Appendix N Technical Benchmarking Modeling – All Other Scenarios

Technology Benchmarking Appendix

Assessment of All Technically Feasible Options and Combinations

Explanation of Reduction Efficiencies for Technically Feasible Options

Technology	Estimated Reduction Efficiency	Rationale
Dust collector/baghouse (DC)	95%	Reduction efficiency is based on Owens Corning engineering estimates taking into account past experience with similar devices at fiberglass insulation facilities, low concentration profile of the exhaust stream and predicted particle size.
Dry Electrostatic Precipitator (DEP)	95%	
Wet Electrostatic Precipitator (WEP)	95%	
Spray Chamber Scrubber	20%	Reduction efficiency is based on Owens Corning engineering estimates taking into account past experience with similar devices at fiberglass insulation facilities, low concentration profile of the exhaust stream and predicted particle size.
Cyclone Spray Chamber	20%	
Low or High Pressure Venturi Scrubber	20%	
Substituting with Low Sublimation Chromium refractory	10%	Reduction efficiency is a rough estimate based on limited information available from source testing at the Guelph facility. This technology has been considered not technical feasible but included for the purposes of completeness.
Conversion to air/gas combustion	86%	Reduction efficiency is based on a single source testing data point at another similar facility.
Use of more accurate combustion control skids with constructing front end superstructures (two technologies must be combined to be effective)	50%	Reduction efficiency is based on assessment of source testing programs at various production rates and process parameters.
Re-engineering the exhaust points to overcome site specific dispersion challenges	65-90%	Reduction efficiency is based on the assessment of annual average dispersion factors for technically feasible changes to stack configurations for sources included in the reconfiguration.

The following sections of this appendix are organized by each Pollution Control Combination in the order of ranking. Each appendix contains a summary of the emission rate calculations for each source as well as the modeling inputs and results.

The Default Pollution Control Combination (combination ID G_R1) is presented in Appendix L and the Preferred Pollution Control Combination (combination ID E_R9) is presented in Appendix M.

Assessment Results of Technically Feasible Pollution Control Strategies

Combination ID	Polution Control Strategy Description	Ranking	Overall Percent Reduction
G_R1 (default)	Electrostatic Precipitator (DEP/WEP) or Dust Collector on furnace and forehearth stacks combined with the use of Low Sublimation Chromium (LSC) refractory and conversion of the forehearths to air/gas combustion	1	95.23%
M_R1	Electrostatic Precipitator (DEP/WEP) or Dust Collector on furnace and forehearth stacks combined with conversion of the forehearths to air/gas combustion	2	95.16%
H_R1	Electrostatic Precipitator (DEP/WEP) or Dust Collector on furnace and forehearth stacks combined with the use of LSC refractory and the installation of more accurate combustion controls in combination with front end superstructures to prevent air ingress	3	94%
N_R1	Electrostatic Precipitator (DEP/WEP) or Dust Collector on furnace and forehearth stacks combined with incorporating more accurate combustion control skids and construction of frontend superstructures	4	93%
V_R1	Electrostatic Precipitator (DEP/WEP) or Dust Collector on furnace and forehearth stacks	5	91%
E_R9 (preferred)	Incorporating more accurate combustion control skids and construction of front end superstructures and re-engineering exhaust stacks impacted by reconfiguration	6	88.5%
I_R3	Scrubber on forehearth stack, use of Low Sublimation Chromium (LSC) refractory and forehearth conversion to air/gas combustion	7	77%
O_R2	Scrubber on forehearth stack and forehearth conversion to air/gas combustion	8	75%
S_R1	Forehearth conversion to air/gas combustion	9	73%
J_R2	Scrubber on forehearth stack, use of Low Sublimation Chromium (LSC) refractory and incorporating more accurate combustion control skids and construction of front end superstructures	10	50%
P_R2	Scrubber on forehearth stack and incorporating more accurate combustion control skids and construction of front end superstructures	11	48%
T_R1	Incorporating more accurate combustion control skids and construction of front end superstructures	12	39%
W_R2	Scrubber on forehearth stack	13	27%

Scenario: M_R1

Emission Rate Calculations for Modeling

							before RC	after RC	before RC	After RC-CFM only								
		Source	B01	B24	B25	B11current	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	Total
		Type	Furnace	Furnace	Furnace	FH	FH	FH	FH	RE1	RE2	RE2	RE1	RE2	RE2	RE1	RE1	
		Current Base Case Emission Rate (g/s)	3.55E-05			1.51E-04		3.32E-05		2.05E-06	2.39E-06	2.39E-06		2.39E-06	2.39E-06	2.04E-06	2.04E-06	2.35E-04
Uncertainty =	1.15	2016 Base RC Emission Rate (g/s) with Uncertainty Factor applied		2.04E-05	2.04E-05		8.66E-05		3.82E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.78E-04
Combination ID	Option Description		B01	B24	B25	B11	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	
M	Facility reconfiguration (RC) + Electrostatic Precipitator (DEP) or WEP or DC for hot sources (1, 2 or 3) + forehearth conversion to air/gas combustion (12)	Description of Reduction Component		DEP/WEP/DC	DEP/WEP/DC				Air/Gas+ (DEP/WEP/DC)									
		Individual Reduction Description		1,2 or 3	1,2 or 3				1,2or3 and 12		partial of 12	partial of 12		partial of 12	partial of 12			
		Reduction Efficiency		95%	95%				95%		50%	50%	0%	50%	50%	0%	0%	
		Additional Reduction Efficiency							86%									
		Comments	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	TotalER (g/s)
		RC+(1,2 or 3)+12		1.02E-06	1.02E-06				1.18E-06		6.87E-07	6.87E-07	2.36E-06	6.87E-07	6.87E-07	2.34E-06	2.34E-06	1.30E-05
	Explanation of calculation for B38 :	It is not appropriate to apply the air/gas reduction of 86% to the current B38 emission rate since it is using a different technology that would be removed before installing air/gas combustion.																
		Therefore, for emission reduction estimation purposes, the B38 reconfiguration ER is assumed to be identical to that of the B11 reconfiguration emission rate.																

Annual Hexavalent Chromium Results
Technical Benchmarking Option M - 5 year data set

Run (tab) Name:	Ann_Otp_M_R1_Metyr1	Ann_Opt_M_R1_Metyr2	Ann_Opt_M_R1_Metyr3	Ann_Opt_M_R1_Metyr4	Ann_Opt_M_R1_Metyr5	
Run Description:	Option M_R1, Reg 419 grid, Site Specific Met (2009)	Option M_R1, Reg 419 grid, Site Specific Met (2010)	Option M_R1, Reg 419 grid, Site Specific Met (2011)	Option M_R1, Reg 419 grid, Site Specific Met (2012)	Option M_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:		**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**
ALL	0.85372	1.00625	0.81832	0.88145	0.84563	**1.00625**
B10	0.03908	0.04012	0.04024	0.04071	0.0402	**0.04071**
B32	0.07978	0.0847	0.07868	0.08102	0.08023	**0.0847**
B34	0.05933	0.06748	0.0576	0.06099	0.05966	**0.06748**
B35	0.05924	0.06836	0.05762	0.06181	0.05927	**0.06836**
C79	0.08277	0.10893	0.07708	0.08782	0.08021	**0.10893**
C80	0.07892	0.1091	0.07271	0.08492	0.07221	**0.1091**
B38	0.1265	0.14336	0.12	0.12939	0.12533	**0.14336**
B24	0.04733	0.05293	0.04593	0.04748	0.0491	**0.05293**
B25	0.0429	0.0494	0.04094	0.04253	0.04298	**0.0494**
B33	0.24981	0.29562	0.23972	0.25766	0.24583	**0.29562**
FURNACE	0.09023	0.10233	0.08688	0.09	0.09208	**0.10233**
FOREHEAR	0.1265	0.14336	0.12	0.12939	0.12533	**0.14336**
GENEXHTS	0.63699	0.76057	0.61145	0.66205	0.62822	**0.76057**

Run Description:	Option M_R1, Reg 419 grid, Site Specific Met (2009)	Option M_R1, Reg 419 grid, Site Specific Met (2010)	Option M_R1, Reg 419 grid, Site Specific Met (2011)	Option M_R1, Reg 419 grid, Site Specific Met (2012)	Option M_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
ALL	0.00085372	0.00100625	0.00081832	0.00088145	0.00084563	**0.001006**
B10	0.00003908	0.00004012	0.00004024	0.00004071	0.0000402	**4.07E-05**
B32	0.00007978	0.0000847	0.00007868	0.00008102	0.00008023	**8.47E-05**
B34	0.00005933	0.00006748	0.0000576	0.00006099	0.00005966	**6.75E-05**
B35	0.00005924	0.00006836	0.00005762	0.00006181	0.00005927	**6.84E-05**
C79	0.00008277	0.00010893	0.00007708	0.00008782	0.00008021	**0.000109**
C80	0.00007892	0.0001091	0.00007271	0.00008492	0.00007221	**0.000109**
B38	0.0001265	0.00014336	0.00012	0.00012939	0.00012533	**0.000143**
B24	0.00004733	0.00005293	0.00004593	0.00004748	0.0000491	**5.29E-05**
B25	0.0000429	0.0000494	0.00004094	0.00004253	0.00004298	**4.94E-05**
B33	0.00024981	0.00029562	0.00023972	0.00025766	0.00024583	**0.000296**
FURNACE	0.00009023	0.00010233	0.00008688	0.00009	0.00009208	**0.000102**
FOREHEAR	0.00009023	0.00014336	0.00012	0.00012939	0.00012533	**0.000143**
GENEXHTS	0.00063699	0.00076057	0.00061145	0.00066205	0.00062822	**0.000761**

Source Pathway - Source Inputs

AERMOD

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	B10	562030.25	4821525.28	312.00	14.45	6.87E-7	321.90	12.10	1.24
		General Exhaust Above T107B F/H							
POINT	B32	562047.16	4821528.02	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T106							
POINT	B34	562039.70	4821535.65	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T107A F/H							
POINT	B35	562047.03	4821543.82	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above CFM Main Channel							
POINT	C79	562023.15	4821559.58	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust West CFM F/H							
POINT	C80	562028.25	4821564.97	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust East CFM F/H							
POINT	B38	562043.48	4821544.79	312.00	16.46	1.18E-6	379.15	5.43	0.75
		105 Forehearth Stack							
POINT	B33	562055.21	4821536.35	312.00	14.48	2.36E-6	321.90	12.59	1.22
		Gen Exhaust Above T105							
POINT	B24	562052.59	4821531.65	312.00	27.77	1.02E-6	597.00	5.89	0.53
		105 Furnace Stack							
POINT	B25	562057.67	4821536.90	312.00	27.77	1.02E-6	597.00	5.89	0.53
		105 Furnace Stack							

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

Source Pathway - Source Inputs

Open Pit Sources

No Open Pit Sources Specified

Circular Area Sources

No Circular Area Sources Specified

Polygon Area Sources

No Polygon Area Sources Specified

Flare Sources

No Flare Sources Specified

Line Sources

No Line Sources Specified

Line Volume Sources

No Line Volume Sources Specified

Line Area Sources

No Line Area Sources Specified

♀ *** AERMOD - VERSION 14134 ***   *** OC Guelph Project 144539 - Site Specific Standard *** 02/27/15
*** AERMET - VERSION 14134 ***   *** Ann_Opt_M_R1_Metyr2 *** 13:50:45

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

***   MODEL SETUP OPTIONS SUMMARY   ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. BETA Option for Capped & Horiz Stacks Selected With:

                5 Capped Stack(s); and   0 Horiz Stack(s)

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: HCR

**Model Calculates ANNUAL Averages Only

**This Run Includes: 10 Source(s);   14 Source Group(s); and   2062 Receptor(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   325.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/S   ; Emission Rate Unit Factor =   0.10000E+10
                 Output Units   = NANOGRAMS/M3

**Approximate Storage Requirements of Model =   4.5 MB of RAM.

**File for Saving Result Arrays: Ann_Opt_M_R1_Metyr2.sv1
**File for Summary of Results: Ann_Opt_M_R1_Metyr2.sum

♀ *** AERMOD - VERSION 14134 ***   *** OC Guelph Project 144539 - Site Specific Standard   ***   02/27/15
*** AERMET - VERSION 14134 ***   *** Ann_Opt_M_R1_Metyr2   ***   13:50:45
PAGE   2

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

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

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

METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2010   1 1 1
AND END DATE: 2010 12 31 24

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

♀ *** AERMOD - VERSION 14134 ***   *** OC Guelph Project 144539 - Site Specific Standard   ***   02/27/15
*** AERMET - VERSION 14134 ***   *** Ann_Opt_M_R1_Metyr2   ***   13:50:45
PAGE   3

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

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

Surface file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.SFC   Met Version: 14134
Profile file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   61430   Upper air station no.:   14733
Name: UNKNOWN   Name: BUFFALO/GREATER_BUFFALO_INT'L
Year: 2009   Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	01	1	01	-8.4	0.105	-9.000	-9.000	-999.	81.	11.8	0.57	0.55	1.00	1.50	291.	10.0	258.1	2.0
09	01	01	1	02	-16.5	0.147	-9.000	-9.000	-999.	135.	16.6	0.57	0.55	1.00	2.10	308.	10.0	258.1	2.0
09	01	01	1	03	-8.4	0.105	-9.000	-9.000	-999.	82.	11.8	0.57	0.55	1.00	1.50	294.	10.0	257.5	2.0
09	01	01	1	04	-7.9	0.100	-9.000	-9.000	-999.	76.	11.0	0.50	0.55	1.00	1.50	233.	10.0	255.9	2.0
09	01	01	1	05	-3.5	0.067	-9.000	-9.000	-999.	41.	7.3	0.50	0.55	1.00	1.00	223.	10.0	255.3	2.0

Ann_Opt_M_R1_Metyr2

09	01	01	1	06	-3.2	0.067	-9.000	-9.000	-999.	41.	8.1	0.50	0.55	1.00	1.00	222.	10.0	254.8	2.0
09	01	01	1	07	-9.5	0.113	-9.000	-9.000	-999.	91.	13.2	0.70	0.55	1.00	1.50	145.	10.0	255.9	2.0
09	01	01	1	08	-8.5	0.109	-9.000	-9.000	-999.	86.	13.0	0.63	0.50	1.00	1.50	243.	10.0	257.5	2.0
09	01	01	1	09	-6.0	0.107	-9.000	-9.000	-999.	84.	17.8	0.61	0.95	0.76	1.50	127.	10.0	258.1	2.0
09	01	01	1	10	-1.6	0.057	-9.000	-9.000	-999.	33.	9.9	0.30	0.95	0.66	1.00	121.	10.0	263.8	2.0
09	01	01	1	11	13.2	0.424	0.253	0.009	42.	662.	-499.8	0.50	0.55	0.54	3.10	224.	10.0	264.2	2.0
09	01	01	1	12	19.8	0.428	0.402	0.008	114.	671.	-342.9	0.50	0.55	0.51	3.10	196.	10.0	265.4	2.0
09	01	01	1	13	22.9	0.367	0.559	0.011	265.	536.	-187.8	0.50	0.55	0.51	2.60	203.	10.0	265.4	2.0
09	01	01	1	14	2.1	0.468	0.256	0.007	275.	768.	-4237.3	0.70	0.55	0.48	3.10	179.	10.0	265.9	2.0
09	01	01	1	15	-4.6	0.538	-9.000	-9.000	-999.	946.	2954.8	0.70	0.55	0.51	3.60	162.	10.0	265.4	2.0
09	01	01	1	16	-20.2	0.526	-9.000	-9.000	-999.	915.	625.4	0.70	0.55	0.59	3.60	164.	10.0	265.9	2.0
09	01	01	1	17	-33.2	0.401	-9.000	-9.000	-999.	622.	168.7	0.61	0.95	0.82	3.10	141.	10.0	265.9	2.0
09	01	01	1	18	-28.3	0.491	-9.000	-9.000	-999.	824.	362.7	0.61	0.95	1.00	3.60	137.	10.0	265.9	2.0
09	01	01	1	19	-53.3	0.464	-9.000	-9.000	-999.	760.	163.0	0.61	0.95	1.00	3.60	134.	10.0	265.9	2.0
09	01	01	1	20	-60.2	0.545	-9.000	-9.000	-999.	964.	233.5	0.61	0.95	1.00	4.10	127.	10.0	265.4	2.0
09	01	01	1	21	-44.8	0.474	-9.000	-9.000	-999.	788.	206.2	0.61	0.95	1.00	3.60	130.	10.0	265.9	2.0
09	01	01	1	22	-61.4	0.544	-9.000	-9.000	-999.	961.	227.6	0.61	0.95	1.00	4.10	132.	10.0	266.4	2.0
09	01	01	1	23	-53.4	0.464	-9.000	-9.000	-999.	764.	162.3	0.61	0.95	1.00	3.60	140.	10.0	266.4	2.0
09	01	01	1	24	-21.2	0.225	-9.000	-9.000	-999.	318.	46.9	0.70	0.55	1.00	2.10	160.	10.0	267.0	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	291.	1.50	258.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
FURNACE	1ST HIGHEST VALUE IS	0.10233 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.10233 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.08622 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.08622 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.08252 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.08252 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.07194 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.06620 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.06392 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.04896 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
FOREHEAR	1ST HIGHEST VALUE IS	0.14336 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.14336 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.12316 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.12316 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.10815 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	

	6TH HIGHEST VALUE IS	0.10815 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.09871 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.09647 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.08684 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.07142 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
GENEXHTS	1ST HIGHEST VALUE IS	0.76057 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.76057 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.65066 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.65066 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.60741 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.60741 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.54638 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.51083 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.44607 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.44607 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
B10	1ST HIGHEST VALUE IS	0.04012 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.04012 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.02875 AT (	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	4TH HIGHEST VALUE IS	0.02875 AT (	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	5TH HIGHEST VALUE IS	0.02713 AT (	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	6TH HIGHEST VALUE IS	0.02713 AT (	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	7TH HIGHEST VALUE IS	0.02679 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.02679 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.02637 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02637 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B24	1ST HIGHEST VALUE IS 0.05293 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.05293 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.04613 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 0.04613 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	5TH HIGHEST VALUE IS 0.04269 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	6TH HIGHEST VALUE IS 0.04269 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	7TH HIGHEST VALUE IS 0.03650 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	8TH HIGHEST VALUE IS 0.03461 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)		DC	
	9TH HIGHEST VALUE IS 0.03175 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	10TH HIGHEST VALUE IS 0.02648 AT (562077.84, 4821540.29, 311.01, 311.01, 0.00)		DC	
B25	1ST HIGHEST VALUE IS 0.04940 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.04940 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.04009 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 0.04009 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	

	5TH HIGHEST VALUE IS	0.03983	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.03983	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.03545	AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.03445	AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.02931	AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02528	AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B32	1ST HIGHEST VALUE IS	0.08470	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.08470	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.07642	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.07642	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.06892	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.06892	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.06327	AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.06327	AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04438	AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.04392	AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B33	1ST HIGHEST VALUE IS	0.29562	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.29562	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.25393	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.25393	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.23387	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.23387	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.20783	AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.18964	AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.16851	AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.16851	AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B34	1ST HIGHEST VALUE IS 0.06748	AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 0.06748	AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.05800	AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.05800	AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS 0.05603	AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS 0.05603	AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS 0.04644	AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS 0.04644	AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS 0.04229	AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS 0.04150	AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
B35	1ST HIGHEST VALUE IS 0.06836	AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 0.06836	AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.05709	AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	4TH HIGHEST VALUE IS	0.05709 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.04574 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.04462 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04101 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.03141 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B38	1ST HIGHEST VALUE IS	0.14336 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.14336 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.12316 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.12316 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.10815 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.10815 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.09871 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.09647 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.08684 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.07142 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
C79	1ST HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.09493 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08665 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06501 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06296 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
C80	1ST HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.10763 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08681 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06977 AT (	562085.76,	4821492.01,	310.52,	310.52,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06310 AT (	562056.81,	4821505.08,	310.84,	310.84,	0.00)	DC
ALL	1ST HIGHEST VALUE IS	1.00625 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	1.00625 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

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         3RD HIGHEST VALUE IS       0.84133 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         4TH HIGHEST VALUE IS       0.84133 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         5TH HIGHEST VALUE IS       0.81678 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         6TH HIGHEST VALUE IS       0.81678 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         7TH HIGHEST VALUE IS       0.71479 AT (  562065.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         8TH HIGHEST VALUE IS       0.67574 AT (  562085.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         9TH HIGHEST VALUE IS       0.55878 AT (  562085.76,  4821532.01,   311.00,   311.00,    0.00)  DC
        10TH HIGHEST VALUE IS       0.54778 AT (  562050.10,  4821511.55,   311.00,   311.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀*** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                  ***        02/27/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_M_R1_Metyr2                                               ***       13:50:45
                                                                                                                 PAGE   8
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

 *** Message Summary : AERMOD Model Execution ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of            3 Informational Message(s)

 A Total of         8760 Hours Were Processed

 A Total of            3 Calm Hours Identified

 A Total of            0 Missing Hours Identified (  0.00 Percent)


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


    ********   WARNING MESSAGES   ********
              ***  NONE  ***
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Scenario: H_R1

Emission Rate Calculations for Modeling

						before RC	after RC	before RC	After RC-CFM only								
		Source	B01	B24	B25	B11current	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	Total
		Type	Furnace	Furnace	Furnace	FH	FH	FH	FH	RE1	RE2	RE2	RE1	RE2	RE2	RE1	RE1	
		Current Base Case Emission Rate (g/s)	3.55E-05			1.51E-04		3.32E-05		2.05E-06	2.39E-06	2.39E-06		2.39E-06	2.39E-06	2.04E-06	2.04E-06	2.35E-04
Uncertainty =	1.15	2016 Base RC Emission Rate (g/s) with Uncertainty Factor applied		2.04E-05	2.04E-05		8.66E-05		3.82E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.78E-04
Combination ID	Option Description		B01	B24	B25	B11	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	
H	Facility reconfiguration (RC) + Electrostatic Precipitator (DEP) or WEP or DC for hot sources (1, 2 or 3) + substituting LSC refractory in the forehearth (11) + incorporating more accurate combustion control skids and construction of front end superstructures (14)	Description of Reduction Component		DEP/WEP/DC	DEP/WEP/DC				DEP/WEP/DC + LSC+ partial prototype									
		Individual Reduction Description		1,2 or 3	1,2 or 3				(1,2, or 3)+11+14		Result of 14	Result of 14		Result of 14	Result of 14			
		Reduction Efficiency 1		95%	95%				95%	0%	50%	50%	0%	50%	50%	0%	0%	
		Reduction Efficiency 2							10%									
		Reduction Efficiency 3							50%									
		Comments	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	TotalER (g/s)
		RC+(1,2 or 3)+11+14		1.02E-06	1.02E-06				3.86E-06		6.87E-07	6.87E-07	2.36E-06	6.87E-07	6.87E-07	2.34E-06	2.34E-06	1.57E-05
	Explanation of calculation for B38 :	The 50% reduction efficiency for control option #11 and #14 only applies to the B11 reconfigured emission rate, not the B38 current emission rate since these technologies already exist on that portion of (CFM) forehearth.																

Annual Hexavalent Chromium Results
Technical Benchmarking Option H - 5 year data set

Run (tab) Name:	Ann_Opt_H_R1_Metyr1	Ann_Opt_H_R1_Metyr2	Ann_Opt_H_R1_Metyr3	Ann_Opt_H_R1_Metyr4	Ann_Opt_H_R1_Metyr5	
Run Description:	Option H_R1, Reg 419 grid, Site Specific Met (2009)	Option H_R1, Reg 419 grid, Site Specific Met (2010)	Option H_R1, Reg 419 grid, Site Specific Met (2011)	Option H_R1, Reg 419 grid, Site Specific Met (2012)	Option H_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:		**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**
ALL	1.14159	1.33256	1.09137	1.17591	1.13083	**1.33256**
B10	0.03908	0.04012	0.04024	0.04071	0.0402	**0.04071**
B32	0.07978	0.0847	0.07868	0.08102	0.08023	**0.0847**
B34	0.05933	0.06748	0.0576	0.06099	0.05966	**0.06748**
B35	0.05924	0.06836	0.05762	0.06181	0.05927	**0.06836**
C79	0.08277	0.10893	0.07708	0.08782	0.08021	**0.10893**
C80	0.07892	0.1091	0.07271	0.08492	0.07221	**0.1091**
B38	0.41437	0.46967	0.39305	0.42386	0.41052	**0.46967**
B24	0.04733	0.05293	0.04593	0.04748	0.0491	**0.05293**
B25	0.0429	0.0494	0.04094	0.04253	0.04298	**0.0494**
B33	0.24981	0.29562	0.23972	0.25766	0.24583	**0.29562**
FURNACE	0.09023	0.10233	0.08688	0.09	0.09208	**0.10233**
FOREHEAR	0.41437	0.46967	0.39305	0.42386	0.41052	**0.46967**
GENEXHTS	0.63699	0.76057	0.61145	0.66205	0.62822	**0.76057**

Run Description:	Option H_R1, Reg 419 grid, Site Specific Met (2009)	Option H_R1, Reg 419 grid, Site Specific Met (2010)	Option H_R1, Reg 419 grid, Site Specific Met (2011)	Option H_R1, Reg 419 grid, Site Specific Met (2012)	Option H_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
ALL	0.00114159	0.00133256	0.00109137	0.00117591	0.00113083	**0.001333**
B10	0.00003908	0.00004012	0.00004024	0.00004071	0.0000402	**4.07E-05**
B32	0.00007978	0.0000847	0.00007868	0.00008102	0.00008023	**8.47E-05**
B34	0.00005933	0.00006748	0.0000576	0.00006099	0.00005966	**6.75E-05**
B35	0.00005924	0.00006836	0.00005762	0.00006181	0.00005927	**6.84E-05**
C79	0.00008277	0.00010893	0.00007708	0.00008782	0.00008021	**0.000109**
C80	0.00007892	0.0001091	0.00007271	0.00008492	0.00007221	**0.000109**
B38	0.00041437	0.00046967	0.00039305	0.00042386	0.00041052	**0.00047**
B24	0.00004733	0.00005293	0.00004593	0.00004748	0.0000491	**5.29E-05**
B25	0.0000429	0.0000494	0.00004094	0.00004253	0.00004298	**4.94E-05**
B33	0.00024981	0.00029562	0.00023972	0.00025766	0.00024583	**0.000296**
FURNACE	0.00009023	0.00010233	0.00008688	0.00009	0.00009208	**0.000102**
FOREHEAR	0.00041437	0.00046967	0.00039305	0.00042386	0.00041052	**0.00047**
GENEXHTS	0.00063699	0.00076057	0.00061145	0.00066205	0.00062822	**0.000761**

Source Pathway - Source Inputs

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	B10	562030.25	4821525.28	312.00	14.45	6.87E-7	321.90	12.10	1.24
		General Exhaust Above T107B F/H							
POINT	B32	562047.16	4821528.02	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T106							
POINT	B34	562039.70	4821535.65	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T107A F/H							
POINT	B35	562047.03	4821543.82	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above CFM Main Channel							
POINT	C79	562023.15	4821559.58	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust West CFM F/H							
POINT	C80	562028.25	4821564.97	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust East CFM F/H							
POINT	B38	562043.48	4821544.79	312.00	16.46	3.86E-6	379.00	5.43	0.75
		105 Forehearth Stack							
POINT	B33	562055.21	4821536.35	312.00	14.48	2.36E-6	321.90	12.59	1.22
		Gen Exhaust Above T105							
POINT	B24	562052.59	4821531.65	312.00	27.77	1.02E-6	597.00	5.89	0.53
		105 Furnace Stack							
POINT	B25	562057.67	4821536.90	312.00	27.77	1.02E-6	597.00	5.89	0.53
		105 Furnace Stack							

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

Source Pathway - Source Inputs

Open Pit Sources

No Open Pit Sources Specified

Circular Area Sources

No Circular Area Sources Specified

Polygon Area Sources

No Polygon Area Sources Specified

Flare Sources

No Flare Sources Specified

Line Sources

No Line Sources Specified

Line Volume Sources

No Line Volume Sources Specified

Line Area Sources

No Line Area Sources Specified

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. BETA Option for Capped & Horiz Stacks Selected With:

                5 Capped Stack(s); and   0 Horiz Stack(s)

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: HCR

**Model Calculates ANNUAL Averages Only

**This Run Includes: 10 Source(s);   14 Source Group(s); and   2062 Receptor(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   325.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/S   ; Emission Rate Unit Factor =   0.10000E+10
                 Output Units   = NANOGRAMS/M3

```
 **Approximate Storage Requirements of Model =      4.5 MB of RAM.

 **File for Saving Result Arrays: Ann_Opt_H_R1_Metyr2.sv1
 **File for Summary of Results:   Ann_Opt_H_R1_Metyr2.sum
♀ *** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                   ***        02/27/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_H_R1_Metyr2                                                 ***        14:30:24
                                                                                                                      PAGE   2
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

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

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

                      METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2010   1  1  1
                                                             AND END DATE: 2010  12 31 24

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


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

                                                     1.54,   3.09,   5.14,   8.23,  10.80,
♀ *** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                   ***        02/27/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_H_R1_Metyr2                                                 ***        14:30:24
                                                                                                                      PAGE   3
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

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

   Surface file:   E:\_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.SFC          Met Version:  14134
   Profile file:   E:\_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.PFL
   Surface format: FREE
   Profile format: FREE
   Surface station no.:    61430                 Upper air station no.:    14733
                  Name: UNKNOWN                                   Name: BUFFALO/GREATER_BUFFALO_INT'L
                  Year:   2009                                    Year:   2009

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 09 01 01   1 01   -8.4  0.105 -9.000 -9.000 -999.   81.     11.8  0.57   0.55   1.00    1.50  291.   10.0  258.1    2.0
 09 01 01   1 02  -16.5  0.147 -9.000 -9.000 -999.  135.     16.6  0.57   0.55   1.00    2.10  308.   10.0  258.1    2.0
 09 01 01   1 03   -8.4  0.105 -9.000 -9.000 -999.   82.     11.8  0.57   0.55   1.00    1.50  294.   10.0  257.5    2.0
 09 01 01   1 04   -7.9  0.100 -9.000 -9.000 -999.   76.     11.0  0.50   0.55   1.00    1.50  233.   10.0  255.9    2.0
 09 01 01   1 05   -3.5  0.067 -9.000 -9.000 -999.   41.      7.3  0.50   0.55   1.00    1.00  223.   10.0  255.3    2.0
```

Ann_Opt_H_R1_Metyr2

09	01	01	1	06	-3.2	0.067	-9.000	-9.000	-999.	41.	8.1	0.50	0.55	1.00	1.00	222.	10.0	254.8	2.0
09	01	01	1	07	-9.5	0.113	-9.000	-9.000	-999.	91.	13.2	0.70	0.55	1.00	1.50	145.	10.0	255.9	2.0
09	01	01	1	08	-8.5	0.109	-9.000	-9.000	-999.	86.	13.0	0.63	0.50	1.00	1.50	243.	10.0	257.5	2.0
09	01	01	1	09	-6.0	0.107	-9.000	-9.000	-999.	84.	17.8	0.61	0.95	0.76	1.50	127.	10.0	258.1	2.0
09	01	01	1	10	-1.6	0.057	-9.000	-9.000	-999.	33.	9.9	0.30	0.95	0.66	1.00	121.	10.0	263.8	2.0
09	01	01	1	11	13.2	0.424	0.253	0.009	42.	662.	-499.8	0.50	0.55	0.54	3.10	224.	10.0	264.2	2.0
09	01	01	1	12	19.8	0.428	0.402	0.008	114.	671.	-342.9	0.50	0.55	0.51	3.10	196.	10.0	265.4	2.0
09	01	01	1	13	22.9	0.367	0.559	0.011	265.	536.	-187.8	0.50	0.55	0.51	2.60	203.	10.0	265.4	2.0
09	01	01	1	14	2.1	0.468	0.256	0.007	275.	768.	-4237.3	0.70	0.55	0.48	3.10	179.	10.0	265.9	2.0
09	01	01	1	15	-4.6	0.538	-9.000	-9.000	-999.	946.	2954.8	0.70	0.55	0.51	3.60	162.	10.0	265.4	2.0
09	01	01	1	16	-20.2	0.526	-9.000	-9.000	-999.	915.	625.4	0.70	0.55	0.59	3.60	164.	10.0	265.9	2.0
09	01	01	1	17	-33.2	0.401	-9.000	-9.000	-999.	622.	168.7	0.61	0.95	0.82	3.10	141.	10.0	265.9	2.0
09	01	01	1	18	-28.3	0.491	-9.000	-9.000	-999.	824.	362.7	0.61	0.95	1.00	3.60	137.	10.0	265.9	2.0
09	01	01	1	19	-53.3	0.464	-9.000	-9.000	-999.	760.	163.0	0.61	0.95	1.00	3.60	134.	10.0	265.9	2.0
09	01	01	1	20	-60.2	0.545	-9.000	-9.000	-999.	964.	233.5	0.61	0.95	1.00	4.10	127.	10.0	265.4	2.0
09	01	01	1	21	-44.8	0.474	-9.000	-9.000	-999.	788.	206.2	0.61	0.95	1.00	3.60	130.	10.0	265.9	2.0
09	01	01	1	22	-61.4	0.544	-9.000	-9.000	-999.	961.	227.6	0.61	0.95	1.00	4.10	132.	10.0	266.4	2.0
09	01	01	1	23	-53.4	0.464	-9.000	-9.000	-999.	764.	162.3	0.61	0.95	1.00	3.60	140.	10.0	266.4	2.0
09	01	01	1	24	-21.2	0.225	-9.000	-9.000	-999.	318.	46.9	0.70	0.55	1.00	2.10	160.	10.0	267.0	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	291.	1.50	258.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
FURNACE	1ST HIGHEST VALUE IS	0.10233 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.10233 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.08622 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.08622 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.08252 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.08252 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.07194 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.06620 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.06392 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.04896 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
FOREHEAR	1ST HIGHEST VALUE IS	0.46967 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.46967 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.40347 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.40347 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.35431 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	

	6TH HIGHEST VALUE IS	0.35431 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.32344 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.31606 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.28446 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.23396 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
GENEXHTS	1ST HIGHEST VALUE IS	0.76057 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.76057 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.65066 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.65066 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.60741 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.60741 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.54638 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.51083 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.44607 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.44607 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
B10	1ST HIGHEST VALUE IS	0.04012 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.04012 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.02875 AT (	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	4TH HIGHEST VALUE IS	0.02875 AT (	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	5TH HIGHEST VALUE IS	0.02713 AT (	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	6TH HIGHEST VALUE IS	0.02713 AT (	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	7TH HIGHEST VALUE IS	0.02679 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.02679 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.02637 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02637 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B24	1ST HIGHEST VALUE IS 0.05293 AT (	562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 0.05293 AT (	562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.04613 AT (	562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.04613 AT (	562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS 0.04269 AT (	562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS 0.04269 AT (	562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS 0.03650 AT (	562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS 0.03461 AT (	562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS 0.03175 AT (	562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS 0.02648 AT (	562077.84, 4821540.29, 311.01, 311.01, 0.00)	DC	
B25	1ST HIGHEST VALUE IS 0.04940 AT (	562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 0.04940 AT (	562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.04009 AT (	562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.04009 AT (	562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	5TH HIGHEST VALUE IS	0.03983	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.03983	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.03545	AT	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.03445	AT	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.02931	AT	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02528	AT	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B32	1ST HIGHEST VALUE IS	0.08470	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.08470	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.07642	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.07642	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.06892	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.06892	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.06327	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.06327	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04438	AT	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.04392	AT	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B33	1ST HIGHEST VALUE IS	0.29562	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.29562	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.25393	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.25393	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.23387	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.23387	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.20783	AT	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.18964	AT	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.16851	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.16851	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)				OF TYPE	NETWORK GRID-ID
B34	1ST HIGHEST VALUE IS	0.06748	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.06748	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.05800	AT (562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.05800	AT (562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05603	AT (562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05603	AT (562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.04644	AT (562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.04644	AT (562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04229	AT (562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.04150	AT (562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B35	1ST HIGHEST VALUE IS	0.06836	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.06836	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.05709	AT (562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC

	4TH HIGHEST VALUE IS	0.05709 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.04574 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.04462 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04101 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.03141 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B38	1ST HIGHEST VALUE IS	0.46967 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.46967 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.40347 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.40347 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.35431 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.35431 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.32344 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.31606 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.28446 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.23396 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
C79	1ST HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.09493 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08665 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06501 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06296 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
C80	1ST HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.10763 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08681 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06977 AT (	562085.76,	4821492.01,	310.52,	310.52,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06310 AT (	562056.81,	4821505.08,	310.84,	310.84,	0.00)	DC
ALL	1ST HIGHEST VALUE IS	1.33256 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	1.33256 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

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         3RD HIGHEST VALUE IS       1.09710 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         4TH HIGHEST VALUE IS       1.09710 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         5TH HIGHEST VALUE IS       1.08749 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         6TH HIGHEST VALUE IS       1.08749 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         7TH HIGHEST VALUE IS       0.93439 AT (  562065.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         8TH HIGHEST VALUE IS       0.90047 AT (  562085.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         9TH HIGHEST VALUE IS       0.75640 AT (  562085.76,  4821532.01,   311.00,   311.00,    0.00)  DC
        10TH HIGHEST VALUE IS       0.66782 AT (  562050.10,  4821511.55,   311.00,   311.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀*** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                  ***        02/27/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_H_R1_Metyr2                                               ***       14:30:24
                                                                                                                 PAGE   8
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

 *** Message Summary : AERMOD Model Execution ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of            3 Informational Message(s)

 A Total of         8760 Hours Were Processed

 A Total of            3 Calm Hours Identified

 A Total of            0 Missing Hours Identified (  0.00 Percent)


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


    ********   WARNING MESSAGES   ********
               ***  NONE  ***
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Scenario: N_R1

Emission Rate Calculations for Modeling

						before RC	after RC	before RC	After RC-CFM only								
		Source	B01	B24	B25	B11current	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	Total
		Type	Furnace	Furnace	Furnace	FH	FH	FH	FH	RE1	RE2	RE2	RE1	RE2	RE2	RE1	RE1	
		Current Base Case Emission Rate (g/s)	3.55E-05			1.51E-04		3.32E-05		2.05E-06	2.39E-06	2.39E-06		2.39E-06	2.39E-06	2.04E-06	2.04E-06	2.35E-04
Uncertainty =	1.15	2016 Base RC Emission Rate (g/s) with Uncertainty Factor applied		2.04E-05	2.04E-05		8.66E-05		3.82E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.78E-04
Combination ID	Option Description		B01	B24	B25	B11	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	
N	Facility reconfiguration (RC) + Electrostatic Precipitator (DEP) or WEP or DC for hot sources (1, 2 or 3) + incorporating more accurate combustion control skids and construction of front end superstructures (14)	Description of Reduction Component		DEP/WEP/DC	DEP/WEP/DC				DEP/WEP/DC + partial prototype									
		Individual Reduction Description		1,2 or 3	1,2 or 3				(1,2,or 3) and 14		Result of 14	Result of 14		Result of 14	Result of 14			
		Reduction Efficiency		95%	95%				95%	0%	50%	50%	0%	50%	50%	0%	0%	
		Additional Reduction Efficiency							50%									
		Comments	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	TotalER (g/s)
		RC+(1,2 or 3)+14		1.02E-06	1.02E-06				4.07E-06		6.87E-07	6.87E-07	2.36E-06	6.87E-07	6.87E-07	2.34E-06	2.34E-06	1.59E-05
	Explanation of calculation for B38 :	The 50% reduction efficiency for control option #14 only applies to the B11 reconfigured emission rate, not the B38 current emission rate since the technology already exists on that portion of CFM forehearth.																

Annual Hexavalent Chromium Results
Technical Benchmarking Option N - 5 year data set

Run (tab) Name:	Ann_Otp_N_R1_Metyr1	Ann_Opt_N_R1_Metyr2	Ann_Opt_N_R1_Metyr3	Ann_Opt_N_R1_Metyr4	Ann_Opt_N_R1_Metyr5	
Run Description:	Option N_R1, Reg 419 grid, Site Specific Met (2009)	Option N_R1, Reg 419 grid, Site Specific Met (2010)	Option N_R1, Reg 419 grid, Site Specific Met (2011)	Option N_R1, Reg 419 grid, Site Specific Met (2012)	Option N_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:		**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**
ALL	1.16484	1.35892	1.11343	1.1997	1.15386	**1.35892**
B10	0.03908	0.04012	0.04024	0.04071	0.0402	**0.04071**
B32	0.07978	0.0847	0.07868	0.08102	0.08023	**0.0847**
B34	0.05933	0.06748	0.0576	0.06099	0.05966	**0.06748**
B35	0.05924	0.06836	0.05762	0.06181	0.05927	**0.06836**
C79	0.08277	0.10893	0.07708	0.08782	0.08021	**0.10893**
C80	0.07892	0.1091	0.07271	0.08492	0.07221	**0.1091**
B38	0.43762	0.49602	0.4151	0.44765	0.43356	**0.49602**
B24	0.04733	0.05293	0.04593	0.04748	0.0491	**0.05293**
B25	0.0429	0.0494	0.04094	0.04253	0.04298	**0.0494**
B33	0.24981	0.29562	0.23972	0.25766	0.24583	**0.29562**
FURNACE	0.09023	0.10233	0.08688	0.09	0.09208	**0.10233**
FOREHEAR	0.43762	0.49602	0.4151	0.44765	0.43356	**0.49602**
GENEXHTS	0.63699	0.76057	0.61145	0.66205	0.62822	**0.76057**

Run Description:	Option N_R1, Reg 419 grid, Site Specific Met (2009)	Option N_R1, Reg 419 grid, Site Specific Met (2010)	Option N_R1, Reg 419 grid, Site Specific Met (2011)	Option N_R1, Reg 419 grid, Site Specific Met (2012)	Option N_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
ALL	0.00116484	0.00135892	0.00111343	0.0011997	0.00115386	**0.001359**
B10	0.00003908	0.00004012	0.00004024	0.00004071	0.0000402	**4.07E-05**
B32	0.00007978	0.0000847	0.00007868	0.00008102	0.00008023	**8.47E-05**
B34	0.00005933	0.00006748	0.0000576	0.00006099	0.00005966	**6.75E-05**
B35	0.00005924	0.00006836	0.00005762	0.00006181	0.00005927	**6.84E-05**
C79	0.00008277	0.00010893	0.00007708	0.00008782	0.00008021	**0.000109**
C80	0.00007892	0.0001091	0.00007271	0.00008492	0.00007221	**0.000109**
B38	0.00043762	0.00049602	0.0004151	0.00044765	0.00043356	**0.000496**
B24	0.00004733	0.00005293	0.00004593	0.00004748	0.0000491	**5.29E-05**
B25	0.0000429	0.0000494	0.00004094	0.00004253	0.00004298	**4.94E-05**
B33	0.00024981	0.00029562	0.00023972	0.00025766	0.00024583	**0.000296**
FURNACE	0.00009023	0.00010233	0.00008688	0.00009	0.00009208	**0.000102**
FOREHEAR	0.00043762	0.00049602	0.0004151	0.00044765	0.00043356	**0.000496**
GENEXHTS	0.00063699	0.00076057	0.00061145	0.00066205	0.00062822	**0.000761**

Source Pathway - Source Inputs

AERMOD

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	B10	562030.25	4821525.28	312.00	14.45	6.87E-7	321.90	12.10	1.24
		General Exhaust Above T107B F/H							
POINT	B32	562047.16	4821528.02	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T106							
POINT	B34	562039.70	4821535.65	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T107A F/H							
POINT	B35	562047.03	4821543.82	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above CFM Main Channel							
POINT	C79	562023.15	4821559.58	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust West CFM F/H							
POINT	C80	562028.25	4821564.97	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust East CFM F/H							
POINT	B38	562043.48	4821544.79	312.00	16.46	4.07E-6	379.00	5.43	0.75
		105 Forehearth Stack							
POINT	B33	562055.21	4821536.35	312.00	14.48	2.36E-6	321.90	12.59	1.22
		Gen Exhaust Above T105							
POINT	B24	562052.59	4821531.65	312.00	27.77	1.02E-6	597.00	5.89	0.53
		105 Furnace Stack							
POINT	B25	562057.67	4821536.90	312.00	27.77	1.02E-6	597.00	5.89	0.53
		105 Furnace Stack							

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

Source Pathway - Source Inputs

Open Pit Sources

No Open Pit Sources Specified

Circular Area Sources

No Circular Area Sources Specified

Polygon Area Sources

No Polygon Area Sources Specified

Flare Sources

No Flare Sources Specified

Line Sources

No Line Sources Specified

Line Volume Sources

No Line Volume Sources Specified

Line Area Sources

No Line Area Sources Specified

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. BETA Option for Capped & Horiz Stacks Selected With:

                5 Capped Stack(s); and   0 Horiz Stack(s)

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: HCR

**Model Calculates ANNUAL Averages Only

**This Run Includes: 10 Source(s);   14 Source Group(s); and   2062 Receptor(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   325.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/S   ; Emission Rate Unit Factor =   0.10000E+10
                 Output Units   = NANOGRAMS/M3

**Approximate Storage Requirements of Model =   4.5 MB of RAM.

**File for Saving Result Arrays: Ann_Opt_N_R1_Metyr2.sv1
**File for Summary of Results: Ann_Opt_N_R1_Metyr2.sum

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

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

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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
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METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2010   1 1 1
AND END DATE: 2010 12 31 24

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

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

Surface file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.SFC   Met Version: 14134
Profile file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   61430   Upper air station no.:   14733
Name: UNKNOWN   Name: BUFFALO/GREATER_BUFFALO_INT'L
Year: 2009   Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	01	1	01	-8.4	0.105	-9.000	-9.000	-999.	81.	11.8	0.57	0.55	1.00	1.50	291.	10.0	258.1	2.0
09	01	01	1	02	-16.5	0.147	-9.000	-9.000	-999.	135.	16.6	0.57	0.55	1.00	2.10	308.	10.0	258.1	2.0
09	01	01	1	03	-8.4	0.105	-9.000	-9.000	-999.	82.	11.8	0.57	0.55	1.00	1.50	294.	10.0	257.5	2.0
09	01	01	1	04	-7.9	0.100	-9.000	-9.000	-999.	76.	11.0	0.50	0.55	1.00	1.50	233.	10.0	255.9	2.0
09	01	01	1	05	-3.5	0.067	-9.000	-9.000	-999.	41.	7.3	0.50	0.55	1.00	1.00	223.	10.0	255.3	2.0

Ann_Opt_N_R1_Metyr2

09	01	01	1	06	-3.2	0.067	-9.000	-9.000	-999.	41.	8.1	0.50	0.55	1.00	1.00	222.	10.0	254.8	2.0
09	01	01	1	07	-9.5	0.113	-9.000	-9.000	-999.	91.	13.2	0.70	0.55	1.00	1.50	145.	10.0	255.9	2.0
09	01	01	1	08	-8.5	0.109	-9.000	-9.000	-999.	86.	13.0	0.63	0.50	1.00	1.50	243.	10.0	257.5	2.0
09	01	01	1	09	-6.0	0.107	-9.000	-9.000	-999.	84.	17.8	0.61	0.95	0.76	1.50	127.	10.0	258.1	2.0
09	01	01	1	10	-1.6	0.057	-9.000	-9.000	-999.	33.	9.9	0.30	0.95	0.66	1.00	121.	10.0	263.8	2.0
09	01	01	1	11	13.2	0.424	0.253	0.009	42.	662.	-499.8	0.50	0.55	0.54	3.10	224.	10.0	264.2	2.0
09	01	01	1	12	19.8	0.428	0.402	0.008	114.	671.	-342.9	0.50	0.55	0.51	3.10	196.	10.0	265.4	2.0
09	01	01	1	13	22.9	0.367	0.559	0.011	265.	536.	-187.8	0.50	0.55	0.51	2.60	203.	10.0	265.4	2.0
09	01	01	1	14	2.1	0.468	0.256	0.007	275.	768.	-4237.3	0.70	0.55	0.48	3.10	179.	10.0	265.9	2.0
09	01	01	1	15	-4.6	0.538	-9.000	-9.000	-999.	946.	2954.8	0.70	0.55	0.51	3.60	162.	10.0	265.4	2.0
09	01	01	1	16	-20.2	0.526	-9.000	-9.000	-999.	915.	625.4	0.70	0.55	0.59	3.60	164.	10.0	265.9	2.0
09	01	01	1	17	-33.2	0.401	-9.000	-9.000	-999.	622.	168.7	0.61	0.95	0.82	3.10	141.	10.0	265.9	2.0
09	01	01	1	18	-28.3	0.491	-9.000	-9.000	-999.	824.	362.7	0.61	0.95	1.00	3.60	137.	10.0	265.9	2.0
09	01	01	1	19	-53.3	0.464	-9.000	-9.000	-999.	760.	163.0	0.61	0.95	1.00	3.60	134.	10.0	265.9	2.0
09	01	01	1	20	-60.2	0.545	-9.000	-9.000	-999.	964.	233.5	0.61	0.95	1.00	4.10	127.	10.0	265.4	2.0
09	01	01	1	21	-44.8	0.474	-9.000	-9.000	-999.	788.	206.2	0.61	0.95	1.00	3.60	130.	10.0	265.9	2.0
09	01	01	1	22	-61.4	0.544	-9.000	-9.000	-999.	961.	227.6	0.61	0.95	1.00	4.10	132.	10.0	266.4	2.0
09	01	01	1	23	-53.4	0.464	-9.000	-9.000	-999.	764.	162.3	0.61	0.95	1.00	3.60	140.	10.0	266.4	2.0
09	01	01	1	24	-21.2	0.225	-9.000	-9.000	-999.	318.	46.9	0.70	0.55	1.00	2.10	160.	10.0	267.0	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	291.	1.50	258.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
FURNACE	1ST HIGHEST VALUE IS	0.10233 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.10233 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.08622 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.08622 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.08252 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.08252 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.07194 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.06620 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.06392 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.04896 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
FOREHEAR	1ST HIGHEST VALUE IS	0.49602 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.49602 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.42612 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.42612 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.37419 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	

	6TH HIGHEST VALUE IS	0.37419 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.34159 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.33380 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.30042 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.24709 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
GENEXHTS	1ST HIGHEST VALUE IS	0.76057 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.76057 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.65066 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.65066 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.60741 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.60741 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.54638 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.51083 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.44607 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.44607 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
B10	1ST HIGHEST VALUE IS	0.04012 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.04012 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.02875 AT (	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	4TH HIGHEST VALUE IS	0.02875 AT (	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	5TH HIGHEST VALUE IS	0.02713 AT (	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	6TH HIGHEST VALUE IS	0.02713 AT (	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	7TH HIGHEST VALUE IS	0.02679 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.02679 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.02637 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02637 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
B24	1ST HIGHEST VALUE IS	0.05293 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.05293 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.04613 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.04613 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.04269 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.04269 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.03650 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.03461 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.03175 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02648 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B25	1ST HIGHEST VALUE IS	0.04940 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.04940 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.04009 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.04009 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC

	5TH HIGHEST VALUE IS	0.03983	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.03983	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.03545	AT	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.03445	AT	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.02931	AT	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02528	AT	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B32	1ST HIGHEST VALUE IS	0.08470	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.08470	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.07642	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.07642	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.06892	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.06892	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.06327	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.06327	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04438	AT	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.04392	AT	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B33	1ST HIGHEST VALUE IS	0.29562	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.29562	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.25393	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.25393	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.23387	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.23387	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.20783	AT	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.18964	AT	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.16851	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.16851	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)				OF TYPE	NETWORK GRID-ID
B34	1ST HIGHEST VALUE IS	0.06748	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.06748	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.05800	AT (562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.05800	AT (562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05603	AT (562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05603	AT (562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.04644	AT (562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.04644	AT (562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04229	AT (562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.04150	AT (562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B35	1ST HIGHEST VALUE IS	0.06836	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.06836	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.05709	AT (562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC

	4TH HIGHEST VALUE IS	0.05709 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.04574 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.04462 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04101 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.03141 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B38	1ST HIGHEST VALUE IS	0.49602 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.49602 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.42612 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.42612 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.37419 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.37419 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.34159 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.33380 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.30042 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.24709 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
C79	1ST HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.09493 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08665 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06501 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06296 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
C80	1ST HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.10763 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08681 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06977 AT (	562085.76,	4821492.01,	310.52,	310.52,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06310 AT (	562056.81,	4821505.08,	310.84,	310.84,	0.00)	DC
ALL	1ST HIGHEST VALUE IS	1.35892 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	1.35892 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

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         3RD HIGHEST VALUE IS       1.11974 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         4TH HIGHEST VALUE IS       1.11974 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         5TH HIGHEST VALUE IS       1.10737 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         6TH HIGHEST VALUE IS       1.10737 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         7TH HIGHEST VALUE IS       0.95212 AT (  562065.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         8TH HIGHEST VALUE IS       0.91862 AT (  562085.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         9TH HIGHEST VALUE IS       0.77237 AT (  562085.76,  4821532.01,   311.00,   311.00,    0.00)  DC
        10TH HIGHEST VALUE IS       0.67751 AT (  562050.10,  4821511.55,   311.00,   311.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                  ***        02/27/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_N_R1_Metyr2                                                ***       13:15:20
                                                                                                                  PAGE   8
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

 *** Message Summary : AERMOD Model Execution ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of            3 Informational Message(s)

 A Total of         8760 Hours Were Processed

 A Total of            3 Calm Hours Identified

 A Total of            0 Missing Hours Identified (  0.00 Percent)


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


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

Scenario: V_R1

Emission Rate Calculations for Modeling

							before RC	after RC	before RC	After RC-CFM only								
		Source	B01	B24	B25	B11current	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	Total
		Type	Furnace	Furnace	Furnace	FH	FH	FH	FH	RE1	RE2	RE2	RE1	RE2	RE2	RE1	RE1	
		Current Base Case Emission Rate (g/s)	3.55E-05			1.51E-04		3.32E-05		2.05E-06	2.39E-06	2.39E-06		2.39E-06	2.39E-06	2.04E-06	2.04E-06	2.35E-04
Uncertainty =	1.15	2016 Base RC Emission Rate (g/s) with Uncertainty Factor applied		2.04E-05	2.04E-05		8.66E-05		3.82E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.78E-04
Combination ID	Option Description		B01	B24	B25	B11	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	
V	Facility reconfiguration (RC) + Electrostatic Precipitator (DEP) or WEP or DC for hot sources (1, 2 or 3)	Description of Reduction Component		DEP/WEP/DC	DEP/WEP/DC				DEP/WEP/DC +									
		Individual Reduction Description		1,2 or 3	1,2 or 3				(1,2,or 3)									
		Reduction Efficiency		95%	95%				95%	0%	0%	0%	0%	0%	0%	0%	0%	
		Additional Reduction Efficiency																
		Comments	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	TotalER (g/s)
		RC+(1,2,or 3)		1.02E-06	1.02E-06				6.24E-06		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	2.08E-05

Annual Hexavalent Chromium Results
Technology Benchmarking Option V - 5 year data set

Run (tab) Name:	Ann_Opt_V_R1_Metyr1	Ann_Opt_V_R1_Metyr2	Ann_Opt_V_R1_Metyr3	Ann_Opt_V_R1_Metyr4	Ann_Opt_V_R1_Metyr5	
Run Description:	Option V_R1, Reg 419 grid, Site Specific Met (2009)	Option V_R1, Reg 419 grid, Site Specific Met (2010)	Option V_R1, Reg 419 grid, Site Specific Met (2011)	Option V_R1, Reg 419 grid, Site Specific Met (2012)	Option V_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:		**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**
ALL	1.6227	1.86906	1.5558	1.66901	1.61404	**1.86906**
B10	0.07817	0.08024	0.08048	0.08142	0.0804	**0.08142**
B32	0.15957	0.16941	0.15737	0.16204	0.16045	**0.16941**
B34	0.11866	0.13496	0.11519	0.12199	0.11932	**0.13496**
B35	0.11847	0.13671	0.11524	0.12361	0.11854	**0.13671**
C79	0.08277	0.10893	0.07708	0.08782	0.08021	**0.10893**
C80	0.07892	0.1091	0.07271	0.08492	0.07221	**0.1091**
B38	0.66999	0.75925	0.63554	0.68531	0.66377	**0.75925**
B24	0.04733	0.05293	0.04593	0.04748	0.0491	**0.05293**
B25	0.0429	0.0494	0.04094	0.04253	0.04298	**0.0494**
B33	0.24981	0.29562	0.23972	0.25766	0.24583	**0.29562**
FURNACE	0.09023	0.10233	0.08688	0.09	0.09208	**0.10233**
FOREHEAR	0.66999	0.75925	0.63554	0.68531	0.66377	**0.75925**
GENEXHTS	0.86248	1.00748	0.83338	0.8937	0.85819	**1.00748**

Run Description:	Option V_R1, Reg 419 grid, Site Specific Met (2009)	Option V_R1, Reg 419 grid, Site Specific Met (2010)	Option V_R1, Reg 419 grid, Site Specific Met (2011)	Option V_R1, Reg 419 grid, Site Specific Met (2012)	Option V_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
ALL	0.0016227	0.00186906	0.0015558	0.00166901	0.00161404	**0.001869**
B10	0.00007817	0.00008024	0.00008048	0.00008142	0.0000804	**8.14E-05**
B32	0.00015957	0.00016941	0.00015737	0.00016204	0.00016045	**0.000169**
B34	0.00011866	0.00013496	0.00011519	0.00012199	0.00011932	**0.000135**
B35	0.00011847	0.00013671	0.00011524	0.00012361	0.00011854	**0.000137**
C79	0.00008277	0.00010893	0.00007708	0.00008782	0.00008021	**0.000109**
C80	0.00007892	0.0001091	0.00007271	0.00008492	0.00007221	**0.000109**
B38	0.00066999	0.00075925	0.00063554	0.00068531	0.00066377	**0.000759**
B24	0.00004733	0.00005293	0.00004593	0.00004748	0.0000491	**5.29E-05**
B25	0.0000429	0.0000494	0.00004094	0.00004253	0.00004298	**4.94E-05**
B33	0.00024981	0.00029562	0.00023972	0.00025766	0.00024583	**0.000296**
FURNACE	0.00009023	0.00010233	0.00008688	0.00009	0.00009208	**0.000102**
FOREHEAR	0.00066999	0.00075925	0.00063554	0.00068531	0.00066377	**0.000759**
GENEXHTS	0.00086248	0.00100748	0.00083338	0.0008937	0.00085819	**0.001007**

Source Pathway - Source Inputs

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	B10	562030.25	4821525.28	312.00	14.45	1.37E-6	321.90	12.10	1.24
		General Exhaust Above T107B F/H							
POINT	B32	562047.16	4821528.02	312.00	14.48	1.37E-6	321.90	19.19	1.24
		General Exhaust Above T106							
POINT	B34	562039.70	4821535.65	312.00	14.48	1.37E-6	321.90	19.19	1.24
		General Exhaust Above T107A F/H							
POINT	B35	562047.03	4821543.82	312.00	14.48	1.37E-6	321.90	19.19	1.24
		General Exhaust Above CFM Main Channel							
POINT	C79	562023.15	4821559.58	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust West CFM F/H							
POINT	C80	562028.25	4821564.97	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust East CFM F/H							
POINT	B38	562043.48	4821544.79	312.00	16.46	6.24E-6	379.15	5.43	0.75
		105 Forehearth Stack							
POINT	B33	562055.21	4821536.35	312.00	14.48	2.36E-6	321.90	12.59	1.22
		Gen Exhaust Above T105							
POINT	B24	562052.59	4821531.65	312.00	27.77	1.02E-6	597.00	5.89	0.53
		105 Furnace Stack							
POINT	B25	562057.67	4821536.90	312.00	27.77	1.02E-6	597.00	5.89	0.53
		105 Furnace Stack							

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

Source Pathway - Source Inputs

Open Pit Sources

No Open Pit Sources Specified

Circular Area Sources

No Circular Area Sources Specified

Polygon Area Sources

No Polygon Area Sources Specified

Flare Sources

No Flare Sources Specified

Line Sources

No Line Sources Specified

Line Volume Sources

No Line Volume Sources Specified

Line Area Sources

No Line Area Sources Specified

 **MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
 -

 **Model Is Setup For Calculation of Average CONCentration Values.

   -- DEPOSITION LOGIC --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION. DRYDPLT = F
 **Model Uses NO WET DEPLETION. WETDPLT = F

 **Model Uses RURAL Dispersion Only.

 **Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. BETA Option for Capped & Horiz Stacks Selected With:

                5 Capped Stack(s); and   0 Horiz Stack(s)

 **Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Accepts FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of: HCR

 **Model Calculates ANNUAL Averages Only

 **This Run Includes: 10 Source(s);   14 Source Group(s); and   2062 Receptor(s)

 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date: 14134

 **Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

 **NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   325.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                  Emission Units = GRAMS/S   ; Emission Rate Unit Factor =   0.10000E+10
                  Output Units   = NANOGRAMS/M3

**Approximate Storage Requirements of Model =   4.5 MB of RAM.

**File for Saving Result Arrays: Ann_Opt_V_R1_Metyr2.sv1
**File for Summary of Results: Ann_Opt_V_R1_Metyr2.sum

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♀ *** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                 ***        02/27/15
*** AERMET - VERSION  14134 ***   *** Ann_Opt_V_R1_Metyr2                                                ***        11:15:59
                                                                                                                    PAGE   2
**MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

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

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

                      METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2010   1  1  1
                                                          AND END DATE: 2010  12 31 24

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


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

                                                   1.54,   3.09,   5.14,   8.23,  10.80,
♀ *** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                 ***        02/27/15
*** AERMET - VERSION  14134 ***   *** Ann_Opt_V_R1_Metyr2                                                ***        11:15:59
                                                                                                                    PAGE   3
**MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

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

  Surface file:   E:\_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.SFC          Met Version:  14134
  Profile file:   E:\_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:    61430                  Upper air station no.:    14733
                 Name: UNKNOWN                                  Name: BUFFALO/GREATER_BUFFALO_INT'L
                 Year:   2009                                   Year:   2009

First 24 hours of scalar data
```

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	01	1	01	-8.4	0.105	-9.000	-9.000	-999.	81.	11.8	0.57	0.55	1.00	1.50	291.	10.0	258.1	2.0
09	01	01	1	02	-16.5	0.147	-9.000	-9.000	-999.	135.	16.6	0.57	0.55	1.00	2.10	308.	10.0	258.1	2.0
09	01	01	1	03	-8.4	0.105	-9.000	-9.000	-999.	82.	11.8	0.57	0.55	1.00	1.50	294.	10.0	257.5	2.0
09	01	01	1	04	-7.9	0.100	-9.000	-9.000	-999.	76.	11.0	0.50	0.55	1.00	1.50	233.	10.0	255.9	2.0
09	01	01	1	05	-3.5	0.067	-9.000	-9.000	-999.	41.	7.3	0.50	0.55	1.00	1.00	223.	10.0	255.3	2.0

Ann_Opt_V_R1_Metyr2

09	01	01	1	06	-3.2	0.067	-9.000	-9.000	-999.	41.	8.1	0.50	0.55	1.00	1.00	222.	10.0	254.8	2.0
09	01	01	1	07	-9.5	0.113	-9.000	-9.000	-999.	91.	13.2	0.70	0.55	1.00	1.50	145.	10.0	255.9	2.0
09	01	01	1	08	-8.5	0.109	-9.000	-9.000	-999.	86.	13.0	0.63	0.50	1.00	1.50	243.	10.0	257.5	2.0
09	01	01	1	09	-6.0	0.107	-9.000	-9.000	-999.	84.	17.8	0.61	0.95	0.76	1.50	127.	10.0	258.1	2.0
09	01	01	1	10	-1.6	0.057	-9.000	-9.000	-999.	33.	9.9	0.30	0.95	0.66	1.00	121.	10.0	263.8	2.0
09	01	01	1	11	13.2	0.424	0.253	0.009	42.	662.	-499.8	0.50	0.55	0.54	3.10	224.	10.0	264.2	2.0
09	01	01	1	12	19.8	0.428	0.402	0.008	114.	671.	-342.9	0.50	0.55	0.51	3.10	196.	10.0	265.4	2.0
09	01	01	1	13	22.9	0.367	0.559	0.011	265.	536.	-187.8	0.50	0.55	0.51	2.60	203.	10.0	265.4	2.0
09	01	01	1	14	2.1	0.468	0.256	0.007	275.	768.	-4237.3	0.70	0.55	0.48	3.10	179.	10.0	265.9	2.0
09	01	01	1	15	-4.6	0.538	-9.000	-9.000	-999.	946.	2954.8	0.70	0.55	0.51	3.60	162.	10.0	265.4	2.0
09	01	01	1	16	-20.2	0.526	-9.000	-9.000	-999.	915.	625.4	0.70	0.55	0.59	3.60	164.	10.0	265.9	2.0
09	01	01	1	17	-33.2	0.401	-9.000	-9.000	-999.	622.	168.7	0.61	0.95	0.82	3.10	141.	10.0	265.9	2.0
09	01	01	1	18	-28.3	0.491	-9.000	-9.000	-999.	824.	362.7	0.61	0.95	1.00	3.60	137.	10.0	265.9	2.0
09	01	01	1	19	-53.3	0.464	-9.000	-9.000	-999.	760.	163.0	0.61	0.95	1.00	3.60	134.	10.0	265.9	2.0
09	01	01	1	20	-60.2	0.545	-9.000	-9.000	-999.	964.	233.5	0.61	0.95	1.00	4.10	127.	10.0	265.4	2.0
09	01	01	1	21	-44.8	0.474	-9.000	-9.000	-999.	788.	206.2	0.61	0.95	1.00	3.60	130.	10.0	265.9	2.0
09	01	01	1	22	-61.4	0.544	-9.000	-9.000	-999.	961.	227.6	0.61	0.95	1.00	4.10	132.	10.0	266.4	2.0
09	01	01	1	23	-53.4	0.464	-9.000	-9.000	-999.	764.	162.3	0.61	0.95	1.00	3.60	140.	10.0	266.4	2.0
09	01	01	1	24	-21.2	0.225	-9.000	-9.000	-999.	318.	46.9	0.70	0.55	1.00	2.10	160.	10.0	267.0	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	291.	1.50	258.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
FURNACE	1ST HIGHEST VALUE IS	0.10233 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.10233 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.08622 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.08622 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.08252 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.08252 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.07194 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.06620 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.06392 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.04896 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
FOREHEAR	1ST HIGHEST VALUE IS	0.75925 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.75925 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.65228 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.65228 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.57278 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	

	6TH HIGHEST VALUE IS	0.57278 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.52279 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.51091 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.45991 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.37827 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
GENEXHTS	1ST HIGHEST VALUE IS	1.00748 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	1.00748 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.86604 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.86604 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.81555 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.81555 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.69066 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.65026 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.62638 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.62638 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
B10	1ST HIGHEST VALUE IS	0.08024 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.08024 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.05750 AT (	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	4TH HIGHEST VALUE IS	0.05750 AT (	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05426 AT (	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05426 AT (	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	7TH HIGHEST VALUE IS	0.05358 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.05358 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.05274 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.05274 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B24	1ST HIGHEST VALUE IS 0.05293 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.05293 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.04613 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 0.04613 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	5TH HIGHEST VALUE IS 0.04269 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	6TH HIGHEST VALUE IS 0.04269 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	7TH HIGHEST VALUE IS 0.03650 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	8TH HIGHEST VALUE IS 0.03461 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)		DC	
	9TH HIGHEST VALUE IS 0.03175 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	10TH HIGHEST VALUE IS 0.02648 AT (562077.84, 4821540.29, 311.01, 311.01, 0.00)		DC	
B25	1ST HIGHEST VALUE IS 0.04940 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.04940 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.04009 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 0.04009 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	

	5TH HIGHEST VALUE IS	0.03983 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.03983 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.03545 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.03445 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.02931 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02528 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B32	1ST HIGHEST VALUE IS	0.16941 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.16941 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.15283 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.15283 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.13784 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.13784 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.12654 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.12654 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.08876 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.08785 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B33	1ST HIGHEST VALUE IS	0.29562 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.29562 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.25393 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.25393 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.23387 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.23387 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.20783 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.18964 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.16851 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.16851 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B34	1ST HIGHEST VALUE IS 0.13496 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.13496 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.11600 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 0.11600 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	5TH HIGHEST VALUE IS 0.11206 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	6TH HIGHEST VALUE IS 0.11206 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	7TH HIGHEST VALUE IS 0.09289 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)		DC	
	8TH HIGHEST VALUE IS 0.09289 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)		DC	
	9TH HIGHEST VALUE IS 0.08457 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	10TH HIGHEST VALUE IS 0.08300 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
B35	1ST HIGHEST VALUE IS 0.13671 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.13671 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.11417 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	

	4TH HIGHEST VALUE IS	0.11417 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.10835 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.10835 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.09148 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08925 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.08202 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06283 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B38	1ST HIGHEST VALUE IS	0.75925 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.75925 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.65228 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.65228 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.57278 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.57278 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.52279 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.51091 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.45991 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.37827 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
C79	1ST HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.09493 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08665 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06501 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06296 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
C80	1ST HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.10763 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08681 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06977 AT (	562085.76,	4821492.01,	310.52,	310.52,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06310 AT (	562056.81,	4821505.08,	310.84,	310.84,	0.00)	DC
ALL	1ST HIGHEST VALUE IS	1.86906 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	1.86906 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

```
         3RD HIGHEST VALUE IS       1.55405 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         4TH HIGHEST VALUE IS       1.55405 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         5TH HIGHEST VALUE IS       1.52134 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         6TH HIGHEST VALUE IS       1.52134 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         7TH HIGHEST VALUE IS       1.27351 AT (  562065.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         8TH HIGHEST VALUE IS       1.23925 AT (  562085.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         9TH HIGHEST VALUE IS       1.07747 AT (  562085.76,  4821532.01,   311.00,   311.00,    0.00)  DC
        10TH HIGHEST VALUE IS       0.95467 AT (  562050.10,  4821511.55,   311.00,   311.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                  ***        02/27/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_V_R1_Metyr2                                                ***       11:15:59
                                                                                                                  PAGE   8
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

 *** Message Summary : AERMOD Model Execution ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of            3 Informational Message(s)

 A Total of         8760 Hours Were Processed

 A Total of            3 Calm Hours Identified

 A Total of            0 Missing Hours Identified (  0.00 Percent)


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


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

Scenario I_R3:

Technology Benchmarking - Option I
Calculation of Emission Rates including Example Calculation

Emission Rate Calculations for Modeling

						before RC	after RC	before RC	After RC-CFM only								
		Source	B01	B24	B25	B11current	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	Total
		Type	Furnace	Furnace	Furnace	FH	FH	FH	FH	RE1	RE2	RE2	RE1	RE2	RE2	RE1	RE1	
		Current Base Case Emission Rate (g/s)	3.55E-05			1.51E-04		3.32E-05		2.05E-06	2.39E-06	2.39E-06		2.39E-06	2.39E-06	2.04E-06	2.04E-06	2.35E-04
Uncertainty =	1.15	2016 Base RC Emission Rate (g/s) with Uncertainty Factor applied		2.04E-05	2.04E-05		8.66E-05		3.82E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.78E-04
		2016 Base RC Emission Rate (g/s) without uncertainty applied		1.78E-05	1.78E-05		7.53E-05		3.32E-05		1.19E-06	1.19E-06	2.05E-06	1.19E-06	1.19E-06	2.04E-06	2.04E-06	1.55E-04
Combination ID	Option Description		B01	B24	B25	B11	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	
I_R3	Facility reconfiguration (RC) + Scrubber system on forehearth stack (6,7,8, or 9) + substituting LSC refractory in the forehearth (11) + forehearth conversion to air/gas combustion (12)	Description of Reduction Component							scrubber + LSC+Air/Gas									
		Individual Reduction Description							(6,7,8,or9)+11+12		partial of 12	partial of 12		partial of 12	partial of 12			
		Reduction Efficiency 1		0%	0%				20%	0%	50%	50%	0%	50%	50%	0%	0%	
		Reduction Efficiency 2							10%									
		Reduction Efficiency 3							86%									
		Comments	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	TotalER (g/s)
		RC+(6,7,8 or9) +11+12		2.04E-05	2.04E-05				1.70E-05		6.87E-07	6.87E-07	2.36E-06	6.87E-07	6.87E-07	2.34E-06	2.34E-06	6.76E-05
	Explanation of calculation for B38 :	It is not appropriate to apply the air/gas reduction of 86% to the current B38 emission rate since it is using a different technology that would be removed before installing air/gas combustion. Therefore, for emission reduction estimation purposes, the B38 reconfiguration ER is assumed to be identical to that of the B11 reconfiguration emission rate.																

RC = reconfiguration
Before RC = before reconfiguration
After RC = after reconfiguration

This combination does not include any reductions for the furnace source(s). All technologies for this option are for the forehearths.

Conversion to air/gas combustion for all forehearths would require the removal of the existing prototype technologies that are currently installed on the CFM forehearth (see Source ID B38 current).
Therefore, the baseline emission rates (prior to the application of reduction efficiencies) for all forehearths at the facility would be more similar to the conventional forehearth operations (see Source ID B11 current).
However, the reconfiguration involves reducing the conventional forehearth area by approximately 50% - which would reduce the baseline emission rate of B11current by half as shown with Source ID B11 (after RC)
Therefore, the estimated baseline emission rate for all forehearth emissions after reconfiguration and the removal of the prototype technology on the CFM forehearth is shown below:

New Baseline Forehearth ER = (B11 conventional forehearth current emission rate) / 2(for reduction of forehearth area) x uncertainty factor of 1.15 x 2 (to reflect CFM forehearth at same emission rate)

New Baseline Forehearth ER = [0.000151 , g/s / 2] x 1.15 x2

New Baseline Forehearth ER = 1.73E-04

ER after technologies applied = New Baseline Forehearth ER x (1 - reduction efficiency option 1) x (1 - reduction efficiency option 2) x (1-reduction efficiency option 3)

ER after technologies applied = 0.000173 g/s x (1-0.2) x (1-0.1) x (1-0.864)

ER after technologies applied = 1.70E-05 g/s

Annual Hexavalent Chromium Results
Technical Benchmarking Option I - 5 year data set

Run (tab) Name:	Ann_Opt_I_R3_Metyr1	Ann_Opt_I_R3_Metyr2	Ann_Opt_I_R3_Metyr3	Ann_Opt_I_R3_Metyr4	Ann_Opt_I_R3_Metyr5	
Run Description:	Option I_R2, Reg 419 grid, Site Specific Met (2009)	Option I_R2, Reg 419 grid, Site Specific Met (2010)	Option I_R2, Reg 419 grid, Site Specific Met (2011)	Option I_R2, Reg 419 grid, Site Specific Met (2012)	Option I_R2, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**
ALL	4.26404	4.87285	4.07768	4.32635	4.2754	**4.87285**
B10	0.03908	0.04012	0.04024	0.04071	0.0402	**0.04071**
B32	0.07978	0.0847	0.07868	0.08102	0.08023	**0.0847**
B34	0.05933	0.06748	0.0576	0.06099	0.05966	**0.06748**
B35	0.05924	0.06836	0.05762	0.06181	0.05927	**0.06836**
C79	0.08277	0.10893	0.07708	0.08782	0.08021	**0.10893**
C80	0.07892	0.1091	0.07271	0.08492	0.07221	**0.1091**
B38	1.82247	2.06567	1.72869	1.86421	1.80554	**2.06567**
B24	0.94663	1.05854	0.91869	0.94959	0.98204	**1.05854**
B25	0.85795	0.98808	0.81885	0.85051	0.85959	**0.98808**
B33	0.24981	0.29562	0.23972	0.25766	0.24583	**0.29562**
FURNACE	1.80458	2.04661	1.73754	1.80009	1.84163	**2.04661**
FOREHEAR	1.82247	2.06567	1.72869	1.86421	1.80554	**2.06567**
GENEXHTS	0.63699	0.76057	0.61145	0.66205	0.62822	**0.76057**

Run Description:	Option I_R2, Reg 419 grid, Site Specific Met (2009)	Option I_R2, Reg 419 grid, Site Specific Met (2010)	Option I_R2, Reg 419 grid, Site Specific Met (2011)	Option I_R2, Reg 419 grid, Site Specific Met (2012)	Option I_R2, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
ALL	0.00426404	0.00487285	0.00407768	0.00432635	0.0042754	**0.004873**
B10	0.00003908	0.00004012	0.00004024	0.00004071	0.0000402	**4.07E-05**
B32	0.00007978	0.0000847	0.00007868	0.00008102	0.00008023	**8.47E-05**
B34	0.00005933	0.00006748	0.0000576	0.00006099	0.00005966	**6.75E-05**
B35	0.00005924	0.00006836	0.00005762	0.00006181	0.00005927	**6.84E-05**
C79	0.00008277	0.00010893	0.00007708	0.00008782	0.00008021	**0.000109**
C80	0.00007892	0.0001091	0.00007271	0.00008492	0.00007221	**0.000109**
B38	0.00182247	0.00206567	0.00172869	0.00186421	0.00180554	**0.002066**
B24	0.00094663	0.00105854	0.00091869	0.00094959	0.00098204	**0.001059**
B25	0.00085795	0.00098808	0.00081885	0.00085051	0.00085959	**0.000988**
B33	0.00024981	0.00029562	0.00023972	0.00025766	0.00024583	**0.000296**
FURNACE	0.00180458	0.00204661	0.00173754	0.00180009	0.00184163	**0.002047**
FOREHEAR	0.00182247	0.00206567	0.00172869	0.00186421	0.00180554	**0.002066**
GENEXHTS	0.00063699	0.00076057	0.00061145	0.00066205	0.00062822	**0.000761**

Source Pathway - Source Inputs

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	B10	562030.25	4821525.28	312.00	14.45	6.87E-7	321.90	12.10	1.24
		General Exhaust Above T107B F/H							
POINT	B32	562047.16	4821528.02	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T106							
POINT	B34	562039.70	4821535.65	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T107A F/H							
POINT	B35	562047.03	4821543.82	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above CFM Main Channel							
POINT	C79	562023.15	4821559.58	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust West CFM F/H							
POINT	C80	562028.25	4821564.97	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust East CFM F/H							
POINT	B38	562043.48	4821544.79	312.00	16.46	0.00002	379.00	5.43	0.75
		105 Forehearth Stack							
POINT	B33	562055.21	4821536.35	312.00	14.48	2.36E-6	321.90	12.59	1.22
		Gen Exhaust Above T105							
POINT	B24	562052.59	4821531.65	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							
POINT	B25	562057.67	4821536.90	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

***   MODEL SETUP OPTIONS SUMMARY   ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. BETA Option for Capped & Horiz Stacks Selected With:

                5 Capped Stack(s); and   0 Horiz Stack(s)

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: HCR

**Model Calculates ANNUAL Averages Only

**This Run Includes: 10 Source(s);   14 Source Group(s); and   2062 Receptor(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   325.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/S   ; Emission Rate Unit Factor =   0.10000E+10
                 Output Units   = NANOGRAMS/M3

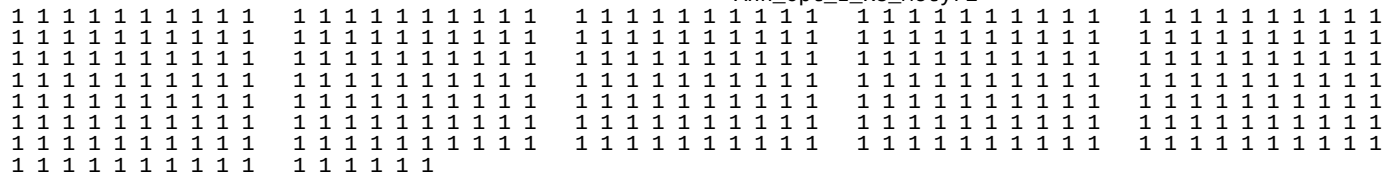
**Approximate Storage Requirements of Model =   4.5 MB of RAM.

**File for Saving Result Arrays: Ann_Opt_I_R3_Metyr2.sv1
**File for Summary of Results: Ann_Opt_I_R3_Metyr2.sum

♀ *** AERMOD - VERSION 14134 ***   *** OC Guelph Project 144539 - Site Specific Standard   ***   03/22/15
*** AERMET - VERSION 14134 ***   *** Ann_Opt_I_R3_Metyr2   ***   20:14:11
                                                                                                                    PAGE   2

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

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



METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2010 1 1 1
AND END DATE: 2010 12 31 24

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

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

1.54, 3.09, 5.14, 8.23, 10.80,

♀ *** AERMOD - VERSION 14134 *** *** OC Guelph Project 144539 - Site Specific Standard *** 03/22/15
*** AERMET - VERSION 14134 *** *** Ann_Opt_I_R3_Metyr2 *** 20:14:11
PAGE 3

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

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

Surface file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.SFC Met Version: 14134
Profile file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 61430 Upper air station no.: 14733
Name: UNKNOWN Name: BUFFALO/GREATER_BUFFALO_INT'L
Year: 2009 Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	01	1	01	-8.4	0.105	-9.000	-9.000	-999.	81.	11.8	0.57	0.55	1.00	1.50	291.	10.0	258.1	2.0
09	01	01	1	02	-16.5	0.147	-9.000	-9.000	-999.	135.	16.6	0.57	0.55	1.00	2.10	308.	10.0	258.1	2.0
09	01	01	1	03	-8.4	0.105	-9.000	-9.000	-999.	82.	11.8	0.57	0.55	1.00	1.50	294.	10.0	257.5	2.0
09	01	01	1	04	-7.9	0.100	-9.000	-9.000	-999.	76.	11.0	0.50	0.55	1.00	1.50	233.	10.0	255.9	2.0
09	01	01	1	05	-3.5	0.067	-9.000	-9.000	-999.	41.	7.3	0.50	0.55	1.00	1.00	223.	10.0	255.3	2.0
09	01	01	1	06	-3.2	0.067	-9.000	-9.000	-999.	41.	8.1	0.50	0.55	1.00	1.00	222.	10.0	254.8	2.0
09	01	01	1	07	-9.5	0.113	-9.000	-9.000	-999.	91.	13.2	0.70	0.55	1.00	1.50	145.	10.0	255.9	2.0
09	01	01	1	08	-8.5	0.109	-9.000	-9.000	-999.	86.	13.0	0.63	0.50	1.00	1.50	243.	10.0	257.5	2.0
09	01	01	1	09	-6.0	0.107	-9.000	-9.000	-999.	84.	17.8	0.61	0.95	0.76	1.50	127.	10.0	258.1	2.0
09	01	01	1	10	-1.6	0.057	-9.000	-9.000	-999.	33.	9.9	0.30	0.95	0.66	1.00	121.	10.0	263.8	2.0
09	01	01	1	11	13.2	0.424	0.253	0.009	42.	662.	-499.8	0.50	0.55	0.54	3.10	224.	10.0	264.2	2.0
09	01	01	1	12	19.8	0.428	0.402	0.008	114.	671.	-342.9	0.50	0.55	0.51	3.10	196.	10.0	265.4	2.0
09	01	01	1	13	22.9	0.367	0.559	0.011	265.	536.	-187.8	0.50	0.55	0.51	2.60	203.	10.0	265.4	2.0
09	01	01	1	14	2.1	0.468	0.256	0.007	275.	768.	-4237.3	0.70	0.55	0.48	3.10	179.	10.0	265.9	2.0
09	01	01	1	15	-4.6	0.538	-9.000	-9.000	-999.	946.	2954.8	0.70	0.55	0.51	3.60	162.	10.0	265.4	2.0
09	01	01	1	16	-20.2	0.526	-9.000	-9.000	-999.	915.	625.4	0.70	0.55	0.59	3.60	164.	10.0	265.9	2.0
09	01	01	1	17	-33.2	0.401	-9.000	-9.000	-999.	622.	168.7	0.61	0.95	0.82	3.10	141.	10.0	265.9	2.0
09	01	01	1	18	-28.3	0.491	-9.000	-9.000	-999.	824.	362.7	0.61	0.95	1.00	3.60	137.	10.0	265.9	2.0
09	01	01	1	19	-53.3	0.464	-9.000	-9.000	-999.	760.	163.0	0.61	0.95	1.00	3.60	134.	10.0	265.9	2.0
09	01	01	1	20	-60.2	0.545	-9.000	-9.000	-999.	964.	233.5	0.61	0.95	1.00	4.10	127.	10.0	265.4	2.0
09	01	01	1	21	-44.8	0.474	-9.000	-9.000	-999.	788.	206.2	0.61	0.95	1.00	3.60	130.	10.0	265.9	2.0
09	01	01	1	22	-61.4	0.544	-9.000	-9.000	-999.	961.	227.6	0.61	0.95	1.00	4.10	132.	10.0	266.4	2.0
09	01	01	1	23	-53.4	0.464	-9.000	-9.000	-999.	764.	162.3	0.61	0.95	1.00	3.60	140.	10.0	266.4	2.0
09	01	01	1	24	-21.2	0.225	-9.000	-9.000	-999.	318.	46.9	0.70	0.55	1.00	2.10	160.	10.0	267.0	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	291.	1.50	258.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
FURNACE	1ST HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	1.43889 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	1.32402 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	1.27844 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.97929 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
FOREHEAR	1ST HIGHEST VALUE IS	2.06567 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	2.06567 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	1.77454 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	1.77454 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	1.55832 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	1.55832 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	1.42254 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	1.39010 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	1.25110 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	1.02901 AT (562077.84, 4821540.29, 311.01, 311.01, 0.00)	DC	
GENEXHTS	1ST HIGHEST VALUE IS	0.76057 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.76057 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.65066 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.65066 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.60741 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.60741 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.54638 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.51083 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.44607 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.44607 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
B10	1ST HIGHEST VALUE IS	0.04012 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.04012 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.02875 AT (562076.93, 4821485.66, 310.19, 310.19, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.02875 AT (562076.93, 4821485.66, 310.19, 310.19, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.02713 AT (562070.22, 4821492.13, 310.40, 310.40, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.02713 AT (562070.22, 4821492.13, 310.40, 310.40, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.02679 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.02679 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.02637 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.02637 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID AVERAGE CONC RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE NETWORK GRID-ID

B24	1ST HIGHEST VALUE IS	1.05854	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	1.05854	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.92257	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.92257	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.85389	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.85389	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.72997	AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.69230	AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.63497	AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.52969	AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B25	1ST HIGHEST VALUE IS	0.98808	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.98808	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.80177	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.80177	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.79658	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.79658	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.70892	AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.68905	AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.58614	AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.50560	AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B32	1ST HIGHEST VALUE IS	0.08470	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.08470	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.07642	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.07642	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.06892	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.06892	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.06327	AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.06327	AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04438	AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.04392	AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B33	1ST HIGHEST VALUE IS	0.29562	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.29562	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.25393	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.25393	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.23387	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.23387	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.20783	AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.18964	AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.16851	AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.16851	AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)						OF TYPE	NETWORK GRID-ID
B34	1ST HIGHEST VALUE IS	0.06748	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.06748	AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.05800	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.05800	AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.05603	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.05603	AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.04644	AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.04644	AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.04229	AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.04150	AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	

B35	1ST HIGHEST VALUE IS	0.06836 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.06836 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.05709 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.05709 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.04574 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.04462 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.04101 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.03141 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC	
B38	1ST HIGHEST VALUE IS	2.06567 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	2.06567 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	1.77454 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	1.77454 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	1.55832 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	1.55832 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	1.42254 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	1.39010 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	1.25110 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	1.02901 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC	
C79	1ST HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.09493 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.08665 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.06501 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.06296 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC	

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
C80	1ST HIGHEST VALUE IS 0.10910 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.10910 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.10763 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 0.10032 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	5TH HIGHEST VALUE IS 0.10032 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	6TH HIGHEST VALUE IS 0.08681 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	7TH HIGHEST VALUE IS 0.07391 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	8TH HIGHEST VALUE IS 0.07391 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	9TH HIGHEST VALUE IS 0.06977 AT (562085.76, 4821492.01, 310.52, 310.52, 0.00)		DC	
	10TH HIGHEST VALUE IS 0.06310 AT (562056.81, 4821505.08, 310.84, 310.84, 0.00)		DC	
ALL	1ST HIGHEST VALUE IS 4.87285 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	4.87285 ng/m3 = 0.00487285 ug/m3
	2ND HIGHEST VALUE IS 4.87285 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 4.10629 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 4.10629 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	5TH HIGHEST VALUE IS 3.85944 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	6TH HIGHEST VALUE IS 3.85944 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	7TH HIGHEST VALUE IS 3.37536 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	8TH HIGHEST VALUE IS 3.25739 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	9TH HIGHEST VALUE IS 2.93757 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)		DC	
	10TH HIGHEST VALUE IS 2.28475 AT (562077.84, 4821540.29, 311.01, 311.01, 0.00)		DC	

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 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀*** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                 ***        03/22/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_I_R3_Metyr2                                              ***        20:14:11
                                                                                                                 PAGE   8
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

 *** Message Summary : AERMOD Model Execution ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of            3 Informational Message(s)

 A Total of         8760 Hours Were Processed

 A Total of            3 Calm Hours Identified

 A Total of            0 Missing Hours Identified (  0.00 Percent)


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


    ********   WARNING MESSAGES   ********
               ***  NONE  ***
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Scenario: O_R2

Emission Rate Calculations for Modeling

						before RC	after RC	before RC	After RC-CFM only								
		Source	B01	B24	B25	B11current	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	Total
		Type	Furnace	Furnace	Furnace	FH	FH	FH	FH	RE1	RE2	RE2	RE1	RE2	RE2	RE1	RE1	
		Current Base Case Emission Rate (g/s)	3.55E-05			1.51E-04		3.32E-05		2.05E-06	2.39E-06	2.39E-06		2.39E-06	2.39E-06	2.04E-06	2.04E-06	2.35E-04
Uncertainty =	1.15	2016 Base RC Emission Rate (g/s) with Uncertainty Factor applied		2.04E-05	2.04E-05		8.66E-05		3.82E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.78E-04
Combination ID	Option Description		B01	B24	B25	B11	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	
O_R1	Facility reconfiguration (RC) + Scrubber system on forehearth stack (6,7,8, or 9) + forehearth conversion to air/gas combustion (12)	Description of Reduction Component							Scrubber + Air/gas									
		Individual Reduction Description							(6,7,8,or 9) + 12		Partial of 12	Partial of 12		Partial of 12	Partial of 12			
		Reduction Efficiency							20%	0%	50%	50%	0%	50%	50%	0%	0%	
		Additional Reduction Efficiency							86%									
		Comments	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	TotalER (g/s)
		RC+(6,7,8, or9) +12		2.04E-05	2.04E-05				1.89E-05		6.87E-07	6.87E-07	2.36E-06	6.87E-07	6.87E-07	2.34E-06	2.34E-06	6.95E-05

Explanation of calculation for B38 : It is not appropriate to apply the air/gas reduction of 86% to the current B38 emission rate since it is using a different technology that would be removed before installing air/gas combustion. Therefore, for emission reduction estimation purposes, the B38 reconfiguration ER is assumed to be identical to that of the B11 reconfiguration emission rate.

Annual Hexavalent Chromium Results
Technical Benchmarking Option 0 - 5 year data set

Run (tab) Name:	Ann_Opt_O_R2_Metyr1	Ann_Opt_O_R2_Metyr2	Ann_Opt_O_R2_Metyr3	Ann_Opt_O_R2_Metyr4	Ann_Opt_O_R2_Metyr5	
Run Description:	Option O_R2, Reg 419 grid, Site Specific Met (2009)	Option O_R2, Reg 419 grid, Site Specific Met (2010)	Option O_R2, Reg 419 grid, Site Specific Met (2011)	Option O_R2, Reg 419 grid, Site Specific Met (2012)	Option O_R2, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:		**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**
ALL	4.46567	5.10095	4.26902	4.53251	4.47516	**5.10095**
B10	0.03908	0.04012	0.04024	0.04071	0.0402	**0.04071**
B32	0.07978	0.0847	0.07868	0.08102	0.08023	**0.0847**
B34	0.05933	0.06748	0.0576	0.06099	0.05966	**0.06748**
B35	0.05924	0.06836	0.05762	0.06181	0.05927	**0.06836**
C79	0.08277	0.10893	0.07708	0.08782	0.08021	**0.10893**
C80	0.07892	0.1091	0.07271	0.08492	0.07221	**0.1091**
B38	2.0241	2.29377	1.92003	2.07037	2.0053	**2.29377**
B24	0.94663	1.05854	0.91869	0.94959	0.98204	**1.05854**
B25	0.85795	0.98808	0.81885	0.85051	0.85959	**0.98808**
B33	0.24981	0.29562	0.23972	0.25766	0.24583	**0.29562**
FURNACE	1.80458	2.04661	1.73754	1.80009	1.84163	**2.04661**
FOREHEAR	2.0241	2.29377	1.92003	2.07037	2.0053	**2.29377**
GENEXHTS	0.63699	0.76057	0.61145	0.66205	0.62822	**0.76057**

Run Description:	Option O_R2, Reg 419 grid, Site Specific Met (2009)	Option O_R2, Reg 419 grid, Site Specific Met (2010)	Option O_R2, Reg 419 grid, Site Specific Met (2011)	Option O_R2, Reg 419 grid, Site Specific Met (2012)	Option O_R2, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
ALL	0.00446567	0.00510095	0.00426902	0.00453251	0.00447516	**0.005101**
B10	0.00003908	0.00004012	0.00004024	0.00004071	0.0000402	**4.07E-05**
B32	0.00007978	0.0000847	0.00007868	0.00008102	0.00008023	**8.47E-05**
B34	0.00005933	0.00006748	0.0000576	0.00006099	0.00005966	**6.75E-05**
B35	0.00005924	0.00006836	0.00005762	0.00006181	0.00005927	**6.84E-05**
C79	0.00008277	0.00010893	0.00007708	0.00008782	0.00008021	**0.000109**
C80	0.00007892	0.0001091	0.00007271	0.00008492	0.00007221	**0.000109**
B38	0.0020241	0.00229377	0.00192003	0.00207037	0.0020053	**0.002294**
B24	0.00094663	0.00105854	0.00091869	0.00094959	0.00098204	**0.001059**
B25	0.00085795	0.00098808	0.00081885	0.00085051	0.00085959	**0.000988**
B33	0.00024981	0.00029562	0.00023972	0.00025766	0.00024583	**0.000296**
FURNACE	0.00180458	0.00204661	0.00173754	0.00180009	0.00184163	**0.002047**
FOREHEAR	0.0020241	0.00229377	0.00192003	0.00207037	0.0020053	**0.002294**
GENEXHTS	0.00063699	0.00076057	0.00061145	0.00066205	0.00062822	**0.000761**

Source Pathway - Source Inputs

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	B10	562030.25	4821525.28	312.00	14.45	6.87E-7	321.90	12.10	1.24
		General Exhaust Above T107B F/H							
POINT	B32	562047.16	4821528.02	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T106							
POINT	B34	562039.70	4821535.65	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T107A F/H							
POINT	B35	562047.03	4821543.82	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above CFM Main Channel							
POINT	C79	562023.15	4821559.58	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust West CFM F/H							
POINT	C80	562028.25	4821564.97	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust East CFM F/H							
POINT	B38	562043.48	4821544.79	312.00	16.46	0.00002	379.15	5.43	0.75
		105 Forehearth Stack							
POINT	B33	562055.21	4821536.35	312.00	14.48	2.36E-6	321.90	12.59	1.22
		Gen Exhaust Above T105							
POINT	B24	562052.59	4821531.65	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							
POINT	B25	562057.67	4821536.90	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

Source Pathway - Source Inputs

Open Pit Sources

No Open Pit Sources Specified

Circular Area Sources

No Circular Area Sources Specified

Polygon Area Sources

No Polygon Area Sources Specified

Flare Sources

No Flare Sources Specified

Line Sources

No Line Sources Specified

Line Volume Sources

No Line Volume Sources Specified

Line Area Sources

No Line Area Sources Specified

♀ *** AERMOD - VERSION 14134 ***   *** OC Guelph Project 144539 - Site Specific Standard *** 02/27/15
*** AERMET - VERSION 14134 ***   *** Ann_Opt_O_R2_Metyr2 *** 10:53:29

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

***   MODEL SETUP OPTIONS SUMMARY   ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. BETA Option for Capped & Horiz Stacks Selected With:

                5 Capped Stack(s); and   0 Horiz Stack(s)

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: HCR

**Model Calculates ANNUAL Averages Only

**This Run Includes: 10 Source(s);   14 Source Group(s); and   2062 Receptor(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   325.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/S   ; Emission Rate Unit Factor =   0.10000E+10
                 Output Units   = NANOGRAMS/M3

```
**Approximate Storage Requirements of Model =      4.5 MB of RAM.

**File for Saving Result Arrays: Ann_Opt_O_R2_Metyr2.sv1
**File for Summary of Results:   Ann_Opt_O_R2_Metyr2.sum
♀ *** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                    ***        02/27/15
*** AERMET - VERSION  14134 ***   *** Ann_Opt_O_R2_Metyr2                                                  ***        10:53:29
                                                                                                                      PAGE   2
**MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

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

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

                     METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2010   1  1  1
                                                     AND END DATE: 2010  12 31 24

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


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

                                                 1.54,   3.09,   5.14,   8.23,  10.80,
♀ *** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                    ***        02/27/15
*** AERMET - VERSION  14134 ***   *** Ann_Opt_O_R2_Metyr2                                                  ***        10:53:29
                                                                                                                      PAGE   3
**MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

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

  Surface file:   E:\_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.SFC          Met Version:  14134
  Profile file:   E:\_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:    61430                 Upper air station no.:    14733
                 Name: UNKNOWN                                  Name: BUFFALO/GREATER_BUFFALO_INT'L
                 Year:   2009                                   Year:   2009

First 24 hours of scalar data
YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
09 01 01   1 01   -8.4  0.105 -9.000 -9.000 -999.   81.     11.8  0.57   0.55   1.00    1.50  291.   10.0  258.1    2.0
09 01 01   1 02  -16.5  0.147 -9.000 -9.000 -999.  135.     16.6  0.57   0.55   1.00    2.10  308.   10.0  258.1    2.0
09 01 01   1 03   -8.4  0.105 -9.000 -9.000 -999.   82.     11.8  0.57   0.55   1.00    1.50  294.   10.0  257.5    2.0
09 01 01   1 04   -7.9  0.100 -9.000 -9.000 -999.   76.     11.0  0.50   0.55   1.00    1.50  233.   10.0  255.9    2.0
09 01 01   1 05   -3.5  0.067 -9.000 -9.000 -999.   41.      7.3  0.50   0.55   1.00    1.00  223.   10.0  255.3    2.0
```

Ann_Opt_O_R2_Metyr2

09	01	01	1	06	-3.2	0.067	-9.000	-9.000	-999.	41.	8.1	0.50	0.55	1.00	1.00	222.	10.0	254.8	2.0
09	01	01	1	07	-9.5	0.113	-9.000	-9.000	-999.	91.	13.2	0.70	0.55	1.00	1.50	145.	10.0	255.9	2.0
09	01	01	1	08	-8.5	0.109	-9.000	-9.000	-999.	86.	13.0	0.63	0.50	1.00	1.50	243.	10.0	257.5	2.0
09	01	01	1	09	-6.0	0.107	-9.000	-9.000	-999.	84.	17.8	0.61	0.95	0.76	1.50	127.	10.0	258.1	2.0
09	01	01	1	10	-1.6	0.057	-9.000	-9.000	-999.	33.	9.9	0.30	0.95	0.66	1.00	121.	10.0	263.8	2.0
09	01	01	1	11	13.2	0.424	0.253	0.009	42.	662.	-499.8	0.50	0.55	0.54	3.10	224.	10.0	264.2	2.0
09	01	01	1	12	19.8	0.428	0.402	0.008	114.	671.	-342.9	0.50	0.55	0.51	3.10	196.	10.0	265.4	2.0
09	01	01	1	13	22.9	0.367	0.559	0.011	265.	536.	-187.8	0.50	0.55	0.51	2.60	203.	10.0	265.4	2.0
09	01	01	1	14	2.1	0.468	0.256	0.007	275.	768.	-4237.3	0.70	0.55	0.48	3.10	179.	10.0	265.9	2.0
09	01	01	1	15	-4.6	0.538	-9.000	-9.000	-999.	946.	2954.8	0.70	0.55	0.51	3.60	162.	10.0	265.4	2.0
09	01	01	1	16	-20.2	0.526	-9.000	-9.000	-999.	915.	625.4	0.70	0.55	0.59	3.60	164.	10.0	265.9	2.0
09	01	01	1	17	-33.2	0.401	-9.000	-9.000	-999.	622.	168.7	0.61	0.95	0.82	3.10	141.	10.0	265.9	2.0
09	01	01	1	18	-28.3	0.491	-9.000	-9.000	-999.	824.	362.7	0.61	0.95	1.00	3.60	137.	10.0	265.9	2.0
09	01	01	1	19	-53.3	0.464	-9.000	-9.000	-999.	760.	163.0	0.61	0.95	1.00	3.60	134.	10.0	265.9	2.0
09	01	01	1	20	-60.2	0.545	-9.000	-9.000	-999.	964.	233.5	0.61	0.95	1.00	4.10	127.	10.0	265.4	2.0
09	01	01	1	21	-44.8	0.474	-9.000	-9.000	-999.	788.	206.2	0.61	0.95	1.00	3.60	130.	10.0	265.9	2.0
09	01	01	1	22	-61.4	0.544	-9.000	-9.000	-999.	961.	227.6	0.61	0.95	1.00	4.10	132.	10.0	266.4	2.0
09	01	01	1	23	-53.4	0.464	-9.000	-9.000	-999.	764.	162.3	0.61	0.95	1.00	3.60	140.	10.0	266.4	2.0
09	01	01	1	24	-21.2	0.225	-9.000	-9.000	-999.	318.	46.9	0.70	0.55	1.00	2.10	160.	10.0	267.0	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	291.	1.50	258.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
FURNACE	1ST HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	1.43889 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	1.32402 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	1.27844 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.97929 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
FOREHEAR	1ST HIGHEST VALUE IS	2.29377 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	2.29377 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	1.97059 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	1.97059 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	1.73041 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	

	6TH HIGHEST VALUE IS	1.73041 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	1.57939 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	1.54351 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	1.38943 AT	(562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	1.14280 AT	(562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
GENEXHTS	1ST HIGHEST VALUE IS	0.76057 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.76057 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.65066 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.65066 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.60741 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.60741 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.54638 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.51083 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.44607 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.44607 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
B10	1ST HIGHEST VALUE IS	0.04012 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.04012 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.02875 AT	(562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	4TH HIGHEST VALUE IS	0.02875 AT	(562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	5TH HIGHEST VALUE IS	0.02713 AT	(562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	6TH HIGHEST VALUE IS	0.02713 AT	(562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	7TH HIGHEST VALUE IS	0.02679 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.02679 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.02637 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02637 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B24	1ST HIGHEST VALUE IS 1.05854 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 1.05854 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.92257 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.92257 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS 0.85389 AT	(562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS 0.85389 AT	(562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS 0.72997 AT	(562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS 0.69230 AT	(562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS 0.63497 AT	(562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS 0.52969 AT	(562077.84, 4821540.29, 311.01, 311.01, 0.00)	DC	
B25	1ST HIGHEST VALUE IS 0.98808 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 0.98808 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.80177 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.80177 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	5TH HIGHEST VALUE IS	0.79658	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.79658	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.70892	AT	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.68905	AT	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.58614	AT	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.50560	AT	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B32	1ST HIGHEST VALUE IS	0.08470	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.08470	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.07642	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.07642	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.06892	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.06892	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.06327	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.06327	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04438	AT	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.04392	AT	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B33	1ST HIGHEST VALUE IS	0.29562	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.29562	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.25393	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.25393	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.23387	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.23387	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.20783	AT	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.18964	AT	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.16851	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.16851	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)				OF TYPE	NETWORK GRID-ID
B34	1ST HIGHEST VALUE IS	0.06748	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.06748	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.05800	AT (562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.05800	AT (562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05603	AT (562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05603	AT (562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.04644	AT (562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.04644	AT (562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04229	AT (562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.04150	AT (562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B35	1ST HIGHEST VALUE IS	0.06836	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.06836	AT (562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.05709	AT (562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC

	4TH HIGHEST VALUE IS	0.05709 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.04574 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.04462 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04101 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.03141 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B38	1ST HIGHEST VALUE IS	2.29377 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	2.29377 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	1.97059 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	1.97059 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	1.73041 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	1.73041 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	1.57939 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	1.54351 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	1.38943 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	1.14280 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
C79	1ST HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.09493 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08665 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06501 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06296 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
C80	1ST HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.10763 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08681 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06977 AT (	562085.76,	4821492.01,	310.52,	310.52,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06310 AT (	562056.81,	4821505.08,	310.84,	310.84,	0.00)	DC
ALL	1ST HIGHEST VALUE IS	5.10095 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	5.10095 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

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         3RD HIGHEST VALUE IS       4.30233 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         4TH HIGHEST VALUE IS       4.30233 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         5TH HIGHEST VALUE IS       4.03153 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         6TH HIGHEST VALUE IS       4.03153 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         7TH HIGHEST VALUE IS       3.52878 AT (  562065.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         8TH HIGHEST VALUE IS       3.41424 AT (  562085.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         9TH HIGHEST VALUE IS       3.07589 AT (  562085.76,  4821532.01,   311.00,   311.00,    0.00)  DC
        10TH HIGHEST VALUE IS       2.39854 AT (  562077.84,  4821540.29,   311.01,   311.01,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀*** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                  ***        02/27/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_O_R2_Metyr2                                               ***       10:53:29
                                                                                                                 PAGE   8
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

 *** Message Summary : AERMOD Model Execution ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of            3 Informational Message(s)

 A Total of         8760 Hours Were Processed

 A Total of            3 Calm Hours Identified

 A Total of            0 Missing Hours Identified (  0.00 Percent)


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


    ********   WARNING MESSAGES   ********
               ***  NONE  ***
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Scenario: S_R1

Emission Rate Calculations for Modeling

						before RC	after RC	before RC	After RC-CFM only								
		Source	B01	B24	B25	B11current	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	Total
		Type	Furnace	Furnace	Furnace	FH	FH	FH	FH	RE1	RE2	RE2	RE1	RE2	RE2	RE1	RE1	
		Current Base Case Emission Rate (g/s)	3.55E-05			1.51E-04		3.32E-05		2.05E-06	2.39E-06	2.39E-06		2.39E-06	2.39E-06	2.04E-06	2.04E-06	2.35E-04
Uncertainty =	1.15	2016 Base RC Emission Rate (g/s) with Uncertainty Factor applied		2.04E-05	2.04E-05		8.66E-05		3.82E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.78E-04
Combination ID	Option Description		B01	B24	B25	B11	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	
S	Facility reconfiguration + forehearth conversion to air/gas combustion (12)	Description of Reduction Component							Air/Gas									
		Individual Reduction Description							12		partial of 12	partial of 12		partial of 12	partial of 12			
		Reduction Efficiency		0%	0%				86%	0%	50%	50%	0%	50%	50%	0%	0%	
		Additional Reduction Efficiency																
		Comments	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	TotalER (g/s)
		RC+12		2.04E-05	2.04E-05				2.36E-05		6.87E-07	6.87E-07	2.36E-06	6.87E-07	6.87E-07	2.34E-06	2.34E-06	7.42E-05
	Explanation of calculation for B38 :	It is not appropriate to apply the air/gas reduction of 86% to the current B38 emission rate since it is using a different technology that would be removed before installing air/gas combustion.																
		Therefore, for emission reduction estimation purposes, the B38 reconfiguration ER is assumed to be identical to that of the B11 reconfiguration emission rate.																

Annual Hexavalent Chromium Results
Technical Benchmarking Option S - 5 year data set

Run (tab) Name:	Ann_Opt_S_R1_Metyr1	Ann_Opt_S_R1_Metyr2	Ann_Opt_S_R1_Metyr3	Ann_Opt_S_R1_Metyr4	Ann_Opt_S_R1_Metyr5	
Run Description:	Option S_R1, Reg 419 grid, Site Specific Met (2009)	Option S_R1, Reg 419 grid, Site Specific Met (2010)	Option S_R1, Reg 419 grid, Site Specific Met (2011)	Option S_R1, Reg 419 grid, Site Specific Met (2012)	Option S_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:		**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**
ALL	4.97277	5.67617	4.74994	5.05131	4.97755	**5.67617**
B10	0.03908	0.04012	0.04024	0.04071	0.0402	**0.04071**
B32	0.07978	0.0847	0.07868	0.08102	0.08023	**0.0847**
B34	0.05933	0.06748	0.0576	0.06099	0.05966	**0.06748**
B35	0.05924	0.06836	0.05762	0.06181	0.05927	**0.06836**
C79	0.08277	0.10893	0.07708	0.08782	0.08021	**0.10893**
C80	0.07892	0.1091	0.07271	0.08492	0.07221	**0.1091**
B38	2.53121	2.86899	2.40095	2.58917	2.50769	**2.86899**
B24	0.94663	1.05854	0.91869	0.94959	0.98204	**1.05854**
B25	0.85795	0.98808	0.81885	0.85051	0.85959	**0.98808**
B33	0.24981	0.29562	0.23972	0.25766	0.24583	**0.29562**
FURNACE	1.80458	2.04661	1.73754	1.80009	1.84163	**2.04661**
FOREHEAR	2.53121	2.86899	2.40095	2.58917	2.50769	**2.86899**
GENEXHTS	0.63699	0.76057	0.61145	0.66205	0.62822	**0.76057**

Run Description:	Option S_R1, Reg 419 grid, Site Specific Met (2009)	Option S_R1, Reg 419 grid, Site Specific Met (2010)	Option S_R1, Reg 419 grid, Site Specific Met (2011)	Option S_R1, Reg 419 grid, Site Specific Met (2012)	Option S_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
ALL	0.00497277	0.00567617	0.00474994	0.00505131	0.00497755	**0.005676**
B10	0.00003908	0.00004012	0.00004024	0.00004071	0.0000402	**4.07E-05**
B32	0.00007978	0.0000847	0.00007868	0.00008102	0.00008023	**8.47E-05**
B34	0.00005933	0.00006748	0.0000576	0.00006099	0.00005966	**6.75E-05**
B35	0.00005924	0.00006836	0.00005762	0.00006181	0.00005927	**6.84E-05**
C79	0.00008277	0.00010893	0.00007708	0.00008782	0.00008021	**0.000109**
C80	0.00007892	0.0001091	0.00007271	0.00008492	0.00007221	**0.000109**
B38	0.00253121	0.00286899	0.00240095	0.00258917	0.00250769	**0.002869**
B24	0.00094663	0.00105854	0.00091869	0.00094959	0.00098204	**0.001059**
B25	0.00085795	0.00098808	0.00081885	0.00085051	0.00085959	**0.000988**
B33	0.00024981	0.00029562	0.00023972	0.00025766	0.00024583	**0.000296**
FURNACE	0.00180458	0.00204661	0.00173754	0.00180009	0.00184163	**0.002047**
FOREHEAR	0.00253121	0.00286899	0.00240095	0.00258917	0.00250769	**0.002869**
GENEXHTS	0.00063699	0.00076057	0.00061145	0.00066205	0.00062822	**0.000761**

Source Pathway - Source Inputs

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	B10	562030.25	4821525.28	312.00	14.45	6.87E-7	321.90	12.10	1.24
		General Exhaust Above T107B F/H							
POINT	B32	562047.16	4821528.02	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T106							
POINT	B34	562039.70	4821535.65	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T107A F/H							
POINT	B35	562047.03	4821543.82	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above CFM Main Channel							
POINT	C79	562023.15	4821559.58	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust West CFM F/H							
POINT	C80	562028.25	4821564.97	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust East CFM F/H							
POINT	B38	562043.48	4821544.79	312.00	16.46	0.00002	379.00	5.43	0.75
		105 Forehearth Stack							
POINT	B33	562055.21	4821536.35	312.00	14.48	2.36E-6	321.90	12.59	1.22
		Gen Exhaust Above T105							
POINT	B24	562052.59	4821531.65	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							
POINT	B25	562057.67	4821536.90	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

Source Pathway - Source Inputs

Open Pit Sources

No Open Pit Sources Specified

Circular Area Sources

No Circular Area Sources Specified

Polygon Area Sources

No Polygon Area Sources Specified

Flare Sources

No Flare Sources Specified

Line Sources

No Line Sources Specified

Line Volume Sources

No Line Volume Sources Specified

Line Area Sources

No Line Area Sources Specified

 **MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
 -

 **Model Is Setup For Calculation of Average CONCentration Values.

   -- DEPOSITION LOGIC --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION. DRYDPLT = F
 **Model Uses NO WET DEPLETION. WETDPLT = F

 **Model Uses RURAL Dispersion Only.

 **Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. BETA Option for Capped & Horiz Stacks Selected With:

                5 Capped Stack(s); and   0 Horiz Stack(s)

 **Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Accepts FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of: HCR

 **Model Calculates ANNUAL Averages Only

 **This Run Includes: 10 Source(s);   14 Source Group(s); and   2062 Receptor(s)

 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date: 14134

 **Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

 **NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   325.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                  Emission Units = GRAMS/S   ; Emission Rate Unit Factor =   0.10000E+10
                  Output Units   = NANOGRAMS/M3

**Approximate Storage Requirements of Model =   4.5 MB of RAM.

**File for Saving Result Arrays: Ann_Opt_S_R1_Metyr2.sv1
**File for Summary of Results: Ann_Opt_S_R1_Metyr2.sum

♀ *** AERMOD - VERSION 14134 ***   *** OC Guelph Project 144539 - Site Specific Standard   ***   02/27/15
*** AERMET - VERSION 14134 ***   *** Ann_Opt_S_R1_Metyr2   ***   10:28:24
PAGE   2

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

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

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

METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2010   1 1 1
AND END DATE: 2010 12 31 24

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

♀ *** AERMOD - VERSION 14134 ***   *** OC Guelph Project 144539 - Site Specific Standard   ***   02/27/15
*** AERMET - VERSION 14134 ***   *** Ann_Opt_S_R1_Metyr2   ***   10:28:24
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**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

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

Surface file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.SFC   Met Version: 14134
Profile file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   61430   Upper air station no.:   14733
Name: UNKNOWN   Name: BUFFALO/GREATER_BUFFALO_INT'L
Year: 2009   Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	01	1	01	-8.4	0.105	-9.000	-9.000	-999.	81.	11.8	0.57	0.55	1.00	1.50	291.	10.0	258.1	2.0
09	01	01	1	02	-16.5	0.147	-9.000	-9.000	-999.	135.	16.6	0.57	0.55	1.00	2.10	308.	10.0	258.1	2.0
09	01	01	1	03	-8.4	0.105	-9.000	-9.000	-999.	82.	11.8	0.57	0.55	1.00	1.50	294.	10.0	257.5	2.0
09	01	01	1	04	-7.9	0.100	-9.000	-9.000	-999.	76.	11.0	0.50	0.55	1.00	1.50	233.	10.0	255.9	2.0
09	01	01	1	05	-3.5	0.067	-9.000	-9.000	-999.	41.	7.3	0.50	0.55	1.00	1.00	223.	10.0	255.3	2.0

Ann_Opt_S_R1_Metyr2

09	01	01	1	06	-3.2	0.067	-9.000	-9.000	-999.	41.	8.1	0.50	0.55	1.00	1.00	222.	10.0	254.8	2.0
09	01	01	1	07	-9.5	0.113	-9.000	-9.000	-999.	91.	13.2	0.70	0.55	1.00	1.50	145.	10.0	255.9	2.0
09	01	01	1	08	-8.5	0.109	-9.000	-9.000	-999.	86.	13.0	0.63	0.50	1.00	1.50	243.	10.0	257.5	2.0
09	01	01	1	09	-6.0	0.107	-9.000	-9.000	-999.	84.	17.8	0.61	0.95	0.76	1.50	127.	10.0	258.1	2.0
09	01	01	1	10	-1.6	0.057	-9.000	-9.000	-999.	33.	9.9	0.30	0.95	0.66	1.00	121.	10.0	263.8	2.0
09	01	01	1	11	13.2	0.424	0.253	0.009	42.	662.	-499.8	0.50	0.55	0.54	3.10	224.	10.0	264.2	2.0
09	01	01	1	12	19.8	0.428	0.402	0.008	114.	671.	-342.9	0.50	0.55	0.51	3.10	196.	10.0	265.4	2.0
09	01	01	1	13	22.9	0.367	0.559	0.011	265.	536.	-187.8	0.50	0.55	0.51	2.60	203.	10.0	265.4	2.0
09	01	01	1	14	2.1	0.468	0.256	0.007	275.	768.	-4237.3	0.70	0.55	0.48	3.10	179.	10.0	265.9	2.0
09	01	01	1	15	-4.6	0.538	-9.000	-9.000	-999.	946.	2954.8	0.70	0.55	0.51	3.60	162.	10.0	265.4	2.0
09	01	01	1	16	-20.2	0.526	-9.000	-9.000	-999.	915.	625.4	0.70	0.55	0.59	3.60	164.	10.0	265.9	2.0
09	01	01	1	17	-33.2	0.401	-9.000	-9.000	-999.	622.	168.7	0.61	0.95	0.82	3.10	141.	10.0	265.9	2.0
09	01	01	1	18	-28.3	0.491	-9.000	-9.000	-999.	824.	362.7	0.61	0.95	1.00	3.60	137.	10.0	265.9	2.0
09	01	01	1	19	-53.3	0.464	-9.000	-9.000	-999.	760.	163.0	0.61	0.95	1.00	3.60	134.	10.0	265.9	2.0
09	01	01	1	20	-60.2	0.545	-9.000	-9.000	-999.	964.	233.5	0.61	0.95	1.00	4.10	127.	10.0	265.4	2.0
09	01	01	1	21	-44.8	0.474	-9.000	-9.000	-999.	788.	206.2	0.61	0.95	1.00	3.60	130.	10.0	265.9	2.0
09	01	01	1	22	-61.4	0.544	-9.000	-9.000	-999.	961.	227.6	0.61	0.95	1.00	4.10	132.	10.0	266.4	2.0
09	01	01	1	23	-53.4	0.464	-9.000	-9.000	-999.	764.	162.3	0.61	0.95	1.00	3.60	140.	10.0	266.4	2.0
09	01	01	1	24	-21.2	0.225	-9.000	-9.000	-999.	318.	46.9	0.70	0.55	1.00	2.10	160.	10.0	267.0	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	291.	1.50	258.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
FURNACE	1ST HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	1.43889 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	1.32402 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	1.27844 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.97929 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
FOREHEAR	1ST HIGHEST VALUE IS	2.86899 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	2.86899 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	2.46464 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	2.46464 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	2.16433 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	

	6TH HIGHEST VALUE IS	2.16433 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	1.97575 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	1.93069 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	1.73764 AT	(562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	1.42919 AT	(562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
GENEXHTS	1ST HIGHEST VALUE IS	0.76057 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.76057 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.65066 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.65066 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.60741 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.60741 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.54638 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.51083 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.44607 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.44607 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
B10	1ST HIGHEST VALUE IS	0.04012 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.04012 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.02875 AT	(562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	4TH HIGHEST VALUE IS	0.02875 AT	(562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	5TH HIGHEST VALUE IS	0.02713 AT	(562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	6TH HIGHEST VALUE IS	0.02713 AT	(562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	7TH HIGHEST VALUE IS	0.02679 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.02679 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.02637 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02637 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B24	1ST HIGHEST VALUE IS 1.05854 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 1.05854 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.92257 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.92257 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS 0.85389 AT	(562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS 0.85389 AT	(562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS 0.72997 AT	(562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS 0.69230 AT	(562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS 0.63497 AT	(562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS 0.52969 AT	(562077.84, 4821540.29, 311.01, 311.01, 0.00)	DC	
B25	1ST HIGHEST VALUE IS 0.98808 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 0.98808 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.80177 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.80177 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	5TH HIGHEST VALUE IS	0.79658 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.79658 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.70892 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.68905 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.58614 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.50560 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
B32	1ST HIGHEST VALUE IS	0.08470 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.08470 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.07642 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.07642 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.06892 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.06892 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.06327 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.06327 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.04438 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.04392 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
B33	1ST HIGHEST VALUE IS	0.29562 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.29562 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.25393 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.25393 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.23387 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.23387 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.20783 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.18964 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.16851 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.16851 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B34	1ST HIGHEST VALUE IS	0.06748 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.06748 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.05800 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.05800 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.05603 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.05603 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.04644 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.04644 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.04229 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.04150 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
B35	1ST HIGHEST VALUE IS	0.06836 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.06836 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.05709 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	4TH HIGHEST VALUE IS	0.05709 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.04574 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.04462 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04101 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.03141 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B38	1ST HIGHEST VALUE IS	2.86899 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	2.86899 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	2.46464 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	2.46464 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	2.16433 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	2.16433 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	1.97575 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	1.93069 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	1.73764 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	1.42919 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
C79	1ST HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.09493 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08665 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06501 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06296 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
C80	1ST HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.10763 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08681 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06977 AT (	562085.76,	4821492.01,	310.52,	310.52,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06310 AT (	562056.81,	4821505.08,	310.84,	310.84,	0.00)	DC
ALL	1ST HIGHEST VALUE IS	5.67617 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	5.67617 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

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         3RD HIGHEST VALUE IS       4.79639 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         4TH HIGHEST VALUE IS       4.79639 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         5TH HIGHEST VALUE IS       4.46545 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         6TH HIGHEST VALUE IS       4.46545 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         7TH HIGHEST VALUE IS       3.91596 AT (  562065.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         8TH HIGHEST VALUE IS       3.81060 AT (  562085.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         9TH HIGHEST VALUE IS       3.42411 AT (  562085.76,  4821532.01,   311.00,   311.00,    0.00)  DC
        10TH HIGHEST VALUE IS       2.68493 AT (  562077.84,  4821540.29,   311.01,   311.01,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                  ***        02/27/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_S_R1_Metyr2                                                ***       10:28:24
                                                                                                                  PAGE   8
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

 *** Message Summary : AERMOD Model Execution ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of            3 Informational Message(s)

 A Total of         8760 Hours Were Processed

 A Total of            3 Calm Hours Identified

 A Total of            0 Missing Hours Identified (  0.00 Percent)


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


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

Scenario: J_R2

Emission Rate Calculations for Modeling

							before RC	after RC	before RC	After RC-CFM only								
		Source	B01	B24	B25	B11current	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	Total
		Type	Furnace	Furnace	Furnace	FH	FH	FH	FH	RE1	RE2	RE2	RE1	RE2	RE2	RE1	RE1	
		Current Base Case Emission Rate (g/s)	3.55E-05			1.51E-04		3.32E-05		2.05E-06	2.39E-06	2.39E-06		2.39E-06	2.39E-06	2.04E-06	2.04E-06	2.35E-04
Uncertainty =	1.15	2016 Base RC Emission Rate (g/s) with Uncertainty Factor applied		2.04E-05	2.04E-05		8.66E-05		3.82E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.78E-04
Combination ID	Option Description		B01	B24	B25	B11	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	
J_R1	Facility reconfiguration (RC) + Scrubber system on forehearth stack (6,7,8, or 9) + substituting LSC refractory in the forehearth (11) + incorporating more accurate combustion control skids and construction of front end superstructures (14)	Description of Reduction Component							Scrubber + LSC+ partial prototype									
		Individual Reduction Description							(6,7,8 or 9)+11+14		Result of 14	Result of 14		Result of 14	Result of 14			
		Reduction Efficiency 1							20%	0%	50%	50%	0%	50%	50%	0%	0%	
		Reduction Efficiency 2							10%									
		Reduction Efficiency 3							50%									
		Comments	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	TotalER (g/s)
		RC+6,7,8, or 9) +11+14		2.04E-05	2.04E-05				6.17E-05		6.87E-07	6.87E-07	2.36E-06	6.87E-07	6.87E-07	2.34E-06	2.34E-06	1.12E-04

Explanation of calculation for B38 : The 50% reduction efficiency for control option #11 and #14 only applies to the B11 reconfigured emission rate, not the B38 current emission rate since these technologies already exist on that portion of (CFM) forehearth.

Annual Hexavalent Chromium Results
Technical Benchmarking Option J - 5 year data set

Run (tab) Name:	Ann_Opt_J_R1_Metyr1	Ann_Opt_J_R1_Metyr2	Ann_Opt_J_R1_Metyr3	Ann_Opt_J_R1_Metyr4	Ann_Opt_J_R1_Metyr5	
Run Description:	Option J_R1, Reg 419 grid, Site Specific Met (2009)	Option J_R1, Reg 419 grid, Site Specific Met (2010)	Option J_R1, Reg 419 grid, Site Specific Met (2011)	Option J_R1, Reg 419 grid, Site Specific Met (2012)	Option J_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**
ALL	2.34318	2.63624	2.33788	2.42194	2.51209	**2.63624**
B10	0.03908	0.04012	0.04024	0.04071	0.0402	**0.04071**
B32	0.07978	0.0847	0.07868	0.08102	0.08023	**0.0847**
B34	0.05933	0.06748	0.0576	0.06099	0.05966	**0.06748**
B35	0.05924	0.06836	0.05762	0.06181	0.05927	**0.06836**
C79	0.08277	0.10893	0.07708	0.08782	0.08021	**0.10893**
C80	0.07892	0.1091	0.07271	0.08492	0.07221	**0.1091**
B38	1.50489	1.65425	1.52402	1.63094	1.72766	**1.72766**
B24	0.23591	0.23253	0.24181	0.22825	0.25149	**0.25149**
B25	0.16159	0.17259	0.16251	0.15383	0.1691	**0.17259**
B33	0.08734	0.11193	0.07987	0.08701	0.08128	**0.11193**
FURNACE	0.3975	0.40512	0.40432	0.38208	0.42059	**0.42059**
FOREHEAR	1.50489	1.65425	1.52402	1.63094	1.72766	**1.72766**
GENEXHTS	0.47452	0.57687	0.4516	0.4914	0.46367	**0.57687**

Run Description:	Option J_R1, Reg 419 grid, Site Specific Met (2009)	Option J_R1, Reg 419 grid, Site Specific Met (2010)	Option J_R1, Reg 419 grid, Site Specific Met (2011)	Option J_R1, Reg 419 grid, Site Specific Met (2012)	Option J_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
ALL	0.00234318	0.00263624	0.00233788	0.00242194	0.00251209	**0.002636**
B10	0.00003908	0.00004012	0.00004024	0.00004071	0.0000402	**4.07E-05**
B32	0.00007978	0.0000847	0.00007868	0.00008102	0.00008023	**8.47E-05**
B34	0.00005933	0.00006748	0.0000576	0.00006099	0.00005966	**6.75E-05**
B35	0.00005924	0.00006836	0.00005762	0.00006181	0.00005927	**6.84E-05**
C79	0.00008277	0.00010893	0.00007708	0.00008782	0.00008021	**0.000109**
C80	0.00007892	0.0001091	0.00007271	0.00008492	0.00007221	**0.000109**
B38	0.00150489	0.00165425	0.00152402	0.00163094	0.00172766	**0.001728**
B24	0.00023591	0.00023253	0.00024181	0.00022825	0.00025149	**0.000251**
B25	0.00016159	0.00017259	0.00016251	0.00015383	0.0001691	**0.000173**
B33	0.00008734	0.00011193	0.00007987	0.00008701	0.00008128	**0.000112**
FURNACE	0.0003975	0.00040512	0.00040432	0.00038208	0.00042059	**0.000421**
FOREHEAR	0.00150489	0.00165425	0.00152402	0.00163094	0.00172766	**0.001728**
GENEXHTS	0.00047452	0.00057687	0.0004516	0.0004914	0.00046367	**0.000577**

Source Pathway - Source Inputs

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	B10	562030.25	4821525.28	312.00	14.45	6.87E-7	321.90	12.10	1.24
		General Exhaust Above T107B F/H							
POINT	B32	562047.16	4821528.02	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T106							
POINT	B34	562039.70	4821535.65	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T107A F/H							
POINT	B35	562047.03	4821543.82	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above CFM Main Channel							
POINT	C79	562023.15	4821559.58	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust West CFM F/H							
POINT	C80	562028.25	4821564.97	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust East CFM F/H							
POINT	B38	562043.48	4821544.79	312.00	16.46	0.00006	379.00	5.43	0.75
		105 Forehearth Stack							
POINT	B33	562055.21	4821536.35	312.00	14.48	2.36E-6	321.90	12.59	1.22
		Gen Exhaust Above T105							
POINT	B24	562052.59	4821531.65	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							
POINT	B25	562057.67	4821536.90	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

Source Pathway - Source Inputs

Open Pit Sources

No Open Pit Sources Specified

Circular Area Sources

No Circular Area Sources Specified

Polygon Area Sources

No Polygon Area Sources Specified

Flare Sources

No Flare Sources Specified

Line Sources

No Line Sources Specified

Line Volume Sources

No Line Volume Sources Specified

Line Area Sources

No Line Area Sources Specified

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

***   MODEL SETUP OPTIONS SUMMARY   ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. BETA Option for Capped & Horiz Stacks Selected With:

                5 Capped Stack(s); and   0 Horiz Stack(s)

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: HCR

**Model Calculates ANNUAL Averages Only

**This Run Includes: 10 Source(s);   14 Source Group(s); and   2062 Receptor(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   325.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/S   ; Emission Rate Unit Factor =   0.10000E+10
                 Output Units   = NANOGRAMS/M3

**Approximate Storage Requirements of Model =   4.5 MB of RAM.

**File for Saving Result Arrays: Ann_Opt_J_R2_Metyr2.sv1
**File for Summary of Results: Ann_Opt_J_R2_Metyr2.sum

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

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

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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
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METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2010   1 1 1
AND END DATE: 2010 12 31 24

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

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

Surface file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.SFC   Met Version: 14134
Profile file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   61430   Upper air station no.:   14733
Name: UNKNOWN   Name: BUFFALO/GREATER_BUFFALO_INT'L
Year: 2009   Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	01	1	01	-8.4	0.105	-9.000	-9.000	-999.	81.	11.8	0.57	0.55	1.00	1.50	291.	10.0	258.1	2.0
09	01	01	1	02	-16.5	0.147	-9.000	-9.000	-999.	135.	16.6	0.57	0.55	1.00	2.10	308.	10.0	258.1	2.0
09	01	01	1	03	-8.4	0.105	-9.000	-9.000	-999.	82.	11.8	0.57	0.55	1.00	1.50	294.	10.0	257.5	2.0
09	01	01	1	04	-7.9	0.100	-9.000	-9.000	-999.	76.	11.0	0.50	0.55	1.00	1.50	233.	10.0	255.9	2.0
09	01	01	1	05	-3.5	0.067	-9.000	-9.000	-999.	41.	7.3	0.50	0.55	1.00	1.00	223.	10.0	255.3	2.0

Ann_Opt_J_R2_Metyr2

09	01	01	1	06	-3.2	0.067	-9.000	-9.000	-999.	41.	8.1	0.50	0.55	1.00	1.00	222.	10.0	254.8	2.0
09	01	01	1	07	-9.5	0.113	-9.000	-9.000	-999.	91.	13.2	0.70	0.55	1.00	1.50	145.	10.0	255.9	2.0
09	01	01	1	08	-8.5	0.109	-9.000	-9.000	-999.	86.	13.0	0.63	0.50	1.00	1.50	243.	10.0	257.5	2.0
09	01	01	1	09	-6.0	0.107	-9.000	-9.000	-999.	84.	17.8	0.61	0.95	0.76	1.50	127.	10.0	258.1	2.0
09	01	01	1	10	-1.6	0.057	-9.000	-9.000	-999.	33.	9.9	0.30	0.95	0.66	1.00	121.	10.0	263.8	2.0
09	01	01	1	11	13.2	0.424	0.253	0.009	42.	662.	-499.8	0.50	0.55	0.54	3.10	224.	10.0	264.2	2.0
09	01	01	1	12	19.8	0.428	0.402	0.008	114.	671.	-342.9	0.50	0.55	0.51	3.10	196.	10.0	265.4	2.0
09	01	01	1	13	22.9	0.367	0.559	0.011	265.	536.	-187.8	0.50	0.55	0.51	2.60	203.	10.0	265.4	2.0
09	01	01	1	14	2.1	0.468	0.256	0.007	275.	768.	-4237.3	0.70	0.55	0.48	3.10	179.	10.0	265.9	2.0
09	01	01	1	15	-4.6	0.538	-9.000	-9.000	-999.	946.	2954.8	0.70	0.55	0.51	3.60	162.	10.0	265.4	2.0
09	01	01	1	16	-20.2	0.526	-9.000	-9.000	-999.	915.	625.4	0.70	0.55	0.59	3.60	164.	10.0	265.9	2.0
09	01	01	1	17	-33.2	0.401	-9.000	-9.000	-999.	622.	168.7	0.61	0.95	0.82	3.10	141.	10.0	265.9	2.0
09	01	01	1	18	-28.3	0.491	-9.000	-9.000	-999.	824.	362.7	0.61	0.95	1.00	3.60	137.	10.0	265.9	2.0
09	01	01	1	19	-53.3	0.464	-9.000	-9.000	-999.	760.	163.0	0.61	0.95	1.00	3.60	134.	10.0	265.9	2.0
09	01	01	1	20	-60.2	0.545	-9.000	-9.000	-999.	964.	233.5	0.61	0.95	1.00	4.10	127.	10.0	265.4	2.0
09	01	01	1	21	-44.8	0.474	-9.000	-9.000	-999.	788.	206.2	0.61	0.95	1.00	3.60	130.	10.0	265.9	2.0
09	01	01	1	22	-61.4	0.544	-9.000	-9.000	-999.	961.	227.6	0.61	0.95	1.00	4.10	132.	10.0	266.4	2.0
09	01	01	1	23	-53.4	0.464	-9.000	-9.000	-999.	764.	162.3	0.61	0.95	1.00	3.60	140.	10.0	266.4	2.0
09	01	01	1	24	-21.2	0.225	-9.000	-9.000	-999.	318.	46.9	0.70	0.55	1.00	2.10	160.	10.0	267.0	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	291.	1.50	258.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
FURNACE	1ST HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	1.43889 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	1.32402 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	1.27844 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.97929 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
GENEXHTS	1ST HIGHEST VALUE IS	0.76057 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.76057 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.65066 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.65066 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.60741 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	6TH HIGHEST VALUE IS	0.60741 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.54638 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.51083 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.44607 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.44607 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
FOREHEAR	1ST HIGHEST VALUE IS	7.51457 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	7.51457 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	6.45549 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	6.45549 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	5.66890 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	5.66890 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	5.17497 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	5.05694 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	4.55130 AT	(562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	3.74338 AT	(562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC	
B10	1ST HIGHEST VALUE IS	0.04012 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.04012 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.02875 AT	(562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.02875 AT	(562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.02713 AT	(562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.02713 AT	(562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.02679 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.02679 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.02637 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.02637 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B24	1ST HIGHEST VALUE IS 1.05854 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 1.05854 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.92257 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.92257 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS 0.85389 AT	(562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS 0.85389 AT	(562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS 0.72997 AT	(562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS 0.69230 AT	(562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS 0.63497 AT	(562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS 0.52969 AT	(562077.84, 4821540.29, 311.01, 311.01, 0.00)	DC	
B25	1ST HIGHEST VALUE IS 0.98808 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 0.98808 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.80177 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.80177 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	5TH HIGHEST VALUE IS	0.79658 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.79658 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.70892 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.68905 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.58614 AT	(562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.50560 AT	(562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
B32	1ST HIGHEST VALUE IS	0.08470 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.08470 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.07642 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.07642 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.06892 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.06892 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.06327 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.06327 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.04438 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.04392 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
B33	1ST HIGHEST VALUE IS	0.29562 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.29562 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.25393 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.25393 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.23387 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.23387 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.20783 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.18964 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.16851 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.16851 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B34	1ST HIGHEST VALUE IS	0.06748 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.06748 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.05800 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.05800 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.05603 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.05603 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.04644 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.04644 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.04229 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.04150 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
B35	1ST HIGHEST VALUE IS	0.06836 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.06836 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.05709 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	4TH HIGHEST VALUE IS	0.05709 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.04574 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.04462 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04101 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.03141 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B38	1ST HIGHEST VALUE IS	7.51457 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	7.51457 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	6.45549 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	6.45549 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	5.66890 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	5.66890 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	5.17497 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	5.05694 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	4.55130 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	3.74338 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
C79	1ST HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.09493 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08665 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06501 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06296 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
C80	1ST HIGHEST VALUE IS 0.10910 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.10910 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.10763 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 0.10032 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	5TH HIGHEST VALUE IS 0.10032 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	6TH HIGHEST VALUE IS 0.08681 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	7TH HIGHEST VALUE IS 0.07391 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	8TH HIGHEST VALUE IS 0.07391 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	9TH HIGHEST VALUE IS 0.06977 AT (562085.76, 4821492.01, 310.52, 310.52, 0.00)		DC	
	10TH HIGHEST VALUE IS 0.06310 AT (562056.81, 4821505.08, 310.84, 310.84, 0.00)		DC	
ALL	1ST HIGHEST VALUE IS 10.32175 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 10.32175 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	

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         3RD HIGHEST VALUE IS       8.78723 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         4TH HIGHEST VALUE IS       8.78723 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         5TH HIGHEST VALUE IS       7.97002 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         6TH HIGHEST VALUE IS       7.97002 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         7TH HIGHEST VALUE IS       7.04221 AT (  562065.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         8TH HIGHEST VALUE IS       7.00982 AT (  562085.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         9TH HIGHEST VALUE IS       6.23777 AT (  562085.76,  4821532.01,   311.00,   311.00,    0.00)  DC
        10TH HIGHEST VALUE IS       4.99912 AT (  562077.84,  4821540.29,   311.01,   311.01,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀*** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                  ***        02/27/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_J_R2_Metyr2                                               ***       12:16:45
                                                                                                                 PAGE   8
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

 *** Message Summary : AERMOD Model Execution ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of            3 Informational Message(s)

 A Total of         8760 Hours Were Processed

 A Total of            3 Calm Hours Identified

 A Total of            0 Missing Hours Identified (  0.00 Percent)


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


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

Scenario: P_R2

Emission Rate Calculations for Modeling

							before RC	after RC	before RC	After RC-CFM only								
		Source	B01	B24	B25	B11current	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	Total
		Type	Furnace	Furnace	Furnace	FH	FH	FH	FH	RE1	RE2	RE2	RE1	RE2	RE2	RE1	RE1	
		Current Base Case Emission Rate (g/s)	3.55E-05			1.51E-04		3.32E-05		2.05E-06	2.39E-06	2.39E-06		2.39E-06	2.39E-06	2.04E-06	2.04E-06	2.35E-04
Uncertainty =	1.15	2016 Base RC Emission Rate (g/s) with Uncertainty Factor applied		2.04E-05	2.04E-05		8.66E-05		3.82E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.78E-04
Combination ID	Option Description		B01	B24	B25	B11	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	
P_R1	Facility reconfiguration (RC) + Scrubber system on forehearth stack (6,7,8, or 9) + incorporating more accurate combustion control skids and construction of front end superstructures (14)	Description of Reduction Component							Scrubber + Partial Prototype									
		Individual Reduction Description							(6,7,8, or 9) + 14		Result of 14	Result of 14		Result of 14	Result of 14			
		Reduction Efficiency							20%	0%	50%	50%	0%	50%	50%	0%	0%	
		Additional Reduction Efficiency							50%									
		Comments	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	TotalER (g/s)
		RC+(6,7,8 or 9)+14		2.04E-05	2.04E-05				6.52E-05		6.87E-07	6.87E-07	2.36E-06	6.87E-07	6.87E-07	2.34E-06	2.34E-06	1.16E-04
	Explanation of calculation for B38 :	The 50% reduction efficiency for control option #14 only applies to the B11 reconfigured emission rate, not the B38 current emission rate since the technology already exists on that portion of CFM forehearth.																

Annual Hexavalent Chromium Results
Technical Benchmarking Option P - 5 year data set

Run (tab) Name:	Ann_Opt_P_R2_Metyr1	Ann_Opt_P_R2_Metyr2	Ann_Opt_P_R2_Metyr3	Ann_Opt_P_R2_Metyr4	Ann_Opt_P_R2_Metyr5	
Run Description:	Option P_R2, Reg 419 grid, Site Specific Met (2009)	Option P_R2, Reg 419 grid, Site Specific Met (2010)	Option P_R2, Reg 419 grid, Site Specific Met (2011)	Option P_R2, Reg 419 grid, Site Specific Met (2012)	Option P_R2, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:		**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**
ALL	9.44364	10.74366	8.99074	9.62457	9.40688	**10.74366**
B10	0.03908	0.04012	0.04024	0.04071	0.0402	**0.04071**
B32	0.07978	0.0847	0.07868	0.08102	0.08023	**0.0847**
B34	0.05933	0.06748	0.0576	0.06099	0.05966	**0.06748**
B35	0.05924	0.06836	0.05762	0.06181	0.05927	**0.06836**
C79	0.08277	0.10893	0.07708	0.08782	0.08021	**0.10893**
C80	0.07892	0.1091	0.07271	0.08492	0.07221	**0.1091**
B38	7.00207	7.93647	6.64175	7.16243	6.93703	**7.93647**
B24	0.94663	1.05854	0.91869	0.94959	0.98204	**1.05854**
B25	0.85795	0.98808	0.81885	0.85051	0.85959	**0.98808**
B33	0.24981	0.29562	0.23972	0.25766	0.24583	**0.29562**
FURNACE	1.80458	2.04661	1.73754	1.80009	1.84163	**2.04661**
FOREHEAR	7.00207	7.93647	6.64175	7.16243	6.93703	**7.93647**
GENEXHTS	0.63699	0.76057	0.61145	0.66205	0.62822	**0.76057**

Run Description:	Option P_R2, Reg 419 grid, Site Specific Met (2009)	Option P_R2, Reg 419 grid, Site Specific Met (2010)	Option P_R2, Reg 419 grid, Site Specific Met (2011)	Option P_R2, Reg 419 grid, Site Specific Met (2012)	Option P_R2, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
ALL	0.00944364	0.01074366	0.00899074	0.00962457	0.00940688	**0.010744**
B10	0.00003908	0.00004012	0.00004024	0.00004071	0.0000402	**4.07E-05**
B32	0.00007978	0.0000847	0.00007868	0.00008102	0.00008023	**8.47E-05**
B34	0.00005933	0.00006748	0.0000576	0.00006099	0.00005966	**6.75E-05**
B35	0.00005924	0.00006836	0.00005762	0.00006181	0.00005927	**6.84E-05**
C79	0.00008277	0.00010893	0.00007708	0.00008782	0.00008021	**0.000109**
C80	0.00007892	0.0001091	0.00007271	0.00008492	0.00007221	**0.000109**
B38	0.00700207	0.00793647	0.00664175	0.00716243	0.00693703	**0.007936**
B24	0.00094663	0.00105854	0.00091869	0.00094959	0.00098204	**0.001059**
B25	0.00085795	0.00098808	0.00081885	0.00085051	0.00085959	**0.000988**
B33	0.00024981	0.00029562	0.00023972	0.00025766	0.00024583	**0.000296**
FURNACE	0.00180458	0.00204661	0.00173754	0.00180009	0.00184163	**0.002047**
FOREHEAR	0.00700207	0.00793647	0.00664175	0.00716243	0.00693703	**0.007936**
GENEXHTS	0.00063699	0.00076057	0.00061145	0.00066205	0.00062822	**0.000761**

Source Pathway - Source Inputs

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	B10	562030.25	4821525.28	312.00	14.45	6.87E-7	321.90	12.10	1.24
		General Exhaust Above T107B F/H							
POINT	B32	562047.16	4821528.02	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T106							
POINT	B34	562039.70	4821535.65	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T107A F/H							
POINT	B35	562047.03	4821543.82	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above CFM Main Channel							
POINT	C79	562023.15	4821559.58	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust West CFM F/H							
POINT	C80	562028.25	4821564.97	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust East CFM F/H							
POINT	B38	562043.48	4821544.79	312.00	16.46	0.00007	379.00	5.43	0.75
		105 Forehearth Stack							
POINT	B33	562055.21	4821536.35	312.00	14.48	2.36E-6	321.90	12.59	1.22
		Gen Exhaust Above T105							
POINT	B24	562052.59	4821531.65	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							
POINT	B25	562057.67	4821536.90	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

Source Pathway - Source Inputs

Open Pit Sources

No Open Pit Sources Specified

Circular Area Sources

No Circular Area Sources Specified

Polygon Area Sources

No Polygon Area Sources Specified

Flare Sources

No Flare Sources Specified

Line Sources

No Line Sources Specified

Line Volume Sources

No Line Volume Sources Specified

Line Area Sources

No Line Area Sources Specified

 **MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
 -

 **Model Is Setup For Calculation of Average CONCentration Values.

   -- DEPOSITION LOGIC --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION. DRYDPLT = F
 **Model Uses NO WET DEPLETION. WETDPLT = F

 **Model Uses RURAL Dispersion Only.

 **Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. BETA Option for Capped & Horiz Stacks Selected With:

                5 Capped Stack(s); and   0 Horiz Stack(s)

 **Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Accepts FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of: HCR

 **Model Calculates ANNUAL Averages Only

 **This Run Includes: 10 Source(s);   14 Source Group(s); and   2062 Receptor(s)

 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date: 14134

 **Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

 **NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   325.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                  Emission Units = GRAMS/S   ; Emission Rate Unit Factor =   0.10000E+10
                  Output Units   = NANOGRAMS/M3

**Approximate Storage Requirements of Model =   4.5 MB of RAM.

**File for Saving Result Arrays: Ann_Opt_P_R2_Metyr2.sv1
**File for Summary of Results: Ann_Opt_P_R2_Metyr2.sum

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

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

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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
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METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2010   1 1 1
AND END DATE: 2010 12 31 24

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

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

1.54,   3.09,   5.14,   8.23, 10.80,

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

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

Surface file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.SFC   Met Version: 14134
Profile file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   61430   Upper air station no.:   14733
Name: UNKNOWN   Name: BUFFALO/GREATER_BUFFALO_INT'L
Year: 2009   Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	01	1	01	-8.4	0.105	-9.000	-9.000	-999.	81.	11.8	0.57	0.55	1.00	1.50	291.	10.0	258.1	2.0
09	01	01	1	02	-16.5	0.147	-9.000	-9.000	-999.	135.	16.6	0.57	0.55	1.00	2.10	308.	10.0	258.1	2.0
09	01	01	1	03	-8.4	0.105	-9.000	-9.000	-999.	82.	11.8	0.57	0.55	1.00	1.50	294.	10.0	257.5	2.0
09	01	01	1	04	-7.9	0.100	-9.000	-9.000	-999.	76.	11.0	0.50	0.55	1.00	1.50	233.	10.0	255.9	2.0
09	01	01	1	05	-3.5	0.067	-9.000	-9.000	-999.	41.	7.3	0.50	0.55	1.00	1.00	223.	10.0	255.3	2.0

Ann_Opt_P_R2_Metyr2

09	01	01	1	06	-3.2	0.067	-9.000	-9.000	-999.	41.	8.1	0.50	0.55	1.00	1.00	222.	10.0	254.8	2.0
09	01	01	1	07	-9.5	0.113	-9.000	-9.000	-999.	91.	13.2	0.70	0.55	1.00	1.50	145.	10.0	255.9	2.0
09	01	01	1	08	-8.5	0.109	-9.000	-9.000	-999.	86.	13.0	0.63	0.50	1.00	1.50	243.	10.0	257.5	2.0
09	01	01	1	09	-6.0	0.107	-9.000	-9.000	-999.	84.	17.8	0.61	0.95	0.76	1.50	127.	10.0	258.1	2.0
09	01	01	1	10	-1.6	0.057	-9.000	-9.000	-999.	33.	9.9	0.30	0.95	0.66	1.00	121.	10.0	263.8	2.0
09	01	01	1	11	13.2	0.424	0.253	0.009	42.	662.	-499.8	0.50	0.55	0.54	3.10	224.	10.0	264.2	2.0
09	01	01	1	12	19.8	0.428	0.402	0.008	114.	671.	-342.9	0.50	0.55	0.51	3.10	196.	10.0	265.4	2.0
09	01	01	1	13	22.9	0.367	0.559	0.011	265.	536.	-187.8	0.50	0.55	0.51	2.60	203.	10.0	265.4	2.0
09	01	01	1	14	2.1	0.468	0.256	0.007	275.	768.	-4237.3	0.70	0.55	0.48	3.10	179.	10.0	265.9	2.0
09	01	01	1	15	-4.6	0.538	-9.000	-9.000	-999.	946.	2954.8	0.70	0.55	0.51	3.60	162.	10.0	265.4	2.0
09	01	01	1	16	-20.2	0.526	-9.000	-9.000	-999.	915.	625.4	0.70	0.55	0.59	3.60	164.	10.0	265.9	2.0
09	01	01	1	17	-33.2	0.401	-9.000	-9.000	-999.	622.	168.7	0.61	0.95	0.82	3.10	141.	10.0	265.9	2.0
09	01	01	1	18	-28.3	0.491	-9.000	-9.000	-999.	824.	362.7	0.61	0.95	1.00	3.60	137.	10.0	265.9	2.0
09	01	01	1	19	-53.3	0.464	-9.000	-9.000	-999.	760.	163.0	0.61	0.95	1.00	3.60	134.	10.0	265.9	2.0
09	01	01	1	20	-60.2	0.545	-9.000	-9.000	-999.	964.	233.5	0.61	0.95	1.00	4.10	127.	10.0	265.4	2.0
09	01	01	1	21	-44.8	0.474	-9.000	-9.000	-999.	788.	206.2	0.61	0.95	1.00	3.60	130.	10.0	265.9	2.0
09	01	01	1	22	-61.4	0.544	-9.000	-9.000	-999.	961.	227.6	0.61	0.95	1.00	4.10	132.	10.0	266.4	2.0
09	01	01	1	23	-53.4	0.464	-9.000	-9.000	-999.	764.	162.3	0.61	0.95	1.00	3.60	140.	10.0	266.4	2.0
09	01	01	1	24	-21.2	0.225	-9.000	-9.000	-999.	318.	46.9	0.70	0.55	1.00	2.10	160.	10.0	267.0	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	291.	1.50	258.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
FURNACE	1ST HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	1.43889 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	1.32402 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	1.27844 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.97929 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
FOREHEAR	1ST HIGHEST VALUE IS	7.93647 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	7.93647 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	6.81793 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	6.81793 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	5.98718 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	

	6TH HIGHEST VALUE IS	5.98718	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	5.46552	AT	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	5.34086	AT	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	4.80684	AT	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	3.95356	AT	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
GENEXHTS	1ST HIGHEST VALUE IS	0.76057	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.76057	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.65066	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.65066	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.60741	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.60741	AT	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.54638	AT	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.51083	AT	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.44607	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.44607	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
B10	1ST HIGHEST VALUE IS	0.04012	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.04012	AT	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.02875	AT	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	4TH HIGHEST VALUE IS	0.02875	AT	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	5TH HIGHEST VALUE IS	0.02713	AT	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	6TH HIGHEST VALUE IS	0.02713	AT	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	7TH HIGHEST VALUE IS	0.02679	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.02679	AT	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.02637	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02637	AT	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B24	1ST HIGHEST VALUE IS 1.05854 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 1.05854 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.92257 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 0.92257 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	5TH HIGHEST VALUE IS 0.85389 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	6TH HIGHEST VALUE IS 0.85389 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	7TH HIGHEST VALUE IS 0.72997 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	8TH HIGHEST VALUE IS 0.69230 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)		DC	
	9TH HIGHEST VALUE IS 0.63497 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	10TH HIGHEST VALUE IS 0.52969 AT (562077.84, 4821540.29, 311.01, 311.01, 0.00)		DC	
B25	1ST HIGHEST VALUE IS 0.98808 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.98808 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.80177 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 0.80177 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	

	5TH HIGHEST VALUE IS	0.79658 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.79658 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.70892 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.68905 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.58614 AT	(562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.50560 AT	(562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
B32	1ST HIGHEST VALUE IS	0.08470 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.08470 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.07642 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.07642 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.06892 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.06892 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.06327 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.06327 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.04438 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.04392 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
B33	1ST HIGHEST VALUE IS	0.29562 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.29562 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.25393 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.25393 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.23387 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.23387 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.20783 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.18964 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.16851 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.16851 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC	

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B34	1ST HIGHEST VALUE IS	0.06748 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.06748 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.05800 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.05800 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.05603 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.05603 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.04644 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.04644 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.04229 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.04150 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
B35	1ST HIGHEST VALUE IS	0.06836 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.06836 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.05709 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	4TH HIGHEST VALUE IS	0.05709 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05418 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.04574 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.04462 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04101 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.03141 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B38	1ST HIGHEST VALUE IS	7.93647 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	7.93647 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	6.81793 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	6.81793 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	5.98718 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	5.98718 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	5.46552 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	5.34086 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	4.80684 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	3.95356 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
C79	1ST HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.09493 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08665 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06501 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06296 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
C80	1ST HIGHEST VALUE IS 0.10910 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.10910 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.10763 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 0.10032 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	5TH HIGHEST VALUE IS 0.10032 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	6TH HIGHEST VALUE IS 0.08681 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	7TH HIGHEST VALUE IS 0.07391 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	8TH HIGHEST VALUE IS 0.07391 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	9TH HIGHEST VALUE IS 0.06977 AT (562085.76, 4821492.01, 310.52, 310.52, 0.00)		DC	
	10TH HIGHEST VALUE IS 0.06310 AT (562056.81, 4821505.08, 310.84, 310.84, 0.00)		DC	
ALL	1ST HIGHEST VALUE IS 10.74366 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 10.74366 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	

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         3RD HIGHEST VALUE IS       9.14968 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         4TH HIGHEST VALUE IS       9.14968 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         5TH HIGHEST VALUE IS       8.28830 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         6TH HIGHEST VALUE IS       8.28830 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         7TH HIGHEST VALUE IS       7.32613 AT (  562065.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         8TH HIGHEST VALUE IS       7.30037 AT (  562085.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         9TH HIGHEST VALUE IS       6.49330 AT (  562085.76,  4821532.01,   311.00,   311.00,    0.00)  DC
        10TH HIGHEST VALUE IS       5.20929 AT (  562077.84,  4821540.29,   311.01,   311.01,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀*** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                  ***        02/27/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_P_R2_Metyr2                                               ***       14:55:42
                                                                                                                 PAGE   8
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

 *** Message Summary : AERMOD Model Execution ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of            3 Informational Message(s)

 A Total of         8760 Hours Were Processed

 A Total of            3 Calm Hours Identified

 A Total of            0 Missing Hours Identified (  0.00 Percent)


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


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

Scenario: T_R1

Emission Rate Calculations for Modeling

							before RC	after RC	before RC	After RC-CFM only								
		Source	B01	B24	B25	B11current	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	Total
		Type	Furnace	Furnace	Furnace	FH	FH	FH	FH	RE1	RE2	RE2	RE1	RE2	RE2	RE1	RE1	
		Current Base Case Emission Rate (g/s)	3.55E-05			1.51E-04		3.32E-05		2.05E-06	2.39E-06	2.39E-06		2.39E-06	2.39E-06	2.04E-06	2.04E-06	2.35E-04
Uncertainty =	1.15	2016 Base RC Emission Rate (g/s) with Uncertainty Factor applied		2.04E-05	2.04E-05		8.66E-05		3.82E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.78E-04
Combination ID	Option Description		B01	B24	B25	B11	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	
T	Facility reconfiguration + incorporating more accurate combustion control skids and construction of front end superstructures (14)	Description of Reduction Component							Partial Prototype									
		Individual Reduction Description							14		Result of 14	Result of 14		Result of 14	Result of 14			
		Reduction Efficiency		0%	0%				50%	0%	50%	50%	0%	50%	50%	0%	0%	
		Additional Reduction Efficiency																
		Comments	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	TotalER (g/s)
		RC+14		2.04E-05	2.04E-05				8.15E-05		6.87E-07	6.87E-07	2.36E-06	6.87E-07	6.87E-07	2.34E-06	2.34E-06	1.32E-04
	Explanation of calculation for B38 :	The 50% reduction efficiency for control option #14 only applies to the B11 reconfigured emission rate, not the B38 current emission rate since the technology already exists on that portion of CFM forehearth.																

Annual Hexavalent Chromium Results
Technical Benchmarking Option T - 5 year data set

Run (tab) Name:	Ann_Opt_T_R1_Metyr1	Ann_Opt_T_R1_Metyr2	Ann_Opt_T_R1_Metyr3	Ann_Opt_T_R1_Metyr4	Ann_Opt_T_R1_Metyr5	
Run Description:	Option T_R1, Reg 419 grid, Site Specific Met (2009)	Option T_R1, Reg 419 grid, Site Specific Met (2010)	Option T_R1, Reg 419 grid, Site Specific Met (2011)	Option T_R1, Reg 419 grid, Site Specific Met (2012)	Option T_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:		**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**
ALL	11.19417	12.72779	10.65119	11.41519	11.14115	**12.72779**
B10	0.03908	0.04012	0.04024	0.04071	0.0402	**0.04071**
B32	0.07978	0.0847	0.07868	0.08102	0.08023	**0.0847**
B34	0.05933	0.06748	0.0576	0.06099	0.05966	**0.06748**
B35	0.05924	0.06836	0.05762	0.06181	0.05927	**0.06836**
C79	0.08277	0.10893	0.07708	0.08782	0.08021	**0.10893**
C80	0.07892	0.1091	0.07271	0.08492	0.07221	**0.1091**
B38	8.7526	9.92061	8.3022	8.95305	8.67129	**9.92061**
B24	0.94663	1.05854	0.91869	0.94959	0.98204	**1.05854**
B25	0.85795	0.98808	0.81885	0.85051	0.85959	**0.98808**
B33	0.24981	0.29562	0.23972	0.25766	0.24583	**0.29562**
FURNACE	1.80458	2.04661	1.73754	1.80009	1.84163	**2.04661**
FOREHEAR	8.7526	9.92061	8.3022	8.95305	8.67129	**9.92061**
GENEXHTS	0.63699	0.76057	0.61145	0.66205	0.62822	**0.76057**

Run Description:	Option T_R1, Reg 419 grid, Site Specific Met (2009)	Option T_R1, Reg 419 grid, Site Specific Met (2010)	Option T_R1, Reg 419 grid, Site Specific Met (2011)	Option T_R1, Reg 419 grid, Site Specific Met (2012)	Option T_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
ALL	0.01119417	0.01272779	0.01065119	0.01141519	0.01114115	**0.012728**
B10	0.00003908	0.00004012	0.00004024	0.00004071	0.0000402	**4.07E-05**
B32	0.00007978	0.0000847	0.00007868	0.00008102	0.00008023	**8.47E-05**
B34	0.00005933	0.00006748	0.0000576	0.00006099	0.00005966	**6.75E-05**
B35	0.00005924	0.00006836	0.00005762	0.00006181	0.00005927	**6.84E-05**
C79	0.00008277	0.00010893	0.00007708	0.00008782	0.00008021	**0.000109**
C80	0.00007892	0.0001091	0.00007271	0.00008492	0.00007221	**0.000109**
B38	0.0087526	0.00992061	0.0083022	0.00895305	0.00867129	**0.009921**
B24	0.00094663	0.00105854	0.00091869	0.00094959	0.00098204	**0.001059**
B25	0.00085795	0.00098808	0.00081885	0.00085051	0.00085959	**0.000988**
B33	0.00024981	0.00029562	0.00023972	0.00025766	0.00024583	**0.000296**
FURNACE	0.00180458	0.00204661	0.00173754	0.00180009	0.00184163	**0.002047**
FOREHEAR	0.0087526	0.00992061	0.0083022	0.00895305	0.00867129	**0.009921**
GENEXHTS	0.00063699	0.00076057	0.00061145	0.00066205	0.00062822	**0.000761**

Source Pathway - Source Inputs

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	B10	562030.25	4821525.28	312.00	14.45	6.87E-7	321.90	12.10	1.24
		General Exhaust Above T107B F/H							
POINT	B32	562047.16	4821528.02	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T106							
POINT	B34	562039.70	4821535.65	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above T107A F/H							
POINT	B35	562047.03	4821543.82	312.00	14.48	6.87E-7	321.90	19.19	1.24
		General Exhaust Above CFM Main Channel							
POINT	C79	562023.15	4821559.58	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust West CFM F/H							
POINT	C80	562028.25	4821564.97	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust East CFM F/H							
POINT	B38	562043.48	4821544.79	312.00	16.46	0.00008	379.00	5.43	0.75
		105 Forehearth Stack							
POINT	B33	562055.21	4821536.35	312.00	14.48	2.36E-6	321.90	12.59	1.22
		Gen Exhaust Above T105							
POINT	B24	562052.59	4821531.65	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							
POINT	B25	562057.67	4821536.90	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

Source Pathway - Source Inputs

Open Pit Sources

No Open Pit Sources Specified

Circular Area Sources

No Circular Area Sources Specified

Polygon Area Sources

No Polygon Area Sources Specified

Flare Sources

No Flare Sources Specified

Line Sources

No Line Sources Specified

Line Volume Sources

No Line Volume Sources Specified

Line Area Sources

No Line Area Sources Specified

♀ *** AERMOD - VERSION 14134 ***   *** OC Guelph Project 144539 - Site Specific Standard *** 02/27/15
*** AERMET - VERSION 14134 ***   *** Ann_Opt_T_R1_Metyr2 *** 15:51:18

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

***   MODEL SETUP OPTIONS SUMMARY   ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. BETA Option for Capped & Horiz Stacks Selected With:

                5 Capped Stack(s); and   0 Horiz Stack(s)

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: HCR

**Model Calculates ANNUAL Averages Only

**This Run Includes: 10 Source(s);   14 Source Group(s); and   2062 Receptor(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   325.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/S   ; Emission Rate Unit Factor =   0.10000E+10
                 Output Units   = NANOGRAMS/M3

**Approximate Storage Requirements of Model = 4.5 MB of RAM.

**File for Saving Result Arrays: Ann_Opt_T_R1_Metyr2.sv1
**File for Summary of Results: Ann_Opt_T_R1_Metyr2.sum

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

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

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

METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2010 1 1 1
AND END DATE: 2010 12 31 24

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

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

1.54, 3.09, 5.14, 8.23, 10.80,

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

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

Surface file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.SFC Met Version: 14134
Profile file: E:_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 61430 Upper air station no.: 14733
Name: UNKNOWN Name: BUFFALO/GREATER_BUFFALO_INT'L
Year: 2009 Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	01	1	01	-8.4	0.105	-9.000	-9.000	-999.	81.	11.8	0.57	0.55	1.00	1.50	291.	10.0	258.1	2.0
09	01	01	1	02	-16.5	0.147	-9.000	-9.000	-999.	135.	16.6	0.57	0.55	1.00	2.10	308.	10.0	258.1	2.0
09	01	01	1	03	-8.4	0.105	-9.000	-9.000	-999.	82.	11.8	0.57	0.55	1.00	1.50	294.	10.0	257.5	2.0
09	01	01	1	04	-7.9	0.100	-9.000	-9.000	-999.	76.	11.0	0.50	0.55	1.00	1.50	233.	10.0	255.9	2.0
09	01	01	1	05	-3.5	0.067	-9.000	-9.000	-999.	41.	7.3	0.50	0.55	1.00	1.00	223.	10.0	255.3	2.0

Ann_Opt_T_R1_Metyr2

09	01	01	1	06	-3.2	0.067	-9.000	-9.000	-999.	41.	8.1	0.50	0.55	1.00	1.00	222.	10.0	254.8	2.0
09	01	01	1	07	-9.5	0.113	-9.000	-9.000	-999.	91.	13.2	0.70	0.55	1.00	1.50	145.	10.0	255.9	2.0
09	01	01	1	08	-8.5	0.109	-9.000	-9.000	-999.	86.	13.0	0.63	0.50	1.00	1.50	243.	10.0	257.5	2.0
09	01	01	1	09	-6.0	0.107	-9.000	-9.000	-999.	84.	17.8	0.61	0.95	0.76	1.50	127.	10.0	258.1	2.0
09	01	01	1	10	-1.6	0.057	-9.000	-9.000	-999.	33.	9.9	0.30	0.95	0.66	1.00	121.	10.0	263.8	2.0
09	01	01	1	11	13.2	0.424	0.253	0.009	42.	662.	-499.8	0.50	0.55	0.54	3.10	224.	10.0	264.2	2.0
09	01	01	1	12	19.8	0.428	0.402	0.008	114.	671.	-342.9	0.50	0.55	0.51	3.10	196.	10.0	265.4	2.0
09	01	01	1	13	22.9	0.367	0.559	0.011	265.	536.	-187.8	0.50	0.55	0.51	2.60	203.	10.0	265.4	2.0
09	01	01	1	14	2.1	0.468	0.256	0.007	275.	768.	-4237.3	0.70	0.55	0.48	3.10	179.	10.0	265.9	2.0
09	01	01	1	15	-4.6	0.538	-9.000	-9.000	-999.	946.	2954.8	0.70	0.55	0.51	3.60	162.	10.0	265.4	2.0
09	01	01	1	16	-20.2	0.526	-9.000	-9.000	-999.	915.	625.4	0.70	0.55	0.59	3.60	164.	10.0	265.9	2.0
09	01	01	1	17	-33.2	0.401	-9.000	-9.000	-999.	622.	168.7	0.61	0.95	0.82	3.10	141.	10.0	265.9	2.0
09	01	01	1	18	-28.3	0.491	-9.000	-9.000	-999.	824.	362.7	0.61	0.95	1.00	3.60	137.	10.0	265.9	2.0
09	01	01	1	19	-53.3	0.464	-9.000	-9.000	-999.	760.	163.0	0.61	0.95	1.00	3.60	134.	10.0	265.9	2.0
09	01	01	1	20	-60.2	0.545	-9.000	-9.000	-999.	964.	233.5	0.61	0.95	1.00	4.10	127.	10.0	265.4	2.0
09	01	01	1	21	-44.8	0.474	-9.000	-9.000	-999.	788.	206.2	0.61	0.95	1.00	3.60	130.	10.0	265.9	2.0
09	01	01	1	22	-61.4	0.544	-9.000	-9.000	-999.	961.	227.6	0.61	0.95	1.00	4.10	132.	10.0	266.4	2.0
09	01	01	1	23	-53.4	0.464	-9.000	-9.000	-999.	764.	162.3	0.61	0.95	1.00	3.60	140.	10.0	266.4	2.0
09	01	01	1	24	-21.2	0.225	-9.000	-9.000	-999.	318.	46.9	0.70	0.55	1.00	2.10	160.	10.0	267.0	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	291.	1.50	258.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
FURNACE	1ST HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	1.43889 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	1.32402 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	1.27844 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.97929 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
FOREHEAR	1ST HIGHEST VALUE IS	9.92061 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	9.92061 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	8.52243 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	8.52243 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	7.48399 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	

	6TH HIGHEST VALUE IS	7.48399 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	6.83191 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	6.67609 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	6.00856 AT	(562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	4.94195 AT	(562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
GENEXHTS	1ST HIGHEST VALUE IS	0.76057 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.76057 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.65066 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.65066 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.60741 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.60741 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.54638 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.51083 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.44607 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.44607 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
B10	1ST HIGHEST VALUE IS	0.04012 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.04012 AT	(562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.02875 AT	(562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	4TH HIGHEST VALUE IS	0.02875 AT	(562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	5TH HIGHEST VALUE IS	0.02713 AT	(562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	6TH HIGHEST VALUE IS	0.02713 AT	(562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	7TH HIGHEST VALUE IS	0.02679 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.02679 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.02637 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.02637 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B24	1ST HIGHEST VALUE IS 1.05854 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 1.05854 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.92257 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.92257 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS 0.85389 AT	(562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS 0.85389 AT	(562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS 0.72997 AT	(562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS 0.69230 AT	(562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS 0.63497 AT	(562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS 0.52969 AT	(562077.84, 4821540.29, 311.01, 311.01, 0.00)	DC	
B25	1ST HIGHEST VALUE IS 0.98808 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 0.98808 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.80177 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.80177 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	5TH HIGHEST VALUE IS	0.79658 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.79658 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.70892 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.68905 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.58614 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.50560 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B32	1ST HIGHEST VALUE IS	0.08470 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.08470 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.07642 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.07642 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.06892 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.06892 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.06327 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.06327 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04438 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.04392 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B33	1ST HIGHEST VALUE IS	0.29562 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.29562 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.25393 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.25393 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.23387 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.23387 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.20783 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.18964 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.16851 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.16851 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B34	1ST HIGHEST VALUE IS	0.06748 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.06748 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.05800 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.05800 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.05603 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.05603 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.04644 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.04644 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.04229 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.04150 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
B35	1ST HIGHEST VALUE IS	0.06836 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.06836 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.05709 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	4TH HIGHEST VALUE IS	0.05709 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05418 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05418 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.04574 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.04462 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.04101 AT	(562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.03141 AT	(562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B38	1ST HIGHEST VALUE IS	9.92061 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	9.92061 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	8.52243 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	8.52243 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	7.48399 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	7.48399 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	6.83191 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	6.67609 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	6.00856 AT	(562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	4.94195 AT	(562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
C79	1ST HIGHEST VALUE IS	0.10893 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10893 AT	(562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.09493 AT	(562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.09149 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.09149 AT	(562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08665 AT	(562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.08102 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08102 AT	(562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06501 AT	(562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06296 AT	(562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
C80	1ST HIGHEST VALUE IS 0.10910 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 0.10910 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.10763 AT	(562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.10032 AT	(562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS 0.10032 AT	(562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS 0.08681 AT	(562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS 0.07391 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS 0.07391 AT	(562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS 0.06977 AT	(562085.76, 4821492.01, 310.52, 310.52, 0.00)	DC	
	10TH HIGHEST VALUE IS 0.06310 AT	(562056.81, 4821505.08, 310.84, 310.84, 0.00)	DC	
ALL	1ST HIGHEST VALUE IS 12.72779 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 12.72779 AT	(562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	

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         3RD HIGHEST VALUE IS      10.85417 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         4TH HIGHEST VALUE IS      10.85417 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         5TH HIGHEST VALUE IS       9.78510 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         6TH HIGHEST VALUE IS       9.78510 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         7TH HIGHEST VALUE IS       8.66676 AT (  562085.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         8TH HIGHEST VALUE IS       8.66135 AT (  562065.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         9TH HIGHEST VALUE IS       7.69502 AT (  562085.76,  4821532.01,   311.00,   311.00,    0.00)  DC
        10TH HIGHEST VALUE IS       6.19769 AT (  562077.84,  4821540.29,   311.01,   311.01,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀*** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                  ***        02/27/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_T_R1_Metyr2                                               ***       15:51:18
                                                                                                                 PAGE   8
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

 *** Message Summary : AERMOD Model Execution ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of            3 Informational Message(s)

 A Total of         8760 Hours Were Processed

 A Total of            3 Calm Hours Identified

 A Total of            0 Missing Hours Identified (  0.00 Percent)


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


    ********   WARNING MESSAGES   ********
              ***  NONE  ***
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Scenario: W_R2

Emission Rate Calculations for Modeling

						before RC	after RC	before RC	After RC-CFM only									
		Source	B01	B24	B25	B11current	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	Total
		Type	Furnace	Furnace	Furnace	FH	FH	FH	FH	RE1	RE2	RE2	RE1	RE2	RE2	RE1	RE1	
		Current Base Case Emission Rate (g/s)	3.55E-05			1.51E-04		3.32E-05		2.05E-06	2.39E-06	2.39E-06		2.39E-06	2.39E-06	2.04E-06	2.04E-06	2.35E-04
Uncertainty =	1.15	2016 Base RC Emission Rate (g/s) with Uncertainty Factor applied		2.04E-05	2.04E-05		8.66E-05		3.82E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.78E-04
Combination ID	Option Description		B01	B24	B25	B11	B11	B38current	B38	B08	B10	B32	B33	B34	B35	C79	C80	
W_R1	Facility reconfiguration + Scrubber system on forehearth stack (6,7,8, or 9)	Description of Reduction Component							Scrubber									
		Individual Reduction Description							(6,7,8 or 9)									
		Reduction Efficiency							20%	0%	0%	0%	0%	0%	0%	0%	0%	
		Additional Reduction Efficiency																
		Comments	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	Source ER (g/s)	TotalER (g/s)
		RC+(6,7,8 or 9)		2.04E-05	2.04E-05				9.98E-05		1.37E-06	1.37E-06	2.36E-06	1.37E-06	1.37E-06	2.34E-06	2.34E-06	1.53E-04

Annual Hexavalent Chromium Results
Technical Benchmarking Option W - 5 year data set

Run (tab) Name:	Ann_Opt_W_R1_Metyr1	Ann_Opt_W_R1_Metyr2	Ann_Opt_W_R1_Metyr3	Ann_Opt_W_R1_Metyr4	Ann_Opt_W_R1_Metyr5	
Run Description:	Option W_R1, Reg 419 grid, Site Specific Met (2009)	Option W_R1, Reg 419 grid, Site Specific Met (2010)	Option W_R1, Reg 419 grid, Site Specific Met (2011)	Option W_R1, Reg 419 grid, Site Specific Met (2012)	Option W_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:		**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**	**ng/m3**
ALL	3.47727	3.90482	3.47507	3.60993	3.78339	**3.90482**
B10	0.07817	0.08024	0.08048	0.08142	0.0804	**0.08142**
B32	0.15957	0.16941	0.15737	0.16204	0.16045	**0.16941**
B34	0.11866	0.13496	0.11519	0.12199	0.11932	**0.13496**
B35	0.11847	0.13671	0.11524	0.12361	0.11854	**0.13671**
C79	0.08277	0.10893	0.07708	0.08782	0.08021	**0.10893**
C80	0.07892	0.1091	0.07271	0.08492	0.07221	**0.1091**
B38	2.43431	2.67592	2.46526	2.63821	2.79467	**2.79467**
B24	0.23591	0.23253	0.24181	0.22825	0.25149	**0.25149**
B25	0.16159	0.17259	0.16251	0.15383	0.1691	**0.17259**
B33	0.08734	0.11193	0.07987	0.08701	0.08128	**0.11193**
FURNACE	0.3975	0.40512	0.40432	0.38208	0.42059	**0.42059**
FOREHEAR	2.43431	2.67592	2.46526	2.63821	2.79467	**2.79467**
GENEXHTS	0.70001	0.82378	0.67353	0.72305	0.69364	**0.82378**

Run Description:	Option W_R1, Reg 419 grid, Site Specific Met (2009)	Option W_R1, Reg 419 grid, Site Specific Met (2010)	Option W_R1, Reg 419 grid, Site Specific Met (2011)	Option W_R1, Reg 419 grid, Site Specific Met (2012)	Option W_R1, Reg 419 grid, Site Specific Met (2013)	**MAX**
Result Units:	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
ALL	0.00347727	0.00390482	0.00347507	0.00360993	0.00378339	**0.003905**
B10	0.00007817	0.00008024	0.00008048	0.00008142	0.0000804	**8.14E-05**
B32	0.00015957	0.00016941	0.00015737	0.00016204	0.00016045	**0.000169**
B34	0.00011866	0.00013496	0.00011519	0.00012199	0.00011932	**0.000135**
B35	0.00011847	0.00013671	0.00011524	0.00012361	0.00011854	**0.000137**
C79	0.00008277	0.00010893	0.00007708	0.00008782	0.00008021	**0.000109**
C80	0.00007892	0.0001091	0.00007271	0.00008492	0.00007221	**0.000109**
B38	0.00243431	0.00267592	0.00246526	0.00263821	0.00279467	**0.002795**
B24	0.00023591	0.00023253	0.00024181	0.00022825	0.00025149	**0.000251**
B25	0.00016159	0.00017259	0.00016251	0.00015383	0.0001691	**0.000173**
B33	0.00008734	0.00011193	0.00007987	0.00008701	0.00008128	**0.000112**
FURNACE	0.0003975	0.00040512	0.00040432	0.00038208	0.00042059	**0.000421**
FOREHEAR	0.00243431	0.00267592	0.00246526	0.00263821	0.00279467	**0.002795**
GENEXHTS	0.00070001	0.00082378	0.00067353	0.00072305	0.00069364	**0.000824**

Source Pathway - Source Inputs

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	B10	562030.25	4821525.28	312.00	14.45	1.37E-6	321.90	12.10	1.24
		General Exhaust Above T107B F/H							
POINT	B32	562047.16	4821528.02	312.00	14.48	1.37E-6	321.90	19.19	1.24
		General Exhaust Above T106							
POINT	B34	562039.70	4821535.65	312.00	14.48	1.37E-6	321.90	19.19	1.24
		General Exhaust Above T107A F/H							
POINT	B35	562047.03	4821543.82	312.00	14.48	1.37E-6	321.90	19.19	1.24
		General Exhaust Above CFM Main Channel							
POINT	C79	562023.15	4821559.58	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust West CFM F/H							
POINT	C80	562028.25	4821564.97	312.00	11.64	2.34E-6	310.80	9.59	1.41
		General Exhaust East CFM F/H							
POINT	B38	562043.48	4821544.79	312.00	16.46	0.00010	379.00	5.43	0.75
		105 Forehearth Stack							
POINT	B33	562055.21	4821536.35	312.00	14.48	2.36E-6	321.90	12.59	1.22
		Gen Exhaust Above T105							
POINT	B24	562052.59	4821531.65	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							
POINT	B25	562057.67	4821536.90	312.00	27.77	0.00002	597.00	5.89	0.53
		105 Furnace Stack							

Volume Sources

No Volume Sources Specified

Area Sources

No Area Sources Specified

Source Pathway - Source Inputs

Open Pit Sources

No Open Pit Sources Specified

Circular Area Sources

No Circular Area Sources Specified

Polygon Area Sources

No Polygon Area Sources Specified

Flare Sources

No Flare Sources Specified

Line Sources

No Line Sources Specified

Line Volume Sources

No Line Volume Sources Specified

Line Area Sources

No Line Area Sources Specified

♀ *** AERMOD - VERSION 14134 ***   *** OC Guelph Project 144539 - Site Specific Standard *** 02/28/15
*** AERMET - VERSION 14134 ***   *** Ann_Opt_W_R2_Metyr2 *** 06:33:23

**MODELOPTs: NonDFAULT CONC   ELEV   FLGPOL   BETA

***   MODEL SETUP OPTIONS SUMMARY   ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. BETA Option for Capped & Horiz Stacks Selected With:

                5 Capped Stack(s); and   0 Horiz Stack(s)

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: HCR

**Model Calculates ANNUAL Averages Only

**This Run Includes: 10 Source(s);   14 Source Group(s); and   2062 Receptor(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   325.00 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
                 Emission Units = GRAMS/S   ; Emission Rate Unit Factor =   0.10000E+10
                 Output Units   = NANOGRAMS/M3

```
**Approximate Storage Requirements of Model =      4.5 MB of RAM.

**File for Saving Result Arrays: Ann_Opt_W_R2_Metyr2.sv1
**File for Summary of Results:   Ann_Opt_W_R2_Metyr2.sum
*** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                 ***        02/28/15
*** AERMET - VERSION  14134 ***   *** Ann_Opt_W_R2_Metyr2                                               ***        06:33:23
                                                                                                                   PAGE   2
**MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

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

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

                      METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2010   1  1  1
                                                          AND END DATE: 2010  12 31 24

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



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

                                                 1.54,   3.09,   5.14,   8.23,  10.80,
*** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                 ***        02/28/15
*** AERMET - VERSION  14134 ***   *** Ann_Opt_W_R2_Metyr2                                               ***        06:33:23
                                                                                                                   PAGE   3
**MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

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

  Surface file:   E:\_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.SFC          Met Version:  14134
  Profile file:   E:\_Site Specific Met\OCGuelph_ONLY\V14134\OwensCorning-Guelph-v14134.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:    61430                  Upper air station no.:    14733
                 Name: UNKNOWN                                    Name: BUFFALO/GREATER_BUFFALO_INT'L
                 Year:   2009                                     Year:   2009

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 09 01 01   1 01   -8.4  0.105 -9.000 -9.000 -999.   81.     11.8  0.57   0.55   1.00    1.50  291.   10.0  258.1    2.0
 09 01 01   1 02  -16.5  0.147 -9.000 -9.000 -999.  135.     16.6  0.57   0.55   1.00    2.10  308.   10.0  258.1    2.0
 09 01 01   1 03   -8.4  0.105 -9.000 -9.000 -999.   82.     11.8  0.57   0.55   1.00    1.50  294.   10.0  257.5    2.0
 09 01 01   1 04   -7.9  0.100 -9.000 -9.000 -999.   76.     11.0  0.50   0.55   1.00    1.50  233.   10.0  255.9    2.0
 09 01 01   1 05   -3.5  0.067 -9.000 -9.000 -999.   41.      7.3  0.50   0.55   1.00    1.00  223.   10.0  255.3    2.0
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Ann_Opt_W_R2_Metyr2

09	01	01	1	06	-3.2	0.067	-9.000	-9.000	-999.	41.	8.1	0.50	0.55	1.00	1.00	222.	10.0	254.8	2.0
09	01	01	1	07	-9.5	0.113	-9.000	-9.000	-999.	91.	13.2	0.70	0.55	1.00	1.50	145.	10.0	255.9	2.0
09	01	01	1	08	-8.5	0.109	-9.000	-9.000	-999.	86.	13.0	0.63	0.50	1.00	1.50	243.	10.0	257.5	2.0
09	01	01	1	09	-6.0	0.107	-9.000	-9.000	-999.	84.	17.8	0.61	0.95	0.76	1.50	127.	10.0	258.1	2.0
09	01	01	1	10	-1.6	0.057	-9.000	-9.000	-999.	33.	9.9	0.30	0.95	0.66	1.00	121.	10.0	263.8	2.0
09	01	01	1	11	13.2	0.424	0.253	0.009	42.	662.	-499.8	0.50	0.55	0.54	3.10	224.	10.0	264.2	2.0
09	01	01	1	12	19.8	0.428	0.402	0.008	114.	671.	-342.9	0.50	0.55	0.51	3.10	196.	10.0	265.4	2.0
09	01	01	1	13	22.9	0.367	0.559	0.011	265.	536.	-187.8	0.50	0.55	0.51	2.60	203.	10.0	265.4	2.0
09	01	01	1	14	2.1	0.468	0.256	0.007	275.	768.	-4237.3	0.70	0.55	0.48	3.10	179.	10.0	265.9	2.0
09	01	01	1	15	-4.6	0.538	-9.000	-9.000	-999.	946.	2954.8	0.70	0.55	0.51	3.60	162.	10.0	265.4	2.0
09	01	01	1	16	-20.2	0.526	-9.000	-9.000	-999.	915.	625.4	0.70	0.55	0.59	3.60	164.	10.0	265.9	2.0
09	01	01	1	17	-33.2	0.401	-9.000	-9.000	-999.	622.	168.7	0.61	0.95	0.82	3.10	141.	10.0	265.9	2.0
09	01	01	1	18	-28.3	0.491	-9.000	-9.000	-999.	824.	362.7	0.61	0.95	1.00	3.60	137.	10.0	265.9	2.0
09	01	01	1	19	-53.3	0.464	-9.000	-9.000	-999.	760.	163.0	0.61	0.95	1.00	3.60	134.	10.0	265.9	2.0
09	01	01	1	20	-60.2	0.545	-9.000	-9.000	-999.	964.	233.5	0.61	0.95	1.00	4.10	127.	10.0	265.4	2.0
09	01	01	1	21	-44.8	0.474	-9.000	-9.000	-999.	788.	206.2	0.61	0.95	1.00	3.60	130.	10.0	265.9	2.0
09	01	01	1	22	-61.4	0.544	-9.000	-9.000	-999.	961.	227.6	0.61	0.95	1.00	4.10	132.	10.0	266.4	2.0
09	01	01	1	23	-53.4	0.464	-9.000	-9.000	-999.	764.	162.3	0.61	0.95	1.00	3.60	140.	10.0	266.4	2.0
09	01	01	1	24	-21.2	0.225	-9.000	-9.000	-999.	318.	46.9	0.70	0.55	1.00	2.10	160.	10.0	267.0	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	291.	1.50	258.2	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
FURNACE	1ST HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	2.04661 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	1.72434 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	1.65046 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	1.43889 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	1.32402 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	1.27844 AT (562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.97929 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)	DC	
FOREHEAR	1ST HIGHEST VALUE IS	12.15557 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	12.15557 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	10.44240 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	10.44240 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	9.17001 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	

	6TH HIGHEST VALUE IS	9.17001 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	8.37103 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	8.18011 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	7.36219 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	6.05530 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
GENEXHTS	1ST HIGHEST VALUE IS	1.00748 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	1.00748 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.86604 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.86604 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.81555 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.81555 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.69066 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.65026 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.62638 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.62638 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
B10	1ST HIGHEST VALUE IS	0.08024 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.08024 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.05750 AT (	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	4TH HIGHEST VALUE IS	0.05750 AT (	562076.93,	4821485.66,	310.19,	310.19,	0.00)	DC
	5TH HIGHEST VALUE IS	0.05426 AT (	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	6TH HIGHEST VALUE IS	0.05426 AT (	562070.22,	4821492.13,	310.40,	310.40,	0.00)	DC
	7TH HIGHEST VALUE IS	0.05358 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.05358 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.05274 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.05274 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B24	1ST HIGHEST VALUE IS 1.05854 AT (	562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 1.05854 AT (	562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.92257 AT (	562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.92257 AT (	562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	5TH HIGHEST VALUE IS 0.85389 AT (	562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	6TH HIGHEST VALUE IS 0.85389 AT (	562057.04, 4821518.74, 311.00, 311.00, 0.00)	DC	
	7TH HIGHEST VALUE IS 0.72997 AT (	562065.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	8TH HIGHEST VALUE IS 0.69230 AT (	562085.76, 4821532.01, 311.00, 311.00, 0.00)	DC	
	9TH HIGHEST VALUE IS 0.63497 AT (	562085.76, 4821512.01, 311.00, 311.00, 0.00)	DC	
	10TH HIGHEST VALUE IS 0.52969 AT (	562077.84, 4821540.29, 311.01, 311.01, 0.00)	DC	
B25	1ST HIGHEST VALUE IS 0.98808 AT (	562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	2ND HIGHEST VALUE IS 0.98808 AT (	562063.97, 4821525.92, 311.00, 311.00, 0.00)	DC	
	3RD HIGHEST VALUE IS 0.80177 AT (	562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	
	4TH HIGHEST VALUE IS 0.80177 AT (	562070.91, 4821533.11, 311.00, 311.00, 0.00)	DC	

	5TH HIGHEST VALUE IS	0.79658 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.79658 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.70892 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.68905 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.58614 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.50560 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B32	1ST HIGHEST VALUE IS	0.16941 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.16941 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.15283 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.15283 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.13784 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.13784 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.12654 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.12654 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.08876 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.08785 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
B33	1ST HIGHEST VALUE IS	0.29562 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.29562 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.25393 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.25393 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.23387 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.23387 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.20783 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.18964 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.16851 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.16851 AT (	562050.10,	4821511.55,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
B34	1ST HIGHEST VALUE IS 0.13496 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.13496 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.11600 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	4TH HIGHEST VALUE IS 0.11600 AT (562057.04, 4821518.74, 311.00, 311.00, 0.00)		DC	
	5TH HIGHEST VALUE IS 0.11206 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	6TH HIGHEST VALUE IS 0.11206 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	
	7TH HIGHEST VALUE IS 0.09289 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)		DC	
	8TH HIGHEST VALUE IS 0.09289 AT (562050.10, 4821511.55, 311.00, 311.00, 0.00)		DC	
	9TH HIGHEST VALUE IS 0.08457 AT (562085.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
	10TH HIGHEST VALUE IS 0.08300 AT (562065.76, 4821512.01, 311.00, 311.00, 0.00)		DC	
B35	1ST HIGHEST VALUE IS 0.13671 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	2ND HIGHEST VALUE IS 0.13671 AT (562063.97, 4821525.92, 311.00, 311.00, 0.00)		DC	
	3RD HIGHEST VALUE IS 0.11417 AT (562070.91, 4821533.11, 311.00, 311.00, 0.00)		DC	

	4TH HIGHEST VALUE IS	0.11417 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.10835 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.10835 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.09148 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08925 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.08202 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06283 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
B38	1ST HIGHEST VALUE IS	12.15557 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	12.15557 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	10.44240 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	10.44240 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	9.17001 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	9.17001 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	8.37103 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	8.18011 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	7.36219 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	6.05530 AT (	562077.84,	4821540.29,	311.01,	311.01,	0.00)	DC
C79	1ST HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10893 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.09493 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.09149 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08665 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.08102 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06501 AT (	562085.76,	4821532.01,	311.00,	311.00,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06296 AT (	562105.76,	4821512.01,	311.00,	311.00,	0.00)	DC

**MODELOPTs: NonDFAULT CONC ELEV FLGPOL BETA

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF HCR IN NANOGRAMS/M3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
C80	1ST HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	0.10910 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	3RD HIGHEST VALUE IS	0.10763 AT (	562065.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	4TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	5TH HIGHEST VALUE IS	0.10032 AT (	562057.04,	4821518.74,	311.00,	311.00,	0.00)	DC
	6TH HIGHEST VALUE IS	0.08681 AT (	562085.76,	4821512.01,	311.00,	311.00,	0.00)	DC
	7TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	8TH HIGHEST VALUE IS	0.07391 AT (	562070.91,	4821533.11,	311.00,	311.00,	0.00)	DC
	9TH HIGHEST VALUE IS	0.06977 AT (	562085.76,	4821492.01,	310.52,	310.52,	0.00)	DC
	10TH HIGHEST VALUE IS	0.06310 AT (	562056.81,	4821505.08,	310.84,	310.84,	0.00)	DC
ALL	1ST HIGHEST VALUE IS	15.20966 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC
	2ND HIGHEST VALUE IS	15.20966 AT (	562063.97,	4821525.92,	311.00,	311.00,	0.00)	DC

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         3RD HIGHEST VALUE IS      12.98229 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         4TH HIGHEST VALUE IS      12.98229 AT (  562070.91,  4821533.11,   311.00,   311.00,    0.00)  DC
         5TH HIGHEST VALUE IS      11.68651 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         6TH HIGHEST VALUE IS      11.68651 AT (  562057.04,  4821518.74,   311.00,   311.00,    0.00)  DC
         7TH HIGHEST VALUE IS      10.34532 AT (  562085.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         8TH HIGHEST VALUE IS      10.30965 AT (  562065.76,  4821512.01,   311.00,   311.00,    0.00)  DC
         9TH HIGHEST VALUE IS       9.19427 AT (  562085.76,  4821532.01,   311.00,   311.00,    0.00)  DC
        10TH HIGHEST VALUE IS       7.43715 AT (  562077.84,  4821540.29,   311.01,   311.01,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀*** AERMOD - VERSION  14134 ***   *** OC Guelph Project 144539 - Site Specific Standard                  ***        02/28/15
 *** AERMET - VERSION  14134 ***   *** Ann_Opt_W_R2_Metyr2                                               ***       06:33:23
                                                                                                                 PAGE   8
 **MODELOPTs:   NonDFAULT CONC      ELEV      FLGPOL    BETA

 *** Message Summary : AERMOD Model Execution ***

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of            3 Informational Message(s)

 A Total of         8760 Hours Were Processed

 A Total of            3 Calm Hours Identified

 A Total of            0 Missing Hours Identified (  0.00 Percent)


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


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