SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

AMBIENT CONCENTRATIONS OF CRITERIA AND AIR TOXIC POLLUTANTS IN CLOSE PROXIMITY TO A FREEWAY WITH HEAVY-DUTY DIESEL TRAFFIC

FINAL REPORT

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SUMMARY REPORT

BACKGROUND AND OBJECTIVES

Since nearly one million people in the South Coast Air Basin live within 100 meters (m) of a major roadway, there is a growing concern about the potential health effects caused by exposure to air pollutants emitted from both gasoline and diesel vehicles. Recent studies have associated living near major roadways with respiratory and cardiovascular problems and other health related issues including: asthma and allergic diseases, lung cancer and premature death (Balmes et al., 2009; Jarrett et al., 2009).

Among all particulate pollutants, ultra-fine particles (UFP; very small particles produced from combustion activities) and diesel particulate emissions [measured as black carbon (BC), an indicator of diesel emissions] are believed to be mainly responsible for these adverse health effects. Previous field work conducted by the South Coast Air Quality Management District (AQMD) has found that exposure to diesel particles accounts for more than 80% of the total carcinogenic risk in the South Coast Air Basin (MATES III; South Coast AQMD, 2008).

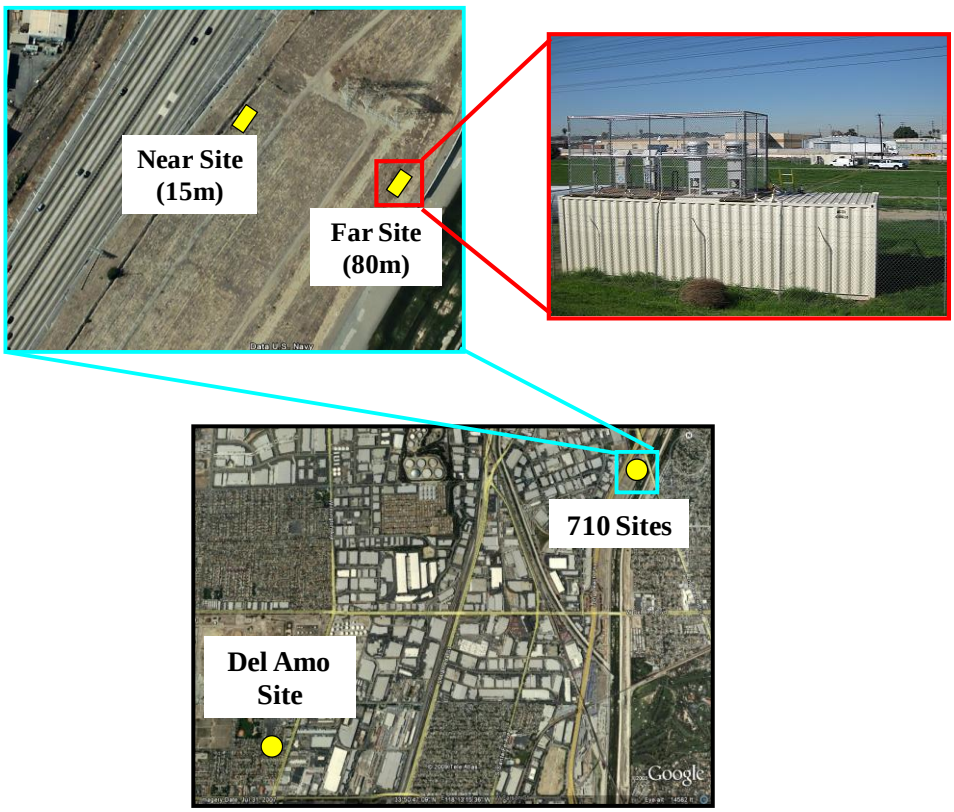
Several previous studies have focused on the influence of proximity to roadways on outdoor and indoor exposure to air toxics. In all these works, it was found that the outdoor concentrations of pollutants emitted from motor-vehicles were highest near a roadway and decreased with increasing distance downwind of the source (Zhu et al., 2002a; 20002b; Hu et al., 2009; Karner et al., 2010).

In the winter and summer of 2009 AQMD conducted two field studies in the vicinity of the Interstate 710 freeway (I-710). Two sampling stations were set-up at different distances from the edge of this freeway and the atmospheric concentration of several air pollutants was measured to study the levels of motor-vehicle emissions and their potential impact on the surrounding communities. The I-710 is an eight-lane freeway connecting the ports of Long Beach and San Pedro to the shipping yards in East Los Angeles. On this freeway, heavy duty diesel trucks account for about 20% of the total number of vehicles.

METHODS

Sampling was conducted at two monitoring stations located 15 meters and 80 meters east and downwind of the I-710 ("near" and "far" site, respectively), near the intersection with North Long Beach Boulevard (Figure 1). A third station, far from the influence of the I-710 and representative of background conditions was operated in Carson (CA), next to Del Amo Elementary School. Sampling was divided into two separate periods to study seasonal differences of the measured air pollutant levels: from 01/29/09 to 03/11/09 (winter campaign) and from 06/30/09 to 08/19/09 (summer campaign). Both continuous and integrated measurement techniques (described in detail in APPENDIX A) were used to monitor the atmospheric concentration of the following air contaminants: coarse and fine particulate matter (PM_{10} and $PM_{2.5}$, respectively), UFP, BC, elemental carbon (EC; closely related to BC), Total Suspended Particulate (TSP) lead, volatile organic compounds (VOC), nitrogen oxides (NO and NO_2) and carbon monoxide (CO). Wind speed, wind direction and other meteorological data were obtained from a meteorological tower installed at the "far" site (80 meters from the I-710).

Figure 1 Aerial view of the sampling area showing the locations of the two monitoring stations near the I-710 freeway ("near" and "far" sites), and the background site in Del Amo



RESULTS AND DISCUSSION

The meteorological data from the winter and summer studies show the presence of a distinct wind coming from the West, which is typical for this part of the South Coast Air Basin. In addition to this dominant westerly wind, the winter period also included weaker winds coming from all directions. The typical afternoon onshore see-breeze was present only during the summer months. The winter study was affected by an unusually high number of precipitation days, with values up to 0.9 inches per day. Periods with high rainfall had ambient concentrations of all measured air pollutants close to measured background levels.

As expected, the highest average PM_{10} concentrations during the winter months (from 01/29/09 to 03/11/09) were measured at the "near" site. The corresponding average PM_{10} value at the "far" station was substantially lower than that recorded near the edge of the freeway, but similar to that observed at Del Amo (background) during the same time period (Figure 2a). Near-roadway PM_{10} is mostly emitted from re-suspension of road dust particles by freeway traffic and through other mechanical processes such as brake and tire wear. Because of their larger size, these particles are generally not transported far away from their source. The average EC concentration associated with PM_{10} particles (PM_{10} EC) showed a similar pattern, although it decreased more gradually with increasing distance from the freeway (Figure 2b). This is

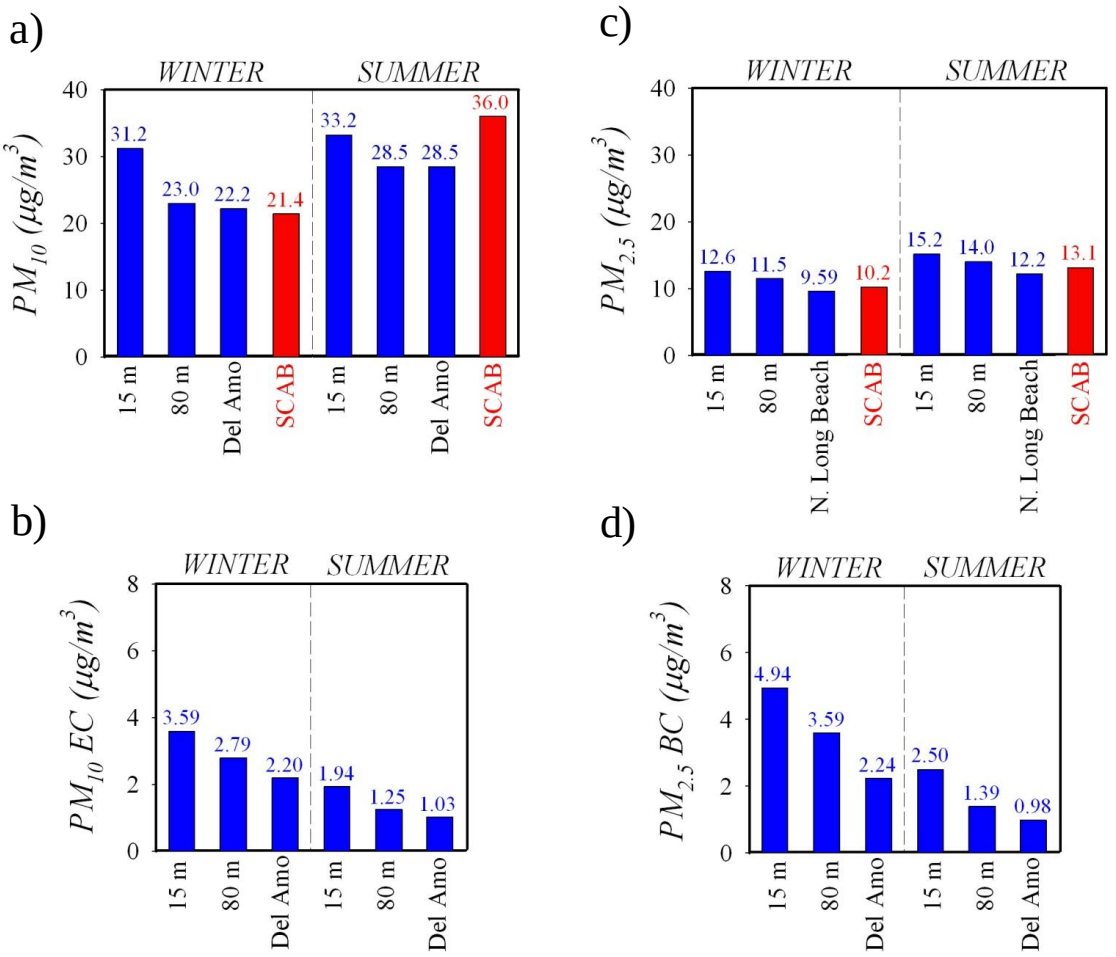
probably due to the fact that EC is mostly found in particles smaller than PM_{10} and, thus, it can be transported over longer distances.

During the second part of the study (from 06/30/09 to 08/19/09), the PM_{10} concentrations at all three sites were comparable to those observed during the wintertime and followed a similar pattern (Figure 2a). However, the corresponding PM_{10} EC levels were substantially lower than those observed during the winter campaign (Figure 2b). It is possible that lower EC values during the warmer months are related to seasonal changes in meteorological conditions, i.e., stronger sea-breezes cause morning mixing and dilution in the atmosphere. The PM_{10} concentrations observed throughout this study were generally comparable to or lower than those measured in the South Coast Air Basin during similar time periods. Also, all measurements were well below the U.S. EPA NAAQS for PM_{10} (150 $\mu g/m^3$).

Because a PM sampler was not available at the Del Amo site at the time of this study, $PM_{2.5}$ data were not measured at this station. However, background $PM_{2.5}$ levels for both the winter and summer periods were obtained from the North Long Beach site, one of AQMD's network stations located away from the influence of the I-710, but in the same geographical area. As expected, the highest average $PM_{2.5}$ level during the winter months was measured at the "near" site and decreased only gradually with increasing distance from the freeway (Figure 2c), suggesting that the direct contribution of motor-vehicle emissions to $PM_{2.5}$ was modest. The concentration of BC present in $PM_{2.5}$ particles ($PM_{2.5}$ BC) showed a higher drop-off with distance, reflecting relatively higher emissions of diesel PM from heavy duty diesel trucks (Figure 2d).

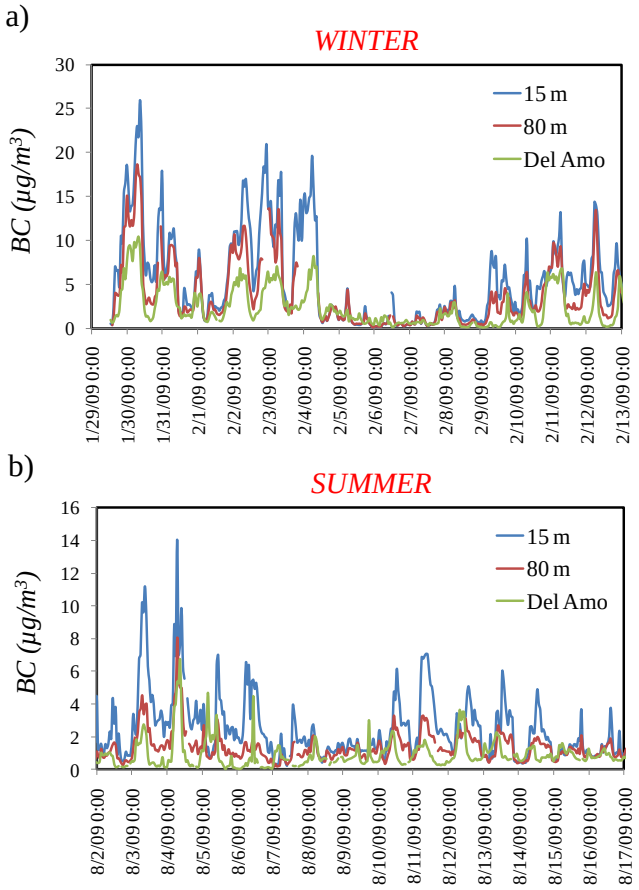
Similar results were obtained during the summer months, when both $PM_{2.5}$ and $PM_{2.5}$ BC showed comparable patterns (Figures 2c and 2d). Also in this case, decreased $PM_{2.5}$ BC concentrations during the warmer months are probably related to seasonal differences in meteorological conditions. All season average $PM_{2.5}$ levels observed during this study are below the corresponding annual average NAAQS set by the U.S. EPA (15 $\mu g/m^3$). None of the measured daily average $PM_{2.5}$ values exceeded the 24-hour average NAAQS for fine PM (35 $\mu g/m^3$).

Figure 2 Average (a) PM_{10}), (b) PM_{10} EC, (c) $PM_{2.5}$, and (d) $PM_{2.5}$ BC concentrations at the "near", "far" and background sites during the winter and summer periods. The corresponding average PM_{10} and $PM_{2.5}$ levels for the South Coast Air Basin (SCAB; see red bars) calculated for similar time periods are also included for comparison



The effect of freeway traffic on measured BC can be observed more clearly on a shorter time-scale, as in the hourly data shown below which are representative of wintertime (Figure 3a) and summertime (Figure 3b) conditions. In both cases, 1-hour BC levels at all three stations tracked each other well over time and the highest BC peaks were recorded at the "near" site (15 meters from the freeway). Because of unusually intense precipitation between 02/05/09 and 02/09/09 the BC concentrations at the two freeway sites often dropped to values similar those observed at Del Amo (background; Figure 3a). The intense rain that characterized the early part of 2009 lowered the concentrations of most air pollutants close to or below background levels on several occasions. The highest wintertime 1-hour BC value (26.0 μg/m^3) was measured at the "near" site on 01/30/09 at 9:00 AM (Figure 3a), apparently associated with diesel emissions from the freeway during rush-hour traffic. Similarly, the highest summertime 1-hour BC concentration at the "near" site (14.0 μg/m^3) was observed on 08/04/09 at 7:00 AM (Figure 3b). A more detailed analysis of the hourly BC data collected during this study can be found in APPENDIX A (Technical Analysis).

Figure 3 Representative hourly average black carbon (BC) data at the "near", "far" and Del Amo (background) sites during the winter (a) and summer (b) periods

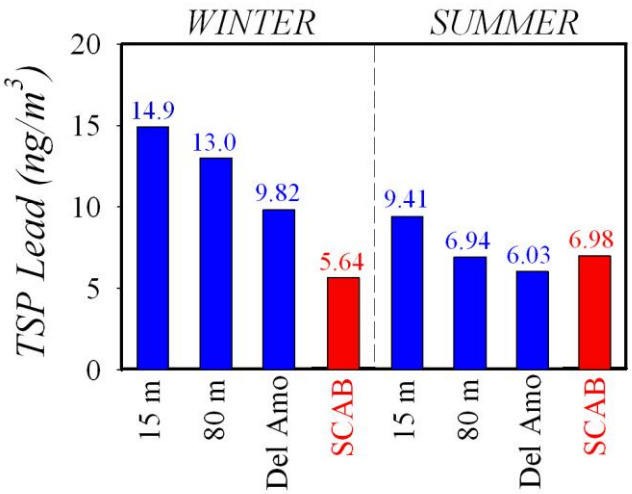


As observed for $PM_{2.5}$ and BC, the highest average TSP lead levels during the winter months were measured at the "near" site and decreased gradually with increasing distance from the freeway (Figure 4). All measured values are higher than the average lead level recorded in the South Coast Basin during the same time period, but similar to the average TSP lead concentration measured between 2004 and 2006 during the third Multiple Air Toxics Exposure Study (MATES III; South Coast AQMD 2008). Increased lead concentrations at the "near" site are probably associated with re-suspension of dust accumulated on or near the freeway dating back to leaded fuels, and not with fresh unleaded fuel motor-vehicle emissions. However, brake wear, tire wear, and the degradation of wheel weights used for tire balancing may also contribute to increase the concentration of lead in near-road environments. Lead is also present in trace amounts in lubricating oil.

During the summer campaign, the overall lead concentrations at all three sites were substantially smaller than during the wintertime (Figure 4) but followed a similar spatial pattern. It is possible that these lower concentrations observed in the warmer months are also related to changes in meteorological conditions. The average lead concentrations measured at all three monitoring stations during the summer are close to the corresponding average value for the South Coast Air Basin.

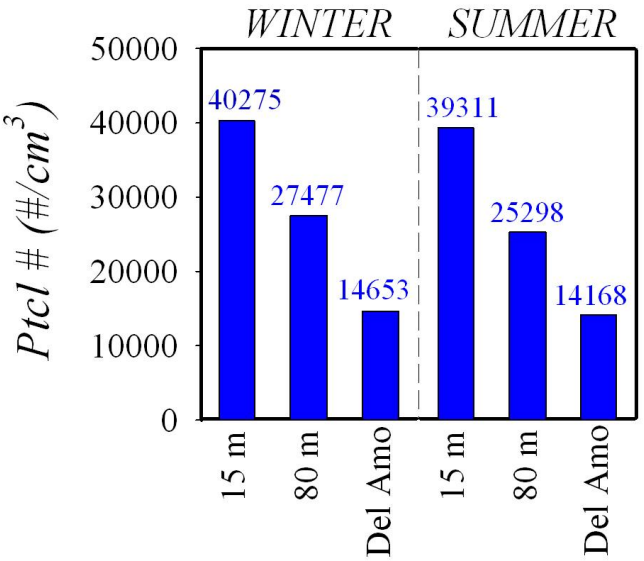
In October 2008 the U.S. Environmental Protection Agency strengthened the NAAQS for lead, lowering it from 1500 ng/m^3 (quarterly average) to a more stringent 150 ng/m^3 (3-month average). None of the concentrations measured at the two I-710 sites and at the Del Amo station were close to or above the current NAAQS for lead set by the U.S. EPA.

Figure 4 Average Total Suspended Particulate (TSP) lead concentrations at the "near", "far" and Del Amo stations during the winter and summer periods. The corresponding average TSP lead levels for the South Coast Air Basin (SCAB) are also included for comparison (red bars)



The highest average UFP level during the winter study was measured at the "near" site and decreased steeply with distance away from the freeway (Figure 5). Background levels at Del Amo are comparable to typical ambient urban levels (5,000-25,000 #/cm^3; Zhu et al., 2002a; 2002b; Hagler et al., 2009; Karner et al., 2010). Ultrafine particles in the study area are only emitted from motor-vehicles. Average summertime UFP number concentrations at all stations were very similar to the corresponding wintertime levels (Figure 5), suggesting that seasonal changes in meteorological conditions did not affect the ambient concentrations of this important pollutant substantially. Our data are consistent with the results of other near-roadway studies conducted both in California and other parts of the United States (Zhu et al., 2002a; 2002b; Hagler et al., 2009; Karner et al., 2010). These results may vary substantially at roadside locations where noise barriers and/or vegetation are present (Bowker et al., 2007).

Figure 5 Average ultrafine particle (UFP) number concentrations at the "near", "far" and Del Amo stations during the winter and summer periods

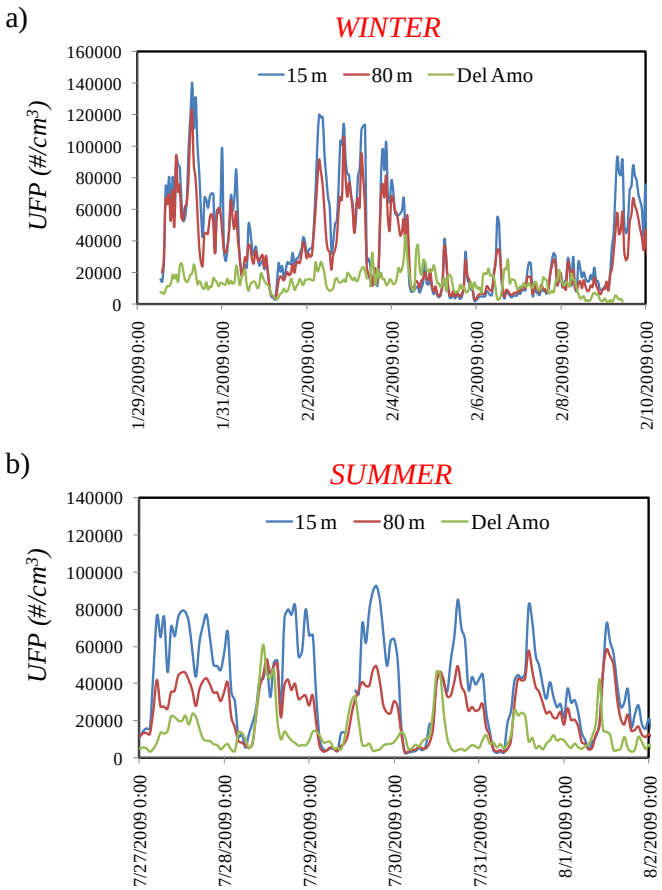


The plots shown in Figure 6 highlight the effect of freeway traffic on the UFP levels measured at the two I-710 sites during the winter (Figure 6a) and the summer (Figure 6b) months. In both cases, the 1-hour average UFP number concentrations at the "near" and "far" sites tracked each other well over time, and sharp UFP peaks were recorded 15 meters from the freeway during periods of intense traffic. As observed for BC, the atmospheric concentrations of UFP at the two freeway sites often dropped to values similar to those observed at Del Amo (background; Figure 6a) due to precipitation events that occurred between 02/05/09 and 02/09/09.

The highest wintertime 1-hour average UFP number concentration (140,350 particles/cm^3) was measured at the "near" site on 01/30/09 at 7:00 AM (Figure 6a) at around the same time when the highest wintertime 1-hour BC level was also observed. This confirms that both peaks were probably associated with motor-vehicle emissions (possibly from heavy duty diesel traffic) during morning rush-hour traffic. The highest summertime 1-hour average UFP count at the "near" site (118,400 #/cm^3) occurred on 07/20/09 early in the evening (at 8:00 PM; not shown). A more detailed analysis of the hourly UFP data collected during this study can be found in APPENDIX A (Technical Analysis).

The presence of highly elevated UFP and BC levels in close proximity to the I-710 may have potential health implications for persons living in adjacent areas. Further work is needed to better evaluate the potential health effects due to exposure to currently unregulated pollutants such as UFP, BC and other combustion products in close proximity to the I-710.

Figure 6 Representative 1-hour average ultrafine particle (UFP) number concentrations measured at the two I-710 sites and in Del Amo during the (a) winter and (b) summer periods



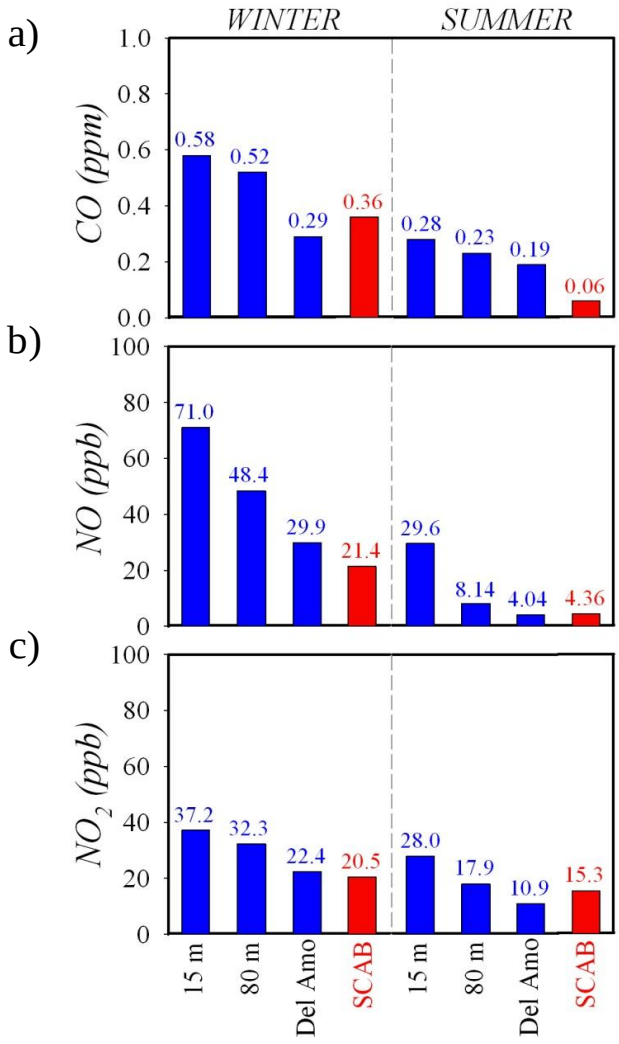
As for all particulate pollutants, the highest average gaseous levels were measured at the "near" site and decreased with increasing distance from the freeway (Figure 7a). In particular, the average wintertime CO concentrations 15 and 80 meters from the I-710 were substantially higher than those at the Del Amo station (background) and in the South Coast Air Basin. This suggests that motor-vehicle emissions, primarily light-duty gasoline vehicles, had a substantial impact on the measured CO levels in close proximity to the freeway. As expected, the overall CO concentrations at the "near", "far" and Del Amo stations (as well as the average South Coast Air Basin level) were lower in the summertime than in the winter months. The maximum 1-hour average concentration downwind of the I-710 (3.0 ppm; measured on 03/02/09 at 08:00) was far below the corresponding NAAQS for CO (35 ppm). Emissions of CO from motor vehicles have declined following the adoption of new control technologies and regulations. However, light-duty gasoline-powered vehicles remain the primary source of this gaseous pollutant at most locations.

Measured concentrations of NO and NO_2 showed a similar pattern as CO, and their atmospheric levels decreased with increasing distance from the I-710 (Figures 7b and 7c). For example, the average wintertime NO concentrations at the "near" and "far" sites were around

three and two times higher than the corresponding values observed at the Del Amo station and in the South Coast Air Basin. On the other hand, the average summertime NO concentrations at the "near" and "far" sites were about seven and two times higher than the corresponding background value. The average NO_2 concentration showed a similar pattern as NO, although it decreased more gradually with increasing distance from the freeway. As for the other measured pollutants, the overall NO and NO_2 levels at all three stations and in the South Coast Air Basin were typically lower in the summertime than in the winter months. Although motor-vehicles emit more NO than NO_2, exposure to NO_2 is particularly important because it has been linked with a number of adverse effects on the respiratory system. On January 2010, a short term standard for NO_2 (100 ppb) was set by the U.S. EPA to complement the existing annual primary NAAQS (53 ppb) and to protect against health effects associated with short-term exposures to NO_2, which can be higher on or near major roads. In conjunction with this new standard, the U.S. EPA also initiated requirements for near-roadway NO_2 monitoring to be implemented in 2013. None of the values measured during this study exceeded the newly set NAAQS for NO_2.

Volatile Organic Compound samples were also collected at the two 710 sites and at Del Amo every other day and at different time intervals (i.e. 05:00 to 09:00, 09:00 to 15:00, 15:00 to 19:00, and 19:00 to 05:00) to examine the composition and the diurnal pattern of this important compound class. Overall, our results strongly suggest that emissions from gasoline-powered vehicles traveling on the I-710 contributed to increased ambient levels of combustion-related VOCs in close proximity (and downwind) of the freeway. The unexpectedly high concentrations of toluene and m,p-xylenes observed at the Del Amo (background) site were probably due to contributions from both motor vehicle and evaporative emissions from nearby industrial facilities and local refinery-related operations (see APPENDIX A for details).

Figure 7 Season-average (a) CO, (b) NO, and (c) NO_2 concentrations at the "near", "far" and background sites during the winter and summer periods. The corresponding average levels for the South Coast Air Basin (SCAB; see red bars) calculated for similar time periods are also included for comparison



CONCLUSIONS AND RECOMMENDATIONS

The results obtained from this monitoring study suggest that motor-vehicle emissions from the I-710 increase the atmospheric concentration of most combustion-related pollutants above background levels, especially within the first 80 meters from the edge of the freeway. Previous studies conducted in California and in other parts of the United States have shown that for UFP and EC (or BC) this area of impact typically extends to 300-400 meters (Karner et al., 2010). These results are important because exposure to UFP and BC (both present in diesel emissions) has been linked to respiratory problems and other adverse health effects. Previous studies conducted by the South Coast AQMD suggested that exposure to diesel particles is the major contributor to the air toxics risk in the South Coast Air Basin accounting for more than

80% of the total carcinogenic risk (MATES III; South Coast AQMD, 2008). Further health effect studies are needed to better characterize short- and long-term risks associated with exposure to these and other combustion-related emissions. The primary means of reducing exposures to near-roadway pollutants is the development and deployment of zero and near-zero emission vehicle technologies and goods movement systems. Other potential mitigation measures that might be effective in communities located near major freeways include: extending the width of "buffer zones" and lowering on-road emissions by promoting tighter emissions standards and cleaner technologies and fuels. Other exposure reduction measures such as building road-side features and noise barriers and/or tree lines, and lowering indoor concentrations by installing high-performance particle filters inside residences are worthy of further evaluation.

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APPENDIX A: TECHNICAL ANALYSIS

INTRODUCTION

Since nearly one million people in the South Coast Air Basin live within 100 meters (m) of a major roadway there is a growing concern about the potential health effects caused by exposure to criteria pollutants and air toxics emitted from both gasoline and diesel vehicles. Recent toxicological and epidemiological studies have identified living near major roadways as a risk factor for respiratory and cardiovascular problems and other health related issues including: asthma and allergic diseases, reduced lung function and growth, low birth weight and pre-term newborns, lung cancer and premature death (Brugge et al., 2007; Balmes et al., 2009; Jarrett et al., 2009).

Motor-vehicle emissions consist of a complex mixture of particulate and gaseous pollutants such as fine particulate matter [$PM_{2.5}$; particles with an aerodynamic diameter (d) less than 2.5 µm], ultra-fine particles (UFP; d < 0.1 µm), metals, organic material, black carbon (BC; an indicator of diesel particulate emissions), volatile organic compounds (VOC), nitrogen oxides (NOx) and carbon monoxide (CO). Among all PM components, UFP and diesel particulate have been hypothesized to be mainly responsible for the observed adverse health effects. A previous study conducted by the South Coast Air Quality Management District (AQMD) suggested that exposure to diesel particles is the major contributor to the air toxics cancer risk in the South Coast Air Basin, accounting on average for about 84% of the total carcinogenic risk (MATES III; South Coast AQMD, 2008).

The majority of all "source proximity" studies conducted to date have focused on the influence of proximity to roadways on outdoor (residential) and indoor exposure to air pollutants. In virtually all these works, it was found that the outdoor concentrations of primary pollutants emitted from motor-vehicle emissions (e.g. UFP and EC) were more strongly correlated with distance from roadways than the outdoor concentrations of species dominated by atmospheric formation or other regional sources (e.g. $PM_{2.5}$, VOCs, and NO_2). Measured concentrations of these primary pollutants were typically highest in close proximity to a roadway and decreased exponentially with increasing distance from (and downwind of) the source. For example, in a study conducted in the Los Angeles area in the daytime Zhu et al. (2002a) found that the concentrations of CO, BC, and UFPs were highest in the vicinity (17 m) of the I-710 (a freeway highly influenced by heavy-duty diesel trucks [HDDT]), and decreased exponentially to upwind background levels after about 300 m. A companion study was carried out next to the I-405 freeway (dominated by gasoline vehicle traffic) with similar results (Zhu et al. 2002b). In a more recent work conducted near the I-10 freeway, Hu et al. (2008) observed a wider area of air pollutant impact downwind of the freeway during pre-sunrise hours. In particular, UFP concentrations peaked immediately downwind of the I-10 and reached background levels only after a distance of about 2600 m. Other combustion related pollutants, such as NO and particle-bound polycyclic aromatic hydrocarbons (p-PAHs), exhibited similar long-distance downwind concentration gradients. The authors associated these elevated pre-sunrise concentrations over a wide area with a nocturnal surface temperature inversion, low wind speeds, and high relative humidity.

It is worth noting that the presence of roadside features such as noise barriers, trees, and buildings can change the dynamics of air pollutant dispersion downwind of a freeway. Results

from two recent studies conducted in Raleigh (NC) and in Los Angeles indicate that near-roadway concentrations of combustion particles (e.g. UFP and BC) and related gaseous co-pollutants (e.g. CO and NO_2) were lower where a noise barrier was present than in open terrain (Bowker et al., 2007 and Ning et al., 2010). However, a longer downwind distance was generally needed to reach background levels, indicating a larger impact zone of traffic emission sources.

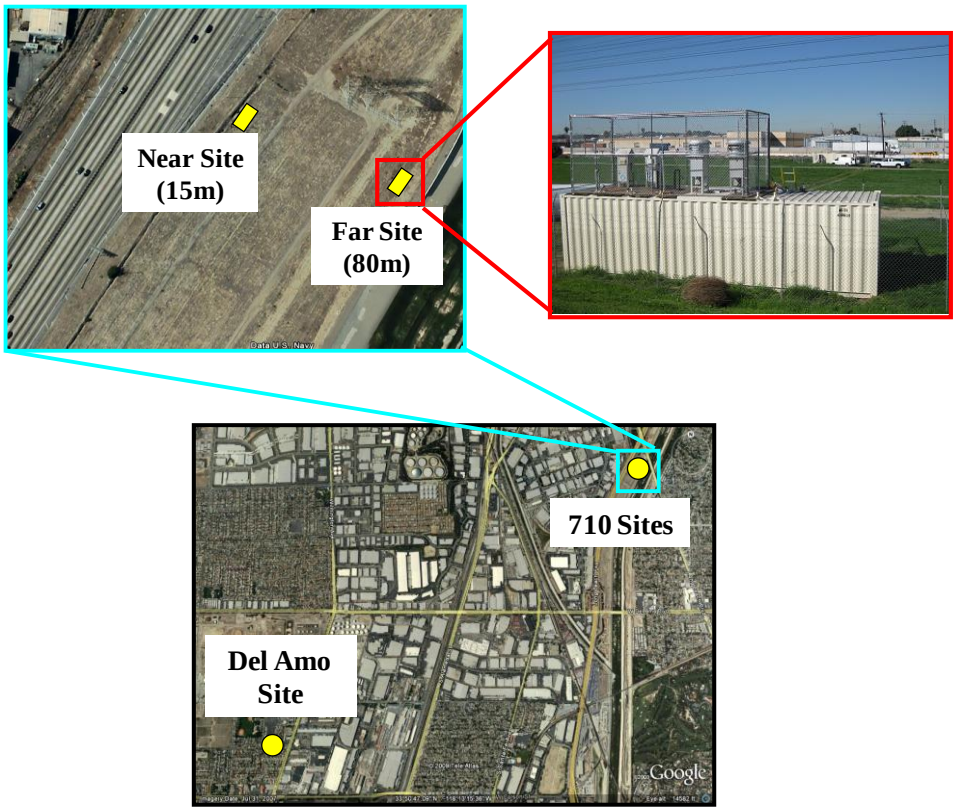
In the winter and summer of 2009 AQMD conducted two intensive field campaigns in the vicinity of the I-710. Two sampling stations were set-up at different distances from (and downwind of) the edge of the freeway and the atmospheric concentration of several air pollutants were measured to characterize the spatial and temporal variations of motor-vehicle emissions and their potential impact on the surrounding communities. This information will help to better understand how Southern California residents are exposed to on-road vehicle emissions, the extent of such exposure, and the type and severity of potential health effects. The I-710 is a 26m wide, eight-lane freeway connecting the port complexes of Long Beach and Los Angeles to warehouses, industry, rail yards, and other freeways East of Downtown Los Angeles. About 20% of the total number of vehicles on the I-710 are HDDT, one of the highest fractions in the South Coast Air Basin.

METHODS

Study Design

Sampling was conducted at two monitoring stations set-up at 15 and 80 m downwind of the eastern edge of the I-710 (here referred to as "near" and "far" sites, respectively), about 250 m south of the North Long Beach Boulevard overpass, and away from the influence of any other immediate PM sources (Figure 1). A third station, far from the influence of the I-710 and representative of generally upwind background conditions for the study area, was operated near Del Amo Elementary School (Carson, CA), about 3 Km west of the freeway and approximately 4.5 km southwest of the two monitoring sites (Figure 1). Sampling was divided into two intensive periods lasting approximately one month each to capture seasonal variations of the measured air pollutants: from 01/29/09 to 03/11/09 (winter campaign) and from 06/30/09 to 08/19/09 (summer campaign). All sampling locations were chosen upon examination of historical wind patterns and site availability.

Figure 1 Aerial view of the sampling area showing the locations of the two monitoring stations near the I-710 freeway ("near" and "far" sites) with respect to the background site in Del Amo. An actual picture of the "far" site is also included



Measured Pollutants

Table 1 lists the particle and gaseous pollutants that were measured at all three stations. Previous work has shown that these species are among the most significant contributors to health risks related to exposure to air pollutants in the South Coast Air Basin (MATES III; South Coast AQMD, 2008). Both continuous and integrated measurement techniques were used to collect/monitor these air toxics. Wind speed, wind direction and other meteorological data were obtained from a meteorological tower installed at the "far" site (80 m from the I-710).

Table 1 List of the particle and gaseous species monitored during this study. Both continuous and integrated measurement techniques were used to collect/monitor all targeted pollutants

Targeted Pollutants			
Integrated Measurements		*Continuous Measurements*	
PM_{10} mass	$PM_{2.5}$ mass	Ultrafine Particle number (UFP)	Nitrogen Oxides (NO, NO_2, NO_X)
Organic Carbon (OC)	TSP Lead	Black Carbon (BC)	Carbon Monoxide (CO)
Elemental Carbon (EC)	Volatile Organic Compounds (VOC)		

Measurement Techniques

Integrated 24-hour (hr) PM_{10} samples were collected every other day on quartz fiber filters (QF) by mean of hi-volume FRM samplers (Tisch Environmental, Inc.). These samples were than analyzed for gravimetric mass using an analytical balance (Sartorus, Inc.). Carbon analysis for the determination of organic carbon (OC) and elemental carbon (EC; closely related to BC and also an indicator of diesel emissions) was then performed on small circular disks taken from the loaded PM_{10} QF samples. These disks were placed inside a heated furnace of a Thermal/Optical Carbon Analyzer (Desert Research Institute, Model 2001) one at the time and subjected to a programmed, step-wise temperature increase while helium gas (He) with varying amounts of oxygen was passed over the sample. This method (based on the IMPROVE protocol) uses a laser beam to monitor and correct the degree of oxidation or carbonization (pyrolysis) that occurs during the analysis. Because OC results may have been affected by potential biases caused by sampling-related artifacts (i.e. excessive absorption of semi-volatile organic compounds on the sampling filter), they are not presented in this report.

Integrated (24-hr) $PM_{2.5}$ samples were collected daily on Teflon filters by mean of Partisol Plus 2025 samplers (Thermo Fisher Scientific, Inc.) and then analyzed for gravimetric mass using an analytical micro-balance (Sartorus, Inc., model MC-5). In addition, 24-hr Total Suspended Particulate (TSP) samples were collected every other day on glass fiber filters by mean of high volume samplers (Tisch Environmental, Inc.). Loaded TSP filters from all sampling locations were then extracted with acid and analyzed for Lead using an Inductively Coupled Plasma Mass Spectrometer (ICP-MS; Leco® Renaissance Time of Flight). Also, four VOC samples per day (i.e. 05:00 to 09:00, 09:00 to 15:00, 15:00 to 19:00, and 19:00 to 05:00)

were collected every other day using silica-lined 6-liter canisters connected to Xontec® 910/912 multi-canister samplers. Targeted VOC were identified and measured using Gas Chromatograph-Mass Spectrometer (GC/MS) method TO-15.

The UFP concentration (particle counts per cubic centimeter of air) was measured continuously (i.e. every minute) by mean of water-based condensation particle counters (CPCs; TSI® Model 3781). This instrument uses a laser photo diode to flash light on the particles that have been supersaturated and grown to detectable sizes with water. A photo detector is then used to count the particles in the sample stream. The sample inlet probe uses a $PM_{2.5}$ sharp cut cyclone to eliminate particles larger than 2.5 μm in diameter to keep the instrument clean. Black Carbon measurements were taken at five minute intervals using portable Aethalometers (Magee Scientific Model AE42), which are based on light absorption of aerosol particles collected on a Teflon tape mounted inside the instrument. Also in this case, the sample inlet probe was preceded by a $PM_{2.5}$ sharp cut cyclone.

Atmospheric levels of CO were monitored at one minute intervals in accordance with U.S. EPA equivalent methods criteria using CO analyzers (Horiba APMA, model 370), which are based on a non dispersive cross modulation infrared analysis method. Nitric oxides concentrations were measured every minute by means of NO-NO_2-NOx analyzers (Thermo Scientific, Model 42i). The model 42i has a single chamber, single photomultiplier tube design that cycles between the NO and NOx modes.

One and five minute data from all continuous instruments (i.e. ultrafine particle, BC, NOx, CO, and meteorological data) were recorded on a data logger and averaged to hourly concentrations to facilitate comparison among sites. All data files were periodically downloaded to a laptop computer and transferred to the AQMD's central database. A summary of the analytical methods that were used to measure the concentrations of all targeted chemical compounds is shown in Table 2.

Table 2 Sampling and analysis methods employed during this study

Ambient Species	Sampling Method	Analysis Method
Integrated Measurements		
$PM_{2.5}$ Mass	24-hr FRM sampler (Daily Samples)	Determined using an analytical microbalance
PM_{10} Mass	Hi-volume sampler (1 sample every 2 days)	Determined using an analytical microbalance
Organic and Elemental Carbon (OC and EC)	Hi-volume sampler (1 sample every 2 days)	Sections of the PM filter were removed and analyzed using a thermal-optical carbon analyzer (IMPROVE method)
TSP Lead	TSP Samplers (1 sample every 2 days)	Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
Volatile Organic Compounds (VOC)	Silica-Lined Canisters (4 samples per day)	Gas Chromatography-Mass Spectrometry (GC-MS) with automated pre-concentration (TO-15)
Continuous Measurements		
Ultrafine Particles (UFP)	CPC Particle Counter (1 minute data)	Continuous particle counts via photo detection of light scattering from particles
Carbon Monoxide (CO)	Continuous Analyzers (1 minute data)	Infrared radiation absorption using gas filter correlation
Black Carbon (BC)	Aethalometer (5 minute data)	Optical analysis method
Nitrogen Oxides (NO, NO_2, NOx)	Continuous Analyzers (1 minute data)	Non dispersive cross modulation infrared analysis

RESULTS AND DISCUSSION

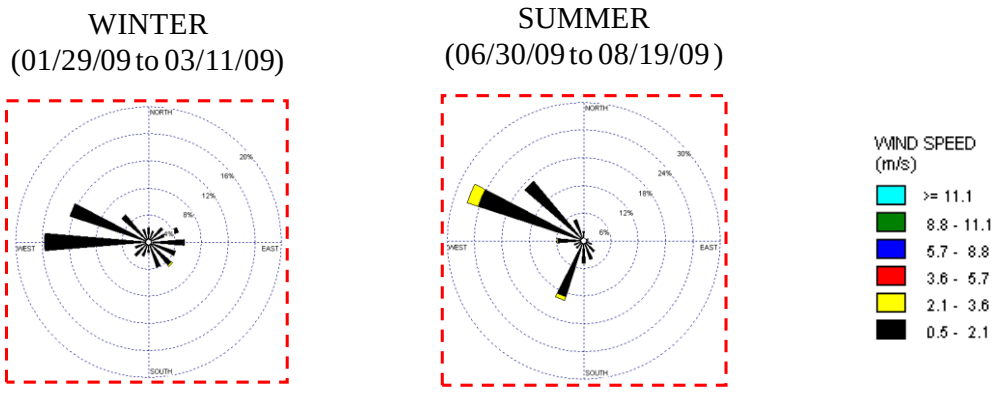
The data collected at the two I-710 sites and at the Del Amo Elementary School station were examined for temporal and seasonal variations, "near" / "far" / "background" site differences, and comparisons to corresponding South Coast Air Basin averages (when available). Pearson correlation plots were used to study the relationships among the measured pollutants and to identify which species are most affected by proximity to the I-710. Finally, the collected wind data were studied in more detail to better understand how local meteorology influences the atmospheric concentration of the measured air pollutants.

Meteorology

Wind roses for to the winter and summer campaigns show the presence of a distinct westerly wind, which is typical for this part of the South Coast Air Basin (Figure 2). In addition

to this dominant westerly component, the winter period was characterized by weaker winds coming from all directions. It is worth noting that the typical afternoon onshore see-breeze was present during the summer months.

Figure 2 Average wind speed and direction at the two I-710 sites during the winter and summer campaigns



The winter field campaign was characterized by an unusually high number of precipitation days. As explained later in this section, days with high rainfall exhibited lower ambient concentrations of all measured air pollutants close to background levels. A summary of the precipitation data measured from 02/01/09 through 03/14/09 is shown below (Table 3; precipitation data were obtained from http://www.weather.com/).

Table 3 Precipitation data near the I-710 monitoring area between 02/01/09 to 03/14/09. Data were retrieved from http://www.weather.com/

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
02/01/09	02/02/09	02/03/09	02/04/09	02/05/09	02/06/09	02/07/09
No rain	No rain	No rain	No rain	Rain (0.32 in)	Rain (0.89 in)	Rain (0.09 in)
02/08/09	02/09/09	02/10/09	02/11/09	02/12/09	02/13/09	02/14/09
Rain (0.11 in)	Rain (0.17 in)	No rain	No rain	No rain	Rain (0.21 in)	No rain
02/15/09	02/16/09	02/17/09	02/18/09	02/19/09	02/20/09	02/21/09
Rain (0.04 in)	Rain (0.64 in)	Rain (0.17 in)	No rain	No rain	No rain	No rain
02/22/09	02/23/09	02/24/09	02/25/09	02/26/09	02/27/09	02/28/09
No rain	No rain	No rain	No rain	No rain	No rain	No rain
03/01/09	03/02/09	03/03/09	03/04/09	03/05/09	03/06/09	03/07/09
No rain	No rain	No rain	Rain (0.13 in)	No rain	No rain	No rain
03/08/09	03/09/09	03/10/09	03/11/09	03/12/09	03/13/09	03/14/09
No rain	No rain	No rain	No rain	No rain	No rain	No rain

Coarse Particulate Matter and Elemental Carbon Content

The PM_{10} mass concentration of and the corresponding EC content for samples collected at the three monitoring stations during the winter and summer periods were examined for spatial and seasonal patterns. The results have been summarized in Table 4 and Figure 3. As expected,

the highest average and median PM_{10} mass levels (31.2 and 29.5 µg/m^3, respectively) during the winter campaign (from 01/29/09 to 03/11/09) were measured at the "near" site. The corresponding average PM_{10} value at the "far" station (23.0 µg/m^3) was substantially lower than that recorded near the edge of the freeway, but similar to that observed in Del Amo during the same time period (22.2 µg/m^3). Near-roadway PM_{10} is mostly emitted from re-suspension of road dust particles by freeway traffic and through other mechanical processes such as brake and tire wear. Because of their larger size, the coarse portion (2.5 to 10 µm) of PM_{10} particles are generally not transported far away from their source.

Elemental carbon was characterized by a similar spatial variability as PM_{10}, although its atmospheric concentration decreased more gradually with increasing distance from the freeway (Figure 3). This result is probably due to the fact that this carbonaceous species is mostly associated with smaller PM fractions (e.g. sub-micron particles from diesel emissions) and transported over longer distances. In particular, the average wintertime EC levels at the "near", "far" and Del Amo sites were 3.59, 2.79, and 2.20 µg/m^3, respectively.

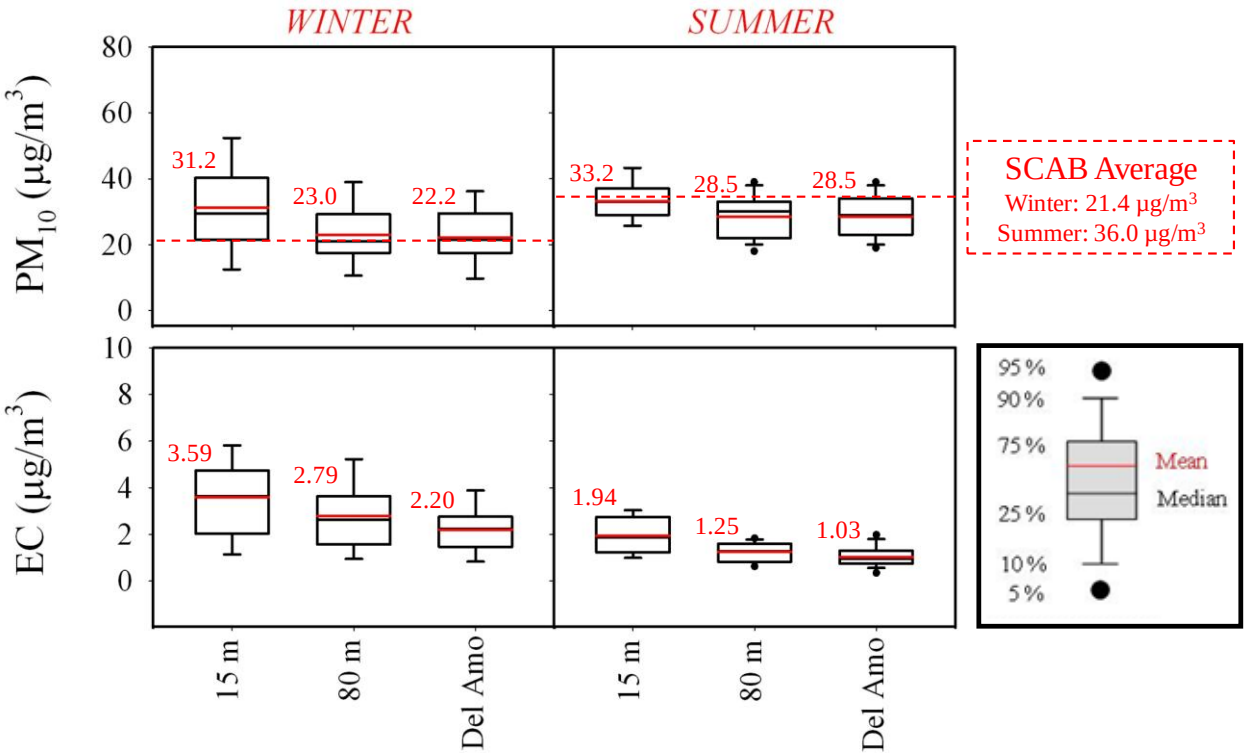
Table 4 Average and median coarse particulate matter (PM_{10}) and elemental carbon (EC) concentrations measured at the "near", "far" and Del Amo stations during the winter (from 01/29/09 to 03/11/09) and summer (between 06/30/09 and 08/19/09) campaigns. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) are also included along with the corresponding PM_{10} levels for the South Coast Air Basin calculated for the same time periods

	15 m	80 m	Del Amo	South Coast
	PM_{10} (µg/m^3) - WINTER			
Average	31.2	23.0	22.2	21.4
Median	29.5	21.0	21.5	19.0
SD	15.0	9.70	8.63	12.5
Min	8.00	7.00	7.00	0.0
Max	65.0	39.0	38.0	74.0
Valid N	18	18	18	151
	EC (µg/m^3) – WINTER			
Average	3.59	2.79	2.20	NA
Median	3.64	2.63	2.25	NA
SD	1.97	1.57	0.95	NA
Min	0.60	0.54	0.69	NA
Max	9.01	6.54	3.97	NA
Valid N	18	18	18	NA

	15 m	80 m	Del Amo	South Coast
	PM_{10} (µg/m^3) – SUMMER			
Average	33.2	28.5	28.5	36.0
Median	33.0	30.0	29.0	34.0
SD	5.91	6.24	6.35	15.0
Min	23.0	18.0	19.0	13.0
Max	46.0	39.0	39.0	140
Valid N	18	19	19	191
	EC (µg/m^3) – SUMMER			
Average	1.94	1.25	1.03	NA
Median	1.86	1.28	0.97	NA
SD	0.74	0.37	0.42	NA
Min	0.89	0.63	0.35	NA
Max	3.09	1.84	1.98	NA
Valid N	17	19	19	NA

NA = Not Applicable. EC is not routinely measured on PM_{10} samples collected at SCAQMD network stations

Figure 3 Spatial distributions of coarse particulate matter (PM_{10}) and elemental carbon (EC) at the "near", "far" and Del Amo sites during the winter and summer campaigns. The corresponding average PM_{10} levels for the South Coast Air Basin (SCAB) calculated for the same time periods are also included for comparison



During the summer part of the study (from 06/30/09 to 08/19/09), the PM_{10} mass concentrations at all three sites were comparable to those observed during the wintertime and followed a similar spatial gradient. Specifically, the average coarse PM levels at the "near", "far" and Del Amo stations were 33.2, 28.5 and 28.5 µg/m^3, respectively. However, the corresponding average EC contributions to the measured PM_{10} concentrations were substantially lower than those observed during the winter campaign (Figure 3). It is possible that lower EC levels during the warmer months are related to seasonal changes in meteorological conditions. Generally, in the late fall and winter light winds result in reduced ventilation, and late night/early morning inversions contribute to increasing the surface-level concentrations of those pollutants that are emitted from nearby ground-level sources. During the summertime months, a stronger land breeze/sea breeze circulation and increased solar insulation results in higher wind speeds, increased vertical atmospheric dispersion and, subsequently, reduced impact of local sources to ambient concentrations.

With the exception of the average PM_{10} concentration measured at the "near" site during the winter campaign, the average (or median) coarse PM levels observed at all stations throughout this study were comparable or lower than the corresponding average PM_{10} values measured in the South Coast Air Basin during similar times periods (21.4 and 36.0 µg/m^3 during the winter and summer campaigns, respectively). Also, all measurements were well below the

U.S. EPA NAAQS for PM_{10} (150 µg/m^3, not to be exceeded more than once per year on average over three years).

Fine Particulate Matter and Black Carbon Content

The measured $PM_{2.5}$ mass concentrations were also analyzed for spatial and seasonal differences (Table 5 and Figure 4). Because a Partisol sampler was not available at the Del Amo site, fine PM data are not available at this station. However, background $PM_{2.5}$ levels for both the winter and summer campaigns were obtained from the North Long Beach site, one of AQMD's network stations located away from the influence of the I-710, but in the same geographical area. Although the EC content of the collected $PM_{2.5}$ samples was not measured, BC data obtained from an Aethalometer with a $PM_{2.5}$ selective inlet were used to gain some insight on potential contributions from diesel emissions. Elemental carbon and BC are both indicators of diesel emitted PM and are typically well correlated across the South Coast Air Basin. However, it should be noted that recent data collected by AQMD have shown that the extent of this correlation can be different at coastal and inland sites and may vary throughout the year.

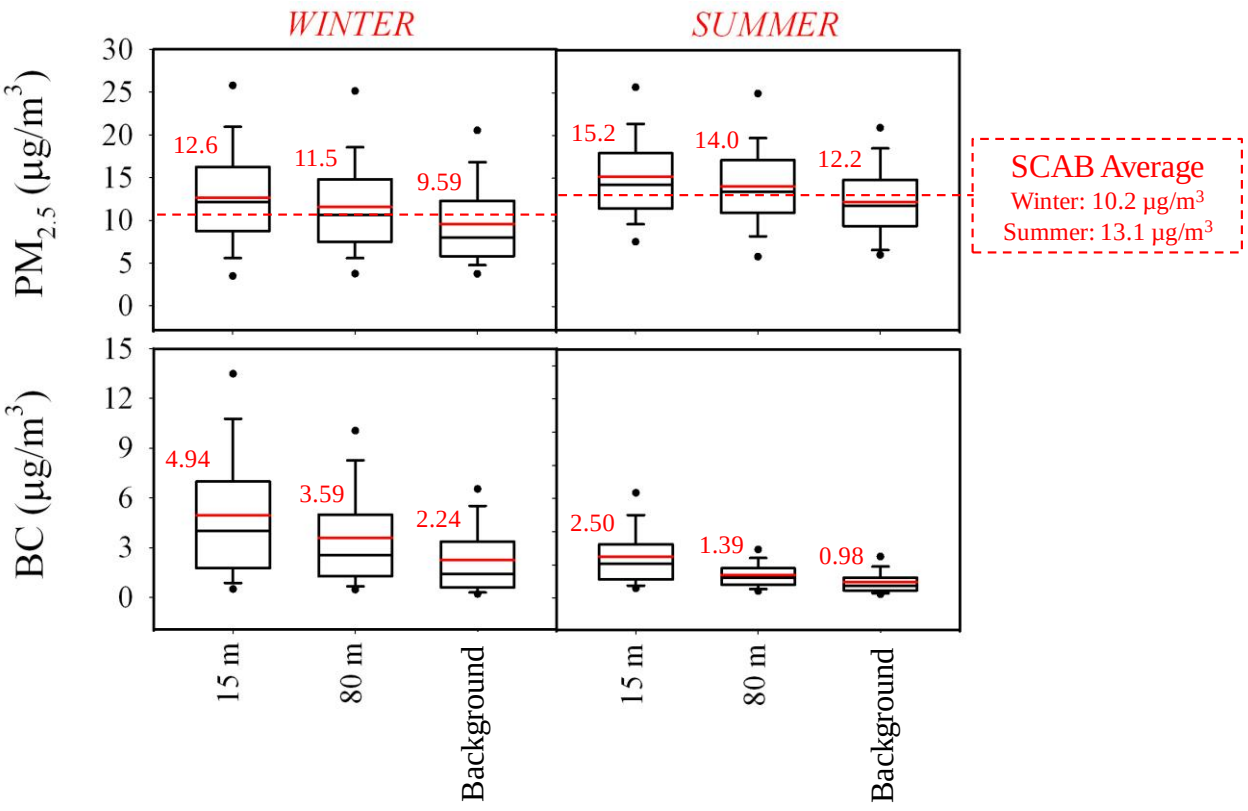
Table 5 Average and median fine particulate matter ($PM_{2.5}$) and black carbon (BC) concentrations at the "near", "far" and background stations during the winter and summer campaigns. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) are also included along with the corresponding $PM_{2.5}$ levels for the South Coast Air Basin calculated for the same time periods. Background $PM_{2.5}$ and BC data were measured at the North Long Beach and Del Amo stations, respectively

	15 m	80 m	Background	South Coast		15 m	80 m	Background	South Coast
	$PM_{2.5}$ (µg/m^3) - WINTER					*$PM_{2.5}$ (µg/m^3) - SUMMER*			
Average	12.6	11.5	9.59	10.2	**Average**	15.2	14.0	12.2	13.1
Median	12.1	10.6	7.96	8.8	**Median**	14.2	13.4	11.8	12.3
SD	5.72	5.34	4.63	6.2	**SD**	4.83	4.70	4.18	5.1
Min	3.21	3.29	2.84	1.3	**Min**	7.29	4.58	4.59	2.0
Max	26.2	25.2	21.1	36.2	**Max**	28.6	25.4	23.7	39.7
Valid N	36	36	35	416	**Valid N**	41	34	43	515
	BC (µg/m^3) - WINTER					*BC (µg/m^3) - SUMMER*			
Average	4.94	3.59	2.24	NA	**Average**	2.50	1.39	0.98	NA
Median	3.99	2.55	1.42	NA	**Median**	2.07	1.23	0.74	NA
SD	4.10	3.12	2.12	NA	**SD**	1.80	0.81	0.81	NA
Min	0.05	0.06	0.04	NA	**Min**	0.15	0.14	0.04	NA
Max	26.0	18.6	13.8	NA	**Max**	14.0	8.06	6.71	NA
Valid N	978	955	921	NA	**Valid N**	1194	1185	846	NA

NA = Not Applicable. BC is not routinely measured on $PM_{2.5}$ samples collected at SCAQMD network stations

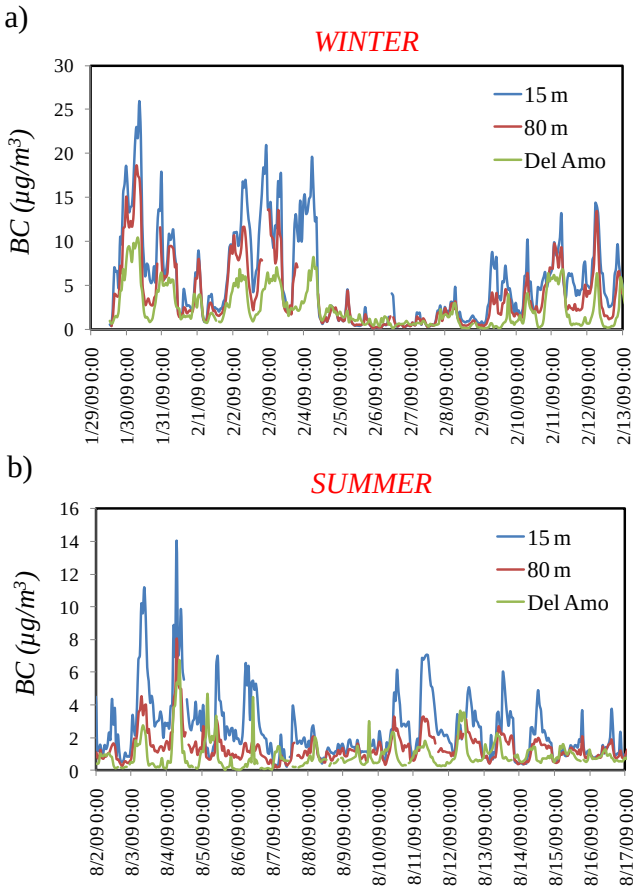
As expected, the highest average and median $PM_{2.5}$ mass levels (12.6 and 12.1 µg/m^3, respectively) during the winter campaign were measured at the "near" site and decreased gradually with increasing distance from the freeway (Figure 4). The corresponding average $PM_{2.5}$ concentrations at the "far" and at the North Long Beach stations were 11.5 and 9.59 µg/m^3, respectively, suggesting that the contribution of motor-vehicle emissions to the $PM_{2.5}$ levels measured in close proximity to the I-710 freeway was modest. Conversely, the atmospheric concentration of BC was characterized by a higher spatial variability, reflecting relatively higher emissions of diesel PM from HDDT. Similar results were obtained during the summer months, when both $PM_{2.5}$ and BC showed comparable spatial trends. Similar to PM_{10} EC, decreased $PM_{2.5}$ BC concentrations during the warmer months are probably related to seasonal differences in meteorological conditions. All season average $PM_{2.5}$ levels measured during this study are below the annual average NAAQS for $PM_{2.5}$ set by the U.S. EPA (15 µg/m^3). None of the measured daily average $PM_{2.5}$ concentrations exceeded the corresponding 24-hr average NAAQS (35 µg/m^3).

Figure 4 Spatial distributions of fine particulate matter ($PM_{2.5}$) and black carbon (BC) at the "near", "far" and background sites during the winter and the summer campaigns. The corresponding average $PM_{2.5}$ levels for the South Coast Air Basin (SCAB) calculated for the same periods are also included for comparison. Background $PM_{2.5}$ and BC data were measured at the North Long Beach and Del Amo stations, respectively



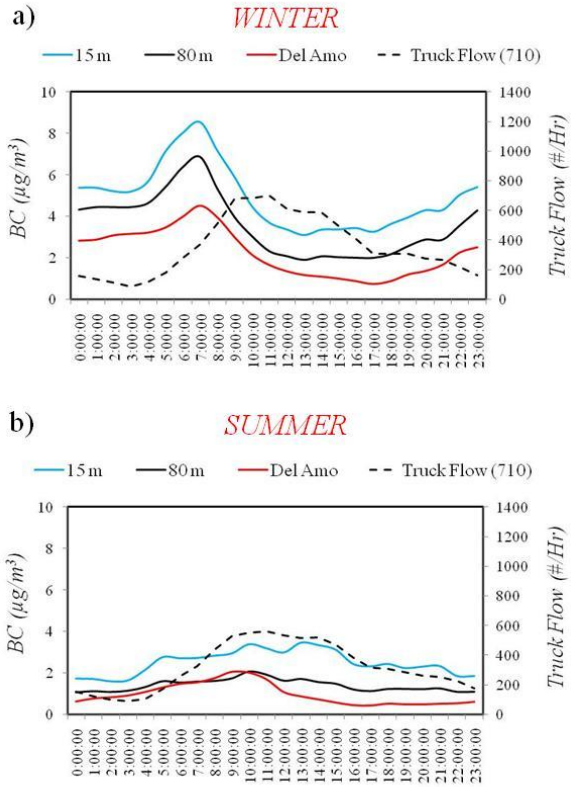
The effect of freeway traffic on measured BC can be observed more clearly on a shorter time-scale, as in the hourly data shown below which are representative of wintertime (Figure 5a) and summertime (Figure 5b) conditions. In both cases, 1-hr BC levels at all three stations tracked each other well over time and the highest BC peaks were observed at the "near" site (15 m from the freeway). Because of unusually intense precipitation between 02/05/09 and 02/09/09 (with daily rainfall as high as 0.9 inches) the BC concentrations at the two freeway sites often dropped to values similar those observed in Del Amo (background; Figure 5a). The intense rain that characterized the early part of 2009 lowered the concentrations of most air pollutants close to or below background levels on several occasions. The highest wintertime 1-hr BC concentration (26.0 µg/m^3) was measured at the "near" site on 01/30/09 at 09:00 (Figure 5a) and it was probably associated with diesel emissions from the freeway during rush-hour traffic. For comparison, the corresponding BC levels recorded at the same time at the "far" site and in Del Amo were 17.1 and 9.1 µg/m^3 (or about 34 and 65% lower), respectively. Such relatively high BC values at the background site suggests that in the morning hours this station may also be influenced by substantial diesel emissions from local traffic. Similarly, the highest summertime 1-hr BC concentration at the "near" site (14.0 µg/m^3) was observed on 08/04/09 at 07:00 (Figure 5b). In this case, the correspondent BC levels measured at the same time at the "far" site and in Del Amo were 8.06 and 5.37 µg/m^3 (or about 43 and 62% lower), respectively.

Figure 5 Representative hourly average black carbon (BC) data at the "near", "far" and Del Amo (background) sites during the winter (a) and summer (b) field campaigns



As illustrated in Figure 6, the average wintertime and summertime diurnal profiles for BC are characterized by distinctively different patterns. In particular, while the wintertime BC concentrations at all three stations peak between 05:00 and 09:00 and decrease in the afternoon, the correspondent summertime diurnal trends show more irregular variations in BC levels throughout the day and a smaller diurnal increase, with peak values occurring in the late morning / early afternoon. This may be due to seasonal changes in truck traffic volume and/or in local meteorology. In particular, while summertime BC levels are very well correlated to the observed truck traffic flow (Figure 6b), it is likely that measured wintertime BC concentrations are mostly driven by the effect of nighttime and early morning inversions (Figure 6a). It should be noted that midday BC levels of similar magnitude (probably associated with the typical increase in truck traffic between 10:00 and 14:00) were observed during both seasons. This is consistent with the results from a previous study conducted in the same area by Fruin et al., 2008. The traffic information shown in Figure 6 was taken from the CalTrans/PeMS website (http://pems.dot.ca.gov/) and refers to the average diurnal truck traffic flow (#/hr) as recorded by two traffic sensors located about 150 and 500 m north of the 710 site (sensors IDs: 717963 and 717966). Since traffic data were not available at the time of this study the average track flow values in Figure 6 refer to February and June 2011 (for Figure 6a and 6b, respectively).

Figure 6 Average wintertime (a) and summertime (b) diurnal profiles for BC and truck traffic volume at the "near", "far" and Del Amo (background). Traffic information was taken from the CalTrans/PeMS website (http://pems.dot.ca.gov/). Since traffic data were not available at the time of this study, the diurnal average truck flow values shown below are for (a) February and (b) June 2011



Generally, in the late fall and winter light winds result in reduced ventilation, and late night/early morning inversions contribute to increasing the surface-level concentrations of those pollutants that are emitted from nearby ground-level sources. During the summertime months, stronger land breeze/sea breeze circulation and increased solar insulation results in higher wind speeds, increased vertical atmospheric dispersion and, subsequently, reduced impact of local sources to ambient concentrations.

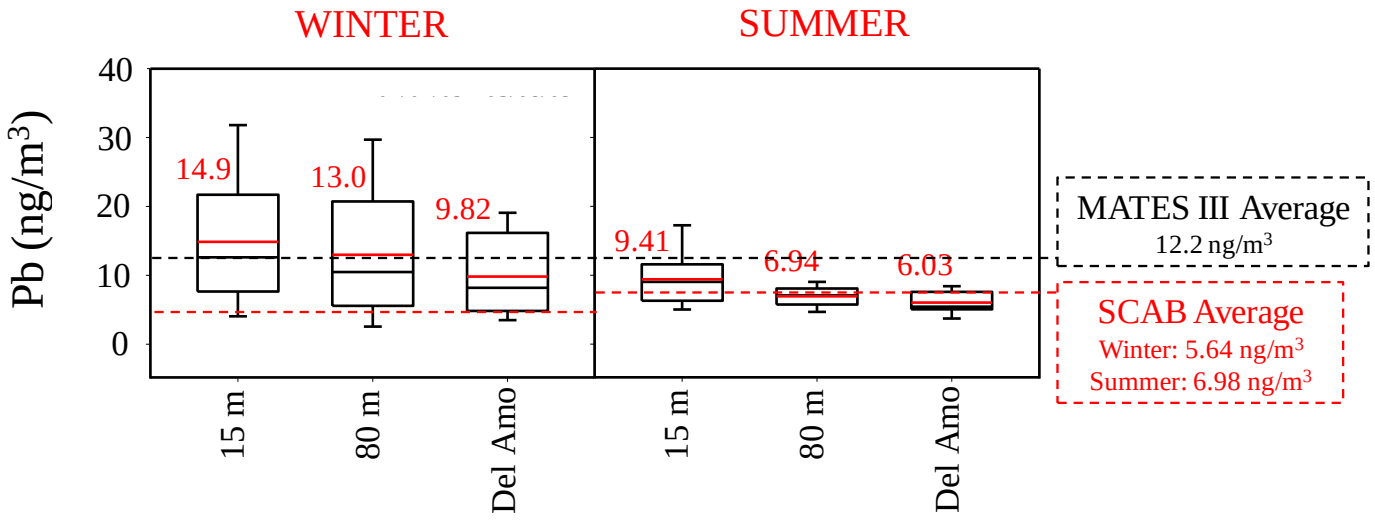
Total Suspended Particulate Lead

As observed for $PM_{2.5}$ and BC, the highest average and median TSP lead levels (14.9 and 12.6 ng/m^3, respectively) during the winter months were measured at the "near" site and decreased gradually with increasing distance from the freeway (Figure 7). For comparison, the corresponding average lead concentrations at the "far" and Del Amo stations were 13.0 and 9.8 ng/m^3, respectively. These values are higher than the average lead level recorded in the South Coast Basin during the same time period (5.64 ng/m^3; Table 6), but in line with the average TSP lead concentration measured between 2004 and 2006 during the third Multiple Air Toxics Exposure Study (MATES III; South Coast AQMD, 2008) (12.2 ng/m^3). Increased lead concentrations at the "near" site are probably associated with re-suspension of historically deposited dust accumulated on or near the freeway dating back to leaded fuels, and not with fresh unleaded fuel motor-vehicle emissions. However, brake wear, tire wear, and the degradation of wheel weights used for tire balancing may also contribute to increase the concentration of lead in the near-road environments. Lead is also present in trace amounts in lubricating oil.

Table 6 Average and median lead concentrations in Total Suspended Particles (TSP) at the "near", "far" and Del Amo sites during the winter and the summer campaigns. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) are also included along with representative lead data for the South Coast Air Basin calculated during the same time periods

	15 m	80 m	Del Amo	South Coast
	TSP Lead (ng/m^3) – WINTER			
Average	14.9	13.0	9.82	5.64
Median	12.6	10.5	8.20	3.51
SD	9.35	9.33	5.74	4.93
Min	1.93	0.84	2.55	0.58
Max	33.7	31.2	19.9	19.8
Valid N	17	17	14	84
	TSP Lead (ng/m^3) – SUMMER			
Average	9.41	6.94	6.03	6.98
Median	9.04	7.07	5.45	6.58
SD	3.84	1.49	1.56	3.45
Min	4.10	3.96	3.45	0.40
Max	17.7	9.34	8.67	16.3
Valid N	18	15	17	108

Figure 7 Spatial distribution of Total Suspended Particulate (TSP) lead at the "near", "far" and Del Amo stations during the winter and summer campaigns. The corresponding average TSP lead levels for the South Coast Air Basin (SCAB) calculated for the same time periods and during MATES III (2004-2006) are also included for comparison



During the summer campaign, the overall lead concentrations at all three sites were substantially smaller than during the wintertime (Figure 7) but followed a similar spatial gradient, with average values of 9.4, 6.9 and 6.0 ng/m^3 at the "near", "far" and Del Amo sites, respectively. It is possible that these substantially lower concentrations observed in the warmer months are also related to changes in meteorological conditions, as explained in the previous sections. The average and median lead concentrations measured at all three monitoring stations during the summer intensive are close to the corresponding average value for the South Coast Air Basin.

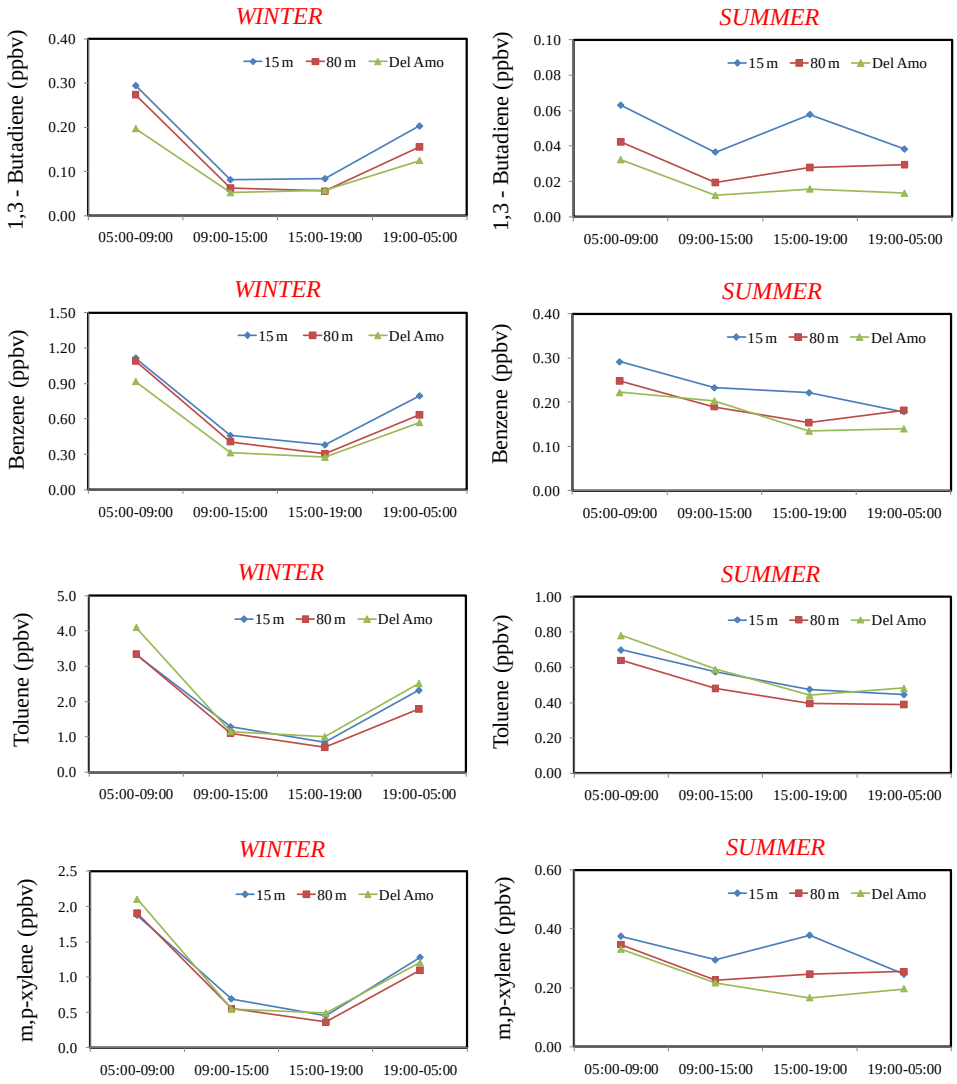
In October 2008 the U.S. Environmental Protection Agency strengthened the NAAQS for lead, lowering it from 1500 ng/m^3 (quarterly average) to a more stringent 150 ng/m^3 (rolling 3-month average). None of the concentrations measured at the two I-710 sites and at the Del Amo station during this study were close to or above the current NAAQS for lead (Table 6).

Time Resolved Volatile Organic Compounds

Volatile Organic Compound samples were collected at the two 710 sites and at Del Amo every other day and at different time intervals (i.e. 05:00 to 09:00, 09:00 to 15:00, 15:00 to 19:00, and 19:00 to 05:00) to examine the composition and the diurnal variability of this important compound class. The following VOCs were analyzed in all collected samples because of their potential importance relative to toxic cancer risk in the South Coast Air Basin: Vinylchloride, 1,3-butadiene, Acrolein, Acetone, Methylenechloride, Methyltertbutylether, 2-butanone, chloroform, 1,2-Dichloroethane, Benzene, Carbontetrachloride, 1,2-Dichloropropane, Trichloroethylene, Toluene, 1,2-dibromoethane, Tetrachloroethene, Ethylbenzene, m,p-Xylenes, Styrene, o-Xylene, 1,4-DiChlorobenzene, and 1,2-DiChlorobenzene. Only benzene, 1,3-butadiene, toluene and m,p-xylene were selected for the purpose of this analysis since they were detected in all samples and are common components of motor vehicle exhaust. The time-integrated concentrations of all other VOCs measured at the 710 and Del Amo sites were found to follow similar spatial and temporal trends and will not be discussed here. The complete VOC dataset can be found in Appendix B.

As shown in Figure 8, the ambient concentrations of these four volatile species were typically higher during the winter months than in the summer period. This is consistent with expectations due to the same seasonal changes in local meteorological conditions mentioned above. Similar seasonal variations have also been observed during previous studies conducted in the South Coast Air Basin (e.g. MATES III; South Coast AQMD, 2008).

Figure 8 Time-averaged concentrations of benzene, 1,3-butadiene, toluene and m,p-xylene at the "near", "far", and Del Amo sites during the winter and summer campaigns. Note that the winter and summer charts display different y-axis scales to accommodate the lower concentrations in summer.



The average wintertime concentrations of 1,3-butadiene, benzene, toluene, and m,p-xylene (as with most measured VOCs) were higher between 05:00 and 09:00 and between 19:00 and 05:00, probably because of a decreased mixing height and increased atmospheric stability early in the morning and late at night. A rather different and less consistent average diurnal pattern was observed in the summertime, when the ambient concentrations of most species peaked early in the morning (i.e. 05:00) and decreased late at night/early in the morning.

Table 7 shows the ratios between the concentrations of 1,3-butadiene, benzene, toluene and m,p-xylene measured at the "near" and "far" site and the correspondent atmospheric levels observed at the Del Amo (background) station. For 1,3-butadienes and benzene (considered to be good tracers of gasoline vehicle emissions) these "near" and "far" site background-normalized

concentrations (here referred to as "15m/Del Amo" and "80m/Del Amo", respectively) were typically higher than 1. Furthermore, the "15m/Del Amo" was consistently higher than the corresponding "80m/Del Amo" value for each of the considered time periods. These results strongly suggest that emissions from gasoline-powered vehicles traveling on the I-710 contributed to increased ambient levels of combustion-related VOCs in close proximity (and downwind) of the freeway.

Interestingly, a very different scenario was observed for toluene and m,p-xylenes. As illustrated in Table 7, the average concentration ratios for these two VOCs were often lower than 1, especially early in the morning and late at night. This indicates that the background levels of toluene and m,p-xylene were, at times, similar or slightly higher than those measured in close proximity to the I-710. A likely explanation from this unexpected finding is that the ambient concentrations of these two air toxics at the Del Amo site may have been influenced by contributions from both motor vehicle and evaporative emissions (e.g. from nearby industrial facilities and local refinery-related operations). Also in this case, the average "15m/Del Amo" ratios for toluene and m,p-xylene were consistently higher than the corresponding "80m/Del Amo" values for each time period considered, which is consistent with expectations.

Table 7 Concentration ratios between the atmospheric levels of 1,3-butadiene, benzene, toluene and m,p-xylene at the "near" and "far" sites and the correspondent values at the Del Amo (background) station ("15m/Del Amo" and "80m/Del Amo", respectively). Wintertime and summertime data have been grouped in four different time intervals (i.e. 05:00 to 09:00, 09:00 to 15:00, 15:00 to 19:00, and 19:00 to 05:00)

Time Interval	Concentration Ratio	1,3-butadiene	Benzene	Toluene	m,p-Xylenes
WINTER					
05:00-09:00	15m / Del Amo	1.62	1.30	0.85	0.93
09:00-15:00	15m / Del Amo	1.93	1.44	1.07	1.19
15:00-19:00	15m / Del Amo	2.37	1.63	1.12	1.22
19:00-05:00	15m / Del Amo	1.63	1.54	0.94	1.12
05:00-09:00	80m / Del Amo	1.49	1.30	0.87	0.97
09:00-15:00	80m / Del Amo	1.44	1.28	0.92	0.96
15:00-19:00	80m / Del Amo	1.59	1.24	0.88	0.92
19:00-05:00	80m / Del Amo	1.29	1.27	0.75	1.30
SUMMER					
05:00-09:00	15m / Del Amo	1.85	1.32	0.95	1.15
09:00-15:00	15m / Del Amo	2.93	1.23	1.01	1.44
15:00-19:00	15m / Del Amo	2.89	1.73	1.12	1.89
19:00-05:00	15m / Del Amo	1.81	1.30	0.94	1.31
05:00-09:00	80m / Del Amo	1.52	1.10	0.86	1.08
09:00-15:00	80m / Del Amo	1.44	0.99	0.84	1.11
15:00-19:00	80m / Del Amo	1.35	1.13	0.85	1.34
19:00-05:00	80m / Del Amo	1.43	1.34	0.84	1.39

Ultrafine Particles

Ultrafine particle count data collected at the two I-710 stations and at Del Amo were analyzed to study how the atmospheric concentrations of this PM fraction changed throughout the day and at different distances from the I-710. The highest average and median UFP levels observed during the winter campaign (around 40275 and 33235 #/cm^3, respectively) were measured at the "near" site and decreased steeply away from the freeway (Figure 9 and Table 8). Ultrafine particles in the study area are primarily emitted from motor-vehicles and, once released, they diffuse rapidly, evaporate, and/or coagulate with bigger particles. Average wintertime concentrations at the "far" and Del Amo (background) sites were 27477 and 14653 #/cm^3, respectively, or about 32 and 64% less than that measured at the "near" site. These background levels are comparable to typical ambient urban levels (5,000-25,000 #/cm^3; Zhu et al., 2002a; 2002b; Hagler et al., 2009; Karner et al., 2010). Summertime UFP number concentrations at all stations were very similar to the corresponding wintertime levels (Figure 9 and Table 8), suggesting that seasonal changes in meteorological conditions did not affect the ambient levels of this important PM fraction substantially. Specifically, average summertime UFP levels at the "far" and Del Amo sites were 25298 and 14168 #/cm^3, respectively, or approximately 36 and 64% less than that measured at the "near" site (39311 #/cm^3).

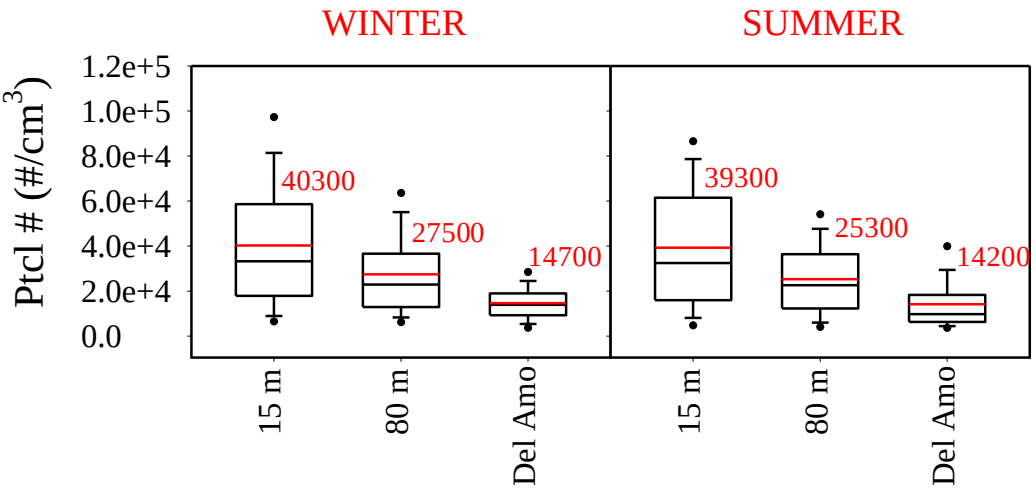
Our data are consistent with the results of other near-roadway studies conducted both in California and other parts of the United States. In particular, a recent comparison among six past field measurements has shown that the decrease in UFP concentration is quasi-linear for the first 100 m, with an approximate 5 to 12% drop in UFP per 10 m distance from the roadway (Hagler et al., 2009). In this work, differences among sampling locations were found to be small and mostly due to the traffic mix characteristics (e.g. percentage of heavy duty diesel trucks), the monitoring period considered, local meteorological conditions, and the measurement device used. In most of these previous field studies the daytime concentration of vehicle-related pollutants was found to decrease exponentially with distance from roadways, and background levels were reached only after 300-400 m (Zhu et al., 2002a and 2002b; Karner et al., 2010). These results may vary substantially at roadside locations where noise barriers and/or vegetation are present (Bowker et al., 2007).

Table 8 Average and median ultrafine particle (UFP) number concentrations at the "near", "far" and Del Amo sites during the winter and the summer campaigns. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) are also included

	15 m	**80 m**	**Del Amo**
	UFP (#/cm^3) - WINTER		
Average	40275	27477	14653
Median	33235	22937	13942
SD	28032	18518	7564
Min	2119	2115	970
Max	140350	122683	46148
Valid N	983	839	913

	15 m	**80 m**	**Del Amo**
	UFP (#/cm^3) - SUMMER		
Average	39311	25298	14168
Median	32490	22622	9773
SD	26776	15934	11952
Min	1754	1980	1325
Max	118423	85533	82577
Valid N	979	839	936

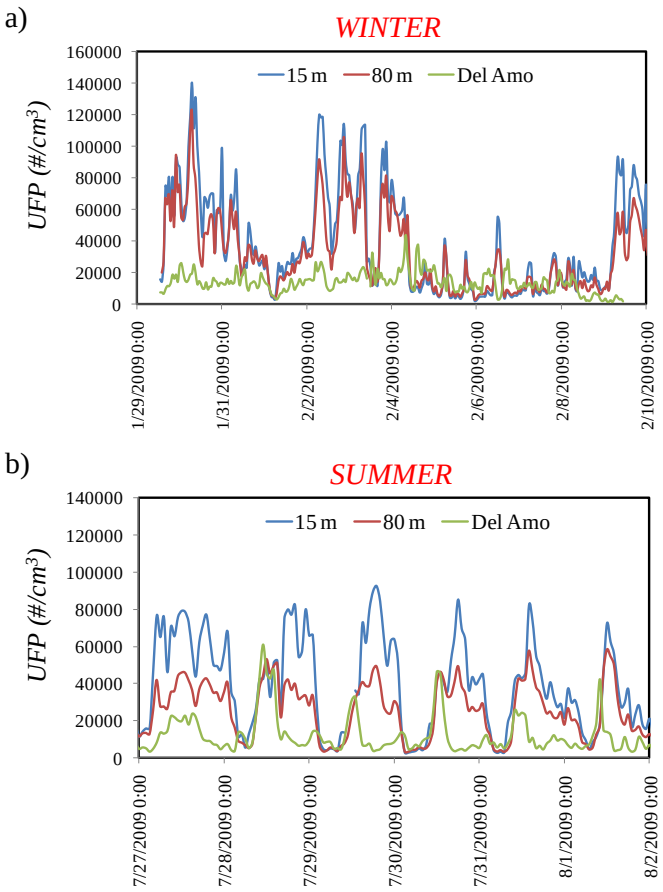
Figure 9 Spatial distribution of ultrafine particle (UFP) number at the "near", "far" and Del Amo stations during the winter and summer campaigns



The time series shown in Figure 10 highlights the effect of freeway traffic on the UFP levels measured at the two I-710 sites during the winter (Figure 10a) and the summer (Figure 10b) months. In both cases, the 1-hr average UFP number concentrations at the "near" and "far" sites tracked each other well over time, and sharp UFP peaks were recorded 15 m from the freeway during periods of intense traffic. As observed for BC, the atmospheric levels of UFP at the two freeway sites often dropped to values similar those observed at Del Amo (background; Figure 10a) due to precipitation events that occurred between 02/05/09 and 02/09/09.

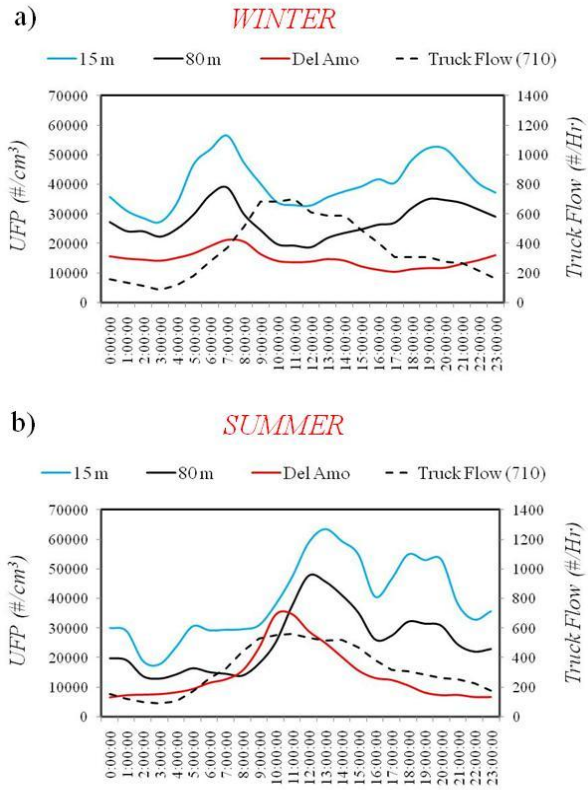
The highest wintertime 1-hr average UFP number concentration (140350 #/cm^3) was measured at the "near" site on 01/30/09 at 07:00 (Figure 10a) at around the same time when the highest wintertime 1-hr BC level was also observed. This strengthens the idea that both peaks were probably associated with motor-vehicles emissions (possibly from HDDT) during morning rush-hour traffic. For comparison, the corresponding UFP levels measured at the same time at the "far" site and in Del Amo were 122700 and 19400 #/cm^3 (or about 13 and 86% lower), respectively. Interestingly, the highest summertime 1-hr average UFP count at the "near" site (118400 #/cm^3) occurred on 07/20/09 early in the evening (at 20:00; not shown). In this case, the corresponding UFP level at the Del Amo site was 10900 #/cm^3, or about 91% less. Because of an instrument malfunction, continuous UFP data at the "far" were not available for that particular time.

Figure 10 Representative 1-hr average ultrafine particle (UFP) number concentrations measured at the two I-710 sites and in Del Amo during the (a) winter and (b) summer campaigns



The average wintertime and summertime diurnal profiles for UFP count are characterized by distinctively different patterns. While the wintertime UFP number concentrations at all three stations peaks early in the morning and later in the afternoon (Figure 11a), the corresponding summertime diurnal trends show more irregular increases in UFP levels throughout the day but at similar levels (Figure 11b), with peak values occurring in the late morning / early afternoon. In particular, the background UFP level during the summer campaign was characterized by a morning peak that occurred between 10:00 and 11:00, a few hours earlier than the typical afternoon spikes measured at the "near" and "far" sites. As noted earlier, these differences may be due to seasonal variations in truck traffic volumes and/or in meteorological conditions, and their effects on the surface-level concentration of pollutants from truck emissions.

Figure 11 Average wintertime (a) and summertime (b) diurnal profiles for UFP count and truck traffic volume at the "near", "far" and Del Amo (background) stations. Traffic information was taken from the CalTrans/PeMS website (http://pems.dot.ca.gov/). Since traffic data were not available at the time of this study, the diurnal average truck flow values shown below are for (a) February and (b) June 2011



There is now a growing body of work related to the adverse health effects from exposure to UFPs emitted from different combustion processes (Xia et al., 2004; Delfino et al., 2005, Pope and Dockery, 2006). The presence of highly elevated UFP levels in close proximity to the I-710 may have potential health implications for persons living in adjacent areas. Further work is needed to better evaluate the potential health effects due to exposure to currently unregulated pollutants such as UFP, BC and other combustion products in close proximity to the I-710.

Gaseous Pollutants

The mass concentrations of CO, NO, NO_2 and NOx measured at all three monitoring stations and during both phases of this study were examined for spatial and seasonal patterns, and the results have been summarized in Table 9. As for all particulate pollutants, the highest average and median gaseous levels were measured at the "near" site and decreased with increasing distance from the freeway (Figure 12). In particular, the average wintertime CO concentrations 15 and 80 m from the I-710 (0.58 and 0.52 ppm, respectively) were substantially

more elevated than those at the Del Amo station (background; 0.29 ppm) and in the South Coast Air Basin (0.36 ppm), which suggests that motor-vehicle emissions, primarily light-duty gasoline vehicles, had a substantial impact on the measured CO levels in close proximity to the freeway. As expected, the overall CO concentrations measured at the "near", "far" and Del Amo stations (as well as the average South Coast Air Basin level) were lower in the summertime than in the winter months but followed a similar spatial distribution. The maximum 1-hr average concentration downwind of the I-710 (3.0 ppm; measured on 03/02/09 at 08:00) was far below the corresponding NAAQS for CO (35 ppm, not to be exceeded more than once per year). Emissions of CO from motor vehicles have declined following the adoption of new control technologies and regulations. However, light-duty gasoline-powered vehicles remain the primary source of this gaseous pollutant at most locations.

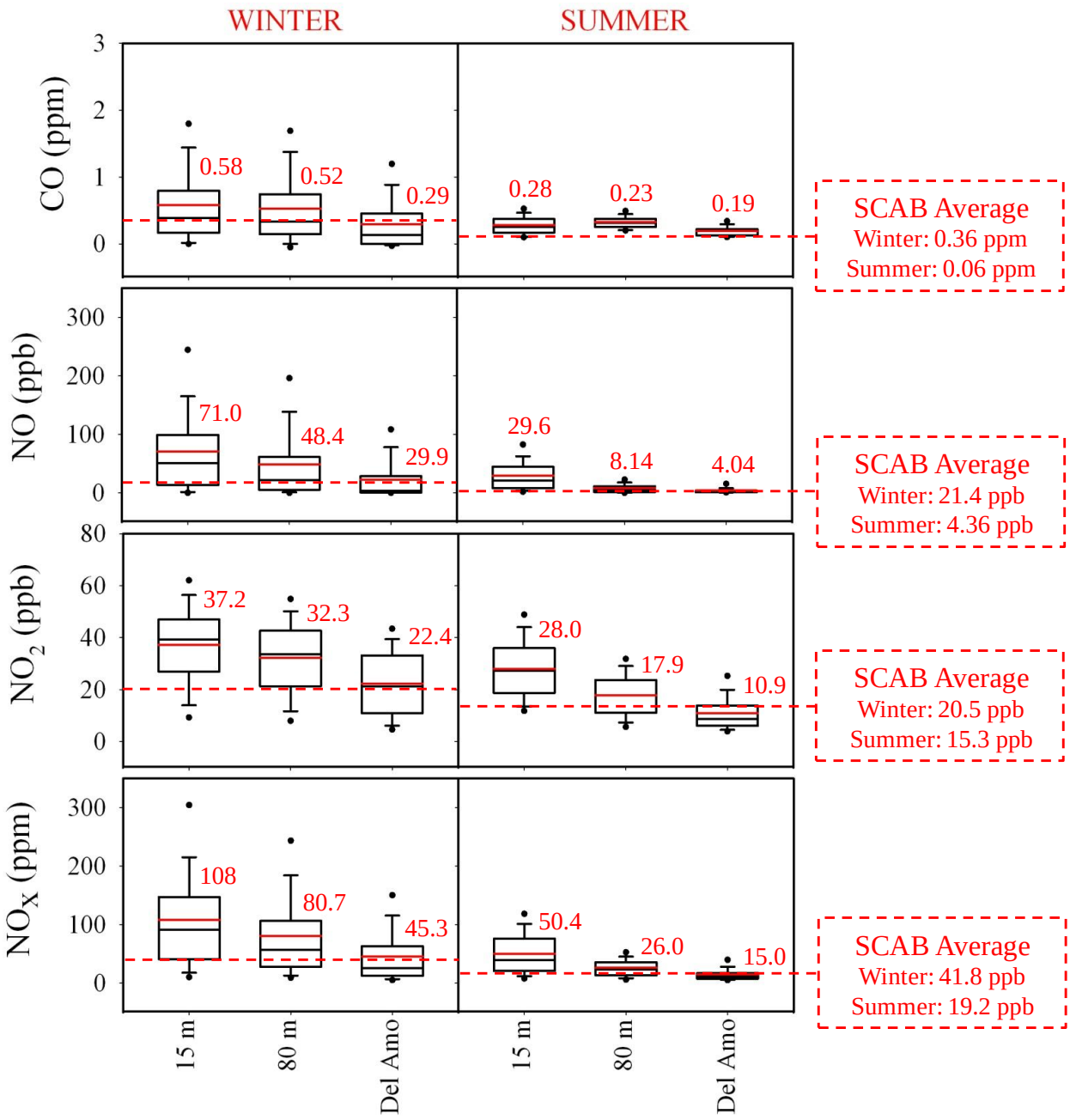
Measured concentrations of NO, NO_2 and NO_x were characterized by a similar spatial variability as CO (Table 9), and their atmospheric levels decreased rapidly with increasing distance from the I-710. For example, the average wintertime NO concentrations at the "near" and "far" sites (71.0 and 48.4 ppm, respectively), were around three and two times higher than the corresponding values observed at the Del Amo station (22.9 ppm) and in the South Coast Air Basin (21.4 ppm). Conversely, the average summertime NO concentrations at the "near" and "far" sites (29.6 and 8.14 ppm, respectively), were about seven and two times higher than the corresponding values observed at the Del Amo station (4.04 ppm) and in the South Coast Air Basin (4.36 ppm). The average NO_2 concentration showed a similar pattern as NO, although it decreased more gradually with increasing distance from the freeway. Although the majority of NO_x exhausted from motor-vehicles is in the form of NO, the NO_2 portion is of specific interest because it has been linked with a number of adverse effects on the respiratory system and is a criteria pollutant with associated National Ambient Air Quality Standards. Nitrogen dioxide forms quickly from combustion-related emissions and contributes to the formation of ground-level ozone (O_3), and fine particle pollution. On January 2010 a short term standard for NO_2 was set by the U.S. EPA to complement the existing annual primary NAAQS (53 ppb) and to protect against health effects associated with short-term exposures to NO_2, which can be higher on or near major roads. To attain this new standard, the 3-year average of the 98th percentile of the daily maximum 1-hr average at each monitor within an area must not exceed 100 ppb. Specific criteria for siting new NO_2 air quality monitors near major roads include identifying road segments ranked with the highest traffic levels, identifying locations where the highest peak concentrations are expected to occur, and placing monitors no more than 50 m away from the edge of the nearest traffic lane (U.S. EPA, 40 CFR Parts 50 and 58). Control measures that reduce NO_x can generally be expected to reduce population exposures to NO_2, although some controls can lead to a greater fraction of NO_2 emissions relative to NO (http://www.arb.ca.gov/regact/verpro06/appe.pdf).

Table 9 Average and median NO, NO_2, NO_x and CO concentrations at the "near", "far" and Del Amo stations during the winter and summer campaigns. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) are also included along with the corresponding levels for the South Coast Air Basin

	15 m	80 m	Del Amo	South Coast
	NO (ppb) – Winter			
Average	71.0	48.4	22.9	21.4
Median	50.8	21.9	3.82	5.00
SD	76.7	65.7	38.4	39.2
Min	-0.27	-0.50	-0.19	0.00
Max	437	407	252	522
Valid N	907	906	832	27583
	NO_2 (ppb) – Winter			
Average	37.2	32.3	22.4	20.5
Median	39.3	33.6	21.3	19.0
SD	15.4	14.3	12.7	12.7
Min	3.30	2.72	2.24	0.00
Max	81.8	71.8	53.6	100
Valid N	907	906	832	27738
	NOx (ppb) – Winter			
Average	108	80.7	45.3	41.8
Median	91.2	56.9	25.5	25.0
SD	88.0	75.6	48.0	47.9
Min	3.72	2.82	2.34	0.00
Max	496	462	305	600
Valid N	907	906	832	27579
	CO (ppm) – Winter			
Average	0.58	0.52	0.29	0.36
Median	0.39	0.33	0.13	0.00
SD	0.57	0.56	0.40	0.56
Min	-0.10	-0.11	-0.10	0.00
Max	2.87	3.00	2.20	8.00
Valid N	910	904	832	27471

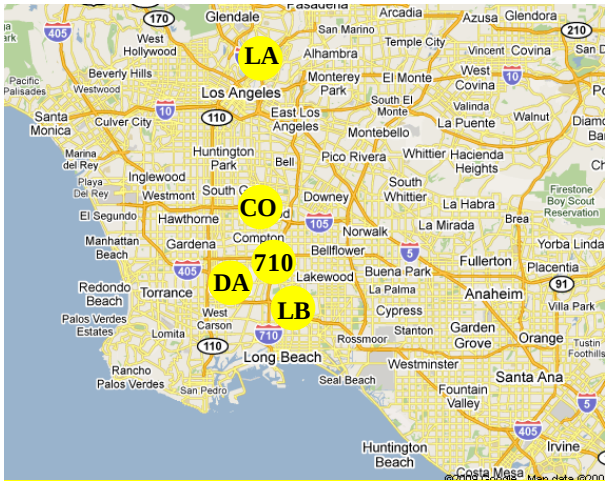
	15 m	80 m	Del Amo	South Coast
	NO (ppb) - Summer			
Average	29.6	8.14	4.04	4.36
Median	21.1	5.29	1.76	1.00
SD	27.3	10.7	7.14	9.75
Min	-0.40	-0.37	0.62	0.00
Max	245	148	73.7	190
Valid N	1117	1176	809	32983
	NO_2 (ppb) - Summer			
Average	28.0	17.9	10.9	15.3
Median	27.3	17.8	8.76	14.0
SD	11.5	8.31	7.03	9.7
Min	4.07	1.94	2.24	0.00
Max	74.4	58.7	54.1	75
Valid N	1117	1176	809	29782
	NOx (ppb) - Summer			
Average	50.4	26.0	15.0	19.2
Median	39.5	23.5	10.8	15.0
SD	37.4	17.0	13.1	16.8
Min	2.51	1.78	2.89	0.00
Max	295	189	128	245
Valid N	1335	1176	809	32982
	CO (ppm) - Summer			
Average	0.28	0.23	0.19	0.06
Median	0.25	0.21	0.19	0.00
SD	0.15	0.12	0.09	0.23
Min	-0.08	0.00	0.05	0.00
Max	1.56	1.51	0.91	1.00
Valid N	1337	1323	809	32968

Figure 12 Spatial distributions of CO, NO, NO_2, and NOx, at the "near", "far" and Del Amo sites during the winter and the summer campaigns. The corresponding average levels for the South Coast Air Basin (SCAB) calculated for similar time periods are also included for comparison



To better characterize the spatial gradient of NO_2 driven by proximity to the I-710 freeway and evaluate levels in relation to the new short-term NO_2 standard, the 1-hr daily maximum NO_2 concentrations at the "near", "far" and Del Amo sites were compared to the corresponding values measured at three of AQMD's permanent network stations: Compton, Long Beach and Los Angeles. These sites are located away from the I-710 but they are influenced by emissions from other local roads and/or freeways (Figure 13).

Figure 13 Map showing the locations of the two I-710 ("near" and "far") and Del Amo sites, and those of the Compton, Long Beach and Los Angeles stations (three of AQMD's permanent network sites)



CO = Compton

LB = Long Beach

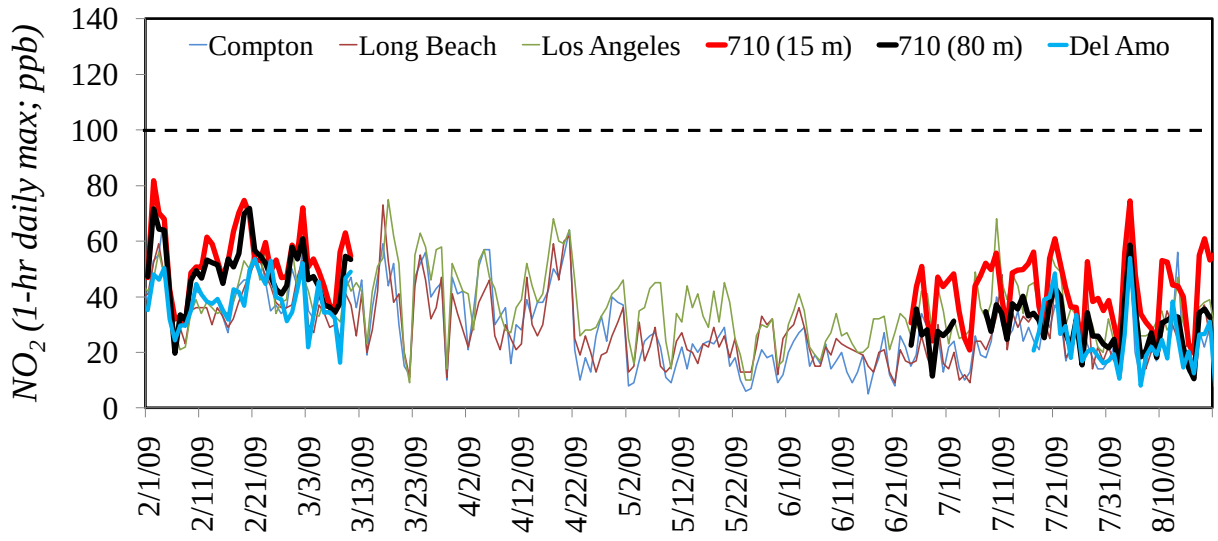
LA = Los Angeles

710 = Near site (15m); Far site (80m)

DA = Del Amo

As shown in the time series plot of Figure 14, the 1-hr daily max concentration of NO_2 at all five sites tracked each other well throughout the study. However, the NO_2 levels 15 m from the I-710 (thick red line) were generally slightly higher than those observed in other parts of the South Coast Air Basin. None of the values measured during this work exceeded the newly set NAAQS for NO_2, although 1-hr daily max NO_2 concentrations as high as 81.8 ppm were measured at the "near" station. Elevated NO_2 levels were also observed at the "far" site and, occasionally, at all other urban stations. Overall, our data seem to indicate that although motor-vehicle emissions contributed to increased near-roadway NO_2 close to the new short term NAAQS, the Basin-wide concentration of this gaseous pollutant is probably driven primarily by regional sources.

Figure 14 Daily maximum 1-hr average concentration of NO_2 at the "near", "far" and Del Amo sites and at three of AQMD's permanent network stations (i.e. Compton, Long Beach and Los Angeles)



Although all motor vehicles emit NO_x, the majority of on-road emissions derive from diesel vehicles. However, primary NO_x emissions from more technologically advanced heavy-duty diesel engines with after-treatment devices may contain a greater percentage of NO_2.

Inter-pollutant Correlations

Table 10 shows Pearson correlation coefficients (R) between the 1-hr concentrations of pollutants measured at the "near" site and the corresponding levels observed at the "far" station and at Del Amo. Only species measured using continuous instruments (i.e. BC, UFP, NO, NO_2 and NOx) were considered in this comparison. Coefficients higher than 0.75 were highlighted in yellow to indicate good to strong levels of correlation. The relationship between BC and all measured gaseous pollutants was strong at both the "near" and "far" sites and during the winter (Table 10a) and summer (Table 10b) months. This suggests that that BC, NO, NO_2 and NOx originated from a common source (i.e. traffic emission), and that atmospheric dispersion has a similar effect on the ambient concentration of diesel PM and on that of its gaseous co-pollutants, at least within the first 80 m near the I-710. This inter-pollutant relationship also implies that epidemiological research seeking to isolate pollutant-specific impacts of diesel traffic emissions may have a challenge in separating the effects of confounding variables. Conversely, moderate to poor correlations were generally observed between UFP and all other gaseous species, probably because once emitted into the atmosphere, UFP evaporate, coagulate, and/or grow quickly by processes that do not affect other combustion-related pollutants (Zhang and Wexler, 2002; Kulmala et al., 2004; Watson et al., 2006).

Although time resolved PM concentrations were not measured in this study, other works conducted in near-road environments have shown that the correlation between PM_{10} or $PM_{2.5}$ and UFP is generally poor (Molnar et al., 2002; Hagler et al., 2009). This is because the atmospheric levels of fine and coarse PM depend on particle mass, primarily contributed by particles larger

than 100 nm, while the ultrafine mode is more heavily influenced by the number concentration of sub-100 nm particles. Thus, while traffic may affect regional levels of $PM_{2.5}$, motor-vehicle UFP emissions have a stronger local scale impact.

Table 10 Pearson correlation coefficients (R) between the concentrations of pollutants measured at the "near" site and the corresponding levels observed at the "far" station and in Del Amo (background). Wintertime (a) and summertime (b) correlations are shown separately. Correlation coefficients of 0.75 or above are highlighted.

a)

WINTER

	BC (15m)	UFP (15m)	CO (15m)	NO (15m)	NO_2 (15m)	NOx (15m)
BC (15m)	1					
UFP (15m)	0.69	1				
CO (15m)	0.85	0.35	1			
NO (15m)	0.95	0.70	0.82	1		
NO_2 (15m)	0.75	0.68	0.60	0.68	1	
NOx (15m)	0.96	0.73	0.82	0.99	0.77	1
BC (80m)	0.93	0.48	0.92	0.86	0.62	0.86
UFP (80m)	0.71	0.86	0.43	0.72	0.62	0.74
CO (80m)	0.77	0.26	0.95	0.73	0.51	0.73
NO (80m)	0.90	0.47	0.89	0.94	0.57	0.92
NO_2 (80m)	0.75	0.53	0.70	0.66	0.91	0.74
NOx (80m)	0.92	0.50	0.91	0.94	0.67	0.94
BC (Del Amo)	0.72	0.18	0.83	0.64	0.43	0.63
UFP (Del Amo)	0.35	0.03	0.47	0.35	0.29	0.35
CO (Del Amo)	0.75	0.20	0.90	0.72	0.48	0.71
NO (Del Amo)	0.70	0.22	0.81	0.74	0.38	0.71
NO_2 (Del Amo)	0.59	0.09	0.72	0.53	0.52	0.55
NOx (Del Amo)	0.72	0.20	0.84	0.73	0.45	0.72

b)

SUMMER

	BC (15m)	UFP (15m)	CO (15m)	NO (15m)	NO_2 (15m)	NOx (15m)
BC (15m)	1					
UFP (15m)	0.75	1				
CO (15m)	0.76	0.57	1			
NO (15m)	0.88	0.74	0.75	1		
NO_2 (15m)	0.81	0.77	0.65	0.73	1	
NOx (15m)	0.92	0.85	0.80	0.98	0.86	1
BC (80m)	0.86	0.56	0.72	0.67	0.72	0.76
UFP (80m)	0.56	0.88	0.38	0.48	0.49	0.64
CO (80m)	0.62	0.32	0.86	0.54	0.51	0.60
NO (80m)	0.72	0.53	0.75	0.82	0.46	0.79
NO_2 (80m)	0.76	0.71	0.70	0.62	0.90	0.80
NOx (80m)	0.82	0.68	0.81	0.84	0.73	0.89
BC (Del Amo)	0.28	-0.06	0.29	0.13	0.20	0.15
UFP (Del Amo)	0.15	0.14	0.06	-0.09	0.01	0.06
CO (Del Amo)	0.41	0.04	0.59	0.30	0.29	0.32
NO (Del Amo)	0.30	0.01	0.40	0.29	0.07	0.27
NO_2 (Del Amo)	0.20	-0.11	0.19	0.10	0.19	0.10
NOx (Del Amo)	0.27	-0.06	0.32	0.21	0.14	0.20

Effect of Wind Direction on Measured Pollutants

The spatial and temporal characteristics of the pollutant concentration gradients downwind of the I-710 depends on a combination of several factors including traffic volume and speed, percentage of heavy-duty diesel truck, and meteorological conditions (wind speed and wind direction in particular). To better understand how meteorology affected the atmospheric levels of BC and UFP at the two I-710 stations, the concentrations of these two particle pollutants at the "near" site were normalized by the corresponding values measured at the "far" and Del Amo (background) stations, and segregated by wind direction into 24 different sectors (binned in 15 degrees increments). These normalized BC and UFP data (concentration ratios) were then averaged over each bin for both the summer and winter periods as summarized in Table 11. Data collected when the wind speed was lower than 1 mph were not considered in this analysis.

As expected, increased ambient levels of both UFP and BC, relative to background, were measured when the "near" and the "far" sites were downwind of the I-710. However, the highest concentration ratios for these two pollutants were not observed when the wind direction was perpendicular to the freeway. In particular, the sector average concentrations of BC and UFP in the wintertime and 15 m from the I-710 were approximately 11.3 to 11.5 times higher than the corresponding background levels in Del Amo when the wind direction was between 240 and 255 deg. The corresponding concentration ratios when the wind was perpindicular to the freeway (between 285 and 300 deg) were significantly lower (4.5 and 5.6, for UFP and BC, respectively; Table 11a). Similarly, sector average concentrations of BC and UFP in the summertime and 15 m from the I-710 were about 11.6 to 12.5 times higher than the corresponding background values when the wind direction was between 255 and 270 deg, but only 4.5 to 5.6 times higher when the wind was perpendicular to the freeway (Table 11b). These discrepancies may be caused by the influence of moving traffic on wind flow fields near the road. This vehicle-induced turbulence has been observed in other near-roadway studies and can affect the concentration variability of pollutant measurements tens of meters downwind of the road (Kalthoff et al. 2005; Baldauf et al., 2008). The discrepancy may also be due to diurnal correlations and competing effects among wind direction, atmospheric stability, and traffic volumes that may confound this analysis. Also note that even when winds are not precisely perpendicular to the freeway, significant freeway influence is expected whenever the monitoring sites are downwind.

Table 11 Background normalized concentrations of BC and UFP at the "near" and "far" sites. These concentration ratios were segregated by wind direction into 24 different sectors (binned in 15 degrees increments) and then averaged over each bin. The highest ratios measured during this study have been highlighted in blue. Wintertime (a) and summertime (b) ratios are shown separately

a)

	CONCENTRATION RATIOS - WINTER			
Wind Sector (deg)	BC (15m/80m)	BC (15m/Del Amo)	UFP (15m/80m)	UFP (15m/Del Amo)
0-15	1.49	2.76	1.71	3.31
15-30	1.36	1.96	1.77	2.20
30-45	1.33	1.69	1.82	1.70
45-60	1.22	1.35	1.69	1.32
60-75	1.13	1.30	1.36	1.17
75-90	1.05	1.23	1.34	1.00
90-105	1.03	1.04	1.10	0.94
105-120	0.99	0.88	1.08	0.92
120-135	0.99	0.79	1.03	0.67
135-150	1.00	0.98	0.99	0.84
150-165	0.96	0.81	0.98	0.54
165-180	1.01	0.78	1.15	0.60
180-195	1.05	1.04	0.95	0.91
195-210	1.20	1.92	1.08	2.25
210-225	1.35	4.52	1.34	4.34
225-240	1.76	10.59	1.74	8.29
240-255	1.99	11.33	1.76	11.48
255-270	1.91	10.29	1.69	9.46
270-285	1.82	8.50	2.12	7.12
285-300	1.55	5.60	1.57	4.49
300-315	1.47	3.89	1.73	4.81
315-330	1.45	3.10	2.22	3.48
330-345	1.36	3.12	1.57	3.01
345-360	1.65	3.13	2.36	3.99

b)

	CONCENTRATION RATIOS - SUMMER			
Wind Sector (deg)	BC (15m/80m)	BC (15m/Del Amo)	UFP (15m/80m)	UFP (15m/Del Amo)
0-15	1.67	3.53	1.61	4.66
15-30	1.71	3.32	1.69	4.64
30-45	1.60	2.63	1.75	2.85
45-60	1.76	2.21	1.47	3.00
60-75	1.62	1.06	2.12	1.76
75-90	1.45	0.81	1.57	0.98
90-105	1.26	0.92	1.26	1.04
105-120	1.21	1.06	1.16	1.12
120-135	1.17	0.84	1.18	0.93
135-150	1.17	1.03	1.15	0.92
150-165	1.23	0.82	1.22	0.83
165-180	1.30	0.90	1.22	0.87
180-195	1.29	1.10	1.34	1.28
195-210	1.27	1.21	1.14	1.20
210-225	1.31	1.86	1.24	2.02
225-240	1.86	4.20	1.95	5.64
240-255	2.10	3.64	2.07	4.18
255-270	2.65	12.46	1.75	11.60
270-285	2.39	8.28	1.71	8.63
285-300	2.09	6.82	1.60	5.35
300-315	1.78	4.79	1.60	5.83
315-330	1.81	4.55	1.59	6.75
330-345	1.71	4.02	1.70	5.54
345-360	1.39	3.54	1.34	4.47

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APPENDIX B: TIME INTEGRATED VOC DATA

		NEAR SITE (15m) - WINTER						
Sample Date	Time Interval	Vinylchloride	1,3-Butadiene	Acrolein	Acetone	Methylenechloride	Methyltertbutylether	2-Butanone
02/02/09	05:00-09:00	0.00	0.41	0.26	17.41	0.21	0.00	0.51
02/04/09	05:00-09:00	0.00	0.59	0.42	14.41	0.79	0.06	1.25
02/06/09	05:00-09:00	0.00	0.04	0.00	1.49	0.05	0.00	0.15
02/08/09	05:00-09:00	0.00	0.02	0.00	1.51	0.06	0.00	0.20
02/10/09	05:00-09:00	0.00	0.19	0.13	2.78	0.10	0.00	0.32
02/12/09	05:00-09:00	0.00	0.47	0.24	8.85	0.35	0.03	0.68
02/14/09	05:00-09:00	0.00	0.21	0.14	3.38	0.21	0.01	0.39
02/16/09	05:00-09:00	0.00	0.03	0.04	2.14	0.09	0.00	0.26
02/18/09	05:00-09:00	0.00	0.33	0.19	4.65	0.25	0.01	0.40
02/20/09	05:00-09:00	0.00	0.39	0.28	6.07	0.27	0.00	0.66
02/22/09	05:00-09:00	0.00	0.29	0.24	9.38	0.61	0.02	0.70
02/24/09	05:00-09:00	0.00	0.53	0.24	8.23	0.62	0.03	0.90
02/26/09	05:00-09:00	0.00	0.28	0.15	5.77	0.47	0.02	0.59
02/28/09	05:00-09:00	0.00	0.28	0.22	7.28	0.32	0.01	0.61
03/02/09	05:00-09:00	0.00	0.50	0.43	10.08	0.81	0.03	1.07
03/04/09	05:00-09:00	0.00	0.08	0.08	4.02	0.25	0.01	0.53
03/06/09	05:00-09:00	0.00	0.27	0.19	4.07	0.23	0.01	0.63
03/08/09	05:00-09:00	0.00	0.18	0.17	4.75	0.22	0.02	0.59
02/02/09	09:00-15:00	0.00	0.15	0.16	9.23	0.18	0.00	0.53
02/04/09	09:00-15:00	0.00	0.14	0.18	5.13	0.25	0.00	0.66
02/06/09	09:00-15:00	0.00	0.03	0.00	1.99	0.06	0.00	0.15
02/08/09	09:00-15:00	0.00	0.04	0.07	2.72	0.07	0.00	0.20
02/10/09	09:00-15:00	0.00	0.07	0.09	3.10	0.13	0.00	0.39
02/12/09	09:00-15:00	0.00	0.08	0.09	17.63	0.44	0.00	0.32
02/14/09	09:00-15:00	0.00	0.04	0.07	2.32	0.10	0.00	0.36
02/16/09	09:00-15:00	0.00	0.02	0.08	2.48	0.18	0.00	0.30
02/18/09	09:00-15:00	0.00	0.06	0.11	4.71	0.13	0.00	0.48
02/20/09	09:00-15:00	0.00	0.12	0.18	8.74	0.30	0.00	0.81
02/22/09	09:00-15:00	0.00	0.21	0.29	7.16	0.32	0.01	0.94
02/24/09	09:00-15:00	0.00	0.08	0.15	12.20	0.40	0.01	0.75
02/26/09	09:00-15:00	0.00	0.02	0.08	3.01	0.12	0.00	0.41
02/28/09	09:00-15:00	0.00	0.07	0.12	5.23	0.12	0.00	0.67
03/02/09	09:00-15:00	0.00	0.24	0.27	22.11	1.06	0.02	0.95
03/04/09	09:00-15:00	0.00	0.03	0.08	2.48	0.09	0.00	0.28
03/06/09	09:00-15:00	0.00	0.05	0.09	9.48	0.33	0.00	0.35
03/08/09	09:00-15:00	0.00	0.02	0.05	2.62	0.08	0.00	0.40
02/02/09	15:00-19:00							
02/04/09	15:00-19:00	0.00	0.04	0.08	3.87	0.11	0.01	0.41
02/06/09	15:00-19:00	0.00	0.02	0.00	1.47	0.05	0.00	0.17
02/08/09	15:00-19:00	0.00	0.04	0.00	2.19	0.06	0.00	0.22
02/10/09	15:00-19:00	0.00	0.11	0.08	4.22	0.58	0.00	0.24
02/12/09	15:00-19:00	0.00	0.08	0.04	3.44	0.23	0.00	0.19
02/14/09	15:00-19:00	0.00	0.06	0.06	3.31	0.17	0.00	0.21
02/16/09	15:00-19:00	0.00	0.05	0.06	5.78	0.18	0.00	0.21
02/18/09	15:00-19:00	0.00	0.11	0.12	6.91	0.37	0.00	0.48
02/20/09	15:00-19:00	0.00	0.11	0.10	3.87	0.35	0.00	0.39
02/22/09	15:00-19:00	0.00	0.28	0.25	6.75	0.32	0.00	0.71
02/24/09	15:00-19:00	0.00	0.03	0.13	14.21	0.20	0.00	0.49
02/26/09	15:00-19:00	0.00	0.06	0.10	4.40	0.20	0.00	0.45
02/28/09	15:00-19:00	0.00	0.09	0.12	5.11	0.17	0.00	0.59
03/02/09	15:00-19:00	0.00	0.18	0.19	9.62	0.44	0.00	0.63
03/04/09	15:00-19:00	0.00	0.05	0.06	2.22	0.10	0.00	0.23
03/06/09	15:00-19:00	0.00	0.06	0.07	3.18	0.29	0.00	0.22
03/08/09	15:00-19:00	0.00	0.06	0.06	2.57	0.07	0.00	0.33
02/02/09	19:00-05:00	0.00	0.43	0.35	23.19	0.64	0.00	1.80
02/04/09	19:00-05:00	0.00	0.06	0.08	2.35	0.11	0.00	0.34
02/06/09	19:00-05:00	0.00	0.02	0.00	2.03	0.06	0.00	0.17
02/08/09	19:00-05:00	0.00	0.14	0.11	3.62	0.15	0.01	0.35
02/10/09	19:00-05:00	0.00	0.36	0.25	5.69	0.70	0.02	0.51
02/12/09	19:00-05:00	0.00	0.18	0.12	4.81	0.78	0.00	0.38
02/14/09	19:00-05:00	0.00	0.42	0.31	7.36	0.26	0.01	0.56
02/16/09	19:00-05:00	0.00	0.07	0.13	3.89	0.43	0.00	0.37
02/18/09	19:00-05:00	0.00	0.24	0.18	4.25	0.28	0.01	0.45
02/20/09	19:00-05:00	0.00	0.40	0.30	9.10	0.32	0.02	0.79
02/22/09	19:00-05:00	0.00	0.32	0.32	6.28	0.42	0.00	0.83
02/24/09	19:00-05:00	0.00	0.04	0.08	3.20	0.19	0.00	0.34
02/26/09	19:00-05:00	0.00	0.04	0.08	2.43	0.11	0.00	0.26
02/28/09	19:00-05:00	0.00	0.26	0.24	8.32	0.57	0.02	0.82
03/02/09	19:00-05:00	0.00	0.14	0.54	8.42	0.32	0.01	0.88
03/04/09	19:00-05:00	0.00	0.10	0.11	4.87	0.72	0.01	0.36
03/06/09	19:00-05:00	0.00	0.09	0.08	2.11	0.35	0.00	0.25
03/08/09	19:00-05:00	0.00	0.05	0.08	2.34	0.08	0.00	0.31

		NEAR SITE (15m) - WINTER						
Sample Date	Time Interval	Chloroform	1,2-Dichloroethane	Benzene	Carbontetrachloride	1,2-Dichloropropane	Trichloroethylene	Toluene
02/02/09	05:00-09:00	0.03	0.05	1.46	0.08	0.00	0.03	4.11
02/04/09	05:00-09:00	0.08	0.07	2.32	0.09	0.00	0.05	8.14
02/06/09	05:00-09:00	0.01	0.00	0.25	0.08	0.00	0.00	0.40
02/08/09	05:00-09:00	0.01	0.02	0.19	0.09	0.00	0.00	0.30
02/10/09	05:00-09:00	0.02	0.02	0.72	0.08	0.00	0.06	1.70
02/12/09	05:00-09:00	0.04	0.05	1.57	0.04	0.00	0.03	4.68
02/14/09	05:00-09:00	0.03	0.00	0.81	0.08	0.00	0.03	2.12
02/16/09	05:00-09:00	0.01	0.00	0.24	0.08	0.00	0.00	0.44
02/18/09	05:00-09:00	0.04	0.04	1.09	0.08	0.00	0.03	3.04
02/20/09	05:00-09:00	0.03	0.04	1.20	0.08	0.00	0.01	3.15
02/22/09	05:00-09:00	0.05	0.08	1.27	0.08	0.00	0.03	3.91
02/24/09	05:00-09:00	0.07	0.05	1.92	0.08	0.00	0.07	6.71
02/26/09	05:00-09:00	0.04	0.05	1.07	0.08	0.00	0.02	3.50
02/28/09	05:00-09:00	0.04	0.05	0.96	0.08	0.00	0.03	2.95
03/02/09	05:00-09:00	0.08	0.07	2.03	0.09	0.00	0.05	6.23
03/04/09	05:00-09:00	0.04	0.03	0.49	0.08	0.00	0.01	1.52
03/06/09	05:00-09:00	0.07	0.04	0.92	0.08	0.00	0.02	2.57
03/08/09	05:00-09:00	0.05	0.04	0.94	0.08	0.00	0.02	2.73
02/02/09	09:00-15:00	0.02	0.00	0.68	0.08	0.00	0.01	2.03
02/04/09	09:00-15:00	0.03	0.03	0.71	0.09	0.00	0.02	2.80
02/06/09	09:00-15:00	0.01	0.00	0.18	0.08	0.00	0.00	0.26
02/08/09	09:00-15:00	0.01	0.02	0.25	0.09	0.00	0.00	0.43
02/10/09	09:00-15:00	0.02	0.00	0.43	0.08	0.00	0.05	1.25
02/12/09	09:00-15:00	0.01	0.00	0.38	0.08	0.00	0.00	0.84
02/14/09	09:00-15:00	0.01	0.02	0.32	0.08	0.00	0.00	0.62
02/16/09	09:00-15:00	0.01	0.00	0.17	0.08	0.00	0.01	0.24
02/18/09	09:00-15:00	0.02	0.02	0.35	0.08	0.00	0.01	0.88
02/20/09	09:00-15:00	0.02	0.03	0.57	0.08	0.00	0.01	1.60
02/22/09	09:00-15:00	0.04	0.05	1.23	0.08	0.00	0.02	4.29
02/24/09	09:00-15:00	0.03	0.03	0.52	0.08	0.00	0.02	1.58
02/26/09	09:00-15:00	0.02	0.02	0.25	0.08	0.00	0.00	0.57
02/28/09	09:00-15:00	0.02	0.02	0.40	0.08	0.00	0.01	1.06
03/02/09	09:00-15:00	0.04	0.04	1.06	0.09	0.00	0.03	3.23
03/04/09	09:00-15:00	0.02	0.01	0.21	0.08	0.00	0.00	0.44
03/06/09	09:00-15:00	0.01	0.00	0.29	0.08	0.00	0.00	0.61
03/08/09	09:00-15:00	0.02	0.02	0.24	0.08	0.00	0.00	0.45
02/02/09	15:00-19:00							
02/04/09	15:00-19:00	0.01	0.00	0.32	0.09	0.00	0.00	0.79
02/06/09	15:00-19:00	0.01	0.00	0.17	0.08	0.00	0.00	0.21
02/08/09	15:00-19:00	0.01	0.00	0.24	0.08	0.00	0.00	0.35
02/10/09	15:00-19:00	0.01	0.00	0.38	0.08	0.00	0.00	0.67
02/12/09	15:00-19:00	0.01	0.00	0.28	0.08	0.00	0.00	0.47
02/14/09	15:00-19:00	0.01	0.01	0.32	0.08	0.00	0.00	0.50
02/16/09	15:00-19:00	0.01	0.02	0.23	0.08	0.00	0.00	0.39
02/18/09	15:00-19:00	0.01	0.02	0.42	0.08	0.00	0.00	0.97
02/20/09	15:00-19:00	0.01	0.02	0.41	0.08	0.00	0.01	0.89
02/22/09	15:00-19:00	0.03	0.04	1.01	0.08	0.00	0.01	2.97
02/24/09	15:00-19:00	0.01	0.02	0.35	0.08	0.00	0.00	0.97
02/26/09	15:00-19:00	0.01	0.02	0.32	0.08	0.00	0.00	0.62
02/28/09	15:00-19:00	0.02	0.03	0.44	0.07	0.00	0.00	1.03
03/02/09	15:00-19:00	0.03	0.03	0.76	0.08	0.00	0.02	2.24
03/04/09	15:00-19:00	0.01	0.02	0.23	0.08	0.00	0.00	0.38
03/06/09	15:00-19:00	0.01	0.01	0.27	0.08	0.00	0.00	0.44
03/08/09	15:00-19:00	0.01	0.02	0.28	0.09	0.00	0.00	0.53
02/02/09	19:00-05:00	0.05	0.08	1.79	0.08	0.00	0.04	6.23
02/04/09	19:00-05:00	0.02	0.02	0.37	0.08	0.00	0.00	1.02
02/06/09	19:00-05:00	0.00	0.02	0.19	0.09	0.00	0.00	0.31
02/08/09	19:00-05:00	0.03	0.03	0.63	0.08	0.00	0.01	1.84
02/10/09	19:00-05:00	0.05	0.04	1.23	0.08	0.00	0.02	3.65
02/12/09	19:00-05:00	0.03	0.03	0.69	0.08	0.00	0.01	1.93
02/14/09	19:00-05:00	0.03	0.05	1.36	0.08	0.00	0.04	3.43
02/16/09	19:00-05:00	0.02	0.04	0.46	0.08	0.00	0.00	1.12
02/18/09	19:00-05:00	0.03	0.08	0.83	0.09	0.00	0.02	2.39
02/20/09	19:00-05:00	0.04	0.11	1.36	0.08	0.00	0.03	4.20
02/22/09	19:00-05:00	0.05	0.08	1.22	0.08	0.00	0.03	3.78
02/24/09	19:00-05:00	0.01	0.04	0.22	0.08	0.00	0.00	0.54
02/26/09	19:00-05:00	0.02	0.04	0.22	0.08	0.00	0.00	0.51
02/28/09	19:00-05:00	0.04	0.10	1.08	0.08	0.00	0.02	3.16
03/02/09	19:00-05:00	0.03	0.31	0.75	0.08	0.00	0.01	2.31
03/04/09	19:00-05:00	0.02	0.03	0.40	0.08	0.00	0.01	0.96
03/06/09	19:00-05:00	0.02	0.03	0.39	0.08	0.00	0.00	0.95
03/08/09	19:00-05:00	0.01	0.03	0.24	0.08	0.00	0.00	0.53

		NEAR SITE (15m) - WINTER							
Sample Date	Time Interval	1,2-Dibromoethane	Tetrachloroethene	Ethylbenzene	m,p-Xylenes	Styrene	O-Xylene	1,4-DiChlorobenzene	1,2-DiChlorobenzene
02/02/09	05:00-09:00	0.00	0.06	0.55	2.36	1.05	0.84	0.05	0.00
02/04/09	05:00-09:00	0.00	0.18	1.08	4.64	0.40	1.56	0.10	0.00
02/06/09	05:00-09:00	0.00	0.00	0.06	0.24	0.01	0.09	0.00	0.00
02/08/09	05:00-09:00	0.00	0.00	0.04	0.12	0.01	0.04	0.00	0.00
02/10/09	05:00-09:00	0.00	0.02	0.25	1.02	0.10	0.35	0.01	0.00
02/12/09	05:00-09:00	0.00	0.09	0.62	2.70	0.39	0.90	0.05	0.00
02/14/09	05:00-09:00	0.00	0.04	0.30	1.17	0.08	0.39	0.02	0.00
02/16/09	05:00-09:00	0.00	0.01	0.07	0.24	0.04	0.08	0.00	0.00
02/18/09	05:00-09:00	0.00	0.06	0.42	1.76	0.15	0.56	0.02	0.00
02/20/09	05:00-09:00	0.00	0.07	0.45	1.94	0.35	0.66	0.03	0.00
02/22/09	05:00-09:00	0.00	0.11	0.49	1.93	0.27	0.66	0.05	0.00
02/24/09	05:00-09:00	0.00	0.13	0.88	3.60	0.25	1.22	0.08	0.00
02/26/09	05:00-09:00	0.00	0.10	0.58	2.00	0.14	0.62	0.04	0.00
02/28/09	05:00-09:00	0.00	0.11	0.39	1.63	0.70	0.57	0.04	0.00
03/02/09	05:00-09:00	0.00	0.10	0.88	3.58	0.38	1.18	0.08	0.00
03/04/09	05:00-09:00	0.00	0.04	0.21	0.80	0.03	0.28	0.02	0.00
03/06/09	05:00-09:00	0.00	0.05	0.36	1.48	0.15	0.51	0.03	0.00
03/08/09	05:00-09:00	0.00	0.05	0.37	1.41	0.06	0.49	0.04	0.00
02/02/09	09:00-15:00	0.00	0.08	0.28	1.12	0.50	0.40	0.01	0.00
02/04/09	09:00-15:00	0.00	0.06	0.42	1.77	0.13	0.63	0.02	0.00
02/06/09	09:00-15:00	0.00	0.00	0.04	0.14	0.02	0.05	0.00	0.00
02/08/09	09:00-15:00	0.00	0.01	0.06	0.23	0.02	0.08	0.00	0.00
02/10/09	09:00-15:00	0.00	0.03	0.19	0.70	0.08	0.24	0.00	0.00
02/12/09	09:00-15:00	0.00	0.05	0.12	0.52	0.05	0.16	0.00	0.00
02/14/09	09:00-15:00	0.00	0.02	0.09	0.31	0.02	0.11	0.00	0.00
02/16/09	09:00-15:00	0.00	0.01	0.03	0.12	0.02	0.04	0.00	0.00
02/18/09	09:00-15:00	0.00	0.03	0.12	0.41	0.08	0.15	0.00	0.00
02/20/09	09:00-15:00	0.00	0.06	0.22	0.85	0.19	0.29	0.01	0.00
02/22/09	09:00-15:00	0.00	0.06	0.57	2.21	0.08	0.80	0.03	0.00
02/24/09	09:00-15:00	0.00	0.05	0.20	0.73	0.09	0.25	0.01	0.00
02/26/09	09:00-15:00	0.00	0.02	0.08	0.27	0.03	0.10	0.01	0.00
02/28/09	09:00-15:00	0.00	0.04	0.15	0.55	0.04	0.20	0.01	0.00
03/02/09	09:00-15:00	0.00	0.09	0.45	1.74	0.29	0.58	0.03	0.00
03/04/09	09:00-15:00	0.00	0.01	0.07	0.24	0.03	0.08	0.00	0.00
03/06/09	09:00-15:00	0.00	0.04	0.08	0.31	0.04	0.10	0.00	0.00
03/08/09	09:00-15:00	0.00	0.01	0.06	0.18	0.01	0.07	0.00	0.00
02/02/09	15:00-19:00								
02/04/09	15:00-19:00	0.00	0.02	0.13	0.42	0.03	0.15	0.00	0.00
02/06/09	15:00-19:00	0.00	0.00	0.04	0.12	0.01	0.05	0.00	0.00
02/08/09	15:00-19:00	0.00	0.00	0.05	0.17	0.01	0.07	0.00	0.00
02/10/09	15:00-19:00	0.00	0.09	0.09	0.41	0.03	0.13	0.00	0.00
02/12/09	15:00-19:00	0.00	0.02	0.07	0.32	0.03	0.12	0.00	0.00
02/14/09	15:00-19:00	0.00	0.02	0.07	0.27	0.02	0.09	0.00	0.00
02/16/09	15:00-19:00	0.00	0.02	0.06	0.21	0.02	0.07	0.00	0.00
02/18/09	15:00-19:00	0.00	0.03	0.14	0.55	0.05	0.18	0.01	0.00
02/20/09	15:00-19:00	0.00	0.03	0.12	0.53	0.05	0.17	0.00	0.00
02/22/09	15:00-19:00	0.00	0.03	0.40	1.59	0.10	0.54	0.02	0.00
02/24/09	15:00-19:00	0.00	0.02	0.11	0.35	0.02	0.12	0.00	0.00
02/26/09	15:00-19:00	0.00	0.02	0.08	0.28	0.02	0.10	0.00	0.00
02/28/09	15:00-19:00	0.00	0.03	0.14	0.50	0.03	0.18	0.01	0.00
03/02/09	15:00-19:00	0.00	0.07	0.32	1.21	0.14	0.42	0.02	0.00
03/04/09	15:00-19:00	0.00	0.01	0.05	0.20	0.05	0.08	0.00	0.00
03/06/09	15:00-19:00	0.00	0.05	0.05	0.26	0.02	0.09	0.00	0.00
03/08/09	15:00-19:00	0.00	0.01	0.06	0.23	0.02	0.09	0.00	0.00
02/02/09	19:00-05:00	0.00	0.17	0.80	3.33	0.42	1.09	0.06	0.00
02/04/09	19:00-05:00	0.00	0.01	0.15	0.57	0.03	0.19	0.01	0.00
02/06/09	19:00-05:00	0.00	0.00	0.06	0.21	0.02	0.07	0.00	0.00
02/08/09	19:00-05:00	0.00	0.03	0.24	0.99	0.06	0.33	0.03	0.00
02/10/09	19:00-05:00	0.00	0.12	0.50	2.10	0.15	0.67	0.03	0.00
02/12/09	19:00-05:00	0.00	0.10	0.28	1.08	0.07	0.36	0.02	0.00
02/14/09	19:00-05:00	0.00	0.05	0.48	1.94	0.17	0.67	0.04	0.00
02/16/09	19:00-05:00	0.00	0.07	0.16	0.56	0.03	0.19	0.01	0.00
02/18/09	19:00-05:00	0.00	0.09	0.32	1.32	0.18	0.44	0.02	0.00
02/20/09	19:00-05:00	0.00	0.06	0.57	2.34	0.26	0.76	0.03	0.00
02/22/09	19:00-05:00	0.00	0.05	0.50	1.96	0.11	0.68	0.04	0.00
02/24/09	19:00-05:00	0.00	0.03	0.06	0.23	0.03	0.08	0.00	0.00
02/26/09	19:00-05:00	0.00	0.01	0.07	0.29	0.04	0.26	0.01	0.00
02/28/09	19:00-05:00	0.00	0.06	0.42	1.74	0.20	0.62	0.06	0.00
03/02/09	19:00-05:00	0.00	0.04	0.38	1.34	0.24	0.52	0.03	0.00
03/04/09	19:00-05:00	0.00	0.13	0.12	0.52	0.09	0.18	0.01	0.00
03/06/09	19:00-05:00	0.00	0.04	0.13	0.57	0.05	0.20	0.02	0.00
03/08/09	19:00-05:00	0.00	0.01	0.06	0.26	0.03	0.10	0.01	0.00

		NEAR SITE (15m) - SUMMER						
Sample Date	Time Interval	Vinylchloride	1,3-Butadiene	Acrolein	Acetone	Methylenechloride	Methyltertbutylether	2-Butanone
07/11/09	05:00-09:00	0.01	0.05	0.00	4.68	0.35	0.00	0.83
07/13/09	05:00-09:00	0.00	0.06	0.00	0.39	0.07	0.00	0.49
07/15/09	05:00-09:00	0.00	0.13	0.00	7.20	0.26	0.00	0.81
07/17/09	05:00-09:00	0.00	0.10	0.00	0.06	0.09	0.00	0.54
07/19/09	05:00-09:00	0.00	0.03	0.00	3.94	0.00	0.00	0.54
07/21/09	05:00-09:00	0.00	0.06	0.00	3.87	0.00	0.00	0.00
07/23/09	05:00-09:00	0.00	0.03	0.00	2.94	0.00	0.00	0.00
07/25/09	05:00-09:00	0.17	0.18	0.22	6.07	0.31	0.15	0.90
07/27/09	05:00-09:00	0.00	0.10	0.00	3.01	0.31	0.00	0.61
07/29/09	05:00-09:00	0.00	0.02	0.00	0.19	0.05	0.00	0.18
07/31/09	05:00-09:00	0.00	0.02	0.00	0.51	0.06	0.00	0.44
08/02/09	05:00-09:00							
08/06/09	05:00-09:00							
08/08/09	05:00-09:00	0.00	0.08	0.08	2.45	0.11	0.00	0.57
08/10/09	05:00-09:00	0.00	0.02	0.00	3.33	0.08	0.00	0.41
08/12/09	05:00-09:00	0.00	0.04	0.00	5.88	0.28	0.00	0.74
08/14/09	05:00-09:00	0.00	0.02	0.00	3.29	0.00	0.00	0.42
08/16/09	05:00-09:00	0.00	0.01	0.00	3.92	0.05	0.00	0.44
07/11/09	09:00-15:00	0.00	0.03	0.00	0.91	0.62	0.00	0.83
07/13/09	09:00-15:00	0.00	0.04	0.06	15.43	0.17	0.03	0.82
07/15/09	09:00-15:00	0.00	0.06	0.00	0.00	0.24	0.00	0.80
07/17/09	09:00-15:00	0.00	0.08	0.07	0.00	0.30	0.00	0.65
07/19/09	09:00-15:00	0.00	0.02	0.00	5.09	0.00	0.00	0.78
07/21/09	09:00-15:00	0.00	0.04	0.00	4.13	0.25	0.00	0.78
07/23/09	09:00-15:00	0.00	0.02	0.00	4.26	0.00	0.09	0.50
07/25/09	09:00-15:00	0.00	0.02	0.00	5.35	0.13	0.00	1.02
07/27/09	09:00-15:00	0.00	0.06	0.00	0.00	0.26	0.03	1.08
07/29/09	09:00-15:00	0.00	0.02	0.00	4.07	0.02	0.00	0.15
07/31/09	09:00-15:00	0.00	0.02	0.00	0.19	0.14	0.00	0.67
08/02/09	09:00-15:00	0.00	0.02	0.00	2.47	0.00	0.00	1.07
08/06/09	09:00-15:00	0.00	0.06	0.12	6.28	0.32	0.00	0.19
08/08/09	09:00-15:00	0.00	0.02	0.00	3.85	0.06	0.00	0.44
08/10/09	09:00-15:00	0.00	0.04	0.00	6.67	0.09	0.00	0.79
08/12/09	09:00-15:00	0.00	0.03	0.00	4.85	0.21	0.00	1.03
08/14/09	09:00-15:00	0.00	0.05	0.00	8.96	0.19	0.00	0.19
08/16/09	09:00-15:00	0.00	0.01	0.00	5.39	0.05	0.00	0.51
07/11/09	15:00-19:00	0.00	0.04	0.00	4.06	0.30	0.00	0.38
07/13/09	15:00-19:00	0.00	0.06	0.04	4.24	0.00	0.00	0.42
07/15/09	15:00-19:00	0.00	0.08	0.00	2.17	0.00	0.00	0.40
07/17/09	15:00-19:00	0.00	0.08	0.00	2.61	0.13	0.00	0.36
07/19/09	15:00-19:00	0.00	0.02	0.00	4.21	0.04	0.00	0.18
07/21/09	15:00-19:00	0.00	0.09	0.00	6.57	0.00	0.00	0.72
07/23/09	15:00-19:00	0.00	0.08	0.00	5.09	0.30	0.00	0.49
07/25/09	15:00-19:00	0.00	0.04	0.00	5.96	0.07	0.00	0.54
07/27/09	15:00-19:00	0.00	0.07	0.00	0.58	0.00	0.00	0.60
07/29/09	15:00-19:00	0.00	0.08	0.00	7.05	0.21	0.00	0.49
07/31/09	15:00-19:00	0.00	0.05	0.00	4.87	0.07	0.00	0.27
08/02/09	15:00-19:00	0.00	0.03	0.00	4.59	0.00	0.00	0.24
08/06/09	15:00-19:00	0.00	0.06	0.15	7.23	0.10	0.00	0.35
08/08/09	15:00-19:00	0.00	0.05	0.00	3.73	0.02	0.00	0.12
08/10/09	15:00-19:00	0.00	0.06	0.00	3.64	0.16	0.00	0.37
08/12/09	15:00-19:00	0.00	0.07	0.00	0.16	0.08	0.00	0.50
08/14/09	15:00-19:00	0.00	0.06	0.00	3.62	0.17	0.00	0.56
08/16/09	15:00-19:00	0.00	0.02	0.00	0.07	0.06	0.00	0.44
07/11/09	19:00-05:00	0.00	0.06	0.00	4.59	0.13	0.00	0.31
07/13/09	19:00-05:00	0.00	0.05	0.00	4.17	0.08	0.00	0.40
07/15/09	19:00-05:00	0.00	0.04	0.00	2.91	0.05	0.00	0.41
07/17/09	19:00-05:00	0.00	0.04	0.00	3.73	0.00	0.00	0.35
07/19/09	19:00-05:00	0.00	0.04	0.00	3.91	0.11	0.00	0.43
07/21/09	19:00-05:00							
07/23/09	19:00-05:00	0.00	0.03	0.00	3.48	0.00	0.00	0.13
07/25/09	19:00-05:00	0.00	0.04	0.00	3.93	0.12	0.00	0.40
07/27/09	19:00-05:00	0.00	0.04	0.00	3.52	0.04	0.00	0.00
07/29/09	19:00-05:00	0.00	0.04	0.00	4.37	0.09	0.00	0.45
07/31/09	19:00-05:00	0.00	0.06	0.00	6.07	0.06	0.00	0.64
08/02/09	19:00-05:00	0.00	0.05	0.00	4.27	0.12	0.00	0.23
08/06/09	19:00-05:00	0.00	0.01	0.00	1.68	0.57	0.00	0.42
08/08/09	19:00-05:00	0.00	0.04	0.00	3.48	0.09	0.00	0.41
08/10/09	19:00-05:00							
08/12/09	19:00-05:00	0.00	0.03	0.00	4.24	0.05	0.00	0.46
08/14/09	19:00-05:00	0.00	0.03	0.00	0.14	0.10	0.00	0.39
08/16/09	19:00-05:00	0.00	0.01	0.00	4.20	0.00	0.00	0.50

		NEAR SITE (15m) - SUMMER						
Sample Date	Time Interval	Chloroform	1,2-Dichloroethane	Benzene	Carbontetrachloride	1,2-Dichloropropane	Trichloroethylene	Toluene
07/11/09	05:00-09:00	0.02	0.00	0.40	0.07	0.00	0.00	1.32
07/13/09	05:00-09:00	0.00	0.02	0.31	0.08	0.00	0.00	0.81
07/15/09	05:00-09:00	0.01	0.00	0.40	0.07	0.00	0.00	0.94
07/17/09	05:00-09:00	0.00	0.00	0.38	0.07	0.00	0.00	0.94
07/19/09	05:00-09:00	0.02	0.00	0.37	0.08	0.00	0.00	0.89
07/21/09	05:00-09:00	0.02	0.02	0.43	0.07	0.00	0.00	0.98
07/23/09	05:00-09:00	0.02	0.00	0.17	0.09	0.00	0.00	0.43
07/25/09	05:00-09:00	0.15	0.18	0.43	0.22	0.14	0.15	0.86
07/27/09	05:00-09:00	0.00	0.00	0.42	0.03	0.00	0.00	1.01
07/29/09	05:00-09:00	0.00	0.00	0.09	0.08	0.00	0.00	0.23
07/31/09	05:00-09:00	0.01	0.00	0.12	0.09	0.00	0.00	0.29
08/02/09	05:00-09:00							
08/06/09	05:00-09:00							
08/08/09	05:00-09:00	0.01	0.00	0.39	0.08	0.00	0.00	1.22
08/10/09	05:00-09:00	0.00	0.00	0.20	0.09	0.00	0.00	0.28
08/12/09	05:00-09:00	0.01	0.00	0.34	0.04	0.00	0.00	0.84
08/14/09	05:00-09:00	0.00	0.00	0.11	0.09	0.00	0.00	0.22
08/16/09	05:00-09:00	0.02	0.00	0.14	0.08	0.00	0.00	0.24
07/11/09	09:00-15:00	0.00	0.00	0.22	0.04	0.00	0.00	0.58
07/13/09	09:00-15:00	0.00	0.00	0.30	0.07	0.00	0.01	0.81
07/15/09	09:00-15:00	0.00	0.00	0.27	0.05	0.00	0.00	0.79
07/17/09	09:00-15:00	0.00	0.00	0.28	0.03	0.00	0.00	0.75
07/19/09	09:00-15:00	0.02	0.00	0.22	0.08	0.00	0.00	0.52
07/21/09	09:00-15:00	0.02	0.00	0.26	0.03	0.00	0.00	0.69
07/23/09	09:00-15:00	0.00	0.00	0.13	0.08	0.00	0.00	0.39
07/25/09	09:00-15:00	0.02	0.00	0.30	0.09	0.00	0.00	0.76
07/27/09	09:00-15:00	0.00	0.02	0.34	0.09	0.00	0.00	0.95
07/29/09	09:00-15:00	0.00	0.00	0.10	0.08	0.00	0.00	0.24
07/31/09	09:00-15:00	0.00	0.00	0.17	0.09	0.00	0.00	0.45
08/02/09	09:00-15:00	0.02	0.00	0.23	0.10	0.00	0.00	0.98
08/06/09	09:00-15:00	0.00	0.00	0.23	0.09	0.00	0.00	0.52
08/08/09	09:00-15:00	0.00	0.00	0.12	0.09	0.00	0.00	0.23
08/10/09	09:00-15:00	0.00	0.00	0.30	0.09	0.00	0.00	0.60
08/12/09	09:00-15:00	0.02	0.00	0.30	0.09	0.00	0.00	0.75
08/14/09	09:00-15:00	0.00	0.00	0.21	0.09	0.00	0.00	0.47
08/16/09	09:00-15:00	0.00	0.00	0.20	0.08	0.00	0.00	0.27
07/11/09	15:00-19:00	0.00	0.00	0.15	0.07	0.00	0.00	0.37
07/13/09	15:00-19:00	0.00	0.00	0.23	0.02	0.00	0.00	0.52
07/15/09	15:00-19:00	0.01	0.00	0.23	0.07	0.00	0.00	0.53
07/17/09	15:00-19:00	0.00	0.00	0.24	0.07	0.00	0.00	0.55
07/19/09	15:00-19:00	0.01	0.00	0.15	0.07	0.00	0.00	0.34
07/21/09	15:00-19:00	0.01	0.00	0.34	0.07	0.00	0.00	0.76
07/23/09	15:00-19:00	0.00	0.00	0.27	0.07	0.00	0.00	0.61
07/25/09	15:00-19:00	0.01	0.00	0.17	0.10	0.00	0.00	0.40
07/27/09	15:00-19:00	0.00	0.00	0.24	0.08	0.00	0.00	0.52
07/29/09	15:00-19:00	0.00	0.01	0.24	0.08	0.00	0.00	0.61
07/31/09	15:00-19:00	0.00	0.01	0.26	0.10	0.00	0.00	0.52
08/02/09	15:00-19:00	0.00	0.00	0.12	0.10	0.00	0.00	0.23
08/06/09	15:00-19:00	0.00	0.00	0.19	0.09	0.00	0.00	0.52
08/08/09	15:00-19:00	0.00	0.00	0.23	0.09	0.00	0.00	0.38
08/10/09	15:00-19:00	0.01	0.00	0.22	0.09	0.00	0.00	0.42
08/12/09	15:00-19:00	0.01	0.00	0.25	0.08	0.00	0.00	0.57
08/14/09	15:00-19:00	0.01	0.00	0.25	0.08	0.00	0.00	0.50
08/16/09	15:00-19:00	0.00	0.00	0.20	0.09	0.00	0.00	0.21
07/11/09	19:00-05:00	0.00	0.02	0.24	0.08	0.00	0.00	0.68
07/13/09	19:00-05:00	0.02	0.03	0.21	0.08	0.00	0.00	0.47
07/15/09	19:00-05:00	0.00	0.00	0.14	0.04	0.00	0.00	0.40
07/17/09	19:00-05:00	0.01	0.00	0.16	0.07	0.00	0.00	0.38
07/19/09	19:00-05:00	0.02	0.00	0.20	0.08	0.00	0.00	0.57
07/21/09	19:00-05:00							
07/23/09	19:00-05:00	0.01	0.00	0.15	0.08	0.00	0.00	0.32
07/25/09	19:00-05:00	0.00	0.00	0.18	0.08	0.00	0.00	0.46
07/27/09	19:00-05:00	0.01	0.00	0.16	0.08	0.00	0.00	0.36
07/29/09	19:00-05:00	0.01	0.00	0.15	0.08	0.00	0.00	0.44
07/31/09	19:00-05:00	0.02	0.00	0.18	0.09	0.00	0.00	0.87
08/02/09	19:00-05:00	0.02	0.00	0.18	0.04	0.00	0.00	0.57
08/06/09	19:00-05:00	0.02	0.00	0.14	0.09	0.00	0.00	0.37
08/08/09	19:00-05:00	0.02	0.00	0.28	0.09	0.00	0.00	0.46
08/10/09	19:00-05:00							
08/12/09	19:00-05:00	0.00	0.00	0.16	0.09	0.00	0.00	0.34
08/14/09	19:00-05:00	0.00	0.00	0.14	0.08	0.00	0.00	0.24
08/16/09	19:00-05:00	0.00	0.00	0.18	0.08	0.00	0.00	0.20

		NEAR SITE (15m) - SUMMER							
Sample Date	Time Interval	1,2-Dibromoethane	Tetrachloroethene	Ethylbenzene	m,p-Xylenes	Styrene	O-Xylene	1,4-DiChlorobenzene	1,2-DiChlorobenzene
07/11/09	05:00-09:00	0.00	0.06	0.14	0.49	0.06	0.17	0.02	01/00/00
07/13/09	05:00-09:00	0.00	0.02	0.12	0.46	0.03	0.15	0.01	01/00/00
07/15/09	05:00-09:00	0.00	0.03	0.17	0.68	0.16	0.21	0.00	01/00/00
07/17/09	05:00-09:00	0.00	0.03	0.14	0.50	0.20	0.16	0.00	01/00/00
07/19/09	05:00-09:00	0.00	0.00	0.15	0.44	0.00	0.13	0.01	01/00/00
07/21/09	05:00-09:00	0.00	0.00	0.17	0.54	0.00	0.17	0.01	01/00/00
07/23/09	05:00-09:00	0.00	0.00	0.08	0.24	0.01	0.08	0.00	01/00/00
07/25/09	05:00-09:00	0.13	0.08	0.25	0.28	0.20	0.30	0.14	01/00/00
07/27/09	05:00-09:00	0.00	0.04	0.17	0.63	0.20	0.20	0.00	01/00/00
07/29/09	05:00-09:00	0.00	0.00	0.04	0.13	0.00	0.05	0.00	01/00/00
07/31/09	05:00-09:00	0.00	0.00	0.04	0.14	0.01	0.05	0.00	01/00/00
08/02/09	05:00-09:00								
08/06/09	05:00-09:00								
08/08/09	05:00-09:00	0.00	0.03	0.18	0.68	0.06	0.22	0.00	01/00/00
08/10/09	05:00-09:00	0.00	0.00	0.04	0.15	0.00	0.05	0.00	01/00/00
08/12/09	05:00-09:00	0.00	0.02	0.12	0.38	0.05	0.13	0.00	01/00/00
08/14/09	05:00-09:00	0.00	0.00	0.03	0.12	0.00	0.05	0.00	01/00/00
08/16/09	05:00-09:00	0.00	0.00	0.05	0.11	0.00	0.04	0.00	01/00/00
07/11/09	09:00-15:00	0.00	0.02	0.15	0.56	0.00	0.17	0.00	01/00/00
07/13/09	09:00-15:00	0.00	0.00	0.11	0.38	0.07	0.13	0.00	01/00/00
07/15/09	09:00-15:00	0.00	0.03	0.13	0.39	0.09	0.12	0.00	01/00/00
07/17/09	09:00-15:00	0.00	0.00	0.10	0.49	0.03	0.11	0.00	01/00/00
07/19/09	09:00-15:00	0.00	0.00	0.08	0.26	0.00	0.10	0.00	01/00/00
07/21/09	09:00-15:00	0.00	0.03	0.12	0.35	0.11	0.10	0.00	01/00/00
07/23/09	09:00-15:00	0.00	0.00	0.06	0.18	0.10	0.06	0.00	01/00/00
07/25/09	09:00-15:00	0.00	0.01	0.09	0.27	0.00	0.10	0.00	01/00/00
07/27/09	09:00-15:00	0.00	0.10	0.16	0.51	0.05	0.16	0.00	01/00/00
07/29/09	09:00-15:00	0.00	0.01	0.04	0.11	0.00	0.04	0.00	01/00/00
07/31/09	09:00-15:00	0.00	0.02	0.07	0.19	0.01	0.06	0.00	01/00/00
08/02/09	09:00-15:00	0.00	0.02	0.08	0.23	0.00	0.09	0.00	01/00/00
08/06/09	09:00-15:00	0.00	0.01	0.07	0.26	0.03	0.10	0.00	01/00/00
08/08/09	09:00-15:00	0.00	0.00	0.04	0.10	0.01	0.05	0.00	01/00/00
08/10/09	09:00-15:00	0.00	0.03	0.08	0.24	0.00	0.08	0.00	01/00/00
08/12/09	09:00-15:00	0.00	0.02	0.11	0.35	0.08	0.13	0.00	01/00/00
08/14/09	09:00-15:00	0.00	0.00	0.08	0.27	0.01	0.08	0.00	01/00/00
08/16/09	09:00-15:00	0.00	0.00	0.04	0.10	0.00	0.04	0.00	01/00/00
07/11/09	15:00-19:00	0.00	0.00	0.41	1.76	0.02	0.53	0.00	01/00/00
07/13/09	15:00-19:00	0.00	0.00	0.16	0.72	0.01	0.22	0.00	01/00/00
07/15/09	15:00-19:00	0.00	0.00	0.08	0.29	0.02	0.10	0.00	01/00/00
07/17/09	15:00-19:00	0.00	0.00	0.10	0.36	0.04	0.09	0.00	01/00/00
07/19/09	15:00-19:00	0.00	0.00	0.05	0.18	0.01	0.06	0.00	01/00/00
07/21/09	15:00-19:00	0.00	0.02	0.12	0.43	0.00	0.11	0.00	01/00/00
07/23/09	15:00-19:00	0.00	0.02	0.10	0.39	0.02	0.11	0.00	01/00/00
07/25/09	15:00-19:00	0.00	0.00	0.06	0.23	0.01	0.07	0.00	01/00/00
07/27/09	15:00-19:00	0.00	0.00	0.08	0.31	0.03	0.10	0.00	01/00/00
07/29/09	15:00-19:00	0.00	0.03	0.08	0.35	0.03	0.12	0.00	01/00/00
07/31/09	15:00-19:00	0.00	0.00	0.08	0.28	0.02	0.10	0.00	01/00/00
08/02/09	15:00-19:00	0.00	0.00	0.04	0.14	0.00	0.04	0.00	01/00/00
08/06/09	15:00-19:00	0.00	0.00	0.08	0.24	0.03	0.08	0.00	01/00/00
08/08/09	15:00-19:00	0.00	0.00	0.06	0.22	0.01	0.08	0.00	01/00/00
08/10/09	15:00-19:00	0.00	0.00	0.06	0.22	0.02	0.07	0.00	01/00/00
08/12/09	15:00-19:00	0.00	0.00	0.08	0.31	0.03	0.09	0.00	01/00/00
08/14/09	15:00-19:00	0.00	0.00	0.08	0.26	0.02	0.09	0.00	01/00/00
08/16/09	15:00-19:00	0.00	0.00	0.03	0.11	0.00	0.04	0.00	01/00/00
07/11/09	19:00-05:00	0.00	0.00	0.14	0.61	0.04	0.20	0.00	01/00/00
07/13/09	19:00-05:00	0.00	0.01	0.09	0.34	0.02	0.10	0.00	01/00/00
07/15/09	19:00-05:00	0.00	0.00	0.06	0.24	0.03	0.07	0.00	01/00/00
07/17/09	19:00-05:00	0.00	0.00	0.06	0.22	0.04	0.07	0.00	01/00/00
07/19/09	19:00-05:00	0.00	0.00	0.08	0.31	0.01	0.10	0.01	01/00/00
07/21/09	19:00-05:00								
07/23/09	19:00-05:00	0.00	0.00	0.05	0.18	0.01	0.06	0.00	01/00/00
07/25/09	19:00-05:00	0.00	0.02	0.07	0.26	0.03	0.09	0.00	01/00/00
07/27/09	19:00-05:00	0.00	0.01	0.06	0.22	0.02	0.07	0.00	01/00/00
07/29/09	19:00-05:00	0.00	0.00	0.06	0.21	0.03	0.07	0.00	01/00/00
07/31/09	19:00-05:00	0.00	0.02	0.07	0.24	0.03	0.08	0.00	01/00/00
08/02/09	19:00-05:00	0.00	0.01	0.08	0.31	0.05	0.10	0.00	01/00/00
08/06/09	19:00-05:00	0.00	0.08	0.05	0.16	0.00	0.05	0.00	01/00/00
08/08/09	19:00-05:00	0.00	0.00	0.06	0.23	0.01	0.08	0.00	01/00/00
08/10/09	19:00-05:00								
08/12/09	19:00-05:00	0.00	0.00	0.05	0.19	0.00	0.06	0.00	01/00/00
08/14/09	19:00-05:00	0.00	0.00	0.04	0.14	0.01	0.05	0.00	01/00/00
08/16/09	19:00-05:00	0.00	0.00	0.03	0.09	0.00	0.04	0.00	01/00/00

		FAR SITE (80m) - WINTER						
Sample Date	Time Interval	Vinylchloride	1,3-Butadiene	Acrolein	Acetone	Methylenechloride	Methyltertbutylether	2-Butanone
02/04/09	05:00-09:00	0.00	0.55	0.41	13.32	0.76	0.05	1.31
02/06/09	05:00-09:00	0.00	0.04	0.00	1.08	0.03	0.00	0.17
02/08/09	05:00-09:00	0.00	0.14	0.08	2.75	0.17	0.02	0.40
02/10/09	05:00-09:00	0.00	0.18	0.11	2.70	0.10	0.00	0.30
02/12/09	05:00-09:00	0.00	0.44	0.19	8.14	0.34	0.03	0.74
02/14/09	05:00-09:00	0.00	0.14	0.12	3.22	0.20	0.01	0.44
02/16/09	05:00-09:00	0.00	0.02	0.00	1.79	0.08	0.00	0.26
02/18/09	05:00-09:00	0.00	0.16	0.16	3.93	0.25	0.00	0.43
02/20/09	05:00-09:00	0.00	0.35	0.21	5.45	0.27	0.00	0.60
02/22/09	05:00-09:00	0.00	0.26	0.22	8.38	0.56	0.02	0.90
02/24/09	05:00-09:00	0.00	0.54	0.25	7.93	0.62	0.00	0.88
02/26/09	05:00-09:00	0.00	0.30	0.14	4.90	0.54	0.02	0.60
02/28/09	05:00-09:00	0.00	0.23	0.17	6.28	0.29	0.01	0.55
03/02/09	05:00-09:00	0.00	0.49	0.41	10.03	0.81	0.03	1.30
03/04/09	05:00-09:00	0.00	0.08	0.12	3.98	0.26	0.01	0.48
03/06/09	05:00-09:00	0.00	0.23	0.16	5.15	0.22	0.01	0.65
03/08/09	05:00-09:00	0.00	0.21	0.15	4.23	0.25	0.02	0.53
02/04/09	09:00-15:00	0.00	0.13	0.14	11.04	0.24	0.01	0.58
02/06/09	09:00-15:00	0.00	0.02	0.06	1.36	0.06	0.00	0.19
02/08/09	09:00-15:00	0.00	0.03	0.05	1.64	0.07	0.00	0.20
02/10/09	09:00-15:00	0.00	0.05	0.11	3.33	0.14	0.00	0.40
02/12/09	09:00-15:00	0.00	0.05	0.07	9.54	0.34	0.00	0.28
02/14/09	09:00-15:00	0.00	0.04	0.09	2.20	0.07	0.00	0.34
02/16/09	09:00-15:00	0.00	0.02	0.00	1.18	0.22	0.00	0.16
02/18/09	09:00-15:00	0.00	0.04	0.09	3.93	0.12	0.00	0.52
02/20/09	09:00-15:00	0.00	0.09	0.15	6.20	0.29	0.00	0.80
02/22/09	09:00-15:00	0.00	0.19	0.26	7.25	0.33	0.01	0.78
02/24/09	09:00-15:00	0.00	0.04	0.14	8.43	0.37	0.01	0.83
02/26/09	09:00-15:00	0.00	0.02	0.08	2.75	0.12	0.00	0.39
02/28/09	09:00-15:00	0.00	0.04	0.13	5.36	0.12	0.00	0.76
03/02/09	09:00-15:00	0.00	0.22	0.26	15.21	0.84	0.01	0.99
03/04/09	09:00-15:00	0.00	0.03	0.05	2.28	0.09	0.00	0.26
03/06/09	09:00-15:00	0.00	0.03	0.07	5.36	0.32	0.00	0.36
03/08/09	09:00-15:00	0.00	0.02	0.07	2.57	0.08	0.00	0.42
02/02/09	15:00-19:00	0.00	0.10	0.09	5.88	0.34	0.00	0.46
02/04/09	15:00-19:00	0.00	0.05	0.07	2.42	0.09	0.01	0.38
02/06/09	15:00-19:00	0.00	0.02	0.00	1.09	0.05	0.00	0.15
02/08/09	15:00-19:00	0.00	0.03	0.00	1.27	0.06	0.00	0.17
02/10/09	15:00-19:00	0.00	0.05	0.06	2.68	0.50	0.00	0.17
02/12/09	15:00-19:00	0.00	0.04	0.05	4.02	0.26	0.00	0.16
02/14/09	15:00-19:00	0.00	0.05	0.07	2.70	0.15	0.00	0.26
02/16/09	15:00-19:00	0.00	0.04	0.00	2.05	0.17	0.00	0.15
02/18/09	15:00-19:00	0.00	0.05	0.12	6.30	0.28	0.00	0.47
02/20/09	15:00-19:00	0.00	0.07	0.07	3.32	0.35	0.00	0.33
02/22/09	15:00-19:00	0.00	0.18	0.27	7.04	0.32	0.01	0.81
02/24/09	15:00-19:00	0.00	0.06	0.06	7.08	0.19	0.00	0.27
02/26/09	15:00-19:00	0.00	0.03	0.04	2.40	0.16	0.00	0.41
02/28/09	15:00-19:00	0.00	0.05	0.11	4.80	0.19	0.00	0.66
03/02/09	15:00-19:00	0.00	0.14	0.19	8.29	0.43	0.01	0.62
03/04/09	15:00-19:00	0.00	0.02	0.03	1.65	0.09	0.00	0.19
03/06/09	15:00-19:00	0.00	0.04	0.04	2.30	0.27	0.00	0.20
03/08/09	15:00-19:00	0.00	0.03	0.03	2.07	0.07	0.00	0.28
02/02/09	19:00-05:00	0.00	0.48	0.45	23.90	0.67	0.01	1.41
02/04/09	19:00-05:00							
02/06/09	19:00-05:00	0.00	0.03	0.23	4.75	0.07	0.00	0.48
02/08/09	19:00-05:00	0.00	0.02	0.13	2.13	0.05	0.00	0.39
02/10/09	19:00-05:00	0.00	0.16	0.35	4.48	0.55	0.01	0.54
02/12/09	19:00-05:00	0.00	0.16	0.35	6.28	0.64	0.01	0.58
02/14/09	19:00-05:00	0.00	0.35	0.31	6.10	0.23	0.01	0.63
02/16/09	19:00-05:00	0.00	0.08	0.28	4.75	0.36	0.00	0.52
02/18/09	19:00-05:00	0.00	0.16	0.33	6.71	0.37	0.01	0.78
02/20/09	19:00-05:00	0.00	0.31	0.50	8.89	0.33	0.01	0.77
02/22/09	19:00-05:00	0.00	0.30	0.44	6.82	0.40	0.02	0.97
02/24/09	19:00-05:00	0.00	0.04	0.23	4.48	0.21	0.00	0.52
02/26/09	19:00-05:00	0.00	0.04	0.23	2.67	0.14	0.00	0.51
02/28/09	19:00-05:00	0.00	0.22	0.41	8.01	0.39	0.01	0.86
03/02/09	19:00-05:00	0.00	0.06	0.20	3.98	0.31	0.01	0.37
03/04/09	19:00-05:00	0.00	0.07	0.31	6.00	0.63	0.01	0.75
03/06/09	19:00-05:00	0.00	0.06	0.29	3.73	0.36	0.01	0.47
03/08/09	19:00-05:00	0.00	0.04	0.31	3.63	0.09	0.00	0.66

		FAR SITE (80m) - WINTER						
Sample Date	Time Interval	Chloroform	1,2-Dichloroethane	Benzene	Carbontetrachloride	1,2-Dichloropropane	Trichloroethylene	Toluene
02/04/09	05:00-09:00	0.08	0.07	2.23	0.08	0.00	0.04	7.95
02/06/09	05:00-09:00	0.01	0.00	0.25	0.08	0.00	0.00	0.41
02/08/09	05:00-09:00	0.03	0.04	0.68	0.09	0.00	0.01	2.04
02/10/09	05:00-09:00	0.02	0.02	0.66	0.09	0.00	0.05	1.61
02/12/09	05:00-09:00	0.04	0.04	1.45	0.08	0.00	0.03	4.47
02/14/09	05:00-09:00	0.03	0.03	0.72	0.08	0.00	0.04	1.92
02/16/09	05:00-09:00	0.01	0.00	0.24	0.08	0.00	0.00	0.40
02/18/09	05:00-09:00	0.04	0.03	0.98	0.08	0.00	0.03	2.79
02/20/09	05:00-09:00	0.03	0.03	1.05	0.09	0.00	0.01	2.82
02/22/09	05:00-09:00	0.04	0.07	1.22	0.08	0.00	0.03	3.81
02/24/09	05:00-09:00	0.08	0.05	1.93	0.08	0.00	0.07	6.65
02/26/09	05:00-09:00	0.05	0.04	1.10	0.08	0.00	0.02	3.64
02/28/09	05:00-09:00	0.04	0.04	0.85	0.08	0.00	0.03	2.75
03/02/09	05:00-09:00	0.09	0.07	2.13	0.09	0.00	0.06	6.61
03/04/09	05:00-09:00	0.04	0.02	0.52	0.08	0.00	0.00	1.58
03/06/09	05:00-09:00	0.07	0.03	0.85	0.08	0.00	0.02	2.37
03/08/09	05:00-09:00	0.05	0.03	0.95	0.09	0.00	0.02	2.77
02/04/09	09:00-15:00	0.02	0.03	0.62	0.09	0.00	0.02	2.62
02/06/09	09:00-15:00	0.01	0.00	0.17	0.08	0.00	0.00	0.25
02/08/09	09:00-15:00	0.00	0.00	0.19	0.08	0.00	0.00	0.31
02/10/09	09:00-15:00	0.02	0.02	0.40	0.08	0.00	0.05	0.93
02/12/09	09:00-15:00	0.01	0.00	0.29	0.08	0.00	0.00	0.65
02/14/09	09:00-15:00	0.02	0.02	0.31	0.08	0.00	0.00	0.58
02/16/09	09:00-15:00	0.01	0.00	0.16	0.08	0.00	0.00	0.20
02/18/09	09:00-15:00	0.02	0.02	0.31	0.08	0.00	0.01	0.79
02/20/09	09:00-15:00	0.02	0.02	0.47	0.08	0.00	0.02	1.38
02/22/09	09:00-15:00	0.04	0.03	1.07	0.08	0.00	0.02	3.30
02/24/09	09:00-15:00	0.03	0.02	0.48	0.08	0.00	0.02	1.43
02/26/09	09:00-15:00	0.02	0.00	0.24	0.08	0.00	0.00	0.56
02/28/09	09:00-15:00	0.02	0.02	0.35	0.08	0.00	0.00	0.95
03/02/09	09:00-15:00	0.04	0.03	1.00	0.08	0.00	0.03	3.05
03/04/09	09:00-15:00	0.02	0.02	0.21	0.08	0.00	0.00	0.45
03/06/09	09:00-15:00	0.02	0.00	0.23	0.08	0.00	0.00	0.51
03/08/09	09:00-15:00	0.01	0.01	0.23	0.08	0.00	0.00	0.41
02/02/09	15:00-19:00	0.02	0.02	0.47	0.08	0.00	0.00	1.25
02/04/09	15:00-19:00	0.01	0.00	0.32	0.08	0.00	0.00	0.82
02/06/09	15:00-19:00	0.01	0.00	0.19	0.08	0.00	0.00	0.26
02/08/09	15:00-19:00	0.01	0.00	0.17	0.08	0.00	0.00	0.32
02/10/09	15:00-19:00	0.01	0.00	0.27	0.08	0.00	0.00	0.43
02/12/09	15:00-19:00	0.01	0.00	0.21	0.08	0.00	0.00	0.32
02/14/09	15:00-19:00	0.01	0.00	0.27	0.08	0.00	0.00	0.51
02/16/09	15:00-19:00	0.01	0.00	0.17	0.08	0.00	0.00	0.31
02/18/09	15:00-19:00	0.02	0.02	0.34	0.08	0.00	0.00	0.79
02/20/09	15:00-19:00	0.01	0.02	0.30	0.08	0.00	0.02	0.68
02/22/09	15:00-19:00	0.03	0.04	0.95	0.08	0.00	0.02	2.92
02/24/09	15:00-19:00	0.01	0.02	0.23	0.08	0.00	0.00	0.57
02/26/09	15:00-19:00	0.01	0.01	0.18	0.08	0.00	0.00	0.43
02/28/09	15:00-19:00	0.02	0.02	0.36	0.09	0.00	0.00	0.88
03/02/09	15:00-19:00	0.03	0.02	0.67	0.09	0.00	0.02	2.04
03/04/09	15:00-19:00	0.01	0.00	0.17	0.07	0.00	0.00	0.27
03/06/09	15:00-19:00	0.01	0.00	0.18	0.08	0.00	0.00	0.29
03/08/09	15:00-19:00	0.01	0.00	0.18	0.08	0.00	0.00	0.27
02/02/09	19:00-05:00	0.06	0.08	1.85	0.09	0.00	0.04	6.47
02/04/09	19:00-05:00							
02/06/09	19:00-05:00	0.02	0.04	0.25	0.08	0.00	0.00	0.42
02/08/09	19:00-05:00	0.01	0.05	0.19	0.08	0.00	0.00	0.31
02/10/09	19:00-05:00	0.03	0.07	0.70	0.08	0.00	0.01	1.84
02/12/09	19:00-05:00	0.03	0.11	0.64	0.08	0.00	0.00	1.71
02/14/09	19:00-05:00	0.03	0.03	1.06	0.08	0.00	0.03	2.59
02/16/09	19:00-05:00	0.02	0.06	0.40	0.08	0.00	0.01	0.98
02/18/09	19:00-05:00	0.03	0.13	0.74	0.08	0.00	0.01	2.04
02/20/09	19:00-05:00	0.03	0.11	1.06	0.08	0.00	0.02	3.22
02/22/09	19:00-05:00	0.05	0.09	1.19	0.08	0.00	0.03	3.64
02/24/09	19:00-05:00	0.01	0.10	0.22	0.08	0.00	0.00	0.73
02/26/09	19:00-05:00	0.01	0.04	0.22	0.08	0.00	0.00	0.52
02/28/09	19:00-05:00	0.03	0.15	0.83	0.08	0.00	0.01	2.32
03/02/09	19:00-05:00	0.02	0.07	0.28	0.08	0.00	0.00	0.74
03/04/09	19:00-05:00	0.02	0.11	0.35	0.08	0.00	0.00	0.78
03/06/09	19:00-05:00	0.02	0.08	0.36	0.08	0.00	0.00	0.79
03/08/09	19:00-05:00	0.02	0.07	0.23	0.08	0.00	0.00	0.46

		FAR SITE (80m) - WINTER							
Sample Date	Time Interval	1,2-Dibromoethane	Tetrachloroethene	Ethylbenzene	m,p-Xylenes	Styrene	O-Xylene	1,4-DiChlorobenzene	1,2-DiChlorobenzene
02/04/09	05:00-09:00	0.00	0.17	1.06	4.58	0.39	1.52	0.10	0.00
02/06/09	05:00-09:00	0.00	0.00	0.06	0.26	0.02	0.09	0.01	0.00
02/08/09	05:00-09:00	0.00	0.04	0.28	1.10	0.06	0.37	0.03	0.00
02/10/09	05:00-09:00	0.00	0.03	0.24	1.04	0.12	0.35	0.01	0.00
02/12/09	05:00-09:00	0.00	0.09	0.60	2.52	0.36	0.89	0.05	0.00
02/14/09	05:00-09:00	0.00	0.04	0.27	0.99	0.07	0.34	0.02	0.00
02/16/09	05:00-09:00	0.00	0.01	0.06	0.22	0.02	0.07	0.01	0.00
02/18/09	05:00-09:00	0.00	0.06	0.39	1.62	0.12	0.54	0.03	0.00
02/20/09	05:00-09:00	0.00	0.10	0.41	1.79	0.25	0.59	0.02	0.00
02/22/09	05:00-09:00	0.00	0.11	0.49	1.93	0.23	0.65	0.08	0.00
02/24/09	05:00-09:00	0.00	0.14	0.88	3.79	0.27	1.19	0.08	0.00
02/26/09	05:00-09:00	0.00	0.11	0.49	2.17	0.15	0.68	0.05	0.00
02/28/09	05:00-09:00	0.00	0.10	0.37	1.50	0.53	0.53	0.05	0.00
03/02/09	05:00-09:00	0.00	0.10	0.92	3.89	0.38	1.24	0.09	0.00
03/04/09	05:00-09:00	0.00	0.04	0.21	0.84	0.03	0.29	0.02	0.00
03/06/09	05:00-09:00	0.00	0.05	0.34	1.25	0.14	0.46	0.03	0.00
03/08/09	05:00-09:00	0.00	0.05	0.38	1.41	0.07	0.51	0.03	0.00
02/04/09	09:00-15:00	0.00	0.06	0.52	2.12	0.08	0.74	0.01	0.00
02/06/09	09:00-15:00	0.00	0.01	0.03	0.12	0.02	0.04	0.00	0.00
02/08/09	09:00-15:00	0.00	0.01	0.04	0.16	0.02	0.06	0.00	0.00
02/10/09	09:00-15:00	0.00	0.04	0.13	0.47	0.06	0.16	0.00	0.00
02/12/09	09:00-15:00	0.00	0.04	0.09	0.34	0.04	0.12	0.01	0.00
02/14/09	09:00-15:00	0.00	0.02	0.08	0.28	0.02	0.10	0.00	0.00
02/16/09	09:00-15:00	0.00	0.00	0.03	0.11	0.03	0.04	0.00	0.00
02/18/09	09:00-15:00	0.00	0.03	0.10	0.36	0.05	0.12	0.00	0.00
02/20/09	09:00-15:00	0.00	0.06	0.20	0.02	0.17	0.24	0.01	0.00
02/22/09	09:00-15:00	0.00	0.07	0.44	1.63	0.08	0.58	0.03	0.00
02/24/09	09:00-15:00	0.00	0.05	0.17	0.57	0.06	0.20	0.01	0.00
02/26/09	09:00-15:00	0.00	0.02	0.08	0.27	0.03	0.06	0.01	0.00
02/28/09	09:00-15:00	0.00	0.03	0.13	0.44	0.03	0.17	0.01	0.00
03/02/09	09:00-15:00	0.00	0.10	0.42	1.62	0.26	0.54	0.03	0.00
03/04/09	09:00-15:00	0.00	0.01	0.07	0.25	0.04	0.08	0.01	0.00
03/06/09	09:00-15:00	0.00	0.04	0.06	0.22	0.03	0.08	0.01	0.00
03/08/09	09:00-15:00	0.00	0.01	0.06	0.17	0.01	0.07	0.00	0.00
02/02/09	15:00-19:00	0.00	0.09	0.20	0.68	0.14	0.24	0.00	0.00
02/04/09	15:00-19:00	0.00	0.02	0.14	0.46	0.03	0.16	0.00	0.00
02/06/09	15:00-19:00	0.00	0.00	0.04	0.15	0.02	0.05	0.00	0.00
02/08/09	15:00-19:00	0.00	0.00	0.04	0.12	0.02	0.05	0.00	0.00
02/10/09	15:00-19:00	0.00	0.07	0.06	0.24	0.02	0.08	0.00	0.00
02/12/09	15:00-19:00	0.00	0.03	0.05	0.21	0.02	0.07	0.00	0.00
02/14/09	15:00-19:00	0.00	0.02	0.08	0.29	0.04	0.10	0.00	0.00
02/16/09	15:00-19:00	0.00	0.02	0.04	0.15	0.02	0.05	0.00	0.00
02/18/09	15:00-19:00	0.00	0.03	0.12	0.44	0.04	0.15	0.00	0.00
02/20/09	15:00-19:00	0.00	0.03	0.10	0.37	0.03	0.12	0.00	0.00
02/22/09	15:00-19:00	0.00	0.04	0.40	1.49	0.08	0.52	0.02	0.00
02/24/09	15:00-19:00	0.00	0.02	0.09	0.01	0.03	0.11	0.00	0.00
02/26/09	15:00-19:00	0.00	0.02	0.05	0.22	0.02	0.07	0.01	0.00
02/28/09	15:00-19:00	0.00	0.03	0.13	0.38	0.02	0.14	0.01	0.00
03/02/09	15:00-19:00	0.00	0.08	0.29	1.11	0.14	0.36	0.02	0.00
03/04/09	15:00-19:00	0.00	0.01	0.04	0.15	0.05	0.05	0.00	0.00
03/06/09	15:00-19:00	0.00	0.04	0.04	0.16	0.01	0.06	0.00	0.00
03/08/09	15:00-19:00	0.00	0.01	0.05	0.20	0.02	0.08	0.01	0.00
02/02/09	19:00-05:00	0.00	0.18	0.84	3.51	0.48	1.18	0.06	0.00
02/04/09	19:00-05:00								
02/06/09	19:00-05:00	0.00	0.01	0.10	0.56	0.19	0.16	0.00	0.00
02/08/09	19:00-05:00	0.00	0.00	0.07	0.32	0.12	0.10	0.00	0.00
02/10/09	19:00-05:00	0.00	0.09	0.29	1.14	0.20	0.38	0.01	0.00
02/12/09	19:00-05:00	0.00	0.09	0.32	1.24	0.29	0.39	0.01	0.00
02/14/09	19:00-05:00	0.00	0.04	0.42	1.73	0.33	0.60	0.03	0.00
02/16/09	19:00-05:00	0.00	0.06	0.19	0.06	0.18	0.24	0.01	0.00
02/18/09	19:00-05:00	0.00	0.07	0.35	0.07	0.25	0.45	0.02	0.00
02/20/09	19:00-05:00	0.00	0.05	0.49	1.99	0.36	0.65	0.03	0.00
02/22/09	19:00-05:00	0.00	0.05	0.52	2.02	0.21	0.69	0.04	0.00
02/24/09	19:00-05:00	0.00	0.03	0.15	0.61	0.17	0.19	0.01	0.00
02/26/09	19:00-05:00	0.00	0.01	0.13	0.51	0.17	0.16	0.01	0.00
02/28/09	19:00-05:00	0.00	0.04	0.36	1.48	0.31	0.48	0.03	0.00
03/02/09	19:00-05:00	0.00	0.04	0.16	0.66	0.16	0.20	0.01	0.00
03/04/09	19:00-05:00	0.00	0.10	0.16	0.67	0.21	0.20	0.01	0.00
03/06/09	19:00-05:00	0.00	0.04	0.13	0.58	0.17	0.20	0.00	0.00
03/08/09	19:00-05:00	0.00	0.01	0.13	0.55	0.20	0.20	0.01	0.00

		FAR SITE (80m) - SUMMER						
Sample Date	Time Interval	Vinylchloride	1,3-Butadiene	Acrolein	Acetone	Methylenechloride	Methyltertbutylether	2-Butanone
07/11/09	05:00-09:00							
07/13/09	05:00-09:00							
07/15/09	05:00-09:00	0.00	0.07	0.00	6.76	0.26	0.00	0.68
07/17/09	05:00-09:00	0.00	0.06	0.10	3.16	0.27	0.00	0.58
07/19/09	05:00-09:00	0.00	0.04	0.09	5.28	0.13	0.00	0.68
07/21/09	05:00-09:00	0.00	0.06	0.00	3.60	0.12	0.00	0.54
07/23/09	05:00-09:00	0.00	0.03	0.00	0.69	0.05	0.00	0.00
07/25/09	05:00-09:00	0.00	0.04	0.00	6.06	0.16	0.00	0.67
07/27/09	05:00-09:00	0.00	0.07	0.13	3.31	0.30	0.00	0.32
07/29/09	05:00-09:00	0.00	0.02	0.00	2.77	0.00	0.00	0.30
07/31/09	05:00-09:00	0.00	0.02	0.00	0.80	0.07	0.00	0.43
08/02/09	05:00-09:00	0.00	0.02	0.00	5.66	0.08	0.00	0.58
08/04/09	05:00-09:00	0.00	0.28	0.26	9.20	0.15	0.00	0.87
08/06/09	05:00-09:00	0.00	0.04	0.08	4.67	0.47	0.00	0.46
08/08/09	05:00-09:00	0.00	0.07	0.09	6.09	0.20	0.00	0.22
08/10/09	05:00-09:00	0.00	0.02	0.00	3.95	0.08	0.00	0.03
08/12/09	05:00-09:00	0.00	0.04	0.00	2.87	0.26	0.00	0.53
08/14/09	05:00-09:00	0.00	0.02	0.00	3.46	0.01	0.00	0.28
08/16/09	05:00-09:00	0.00	0.01	0.00	3.78	0.04	0.00	0.40
07/11/09	09:00-15:00	0.00	0.02	0.00	3.30	0.16	0.00	0.73
07/13/09	09:00-15:00	0.00	0.03	0.00	7.36	0.16	0.06	0.80
07/15/09	09:00-15:00	0.00	0.03	0.00	9.76	0.20	0.04	0.56
07/17/09	09:00-15:00	0.02	0.03	0.00	0.00	0.16	0.00	0.49
07/19/09	09:00-15:00	0.00	0.02	-0.01	2.31	0.02	0.00	0.91
07/21/09	09:00-15:00	0.00	0.02	0.00	5.13	0.24	0.01	0.62
07/23/09	09:00-15:00	0.00	0.02	0.00	2.69	0.10	0.05	0.53
07/25/09	09:00-15:00	0.00	0.02	0.00	5.71	0.10	0.00	0.80
07/27/09	09:00-15:00	0.00	0.02	0.08	0.83	0.22	0.00	0.86
07/29/09	09:00-15:00	0.00	0.01	0.06	0.38	0.05	0.00	0.34
07/31/09	09:00-15:00	0.00	0.02	0.00	0.65	0.17	0.04	0.30
08/02/09	09:00-15:00							
08/04/09	09:00-15:00	0.00	0.06	0.19	10.26	0.17	0.00	1.03
08/06/09	09:00-15:00	0.00	0.02	0.00	5.20	0.30	0.00	0.55
08/08/09	09:00-15:00	0.00	0.00	0.00	1.37	0.00	0.00	0.52
08/10/09	09:00-15:00	0.00	0.02	0.00	6.32	0.23	0.00	0.74
08/12/09	09:00-15:00	0.00	0.02	0.00	4.86	0.21	0.00	0.86
08/14/09	09:00-15:00	0.00	0.02	0.08	3.75	0.16	0.00	0.54
08/16/09	09:00-15:00	0.00	0.01	0.00	4.70	0.01	0.00	0.11
07/11/09	15:00-19:00	0.00	0.02	0.00	1.68	0.31	0.00	0.58
07/13/09	15:00-19:00	0.00	0.03	0.00	3.44	0.01	0.00	0.50
07/15/09	15:00-19:00	0.00	0.03	0.00	2.78	0.00	0.00	0.00
07/17/09	15:00-19:00	0.00	0.03	0.00	0.12	0.04	0.00	0.19
07/19/09	15:00-19:00	0.00	0.02	0.00	3.53	0.00	0.00	0.38
07/21/09	15:00-19:00	0.00	0.04	0.00	6.63	0.27	0.00	0.65
07/23/09	15:00-19:00	0.00	0.04	0.00	4.57	0.30	0.00	0.39
07/25/09	15:00-19:00	0.00	0.02	0.00	0.22	0.00	0.00	0.33
07/27/09	15:00-19:00	0.00	0.04	0.00	0.15	0.02	0.00	0.47
07/29/09	15:00-19:00	0.00	0.03	0.03	0.90	0.18	0.00	0.37
07/31/09	15:00-19:00	0.00	0.04	0.00	0.21	0.14	0.00	0.44
08/02/09	15:00-19:00	0.00	0.02	0.00	0.72	0.04	0.00	0.29
08/04/09	15:00-19:00							
08/06/09	15:00-19:00	0.00	0.01	0.13	5.51	0.03	0.00	0.18
08/08/09	15:00-19:00	0.00	0.02	0.00	0.38	0.00	0.00	0.13
08/10/09	15:00-19:00	0.00	0.03	0.00	0.75	0.14	0.00	0.43
08/12/09	15:00-19:00	0.00	0.03	0.00	0.18	0.08	0.00	0.18
08/14/09	15:00-19:00	0.00	0.04	0.00	1.54	0.14	0.00	0.13
08/16/09	15:00-19:00	0.00	0.01	0.00	3.90	0.02	0.00	0.19
07/11/09	19:00-05:00	0.00	0.04	0.00	3.46	0.05	0.00	0.41
07/13/09	19:00-05:00	0.00	0.03	0.00	3.22	0.14	0.00	0.44
07/15/09	19:00-05:00	0.00	0.03	0.00	3.61	0.11	0.00	0.38
07/17/09	19:00-05:00	0.00	0.02	0.00	3.05	0.00	0.00	0.37
07/19/09	19:00-05:00	0.00	0.03	0.00	2.92	0.12	0.00	0.43
07/21/09	19:00-05:00	0.00	0.04	0.07	3.70	0.14	0.00	0.63
07/23/09	19:00-05:00	0.00	0.02	0.00	3.85	0.11	0.00	0.50
07/25/09	19:00-05:00	0.02	0.04	0.00	3.74	0.07	0.01	0.44
07/27/09	19:00-05:00	0.00	0.03	0.00	3.73	0.10	0.00	0.57
07/29/09	19:00-05:00	0.00	0.03	0.00	3.83	0.10	0.00	0.39
07/31/09	19:00-05:00	0.00	0.04	0.00	5.75	0.13	0.00	0.64
08/02/09	19:00-05:00	0.02	0.06	0.00	4.86	0.17	0.02	0.42
08/04/09	19:00-05:00							
08/06/09	19:00-05:00	0.00	0.02	0.00	2.33	0.49	0.00	0.34
08/08/09	19:00-05:00	0.00	0.03	0.00	2.93	0.08	0.00	0.20
08/10/09	19:00-05:00	0.00	0.02	0.00	0.62	0.10	0.00	0.43
08/12/09	19:00-05:00	0.00	0.02	0.00	4.08	0.09	0.00	0.16
08/14/09	19:00-05:00	0.00	0.02	0.00	3.94	0.10	0.00	0.21
08/16/09	19:00-05:00	0.00	0.01	0.00	3.31	0.00	0.00	0.32

		FAR SITE (80m) - SUMMER						
Sample Date	Time Interval	Chloroform	1,2-Dichloroethane	Benzene	Carbontetrachloride	1,2-Dichloropropane	Trichloroethylene	Toluene
07/11/09	05:00-09:00							
07/13/09	05:00-09:00							
07/15/09	05:00-09:00	0.01	0.00	0.27	0.07	0.00	0.00	0.70
07/17/09	05:00-09:00	0.01	0.03	0.25	0.07	0.00	0.00	0.71
07/19/09	05:00-09:00	0.03	0.00	0.37	0.08	0.00	0.00	0.93
07/21/09	05:00-09:00	0.02	0.00	0.43	0.07	0.00	0.00	0.99
07/23/09	05:00-09:00	0.02	0.00	0.15	0.08	0.00	0.00	0.44
07/25/09	05:00-09:00	0.02	0.00	0.25	0.04	0.00	0.00	0.77
07/27/09	05:00-09:00	0.00	0.00	0.35	0.08	0.00	0.00	0.84
07/29/09	05:00-09:00	0.00	0.00	0.10	0.07	0.00	0.00	0.24
07/31/09	05:00-09:00	0.00	0.00	0.10	0.10	0.00	0.00	0.26
08/02/09	05:00-09:00	0.02	0.00	0.21	0.10	0.00	0.00	0.56
08/04/09	05:00-09:00	0.06	0.00	0.98	0.08	0.00	0.00	3.23
08/06/09	05:00-09:00	0.00	0.00	0.13	0.09	0.00	0.00	0.38
08/08/09	05:00-09:00	0.03	0.00	0.37	0.09	0.00	0.00	1.18
08/10/09	05:00-09:00	0.00	0.00	0.23	0.10	0.00	0.00	0.28
08/12/09	05:00-09:00	0.03	0.00	0.32	0.08	0.00	0.00	0.78
08/14/09	05:00-09:00	0.00	0.00	0.10	0.00	0.00	0.00	0.22
08/16/09	05:00-09:00	0.00	0.00	0.16	0.08	0.00	0.00	0.25
07/11/09	09:00-15:00	0.01	0.00	0.18	0.07	0.00	0.00	0.47
07/13/09	09:00-15:00	0.02	0.00	0.27	0.08	0.00	0.00	0.72
07/15/09	09:00-15:00	0.01	0.00	0.21	0.02	0.00	0.00	0.66
07/17/09	09:00-15:00	0.00	0.01	0.19	0.03	0.00	0.00	0.55
07/19/09	09:00-15:00	0.00	0.00	0.21	0.08	0.00	0.00	0.50
07/21/09	09:00-15:00	0.02	0.00	0.21	0.07	0.00	0.00	0.62
07/23/09	09:00-15:00	0.00	0.00	0.15	0.08	0.00	0.00	0.42
07/25/09	09:00-15:00	0.00	0.00	0.23	0.08	0.00	0.00	0.59
07/27/09	09:00-15:00	0.00	0.00	0.23	0.08	0.00	0.00	0.68
07/29/09	09:00-15:00	0.01	0.00	0.07	0.07	0.00	0.00	0.20
07/31/09	09:00-15:00	0.01	0.00	0.16	0.10	0.00	0.00	0.45
08/02/09	09:00-15:00							
08/04/09	09:00-15:00	0.03	0.00	0.39	0.09	0.00	0.02	1.34
08/06/09	09:00-15:00	0.00	0.00	0.15	0.09	0.00	0.00	0.35
08/08/09	09:00-15:00	0.01	0.00	0.11	0.08	0.00	0.00	0.19
08/10/09	09:00-15:00	0.00	0.00	0.25	0.09	0.00	0.00	0.50
08/12/09	09:00-15:00	0.02	0.00	0.26	0.08	0.00	0.00	0.64
08/14/09	09:00-15:00	0.00	0.00	0.15	0.07	0.00	0.00	0.34
08/16/09	09:00-15:00	0.01	0.00	0.19	0.08	0.00	0.00	0.28
07/11/09	15:00-19:00	0.01	0.00	0.19	0.07	0.00	0.00	0.68
07/13/09	15:00-19:00	0.01	0.00	0.18	0.08	0.00	0.00	0.51
07/15/09	15:00-19:00	0.00	0.00	0.14	0.07	0.00	0.00	0.34
07/17/09	15:00-19:00	0.01	0.00	0.13	0.08	0.00	0.00	0.29
07/19/09	15:00-19:00	0.01	0.00	0.13	0.07	0.00	0.00	0.31
07/21/09	15:00-19:00	0.02	0.03	0.32	0.07	0.00	0.00	1.28
07/23/09	15:00-19:00	0.00	0.00	0.17	0.08	0.00	0.00	0.42
07/25/09	15:00-19:00	0.00	0.00	0.12	0.08	0.00	0.00	0.27
07/27/09	15:00-19:00	0.00	0.00	0.15	0.03	0.00	0.00	0.33
07/29/09	15:00-19:00	0.00	0.00	0.14	0.08	0.00	0.00	0.38
07/31/09	15:00-19:00	0.02	0.00	0.17	0.11	0.00	0.00	0.37
08/02/09	15:00-19:00	0.00	0.00	0.10	0.11	0.00	0.00	0.19
08/04/09	15:00-19:00							
08/06/09	15:00-19:00	0.00	0.00	0.08	0.09	0.00	0.00	0.35
08/08/09	15:00-19:00	0.00	0.00	0.15	0.08	0.00	0.00	0.24
08/10/09	15:00-19:00	0.00	0.00	0.14	0.08	0.00	0.00	0.27
08/12/09	15:00-19:00	0.01	0.00	0.16	0.08	0.00	0.00	0.40
08/14/09	15:00-19:00	0.00	0.00	0.16	0.08	0.00	0.00	0.33
08/16/09	15:00-19:00	0.00	0.00	0.14	0.08	0.00	0.00	0.16
07/11/09	19:00-05:00	0.02	0.00	0.23	0.08	0.00	0.00	0.63
07/13/09	19:00-05:00	0.02	0.02	0.17	0.08	0.00	0.00	0.37
07/15/09	19:00-05:00	0.00	0.02	0.13	0.03	0.00	0.00	0.35
07/17/09	19:00-05:00	0.01	0.00	0.15	0.07	0.00	0.00	0.36
07/19/09	19:00-05:00	0.00	0.02	0.21	0.07	0.00	0.00	0.56
07/21/09	19:00-05:00	0.01	0.00	0.22	0.07	0.00	0.00	0.53
07/23/09	19:00-05:00	0.01	0.00	0.14	0.08	0.00	0.00	0.32
07/25/09	19:00-05:00	0.02	0.00	0.20	0.09	0.00	0.00	0.41
07/27/09	19:00-05:00	0.00	0.00	0.21	0.09	0.00	0.00	0.37
07/29/09	19:00-05:00	0.00	0.00	0.19	0.08	0.00	0.00	0.40
07/31/09	19:00-05:00	0.02	0.02	0.22	0.10	0.00	0.00	0.37
08/02/09	19:00-05:00	0.00	0.04	0.20	0.12	0.03	0.02	0.61
08/04/09	19:00-05:00							
08/06/09	19:00-05:00	0.00	0.00	0.11	0.08	0.00	0.00	0.35
08/08/09	19:00-05:00	0.01	0.00	0.22	0.08	0.00	0.00	0.37
08/10/09	19:00-05:00	0.00	0.00	0.16	0.09	0.00	0.00	0.36
08/12/09	19:00-05:00	0.02	0.00	0.19	0.05	0.00	0.00	0.32
08/14/09	19:00-05:00	0.00	0.00	0.18	0.08	0.00	0.00	0.23
08/16/09	19:00-05:00	0.00	0.00	0.16	0.04	0.00	0.00	0.21

		FAR SITE (80m) - SUMMER							
Sample Date	Time Interval	1,2-Dibromoethane	Tetrachloroethene	Ethylbenzene	m,p-Xylenes	Styrene	O-Xylene	1,4-DiChlorobenzene	1,2-DiChlorobenzene
07/11/09	05:00-09:00								
07/13/09	05:00-09:00								
07/15/09	05:00-09:00	0.00	0.00	0.13	0.49	0.12	0.14	0.00	0.00
07/17/09	05:00-09:00	0.00	0.03	0.10	0.35	0.17	0.11	0.00	0.00
07/19/09	05:00-09:00	0.00	0.02	0.15	0.46	0.01	0.14	0.00	0.00
07/21/09	05:00-09:00	0.00	0.00	0.17	0.54	0.00	0.17	0.00	0.00
07/23/09	05:00-09:00	0.00	0.00	0.07	0.24	0.01	0.08	0.00	0.00
07/25/09	05:00-09:00	0.00	0.00	0.10	0.35	0.12	0.12	0.00	0.00
07/27/09	05:00-09:00	0.00	0.04	0.14	0.55	0.22	0.17	0.00	0.00
07/29/09	05:00-09:00	0.00	0.00	0.04	0.14	0.00	0.04	0.00	0.00
07/31/09	05:00-09:00	0.00	0.00	0.04	0.13	0.00	0.05	0.00	0.00
08/02/09	05:00-09:00	0.00	0.00	0.08	0.28	0.00	0.09	0.00	0.00
08/04/09	05:00-09:00	0.00	0.14	0.46	1.82	0.20	0.56	0.04	0.00
08/06/09	05:00-09:00	0.00	0.06	0.04	0.18	0.08	0.06	0.00	0.00
08/08/09	05:00-09:00	0.00	0.03	0.17	0.63	0.05	0.19	0.01	0.00
08/10/09	05:00-09:00	0.00	0.00	0.04	0.15	0.01	0.05	0.00	0.00
08/12/09	05:00-09:00	0.00	0.02	0.11	0.38	0.06	0.12	0.00	0.00
08/14/09	05:00-09:00	0.00	0.00	0.04	0.13	0.00	0.05	0.00	0.00
08/16/09	05:00-09:00	0.00	0.00	0.04	0.12	0.00	0.04	0.00	0.00
07/11/09	09:00-15:00	0.00	0.00	0.09	0.31	0.02	0.11	0.00	0.00
07/13/09	09:00-15:00	0.00	0.02	0.10	0.32	0.07	0.11	0.00	0.00
07/15/09	09:00-15:00	0.00	0.03	0.09	0.30	0.10	0.09	0.00	0.00
07/17/09	09:00-15:00	0.00	0.03	0.07	0.30	0.04	0.07	0.00	0.00
07/19/09	09:00-15:00	0.00	0.00	0.08	0.24	0.00	0.09	0.00	0.00
07/21/09	09:00-15:00	0.00	0.03	0.09	0.27	0.08	0.09	0.00	0.00
07/23/09	09:00-15:00	0.00	0.00	0.06	0.19	0.11	0.07	0.00	0.00
07/25/09	09:00-15:00	0.00	0.02	0.08	0.31	0.00	0.12	0.01	0.00
07/27/09	09:00-15:00	0.00	0.08	0.10	0.32	0.03	0.10	0.00	0.00
07/29/09	09:00-15:00	0.00	0.00	0.03	0.10	0.03	0.04	0.00	0.00
07/31/09	09:00-15:00	0.00	0.02	0.06	0.20	0.00	0.07	0.00	0.00
08/02/09	09:00-15:00								
08/04/09	09:00-15:00	0.00	0.09	0.18	0.64	0.08	0.21	0.00	0.00
08/06/09	09:00-15:00	0.00	0.05	0.05	0.16	0.02	0.06	0.00	0.00
08/08/09	09:00-15:00	0.00	0.00	0.03	0.08	0.00	0.03	0.00	0.00
08/10/09	09:00-15:00	0.00	0.03	0.06	0.17	0.02	0.05	0.00	0.00
08/12/09	09:00-15:00	0.00	0.02	0.09	0.29	0.10	0.10	0.00	0.00
08/14/09	09:00-15:00	0.00	0.01	0.06	0.18	0.00	0.05	0.00	0.00
08/16/09	09:00-15:00	0.00	0.00	0.04	0.11	0.00	0.05	0.00	0.00
07/11/09	15:00-19:00	0.00	0.01	0.16	0.69	0.00	0.22	0.00	0.00
07/13/09	15:00-19:00	0.00	0.00	0.12	0.46	0.02	0.15	0.00	0.00
07/15/09	15:00-19:00	0.00	0.00	0.05	0.19	0.00	0.06	0.00	0.00
07/17/09	15:00-19:00	0.00	0.00	0.04	0.19	0.02	0.05	0.00	0.00
07/19/09	15:00-19:00	0.00	0.00	0.05	0.16	0.01	0.06	0.00	0.00
07/21/09	15:00-19:00	0.00	0.04	0.20	0.72	0.08	0.20	0.00	0.00
07/23/09	15:00-19:00	0.00	0.03	0.06	0.24	0.01	0.07	0.00	0.00
07/25/09	15:00-19:00	0.00	0.00	0.04	0.14	0.02	0.04	0.00	0.00
07/27/09	15:00-19:00	0.00	0.01	0.06	0.24	0.02	0.07	0.00	0.00
07/29/09	15:00-19:00	0.00	0.02	0.05	0.19	0.02	0.06	0.00	0.00
07/31/09	15:00-19:00	0.00	0.02	0.06	0.21	0.03	0.06	0.00	0.00
08/02/09	15:00-19:00	0.00	0.00	0.04	0.13	0.02	0.04	0.00	0.00
08/04/09	15:00-19:00								
08/06/09	15:00-19:00	0.00	0.00	0.05	0.16	0.00	0.05	0.01	0.00
08/08/09	15:00-19:00	0.00	0.00	0.04	0.13	0.00	0.04	0.00	0.00
08/10/09	15:00-19:00	0.00	0.00	0.04	0.13	0.02	0.04	0.00	0.00
08/12/09	15:00-19:00	0.00	0.00	0.05	0.19	0.00	0.06	0.00	0.00
08/14/09	15:00-19:00	0.00	0.02	0.05	0.17	0.01	0.05	0.00	0.00
08/16/09	15:00-19:00	0.00	0.00	0.04	0.09	0.00	0.00	0.00	0.00
07/11/09	19:00-05:00	0.00	0.01	0.13	0.02	0.09	0.16	0.00	0.00
07/13/09	19:00-05:00	0.00	0.00	0.09	0.33	0.07	0.09	0.00	0.00
07/15/09	19:00-05:00	0.00	0.00	0.07	0.27	0.08	0.07	0.00	0.00
07/17/09	19:00-05:00	0.00	0.02	0.07	0.28	0.07	0.08	0.00	0.00
07/19/09	19:00-05:00	0.00	0.00	0.09	0.39	0.07	0.11	0.01	0.00
07/21/09	19:00-05:00	0.00	0.00	0.08	0.27	0.02	0.07	0.00	0.00
07/23/09	19:00-05:00	0.00	0.00	0.08	0.25	0.00	0.07	0.00	0.00
07/25/09	19:00-05:00	0.00	0.03	0.10	0.32	0.07	0.10	0.01	0.00
07/27/09	19:00-05:00	0.00	0.02	0.09	0.30	0.05	0.08	0.00	0.00
07/29/09	19:00-05:00	0.00	0.01	0.06	0.27	0.09	0.08	0.01	0.00
07/31/09	19:00-05:00	0.00	0.02	0.08	0.26	0.05	0.08	0.00	0.00
08/02/09	19:00-05:00	0.00	0.03	0.10	0.41	0.12	0.13	0.03	0.00
08/04/09	19:00-05:00								
08/06/09	19:00-05:00	0.00	0.08	0.05	0.22	0.04	0.06	0.00	0.00
08/08/09	19:00-05:00	0.00	0.00	0.06	0.24	0.00	0.07	0.00	0.00
08/10/09	19:00-05:00	0.00	0.00	0.05	0.20	0.04	0.06	0.00	0.00
08/12/09	19:00-05:00	0.00	0.02	0.05	0.19	0.02	0.05	0.00	0.00
08/14/09	19:00-05:00	0.00	0.00	0.05	0.18	0.01	0.05	0.00	0.00
08/16/09	19:00-05:00	0.00	0.00	0.04	0.15	0.05	0.04	0.00	0.00

		Del Amo - WINTER						
Sample Date	Time Interval	Vinylchloride	1,3-Butadiene	Acrolein	Acetone	Methylenechloride	Methyltertbutylether	2-Butanone
02/02/09	05:00-09:00	0.00	0.28	0.20	7.30	0.60	0.00	0.94
02/04/09	05:00-09:00	0.00	0.43	0.38	39.98	1.54	0.00	6.33
02/06/09	05:00-09:00	0.00	0.02	0.04	1.62	0.06	0.00	0.00
02/08/09	05:00-09:00	0.00	0.09	0.05	4.40	0.25	0.00	0.40
02/10/09	05:00-09:00	0.00	0.11	0.08	4.70	0.22	0.00	0.98
02/12/09	05:00-09:00	0.00	0.20	0.17	14.37	0.59	0.00	1.56
02/14/09	05:00-09:00	0.00	0.11	0.12	9.93	0.77	0.00	0.43
02/16/09	05:00-09:00	0.00	0.01	0.03	2.49	0.09	0.00	0.17
02/18/09	05:00-09:00	0.00	0.17	0.19	14.19	2.09	0.00	0.96
02/20/09	05:00-09:00	0.00	0.27	0.19	14.82	0.90	0.00	1.40
02/22/09	05:00-09:00	0.00	0.15	0.15	9.40	0.80	0.00	1.16
02/24/09	05:00-09:00	0.00	0.27	0.16	32.40	1.91	0.00	3.53
02/26/09	05:00-09:00	0.00	0.14	0.17	26.20	1.02	0.00	1.00
02/28/09	05:00-09:00	0.00	0.19	0.11	9.34	0.39	0.00	0.91
03/02/09	05:00-09:00	0.00	0.49	0.40	29.64	5.20	0.00	1.13
03/04/09	05:00-09:00	0.00	0.02	0.00	1.26	0.05	0.00	0.00
03/06/09	05:00-09:00	0.00	0.22	0.14	13.96	1.05	0.00	1.16
03/08/09	05:00-09:00	0.00	0.19	0.13	6.59	1.79	0.00	0.38
02/02/09	09:00-15:00	0.00	0.11	0.17	7.55	0.54	0.00	0.88
02/04/09	09:00-15:00	0.00	0.06	0.12	6.42	0.36	0.00	0.69
02/06/09	09:00-15:00	0.00	0.01	0.05	1.65	0.05	0.00	0.00
02/08/09	09:00-15:00	0.00	0.02	0.01	2.59	0.05	0.00	0.16
02/10/09	09:00-15:00	0.00	0.04	0.09	6.09	0.22	0.00	0.44
02/12/09	09:00-15:00	0.00	0.01	0.00	0.70	0.38	0.00	0.23
02/14/09	09:00-15:00	0.00	0.03	0.01	4.07	0.10	0.00	0.35
02/16/09	09:00-15:00	0.00	0.01	0.05	1.42	0.05	0.00	0.08
02/18/09	09:00-15:00	0.00	0.02	0.07	6.52	0.25	0.00	0.39
02/20/09	09:00-15:00	0.00	0.07	0.16	11.51	0.60	0.00	0.79
02/22/09	09:00-15:00	0.00	0.12	0.23	9.14	0.30	0.00	0.89
02/24/09	09:00-15:00	0.00	0.05	0.12	8.16	0.32	0.00	1.01
02/26/09	09:00-15:00	0.00	0.03	0.09	4.84	0.14	0.00	0.35
02/28/09	09:00-15:00	0.00	0.04	0.16	9.76	0.15	0.00	0.74
03/02/09	09:00-15:00	0.00	0.19	0.22	14.26	0.47	0.00	0.97
03/04/09	09:00-15:00	0.00	0.03	0.06	2.68	0.07	0.00	0.00
03/06/09	09:00-15:00	0.00	0.04	0.06	4.27	0.25	0.00	0.28
03/08/09	09:00-15:00	0.00	0.06	0.12	3.65	0.20	0.00	0.27
02/02/09	15:00-19:00							
02/04/09	15:00-19:00	0.00	0.05	0.08	3.48	0.16	0.00	0.34
02/06/09	15:00-19:00	0.00	0.02	0.05	1.82	0.06	0.00	0.00
02/08/09	15:00-19:00	0.00	0.02	0.04	2.57	0.07	0.00	0.00
02/10/09	15:00-19:00	0.00	0.02	0.00	2.36	0.07	0.00	0.27
02/12/09	15:00-19:00	0.00	0.00	0.00	2.81	0.14	0.00	0.13
02/14/09	15:00-19:00	0.00	0.03	0.03	2.02	0.05	0.00	0.20
02/16/09	15:00-19:00	0.00	0.01	0.02	0.90	0.05	0.00	0.04
02/18/09	15:00-19:00	0.00	0.02	0.03	3.09	0.16	0.00	0.38
02/20/09	15:00-19:00	0.00	0.04	0.05	3.54	0.56	0.00	0.33
02/22/09	15:00-19:00	0.00	0.10	0.18	6.63	0.28	0.00	0.71
02/24/09	15:00-19:00	0.00	0.05	0.07	2.96	0.35	0.00	0.83
02/26/09	15:00-19:00	0.00	0.04	0.03	2.54	0.08	0.00	0.18
02/28/09	15:00-19:00	0.00	0.07	0.11	5.24	0.16	0.00	0.46
03/02/09	15:00-19:00	0.00	0.15	0.15	9.89	0.38	0.00	0.75
03/04/09	15:00-19:00	0.00	0.28	0.00	24.33	2.02	0.00	0.79
03/06/09	15:00-19:00	0.00	0.03	0.00	1.74	0.34	0.00	0.00
03/08/09	15:00-19:00	0.00	0.03	0.10	2.02	0.45	0.00	0.17
02/02/09	19:00-05:00	0.00	0.37	0.36	6.64	0.81	0.00	1.54
02/04/09	19:00-05:00	0.00	0.04	0.11	3.15	0.13	0.00	0.00
02/06/09	19:00-05:00	0.00	0.02	0.07	2.53	0.07	0.00	0.00
02/08/09	19:00-05:00	0.00	0.03	0.04	1.21	0.05	0.00	0.00
02/10/09	19:00-05:00	0.00	0.18	0.20	16.31	0.71	0.00	1.89
02/12/09	19:00-05:00							
02/14/09	19:00-05:00	0.00	0.33	0.25	10.47	0.57	0.00	0.88
02/16/09	19:00-05:00							
02/18/09	19:00-05:00	0.00	0.09	0.08	7.33	1.29	0.00	0.58
02/20/09	19:00-05:00	0.00	0.20	0.18	14.32	3.41	0.00	1.32
02/22/09	19:00-05:00	0.00	0.20	0.27	9.13	0.38	0.00	0.78
02/24/09	19:00-05:00	0.00	0.02	0.04	0.84	0.07	0.00	1.25
02/26/09	19:00-05:00	0.00	0.03	0.13	4.17	0.09	0.00	0.44
02/28/09	19:00-05:00	0.00	0.10	0.14	11.62	0.38	0.00	1.03
03/02/09	19:00-05:00	0.00	0.06	0.08	4.46	0.13	0.00	0.82
03/04/09	19:00-05:00	0.00	0.12	0.07	5.09	0.19	0.00	0.34
03/06/09	19:00-05:00	0.00	0.07	0.01	4.62	0.35	0.00	0.21
03/08/09	19:00-05:00	0.00	0.04	0.03	3.08	0.45	0.00	0.02

		Del Amo - WINTER						
Sample Date	Time Interval	Chloroform	1,2-Dichloroethane	Benzene	Carbontetrachloride	1,2-Dichloropropane	Trichloroethylene	Toluene
02/02/09	05:00-09:00	0.05	0.06	1.33	0.09	0.00	0.05	5.72
02/04/09	05:00-09:00	0.09	0.09	2.52	0.09	0.09	0.11	13.40
02/06/09	05:00-09:00	0.01	0.01	0.14	0.08	0.02	0.00	0.38
02/08/09	05:00-09:00	0.03	0.05	0.53	0.09	0.05	0.01	2.08
02/10/09	05:00-09:00	0.02	0.02	0.53	0.09	0.01	0.01	1.77
02/12/09	05:00-09:00	0.04	0.07	0.93	0.09	0.04	0.03	3.70
02/14/09	05:00-09:00	0.03	0.04	0.60	0.09	0.03	0.01	2.37
02/16/09	05:00-09:00	0.02	0.02	0.19	0.09	0.01	0.00	0.60
02/18/09	05:00-09:00	0.04	0.05	0.73	0.09	0.03	0.03	3.79
02/20/09	05:00-09:00	0.05	0.07	1.81	0.09	0.06	0.03	6.98
02/22/09	05:00-09:00	0.05	0.05	1.05	0.09	0.05	0.04	4.49
02/24/09	05:00-09:00	0.05	0.07	0.91	0.08	0.04	0.04	5.30
02/26/09	05:00-09:00	0.04	0.04	0.70	0.08	0.05	0.03	3.22
02/28/09	05:00-09:00	0.04	0.04	0.95	0.07	0.04	0.02	3.85
03/02/09	05:00-09:00	0.07	0.06	1.35	0.07	0.05	0.04	6.28
03/04/09	05:00-09:00	0.01	0.01	0.12	0.07	0.01	0.00	0.17
03/06/09	05:00-09:00	0.05	0.04	0.67	0.06	0.04	0.01	2.73
03/08/09	05:00-09:00	0.05	0.03	0.66	0.07	0.04	0.02	3.09
02/02/09	09:00-15:00	0.02	0.03	0.51	0.08	0.00	0.02	2.20
02/04/09	09:00-15:00	0.02	0.02	0.38	0.08	0.03	0.01	1.62
02/06/09	09:00-15:00	0.01	0.01	0.11	0.07	0.02	0.00	0.23
02/08/09	09:00-15:00	0.01	0.02	0.15	0.08	0.01	0.00	0.43
02/10/09	09:00-15:00	0.02	0.02	0.34	0.08	0.02	0.04	0.98
02/12/09	09:00-15:00	0.01	0.02	0.19	0.09	0.03	0.00	0.56
02/14/09	09:00-15:00	0.02	0.02	0.27	0.09	0.02	0.01	0.79
02/16/09	09:00-15:00	0.01	0.01	0.12	0.09	0.01	0.00	0.21
02/18/09	09:00-15:00	0.02	0.02	0.25	0.09	0.02	0.01	0.80
02/20/09	09:00-15:00	0.02	0.02	0.42	0.09	0.02	0.02	1.53
02/22/09	09:00-15:00	0.03	0.03	0.73	0.09	0.04	0.02	2.69
02/24/09	09:00-15:00	0.03	0.02	0.37	0.08	0.04	0.02	1.63
02/26/09	09:00-15:00	0.02	0.02	0.22	0.08	0.02	1.18	0.89
02/28/09	09:00-15:00	0.02	0.02	0.30	0.07	0.03	0.01	1.19
03/02/09	09:00-15:00	0.04	0.03	0.67	0.07	0.05	0.02	2.74
03/04/09	09:00-15:00	0.01	0.01	0.17	0.06	0.02	0.00	0.65
03/06/09	09:00-15:00	0.01	0.01	0.20	0.07	0.03	0.00	0.52
03/08/09	09:00-15:00	0.01	0.01	0.20	0.07	0.03	0.00	1.01
02/02/09	15:00-19:00							
02/04/09	15:00-19:00	0.00	0.02	0.27	0.08	0.02	0.01	0.95
02/06/09	15:00-19:00	0.01	0.02	0.15	0.08	0.02	0.00	0.37
02/08/09	15:00-19:00	0.01	0.01	0.16	0.08	0.04	0.00	0.41
02/10/09	15:00-19:00	0.01	0.01	0.28	0.09	0.00	0.00	0.70
02/12/09	15:00-19:00	0.01	0.01	0.17	0.09	0.03	0.00	0.37
02/14/09	15:00-19:00	0.01	0.02	0.21	0.08	0.01	0.00	0.60
02/16/09	15:00-19:00	0.01	0.01	0.11	0.09	0.01	0.00	0.16
02/18/09	15:00-19:00	0.02	0.02	0.25	0.09	0.01	0.01	0.79
02/20/09	15:00-19:00	0.02	0.02	0.25	0.09	0.02	0.00	0.89
02/22/09	15:00-19:00	0.03	0.03	0.67	0.09	0.04	0.01	2.62
02/24/09	15:00-19:00	0.02	0.01	0.16	0.08	0.02	0.01	1.50
02/26/09	15:00-19:00	0.01	0.01	0.11	0.08	0.01	0.00	0.31
02/28/09	15:00-19:00	0.02	0.02	0.31	0.07	0.03	0.01	1.03
03/02/09	15:00-19:00	0.03	0.02	0.50	0.07	0.04	0.02	1.99
03/04/09	15:00-19:00	0.03	0.05	0.81	0.07	0.03	0.01	3.63
03/06/09	15:00-19:00	0.01	0.01	0.13	0.06	0.01	0.01	0.27
03/08/09	15:00-19:00	0.01	0.01	0.14	0.07	0.01	0.00	0.41
02/02/09	19:00-05:00	0.08	0.06	1.68	0.09	0.00	0.06	7.73
02/04/09	19:00-05:00	0.02	0.02	0.26	0.08	0.02	0.01	0.96
02/06/09	19:00-05:00	0.01	0.02	0.13	0.08	0.02	0.00	0.49
02/08/09	19:00-05:00	0.01	0.01	0.10	0.08	0.01	0.00	0.17
02/10/09	19:00-05:00	0.05	0.05	0.90	0.10	0.03	0.03	3.97
02/12/09	19:00-05:00							
02/14/09	19:00-05:00	0.04	0.07	1.38	0.09	0.07	0.02	5.77
02/16/09	19:00-05:00							
02/18/09	19:00-05:00	0.03	0.03	0.46	0.09	0.02	0.01	2.28
02/20/09	19:00-05:00	0.04	0.05	1.04	0.09	0.05	0.03	5.15
02/22/09	19:00-05:00	0.05	0.04	0.77	0.10	0.04	0.02	3.05
02/24/09	19:00-05:00	0.01	0.02	0.14	0.08	0.01	0.01	1.29
02/26/09	19:00-05:00	0.02	0.02	0.15	0.08	0.02	0.02	0.56
02/28/09	19:00-05:00	0.04	0.04	0.77	0.07	0.06	0.02	3.35
03/02/09	19:00-05:00	0.01	0.01	0.20	0.07	0.02	0.01	1.10
03/04/09	19:00-05:00	0.02	0.02	0.35	0.07	0.02	0.01	1.19
03/06/09	19:00-05:00	0.02	0.02	0.27	0.07	0.02	0.01	0.99
03/08/09	19:00-05:00	0.01	0.01	0.18	0.07	0.01	0.00	0.57

		Del Amo - WINTER							
Sample Date	Time Interval	1,2-Dibromoethane	Tetrachloroethene	Ethylbenzene	m,p-Xylenes	Styrene	O-Xylene	1,4-DiChlorobenzene	1,2-DiChlorobenzene
02/02/09	05:00-09:00	0.01	0.06	0.65	2.55	0.26	0.75	0.06	0.00
02/04/09	05:00-09:00	0.01	0.19	1.35	4.99	0.69	1.59	0.14	0.01
02/06/09	05:00-09:00	0.00	0.00	0.05	0.21	0.01	0.04	0.01	0.00
02/08/09	05:00-09:00	0.00	0.03	0.24	0.90	0.07	0.23	0.03	0.00
02/10/09	05:00-09:00	0.00	0.00	0.24	1.00	0.21	0.29	0.02	0.00
02/12/09	05:00-09:00	0.01	0.07	0.45	1.88	0.24	0.54	0.04	0.00
02/14/09	05:00-09:00	0.00	0.10	0.27	1.04	0.30	0.30	0.03	0.00
02/16/09	05:00-09:00	0.00	0.00	0.12	0.42	0.02	0.13	0.01	0.00
02/18/09	05:00-09:00	0.00	0.22	0.44	1.79	0.24	0.51	0.05	0.00
02/20/09	05:00-09:00	0.01	0.12	0.85	3.18	0.33	0.99	0.06	0.00
02/22/09	05:00-09:00	0.00	0.11	0.57	2.25	0.21	0.72	0.13	0.00
02/24/09	05:00-09:00	0.01	0.19	1.65	6.13	0.55	1.81	0.10	0.01
02/26/09	05:00-09:00	0.00	0.08	0.39	1.32	0.19	0.39	0.06	0.00
02/28/09	05:00-09:00	0.01	0.06	0.48	1.98	0.15	0.59	0.08	0.00
03/02/09	05:00-09:00	0.00	0.06	0.91	3.14	0.66	0.86	0.20	0.00
03/04/09	05:00-09:00	0.00	0.00	0.03	0.09	0.01	0.02	0.01	0.00
03/06/09	05:00-09:00	0.01	0.12	0.43	1.62	0.67	0.41	0.05	0.00
03/08/09	05:00-09:00	0.00	0.03	0.35	1.38	0.07	0.33	0.06	0.00
02/02/09	09:00-15:00	0.00	0.06	0.31	1.15	0.07	0.30	0.03	0.00
02/04/09	09:00-15:00	0.00	0.04	0.24	0.82	0.09	0.21	0.02	0.00
02/06/09	09:00-15:00	0.00	0.00	0.03	0.13	0.01	0.03	0.01	0.00
02/08/09	09:00-15:00	0.00	0.00	0.05	0.18	0.01	0.05	0.01	0.00
02/10/09	09:00-15:00	0.00	0.03	0.14	0.55	0.09	0.14	0.00	0.00
02/12/09	09:00-15:00	0.00	0.01	0.07	0.27	0.01	0.08	0.01	0.00
02/14/09	09:00-15:00	0.00	0.02	0.09	0.31	0.02	0.09	0.01	0.00
02/16/09	09:00-15:00	0.00	0.00	0.03	0.11	0.00	0.03	0.01	0.00
02/18/09	09:00-15:00	0.00	0.04	0.11	0.37	0.04	0.11	0.01	0.00
02/20/09	09:00-15:00	0.00	0.08	0.24	0.92	0.12	0.26	0.02	0.00
02/22/09	09:00-15:00	0.00	0.07	0.37	1.34	0.07	0.41	0.05	0.00
02/24/09	09:00-15:00	0.01	0.04	0.23	0.75	0.07	0.23	0.03	0.00
02/26/09	09:00-15:00	0.00	0.02	0.10	0.35	0.06	0.09	0.02	0.00
02/28/09	09:00-15:00	0.00	0.04	0.16	0.56	0.04	0.17	0.02	0.00
03/02/09	09:00-15:00	0.00	0.06	0.39	1.27	0.16	0.32	0.06	0.00
03/04/09	09:00-15:00	0.00	0.00	0.08	0.30	0.04	0.07	0.01	0.00
03/06/09	09:00-15:00	0.00	0.01	0.07	0.22	0.02	0.06	0.01	0.00
03/08/09	09:00-15:00	0.00	0.01	0.07	0.28	0.02	0.07	0.03	0.00
02/02/09	15:00-19:00								
02/04/09	15:00-19:00	0.00	0.01	0.14	0.54	0.04	0.12	0.02	0.00
02/06/09	15:00-19:00	0.00	0.00	0.05	0.19	0.01	0.04	0.01	0.00
02/08/09	15:00-19:00	0.00	0.00	0.05	0.19	0.01	0.04	0.01	0.00
02/10/09	15:00-19:00	0.00	0.01	0.08	0.34	0.02	0.09	0.01	0.00
02/12/09	15:00-19:00	0.00	0.01	0.05	0.19	0.01	0.05	0.00	0.00
02/14/09	15:00-19:00	0.00	0.00	0.08	0.30	0.01	0.08	0.01	0.00
02/16/09	15:00-19:00	0.00	0.00	0.03	0.09	0.00	0.03	0.00	0.00
02/18/09	15:00-19:00	0.00	0.02	0.11	0.42	0.02	0.11	0.01	0.00
02/20/09	15:00-19:00	0.00	0.00	0.11	0.40	0.04	0.12	0.01	0.00
02/22/09	15:00-19:00	0.00	0.04	0.31	1.12	0.06	0.35	0.07	0.00
02/24/09	15:00-19:00	0.00	0.01	0.10	0.36	0.04	0.10	0.01	0.00
02/26/09	15:00-19:00	0.00	0.01	0.05	0.16	0.01	0.04	0.01	0.01
02/28/09	15:00-19:00	0.00	0.02	0.13	0.44	0.02	0.13	0.02	0.00
03/02/09	15:00-19:00	0.00	0.04	0.48	1.53	0.05	0.37	0.04	0.00
03/04/09	15:00-19:00	0.00	0.25	0.47	1.81	0.18	0.46	0.06	0.00
03/06/09	15:00-19:00	0.00	0.00	0.03	0.12	0.01	0.03	0.02	0.00
03/08/09	15:00-19:00	0.00	0.00	0.04	0.17	0.01	0.04	0.01	0.00
02/02/09	19:00-05:00	0.01	0.13	0.89	3.41	0.48	1.03	0.08	0.00
02/04/09	19:00-05:00	0.00	0.01	0.13	0.50	0.02	0.12	0.01	0.00
02/06/09	19:00-05:00	0.00	0.01	0.06	0.21	0.02	0.05	0.01	0.00
02/08/09	19:00-05:00	0.00	0.00	0.02	0.09	0.01	0.02	0.01	0.00
02/10/09	19:00-05:00	0.00	0.06	0.47	1.79	0.18	0.53	0.06	0.00
02/12/09	19:00-05:00								
02/14/09	19:00-05:00	0.01	0.08	0.72	2.80	0.15	0.86	0.08	0.00
02/16/09	19:00-05:00								
02/18/09	19:00-05:00	0.00	0.13	0.39	1.44	0.12	0.39	0.03	0.00
02/20/09	19:00-05:00	0.01	0.49	0.75	2.87	0.27	0.86	0.05	0.00
02/22/09	19:00-05:00	0.00	0.07	0.39	1.49	0.10	0.44	0.07	0.00
02/24/09	19:00-05:00	0.00	0.00	0.07	0.31	0.05	0.08	0.02	0.00
02/26/09	19:00-05:00	0.00	0.01	0.03	0.19	0.01	0.02	0.04	0.00
02/28/09	19:00-05:00	0.01	0.04	0.41	1.52	0.13	0.45	0.07	0.00
03/02/09	19:00-05:00	0.00	0.01	0.17	0.60	0.04	0.15	0.00	0.01
03/04/09	19:00-05:00	0.00	0.02	0.17	0.68	0.32	0.16	0.03	0.00
03/06/09	19:00-05:00	0.00	0.01	0.11	0.43	0.03	0.11	0.02	0.00
03/08/09	19:00-05:00	0.00	0.00	0.07	0.25	0.01	0.06	0.01	0.00

		Del Amo - SUMMER						
Sample Date	Time Interval	Vinylchloride	1,3-Butadiene	Acrolein	Acetone	Methylenechloride	Methyltertbutylether	2-Butanone
07/11/09	05:00-09:00	0.04	0.00	0.23	6.33	0.26	0.02	0.93
07/13/09	05:00-09:00	0.00	0.00	0.25	7.30	0.41	0.00	0.66
07/15/09	05:00-09:00	0.00	0.00	0.10	3.42	0.56	0.00	0.46
07/17/09	05:00-09:00	0.00	0.03	0.08	3.65	0.11	0.00	0.36
07/19/09	05:00-09:00	0.00	0.06	0.12	5.30	0.11	0.00	0.58
07/21/09	05:00-09:00	0.02	0.07	0.32	10.22	0.18	0.10	0.65
07/23/09	05:00-09:00	0.02	0.04	0.11	4.28	0.09	0.00	0.41
07/25/09	05:00-09:00	0.00	0.00	0.16	5.34	0.13	0.00	0.59
07/27/09	05:00-09:00	0.00	0.02	0.10	5.07	0.21	0.00	0.58
07/29/09	05:00-09:00	0.00	0.02	0.14	3.88	0.09	0.00	1.18
07/31/09	05:00-09:00	0.00	0.01	0.16	5.33	0.07	0.00	0.28
08/02/09	05:00-09:00	0.00	0.02	0.10	4.62	0.12	0.00	0.38
08/04/09	05:00-09:00	0.03	0.09	0.46	26.28	2.00	0.03	5.47
08/06/09	05:00-09:00	0.00	0.02	0.05	2.81	0.06	0.00	0.29
08/08/09	05:00-09:00	0.00	0.03	0.11	6.90	0.30	0.00	0.70
08/10/09	05:00-09:00							
08/12/09	05:00-09:00	0.05	0.12	0.19	6.76	2.08	0.00	0.79
08/14/09	05:00-09:00	0.00	0.03	0.09	6.21	0.10	0.00	0.21
08/16/09	05:00-09:00	0.00	0.00	0.04	3.42	0.06	0.00	0.22
07/11/09	09:00-15:00	0.00	0.00	0.19	7.53	0.20	0.00	0.67
07/13/09	09:00-15:00	0.00	0.00	0.29	9.66	0.54	0.15	0.80
07/15/09	09:00-15:00	0.00	0.00	0.13	6.82	0.46	0.00	0.65
07/17/09	09:00-15:00	0.00	0.01	0.03	5.92	0.66	0.00	0.51
07/19/09	09:00-15:00	0.00	0.02	0.25	7.88	0.09	0.00	0.88
07/21/09	09:00-15:00	0.00	0.03	0.17	10.54	0.40	0.04	0.94
07/23/09	09:00-15:00	0.00	0.01	0.36	7.72	0.16	0.09	0.53
07/25/09	09:00-15:00	0.00	0.00	0.21	0.00	0.11	0.00	0.69
07/27/09	09:00-15:00	0.00	0.01	0.23	0.07	0.21	0.00	0.76
07/29/09	09:00-15:00	0.00	0.01	0.19	5.37	0.09	0.00	0.40
07/31/09	09:00-15:00	0.00	0.01	0.19	8.28	0.18	0.00	0.72
08/02/09	09:00-15:00	0.00	0.02	0.12	6.35	0.09	0.00	0.55
08/04/09	09:00-15:00	0.00	0.02	0.20	10.33	0.31	0.00	1.07
08/06/09	09:00-15:00	0.00	0.02	0.15	4.70	0.15	0.00	0.50
08/08/09	09:00-15:00	0.00	0.05	0.16	4.68	0.06	0.00	0.43
08/10/09	09:00-15:00	0.00	0.03	0.09	6.40	0.19	0.00	0.61
08/12/09	09:00-15:00	0.00	0.02	0.23	7.02	0.78	0.00	0.81
08/14/09	09:00-15:00	0.00	0.00	0.15	5.20	0.15	0.00	0.38
08/16/09	09:00-15:00	0.00	0.00	0.10	4.94	0.06	0.00	0.35
07/11/09	15:00-19:00	0.00	0.00	0.27	3.43	0.10	0.00	0.28
07/13/09	15:00-19:00	0.00	0.00	0.08	2.88	1.16	0.01	0.35
07/15/09	15:00-19:00	0.00	0.00	0.07	5.01	0.11	0.00	0.30
07/17/09	15:00-19:00	0.00	0.03	0.06	2.78	0.08	0.00	0.20
07/19/09	15:00-19:00	0.00	0.02	0.08	3.42	0.06	0.00	0.37
07/21/09	15:00-19:00	0.00	0.02	0.15	5.76	0.18	0.00	0.42
07/23/09	15:00-19:00	0.00	0.00	0.18	6.09	0.15	0.01	0.44
07/25/09	15:00-19:00	0.00	0.00	0.11	4.27	0.09	0.00	0.30
07/27/09	15:00-19:00	0.00	0.02	0.05	3.54	0.08	0.00	0.29
07/29/09	15:00-19:00	0.00	0.01	0.09	4.14	0.11	0.00	0.40
07/31/09	15:00-19:00	0.00	0.02	0.13	4.62	0.09	0.00	0.44
08/02/09	15:00-19:00	0.00	0.02	0.06	3.54	0.06	0.01	0.30
08/04/09	15:00-19:00	0.00	0.04	0.07	3.24	0.15	0.01	0.43
08/06/09	15:00-19:00	0.00	0.01	0.08	2.61	0.12	0.00	0.21
08/08/09	15:00-19:00	0.00	0.03	0.10	10.18	0.06	0.00	0.41
08/10/09	15:00-19:00	0.00	0.03	0.06	2.81	0.14	0.00	0.41
08/12/09	15:00-19:00	0.00	0.03	0.06	3.91	0.14	0.00	0.48
08/14/09	15:00-19:00	0.00	0.02	0.07	4.09	0.12	0.00	0.47
08/16/09	15:00-19:00	0.00	0.01	0.11	3.23	0.06	0.00	0.27
07/11/09	19:00-05:00	0.00	0.00	0.02	3.17	0.09	0.00	0.29
07/13/09	19:00-05:00	0.00	0.00	0.04	2.58	0.49	0.00	0.21
07/15/09	19:00-05:00	0.00	0.00	0.08	2.39	0.12	0.00	0.30
07/17/09	19:00-05:00	0.00	0.03	0.15	2.11	0.06	0.00	0.29
07/19/09	19:00-05:00	0.00	0.02	0.14	4.00	0.08	0.00	0.43
07/21/09	19:00-05:00	0.00	0.04	0.05	0.00	0.15	0.00	0.37
07/23/09	19:00-05:00	0.00	0.00	0.22	5.93	0.11	0.00	0.44
07/25/09	19:00-05:00	0.00	0.00	0.11	3.82	0.09	0.00	0.39
07/27/09	19:00-05:00	0.00	0.01	0.20	2.74	0.12	0.00	0.24
07/29/09	19:00-05:00	0.00	0.03	0.06	3.71	0.08	0.00	1.01
07/31/09	19:00-05:00	0.00	0.02	0.05	4.09	0.07	0.00	0.64
08/02/09	19:00-05:00	0.00	0.03	0.14	4.32	0.11	0.00	0.51
08/04/09	19:00-05:00	0.00	0.03	0.12	6.93	0.59	0.00	0.76
08/06/09	19:00-05:00	0.00	0.03	0.13	2.31	0.05	0.00	0.27
08/08/09	19:00-05:00	0.00	0.03	0.09	2.52	0.07	0.00	0.24
08/10/09	19:00-05:00	0.00	0.03	0.04	3.77	0.10	0.00	0.48
08/12/09	19:00-05:00	0.00	0.03	0.11	3.88	0.10	0.00	0.39
08/14/09	19:00-05:00	0.00	0.00	0.02	3.11	0.08	0.00	0.27
08/16/09	19:00-05:00	0.00	0.00	0.05	3.38	0.06	0.00	0.25

		Del Amo - SUMMER						
Sample Date	Time Interval	Chloroform	1,2-Dichloroethane	Benzene	Carbontetrachloride	1,2-Dichloropropane	Trichloroethylene	Toluene
07/11/09	05:00-09:00	0.06	0.04	0.35	0.10	0.05	0.03	1.07
07/13/09	05:00-09:00	0.03	0.02	0.30	0.08	0.02	0.00	1.02
07/15/09	05:00-09:00	0.02	0.01	0.23	0.07	0.02	0.01	0.76
07/17/09	05:00-09:00	0.02	0.01	0.19	0.07	0.01	0.01	0.56
07/19/09	05:00-09:00	0.03	0.03	0.30	0.08	0.03	0.01	0.98
07/21/09	05:00-09:00	0.04	0.04	0.37	0.10	0.05	0.02	1.30
07/23/09	05:00-09:00	0.03	0.03	0.24	0.09	0.02	0.02	0.83
07/25/09	05:00-09:00	0.02	0.01	0.20	0.08	0.01	0.00	0.62
07/27/09	05:00-09:00	0.03	0.01	0.21	0.09	0.02	0.01	0.69
07/29/09	05:00-09:00	0.02	0.01	0.15	0.08	0.01	0.01	1.10
07/31/09	05:00-09:00	0.01	0.01	0.09	0.09	0.01	0.01	0.26
08/02/09	05:00-09:00	0.03	0.02	0.21	0.08	0.01	0.00	0.66
08/04/09	05:00-09:00	0.05	0.08	0.66	0.09	0.07	0.04	2.74
08/06/09	05:00-09:00	0.01	0.01	0.11	0.07	0.01	0.00	0.46
08/08/09	05:00-09:00	0.03	0.02	0.30	0.08	0.01	0.02	1.18
08/10/09	05:00-09:00							
08/12/09	05:00-09:00	0.05	0.04	0.35	0.10	0.06	0.03	1.17
08/14/09	05:00-09:00	0.01	0.01	0.12	0.07	0.01	0.01	0.33
08/16/09	05:00-09:00	0.02	0.01	0.14	0.08	0.01	0.01	0.36
07/11/09	09:00-15:00	0.02	0.01	0.23	0.07	0.00	0.00	0.71
07/13/09	09:00-15:00	0.02	0.02	0.33	0.07	0.03	0.01	1.01
07/15/09	09:00-15:00	0.02	0.01	0.18	0.08	0.02	0.01	0.61
07/17/09	09:00-15:00	0.02	0.01	0.15	0.08	0.02	0.01	0.50
07/19/09	09:00-15:00	0.02	0.02	0.36	0.08	0.04	0.01	0.86
07/21/09	09:00-15:00	0.03	0.02	0.32	0.07	0.04	0.02	0.99
07/23/09	09:00-15:00	0.01	0.01	0.14	0.08	0.02	0.01	0.49
07/25/09	09:00-15:00	0.02	0.02	0.26	0.08	0.04	0.01	0.64
07/27/09	09:00-15:00	0.03	0.01	0.18	0.08	0.04	0.02	0.68
07/29/09	09:00-15:00	0.02	0.01	0.09	0.08	0.01	0.01	0.29
07/31/09	09:00-15:00	0.02	0.01	0.14	0.09	0.03	0.01	0.51
08/02/09	09:00-15:00	0.02	0.01	0.17	0.08	0.02	0.01	0.44
08/04/09	09:00-15:00	0.02	0.01	0.26	0.07	0.02	0.02	1.11
08/06/09	09:00-15:00	0.01	0.01	0.12	0.07	0.02	0.01	0.40
08/08/09	09:00-15:00	0.01	0.01	0.17	0.08	0.06	0.01	0.36
08/10/09	09:00-15:00	0.02	0.01	0.22	0.08	0.03	0.02	0.50
08/12/09	09:00-15:00	0.02	0.02	0.28	0.08	0.03	0.01	0.85
08/14/09	09:00-15:00	0.01	0.01	0.12	0.07	0.01	0.02	0.38
08/16/09	09:00-15:00	0.02	0.01	0.18	0.09	0.01	0.01	0.27
07/11/09	15:00-19:00	0.02	0.01	0.15	0.07	0.05	0.00	0.40
07/13/09	15:00-19:00	0.02	0.01	0.16	0.07	0.02	0.00	0.46
07/15/09	15:00-19:00	0.01	0.01	0.13	0.07	0.01	0.00	0.56
07/17/09	15:00-19:00	0.02	0.01	0.12	0.08	0.01	0.00	0.36
07/19/09	15:00-19:00	0.02	0.01	0.13	0.08	0.01	0.00	0.42
07/21/09	15:00-19:00	0.03	0.01	0.19	0.08	0.02	0.00	0.60
07/23/09	15:00-19:00	0.02	0.01	0.14	0.08	0.01	0.00	0.43
07/25/09	15:00-19:00	0.02	0.01	0.15	0.08	0.01	0.00	0.89
07/27/09	15:00-19:00	0.01	0.01	0.12	0.08	0.00	0.00	0.39
07/29/09	15:00-19:00	0.02	0.01	0.09	0.08	0.01	0.00	0.36
07/31/09	15:00-19:00	0.02	0.01	0.12	0.08	0.01	0.00	0.42
08/02/09	15:00-19:00	0.02	0.01	0.13	0.08	0.02	0.00	0.30
08/04/09	15:00-19:00	0.01	0.01	0.11	0.08	0.01	0.00	0.54
08/06/09	15:00-19:00	0.01	0.01	0.08	0.07	0.01	0.00	0.32
08/08/09	15:00-19:00	0.02	0.01	0.17	0.08	0.02	0.00	0.38
08/10/09	15:00-19:00	0.01	0.01	0.12	0.08	0.01	0.00	0.42
08/12/09	15:00-19:00	0.02	0.01	0.15	0.08	0.01	0.00	0.50
08/14/09	15:00-19:00	0.02	0.01	0.13	0.08	0.05	0.00	0.51
08/16/09	15:00-19:00	0.01	0.00	0.16	0.08	0.01	0.00	0.28
07/11/09	19:00-05:00	0.02	0.01	0.15	0.07	0.04	0.00	0.46
07/13/09	19:00-05:00	0.03	0.01	0.13	0.07	0.01	0.00	0.44
07/15/09	19:00-05:00	0.01	0.01	0.12	0.07	0.01	0.00	0.33
07/17/09	19:00-05:00	0.02	0.01	0.13	0.07	0.00	0.00	0.43
07/19/09	19:00-05:00	0.03	0.01	0.19	0.08	0.02	0.00	0.68
07/21/09	19:00-05:00	0.02	0.01	0.21	0.07	0.02	0.01	0.90
07/23/09	19:00-05:00	0.02	0.01	0.12	0.08	0.01	0.00	0.37
07/25/09	19:00-05:00	0.02	0.01	0.19	0.08	0.01	0.01	0.68
07/27/09	19:00-05:00	0.02	0.01	0.11	0.08	0.00	0.00	0.39
07/29/09	19:00-05:00	0.02	0.01	0.12	0.08	0.01	0.00	0.84
07/31/09	19:00-05:00	0.02	0.01	0.12	0.08	0.01	0.00	0.62
08/02/09	19:00-05:00	0.03	0.02	0.19	0.08	0.02	0.01	0.64
08/04/09	19:00-05:00	0.03	0.03	0.23	0.07	0.03	0.01	1.08
08/06/09	19:00-05:00	0.01	0.01	0.10	0.07	0.01	0.01	0.43
08/08/09	19:00-05:00	0.02	0.01	0.19	0.08	0.01	0.01	0.38
08/10/09	19:00-05:00	0.02	0.01	0.12	0.08	0.01	0.01	0.50
08/12/09	19:00-05:00	0.02	0.01	0.14	0.07	0.01	0.00	0.46
08/14/09	19:00-05:00	0.01	0.01	0.10	0.07	0.05	0.00	0.27
08/16/09	19:00-05:00	0.02	0.01	0.16	0.07	0.02	0.00	0.30

		Del Amo - SUMMER							
Sample Date	Time Interval	1,2-Dibromoethane	Tetrachloroethene	Ethylbenzene	m,p-Xylenes	Styrene	O-Xylene	1,4-DiChlorobenzene	1,2-DiChlorobenzene
07/11/09	05:00-09:00	0.02	0.06	0.17	0.54	0.04	0.14	0.05	0.00
07/13/09	05:00-09:00	0.00	0.00	0.17	0.56	0.05	0.12	0.02	0.00
07/15/09	05:00-09:00	0.00	0.03	0.11	0.50	0.04	0.12	0.03	0.00
07/17/09	05:00-09:00	0.00	0.00	0.07	0.31	0.02	0.08	0.01	0.00
07/19/09	05:00-09:00	0.00	0.02	0.11	0.43	0.02	0.11	0.02	0.00
07/21/09	05:00-09:00	0.02	0.01	0.18	0.57	1.10	0.15	0.03	0.01
07/23/09	05:00-09:00	0.01	0.03	0.10	0.37	0.10	0.10	0.02	0.01
07/25/09	05:00-09:00	0.00	0.02	0.08	0.30	0.02	0.08	0.01	0.00
07/27/09	05:00-09:00	0.00	0.04	0.09	0.29	0.02	0.08	0.01	0.00
07/29/09	05:00-09:00	0.00	0.01	0.06	0.21	0.03	0.06	0.01	0.00
07/31/09	05:00-09:00	0.00	0.01	0.03	0.10	0.01	0.03	0.01	0.01
08/02/09	05:00-09:00	0.00	0.02	0.07	0.29	0.01	0.07	0.02	0.00
08/04/09	05:00-09:00	0.01	0.40	0.29	1.02	0.23	0.26	0.06	0.02
08/06/09	05:00-09:00	0.00	0.00	0.04	0.17	0.01	0.04	0.01	0.00
08/08/09	05:00-09:00	0.01	0.06	0.11	0.47	0.04	0.12	0.02	0.01
08/10/09	05:00-09:00								
08/12/09	05:00-09:00	0.02	0.14	0.14	0.50	0.09	0.13	0.03	0.02
08/14/09	05:00-09:00	0.00	0.01	0.04	0.14	0.01	0.04	0.01	0.00
08/16/09	05:00-09:00	0.00	0.01	0.02	0.10	0.01	0.03	0.01	0.01
07/11/09	09:00-15:00	0.00	0.02	0.08	0.26	0.02	0.07	0.02	0.00
07/13/09	09:00-15:00	0.00	0.02	0.13	0.40	0.08	0.11	0.03	0.00
07/15/09	09:00-15:00	0.00	0.04	0.10	0.23	0.02	0.06	0.01	0.00
07/17/09	09:00-15:00	0.00	0.02	0.07	0.20	0.02	0.05	0.01	0.00
07/19/09	09:00-15:00	0.00	0.01	0.10	0.37	0.01	0.09	0.02	0.00
07/21/09	09:00-15:00	0.00	0.01	0.12	0.34	0.03	0.09	0.02	0.00
07/23/09	09:00-15:00	0.01	0.02	0.06	0.18	0.04	0.05	0.01	0.01
07/25/09	09:00-15:00	0.00	0.01	0.06	0.22	0.01	0.06	0.01	0.00
07/27/09	09:00-15:00	0.00	0.03	0.08	0.23	0.02	0.06	0.01	0.00
07/29/09	09:00-15:00	0.00	0.01	0.03	0.09	0.01	0.03	0.01	0.00
07/31/09	09:00-15:00	0.00	0.01	0.05	0.19	0.02	0.05	0.02	0.00
08/02/09	09:00-15:00	0.00	0.02	0.05	0.16	0.01	0.05	0.01	0.00
08/04/09	09:00-15:00	0.00	0.04	0.11	0.37	0.07	0.09	0.02	0.00
08/06/09	09:00-15:00	0.00	0.01	0.03	0.10	0.01	0.03	0.01	0.00
08/08/09	09:00-15:00	0.00	0.01	0.04	0.15	0.01	0.04	0.01	0.00
08/10/09	09:00-15:00	0.00	0.03	0.06	0.17	0.02	0.04	0.01	0.00
08/12/09	09:00-15:00	0.00	0.02	0.09	0.31	0.04	0.07	0.02	0.00
08/14/09	09:00-15:00	0.00	0.01	0.04	0.15	0.01	0.03	0.01	0.00
08/16/09	09:00-15:00	0.00	0.00	0.03	0.09	0.01	0.02	0.01	0.00
07/11/09	15:00-19:00	0.00	0.01	0.06	0.18	0.01	0.05	0.00	0.00
07/13/09	15:00-19:00	0.00	0.01	0.06	0.21	0.02	0.05	0.01	0.00
07/15/09	15:00-19:00	0.00	0.01	0.05	0.17	0.02	0.04	0.01	0.00
07/17/09	15:00-19:00	0.00	0.00	0.05	0.14	0.01	0.04	0.01	0.00
07/19/09	15:00-19:00	0.00	0.01	0.06	0.25	0.03	0.06	0.02	0.00
07/21/09	15:00-19:00	0.00	0.00	0.08	0.25	0.02	0.06	0.01	0.00
07/23/09	15:00-19:00	0.00	0.01	0.05	0.15	0.01	0.04	0.02	0.00
07/25/09	15:00-19:00	0.00	0.01	0.08	0.34	0.02	0.09	0.01	0.00
07/27/09	15:00-19:00	0.00	0.01	0.05	0.18	0.03	0.05	0.02	0.00
07/29/09	15:00-19:00	0.00	0.01	0.03	0.12	0.01	0.03	0.01	0.00
07/31/09	15:00-19:00	0.00	0.01	0.04	0.14	0.01	0.04	0.00	0.00
08/02/09	15:00-19:00	0.00	0.01	0.03	0.11	0.02	0.04	0.01	0.00
08/04/09	15:00-19:00	0.00	0.01	0.05	0.21	0.03	0.05	0.01	0.00
08/06/09	15:00-19:00	0.00	0.00	0.03	0.13	0.00	0.03	0.00	0.00
08/08/09	15:00-19:00	0.00	0.01	0.04	0.13	0.01	0.04	0.01	0.00
08/10/09	15:00-19:00	0.00	0.01	0.04	0.13	0.01	0.03	0.01	0.00
08/12/09	15:00-19:00	0.00	0.01	0.04	0.11	0.00	0.02	0.00	0.00
08/14/09	15:00-19:00	0.00	0.01	0.04	0.14	0.01	0.04	0.01	0.00
08/16/09	15:00-19:00	0.00	0.00	0.03	0.10	0.01	0.03	0.00	0.00
07/11/09	19:00-05:00	0.00	0.01	0.06	0.21	0.01	0.05	0.01	0.00
07/13/09	19:00-05:00	0.00	0.00	0.06	0.23	0.01	0.05	0.01	0.00
07/15/09	19:00-05:00	0.00	0.02	0.04	0.20	0.02	0.05	0.02	0.00
07/17/09	19:00-05:00	0.00	0.01	0.06	0.22	0.03	0.06	0.01	0.00
07/19/09	19:00-05:00	0.00	0.00	0.07	0.28	0.02	0.07	0.01	0.00
07/21/09	19:00-05:00	0.00	0.02	0.11	0.44	0.04	0.11	0.02	0.00
07/23/09	19:00-05:00	0.00	0.03	0.04	0.16	0.01	0.04	0.02	0.00
07/25/09	19:00-05:00	0.00	0.01	0.08	0.39	0.07	0.11	0.03	0.01
07/27/09	19:00-05:00	0.00	0.01	0.04	0.18	0.04	0.05	0.01	0.00
07/29/09	19:00-05:00	0.00	0.01	0.04	0.15	0.02	0.04	0.01	0.00
07/31/09	19:00-05:00	0.00	0.01	0.04	0.17	0.02	0.04	0.01	0.00
08/02/09	19:00-05:00	0.00	0.02	0.06	0.22	0.01	0.07	0.01	0.00
08/04/09	19:00-05:00	0.00	0.12	0.10	0.43	0.05	0.10	0.03	0.00
08/06/09	19:00-05:00	0.00	0.01	0.04	0.17	0.01	0.05	0.01	0.00
08/08/09	19:00-05:00	0.00	0.00	0.05	0.17	0.02	0.04	0.01	0.00
08/10/09	19:00-05:00	0.00	0.02	0.03	0.15	0.01	0.03	0.02	0.01
08/12/09	19:00-05:00	0.00	0.02	0.05	0.19	0.01	0.04	0.01	0.00
08/14/09	19:00-05:00	0.00	0.01	0.02	0.07	0.00	0.02	0.00	0.00
08/16/09	19:00-05:00	0.00	0.01	0.03	0.14	0.01	0.04	0.01	0.00