CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

DATE: March 27, 2008

TO: Interested Parties

FROM: Steve Munro, Compliance Project Manager

SUBJECT: **Malburg Generating Station (01-AFC-25C)**
Staff Analysis of Proposed Modifications of Conditions Relating to Startup Emission Limits for Combustion Turbines

On December 19, 2007, the City of Vernon filed a petition with the California Energy Commission to amend the Energy Commission Decision for the Malburg Generating Station Project. Staff prepared an analysis of the proposed changes, and a copy is enclosed.

The project is a 134 MW combined cycle power plant located in the City of Vernon in Los Angeles County. The project was certified by the Energy Commission on May 20, 2003, and began commercial operation on October 17, 2005.

The proposed changes, as modified by staff, will change the startup emission limits contained in condition of certification AQ C-10 to reflect the operational startup characteristics of the project's combustion turbines as follows:

Hourly Emission Limit Changes – The hourly emission limits for Oxides of Nitrogen (NOx) would increase from 26.2 lbs/hour to 55 lbs/hour during cold startup events. The hourly emission limits for Carbon Monoxide (CO) would increase from 48.6 lbs/hour to 140 lbs/hour during cold startup events.

Daily Emission Limit Changes – The daily emission limits for Oxides of Nitrogen (NOx) would increase from 175 lbs/hour to 230 lbs/day during each cold startup. The hourly emission limits for Carbon Monoxide (CO) would increase from 104 lbs/hour to 245 lbs/day.

Annual Emission Limit Changes – The annual emission limits for Oxides of Nitrogen (NOx) would increase from 52,674 lbs/year to 53,044 lbs/year. The annual emission limits for Carbon Monoxide (CO) would increase from 37,145 lbs/year to 37,768 lbs/.

Energy Commission staff reviewed the petition and assessed the impacts of this proposal on environmental quality, public health and safety, and proposes revisions to existing condition of certification AQ-C10 described above and in the enclosed Staff Analysis. The emission increases for cold startups are limited by the fact that there are a small number of cold startup events (nine since the start of commercial operation), and their duration is limited to two hours per incident. It is staff's opinion that, with the implementation of revised condition of certification AQ-C10, the project will remain in

compliance with applicable laws, ordinances, regulations, and standards and that the proposed modifications will not result in a significant adverse direct or cumulative impact to the environment (Title 20, California Code of Regulations, Section 1769).

The petition and staff's analysis have been posted on the Energy Commission's webpage at http://www.energy.ca.gov/sitingcases/vernon/compliance/index.html. The Energy Commission's Order (if approved) will also be posted on the webpage. Energy Commission staff intends to recommend approval of the petition at the May 21 Business Meeting of the Energy Commission. If you have comments on this proposed modification, please submit them to me at the address below by April 28, 2008.

Steve Munro, Compliance Project Manager
California Energy Commission
1516 9th Street, MS-2000
Sacramento, CA 95814

Comments may be submitted by fax to (916) 654-3882, or by e-mail to smunro@energy.state.ca.us. If you have any questions, please contact me at (916) 654-3936.

Enclosure

MALBURG GENERATING STATION PROJECT (01-AFC-25C)

Petition to Increase Startup Emission limits for CO and NOx
Air Quality Staff Analysis
Prepared by: Joseph M. Loyer

AMENDMENT REQUEST

The City of Vernon (City) is requesting that the startup emission limits for both CO and NOx for the Malburg Generating Station (MGS) be increased based on data collected by the continuous emissions monitoring system.

LAWS, ORDINANCES, REGULATION AND STANDARDS

No laws, ordinances, regulations or standards will affect the petitioned amendment requests. The South Coast Air Quality Management District (District) has reviewed the City's petition and has no comments. This petition will not affect any District conditions in the MGS Permit to Operate.

ANALYSIS

The California Energy Commission issued a Commission Decision for MGS on May 20, 2003. The City completed construction and MGS was operational in October 2005. Since that time, the combustion turbines have performed nine cold starts. From the information gathered during these cold starts by the MGS continuous emission monitoring system (CEMS), the City has determined that consistent compliance with the NOx and CO emission limits (AQ-SC10) is not possible. AIR QUALITY Table 1 shows the maximum reported emissions of CO and NOx during 2005 and 2006 for the two combustion turbines. Based on the CEMS data (see Attachment A) and operations of the same model turbines (at the Roseville Energy Center), the City is requesting that the emission limits be modified as shown in AIR QUALITY Table 2, that includes the two turbines and a facility total (the turbines and a diesel fired fire-water pump).

AIR QUALITY Table 1
Maximum Measured Emissions from Continuous Emission Monitoring System
Malburg Generating Station 2006

Pollutant	Maximum Daily Measured Emissions	Maximum Hourly Measured Emissions
CO Emissions (2 gas turbines)	220.57 lb/day	127.30 lb/hour
NOx Emissions (2 gas turbines)	206.56 lb/day	48.89 lb/hour

AIR QUALITY Table 2
Proposed Changes to Annual Emission Limits in Condition AQ-SC10

Annual Emission Limit	Existing Limit	Proposed Limit	Percent Increase
CO Emission Limit (2 gas turbines)	37,145 lbs/yr	37,768 lbs/yr	1.68%
CO Emission Limit (Facility Total)	37,380 lbs/yr	38,003 lbs/yr	1.67%
NOx Emission Limit (2 gas turbines)	52,674 lbs/yr	53,044 lbs/yr	0.70%
NOx Emission Limit (Facility Total)	53,363 lbs/yr	53,733 lbs/yr	0.69%
Daily Emission Limits			
CO Emission Limit (2 gas turbines)	104.00 lbs/day	463.2 lbs/day	445%
CO Emission Limit (Facility Total)	104.59 lbs/day	463.8 lbs/day	445%
NOx Emission Limit (2 gas turbines)	175.00 lbs/day	322.6 lbs/day	184%
NOx Emission Limit (Facility Total)	176.73 lbs/day	324.4 lbs/day	184%
Hourly Emission Limits			
CO Emission Limit (2 gas turbines)	48.60 lbs/hr	179.0 lbs/hr	368%
CO Emission Limit (Facility Total)	49.19 lbs/hr	179.6 lbs/hr	368%
NOx Emission Limit (2 gas turbines)	26.27 lbs/hr	74.2 lbs/hr	282%
NOx Emission Limit (Facility Total)	27.93 lbs/hr	75.9 lbs/hr	282%

POTENTIAL IMPACTS

These changes are based on the assumption that during a cold startup (with a duration of two hours) CO emissions will be no more than 204.8 lbs/event (originally estimated to be 24.5 lbs/event by the turbine vendor) and NOx emissions will be no more than 122.8 lbs/event (originally estimated to be 15.2 lbs/event by the turbine vendor). The original emission assumptions (24.5 and 15.2) were based on the most recent vendor information at the time of licensing. The proposed emission assumptions are based on the Roseville Energy Center case, which used the same model turbine from the same manufacture approximately one year later.

AIR QUALITY Table 3 shows the expected maximum ambient air quality impacts from the proposed emission increases. The table shows that there will be no expected exceedance of the applicable ambient air quality standards. Thus staff expects there to be no significant impact from the increase in CO or NOx emissions (See AIR QUALITY Table 2).

AIR QUALITY Table 3
Expected Maximum Impacts from Proposed New Emission Limits

Pollutant	Averaging Time	Maximum Project Impact (ug/m^3)	Background Concentrations (ug/m^3)	Total Impact (ug/m^3)	Ambient Air Quality Standard (ug/m^3)	Percent of AAQS (%)
NO_2	1-hour	30.9	263	293.9	470	63
	Annual	0.65	58.7	59.4	100	59
CO	1-hour	81.9	8,050	8,131.9	23,000	35
	8-hour	2.1	7,673	7,675	10,000	77

MITIGATION

CO Mitigation

The City has already surrendered CO emission reduction credits (ERCs), as required in the conditions of certification, prior to the beginning of construction. Therefore only the small annual increase in CO emissions is potentially unmitigated. However, since the impacts on the 1 and 8 hour CO standards will not cause a violation of the CO standards as shown in AIR QUALITY Table 3, those impacts are not considered significant.

The South Coast Air Quality Management District (District) calculates the CO emission reduction credit liability for a facility based on an average daily emission during the project's highest expected monthly hours of operation. The District then imposes a monthly limit of CO emissions (similarly for SOx, PM10 and VOC). The City believes that they can operate within the current monthly limit established by the District. Thus, under District rules, there is no need for the City to surrender additional CO ERCs.

NOx Mitigation

District rules (Regulation XX) require that the NOx emissions be offset through the RECLAIM program. Condition of certification AQ-32 requires the City to hold sufficient RECLAIM trading credits (RTCs) in an amount equal to the annual NOx emissions. The NOx emission increases are not expected to cause or contribute to an exceedance of the NO_2 ambient air quality standards (see AIR QUALITY Table 3). Therefore, staff concludes that there is no potential for the increased NOx emissions to cause a significant impact on the ambient air quality and thus there is no need for further NOx mitigation. In staff's opinion, it is very likely that the actual MGS NOx emissions will be sufficiently lower than the annual NOx limit so that the City will have an excess of NOx RECLAIM credits.

STAFF RECOMMENDED EMISSION LIMITS

It is staff's opinion that the excess emissions shown in AIR QUALITY Table 1 do not warrant the hourly and daily emission limit increases requested in AIR QUALITY Table 2, even though these requested emission increases are not expected to cause significant air quality impacts (see discussion above). Staff believes that higher daily and hourly emission limits are warranted, but not at the levels requested by the City.

Staff recommends the following daily and hourly emission limits in AIR QUALITY Table 4 that were derived from the CEMS data supplied by the applicant. Staff added approximately 10 percent to the maximum measured daily and hourly emissions in AIR QUALITY Table 1 for each emission limit proposed to be modified. Therefore, the daily and hourly emission limits for "2 Gas Turbines" and the "Total Facility" are the same. Staff finds that the annual emission limits requested by the City are reasonable given the excess emissions shown in AIR QUALITY Table 1.

AIR QUALITY Table 4
Staff Proposed Changes to Emission Limits in Condition AQ-SC10

Annual Emission Limit	Existing Limit	Staff Proposed Limit	Percent Increase
CO Emission Limit (2 gas turbines)	37,145 lbs/yr	37,768 lbs/yr	0.17%
CO Emission Limit (Facility Total)	37,380 lbs/yr	38,003 lbs/yr	0.17%
NOx Emission Limit (2 gas turbines)	52,674 lbs/yr	53,044 lbs/yr	0.07%
NOx Emission Limit (Facility Total)	53,363 lbs/yr	53,733 lbs/yr	0.07%
Daily Emission Limits			
CO Emission Limit (2 gas turbines)	104.00 lbs/day	245 lbs/day	135%
CO Emission Limit (Facility Total)	104.59 lbs/day	245 lbs/day	134%
NOx Emission Limit (2 gas turbines)	175.00 lbs/day	230 lbs/day	31%
NOx Emission Limit (Facility Total)	176.73 lbs/day	230 lbs/day	30%
Hourly Emission Limits			
CO Emission Limit (2 gas turbines)	48.60 lbs/hr	140 lbs/hr	188%
CO Emission Limit (Facility Total)	49.19 lbs/hr	140 lbs/hr	185%
NOx Emission Limit (2 gas turbines)	26.27 lbs/hr	55 lbs/hr	109%
NOx Emission Limit (Facility Total)	27.93 lbs/hr	55 lbs/hr	97%

CUMULATIVE IMPACTS

Staff evaluated the potential for additional cumulative impacts from the proposed increased emission limits. The findings are that there will be no significant cumulative impacts for the following reasons: 1) the limited duration of cold start-ups allowed, 2) the limited number cold startups reasonably expected to occur, and 3) the annual increases being less than 1 percent for CO and less than 2 percent for NOx, below the trigger for additional offsets. Therefore, staff concludes that the cumulative analysis from the original licensing case still represents a reasonable estimate of the cumulative impacts as a result of the project which are fully mitigated.

CONCLUSION

Staff has analyzed the City's proposed changes and concludes that there are no new or additional significant impacts associated with approval of the petition. However, the

staff does not agree to the proposed hourly and daily emission levels proposed by the City, but rather proposes lower emission limits than what the City was requesting. The City concurs with these changes. Staff concludes that the proposed changes are based on information that was not available during the original licensing process. Staff concludes that the proposed language retains the intent of the original Commission Decision and conditions of certification. Staff recommends the following modifications to condition of certification AQ-SC10.

PROPOSED MODIFICATIONS TO CONDITIONS OF CERTIFICATION

Staff has proposed modification to the air quality conditions of certification as shown below. (Note: deleted text is in ~~strikethrough~~, new text is **bold and underlined**)

AQ-C10 The City of Vernon shall commission and operate the Malburg Generating Station within the following emission limits.

Commissioning
During the first year of commissioning and operation, the following emission limits shall apply.

Annual Commissioning Emission Limits
Units are in Pounds per year

	Gas Turbines (2)	Cooling Tower	Firewater Pump	Facility Total	Assumptions
CO	112,743	0	478	113,221	a,b,c
NOx	229,531	0	1,377	230,908	a,b,c
PM10	48,873	2,190	58	51,121	a,b,c
ROG	40,518	0	35	40,553	a,b,c
SOx	4,294	0	2	4,296	a,b,c
Ammonia	49,514	0	0	49,514	a,b,c

Assumptions
a The gas turbines are undergoing initial commissioning for three months (2,160 hours) then 3 cold startups, 39 warm startups, 42 shutdowns and 4,355 hours at full load with the duct burners on @ 65 deg F.
b The cooling tower at full load for 8760 hours/year.
c The Firewater pump is being tested 199 hours/year.

Post Commissioning

After the end of the commissioning period, the following hourly and daily emission limits shall apply. The following annual emission limits shall only apply until after the first calendar year of operation is complete.

Hourly Emission Limits
Units are in pounds per hour

	Gas Turbines (2)	Cooling Tower	Firewater Pump	Facility Total	Assumptions
CO	~~48.6~~ **140**	0	0.59	~~49.19~~ **140**	a,c,d
NOx	~~26.2~~ **55**	0	1.73	~~27.93~~ **55**	a,c,d
PM10	7.78	0.26	0.08	8.12	b,c,d
VOC	3.3	0	0.05	3.35	a,c,d
SOx	0.3	0	0.002	0.30	b,c,d
Ammonia	7.6	0	0.00	7.60	b,c,d

Assumptions
a The gas turbines are undergoing a cold startup ~~@ 38 deg F~~.
b The gas turbines are at full load @ 38 deg F with the duct burners on.
c The cooling tower is at full load.
d The Firewater pump is being tested for ½ hour.

Daily Emission Limits
Units are in pounds per day

	Gas Turbines (2)	Cooling Tower	Firewater Pump	Facility Total	Assumptions
CO	~~104.00~~ **245**	0	0.59	~~104.59~~ **245**	a,d,e,
NOx	~~175.00~~ **230**	0	1.73	~~176.73~~ **230**	a,d,e,
PM10	158.00	6.20	0.08	164.28	a,d,e
VOC	36.00	0	0.05	36.05	a,d,e
SOx	6.00	0	0.002	6.00	a,d,e
Ammonia	182.4	0	0.00	182.40	a,d,e

Assumptions
a The gas turbines are undergoing 1 ~~warm~~ **cold** startup (~~1.5~~ **2** hours) per ~~month, 8 hours~~/day **and 22 hours of** full load with duct firing~~, 16 hours/day full load without duct firing and 0.5 hours shutdown per month~~ @ 65 deg F ~~averaged for 29 days/month~~.
b The gas turbines are at full load for 24 hours @ 38 deg F with the duct burners on
c The gas turbines are undergoing cold startup (2 hours) and baseload operation for 22 hours @ 38 deg F.
d The cooling tower is at full load for 24 hours/day
e The Firewater pump is being tested 0.5 hours/day

Annual Emission Limits
Units are in pounds per year

	Gas Turbines (2)	Cooling Tower	Firewater Pump	Facility Total		Assumptions
				Lbs/yr	Tons/yr	
CO	37,145 **37,768**	0	235	37,380 **38,003**	18.69 **19.00**	a,c,d
NOx	52,674 **53,044**	0	689	53,363 **53,733**	26.68 **26.87**	b,c,d
PM10	56,676	2,278	32	58,986	29.49	a,c,d
VOC	13,027	0	20	13,047	6.52	a,c,d
SOx	2,122	0	1	2,123	1.06	a,c,d
Ammonia	66,576	0	0	66,576	3.29	a,c,d

Assumptions	
a	the gas turbines are undergoing **4 cold starts per turbine per year** ~~one warm startup per month (1.5 hours)~~, ~~8 hours/day~~ **with the balance** of full load operation with the duct burner, ~~16 hours/day of full load operation without the duct burners~~ and one shutdown per month ~~(0.5 hours) @ 65 deg F~~.
b	The gas turbines are undergoing 4 cold starts (2 hours), 52 warm starts (1.5 hours) 1314 hours of full load operation with the duct burner, 5782 hours of full load operation without the duct burner and 56 shutdowns (0.5 hours) per year.
c	The cooling tower at full load for 8760 hours/day.
d	The Firewater pump is being tested 199 hours/day.

Verification: The City of Vernon shall submit to the CPM for approval on a quarterly basis all emission records and calculations to demonstrate compliance with the emission limits stated herein as part of the quarterly emissions report.

Attachment A

Quarterly Emission Report from CEMS
Malburg Generating Station

The tables below show the quarterly emissions of the Malburg Generating Station during 2005 and 2006. There are two tables for each quarter; Maximum Hourly and Maximum Daily Emissions. Exceedances of the project emission limits are shown in bold in each table. In the fourth quarter of 2005, both hourly and daily CO and NOx emission limits were exceeded. In the first and second quarter of 2006, both hourly and daily CO and NOx emission limits were exceeded. In the fourth quarter the hourly NOx emission limit was exceeded.

Malburg Generating Station
Maximum Hourly Emissions
During Quarter 4, 2005

	Gas Turnbines (2)		Cooling Tower		Firewater Pump		Facility
Contaminant	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	2005/12/26 23	**127.30**	--	0	2005/10/24 11	0.06	**127.36**
NOx lbs	2005/11/28 04	**48.89**	--	0	2005/10/24 11	0.56	**49.45**
PM lbs	2005/11/30 18	1.99	2005/12/25 00	0.51	2005/10/24 11	0.01	2.52
VOC lbs	2005/12/08 15	1.76	--	0	2005/10/24 11	0.01	1.77
SOx lbs	2005/12/08 15	0.23	--	0	2005/10/24 11	0.001	0.23
NH3 Slip lbs	2005/12/21 09	7.52	--	0	--	0	7.52

Malburg Generating Station
Maximum Daily Emissions
During Quarter 4, 2005

	Gas Turnbines (2)		Cooling Tower		Firewater Pump		Facility
Contaminant	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	2005/12/07	**220.57**	--	0	2005/10/24 11	0.06	**220.63**
NOx lbs	2005/11/28	**176.75**	--	0	2005/10/24 11	0.56	**177.31**
PM lbs	2005/11/30	36.51	12/25/2005	12.31	2005/10/24 11	0.01	48.84
VOC lbs	2005/11/30	35.42	--	0	2005/10/24 11	0.01	35.43
SOx lbs	2005/11/30	4.56	--	0	2005/10/24 11	0.001	4.57
NH3 Slip lbs	2005/11/22	129.06	--	0	--	0	129.06

Malburg Generating Station
Maximum Hourly Emissions
During Quarter 1, 2006

	Gas Turnbines (2)		Cooling Tower		Firewater Pump		Facility
Contaminant	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	2006/03/20 02	**57.15**	--	0	2006/01/15 10	0.05	**57.20**
NOx lbs	2006/03/20 03	**41.57**	--	0	2006/01/15 10	0.46	**42.03**
PM lbs	2006/03/13 06	1.53	2006/01/08 00	0.24	2006/01/15 10	0.01	1.78
VOC lbs	2006/03/13 06	1.49	--	0	2006/01/15 10	0.01	1.50
SOx lbs	2006/03/13 06	0.19	--	0	2006/01/15 10	0.001	0.19
NH3 Slip lbs	2006/03/22 09	7.47	--	0	--	0	7.47

Malburg Generating Station
Maximum Daily Emissions
During Quarter 1, 2006

Contaminant	Gas Turnbines (2)		Cooling Tower		Firewater Pump		Facility
	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	3/20/2006	**141.15**	--	0	2006/01/15 10	0.05	**141.20**
NOx lbs	3/20/2006	**190.80**	--	0	2006/01/15 10	0.46	**191.26**
PM lbs	1/9/2006	34.42	1/8/2006	5.71	2006/01/15 10	0.01	40.14
VOC lbs	1/9/2006	33.41	--	0	2006/01/15 10	0.01	33.42
SOx lbs	1/9/2006	4.30	--	0	2006/01/15 10	0.001	4.30
NH3 Slip lbs	3/10/2006	125.73	--	0	--	0	125.73

Malburg Generating Station
Maximum Hourly Emissions
During Quarter 2, 2006

Contaminant	Gas Turnbines (2)		Cooling Tower		Firewater Pump		Facility
	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	2006/05/30 00	**50.58**	--	0	2006/04/09 07	0.21	**50.79**
NOx lbs	2006/05/30 02	25.83	--	0	2006/04/09 07	2.14	**27.97**
PM lbs	2006/04/06 06	1.52	2006/01/08 00	0.23	2006/04/09 07	0.05	1.80
VOC lbs	2006/04/06 06	1.47	--	0	2006/04/09 07	0.05	1.52
SOx lbs	2006/04/06 06	0.19	--	0	2006/04/09 07	0.004	0.19
NH3 Slip lbs	2006/06/20 07	7.60	--	0	--	0	7.60

Malburg Generating Station
Maximum Daily Emissions
During Quarter 2, 2006

Contaminant	Gas Turnbines (2)		Cooling Tower		Firewater Pump		Facility
	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	5/30/2006	**133.71**	--	0	2006/04/09 07	0.21	**133.92**
NOx lbs	5/30/2006	**206.56**	--	0	2006/04/09 07	2.14	**208.70**
PM lbs	4/18/2006	33.62	6/18/2006	5.60	2006/04/09 07	0.05	39.27
VOC lbs	4/18/2006	32.64	--	0	2006/04/09 07	0.05	32.69
SOx lbs	4/18/2006	4.20	--	0	2006/04/09 07	0.004	4.21
NH3 Slip lbs	5/23/2006	96.56	--	0	--	0	96.56

Malburg Generating Station
Maximum Hourly Emissions
During Quarter 3, 2006

Contaminant	Gas Turnbines (2)		Cooling Tower		Firewater Pump		Facility
	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	2006/07/09 05	33.37	--	0	2006/07/02 08	0.05	33.42
NOx lbs	2006/07/09 06	17.16	--	0	2006/07/02 08	0.46	17.62
PM lbs	2006/08/11 16	1.65	2006/09/24 00	0.27	2006/07/02 08	0.01	1.93
VOC lbs	2006/08/11 16	1.60	--	0	2006/07/02 08	0.01	1.61
SOx lbs	2006/08/11 16	0.21	--	0	2006/07/02 08	0.00	0.21
NH3 Slip lbs	2006/09/28 11	5.88	--	0	--	0	5.88

Malburg Generating Station
Maximum Daily Emissions
During Quarter 3, 2006

Contaminant	Gas Turnbines (2)		Cooling Tower		Firewater Pump		Facility
	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	7/9/2006	66.69	--	0	7/2/2006	0.05	66.74
NOx lbs	8/10/2006	151.38	--	0	7/2/2006	0.46	151.84
PM lbs	8/10/2006	36.46	9/24/2006	6.44	7/2/2006	0.01	42.91
VOC lbs	8/10/2006	35.37	--	0	7/2/2006	0.01	35.38
SOx lbs	8/10/2006	4.56	--	0	7/2/2006	0.001	4.56
NH3 Slip lbs	9/28/2006	115.16	--	0	--	--	115.16

Malburg Generating Station
Maximum Hourly Emissions
During Quarter 4, 2006

Contaminant	Gas Turnbines (2)		Cooling Tower		Firewater Pump		Facility
	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	2006/10/06 13	32.14	--	0	2006/11/26 09	0.08	32.22
NOx lbs	2006/11/17 10	**28.39**	--	0	2006/11/26 09	0.77	**29.16**
PM lbs	2006/12/07 15	1.96	2006/11/26 00	0.28	2006/11/26 09	0.02	2.26
VOC lbs	2006/12/07 15	1.65	--	0	2006/11/26 09	0.02	1.67
SOx lbs	2006/12/07 15	0.21	--	0	2006/11/26 09	0.00	0.21
NH3 Slip lbs	2006/11/30 05	5.67	--	0	--	0	5.67

Malburg Generating Station
Maximum Daily Emissions
During Quarter 4, 2006

Contaminant	Gas Turnbines (2)		Cooling Tower		Firewater Pump		Facility
	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	10/6/2006	86.19	--	0	11/26/2006	0.08	86.27
NOx lbs	10/31/2006	166.93	--	0	11/26/2006	0.77	167.70
PM lbs	11/30/2006	36.84	11/26/2006	6.75	11/26/2006	0.02	43.61
VOC lbs	11/30/2006	35.75	--	0	11/26/2006	0.02	35.77
SOx lbs	11/30/2006	4.60	--	0	11/26/2006	0.001	4.61
NH3 Slip lbs	11/30/2006	127.13	--	0	--	--	127.13