

## APPENDIX E

### CAL3QHCR Methodology

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## Attachments

- Attachment E1: Sample MOBILE6.2C Input File
- Attachment E2: Summary of MOBILE6.2C Output Results
- Attachment E3: Sample CAL3QHCR Input File
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## 1.0 INTRODUCTION

Dispersion modelling was conducted for emissions from off-site vehicles including CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> using the CAL3QHCR Version 6.6C dispersion model. The modelling inputs and methodology used in the assessment are presented below. The emission estimates used in the modelling are presented in Appendix B and the modelling results are discussed in the main report and in Appendix I.

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### 1.1 Description of CAL3QHCR

CAL3QHCR Version 6.6C is a Gaussian type, line-source air pollutant dispersion model. It was developed by the EPA based on the CALINE3 model and it is recommended by the US EPA for predicting pollutant concentrations near intersections. CAL3QHCR is an alternate model recommended by the Ontario MOE for modelling emissions from roadways and intersections.

The model includes algorithms to predict ambient concentrations due to emissions from vehicles moving under free flow conditions, and for estimating vehicular queue lengths and ambient air concentrations due to idling vehicles at signalized intersections. The CAL3QHCR model therefore permits the estimation of air pollution concentrations from both moving and idling vehicles.

The CAL3QHCR model requires the following inputs:

- roadway geometries;
- receptor locations;
- meteorological conditions;
- hourly emissions rates;
- traffic flows; and,
- traffic signalization data.

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#### 1.1.1 Roadway Geometries

Each roadway and intersection is modelled as a link in the CAL3QHCR model, and may be specified as a free flow link or a queue link.

A free flow link is a straight segment of roadway and is defined with a constant width, height, traffic volume, travel speed, and air contaminant emission rate for vehicles. The location of the link is specified by its starting and end point coordinates. The link width is the width of the travelled roadway plus 3 metres on each side to account for the dispersion of the plume generated by the wake of moving vehicles.

A queue link is a straight segment of the road on which vehicles are idling for a specified period of time (i.e., at an intersection), and has a constant width and air contaminant emission rate for vehicles. The location of the queue link is defined by a starting point where vehicles start queuing at an intersection "stopping line", and an arbitrary end point which can be any point along the line where the queue line is

forming. Based on the number of vehicles on the queue link, the traffic speed and signal length, the CAL3QHCR model calculates the length of the queuing vehicles on each link.

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### 1.1.2 Meteorological Conditions

The CAL3QHCR model has the capability to process a full year of hourly meteorological data. The data includes wind speed and direction, air temperature, stability class, and rural or urban mixing height.

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## 1.2 Modelling Scenarios

Peak A.M. and P.M. traffic flows on roads around the Project were estimated by URS Canada Inc. (URS) for 2009 (URS 2009). Since traffic volumes for 2011 are not available, the estimated flows for 2009 were used to approximate 2011 traffic volumes. Two scenarios were assessed for off-site traffic using the CAL3QHCR model:

**Baseline 2011** – This scenario examined the vehicle flow patterns for the year 2011 without the Project (i.e., background traffic flow patterns only).

**Operation 2011** – This scenario assessed the vehicle flow patterns for 2011 including the Project (i.e. projected 2011 background traffic flow patterns plus additional traffic due to the Project operating). For the offsite vehicle traffic modelling, the additional road traffic due to a 400,000 tpy Facility was assessed. These traffic volumes, which would be larger than those required for a 140,000 tpy Facility, were also conservatively applied to the 140,000 tpy Facility. Thus offsite traffic impacts for the 140,000 tpy Facility are expected to be over-predicted.

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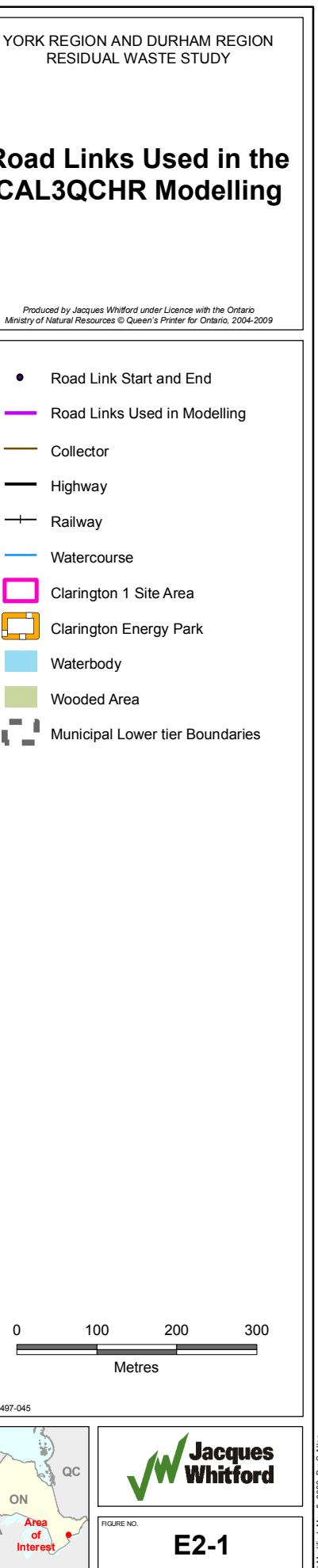
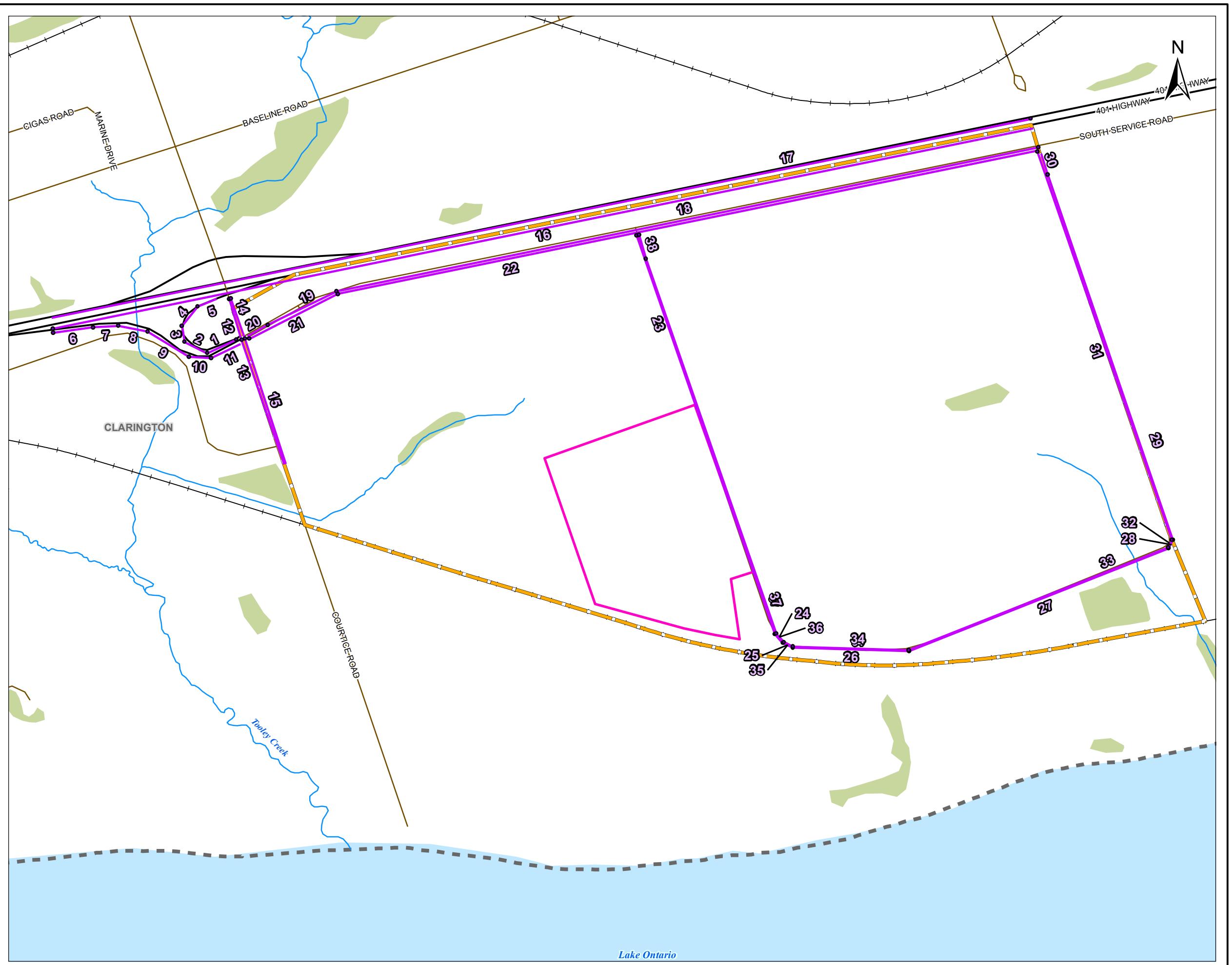
## 2.0 VEHICLE MODELLING METHODOLOGY AND DATA INPUT

Dispersion modelling for emissions from offsite vehicles was conducted for the road segments in the vicinity of the project. In order to assess potential cumulative environmental effects, the results of the CAL3QHCR offsite traffic modelling were combined with the CALPUFF modelling of Project emissions and ambient background concentrations. This approach is expected to be conservative as the approach will tend to double count background current traffic emissions as these will be contributors to the measured ambient concentrations.

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### 2.1 Roadway Information

The road segments included in the modelling assessment are presented in Figure E2-1. Each road segment was modelled as a free flow link to account for traffic travelling along the link. The CAL3QHCR model does not provide a method to model traffic emissions at stop signs. At road intersections with stop signs, a free flow link from approximately 50 to 100 metres prior to the stop line (depending on the traffic volumes expected at the intersection) was defined. This free flow link was assigned a reduced speed of 10 km/h to simulate vehicles slowing as they approach a stop sign. A summary of the free flow link data is presented in Table E2-1. For the baseline scenario, all links were modelled. It was assumed that the project related traffic would travel on the shortest path to the site (or back to Highway 401). The links in Table E2-1 in bold font are the links on which that the project traffic was assumed to travel.



**Table E2-1 Summary of Geographic Information for Free Flow Links**

Link Number	Description	UTM Easting 1 (m)	UTM Northing 1 (m)	UTM Easting 2 (m)	UTM Northing 2 (m)	Width of Road (m)	Link Length (m)
1	Hwy 401 EB Ramp A	679694	4860736	679634	4860708	11	65
2	Hwy 401 EB Ramp B	679634	4860708	679588	4860731	11	51
3	Hwy 401 EB Ramp C	679588	4860731	679583	4860764	11	33
4	Hwy 401 EB Ramp D	679583	4860764	679615	4860803	11	51
5	Hwy 401 EB Ramp E	679615	4860803	679654	4860819	11	42
6	Hwy 401 EB Exit Ramp A	679321	4860750	679402	4860761	11	82
7	Hwy 401 EB Exit Ramp B	679402	4860761	679454	4860764	11	51
8	Hwy 401 EB Exit Ramp C	679454	4860764	679513	4860752	11	61
9	Hwy 401 EB Exit Ramp D	679513	4860752	679597	4860701	11	99
10	Hwy 401 EB Exit Ramp E	679597	4860701	679642	4860698	13	45
11	Hwy 401 EB Exit Ramp F	679642	4860698	679702	4860727	13	66
12	Courtice SB: Hwy 401 & S.Serv	679679	4860819	679704	4860735	12	87
13	Courtice SB: S. of S. Serv	679704	4860735	679791	4860482	12	267
14	Courtice NB: Hwy 401 & S. Serv	679682	4860819	679711	4860738	12	87
15	Courtice NB: S. of S. Service	679711	4860738	679794	4860483	12	268
16	Hwy 401 EB	679320	4860758	681314	4861166	17	2035
17	Hwy 401 WB	681310	4861185	679318	4860780	17	2033
18	South Service Rd WB A	681325	4861127	679898	4860834	10	1457
19	South Service Rd WB B	679898	4860834	679758	4860766	13	156
20	South Service Rd WB C	679758	4860766	679716	4860743	11	47
21	South Service Rd EB A	679720	4860737	679900	4860829	13	202
22	South Service Rd EB B	679900	4860829	681327	4861121	10	1457
23	Osborne Rd SB A	680508	4860948	680789	4860136	10	859
24	Osborne Rd SB B	680789	4860136	680805	4860118	10	24
25	Osborne Rd EB A	680805	4860118	680826	4860109	10	22
26	Osborne Rd EB B	680826	4860109	681062	4860102	10	236
27	Osborne Rd EB C	681062	4860102	681590	4860311	10	568
28	Osborne Rd EB D	681590	4860311	681599	4860328	10	19
29	Solina Rd NB A	681599	4860328	681344	4861072	10	786
30	Solina Rd NB B	681344	4861072	681331	4861114	10	45
31	Solina Rd SB A	681323	4861118	681597	4860328	10	836
32	Solina Rd SB B	681597	4860328	681589	4860313	10	17
33	Osborne Rd WB A	681589	4860313	681061	4860104	10	568
34	Osborne Rd WB B	681061	4860104	680826	4860111	10	235
35	Osborne Rd WB C	680826	4860111	680808	4860120	10	20
36	Osborne Rd NB A	680808	4860120	680792	4860137	10	24
37	Osborne Rd NB B	680792	4860137	680527	4860901	50	808
38	Osborne Rd NB C	680527	4860901	680513	4860949	10	850

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## 2.2 Meteorological Data

To prepare meteorological data for use in CAL3QHCR, the required fields were extracted from the CALMET grid cell nearest to the site location. The meteorological data required to run CAL3QHCR (wind speed and direction, temperature, Pasquill-Gifford stability class, and mixing height) was extracted for the full five-year period (2003-2007). The extracted time series was then converted into the format accepted by the CAL3QHCR model.

Since the CALQHCR model will process a maximum of one year of meteorological data, the five year data set was divided into individual years and the model run for each year individually.

The CAL3QHCR model accepts only a single surface roughness length to quantify the surface characteristics of the region (as opposed to CALPUFF which allows for variations in surface roughness with azimuth). The surface roughness length is related to the roughness of the terrain and is defined as the height at which the wind speed becomes zero when the logarithmic wind speed profile is extrapolated to zero wind speed above the terrain. The greater the surface roughness length, the greater the vertical turbulence as wind flows over a surface. According to the U.S. EPA's *User's Guide for the AERMOD Meteorological (AERMET) Pre-processor* (U.S. EPA 2004b), surface roughness values range from less than 0.001 m over a calm water to 1 m or more over a forest or urban area. For urban areas, the U.S. EPA's *AERSURFACE User's Guide* recommends a surface roughness length ranging from 50 cm to 100 cm (U.S. EPA 2008). Based on the land use in the surrounding area and guidance published by the U.S. EPA, a surface roughness length of 57 cm was selected for input into the CAL3QHCR model.

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## 2.3 Receptor Locations

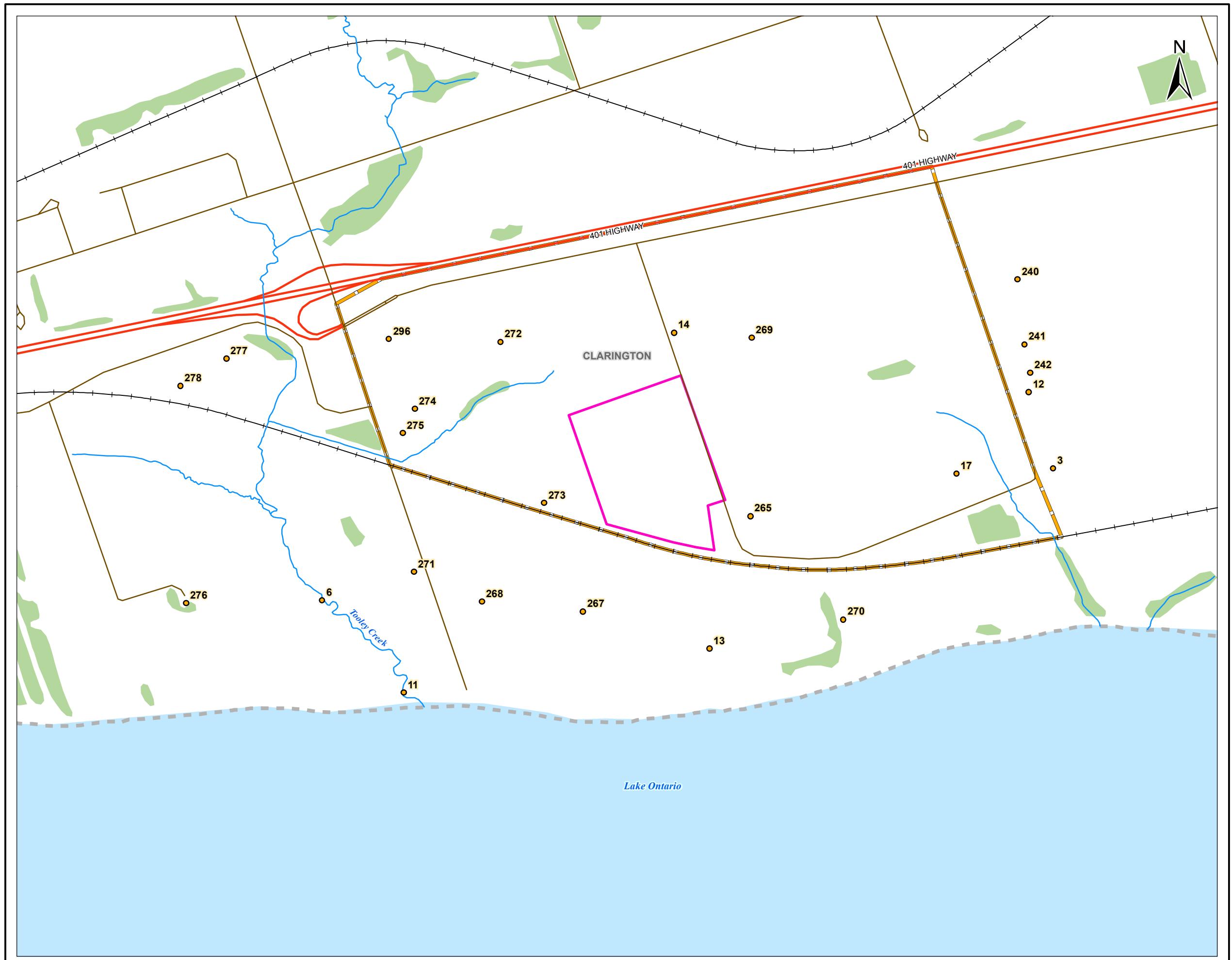
The assessment was conducted for receptors located in the immediate vicinity of the Project that might be affected by off-site traffic from the Project. Specifically, the assessment was conducted for receptors south of the 401, east of Darlington Provincial Park, and west of Osborne Road. These receptor locations are shown in Figure E2-2.

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## 2.4 Emissions Data

Tailpipe emissions were estimated for CO, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> using the MOBILE6.2C emissions model. Data required to estimate emissions with the Mobile 6.2 model includes:

- Year of assessment (Mobile 6.2C provides projections of vehicle emissions with year);
- Vehicle type;
- meteorological data (maximum/minimum average temperatures and humidity);
- Vehicle speed; and,
- Fuel volatility.



YORK REGION AND DURHAM REGION  
RESIDUAL WASTE STUDY

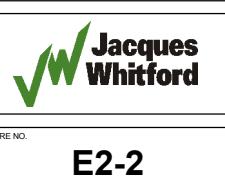
## Receptors Used in the CAL3QCHR Modelling

Produced by Jacques Whitford under Licence with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2004-2009

- CAL3QHCR Receptors
- Collector
- Highway
- Railway
- Watercourse
- Proposed EFW Facility Site
- Clarington Energy Park
- Waterbody
- Wooded Area
- Municipal Lower tier Boundaries

0 75 150 225  
Metres

1009497-044



With the exception of the Highway 401 ramps, speed limits for each road segment are available through the Municipality of Clarington. It was assumed that over the length of the on/off-ramps vehicles would travel at an average speed of half that of Highway 401 (50 km/h). The speed limits considered in the assessment are presented in Table E2-2.

**Table E2-2 Speed Limits for Roads Considered in the Assessment**

Road	Posted Speed Limit (km/h)
Courtice Road	50
Hwy 401	100
Hwy 401 East bound ramp (South of Hwy 401)	50
Hwy 401 exit (South of Hwy 401)	50
Osborne Road	50
South Service Road	60
Solina Road	50

MOBILE6.2c can model particulates with a maximum particle size of 10.0 microns and a minimum particle size of 1.0 micron.

Table E2-3 presents the input parameters used for the MOBILE6.2c emissions estimation.

**Table E2-3 MOBILE6.2C Input Parameters**

Parameter	Input	Comments
<b>Pollutants Modelled</b>	CO, NO <sub>x</sub> , SO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>	
<b>Years Modelled</b>	2011	
<b>Particle Size</b>	10 and 2.5 microns	
<b>Gasoline Sulphur Content</b>	30 ppm	Gasoline Sulphur content max. allowable is 30 ppm based on Sulfur in Gasoline Regs and Diesel Fuel Regs
<b>Diesel Sulphur Content</b>	15 ppm	Diesel Sulphur content based on CEPA maximum allowable sulphur in diesel 15 ppm
<b>Absolute Humidity</b>	49 grains/lb	Absolute humidity based on relative humidity from Climate Normals in Oshawa (1971-2000) from Environment Canada
<b>Minimum Temperature</b>	38.5 °F	Temperature based on Climate Normals in Oshawa (1971-2000) from Environment Canada
<b>Maximum Temperature</b>	53.2°F	Temperature based on Climate Normals in Oshawa (1971-2000) from Environment Canada
<b>Fuel Reid Vapour Pressure</b>	9.0	Based on O. Reg. 271/91, gasoline volatility limit for Southern Ontario
<b>Vehicle Speed</b>	Idling, 50, 60, 70, 100 km/h (Idling, 31, 37, 44, 62 miles/h)	Based on posted speed limits on roadways
<b>Road Type</b>	Arterial and freeway	

MOBILE6.2C can estimate emissions for 28 types of vehicles. For the baseline scenario, emission factors for Class LDGT12 (light duty gasoline Vehicle Class 1 and 2 trucks) from the light duty vehicle class and HDDV (heavy duty diesel vehicles) from the heavy duty vehicle class were chosen. The tailpipe emission factor for a roadway was a composite based on a relative percentage of light (85%) to heavy duty (15%) vehicles on the road. This is considered a conservative approach since it is expected that the majority of vehicles travelling on the roads would be in the LDGV (light duty gasoline vehicle) class which has lower emissions than the LDGT12 or HDDV class. For the operation scenario, emission factors for Class LDGV (light duty gasoline vehicles) and HDDV vehicles were used. Since the percentage of LDGV and HDDV vehicle volumes varied throughout the day, the road link emission rates also varied depending on the time of day. Tailpipe emission estimates output by the MOBILE6.2c model and used for CAL3QHCR modelling are summarized in Appendix B. Sample MOBILE6.2c input and output files are provided in Attachments E1 and E2.

## 2.5 Traffic Data

The CAL3QHCR model also requires hourly free flow traffic volumes to define the free flow links.

For the baseline scenario, a diurnal variation in hourly traffic volume on each road segment was applied for the CAL3QHCR modelling. The following traffic distributions were applied to each segment for the baseline scenario:

- Peak Traffic (rush hour) – 6 to 8 AM and 4 to 6 PM (four hours per day);
- Off Peak Daytime Traffic – 8 AM to 4 PM and 6 PM to 8 PM; and,
- Off Peak Nighttime Traffic – 8 PM to 6 AM.

Total daily traffic was estimated as ten times the peak hourly baseline traffic. The peak hourly baseline traffic was estimated as the maximum of the peak A.M. and P.M traffic flows estimated by URS (URS 2009). Hourly traffic volumes were calculated for off-peak daytime and off-peak nighttime hours from the total daily background traffic assuming a total of 4 hours of peak traffic per day (2 hours in the morning and 2 hours in the evening), with the remaining portion of the total daily traffic being distributed 90% in daytime hours and 10% during nighttime hours.

The off-peak daytime and nighttime calculations were as follows:

- Total Daily Traffic (TDT) (veh/day) =  $10 \text{ (h/day)} \times \text{Background flow peak (BGP) (veh/h)}$
- Off-Peak Daytime Traffic (veh/h) =  $[\text{TDT (veh/day)} - (4 \text{ (h)} \times \text{BGP veh/h})] / 10 \text{ (h/day)} \times 90\%$
- Off-Peak Nighttime Traffic (veh/h) =  $[\text{TDT (veh/day)} - (4 \text{ (h)} \times \text{BGP veh/h})] / 10 \text{ (h/day)} \times 10\%$

Traffic data was not available for the intersections of South Service Road and Osborne Road and South Service Road and Solina Road. It was conservatively assumed that the traffic travelling east on South Service Road continued past Osborne Road and also turned down both Osborne Road and Solina Road. This was a conservative assumption since it double counts the traffic by assuming that it simultaneously travels on each road. Table E2-4 presents a summary of the baseline traffic data at each free flow link.

**Table E2-4 Summary of the Baseline Hourly Traffic Volume Data at Free Flow Links**

Link Number	Description	Baseline Traffic Volumes - 2011		
		Peak Flow	Off-Peak Daytime	Off-Peak Nighttime
1	Hwy 401 EB Ramp A	176	95	11
2	Hwy 401 EB Ramp B	176	95	11
3	Hwy 401 EB Ramp C	176	95	11
4	Hwy 401 EB Ramp D	176	95	11
5	Hwy 401 EB Ramp E	176	95	11
6	Hwy 401 EB Exit Ramp A	627	339	38
7	Hwy 401 EB Exit Ramp B	627	339	38
8	Hwy 401 EB Exit Ramp C	627	339	38
9	Hwy 401 EB Exit Ramp D	627	339	38
10	Hwy 401 EB Exit Ramp E	627	339	38
11	Hwy 401 EB Exit Ramp F	627	339	38
12	Courtice SB: Hwy 401 & S.Serv	234	126	14
13	Courtice SB: S. of S. Serv	28	15	2
14	Courtice NB: Hwy 401 & S. Serv	655	354	39
15	Courtice NB: S. of S. Service	19	10	1
16	Hwy 401 EB	5000	2700	300
17	Hwy 401 WB	5000	2700	300
18	South Service Rd WB A	57	31	3
19	South Service Rd WB B	57	31	3
20	South Service Rd WB C	57	31	3
21	South Service Rd EB A	142	77	9
22	South Service Rd EB B	142	77	9
23	Osborne Rd SB A	199	107	12
24	Osborne Rd SB B	199	107	12
25	Osborne Rd EB A	199	107	12
26	Osborne Rd EB B	199	107	12
27	Osborne Rd EB C	199	107	12
28	Osborne Rd EB D	199	107	12
29	Solina Rd NB A	199	107	12
30	Solina Rd NB B	199	107	12
31	Solina Rd SB A	199	107	12
32	Solina Rd SB B	199	107	12
33	Osborne Rd WB A	199	107	12
34	Osborne Rd WB B	199	107	12
35	Osborne Rd WB C	199	107	12
36	Osborne Rd NB A	199	107	12
37	Osborne Rd NB B	199	107	12
38	Osborne Rd NB C	199	107	12

The distribution of project-related traffic volumes varies by both time of day and vehicle type (Class HDDV or LDGV) and is discussed in detail in Appendix B. The number of project-related vehicles and operating hours for the operation scenario were developed using the same methodology as was used in the “*Traffic Assessment – Technical Study Report*”, (URS, 2007) for a 400,000 tpy Facility. To approximate the increase in traffic volumes due to the project, it was conservatively assumed that the project related traffic would be travelling simultaneously on all links identified in bold font in Table E2-1. Table E2-5 presents a summary of the project-related traffic volumes during different periods throughout the day.

**Table E2-5 Summary of Project Hourly Traffic Volumes**

Hour of Day	Project Traffic Volumes - 2011	
	HDVV vehicles	LDGV vehicles
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	23
8	10	0
9	10	0
10	9	0
11	9	0
12	9	0
13	9	0
14	10	0
15	10	23
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0

Sample input and output CAL3QHCR files are presented in attachments E3 and E4.

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### 3.0 RESULTS

In Appendix I, results of the CAL3QHCR traffic dispersion modelling are presented for the two scenarios examined:

- baseline 2011; and,
- operation 2011 (either a 140,000 or 400,000 tpy Facility).

As previously mentioned, the predicted concentrations for operation are the sum of the baseline traffic predicted concentrations and the project traffic predicted concentrations.

The CAL3QHCR dispersion model NO<sub>x</sub> results presented in Appendix I were subjected to the Ozone Limiting Method (OLM) to determine ambient NO<sub>2</sub> concentrations. The OLM is a standard methodology for determining ambient NO<sub>2</sub> concentrations based on maximum NO<sub>x</sub> concentrations. The OLM assumes that some NO<sub>2</sub> is emitted directly from the source and that additional NO<sub>2</sub> is formed in the atmosphere by the direct mole for mole oxidation of NO by O<sub>3</sub> in the presence of organic radicals and sunlight. If plenty of ozone is available, and given enough time all of the NO is converted by oxidation to NO<sub>2</sub>. If the ozone is limited (i.e., present at low concentrations), the conversion of NO to NO<sub>2</sub> will be limited by the amount of O<sub>3</sub>. The OLM method is also referred to as the U.S. EPA Tier 3 approach to the NO to NO<sub>2</sub> conversion. NO to NO<sub>2</sub> conversion by the OLM method is dependent on the relative magnitudes of the NO<sub>x</sub> and O<sub>3</sub> available in the atmosphere according to the following relationship:

If [O<sub>3</sub>] > 0.9\*[NO<sub>x</sub>] then [NO<sub>2</sub>] = [NO<sub>x</sub>]

Otherwise, [NO<sub>2</sub>] = [O<sub>3</sub>] + 0.1\*[NO<sub>x</sub>]

All concentrations in the previous equations are in parts per million (ppm). The predicted NO<sub>x</sub> concentrations are calculated as equivalent NO<sub>2</sub>.

Concentrations of total particulate (PM) were estimated by multiplying the PM<sub>10</sub> predicted concentrations by a factor of 2.

A summary of the maximum 1-hour, 8-hour (CO only), 24-hour, and annual concentrations for the CAL3QHCR traffic dispersion modelling for each scenario at each receptor is presented in Appendix I. In this summary, the maximum predicted GLC for each air contaminant at each receptor due to the baseline or operational traffic has been conservatively added to the measured background concentration (which double counts the contribution of baseline traffic). For the operations case, the maximum predicted CALPUFF concentrations (due to on-site Facility emissions, including traffic) at each discrete receptor location was added to the vehicle traffic predictions.

## ATTACHMENT E-1

### Sample MOBILE6.2C Input File

MOBILE6 INPUT FILE  
\*Mobile6.2C Run for York-Durham Off-site Traffic  
PARTICULATES :  
POLLUTANTS : HC CO NOX  
SPREADSHEET : York-Durkam Off-site Traffic 60 km/hr  
\* Run for all vehicle types (default)

RUN DATA  
EXPRESS HC AS VOC :  
EXPAND EVAP :  
  
SCENARIO REC : Offsite Traffic - 60 km/hr  
CALENDAR YEAR : 2011  
SULFUR CONTENT : 30.0  
ABSOLUTE HUMIDITY : 48.7  
MIN/MAX TEMP : 38.5 53.2  
FUEL RVP : 9.0  
AVERAGE SPEED : 37 arterial 0.0 0.0 100.0 0.0  
  
PARTICLE SIZE : 10.0  
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV  
PMDDR1.CSV PMDDR2.CSV  
DIESEL SULFUR : 15.0  
  
END OF RUN :

## ATTACHMENT E-2

### Summary of MOBILE6.2C Output Results

60KMPM10

\*\*\*\*\*  
\* MOBILE6C 6.2ETOH (27-May-2005) \*  
\* Input file: 60KMPM10.IN (file 1, run 1). \*  
\*\*\*\*\*

\* # # # # # # # # # # # # # # # # # # #  
\* Offsite Traffic - 60 km/hr

\* File 1, Run 1, Scenario 1.

\* # # # # # # # # # # # # # # # # # # #

User supplied gasoline sulfur content = 30.0 ppm.

M583 Warning:

The user supplied arterial average speed of 37.0  
will be used for all hours of the day. 100% of VMT  
has been assigned to the arterial/collector roadway  
type for all hours of the day and all vehicle types.

\* Reading PM Gas Carbon ZML Levels  
\* from the external data file PMGZML.CSV

\* Reading PM Gas Carbon DR1 Levels  
\* from the external data file PMGDR1.CSV

\* Reading PM Gas Carbon DR2 Levels  
\* from the external data file PMGDR2.CSV

\* Reading PM Diesel Zero Mile Levels  
\* from the external data file PMDZML.CSV

\* Reading the First PM Deterioration Rates  
\* from the external data file PMDDR1.CSV

\* Reading the Second PM Deterioration Rates  
\* from the external data file PMDDR2.CSV

M 48 Warning:

there are no sales for vehicle class HDGV8b

\* Reading Ammonia (NH3) Basic Emission Rates  
\* from the external data file PMNH3BER.D

\* Reading Ammonia (NH3) Sulfur Deterioration Rates  
\* from the external data file PMNH3SDR.D

Calendar Year: 2011  
Month: Jan.  
Altitude: Low  
Minimum Temperature: 38.5 (F)  
Maximum Temperature: 53.2 (F)  
Absolute Humidity: 49. grains/lb  
Nominal Fuel RVP: 9.0 psi  
Weathered RVP: 9.0 psi  
Fuel Sulfur Content: 25. ppm

Exhaust I/M Program: No  
Evap I/M Program: No  
ATP Program: No  
Reformulated Gas: No

LDDT	Vehicle Type: HDDV	LDGV MC	LDGT12 All Veh	LDGT34 <6000	LDGT >6000	HDGV	LDVV (All)
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60KMPM10							
VMT	Distribution:	0.3425	0.3941	0.1344		0.0357	0.0003
0.0020	0.0856	0.0053	1.0000				
<hr/>							
Composite Emission Factors (g/mi):							
0.362	Composite VOC :	0.601	0.706	1.599	0.933	0.697	0.143
0.591	0.322	1.37	0.760				
0.555	Composite CO :	12.11	13.61	25.05	16.52	6.81	0.723
	1.202	11.18	13.287				
	Composite NOX :	0.569	0.767	1.427	0.935	2.192	0.298
	5.418	0.95	1.238				
<hr/>							
Non-Exhaust Emissions (g/mi):							
0.000	Hot Soak Loss:	0.079	0.067	0.132	0.084	0.122	0.000
0.000	0.000	0.019	0.076				
0.000	Diurnal Loss:	0.008	0.008	0.016	0.010	0.014	0.000
0.000	0.000	0.001	0.009				
0.000	Resting Loss:	0.055	0.062	0.134	0.081	0.106	0.000
0.000	0.000	0.139	0.066				
0.000	Running Loss:	0.067	0.053	0.099	0.065	0.090	0.000
0.000	0.000	0.000	0.061				
0.000	Crankcase Loss:	0.008	0.010	0.010	0.010	0.010	0.000
0.000	0.000	0.000	0.008				
0.000	Refueling Loss:	0.021	0.039	0.084	0.050	0.153	0.000
0.000	0.000	0.000	0.039				
0.000	Total Non-Exhaust:	0.238	0.240	0.475	0.302	0.495	0.000
0.000	0.000	0.159	0.259				

## ATTACHMENT E3

### Sample CAL3QHCR Input File

' DY Offsite Traffic'		60	57	0	0	24	1	0	BG2011-C0	
1	1	03	12	31	03					
10010		3	10010		3					
1	1	' R'								
' REC3'	681642.	0	4860349.	3	0					
' REC6'	679647.	8	4859989.	3	0					
' REC11'	679870.	4	4859737.	9	0					
' REC12'	681575.	5	4860557.	7	0					
' REC13'	680704.	5	4859857.	8	0					
' REC14'	680608.	0	4860719.	6	0					
' REC17'	681378.	6	4860335.	0	0					
' REC240'	681545.	0	4860865.	0	0					
' REC241'	681563.	7	4860687.	4	0					
' REC242'	681579.	7	4860610.	0	0					
' REC265'	680816.	2	4860219.	3	0					
' REC267'	680359.	6	4859959.	2	0					
' REC268'	680083.	7	4859985.	7	0					
' REC269'	680819.	9	4860705.	3	0					
' REC270'	681070.	0	4859937.	2	0					
' REC271'	679898.	8	4860067.	4	0					
' REC272'	680134.	8	4860694.	1	0					
' REC273'	680253.	7	4860255.	2	0					
' REC274'	679901.	2	4860511.	8	0					
' REC275'	679867.	8	4860445.	4	0					
' REC276'	679277.	0	4859981.	5	0					
' REC277'	679387.	2	4860648.	9	0					
' REC278'	679261.	9	4860574.	2	0					
' REC296'	679830.	2	4860702.	2	0					
2	' C'									
1	1	1	1	1	1					
' York-Durham'		38								
1	1									
1	5	11								
2	1									
1	5	11								
3	1									
1	1									
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8	1									
1	5	11								
9	1									
1	5	11								
10	1									
1	5	13								
' Hwy 401 EB Ramp A'	' AG'		679693.	7	4860736.	1	679634.	4	4860708.	3
' Hwy 401 EB Ramp B'	' AG'		679634.	4	4860708.	3	679588.	3	4860731.	3
' Hwy 401 EB Ramp C'	' AG'		679588.	3	4860731.	3	679582.	7	4860764	1.5
' Hwy 401 EB Ramp D'	' AG'		679582.	7	4860764.	0	679615.	2	4860803.	1
' Hwy 401 EB Ramp E'	' AG'		679615.	2	4860803.	1	679654.	0	4860819.	3
' Hwy 401 EB Exit Ramp A'	' AG'		679321.	2	4860749.	8	679402.	4	4860760.	5
' Hwy 401 EB Exit Ramp B'	' AG'		679402.	4	4860760.	5	679453.	7	4860764.	1
' Hwy 401 EB Exit Ramp C'	' AG'		679453.	7	4860764.	1	679513.	1	4860752.	1
' Hwy 401 EB Exit Ramp D'	' AG'		679513.	1	4860752.	1	679597.	4	4860700.	6
' Hwy 401 EB Exit Ramp E'	' AG'		679597.	4	4860700.	6	679642.	2	4860698.	2

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11 1					
' Hwy 401 EB Exit Ramp F' ' AG'	1.5 13	679642. 2	4860698. 2	679701. 8	4860726. 6
12 1					
' Court SB: Hwy 401 & S. Ser' ' AG'	1.5 12	679679. 3	4860818. 5	679704. 2	4860735. 1
13 1					
' Court SB: S. of S. Ser' ' AG'	1.5 12	679704. 2	4860735. 1	679790. 9	4860481. 9
14 1					
' Court NB: Hwy 401 & S. Ser' ' AG'	1.5 12	679682. 1	4860819. 5	679711. 3	4860737. 6
15 1					
' Court NB: S. of S. Ser' ' AG'	1.5 12	679711. 3	4860737. 6	679793. 7	4860482. 5
16 1					
' Hwy 401 EB' ' AG'	1.5 17	679320. 4	4860758. 3	681314. 2	4861165. 9
17 1					
' Hwy 401 WB' ' AG'	1.5 17	681310. 0	4861185. 2	679317. 6	4860780. 2
18 1					
' South Service Rd WB A' ' AG'	1.5 10	681324. 9	4861127. 0	679897. 7	4860834. 1
19 1					
' South Service Rd WB B' ' AG'	1.5 13	679897. 7	4860834. 1	679757. 6	4860765. 8
20 1					
' South Service Rd WB C' ' AG'	1.5 11	679757. 6	4860765. 8	679716. 5	4860743. 5
21 1					
' South Service Rd EB A' ' AG'	1.5 13	679719. 9	4860737. 4	679899. 8	4860828. 6
22 1					
' South Service Rd EB B' ' AG'	1.5 10	679899. 8	4860828. 6	681326. 8	4861121. 3
23 1					
' Osborne Rd SB A' ' AG'	1.5 10	680507. 7	4860947. 9	680789. 1	4860136. 5
24 1					
' Osborne Rd SB B' ' AG'	1.5 10	680789. 1	4860136. 5	680805. 5	4860118. 5
25 1					
' Osborne Rd EB A' ' AG'	1.5 10	680805. 5	4860118. 5	680825. 9	4860109. 0
26 1					
' Osborne Rd EB B' ' AG'	1.5 10	680825. 9	4860109. 0	681062. 0	4860101. 9
27 1					
' Osborne Rd EB C' ' AG'	1.5 10	681062. 0	4860101. 9	681590. 1	4860311. 3
28 1					
' Osborne Rd EB D' ' AG'	1.5 10	681590. 1	4860311. 3	681599. 3	4860328. 0
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' Solina Rd NB A' ' AG'	1.5 10	681599. 3	4860328. 0	681344. 4	4861071. 6
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' Solina Rd NB B' ' AG'	1.5 10	681344. 4	4861071. 6	681330. 6	4861114. 2
31 1					
' Solina Rd SB A' ' AG'	1.5 10	681323. 1	4861118. 1	681596. 8	4860328. 0

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32	1	' Solina Rd SB B' ' AG'	681596. 8	4860328. 0	681589. 1	4860312. 9
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33	1	' Osborne Rd WB A' ' AG'	681589. 1	4860312. 9	681061. 4	4860104. 1
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34	1	' Osborne Rd WB B' ' AG'	681061. 4	4860104. 1	680826. 2	4860111. 3
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35	1	' Osborne Rd WB C' ' AG'	680826. 2	4860111. 3	680807. 7	4860120. 0
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36	1	' Osborne Rd NB A' ' AG'	680807. 7	4860120. 0	680791. 7	4860137. 4
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37	1	' Osborne Rd NB B' ' AG'	680791. 7	4860137. 4	680527. 1	4860900. 5
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38	1	' Osborne Rd NB C' ' AG'	680527. 1	4860900. 5	680513. 0	4860949. 3
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BG2011-CO

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34	12	116. 1

BG2011-CO

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13 15 116. 1  
14 354 116. 1  
15 10 116. 1  
16 2700 138. 3  
17 2700 138. 3  
18 31 117. 5  
19 31 117. 5  
20 31 180. 5  
21 77 117. 5  
22 77 117. 5

BG2011-CO

23 107 116.1  
24 107 116.1  
25 107 116.1  
26 107 116.1  
27 107 116.1  
28 107 116.1  
29 107 116.1  
30 107 180.5  
31 107 116.1  
32 107 116.1  
33 107 116.1  
34 107 116.1  
35 107 116.1  
36 107 116.1  
37 107 116.1  
38 107 180.5  
17 0  
1 176 116.1  
2 176 116.1  
3 176 116.1  
4 176 116.1  
5 176 116.1  
6 627 116.1  
7 627 116.1  
8 627 116.1  
9 627 116.1  
10 627 180.5  
11 627 180.5  
12 234 116.1  
13 28 116.1  
14 655 116.1  
15 19 116.1  
16 5000 138.3  
17 5000 138.3  
18 57 117.5  
19 57 117.5  
20 57 180.5  
21 57 117.5  
22 57 117.5  
23 199 116.1  
24 199 116.1  
25 199 116.1  
26 199 116.1  
27 199 116.1  
28 199 116.1  
29 199 116.1  
30 199 180.5  
31 199 116.1  
32 199 116.1  
33 199 116.1  
34 199 116.1  
35 199 116.1  
36 199 116.1  
37 199 116.1  
38 199 180.5  
18 0  
1 176 116.1  
2 176 116.1  
3 176 116.1  
4 176 116.1  
5 176 116.1  
6 627 116.1  
7 627 116.1

BG2011-CO

8	627	116.1
9	627	116.1
10	627	180.5
11	627	180.5
12	234	116.1
13	28	116.1
14	655	116.1
15	19	116.1
16	5000	138.3
17	5000	138.3
18	57	117.5
19	57	117.5
20	57	180.5
21	57	117.5
22	57	117.5
23	199	116.1
24	199	116.1
25	199	116.1
26	199	116.1
27	199	116.1
28	199	116.1
29	199	116.1
30	199	180.5
31	199	116.1
32	199	116.1
33	199	116.1
34	199	116.1
35	199	116.1
36	199	116.1
37	199	116.1
38	199	180.5
19	0	
1	95	116.1
2	95	116.1
3	95	116.1
4	95	116.1
5	95	116.1
6	339	116.1
7	339	116.1
8	339	116.1
9	339	116.1
10	339	180.5
11	339	180.5
12	126	116.1
13	15	116.1
14	354	116.1
15	10	116.1
16	2700	138.3
17	2700	138.3
18	31	117.5
19	31	117.5
20	31	180.5
21	77	117.5
22	77	117.5
23	107	116.1
24	107	116.1
25	107	116.1
26	107	116.1
27	107	116.1
28	107	116.1
29	107	116.1
30	107	180.5
31	107	116.1

BG2011-CO

32 107 116. 1  
33 107 116. 1  
34 107 116. 1  
35 107 116. 1  
36 107 116. 1  
37 107 116. 1  
38 107 180. 5  
20 0  
1 95 116. 1  
2 95 116. 1  
3 95 116. 1  
4 95 116. 1  
5 95 116. 1  
6 339 116. 1  
7 339 116. 1  
8 339 116. 1  
9 339 116. 1  
10 339 180. 5  
11 339 180. 5  
12 126 116. 1  
13 15 116. 1  
14 354 116. 1  
15 10 116. 1  
16 2700 138. 3  
17 2700 138. 3  
18 31 117. 5  
19 31 117. 5  
20 31 180. 5  
21 77 117. 5  
22 77 117. 5  
23 107 116. 1  
24 107 116. 1  
25 107 116. 1  
26 107 116. 1  
27 107 116. 1  
28 107 116. 1  
29 107 116. 1  
30 107 180. 5  
31 107 116. 1  
32 107 116. 1  
33 107 116. 1  
34 107 116. 1  
35 107 116. 1  
36 107 116. 1  
37 107 116. 1  
38 107 180. 5  
21 0  
1 11 116. 1  
2 11 116. 1  
3 11 116. 1  
4 11 116. 1  
5 11 116. 1  
6 38 116. 1  
7 38 116. 1  
8 38 116. 1  
9 38 116. 1  
10 38 180. 5  
11 38 180. 5  
12 14 116. 1  
13 2 116. 1  
14 39 116. 1  
15 1 116. 1  
16 300 138. 3

BG2011-CO

17 300 138. 3  
18 3 117. 5  
19 3 117. 5  
20 3 180. 5  
21 9 117. 5  
22 9 117. 5  
23 12 116. 1  
24 12 116. 1  
25 12 116. 1  
26 12 116. 1  
27 12 116. 1  
28 12 116. 1  
29 12 116. 1  
30 12 180. 5  
31 12 116. 1  
32 12 116. 1  
33 12 116. 1  
34 12 116. 1  
35 12 116. 1  
36 12 116. 1  
37 12 116. 1  
38 12 180. 5  
22 0  
1 11 116. 1  
2 11 116. 1  
3 11 116. 1  
4 11 116. 1  
5 11 116. 1  
6 38 116. 1  
7 38 116. 1  
8 38 116. 1  
9 38 116. 1  
10 38 180. 5  
11 38 180. 5  
12 14 116. 1  
13 2 116. 1  
14 39 116. 1  
15 1 116. 1  
16 300 138. 3  
17 300 138. 3  
18 3 117. 5  
19 3 117. 5  
20 3 180. 5  
21 9 117. 5  
22 9 117. 5  
23 12 116. 1  
24 12 116. 1  
25 12 116. 1  
26 12 116. 1  
27 12 116. 1  
28 12 116. 1  
29 12 116. 1  
30 12 180. 5  
31 12 116. 1  
32 12 116. 1  
33 12 116. 1  
34 12 116. 1  
35 12 116. 1  
36 12 116. 1  
37 12 116. 1  
38 12 180. 5  
23 0  
1 11 116. 1

BG2011-C0

2	11	116. 1
3	11	116. 1
4	11	116. 1
5	11	116. 1
6	38	116. 1
7	38	116. 1
8	38	116. 1
9	38	116. 1
10	38	180. 5
11	38	180. 5
12	14	116. 1
13	2	116. 1
14	39	116. 1
15	1	116. 1
16	300	138. 3
17	300	138. 3
18	3	117. 5
19	3	117. 5
20	3	180. 5
21	9	117. 5
22	9	117. 5
23	12	116. 1
24	12	116. 1
25	12	116. 1
26	12	116. 1
27	12	116. 1
28	12	116. 1
29	12	116. 1
30	12	180. 5
31	12	116. 1
32	12	116. 1
33	12	116. 1
34	12	116. 1
35	12	116. 1
36	12	116. 1
37	12	116. 1
38	12	180. 5
24	0	
1	11	116. 1
2	11	116. 1
3	11	116. 1
4	11	116. 1
5	11	116. 1
6	38	116. 1
7	38	116. 1
8	38	116. 1
9	38	116. 1
10	38	180. 5
11	38	180. 5
12	14	116. 1
13	2	116. 1
14	39	116. 1
15	1	116. 1
16	300	138. 3
17	300	138. 3
18	3	117. 5
19	3	117. 5
20	3	180. 5
21	9	117. 5
22	9	117. 5
23	12	116. 1
24	12	116. 1
25	12	116. 1

BG2011-C0

26	12	116.1
27	12	116.1
28	12	116.1
29	12	116.1
30	12	180.5
31	12	116.1
32	12	116.1
33	12	116.1
34	12	116.1
35	12	116.1
36	12	116.1
37	12	116.1
38	12	180.5

## ATTACHMENT E4

### Sample CAL3QHCR Output File

CAL3QHCR

(Dated: 04244)

DATE : 6/25/ 9  
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TIME : 11: 3:29

JOB: DY Offsite Traffic  
RUN: York-Durham

=====  
General Information  
=====

Run start date: 1/ 1/ 3 Julian: 1  
end date: 12/31/ 3 Julian: 365

A Tier 2 approach was used for input data preparation.

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

Ambient background concentrations are included in the averages below.

Site & Meteorological Constants

-----  
VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 57. CM  
ATIM = 60.

Met. Sfc. Sta. Id & Yr = 10010 3  
Upper Air Sta. Id & Yr = 10010 3

Rural mixing heights were processed.

In 2003, Julian day 1 is a Wednesday.

The patterns from the input file  
have been assigned as follows:

Pattern # 1 is assigned to Monday.  
Pattern # 1 is assigned to Tuesday.  
Pattern # 1 is assigned to Wednesday.  
Pattern # 1 is assigned to Thursday.  
Pattern # 1 is assigned to Friday.  
Pattern # 1 is assigned to Saturday.  
Pattern # 1 is assigned to Sunday.

Link Data Constants - (Variable data in \*.LNK file)

-----  
\* LENGTH BRG TYPE H W NLANES \* X1 Y1 X2 Y2  
\* (M) (DEG) (M) (M)  
-----  
\*-----  
\*-----  
1. Hwy 401 EB Ramp A \* 679693.7 4860736.0 679634.4  
4860708.5 \* 65. 245. AG 1.5 11.0

	2.	Hwy	401	EB	Ramp	B	*	679634.4	4860708.5	679588.3
4860731.5	*		51.	297.	AG		1.5	11.0		
	3.	Hwy	401	EB	Ramp	C	*	679588.3	4860731.5	679582.7
4860764.0	*		33.	350.	AG		1.5	11.0		
	4.	Hwy	401	EB	Ramp	D	*	679582.7	4860764.0	679615.2
4860803.0	*		51.	40.	AG		1.5	11.0		
	5.	Hwy	401	EB	Ramp	E	*	679615.2	4860803.0	679654.0
4860819.5	*		42.	67.	AG		1.5	11.0		
	6.	Hwy	401	EB	Exit	Ramp*	679321.2	4860750.0	679402.4	
4860760.5	*		82.	83.	AG		1.5	11.0		
	7.	Hwy	401	EB	Exit	Ramp*	679402.4	4860760.5	679453.7	
4860764.0	*		51.	86.	AG		1.5	11.0		

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## Link Data Constants - (Variable data in \*.LNK file)

* LENGTH	LINK BRG	DESCRIPTION TYPE	H	W	NLANES	LINK COORDINATES (M)				
						*	X1	Y1	X2	Y2
* (M)	(DEG)		(M)	(M)						
4860752.0	*	8. Hwy 401 EB Exit Ramp*	61.	101.	AG	1.5	11.0	679453.7	4860764.0	679513.1
4860700.5	*	9. Hwy 401 EB Exit Ramp*	99.	121.	AG	1.5	11.0	679513.1	4860752.0	679597.4
4860698.0	*	10. Hwy 401 EB Exit Ramp*	45.	93.	AG	1.5	13.0	679597.4	4860700.5	679642.2
4860726.5	*	11. Hwy 401 EB Exit Ramp*	66.	64.	AG	1.5	13.0	679642.2	4860698.0	679701.8
4860735.0	*	12. Court SB: Hwy 401 & *	87.	163.	AG	1.5	12.0	679679.3	4860818.5	679704.2
4860482.0	*	13. Court SB: S. of S. S*	267.	161.	AG	1.5	12.0	679704.2	4860735.0	679790.9
4860737.5	*	14. Court NB: Hwy 401 & *	87.	160.	AG	1.5	12.0	679682.1	4860819.5	679711.3
4860482.5	*	15. Court NB: S. of S. S*	268.	162.	AG	1.5	12.0	679711.3	4860737.5	679793.7
4861166.0	*	16. Hwy 401 EB	2035.	78.	AG	1.5	17.0	679320.4	4860758.5	681314.2
4860780.0	*	17. Hwy 401 WB	2033.	259.	AG	1.5	17.0	681310.0	4861185.0	679317.6
4860834.0	*	18. South Service Rd WB	1457.	258.	AG	1.5	10.0	681324.9	4861127.0	679897.7
4860766.0	*	19. South Service Rd WB	156.	244.	AG	1.5	13.0	679897.7	4860834.0	679757.6
4860743.5	*	20. South Service Rd WB	47.	241.	AG	1.5	11.0	679757.6	4860766.0	679716.5
4860828.5	*	21. South Service Rd EB	1457.	78.	AG	1.5	10.0	679719.9	4860737.5	679899.8
4861121.5	*	22. South Service Rd EB	202.	63.	AG	1.5	13.0	679899.8	4860828.5	681326.8
4860136.5	*	23. Osborne Rd SB A	1457.	78.	AG	1.5	10.0	680507.7	4860948.0	680789.1
4860118.5	*	24. Osborne Rd SB B	859.	161.	AG	1.5	10.0	680789.1	4860136.5	680805.5
4860109.0	*	25. Osborne Rd EB A	24.	138.	AG	1.5	10.0	680805.5	4860118.5	680825.9
4860102.0	*	26. Osborne Rd EB B	22.	115.	AG	1.5	10.0	680825.9	4860109.0	681062.0
4860311.5	*	27. Osborne Rd EB C	236.	92.	AG	1.5	10.0	681062.0	4860102.0	681590.1

	28.	Osborne Rd	EB D	*	681590.1	4860311.5	681599.3
4860328.0	*	19.	29.	AG	1.5 10.0		
	29.	Solina Rd	NB A	*	681599.3	4860328.0	681344.4
4861071.5	*	786.	341.	AG	1.5 10.0		
	30.	Solina Rd	NB B	*	681344.4	4861071.5	681330.6
4861114.0	*	45.	342.	AG	1.5 10.0		
	31.	Solina Rd	SB A	*	681323.1	4861118.0	681596.8
4860328.0	*	836.	161.	AG	1.5 10.0		
	32.	Solina Rd	SB B	*	681596.8	4860328.0	681589.1
4860313.0	*	17.	207.	AG	1.5 10.0		
	33.	Osborne Rd	WB A	*	681589.1	4860313.0	681061.4
4860104.0	*	568.	248.	AG	1.5 10.0		
	34.	Osborne Rd	WB B	*	681061.4	4860104.0	680826.2
4860111.5	*	235.	272.	AG	1.5 10.0		
	35.	Osborne Rd	WB C	*	680826.2	4860111.5	680807.7
4860120.0	*	20.	295.	AG	1.5 10.0		
	36.	Osborne Rd	NB A	*	680807.7	4860120.0	680791.7
4860137.5	*	24.	318.	AG	1.5 10.0		
	37.	Osborne Rd	NB B	*	680791.7	4860137.5	680527.1
4860900.5	*	808.	341.	AG	1.5 10.0		
	38.	Osborne Rd	NB C	*	680527.1	4860900.5	680513.0
4860949.5	*	51.	344.	AG	1.5 10.0		

CAL3QHCR

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JOB: DY Offsite Traffic  
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Receptor Data

	RECEPTOR	*	COORDINATES (M)		
		*	X	Y	Z
*	1. REC3	*	681642.0	4860349.5	
0.0	2. REC6	*	679647.8	4859989.5	
0.0	3. REC11	*	679870.4	4859738.0	
0.0	4. REC12	*	681575.5	4860557.5	
0.0	5. REC13	*	680704.5	4859858.0	
0.0	6. REC14	*	680608.0	4860719.5	
0.0	7. REC17	*	681378.6	4860335.0	
0.0	8. REC240	*	681545.0	4860865.0	
0.0	9. REC241	*	681563.7	4860687.5	
0.0	10. REC242	*	681579.7	4860610.0	
0.0	11. REC265	*	680816.2	4860219.5	
0.0	12. REC267	*	680359.6	4859959.0	
0.0	13. REC268	*	680083.7	4859985.5	
0.0	14. REC269	*	680819.9	4860705.5	
0.0	15. REC270	*	681070.0	4859937.0	
0.0	16. REC271	*	679898.8	4860067.5	
0.0	17. REC272	*	680134.8	4860694.0	
0.0	18. REC273	*	680253.7	4860255.0	
0.0	19. REC274	*	679901.2	4860512.0	
0.0	20. REC275	*	679867.8	4860445.5	
0.0	21. REC276	*	679277.0	4859981.5	
0.0	22. REC277	*	679387.2	4860649.0	

0.0							
	23.	REC278		*	679261.9	4860574.0	
0.0		24.	REC296	*	679830.2	4860702.0	
0.0							

Model Results

-----

Remarks : In search of the wind direction corresponding to the maximum concentration, only the first direction, of the directions with the same maximum concentrations, is indicated as the maximum.

\* MAXIMUM HOURLY CONCENTRATIONS WITH ANY AMBIENT  
BACKGROUND CONCENTRATIONS (BKG) ADDED

REC7	REC8	REC9	REC10		REC3	REC4	REC5	REC6
			*	(PPM)				

6.2	10.0	8.3	MAX+BKG	*	6.8	6.0	4.6	8.0	5.0	12.0
			- BKG	*	8.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0			0.0					
			-----							
6.2	10.0	8.3	MAX	*	6.8	6.0	4.6	8.0	5.0	12.0
			WIND DIR*		8.0	300	4	4	300	4
300	300	300								
342	342	342	JULIAN	*	342	42	42	342	42	342
			HOUR	*	342	18	7	18	7	18
18	18	18			18					

CAL3QHCR

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JOB: DY Offsite Traffic  
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\* MAXIMUM HOURLY CONCENTRATIONS WITH ANY AMBIENT  
BACKGROUND CONCENTRATIONS (BKG) ADDED

\* (PPM)  
\* REC11 REC12 REC13 REC14 REC15 REC16  
REC17 REC18 REC19 REC20

-----  
-----  
MAX+BKG \* 6.8 4.8 5.5 9.8 5.1 5.6  
11.6 5.8 9.7 8.0  
- BKG \* 0.0 0.0 0.0 0.0 0.0 0.0  
0.0 0.0 0.0 0.0  
-----

-----  
-----  
MAX \* 6.8 4.8 5.5 9.8 5.1 5.6  
11.6 5.8 9.7 8.0  
WIND DIR\* 329 4 329 300 300 329  
300 329 300 329  
JULIAN \* 57 42 57 342 342 57  
342 57 342 57  
HOUR \* 7 7 7 18 18 7  
18 7 18 7

\* REC21 REC22 REC23 REC24  
-----  
MAX+BKG \* 5.1 13.7 10.6 15.7  
- BKG \* 0.0 0.0 0.0 0.0  
-----  
MAX \* 5.1 13.7 10.6 15.7  
WIND DIR\* 32 4 32 300  
JULIAN \* 291 42 291 342  
HOUR \* 7 7 7 18

THE HIGHEST CONCENTRATION OF 15.70 PPM OCCURRED AT RECEPTOR  
REC24.

(Dated: 04244)

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JOB: DY Offsite Traffic  
 RUN: York-Durham

=====  
 Output Section  
 =====

## NOTES PERTAINING TO THE REPORT

1. THE HIGHEST AVERAGE IN EACH OF THE FIRST TWO COLUMNS OF EACH TABLE BELOW ARE SUFFIXED BY AN ASTERISK (\*).

FOR PM OUTPUT, THERE IS ONLY ONE COLUMN AND ASTERISK FOR THE ANNUAL AVERAGE/PERIOD OF CONCERN TABLE.

2. THE NUMBERS IN PARENTHESES ARE THE JULIAN DAY AND ENDING HOUR FOR THE PRECEDING AVERAGE.

3. THE NUMBER OF CALM HOURS USED IN PRODUCING EACH AVERAGE ARE PREFIXED BY A C.

## PRIMARY AVERAGES.

MAXIMUM 8-HOUR RUNNING NONOVERLAPPING AVERAGE CONCENTRATIONS  
 IN PARTS PER MILLION (PPM),  
 INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Receptor Number	Conc	Highest			Second highest		
		Day	Hr	Calm	Conc	Day	Hr
1	1.81	(342, 21)	C 0		1.17	( 55,14)	C 0
2	1.31	( 5,18)	C 0		1.09	(342,12)	C 0
3	0.80	(342,12)	C 0		0.79	( 65,20)	C 0
4	2.18	(342,21)	C 0		1.26	(349,21)	C 0
5	0.85	(342,12)	C 0		0.85	( 65,20)	C 0
6	3.60	(342,24)	C 0		2.96	( 32,20)	C 0
7	1.69	(342,21)	C 0		1.06	(349,21)	C 0
8	2.71	(342,21)	C 0		2.06	(310,12)	C 0
9	2.34	(342,21)	C 0		1.49	(349,21)	C 0
10	2.24	(342,21)	C 0		1.33	(349,21)	C 0
11	1.61	(342,22)	C 0		1.33	( 55,14)	C 0
12	0.94	(342,12)	C 0		0.89	(291, 9)	C 0
13	0.98	(291, 9)	C 0		0.98	( 30, 8)	C 0
14	2.74	(342,24)	C 0		2.69	( 32,20)	C 0
15	1.10	(342,22)	C 0		0.90	( 65,23)	C 0
16	1.35	( 5,14)	C 0		1.19	( 5,21)	C 0
17	3.58	(343, 1)	C 0		3.21	( 32,20)	C 0
18	1.90	( 32,20)	C 0		1.73	( 5,14)	C 0
19	2.74	( 32,20)	C 0		2.28	(343, 1)	C 0
20	2.66	( 32,20)	C 0		2.08	( 55,14)	C 0
21	1.30	( 5,13)	C 0		1.01	(291, 9)	C 0
22	4.74*	( 32,20)	C 0		4.07*	( 5,14)	C 0

23	2.45	( 32,18) C 0	2.00	( 60,10) C 0
24	4.54	(343, 1) C 0	3.97	( 32,20) C 0

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JOB: DY Offsite Traffic  
 York-Durham

RUN:

FIVE HIGHEST 1-HOUR END-TO-END AVERAGE CONCENTRATIONS IN PARTS  
 PER MILLION  
 INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Highest Ending	Highest			Second Highest			Third		
	Fourth Highest Rcptr Ending		Fifth Highest Ending		Ending		Ending		Ending
	No.	Conc	Day	Hr	Calm	Conc	Day	Hr	Calm
C 0	Calm	Conc	Day	Hr	Calm	Conc	Day	Hr	Calm
	1	6.80	(342,18)	C 0	6.50	( 57, 7)	C 0	4.00	( 30, 8)
C 0	4.00	( 55, 7)	C 0	4.00	(342,19)	C 0			
	2	6.00	( 42, 7)	C 0	4.70	(291, 7)	C 0	4.40	( 44, 7)
C 0	4.20	( 56, 7)	C 0	4.10	( 60, 7)	C 0			
	3	4.60	( 42, 7)	C 0	4.10	(291, 7)	C 0	4.00	( 60, 7)
C 0	3.60	( 56, 7)	C 0	3.40	( 44, 7)	C 0			
	4	8.00	(342,18)	C 0	6.90	( 57, 7)	C 0	5.00	(249,20)
C 0	4.90	(123,20)	C 0	4.90	(342,19)	C 0			
	5	5.00	( 42, 7)	C 0	4.20	( 57, 7)	C 0	4.00	( 56, 7)
C 0	3.60	( 44, 7)	C 0	3.40	( 55, 7)	C 0			
	6	12.00	(342,18)	C 0	10.40	( 57, 7)	C 0	8.50	( 42, 7)
C 0	8.50	( 55, 7)	C 0	8.40	(299, 8)	C 0			
	7	6.20	(342,18)	C 0	5.40	( 57, 7)	C 0	4.00	( 55, 7)
C 0	3.80	(342,19)	C 0	3.60	( 73, 7)	C 0			
	8	10.00	(342,18)	C 0	7.40	(123,20)	C 0	7.30	(249,20)
C 0	7.10	(299, 8)	C 0	6.20	(342,19)	C 0			
	9	8.30	(342,18)	C 0	5.80	(123,20)	C 0	5.80	(249,20)
C 0	5.60	( 57, 7)	C 0	5.20	(342,19)	C 0			
	10	8.00	(342,18)	C 0	6.40	( 57, 7)	C 0	5.10	(123,20)
C 0	5.10	(249,20)	C 0	5.10	(342,19)	C 0			
	11	6.80	( 57, 7)	C 0	6.80	(342,18)	C 0	5.20	( 42, 7)
C 0	5.00	( 55, 7)	C 0	4.40	( 44, 7)	C 0			
	12	4.80	( 42, 7)	C 0	4.70	( 57, 7)	C 0	4.20	( 60, 7)
C 0	4.00	( 44, 7)	C 0	4.00	(291, 7)	C 0			
	13	5.50	( 57, 7)	C 0	5.10	( 42, 7)	C 0	4.40	(291, 7)
C 0	4.10	( 60, 7)	C 0	4.00	( 44, 7)	C 0			
	14	9.80	(342,18)	C 0	7.70	( 42, 7)	C 0	7.50	( 57, 7)
C 0	7.00	(291, 7)	C 0	7.00	(299, 8)	C 0			
	15	5.10	(342,18)	C 0	4.90	( 57, 7)	C 0	4.70	( 42, 7)
C 0	3.60	( 55, 7)	C 0	3.40	( 30, 8)	C 0			
	16	5.60	( 57, 7)	C 0	5.40	( 42, 7)	C 0	4.80	(291, 7)
C 0	4.50	( 44, 7)	C 0	4.40	( 55, 7)	C 0			
	17	11.60	(342,18)	C 0	10.20	( 42, 7)	C 0	9.70	( 57, 7)
C 0	8.70	(291, 7)	C 0	8.60	( 60, 7)	C 0			
	18	5.80	( 57, 7)	C 0	5.70	( 42, 7)	C 0	5.20	(291, 7)
C 0	5.10	(342,18)	C 0	5.00	( 60, 7)	C 0			
	19	9.70	(342,18)	C 0	7.70	( 57, 7)	C 0	7.50	( 42, 7)
C 0	7.00	(291, 7)	C 0	6.70	( 44, 7)	C 0			
	20	8.00	( 57, 7)	C 0	7.10	( 42, 7)	C 0	6.30	(291, 7)
C 0	6.10	( 44, 7)	C 0	6.10	( 55, 7)	C 0			

	21	5.10	(291, 7)	C 0	4.80	( 44, 7)	C 0	4.70	( 60, 7)
C 0	4.10	( 56, 7)	C 0	3.40	( 42, 7)	C 0			
	22	13.70	( 42, 7)	C 0	12.70*	( 60, 7)	C 0	12.60	(291, 7)
C 0	11.30	( 44, 7)	C 0	11.30	( 56, 7)	C 0			
	23	10.60	(291, 7)	C 0	9.10	( 60, 7)	C 0	8.20	(156, 8)
C 0	7.20	(347,17)	C 0	6.60	( 57,19)	C 0			
	24	15.70*	(342,18)	C 0	12.30	( 57, 7)	C 0	12.10	( 42, 7)
C 0	10.30	( 44, 7)	C 0	10.30	(291, 7)	C 0			

MAXIMUM 8-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Rcptr	Total	Ending	Ambient	Total	Link	Link	Link	Link
Link	Link	Link	Link	Link	Link	+1	+2	+3	+4
+5	+6	+7	+8	+9	+10				
		1	1.81	(342,21)	0.00	1.81	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00
0.00	0.80	0.80	0.00	0.00	0.00	Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.11	0.00	Links	30+	0.10	0.00
0.00	0.00	0.00	0.00	0.00	0.00				
		2	1.31	( 5,18)	0.00	1.31	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00
0.00	0.66	0.65	0.00	0.00	0.00	Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00				

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LINK CONTRIBUTION TABLES

MAXIMUM 8-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Link	Rcptr	Total	Ending	Ambient	Total	Link	Link	Link	Link	
		Link	Link	Link	Link	Link	Link	+1	+2	+3	+4
+5	+6	No.	Conc	Day	Hr	Backgnd	Link	+1	+2	+3	+4
		3	0.80	(342,12)	0.00	0.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	0.40	0.40	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
		4	2.18	(342,21)	0.00	2.17	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	0.98	0.96	0.00	0.00	0.00	Links	20+	0.00	0.01	0.00	0.00
0.00	0.00	0.00	0.00	0.11	0.00	Links	30+	0.11	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
		5	0.85	(342,12)	0.00	0.85	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	0.40	0.38	0.00	0.00	0.00	Links	20+	0.00	0.00	0.04	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
0.00	0.00	0.04	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
		6	3.60	(342,24)	0.00	3.60	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	1.60	1.49	0.01	0.00	0.00	Links	20+	0.00	0.04	0.21	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
0.00	0.00	0.25	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
		7	1.69	(342,21)	0.00	1.69	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	0.81	0.80	0.00	0.00	0.00	Links	20+	0.00	0.00	0.03	0.00
0.00	0.00	0.01	0.00	0.00	0.00						

							Links	30+	0.00	0.00	0.01	0.00
0.00	0.00	0.03	0.00	0.00	0.00							
		8	2.71	(342,21)		0.00	2.71	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00							
						Links	10+	0.00	0.00	0.00	0.00	0.00
0.00	1.29	1.24	0.00	0.00	0.00							
0.00	0.00	0.00	0.00	0.08	0.00							
						Links	20+	0.00	0.03	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00							
		9	2.34	(342,21)		0.00	2.34	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00							
						Links	10+	0.00	0.00	0.00	0.00	0.00
0.00	1.08	1.05	0.00	0.00	0.00							
0.00	0.00	0.00	0.00	0.10	0.00							
						Links	30+	0.10	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00							
		10	2.24	(342,21)		0.00	2.24	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00							
						Links	10+	0.00	0.00	0.00	0.00	0.00
0.00	1.01	1.01	0.00	0.00	0.00							
0.00	0.00	0.00	0.00	0.10	0.00							
						Links	30+	0.10	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00							
		11	1.61	(342,22)		0.00	1.61	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00							
						Links	10+	0.00	0.00	0.00	0.00	0.01
0.00	0.71	0.66	0.00	0.00	0.00							
0.00	0.01	0.00	0.00	0.00	0.00							
						Links	20+	0.00	0.00	0.10	0.00	0.00
0.00	0.00	0.10	0.00	0.00	0.00							
						Links	30+	0.00	0.00	0.00	0.00	0.01

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## LINK CONTRIBUTION TABLES

MAXIMUM 8-HOUR AVERAGED LINK CONTRIBUTIONS  
 IN PARTS PER MILLION (PPM)  
 INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Link	Rcptr	Total	Ending	Ambient	Total	Link	Link	Link	Link
		Link	Link	Link	Link	Link	+1	+2	+3	+4
+5	+6	No.	Conc	Day	Hr	Backgnd				
+7	+8	+9	+10							
		12	0.94	(342,12)		0.00	0.94	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00
0.00	0.46	0.46	0.00	0.00	0.00		Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00					
		13	0.98	(291, 9)		0.00	0.98	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00
0.00	0.48	0.48	0.00	0.00	0.00		Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00
0.00	0.00	0.01	0.00	0.00	0.00					
		14	2.74	(342,24)		0.00	2.74	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00
0.00	1.34	1.29	0.00	0.00	0.00		Links	20+	0.00	0.03
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00
0.00	0.00	0.04	0.01	0.00	0.00					
		15	1.10	(342,22)		0.00	1.10	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.01	0.00
0.00	0.52	0.50	0.00	0.00	0.00		Links	20+	0.00	0.00
0.00	0.01	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00
0.00	0.00	0.01	0.00	0.00	0.00					
		16	1.35	( 5,14)		0.00	1.35	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00
0.00	0.76	0.59	0.00	0.00	0.00		Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00					

0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00	0.00	0.00
		17	3.58	(343,	1)	0.00		3.57	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00	0.00	0.00	0.01
0.00	1.79	1.75	0.00	0.00	0.00		Links	20+	0.01	0.01	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00	0.00	0.00
		18	1.90	(32,	20)	0.00		1.90	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00	0.00	0.00	0.00
0.00	0.99	0.89	0.00	0.00	0.00		Links	20+	0.00	0.00	0.01	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.01	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00	0.00	0.00
		19	2.74	(32,	20)	0.00		2.74	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00	0.00	0.00	0.00
0.00	1.38	1.36	0.00	0.00	0.00		Links	20+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00	0.00	0.00
		20	2.66	(32,	20)	0.00		2.66	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00	0.00	0.00	0.01
0.00	1.34	1.31	0.00	0.00	0.00		Links	20+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00	0.00	0.00

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LINK CONTRIBUTION TABLES

MAXIMUM 8-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Rcptr	Total	Ending	Ambient	Total	Link	Link	Link	Link
	Link	Link	Link	Link	Link	+1	+2	+3	+4
	No.	Conc	Day	Hr	Backgnd				
+5	+6	+7	+8	+9	+10				
		21	1.30	( 5,13)	0.00	1.30	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00
0.00	0.65	0.65	0.00	0.00	0.00	Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00				
		22	4.74	( 32,20)	0.00	4.74	0.00	0.00	0.00
0.00	0.09	0.09	0.05	0.00	0.00	Links	10+	0.00	0.00
0.00	2.39	2.13	0.00	0.00	0.00	Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00				
		23	2.45	( 32,18)	0.00	2.45	0.00	0.00	0.00
0.00	0.08	0.01	0.00	0.00	0.00	Links	10+	0.00	0.00
0.00	1.18	1.19	0.00	0.00	0.00	Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00				
		24	4.54	(343, 1)	0.00	4.54	0.00	0.00	0.01
0.01	0.00	0.00	0.00	0.00	0.00	Links	10+	0.01	0.06
0.00	2.16	2.05	0.00	0.00	0.01	Links	20+	0.04	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00				

SECOND HIGHEST 8-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Rcptr Total Ending Ambient Total Link Link Link Link

Link +5	Link +6	Link +7	Link No. +8	Link Conc +9	Link Day +10	Link Backgnd	Link	+1	+2	+3	+4
			1	1.17	( 55,14)	0.00	1.18	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00	0.00
0.00	0.43	0.43	0.00	0.00	0.00		Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.16	0.00		Links	30+	0.16	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.01	0.00	0.00
0.00	0.00	0.00	2	1.09	(342,12)	0.00	1.09	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.01		Links	20+	0.00	0.00	0.00
0.00	0.54	0.51	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.01	0.00	0.01
0.00	0.00	0.00	0.00	0.00	0.00		Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	3	0.79	( 65,20)	0.00	0.79	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00
0.00	0.39	0.38	0.00	0.00	0.00		Links	10+	0.01	0.00	0.01
0.00	0.00	0.00	0.00	0.00	0.00		Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00						

CAL3QHCR

(Dated: 04244)

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JOB: DY Offsite Traffic  
RUN: York-Durham

LINK CONTRIBUTION TABLES

SECOND HIGHEST 8-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Link	Rcpt	Total	Ending	Ambient	Total	Link	Link	Link	Link	
		Link	Link	Link	Link	Link	Link	+1	+2	+3	+4
+5	+6	No.	Conc	Day	Hr	Backgnd	Link	+1	+2	+3	+4
0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.26	0.00	0.00	0.00	0.00
0.00	0.57	0.56	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.06	0.00	0.00	Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.06	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.01
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00
0.00	0.00	0.01	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	0.00	0.00	2.96	( 32,20 )	0.00	2.96	Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	1.48	1.41	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.04
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00
0.00	0.00	0.04	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	0.00	0.00	1.06	( 349,21 )	0.00	1.06	Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	0.54	0.52	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	0.00	0.00	2.06	( 310,12 )	0.00	2.06	Links	20+	0.00	0.00	0.00
0.00	0.99	0.95	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	0.00	0.00	0.06	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00

0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.06	0.00	0.00	0.00	0.00
		9	1.49	(349,	21)	0.00		1.49	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00	0.00
0.00	0.70	0.69	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.05	0.00	0.00	Links	30+	0.05	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00	0.00
		10	1.33	(349,	21)	0.00		1.33	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00	0.00
0.00	0.61	0.61	0.00	0.00	0.00	0.00	Links	30+	0.05	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.05	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00	0.00
		11	1.33	( 55,	14)	0.00		1.33	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00	0.00
0.00	0.50	0.50	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.16	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.16	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00	0.00
		12	0.89	(291,	9)	0.00		0.89	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00	0.00
0.00	0.44	0.42	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.01	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.01	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00	0.00

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JOB: DY Offsite Traffic  
 RUN: York-Durham

## LINK CONTRIBUTION TABLES

SECOND HIGHEST 8-HOUR AVERAGED LINK CONTRIBUTIONS  
 IN PARTS PER MILLION (PPM)  
 INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Link	Rcpt	Total	Ending	Ambient	Total	Link	Link	Link	Link
		Link	Link	Link	Link	Link	+1	+2	+3	+4
+5	+6	No.	Conc	Day	Hr	Backgnd				
				+7	+8	+9	+10			
0.00	0.00	13	0.98	( 30,	8 )	0.00	0.98	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.01	0.01					
0.00	0.48	0.48	0.00	0.00	0.00		Links	10+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00					
0.00	0.00	14	2.69	( 32,	20 )	0.00	2.69	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00
0.00	1.35	1.34	0.00	0.00	0.00		Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00					
0.00	0.00	15	0.90	( 65,	23 )	0.00	0.90	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00
0.00	0.41	0.41	0.00	0.00	0.00		Links	20+	0.00	0.00
0.00	0.04	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00					0.04
0.00	0.00	16	1.19	( 5,	21 )	0.00	1.19	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00
0.00	0.60	0.59	0.00	0.00	0.00		Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00					
0.00	0.00	17	3.21	( 32,	20 )	0.00	3.21	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00
0.00	1.64	1.57	0.00	0.00	0.00		Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00					



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JOB: DY Offsite Traffic  
RUN: York-Durham

LINK CONTRIBUTION TABLES

SECOND HIGHEST 8-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Rcptr	Total	Ending	Ambient	Total	Link	Link	Link	Link
Link	Link	Link	Link	Link	Link	+1	+2	+3	+4
	No.	Conc	Day	Hr	Backgnd				
+5	+6	+7	+8	+9	+10				
0.00	0.05	0.11	0.03	0.00	0.00	Links	10+	0.00	0.00
0.00	2.06	1.82	0.00	0.00	0.00	Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00
0.00	0.05	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00
0.00	0.99	0.96	0.00	0.00	0.00	Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00
0.00	2.05	1.90	0.00	0.00	0.00	Links	10+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.03	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00				

MAXIMUM 1-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Rcptr	Total	Ending	Ambient	Total	Link	Link	Link	Link
Link	Link	Link	Link	Link	Link	+1	+2	+3	+4
	No.	Conc	Day	Hr	Backgnd				
+5	+6	+7	+8	+9	+10				
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00
0.00	3.00	3.00	0.00	0.00	0.00				

0.00	0.00	0.00	0.00	0.40	0.00	Links	20+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.40	0.00	0.00	0.00	0.00
0.00	0.00	0.00	2	6.00	( 42, 7)	0.00	6.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.10	Links	10+	0.20	0.10	0.00	0.20	
0.00	2.70	2.70	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	3	4.60	( 42, 7)	0.00	4.60	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00	0.00
0.00	2.30	2.30	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	4	8.00	(342,18)	0.00	8.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00	0.00
0.00	3.60	3.60	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.40	0.00	Links	30+	0.40	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00							

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JOB: DY Offsite Traffic  
RUN: York-Durham

LINK CONTRIBUTION TABLES

MAXIMUM 1-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Link	Rcptr	Total	Ending	Ambient	Total	Link	Link	Link	Link	
		Link	Link	Link	Link	Link	Link	+1	+2	+3	+4
+5	+6	No.	Conc	Day	Hr	Backgnd	Link	+1	+2	+3	+4
		5	5.00	( 42,	7 )	0.00	5.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	2.20	2.20	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.30
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00
0.00	0.00	0.30	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
		6	12.00	( 342,	18 )	0.00	12.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00
0.00	5.40	5.10	0.10	0.00	0.00	0.00	Links	30+	0.00	0.10	0.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	0.00	0.70	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00
		7	6.20	( 342,	18 )	0.00	6.20	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00
0.00	3.00	3.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.10
0.00	0.00	0.10	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00
		8	10.00	( 342,	18 )	0.00	10.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	4.80	4.60	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.30	0.00	0.00	Links	30+	0.30	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
		9	8.30	( 342,	18 )	0.00	8.30	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00
0.00	3.90	3.80	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.30	0.00	0.00	Links	10+	0.00	0.00	0.00



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JOB: DY Offsite Traffic  
RUN: York-Durham

LINK CONTRIBUTION TABLES

MAXIMUM 1-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Link	Rcptr	Total	Ending	Ambient	Total	Link	Link	Link	Link	
		Link	Link	Link	Link	Link	Link	+1	+2	+3	+4
+5	+6	No.	Conc	Day	Hr	Backgnd	Link	+1	+2	+3	+4
		14	9.80	(342,18)		0.00	9.80	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00	0.00
0.00	4.70	4.60	0.00	0.00	0.00		Links	20+	0.00	0.00	0.20
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00
0.00	0.00	0.20	0.10	0.00	0.00						
		15	5.10	(342,18)		0.00	5.10	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.10	0.00	0.00
0.00	2.50	2.40	0.00	0.00	0.00		Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00						
		16	5.60	( 57, 7)		0.00	5.60	0.00	0.00	0.00	0.00
0.00	0.00	0.10	0.10	0.10	0.00		Links	10+	0.00	0.00	0.00
0.00	2.70	2.60	0.00	0.00	0.00		Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00						
		17	11.60	(342,18)		0.00	11.60	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00	0.00
0.00	5.90	5.70	0.00	0.00	0.00		Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	30+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00						
		18	5.80	( 57, 7)		0.00	5.80	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00		Links	10+	0.00	0.00	0.00
0.00	2.90	2.90	0.00	0.00	0.00		Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00						



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(Dated: 04244)

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JOB: DY Offsite Traffic  
RUN: York-Durham

LINK CONTRIBUTION TABLES

MAXIMUM 1-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Link	Rcptr	Total	Ending	Ambient	Total	Link	Link	Link	Link
		Link	Link	Link	Link	Link	+1	+2	+3	+4
+5	+6	No.	Conc	Day	Hr	Backgnd	Link			
		+7	+8	+9	+10					
0.00	0.40	23	10.60	(291,	7)	0.00	10.60	0.00	0.00	0.00
0.00	5.10	5.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00
0.10	0.00	24	15.70	(342,	18)	0.00	15.70	0.00	0.00	0.00
0.00	7.20	7.00	0.00	0.00	0.10	0.00	Links	10+	0.00	0.30
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.10	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00				

SECOND HIGHEST 1-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Link	Rcptr	Total	Ending	Ambient	Total	Link	Link	Link	Link
		Link	Link	Link	Link	Link	+1	+2	+3	+4
+5	+6	No.	Conc	Day	Hr	Backgnd	Link			
		+7	+8	+9	+10					
0.00	0.00	1	6.50	( 57,	7)	0.00	6.50	0.00	0.00	0.00
0.00	2.60	2.50	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00
0.00	0.00	0.00	0.00	0.70	0.00	0.00	Links	20+	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.70	0.00
0.00	0.00	2	4.70	(291,	7)	0.00	4.70	0.00	0.00	0.00
0.00	2.40	2.30	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00



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RUN: York-Durham

LINK CONTRIBUTION TABLES

SECOND HIGHEST 1-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Link	Rcpt	Total	Ending	Ambient	Total	Link	Link	Link	Link	
		Link	Link	Link	Link	Link	Link	+1	+2	+3	+4
+5	+6	No.	Conc	Day	Hr	Backgnd	Link	+1	+2	+3	+4
0.00	0.00	6	10.40	( 57,	7)	0.00	10.40	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	4.10	4.00	0.00	0.00	0.00	Links	20+	0.00	0.00	1.10	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
0.00	0.00	1.10	0.10	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	0.00	7	5.40	( 57,	7)	0.00	5.40	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00
0.00	2.70	2.70	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
0.00	0.00	8	7.40	(123,20)	0.00	7.40	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	3.60	3.50	0.00	0.00	0.00	Links	20+	0.00	0.10	0.00	0.00
0.00	0.00	0.00	0.00	0.10	0.00	Links	30+	0.10	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	0.00	9	5.80	(123,20)	0.00	5.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.10	0.00	0.00
0.00	2.80	2.70	0.00	0.00	0.00	Links	30+	0.10	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.10	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.10	0.00	0.00
0.00	0.00	10	6.40	( 57,	7)	0.00	6.40	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	2.70	2.70	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.50	0.00	Links	30+	0.00	0.00	0.00	0.00

							Links	30+	0.50	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00		6.80	0.00	0.00	0.00	0.00
		11	6.80	(342,18)		0.00						
0.00	0.00	0.00	0.00	0.00	0.00	0.00						
0.00	3.00	2.90	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.10
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.40	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
0.00	0.00	0.40	0.00	0.00	0.00	0.00						
		12	4.70	( 57, 7)		0.00		4.70	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	2.40	2.30	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00						
		13	5.10	( 42, 7)		0.00		5.10	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	2.60	2.50	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00						
		14	7.70	( 42, 7)		0.00		7.70	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00	0.00
0.00	3.90	3.80	0.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00						

CAL3QHCR

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JOB: DY Offsite Traffic  
 RUN: York-Durham

## LINK CONTRIBUTION TABLES

SECOND HIGHEST 1-HOUR AVERAGED LINK CONTRIBUTIONS  
 IN PARTS PER MILLION (PPM)  
 INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Link	Rcptr	Total	Ending	Ambient	Total	Link	Link	Link	Link
		Link	Link	Link	Link	Link	+1	+2	+3	+4
		No.	Conc	Day	Hr	Backgnd				
+5	+6	+7	+8	+9	+10					
		15	4.90	( 57,	7)	0.00	4.90	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	2.10	2.00	0.00	0.00	0.00	Links	20+	0.00	0.00	0.20
0.00	0.20	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.20
0.00	0.00	0.20	0.00	0.00	0.00					
		16	5.40	( 42,	7)	0.00	5.40	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	2.70	2.70	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00					
		17	10.20	( 42,	7)	0.00	10.20	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	5.20	4.90	0.00	0.00	0.00	Links	20+	0.00	0.10	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00					
		18	5.70	( 42,	7)	0.00	5.70	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.00	0.00
0.00	2.90	2.80	0.00	0.00	0.00	Links	20+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00					
		19	7.70	( 57,	7)	0.00	7.70	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	10+	0.00	0.10	0.00
0.00	3.70	3.70	0.00	0.00	0.00	Links	20+	0.00	0.00	0.20
0.00	0.00	0.00	0.00	0.00	0.00					

							Links	30+	0.00	0.00	0.00	0.00	0.00		
0.00	0.00	0.00	0.00	0.00	0.00										
			20	7.10	( 42, 7)	0.00	7.10	0.00	0.00	0.00	0.00	0.00	0.00		
0.00	0.00	0.00	0.00	0.00	0.00										
							Links	10+	0.00	0.00	0.00	0.00	0.00		
0.00	3.60	3.50	0.00	0.00	0.00										
0.00	0.00	0.00	0.00	0.00	0.00		Links	20+	0.00	0.00	0.00	0.00	0.00		
0.00	0.00	0.00	0.00	0.00	0.00			Links	30+	0.00	0.00	0.00	0.00		
0.00	0.00	0.00	0.00	0.00	0.00				Links	30+	0.00	0.00	0.00	0.00	
			21	4.80	( 44, 7)	0.00	4.80	0.00	0.00	0.00	0.00	0.00	0.00		
0.00	0.00	0.00	0.10	0.10	0.00			Links	10+	0.00	0.00	0.00	0.00	0.00	
0.00	2.30	2.30	0.00	0.00	0.00			Links	20+	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00			Links	30+	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00				Links	30+	0.00	0.00	0.00	0.00	
			22	12.70	( 60, 7)	0.00	12.70	0.00	0.00	0.00	0.00	0.00	0.00		
0.00	0.00	0.50	0.10	0.00	0.00			Links	10+	0.00	0.00	0.00	0.00	0.00	
0.00	6.40	5.70	0.00	0.00	0.00			Links	20+	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00			Links	30+	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00				Links	30+	0.00	0.00	0.00	0.00	
			23	9.10	( 60, 7)	0.00	9.10	0.00	0.00	0.00	0.00	0.00	0.00		
0.00	0.40	0.00	0.00	0.00	0.00			Links	10+	0.00	0.00	0.00	0.00	0.00	
0.00	4.40	4.30	0.00	0.00	0.00			Links	20+	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00			Links	30+	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00				Links	30+	0.00	0.00	0.00	0.00	0.00

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JOB: DY Offsite Traffic  
RUN: York-Durham

## LINK CONTRIBUTION TABLES

SECOND HIGHEST 1-HOUR AVERAGED LINK CONTRIBUTIONS  
IN PARTS PER MILLION (PPM)  
INCLUDING AMBIENT BACKGROUND CONCENTRATIONS.

Link	Link	Rcpt	Total	Ending	Ambient	Total	Link	Link	Link	Link
		Link	Link	Link	Link	Link	+1	+2	+3	+4
+5	+6	+7	+8	+9	+10					
0.00	0.00	0.00	12.30	( 57, 7)	0.00	12.30	0.00	0.00	0.00	0.00
0.00	6.20	5.90	0.00	0.10	0.00	Links	10+	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	20+	0.10	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	Links	30+	0.00	0.00	0.00

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JOB: DY Offsite Traffic  
RUN: York-Durham

CALM DURATION  
FREQUENCY

Hours of Consecutive Calm Winds Significat Occurrences	Frequency of Occurrence	(Julian day/hour ending) of
1 (305, 1)	5	( 1, 1)( 91, 1)(182, 1)(274, 1)

Program terminated normally