APPENDIX B

Health Risk Screening Results

- INTEROFFICE MEMORANDUM
Revised – April 19, 2007

TO: **Brian Lusher**

Via: **Scott B. Lutz** SB for SBL
Daphne Y. Chong DYC
Glen Long

FROM: **Irma Salinas** IS

SUBJECT: **Results of Health Risk Screening Analysis for Eastshore Energy Center (Hayward, CA), Standby Generator Diesel Engine, and 14 Natural Gas Engines Plant #18041, Application #15195**

Per your request, we have completed a health risk screening analysis for the above referenced permit application. The analysis estimates the incremental health risk resulting from toxic air contaminant (TAC) emissions from operation of a standby generator diesel engine and 14 natural gas engines at this facility. Results from the health risk screening analysis indicate that the maximum cancer risk is estimated at 3.9 in a million. In accordance with the District's Regulation 2-5, this risk level is considered acceptable as the engine meets current TBACT requirements.

EMISSIONS: The emission rates for toxic air contaminants (TAC) were calculated based on the following assumptions:

1. Each IC Engine will operate intermittently (4000 hours per year) at a firing rate of 72.8 MMBTU/hr. There are a total of 14 engines. TAC emissions estimates were made using emission factors from the CARB CATEF database for Natural Gas Fired IC Engines >650 hp, lean-burn engines. The engines will have an abatement efficiency of 40% (Oxidation Catalyst). See Table #1

2. Diesel Engine will operate 50 hours for testing and maintenance purposes, 369 BHP hr,

Source	PM Emission Factor (g/bhp-hr)	Horsepower	Annual Usage (hours/year)	Diesel PM Emissions (lb/year)
S15	0.1118	369	50	4.5434

MODELING: The ISCST3 air dispersion computer model was used to estimate annual average and maximum 1-hour ambient air concentrations. The model was run with Union City (5 year) meteorological data, emission rate scalars to account for operations that occur only during normal working hours and Hayward terrain data. Model runs were made with urban dispersion coefficients. In addition, to be more conservative a gradual plume rise was used. Stack and building parameters for the analysis were based on information provided by the applicant.

HEALTH RISK: Estimates of residential risk assume potential exposure to annual average TAC concentrations occur 24 hours per day, 350 days per year, for a 70-year lifetime. Risk estimates for offsite workers assume potential exposure occurs 8 hours per day, 245 day per year, for 40 years. The estimated health risks for this permit application are presented in the table below.

Sources 1-14 (Natural Gas Engines)

Receptor	Cancer Risk	Non-cancer Hazard Index (HI)	Max. Acute Non-cancer HI
Resident	0.32 in a million	0.005	0.028
Worker	3.54 in a million	0.065	0.066

Source 15 (Diesel Engine)

Receptor	Cancer Risk	Non-cancer Hazard Index (HI)
Resident	0.0113 in a million	0.0000068
Worker	0.63 in a million	0.00045

Sources 1-15 Cumulative at maximum point of impact

Receptor	Cancer Risk	Non-cancer Hazard Index (HI)	Max. Acute Non-cancer HI
Resident	0.3305 in a million	0.0050	0.028
Worker	3.856 in a million	0.06522	0.066

Including the compound Acrolein, the results are as follows:

Sources 1-14 (Natural Gas Engines)

Receptor	Cancer Risk	Non-cancer Hazard Index (HI)	Max. Acute Non-cancer HI
Resident	0.32 in a million	0.008	0.201
Worker	3.54 in a million	0.104	0.470

No Change in the diesel engine

Sources 1-15 Cumulative at maximum point of impact

Receptor	Cancer Risk	Non-cancer Hazard Index (HI)	Max. Acute Non-cancer HI
Resident	0.3305 in a million	0.0080	0.201
Worker	3.856 in a million	0.10422	0.470

Potential hours/yr	8760
Operating hours/yr Maximum	4000

Table #1

SUBSTANCE	MEAN lbs/MMCF	lbs/MMBtu	lbm/hr	lbm/hr after Abatement	g/sec 1 hr max	lbm/yr	lbm/yr after abatement	g/sec - Annual
Ammonia	1.39E+01	1.36E-02	9.91E-01	9.908E-01	1.248E-01	3.96E+03	3963.232	5.700E-02
1,3-Butadiene	3.67E-01	3.60E-04	2.62E-02	1.572E-02	1.980E-03	1.05E+02	62.865	9.042E-04
Acetaldehyde	5.29E-01	5.19E-04	3.78E-02	2.265E-02	2.854E-03	1.51E+02	90.615	1.303E-03
Acrolein	5.90E-02	5.78E-05	4.21E-03	2.527E-03	3.183E-04	1.68E+01	10.106	1.454E-04
Benzene	2.18E-01	2.14E-04	1.56E-02	9.336E-03	1.176E-03	6.22E+01	37.342	5.371E-04
PAHs [as B(a)P]	1.71E-05	1.68E-08	1.22E-06	7.343E-07	9.253E-08	4.90E-03	0.003	4.225E-08
Ethylbenzene	7.11E-02	6.97E-05	5.07E-03	3.045E-03	3.836E-04	2.03E+01	12.179	1.752E-04
Formaldehyde	4.71E+00	4.62E-03	3.36E-01	2.017E-01	2.541E-02	1.34E+03	806.795	1.160E-02
Naphthalene	2.51E-02	2.46E-05	1.79E-03	1.075E-03	1.354E-04	7.17E+00	4.299	6.184E-05
Propylene	5.38E+00	5.27E-03	3.84E-01	2.304E-01	2.903E-02	1.54E+03	921.562	1.326E-02
Toluene	2.39E-01	2.34E-04	1.71E-02	1.023E-02	1.290E-03	6.82E+01	40.939	5.888E-04
Xylene (Total)	6.46E-01	6.33E-04	4.61E-02	2.766E-02	3.486E-03	1.84E+02	110.656	1.592E-03

Emissions Calculations for a Single NG Engine

Application No.		
Plant No.		
Company	EastShore Energy Center	
Input Data		
IC Engine, MMBtu/hr	72.8	
Hours Of Operation, hr/yr	3900	4000
Higher Heating Value, Btu/cf	1020	
per AP 42 for natural gas		
Calculated Value		
Fuel Usage MMcf/hr	7.14E-02	
Fuel Usage MMcf/yr	278.35	285.49
Abatement Efficiency	40.00%	
# of Engines	14.00	

PAH(s)	**MEAN lbs/MMCF**	PEF equivalents	**MEAN lbs/MMCF**
Benzo(a)anthracene	5.88E-05	0.1	5.88E-06
Benzo(a)pyrene	2.70E-06	1	2.70E-06
Benzo(b)fluoranthene	4.09E-05	0.1	4.09E-06
Benzo(k)fluoranthene	7.83E-06	0.1	7.83E-07
Chrysene	1.43E-05	0.01	1.43E-07
Dibenz(a,h)anthracene	2.70E-06	1.05	2.84E-06
Indeno(1,2,3-cd)pyrene	7.17E-06	0.1	7.17E-07
Total			**1.71E-05**

CATEF Emission Factors for Natural Gas Fired Industrial Turbines SCC 20200202

Health Risk Screening Analysis Summary for Natural Gas-fired Engine
Facility = Eastshore Energy Center (Hayward, CA)

- **Plant #18041, Application #15195**
- **ISCST3 Air Dispersion Model Used**
- **Union City 5 yrs of Meteorological Data Used**
- **Hayward Terrain Data Used**
- **Daytime Scalars Used**
- **Urban Land Use**

Health Risk Estimates:

TACs	Maximum Emission Rate (g/sec)		Residential Receptor						Residential Receptor		
	Annual	Hourly	Max. Annual Avg Conc.[1] (ug/m³)	Max. Hourly Conc.[2] (ug/m³)	Inhalation Dose[3] (mg/kg-day)	Inhalation Cancer Potency Factor (CPF) (mg/kg-day)⁻¹	Chronic REL (ug/m³)	Acute REL (ug/m³)	Max. Cancer Risk[4]	Max. Chronic Non-cancer HQ[5]	Max. Acute Non-cancer HQ[6]
Ammonia	5.7E-02	1.2E-01	6.9E-02	1.3E+01	2.1E-05	NC	2.00E+02	3.20E+03	NC	3.4E-04	4.0E-03
Benzene	5.4E-04	1.2E-03	6.5E-04	1.2E-01	2.0E-07	1.0E-01	6.0E+01	1.3E+03	2.0E-08	1.1E-05	9.3E-06
Acrolein	1.5E-04	3.2E-04	1.8E-04	3.3E-02	5.3E-08	NC	6.0E-02	1.9E-01	NC	2.9E-03	1.7E-01
1,3-Butadiene	9.0E-04	2.0E-03	1.1E-03	2.0E-01	3.3E-07	6.0E-01	2.0E+01	NA	2.0E-07	5.5E-05	NA
Acetaldehyde	1.3E-03	2.9E-03	1.6E-03	2.9E-01	4.8E-07	1.0E-02	9.0E+00	NA	4.8E-09	1.6E-04	NA
PAHs (as B(a)P)	4.2E-08	9.3E-08	5.1E-08	9.5E-06	1.5E-11	8.0E+01	NA	NA	9.3E-10	NA	NA
Ethylbenzene	1.8E-04	3.8E-04	2.1E-04	4.0E-02	6.4E-08	NC	2.0E+03	NA	NC	1.1E-07	NA
Formaldehyde	1.2E-02	2.5E-02	1.4E-02	2.6E+00	4.2E-06	2.1E-02	3.0E+00	9.4E+01	8.8E-08	4.7E-03	2.8E-02
Naphthalene	5.2E-05	1.4E-04	7.5E-05	1.4E-02	2.3E-08	1.2E-01	9.0E+00	NA	2.7E-09	5.3E-05	NA
Propylene	1.3E-02	2.9E-02	1.6E-02	3.0E+00	4.8E-06	NC	3.0E+03	NA	NC	5.3E-05	NA
Toluene	5.9E-04	1.3E-03	7.1E-04	1.3E-01	2.2E-07	NC	3.0E+02	3.7E+04	NC	2.4E-06	3.6E-06
Xylene (Total)	1.6E-03	3.5E-03	1.9E-03	3.6E-01	5.8E-07	NC	7.0E+02	2.2E+04	NC	2.8E-06	1.6E-05
								TOTAL RISK =	*3.2E-07*	*0.008*	*0.201*

Maximum Annual Average Chi/Q [(ug/m³)/(g/sec)] at Resident = 1.21000

Maximum Hourly Chi/Q [(ug/m³)/(g/sec)] = 103

1. Max. Annual Average Concentration (ug/m³) = Max. Annual Emission Rate (g/sec) * Max. Annual Avg. Chi/Q (ug/m³ per g/sec)
2. Max. Hourly Concentration (ug/m³) = Max. Hourly Emission Rate (g/sec) * Max. Hourly Chi/Q (ug/m³ per g/sec)
3. Inhalation Dose (mg/kg-day) = Ann. Avg. Conc. (ug/m³) * BR (L/kg-day) * UCF (mg-m³/ug-L) * $EAF_{cancer\ res}$
4. Max. Cancer Risk = Inhalation Dose (mg/kg-day) * CPF (mg/kg-day)⁻¹
5. Max. Chronic Non-cancer Hazard Quotient = Ann. Avg. Conc. (ug/m³) * $EAF_{non\text{-}cancer}$ / Chronic REL (ug/m³)
6. Max. Acute Non-cancer Hazard Quotient = Hourly Conc. (ug/m³) / Acute REL (ug/m³)

TACs	Maximum Emission Rate (g/sec)		Worker Receptor						Worker Receptor		
	Annual	Hourly	Max. Annual Avg Conc.[1] (ug/m³)	Max. Hourly Conc.[2] (ug/m³)	Inhalation Dose[3] (mg/kg-day)	Inhalation Cancer Potency Factor (CPF) (mg/kg-day)⁻¹	Chronic REL (ug/m³)	Acute REL (ug/m³)	Max. Cancer Risk[4]	Max. Chronic Non-cancer HQ[5]	Max. Acute Non-cancer HQ[6]
Ammonia	5.7E-02	1.2E-01	1.88604	3.0E+01	2.3E-04	NC	2.00E+02	3.20E+03	NC	4.6E-03	9.4E-03
Benzene	5.4E-04	1.2E-03	0.01758	2.8E-01	2.8E-06	1.0E-01	6.0E+01	1.3E+03	2.2E-07	1.4E-04	2.2E-04
Acrolein	1.5E-04	3.2E-04	0.00476	7.7E-02	6.0E-07	NC	6.0E-02	1.9E-01	NC	3.9E-02	4.0E-01
1,3-Butadiene	9.0E-04	2.0E-03	0.0296	4.8E-01	3.7E-06	6.0E-01	2.0E+01	NA	2.2E-06	7.3E-04	NA
Acetaldehyde	1.3E-03	2.9E-03	0.04296	6.9E-01	5.3E-06	1.0E-02	9.0E+00	NA	5.3E-08	2.3E-03	NA
PAHs (as B(a)P)	4.2E-08	9.3E-08	0.00000	2.2E-05	1.7E-10	8.0E+01	NA	NA	1.0E-09	NA	NA
Ethylbenzene	1.8E-04	3.8E-04	0.00573	9.3E-02	7.2E-07	NC	2.0E+03	NA	NC	1.4E-06	NA
Formaldehyde	1.2E-02	2.5E-02	0.37857	6.1E+00	4.8E-05	2.1E-02	3.0E+00	9.4E+01	1.0E-06	6.3E-02	6.5E-02
Naphthalene	5.2E-05	1.4E-04	0.00202	3.3E-02	2.6E-07	1.2E-01	9.0E+00	NA	3.0E-08	1.1E-04	NA
Propylene	1.3E-02	2.9E-02	0.43391	7.0E+00	5.4E-06	NC	3.0E+03	NA	NC	7.1E-05	NA
Toluene	5.9E-04	1.3E-03	0.01918	3.1E-01	2.4E-06	NC	3.0E+02	3.7E+04	NC	3.1E-05	8.4E-06
Xylene (Total)	1.6E-03	3.5E-03	0.05210	8.4E-01	6.5E-06	NC	7.0E+02	2.2E+04	NC	3.8E-05	3.8E-05
								TOTAL RISK =	*3.54E-06*	*0.104*	*0.470*

Maximum Annual Average Chi/Q [(ug/m³)/(g/sec)] at Worker = 32.73486

Maximum Hourly Chi/Q [(ug/m³)/(g/sec)] = 241.49647

1. Max. Annual Average Exposure Concentration (ug/m³) = Max. Annual Emission Rate (g/sec) * Max. Annual Avg. Chi/Q (ug/m³ per g/sec)
2. Max. Hourly Concentration (ug/m³) = Max. Hourly Emission Rate (g/sec) * Max. Hourly Chi/Q (ug/m³ per g/sec)
3. Inhalation Dose (mg/kg-day) = Ann. Avg. Conc. (ug/m³) * BR (L/kg-day) * UCF (mg-m³/ug-L) * $EAF_{cancer\ res}$
4. Max. Cancer Risk = Inhalation Dose (mg/kg-day) * CPF (mg/kg-day)⁻¹
5. Max. Chronic Non-cancer Hazard Quotient = Ann. Avg. Conc. (ug/m³) * $EAF_{non\text{-}cancer}$ / Chronic REL (ug/m³)
6. Max. Acute Non-cancer Hazard Quotient = Hourly Conc. (ug/m³) / Acute REL (ug/m³)

Exposure Adjustment Factors (EAFs) for Sources that Operate Intermittently:

	Daily (hours/day)	Weekly (days/week)	Annually (weeks/year)	Lifetime (years per 70 yr lifetime)	Exposure Adjustment Factors (EAFs)[7]	
					(cancer risk)	(non-cancer hazard quotient)
Resident is Present While Source is Operating	24	7	50	70		
Worker is Present While Source is Operating	8	5	49	40		
Student is Present While Source is Operating	10	5	36	9		
Source is Operating	18	5	50	70		
Fraction of Time Resident is Present While the Source is Operating	1.00	1.00	1.00	1.00	1.00	1.00
Fraction of Time Worker is Present While the Source is Operating	0.50	1.00	0.98	0.57	0.28	0.49
Fraction of Time Student is Present While the Source is Operating	0.63	1.00	0.72	0.13	0.06	0.45

7. Note that the fraction of time that a receptor is present while a source is operating can not exceed one.
Thus, if a receptor is present 10 hours/day, but the source operates only 5 hours/day, the maximum that the receptor can be present while the source is operating is the number of hours the source is operating (e.g., 5 hours).

Exposure Parameters:

Receptor	Breathing Rate (BR)[8] (L/kg-day)	Exposure Time (ET) (hours/day)	Exposure Frequency (EF) (days/year)	Exposure Duration (ED) (years)	Units Conversion Factor (UCF) (mg-m³/ug-L)	Averaging Time (AT - 70 years) (days)
Resident	302	24	350	70	1.0E-06	25,550
Worker	447	8	245	40	1.0E-06	25,550
Student	581	10	180	9	1.0E-06	25,550

8. Based on a 24-hour day. Worker breathing rate is 149 L/kg-day (for an 8-hour work day), and 447 L/kg-day (for a 24-hour day).

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				Residential Receptor		
Inhalation Dose[3] (mg/kg-day)	Inhalation Cancer Potency Factor (CPF) (mg/kg-day)$^{-1}$	Chronic REL (µg/m^3)	Acute REL (µg/m^3)	Max. Cancer Risk[4]	Max. Chronic Non-cancer HQ[5]	Max. Acute Non-cancer HQ[6]
2.1E-05	NC	2.00E+02	3.20E+03	NC	3.4E-04	4.0E-03
2.0E-07	1.0E-01	6.0E+01	1.3E+03	2.0E-08	1.1E-06	9.3E-05
3.3E-07	6.0E-01	2.0E+01	NA	2.0E-07	5.5E-06	NA
4.8E-07	1.0E-02	9.0E+00	NA	4.8E-09	1.6E-04	NA
1.5E-11	6.0E+01	NA	NA	9.2E-10	NA	NA
6.4E-05	NC	2.0E+03	NA	NC	1.1E-07	NA
4.2E-05	2.1E-02	3.0E+00	9.4E+01	8.9E-08	4.7E-03	2.8E-02
2.3E-06	1.2E-01	9.0E+00	NA	2.7E-09	8.3E-06	NA
4.8E-05	NC	3.0E+03	NA	NC	5.3E-06	NA
2.2E-07	NC	3.0E+02	3.7E+04	NC	2.4E-06	3.6E-08
5.8E-07	NC	7.0E+02	2.2E+04	NC	2.8E-06	1.0E-05
			TOTAL RISK =	*3.2E-07*	*0.005*	*0.028*

g/sec)

				Worker Receptor		
Inhalation Dose[3] (mg/kg day)	Inhalation Cancer Potency Factor (CPF) (mg/kg-day)$^{-1}$	Chronic REL (µg/m^3)	Acute REL (µg/m^3)	Max. Cancer Risk[4]	Max. Chronic Non-cancer HQ[5]	Max. Acute Non-cancer HQ[6]
2.3E-04	NC	2.00E+02	3.20E+03	NC	4.6E-03	9.4E-03
2.2E-06	1.0E-01	6.0E+01	1.3E+03	2.2E-07	1.4E-04	2.2E-04
3.7E-06	6.0E-01	2.0E+01	NA	2.2E-06	7.3E-04	NA
5.3E-06	1.0E-02	9.0E+00	NA	5.3E-08	2.3E-03	NA
1.7E-10	6.0E+01	NA	NA	1.0E-08	NA	NA
7.2E-07	NC	2.0E+03	NA	NC	1.4E-05	NA
4.8E-05	2.1E-02	3.0E+00	9.4E+01	1.0E-06	6.2E-02	6.5E-02
2.5E-07	1.2E-01	9.0E+00	NA	3.0E-08	1.1E-04	NA
5.4E-05	NC	3.0E+03	NA	NC	7.1E-05	NA
2.4E-06	NC	3.0E+02	3.7E+04	NC	3.1E-05	8.4E-08
6.5E-08	NC	7.0E+02	2.2E+04	NC	3.6E-05	3.8E-05
			TOTAL RISK =	*3.54E-06*	*0.055*	*0.066*

ug/m^3 per g/sec)

ittently:

Weekly (days/week)	Annually (weeks/year)	Lifetime (years per 70-yr lifetime)	Exposure Adjustment Factors (EAFs)[7]	
7	50	70		
5	49	40		
5	30	9	(cancer risk)	(non-cancer hazard quotient)
5	50	70		
1.00	1.00	1.00	1.00	1.00
1.00	0.98	0.57	0.28	0.49
1.00	0.72	0.13	0.06	0.45

s present while the source is operating is the number of hours the source is operating (e.g., 8 hours)

Units Conversion Factor (UCF) (m-cm^3/kg-L)	Averaging Time (AT - 70 years) (days)
1.0E-06	25,550
1.0E-06	25,550
1.0E-06	25,550

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Health Risk Screening Analysis Summary for Standby Generator Diesel Engine
Facility =Eastshore Energy Center, (Hayward, CA)

- **Plant #18041; Application #15195**
- **ISC Air Dispersion Model Used**
- **Union City Meteorological Data Used**
- **Hayward Terrain Data Used**
- **Daytime Scalars Used**
- **Urban Land Use** @ pt of Max for Natural Gas

Health Risk Estimates:

Receptor	Max. Annual Emission Rate (lb/yr)	Max. Annual Emission Rate (g/sec)	Max. Annual Avg. Chi/Q (ug/m^3 per g/sec)	Annual Average Exposure Concentration[1] (ug/m^3)	Inhalation Dose[2] (mg/kg-day)	Diesel PM: Inhalation Cancer Potency Factor (CPF) (mg/kg-day)$^{-1}$	Diesel PM: Inhalation Reference Exposure Level (REL) (ug/m^3)	***Max. Cancer Risk[3]***	***Max. Non-cancer Hazard Quotient[4]***
Resident	4.5434	6.5E-05	4.8E-01	0.00003	9.5E-09	1.1E+00	5.0E+00	***1.05E-08***	***6.3E-06***
Worker	4.5434	6.5E-05	1.8E+01	0.00115	2.9E-07	1.1E+00	5.0E+00	***3.16E-07***	***2.2E-04***
Student	0	0.0E+00	0	0.0E+00	0.0E+00	1.1E+00	5.0E+00	***0.0E+00***	***0.0E+00***

1. Annual Average Exposure Concentration (ug/m^3) = Max. Annual Emission Rate (g/sec) * Max. Annual Avg. Chi/Q (ug/m^3 per g/sec)
2. Inhalation Dose (mg/kg-day) = Ann. Avg. Exp. Conc. (ug/m^3) * BR (L/kg-day) * UCF (mg-m^3)/(ug/L) * $EAF_{(cancer\ risk)}$
3. Max. Cancer Risk = Inhalation Dose (mg/kg-day) * CPF (mg/kg-day)$^{-1}$
4. Max. Non-cancer Hazard Quotient = Ann. Avg. Exp. Conc. (ug/m^3) * $EAF_{(non\text{-}cancer)}$ / REL (ug/m^3)

Exposure Adjustment Factors (EAFs) for Sources that Operate Intermittently:

	Daily (hours/day)	Weekly (days/week)	Annually (weeks/year)	Lifetime (years per 70-yr lifetime)	Exposure Adjustment Factors (EAFs)[5] (cancer risk)	Exposure Adjustment Factors (EAFs)[5] (non-cancer hazard quotient)
Resident is Present While Source is Operating	24	7	50	70		
Worker is Present While Source is Operating	8	5	49	40		
Student is Present While Source is Operating	10	5	36	9		
Source is Operating	1	1	50	70		
Fraction of Time **Resident** is Present While the Source is Operating	1.00	1.00	1.00	1.00	1.00	1.00
Fraction of Time **Worker** is Present While the Source is Operating	1.00	1.00	0.98	0.57	0.56	0.98
Fraction of Time **Student** is Present While the Source is Operating	1.00	1.00	0.72	0.13	0.09	0.72

5. Note that the fraction of time that a receptor is present while a source is operating can not exceed one.

Thus, if a receptor is present 10 hours/day, but the source operates only 8 hours/day, the maximum that the receptor can be present while the source is operating is the number of hours the source is operating (e.g., 8 hours).

Exposure Parameters:

Receptor	Breathing Rate (BR)[6] (L/kg-day)	Exposure Time (ET) (hours/day)	Exposure Frequency (EF) (day/year)	Exposure Duration (ED) (years)	Units Conversion Factor (UCF) (mg-m^3)/(ug/L)	Averaging Time (AT - 70 years) (days)
Resident	302	24	350	70	1.0E-06	25,550
Worker	447	8	245	40	1.0E-06	25,550
Student	581	10	180	9	1.0E-06	25,550

6. Based on a 24-hour day. Worker breathing rate is 149 L/kg-day (for an 8-hour workday), and 447 L/kg-day (for a 24-hour day).

nary for Standby Generator Diesel Eme
layward, CA)

MAX PT

sed

			Diesel PM			
ax. Annual Avg. Chi/Q g/m^3 per g/sec)	Annual Average Exposure Concentration[1] (ug/m^3)	Inhalation Dose[2] (mg/kg-day)	alation Cancer Picy Factor (CPF) ng/kg-day)$^{-1}$	Inhalation Reference Exposure Level (REL) (ug/m^3)	***Max. Cancer Risk***[3]	***Max. Non-cancer Hazard Quotient***[4]
5.2E-01	0.00003	1.0E-08	1.1E+00	5.0E+00	***1.13E-08***	***6.8E-06***
3.5E+01	0.00229	5.7E-07	1.1E+00	5.0E+00	***6.30E-07***	***4.5E-04***
0	0.0E+00	0.0E+00	1.1E+00	5.0E+00	***0.0E+00***	***0.0E+00***

ission Rate (g/sec) * Max. Annual Avg. Chi/Q (ug/m^3 per g/sec)

./kg-day) * UCF (mg-m^3)/(ug/L) * $EAF_{(cancer risk)}$

)$^{-1}$

* $EAF_{(non-cancer)}$ / REL (ug/m^3)

for Sources that Operate Intermittent

	Daily (hours/day)	Weekly (days/week)	Anlly (weeks/year)	Lifetime (years per 70 yr lifetime)	Exposure Adjustment Factors (EAFs)[5]	
	24	7	50	70		
	8	5	49	40		
	10	5	36	9	(cancer risk)	(non-cancer hazard quotient)
	1	1	50	70		
is Operating	1.00	1.00	1.00	1.00	1.00	1.00
Operating	1.00	1.00	0.98	0.57	0.56	0.98
Operating	1.00	1.00	0.72	0.13	0.09	0.72

is operating can not exceed one.

/ 8 hours/day, the maximum that the receptor can be present while the s is operating is the number of hours the source is operating (e.g., 8 hours).

Exposure requency (EF) (day/year)	Exposure Duration (ED) (years)	Units Conversion Factor (UCF) (mg-m^3)/(ug/L)	Averaging Ti(AT - 70 years) (days)
350	70	1.0E-06	25,550
245	40	1.0E-06	25,550
180	9	1.0E-06	25,550

an 8-hour workday), and 447 L/kg-day (for a 24-hour day).

Risk Screening Assessment Dispersion Modeling Checklist

Application No: 15195 Modeler: TCJ

GEOGRAPHIC DATA

BEEST run for the following land use (check all that apply): ☑urban ☐rural

Coordinate system used: ☑NAD27 ☑NAD83 ☐relative

Was elevated terrain data used? ☑yes ☐no

If yes, name(s) of USGS DEM quad used: Hayward, _____, _____

METEOROLOGICAL DATA

Screening: ☐screen ☐daytime screen

Closest met data set identified in BLOB program _____ Distance _____

Actual: Name of data set: Oakland C.M.

Year of data: ~~2003~~ 1960 ~~2004~~ 84

Mixing Height (m): 600 m

Anemometer height (m): 20

SOURCE DATA

Venting: ☑rain flap ☐rain cap ☐unobstructed (Check all for which the model was run)

☐horizontal ☑vertical (Check all for which the model was run)

Emis. scalars: ☐yes ☐no (note - emission scalars can't be used with screening met. data)

Operating hours 1-24 Scalar value 1 (24/# of hours of operation)

RECEPTORS

Are schools within: ☐500 feet? (HRSA report required) ☐1000 feet? (HRSA report required) ☐1/4 mile?

☑no schools within 1000 feet.

Are receptors located within a building cavity region? ☐yes ☑no (does the model output show zero concentrations in the wake of nearby buildings?)

Is yes, was ISCPRIME run to determine cavity region concentration? ☐yes ☐no

If yes, the ISCPRIME max. concentration was… ☐higher ☐lower …than the max ISC concentration.

COMMENTS:

used non regulatory default - more conservative gradual plume rise

Health Risk Screening Analysis Summary for Natural Gas-fired Engine
Facility = Eastshore Energy Center (Hayward, CA)

- **Plant #18041, Application #15195**
- **ISCST3 Air Dispersion Model Used**
- **Union City 5 yrs of Meteorological Data Used**
- **Hayward Terrain Data Used**
- **Daytime Scalars Used**
- **Urban Land Use**

Health Risk Estimates:

TACs	Maximum Emission Rate (g/sec)		Residential Receptor			Inhalation Cancer Potency Factor (CPF) (mg/kg-day)$^{-1}$	Chronic REL (ug/m^3)	Acute REL (ug/m^3)	Residential Receptor		
	Annual	Hourly	Max. Annual Avg. Conc.[1] (ug/m^3)	Max. Hourly Conc.[2] (ug/m^3)	Inhalation Dose[3] (mg/kg-day)				Max. Cancer Risk[4]	Max. Chronic Non-cancer HQ[5]	Max. Acute Non-cancer HQ[6]
Ammonia	5.7E-02	1.2E-01	5.9E-02	1.2E-01	2.1E-05	NC	2.00E+02	3.20E+03	NC	3.4E-04	4.0E-03
Benzene	5.4E-04	1.2E-03	5.5E-04	1.2E-01	2.0E-07	1.0E-01	6.0E+01	1.3E+03	2.0E-08	1.1E-05	8.3E-05
1,3-Butadiene	9.0E-04	2.0E-03	1.1E-03	2.0E-01	3.3E-07	6.0E-01	2.0E+01	NA	2.0E-07	5.5E-05	NA
Acetaldehyde	1.3E-03	2.9E-03	1.6E-03	2.9E-01	4.8E-07	1.0E-02	9.0E+00	NA	4.8E-09	1.8E-04	NA
PAHs [as B(a)P]	4.2E-08	9.3E-08	5.1E-06	9.5E-06	1.5E-11	6.0E+01	NA	NA	9.3E-10	NA	NA
Ethylbenzene	1.8E-04	3.8E-04	2.1E-04	4.0E-02	6.4E-08	NC	2.0E+03	NA	NC	1.1E-07	NA
Formaldehyde	1.2E-02	2.5E-02	1.4E-02	2.6E+00	4.2E-06	2.1E-02	3.0E+00	9.4E+01	8.9E-05	4.7E-03	2.8E-02
Naphthalene	6.2E-05	1.4E-04	7.5E-05	1.4E-02	2.3E-08	1.2E-01	9.0E+00	NA	2.7E-09	8.3E-06	NA
Propylene	1.3E-02	2.9E-02	1.6E-02	3.0E+00	4.8E-06	NC	3.0E+03	NA	NC	5.3E-06	NA
Toluene	5.9E-04	1.3E-03	7.1E-04	1.3E-01	2.2E-07	NC	3.0E+02	3.7E+04	NC	2.4E-06	3.6E-06
Xylene (Total)	1.6E-03	3.5E-03	1.9E-03	3.6E-01	5.8E-07	NC	7.0E+02	2.2E+04	NC	2.8E-06	1.6E-05
								TOTAL RISK =	*3.2E-07*	*0.005*	*0.028*

Maximum Annual Average Chi/Q (ug/m^3)/(g/sec) at Resident = 1.21000

Maximum Hourly Chi/Q (ug/m^3)/(g/sec) = 103

1. Max. Annual Average Concentration (ug/m^3) = Max. Annual Emission Rate (g/sec) * Max. Annual Avg. Chi/Q (ug/m^3 per g/sec)
2. Max. Hourly Concentration (ug/m^3) = Max. Hourly Emission Rate (g/sec) * Max. Hourly Chi/Q (ug/m^3 per g/sec)
3. Inhalation Dose (mg/kg-day) = Ann. Avg. Conc. (ug/m^3) * BR (L/kg-day) * UCF (mg-m^3/ug/L) * $EAF_{cancer\ risk}$
4. Max. Cancer Risk = Inhalation Dose (mg/kg-day) * CPF (mg/kg-day)$^{-1}$
5. Max. Chronic Non-cancer Hazard Quotient = Ann. Avg. Conc. (ug/m^3) * $EAF_{non\text{-}cancer}$ / Chronic REL (ug/m^3)
6. Max. Acute Non-cancer Hazard Quotient = Hourly Conc. (ug/m^3) / Acute REL (ug/m^3)

TACs	Maximum Emission Rate (g/sec)		Worker Receptor			Inhalation Cancer Potency Factor (CPF) (mg/kg-day)$^{-1}$	Chronic REL (ug/m^3)	Acute REL (ug/m^3)	Worker Receptor		
	Annual	Hourly	Max. Annual Avg. Conc.[1] (ug/m^3)	Max. Hourly Conc.[2] (ug/m^3)	Inhalation Dose[3] (mg/kg-day)				Max. Cancer Risk[4]	Max. Chronic Non-cancer HQ[5]	Max. Acute Non-cancer HQ[6]
Ammonia	5.7E-02	1.2E-01	1.86604	3.0E+01	2.3E-04	NC	2.00E+02	3.20E+03	NC	4.6E-03	9.4E-03
Benzene	5.4E-04	1.2E-03	0.01758	2.8E-01	2.2E-06	1.0E-01	6.0E+01	1.3E+03	2.2E-07	1.4E-04	2.2E-04
1,3-Butadiene	9.0E-04	2.0E-03	0.0298	4.8E-01	3.7E-06	6.0E-01	2.0E+01	NA	2.2E-06	7.3E-04	NA
Acetaldehyde	1.3E-03	2.9E-03	0.04265	6.9E-01	5.3E-06	1.0E-02	9.0E+00	NA	5.3E-08	2.3E-03	NA
PAHs [as B(a)P]	4.2E-08	9.3E-08	0.00000	2.2E-05	1.7E-10	6.0E+01	NA	NA	1.0E-08	NA	NA
Ethylbenzene	1.8E-04	3.8E-04	0.00673	9.3E-02	7.2E-07	NC	2.0E+03	NA	NC	1.4E-06	NA
Formaldehyde	1.2E-02	2.5E-02	0.37867	6.1E+00	4.8E-05	2.1E-02	3.0E+00	9.4E+01	1.0E-06	6.2E-02	6.5E-02
Naphthalene	6.2E-05	1.4E-04	0.00202	3.3E-02	2.5E-07	1.2E-01	9.0E+00	NA	3.0E-08	1.1E-04	NA
Propylene	1.3E-02	2.9E-02	0.43391	7.0E+00	5.4E-05	NC	3.0E+03	NA	NC	7.1E-05	NA
Toluene	5.9E-04	1.3E-03	0.01928	3.1E-01	2.4E-06	NC	3.0E+02	3.7E+04	NC	3.1E-05	8.4E-06
Xylene (Total)	1.6E-03	3.5E-03	0.05210	8.4E-01	6.6E-05	NC	7.0E+02	2.2E+04	NC	3.8E-05	3.8E-05
								TOTAL RISK =	*3.54E-06*	*0.065*	*0.066*

Maximum Annual Average Chi/Q (ug/m^3)/(g/sec) at Worker = 30.73484

Maximum Hourly Chi/Q (ug/m^3)/(g/sec) = 241.49647

1. Max. Annual Average Exposure Concentration (ug/m^3) = Max. Annual Emission Rate (g/sec) * Max. Annual Avg. Chi/Q (ug/m^3 per g/sec)
2. Max. Hourly Concentration (ug/m^3) = Max. Hourly Emission Rate (g/sec) * Max. Hourly Chi/Q (ug/m^3 per g/sec)
3. Inhalation Dose (mg/kg-day) = Ann. Avg. Conc. (ug/m^3) * BR (L/kg-day) * UCF (mg-m^3/ug/L) * $EAF_{cancer\ risk}$
4. Max. Cancer Risk = Inhalation Dose (mg/kg-day) * CPF (mg/kg-day)$^{-1}$
5. Max. Chronic Non-cancer Hazard Quotient = Ann. Avg. Conc. (ug/m^3) * $EAF_{non\text{-}cancer}$ / Chronic REL (ug/m^3)
6. Max. Acute Non-cancer Hazard Quotient = Hourly Conc. (ug/m^3) / Acute REL (ug/m^3)

Exposure Adjustment Factors (EAFs) for Sources that Operate Intermittently:

	Daily (hours/day)	Weekly (days/week)	Annually (weeks/year)	Lifetime (years per 70-yr lifetime)	Exposure Adjustment Factors (EAFs)[7]	
Resident is Present While Source is Operating	24	7	50	70		
Worker is Present While Source is Operating	8	5	49	40		
Student is Present While Source is Operating	10	5	36	9	(cancer risk)	(non-cancer hazard quotient)
Source is Operating	16	5	50	70		
Fraction of Time Resident is Present While the Source is Operating	1.00	1.00	1.00	1.00	1.00	1.00
Fraction of Time Worker is Present While the Source is Operating	0.50	1.00	0.98	0.57	0.28	0.49
Fraction of Time Student is Present While the Source is Operating	0.63	1.00	0.72	0.13	0.06	0.45

7. Note that the fraction of time that a receptor is present while a source is operating can not exceed one.

Thus, if a receptor is present 10 hours/day, but the source operates only 8 hours/day, the maximum that the receptor can be present while the source is operating is the number of hours the source is operating (e.g., 8 hours).

Exposure Parameters:

Receptor	Breathing Rate (BR)[8] (L/kg-day)	Exposure Time (ET) (hours/day)	Exposure Frequency (EF) (day/year)	Exposure Duration (ED) (years)	Units Conversion Factor (UCF) (mg-m^3/ug-L)	Averaging Time (AT - 70 years) (days)
Resident	302	24	350	70	1.0E-06	25,550
Worker	447	8	245	40	1.0E-06	25,550
Student	581	10	180	9	1.0E-06	25,550

8. Based on a 24-hour day. Worker breathing rate is 149 L/kg-day (for an 8-hour workday), and 447 L/kg-day (for a 24-hour day).

```
NO ECHO

 BEE-Line ISCST3 "BEEST" Version 9.00

 Input File - C:\IRMA\BEEST\DCModel\EECenter(unitless)gradualplumerise_90_NGAS.DTA
Output File - C:\IRMA\BEEST\DCModel\EECenter(unitless)gradualplumerise_90_NGAS.LST
   Met File - C:\metdata\UnionCity\metdata00-04600.asc

 *** Message Summary For ISC3 Model Setup ***

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

A Total of            0 Fatal Error Message(s)
A Total of            1 Warning Message(s)
A Total of            0 Informational Message(s)

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

   ********   WARNING MESSAGES   ********
RE W282  2606 CHK_EL:RecElev < SrcBase; See non-DFAULT HE>ZI option in  MCB#9

***********************************
*** SETUP Finishes Successfully ***
***********************************

 *** ISCST3 - VERSION 02035 ***    *** Eastshore Energy LLC                                   ***        01/25/07
                                   ***                                                        ***        16:23:53
**MODELOPTs:                                                                                             PAGE   1
CONC                    URBAN ELEV               GRDRIS

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

**Intermediate Terrain Processing is Selected

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

  --  SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION.  DDPLETE =  F
**Model Uses NO WET DEPLETION.  WDPLETE =  F
**NO WET SCAVENGING Data Provided.
```

```
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:
          1. Gradual Plume Rise.
          2. Stack-tip Downwash.
          3. Buoyancy-induced Dispersion.
          4. Calms Processing Routine.
          5. Not Use Missing Data Processing Routine.
          6. User-Specified Wind Profile Exponents.
          7. Default Vertical Potential Temperature Gradients.

**Model Accepts Receptors on ELEV Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates  1 Short Term Average(s) of:   1-HR
   and Calculates PERIOD Averages

**This Run Includes:    14 Source(s);     31 Source Group(s); and    2357 Receptor(s)

**The Model Assumes A Pollutant Type of:  NGAS

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

**Output Options Selected:
        Model Outputs Tables of PERIOD Averages by Receptor
        Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
        Model Outputs External File(s) of High Values for Plotting (PLOTFILE 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:  Anem. Hgt. (m) =    20.00 ;    Decay Coef. =    0.000     ;    Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                  ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =     2.5 MB of RAM.

**Input Runstream File:          EECenter(unitless)gradualplumerise_90_NGAS.DTA
**Output Print File:             EECenter(unitless)gradualplumerise_90_NGAS.LST

 *** ISCST3 - VERSION 02035 ***    *** Eastshore Energy LLC                                          ***        01/25/07
                                   ***                                                               ***        16:23:53
**MODELOPTs:                                                                                                    PAGE   2
CONC                    URBAN ELEV                GRDRIS
```

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
1	0	0.10000E+01	577527.1	4165779.5	6.4	21.34	641.65	23.48	1.21	YES	
2	0	0.10000E+01	577532.4	4165779.5	6.4	21.34	641.65	23.48	1.21	YES	
3	0	0.10000E+01	577537.9	4165779.5	6.6	21.34	641.65	23.48	1.21	YES	
4	0	0.10000E+01	577548.7	4165779.5	6.7	21.34	641.65	23.48	1.21	YES	
5	0	0.10000E+01	577554.1	4165779.5	6.7	21.34	641.65	23.48	1.21	YES	
6	0	0.10000E+01	577559.4	4165779.5	6.7	21.34	641.65	23.48	1.21	YES	
7	0	0.10000E+01	577564.9	4165779.5	6.7	21.34	641.65	23.48	1.21	YES	
14	0	0.10000E+01	577604.6	4165779.5	7.3	21.34	641.65	23.48	1.21	YES	
13	0	0.10000E+01	577609.9	4165779.5	7.3	21.34	641.65	23.48	1.21	YES	
12	0	0.10000E+01	577615.4	4165779.5	7.3	21.34	641.65	23.48	1.21	YES	
11	0	0.10000E+01	577620.8	4165779.5	7.0	21.34	641.65	23.48	1.21	YES	
10	0	0.10000E+01	577631.6	4165779.5	7.0	21.34	641.65	23.48	1.21	YES	
9	0	0.10000E+01	577636.9	4165779.5	7.0	21.34	641.65	23.48	1.21	YES	
8	0	0.10000E+01	577642.4	4165779.5	7.0	21.34	641.65	23.48	1.21	YES	

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	1 , 2 , 3 , 4 , 5 , 6 , 7 , 14 , 13 , 12 , 11 , 10 , 9 , 8 ,
NATGAS	1 , 2 , 3 , 4 , 5 , 6 , 7 , 14 , 13 , 12 , 11 , 10 , 9 , 8 ,
S1	1 ,
S2	2 ,

```
S3        3       ,

S4        4       ,

S5        5       ,

S6        6       ,

S7        7       ,

S8        8       ,

S9        9       ,

S10       10      ,

S11       11      ,

S12       12      ,

S13       13      ,

S14       14      ,

SA11      1       , 2       , 3       , 4       , 5       , 6       , 7       , 14      , 13      , 12      , 11      , 10      ,
          9       , 8       ,
```


**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
1	1 ,
2	2 ,
3	3 ,
4	4 ,
5	5 ,
6	6 ,
7	7 ,
14	14 ,
13	13 ,
12	12 ,
11	11 ,
10	10 ,
9	9 ,
8	8 ,

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 1

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	14.9,	90.5,	0	4	14.9,	103.4,	0	5	14.9,	113.8,	0	6	14.9,	120.7,	0
7	14.9,	124.0,	0	8	14.9,	123.5,	0	9	14.9,	119.2,	0	10	9.0,	40.8,	0	11	9.0,	60.0,	0	12	9.0,	79.0,	0
13	9.0,	95.7,	0	14	9.0,	109.4,	0	15	9.0,	119.8,	0	16	9.0,	126.6,	0	17	9.0,	129.6,	0	18	9.0,	128.6,	0
19	9.0,	129.5,	0	20	13.3,	52.8,	0	21	14.9,	90.5,	0	22	13.3,	53.5,	0	23	13.3,	51.4,	0	24	6.7,	27.5,	0
25	6.7,	19.9,	0	26	0.0,	0.0,	0	27	6.7,	38.8,	0	28	9.0,	40.8,	0	29	9.0,	60.0,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	9.0,	129.6,	0	36	9.0,	128.6,	0

SOURCE ID: 2

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	14.9,	90.5,	0	4	14.9,	103.4,	0	5	14.9,	113.8,	0	6	14.9,	120.7,	0
7	14.9,	124.0,	0	8	14.9,	123.5,	0	9	14.9,	119.2,	0	10	9.0,	40.8,	0	11	9.0,	60.0,	0	12	9.0,	79.0,	0
13	9.0,	95.7,	0	14	9.0,	109.4,	0	15	9.0,	119.8,	0	16	9.0,	126.6,	0	17	9.0,	129.6,	0	18	9.0,	128.6,	0
19	13.3,	50.0,	0	20	13.3,	52.8,	0	21	13.3,	54.0,	0	22	13.3,	53.5,	0	23	13.3,	51.4,	0	24	6.7,	27.5,	0
25	6.7,	19.9,	0	26	6.7,	11.6,	0	27	6.7,	38.8,	0	28	9.0,	40.8,	0	29	9.0,	60.0,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	9.0,	129.6,	0	36	9.0,	128.6,	0

SOURCE ID: 3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	14.9,	90.5,	0	4	14.9,	103.4,	0	5	14.9,	113.8,	0	6	14.9,	120.7,	0
7	14.9,	124.0,	0	8	14.9,	123.5,	0	9	14.9,	119.2,	0	10	9.0,	40.8,	0	11	9.0,	60.0,	0	12	9.0,	79.0,	0
13	9.0,	95.7,	0	14	9.0,	109.4,	0	15	9.0,	119.8,	0	16	9.0,	126.6,	0	17	9.0,	129.6,	0	18	9.0,	128.6,	0
19	13.3,	50.0,	0	20	13.3,	52.8,	0	21	13.3,	54.0,	0	22	13.3,	53.5,	0	23	13.3,	51.4,	0	24	6.7,	27.5,	0
25	6.7,	19.9,	0	26	6.7,	11.6,	0	27	6.7,	38.8,	0	28	9.0,	40.8,	0	29	9.0,	60.0,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	9.0,	129.6,	0	36	9.0,	128.6,	0

SOURCE ID: 4

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	9.0,	109.3,	0	5	9.0,	95.5,	0	6	9.0,	78.8,	0
7	6.7,	11.6,	0	8	6.7,	11.6,	0	9	6.7,	38.8,	0	10	9.0,	40.8,	0	11	9.0,	60.0,	0	12	9.0,	79.0,	0
13	9.0,	95.7,	0	14	9.0,	109.4,	0	15	9.0,	119.8,	0	16	9.0,	126.6,	0	17	9.0,	129.6,	0	18	13.3,	47.6,	0
19	13.3,	50.0,	0	20	13.3,	52.8,	0	21	13.3,	54.0,	0	22	13.3,	53.5,	0	23	9.0,	95.5,	0	24	9.0,	78.8,	0
25	6.7,	11.6,	0	26	6.7,	11.6,	0	27	6.7,	38.8,	0	28	9.0,	40.8,	0	29	9.0,	60.0,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	9.0,	129.6,	0	36	9.0,	128.6,	0

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 5

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	9.0,	109.3,	0	5	9.0,	95.5,	0	6	9.0,	78.8,	0
7	6.7,	11.6,	0	8	6.7,	7.4,	0	9	6.7,	38.8,	0	10	9.0,	40.8,	0	11	9.0,	60.0,	0	12	9.0,	79.0,	0
13	9.0,	95.7,	0	14	9.0,	109.4,	0	15	9.0,	119.8,	0	16	9.0,	126.6,	0	17	13.3,	50.2,	0	18	13.3,	47.6,	0
19	13.3,	50.0,	0	20	13.3,	52.8,	0	21	13.3,	54.0,	0	22	13.3,	53.5,	0	23	9.0,	95.5,	0	24	9.0,	78.8,	0
25	6.7,	11.6,	0	26	6.7,	7.4,	0	27	6.7,	38.8,	0	28	9.0,	40.8,	0	29	9.0,	60.0,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	9.0,	129.6,	0	36	9.0,	128.6,	0

SOURCE ID: 6

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	9.0,	109.3,	0	5	9.0,	95.5,	0	6	9.0,	78.8,	0
7	9.0,	59.7,	0	8	6.7,	7.4,	0	9	6.7,	38.8,	0	10	9.0,	40.8,	0	11	9.0,	60.0,	0	12	9.0,	79.0,	0
13	9.0,	95.7,	0	14	9.0,	109.4,	0	15	9.0,	119.8,	0	16	9.0,	126.6,	0	17	13.3,	50.2,	0	18	13.3,	47.6,	0
19	13.3,	50.0,	0	20	13.3,	52.8,	0	21	13.3,	54.0,	0	22	13.3,	53.5,	0	23	9.0,	95.5,	0	24	9.0,	78.8,	0
25	9.0,	59.7,	0	26	6.7,	7.4,	0	27	6.7,	38.8,	0	28	9.0,	40.8,	0	29	9.0,	60.0,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	9.0,	129.6,	0	36	9.0,	128.6,	0

SOURCE ID: 7

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	9.0,	109.3,	0	5	9.0,	95.5,	0	6	9.0,	78.8,	0
7	9.0,	59.7,	0	8	6.7,	7.4,	0	9	6.7,	38.8,	0	10	9.0,	40.8,	0	11	9.0,	60.0,	0	12	9.0,	79.0,	0
13	9.0,	95.7,	0	14	9.0,	109.4,	0	15	9.0,	119.8,	0	16	13.3,	54.1,	0	17	13.3,	50.2,	0	18	13.3,	47.6,	0
19	13.3,	50.0,	0	20	13.3,	52.8,	0	21	13.3,	54.0,	0	22	9.0,	109.3,	0	23	9.0,	95.5,	0	24	9.0,	78.8,	0
25	9.0,	59.7,	0	26	6.7,	7.4,	0	27	6.7,	38.8,	0	28	9.0,	40.8,	0	29	9.0,	60.0,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	9.0,	129.6,	0	36	9.0,	128.6,	0

SOURCE ID: 14

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	9.0,	109.3,	0	5	9.0,	95.5,	0	6	9.0,	78.8,	0
7	9.0,	59.7,	0	8	9.0,	38.8,	0	9	6.7,	38.8,	0	10	6.7,	12.0,	0	11	9.0,	60.0,	0	12	9.0,	79.0,	0
13	13.3,	55.6,	0	14	13.3,	56.8,	0	15	13.3,	56.3,	0	16	13.3,	54.1,	0	17	13.3,	50.2,	0	18	13.3,	47.6,	0
19	13.6,	106.0,	0	20	13.6,	110.3,	0	21	13.6,	111.2,	0	22	13.6,	108.8,	0	23	13.6,	103.1,	0	24	13.6,	94.2,	0
25	13.6,	82.5,	0	26	9.0,	38.8,	0	27	6.7,	38.8,	0	28	6.7,	12.0,	0	29	9.0,	60.0,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	9.0,	129.6,	0	36	9.0,	128.6,	0

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 13

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	9.0,	109.3,	0	5	9.0,	95.5,	0	6	9.0,	78.8,	0
7	13.6,	82.5,	0	8	9.0,	38.8,	0	9	6.7,	38.8,	0	10	6.7,	12.0,	0	11	6.7,	20.3,	0	12	9.0,	79.0,	0
13	13.3,	55.6,	0	14	13.3,	56.8,	0	15	13.3,	56.3,	0	16	13.3,	54.1,	0	17	13.3,	50.2,	0	18	9.0,	128.6,	0
19	13.6,	106.0,	0	20	13.6,	110.3,	0	21	13.6,	111.2,	0	22	13.6,	108.8,	0	23	13.6,	103.1,	0	24	13.6,	94.2,	0
25	13.6,	82.5,	0	26	9.0,	38.8,	0	27	6.7,	38.8,	0	28	6.7,	12.0,	0	29	6.7,	9.2,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	9.0,	129.6,	0	36	9.0,	128.6,	0

SOURCE ID: 12

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	9.0,	109.3,	0	5	9.0,	95.5,	0	6	9.0,	78.8,	0
7	13.6,	82.5,	0	8	9.0,	38.8,	0	9	6.7,	38.8,	0	10	6.7,	12.0,	0	11	6.7,	20.3,	0	12	9.0,	79.0,	0
13	13.3,	55.6,	0	14	13.3,	56.8,	0	15	13.3,	56.3,	0	16	13.3,	54.1,	0	17	13.3,	50.2,	0	18	13.6,	98.4,	0
19	13.6,	106.0,	0	20	13.6,	110.3,	0	21	13.6,	111.2,	0	22	13.6,	108.8,	0	23	13.6,	103.1,	0	24	13.6,	94.2,	0
25	13.6,	82.5,	0	26	9.0,	38.8,	0	27	6.7,	38.8,	0	28	6.7,	12.0,	0	29	6.7,	9.2,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	9.0,	129.6,	0	36	9.0,	128.6,	0

SOURCE ID: 11

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	9.0,	109.3,	0	5	9.0,	95.5,	0	6	13.6,	94.2,	0
7	13.6,	82.5,	0	8	9.0,	38.8,	0	9	6.7,	38.8,	0	10	6.7,	12.0,	0	11	6.7,	9.2,	0	12	9.0,	79.0,	0
13	13.3,	55.6,	0	14	13.3,	56.8,	0	15	13.3,	56.3,	0	16	13.3,	54.1,	0	17	13.6,	93.4,	0	18	13.6,	98.4,	0
19	13.6,	106.0,	0	20	13.6,	110.3,	0	21	13.6,	111.2,	0	22	13.6,	108.8,	0	23	13.6,	40.8,	0	24	13.6,	37.2,	0
25	13.6,	32.5,	0	26	9.0,	38.8,	0	27	6.7,	38.8,	0	28	6.7,	12.0,	0	29	6.7,	9.2,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	13.6,	93.4,	0	36	9.0,	128.6,	0

SOURCE ID: 10

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	9.0,	109.3,	0	5	13.6,	103.1,	0	6	13.6,	94.2,	0
7	13.6,	82.5,	0	8	9.0,	38.8,	0	9	6.7,	38.8,	0	10	6.7,	12.0,	0	11	6.7,	9.2,	0	12	13.3,	52.7,	0
13	13.3,	55.6,	0	14	13.3,	56.8,	0	15	13.3,	56.3,	0	16	13.6,	85.5,	0	17	13.6,	93.4,	0	18	13.6,	98.4,	0
19	13.6,	106.0,	0	20	13.6,	110.3,	0	21	13.6,	111.2,	0	22	13.6,	43.1,	0	23	13.6,	40.8,	0	24	13.6,	37.2,	0
25	13.6,	32.5,	0	26	9.0,	38.8,	0	27	6.7,	38.8,	0	28	6.7,	12.0,	0	29	6.7,	9.2,	0	30	6.7,	11.9,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	13.6,	85.5,	0	35	13.6,	93.4,	0	36	9.0,	128.6,	0

CONC URBAN ELEV GRDRIS

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 9

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	9.0,	109.3,	0	5	13.6,	103.1,	0	6	13.6,	94.2,	0
7	13.6,	82.5,	0	8	9.0,	38.8,	0	9	6.7,	38.8,	0	10	6.7,	12.0,	0	11	6.7,	9.2,	0	12	13.3,	52.7,	0
13	13.3,	55.6,	0	14	13.3,	56.8,	0	15	13.3,	56.3,	0	16	13.6,	85.5,	0	17	13.6,	93.4,	0	18	13.6,	98.4,	0
19	13.6,	106.0,	0	20	13.6,	110.3,	0	21	13.6,	44.2,	0	22	13.6,	43.1,	0	23	13.6,	40.8,	0	24	13.6,	37.2,	0
25	13.6,	32.5,	0	26	9.0,	38.8,	0	27	6.7,	38.8,	0	28	6.7,	12.0,	0	29	6.7,	9.2,	0	30	6.7,	11.9,	0
31	6.7,	14.3,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	13.6,	85.5,	0	35	13.6,	93.4,	0	36	9.0,	128.6,	0

SOURCE ID: 8

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	13.6,	108.8,	0	5	13.6,	103.1,	0	6	13.6,	94.2,	0
7	9.0,	59.7,	0	8	9.0,	38.8,	0	9	6.7,	38.8,	0	10	6.7,	12.0,	0	11	6.7,	9.2,	0	12	6.7,	11.9,	0
13	6.7,	14.3,	0	14	6.7,	16.2,	0	15	13.6,	75.0,	0	16	13.6,	85.5,	0	17	13.6,	93.4,	0	18	13.6,	98.4,	0
19	13.6,	106.0,	0	20	13.6,	110.3,	0	21	13.6,	44.2,	0	22	13.6,	43.1,	0	23	13.6,	40.8,	0	24	13.6,	37.2,	0
25	9.0,	59.7,	0	26	9.0,	38.8,	0	27	6.7,	38.8,	0	28	6.7,	12.0,	0	29	6.7,	9.2,	0	30	6.7,	11.9,	0
31	6.7,	14.3,	0	32	6.7,	16.2,	0	33	13.6,	75.0,	0	34	13.6,	85.5,	0	35	13.6,	93.4,	0	36	9.0,	128.6,	0

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(577932.8,	4166528.2,	8.6,	0.0);	(577932.8,	4166499.8,	9.1,	0.0);
(577936.3,	4166457.2,	9.1,	0.0);	(577936.3,	4166421.8,	8.8,	0.0);
(577939.9,	4166389.8,	8.8,	0.0);	(577939.9,	4166361.5,	8.8,	0.0);
(577954.1,	4166347.2,	8.8,	0.0);	(577982.5,	4166347.2,	8.8,	0.0);
(578003.8,	4166347.2,	8.9,	0.0);	(578032.2,	4166347.2,	9.1,	0.0);
(578071.2,	4166347.2,	9.2,	0.0);	(578096.1,	4166343.8,	9.4,	0.0);
(577993.1,	4166340.0,	8.8,	0.0);	(577964.8,	4166340.0,	8.8,	0.0);
(577943.4,	4166386.2,	8.8,	0.0);	(577947.0,	4166428.8,	8.8,	0.0);
(577939.9,	4166478.5,	9.1,	0.0);	(577939.9,	4166507.0,	9.1,	0.0);
(577477.6,	4165819.0,	6.3,	0.0);	(577479.0,	4165819.0,	6.4,	0.0);
(577488.7,	4165818.8,	6.4,	0.0);	(577498.4,	4165818.5,	6.4,	0.0);
(577508.1,	4165818.0,	6.4,	0.0);	(577517.8,	4165817.8,	6.4,	0.0);
(577527.5,	4165817.5,	6.6,	0.0);	(577537.1,	4165817.0,	6.7,	0.0);
(577546.8,	4165816.8,	6.7,	0.0);	(577556.5,	4165816.5,	6.7,	0.0);

(577566.2,	4165816.0,	6.7,	0.0);	(577575.9,	4165815.8,	6.9,	0.0);
(577585.6,	4165815.5,	7.0,	0.0);	(577595.3,	4165815.0,	7.0,	0.0);
(577605.0,	4165814.8,	7.0,	0.0);	(577614.7,	4165814.5,	7.2,	0.0);
(577624.4,	4165814.2,	7.3,	0.0);	(577634.0,	4165814.0,	7.3,	0.0);
(577643.7,	4165813.5,	7.3,	0.0);	(577653.4,	4165813.2,	7.3,	0.0);
(577663.1,	4165813.0,	7.4,	0.0);	(577672.8,	4165812.5,	7.6,	0.0);
(577682.5,	4165812.2,	7.6,	0.0);	(577691.6,	4165809.0,	7.6,	0.0);
(577700.7,	4165805.5,	7.6,	0.0);	(577709.7,	4165802.2,	7.9,	0.0);
(577718.8,	4165799.0,	7.9,	0.0);	(577726.2,	4165793.5,	7.9,	0.0);
(577733.6,	4165788.2,	7.9,	0.0);	(577741.0,	4165782.8,	7.9,	0.0);
(577748.4,	4165777.5,	7.9,	0.0);	(577755.8,	4165772.0,	8.1,	0.0);
(577755.9,	4165762.5,	8.2,	0.0);	(577756.0,	4165753.2,	8.2,	0.0);
(577756.2,	4165743.8,	8.2,	0.0);	(577756.3,	4165734.5,	8.2,	0.0);
(577756.4,	4165725.0,	8.2,	0.0);	(577756.4,	4165718.2,	8.2,	0.0);
(577746.8,	4165718.2,	8.2,	0.0);	(577737.1,	4165718.5,	8.1,	0.0);
(577727.5,	4165718.5,	7.9,	0.0);	(577717.8,	4165718.5,	7.9,	0.0);
(577708.1,	4165718.8,	7.9,	0.0);	(577698.5,	4165718.8,	7.7,	0.0);
(577688.8,	4165719.0,	7.6,	0.0);	(577679.2,	4165719.0,	7.6,	0.0);
(577669.5,	4165719.0,	7.6,	0.0);	(577659.8,	4165719.2,	7.3,	0.0);
(577650.2,	4165719.2,	7.3,	0.0);	(577640.5,	4165719.5,	7.3,	0.0);
(577630.9,	4165719.5,	7.3,	0.0);	(577621.2,	4165719.5,	7.0,	0.0);
(577611.5,	4165719.8,	7.0,	0.0);	(577601.9,	4165719.8,	7.0,	0.0);
(577592.2,	4165720.0,	7.0,	0.0);	(577582.6,	4165720.0,	6.8,	0.0);
(577572.9,	4165720.0,	6.7,	0.0);	(577563.2,	4165720.0,	6.7,	0.0);
(577553.6,	4165720.2,	6.5,	0.0);	(577543.9,	4165720.2,	6.4,	0.0);
(577534.3,	4165720.5,	6.4,	0.0);	(577524.6,	4165720.5,	6.2,	0.0);
(577514.9,	4165720.5,	6.1,	0.0);	(577505.3,	4165720.8,	6.1,	0.0);
(577495.6,	4165720.8,	6.1,	0.0);	(577486.0,	4165721.0,	6.1,	0.0);
(577476.3,	4165721.0,	6.0,	0.0);	(577476.4,	4165730.8,	6.1,	0.0);
(577476.6,	4165740.5,	6.1,	0.0);	(577476.7,	4165750.5,	6.1,	0.0);
(577476.8,	4165760.2,	6.1,	0.0);	(577477.0,	4165770.0,	6.1,	0.0);

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(577477.1,	4165779.8,	6.1,	0.0);	(577477.2,	4165789.5,	6.1,	0.0);
(577477.4,	4165799.5,	6.1,	0.0);	(577477.5,	4165809.2,	6.3,	0.0);
(577320.0,	4165560.0,	5.2,	0.0);	(577330.0,	4165560.0,	5.2,	0.0);
(577340.0,	4165560.0,	5.2,	0.0);	(577350.0,	4165560.0,	5.2,	0.0);
(577360.0,	4165560.0,	5.5,	0.0);	(577370.0,	4165560.0,	5.5,	0.0);
(577380.0,	4165560.0,	5.5,	0.0);	(577390.0,	4165560.0,	5.5,	0.0);
(577400.0,	4165560.0,	5.5,	0.0);	(577410.0,	4165560.0,	5.5,	0.0);
(577420.0,	4165560.0,	5.5,	0.0);	(577430.0,	4165560.0,	5.8,	0.0);
(577440.0,	4165560.0,	5.8,	0.0);	(577450.0,	4165560.0,	5.8,	0.0);

(577460.0,	4165560.0,	5.8,	0.0);	(577470.0,	4165560.0,	5.8,	0.0);
(577480.0,	4165560.0,	5.8,	0.0);	(577490.0,	4165560.0,	6.1,	0.0);
(577500.0,	4165560.0,	6.1,	0.0);	(577510.0,	4165560.0,	6.1,	0.0);
(577520.0,	4165560.0,	6.1,	0.0);	(577530.0,	4165560.0,	6.4,	0.0);
(577540.0,	4165560.0,	6.4,	0.0);	(577550.0,	4165560.0,	6.4,	0.0);
(577560.0,	4165560.0,	6.7,	0.0);	(577570.0,	4165560.0,	6.7,	0.0);
(577580.0,	4165560.0,	6.7,	0.0);	(577590.0,	4165560.0,	7.0,	0.0);
(577600.0,	4165560.0,	7.0,	0.0);	(577610.0,	4165560.0,	7.3,	0.0);
(577620.0,	4165560.0,	7.3,	0.0);	(577630.0,	4165560.0,	7.6,	0.0);
(577640.0,	4165560.0,	7.6,	0.0);	(577650.0,	4165560.0,	7.6,	0.0);
(577660.0,	4165560.0,	7.9,	0.0);	(577670.0,	4165560.0,	7.9,	0.0);
(577680.0,	4165560.0,	8.2,	0.0);	(577690.0,	4165560.0,	8.5,	0.0);
(577700.0,	4165560.0,	8.5,	0.0);	(577710.0,	4165560.0,	8.8,	0.0);
(577720.0,	4165560.0,	9.1,	0.0);	(577730.0,	4165560.0,	9.1,	0.0);
(577740.0,	4165560.0,	9.4,	0.0);	(577750.0,	4165560.0,	9.4,	0.0);
(577760.0,	4165560.0,	9.4,	0.0);	(577770.0,	4165560.0,	9.4,	0.0);
(577780.0,	4165560.0,	9.4,	0.0);	(577790.0,	4165560.0,	9.1,	0.0);
(577800.0,	4165560.0,	9.1,	0.0);	(577810.0,	4165560.0,	9.1,	0.0);
(577820.0,	4165560.0,	9.1,	0.0);	(577830.0,	4165560.0,	9.1,	0.0);
(577840.0,	4165560.0,	9.1,	0.0);	(577850.0,	4165560.0,	8.8,	0.0);
(577860.0,	4165560.0,	8.8,	0.0);	(577870.0,	4165560.0,	8.8,	0.0);
(577880.0,	4165560.0,	8.8,	0.0);	(577890.0,	4165560.0,	8.8,	0.0);
(577900.0,	4165560.0,	8.8,	0.0);	(577910.0,	4165560.0,	8.8,	0.0);
(577320.0,	4165570.0,	5.2,	0.0);	(577330.0,	4165570.0,	5.2,	0.0);
(577340.0,	4165570.0,	5.2,	0.0);	(577350.0,	4165570.0,	5.2,	0.0);
(577360.0,	4165570.0,	5.5,	0.0);	(577370.0,	4165570.0,	5.5,	0.0);
(577380.0,	4165570.0,	5.5,	0.0);	(577390.0,	4165570.0,	5.5,	0.0);
(577400.0,	4165570.0,	5.5,	0.0);	(577410.0,	4165570.0,	5.5,	0.0);
(577420.0,	4165570.0,	5.5,	0.0);	(577430.0,	4165570.0,	5.8,	0.0);
(577440.0,	4165570.0,	5.8,	0.0);	(577450.0,	4165570.0,	5.8,	0.0);
(577460.0,	4165570.0,	5.8,	0.0);	(577470.0,	4165570.0,	5.8,	0.0);
(577480.0,	4165570.0,	5.8,	0.0);	(577490.0,	4165570.0,	6.1,	0.0);
(577500.0,	4165570.0,	6.1,	0.0);	(577510.0,	4165570.0,	6.1,	0.0);
(577520.0,	4165570.0,	6.1,	0.0);	(577530.0,	4165570.0,	6.4,	0.0);
(577540.0,	4165570.0,	6.4,	0.0);	(577550.0,	4165570.0,	6.4,	0.0);
(577560.0,	4165570.0,	6.7,	0.0);	(577570.0,	4165570.0,	6.7,	0.0);

*** ISCST3 - VERSION 02035 *** *** Eastshore Energy LLC *** *** 01/25/07 *** 16:23:53

**MODELOPTs:
CONC URBAN ELEV GRDRIS

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *
LESS THAN 1.0 METER OR 3*ZLB IN DISTANCE, OR WITHIN OPEN PIT SOURCE

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)

1	577546.8	4165816.8	42.16
2	577556.5	4165816.5	44.14
3	577556.5	4165816.5	41.42
11	577614.7	4165814.5	35.52
10	577624.4	4165814.2	35.49
9	577624.4	4165814.2	36.95
8	577624.4	4165814.2	39.14
8	577634.0	4165814.0	35.50

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** 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
```

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,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

**MODELOPTs:
CONC URBAN ELEV GRDRIS

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

FILE: metdata00-04600.asc
FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
SURFACE STATION NO.: 1901 UPPER AIR STATION NO.: 1901
NAME: UNKNOWN NAME: UNKNOWN
YEAR: 1990 YEAR: 1990

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
90	01	01	01	342.0	2.15	283.0	4	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	02	303.0	1.00	283.0	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	03	267.0	1.07	283.0	6	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	04	288.0	1.00	282.8	6	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	05	296.0	1.00	282.4	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	06	312.0	1.70	282.0	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	07	326.0	2.19	281.8	6	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	08	314.0	2.59	281.5	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	09	304.0	2.10	281.9	4	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	10	303.0	2.15	282.9	3	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	11	333.0	2.32	284.1	3	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	12	339.0	3.31	284.5	4	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	13	345.0	2.24	284.1	3	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	14	335.0	2.82	283.5	3	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	15	341.0	2.68	283.1	2	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	16	360.0	2.01	283.4	1	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	17	64.0	1.00	282.8	2	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	18	36.0	1.16	282.5	3	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	19	106.0	1.97	282.5	4	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	20	69.0	1.00	282.5	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00

90 01 01 21	112.0	2.50	281.9	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90 01 01 22	131.0	1.83	281.0	4	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90 01 01 23	151.0	2.46	280.8	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90 01 01 24	227.0	1.74	280.0	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE PERIOD (43824 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 1 , 2 , 3 , 4 , 5 , 6 , 7 ,
14 , 13 , 12 , 11 , 10 , 9 , 8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC	
577932.75	4166528.25	0.94439	577932.75	4166499.75	0.95934	
577936.31	4166457.25	0.96764	577936.31	4166421.75	0.96896	
577939.88	4166389.75	0.98131	577939.88	4166361.50	0.99282	
577954.06	4166347.25	1.01517	577982.50	4166347.25	1.04895	
578003.81	4166347.25	1.07831	578032.19	4166347.25	1.11979	
578071.25	4166347.25	1.17072	578096.12	4166343.75	1.20852	RES
577993.12	4166340.00	1.06857	577964.75	4166340.00	1.03255	
577943.44	4166386.25	0.98542	577947.00	4166428.75	0.97283	
577939.88	4166478.50	0.96446	577939.88	4166507.00	0.95932	
577477.62	4165819.00	0.27644	577479.00	4165819.00	0.27909	
577488.69	4165818.75	0.26830	577498.38	4165818.50	0.25398	
577508.12	4165818.00	0.23165	577517.81	4165817.75	0.20877	
577527.50	4165817.50	0.19198	577537.12	4165817.00	0.16919	
577546.81	4165816.75	0.14840	577556.50	4165816.50	0.29266	
577566.19	4165816.00	0.74879	577575.88	4165815.75	1.16734	
577585.62	4165815.50	1.62954	577595.31	4165815.00	2.10915	
577605.00	4165814.75	2.61001	577614.69	4165814.50	3.20734	
577624.38	4165814.25	3.72513	577634.00	4165814.00	4.24979	
577643.69	4165813.50	4.81190	577653.38	4165813.25	5.34709	
577663.12	4165813.00	5.95221	577672.81	4165812.50	6.67574	
577682.50	4165812.25	7.27685	577691.62	4165809.00	8.41763	
577700.69	4165805.50	9.74519	577709.69	4165802.25	11.40602	
577718.81	4165799.00	12.95955	577726.19	4165793.50	15.14369	
577733.62	4165788.25	17.33235	577741.00	4165782.75	19.55715	
577748.38	4165777.50	21.53445	577755.81	4165772.00	23.62697	
577755.88	4165762.50	26.83762	577756.00	4165753.25	29.40611	

577756.19	4165743.75	31.35772		577756.31	4165734.50	32.45525
577756.38	4165725.00	32.73498	IND	577756.38	4165718.25	32.45528
577746.81	4165718.25	32.54340		577737.12	4165718.50	32.15517
577727.50	4165718.50	31.16064		577717.81	4165718.50	30.11556
577708.12	4165718.75	28.68698		577698.50	4165718.75	26.47328
577688.81	4165719.00	24.23501		577679.19	4165719.00	22.05082
577669.50	4165719.00	19.88355		577659.81	4165719.25	17.40756
577650.19	4165719.25	15.47644		577640.50	4165719.50	13.57661
577630.88	4165719.50	11.56915		577621.19	4165719.50	9.10724
577611.50	4165719.75	6.96565		577601.88	4165719.75	4.93029
577592.19	4165720.00	3.19749		577582.62	4165720.00	1.83614
577572.88	4165720.00	0.97824		577563.19	4165720.00	0.53227
577553.62	4165720.25	0.32236		577543.88	4165720.25	0.24714
577534.31	4165720.50	0.22043		577524.62	4165720.50	0.20313

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 1 , 2 , 3 , 4 , 5 , 6 , 7 ,
14 , 13 , 12 , 11 , 10 , 9 , 8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
577932.75	4166528.25	102.68767	(93122324)	577932.75	4166499.75	100.72300	(90012424)
577936.31	4166457.25	94.46078	(91010908)	577936.31	4166421.75	88.01776	(93030807)
577939.88	4166389.75	84.01555	(93011601)	577939.88	4166361.50	80.09186	(93011601)
577954.06	4166347.25	79.17673	(94120522)	577982.50	4166347.25	82.79347	(92030401)
578003.81	4166347.25	85.48978	(92012322)	578032.19	4166347.25	89.67801	(90031020)
578071.25	4166347.25	95.24367	(90010502)	578096.12	4166343.75	98.76987	(91010524)
577993.12	4166340.00	83.37952	(92030401)	577964.75	4166340.00	79.00276	(93040624)
577943.44	4166386.25	84.12881	(93011601)	577947.00	4166428.75	90.01869	(93030807)
577939.88	4166478.50	98.20449	(91010908)	577939.88	4166507.00	102.31668	(90012424)
577477.62	4165819.00	117.86664	(93112813)	577479.00	4165819.00	117.31935	(93112813)
577488.69	4165818.75	107.04486	(93022617)	577498.38	4165818.50	96.68312	(93022617)
577508.12	4165818.00	86.65147	(93112813)	577517.81	4165817.75	79.67763	(93112813)
577527.50	4165817.50	74.52088	(93112813)	577537.12	4165817.00	71.28780	(92032012)
577546.81	4165816.75	66.82955	(92032012)	577556.50	4165816.50	57.39623	(92032012)
577566.19	4165816.00	164.20331	(92062910)	577575.88	4165815.75	189.72913	(90040717)
577585.62	4165815.50	200.53798	(93051913)	577595.31	4165815.00	199.92354	(91092513)
577605.00	4165814.75	198.37993	(93011015)	577614.69	4165814.50	199.40755	(91042518)
577624.38	4165814.25	201.40446	(94042510)	577634.00	4165814.00	200.94949	(94042513)
577643.69	4165813.50	197.31142	(91102213)	577653.38	4165813.25	192.95833	(92062817)

577663.12	4165813.00	191.62750	(92062817)		577672.81	4165812.50	195.79611	(92062817)
577682.50	4165812.25	201.15787	(92062817)		577691.62	4165809.00	212.07544	(94042516)
577700.69	4165805.50	222.59419	(94042516)		577709.69	4165802.25	234.38380	(90051411)
577718.81	4165799.00	238.00526	(90060411)		577726.19	4165793.50	241.03094	(93061011)
577733.62	4165788.25	241.45547	(90061314)	IND	577741.00	4165782.75	237.81494	(93040816)
577748.38	4165777.50	231.48122	(93071517)		577755.81	4165772.00	227.03488	(92062815)
577755.88	4165762.50	224.72575	(90041114)		577756.00	4165753.25	209.87608	(90041114)
577756.19	4165743.75	202.71753	(90081815)		577756.31	4165734.50	198.05521	(90083017)
577756.38	4165725.00	193.46408	(90050214)		577756.38	4165718.25	189.58389	(90092015)
577746.81	4165718.25	193.71527	(93081617)		577737.12	4165718.50	195.70416	(92072013)
577727.50	4165718.50	194.84459	(93062315)		577717.81	4165718.50	192.26039	(93062315)
577708.12	4165718.75	187.11392	(93042016)		577698.50	4165718.75	175.31422	(93042016)
577688.81	4165719.00	174.85107	(92032216)		577679.19	4165719.00	170.07977	(92032216)
577669.50	4165719.00	159.48694	(92032216)		577659.81	4165719.25	143.37132	(92032216)
577650.19	4165719.25	132.12288	(92032216)		577640.50	4165719.50	124.04937	(92032216)
577630.88	4165719.50	119.72742	(92032216)		577621.19	4165719.50	114.20641	(92032216)
577611.50	4165719.75	107.53555	(92032216)		577601.88	4165719.75	93.96880	(92032216)
577592.19	4165720.00	75.07181	(93110116)		577582.62	4165720.00	65.22369	(93110116)
577572.88	4165720.00	61.29892	(92020312)		577563.19	4165720.00	67.91652	(94031212)
577553.62	4165720.25	80.37663	(94031212)		577543.88	4165720.25	89.30459	(94031212)
577534.31	4165720.50	95.94508	(94031212)		577524.62	4165720.50	101.36022	(94031212)

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: NATGAS ***
INCLUDING SOURCE(S): 1 , 2 , 3 , 4 , 5 , 6 , 7 ,
14 , 13 , 12 , 11 , 10 , 9 , 8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)		X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
577932.75	4166528.25	102.68767	(93122324)	RES	577932.75	4166499.75	100.72300	(90012424)
577936.31	4166457.25	94.46078	(91010908)		577936.31	4166421.75	88.01776	(93030807)
577939.88	4166389.75	84.01555	(93011601)		577939.88	4166361.50	80.09186	(93011601)
577954.06	4166347.25	79.17673	(94120522)		577982.50	4166347.25	82.79347	(92030401)
578003.81	4166347.25	85.48978	(92012322)		578032.19	4166347.25	89.67801	(90031020)
578071.25	4166347.25	95.24367	(90010502)		578096.12	4166343.75	98.76987	(91010524)
577993.12	4166340.00	83.37952	(92030401)		577964.75	4166340.00	79.00276	(93040624)
577943.44	4166386.25	84.12881	(93011601)		577947.00	4166428.75	90.01869	(93030807)
577939.88	4166478.50	98.20449	(91010908)		577939.88	4166507.00	102.31668	(90012424)
577477.62	4165819.00	117.86664	(93112813)		577479.00	4165819.00	117.31935	(93112813)
577488.69	4165818.75	107.04486	(93022617)		577498.38	4165818.50	96.68312	(93022617)
577508.12	4165818.00	86.65147	(93112813)		577517.81	4165817.75	79.67763	(93112813)
577527.50	4165817.50	74.52088	(93112813)		577537.12	4165817.00	71.28780	(92032012)
577546.81	4165816.75	66.82955	(92032012)		577556.50	4165816.50	57.39623	(92032012)

577566.19	4165816.00	164.20331	(92062910)	577575.88	4165815.75	189.72913	(90040717)
577585.62	4165815.50	200.53798	(93051913)	577595.31	4165815.00	199.92354	(91092513)
577605.00	4165814.75	198.37993	(93011015)	577614.69	4165814.50	199.40755	(91042518)
577624.38	4165814.25	201.40446	(94042510)	577634.00	4165814.00	200.94949	(94042513)
577643.69	4165813.50	197.31142	(91102213)	577653.38	4165813.25	192.95833	(92062817)
577663.12	4165813.00	191.62750	(92062817)	577672.81	4165812.50	195.79611	(92062817)
577682.50	4165812.25	201.15787	(92062817)	577691.62	4165809.00	212.07544	(94042516)
577700.69	4165805.50	222.59419	(94042516)	577709.69	4165802.25	234.38380	(90051411)
577718.81	4165799.00	238.00526	(90060411)	577726.19	4165793.50	241.03094	(93061011)
577733.62	4165788.25	241.45547	(90061314)	577741.00	4165782.75	237.81494	(93040816)
577748.38	4165777.50	231.48122	(93071517)	577755.81	4165772.00	227.03488	(92062815)
577755.88	4165762.50	224.72575	(90041114)	577756.00	4165753.25	209.87608	(90041114)
577756.19	4165743.75	202.71753	(90081815)	577756.31	4165734.50	198.05521	(90083017)
577756.38	4165725.00	193.46408	(90050214)	577756.38	4165718.25	189.58389	(90092015)
577746.81	4165718.25	193.71527	(93081617)	577737.12	4165718.50	195.70416	(92072013)
577727.50	4165718.50	194.84459	(93062315)	577717.81	4165718.50	192.26039	(93062315)
577708.12	4165718.75	187.11392	(93042016)	577698.50	4165718.75	175.31422	(93042016)
577688.81	4165719.00	174.85107	(92032216)	577679.19	4165719.00	170.07977	(92032216)
577669.50	4165719.00	159.48694	(92032216)	577659.81	4165719.25	143.37132	(92032216)
577650.19	4165719.25	132.12288	(92032216)	577640.50	4165719.50	124.04937	(92032216)
577630.88	4165719.50	119.72742	(92032216)	577621.19	4165719.50	114.20641	(92032216)
577611.50	4165719.75	107.53555	(92032216)	577601.88	4165719.75	93.96880	(92032216)
577592.19	4165720.00	75.07181	(93110116)	577582.62	4165720.00	65.22369	(93110116)
577572.88	4165720.00	61.29892	(92020312)	577563.19	4165720.00	67.91652	(94031212)
577553.62	4165720.25	80.37663	(94031212)	577543.88	4165720.25	89.30459	(94031212)
577534.31	4165720.50	95.94508	(94031212)	577524.62	4165720.50	101.36022	(94031212)

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	32.73498 AT	(577756.38, 4165725.00, 8.20, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	32.54340 AT	(577746.81, 4165718.25, 8.20, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	32.49900 AT	(577760.00, 4165730.00, 8.20, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	32.45528 AT	(577756.38, 4165718.25, 8.20, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	32.45525 AT	(577756.31, 4165734.50, 8.20, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	32.44508 AT	(577760.00, 4165720.00, 8.20, 0.00)	DC	NA
	7TH HIGHEST VALUE IS	32.15517 AT	(577737.12, 4165718.50, 8.10, 0.00)	DC	NA
	8TH HIGHEST VALUE IS	31.96341 AT	(577770.00, 4165720.00, 8.20, 0.00)	DC	NA
	9TH HIGHEST VALUE IS	31.83233 AT	(577770.00, 4165730.00, 8.20, 0.00)	DC	NA
	10TH HIGHEST VALUE IS	31.71522 AT	(577780.00, 4165720.00, 8.50, 0.00)	DC	NA

NATGAS	1ST HIGHEST VALUE IS	32.73498 AT (	577756.38,	4165725.00,	8.20,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	32.54340 AT (	577746.81,	4165718.25,	8.20,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	32.49900 AT (	577760.00,	4165730.00,	8.20,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	32.45528 AT (	577756.38,	4165718.25,	8.20,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	32.45525 AT (	577756.31,	4165734.50,	8.20,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	32.44508 AT (	577760.00,	4165720.00,	8.20,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	32.15517 AT (	577737.12,	4165718.50,	8.10,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	31.96341 AT (	577770.00,	4165720.00,	8.20,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	31.83233 AT (	577770.00,	4165730.00,	8.20,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	31.71522 AT (	577780.00,	4165720.00,	8.50,	0.00)	DC	NA
S1	1ST HIGHEST VALUE IS	2.59622 AT (	577669.50,	4165719.00,	7.60,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.59355 AT (	577679.19,	4165719.00,	7.60,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.56826 AT (	577688.81,	4165719.00,	7.60,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.53584 AT (	577698.50,	4165718.75,	7.70,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.52533 AT (	577659.81,	4165719.25,	7.30,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.50251 AT (	577708.12,	4165718.75,	7.90,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.48063 AT (	577680.00,	4165710.00,	7.60,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.47749 AT (	577700.00,	4165710.00,	7.90,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.47227 AT (	577690.00,	4165710.00,	7.60,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.46340 AT (	577670.00,	4165710.00,	7.60,	0.00)	DC	NA

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
S2	1ST HIGHEST VALUE IS	2.59826 AT (	577679.19,	4165719.00,	7.60,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.58542 AT (	577669.50,	4165719.00,	7.60,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.58480 AT (	577688.81,	4165719.00,	7.60,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.56158 AT (	577698.50,	4165718.75,	7.70,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.53572 AT (	577708.12,	4165718.75,	7.90,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.49618 AT (	577700.00,	4165710.00,	7.90,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.49363 AT (	577659.81,	4165719.25,	7.30,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.47958 AT (	577690.00,	4165710.00,	7.60,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.47495 AT (	577680.00,	4165710.00,	7.60,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.47270 AT (	577717.81,	4165718.50,	7.90,	0.00)	DC	NA
S3	1ST HIGHEST VALUE IS	2.56722 AT (	577688.81,	4165719.00,	7.60,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.56465 AT (	577679.19,	4165719.00,	7.60,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.55698 AT (	577698.50,	4165718.75,	7.70,	0.00)	DC	NA

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          4TH HIGHEST VALUE IS       2.54187 AT (  577708.12,  4165718.75,       7.90,       0.00)  DC       NA
          5TH HIGHEST VALUE IS       2.53180 AT (  577669.50,  4165719.00,       7.60,       0.00)  DC       NA
          6TH HIGHEST VALUE IS       2.48614 AT (  577717.81,  4165718.50,       7.90,       0.00)  DC       NA
          7TH HIGHEST VALUE IS       2.48580 AT (  577700.00,  4165710.00,       7.90,       0.00)  DC       NA
          8TH HIGHEST VALUE IS       2.45819 AT (  577710.00,  4165710.00,       7.90,       0.00)  DC       NA
          9TH HIGHEST VALUE IS       2.45457 AT (  577690.00,  4165710.00,       7.60,       0.00)  DC       NA
         10TH HIGHEST VALUE IS       2.43329 AT (  577680.00,  4165710.00,       7.60,       0.00)  DC       NA

S4        1ST HIGHEST VALUE IS       2.45522 AT (  577708.12,  4165718.75,       7.90,       0.00)  DC       NA
          2ND HIGHEST VALUE IS       2.45372 AT (  577698.50,  4165718.75,       7.70,       0.00)  DC       NA
          3RD HIGHEST VALUE IS       2.44248 AT (  577688.81,  4165719.00,       7.60,       0.00)  DC       NA
          4TH HIGHEST VALUE IS       2.41458 AT (  577679.19,  4165719.00,       7.60,       0.00)  DC       NA
          5TH HIGHEST VALUE IS       2.41201 AT (  577717.81,  4165718.50,       7.90,       0.00)  DC       NA
          6TH HIGHEST VALUE IS       2.40722 AT (  577700.00,  4165710.00,       7.90,       0.00)  DC       NA
          7TH HIGHEST VALUE IS       2.39669 AT (  577710.00,  4165710.00,       7.90,       0.00)  DC       NA
          8TH HIGHEST VALUE IS       2.36667 AT (  577720.00,  4165710.00,       7.90,       0.00)  DC       NA
          9TH HIGHEST VALUE IS       2.35758 AT (  577727.50,  4165718.50,       7.90,       0.00)  DC       NA
         10TH HIGHEST VALUE IS       2.35184 AT (  577690.00,  4165710.00,       7.60,       0.00)  DC       NA

 *** ISCST3 - VERSION 02035 ***     *** Eastshore Energy LLC                                          ***        01/25/07
                                    ***                                                               ***        16:23:53
**MODELOPTs:                                                                                                     PAGE1901
CONC                    URBAN ELEV                GRDRIS

                                   *** THE SUMMARY OF MAXIMUM PERIOD ( 43824 HRS) RESULTS ***

                                 ** CONC OF NGAS     IN MICROGRAMS/M**3                          **

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

S5        1ST HIGHEST VALUE IS       2.47205 AT (  577708.12,  4165718.75,       7.90,       0.00)  DC       NA
          2ND HIGHEST VALUE IS       2.45771 AT (  577698.50,  4165718.75,       7.70,       0.00)  DC       NA
          3RD HIGHEST VALUE IS       2.43725 AT (  577717.81,  4165718.50,       7.90,       0.00)  DC       NA
          4TH HIGHEST VALUE IS       2.43091 AT (  577688.81,  4165719.00,       7.60,       0.00)  DC       NA
          5TH HIGHEST VALUE IS       2.40512 AT (  577710.00,  4165710.00,       7.90,       0.00)  DC       NA
          6TH HIGHEST VALUE IS       2.40280 AT (  577700.00,  4165710.00,       7.90,       0.00)  DC       NA
          7TH HIGHEST VALUE IS       2.38903 AT (  577727.50,  4165718.50,       7.90,       0.00)  DC       NA
          8TH HIGHEST VALUE IS       2.38490 AT (  577720.00,  4165710.00,       7.90,       0.00)  DC       NA
          9TH HIGHEST VALUE IS       2.38368 AT (  577679.19,  4165719.00,       7.60,       0.00)  DC       NA
         10TH HIGHEST VALUE IS       2.35158 AT (  577737.12,  4165718.50,       8.10,       0.00)  DC       NA

S6        1ST HIGHEST VALUE IS       2.48278 AT (  577708.12,  4165718.75,       7.90,       0.00)  DC       NA
          2ND HIGHEST VALUE IS       2.45803 AT (  577717.81,  4165718.50,       7.90,       0.00)  DC       NA
          3RD HIGHEST VALUE IS       2.45371 AT (  577698.50,  4165718.75,       7.70,       0.00)  DC       NA
          4TH HIGHEST VALUE IS       2.41732 AT (  577727.50,  4165718.50,       7.90,       0.00)  DC       NA
          5TH HIGHEST VALUE IS       2.40909 AT (  577688.81,  4165719.00,       7.60,       0.00)  DC       NA
          6TH HIGHEST VALUE IS       2.40707 AT (  577710.00,  4165710.00,       7.90,       0.00)  DC       NA
          7TH HIGHEST VALUE IS       2.39823 AT (  577720.00,  4165710.00,       7.90,       0.00)  DC       NA
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	8TH HIGHEST VALUE IS	2.39002 AT (	577700.00,	4165710.00,	7.90,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.38614 AT (	577737.12,	4165718.50,	8.10,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.36948 AT (	577730.00,	4165710.00,	7.90,	0.00)	DC	NA
S7	1ST HIGHEST VALUE IS	2.48638 AT (	577708.12,	4165718.75,	7.90,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.47358 AT (	577717.81,	4165718.50,	7.90,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.44200 AT (	577727.50,	4165718.50,	7.90,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.44021 AT (	577698.50,	4165718.75,	7.70,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.41839 AT (	577737.12,	4165718.50,	8.10,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.40586 AT (	577720.00,	4165710.00,	7.90,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.40143 AT (	577710.00,	4165710.00,	7.90,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.38725 AT (	577730.00,	4165710.00,	7.90,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.38324 AT (	577740.00,	4165710.00,	8.20,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.37518 AT (	577688.81,	4165719.00,	7.60,	0.00)	DC	NA

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
S8	1ST HIGHEST VALUE IS	2.57619 AT (	577780.00,	4165730.00,	8.50,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.54966 AT (	577790.00,	4165730.00,	8.50,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.53741 AT (	577780.00,	4165720.00,	8.50,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.53386 AT (	577790.00,	4165720.00,	8.50,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.52029 AT (	577770.00,	4165730.00,	8.20,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.50512 AT (	577800.00,	4165720.00,	8.50,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.50195 AT (	577800.00,	4165730.00,	8.50,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.49436 AT (	577810.00,	4165720.00,	8.80,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.47987 AT (	577770.00,	4165740.00,	8.20,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.47935 AT (	577790.00,	4165740.00,	8.50,	0.00)	DC	NA
S9	1ST HIGHEST VALUE IS	2.56491 AT (	577780.00,	4165730.00,	8.50,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.53917 AT (	577780.00,	4165720.00,	8.50,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.52847 AT (	577770.00,	4165730.00,	8.20,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.52595 AT (	577790.00,	4165730.00,	8.50,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.52099 AT (	577790.00,	4165720.00,	8.50,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.50472 AT (	577760.00,	4165730.00,	8.20,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.48983 AT (	577756.31,	4165734.50,	8.20,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.48150 AT (	577800.00,	4165720.00,	8.50,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.48118 AT (	577770.00,	4165720.00,	8.20,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.47805 AT (	577770.00,	4165740.00,	8.20,	0.00)	DC	NA

S10	1ST HIGHEST VALUE IS	2.54653	AT (	577780.00,	4165730.00,	8.50,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.53246	AT (	577780.00,	4165720.00,	8.50,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.52666	AT (	577770.00,	4165730.00,	8.20,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.52230	AT (	577760.00,	4165730.00,	8.20,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.50997	AT (	577756.31,	4165734.50,	8.20,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.50199	AT (	577790.00,	4165720.00,	8.50,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.49741	AT (	577790.00,	4165730.00,	8.50,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.49268	AT (	577770.00,	4165720.00,	8.20,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.48866	AT (	577756.38,	4165725.00,	8.20,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.48024	AT (	577760.00,	4165740.00,	8.20,	0.00)	DC	NA

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
SA11	1ST HIGHEST VALUE IS	32.73498	AT (	577756.38,	4165725.00,	8.20,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	32.54340	AT (	577746.81,	4165718.25,	8.20,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	32.49900	AT (	577760.00,	4165730.00,	8.20,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	32.45528	AT (	577756.38,	4165718.25,	8.20,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	32.45525	AT (	577756.31,	4165734.50,	8.20,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	32.44508	AT (	577760.00,	4165720.00,	8.20,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	32.15517	AT (	577737.12,	4165718.50,	8.10,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	31.96341	AT (	577770.00,	4165720.00,	8.20,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	31.83233	AT (	577770.00,	4165730.00,	8.20,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	31.71522	AT (	577780.00,	4165720.00,	8.50,	0.00)	DC	NA
1	1ST HIGHEST VALUE IS	2.59622	AT (	577669.50,	4165719.00,	7.60,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.59355	AT (	577679.19,	4165719.00,	7.60,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.56826	AT (	577688.81,	4165719.00,	7.60,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.53584	AT (	577698.50,	4165718.75,	7.70,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.52533	AT (	577659.81,	4165719.25,	7.30,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.50251	AT (	577708.12,	4165718.75,	7.90,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.48063	AT (	577680.00,	4165710.00,	7.60,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.47749	AT (	577700.00,	4165710.00,	7.90,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.47227	AT (	577690.00,	4165710.00,	7.60,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.46340	AT (	577670.00,	4165710.00,	7.60,	0.00)	DC	NA

CONC URBAN ELEV GRDRIS

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
2	1ST HIGHEST VALUE IS	2.59826 AT (	577679.19,	4165719.00,	7.60,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.58542 AT (	577669.50,	4165719.00,	7.60,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.58480 AT (	577688.81,	4165719.00,	7.60,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.56158 AT (	577698.50,	4165718.75,	7.70,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.53572 AT (	577708.12,	4165718.75,	7.90,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.49618 AT (	577700.00,	4165710.00,	7.90,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.49363 AT (	577659.81,	4165719.25,	7.30,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.47958 AT (	577690.00,	4165710.00,	7.60,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.47495 AT (	577680.00,	4165710.00,	7.60,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.47270 AT (	577717.81,	4165718.50,	7.90,	0.00)	DC	NA
3	1ST HIGHEST VALUE IS	2.56722 AT (	577688.81,	4165719.00,	7.60,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.56465 AT (	577679.19,	4165719.00,	7.60,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.55698 AT (	577698.50,	4165718.75,	7.70,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.54187 AT (	577708.12,	4165718.75,	7.90,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.53180 AT (	577669.50,	4165719.00,	7.60,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.48614 AT (	577717.81,	4165718.50,	7.90,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.48580 AT (	577700.00,	4165710.00,	7.90,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.45819 AT (	577710.00,	4165710.00,	7.90,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.45457 AT (	577690.00,	4165710.00,	7.60,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.43329 AT (	577680.00,	4165710.00,	7.60,	0.00)	DC	NA
4	1ST HIGHEST VALUE IS	2.45522 AT (	577708.12,	4165718.75,	7.90,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.45372 AT (	577698.50,	4165718.75,	7.70,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.44248 AT (	577688.81,	4165719.00,	7.60,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.41458 AT (	577679.19,	4165719.00,	7.60,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.41201 AT (	577717.81,	4165718.50,	7.90,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.40722 AT (	577700.00,	4165710.00,	7.90,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.39669 AT (	577710.00,	4165710.00,	7.90,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.36667 AT (	577720.00,	4165710.00,	7.90,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.35758 AT (	577727.50,	4165718.50,	7.90,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.35184 AT (	577690.00,	4165710.00,	7.60,	0.00)	DC	NA

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
5	1ST HIGHEST VALUE IS	2.47205 AT	(577708.12, 4165718.75, 7.90, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.45771 AT	(577698.50, 4165718.75, 7.70, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.43725 AT	(577717.81, 4165718.50, 7.90, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.43091 AT	(577688.81, 4165719.00, 7.60, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.40512 AT	(577710.00, 4165710.00, 7.90, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.40280 AT	(577700.00, 4165710.00, 7.90, 0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.38903 AT	(577727.50, 4165718.50, 7.90, 0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.38490 AT	(577720.00, 4165710.00, 7.90, 0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.38368 AT	(577679.19, 4165719.00, 7.60, 0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.35158 AT	(577737.12, 4165718.50, 8.10, 0.00)	DC	NA
6	1ST HIGHEST VALUE IS	2.48278 AT	(577708.12, 4165718.75, 7.90, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.45803 AT	(577717.81, 4165718.50, 7.90, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.45371 AT	(577698.50, 4165718.75, 7.70, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.41732 AT	(577727.50, 4165718.50, 7.90, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.40909 AT	(577688.81, 4165719.00, 7.60, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.40707 AT	(577710.00, 4165710.00, 7.90, 0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.39823 AT	(577720.00, 4165710.00, 7.90, 0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.39002 AT	(577700.00, 4165710.00, 7.90, 0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.38614 AT	(577737.12, 4165718.50, 8.10, 0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.36948 AT	(577730.00, 4165710.00, 7.90, 0.00)	DC	NA
7	1ST HIGHEST VALUE IS	2.48638 AT	(577708.12, 4165718.75, 7.90, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.47358 AT	(577717.81, 4165718.50, 7.90, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.44200 AT	(577727.50, 4165718.50, 7.90, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.44021 AT	(577698.50, 4165718.75, 7.70, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.41839 AT	(577737.12, 4165718.50, 8.10, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.40586 AT	(577720.00, 4165710.00, 7.90, 0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.40143 AT	(577710.00, 4165710.00, 7.90, 0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.38725 AT	(577730.00, 4165710.00, 7.90, 0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.38324 AT	(577740.00, 4165710.00, 8.20, 0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.37518 AT	(577688.81, 4165719.00, 7.60, 0.00)	DC	NA

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

NETWORK

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	GRID-ID
14	1ST HIGHEST VALUE IS	2.45416 AT (	577756.38,	4165725.00,	8.20,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.43904 AT (	577746.81,	4165718.25,	8.20,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.43445 AT (	577756.38,	4165718.25,	8.20,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.43384 AT (	577760.00,	4165720.00,	8.20,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.43149 AT (	577760.00,	4165730.00,	8.20,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.42312 AT (	577756.31,	4165734.50,	8.20,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.40321 AT (	577737.12,	4165718.50,	8.10,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.39678 AT (	577770.00,	4165720.00,	8.20,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.37938 AT (	577770.00,	4165730.00,	8.20,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.37846 AT (	577780.00,	4165720.00,	8.50,	0.00)	DC	NA
13	1ST HIGHEST VALUE IS	2.46739 AT (	577756.38,	4165725.00,	8.20,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.45312 AT (	577760.00,	4165730.00,	8.20,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.44592 AT (	577760.00,	4165720.00,	8.20,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.44410 AT (	577756.31,	4165734.50,	8.20,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.43998 AT (	577756.38,	4165718.25,	8.20,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.43014 AT (	577746.81,	4165718.25,	8.20,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.41881 AT (	577770.00,	4165720.00,	8.20,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.40925 AT (	577780.00,	4165720.00,	8.50,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.40908 AT (	577770.00,	4165730.00,	8.20,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.38681 AT (	577780.00,	4165730.00,	8.50,	0.00)	DC	NA
12	1ST HIGHEST VALUE IS	2.47368 AT (	577756.38,	4165725.00,	8.20,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	2.46920 AT (	577760.00,	4165730.00,	8.20,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	2.45928 AT (	577756.31,	4165734.50,	8.20,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.45128 AT (	577760.00,	4165720.00,	8.20,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	2.43778 AT (	577756.38,	4165718.25,	8.20,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	2.43686 AT (	577780.00,	4165720.00,	8.50,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	2.43606 AT (	577770.00,	4165720.00,	8.20,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	2.43508 AT (	577770.00,	4165730.00,	8.20,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	2.42159 AT (	577780.00,	4165730.00,	8.50,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	2.41119 AT (	577746.81,	4165718.25,	8.20,	0.00)	DC	NA

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
11	1ST HIGHEST VALUE IS	2.52556 AT (	577760.00,	4165730.00,	8.20,	0.00)	DC	NA

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          2ND HIGHEST VALUE IS      2.51922 AT (  577756.38,  4165725.00,      8.20,      0.00)  DC      NA
          3RD HIGHEST VALUE IS      2.51665 AT (  577756.31,  4165734.50,      8.20,      0.00)  DC      NA
          4TH HIGHEST VALUE IS      2.49922 AT (  577770.00,  4165730.00,      8.20,      0.00)  DC      NA
          5TH HIGHEST VALUE IS      2.49856 AT (  577780.00,  4165720.00,      8.50,      0.00)  DC      NA
          6TH HIGHEST VALUE IS      2.49342 AT (  577760.00,  4165720.00,      8.20,      0.00)  DC      NA
          7TH HIGHEST VALUE IS      2.49268 AT (  577780.00,  4165730.00,      8.50,      0.00)  DC      NA
          8TH HIGHEST VALUE IS      2.48867 AT (  577770.00,  4165720.00,      8.20,      0.00)  DC      NA
          9TH HIGHEST VALUE IS      2.47204 AT (  577756.38,  4165718.25,      8.20,      0.00)  DC      NA
         10TH HIGHEST VALUE IS      2.46545 AT (  577760.00,  4165740.00,      8.20,      0.00)  DC      NA

10        1ST HIGHEST VALUE IS      2.54653 AT (  577780.00,  4165730.00,      8.50,      0.00)  DC      NA
          2ND HIGHEST VALUE IS      2.53246 AT (  577780.00,  4165720.00,      8.50,      0.00)  DC      NA
          3RD HIGHEST VALUE IS      2.52666 AT (  577770.00,  4165730.00,      8.20,      0.00)  DC      NA
          4TH HIGHEST VALUE IS      2.52230 AT (  577760.00,  4165730.00,      8.20,      0.00)  DC      NA
          5TH HIGHEST VALUE IS      2.50997 AT (  577756.31,  4165734.50,      8.20,      0.00)  DC      NA
          6TH HIGHEST VALUE IS      2.50199 AT (  577790.00,  4165720.00,      8.50,      0.00)  DC      NA
          7TH HIGHEST VALUE IS      2.49741 AT (  577790.00,  4165730.00,      8.50,      0.00)  DC      NA
          8TH HIGHEST VALUE IS      2.49268 AT (  577770.00,  4165720.00,      8.20,      0.00)  DC      NA
          9TH HIGHEST VALUE IS      2.48866 AT (  577756.38,  4165725.00,      8.20,      0.00)  DC      NA
         10TH HIGHEST VALUE IS      2.48024 AT (  577760.00,  4165740.00,      8.20,      0.00)  DC      NA

9         1ST HIGHEST VALUE IS      2.56491 AT (  577780.00,  4165730.00,      8.50,      0.00)  DC      NA
          2ND HIGHEST VALUE IS      2.53917 AT (  577780.00,  4165720.00,      8.50,      0.00)  DC      NA
          3RD HIGHEST VALUE IS      2.52847 AT (  577770.00,  4165730.00,      8.20,      0.00)  DC      NA
          4TH HIGHEST VALUE IS      2.52595 AT (  577790.00,  4165730.00,      8.50,      0.00)  DC      NA
          5TH HIGHEST VALUE IS      2.52099 AT (  577790.00,  4165720.00,      8.50,      0.00)  DC      NA
          6TH HIGHEST VALUE IS      2.50472 AT (  577760.00,  4165730.00,      8.20,      0.00)  DC      NA
          7TH HIGHEST VALUE IS      2.48983 AT (  577756.31,  4165734.50,      8.20,      0.00)  DC      NA
          8TH HIGHEST VALUE IS      2.48150 AT (  577800.00,  4165720.00,      8.50,      0.00)  DC      NA
          9TH HIGHEST VALUE IS      2.48118 AT (  577770.00,  4165720.00,      8.20,      0.00)  DC      NA
         10TH HIGHEST VALUE IS      2.47805 AT (  577770.00,  4165740.00,      8.20,      0.00)  DC      NA

 *** ISCST3 - VERSION 02035 ***    *** Eastshore Energy LLC                                          ***      01/25/07
                                   ***                                                               ***      16:23:53
**MODELOPTs:                                                                                                  PAGE1909
CONC                    URBAN ELEV                GRDRIS

                                  *** THE SUMMARY OF MAXIMUM PERIOD ( 43824 HRS) RESULTS ***

                                  ** CONC OF NGAS    IN MICROGRAMS/M**3                          **

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

8         1ST HIGHEST VALUE IS      2.57619 AT (  577780.00,  4165730.00,      8.50,      0.00)  DC      NA
          2ND HIGHEST VALUE IS      2.54966 AT (  577790.00,  4165730.00,      8.50,      0.00)  DC      NA
          3RD HIGHEST VALUE IS      2.53741 AT (  577780.00,  4165720.00,      8.50,      0.00)  DC      NA
          4TH HIGHEST VALUE IS      2.53386 AT (  577790.00,  4165720.00,      8.50,      0.00)  DC      NA
          5TH HIGHEST VALUE IS      2.52029 AT (  577770.00,  4165730.00,      8.20,      0.00)  DC      NA
```

6TH HIGHEST VALUE IS	2.50512 AT (	577800.00,	4165720.00,	8.50,	0.00)	DC	NA
7TH HIGHEST VALUE IS	2.50195 AT (	577800.00,	4165730.00,	8.50,	0.00)	DC	NA
8TH HIGHEST VALUE IS	2.49436 AT (	577810.00,	4165720.00,	8.80,	0.00)	DC	NA
9TH HIGHEST VALUE IS	2.47987 AT (	577770.00,	4165740.00,	8.20,	0.00)	DC	NA
10TH HIGHEST VALUE IS	2.47935 AT (	577790.00,	4165740.00,	8.50,	0.00)	DC	NA

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** ISCST3 - VERSION 02035 *** *** Eastshore Energy LLC *** *** 01/25/07
*** 16:23:53
PAGE1910

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

GROUP ID			AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
ALL	HIGH	1ST HIGH VALUE IS	241.45547	ON 90061314: AT (	577733.62,	4165788.25,	7.90,	0.00)	DC	NA
NATGAS	HIGH	1ST HIGH VALUE IS	241.45547	ON 90061314: AT (	577733.62,	4165788.25,	7.90,	0.00)	DC	NA
S1	HIGH	1ST HIGH VALUE IS	64.78739	ON 93051913: AT (	577575.88,	4165815.75,	6.90,	0.00)	DC	NA
S2	HIGH	1ST HIGH VALUE IS	65.94718	ON 93051913: AT (	577585.62,	4165815.50,	7.00,	0.00)	DC	NA
S3	HIGH	1ST HIGH VALUE IS	64.50179	ON 90050910: AT (	577570.00,	4165830.00,	7.00,	0.00)	DC	NA
S4	HIGH	1ST HIGH VALUE IS	17.94952	ON 92042915: AT (	577660.00,	4165840.00,	7.60,	0.00)	DC	NA
S5	HIGH	1ST HIGH VALUE IS	18.24152	ON 92042915: AT (	577660.00,	4165840.00,	7.60,	0.00)	DC	NA
S6	HIGH	1ST HIGH VALUE IS	18.29713	ON 92042915: AT (	577660.00,	4165840.00,	7.60,	0.00)	DC	NA
S7	HIGH	1ST HIGH VALUE IS	18.26651	ON 92042915: AT (	577670.00,	4165840.00,	7.60,	0.00)	DC	NA
S8	HIGH	1ST HIGH VALUE IS	19.20976	ON 91031413: AT (	577755.88,	4165762.50,	8.20,	0.00)	DC	NA
S9	HIGH	1ST HIGH VALUE IS	18.93040	ON 91031413: AT (	577755.88,	4165762.50,	8.20,	0.00)	DC	NA
S10	HIGH	1ST HIGH VALUE IS	18.56981	ON 91031413: AT (	577755.88,	4165762.50,	8.20,	0.00)	DC	NA

S11	HIGH	1ST HIGH VALUE IS	18.22219	ON 90070518: AT (	577710.00,	4165710.00,	7.90,	0.00)	DC	NA
S12	HIGH	1ST HIGH VALUE IS	17.73004	ON 93081817: AT (	577710.00,	4165710.00,	7.90,	0.00)	DC	NA
S13	HIGH	1ST HIGH VALUE IS	17.81702	ON 90070518: AT (	577700.00,	4165710.00,	7.90,	0.00)	DC	NA
S14	HIGH	1ST HIGH VALUE IS	17.74215	ON 93042016: AT (	577708.12,	4165718.75,	7.90,	0.00)	DC	NA
SA11	HIGH	1ST HIGH VALUE IS	241.45547	ON 90061314: AT (	577733.62,	4165788.25,	7.90,	0.00)	DC	NA
1	HIGH	1ST HIGH VALUE IS	64.78739	ON 93051913: AT (	577575.88,	4165815.75,	6.90,	0.00)	DC	NA
2	HIGH	1ST HIGH VALUE IS	65.94718	ON 93051913: AT (	577585.62,	4165815.50,	7.00,	0.00)	DC	NA
3	HIGH	1ST HIGH VALUE IS	64.50179	ON 90050910: AT (	577570.00,	4165830.00,	7.00,	0.00)	DC	NA

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF NGAS IN MICROGRAMS/M**3 **

GROUP ID			AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
4	HIGH	1ST HIGH VALUE IS	17.94952	ON 92042915: AT (	577660.00,	4165840.00,	7.60,	0.00)	DC	NA
5	HIGH	1ST HIGH VALUE IS	18.24152	ON 92042915: AT (	577660.00,	4165840.00,	7.60,	0.00)	DC	NA
6	HIGH	1ST HIGH VALUE IS	18.29713	ON 92042915: AT (	577660.00,	4165840.00,	7.60,	0.00)	DC	NA
7	HIGH	1ST HIGH VALUE IS	18.26651	ON 92042915: AT (	577670.00,	4165840.00,	7.60,	0.00)	DC	NA
14	HIGH	1ST HIGH VALUE IS	17.74215	ON 93042016: AT (	577708.12,	4165718.75,	7.90,	0.00)	DC	NA
13	HIGH	1ST HIGH VALUE IS	17.81702	ON 90070518: AT (	577700.00,	4165710.00,	7.90,	0.00)	DC	NA
12	HIGH	1ST HIGH VALUE IS	17.73004	ON 93081817: AT (	577710.00,	4165710.00,	7.90,	0.00)	DC	NA
11	HIGH	1ST HIGH VALUE IS	18.22219	ON 90070518: AT (	577710.00,	4165710.00,	7.90,	0.00)	DC	NA
10	HIGH	1ST HIGH VALUE IS	18.56981	ON 91031413: AT (	577755.88,	4165762.50,	8.20,	0.00)	DC	NA
9	HIGH	1ST HIGH VALUE IS	18.93040	ON 91031413: AT (	577755.88,	4165762.50,	8.20,	0.00)	DC	NA
8	HIGH	1ST HIGH VALUE IS	19.20976	ON 91031413: AT (	577755.88,	4165762.50,	8.20,	0.00)	DC	NA

```
 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
                      BD = BOUNDARY

 *** ISCST3 - VERSION 02035 ***    *** Eastshore Energy LLC                                  ***      01/25/07
                                   ***                                                       ***      16:23:53
**MODELOPTs:                                                                                         PAGE1912
CONC                    URBAN ELEV                GRDRIS


*** Message Summary : ISCST3 Model Execution ***

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

A Total of            0 Fatal Error Message(s)
A Total of            1 Warning Message(s)
A Total of          133 Informational Message(s)

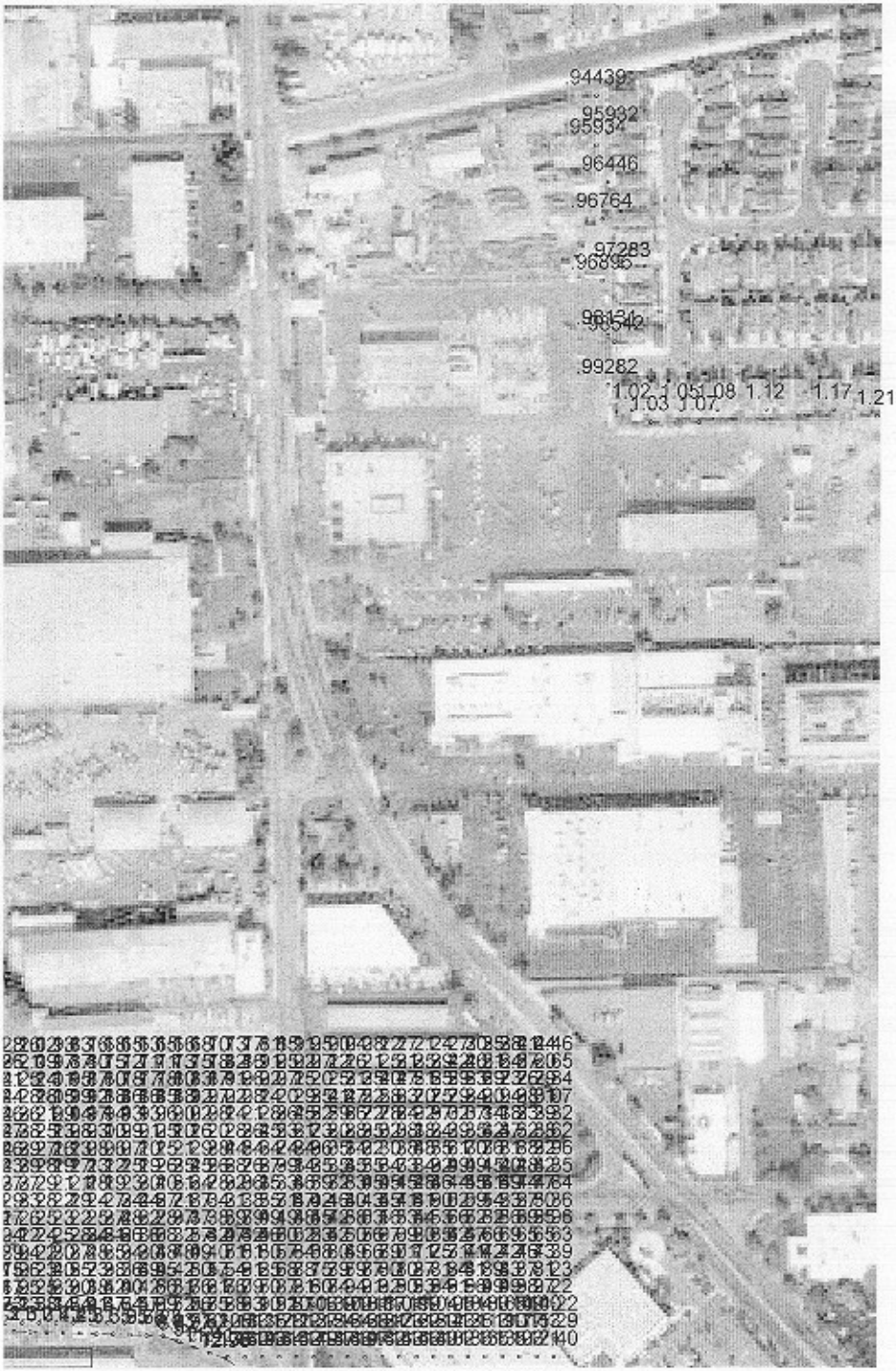
A Total of          133 Calm Hours Identified


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


   ********   WARNING MESSAGES   ********
RE W282  2606 CHK_EL:RecElev < SrcBase; See non-DFAULT HE>ZI option in  MCB#9

   ************************************
   *** ISCST3 Finishes Successfully ***
   ************************************
```

C:\IRMA\BEEST\DCModel\EECenter(unitless)gradualplumerise_90_NGAS.GRF



PERIOD VALUES FOR GROUP: ALL

Max = 32.73498 (577756.4, 4165725)

Scale: 1" = 104.7 Meters

HIGH 1ST HIGH 1-HR VALUES FOR GROUP: ALL

Max = 241.45547 (577733.6, 4165788)

Health Risk Screening Analysis Summary for Standby Generator Diesel Engine
Facility =Eastshore Energy Center, (Hayward, CA)

- **Plant #18041; Application #15195**
- **ISC Air Dispersion Model Used**
- **Union City Meteorological Data Used**
- **Hayward Terrain Data Used**
- **Daytime Scalars Used**
- **Urban Land Use** @ pt of Max for Natural Gas

Health Risk Estimates:

Receptor	Max. Annual Emission Rate (lb/yr)	Max. Annual Emission Rate (g/sec)	Max. Annual Avg. Chi/Q (ug/m^3 per g/sec)	Annual Average Exposure Concentration[1] (ug/m^3)	Inhalation Dose[2] (mg/kg-day)	Diesel PM: Inhalation Cancer Potency Factor (CPF) (mg/kg-day)$^{-1}$	Diesel PM: Inhalation Reference Exposure Level (REL) (ug/m^3)	***Max. Cancer Risk[3]***	***Max. Non-cancer Hazard Quotient[4]***
Resident	4.5434	6.5E-05	4.8E-01	0.00003	9.5E-09	1.1E+00	5.0E+00	***1.05E-08***	***6.3E-06***
Worker	4.5434	6.5E-05	1.8E+01	0.00115	2.9E-07	1.1E+00	5.0E+00	***3.16E-07***	***2.2E-04***
Student	0	0.0E+00	0	0.0E+00	0.0E+00	1.1E+00	5.0E+00	***0.0E+00***	***0.0E+00***

1. Annual Average Exposure Concentration (ug/m^3) = Max. Annual Emission Rate (g/sec) * Max. Annual Avg. Chi/Q (ug/m^3 per g/sec)
2. Inhalation Dose (mg/kg-day) = Ann. Avg. Exp. Conc. (ug/m^3) * BR (L/kg-day) * UCF (mg-m^3)/(ug/L) * $EAF_{(cancer\ risk)}$
3. Max. Cancer Risk = Inhalation Dose (mg/kg-day) * CPF (mg/kg-day)$^{-1}$
4. Max. Non-cancer Hazard Quotient = Ann. Avg. Exp. Conc. (ug/m^3) * $EAF_{(non\text{-}cancer)}$ / REL (ug/m^3)

Exposure Adjustment Factors (EAFs) for Sources that Operate Intermittently:

	Daily (hours/day)	Weekly (days/week)	Annually (weeks/year)	Lifetime (years per 70-yr lifetime)	Exposure Adjustment Factors (EAFs)[5] (cancer risk)	Exposure Adjustment Factors (EAFs)[5] (non-cancer hazard quotient)
Resident is Present While Source is Operating	24	7	50	70		
Worker is Present While Source is Operating	8	5	49	40		
Student is Present While Source is Operating	10	5	36	9		
Source is Operating	1	1	50	70		
Fraction of Time **Resident** is Present While the Source is Operating	1.00	1.00	1.00	1.00	1.00	1.00
Fraction of Time **Worker** is Present While the Source is Operating	1.00	1.00	0.98	0.57	0.56	0.98
Fraction of Time **Student** is Present While the Source is Operating	1.00	1.00	0.72	0.13	0.09	0.72

5. Note that the fraction of time that a receptor is present while a source is operating can not exceed one.

Thus, if a receptor is present 10 hours/day, but the source operates only 8 hours/day, the maximum that the receptor can be present while the source is operating is the number of hours the source is operating (e.g., 8 hours).

Exposure Parameters:

Receptor	Breathing Rate (BR)[6] (L/kg-day)	Exposure Time (ET) (hours/day)	Exposure Frequency (EF) (day/year)	Exposure Duration (ED) (years)	Units Conversion Factor (UCF) (mg-m^3)/(ug/L)	Averaging Time (AT - 70 years) (days)
Resident	302	24	350	70	1.0E-06	25,550
Worker	447	8	245	40	1.0E-06	25,550
Student	581	10	180	9	1.0E-06	25,550

6. Based on a 24-hour day. Worker breathing rate is 149 L/kg-day (for an 8-hour workday), and 447 L/kg-day (for a 24-hour day).

Health Risk Screening Analysis Summary for Standby Generator Diesel Engine
Facility =Eastshore Energy Center, (Hayward, CA)

- **Plant #18041; Application #15195** MAX PT
- **ISC Air Dispersion Model Used**
- **Union City Meteorological Data Used**
- **Hayward Terrain Data Used**
- **Daytime Scalars Used**
- **Urban Land Use**

Health Risk Estimates:

Receptor	Max. Annual Emission Rate (lb/yr)	Max. Annual Emission Rate (g/sec)	Max. Annual Avg. Chi/Q (ug/m^3 per g/sec)	Annual Average Exposure Concentration[1] (ug/m^3)	Inhalation Dose[2] (mg/kg-day)	Diesel PM: Inhalation Cancer Potency Factor (CPF) $(mg/kg\text{-}day)^{-1}$	Diesel PM: Inhalation Reference Exposure Level (REL) (ug/m^3)	***Max. Cancer Risk[3]***	***Max. Non-cancer Hazard Quotient[4]***
Resident	4.5434	6.5E-05	5.2E-01	0.00003	1.0E-08	1.1E+00	5.0E+00	***1.13E-08***	***6.8E-06***
Worker	4.5434	6.5E-05	3.5E+01	0.00229	5.7E-07	1.1E+00	5.0E+00	***6.30E-07***	***4.5E-04***
Student	0	0.0E+00	0	0.0E+00	0.0E+00	1.1E+00	5.0E+00	***0.0E+00***	***0.0E+00***

1. Annual Average Exposure Concentration (ug/m^3) = Max. Annual Emission Rate (g/sec) * Max. Annual Avg. Chi/Q (ug/m^3 per g/sec)
2. Inhalation Dose (mg/kg-day) = Ann. Avg. Exp. Conc. (ug/m^3) * BR (L/kg-day) * UCF ($mg\text{-}m^3$)/(ug/L) * $EAF_{(cancer\ risk)}$
3. Max. Cancer Risk = Inhalation Dose (mg/kg-day) * CPF $(mg/kg\text{-}day)^{-1}$
4. Max. Non-cancer Hazard Quotient = Ann. Avg. Exp. Conc. (ug/m^3) * $EAF_{(non\text{-}cancer)}$ / REL (ug/m^3)

Exposure Adjustment Factors (EAFs) for Sources that Operate Intermittently:

	Daily (hours/day)	Weekly (days/week)	Annually (weeks/year)	Lifetime (years per 70-yr lifetime)	Exposure Adjustment Factors (EAFs)[5] (cancer risk)	Exposure Adjustment Factors (EAFs)[5] (non-cancer hazard quotient)
Resident is Present While Source is Operating	24	7	50	70		
Worker is Present While Source is Operating	8	5	49	40		
Student is Present While Source is Operating	10	5	36	9		
Source is Operating	1	1	50	70		
Fraction of Time **Resident** is Present While the Source is Operating	1.00	1.00	1.00	1.00	1.00	1.00
Fraction of Time **Worker** is Present While the Source is Operating	1.00	1.00	0.98	0.57	0.56	0.98
Fraction of Time **Student** is Present While the Source is Operating	1.00	1.00	0.72	0.13	0.09	0.72

5. Note that the fraction of time that a receptor is present while a source is operating can not exceed one.
Thus, if a receptor is present 10 hours/day, but the source operates only 8 hours/day, the maximum that the receptor can be present while the source is operating is the number of hours the source is operating (e.g., 8 hours).

Exposure Parameters:

Receptor	Breathing Rate (BR)[6] (L/kg-day)	Exposure Time (ET) (hours/day)	Exposure Frequency (EF) (day/year)	Exposure Duration (ED) (years)	Units Conversion Factor (UCF) $(mg\text{-}m^3)/(ug/L)$	Averaging Time (AT - 70 years) (days)
Resident	302	24	350	70	1.0E-06	25,550
Worker	447	8	245	40	1.0E-06	25,550
Student	581	10	180	9	1.0E-06	25,550

6. Based on a 24-hour day. Worker breathing rate is 149 L/kg-day (for an 8-hour workday), and 447 L/kg-day (for a 24-hour day).

```
NO ECHO

 BEE-Line ISCST3 "BEEST" Version 9.00

 Input File - C:\IRMA\BEEST\DCModel\EECenter(unitless)gradualplumerise_90_DIESEL.DTA

Output File - C:\IRMA\BEEST\DCModel\EECenter(unitless)gradualplumerise_90_DIESEL.LST

   Met File - C:\metdata\UnionCity\metdata00-04600.asc


 *** Message Summary For ISC3 Model Setup ***

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

A Total of           0 Fatal Error Message(s)
A Total of           1 Warning Message(s)
A Total of           0 Informational Message(s)

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

   ********   WARNING MESSAGES   ********
RE W282  2397 CHK_EL:RecElev < SrcBase; See non-DFAULT HE>ZI option in  MCB#9

**********************************
*** SETUP Finishes Successfully ***
**********************************

 *** ISCST3 - VERSION 02035 ***    *** Eastshore Energy LLC                                            ***        01/25/07
                                   ***                                                                 ***        16:44:31
**MODELOPTs:                                                                                                      PAGE   1
CONC                    URBAN ELEV              GRDRIS

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

**Intermediate Terrain Processing is Selected

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

  --  SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION.  DDPLETE =  F
**Model Uses NO WET DEPLETION.  WDPLETE =  F
**NO WET SCAVENGING Data Provided.
```

```
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:
          1. Gradual Plume Rise.
          2. Stack-tip Downwash.
          3. Buoyancy-induced Dispersion.
          4. Calms Processing Routine.
          5. Not Use Missing Data Processing Routine.
          6. User-Specified Wind Profile Exponents.
          7. Default Vertical Potential Temperature Gradients.

**Model Accepts Receptors on ELEV Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates  1 Short Term Average(s) of:   1-HR
   and Calculates PERIOD Averages

**This Run Includes:     1 Source(s);      4 Source Group(s); and    2357 Receptor(s)

**The Model Assumes A Pollutant Type of:  DIESEL

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

**Output Options Selected:
        Model Outputs Tables of PERIOD Averages by Receptor
        Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
        Model Outputs External File(s) of High Values for Plotting (PLOTFILE 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:  Anem. Hgt. (m) =    20.00 ;    Decay Coef. =    0.000     ;    Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                  ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =     1.4 MB of RAM.

**Input Runstream File:          EECenter(unitless)gradualplumerise_90_DIESEL.DTA
**Output Print File:             EECenter(unitless)gradualplumerise_90_DIESEL.LST

 *** ISCST3 - VERSION 02035 ***    *** Eastshore Energy LLC                                          ***        01/25/07
                                   ***                                                               ***        16:44:31
**MODELOPTs:                                                                                                    PAGE   2
CONC                    URBAN ELEV                GRDRIS
```

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
15	0	0.10000E+01	577581.7	4165776.2	7.0	10.00	735.15	41.47	0.18	YES	

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	15 ,
SA11	15 ,
S15	15 ,
15	15 ,

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 15

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	9.0,	129.5,	0	2	9.0,	126.6,	0	3	9.0,	119.7,	0	4	9.0,	109.3,	0	5	9.0,	95.5,	0	6	9.0,	78.8,	0
7	9.0,	59.7,	0	8	9.0,	38.8,	0	9	6.7,	38.8,	0	10	9.0,	40.8,	0	11	9.0,	60.0,	0	12	9.0,	79.0,	0
13	9.0,	95.7,	0	14	9.0,	109.4,	0	15	13.3,	56.3,	0	16	13.3,	54.1,	0	17	13.3,	50.2,	0	18	13.3,	47.6,	0
19	13.3,	50.0,	0	20	13.3,	52.8,	0	21	9.0,	119.7,	0	22	9.0,	109.3,	0	23	9.0,	95.5,	0	24	9.0,	78.8,	0
25	9.0,	59.7,	0	26	9.0,	38.8,	0	27	6.7,	38.8,	0	28	9.0,	40.8,	0	29	9.0,	60.0,	0	30	9.0,	79.0,	0
31	9.0,	95.7,	0	32	9.0,	109.4,	0	33	9.0,	119.8,	0	34	9.0,	126.6,	0	35	9.0,	129.6,	0	36	9.0,	128.6,	0

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(577932.8,	4166528.2,	8.6,	0.0);	(577932.8,	4166499.8,	9.1,	0.0);
(577936.3,	4166457.2,	9.1,	0.0);	(577936.3,	4166421.8,	8.8,	0.0);
(577939.9,	4166389.8,	8.8,	0.0);	(577939.9,	4166361.5,	8.8,	0.0);
(577954.1,	4166347.2,	8.8,	0.0);	(577982.5,	4166347.2,	8.8,	0.0);
(578003.8,	4166347.2,	8.9,	0.0);	(578032.2,	4166347.2,	9.1,	0.0);
(578071.2,	4166347.2,	9.2,	0.0);	(578096.1,	4166343.8,	9.4,	0.0);
(577993.1,	4166340.0,	8.8,	0.0);	(577964.8,	4166340.0,	8.8,	0.0);
(577943.4,	4166386.2,	8.8,	0.0);	(577947.0,	4166428.8,	8.8,	0.0);
(577939.9,	4166478.5,	9.1,	0.0);	(577939.9,	4166507.0,	9.1,	0.0);
(577477.6,	4165819.0,	6.3,	0.0);	(577479.0,	4165819.0,	6.4,	0.0);
(577488.7,	4165818.8,	6.4,	0.0);	(577498.4,	4165818.5,	6.4,	0.0);
(577508.1,	4165818.0,	6.4,	0.0);	(577517.8,	4165817.8,	6.4,	0.0);
(577527.5,	4165817.5,	6.6,	0.0);	(577537.1,	4165817.0,	6.7,	0.0);
(577546.8,	4165816.8,	6.7,	0.0);	(577556.5,	4165816.5,	6.7,	0.0);
(577566.2,	4165816.0,	6.7,	0.0);	(577575.9,	4165815.8,	6.9,	0.0);
(577585.6,	4165815.5,	7.0,	0.0);	(577595.3,	4165815.0,	7.0,	0.0);
(577605.0,	4165814.8,	7.0,	0.0);	(577614.7,	4165814.5,	7.2,	0.0);
(577624.4,	4165814.2,	7.3,	0.0);	(577634.0,	4165814.0,	7.3,	0.0);
(577643.7,	4165813.5,	7.3,	0.0);	(577653.4,	4165813.2,	7.3,	0.0);
(577663.1,	4165813.0,	7.4,	0.0);	(577672.8,	4165812.5,	7.6,	0.0);
(577682.5,	4165812.2,	7.6,	0.0);	(577691.6,	4165809.0,	7.6,	0.0);
(577700.7,	4165805.5,	7.6,	0.0);	(577709.7,	4165802.2,	7.9,	0.0);
(577718.8,	4165799.0,	7.9,	0.0);	(577726.2,	4165793.5,	7.9,	0.0);
(577733.6,	4165788.2,	7.9,	0.0);	(577741.0,	4165782.8,	7.9,	0.0);
(577748.4,	4165777.5,	7.9,	0.0);	(577755.8,	4165772.0,	8.1,	0.0);
(577755.9,	4165762.5,	8.2,	0.0);	(577756.0,	4165753.2,	8.2,	0.0);
(577756.2,	4165743.8,	8.2,	0.0);	(577756.3,	4165734.5,	8.2,	0.0);
(577756.4,	4165725.0,	8.2,	0.0);	(577756.4,	4165718.2,	8.2,	0.0);
(577746.8,	4165718.2,	8.2,	0.0);	(577737.1,	4165718.5,	8.1,	0.0);
(577727.5,	4165718.5,	7.9,	0.0);	(577717.8,	4165718.5,	7.9,	0.0);
(577708.1,	4165718.8,	7.9,	0.0);	(577698.5,	4165718.8,	7.7,	0.0);
(577688.8,	4165719.0,	7.6,	0.0);	(577679.2,	4165719.0,	7.6,	0.0);
(577669.5,	4165719.0,	7.6,	0.0);	(577659.8,	4165719.2,	7.3,	0.0);
(577650.2,	4165719.2,	7.3,	0.0);	(577640.5,	4165719.5,	7.3,	0.0);
(577630.9,	4165719.5,	7.3,	0.0);	(577621.2,	4165719.5,	7.0,	0.0);
(577611.5,	4165719.8,	7.0,	0.0);	(577601.9,	4165719.8,	7.0,	0.0);
(577592.2,	4165720.0,	7.0,	0.0);	(577582.6,	4165720.0,	6.8,	0.0);
(577572.9,	4165720.0,	6.7,	0.0);	(577563.2,	4165720.0,	6.7,	0.0);

```
( 577553.6, 4165720.2,      6.5,      0.0);      ( 577543.9, 4165720.2,      6.4,      0.0);
( 577534.3, 4165720.5,      6.4,      0.0);      ( 577524.6, 4165720.5,      6.2,      0.0);
( 577514.9, 4165720.5,      6.1,      0.0);      ( 577505.3, 4165720.8,      6.1,      0.0);
( 577495.6, 4165720.8,      6.1,      0.0);      ( 577486.0, 4165721.0,      6.1,      0.0);
( 577476.3, 4165721.0,      6.0,      0.0);      ( 577476.4, 4165730.8,      6.1,      0.0);
( 577476.6, 4165740.5,      6.1,      0.0);      ( 577476.7, 4165750.5,      6.1,      0.0);
( 577476.8, 4165760.2,      6.1,      0.0);      ( 577477.0, 4165770.0,      6.1,      0.0);
```


*** 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
```

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,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

**MODELOPTs:
CONC URBAN ELEV GRDRIS

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

FILE: metdata00-04600.asc
FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
SURFACE STATION NO.: 1901 UPPER AIR STATION NO.: 1901
NAME: UNKNOWN NAME: UNKNOWN
YEAR: 1990 YEAR: 1990

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-O (M)	IPCODE	PRATE (mm/HR)
90	01	01	01	342.0	2.15	283.0	4	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	02	303.0	1.00	283.0	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	03	267.0	1.07	283.0	6	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	04	288.0	1.00	282.8	6	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	05	296.0	1.00	282.4	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	06	312.0	1.70	282.0	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	07	326.0	2.19	281.8	6	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	08	314.0	2.59	281.5	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	09	304.0	2.10	281.9	4	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	10	303.0	2.15	282.9	3	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	11	333.0	2.32	284.1	3	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	12	339.0	3.31	284.5	4	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	13	345.0	2.24	284.1	3	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	14	335.0	2.82	283.5	3	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	15	341.0	2.68	283.1	2	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	16	360.0	2.01	283.4	1	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	17	64.0	1.00	282.8	2	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	18	36.0	1.16	282.5	3	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	19	106.0	1.97	282.5	4	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	20	69.0	1.00	282.5	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	21	112.0	2.50	281.9	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90	01	01	22	131.0	1.83	281.0	4	600.0	600.0	0.0000	0.0	0.0000	0	0.00

90 01 01 23	151.0	2.46	280.8	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00
90 01 01 24	227.0	1.74	280.0	5	600.0	600.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE PERIOD (43824 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 15 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DIESEL IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC		X-COORD (M)	Y-COORD (M)	CONC	
577932.75	4166528.25	0.38215		577932.75	4166499.75	0.40169	
577936.31	4166457.25	0.42844		577936.31	4166421.75	0.45316	
577939.88	4166389.75	0.47886		577939.88	4166361.50	0.50581	
577954.06	4166347.25	0.51610		577982.50	4166347.25	0.50824	
578003.81	4166347.25	0.50367		578032.19	4166347.25	0.49782	
578071.25	4166347.25	0.48648		578096.12	4166343.75	0.48157	
577993.12	4166340.00	0.51356		577964.75	4166340.00	0.52100	RES
577943.44	4166386.25	0.48074		577947.00	4166428.75	0.44355	
577939.88	4166478.50	0.41246		577939.88	4166507.00	0.39440	
577477.62	4165819.00	3.09072		577479.00	4165819.00	3.15002	
577488.69	4165818.75	3.36975		577498.38	4165818.50	3.61986	
577508.12	4165818.00	3.88387		577517.81	4165817.75	4.26888	
577527.50	4165817.50	5.65753		577537.12	4165817.00	7.69417	
577546.81	4165816.75	10.55177		577556.50	4165816.50	13.77655	
577566.19	4165816.00	14.55918		577575.88	4165815.75	11.86849	
577585.62	4165815.50	8.58663		577595.31	4165815.00	7.40701	
577605.00	4165814.75	7.86360		577614.69	4165814.50	9.25977	
577624.38	4165814.25	10.25516		577634.00	4165814.00	10.67657	
577643.69	4165813.50	10.89088		577653.38	4165813.25	11.21649	
577663.12	4165813.00	11.63138		577672.81	4165812.50	11.93098	
577682.50	4165812.25	11.78340		577691.62	4165809.00	12.47078	
577700.69	4165805.50	13.03301		577709.69	4165802.25	13.42173	
577718.81	4165799.00	13.45791		577726.19	4165793.50	14.10096	
577733.62	4165788.25	14.44005		577741.00	4165782.75	14.62820	
577748.38	4165777.50	14.57869		577755.81	4165772.00	14.47177	
577755.88	4165762.50	15.78101		577756.00	4165753.25	16.74888	
577756.19	4165743.75	17.38327		577756.31	4165734.50	17.63976	
577756.38	4165725.00	17.54350	IND (CUM)	577756.38	4165718.25	17.27776	
577746.81	4165718.25	18.73650		577737.12	4165718.50	20.36184	

577727.50	4165718.50	22.07144	577717.81	4165718.50	24.04777	
577708.12	4165718.75	26.23095	577698.50	4165718.75	28.28960	
577688.81	4165719.00	30.50341	577679.19	4165719.00	32.57171	
577669.50	4165719.00	34.30567	577659.81	4165719.25	35.02845	IND
577650.19	4165719.25	35.02361	577640.50	4165719.50	33.81364	
577630.88	4165719.50	31.07071	577621.19	4165719.50	27.82691	
577611.50	4165719.75	25.78679	577601.88	4165719.75	22.43861	
577592.19	4165720.00	18.43530	577582.62	4165720.00	13.24175	
577572.88	4165720.00	8.24627	577563.19	4165720.00	4.75374	
577553.62	4165720.25	2.56764	577543.88	4165720.25	1.50911	
577534.31	4165720.50	1.05879	577524.62	4165720.50	0.85775	

**MODELOPTs:
CONC URBAN ELEV GRDRIS

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF DIESEL IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	35.02845 AT	(577659.81, 4165719.25, 7.30, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	35.02361 AT	(577650.19, 4165719.25, 7.30, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	34.30567 AT	(577669.50, 4165719.00, 7.60, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	33.81364 AT	(577640.50, 4165719.50, 7.30, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	32.57171 AT	(577679.19, 4165719.00, 7.60, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	31.07071 AT	(577630.88, 4165719.50, 7.30, 0.00)	DC	NA
	7TH HIGHEST VALUE IS	30.50341 AT	(577688.81, 4165719.00, 7.60, 0.00)	DC	NA
	8TH HIGHEST VALUE IS	29.12955 AT	(577670.00, 4165710.00, 7.60, 0.00)	DC	NA
	9TH HIGHEST VALUE IS	29.09073 AT	(577660.00, 4165710.00, 7.30, 0.00)	DC	NA
	10TH HIGHEST VALUE IS	28.58663 AT	(577650.00, 4165710.00, 7.30, 0.00)	DC	NA
SA11	1ST HIGHEST VALUE IS	35.02845 AT	(577659.81, 4165719.25, 7.30, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	35.02361 AT	(577650.19, 4165719.25, 7.30, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	34.30567 AT	(577669.50, 4165719.00, 7.60, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	33.81364 AT	(577640.50, 4165719.50, 7.30, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	32.57171 AT	(577679.19, 4165719.00, 7.60, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	31.07071 AT	(577630.88, 4165719.50, 7.30, 0.00)	DC	NA
	7TH HIGHEST VALUE IS	30.50341 AT	(577688.81, 4165719.00, 7.60, 0.00)	DC	NA
	8TH HIGHEST VALUE IS	29.12955 AT	(577670.00, 4165710.00, 7.60, 0.00)	DC	NA
	9TH HIGHEST VALUE IS	29.09073 AT	(577660.00, 4165710.00, 7.30, 0.00)	DC	NA
	10TH HIGHEST VALUE IS	28.58663 AT	(577650.00, 4165710.00, 7.30, 0.00)	DC	NA
S15	1ST HIGHEST VALUE IS	35.02845 AT	(577659.81, 4165719.25, 7.30, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	35.02361 AT	(577650.19, 4165719.25, 7.30, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	34.30567 AT	(577669.50, 4165719.00, 7.60, 0.00)	DC	NA

4TH HIGHEST VALUE IS	33.81364 AT (	577640.50,	4165719.50,	7.30,	0.00)	DC	NA
5TH HIGHEST VALUE IS	32.57171 AT (	577679.19,	4165719.00,	7.60,	0.00)	DC	NA
6TH HIGHEST VALUE IS	31.07071 AT (	577630.88,	4165719.50,	7.30,	0.00)	DC	NA
7TH HIGHEST VALUE IS	30.50341 AT (	577688.81,	4165719.00,	7.60,	0.00)	DC	NA
8TH HIGHEST VALUE IS	29.12955 AT (	577670.00,	4165710.00,	7.60,	0.00)	DC	NA
9TH HIGHEST VALUE IS	29.09073 AT (	577660.00,	4165710.00,	7.30,	0.00)	DC	NA
10TH HIGHEST VALUE IS	28.58663 AT (	577650.00,	4165710.00,	7.30,	0.00)	DC	NA

**MODELOPTs:
CONC   URBAN ELEV   GRDRIS

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF DIESEL   IN MICROGRAMS/M**3   **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR,	ZELEV, ZFLAG)			OF TYPE	NETWORK GRID-ID
15	1ST HIGHEST VALUE IS	35.02845 AT (	577659.81,	4165719.25,	7.30,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	35.02361 AT (	577650.19,	4165719.25,	7.30,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	34.30567 AT (	577669.50,	4165719.00,	7.60,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	33.81364 AT (	577640.50,	4165719.50,	7.30,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	32.57171 AT (	577679.19,	4165719.00,	7.60,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	31.07071 AT (	577630.88,	4165719.50,	7.30,	0.00)	DC	NA
	7TH HIGHEST VALUE IS	30.50341 AT (	577688.81,	4165719.00,	7.60,	0.00)	DC	NA
	8TH HIGHEST VALUE IS	29.12955 AT (	577670.00,	4165710.00,	7.60,	0.00)	DC	NA
	9TH HIGHEST VALUE IS	29.09073 AT (	577660.00,	4165710.00,	7.30,	0.00)	DC	NA
	10TH HIGHEST VALUE IS	28.58663 AT (	577650.00,	4165710.00,	7.30,	0.00)	DC	NA

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

**MODELOPTs:
CONC   URBAN ELEV   GRDRIS

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF DIESEL   IN MICROGRAMS/M**3   **

DATE   NETWORK

```
AGE CONC      (YYDHH)              RECEPTOR  (XR, YR, ZELEV, ZFLAG)     OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

979.23785  ON 9:703: AT (  577592.19,  4165720.00,      7.00,       0.00)  DC      NA

979.23785  ON 9:703: AT (  577592.19,  4165720.00,      7.00,       0.00)  DC      NA

979.23785  ON 9:703: AT (  577592.19,  4165720.00,      7.00,       0.00)  DC      NA

979.23785  ON 9:703: AT (  577592.19,  4165720.00,      7.00,       0.00)  DC      NA




* Eastshore EneLLC                                               ***        01/25/07
*                                                                ***        16:44:31
                                                                            PAGE 277
               GRI

ecution ***

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 Message(s)

entified


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e; See non-DFAULT>2I option in  MCB#9

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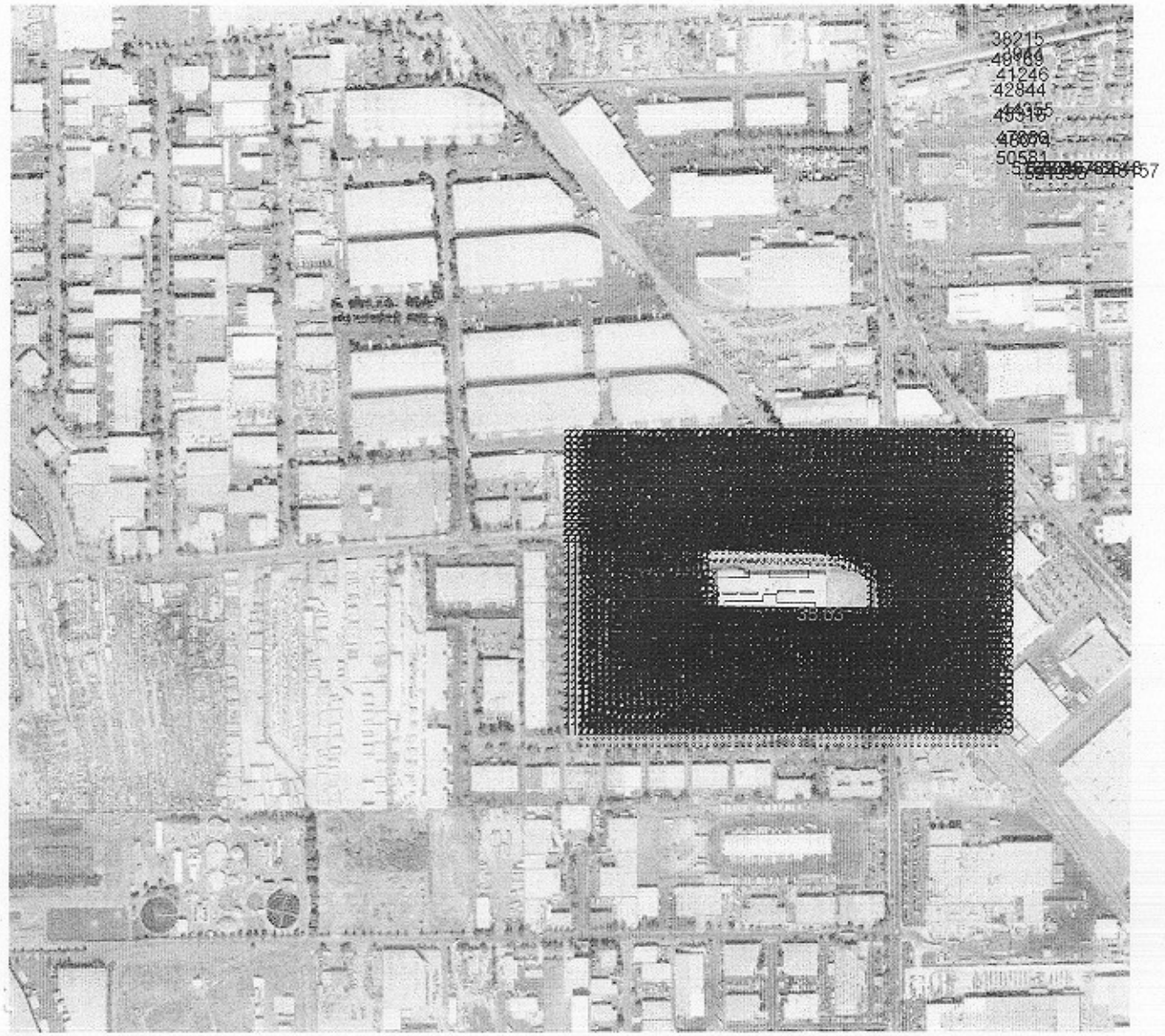
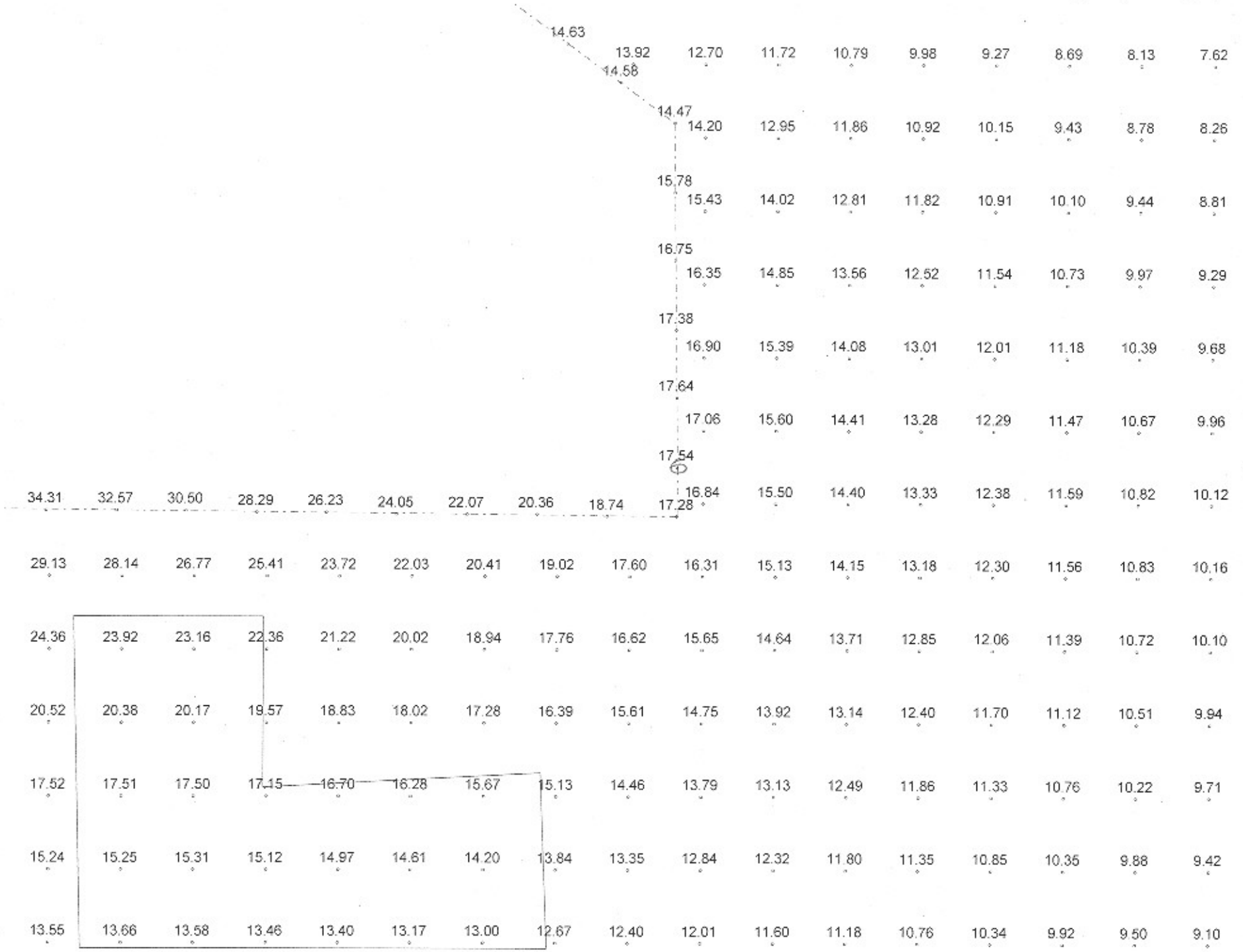


Scale: 1" = 235.7 Meters PERIOD VALUES FOR GROUP: ALL Max = 35.02845 (577659.8, 4165719)

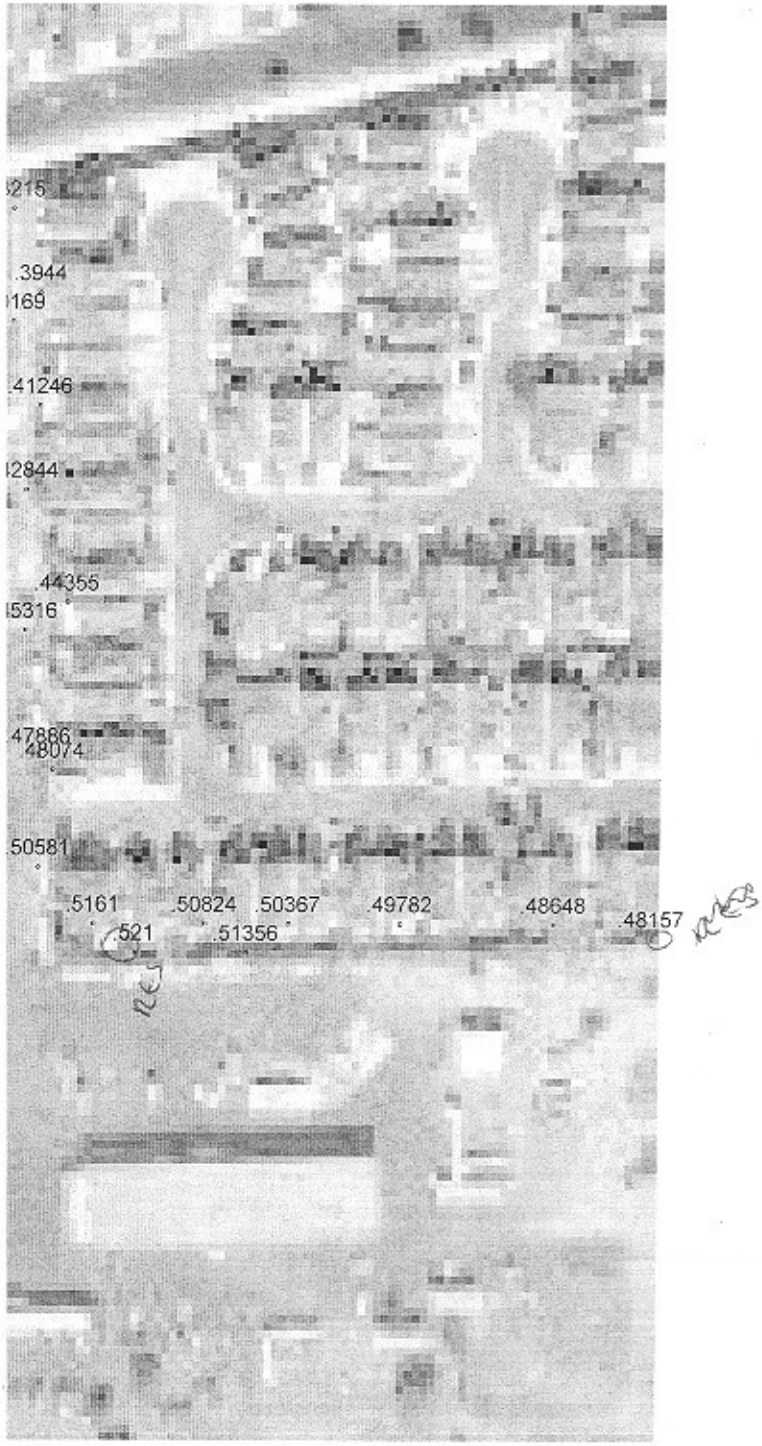


Scale: 1" = 17.2 Meters

PERIOD VALUES FOR GROUP: ALL

Max = 35.02845 (577659.8, 4165719)

C:\IRMA\BEEST\DCModel\EECenter(unitless)gradualplumerise_90_DIESEL.GRF



PERIOD VALUES FOR GROUP: ALL

Max = 35.02845 (577659.8, 4165719)

Scale: 1" = 70.9 Meters

PERIOD VALUES FOR GROUP: ALL

Max = 35.02845 (577659.8, 4165719)

Irma Salinas

From: Brian Lusher
Sent: Thursday, March 15, 2007 8:48 AM
To: Irma Salinas
Subject: Final Air Toxics Inventory

Air Toxics Emissions Eastshore...

Annual Average Firing Rate 72.08 MMBtu/hr

Short Term Max Firing Rate 72.8 MMBtu/hr

Ammonia Slip Now 10 ppm

Diesel Engine 50 hours

Please Finalize the Health Risk Screening Analysis with this data.

Thanks,

Brian K Lusher
Air Quality Engineer II
Engineering Division
Bay Area Air Quality Management District

Phone (415) 749-4623
Fax (415) 749-5030