19	-39.0	-8.5	1.8
20. REC 20	-64.0	-8.5	1.8

North (Seattle)

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: 0.-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
0.	*	8.0	7.4	7.5	10.1	8.0	8.0	7.2	7.1	6.8	7.0	8.0	7.8	3.9	3.2	3.8	3.2	4.5	3.6	5.3	3.9
5.	*	9.3	5.8	6.2	10.9	9.2	9.1	5.8	5.7	5.6	5.6	9.0	8.7	4.5	3.5	3.4	3.0	4.1	3.4	5.9	4.1
10.	*	9.6	4.5	5.5	11.4	9.6	9.6	4.5	4.5	4.5	4.5	8.7	8.8	5.2	4.1	3.1	3.0	3.8	3.4	6.6	4.6
15.	*	9.5	3.8	4.9	10.6	9.5	9.5	3.8	3.8	3.8	3.6	8.5	8.5	5.5	4.4	3.0	3.0	3.7	3.4	7.0	5.0
20.	*	8.8	3.4	4.8	9.8	8.8	8.8	3.4	3.4	3.7	3.4	7.5	8.1	5.5	4.6	3.0	3.0	3.6	3.4	7.1	5.1
25.	*	8.3	3.3	4.7	8.8	8.3	8.3	3.3	3.2	3.5	3.3	7.6	7.8	5.4	4.6	3.0	3.0	3.7	3.5	7.1	5.1
30.	*	7.9	3.2	4.6	8.1	7.9	7.9	3.2	3.2	3.5	3.3	7.7	7.5	5.2	4.5	3.0	3.0	3.6	3.5	7.0	5.0
35.	*	7.6	3.2	4.5	7.5	7.7	7.7	3.2	3.2	3.4	3.2	7.4	7.4	5.2	4.5	3.0	3.0	3.6	3.5	7.2	5.1
40.	*	7.4	3.1	4.4	7.2	7.4	7.4	3.1	3.1	3.3	3.2	7.6	7.0	5.0	4.5	3.0	3.0	3.5	3.5	7.3	5.1
45.	*	7.2	3.1	4.4	6.6	7.2	7.2	3.1	3.1	3.3	3.2	7.6	6.5	4.9	4.5	3.0	3.0	3.6	3.6	7.4	5.2
50.	*	7.0	3.1	4.3	6.4	6.9	6.9	3.1	3.1	3.2	3.2	7.6	6.4	4.8	4.3	3.0	3.0	3.6	3.6	7.4	5.1
55.	*	7.0	3.1	4.3	6.3	6.8	6.8	3.1	3.1	3.3	3.2	7.4	6.3	4.8	4.2	3.0	3.0	3.6	3.6	7.6	5.3
60.	*	6.9	3.1	4.3	6.4	6.7	6.7	3.1	3.1	3.3	3.2	7.1	6.1	4.8	4.2	3.0	3.0	3.7	3.7	7.5	5.4
65.	*	6.9	3.1	4.2	6.7	6.5	6.5	3.1	3.1	3.3	3.2	6.8	6.0	4.9	4.3	3.0	3.0	3.7	3.7	7.4	5.6
70.	*	7.0	3.1	4.1	6.9	6.5	6.5	3.0	3.0	3.3	3.2	6.5	5.9	4.9	4.3	3.1	3.1	3.8	3.8	7.5	6.1
75.	*	7.1	3.2	4.1	7.2	6.3	6.3	3.0	3.0	3.3	3.2	6.4	5.9	4.8	4.3	3.1	3.1	3.9	3.8	7.2	6.4
80.	*	7.4	3.5	4.0	7.4	6.3	6.3	3.0	3.0	3.3	3.1	6.3	5.8	5.2	4.8	3.3	3.3	3.9	3.9	7.1	6.8
85.	*	7.8	3.7	4.0	7.3	6.4	6.4	3.0	3.0	3.2	3.0	6.2	5.8	5.4	5.2	3.4	3.4	3.9	3.9	6.8	6.4
90.	*	8.1	4.1	3.8	7.3	6.6	6.4	3.1	3.0	3.1	3.0	6.0	5.8	5.9	5.5	3.6	3.6	3.8	3.7	6.1	6.0
95.	*	8.3	4.6	3.6	7.2	6.6	6.4	3.2	3.0	3.0	3.0	5.9	5.8	6.4	6.0	3.8	3.8	3.6	3.5	5.7	5.6
100.	*	8.2	4.8	3.3	6.9	6.5	6.5	3.2	3.2	3.0	3.0	5.7	5.7	6.6	6.4	3.9	3.8	3.3	3.3	5.3	4.9
105.	*	7.8	5.1	3.2	6.7	6.7	6.5	3.3	3.2	3.0	3.0	5.7	5.7	6.7	6.3	4.0	3.8	3.2	3.2	5.2	4.5

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 110.  *   7.7   4.9   3.1   6.6   6.7   6.7   3.3   3.2   3.0   3.0   5.7   5.7
6.8   6.2   4.0   3.7   3.1   3.1   5.1   4.3
 115.  *   7.4   5.1   3.1   6.6   7.0   6.7   3.4   3.3   3.0   3.0   5.8   5.8
6.9   5.9   4.1   3.7   3.1   3.1   4.9   4.4
 120.  *   7.1   5.1   3.0   6.6   7.2   6.9   3.4   3.3   3.0   3.0   5.9   5.9
7.1   5.7   4.1   3.6   3.0   3.0   4.8   4.2
 125.  *   7.2   5.2   3.0   6.9   7.4   7.1   3.4   3.3   3.0   3.0   6.1   6.1
7.3   5.6   4.3   3.6   3.0   3.0   4.7   4.2
 130.  *   7.1   5.2   3.0   6.8   7.7   7.2   3.5   3.3   3.0   3.0   6.1   6.1
7.1   5.3   4.4   3.6   3.0   3.0   4.9   4.2
 135.  *   7.5   5.1   3.0   6.8   7.9   7.6   3.5   3.3   3.0   3.0   6.2   6.2
7.1   5.2   4.3   3.5   3.0   3.0   4.8   4.3
 140.  *   8.0   5.1   3.0   7.1   8.1   7.8   3.6   3.4   3.0   3.0   6.5   6.5
6.9   5.2   4.3   3.4   3.0   3.0   4.8   4.4
 145.  *   7.8   5.1   3.0   7.1   8.4   8.1   3.7   3.5   3.0   3.0   6.6   6.6
6.7   5.1   4.3   3.4   3.0   3.0   4.9   4.4
 150.  *   8.5   5.1   3.0   7.4   8.9   8.5   3.8   3.5   3.0   3.0   6.9   6.9
6.6   5.0   4.3   3.4   3.0   3.0   5.1   4.5
 155.  *   8.8   5.1   3.0   7.5   9.4   9.1   3.9   3.6   3.0   3.0   7.2   7.2
6.5   5.0   4.3   3.4   3.0   3.0   5.1   4.5
 160.  *   9.3   5.3   3.2   7.8   9.9   9.7   4.1   3.9   3.2   3.2   7.6   7.6
6.5   5.0   4.3   3.4   3.0   3.0   5.3   4.5
 165.  *   9.8   5.7   3.4   8.2  10.5  10.0   4.6   4.4   3.4   3.4   8.1   8.0
6.4   4.9   4.3   3.4   3.0   3.0   5.3   4.4
 170.  *  10.0   6.8   4.1   8.4  10.1  10.5   5.8   5.4   4.1   4.1   8.1   8.1
6.1   4.6   4.5   3.4   3.1   3.0   5.0   4.1
 175.  *   9.5   8.5   5.2   7.8   9.6  10.0   7.3   7.1   5.2   5.2   7.7   7.7
5.4   4.3   4.9   3.5   3.3   3.1   4.4   3.6
 180.  *   8.7  10.1   6.8   6.8   8.0   8.6   8.7   8.7   6.6   6.5   6.7   6.7
4.9   3.9   5.4   3.8   3.9   3.3   3.8   3.4
 185.  *   7.3  11.1   7.9   5.5   6.7   6.9   9.5   9.4   7.7   7.5   5.5   5.3
4.4   3.6   6.1   4.2   4.6   3.7   3.4   3.1
 190.  *   6.0  11.0   8.4   4.3   5.2   5.2   9.6   8.9   8.2   8.1   4.2   4.2
4.1   3.5   6.6   4.6   5.1   4.2   3.1   3.0
 195.  *   5.3  10.4   8.5   3.7   4.6   4.3   9.1   8.9   8.2   8.2   3.7   3.7
4.0   3.5   6.8   5.0   5.3   4.4   3.0   3.0
 200.  *   4.9   9.3   8.4   3.3   4.1   3.8   8.2   8.3   7.9   7.9   3.3   3.3
4.0   3.5   6.7   5.1   5.3   4.5   3.0   3.0
 205.  *   5.1   8.6   8.0   3.2   3.9   3.7   7.8   8.1   7.4   7.4   3.2   3.2
4.0   3.5   6.6   5.1   5.2   4.6   3.0   3.0
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JOB: 125th Avenue & North Aurora 2005 RUN: Aurora Avenue North (Seattle)

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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

------*-------------------------------------------------------------------------------
-----------------------------------------
 210.  *   5.0   7.9   8.0   3.1   3.8   3.4   7.7   7.6   7.2   7.2   3.1   3.1
4.0   3.5   6.6   5.0   5.1   4.5   3.0   3.0
 215.  *   5.2   7.4   7.8   3.1   3.7   3.4   7.3   7.4   6.8   6.8   3.1   3.1
4.1   3.7   6.7   4.9   5.0   4.4   3.0   3.0
 220.  *   5.1   6.8   7.7   3.1   3.7   3.3   7.4   7.1   6.6   6.6   3.1   3.1
4.0   3.7   6.7   4.8   4.9   4.4   3.0   3.0
 225.  *   5.1   6.8   7.7   3.1   3.6   3.3   7.5   6.9   6.5   6.5   3.1   3.1
3.9   3.7   7.0   4.9   4.8   4.3   3.0   3.0
 230.  *   5.1   6.5   7.5   3.1   3.5   3.3   7.2   6.7   6.3   6.3   3.1   3.1
3.9   3.7   7.1   4.9   4.8   4.2   3.0   3.0
 235.  *   5.2   6.4   7.4   3.1   3.6   3.3   7.0   6.4   6.2   6.2   3.1   3.1
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3.9   3.8   6.9   5.1   4.8   4.2   3.0   3.0
 240.  *   5.1   6.7   7.4   3.1   3.5   3.3   6.8   6.4   6.2   6.2   3.1   3.1
3.8   3.8   7.1   5.2   5.0   4.2   3.0   3.0
 245.  *   5.0   6.9   7.2   3.1   3.4   3.2   6.7   6.3   6.0   6.0   3.0   3.0
3.9   3.9   6.9   5.5   5.0   4.4   3.1   3.1
 250.  *   4.9   7.4   7.1   3.1   3.4   3.2   6.4   6.1   6.0   6.0   3.0   3.0
4.0   4.0   7.0   6.0   5.0   4.4   3.1   3.1
 255.  *   4.7   7.8   7.3   3.3   3.4   3.2   6.3   6.1   5.9   5.9   3.0   3.0
4.1   4.1   7.1   5.9   5.4   4.6   3.2   3.2
 260.  *   4.6   7.9   7.8   3.6   3.3   3.2   6.3   6.2   5.9   5.9   3.0   3.0
4.2   4.2   7.0   6.4   5.7   5.0   3.4   3.4
 265.  *   4.3   7.8   8.1   3.9   3.2   3.0   6.1   6.1   6.1   6.0   3.0   3.0
4.1   4.1   6.5   6.2   5.6   5.1   3.6   3.6
 270.  *   4.0   7.6   8.5   4.4   3.2   3.0   6.2   6.0   6.3   6.0   3.2   3.0
3.9   3.9   6.3   5.8   6.3   5.7   4.0   3.9
 275.  *   3.7   7.3   8.6   5.0   3.0   3.0   6.0   6.0   6.4   6.1   3.2   3.0
3.6   3.6   5.7   5.1   6.4   5.9   4.2   4.1
 280.  *   3.4   6.9   8.6   5.4   3.0   3.0   6.0   6.0   6.5   6.1   3.3   3.2
3.4   3.4   5.2   4.7   6.5   6.1   4.4   4.2
 285.  *   3.2   6.5   8.2   5.5   3.0   3.0   5.9   5.9   6.8   6.1   3.4   3.2
3.2   3.2   4.9   4.4   6.4   6.0   4.5   4.1
 290.  *   3.1   6.5   7.7   5.7   3.0   3.0   6.0   6.0   6.8   6.2   3.4   3.2
3.1   3.1   4.8   4.4   6.3   5.6   4.5   4.0
 295.  *   3.1   6.4   7.3   5.7   3.0   3.0   6.1   6.1   7.2   6.2   3.4   3.2
3.1   3.1   4.7   4.3   5.9   5.2   4.5   3.9
 300.  *   3.1   6.4   7.1   5.7   3.1   3.1   6.2   6.2   7.5   6.4   3.6   3.3
3.0   3.0   4.7   4.3   6.0   5.3   4.6   3.8
 305.  *   3.1   6.5   7.0   5.7   3.1   3.1   6.2   6.2   7.5   6.5   3.6   3.3
3.0   3.0   4.7   4.3   6.0   5.2   4.6   3.8
 310.  *   3.1   6.5   6.9   5.5   3.1   3.1   6.4   6.4   7.7   6.6   3.6   3.3
3.0   3.0   4.7   4.3   6.1   5.1   4.6   3.7
 315.  *   3.1   6.5   6.9   5.5   3.1   3.1   6.5   6.5   7.8   7.1   3.7   3.3
3.0   3.0   4.9   4.3   5.9   5.0   4.6   3.7
 320.  *   3.1   6.7   7.2   5.3   3.1   3.1   6.7   6.7   8.1   7.2   3.8   3.4
3.0   3.0   5.0   4.4   5.9   4.8   4.5   3.6
 325.  *   3.1   7.0   7.3   5.4   3.1   3.1   7.0   7.0   8.1   7.8   3.8   3.4
3.0   3.0   5.0   4.6   6.1   4.9   4.5   3.6
 330.  *   3.1   7.3   7.6   5.3   3.1   3.1   7.3   7.2   8.4   8.2   3.8   3.5
3.0   3.0   5.2   4.6   6.1   5.1   4.4   3.5
 335.  *   3.2   7.7   7.8   5.4   3.2   3.2   7.7   7.7   8.7   8.4   3.9   3.7
3.0   3.0   5.2   4.6   6.3   5.1   4.4   3.5
 340.  *   3.4   8.1   8.3   5.4   3.4   3.4   8.1   8.1   8.6   9.0   4.2   3.8
3.0   3.0   5.3   4.5   6.2   4.9   4.4   3.5
 345.  *   3.9   8.6   8.7   5.9   3.9   3.8   8.6   8.6   9.1   9.2   4.7   4.3
3.0   3.0   5.3   4.3   6.2   4.7   4.3   3.5
 350.  *   4.9   8.9   8.8   6.9   4.8   4.8   8.7   8.6   8.7   9.0   5.4   5.2
3.1   3.0   4.9   4.0   5.9   4.4   4.4   3.5
 355.  *   6.5   8.3   8.4   8.4   6.4   6.2   8.3   8.2   8.2   8.2   7.0   6.7
3.4   3.0   4.4   3.5   5.1   3.9   4.7   3.6
 360.  *   8.0   7.4   7.5  10.1   8.0   8.0   7.2   7.1   6.8   7.0   8.0   7.8
3.9   3.2   3.8   3.2   4.5   3.6   5.3   3.9

------*-------------------------------------------------------------------------------
-------------------------------------------
 MAX   *  10.0  11.1   8.8  11.4  10.5  10.5   9.6   9.4   9.1   9.2   9.0   8.8
7.3   6.4   7.1   6.4   6.5   6.1   7.6   6.8
 DEGR. *  170   185   350    10   165   170   190   185   345   345     5    10
125   100   230   260   280   280    55    80

 THE HIGHEST CONCENTRATION OF   11.40 PPM OCCURRED AT RECEPTOR REC4 .
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: 125th Avenue & North Aurora 2010 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 13:57: 9

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 = 3.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (M)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(M)	(DEG)		(G/MI)	(M)	(M)		(VEH)	
1.	EBA	*	-304.8	-3.7	.0	-3.7	*	305.	90.	AG	460.	16.2	.0	9.8		
2.	EBD	*	.0	-3.7	304.8	-3.7	*	305.	90.	AG	410.	16.2	.0	9.8		
3.	WBA	*	304.8	3.7	.0	3.7	*	305.	270.	AG	290.	16.2	.0	9.8		
4.	WBD	*	.0	3.7	-304.8	3.7	*	305.	270.	AG	455.	16.2	.0	9.8		
5.	NBA	*	3.7	-304.8	3.7	.0	*	305.	360.	AG	2135.	16.6	.0	13.4		
6.	NBD	*	3.7	.0	3.7	304.8	*	305.	360.	AG	2005.	16.6	.0	13.4		
7.	SBA	*	-7.3	304.8	-7.3	.0	*	305.	180.	AG	1390.	16.6	.0	13.4		
8.	SBD	*	-7.3	.0	-7.3	-304.8	*	305.	180.	AG	1405.	16.6	.0	13.4		
9.	EBL	*	-14.6	.0	-212.9	.0	*	198.	270.	AG	246.	100.0	.0	3.7	1.46	33.0
10.	EBT	*	-14.6	-3.7	-71.6	-3.7	*	57.	270.	AG	202.	100.0	.0	3.7	.84	9.5
11.	WBL	*	11.0	.0	38.4	.0	*	27.	90.	AG	255.	100.0	.0	3.7	1.04	4.6
12.	WBT	*	11.0	3.7	56.4	3.7	*	45.	90.	AG	211.	100.0	.0	3.7	.76	7.6
13.	NBL	*	-1.8	-5.5	-1.8	-55.5	*	50.	180.	AG	228.	100.0	.0	3.7	.94	8.3
14.	NBT	*	3.7	-5.5	3.7	-244.0	*	239.	180.	AG	237.	100.0	.0	7.3	1.04	39.8
15.	NBR	*	9.1	-5.5	9.1	-22.3	*	17.	180.	AG	119.	100.0	.0	3.7	.18	2.8
16.	SBL	*	-1.8	5.5	-1.8	14.0	*	9.	360.	AG	511.	100.0	.0	7.3	.66	1.4
17.	SBT	*	-7.3	5.5	-7.3	87.7	*	82.	360.	AG	292.	100.0	.0	7.3	.88	13.7
18.	SBR	*	-12.8	5.5	-12.8	18.2	*	13.	360.	AG	146.	100.0	.0	3.7	.14	2.1

JOB: 125th Avenue & North Aurora 2010 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 13:57: 9

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	150	135	3.0	155	1600	101.96	2	3
10. EBT	150	111	3.0	305	1600	101.96	2	3
11. WBL	150	140	3.0	55	1600	101.96	2	3
12. WBT	150	116	3.0	235	1600	101.96	2	3
13. NBL	150	125	3.0	200	1600	101.96	2	3
14. NBT	150	65	3.0	1780	1600	101.96	2	3
15. NBR	150	65	3.0	155	1600	101.96	2	3
16. SBL	150	140	3.0	70	1600	101.96	2	3
17. SBT	150	80	3.0	1225	1600	101.96	2	3
18. SBR	150	80	3.0	95	1600	101.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. REC 1	-17.7	8.5	1.8
2. REC 2	10.4	8.5	1.8
3. REC 3	14.0	-8.5	1.8
4. REC 4	-14.0	-8.5	1.8
5. REC 5	-17.7	33.5	1.8
6. REC 6	-17.7	58.5	1.8
7. REC 7	10.4	33.5	1.8
8. REC 8	10.4	58.5	1.8
9. REC 9	14.0	-33.5	1.8
10. REC 10	14.0	-58.5	1.8
11. REC 11	-14.0	-33.5	1.8
12. REC 12	-14.0	-58.5	1.8
13. REC 13	-42.7	8.5	1.8
14. REC 14	-67.7	8.5	1.8
15. REC 15	35.4	8.5	1.8
16. REC 16	60.4	8.5	1.8
17. REC 17	39.0	-8.5	1.8
18. REC 18	64.0	-8.5	1.8
19. REC 19	-39.0	-8.5	1.8

20. REC 20 * -64.0 -8.5 1.8 *

JOB: 125th Avenue & North Aurora 2010 PM RUN: Aurora Avenue North (Seattle)

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: 0.-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
0.	*	4.7	5.6	5.8	7.1	4.6	4.3	5.5	5.5	5.4	5.6	6.3	6.1	3.3	3.0	3.4	3.1	4.2	3.4	5.0	4.7
5.	*	5.5	4.7	5.1	7.6	5.1	4.9	4.7	4.7	4.8	4.5	6.9	6.9	3.6	3.2	3.1	3.0	3.9	3.3	5.3	4.8
10.	*	6.0	4.1	4.7	7.9	5.7	5.4	4.0	4.0	4.1	3.9	7.0	6.9	3.8	3.4	3.0	3.0	3.8	3.3	5.6	4.9
15.	*	6.2	3.5	4.3	7.6	6.0	5.6	3.5	3.5	3.7	3.5	6.8	6.8	4.1	3.6	3.0	3.0	3.7	3.3	5.8	5.1
20.	*	6.3	3.3	4.3	7.2	6.0	5.6	3.3	3.3	3.6	3.3	6.4	7.0	4.2	3.7	3.0	3.0	3.7	3.3	5.9	5.3
25.	*	6.2	3.2	4.3	6.9	5.8	5.6	3.2	3.2	3.6	3.3	6.2	6.6	4.3	3.7	3.0	3.0	3.7	3.3	6.1	5.4
30.	*	5.9	3.1	4.3	6.6	5.6	5.5	3.1	3.1	3.6	3.2	6.3	6.5	4.2	3.8	3.0	3.0	3.7	3.3	6.1	5.5
35.	*	6.0	3.1	4.4	6.2	5.6	5.5	3.1	3.1	3.6	3.2	6.2	6.5	4.3	3.8	3.0	3.0	3.8	3.4	6.0	5.6
40.	*	5.8	3.1	4.4	6.1	5.4	5.4	3.1	3.1	3.5	3.1	6.4	6.2	4.3	3.9	3.0	3.0	3.8	3.4	6.1	5.7
45.	*	5.7	3.1	4.4	5.7	5.3	5.3	3.1	3.1	3.4	3.2	6.4	6.2	4.3	3.9	3.0	3.0	3.7	3.4	6.3	5.8
50.	*	5.7	3.1	4.4	5.8	5.2	5.1	3.1	3.1	3.3	3.2	6.2	5.9	4.2	3.9	3.0	3.0	3.7	3.4	6.3	5.7
55.	*	5.6	3.1	4.5	5.6	5.1	5.1	3.1	3.1	3.3	3.2	6.1	5.7	4.2	3.9	3.0	3.0	3.6	3.4	6.4	5.9
60.	*	5.7	3.1	4.7	5.5	5.1	5.1	3.1	3.1	3.2	3.2	6.0	5.6	4.1	3.9	3.0	3.0	3.8	3.6	6.2	6.1
65.	*	5.8	3.0	4.5	5.8	5.1	5.1	3.0	3.0	3.2	3.2	5.8	5.4	4.1	3.8	3.0	3.0	3.7	3.6	6.3	6.0
70.	*	5.9	3.1	4.4	6.0	5.0	5.0	3.0	3.0	3.2	3.2	5.6	5.4	4.3	3.9	3.1	3.1	3.7	3.6	6.1	6.2
75.	*	6.2	3.2	4.3	6.2	5.0	5.0	3.0	3.0	3.2	3.1	5.5	5.2	4.3	4.0	3.1	3.1	3.7	3.7	6.0	6.3
80.	*	6.4	3.3	4.1	6.3	4.9	4.9	3.0	3.0	3.2	3.1	5.4	5.2	4.7	4.2	3.2	3.2	3.7	3.7	5.9	6.1
85.	*	6.7	3.7	3.9	6.5	4.9	4.9	3.0	3.0	3.1	3.0	5.6	5.1	4.9	4.7	3.4	3.3	3.7	3.7	5.7	6.1
90.	*	7.0	4.0	3.8	6.1	4.9	4.9	3.0	3.0	3.1	3.0	5.5	5.1	5.2	5.1	3.7	3.5	3.6	3.6	5.3	5.5
95.	*	7.1	4.4	3.5	6.0	5.1	4.9	3.2	3.0	3.0	3.0	5.4	5.0	5.7	5.4	3.9	3.6	3.5	3.4	5.0	4.9

```
 100.  *   7.0   4.8   3.2   5.7   5.1   5.0   3.2   3.0   3.0   3.0   5.3   4.9
5.7   5.8   4.2   3.7   3.2   3.2   4.6   4.2
 105.  *   6.7   5.0   3.1   5.6   5.2   5.2   3.2   3.2   3.0   3.0   5.3   4.9
5.6   5.8   4.3   3.7   3.1   3.1   4.3   4.1
 110.  *   6.3   5.0   3.1   5.4   5.4   5.2   3.2   3.2   3.0   3.0   5.3   4.9
5.7   5.6   4.2   3.5   3.1   3.1   4.4   4.0
 115.  *   6.2   5.0   3.0   5.5   5.5   5.3   3.3   3.2   3.0   3.0   5.3   4.9
5.9   5.5   4.2   3.5   3.0   3.0   4.4   4.1
 120.  *   5.8   4.8   3.0   5.5   5.6   5.4   3.4   3.3   3.0   3.0   5.4   5.0
5.6   5.7   4.1   3.4   3.0   3.0   4.4   4.0
 125.  *   5.6   4.9   3.0   5.6   5.8   5.4   3.5   3.3   3.0   3.0   5.5   5.1
5.9   5.6   4.1   3.4   3.0   3.0   4.4   4.0
 130.  *   5.8   4.7   3.0   5.6   5.9   5.6   3.6   3.3   3.0   3.0   5.6   5.2
5.9   5.5   4.1   3.4   3.0   3.0   4.4   4.0
 135.  *   5.9   4.7   3.0   5.8   6.1   5.7   3.6   3.4   3.0   3.0   5.7   5.3
5.9   5.5   4.1   3.4   3.0   3.0   4.4   3.9
 140.  *   6.0   4.7   3.0   5.9   6.2   5.7   3.6   3.4   3.0   3.0   5.8   5.4
5.9   5.5   4.0   3.4   3.0   3.0   4.3   3.9
 145.  *   6.1   4.7   3.0   6.1   6.6   5.9   3.7   3.4   3.0   3.0   5.9   5.5
5.9   5.4   4.1   3.4   3.0   3.0   4.4   3.9
 150.  *   6.3   4.6   3.0   6.2   6.6   6.2   3.7   3.4   3.0   3.0   6.0   5.7
5.8   5.3   4.1   3.4   3.0   3.0   4.5   3.9
 155.  *   6.6   4.6   3.0   6.5   7.0   6.5   3.8   3.6   3.0   3.0   6.2   6.0
5.8   5.2   4.2   3.4   3.0   3.0   4.4   3.9
 160.  *   6.9   4.8   3.1   6.6   7.0   6.7   3.9   3.7   3.1   3.1   6.2   6.1
5.6   5.1   4.3   3.4   3.0   3.0   4.4   3.9
 165.  *   7.1   4.9   3.3   6.8   7.0   6.9   4.2   4.1   3.3   3.2   6.6   6.4
5.6   4.9   4.3   3.4   3.0   3.0   4.4   3.7
 170.  *   6.9   5.6   3.7   6.7   6.9   6.7   5.0   4.6   3.7   3.7   6.4   6.4
5.3   4.8   4.4   3.4   3.0   3.0   4.1   3.5
 175.  *   6.6   6.9   4.4   6.3   6.2   6.6   6.1   5.7   4.4   4.2   6.2   6.0
5.1   4.5   4.7   3.4   3.1   3.0   3.7   3.2
 180.  *   6.1   7.8   5.4   5.6   5.6   5.5   7.0   6.8   5.1   5.1   5.5   5.3
4.8   4.3   5.0   3.5   3.4   3.1   3.5   3.0
 185.  *   5.2   8.4   6.1   4.7   4.7   4.7   7.7   7.3   5.9   5.9   4.7   4.4
4.6   4.3   5.5   3.8   3.8   3.3   3.2   3.0
 190.  *   4.7   8.6   6.7   4.0   4.0   4.0   7.8   7.3   6.3   6.3   3.9   3.8
4.3   4.2   5.9   4.0   4.2   3.5   3.0   3.0
 195.  *   4.3   8.2   6.9   3.4   3.7   3.6   7.2   7.1   6.5   6.4   3.4   3.4
4.2   4.1   6.1   4.2   4.5   3.8   3.0   3.0
 200.  *   4.2   7.5   6.9   3.2   3.7   3.5   6.9   7.0   6.3   6.3   3.2   3.2
4.2   4.1   6.1   4.6   4.5   4.0   3.0   3.0
 205.  *   4.3   7.1   6.7   3.1   3.7   3.5   6.5   6.6   6.1   6.0   3.1   3.1
4.3   4.0   6.2   4.6   4.5   4.1   3.0   3.0
```


JOB: 125th Avenue & North Aurora 2010 PM RUN: Aurora Avenue North (Seattle)

```
 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

------*-------------------------------------------------------------------------------
-----------------------------------------
 210.  *   4.4   6.5   6.6   3.1   3.7   3.5   6.6   6.5   5.9   5.8   3.1   3.1
4.4   4.1   6.2   4.7   4.5   4.1   3.0   3.0
 215.  *   4.5   6.2   6.4   3.1   3.7   3.5   6.4   6.2   5.8   5.6   3.1   3.1
4.5   4.1   6.4   4.7   4.5   4.1   3.0   3.0
 220.  *   4.5   5.9   6.2   3.1   3.7   3.5   6.4   6.1   5.8   5.5   3.1   3.1
4.5   4.1   6.4   4.9   4.3   4.0   3.0   3.0
 225.  *   4.5   5.7   6.2   3.1   3.7   3.5   6.3   6.0   5.7   5.4   3.1   3.1
```

```
4.5   4.1   6.2   4.9   4.4   3.8   3.0   3.0
 230.  *   4.5   5.7   6.0   3.1   3.7   3.4   6.1   5.9   5.5   5.2   3.1   3.1
4.5   4.1   6.2   4.9   4.4   3.9   3.0   3.0
 235.  *   4.7   5.7   5.9   3.1   3.6   3.4   6.0   5.8   5.6   5.2   3.1   3.1
4.7   4.3   6.1   5.1   4.3   3.9   3.0   3.0
 240.  *   4.8   5.8   5.9   3.0   3.6   3.4   5.9   5.5   5.6   5.2   3.0   3.0
4.6   4.3   6.2   5.3   4.3   3.9   3.0   3.0
 245.  *   5.0   6.3   5.8   3.0   3.6   3.4   5.9   5.5   5.5   5.1   3.0   3.0
4.8   4.5   6.3   5.6   4.4   3.9   3.0   3.0
 250.  *   5.0   6.5   5.7   3.1   3.6   3.4   5.8   5.4   5.4   5.1   3.0   3.0
4.8   4.6   6.1   6.0   4.5   4.1   3.1   3.1
 255.  *   5.1   7.1   6.1   3.3   3.6   3.3   5.7   5.4   5.4   5.1   3.0   3.0
4.9   4.8   6.4   6.2   4.6   4.1   3.2   3.2
 260.  *   5.1   7.5   6.4   3.8   3.4   3.2   5.5   5.3   5.4   5.1   3.0   3.0
4.9   4.7   6.2   6.3   5.0   4.4   3.7   3.4
 265.  *   4.9   7.6   6.6   4.2   3.4   3.0   5.5   5.1   5.3   5.0   3.0   3.0
4.7   4.5   6.0   6.0   5.2   4.7   4.0   3.8
 270.  *   4.4   7.5   7.1   4.8   3.2   3.0   5.3   5.1   5.5   5.1   3.2   3.0
4.3   4.2   5.8   5.7   5.5   5.2   4.6   4.2
 275.  *   3.9   7.1   7.3   5.4   3.0   3.0   5.1   5.1   5.7   5.1   3.4   3.0
3.8   3.8   5.4   4.9   5.8   5.7   5.2   4.5
 280.  *   3.5   6.6   7.3   5.6   3.0   3.0   5.0   5.0   5.9   5.6   3.4   3.2
3.5   3.4   5.0   4.3   6.0   5.7   5.4   4.8
 285.  *   3.2   6.1   6.6   5.7   3.0   3.0   5.0   5.0   6.0   5.6   3.6   3.3
3.2   3.2   4.5   4.0   5.9   5.5   5.5   4.9
 290.  *   3.1   5.8   6.5   5.5   3.0   3.0   5.0   5.0   6.3   5.8   3.8   3.4
3.1   3.1   4.2   3.7   5.9   5.2   5.4   4.8
 295.  *   3.0   5.8   6.2   5.3   3.0   3.0   5.1   5.1   6.4   5.8   3.8   3.4
3.0   3.0   4.1   3.9   5.8   5.0   5.3   4.7
 300.  *   3.0   5.6   6.0   5.1   3.0   3.0   5.1   5.1   6.2   6.0   3.7   3.4
3.0   3.0   4.1   3.9   5.6   4.8   5.1   4.6
 305.  *   3.0   5.6   6.3   5.0   3.0   3.0   5.3   5.2   6.3   6.1   3.8   3.5
3.0   3.0   4.1   3.8   5.6   4.8   5.0   4.7
 310.  *   3.0   5.5   6.0   4.8   3.0   3.0   5.4   5.4   6.2   6.1   3.8   3.6
3.0   3.0   4.2   3.8   5.6   4.6   4.8   4.6
 315.  *   3.0   5.6   6.1   4.8   3.0   3.0   5.5   5.4   6.2   6.4   3.8   3.6
3.0   3.0   4.2   3.9   5.5   4.6   4.8   4.6
 320.  *   3.0   5.7   6.4   4.7   3.0   3.0   5.6   5.5   6.4   6.4   3.8   3.6
3.0   3.0   4.2   3.8   5.6   4.6   4.7   4.7
 325.  *   3.0   5.8   6.1   4.7   3.0   3.0   5.7   5.5   6.6   6.5   3.8   3.6
3.0   3.0   4.3   3.8   5.6   4.4   4.7   4.7
 330.  *   3.0   6.0   6.2   4.5   3.0   3.0   5.9   5.6   6.6   6.7   3.8   3.7
3.0   3.0   4.3   3.8   5.5   4.3   4.6   4.6
 335.  *   3.0   6.2   6.4   4.6   3.0   3.0   6.0   5.7   7.1   6.9   3.8   3.7
3.0   3.0   4.3   3.8   5.5   4.2   4.6   4.6
 340.  *   3.0   6.4   6.6   4.5   3.0   3.0   6.2   5.8   6.9   7.0   3.9   3.8
3.0   3.0   4.2   3.8   5.4   4.1   4.5   4.5
 345.  *   3.1   6.6   6.8   4.8   3.1   3.1   6.4   6.2   7.0   6.8   4.0   4.0
3.0   3.0   4.1   3.6   5.3   3.9   4.5   4.5
 350.  *   3.5   6.7   6.6   5.2   3.4   3.3   6.4   6.2   6.6   6.7   4.6   4.5
3.0   3.0   3.9   3.4   5.0   3.7   4.5   4.5
 355.  *   4.0   6.3   6.3   6.2   3.8   3.7   6.1   6.0   6.2   6.5   5.5   5.1
3.1   3.0   3.7   3.3   4.6   3.6   4.8   4.6
 360.  *   4.7   5.6   5.8   7.1   4.6   4.3   5.5   5.5   5.4   5.6   6.3   6.1
3.3   3.0   3.4   3.1   4.2   3.4   5.0   4.7

------*-------------------------------------------------------------------------------
-------------------------------------------
 MAX   *   7.1   8.6   7.3   7.9   7.0   6.9   7.8   7.3   7.1   7.0   7.0   7.0
5.9   5.8   6.4   6.3   6.0   5.7   6.4   6.3
 DEGR. *   95   190   275    10   155   165   190   190   335   340    10    20
125   105   220   260   280   275    55    75
```

THE HIGHEST CONCENTRATION OF 8.60 PPM OCCURRED AT RECEPTOR REC2 .

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: 125th Avenue & North Aurora 2030 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14: 1:24

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 = 3.0 PPM

LINK VARIABLES

	LINK DESCRIPTION		LINK COORDINATES (M)					LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
			X1	Y1	X2	Y2		(M)	(DEG)			(G/MI)	(M)	(M)	(VEH)	
1.	EBA	*	-304.8	-3.7	.0	-3.7	*	305.	90.	AG	560.	9.2	.0	9.8		
2.	EBD	*	.0	-3.7	304.8	-3.7	*	305.	90.	AG	505.	9.2	.0	9.8		
3.	WBA	*	304.8	3.7	.0	3.7	*	305.	270.	AG	360.	9.2	.0	9.8		
4.	WBD	*	.0	3.7	-304.8	3.7	*	305.	270.	AG	555.	9.2	.0	9.8		
5.	NBA	*	3.7	-304.8	3.7	.0	*	305.	360.	AG	2625.	9.5	.0	13.4		
6.	NBD	*	3.7	.0	3.7	304.8	*	305.	360.	AG	2475.	9.5	.0	13.4		
7.	SBA	*	-7.3	304.8	-7.3	.0	*	305.	180.	AG	1710.	9.5	.0	13.4		
8.	SBD	*	-7.3	.0	-7.3	-304.8	*	305.	180.	AG	1720.	9.5	.0	13.4		
9.	EBL	*	-14.6	.0	-288.4	.0	*	274.	270.	AG	132.	100.0	.0	3.7	1.58	45.6
10.	EBT	*	-14.6	-3.7	-137.0	-3.7	*	122.	270.	AG	110.	100.0	.0	3.7	1.03	20.4
11.	WBL	*	11.0	.0	99.7	.0	*	89.	90.	AG	139.	100.0	.0	3.7	1.40	14.8
12.	WBT	*	11.0	3.7	88.7	3.7	*	78.	90.	AG	116.	100.0	.0	3.7	1.00	13.0
13.	NBL	*	-1.8	-5.5	-1.8	-196.8	*	191.	180.	AG	125.	100.0	.0	3.7	1.20	31.9
14.	NBT	*	3.7	-5.5	3.7	-816.3	*	811.	180.	AG	124.	100.0	.0	7.3	1.25	135.1
15.	NBR	*	9.1	-5.5	9.1	-26.7	*	21.	180.	AG	62.	100.0	.0	3.7	.22	3.5
16.	SBL	*	-1.8	5.5	-1.8	21.0	*	15.	360.	AG	277.	100.0	.0	7.3	.90	2.6
17.	SBT	*	-7.3	5.5	-7.3	201.5	*	196.	360.	AG	151.	100.0	.0	7.3	1.03	32.7
18.	SBR	*	-12.8	5.5	-12.8	21.2	*	16.	360.	AG	76.	100.0	.0	3.7	.16	2.6

JOB: 125th Avenue & North Aurora 2030 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14: 1:24

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
9. EBL	*	160	143	3.0	190	1600	55.10	2	3
10. EBT	*	160	119	3.0	370	1600	55.10	2	3
11. WBL	*	160	150	3.0	70	1600	55.10	2	3
12. WBT	*	160	126	3.0	290	1600	55.10	2	3
13. NBL	*	160	135	3.0	240	1600	55.10	2	3
14. NBT	*	160	67	3.0	2195	1600	55.10	2	3
15. NBR	*	160	67	3.0	190	1600	55.10	2	3
16. SBL	*	160	150	3.0	90	1600	55.10	2	3
17. SBT	*	160	82	3.0	1505	1600	55.10	2	3
18. SBR	*	160	82	3.0	115	1600	55.10	2	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. REC 1	*	-17.7	8.5	1.8
2. REC 2	*	10.4	8.5	1.8
3. REC 3	*	14.0	-8.5	1.8
4. REC 4	*	-14.0	-8.5	1.8
5. REC 5	*	-17.7	33.5	1.8
6. REC 6	*	-17.7	58.5	1.8
7. REC 7	*	10.4	33.5	1.8
8. REC 8	*	10.4	58.5	1.8
9. REC 9	*	14.0	-33.5	1.8
10. REC 10	*	14.0	-58.5	1.8
11. REC 11	*	-14.0	-33.5	1.8
12. REC 12	*	-14.0	-58.5	1.8
13. REC 13	*	-42.7	8.5	1.8
14. REC 14	*	-67.7	8.5	1.8
15. REC 15	*	35.4	8.5	1.8
16. REC 16	*	60.4	8.5	1.8
17. REC 17	*	39.0	-8.5	1.8
18. REC 18	*	64.0	-8.5	1.8
19. REC 19	*	-39.0	-8.5	1.8

20. REC 20 * -64.0 -8.5 1.8 *

JOB: 125th Avenue & North Aurora 2030 PM RUN: Aurora Avenue North (Seattle)

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: 0.-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
0.	*	4.4	5.0	5.2	5.7	4.2	4.1	5.0	4.9	4.8	4.9	5.5	5.1	3.2	3.0	3.3	3.0	4.1	3.8	4.2	3.9
5.	*	4.8	4.4	4.5	6.3	4.7	4.6	4.4	4.4	4.1	4.1	5.6	5.4	3.5	3.2	3.1	3.0	3.9	3.8	4.4	4.1
10.	*	5.2	3.8	4.2	6.4	5.0	4.9	3.8	3.8	3.6	3.6	5.8	5.7	3.8	3.2	3.0	3.0	3.8	3.8	4.7	4.3
15.	*	5.2	3.4	3.9	6.2	5.1	5.1	3.4	3.4	3.4	3.3	5.7	5.5	3.9	3.5	3.0	3.0	3.8	3.8	5.0	4.4
20.	*	5.3	3.2	3.8	6.0	5.1	5.1	3.2	3.2	3.3	3.2	5.2	5.5	3.9	3.6	3.0	3.0	3.8	3.8	5.0	4.6
25.	*	5.0	3.1	3.8	5.7	4.8	4.8	3.1	3.1	3.3	3.2	5.1	5.3	3.9	3.7	3.0	3.0	3.8	3.8	4.9	4.6
30.	*	5.0	3.1	3.8	5.5	4.8	4.8	3.1	3.1	3.4	3.2	4.9	5.3	3.9	3.7	3.0	3.0	3.8	3.8	4.9	4.6
35.	*	5.0	3.1	3.8	5.3	4.7	4.7	3.1	3.1	3.4	3.3	5.1	5.1	3.9	3.7	3.0	3.0	3.8	3.8	4.8	4.6
40.	*	4.8	3.1	3.8	4.9	4.5	4.5	3.1	3.1	3.4	3.3	5.0	5.2	3.8	3.7	3.0	3.0	3.8	3.8	4.9	4.6
45.	*	4.8	3.1	3.8	4.9	4.4	4.4	3.1	3.1	3.4	3.3	5.1	5.1	3.8	3.7	3.0	3.0	3.8	3.8	5.0	4.7
50.	*	4.9	3.1	4.0	4.8	4.4	4.4	3.1	3.1	3.5	3.3	5.2	4.9	3.8	3.5	3.0	3.0	3.9	3.9	5.0	4.6
55.	*	4.9	3.1	4.0	4.8	4.4	4.4	3.1	3.1	3.5	3.2	5.2	4.9	3.7	3.5	3.0	3.0	4.0	3.9	5.0	4.8
60.	*	5.0	3.0	4.0	4.8	4.4	4.4	3.0	3.0	3.5	3.1	5.1	4.7	3.7	3.5	3.0	3.0	4.0	3.9	4.9	4.9
65.	*	5.1	3.0	4.1	4.8	4.4	4.4	3.0	3.0	3.4	3.1	5.1	4.7	3.8	3.5	3.0	3.0	4.1	3.9	5.0	4.9
70.	*	5.0	3.0	4.1	5.0	4.3	4.3	3.0	3.0	3.3	3.1	4.8	4.6	3.8	3.5	3.0	3.0	4.0	3.8	5.1	4.9
75.	*	5.0	3.2	4.2	5.2	4.3	4.3	3.0	3.0	3.3	3.1	4.8	4.5	4.1	3.7	3.1	3.1	4.1	3.9	4.9	5.0
80.	*	5.4	3.3	4.1	5.3	4.3	4.3	3.0	3.0	3.1	3.0	4.7	4.4	4.3	3.7	3.2	3.1	3.9	3.7	5.0	5.1
85.	*	5.5	3.6	3.9	5.3	4.4	4.4	3.0	3.0	3.1	3.0	4.5	4.4	4.5	4.3	3.6	3.4	3.8	3.6	5.0	4.8
90.	*	5.6	3.8	3.7	5.3	4.4	4.4	3.0	3.0	3.0	3.0	4.5	4.5	4.6	4.4	3.8	3.6	3.6	3.5	4.5	4.6
95.	*	5.9	4.2	3.4	5.1	4.5	4.4	3.0	3.0	3.0	3.0	4.4	4.4	4.7	4.7	4.2	3.9	3.4	3.2	4.4	4.4

```
 100.  *   5.7   4.4   3.3   4.8   4.6   4.3   3.2   3.0   3.0   3.0   4.4   4.4
4.6   4.7   4.3   4.0   3.2   3.2   4.0   3.8
 105.  *   5.5   4.4   3.1   4.6   4.7   4.3   3.4   3.0   3.0   3.0   4.4   4.4
4.8   4.6   4.4   4.2   3.1   3.1   3.9   3.7
 110.  *   5.1   4.3   3.1   4.6   4.7   4.4   3.4   3.1   3.0   3.0   4.5   4.5
4.8   4.6   4.3   4.1   3.1   3.1   3.7   3.6
 115.  *   5.0   4.3   3.0   4.6   5.0   4.7   3.4   3.1   3.0   3.0   4.5   4.5
4.6   4.7   4.3   4.2   3.0   3.0   3.8   3.6
 120.  *   4.7   4.3   3.0   4.7   5.0   4.7   3.5   3.2   3.0   3.0   4.5   4.5
4.6   4.7   4.3   4.2   3.0   3.0   3.8   3.7
 125.  *   4.8   4.1   3.0   4.7   5.1   4.7   3.6   3.4   3.0   3.0   4.6   4.6
4.5   4.6   4.1   4.1   3.0   3.0   3.8   3.7
 130.  *   4.8   4.1   3.0   4.6   5.1   4.7   3.6   3.4   3.0   3.0   4.6   4.6
4.6   4.5   4.1   4.1   3.0   3.0   4.0   3.7
 135.  *   4.8   3.9   3.0   4.8   5.1   4.7   3.6   3.4   3.0   3.0   4.8   4.8
4.6   4.5   3.9   3.9   3.0   3.0   4.0   3.7
 140.  *   4.9   3.8   3.0   4.9   5.2   4.7   3.6   3.3   3.0   3.0   4.9   4.9
4.8   4.5   3.9   3.9   3.0   3.0   4.0   3.7
 145.  *   4.9   3.8   3.0   5.0   5.1   5.0   3.6   3.3   3.0   3.0   5.0   5.0
4.8   4.5   3.8   3.8   3.0   3.0   4.1   3.7
 150.  *   5.1   3.8   3.0   5.1   5.4   5.0   3.5   3.3   3.0   3.0   5.1   5.1
4.9   4.5   3.8   3.8   3.0   3.0   4.1   3.7
 155.  *   5.4   3.9   3.0   5.3   5.4   5.3   3.4   3.3   3.0   3.0   5.3   5.3
4.9   4.5   3.8   3.8   3.0   3.0   4.1   3.7
 160.  *   5.6   3.9   3.0   5.5   5.6   5.3   3.6   3.4   3.0   3.0   5.5   5.5
4.9   4.6   3.8   3.8   3.0   3.0   4.2   3.8
 165.  *   5.8   4.1   3.1   5.8   5.7   5.5   3.8   3.7   3.1   3.1   5.7   5.6
4.8   4.5   3.8   3.8   3.0   3.0   4.1   3.7
 170.  *   5.8   4.8   3.4   5.7   5.6   5.5   4.4   4.2   3.4   3.4   5.7   5.7
4.7   4.1   3.8   3.8   3.0   3.0   3.9   3.4
 175.  *   5.5   5.5   4.1   5.6   5.5   5.2   5.0   5.0   4.0   4.0   5.6   5.4
4.5   4.1   4.0   3.8   3.2   3.0   3.7   3.3
 180.  *   5.3   6.2   4.7   5.0   5.0   4.5   5.8   5.6   4.6   4.5   5.0   4.9
4.1   3.9   4.3   4.0   3.5   3.1   3.3   3.1
 185.  *   4.6   6.8   5.5   4.4   4.2   4.2   6.2   6.1   5.2   5.1   4.3   4.2
3.9   3.8   4.7   4.1   3.6   3.2   3.2   3.0
 190.  *   4.2   6.7   5.8   3.8   3.8   3.7   6.1   6.1   5.6   5.5   3.7   3.7
3.8   3.8   4.9   4.3   4.0   3.5   3.0   3.0
 195.  *   3.9   6.5   5.7   3.3   3.5   3.4   5.9   5.8   5.6   5.6   3.3   3.3
3.8   3.8   5.1   4.6   4.1   3.6   3.0   3.0
 200.  *   3.8   6.0   5.7   3.1   3.4   3.4   5.8   5.6   5.5   5.5   3.1   3.1
3.8   3.8   5.1   4.7   4.1   3.8   3.0   3.0
 205.  *   3.8   5.7   5.4   3.1   3.4   3.4   5.7   5.4   5.2   5.2   3.1   3.1
3.8   3.8   5.0   4.7   4.2   3.8   3.0   3.0
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JOB: 125th Avenue & North Aurora 2030 PM RUN: Aurora Avenue North (Seattle)

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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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 210.  *   3.8   5.3   5.3   3.1   3.4   3.4   5.5   5.3   5.1   5.1   3.1   3.1
3.8   3.8   5.0   4.6   4.2   3.7   3.0   3.0
 215.  *   3.8   5.1   5.1   3.1   3.4   3.4   5.4   5.2   4.9   4.9   3.1   3.1
3.8   3.8   5.0   4.5   3.9   3.7   3.0   3.0
 220.  *   3.8   5.0   5.1   3.1   3.4   3.4   5.5   5.1   4.9   4.9   3.1   3.1
3.8   3.8   5.0   4.6   3.9   3.7   3.0   3.0
 225.  *   3.8   4.7   4.9   3.1   3.5   3.4   5.4   5.0   4.7   4.7   3.1   3.1
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3.8   3.8   4.9   4.6   3.9   3.7   3.0   3.0
 230.  *   3.9   4.7   4.8   3.0   3.5   3.4   5.3   5.0   4.6   4.6   3.0   3.0
3.9   3.9   4.9   4.8   3.9   3.7   3.0   3.0
 235.  *   4.1   4.7   4.8   3.0   3.5   3.4   5.2   4.9   4.6   4.6   3.0   3.0
4.1   4.0   4.9   4.8   3.9   3.7   3.0   3.0
 240.  *   4.2   4.7   4.7   3.0   3.5   3.4   5.2   4.9   4.5   4.5   3.0   3.0
4.2   4.2   4.7   4.9   3.9   3.7   3.0   3.0
 245.  *   4.2   5.0   4.7   3.0   3.5   3.3   4.9   4.8   4.5   4.5   3.0   3.0
4.2   4.2   4.9   4.9   3.9   3.7   3.0   3.0
 250.  *   4.3   5.3   4.7   3.1   3.5   3.3   4.9   4.7   4.5   4.5   3.0   3.0
4.3   4.3   5.0   4.7   3.8   3.7   3.1   3.1
 255.  *   4.4   5.6   4.8   3.2   3.5   3.2   4.8   4.6   4.5   4.5   3.0   3.0
4.4   4.3   5.1   5.1   4.0   3.6   3.2   3.1
 260.  *   4.4   5.9   5.1   3.4   3.4   3.1   4.8   4.4   4.5   4.5   3.0   3.0
4.3   4.3   4.9   5.0   4.3   3.9   3.4   3.4
 265.  *   4.3   6.1   5.5   3.9   3.3   3.0   4.7   4.4   4.5   4.5   3.0   3.0
4.3   4.1   5.3   5.1   4.4   4.2   3.8   3.8
 270.  *   4.0   5.9   5.8   4.3   3.1   3.0   4.5   4.4   4.6   4.5   3.1   3.0
3.9   3.9   4.7   4.7   4.7   4.4   4.1   4.1
 275.  *   3.7   5.6   5.8   4.6   3.0   3.0   4.4   4.4   4.9   4.5   3.3   3.0
3.7   3.6   4.5   4.3   5.0   4.7   4.6   4.4
 280.  *   3.3   5.2   5.8   4.6   3.0   3.0   4.3   4.3   5.0   4.6   3.5   3.1
3.3   3.3   4.2   3.9   4.6   4.9   4.6   4.6
 285.  *   3.1   5.2   5.5   4.6   3.0   3.0   4.4   4.4   5.0   4.8   3.5   3.2
3.1   3.1   4.0   3.6   5.0   5.0   4.6   4.6
 290.  *   3.1   5.1   5.1   4.5   3.0   3.0   4.4   4.4   5.1   4.9   3.5   3.3
3.1   3.1   3.9   3.5   4.6   4.5   4.5   4.5
 295.  *   3.0   5.2   5.1   4.4   3.0   3.0   4.4   4.4   5.1   4.9   3.6   3.4
3.0   3.0   3.9   3.6   4.9   4.7   4.4   4.4
 300.  *   3.0   5.1   4.9   4.3   3.0   3.0   4.5   4.5   5.0   4.9   3.6   3.4
3.0   3.0   3.9   3.6   4.6   4.7   4.3   4.3
 305.  *   3.0   5.0   5.0   4.3   3.0   3.0   4.5   4.5   5.1   5.0   3.6   3.4
3.0   3.0   3.8   3.6   4.8   4.6   4.3   4.3
 310.  *   3.0   5.1   5.1   4.0   3.0   3.0   4.6   4.6   5.0   5.0   3.5   3.4
3.0   3.0   3.8   3.6   4.7   4.5   4.0   4.0
 315.  *   3.0   5.0   5.2   4.0   3.0   3.0   4.6   4.6   5.2   5.1   3.6   3.5
3.0   3.0   3.8   3.6   4.7   4.4   4.0   4.0
 320.  *   3.0   5.0   5.2   3.9   3.0   3.0   4.7   4.7   5.2   5.3   3.5   3.5
3.0   3.0   3.8   3.6   4.6   4.4   3.9   3.9
 325.  *   3.0   5.0   5.2   3.9   3.0   3.0   4.8   4.8   5.3   5.3   3.5   3.5
3.0   3.0   3.9   3.7   4.6   4.4   3.9   3.9
 330.  *   3.0   5.1   5.3   3.9   3.0   3.0   5.1   5.1   5.4   5.4   3.5   3.5
3.0   3.0   4.0   3.6   4.7   4.4   3.9   3.9
 335.  *   3.0   5.3   5.4   3.9   3.0   3.0   5.2   5.2   5.4   5.3   3.5   3.4
3.0   3.0   4.0   3.6   4.8   4.4   3.9   3.9
 340.  *   3.0   5.3   5.7   3.8   3.0   3.0   5.3   5.3   5.6   5.5   3.5   3.4
3.0   3.0   4.0   3.6   4.8   4.4   3.9   3.9
 345.  *   3.1   5.6   5.8   4.1   3.1   3.1   5.6   5.5   5.7   5.5   3.8   3.6
3.0   3.0   4.0   3.5   4.8   4.3   3.9   3.9
 350.  *   3.4   5.7   5.7   4.6   3.4   3.4   5.6   5.5   5.6   5.7   4.1   4.0
3.0   3.0   3.7   3.3   4.5   4.1   3.9   3.9
 355.  *   3.8   5.5   5.4   5.0   3.8   3.7   5.4   5.3   5.4   5.2   4.8   4.6
3.0   3.0   3.5   3.1   4.3   3.9   4.0   3.9
 360.  *   4.4   5.0   5.2   5.7   4.2   4.1   5.0   4.9   4.8   4.9   5.5   5.1
3.2   3.0   3.3   3.0   4.1   3.8   4.2   3.9

------*-------------------------------------------------------------------------------
-----------------------------------------------
 MAX   *   5.9   6.8   5.8   6.4   5.7   5.5   6.2   6.1   5.7   5.7   5.8   5.7
4.9   4.7   5.3   5.1   5.0   5.0   5.1   5.1
 DEGR. *   95   185   270    10   165   165   185   190   345   350    10    10
150    95   265   255   275   285    70    80
```

THE HIGHEST CONCENTRATION OF 6.80 PPM OCCURRED AT RECEPTOR REC2 .

JOB: 125th Avenue & North Aurora 2030 NoBuild RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14: 5:11

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 = 3.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(M)	(DEG)			(G/MI)	(M)	(M)	(VEH)	
1. EBA	*	-304.8	-3.7	.0	-3.7	*	305.	90.	AG	560.	9.2	.0	9.8		
2. EBD	*	.0	-3.7	304.8	-3.7	*	305.	90.	AG	505.	9.2	.0	9.8		
3. WBA	*	304.8	3.7	.0	3.7	*	305.	270.	AG	360.	9.2	.0	9.8		
4. WBD	*	.0	3.7	-304.8	3.7	*	305.	270.	AG	555.	9.2	.0	9.8		
5. NBA	*	3.7	-304.8	3.7	.0	*	305.	360.	AG	2605.	9.5	.0	13.4		
6. NBD	*	3.7	.0	3.7	304.8	*	305.	360.	AG	2455.	9.5	.0	13.4		
7. SBA	*	-7.3	304.8	-7.3	.0	*	305.	180.	AG	1690.	9.5	.0	13.4		
8. SBD	*	-7.3	.0	-7.3	-304.8	*	305.	180.	AG	1700.	9.5	.0	13.4		
9. EBL	*	-11.0	.0	-253.6	-.1	*	243.	270.	AG	131.	100.0	.0	3.7	1.46	40.4
10. EBT	*	-11.0	-3.7	-350.1	-3.7	*	339.	270.	AG	116.	100.0	.0	3.7	1.28	56.5
11. WBL	*	11.0	.0	99.7	.0	*	89.	90.	AG	139.	100.0	.0	3.7	1.40	14.8
12. WBT	*	11.0	3.7	336.1	3.7	*	325.	90.	AG	124.	100.0	.0	3.7	1.38	54.2
13. NBL	*	-1.8	-5.5	-1.8	-161.7	*	156.	180.	AG	126.	100.0	.0	3.7	1.16	26.0
14. NBT	*	3.7	-5.5	3.7	-592.8	*	587.	180.	AG	111.	100.0	.0	7.3	1.15	97.9
15. NBR	*	9.1	-5.5	9.1	-24.5	*	19.	180.	AG	55.	100.0	.0	3.7	.20	3.2
16. SBL	*	-1.8	5.5	-1.8	14.9	*	9.	360.	AG	277.	100.0	.0	7.3	.70	1.6
17. SBT	*	-7.3	5.5	-7.3	133.7	*	128.	360.	AG	137.	100.0	.0	7.3	1.00	21.4

North (Seattle)

DATE : 4/18/ 6
TIME : 14: 5:11

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	160	142	3.0	190	1600	55.10	2	3
10. EBT	160	126	3.0	370	1600	55.10	2	3
11. WBL	160	150	3.0	70	1600	55.10	2	3
12. WBT	160	134	3.0	290	1600	55.10	2	3
13. NBL	160	136	3.0	220	1600	55.10	2	3
14. NBT	160	60	3.0	2195	1600	55.10	2	3
15. NBR	160	60	3.0	190	1600	55.10	2	3
16. SBL	160	150	3.0	70	1600	55.10	2	3
17. SBT	160	74	3.0	1620	1600	55.10	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. REC 1	-14.0	8.5	1.8
2. REC 2	10.4	8.5	1.8
3. REC 3	14.0	-8.5	1.8
4. REC 4	-14.0	-8.5	1.8
5. REC 5	-14.0	33.5	1.8
6. REC 6	-14.0	58.5	1.8
7. REC 7	10.4	33.5	1.8
8. REC 8	10.4	58.5	1.8
9. REC 9	14.0	-33.5	1.8
10. REC 10	14.0	-58.5	1.8
11. REC 11	-14.0	-33.5	1.8
12. REC 12	-14.0	-58.5	1.8
13. REC 13	-39.0	8.5	1.8
14. REC 14	-64.0	8.5	1.8
15. REC 15	35.4	8.5	1.8
16. REC 16	60.4	8.5	1.8
17. REC 17	39.0	-8.5	1.8
18. REC 18	64.0	-8.5	1.8
19. REC 19	-39.0	-8.5	1.8
20. REC 20	-64.0	-8.5	1.8

North (Seattle)

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: 0.-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
0.	*	4.9	4.9	5.0	5.8	4.8	4.7	4.9	4.7	4.7	4.5	5.3	5.1	3.2	3.0	3.3	3.0	4.1	3.8	4.1	3.9
5.	*	5.4	4.4	4.4	6.2	5.3	5.3	4.3	4.2	4.0	4.0	5.6	5.3	3.5	3.2	3.1	3.0	3.9	3.8	4.4	4.1
10.	*	5.7	3.8	4.2	6.6	5.6	5.5	3.8	3.7	3.6	3.6	5.6	5.7	3.7	3.2	3.0	3.0	3.8	3.8	4.6	4.2
15.	*	5.6	3.4	3.9	6.3	5.6	5.5	3.4	3.4	3.4	3.3	5.4	5.5	4.0	3.4	3.0	3.0	3.8	3.8	4.9	4.3
20.	*	5.5	3.2	3.8	6.1	5.5	5.4	3.2	3.2	3.3	3.2	5.1	5.4	4.0	3.6	3.0	3.0	3.8	3.8	4.9	4.5
25.	*	5.2	3.1	3.8	5.8	5.2	5.2	3.1	3.1	3.3	3.2	5.0	5.3	3.9	3.6	3.0	3.0	3.8	3.8	4.8	4.5
30.	*	5.1	3.1	3.8	5.7	5.1	5.1	3.1	3.1	3.4	3.2	4.9	5.2	3.9	3.6	3.0	3.0	3.8	3.8	4.8	4.5
35.	*	4.8	3.1	3.8	5.3	4.8	4.8	3.1	3.1	3.4	3.3	5.0	5.0	3.9	3.6	3.0	3.0	3.8	3.8	4.8	4.5
40.	*	4.8	3.1	3.8	5.0	4.8	4.8	3.1	3.1	3.4	3.3	5.0	5.1	3.9	3.6	3.0	3.0	3.8	3.8	4.9	4.6
45.	*	4.8	3.1	3.9	4.9	4.7	4.7	3.1	3.1	3.4	3.3	5.1	5.0	3.8	3.6	3.0	3.0	3.9	3.9	4.8	4.6
50.	*	4.7	3.1	4.0	4.9	4.6	4.6	3.1	3.1	3.5	3.3	5.2	4.9	3.8	3.5	3.0	3.0	4.0	4.0	4.9	4.5
55.	*	4.7	3.1	4.0	4.8	4.5	4.5	3.1	3.1	3.6	3.3	5.3	4.9	3.8	3.5	3.0	3.0	4.0	4.0	4.8	4.8
60.	*	4.7	3.0	4.0	4.8	4.4	4.4	3.0	3.0	3.6	3.2	5.2	4.8	3.8	3.5	3.0	3.0	4.0	4.0	4.8	4.9
65.	*	4.8	3.0	4.1	4.7	4.4	4.4	3.0	3.0	3.5	3.2	5.1	4.8	3.7	3.5	3.0	3.0	4.1	4.1	5.0	5.0
70.	*	4.8	3.0	4.2	5.1	4.4	4.4	3.0	3.0	3.5	3.2	4.9	4.6	3.8	3.5	3.0	3.0	4.2	4.1	5.2	5.0
75.	*	5.0	3.2	4.3	5.3	4.4	4.4	3.0	3.0	3.5	3.2	4.9	4.6	4.0	3.6	3.2	3.2	4.3	4.2	5.1	5.0
80.	*	5.4	3.4	4.3	5.5	4.4	4.4	3.0	3.0	3.3	3.1	4.9	4.5	4.1	3.8	3.3	3.3	4.2	4.1	5.2	5.2
85.	*	5.6	3.8	4.1	5.4	4.4	4.4	3.0	3.0	3.2	3.0	4.6	4.4	4.5	4.4	3.8	3.7	4.0	3.9	5.1	4.9
90.	*	5.9	4.0	3.9	5.4	4.5	4.4	3.1	3.0	3.1	3.0	4.5	4.4	4.7	4.5	4.0	3.9	3.9	3.7	4.7	4.8
95.	*	6.1	4.5	3.6	5.2	4.7	4.5	3.2	3.1	3.0	3.0	4.4	4.4	4.9	4.8	4.4	4.3	3.5	3.3	4.4	4.4
100.	*	6.0	4.6	3.4	4.9	4.9	4.5	3.4	3.1	3.0	3.0	4.4	4.4	4.9	4.7	4.5	4.4	3.3	3.3	4.1	3.9
105.	*	5.7	4.5	3.1	4.6	4.9	4.5	3.5	3.1	3.0	3.0	4.4	4.4	4.7	4.8	4.5	4.4	3.1	3.1	3.8	3.7

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 110.  *   5.3   4.4   3.1   4.6   4.9   4.6   3.5   3.2   3.0   3.0   4.4   4.4
4.9   4.6   4.4   4.3   3.1   3.1   3.7   3.6
 115.  *   5.0   4.3   3.0   4.6   5.0   4.7   3.5   3.2   3.0   3.0   4.5   4.5
4.7   4.8   4.3   4.3   3.0   3.0   3.7   3.6
 120.  *   4.9   4.3   3.0   4.5   5.0   4.7   3.6   3.3   3.0   3.0   4.5   4.5
4.6   4.8   4.3   4.3   3.0   3.0   3.8   3.6
 125.  *   4.8   4.2   3.0   4.6   5.1   4.8   3.7   3.4   3.0   3.0   4.6   4.6
4.5   4.7   4.2   4.2   3.0   3.0   3.8   3.7
 130.  *   5.0   4.1   3.0   4.6   5.2   4.9   3.7   3.4   3.0   3.0   4.6   4.6
4.6   4.5   4.1   4.1   3.0   3.0   3.9   3.7
 135.  *   5.1   3.9   3.0   4.7   5.2   5.0   3.7   3.4   3.0   3.0   4.7   4.7
4.7   4.5   3.9   3.9   3.0   3.0   3.9   3.7
 140.  *   5.0   3.9   3.0   4.8   5.3   5.0   3.7   3.3   3.0   3.0   4.8   4.8
4.7   4.5   3.9   3.9   3.0   3.0   3.9   3.7
 145.  *   5.1   3.8   3.0   5.0   5.3   5.0   3.6   3.3   3.0   3.0   5.0   5.0
4.9   4.5   3.9   3.9   3.0   3.0   4.1   3.7
 150.  *   5.4   3.8   3.0   5.1   5.3   5.3   3.5   3.3   3.0   3.0   5.1   5.1
4.9   4.5   3.9   3.9   3.0   3.0   4.1   3.7
 155.  *   5.7   3.9   3.0   5.3   5.4   5.5   3.4   3.3   3.0   3.0   5.3   5.2
4.9   4.5   3.9   3.9   3.0   3.0   4.1   3.7
 160.  *   5.9   3.9   3.0   5.4   6.0   5.7   3.6   3.4   3.0   3.0   5.4   5.4
5.0   4.5   3.9   3.9   3.0   3.0   4.1   3.7
 165.  *   6.4   4.1   3.1   5.7   6.1   6.0   3.8   3.6   3.1   3.1   5.5   5.5
4.9   4.3   3.8   3.8   3.0   3.0   4.1   3.5
 170.  *   6.4   4.7   3.4   5.7   6.3   6.1   4.3   4.1   3.4   3.4   5.7   5.6
4.7   4.2   3.8   3.8   3.0   3.0   3.9   3.3
 175.  *   6.2   5.5   4.0   5.5   6.1   5.9   5.0   4.9   3.9   3.8   5.4   5.3
4.3   4.1   4.0   3.8   3.2   3.0   3.5   3.3
 180.  *   5.7   6.1   4.6   4.9   5.5   5.6   5.8   5.4   4.6   4.5   4.9   4.7
4.1   3.8   4.2   4.0   3.4   3.1   3.3   3.0
 185.  *   5.0   6.7   5.3   4.2   4.8   4.8   5.9   5.9   5.2   5.0   4.1   4.1
3.9   3.8   4.6   4.1   3.6   3.2   3.1   3.0
 190.  *   4.5   6.6   5.7   3.7   4.1   4.1   6.0   6.0   5.4   5.3   3.7   3.6
3.8   3.8   4.8   4.2   3.9   3.4   3.0   3.0
 195.  *   4.1   6.5   5.7   3.3   3.6   3.6   5.9   5.5   5.6   5.5   3.3   3.2
3.8   3.8   4.9   4.5   4.0   3.6   3.0   3.0
 200.  *   3.9   5.9   5.5   3.1   3.5   3.5   5.7   5.5   5.4   5.4   3.1   3.1
3.8   3.8   5.0   4.6   4.1   3.6   3.0   3.0
 205.  *   3.8   5.7   5.4   3.1   3.5   3.5   5.5   5.4   5.2   5.2   3.1   3.1
3.8   3.8   5.1   4.7   4.1   3.7   3.0   3.0
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JOB: 125th Avenue & North Aurora 2030 NoBuild RUN: Aurora Avenue North (Seattle)

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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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 210.  *   3.8   5.3   5.3   3.1   3.5   3.5   5.4   5.2   5.1   5.1   3.1   3.1
3.8   3.8   5.1   4.6   4.1   3.7   3.0   3.0
 215.  *   3.8   5.0   5.0   3.1   3.5   3.5   5.2   5.2   4.8   4.8   3.1   3.1
3.8   3.8   5.1   4.6   3.9   3.7   3.0   3.0
 220.  *   3.8   5.0   5.0   3.1   3.5   3.5   5.2   5.1   4.8   4.8   3.1   3.1
3.8   3.8   4.8   4.6   3.9   3.7   3.0   3.0
 225.  *   3.8   4.7   4.9   3.1   3.6   3.5   5.0   5.0   4.7   4.7   3.1   3.1
3.8   3.8   4.8   4.6   3.9   3.7   3.0   3.0
 230.  *   4.0   4.8   4.8   3.0   3.5   3.4   5.2   5.0   4.6   4.6   3.0   3.0
4.0   4.0   4.8   4.8   3.8   3.7   3.0   3.0
 235.  *   4.1   4.8   4.8   3.0   3.5   3.4   5.0   4.9   4.6   4.6   3.0   3.0
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4.1   4.1   4.8   4.9   3.8   3.7   3.0   3.0
 240.  *   4.2   4.7   4.7   3.0   3.6   3.4   5.0   4.9   4.5   4.5   3.0   3.0
4.2   4.2   4.7   4.9   3.8   3.7   3.0   3.0
 245.  *   4.2   5.1   4.7   3.0   3.6   3.4   4.9   4.7   4.5   4.5   3.0   3.0
4.2   4.2   5.0   4.9   3.8   3.7   3.0   3.0
 250.  *   4.3   5.4   4.7   3.1   3.6   3.4   4.8   4.7   4.5   4.5   3.0   3.0
4.2   4.2   5.0   4.9   3.7   3.5   3.1   3.1
 255.  *   4.5   5.7   4.9   3.2   3.6   3.4   4.8   4.6   4.5   4.5   3.0   3.0
4.5   4.5   5.2   5.1   4.1   3.6   3.2   3.2
 260.  *   4.5   5.9   5.2   3.5   3.6   3.2   4.8   4.4   4.5   4.5   3.0   3.0
4.5   4.5   5.1   5.1   4.3   3.9   3.5   3.5
 265.  *   4.3   6.1   5.5   4.0   3.4   3.0   4.7   4.3   4.5   4.5   3.0   3.0
4.3   4.3   5.3   5.1   4.4   4.3   4.0   3.9
 270.  *   4.0   5.9   5.7   4.3   3.2   3.0   4.5   4.3   4.7   4.5   3.2   3.0
4.0   4.0   4.8   4.8   4.7   4.6   4.3   4.3
 275.  *   3.7   5.5   5.8   4.6   3.0   3.0   4.3   4.3   5.0   4.6   3.4   3.1
3.7   3.7   4.5   4.3   5.1   4.7   4.6   4.6
 280.  *   3.4   5.0   5.9   4.7   3.0   3.0   4.2   4.2   5.1   4.7   3.6   3.2
3.4   3.4   4.2   4.0   4.7   5.0   4.7   4.7
 285.  *   3.1   4.8   5.5   4.7   3.0   3.0   4.2   4.2   5.1   4.9   3.6   3.3
3.1   3.1   3.8   3.4   5.0   5.0   4.7   4.7
 290.  *   3.1   4.7   5.1   4.5   3.0   3.0   4.3   4.3   5.1   4.9   3.6   3.4
3.1   3.1   3.8   3.5   4.7   4.6   4.5   4.4
 295.  *   3.0   4.9   5.1   4.4   3.0   3.0   4.3   4.3   5.1   4.9   3.6   3.4
3.0   3.0   3.8   3.6   4.8   4.5   4.4   4.4
 300.  *   3.0   4.8   4.9   4.4   3.0   3.0   4.5   4.5   5.1   4.9   3.6   3.4
3.0   3.0   3.8   3.6   4.5   4.5   4.4   4.4
 305.  *   3.0   4.7   4.9   4.3   3.0   3.0   4.5   4.5   5.1   5.0   3.6   3.4
3.0   3.0   3.8   3.6   4.6   4.6   4.3   4.3
 310.  *   3.0   4.7   4.9   4.0   3.0   3.0   4.6   4.6   5.0   5.0   3.6   3.4
3.0   3.0   3.8   3.6   4.7   4.6   4.0   4.0
 315.  *   3.1   4.7   5.1   4.0   3.1   3.1   4.6   4.6   5.1   5.1   3.6   3.5
3.0   3.0   3.8   3.6   4.6   4.5   4.0   4.0
 320.  *   3.1   4.7   5.0   4.0   3.1   3.1   4.7   4.7   5.1   5.2   3.5   3.5
3.0   3.0   3.8   3.6   4.6   4.4   4.0   4.0
 325.  *   3.1   4.8   5.0   3.9   3.1   3.1   4.8   4.8   5.4   5.2   3.5   3.5
3.0   3.0   3.9   3.6   4.6   4.4   3.9   3.9
 330.  *   3.1   4.9   5.2   3.9   3.1   3.1   4.9   4.9   5.2   5.2   3.5   3.5
3.0   3.0   4.0   3.6   4.7   4.4   3.9   3.9
 335.  *   3.1   5.1   5.1   3.9   3.1   3.1   5.1   5.1   5.3   5.2   3.5   3.4
3.0   3.0   4.0   3.6   4.8   4.4   3.9   3.9
 340.  *   3.1   5.2   5.5   4.0   3.1   3.1   5.2   5.2   5.3   5.3   3.5   3.4
3.0   3.0   3.9   3.5   4.7   4.3   3.9   3.9
 345.  *   3.4   5.5   5.6   4.3   3.3   3.2   5.4   5.3   5.4   5.5   3.7   3.6
3.0   3.0   3.9   3.4   4.7   4.2   3.9   3.9
 350.  *   3.8   5.5   5.5   4.7   3.7   3.6   5.4   5.4   5.4   5.3   4.0   4.0
3.0   3.0   3.6   3.3   4.4   4.1   3.9   3.9
 355.  *   4.2   5.3   5.4   5.2   4.2   4.1   5.2   5.2   5.3   4.8   4.7   4.6
3.1   3.0   3.4   3.1   4.2   3.9   4.0   3.9
 360.  *   4.9   4.9   5.0   5.8   4.8   4.7   4.9   4.7   4.7   4.5   5.3   5.1
3.2   3.0   3.3   3.0   4.1   3.8   4.1   3.9

------*-------------------------------------------------------------------------------
-----------------------------------------
 MAX   *   6.4   6.7   5.9   6.6   6.3   6.1   6.0   6.0   5.6   5.5   5.7   5.7
5.0   4.8   5.3   5.1   5.1   5.0   5.2   5.2
 DEGR. *  165   185   280    10   170   170   190   190   195   195   170    10
160    95   265   260   275   280    70    80
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THE HIGHEST CONCENTRATION OF 6.70 PPM OCCURRED AT RECEPTOR REC2 .

JOB: 130th Avenue & North Aurora 2005 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14: 6:57

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 = 3.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(M)	(DEG)		(G/MI)	(M)	(M)	(VEH)		
1. EBA	*	-304.8	-5.5	.0	-5.5	*	305.	90.	AG	560.	22.7	.0	13.4		
2. EBD	*	.0	-5.5	304.8	-5.5	*	305.	90.	AG	655.	22.7	.0	13.4		
3. WBA	*	304.8	5.5	.0	5.5	*	305.	270.	AG	810.	22.7	.0	13.4		
4. WBD	*	.0	5.5	-304.8	5.5	*	305.	270.	AG	665.	22.7	.0	13.4		
5. NBA	*	3.7	-304.8	3.7	.0	*	305.	360.	AG	1770.	23.3	.0	13.4		
6. NBD	*	3.7	.0	3.7	304.8	*	305.	360.	AG	1835.	23.3	.0	13.4		
7. SBA	*	-7.3	304.8	-7.3	.0	*	305.	180.	AG	1205.	23.3	.0	13.4		
8. SBD	*	-7.3	.0	-7.3	-304.8	*	305.	180.	AG	1190.	23.3	.0	13.4		
9. EBL	*	-11.0	.0	-235.5	-.1	*	224.	270.	AG	375.	100.0	.0	3.7	1.56	37.4
10. EBT	*	-11.0	-5.5	-41.8	-5.5	*	31.	270.	AG	659.	100.0	.0	7.3	.71	5.1
11. WBL	*	11.0	.0	102.6	.0	*	92.	90.	AG	354.	100.0	.0	3.7	1.08	15.3
12. WBT	*	11.0	5.5	57.8	5.5	*	47.	90.	AG	617.	100.0	.0	7.3	.85	7.8
13. NBL	*	-1.8	-9.1	-1.8	-26.0	*	17.	180.	AG	354.	100.0	.0	3.7	.54	2.8
14. NBT	*	3.7	-9.1	3.7	-635.4	*	626.	180.	AG	491.	100.0	.0	7.3	1.28	104.4
15. NBR	*	9.1	-9.1	9.1	-24.9	*	16.	180.	AG	245.	100.0	.0	3.7	.23	2.6
16. SBL	*	-1.8	9.1	-1.8	124.5	*	115.	360.	AG	358.	100.0	.0	3.7	1.13	19.2
17. SBT	*	-7.3	9.1	-7.3	70.1	*	61.	360.	AG	498.	100.0	.0	7.3	.86	10.2

North (Seattle)

DATE : 4/18/ 6
TIME : 14: 6:57

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	120	107	3.0	165	1600	156.90	2	3
10. EBT	120	94	3.0	395	1600	156.90	2	3
11. WBL	120	101	3.0	200	1600	156.90	2	3
12. WBT	120	88	3.0	610	1600	156.90	2	3
13. NBL	120	101	3.0	100	1600	156.90	2	3
14. NBT	120	70	3.0	1535	1600	156.90	2	3
15. NBR	120	70	3.0	135	1600	156.90	2	3
16. SBL	120	102	3.0	195	1600	156.90	2	3
17. SBT	120	71	3.0	1010	1600	156.90	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. REC 1	-14.0	12.2	1.8
2. REC 2	10.4	12.2	1.8
3. REC 3	14.0	-12.2	1.8
4. REC 4	-14.0	-12.2	1.8
5. REC 5	-14.0	37.2	1.8
6. REC 6	-14.0	62.2	1.8
7. REC 7	10.4	37.2	1.8
8. REC 8	10.4	62.2	1.8
9. REC 9	14.0	-37.2	1.8
10. REC 10	14.0	-62.2	1.8
11. REC 11	-14.0	-37.2	1.8
12. REC 12	-14.0	-62.2	1.8
13. REC 13	-39.0	12.2	1.8
14. REC 14	-64.0	12.2	1.8
15. REC 15	35.4	12.2	1.8
16. REC 16	60.4	12.2	1.8
17. REC 17	39.0	-12.2	1.8
18. REC 18	64.0	-12.2	1.8
19. REC 19	-39.0	-12.2	1.8
20. REC 20	-64.0	-12.2	1.8

North (Seattle)

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: 0.-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
0.	*	7.1	6.7	7.6	10.3	6.5	5.6	6.5	6.3	6.9	6.8	7.9	7.5	3.4	3.1	3.4	3.1	6.0	4.7	6.6	4.6
5.	*	8.4	5.5	6.9	11.3	7.6	6.5	5.4	5.3	5.9	5.8	8.8	8.2	3.8	3.2	3.2	3.0	5.7	4.5	7.3	4.7
10.	*	9.2	4.4	6.3	11.3	8.5	7.0	4.4	4.3	5.1	5.0	8.9	8.8	4.2	3.4	3.0	3.0	5.6	4.5	7.8	5.0
15.	*	9.6	3.7	5.8	10.9	8.8	7.2	3.7	3.7	4.5	4.3	8.6	8.6	4.6	3.7	3.0	3.0	5.6	4.5	8.1	5.2
20.	*	9.2	3.4	5.7	9.9	8.9	7.3	3.4	3.4	4.5	4.2	7.9	8.0	4.8	4.0	3.0	3.0	5.6	4.5	8.5	5.4
25.	*	8.9	3.2	5.6	8.9	8.7	7.1	3.2	3.2	4.5	4.1	7.6	8.1	5.0	4.0	3.0	3.0	5.6	4.5	8.7	5.6
30.	*	8.6	3.2	5.7	8.2	8.5	7.1	3.2	3.2	4.5	4.0	7.8	7.6	5.2	4.1	3.0	3.0	5.7	4.6	8.9	5.8
35.	*	8.2	3.2	5.8	7.3	8.1	7.0	3.2	3.2	4.5	3.9	7.8	7.9	5.2	4.2	3.0	3.0	5.6	4.6	9.0	6.0
40.	*	8.0	3.2	5.9	7.1	7.9	7.1	3.1	3.1	4.5	3.8	8.1	7.4	5.2	4.4	3.1	3.1	5.6	4.7	8.9	6.1
45.	*	7.8	3.2	6.1	6.8	7.7	7.0	3.1	3.1	4.4	3.8	8.1	7.1	5.3	4.5	3.1	3.1	5.5	4.8	9.0	6.3
50.	*	7.6	3.2	6.2	6.8	7.5	7.1	3.1	3.1	4.3	3.6	7.9	6.8	5.3	4.5	3.1	3.1	5.5	4.8	8.8	6.3
55.	*	7.4	3.2	6.2	7.2	7.3	7.1	3.1	3.1	4.2	3.6	7.8	6.5	5.3	4.5	3.1	3.1	5.4	4.9	8.9	6.5
60.	*	7.3	3.2	6.1	7.5	7.2	7.0	3.1	3.1	4.1	3.5	7.4	6.4	5.2	4.6	3.1	3.1	5.2	4.9	8.9	6.7
65.	*	7.2	3.2	6.3	7.9	7.1	7.0	3.1	3.1	3.9	3.4	7.2	6.2	5.2	4.6	3.1	3.1	5.3	5.1	9.0	7.2
70.	*	7.2	3.2	6.1	8.6	6.9	6.8	3.0	3.0	3.8	3.4	6.8	6.2	4.9	4.6	3.2	3.2	5.3	5.1	9.1	7.5
75.	*	7.3	3.4	5.9	8.8	6.8	6.8	3.0	3.0	3.7	3.4	6.6	6.1	5.1	4.7	3.3	3.3	5.3	5.0	8.9	7.8
80.	*	7.9	4.0	5.7	8.7	6.8	6.8	3.0	3.0	3.6	3.2	6.4	5.9	5.7	5.2	3.7	3.6	5.2	5.0	8.8	8.1
85.	*	8.7	4.9	5.2	8.7	6.9	6.8	3.1	3.0	3.4	3.2	6.2	5.9	6.3	5.9	4.2	3.9	5.0	4.7	8.1	7.8
90.	*	9.7	5.9	4.6	8.1	7.3	7.0	3.2	3.0	3.2	3.0	5.9	5.7	6.9	6.5	5.2	4.5	4.4	4.3	7.2	7.1
95.	*	10.2	7.0	4.1	7.7	7.3	7.0	3.4	3.1	3.1	3.0	5.8	5.7	7.4	6.9	5.9	4.9	4.0	3.9	6.2	6.0
100.	*	10.2	7.8	3.6	7.1	7.6	7.1	3.7	3.3	3.0	3.0	5.7	5.7	7.5	7.4	6.6	5.2	3.5	3.5	5.5	5.3
105.	*	9.9	8.2	3.2	6.8	7.9	7.1	3.7	3.3	3.0	3.0	5.7	5.7	7.1	7.6	7.0	5.3	3.2	3.2	5.0	4.5

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 110.  *   8.9   8.1   3.1   6.7   8.3   7.5   4.0   3.5   3.0   3.0   5.7   5.7
7.1   7.5   7.3   5.2   3.1   3.1   4.8   4.3
 115.  *   8.0   8.1   3.1   6.6   8.8   7.8   4.3   3.7   3.0   3.0   5.7   5.7
6.7   7.4   7.4   5.1   3.1   3.1   4.7   4.2
 120.  *   7.4   7.7   3.1   6.4   8.9   8.0   4.5   3.7   3.0   3.0   5.7   5.7
7.3   7.1   7.3   5.1   3.1   3.1   4.8   4.2
 125.  *   7.1   7.5   3.1   6.5   9.0   8.3   4.5   3.7   3.0   3.0   5.8   5.8
7.4   6.8   7.2   5.0   3.1   3.1   4.6   4.1
 130.  *   6.9   7.3   3.1   6.6   9.1   8.6   4.7   3.8   3.0   3.0   6.0   6.0
7.5   6.5   7.2   4.9   3.1   3.1   4.7   4.1
 135.  *   7.1   7.0   3.0   6.5   9.0   8.8   4.8   4.0   3.0   3.0   6.1   6.1
7.8   6.4   6.9   4.8   3.0   3.0   4.7   4.3
 140.  *   7.4   6.8   3.0   6.7   9.2   9.2   4.8   4.1   3.0   3.0   6.4   6.4
7.6   6.2   6.8   4.7   3.0   3.0   4.7   4.4
 145.  *   7.4   6.7   3.0   6.7   9.0   9.4   4.9   4.3   3.0   3.0   6.5   6.5
7.7   6.0   6.7   4.7   3.0   3.0   4.9   4.4
 150.  *   8.0   6.5   3.0   6.9   9.4   9.5   4.9   4.3   3.0   3.0   6.8   6.8
7.7   6.0   6.6   4.6   3.0   3.0   5.0   4.4
 155.  *   8.4   6.4   3.0   7.2   9.4   9.9   4.9   4.3   3.0   3.0   7.1   7.0
7.8   6.0   6.4   4.5   3.0   3.0   5.1   4.5
 160.  *   9.1   6.5   3.2   7.4   9.8  10.1   5.0   4.6   3.2   3.2   7.4   7.4
7.7   5.9   6.3   4.5   3.0   3.0   5.1   4.5
 165.  *   9.7   6.7   3.4   7.8  10.2  10.7   5.4   4.9   3.4   3.4   7.8   7.8
7.8   5.7   6.3   4.5   3.0   3.0   5.2   4.3
 170.  *  10.1   7.7   4.1   8.1  10.0  10.7   6.4   5.8   4.1   4.0   8.0   7.9
7.5   5.7   6.5   4.5   3.1   3.0   4.8   3.9
 175.  *   9.9   9.2   5.2   7.5   9.5   9.9   7.7   7.4   5.2   5.2   7.5   7.5
7.0   5.2   6.9   4.7   3.4   3.1   4.5   3.6
 180.  *   9.1  10.7   6.7   6.7   8.4   8.6   9.2   8.7   6.5   6.5   6.6   6.5
6.2   4.9   7.4   5.0   3.9   3.3   3.8   3.3
 185.  *   7.8  11.2   7.8   5.3   7.0   7.0   9.6   9.6   7.6   7.5   5.3   5.2
5.6   4.6   8.1   5.6   4.5   3.7   3.4   3.1
 190.  *   6.8  10.8   8.4   4.3   5.7   5.5   9.4   9.5   8.1   8.0   4.3   4.3
5.2   4.5   8.6   6.3   5.0   4.0   3.1   3.0
 195.  *   6.3  10.2   8.4   3.6   5.2   4.7   9.1   9.3   8.0   8.0   3.6   3.5
4.8   4.4   8.8   6.7   5.2   4.3   3.0   3.0
 200.  *   5.9   9.2   8.2   3.3   4.7   4.2   8.3   9.0   7.7   7.7   3.3   3.2
4.7   4.5   8.7   7.0   5.2   4.5   3.0   3.0
 205.  *   5.8   8.1   7.9   3.2   4.5   3.9   8.0   8.9   7.2   7.2   3.2   3.2
4.6   4.5   8.8   7.2   5.2   4.5   3.0   3.0
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PAGE 4

JOB: 130th Avenue & North Aurora 2005 PM RUN: Aurora Avenue North (Seattle)

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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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 210.  *   5.8   7.5   7.7   3.1   4.4   3.8   8.2   8.6   7.0   7.0   3.1   3.1
4.6   4.5   8.8   7.5   5.0   4.4   3.0   3.0
 215.  *   5.8   7.3   7.5   3.1   4.2   3.8   8.4   8.4   6.7   6.7   3.1   3.1
4.5   4.5   8.9   7.6   4.9   4.4   3.0   3.0
 220.  *   5.9   7.2   7.5   3.1   4.2   3.7   8.3   8.2   6.5   6.5   3.1   3.1
4.6   4.6   8.9   7.7   4.8   4.3   3.0   3.0
 225.  *   6.0   7.2   7.4   3.1   4.1   3.7   8.3   7.8   6.4   6.4   3.1   3.1
4.7   4.7   9.0   8.0   4.8   4.3   3.0   3.0
 230.  *   5.9   7.2   7.3   3.1   4.0   3.7   8.1   7.6   6.2   6.2   3.1   3.1
4.7   4.7   9.0   8.5   4.9   4.4   3.0   3.0
 235.  *   5.9   7.4   7.4   3.1   4.1   3.8   8.0   7.5   6.2   6.2   3.1   3.1
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4.9   4.9   9.0   8.7   4.7   4.3   3.0   3.0
 240.  *   5.8   8.1   7.4   3.2   4.1   3.9   7.8   7.4   6.0   6.0   3.1   3.1
5.0   5.0   9.0   8.9   4.9   4.3   3.1   3.1
 245.  *   5.6   8.3   7.3   3.1   4.0   3.7   7.7   7.4   6.0   6.0   3.0   3.0
5.2   5.2   8.9   9.4   4.8   4.3   3.1   3.1
 250.  *   5.7   8.5   7.3   3.1   4.0   3.6   7.4   7.1   5.9   5.9   3.0   3.0
5.4   5.4   9.1   9.5   4.9   4.4   3.1   3.1
 255.  *   5.7   8.9   7.4   3.4   4.0   3.5   7.4   6.9   5.8   5.8   3.0   3.0
5.5   5.5   9.0   9.6   5.3   4.8   3.3   3.2
 260.  *   5.6   8.8   7.9   3.9   3.9   3.3   7.3   6.8   5.8   5.8   3.0   3.0
5.6   5.5   8.6   9.3   5.7   5.1   3.7   3.6
 265.  *   5.3   8.8   8.6   4.6   3.5   3.2   7.1   6.7   6.0   5.8   3.0   3.0
5.3   5.2   8.0   8.5   6.4   5.5   4.1   4.0
 270.  *   4.9   8.4   9.5   5.5   3.3   3.0   6.8   6.5   6.2   5.9   3.3   3.0
4.7   4.7   7.1   7.5   7.0   6.5   4.7   4.7
 275.  *   4.2   7.7   9.8   6.3   3.1   3.0   6.6   6.4   6.4   6.1   3.5   3.2
4.2   4.1   6.5   6.3   7.4   7.2   5.2   5.1
 280.  *   3.7   7.1  10.0   7.1   3.0   3.0   6.4   6.3   6.7   6.2   3.8   3.3
3.7   3.5   5.8   5.5   7.2   7.1   5.5   5.4
 285.  *   3.3   6.8   9.7   7.5   3.0   3.0   6.4   6.2   7.0   6.3   4.0   3.4
3.3   3.2   5.3   4.8   7.1   7.7   5.5   5.5
 290.  *   3.1   6.6   8.6   7.7   3.0   3.0   6.4   6.1   7.2   6.6   4.1   3.7
3.1   3.1   4.8   4.6   6.9   7.4   5.3   5.3
 295.  *   3.1   6.7   8.1   7.7   3.0   3.0   6.6   6.1   7.6   6.8   4.1   3.7
3.1   3.1   5.2   4.6   6.9   7.5   5.2   5.2
 300.  *   3.2   6.6   7.4   7.5   3.1   3.1   6.6   6.0   7.8   6.8   4.2   3.9
3.1   3.1   5.2   4.6   7.0   7.6   5.0   4.9
 305.  *   3.2   6.8   6.9   7.5   3.1   3.1   6.7   6.0   7.9   7.0   4.1   3.8
3.1   3.1   5.2   4.5   7.6   7.8   5.0   4.9
 310.  *   3.2   6.9   6.9   7.2   3.1   3.1   6.9   6.0   7.9   7.1   4.1   3.8
3.1   3.1   5.1   4.4   7.6   7.7   4.9   4.7
 315.  *   3.2   7.1   7.0   7.1   3.1   3.1   7.1   6.2   8.1   7.4   4.3   3.8
3.1   3.1   5.1   4.4   7.8   7.4   5.0   4.7
 320.  *   3.1   7.4   7.0   6.8   3.1   3.1   7.2   6.3   8.2   7.4   4.4   3.8
3.0   3.0   5.1   4.3   7.9   7.2   4.9   4.5
 325.  *   3.1   7.6   7.4   6.8   3.1   3.1   7.3   6.5   8.3   7.9   4.6   3.8
3.0   3.0   4.9   4.1   7.8   6.8   5.0   4.5
 330.  *   3.1   7.9   7.9   6.6   3.1   3.1   7.5   6.7   8.4   7.9   4.7   3.9
3.0   3.0   5.0   4.1   7.7   6.7   5.1   4.4
 335.  *   3.2   8.1   8.4   6.5   3.2   3.2   7.6   6.9   8.6   8.3   4.7   4.0
3.0   3.0   4.9   4.0   7.5   6.3   5.3   4.4
 340.  *   3.4   8.2   8.6   6.6   3.3   3.3   7.7   7.3   8.8   8.6   4.9   4.1
3.0   3.0   4.7   4.0   7.4   6.0   5.4   4.3
 345.  *   3.6   8.5   9.1   7.0   3.6   3.4   8.0   7.6   9.0   9.1   5.3   4.6
3.0   3.0   4.6   3.8   7.2   5.7   5.6   4.3
 350.  *   4.4   8.3   9.0   7.7   4.3   4.0   7.9   7.5   8.6   8.7   5.9   5.2
3.0   3.0   4.3   3.6   6.9   5.4   6.0   4.4
 355.  *   5.5   7.8   8.6   9.0   5.3   4.8   7.3   7.2   8.1   8.0   7.0   6.3
3.2   3.0   3.8   3.3   6.4   5.0   6.3   4.4
 360.  *   7.1   6.7   7.6  10.3   6.5   5.6   6.5   6.3   6.9   6.8   7.9   7.5
3.4   3.1   3.4   3.1   6.0   4.7   6.6   4.6

------*-------------------------------------------------------------------------------
-------------------------------------------
 MAX   *  10.2  11.2  10.0  11.3  10.2  10.7   9.6   9.6   9.0   9.1   8.9   8.8
7.8   7.6   9.1   9.6   7.9   7.8   9.1   8.1
 DEGR. *   95   185   280     5   165   165   185   185   345   345    10    10
155   105   250   255   320   305    70    80

 THE HIGHEST CONCENTRATION OF   11.30 PPM OCCURRED AT RECEPTOR REC4 .
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JOB: 130th Avenue & North Aurora 2010 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14: 8:57

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 = 3.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(M)	(DEG)			(G/MI)	(M)	(M)	(VEH)	
1. EBA	*	-304.8	-5.5	.0	-5.5	*	305.	90.	AG	600.	16.2	.0	13.4		
2. EBD	*	.0	-5.5	304.8	-5.5	*	305.	90.	AG	700.	16.2	.0	13.4		
3. WBA	*	304.8	5.5	.0	5.5	*	305.	270.	AG	865.	16.2	.0	13.4		
4. WBD	*	.0	5.5	-304.8	5.5	*	305.	270.	AG	715.	16.2	.0	13.4		
5. NBA	*	3.7	-304.8	3.7	.0	*	305.	360.	AG	1930.	16.6	.0	13.4		
6. NBD	*	3.7	.0	3.7	304.8	*	305.	360.	AG	1955.	16.6	.0	13.4		
7. SBA	*	-7.3	304.8	-7.3	.0	*	305.	180.	AG	1290.	16.6	.0	13.4		
8. SBD	*	-7.3	.0	-7.3	-304.8	*	305.	180.	AG	1315.	16.6	.0	13.4		
9. EBL	*	-14.6	.0	-196.6	.0	*	182.	270.	AG	241.	100.0	.0	3.7	1.30	30.3
10. EBT	*	-14.6	-5.5	-55.2	-5.5	*	41.	270.	AG	423.	100.0	.0	7.3	.68	6.8
11. WBL	*	11.0	.0	308.8	.1	*	298.	90.	AG	241.	100.0	.0	3.7	1.56	49.6
12. WBT	*	11.0	5.5	140.3	5.5	*	129.	90.	AG	423.	100.0	.0	7.3	1.05	21.6
13. NBL	*	-1.8	-9.1	-1.8	-41.4	*	32.	180.	AG	228.	100.0	.0	3.7	.73	5.4
14. NBT	*	3.7	-9.1	3.7	-448.5	*	439.	180.	AG	284.	100.0	.0	7.3	1.14	73.2
15. NBR	*	9.1	-9.1	9.1	-28.0	*	19.	180.	AG	142.	100.0	.0	3.7	.20	3.1
16. SBL	*	-1.8	9.1	-1.8	256.2	*	247.	360.	AG	239.	100.0	.0	3.7	1.41	41.2
17. SBT	*	-7.3	9.1	-7.3	77.7	*	69.	360.	AG	306.	100.0	.0	7.3	.75	11.4
18. SBR	*	-12.8	9.1	-12.8	23.1	*	14.	360.	AG	153.	100.0	.0	3.7	.15	2.3

JOB: 130th Avenue & North Aurora 2010 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14: 8:57

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	150	132	3.0	180	1600	101.96	2	3
10. EBT	150	116	3.0	420	1600	101.96	2	3
11. WBL	150	132	3.0	215	1600	101.96	2	3
12. WBT	150	116	3.0	650	1600	101.96	2	3
13. NBL	150	125	3.0	155	1600	101.96	2	3
14. NBT	150	78	3.0	1630	1600	101.96	2	3
15. NBR	150	78	3.0	145	1600	101.96	2	3
16. SBL	150	131	3.0	210	1600	101.96	2	3
17. SBT	150	84	3.0	980	1600	101.96	2	3
18. SBR	150	84	3.0	100	1600	101.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. REC 1	-17.7	12.2	1.8
2. REC 2	10.4	12.2	1.8
3. REC 3	14.0	-12.2	1.8
4. REC 4	-14.0	-12.2	1.8
5. REC 5	-17.7	37.2	1.8
6. REC 6	-17.7	62.2	1.8
7. REC 7	10.4	37.2	1.8
8. REC 8	10.4	62.2	1.8
9. REC 9	14.0	-37.2	1.8
10. REC 10	14.0	-62.2	1.8
11. REC 11	-14.0	-37.2	1.8
12. REC 12	-14.0	-62.2	1.8
13. REC 13	-42.7	12.2	1.8
14. REC 14	-67.7	12.2	1.8
15. REC 15	35.4	12.2	1.8
16. REC 16	60.4	12.2	1.8
17. REC 17	39.0	-12.2	1.8
18. REC 18	64.0	-12.2	1.8
19. REC 19	-39.0	-12.2	1.8

20. REC 20 * -64.0 -12.2 1.8 *

JOB: 130th Avenue & North Aurora 2010 PM RUN: Aurora Avenue North (Seattle)

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: 0.-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
0.	*	4.9	6.0	6.7	7.5	4.7	4.4	5.8	5.8	6.1	5.7	6.5	6.3	3.3	3.0	3.5	3.1	5.3	5.0	5.6	4.0
5.	*	5.8	5.0	5.9	8.0	5.5	5.0	4.9	4.8	5.3	5.1	7.3	6.9	3.6	3.2	3.1	3.0	5.0	4.9	5.9	4.2
10.	*	6.5	4.1	5.4	8.3	6.1	5.6	4.1	4.1	4.7	4.3	7.1	7.3	4.0	3.5	3.0	3.0	4.9	4.9	6.4	4.4
15.	*	6.8	3.5	4.8	7.8	6.3	5.7	3.5	3.5	4.1	3.9	6.9	7.0	4.3	3.6	3.0	3.0	4.8	4.8	6.7	4.7
20.	*	6.8	3.3	4.9	7.2	6.3	5.7	3.3	3.3	4.1	3.8	6.7	6.9	4.3	3.8	3.0	3.0	4.8	4.8	6.9	4.9
25.	*	6.6	3.2	4.9	6.6	6.2	5.6	3.2	3.2	4.1	3.8	6.4	6.7	4.4	3.9	3.0	3.0	4.9	4.9	7.1	5.1
30.	*	6.6	3.1	5.0	6.0	6.1	5.6	3.1	3.1	4.1	3.8	6.4	6.6	4.5	3.9	3.0	3.0	5.0	5.0	7.0	5.2
35.	*	6.4	3.1	5.0	5.9	6.0	5.6	3.1	3.1	4.2	3.8	6.5	6.4	4.5	4.0	3.0	3.0	5.0	5.0	7.3	5.4
40.	*	6.3	3.1	5.1	5.6	5.8	5.5	3.1	3.1	4.2	3.8	6.7	6.3	4.6	4.0	3.0	3.0	5.1	5.0	7.3	5.7
45.	*	6.2	3.1	5.1	5.7	5.7	5.5	3.1	3.1	4.2	3.9	6.8	6.3	4.6	4.0	3.0	3.0	5.1	5.1	7.3	5.9
50.	*	6.0	3.1	5.3	5.7	5.6	5.5	3.1	3.1	4.2	3.9	6.8	6.0	4.3	3.9	3.0	3.0	5.3	5.3	7.0	5.9
55.	*	6.0	3.2	5.5	5.8	5.6	5.6	3.1	3.1	4.3	3.9	6.8	6.0	4.3	4.0	3.1	3.1	5.5	5.3	7.1	6.1
60.	*	5.9	3.2	5.6	6.3	5.5	5.5	3.1	3.1	4.2	3.9	6.7	5.8	4.3	4.0	3.1	3.1	5.6	5.6	7.0	6.5
65.	*	5.9	3.1	5.7	7.0	5.5	5.5	3.0	3.0	4.2	3.8	6.6	5.8	4.5	4.1	3.1	3.1	5.6	5.6	7.1	6.8
70.	*	6.1	3.2	6.0	7.3	5.4	5.3	3.0	3.0	4.2	3.7	6.8	5.7	4.5	4.1	3.2	3.2	5.9	5.7	7.0	7.4
75.	*	6.1	3.4	6.0	7.7	5.3	5.3	3.0	3.0	3.9	3.4	6.7	5.4	4.6	4.3	3.4	3.4	5.9	5.7	7.3	7.5
80.	*	6.6	4.0	5.8	7.9	5.3	5.3	3.0	3.0	3.8	3.3	6.2	5.2	5.2	4.7	3.9	3.9	5.7	5.4	7.5	7.5
85.	*	7.4	4.9	5.5	7.6	5.5	5.3	3.1	3.0	3.6	3.2	5.9	5.1	5.8	5.2	4.8	4.7	5.3	5.1	7.0	7.2
90.	*	8.1	6.0	4.8	7.1	5.7	5.3	3.4	3.0	3.3	3.0	5.6	4.9	6.2	6.0	5.9	5.7	4.8	4.5	6.3	6.4
95.	*	8.5	6.8	4.1	6.6	6.1	5.5	3.7	3.2	3.0	3.0	5.3	4.9	6.7	6.4	6.6	6.4	4.0	4.0	5.6	5.3

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 100.  *   8.6   7.2   3.6   6.1   6.5   5.8   4.1   3.3   3.0   3.0   5.2   4.9
6.7   6.2   7.1   7.0   3.5   3.5   5.1   4.6
 105.  *   8.0   7.3   3.2   5.7   6.8   6.0   4.3   3.6   3.0   3.0   5.1   4.9
6.3   6.4   7.2   7.1   3.2   3.2   4.5   4.0
 110.  *   7.1   7.1   3.1   5.5   7.0   6.2   4.4   3.7   3.0   3.0   5.1   4.9
5.6   5.9   7.0   6.9   3.1   3.1   4.4   3.9
 115.  *   6.5   6.6   3.1   5.4   7.0   6.4   4.5   3.8   3.0   3.0   5.0   4.9
5.9   6.0   6.6   6.6   3.1   3.1   4.2   3.9
 120.  *   6.0   6.5   3.0   5.4   7.0   6.3   4.6   4.0   3.0   3.0   5.0   4.9
5.8   6.0   6.4   6.4   3.0   3.0   4.2   3.9
 125.  *   5.8   6.1   3.0   5.5   6.9   6.5   4.6   4.0   3.0   3.0   5.1   5.0
6.0   5.9   6.2   6.2   3.0   3.0   4.2   3.8
 130.  *   5.8   6.0   3.0   5.6   6.6   6.6   4.6   4.0   3.0   3.0   5.1   5.1
6.1   5.8   6.0   6.0   3.0   3.0   4.3   3.9
 135.  *   5.7   5.9   3.0   5.8   6.6   6.6   4.4   4.0   3.0   3.0   5.3   5.3
6.3   5.9   5.9   5.9   3.0   3.0   4.4   4.0
 140.  *   6.0   5.8   3.0   5.8   6.6   6.7   4.4   4.0   3.0   3.0   5.3   5.3
6.3   5.6   5.7   5.7   3.0   3.0   4.3   4.0
 145.  *   6.1   5.7   3.0   6.0   6.6   6.7   4.4   4.0   3.0   3.0   5.6   5.6
6.3   5.5   5.7   5.7   3.0   3.0   4.3   4.0
 150.  *   6.3   5.5   3.0   6.1   6.7   6.7   4.3   4.0   3.0   3.0   5.7   5.7
6.2   5.4   5.6   5.6   3.0   3.0   4.3   4.0
 155.  *   6.6   5.4   3.0   6.2   6.8   7.0   4.3   4.1   3.0   3.0   5.9   5.9
6.1   5.2   5.4   5.4   3.0   3.0   4.5   4.0
 160.  *   6.8   5.4   3.1   6.3   7.0   7.1   4.3   4.1   3.1   3.1   6.1   6.1
6.1   5.1   5.4   5.4   3.0   3.0   4.6   4.0
 165.  *   7.2   5.6   3.2   6.7   7.0   7.3   4.6   4.4   3.2   3.2   6.5   6.5
6.1   4.9   5.2   5.2   3.0   3.0   4.5   3.9
 170.  *   7.4   6.3   3.8   6.7   6.9   7.0   5.2   4.9   3.8   3.7   6.5   6.4
6.0   4.6   5.2   5.2   3.0   3.0   4.2   3.6
 175.  *   7.0   7.2   4.5   6.3   6.4   6.5   6.2   6.0   4.5   4.4   6.3   6.1
5.7   4.3   5.5   5.3   3.2   3.0   3.9   3.3
 180.  *   6.4   8.3   5.4   5.6   5.9   5.7   7.3   7.0   5.3   5.3   5.5   5.4
5.3   4.1   6.0   5.5   3.5   3.2   3.5   3.1
 185.  *   5.8   8.8   6.3   4.6   5.1   4.9   7.8   7.5   6.0   5.9   4.6   4.6
5.0   4.0   6.5   5.8   4.0   3.4   3.3   3.0
 190.  *   5.2   8.7   6.7   3.8   4.3   4.3   7.8   7.7   6.4   6.4   3.8   3.8
4.8   4.0   6.7   5.9   4.3   3.6   3.0   3.0
 195.  *   4.8   8.1   7.0   3.3   4.0   3.8   7.4   7.6   6.4   6.4   3.3   3.3
4.7   4.0   6.9   6.2   4.4   3.9   3.0   3.0
 200.  *   4.8   7.5   6.7   3.2   4.0   3.7   6.7   7.6   6.2   6.2   3.2   3.2
4.7   4.0   6.9   6.6   4.5   4.0   3.0   3.0
 205.  *   4.8   7.0   6.6   3.1   3.9   3.6   6.6   7.1   6.0   6.0   3.1   3.1
4.6   4.0   7.1   6.6   4.5   4.1   3.0   3.0
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JOB: 130th Avenue & North Aurora 2010 PM RUN: Aurora Avenue North (Seattle)

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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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 210.  *   4.9   6.4   6.6   3.1   3.9   3.6   6.4   7.0   5.8   5.8   3.1   3.1
4.6   4.1   7.2   6.6   4.4   4.0   3.0   3.0
 215.  *   4.9   6.2   6.4   3.1   4.0   3.5   6.6   7.0   5.6   5.6   3.1   3.1
4.5   4.1   7.2   6.7   4.3   4.0   3.0   3.0
 220.  *   4.9   6.1   6.3   3.1   3.9   3.5   7.0   6.7   5.4   5.4   3.1   3.1
4.4   4.1   7.3   6.6   4.2   3.9   3.0   3.0
 225.  *   5.0   5.9   6.3   3.1   3.8   3.4   6.9   6.5   5.4   5.4   3.1   3.1
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4.4   4.2   7.3   6.9   4.2   3.9   3.0   3.0
 230.  *   5.0   6.0   5.9   3.1   3.7   3.4   6.9   6.3   5.1   5.1   3.1   3.1
4.3   4.2   7.1   7.0   4.3   3.9   3.0   3.0
 235.  *   5.1   6.1   5.9   3.1   3.8   3.5   6.9   6.4   5.1   5.1   3.1   3.1
4.4   4.3   7.2   7.2   4.3   3.8   3.0   3.0
 240.  *   5.2   6.5   5.9   3.0   3.7   3.5   6.6   6.1   5.1   5.1   3.0   3.0
4.5   4.5   7.0   7.1   4.5   3.8   3.0   3.0
 245.  *   5.0   6.8   5.8   3.1   3.7   3.5   6.4   6.0   5.1   5.0   3.0   3.0
4.5   4.5   7.4   7.4   4.6   4.0   3.1   3.1
 250.  *   5.1   7.0   5.8   3.1   3.8   3.4   6.3   5.9   5.1   5.0   3.0   3.0
4.7   4.7   7.2   7.6   4.4   4.0   3.1   3.1
 255.  *   5.0   7.3   6.0   3.3   3.8   3.3   6.3   5.8   5.2   5.0   3.0   3.0
4.8   4.7   7.1   7.6   4.7   4.0   3.2   3.1
 260.  *   5.0   7.4   6.4   3.7   3.5   3.2   6.0   5.8   5.2   5.0   3.0   3.0
4.8   4.8   7.0   7.3   5.0   4.5   3.4   3.4
 265.  *   4.7   7.4   6.7   4.1   3.4   3.1   6.0   5.7   5.3   5.0   3.0   3.0
4.6   4.5   6.6   7.0   5.5   4.9   3.8   3.7
 270.  *   4.3   7.0   7.5   4.9   3.1   3.0   5.8   5.6   5.6   5.0   3.2   3.0
4.2   4.2   6.3   6.3   5.6   5.6   4.4   4.1
 275.  *   3.8   6.5   7.6   5.6   3.0   3.0   5.6   5.5   5.6   5.1   3.3   3.0
3.8   3.8   5.6   5.3   6.1   5.8   4.8   4.5
 280.  *   3.4   6.1   8.0   6.2   3.0   3.0   5.5   5.5   6.0   5.3   3.6   3.2
3.4   3.4   5.0   4.6   6.2   6.1   5.2   4.7
 285.  *   3.2   5.7   7.6   6.4   3.0   3.0   5.5   5.5   6.1   5.3   3.7   3.3
3.2   3.2   4.5   4.3   6.0   6.2   5.5   4.8
 290.  *   3.1   5.7   6.9   6.4   3.0   3.0   5.4   5.4   6.3   5.4   3.7   3.3
3.1   3.1   4.4   4.1   5.8   6.3   5.6   4.6
 295.  *   3.1   5.6   6.3   6.3   3.0   3.0   5.5   5.4   6.5   5.4   3.8   3.4
3.1   3.1   4.4   4.2   5.8   6.1   5.6   4.5
 300.  *   3.0   5.7   6.1   6.1   3.0   3.0   5.6   5.5   6.7   5.6   3.9   3.4
3.0   3.0   4.4   4.2   5.9   6.2   5.7   4.4
 305.  *   3.0   5.8   6.1   5.9   3.0   3.0   5.8   5.6   6.7   5.7   4.1   3.5
3.0   3.0   4.4   4.1   6.2   6.3   5.6   4.2
 310.  *   3.0   5.8   5.8   5.8   3.0   3.0   5.8   5.5   6.5   5.8   4.2   3.5
3.0   3.0   4.6   4.0   6.3   6.3   5.6   4.2
 315.  *   3.0   5.9   6.0   5.8   3.0   3.0   5.9   5.6   6.9   6.2   4.3   3.6
3.0   3.0   4.5   3.9   6.3   6.1   5.6   4.2
 320.  *   3.0   6.1   6.0   5.7   3.0   3.0   6.0   5.6   6.7   6.3   4.3   3.7
3.0   3.0   4.5   3.9   6.4   6.0   5.6   4.2
 325.  *   3.0   6.3   6.3   5.5   3.0   3.0   6.2   5.7   6.7   6.5   4.4   3.7
3.0   3.0   4.4   3.9   6.5   5.9   5.5   4.1
 330.  *   3.0   6.5   6.7   5.3   3.0   3.0   6.3   5.9   6.9   6.6   4.3   3.8
3.0   3.0   4.5   3.9   6.4   5.9   5.4   4.1
 335.  *   3.0   6.7   7.0   5.2   3.0   3.0   6.5   6.0   7.1   6.9   4.2   3.8
3.0   3.0   4.5   4.0   6.4   5.8   5.3   4.0
 340.  *   3.0   7.0   7.1   5.2   3.0   3.0   6.7   6.4   7.1   7.3   4.1   4.0
3.0   3.0   4.4   3.8   6.3   5.6   5.2   4.0
 345.  *   3.1   7.1   7.5   5.2   3.1   3.1   6.9   6.6   7.4   7.5   4.4   4.2
3.0   3.0   4.4   3.8   6.1   5.6   5.1   3.9
 350.  *   3.5   7.1   7.6   5.7   3.4   3.4   6.9   6.8   7.2   7.3   5.0   4.5
3.0   3.0   4.1   3.5   6.0   5.4   5.1   3.9
 355.  *   4.2   6.8   7.2   6.6   4.0   3.9   6.6   6.4   6.7   6.7   5.7   5.3
3.1   3.0   3.9   3.3   5.7   5.2   5.3   3.9
 360.  *   4.9   6.0   6.7   7.5   4.7   4.4   5.8   5.8   6.1   5.7   6.5   6.3
3.3   3.0   3.5   3.1   5.3   5.0   5.6   4.0

------*-------------------------------------------------------------------------------
-------------------------------------------
 MAX   *   8.6   8.8   8.0   8.3   7.0   7.3   7.8   7.7   7.4   7.5   7.3   7.3
6.7   6.4   7.4   7.6   6.5   6.3   7.5   7.5
 DEGR. *  100   185   280    10   110   165   185   190   345   345     5    10
95    95   245   255   325   290    80    75
```

THE HIGHEST CONCENTRATION OF 8.80 PPM OCCURRED AT RECEPTOR REC2 .

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: 130th Avenue & North Aurora 2030 Build RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14:10:23

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 = 3.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (M)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(M)	(DEG)			(G/MI)	(M)	(M)		(VEH)
1.	EBA	*	-304.8	-5.5	.0	-5.5	*	305.	90.	AG	740.	9.2	.0	13.4		
2.	EBD	*	.0	-5.5	304.8	-5.5	*	305.	90.	AG	860.	9.2	.0	13.4		
3.	WBA	*	304.8	5.5	.0	5.5	*	305.	270.	AG	1070.	9.2	.0	13.4		
4.	WBD	*	.0	5.5	-304.8	5.5	*	305.	270.	AG	880.	9.2	.0	13.4		
5.	NBA	*	3.7	-304.8	3.7	.0	*	305.	360.	AG	2365.	9.5	.0	13.4		
6.	NBD	*	3.7	.0	3.7	304.8	*	305.	360.	AG	2410.	9.5	.0	13.4		
7.	SBA	*	-7.3	304.8	-7.3	.0	*	305.	180.	AG	1580.	9.5	.0	13.4		
8.	SBD	*	-7.3	.0	-7.3	-304.8	*	305.	180.	AG	1605.	9.5	.0	13.4		
9.	EBL	*	-14.6	.0	-325.9	.0	*	311.	270.	AG	130.	100.0	.0	3.7	1.57	51.9
10.	EBT	*	-14.6	-5.5	-71.1	-5.5	*	56.	270.	AG	231.	100.0	.0	7.3	.87	9.4
11.	WBL	*	11.0	.0	409.1	.1	*	398.	90.	AG	128.	100.0	.0	3.7	1.66	66.4
12.	WBT	*	11.0	5.5	361.4	5.6	*	350.	90.	AG	227.	100.0	.0	7.3	1.26	58.4
13.	NBL	*	-1.8	-9.1	-1.8	-55.4	*	46.	180.	AG	126.	100.0	.0	3.7	.92	7.7
14.	NBT	*	3.7	-9.1	3.7	-1071.6	*	1062.	180.	AG	155.	100.0	.0	7.3	1.42	177.1
15.	NBR	*	9.1	-9.1	9.1	-34.3	*	25.	180.	AG	78.	100.0	.0	3.7	.25	4.2
16.	SBL	*	-1.8	9.1	-1.8	374.2	*	365.	360.	AG	128.	100.0	.0	3.7	1.59	60.8
17.	SBT	*	-7.3	9.1	-7.3	96.7	*	88.	360.	AG	161.	100.0	.0	7.3	.89	14.6
18.	SBR	*	-12.8	9.1	-12.8	26.5	*	17.	360.	AG	80.	100.0	.0	3.7	.18	2.9

JOB: 130th Avenue & North Aurora 2030 Build RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14:10:23

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	160	141	3.0	220	1600	55.10	2	3
10. EBT	160	125	3.0	520	1600	55.10	2	3
11. WBL	160	139	3.0	265	1600	55.10	2	3
12. WBT	160	123	3.0	805	1600	55.10	2	3
13. NBL	160	136	3.0	175	1600	55.10	2	3
14. NBT	160	84	3.0	2010	1600	55.10	2	3
15. NBR	160	84	3.0	180	1600	55.10	2	3
16. SBL	160	139	3.0	255	1600	55.10	2	3
17. SBT	160	87	3.0	1205	1600	55.10	2	3
18. SBR	160	87	3.0	120	1600	55.10	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. REC 1	-17.7	12.2	1.8
2. REC 2	10.4	12.2	1.8
3. REC 3	14.0	-12.2	1.8
4. REC 4	-14.0	-12.2	1.8
5. REC 5	-17.7	37.2	1.8
6. REC 6	-17.7	62.2	1.8
7. REC 7	10.4	37.2	1.8
8. REC 8	10.4	62.2	1.8
9. REC 9	14.0	-37.2	1.8
10. REC 10	14.0	-62.2	1.8
11. REC 11	-14.0	-37.2	1.8
12. REC 12	-14.0	-62.2	1.8
13. REC 13	-42.7	12.2	1.8
14. REC 14	-67.7	12.2	1.8
15. REC 15	35.4	12.2	1.8
16. REC 16	60.4	12.2	1.8
17. REC 17	39.0	-12.2	1.8
18. REC 18	64.0	-12.2	1.8
19. REC 19	-39.0	-12.2	1.8

20. REC 20 * -64.0 -12.2 1.8 *

JOB: 130th Avenue & North Aurora 2030 Build RUN: Aurora Avenue North (Seattle)

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: 0.-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
0.	*	4.2	5.2	5.3	5.9	4.2	4.1	5.0	5.0	5.0	4.9	5.5	5.3	3.3	3.0	3.4	3.0	4.5	4.1	4.6	4.3
5.	*	5.0	4.5	4.8	6.5	4.8	4.6	4.3	4.3	4.3	4.4	5.6	5.8	3.5	3.2	3.1	3.0	4.2	4.1	4.8	4.6
10.	*	5.3	3.9	4.4	6.4	5.1	4.9	3.8	3.8	3.9	4.0	5.9	5.7	3.8	3.3	3.0	3.0	4.0	4.0	5.2	4.7
15.	*	5.4	3.4	4.1	6.3	5.3	5.1	3.4	3.4	3.6	3.6	5.5	5.7	3.9	3.5	3.0	3.0	4.0	4.0	5.3	4.8
20.	*	5.5	3.2	4.0	5.6	5.2	5.0	3.2	3.2	3.6	3.5	5.3	5.7	4.0	3.5	3.0	3.0	4.0	4.0	5.4	4.9
25.	*	5.3	3.1	4.1	5.3	5.1	5.0	3.1	3.1	3.6	3.5	5.4	5.5	4.1	3.6	3.0	3.0	4.1	4.1	5.4	5.0
30.	*	5.2	3.1	4.1	5.0	5.0	4.9	3.1	3.1	3.6	3.5	5.0	5.6	4.1	3.7	3.0	3.0	4.1	4.1	5.5	5.0
35.	*	5.3	3.1	4.1	4.9	5.0	5.0	3.1	3.1	3.6	3.5	5.2	5.5	4.0	3.7	3.0	3.0	4.1	4.1	5.6	5.1
40.	*	5.0	3.1	4.3	4.9	4.7	4.7	3.1	3.1	3.6	3.5	5.3	5.4	3.9	3.7	3.0	3.0	4.3	4.3	5.6	5.4
45.	*	4.9	3.1	4.3	4.8	4.6	4.6	3.1	3.1	3.6	3.5	5.3	5.2	3.8	3.6	3.0	3.0	4.3	4.3	5.6	5.4
50.	*	4.8	3.1	4.4	4.9	4.6	4.6	3.1	3.1	3.7	3.5	5.3	5.1	3.8	3.6	3.0	3.0	4.4	4.4	5.3	5.4
55.	*	4.8	3.1	4.5	4.9	4.6	4.6	3.1	3.1	3.9	3.5	5.5	5.0	3.8	3.7	3.0	3.0	4.5	4.5	5.4	5.3
60.	*	4.7	3.0	4.6	5.1	4.5	4.5	3.0	3.0	3.9	3.5	5.5	4.9	3.8	3.7	3.0	3.0	4.6	4.6	5.6	5.4
65.	*	4.7	3.1	4.6	5.4	4.5	4.5	3.0	3.0	3.9	3.6	5.6	5.0	3.8	3.6	3.1	3.1	4.6	4.6	5.2	5.6
70.	*	4.7	3.1	4.8	5.9	4.5	4.5	3.0	3.0	4.0	3.6	5.6	5.0	4.0	3.7	3.1	3.1	4.8	4.8	5.4	5.7
75.	*	5.0	3.3	5.0	5.9	4.5	4.5	3.0	3.0	4.0	3.5	5.6	4.8	4.2	3.8	3.3	3.3	5.0	4.9	5.9	5.8
80.	*	5.3	3.8	5.0	6.2	4.4	4.4	3.0	3.0	3.8	3.5	5.4	4.8	4.4	4.2	3.8	3.8	5.0	4.9	5.8	5.8
85.	*	5.9	4.5	4.9	6.3	4.5	4.4	3.1	3.0	3.5	3.2	5.0	4.5	5.0	4.4	4.4	4.4	4.9	4.8	5.6	5.6
90.	*	6.4	5.1	4.4	5.9	4.8	4.5	3.4	3.1	3.3	3.0	4.8	4.3	5.4	4.9	5.0	5.0	4.4	4.4	5.3	5.2
95.	*	6.6	5.5	3.9	5.4	5.0	4.7	3.6	3.2	3.0	3.0	4.5	4.3	5.4	5.1	5.5	5.5	3.9	3.9	4.7	4.6

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 100.  *   6.6   5.7   3.4   5.1   5.3   4.9   3.9   3.4   3.0   3.0   4.5   4.3
5.3   5.3   5.7   5.6   3.4   3.4   4.3   4.1
 105.  *   6.3   5.7   3.1   4.7   5.4   5.0   4.0   3.6   3.0   3.0   4.5   4.3
4.9   5.0   5.7   5.6   3.1   3.1   4.0   3.8
 110.  *   5.7   5.4   3.1   4.6   5.4   5.1   3.9   3.6   3.0   3.0   4.5   4.3
4.7   5.2   5.4   5.4   3.1   3.1   3.8   3.7
 115.  *   5.3   5.0   3.0   4.6   5.4   5.1   3.9   3.6   3.0   3.0   4.5   4.3
4.9   4.8   5.0   5.0   3.0   3.0   3.8   3.6
 120.  *   4.9   5.0   3.0   4.6   5.4   5.1   3.9   3.6   3.0   3.0   4.5   4.3
4.7   5.0   5.0   5.0   3.0   3.0   3.8   3.6
 125.  *   4.9   4.9   3.0   4.6   5.4   5.2   4.0   3.7   3.0   3.0   4.5   4.3
4.8   5.0   4.8   4.8   3.0   3.0   3.8   3.5
 130.  *   4.8   4.8   3.0   4.7   5.2   5.1   4.0   3.7   3.0   3.0   4.6   4.4
5.0   4.9   4.7   4.7   3.0   3.0   3.9   3.5
 135.  *   4.9   4.8   3.0   4.9   5.3   5.1   3.8   3.6   3.0   3.0   4.7   4.5
5.0   4.9   4.7   4.7   3.0   3.0   3.9   3.5
 140.  *   4.9   4.7   3.0   4.8   5.0   5.2   3.8   3.6   3.0   3.0   4.7   4.5
5.0   4.9   4.7   4.7   3.0   3.0   3.9   3.7
 145.  *   5.0   4.6   3.0   5.0   5.3   5.3   3.8   3.6   3.0   3.0   4.9   4.7
5.0   4.8   4.5   4.5   3.0   3.0   3.9   3.7
 150.  *   5.2   4.5   3.0   5.0   5.2   5.3   3.8   3.6   3.0   3.0   4.8   4.7
5.1   4.8   4.4   4.4   3.0   3.0   3.9   3.7
 155.  *   5.3   4.4   3.0   5.2   5.4   5.5   3.8   3.6   3.0   3.0   5.0   4.9
5.0   4.8   4.4   4.4   3.0   3.0   3.9   3.7
 160.  *   5.4   4.5   3.0   5.2   5.5   5.6   3.9   3.7   3.0   3.0   5.0   5.0
4.9   4.8   4.4   4.4   3.0   3.0   4.0   3.7
 165.  *   5.6   4.6   3.2   5.6   5.6   5.5   4.1   4.0   3.2   3.2   5.4   5.4
4.9   4.6   4.4   4.4   3.0   3.0   4.0   3.6
 170.  *   5.7   5.3   3.5   5.4   5.5   5.6   4.5   4.4   3.4   3.4   5.3   5.3
4.9   4.4   4.4   4.4   3.0   3.0   3.9   3.4
 175.  *   5.6   5.8   4.0   5.3   5.3   5.4   5.1   5.0   4.0   4.0   5.2   5.2
4.6   4.4   4.6   4.5   3.2   3.1   3.7   3.4
 180.  *   5.1   6.5   4.7   4.8   4.9   4.7   5.8   5.7   4.6   4.6   4.8   4.7
4.4   4.0   4.9   4.6   3.4   3.1   3.4   3.1
 185.  *   4.8   6.9   5.1   4.1   4.4   4.2   6.1   6.2   5.0   5.0   4.1   4.1
4.1   3.9   5.1   4.8   3.7   3.3   3.2   3.0
 190.  *   4.4   6.8   5.6   3.6   3.9   3.9   6.0   6.1   5.2   5.2   3.6   3.6
4.0   3.8   5.3   4.9   3.9   3.5   3.0   3.0
 195.  *   4.1   6.4   5.7   3.2   3.6   3.5   5.7   6.1   5.3   5.2   3.2   3.2
4.0   3.8   5.4   5.0   3.9   3.5   3.0   3.0
 200.  *   4.1   5.8   5.5   3.1   3.5   3.5   5.6   5.8   5.1   5.1   3.1   3.1
4.1   3.8   5.5   5.1   4.1   3.7   3.0   3.0
 205.  *   4.1   5.6   5.5   3.1   3.6   3.5   5.5   5.8   5.0   5.0   3.1   3.1
4.1   3.8   5.6   5.1   3.9   3.7   3.0   3.0
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JOB: 130th Avenue & North Aurora 2030 Build RUN: Aurora Avenue North (Seattle)

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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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 210.  *   4.1   5.3   5.3   3.1   3.6   3.5   5.4   5.6   4.8   4.8   3.1   3.1
4.1   3.7   5.6   5.1   3.9   3.7   3.0   3.0
 215.  *   4.2   5.1   5.2   3.1   3.5   3.4   5.3   5.5   4.8   4.7   3.1   3.1
4.1   3.7   5.4   5.2   3.8   3.7   3.0   3.0
 220.  *   4.3   5.1   5.1   3.1   3.5   3.4   5.5   5.5   4.7   4.6   3.1   3.1
4.2   3.8   5.6   5.4   3.9   3.7   3.0   3.0
 225.  *   4.3   5.0   5.0   3.1   3.5   3.4   5.5   5.4   4.6   4.5   3.1   3.1
```

```
4.2   3.8   5.6   5.5   3.9   3.7   3.0   3.0
 230.  *   4.3   5.0   4.8   3.0   3.6   3.3   5.4   5.2   4.6   4.4   3.0   3.0
4.2   3.8   5.5   5.5   3.9   3.6   3.0   3.0
 235.  *   4.4   5.4   4.8   3.0   3.6   3.3   5.4   5.0   4.6   4.4   3.0   3.0
4.2   3.9   5.3   5.5   3.9   3.5   3.0   3.0
 240.  *   4.4   5.1   4.8   3.0   3.6   3.3   5.4   4.9   4.6   4.4   3.0   3.0
4.1   3.9   5.6   5.4   3.9   3.5   3.0   3.0
 245.  *   4.3   5.4   4.7   3.0   3.5   3.3   5.2   4.8   4.5   4.3   3.0   3.0
4.1   3.9   5.5   5.6   3.9   3.5   3.0   3.0
 250.  *   4.5   5.7   4.7   3.1   3.5   3.3   5.1   4.8   4.5   4.3   3.0   3.0
4.2   4.1   5.5   5.8   4.0   3.6   3.1   3.1
 255.  *   4.5   5.7   4.9   3.2   3.5   3.3   5.0   4.8   4.5   4.3   3.0   3.0
4.2   4.2   5.6   5.6   4.0   3.6   3.1   3.1
 260.  *   4.4   5.8   5.1   3.4   3.5   3.2   5.0   4.7   4.5   4.3   3.0   3.0
4.2   4.2   5.7   5.8   4.3   4.0   3.4   3.3
 265.  *   4.3   6.0   5.5   3.9   3.3   3.0   4.8   4.5   4.5   4.3   3.0   3.0
4.2   4.1   5.4   5.6   4.7   4.1   3.8   3.5
 270.  *   3.9   5.6   5.9   4.4   3.2   3.0   4.8   4.6   4.7   4.3   3.2   3.0
3.9   3.9   4.9   4.9   4.9   4.6   4.1   3.8
 275.  *   3.7   5.3   6.1   4.8   3.0   3.0   4.5   4.5   4.8   4.3   3.3   3.0
3.7   3.6   4.6   4.6   5.0   5.0   4.5   4.0
 280.  *   3.3   5.0   6.3   5.1   3.0   3.0   4.5   4.5   5.0   4.6   3.4   3.2
3.3   3.3   4.2   4.0   5.1   5.1   4.8   4.2
 285.  *   3.1   4.7   5.9   5.2   3.0   3.0   4.5   4.5   5.1   4.7   3.4   3.3
3.1   3.1   4.1   3.7   4.8   4.9   5.0   4.3
 290.  *   3.1   4.6   5.4   5.1   3.0   3.0   4.5   4.5   5.3   4.7   3.5   3.3
3.1   3.1   3.9   3.6   4.9   5.1   5.0   4.2
 295.  *   3.0   4.6   5.1   4.9   3.0   3.0   4.5   4.5   5.3   4.8   3.5   3.3
3.0   3.0   3.9   3.8   4.9   4.8   4.8   4.1
 300.  *   3.0   4.7   5.0   4.8   3.0   3.0   4.6   4.6   5.4   4.9   3.6   3.3
3.0   3.0   3.9   3.7   4.9   5.0   4.7   4.1
 305.  *   3.0   4.6   4.9   4.7   3.0   3.0   4.6   4.6   5.4   5.0   3.7   3.3
3.0   3.0   3.9   3.7   4.8   5.0   4.7   4.1
 310.  *   3.0   4.8   4.9   4.6   3.0   3.0   4.8   4.8   5.4   5.1   3.7   3.4
3.0   3.0   3.9   3.7   5.1   5.0   4.7   4.2
 315.  *   3.0   4.9   5.2   4.6   3.0   3.0   4.9   4.9   5.3   5.2   3.7   3.5
3.0   3.0   3.9   3.7   5.1   5.0   4.6   4.3
 320.  *   3.0   5.0   5.0   4.5   3.0   3.0   5.0   5.0   5.4   5.2   3.7   3.6
3.0   3.0   4.0   3.7   5.0   5.0   4.6   4.3
 325.  *   3.0   5.1   5.2   4.3   3.0   3.0   5.0   5.0   5.7   5.3   3.7   3.6
3.0   3.0   4.0   3.7   5.1   4.8   4.4   4.2
 330.  *   3.0   5.2   5.3   4.4   3.0   3.0   5.1   5.0   5.4   5.4   3.7   3.6
3.0   3.0   4.0   3.6   5.1   4.8   4.3   4.2
 335.  *   3.0   5.4   5.3   4.3   3.0   3.0   5.3   5.2   5.9   5.6   3.7   3.6
3.0   3.0   4.1   3.6   5.1   4.7   4.3   4.2
 340.  *   3.0   5.7   5.7   4.4   3.0   3.0   5.6   5.4   5.9   5.7   3.7   3.6
3.0   3.0   4.1   3.6   5.1   4.6   4.3   4.2
 345.  *   3.1   5.8   5.8   4.4   3.1   3.1   5.7   5.6   5.8   5.6   3.8   3.8
3.0   3.0   3.9   3.5   4.9   4.5   4.3   4.2
 350.  *   3.5   5.8   5.8   4.8   3.4   3.3   5.7   5.6   5.7   5.7   4.2   4.3
3.0   3.0   3.8   3.4   4.8   4.4   4.3   4.3
 355.  *   3.7   5.6   5.8   5.4   3.7   3.6   5.6   5.4   5.7   5.4   5.0   4.6
3.0   3.0   3.5   3.2   4.6   4.3   4.4   4.3
 360.  *   4.2   5.2   5.3   5.9   4.2   4.1   5.0   5.0   5.0   4.9   5.5   5.3
3.3   3.0   3.4   3.0   4.5   4.1   4.6   4.3

------*-------------------------------------------------------------------------------
-------------------------------------------
 MAX   *   6.6   6.9   6.3   6.5   5.6   5.6   6.1   6.2   5.9   5.7   5.9   5.8
5.4   5.3   5.7   5.8   5.1   5.1   5.9   5.8
 DEGR. *   95   185   280     5   165   160   185   185   335   340    10     5
95   100   100   250   310   280    75    75
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THE HIGHEST CONCENTRATION OF 6.90 PPM OCCURRED AT RECEPTOR REC2 .

JOB: 130th Avenue & North Aurora 2030 NoBuild RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14:11:53

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 = 3.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(M)	(DEG)			(G/MI)	(M)	(M)	(VEH)	
1. EBA	*	-304.8	-5.5	.0	-5.5	*	305.	90.	AG	740.	9.2	.0	13.4		
2. EBD	*	.0	-5.5	304.8	-5.5	*	305.	90.	AG	860.	9.2	.0	13.4		
3. WBA	*	304.8	5.5	.0	5.5	*	305.	270.	AG	1070.	9.2	.0	13.4		
4. WBD	*	.0	5.5	-304.8	5.5	*	305.	270.	AG	880.	9.2	.0	13.4		
5. NBA	*	3.7	-304.8	3.7	.0	*	305.	360.	AG	2325.	9.5	.0	13.4		
6. NBD	*	3.7	.0	3.7	304.8	*	305.	360.	AG	2410.	9.5	.0	13.4		
7. SBA	*	-7.3	304.8	-7.3	.0	*	305.	180.	AG	1580.	9.5	.0	13.4		
8. SBD	*	-7.3	.0	-7.3	-304.8	*	305.	180.	AG	1565.	9.5	.0	13.4		
9. EBL	*	-11.0	.0	-322.2	-.1	*	311.	270.	AG	130.	100.0	.0	3.7	1.57	51.9
10. EBT	*	-11.0	-5.5	-113.8	-5.5	*	103.	270.	AG	240.	100.0	.0	7.3	1.04	17.1
11. WBL	*	11.0	.0	409.1	.1	*	398.	90.	AG	128.	100.0	.0	3.7	1.66	66.4
12. WBT	*	11.0	5.5	517.0	5.6	*	506.	90.	AG	236.	100.0	.0	7.3	1.49	84.3
13. NBL	*	-1.8	-9.1	-1.8	-45.8	*	37.	180.	AG	129.	100.0	.0	3.7	.90	6.1
14. NBT	*	3.7	-9.1	3.7	-944.2	*	935.	180.	AG	148.	100.0	.0	7.3	1.34	155.8
15. NBR	*	9.1	-9.1	9.1	-33.1	*	24.	180.	AG	74.	100.0	.0	3.7	.24	4.0
16. SBL	*	-1.8	9.1	-1.8	343.0	*	334.	360.	AG	127.	100.0	.0	3.7	1.50	55.6
17. SBT	*	-7.3	9.1	-7.3	95.2	*	86.	360.	AG	144.	100.0	.0	7.3	.86	14.3

North (Seattle)

DATE : 4/18/ 6
TIME : 14:11:53

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	160	141	3.0	220	1600	55.10	2	3
10. EBT	160	130	3.0	520	1600	55.10	2	3
11. WBL	160	139	3.0	265	1600	55.10	2	3
12. WBT	160	128	3.0	805	1600	55.10	2	3
13. NBL	160	140	3.0	135	1600	55.10	2	3
14. NBT	160	80	3.0	2010	1600	55.10	2	3
15. NBR	160	80	3.0	180	1600	55.10	2	3
16. SBL	160	138	3.0	255	1600	55.10	2	3
17. SBT	160	78	3.0	1325	1600	55.10	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. REC 1	-14.0	12.2	1.8
2. REC 2	10.4	12.2	1.8
3. REC 3	14.0	-12.2	1.8
4. REC 4	-14.0	-12.2	1.8
5. REC 5	-14.0	37.2	1.8
6. REC 6	-14.0	62.2	1.8
7. REC 7	10.4	37.2	1.8
8. REC 8	10.4	62.2	1.8
9. REC 9	14.0	-37.2	1.8
10. REC 10	14.0	-62.2	1.8
11. REC 11	-14.0	-37.2	1.8
12. REC 12	-14.0	-62.2	1.8
13. REC 13	-39.0	12.2	1.8
14. REC 14	-64.0	12.2	1.8
15. REC 15	35.4	12.2	1.8
16. REC 16	60.4	12.2	1.8
17. REC 17	39.0	-12.2	1.8
18. REC 18	64.0	-12.2	1.8
19. REC 19	-39.0	-12.2	1.8
20. REC 20	-64.0	-12.2	1.8

North (Seattle)

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: 0.-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
0.	*	5.1	5.2	5.3	6.3	4.9	4.8	5.0	5.0	5.0	4.9	5.4	5.4	3.3	3.0	3.4	3.0	4.5	4.1	4.6	4.3
5.	*	5.6	4.5	4.8	6.8	5.5	5.3	4.3	4.3	4.3	4.4	5.8	5.7	3.5	3.2	3.1	3.0	4.2	4.1	4.8	4.6
10.	*	5.9	3.9	4.4	6.8	5.8	5.6	3.8	3.8	3.9	4.0	5.8	5.6	3.8	3.3	3.0	3.0	4.0	4.0	5.2	4.7
15.	*	5.9	3.4	4.1	6.6	5.8	5.7	3.4	3.4	3.6	3.6	5.6	5.7	4.0	3.5	3.0	3.0	4.0	4.0	5.3	4.8
20.	*	5.7	3.2	4.0	6.1	5.6	5.5	3.2	3.2	3.6	3.5	5.3	5.5	4.0	3.6	3.0	3.0	4.0	4.0	5.4	4.9
25.	*	5.4	3.1	4.1	5.7	5.4	5.4	3.1	3.1	3.6	3.5	5.3	5.4	4.1	3.6	3.0	3.0	4.1	4.1	5.4	5.0
30.	*	5.3	3.1	4.1	5.3	5.3	5.3	3.1	3.1	3.6	3.5	5.0	5.5	4.1	3.7	3.0	3.0	4.1	4.1	5.5	5.1
35.	*	5.2	3.1	4.2	5.1	5.2	5.2	3.1	3.1	3.6	3.5	5.2	5.4	4.1	3.7	3.0	3.0	4.2	4.2	5.5	5.1
40.	*	5.0	3.1	4.3	5.1	5.0	5.0	3.1	3.1	3.6	3.5	5.3	5.1	4.0	3.7	3.0	3.0	4.3	4.3	5.5	5.3
45.	*	5.0	3.1	4.3	4.9	5.0	5.0	3.1	3.1	3.6	3.5	5.4	5.0	3.9	3.7	3.0	3.0	4.3	4.3	5.5	5.4
50.	*	4.9	3.1	4.4	5.0	4.9	4.9	3.1	3.1	3.7	3.5	5.3	4.9	3.9	3.6	3.0	3.0	4.4	4.4	5.4	5.3
55.	*	4.7	3.1	4.5	5.0	4.7	4.7	3.1	3.1	3.9	3.5	5.5	4.8	3.8	3.6	3.0	3.0	4.5	4.5	5.5	5.3
60.	*	4.7	3.0	4.6	5.1	4.7	4.7	3.0	3.0	3.9	3.6	5.5	4.9	3.8	3.6	3.0	3.0	4.6	4.6	5.6	5.4
65.	*	4.6	3.1	4.6	5.4	4.6	4.6	3.0	3.0	4.0	3.6	5.6	4.9	3.8	3.6	3.1	3.1	4.6	4.6	5.4	5.6
70.	*	4.6	3.1	4.9	5.9	4.6	4.6	3.0	3.0	4.0	3.6	5.6	4.9	3.9	3.7	3.1	3.1	4.9	4.9	5.6	5.8
75.	*	4.9	3.4	5.0	5.9	4.6	4.6	3.0	3.0	4.0	3.6	5.6	4.9	4.1	3.8	3.4	3.4	5.0	4.9	6.0	5.8
80.	*	5.4	3.8	5.0	6.2	4.6	4.6	3.0	3.0	3.9	3.5	5.4	4.8	4.4	4.2	3.8	3.8	5.0	5.0	5.8	6.1
85.	*	6.0	4.6	5.0	6.4	4.7	4.6	3.1	3.0	3.6	3.2	5.1	4.6	5.0	4.6	4.5	4.4	5.0	4.9	5.8	5.8
90.	*	6.6	5.2	4.5	6.0	5.1	4.7	3.5	3.1	3.4	3.1	4.9	4.4	5.5	4.9	5.1	5.1	4.5	4.5	5.4	5.4
95.	*	6.9	5.6	4.0	5.5	5.3	5.0	3.7	3.3	3.1	3.0	4.6	4.3	5.4	5.2	5.6	5.6	4.0	4.0	4.8	4.7
100.	*	6.8	5.8	3.4	5.1	5.6	5.2	4.0	3.5	3.0	3.0	4.5	4.3	5.4	5.4	5.8	5.7	3.4	3.4	4.2	4.1
105.	*	6.3	5.7	3.1	4.7	5.6	5.2	4.0	3.6	3.0	3.0	4.5	4.3	5.1	5.1	5.7	5.7	3.1	3.1	3.9	3.8

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 110.  *   5.9   5.5   3.1   4.6   5.6   5.2   4.0   3.6   3.0   3.0   4.5   4.3
4.9   5.0   5.5   5.5   3.1   3.1   3.8   3.7
 115.  *   5.3   5.1   3.0   4.6   5.5   5.2   3.9   3.6   3.0   3.0   4.5   4.3
4.9   4.8   5.1   5.1   3.0   3.0   3.8   3.6
 120.  *   5.1   5.0   3.0   4.6   5.6   5.3   3.9   3.6   3.0   3.0   4.5   4.3
4.8   5.0   5.0   5.0   3.0   3.0   3.8   3.5
 125.  *   4.9   4.9   3.0   4.6   5.6   5.3   4.0   3.7   3.0   3.0   4.4   4.3
4.7   5.0   4.8   4.8   3.0   3.0   3.8   3.5
 130.  *   4.9   4.9   3.0   4.8   5.5   5.5   4.0   3.7   3.0   3.0   4.5   4.4
5.0   4.9   4.8   4.8   3.0   3.0   3.9   3.5
 135.  *   5.1   4.8   3.0   4.7   5.6   5.5   3.9   3.7   3.0   3.0   4.5   4.4
5.1   4.8   4.7   4.7   3.0   3.0   3.9   3.5
 140.  *   5.3   4.8   3.0   4.8   5.5   5.5   3.8   3.6   3.0   3.0   4.5   4.5
5.1   4.9   4.7   4.7   3.0   3.0   3.8   3.6
 145.  *   5.2   4.6   3.0   4.9   5.4   5.7   3.8   3.6   3.0   3.0   4.6   4.6
5.1   4.9   4.6   4.6   3.0   3.0   3.9   3.7
 150.  *   5.2   4.5   3.0   4.9   5.5   5.8   3.8   3.6   3.0   3.0   4.7   4.7
5.1   4.8   4.4   4.4   3.0   3.0   3.9   3.7
 155.  *   5.6   4.4   3.0   5.1   5.6   5.9   3.8   3.6   3.0   3.0   4.9   4.9
5.0   4.8   4.4   4.4   3.0   3.0   3.9   3.7
 160.  *   5.7   4.5   3.0   5.2   5.9   6.0   3.9   3.7   3.0   3.0   5.0   5.0
4.9   4.8   4.4   4.4   3.0   3.0   3.9   3.7
 165.  *   6.1   4.6   3.2   5.4   5.9   6.2   4.1   4.0   3.2   3.2   5.2   5.2
4.9   4.5   4.4   4.4   3.0   3.0   4.0   3.6
 170.  *   6.2   5.3   3.4   5.4   6.1   6.1   4.5   4.4   3.4   3.4   5.3   5.3
4.9   4.4   4.4   4.4   3.0   3.0   3.9   3.4
 175.  *   6.2   5.8   4.0   5.2   5.8   6.1   5.1   5.0   4.0   4.0   5.2   5.2
4.6   4.4   4.6   4.5   3.2   3.0   3.6   3.4
 180.  *   5.7   6.6   4.6   4.7   5.5   5.7   5.7   5.7   4.5   4.4   4.7   4.7
4.4   4.1   4.9   4.6   3.4   3.1   3.4   3.1
 185.  *   5.1   6.7   5.1   4.1   4.7   4.8   6.0   6.0   5.0   5.0   4.1   4.1
4.2   4.0   5.1   4.8   3.7   3.3   3.2   3.0
 190.  *   4.6   6.7   5.4   3.6   4.1   4.3   6.0   6.0   5.2   5.2   3.6   3.6
4.0   4.0   5.3   4.9   3.9   3.5   3.0   3.0
 195.  *   4.2   6.3   5.4   3.2   3.7   3.8   5.6   6.1   5.1   5.1   3.2   3.2
4.0   4.0   5.5   5.0   3.9   3.5   3.0   3.0
 200.  *   4.3   5.8   5.4   3.1   3.7   3.6   5.7   5.9   5.0   5.0   3.1   3.1
4.1   4.1   5.5   5.1   3.9   3.7   3.0   3.0
 205.  *   4.2   5.5   5.3   3.1   3.7   3.6   5.3   5.9   4.9   4.9   3.1   3.1
4.1   4.1   5.5   5.1   3.9   3.7   3.0   3.0
```


JOB: 130th Avenue & North Aurora 2030 NoBuild RUN: Aurora Avenue North (Seattle)

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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

------*-------------------------------------------------------------------------------
-----------------------------------------
 210.  *   4.1   5.3   5.3   3.1   3.7   3.6   5.5   5.6   4.8   4.8   3.1   3.1
4.1   4.1   5.5   5.1   3.8   3.7   3.0   3.0
 215.  *   4.2   5.2   5.2   3.1   3.7   3.6   5.3   5.5   4.7   4.7   3.1   3.1
4.2   4.2   5.5   5.3   3.8   3.7   3.0   3.0
 220.  *   4.3   5.1   4.9   3.1   3.7   3.6   5.3   5.5   4.5   4.5   3.1   3.1
4.3   4.3   5.6   5.4   3.8   3.7   3.0   3.0
 225.  *   4.3   5.1   4.8   3.0   3.7   3.6   5.4   5.4   4.4   4.4   3.0   3.0
4.3   4.3   5.6   5.4   3.8   3.7   3.0   3.0
 230.  *   4.3   5.2   4.8   3.0   3.7   3.5   5.3   5.3   4.4   4.4   3.0   3.0
4.3   4.3   5.5   5.5   3.9   3.5   3.0   3.0
 235.  *   4.4   5.5   4.8   3.0   3.8   3.4   5.4   5.1   4.5   4.4   3.0   3.0
```

```
4.4   4.4   5.5   5.3   3.8   3.4   3.0   3.0
 240.  *   4.5   5.3   4.8   3.0   3.8   3.4   5.4   5.0   4.5   4.4   3.0   3.0
4.4   4.4   5.7   5.5   3.9   3.4   3.0   3.0
 245.  *   4.5   5.5   4.7   3.0   3.7   3.3   5.3   4.9   4.4   4.3   3.0   3.0
4.4   4.3   5.5   5.6   3.9   3.5   3.0   3.0
 250.  *   4.7   5.9   4.7   3.1   3.6   3.3   5.2   4.8   4.5   4.3   3.0   3.0
4.6   4.4   5.7   5.9   4.0   3.6   3.1   3.1
 255.  *   4.7   6.0   4.9   3.2   3.6   3.3   5.1   4.8   4.5   4.3   3.0   3.0
4.6   4.4   5.7   5.8   4.1   3.6   3.2   3.2
 260.  *   4.6   6.0   5.1   3.5   3.5   3.2   5.1   4.7   4.5   4.3   3.0   3.0
4.5   4.3   5.7   5.9   4.4   4.0   3.5   3.4
 265.  *   4.5   6.0   5.6   4.1   3.3   3.0   4.8   4.5   4.5   4.3   3.0   3.0
4.4   4.2   5.5   5.7   4.8   4.2   4.0   3.8
 270.  *   4.0   5.6   6.1   4.6   3.2   3.0   4.8   4.6   4.7   4.3   3.2   3.0
4.0   3.8   5.0   5.0   5.1   4.7   4.4   4.3
 275.  *   3.8   5.2   6.4   5.1   3.0   3.0   4.5   4.5   4.9   4.3   3.4   3.0
3.7   3.6   4.6   4.6   5.0   5.1   4.9   4.7
 280.  *   3.3   4.8   6.4   5.3   3.0   3.0   4.5   4.5   5.1   4.6   3.5   3.2
3.3   3.3   4.1   4.0   5.1   5.1   5.2   5.1
 285.  *   3.1   4.6   6.1   5.4   3.0   3.0   4.5   4.5   5.3   4.7   3.6   3.3
3.1   3.1   4.0   3.7   4.9   5.1   5.3   5.2
 290.  *   3.1   4.5   5.6   5.2   3.0   3.0   4.5   4.5   5.3   4.7   3.7   3.3
3.1   3.1   3.9   3.6   4.9   5.1   5.2   5.1
 295.  *   3.0   4.5   5.2   5.0   3.0   3.0   4.5   4.5   5.3   4.8   3.7   3.4
3.0   3.0   3.9   3.8   5.0   4.8   5.0   4.9
 300.  *   3.0   4.6   5.0   4.8   3.0   3.0   4.6   4.6   5.5   4.9   3.8   3.5
3.0   3.0   3.9   3.7   4.9   5.0   4.8   4.8
 305.  *   3.0   4.6   5.0   4.7   3.0   3.0   4.6   4.6   5.5   4.9   3.8   3.5
3.0   3.0   3.9   3.7   4.8   5.0   4.7   4.7
 310.  *   3.0   4.8   4.9   4.7   3.0   3.0   4.8   4.8   5.3   5.1   3.8   3.5
3.0   3.0   3.9   3.7   5.1   5.0   4.7   4.7
 315.  *   3.1   4.9   4.9   4.7   3.1   3.1   4.9   4.9   5.3   5.0   3.7   3.5
3.0   3.0   3.9   3.7   5.1   5.0   4.7   4.7
 320.  *   3.1   5.0   4.9   4.6   3.1   3.1   5.0   5.0   5.5   5.1   3.7   3.6
3.0   3.0   4.0   3.7   5.0   5.0   4.6   4.6
 325.  *   3.1   5.0   5.0   4.4   3.1   3.1   5.0   4.9   5.5   5.2   3.7   3.6
3.0   3.0   4.0   3.6   5.1   4.9   4.4   4.5
 330.  *   3.1   5.1   5.3   4.4   3.1   3.1   5.1   5.0   5.4   5.5   3.7   3.6
3.0   3.0   4.0   3.6   5.0   4.8   4.4   4.4
 335.  *   3.1   5.3   5.4   4.4   3.1   3.1   5.3   5.1   5.7   5.6   3.7   3.6
3.0   3.0   4.1   3.6   5.1   4.7   4.3   4.3
 340.  *   3.1   5.6   5.7   4.5   3.1   3.1   5.5   5.4   5.9   5.5   3.7   3.6
3.0   3.0   4.1   3.6   5.1   4.6   4.3   4.3
 345.  *   3.3   5.8   5.7   4.6   3.2   3.2   5.7   5.6   5.6   5.6   3.8   3.8
3.0   3.0   3.9   3.5   4.9   4.5   4.3   4.3
 350.  *   3.7   5.8   5.8   5.0   3.7   3.6   5.7   5.6   5.7   5.7   4.3   4.3
3.0   3.0   3.8   3.4   4.8   4.4   4.3   4.3
 355.  *   4.3   5.6   5.8   5.7   4.3   4.2   5.6   5.3   5.6   5.4   5.0   4.6
3.1   3.0   3.5   3.1   4.6   4.2   4.4   4.3
 360.  *   5.1   5.2   5.3   6.3   4.9   4.8   5.0   5.0   5.0   4.9   5.4   5.4
3.3   3.0   3.4   3.0   4.5   4.1   4.6   4.3

------*-------------------------------------------------------------------------------
-----------------------------------------
 MAX   *   6.9   6.7   6.4   6.8   6.1   6.2   6.0   6.1   5.9   5.7   5.8   5.7
5.5   5.4   5.8   5.9   5.1   5.1   6.0   6.1
 DEGR. *   95   185   275     5   170   165   185   195   340   350     5     5
90   100   100   250   280   275    75    80

 THE HIGHEST CONCENTRATION OF    6.90 PPM OCCURRED AT RECEPTOR REC1 .
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JOB: 145th Avenue & North Aurora 2005 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14:19:27

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 = 3.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(M)	(DEG)			(G/MI)	(M)	(M)	(VEH)	
1. EBA	*	-304.8	-7.3	.0	-7.3	*	305.	90.	AG	700.	22.7	.0	13.4		
2. EBD	*	.0	-7.3	304.8	-7.3	*	305.	90.	AG	935.	22.7	.0	13.4		
3. WBA	*	304.8	3.7	.0	3.7	*	305.	270.	AG	970.	22.7	.0	13.4		
4. WBD	*	.0	3.7	-304.8	3.7	*	305.	270.	AG	635.	22.7	.0	13.4		
5. NBA	*	3.7	-304.8	3.7	.0	*	305.	360.	AG	1695.	23.3	.0	13.4		
6. NBD	*	3.7	.0	3.7	304.8	*	305.	360.	AG	1850.	23.3	.0	13.4		
7. SBA	*	-7.3	304.8	-7.3	.0	*	305.	180.	AG	1155.	23.3	.0	13.4		
8. SBD	*	-7.3	.0	-7.3	-304.8	*	305.	180.	AG	1100.	23.3	.0	13.4		
9. EBL	*	-11.0	-1.8	-51.0	-1.8	*	40.	270.	AG	355.	100.0	.0	3.7	.97	6.7
10. EBT	*	-11.0	-7.3	-48.5	-7.3	*	38.	270.	AG	629.	100.0	.0	7.3	.79	6.3
11. WBL	*	11.0	-1.8	76.7	-1.8	*	66.	90.	AG	351.	100.0	.0	3.7	1.03	11.0
12. WBT	*	11.0	3.7	45.3	3.7	*	34.	90.	AG	622.	100.0	.0	7.3	.70	5.7
13. WBR	*	11.0	9.1	52.3	9.2	*	41.	90.	AG	311.	100.0	.0	3.7	.82	6.9
14. NBL	*	-1.8	-11.0	-1.8	-23.6	*	13.	180.	AG	370.	100.0	.0	3.7	.60	2.1
15. NBT	*	3.7	-11.0	3.7	-842.4	*	831.	180.	AG	564.	100.0	.0	7.3	1.51	138.6
16. NBR	*	9.1	-11.0	9.1	-40.5	*	30.	180.	AG	282.	100.0	.0	3.7	.50	4.9
17. SBL	*	-1.8	11.0	-1.8	93.2	*	82.	360.	AG	340.	100.0	.0	3.7	1.04	13.7
18. SBT	*	-7.3	11.0	-7.3	63.3	*	52.	360.	AG	505.	100.0	.0	7.3	.80	8.7

JOB: 145th Avenue & North Aurora 2005 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14:19:27

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	115	97	3.0	175	1600	156.90	2	3
10. EBT	115	86	3.0	525	1600	156.90	2	3
11. WBL	115	96	3.0	200	1600	156.90	2	3
12. WBT	115	85	3.0	485	1600	156.90	2	3
13. WBR	115	85	3.0	285	1600	156.90	2	3
14. NBL	115	101	3.0	75	1600	156.90	2	3
15. NBT	115	77	3.0	1390	1600	156.90	2	3
16. NBR	115	77	3.0	230	1600	156.90	2	3
17. SBL	115	93	3.0	245	1600	156.90	2	3
18. SBT	115	69	3.0	910	1600	156.90	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. REC 1	-14.0	10.4	1.8
2. REC 2	10.4	14.0	1.8
3. REC 3	14.0	-14.0	1.8
4. REC 4	-14.0	-14.0	1.8
5. REC 5	-14.0	35.4	1.8
6. REC 6	-14.0	60.4	1.8
7. REC 7	10.4	39.0	1.8
8. REC 8	10.4	64.0	1.8
9. REC 9	14.0	-39.0	1.8
10. REC 10	14.0	-64.0	1.8
11. REC 11	-14.0	-39.0	1.8
12. REC 12	-14.0	-64.0	1.8
13. REC 13	-39.0	10.4	1.8
14. REC 14	-64.0	10.4	1.8
15. REC 15	35.4	14.0	1.8
16. REC 16	60.4	14.0	1.8
17. REC 17	39.0	-14.0	1.8
18. REC 18	64.0	-14.0	1.8
19. REC 19	-39.0	-14.0	1.8

20. REC 20 * -64.0 -14.0 1.8 *

JOB: 145th Avenue & North Aurora 2005 PM RUN: Aurora Avenue North (Seattle)

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: 0.-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
0.	*	6.8	6.6	8.1	10.0	6.2	5.4	6.3	6.2	7.2	7.2	7.8	7.4	3.4	3.1	3.4	3.1	6.6	4.9	6.6	4.0
5.	*	8.2	5.4	7.4	10.7	7.3	6.1	5.4	5.1	6.3	6.0	8.4	7.9	3.8	3.2	3.2	3.0	6.3	4.8	7.0	4.1
10.	*	8.9	4.3	6.9	10.9	8.1	6.6	4.3	4.3	5.5	5.1	8.4	8.6	4.1	3.5	3.0	3.0	6.1	4.8	7.5	4.4
15.	*	9.3	3.7	6.5	10.5	8.5	6.6	3.7	3.7	5.0	4.5	8.4	8.5	4.5	3.7	3.0	3.0	5.8	4.8	7.9	4.5
20.	*	9.0	3.4	6.4	9.5	8.5	6.4	3.4	3.4	4.9	4.3	7.8	8.3	4.7	3.9	3.0	3.0	5.7	4.8	8.3	4.7
25.	*	8.8	3.2	6.3	8.7	8.5	6.4	3.2	3.2	4.8	4.1	7.7	8.2	4.8	3.9	3.0	3.0	5.5	4.8	8.5	4.9
30.	*	8.4	3.2	6.4	7.7	8.2	6.2	3.2	3.2	4.7	4.0	7.9	8.1	4.9	4.0	3.0	3.0	5.3	4.8	8.7	5.2
35.	*	8.1	3.2	6.6	7.4	8.1	6.2	3.2	3.2	4.6	3.8	8.1	8.0	5.1	4.1	3.0	3.0	5.2	4.8	9.0	5.4
40.	*	7.7	3.1	6.6	7.1	7.7	6.1	3.1	3.1	4.5	3.6	8.1	7.7	5.2	4.1	3.0	3.0	5.2	4.8	8.9	5.7
45.	*	7.6	3.1	6.6	7.0	7.7	6.1	3.1	3.1	4.4	3.6	8.3	7.5	5.2	4.2	3.0	3.0	5.0	4.7	8.7	6.0
50.	*	7.3	3.1	6.8	7.3	7.4	6.0	3.1	3.1	4.1	3.7	8.2	7.1	5.2	4.3	3.0	3.0	5.2	4.8	8.8	6.4
55.	*	7.3	3.1	6.7	7.8	7.4	6.0	3.1	3.1	4.0	3.6	7.8	6.8	5.2	4.5	3.0	3.0	5.3	4.8	9.0	6.5
60.	*	7.1	3.1	6.4	8.0	7.1	6.1	3.1	3.1	4.0	3.6	7.8	6.6	5.1	4.5	3.0	3.0	5.3	4.7	9.0	7.2
65.	*	6.9	3.1	6.4	8.4	7.0	6.2	3.1	3.1	3.9	3.6	7.3	6.4	5.1	4.6	3.0	3.0	5.5	4.9	9.1	7.7
70.	*	6.8	3.0	6.2	8.8	6.9	6.3	3.0	3.0	4.0	3.5	7.2	6.3	4.9	4.5	3.0	3.0	5.5	5.0	9.3	8.1
75.	*	6.9	3.2	6.2	9.0	6.7	6.3	3.0	3.0	3.9	3.4	6.9	6.1	5.2	4.8	3.1	3.1	5.6	5.2	9.2	8.6
80.	*	7.3	3.5	5.9	9.0	6.7	6.5	3.0	3.0	3.7	3.3	6.7	5.9	5.8	5.2	3.3	3.3	5.6	5.3	9.0	8.9
85.	*	8.2	4.2	5.5	8.9	7.0	6.7	3.1	3.0	3.5	3.2	6.4	5.8	6.3	5.8	3.8	3.6	5.2	5.1	8.5	8.4
90.	*	8.9	5.0	5.0	8.5	7.2	6.9	3.2	3.0	3.3	3.0	6.2	5.8	7.2	6.4	4.3	4.0	4.8	4.7	7.4	7.4
95.	*	9.5	6.1	4.3	7.7	7.4	7.0	3.5	3.2	3.1	3.0	5.9	5.6	7.7	7.2	4.9	4.4	4.2	4.1	6.6	6.4

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 100.  *   9.4   7.0   3.7   7.2   7.6   7.0   3.7   3.3   3.0   3.0   5.7   5.6
7.4   7.3   5.3   4.7   3.7   3.7   5.7   5.3
 105.  *   9.0   7.5   3.3   6.9   7.9   7.3   3.7   3.4   3.0   3.0   5.8   5.7
7.5   7.7   5.6   4.7   3.3   3.3   5.3   4.8
 110.  *   8.3   7.9   3.2   6.9   8.4   7.5   3.8   3.5   3.0   3.0   5.7   5.7
7.1   7.4   6.0   4.6   3.2   3.2   4.9   4.5
 115.  *   7.4   8.3   3.1   6.8   8.9   7.7   4.0   3.6   3.0   3.0   5.7   5.7
6.9   7.5   6.3   4.6   3.1   3.1   4.9   4.4
 120.  *   7.2   8.1   3.1   6.8   9.3   8.0   4.2   3.7   3.0   3.0   5.9   5.9
7.2   7.4   6.3   4.5   3.1   3.1   4.7   4.3
 125.  *   6.9   8.0   3.1   6.7   9.3   8.4   4.5   3.6   3.0   3.0   5.9   5.9
7.4   7.2   6.3   4.5   3.1   3.1   4.8   4.3
 130.  *   6.7   8.0   3.1   6.7   9.4   8.5   4.7   3.7   3.0   3.0   6.0   6.0
7.8   6.8   6.5   4.5   3.1   3.1   4.8   4.3
 135.  *   6.9   7.6   3.1   6.8   9.5   9.1   4.8   3.8   3.0   3.0   6.2   6.2
7.7   6.3   6.7   4.5   3.1   3.1   4.8   4.3
 140.  *   7.2   7.3   3.1   6.6   9.1   9.2   5.0   3.9   3.0   3.0   6.3   6.3
7.8   6.0   6.7   4.5   3.1   3.1   4.8   4.3
 145.  *   7.5   7.2   3.1   6.8   9.4   9.5   5.2   4.2   3.0   3.0   6.6   6.6
7.8   5.8   6.8   4.6   3.1   3.1   4.9   4.4
 150.  *   8.2   7.2   3.0   6.9   9.2   9.7   5.2   4.3   3.0   3.0   6.8   6.8
7.7   5.8   7.0   4.6   3.0   3.0   5.0   4.5
 155.  *   8.5   7.0   3.0   7.1   9.6  10.0   5.2   4.4   3.0   3.0   7.1   7.1
7.7   5.6   6.9   4.5   3.0   3.0   5.1   4.6
 160.  *   9.0   7.2   3.2   7.5   9.5  10.4   5.3   4.8   3.2   3.2   7.5   7.5
7.7   5.5   6.9   4.5   3.0   3.0   5.2   4.4
 165.  *   9.7   7.4   3.4   8.0  10.1  10.7   5.9   5.2   3.4   3.4   7.9   7.9
7.7   5.2   6.9   4.5   3.0   3.0   5.2   4.5
 170.  *  10.2   8.4   4.2   8.1  10.0  10.7   6.9   6.2   4.1   4.1   8.1   7.9
7.6   5.0   7.1   4.5   3.1   3.0   5.0   4.1
 175.  *  10.0   9.8   5.6   7.8   9.5  10.1   8.1   7.8   5.4   5.3   7.6   7.5
7.2   4.6   7.5   4.7   3.5   3.2   4.6   3.7
 180.  *   9.1  11.2   7.3   6.8   8.3   8.6   9.6   9.0   6.8   6.6   6.6   6.6
6.5   4.3   8.1   5.0   4.1   3.5   4.0   3.4
 185.  *   7.8  11.6   8.4   5.4   6.8   7.1  10.1  10.0   7.9   7.7   5.4   5.3
6.0   3.9   8.8   5.5   4.7   3.9   3.5   3.1
 190.  *   6.8  11.1   9.0   4.2   5.7   5.5   9.8   9.8   8.3   8.3   4.2   4.1
5.6   3.8   9.4   5.9   5.2   4.2   3.1   3.0
 195.  *   6.0   9.9   9.1   3.6   5.0   4.6   8.8   9.4   8.2   8.1   3.5   3.5
5.3   3.7   9.5   6.2   5.4   4.4   3.0   3.0
 200.  *   5.7   8.8   8.8   3.2   4.7   4.1   8.1   8.8   7.8   7.8   3.2   3.2
5.3   3.8   9.6   6.3   5.3   4.6   3.0   3.0
 205.  *   5.7   8.1   8.4   3.1   4.4   4.0   8.1   8.8   7.4   7.4   3.1   3.1
5.2   3.9   9.5   6.2   5.2   4.5   3.0   3.0
```

PAGE 4

JOB: 145th Avenue & North Aurora 2005 PM RUN: Aurora Avenue North (Seattle)

```
 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

------*-------------------------------------------------------------------------------
-----------------------------------------
 210.  *   5.9   7.5   8.2   3.1   4.4   3.8   8.0   8.7   7.2   7.2   3.1   3.1
5.0   3.9   9.6   6.3   5.0   4.5   3.0   3.0
 215.  *   5.9   7.1   7.9   3.1   4.3   3.7   8.0   8.5   6.8   6.8   3.1   3.1
4.8   3.9   9.6   6.5   5.1   4.5   3.0   3.0
 220.  *   5.9   7.3   7.7   3.1   4.2   3.7   8.3   8.2   6.6   6.6   3.1   3.1
4.5   3.9   9.4   6.5   5.1   4.5   3.0   3.0
 225.  *   6.0   7.0   7.6   3.2   4.0   3.5   8.1   7.8   6.5   6.5   3.1   3.1
```

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4.5   4.0   9.3   6.9   5.0   4.5   3.1   3.1
 230.  *   6.0   7.2   7.5   3.2   3.8   3.5   7.9   7.5   6.4   6.3   3.1   3.1
4.4   4.0   9.4   7.3   4.9   4.4   3.1   3.1
 235.  *   6.0   7.4   7.2   3.2   3.9   3.5   7.6   7.2   6.2   6.1   3.1   3.1
4.3   4.1   9.0   7.8   4.9   4.3   3.1   3.1
 240.  *   5.8   7.7   7.3   3.1   3.7   3.5   7.5   6.9   6.3   6.1   3.0   3.0
4.3   4.2   9.1   8.1   5.0   4.3   3.1   3.1
 245.  *   5.6   7.7   7.3   3.1   3.6   3.4   7.3   6.9   6.2   6.0   3.0   3.0
4.3   4.3   8.7   8.7   5.0   4.3   3.1   3.1
 250.  *   5.3   7.7   7.5   3.1   3.6   3.4   7.0   6.7   6.3   6.0   3.0   3.0
4.4   4.4   8.5   9.0   5.1   4.5   3.1   3.1
 255.  *   5.2   7.6   7.7   3.3   3.6   3.3   6.9   6.6   6.4   6.0   3.0   3.0
4.5   4.5   8.1   8.7   5.3   4.8   3.2   3.2
 260.  *   4.9   7.5   8.1   3.8   3.5   3.2   6.9   6.4   6.5   6.0   3.0   3.0
4.6   4.6   7.6   8.4   5.8   5.2   3.5   3.5
 265.  *   4.6   7.4   8.9   4.4   3.3   3.1   6.8   6.2   6.6   5.9   3.1   3.0
4.5   4.4   6.9   7.7   6.6   5.9   3.8   3.8
 270.  *   4.3   7.2   9.6   5.2   3.2   3.0   6.8   6.1   6.8   5.9   3.2   3.0
4.2   4.2   6.1   6.4   7.0   6.6   4.3   4.2
 275.  *   3.9   6.8   9.9   6.0   3.1   3.0   6.5   5.9   6.9   6.1   3.3   3.1
3.9   3.7   5.6   5.4   7.2   7.2   4.7   4.5
 280.  *   3.5   6.7  10.0   6.7   3.0   3.0   6.4   5.7   7.2   6.2   3.5   3.2
3.5   3.5   5.1   5.0   7.3   7.6   4.9   4.7
 285.  *   3.2   6.5   9.5   7.2   3.0   3.0   6.4   5.6   7.6   6.3   3.5   3.3
3.2   3.2   4.9   4.5   7.3   7.9   5.0   4.6
 290.  *   3.1   6.4   8.6   7.4   3.0   3.0   6.4   5.5   7.9   6.4   3.6   3.4
3.1   3.1   4.8   4.3   7.2   7.9   5.1   4.5
 295.  *   3.1   6.5   8.0   7.5   3.0   3.0   6.5   5.6   8.1   6.4   3.6   3.4
3.1   3.1   5.0   4.5   7.2   8.0   5.2   4.3
 300.  *   3.2   6.5   7.6   7.4   3.1   3.1   6.5   5.6   8.3   6.6   3.6   3.4
3.1   3.1   5.0   4.4   7.3   8.2   5.4   4.2
 305.  *   3.2   6.8   7.3   7.3   3.1   3.1   6.7   5.7   8.5   6.8   4.0   3.5
3.1   3.1   5.0   4.4   7.8   8.1   5.7   4.1
 310.  *   3.1   6.9   7.0   7.2   3.1   3.1   6.8   5.9   8.8   7.1   4.1   3.5
3.0   3.0   5.0   4.3   8.1   7.9   6.0   4.1
 315.  *   3.1   7.1   6.9   7.0   3.1   3.1   6.9   6.1   9.0   7.5   4.4   3.6
3.0   3.0   5.0   4.1   8.3   7.4   6.1   4.0
 320.  *   3.1   7.3   7.2   6.8   3.1   3.1   6.9   6.2   9.2   7.7   4.6   3.7
3.0   3.0   4.9   4.0   8.6   7.0   6.2   3.9
 325.  *   3.1   7.6   7.4   6.8   3.1   3.1   7.0   6.3   9.1   7.9   4.7   3.7
3.0   3.0   4.7   4.0   8.6   6.6   6.3   3.9
 330.  *   3.1   7.7   8.1   6.6   3.1   3.1   7.1   6.5   9.2   8.3   4.6   3.8
3.0   3.0   4.7   4.0   8.2   6.2   6.3   3.8
 335.  *   3.2   7.8   8.3   6.4   3.2   3.2   7.1   6.6   9.4   8.6   4.6   4.0
3.0   3.0   4.6   3.9   8.0   6.1   6.2   3.8
 340.  *   3.3   8.0   8.9   6.5   3.2   3.2   7.3   6.9   9.4   8.9   4.8   4.2
3.0   3.0   4.5   3.9   8.0   5.8   6.2   3.8
 345.  *   3.6   8.2   9.1   6.9   3.5   3.4   7.6   7.1   9.6   9.3   5.2   4.6
3.0   3.0   4.4   3.7   7.7   5.6   6.2   3.8
 350.  *   4.4   8.0   9.3   7.5   4.1   3.9   7.5   7.1   9.0   9.1   5.7   5.3
3.0   3.0   4.2   3.6   7.5   5.4   6.2   3.8
 355.  *   5.4   7.4   8.8   8.7   5.0   4.6   7.1   6.9   8.3   8.4   6.7   6.3
3.2   3.0   3.8   3.3   7.0   5.1   6.4   3.8
 360.  *   6.8   6.6   8.1  10.0   6.2   5.4   6.3   6.2   7.2   7.2   7.8   7.4
3.4   3.1   3.4   3.1   6.6   4.9   6.6   4.0

------*-------------------------------------------------------------------------------
-------------------------------------------
 MAX   *  10.2  11.6  10.0  10.9  10.1  10.7  10.1  10.0   9.6   9.3   8.4   8.6
7.8   7.7   9.6   9.0   8.6   8.2   9.3   8.9
 DEGR. *  170   185   280    10   165   165   185   185   345   345     5    10
145   105   200   250   320   300    70    80
```

THE HIGHEST CONCENTRATION OF 11.60 PPM OCCURRED AT RECEPTOR REC2 .

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

      JOB: 145th Avenue & North Aurora 2010 PM                  RUN: Aurora Avenue
North (Seattle)

      DATE :  4/18/ 6
      TIME : 14:22:21

         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 =  3.0 PPM

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

------------------------*----------------------------------------*------------------
----------------------------------------
      1. EBA                  *   -304.8      -7.3        .0      -7.3 *     305.
90. AG    750.  16.2    .0 13.4
      2. EBD                  *       .0      -7.3     304.8      -7.3 *     305.
90. AG   1000.  16.2    .0 13.4
      3. WBA                  *    304.8       3.7        .0       3.7 *     305.
270. AG   1035.  16.2    .0 13.4
      4. WBD                  *       .0       3.7    -304.8       3.7 *     305.
270. AG    675.  16.2    .0 13.4
      5. NBA                  *      7.3    -304.8       7.3        .0 *     305.
360. AG   1825.  16.6    .0 13.4
      6. NBD                  *      7.3        .0       7.3     304.8 *     305.
360. AG   1975.  16.6    .0 13.4
      7. SBA                  *     -7.3     304.8      -7.3        .0 *     305.
180. AG   1235.  16.6    .0 13.4
      8. SBD                  *     -7.3        .0      -7.3    -304.8 *     305.
180. AG   1175.  16.6    .0 13.4
      9. EBL                  *    -14.6      -1.8    -195.6      -1.8 *     181.
270. AG    239. 100.0    .0  3.7 1.28  30.2
     10. EBT                  *    -14.6      -7.3     -71.3      -7.3 *      57.
270. AG    419. 100.0    .0  7.3  .88   9.4
     11. WBL                  *     14.6      -1.8     213.2      -1.8 *     199.
90. AG    235. 100.0    .0  3.7 1.26  33.1
     12. WBT                  *     14.6       3.7      63.0       3.7 *      48.
90. AG    412. 100.0    .0  7.3  .75   8.1
     13. WBR                  *     14.6       9.1      76.4       9.1 *      62.
90. AG    206. 100.0    .0  3.7  .89  10.3
     14. NBL                  *      1.8     -11.0       1.8     -33.0 *      22.
180. AG    241. 100.0    .0  3.7  .72   3.7
     15. NBT                  *      7.3     -11.0       7.3    -212.8 *     202.
180. AG    284. 100.0    .0  7.3 1.04  33.6
     16. NBR                  *     12.8     -11.0      12.8     -42.8 *      32.
180. AG    142. 100.0    .0  3.7  .34   5.3
     17. SBL                  *       .0      11.0        .0     132.6 *     122.
360. AG    492. 100.0    .0  7.3 1.25  20.3
     18. SBT                  *     -7.3      11.0      -7.3      71.0 *      60.
360. AG    295. 100.0    .0  7.3  .65  10.0
     19. SBR                  *    -12.8      11.0     -12.8      21.8 *      11.
```

360. AG 148. 100.0 .0 3.7 .12 1.8

JOB: 145th Avenue & North Aurora 2010 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14:22:21

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	150	131	3.0	190	1600	101.96	2	3
10. EBT	150	115	3.0	560	1600	101.96	2	3
11. WBL	150	129	3.0	215	1600	101.96	2	3
12. WBT	150	113	3.0	515	1600	101.96	2	3
13. WBR	150	113	3.0	305	1600	101.96	2	3
14. NBL	150	132	3.0	100	1600	101.96	2	3
15. NBT	150	78	3.0	1480	1600	101.96	2	3
16. NBR	150	78	3.0	245	1600	101.96	2	3
17. SBL	150	135	3.0	265	1600	101.96	2	3
18. SBT	150	81	3.0	890	1600	101.96	2	3
19. SBR	150	81	3.0	80	1600	101.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. REC 1	-17.7	10.4	1.8
2. REC 2	14.0	14.0	1.8
3. REC 3	17.7	-14.0	1.8
4. REC 4	-14.0	-14.0	1.8
5. REC 5	-17.7	35.4	1.8
6. REC 6	-17.7	60.4	1.8
7. REC 7	14.0	39.0	1.8
8. REC 8	14.0	64.0	1.8
9. REC 9	17.7	-39.0	1.8
10. REC 10	17.7	-64.0	1.8
11. REC 11	-14.0	-39.0	1.8
12. REC 12	-14.0	-64.0	1.8
13. REC 13	-42.7	10.4	1.8
14. REC 14	-67.7	10.4	1.8
15. REC 15	39.0	14.0	1.8

16. REC 16	*	64.0	14.0	1.8	*
17. REC 17	*	42.7	-14.0	1.8	*
18. REC 18	*	67.7	-14.0	1.8	*
19. REC 19	*	-39.0	-14.0	1.8	*
20. REC 20	*	-64.0	-14.0	1.8	*

JOB: 145th Avenue & North Aurora 2010 PM RUN: Aurora Avenue North (Seattle)

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: 0.-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
0.	*	4.8	6.0	7.1	7.4	4.5	4.2	5.8	5.6	6.4	6.1	6.6	6.0	3.2	3.0	3.4	3.1	5.6	4.7	5.6	5.2
5.	*	5.8	5.0	6.2	8.1	5.2	4.8	4.8	4.7	5.3	5.2	7.1	6.7	3.5	3.2	3.1	3.0	5.4	4.5	5.9	5.4
10.	*	6.6	4.1	5.7	8.5	6.0	5.3	4.1	4.0	5.0	4.7	7.3	6.9	3.7	3.3	3.0	3.0	5.3	4.5	6.4	5.6
15.	*	7.1	3.5	5.4	8.1	6.5	5.6	3.5	3.5	4.3	4.1	7.0	6.7	4.2	3.4	3.0	3.0	5.3	4.5	6.9	5.9
20.	*	7.2	3.3	5.4	7.4	6.6	5.8	3.3	3.3	4.2	4.0	6.4	6.6	4.4	3.7	3.0	3.0	5.3	4.4	7.1	6.1
25.	*	7.2	3.2	5.4	6.9	6.7	5.9	3.2	3.2	4.3	4.0	6.1	6.4	4.6	3.9	3.0	3.0	5.3	4.4	7.3	6.4
30.	*	7.1	3.1	5.4	6.4	6.6	5.9	3.1	3.1	4.3	3.9	6.4	6.4	4.7	4.0	3.0	3.0	5.3	4.4	7.3	6.5
35.	*	6.9	3.1	5.6	5.9	6.4	5.8	3.1	3.1	4.3	3.9	6.1	6.4	4.8	4.2	3.0	3.0	5.5	4.5	7.6	6.9
40.	*	6.8	3.1	5.6	6.0	6.3	5.9	3.1	3.1	4.4	3.8	6.3	6.2	4.8	4.2	3.0	3.0	5.4	4.5	7.6	7.1
45.	*	6.6	3.1	5.6	5.7	6.2	5.9	3.1	3.1	4.2	3.7	6.7	6.1	4.7	4.2	3.0	3.0	5.2	4.5	7.6	7.2
50.	*	6.5	3.1	5.8	5.7	6.1	5.8	3.1	3.1	4.2	3.6	6.7	5.8	4.7	4.1	3.0	3.0	5.2	4.6	7.2	7.1
55.	*	6.2	3.1	5.7	6.0	5.9	5.7	3.1	3.1	4.1	3.6	6.8	5.7	4.7	4.1	3.0	3.0	5.1	4.6	7.3	7.0
60.	*	6.2	3.1	6.0	6.3	5.8	5.8	3.1	3.1	4.0	3.6	6.6	5.5	4.7	4.2	3.0	3.0	5.2	4.9	7.1	7.2
65.	*	6.2	3.0	5.9	6.9	5.8	5.8	3.0	3.0	3.9	3.6	6.3	5.3	4.8	4.3	3.0	3.0	5.2	5.0	7.2	7.5
70.	*	6.2	3.0	5.9	7.1	5.8	5.8	3.0	3.0	4.0	3.6	6.3	5.2	4.7	4.3	3.0	3.0	5.1	5.1	7.1	7.7
75.	*	6.3	3.2	5.8	7.3	5.7	5.7	3.0	3.0	4.0	3.4	6.1	5.2	5.0	4.3	3.1	3.1	5.4	5.4	7.3	7.8
80.	*	6.6	3.6	5.7	7.6	5.8	5.8	3.0	3.0	3.7	3.3	5.7	5.1	5.4	4.8	3.4	3.2	5.3	5.3	7.4	7.7
85.	*	7.1	4.1	5.4	7.4	5.9	5.8	3.0	3.0	3.4	3.1	5.3	4.9	5.9	5.3	3.8	3.6	5.1	5.1	7.0	7.3

```
  90.  *   7.6   4.9   4.7   6.9   6.1   5.8   3.2   3.0   3.3   3.0   5.2   4.8
6.3   5.9   4.6   4.1   4.7   4.6   6.2   6.4
  95.  *   7.8   5.8   4.1   6.3   6.4   6.0   3.4   3.1   3.1   3.0   4.9   4.7
6.3   6.2   5.1   4.5   4.1   4.1   5.6   5.6
 100.  *   7.8   6.5   3.7   5.7   6.7   6.2   3.7   3.2   3.0   3.0   4.8   4.7
6.5   6.4   5.8   4.9   3.7   3.6   5.0   4.7
 105.  *   7.3   6.9   3.3   5.5   7.1   6.2   3.8   3.4   3.0   3.0   4.7   4.7
6.1   6.4   6.2   5.2   3.2   3.2   4.5   4.2
 110.  *   6.3   7.0   3.1   5.4   7.3   6.4   4.0   3.5   3.0   3.0   4.6   4.6
6.0   6.2   6.3   5.2   3.1   3.1   4.4   3.9
 115.  *   5.7   6.8   3.1   5.3   7.5   6.6   4.1   3.6   3.0   3.0   4.7   4.7
5.8   6.2   6.2   5.1   3.1   3.1   4.3   3.8
 120.  *   5.7   6.8   3.1   5.4   7.4   6.6   4.4   3.7   3.0   3.0   4.8   4.8
5.7   6.1   6.3   5.2   3.1   3.1   4.2   3.8
 125.  *   5.6   6.5   3.1   5.4   7.4   6.9   4.4   3.8   3.0   3.0   4.8   4.8
6.1   6.0   6.2   5.1   3.1   3.1   4.0   3.7
 130.  *   5.5   6.4   3.1   5.2   7.2   7.2   4.5   3.9   3.0   3.0   4.8   4.8
6.2   5.9   6.2   5.0   3.1   3.1   4.0   3.7
 135.  *   5.7   6.3   3.1   5.4   7.0   7.2   4.7   3.9   3.0   3.0   5.0   5.0
6.2   5.9   6.2   5.0   3.1   3.1   4.0   3.8
 140.  *   5.7   6.0   3.0   5.4   6.7   7.2   4.5   4.0   3.0   3.0   5.1   5.1
6.1   5.8   5.8   4.8   3.0   3.0   4.2   3.8
 145.  *   6.0   5.9   3.0   5.4   6.9   7.3   4.5   4.2   3.0   3.0   5.2   5.2
6.1   5.8   5.8   4.8   3.0   3.0   4.3   3.9
 150.  *   6.1   5.8   3.0   5.5   6.8   7.3   4.4   4.2   3.0   3.0   5.4   5.4
6.2   5.8   5.8   4.8   3.0   3.0   4.3   4.0
 155.  *   6.3   5.8   3.0   5.7   6.6   7.2   4.5   4.3   3.0   3.0   5.5   5.5
6.1   5.6   5.8   4.8   3.0   3.0   4.3   3.9
 160.  *   6.4   5.9   3.1   5.8   6.6   7.3   4.6   4.5   3.0   3.0   5.8   5.7
6.0   5.5   5.8   4.8   3.0   3.0   4.3   3.8
 165.  *   6.6   5.9   3.2   6.0   6.7   7.1   4.8   4.5   3.2   3.2   5.9   5.8
5.9   5.2   5.7   4.8   3.0   3.0   4.2   3.5
 170.  *   6.6   6.5   3.6   5.9   6.3   6.8   5.6   5.0   3.5   3.5   5.7   5.7
5.6   5.2   5.8   4.9   3.0   3.0   4.0   3.4
 175.  *   6.4   7.2   4.3   5.5   6.0   6.2   6.2   5.9   4.2   4.1   5.5   5.3
5.4   5.0   6.0   5.0   3.1   3.0   3.6   3.2
 180.  *   6.0   8.1   5.2   5.0   5.5   5.3   7.0   7.0   4.9   4.8   4.8   4.8
5.1   4.7   6.3   5.2   3.4   3.0   3.3   3.0
 185.  *   5.6   8.4   6.1   4.2   4.9   4.5   7.6   7.3   5.6   5.5   4.2   4.2
5.0   4.6   6.7   5.7   3.7   3.1   3.1   3.0
 190.  *   5.0   8.6   6.6   3.7   4.3   4.1   7.2   7.6   6.1   5.9   3.6   3.6
4.8   4.4   7.0   5.9   4.0   3.4   3.0   3.0
 195.  *   4.8   7.7   6.7   3.3   4.1   3.8   7.0   7.7   6.2   6.1   3.3   3.3
4.8   4.3   7.2   6.3   4.3   3.6   3.0   3.0
 200.  *   4.8   7.1   6.5   3.2   4.0   3.7   6.7   7.4   6.0   6.0   3.2   3.2
4.8   4.2   7.3   6.6   4.4   3.8   3.0   3.0
 205.  *   4.8   6.5   6.4   3.1   4.1   3.7   6.6   7.4   5.8   5.8   3.1   3.1
4.8   4.1   7.3   6.6   4.4   3.9   3.0   3.0
```

PAGE 4

JOB: 145th Avenue & North Aurora 2010 PM RUN: Aurora Avenue North (Seattle)

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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

------*-------------------------------------------------------------------------------
-----------------------------------------
 210.  *   4.9   6.2   6.2   3.1   4.1   3.7   6.7   7.4   5.7   5.6   3.1   3.1
4.9   4.2   7.4   6.7   4.4   3.9   3.0   3.0
 215.  *   5.0   6.0   6.1   3.1   4.1   3.6   6.9   7.4   5.5   5.4   3.1   3.1
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5.0   4.2   7.3   6.7   4.2   3.9   3.0   3.0
 220.  *   5.0   5.9   6.0   3.1   4.1   3.6   7.4   7.3   5.4   5.3   3.1   3.1
5.0   4.2   7.2   6.8   4.3   3.9   3.0   3.0
 225.  *   5.1   5.7   6.1   3.1   4.1   3.5   7.3   7.1   5.4   5.2   3.1   3.1
5.0   4.2   7.5   7.2   4.4   4.0   3.0   3.0
 230.  *   5.2   5.8   5.9   3.1   4.0   3.4   7.3   6.8   5.3   5.1   3.1   3.1
5.0   4.3   7.4   7.3   4.3   3.9   3.0   3.0
 235.  *   5.2   6.2   5.9   3.0   3.9   3.4   7.3   6.7   5.3   5.0   3.0   3.0
4.9   4.3   7.2   7.3   4.3   3.9   3.0   3.0
 240.  *   5.3   6.3   5.9   3.1   3.8   3.5   7.1   6.5   5.3   5.0   3.0   3.0
4.8   4.4   7.1   7.5   4.3   3.9   3.1   3.1
 245.  *   5.4   6.5   5.9   3.1   3.8   3.5   6.8   6.3   5.3   5.0   3.0   3.0
4.9   4.6   7.0   7.7   4.4   4.0   3.1   3.1
 250.  *   5.4   6.9   5.8   3.1   3.7   3.3   6.7   6.3   5.2   4.9   3.0   3.0
5.0   4.7   6.9   7.6   4.4   4.1   3.1   3.1
 255.  *   5.4   7.0   6.0   3.3   3.6   3.3   6.7   6.2   5.3   4.9   3.0   3.0
5.0   4.8   6.8   7.6   4.6   4.2   3.3   3.2
 260.  *   5.2   7.1   6.3   3.7   3.6   3.2   6.5   6.2   5.2   4.8   3.0   3.0
4.8   4.8   6.7   7.1   5.1   4.5   3.5   3.4
 265.  *   4.7   7.0   6.8   4.4   3.3   3.1   6.3   6.1   5.2   4.8   3.0   3.0
4.6   4.6   6.2   6.8   5.5   5.1   4.2   3.8
 270.  *   4.4   6.8   7.6   5.3   3.2   3.0   6.1   5.9   5.6   4.9   3.1   3.0
4.2   4.2   5.7   5.8   5.9   6.0   4.8   4.2
 275.  *   3.8   6.4   7.8   6.0   3.0   3.0   6.0   5.9   5.7   4.9   3.4   3.1
3.8   3.8   5.2   5.1   6.3   6.1   5.5   4.7
 280.  *   3.5   6.1   8.1   6.6   3.0   3.0   5.9   5.8   6.0   5.1   3.5   3.2
3.4   3.4   4.8   4.6   6.5   6.4   6.0   4.9
 285.  *   3.2   6.0   7.5   6.7   3.0   3.0   5.9   5.7   6.4   5.3   3.9   3.3
3.2   3.2   4.5   4.2   6.2   6.6   6.3   4.9
 290.  *   3.1   6.0   6.8   6.7   3.0   3.0   5.9   5.6   6.7   5.5   4.0   3.4
3.1   3.1   4.6   4.1   5.9   6.7   6.4   5.0
 295.  *   3.1   5.9   6.3   6.4   3.0   3.0   5.9   5.5   6.9   5.6   4.1   3.5
3.1   3.1   4.7   4.2   6.1   6.8   6.3   5.0
 300.  *   3.0   6.0   6.1   6.2   3.0   3.0   6.0   5.6   6.8   5.6   4.1   3.5
3.0   3.0   4.7   4.2   6.4   6.8   6.2   5.0
 305.  *   3.0   6.2   5.9   6.0   3.0   3.0   6.2   5.7   6.8   5.8   4.2   3.6
3.0   3.0   4.7   4.3   6.5   7.0   6.0   5.0
 310.  *   3.0   6.2   6.0   5.9   3.0   3.0   6.2   5.7   6.8   5.9   4.3   3.7
3.0   3.0   4.8   4.2   7.1   7.0   5.8   5.1
 315.  *   3.0   6.5   6.0   5.8   3.0   3.0   6.5   6.0   7.0   6.0   4.4   3.7
3.0   3.0   4.8   4.2   7.1   6.9   5.8   5.2
 320.  *   3.0   6.7   6.4   5.7   3.0   3.0   6.5   6.1   6.9   6.1   4.4   3.8
3.0   3.0   4.8   4.1   7.3   6.8   5.7   5.3
 325.  *   3.0   6.8   6.6   5.6   3.0   3.0   6.6   6.3   7.0   6.2   4.3   3.9
3.0   3.0   4.7   4.0   7.3   6.6   5.6   5.3
 330.  *   3.0   7.0   7.0   5.3   3.0   3.0   6.6   6.4   7.2   6.6   4.2   3.9
3.0   3.0   4.8   4.0   7.2   6.3   5.3   5.1
 335.  *   3.0   7.2   7.5   5.2   3.0   3.0   7.0   6.7   7.4   6.7   4.2   3.9
3.0   3.0   4.6   3.9   6.9   6.1   5.3   5.2
 340.  *   3.0   7.3   7.7   5.2   3.0   3.0   7.1   6.8   7.5   7.2   4.1   3.9
3.0   3.0   4.5   3.7   6.9   5.9   5.2   5.2
 345.  *   3.1   7.5   8.2   5.2   3.1   3.1   7.2   7.0   7.8   7.6   4.5   4.1
3.0   3.0   4.3   3.6   6.7   5.7   5.2   5.2
 350.  *   3.5   7.4   8.0   5.8   3.3   3.3   7.1   6.7   7.6   7.2   4.9   4.5
3.0   3.0   4.0   3.4   6.3   5.3   5.2   5.2
 355.  *   4.1   6.9   7.7   6.5   3.8   3.7   6.5   6.3   7.0   7.0   5.7   5.4
3.1   3.0   3.8   3.2   5.9   5.1   5.3   5.2
 360.  *   4.8   6.0   7.1   7.4   4.5   4.2   5.8   5.6   6.4   6.1   6.6   6.0
3.2   3.0   3.4   3.1   5.6   4.7   5.6   5.2

------*-------------------------------------------------------------------------------
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 MAX   *   7.8   8.6   8.2   8.5   7.5   7.3   7.6   7.7   7.8   7.6   7.3   6.9
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6.5   6.4   7.5   7.7   7.3   7.0   7.6   7.8
 DEGR. *   95   190   345    10   115   145   185   195   345   345    10    10
100   100   225   245   320   305    35    75

 THE HIGHEST CONCENTRATION OF    8.60 PPM OCCURRED AT RECEPTOR REC2 .
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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

JOB: 145th Avenue & North Aurora 2030 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14:24:29

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 = 3.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (M)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
		*	X1	Y1	X2	Y2	*	(M)	(DEG)		(G/MI)	(M)	(M)	(VEH)		
1.	EBA	*	-304.8	-7.3	.0	-7.3	*	305.	90.	AG	920.	9.2	.0	13.4		
2.	EBD	*	.0	-7.3	304.8	-7.3	*	305.	90.	AG	1235.	9.2	.0	13.4		
3.	WBA	*	304.8	3.7	.0	3.7	*	305.	270.	AG	1275.	9.2	.0	13.4		
4.	WBD	*	.0	3.7	-304.8	3.7	*	305.	270.	AG	835.	9.2	.0	13.4		
5.	NBA	*	7.3	-304.8	7.3	.0	*	305.	360.	AG	2240.	9.5	.0	13.4		
6.	NBD	*	7.3	.0	7.3	304.8	*	305.	360.	AG	2425.	9.5	.0	13.4		
7.	SBA	*	-7.3	304.8	-7.3	.0	*	305.	180.	AG	1520.	9.5	.0	13.4		
8.	SBD	*	-7.3	.0	-7.3	-304.8	*	305.	180.	AG	1460.	9.5	.0	13.4		
9.	EBL	*	-14.6	-1.8	-327.9	-1.8	*	313.	270.	AG	129.	100.0	.0	3.7	1.53	52.2
10.	EBT	*	-14.6	-7.3	-272.1	-7.3	*	257.	270.	AG	233.	100.0	.0	7.3	1.19	42.9
11.	WBL	*	14.6	-1.8	350.5	-1.8	*	336.	90.	AG	127.	100.0	.0	3.7	1.47	56.0
12.	WBT	*	14.6	3.7	95.5	3.7	*	81.	90.	AG	227.	100.0	.0	7.3	.99	13.5
13.	WBR	*	14.6	9.1	277.1	9.1	*	262.	90.	AG	114.	100.0	.0	3.7	1.17	43.7
14.	NBL	*	1.8	-11.0	1.8	-37.6	*	27.	180.	AG	128.	100.0	.0	3.7	.72	4.4
15.	NBT	*	7.3	-11.0	7.3	-644.9	*	634.	180.	AG	148.	100.0	.0	7.3	1.21	105.7
16.	NBR	*	12.8	-11.0	12.8	-51.6	*	41.	180.	AG	74.	100.0	.0	3.7	.41	6.8
17.	SBL	*	.0	11.0	.0	222.4	*	211.	360.	AG	266.	100.0	.0	7.3	1.47	35.2
18.	SBT	*	-7.3	11.0	-7.3	88.5	*	77.	360.	AG	157.	100.0	.0	7.3	.78	12.9
19.	SBR	*	-12.8	11.0	-12.8	25.1	*	14.								

360. AG 79. 100.0 .0 3.7 .14 2.4

JOB: 145th Avenue & North Aurora 2030 PM RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14:24:29

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	160	140	3.0	230	1600	55.10	2	3
10. EBT	160	126	3.0	690	1600	55.10	2	3
11. WBL	160	137	3.0	265	1600	55.10	2	3
12. WBT	160	123	3.0	635	1600	55.10	2	3
13. WBR	160	123	3.0	375	1600	55.10	2	3
14. NBL	160	139	3.0	115	1600	55.10	2	3
15. NBT	160	80	3.0	1820	1600	55.10	2	3
16. NBR	160	80	3.0	305	1600	55.10	2	3
17. SBL	160	144	3.0	325	1600	55.10	2	3
18. SBT	160	85	3.0	1095	1600	55.10	2	3
19. SBR	160	85	3.0	100	1600	55.10	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. REC 1	-17.7	10.4	1.8
2. REC 2	14.0	14.0	1.8
3. REC 3	17.7	-14.0	1.8
4. REC 4	-14.0	-14.0	1.8
5. REC 5	-17.7	35.4	1.8
6. REC 6	-17.7	60.4	1.8
7. REC 7	14.0	39.0	1.8
8. REC 8	14.0	64.0	1.8
9. REC 9	17.7	-39.0	1.8
10. REC 10	17.7	-64.0	1.8
11. REC 11	-14.0	-39.0	1.8
12. REC 12	-14.0	-64.0	1.8
13. REC 13	-42.7	10.4	1.8
14. REC 14	-67.7	10.4	1.8
15. REC 15	39.0	14.0	1.8

16. REC 16	*	64.0	14.0	1.8	*
17. REC 17	*	42.7	-14.0	1.8	*
18. REC 18	*	67.7	-14.0	1.8	*
19. REC 19	*	-39.0	-14.0	1.8	*
20. REC 20	*	-64.0	-14.0	1.8	*

JOB: 145th Avenue & North Aurora 2030 PM RUN: Aurora Avenue North (Seattle)

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: 0.-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
0.	*	4.4	5.2	5.7	6.0	4.2	4.0	5.0	5.0	5.4	5.0	5.4	5.2	3.3	3.0	3.4	3.0	4.7	4.4	4.7	4.4
5.	*	5.0	4.5	5.1	6.6	4.8	4.6	4.3	4.3	4.7	4.6	5.7	5.6	3.4	3.1	3.1	3.0	4.4	4.3	5.0	4.6
10.	*	5.5	3.8	4.7	6.6	5.1	4.9	3.7	3.7	4.1	4.1	5.7	5.6	3.6	3.3	3.0	3.0	4.3	4.3	5.4	4.7
15.	*	5.6	3.4	4.5	6.5	5.4	5.2	3.4	3.4	3.8	3.7	5.7	5.4	3.9	3.5	3.0	3.0	4.4	4.4	5.6	5.0
20.	*	5.7	3.2	4.4	6.0	5.5	5.3	3.2	3.2	3.8	3.6	5.4	5.3	4.2	3.6	3.0	3.0	4.4	4.4	5.7	5.1
25.	*	5.6	3.1	4.4	5.5	5.4	5.3	3.1	3.1	3.9	3.6	5.1	5.2	4.2	3.7	3.0	3.0	4.4	4.4	5.7	5.3
30.	*	5.4	3.1	4.5	5.3	5.2	5.1	3.1	3.1	3.9	3.6	4.8	5.3	4.2	3.8	3.0	3.0	4.5	4.5	5.7	5.3
35.	*	5.4	3.1	4.5	4.9	5.1	5.0	3.1	3.1	3.9	3.6	5.1	5.2	4.2	3.9	3.0	3.0	4.5	4.5	5.7	5.4
40.	*	5.4	3.1	4.6	4.8	5.1	5.0	3.1	3.1	3.9	3.6	5.3	5.2	4.0	3.8	3.0	3.0	4.6	4.5	5.6	5.6
45.	*	5.2	3.1	4.7	5.1	5.0	5.0	3.1	3.1	3.9	3.5	5.2	5.0	4.0	3.8	3.0	3.0	4.7	4.6	5.5	5.5
50.	*	5.0	3.1	4.8	4.8	4.8	4.8	3.1	3.1	3.9	3.5	5.3	4.9	4.0	3.7	3.0	3.0	4.8	4.7	5.5	5.5
55.	*	5.0	3.1	4.8	5.0	4.7	4.7	3.1	3.1	3.9	3.6	5.3	5.0	4.0	3.7	3.0	3.0	4.8	4.6	5.6	5.5
60.	*	4.9	3.0	4.9	5.3	4.7	4.7	3.0	3.0	3.9	3.5	5.4	4.9	4.0	3.7	3.0	3.0	4.9	4.6	5.8	5.6
65.	*	4.9	3.0	5.0	5.5	4.7	4.7	3.0	3.0	3.8	3.5	5.2	4.6	4.0	3.7	3.0	3.0	4.9	4.7	5.7	5.7
70.	*	4.7	3.0	5.2	5.8	4.7	4.7	3.0	3.0	3.8	3.5	5.3	4.5	4.2	3.7	3.0	3.0	5.0	4.8	5.5	6.0
75.	*	5.1	3.2	5.2	6.1	4.7	4.7	3.0	3.0	3.7	3.4	5.1	4.4	4.5	3.7	3.1	3.1	5.0	4.8	5.9	6.0
80.	*	5.5	3.5	5.2	6.2	4.7	4.7	3.0	3.0	3.7	3.3	4.9	4.3	4.6	4.3	3.3	3.3	4.9	4.8	5.7	6.0
85.	*	5.8	4.0	4.9	6.0	4.7	4.7	3.0	3.0	3.4	3.1	4.8	4.3	5.0	4.4	3.9	3.7	4.6	4.5	5.7	5.7

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  90.  *   6.2   4.6   4.4   5.8   5.1   4.7   3.3   3.0   3.3   3.0   4.6   4.1
5.2   5.0   4.5   4.3   4.3   4.3   5.2   5.2
  95.  *   6.2   5.2   3.8   5.4   5.4   5.0   3.4   3.0   3.0   3.0   4.2   4.1
5.5   5.3   4.9   4.7   3.8   3.7   4.7   4.7
 100.  *   6.2   5.4   3.5   4.8   5.6   5.1   3.6   3.4   3.0   3.0   4.1   4.0
5.1   5.2   5.3   5.0   3.4   3.4   4.3   4.1
 105.  *   5.7   5.5   3.2   4.5   5.8   5.1   3.9   3.4   3.0   3.0   4.1   4.0
5.0   5.1   5.4   5.2   3.2   3.2   4.0   3.7
 110.  *   5.4   5.5   3.1   4.3   5.9   5.3   3.9   3.5   3.0   3.0   4.1   4.0
4.8   5.1   5.4   5.2   3.1   3.1   3.9   3.5
 115.  *   4.8   5.4   3.1   4.3   5.8   5.3   4.0   3.5   3.0   3.0   4.0   4.0
4.8   4.9   5.3   5.2   3.1   3.1   3.9   3.5
 120.  *   4.9   5.2   3.0   4.5   5.7   5.4   4.1   3.6   3.0   3.0   4.2   4.2
4.8   4.9   5.2   5.1   3.0   3.0   3.8   3.5
 125.  *   4.6   5.2   3.0   4.5   5.6   5.4   4.1   3.6   3.0   3.0   4.2   4.2
4.8   4.8   5.1   5.0   3.0   3.0   3.7   3.5
 130.  *   4.9   5.1   3.0   4.5   5.7   5.5   4.1   3.7   3.0   3.0   4.2   4.2
5.0   4.8   5.0   4.9   3.0   3.0   3.7   3.5
 135.  *   4.8   5.0   3.0   4.6   5.5   5.5   4.0   3.7   3.0   3.0   4.3   4.3
5.0   4.8   4.9   4.9   3.0   3.0   3.7   3.5
 140.  *   4.8   4.8   3.0   4.7   5.3   5.7   4.0   3.7   3.0   3.0   4.4   4.4
4.9   4.8   4.7   4.7   3.0   3.0   3.8   3.5
 145.  *   5.0   4.8   3.0   4.6   5.2   5.7   4.0   3.7   3.0   3.0   4.4   4.4
4.8   4.6   4.7   4.7   3.0   3.0   3.8   3.6
 150.  *   5.1   4.7   3.0   4.6   5.3   5.6   3.9   3.7   3.0   3.0   4.5   4.5
4.9   4.7   4.6   4.6   3.0   3.0   3.8   3.7
 155.  *   5.1   4.6   3.0   4.8   5.3   5.6   3.9   3.7   3.0   3.0   4.7   4.7
4.8   4.6   4.6   4.6   3.0   3.0   3.8   3.6
 160.  *   5.3   4.7   3.0   4.8   5.4   5.6   4.0   3.8   3.0   3.0   4.8   4.8
4.8   4.6   4.6   4.6   3.0   3.0   3.8   3.6
 165.  *   5.5   4.7   3.2   5.0   5.4   5.6   4.1   4.1   3.2   3.2   5.0   5.0
4.8   4.6   4.6   4.6   3.0   3.0   3.8   3.6
 170.  *   5.3   5.1   3.4   5.0   5.3   5.4   4.6   4.3   3.4   3.4   5.0   5.0
4.6   4.4   4.5   4.5   3.0   3.0   3.7   3.4
 175.  *   5.3   5.6   4.0   4.9   5.0   5.0   5.2   5.0   3.9   3.8   4.9   4.8
4.6   4.4   4.7   4.5   3.2   3.0   3.6   3.3
 180.  *   5.0   6.2   4.6   4.5   4.6   4.5   5.8   5.5   4.4   4.3   4.5   4.5
4.4   4.2   5.0   4.7   3.3   3.1   3.3   3.1
 185.  *   4.6   6.7   5.1   4.0   4.1   4.0   6.0   6.0   4.8   4.7   4.0   3.8
4.1   4.1   5.2   4.8   3.6   3.2   3.0   3.0
 190.  *   4.2   6.4   5.3   3.6   3.7   3.9   5.9   6.1   5.2   5.1   3.6   3.6
4.0   4.0   5.4   5.0   3.8   3.5   3.0   3.0
 195.  *   4.1   6.2   5.4   3.2   3.6   3.5   5.6   6.0   5.2   5.1   3.2   3.2
4.0   4.0   5.5   5.2   3.9   3.5   3.0   3.0
 200.  *   4.0   5.7   5.3   3.1   3.6   3.5   5.5   6.0   5.2   5.0   3.1   3.1
4.0   4.0   5.7   5.3   3.9   3.6   3.0   3.0
 205.  *   4.0   5.4   5.1   3.1   3.6   3.5   5.5   5.9   4.9   4.7   3.1   3.1
4.0   4.0   5.6   5.3   3.9   3.7   3.0   3.0
```

PAGE 4

JOB: 145th Avenue & North Aurora 2030 PM RUN: Aurora Avenue North (Seattle)

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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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 210.  *   4.1   5.1   5.1   3.1   3.6   3.5   5.5   6.0   4.9   4.7   3.1   3.1
4.1   4.1   5.5   5.3   3.8   3.7   3.0   3.0
 215.  *   4.1   5.0   5.0   3.1   3.6   3.5   5.4   5.8   4.8   4.6   3.1   3.1
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4.1   4.1   5.7   5.4   3.8   3.7   3.0   3.0
 220.  *   4.3   4.9   5.0   3.0   3.6   3.5   5.7   5.7   4.7   4.5   3.0   3.0
4.3   4.3   5.7   5.4   3.9   3.6   3.0   3.0
 225.  *   4.3   4.9   4.8   3.0   3.6   3.5   5.6   5.6   4.6   4.4   3.0   3.0
4.3   4.3   5.8   5.5   3.8   3.6   3.0   3.0
 230.  *   4.3   5.0   4.8   3.0   3.7   3.5   5.8   5.6   4.6   4.4   3.0   3.0
4.3   4.3   5.5   5.5   3.8   3.4   3.0   3.0
 235.  *   4.4   4.9   4.8   3.0   3.7   3.5   5.7   5.5   4.6   4.4   3.0   3.0
4.4   4.4   5.7   5.5   3.8   3.4   3.0   3.0
 240.  *   4.5   5.2   4.6   3.0   3.8   3.5   5.7   5.5   4.4   4.2   3.0   3.0
4.5   4.5   5.3   5.5   3.9   3.4   3.0   3.0
 245.  *   4.6   5.4   4.7   3.0   3.8   3.5   5.7   5.4   4.5   4.3   3.0   3.0
4.6   4.6   5.5   5.8   4.0   3.5   3.0   3.0
 250.  *   4.9   5.5   4.7   3.1   3.8   3.5   5.7   5.3   4.4   4.2   3.0   3.0
4.8   4.8   5.4   6.1   4.0   3.6   3.1   3.1
 255.  *   4.9   5.9   4.9   3.2   3.8   3.5   5.7   5.4   4.4   4.2   3.0   3.0
4.9   4.8   5.5   5.8   4.1   3.8   3.2   3.2
 260.  *   4.9   6.0   5.2   3.6   3.6   3.3   5.4   5.3   4.4   4.2   3.0   3.0
4.9   4.9   5.4   6.0   4.5   4.2   3.6   3.6
 265.  *   4.7   5.9   5.8   4.3   3.4   3.0   5.3   4.9   4.5   4.2   3.1   3.0
4.6   4.6   5.4   5.4   4.9   4.4   4.3   4.2
 270.  *   4.3   5.7   6.3   4.9   3.3   3.0   5.2   4.9   4.9   4.2   3.3   3.0
4.3   4.1   4.8   5.0   5.3   5.0   4.8   4.8
 275.  *   3.9   5.4   6.4   5.4   3.0   3.0   4.9   4.9   5.1   4.4   3.6   3.1
3.8   3.7   4.6   4.5   5.4   5.4   5.4   5.2
 280.  *   3.4   5.1   6.3   5.6   3.0   3.0   4.9   4.9   5.4   4.7   3.9   3.3
3.4   3.4   4.3   3.9   5.4   5.6   5.5   5.5
 285.  *   3.1   4.8   6.1   5.6   3.0   3.0   4.9   4.9   5.4   4.7   3.9   3.5
3.1   3.1   4.1   3.6   5.2   5.2   5.6   5.6
 290.  *   3.1   4.9   5.5   5.4   3.0   3.0   4.8   4.9   5.5   4.8   3.9   3.6
3.1   3.1   4.0   3.6   5.0   5.5   5.3   5.3
 295.  *   3.0   4.9   5.2   5.1   3.0   3.0   4.9   4.9   5.5   4.8   3.9   3.6
3.0   3.0   4.1   3.7   5.0   5.3   5.1   5.1
 300.  *   3.0   5.0   5.1   4.9   3.0   3.0   5.0   4.9   5.5   4.8   3.9   3.6
3.0   3.0   4.1   3.7   5.1   5.4   4.9   4.9
 305.  *   3.0   5.0   5.0   4.8   3.0   3.0   5.0   4.9   5.4   4.9   3.9   3.6
3.0   3.0   4.1   3.7   5.2   5.4   4.8   4.8
 310.  *   3.0   5.1   4.9   4.7   3.0   3.0   5.1   5.0   5.2   5.0   3.9   3.6
3.0   3.0   4.1   3.7   5.5   5.5   4.8   4.8
 315.  *   3.0   5.1   5.0   4.6   3.0   3.0   5.1   5.0   5.2   4.9   3.6   3.5
3.0   3.0   4.2   3.9   5.6   5.5   4.6   4.6
 320.  *   3.0   5.3   5.2   4.5   3.0   3.0   5.3   5.1   5.3   5.0   3.6   3.5
3.0   3.0   4.2   3.9   5.5   5.5   4.6   4.6
 325.  *   3.0   5.3   5.2   4.4   3.0   3.0   5.3   5.1   5.6   5.2   3.7   3.6
3.0   3.0   4.1   3.8   5.6   5.4   4.5   4.5
 330.  *   3.0   5.5   5.5   4.5   3.0   3.0   5.4   5.3   5.5   5.3   3.7   3.6
3.0   3.0   4.2   3.8   5.5   5.2   4.4   4.4
 335.  *   3.0   5.7   5.9   4.4   3.0   3.0   5.6   5.4   5.8   5.5   3.7   3.6
3.0   3.0   4.2   3.8   5.6   5.2   4.4   4.4
 340.  *   3.0   5.9   6.1   4.5   3.0   3.0   5.7   5.6   6.0   5.8   3.7   3.6
3.0   3.0   4.1   3.7   5.6   5.1   4.4   4.4
 345.  *   3.1   6.1   6.3   4.5   3.1   3.1   6.0   5.8   6.0   5.9   3.8   3.8
3.0   3.0   4.0   3.5   5.4   5.0   4.4   4.4
 350.  *   3.3   6.0   6.4   4.8   3.3   3.3   5.9   5.9   6.1   5.9   4.2   4.2
3.0   3.0   3.9   3.4   5.2   4.7   4.4   4.4
 355.  *   3.7   5.8   6.2   5.4   3.7   3.5   5.6   5.6   5.8   5.6   4.8   4.6
3.0   3.0   3.6   3.1   4.9   4.4   4.5   4.4
 360.  *   4.4   5.2   5.7   6.0   4.2   4.0   5.0   5.0   5.4   5.0   5.4   5.2
3.3   3.0   3.4   3.0   4.7   4.4   4.7   4.4

------*-------------------------------------------------------------------------------
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 MAX   *   6.2   6.7   6.4   6.6   5.9   5.7   6.0   6.1   6.1   5.9   5.7   5.6
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5.5   5.3   5.8   6.1   5.6   5.6   5.9   6.0
 DEGR. *   90   185   275     5   110   140   185   190   350   345     5     5
95    95   225   250   315   280    75    75
```

THE HIGHEST CONCENTRATION OF 6.70 PPM OCCURRED AT RECEPTOR REC2 .

JOB: 145th Avenue & North Aurora 2030 PM NB RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14:28:22

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 = 3.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(M)	(DEG)			(G/MI)	(M)	(M)	(VEH)	
1. EBA	*	-304.8	-5.5	.0	-5.5	*	305.	90.	AG	920.	9.2	.0	13.4		
2. EBD	*	.0	-5.5	304.8	-5.5	*	305.	90.	AG	1235.	9.2	.0	13.4		
3. WBA	*	304.8	5.5	.0	5.5	*	305.	270.	AG	1275.	9.2	.0	13.4		
4. WBD	*	.0	5.5	-304.8	5.5	*	305.	270.	AG	835.	9.2	.0	13.4		
5. NBA	*	3.7	-304.8	3.7	.0	*	305.	360.	AG	2225.	9.5	.0	13.4		
6. NBD	*	3.7	.0	3.7	304.8	*	305.	360.	AG	2425.	9.5	.0	13.4		
7. SBA	*	-7.3	304.8	-7.3	.0	*	305.	180.	AG	1195.	9.5	.0	13.4		
8. SBD	*	-7.3	.0	-7.3	-304.8	*	305.	180.	AG	1445.	9.5	.0	13.4		
9. EBL	*	-11.0	.0	-355.5	-.1	*	344.	270.	AG	130.	100.0	.0	3.7	1.64	57.4
10. EBT	*	-11.0	-5.5	-361.5	-5.6	*	351.	270.	AG	238.	100.0	.0	7.3	1.33	58.4
11. WBL	*	11.0	.0	409.1	.1	*	398.	90.	AG	128.	100.0	.0	3.7	1.66	66.4
12. WBT	*	11.0	5.5	207.8	5.5	*	197.	90.	AG	235.	100.0	.0	7.3	1.13	32.8
13. WBR	*	11.0	11.0	397.6	11.1	*	387.	90.	AG	117.	100.0	.0	3.7	1.34	64.4
14. NBL	*	-1.8	-9.1	-1.8	-32.6	*	24.	180.	AG	130.	100.0	.0	3.7	.71	3.9
15. NBT	*	3.7	-9.1	3.7	-769.9	*	761.	180.	AG	155.	100.0	.0	7.3	1.28	126.8
16. NBR	*	9.1	-9.1	9.1	-51.8	*	43.	180.	AG	78.	100.0	.0	3.7	.43	7.1
17. SBL	*	-1.8	12.8	-1.8	50.1	*	37.	360.	AG	249.	100.0	.0	7.3	.81	6.2
18. SBT	*	-7.3	12.8	-7.3	90.4	*	78.	360.	AG	144.	100.0	.0	7.3	.78	12.9

JOB: 145th Avenue & North Aurora 2030 PM NB RUN: Aurora Avenue North (Seattle)

DATE : 4/18/ 6
TIME : 14:28:22

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	160	141	3.0	230	1600	55.10	2	3
10. EBT	160	129	3.0	690	1600	55.10	2	3
11. WBL	160	139	3.0	265	1600	55.10	2	3
12. WBT	160	127	3.0	635	1600	55.10	2	3
13. WBR	160	127	3.0	375	1600	55.10	2	3
14. NBL	160	141	3.0	100	1600	55.10	2	3
15. NBT	160	84	3.0	1820	1600	55.10	2	3
16. NBR	160	84	3.0	305	1600	55.10	2	3
17. SBL	160	135	3.0	325	1600	55.10	2	3
18. SBT	160	78	3.0	1195	1600	55.10	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. REC 1	-14.0	12.2	1.8
2. REC 2	10.4	14.0	1.8
3. REC 3	14.0	-12.2	1.8
4. REC 4	-14.0	-12.2	1.8
5. REC 5	-14.0	37.2	1.8
6. REC 6	-14.0	62.2	1.8
7. REC 7	10.4	39.0	1.8
8. REC 8	10.4	64.0	1.8
9. REC 9	14.0	-37.2	1.8
10. REC 10	14.0	-62.2	1.8
11. REC 11	-14.0	-37.2	1.8
12. REC 12	-14.0	-62.2	1.8
13. REC 13	-39.0	12.2	1.8
14. REC 14	-64.0	12.2	1.8
15. REC 15	35.4	14.0	1.8
16. REC 16	60.4	14.0	1.8
17. REC 17	39.0	-12.2	1.8
18. REC 18	64.0	-12.2	1.8
19. REC 19	-39.0	-12.2	1.8

20. REC 20 * -64.0 -12.2 1.8 *

JOB: 145th Avenue & North Aurora 2030 PM NB RUN: Aurora Avenue North (Seattle)

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: 0.-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
0.	*	4.6	4.9	5.5	6.2	4.4	4.2	4.6	4.6	5.1	4.9	5.2	5.0	3.2	3.0	3.2	3.0	4.6	4.4	4.6	4.4
5.	*	5.0	4.2	4.9	6.6	4.8	4.6	4.1	4.1	4.5	4.6	5.5	5.4	3.4	3.2	3.1	3.0	4.4	4.3	4.8	4.6
10.	*	5.5	3.7	4.6	6.7	5.0	4.8	3.6	3.6	4.0	4.0	5.4	5.4	3.5	3.2	3.0	3.0	4.3	4.3	5.0	4.7
15.	*	5.7	3.4	4.5	6.4	5.2	5.0	3.4	3.4	3.8	3.7	5.4	5.5	3.7	3.3	3.0	3.0	4.4	4.4	5.2	4.7
20.	*	5.6	3.2	4.4	6.0	5.0	4.9	3.2	3.2	3.8	3.6	5.3	5.5	3.7	3.5	3.0	3.0	4.4	4.4	5.4	4.9
25.	*	5.5	3.1	4.5	5.6	5.0	4.8	3.1	3.1	3.9	3.6	5.3	5.3	3.8	3.5	3.0	3.0	4.5	4.5	5.3	5.0
30.	*	5.5	3.1	4.5	5.4	5.0	4.9	3.1	3.1	3.9	3.6	5.1	5.4	3.8	3.5	3.0	3.0	4.5	4.5	5.5	5.1
35.	*	5.3	3.1	4.6	5.2	4.9	4.6	3.1	3.1	3.9	3.6	5.2	5.1	3.9	3.6	3.0	3.0	4.6	4.6	5.5	5.1
40.	*	5.2	3.1	4.7	5.0	4.9	4.6	3.1	3.1	3.9	3.6	5.7	5.1	3.8	3.5	3.0	3.0	4.7	4.7	5.6	5.2
45.	*	5.1	3.1	4.7	5.1	4.9	4.5	3.1	3.1	3.9	3.6	5.5	5.0	3.9	3.5	3.0	3.0	4.7	4.7	5.5	5.2
50.	*	5.0	3.1	4.8	5.1	4.8	4.4	3.1	3.1	4.0	3.6	5.5	5.0	3.9	3.4	3.0	3.0	4.8	4.8	5.6	5.4
55.	*	4.9	3.1	4.8	5.3	4.9	4.4	3.1	3.1	4.0	3.7	5.6	5.1	4.0	3.5	3.0	3.0	4.8	4.8	5.7	5.4
60.	*	4.9	3.0	5.0	5.4	4.9	4.4	3.0	3.0	4.0	3.7	5.6	5.1	4.0	3.5	3.0	3.0	5.0	5.0	5.6	5.5
65.	*	4.8	3.0	5.1	5.7	4.9	4.3	3.0	3.0	4.0	3.7	5.5	5.0	4.0	3.6	3.0	3.0	5.1	5.1	5.9	5.7
70.	*	4.9	3.1	5.3	6.2	4.9	4.3	3.0	3.0	4.1	3.7	5.6	4.9	4.1	3.7	3.1	3.1	5.3	5.3	5.8	6.2
75.	*	5.0	3.4	5.4	6.3	4.7	4.2	3.0	3.0	4.0	3.5	5.5	4.7	4.4	4.0	3.4	3.4	5.4	5.4	6.0	6.2
80.	*	5.7	3.8	5.5	6.4	4.8	4.3	3.0	3.0	3.9	3.4	5.2	4.6	4.7	4.3	3.8	3.8	5.3	5.3	6.2	6.4
85.	*	6.1	4.6	5.2	6.5	4.9	4.3	3.1	3.0	3.6	3.2	4.8	4.3	5.2	4.6	4.4	4.4	5.1	5.1	5.9	6.1
90.	*	6.6	5.4	4.6	6.0	5.3	4.3	3.4	3.0	3.3	3.0	4.8	4.3	5.7	5.2	5.4	5.2	4.6	4.5	5.5	5.6
95.	*	6.9	6.0	4.0	5.4	5.6	4.7	3.8	3.3	3.0	3.0	4.2	4.1	5.7	5.6	6.0	6.0	4.0	4.0	5.0	4.8

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 100.  *   6.8   6.4   3.6   5.0   6.0   4.8   4.0   3.5   3.0   3.0   4.2   4.1
5.4   5.4   6.3   6.3   3.4   3.4   4.6   4.2
 105.  *   6.2   6.4   3.2   4.7   6.1   4.8   4.2   3.5   3.0   3.0   4.3   4.2
5.2   5.2   6.4   6.3   3.2   3.2   4.1   3.7
 110.  *   5.7   5.9   3.1   4.5   6.2   5.0   4.2   3.7   3.0   3.0   4.3   4.2
4.9   5.1   5.9   5.9   3.1   3.1   4.0   3.5
 115.  *   5.2   5.7   3.1   4.5   6.1   5.1   4.2   3.7   3.0   3.0   4.3   4.2
5.0   4.9   5.8   5.8   3.1   3.1   3.9   3.5
 120.  *   4.8   5.6   3.0   4.6   6.2   5.3   4.2   3.8   3.0   3.0   4.4   4.3
4.8   4.9   5.6   5.6   3.0   3.0   3.9   3.5
 125.  *   4.8   5.5   3.0   4.6   6.1   5.4   4.3   3.9   3.0   3.0   4.3   4.3
4.9   4.8   5.4   5.4   3.0   3.0   3.7   3.5
 130.  *   4.8   5.5   3.0   4.6   5.9   5.3   4.2   3.8   3.0   3.0   4.3   4.3
5.1   4.8   5.4   5.4   3.0   3.0   3.7   3.5
 135.  *   5.0   5.1   3.0   4.6   5.9   5.4   4.1   3.7   3.0   3.0   4.3   4.3
5.1   4.8   5.1   5.1   3.0   3.0   3.7   3.5
 140.  *   5.0   5.0   3.0   4.7   6.0   5.6   4.0   3.7   3.0   3.0   4.4   4.4
4.9   4.9   5.0   5.0   3.0   3.0   3.7   3.6
 145.  *   5.0   5.0   3.0   4.9   5.6   5.8   4.0   3.7   3.0   3.0   4.6   4.6
5.0   4.9   4.9   4.9   3.0   3.0   3.8   3.7
 150.  *   5.2   4.8   3.0   4.9   5.5   6.0   4.0   3.7   3.0   3.0   4.7   4.7
5.0   4.8   4.9   4.9   3.0   3.0   3.9   3.7
 155.  *   5.5   4.8   3.0   4.8   5.8   6.0   3.9   3.7   3.0   3.0   4.7   4.7
4.9   4.7   4.8   4.8   3.0   3.0   3.9   3.7
 160.  *   5.8   4.7   3.0   5.0   6.1   6.0   4.0   3.8   3.0   3.0   4.9   4.9
5.0   4.7   4.7   4.7   3.0   3.0   4.0   3.6
 165.  *   5.8   4.9   3.2   5.2   6.2   6.2   4.2   4.1   3.2   3.2   5.2   5.1
5.0   4.6   4.7   4.7   3.0   3.0   3.9   3.6
 170.  *   5.9   5.3   3.4   5.2   5.8   6.1   4.7   4.5   3.4   3.4   5.2   5.2
4.9   4.4   4.7   4.7   3.0   3.0   3.9   3.4
 175.  *   6.2   5.9   4.1   5.1   5.7   5.9   5.4   5.1   4.0   3.9   5.1   5.0
4.7   4.4   5.0   4.8   3.2   3.0   3.6   3.3
 180.  *   5.7   6.5   4.6   4.7   5.3   5.4   6.0   5.5   4.5   4.5   4.7   4.6
4.5   4.2   5.3   5.0   3.3   3.1   3.4   3.1
 185.  *   5.1   6.9   5.2   4.0   4.6   4.8   6.1   6.0   5.1   4.9   4.0   4.0
4.3   4.1   5.5   5.1   3.7   3.3   3.1   3.0
 190.  *   4.6   6.5   5.5   3.6   4.1   4.1   6.1   6.1   5.3   5.2   3.6   3.6
4.0   4.0   5.6   5.2   3.9   3.5   3.0   3.0
 195.  *   4.2   6.3   5.5   3.2   3.7   3.7   5.8   6.0   5.3   5.2   3.2   3.2
4.0   4.0   5.7   5.3   3.9   3.5   3.0   3.0
 200.  *   4.1   5.8   5.3   3.1   3.7   3.6   5.7   6.1   5.2   5.0   3.1   3.1
4.0   4.0   5.8   5.4   3.9   3.6   3.0   3.0
 205.  *   4.0   5.4   5.2   3.1   3.7   3.6   5.5   6.1   5.1   4.9   3.1   3.1
4.0   4.0   5.8   5.5   3.9   3.7   3.0   3.0
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PAGE 4

JOB: 145th Avenue & North Aurora 2030 PM NB RUN: Aurora Avenue North (Seattle)

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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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 210.  *   4.1   5.2   5.2   3.1   3.6   3.5   5.6   5.7   4.9   4.7   3.1   3.1
4.1   4.1   5.9   5.6   3.9   3.7   3.0   3.0
 215.  *   4.2   5.3   5.0   3.1   3.6   3.5   5.6   5.5   4.8   4.6   3.1   3.1
4.2   4.2   5.9   5.6   3.8   3.7   3.0   3.0
 220.  *   4.3   5.1   4.9   3.0   3.6   3.5   5.7   5.4   4.8   4.5   3.0   3.0
4.3   4.3   6.0   5.7   3.9   3.7   3.0   3.0
 225.  *   4.3   5.0   4.9   3.0   3.6   3.5   5.6   5.3   4.6   4.4   3.0   3.0
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4.3   4.3   6.0   5.9   3.8   3.5   3.0   3.0
 230.  *   4.3   5.2   4.8   3.0   3.7   3.5   5.7   5.2   4.6   4.4   3.0   3.0
4.3   4.3   5.7   6.0   3.8   3.5   3.0   3.0
 235.  *   4.4   5.2   4.8   3.0   3.7   3.5   5.7   5.0   4.6   4.4   3.0   3.0
4.4   4.4   6.1   6.0   3.8   3.5   3.0   3.0
 240.  *   4.5   5.3   4.7   3.0   3.8   3.6   5.7   5.1   4.5   4.3   3.0   3.0
4.5   4.5   6.1   6.1   3.8   3.4   3.0   3.0
 245.  *   4.6   5.3   4.7   3.0   3.9   3.6   5.8   4.9   4.5   4.3   3.0   3.0
4.6   4.6   6.0   6.0   4.0   3.6   3.0   3.0
 250.  *   4.9   5.7   4.8   3.1   3.9   3.6   5.7   4.9   4.5   4.3   3.0   3.0
4.9   4.9   6.2   6.5   4.0   3.6   3.1   3.1
 255.  *   4.9   6.0   5.0   3.3   3.9   3.5   5.7   4.7   4.5   4.3   3.0   3.0
4.9   4.9   6.1   6.4   4.2   3.8   3.3   3.3
 260.  *   5.0   6.1   5.4   3.7   3.7   3.4   5.5   4.7   4.5   4.3   3.0   3.0
5.0   5.0   6.1   6.6   4.6   4.2   3.7   3.7
 265.  *   4.8   6.0   5.9   4.4   3.5   3.1   5.3   4.5   4.6   4.3   3.1   3.0
4.8   4.8   5.8   6.1   5.2   4.6   4.4   4.4
 270.  *   4.4   5.7   6.6   4.9   3.3   3.0   5.1   4.3   4.9   4.4   3.4   3.1
4.4   4.3   5.3   5.5   5.5   5.1   4.9   4.9
 275.  *   3.9   5.2   6.8   5.5   3.0   3.0   4.8   4.3   5.1   4.5   3.6   3.1
3.8   3.8   4.7   4.7   5.5   5.5   5.5   5.5
 280.  *   3.4   4.9   6.7   5.7   3.0   3.0   4.7   4.2   5.5   4.8   3.9   3.4
3.4   3.4   4.3   4.3   5.3   5.6   5.5   5.5
 285.  *   3.1   4.7   6.3   5.6   3.0   3.0   4.7   4.2   5.6   4.9   4.0   3.6
3.1   3.1   4.0   3.7   5.2   5.3   5.6   5.6
 290.  *   3.1   4.8   5.7   5.4   3.0   3.0   4.8   4.3   5.6   4.9   4.0   3.6
3.1   3.1   3.9   3.6   5.0   5.5   5.3   5.3
 295.  *   3.0   4.9   5.3   5.1   3.0   3.0   4.8   4.3   5.6   4.9   3.9   3.6
3.0   3.0   4.0   3.7   5.2   5.2   5.1   5.1
 300.  *   3.0   5.0   5.1   4.9   3.0   3.0   4.9   4.4   5.6   4.9   3.9   3.6
3.0   3.0   4.1   3.6   4.9   5.4   4.9   4.9
 305.  *   3.0   5.0   4.8   4.8   3.0   3.0   4.8   4.4   5.7   5.0   3.9   3.6
3.0   3.0   4.1   3.6   5.1   5.4   4.8   4.8
 310.  *   3.0   5.1   4.9   4.8   3.0   3.0   4.9   4.5   5.5   5.0   3.9   3.6
3.0   3.0   4.0   3.5   5.4   5.4   4.8   4.8
 315.  *   3.0   5.1   4.9   4.6   3.0   3.0   4.8   4.5   5.5   4.9   3.7   3.6
3.0   3.0   4.0   3.5   5.5   5.3   4.6   4.6
 320.  *   3.0   5.2   4.9   4.6   3.0   3.0   4.8   4.5   5.5   4.9   3.6   3.5
3.0   3.0   3.9   3.5   5.4   5.3   4.6   4.6
 325.  *   3.0   5.2   5.3   4.5   3.0   3.0   4.7   4.5   5.4   5.3   3.6   3.6
3.0   3.0   3.8   3.4   5.4   5.1   4.5   4.6
 330.  *   3.0   5.3   5.3   4.5   3.0   3.0   4.8   4.5   5.5   5.3   3.7   3.6
3.0   3.0   3.8   3.4   5.2   4.9   4.5   4.5
 335.  *   3.1   5.5   5.6   4.5   3.1   3.1   4.8   4.6   5.5   5.8   3.7   3.6
3.0   3.0   3.8   3.4   5.3   4.9   4.4   4.4
 340.  *   3.1   5.6   5.9   4.6   3.1   3.1   5.0   4.8   5.9   5.7   3.7   3.6
3.0   3.0   3.7   3.4   5.2   4.8   4.4   4.4
 345.  *   3.3   5.5   5.8   4.6   3.2   3.2   5.1   5.0   5.6   5.6   3.8   3.7
3.0   3.0   3.7   3.4   5.1   4.8   4.4   4.4
 350.  *   3.5   5.5   6.0   4.9   3.5   3.4   5.2   5.1   5.5   5.7   4.2   4.1
3.0   3.0   3.5   3.3   4.8   4.6   4.4   4.4
 355.  *   3.9   5.2   5.8   5.6   3.9   3.8   5.0   5.0   5.5   5.2   4.7   4.5
3.0   3.0   3.4   3.1   4.7   4.4   4.4   4.4
 360.  *   4.6   4.9   5.5   6.2   4.4   4.2   4.6   4.6   5.1   4.9   5.2   5.0
3.2   3.0   3.2   3.0   4.6   4.4   4.6   4.4

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-------------------------------------------
 MAX   *   6.9   6.9   6.8   6.7   6.2   6.2   6.1   6.1   5.9   5.8   5.7   5.5
5.7   5.6   6.4   6.6   5.5   5.6   6.2   6.4
 DEGR. *   95   185   275    10   110   165   190   205   340   335    40    15
90    95   105   260   270   280    80    80
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THE HIGHEST CONCENTRATION OF 6.90 PPM OCCURRED AT RECEPTOR REC1 .