APPENDIX 5.1A

Emissions and Operating Parameters

APPENDIX 5.1A

Emissions and Operating Parameters

The following tables are provided in this appendix:

Table 5.1A-1 Potential to Emit for the Existing Almond Power Plant CTG

Table 5.1A-2 Emissions from the Existing Almond Power Plant Emergency Diesel Fire Pump Engine

Table 5.1A-3 Emissions and Operating Parameters for the A2PP CTGs

Table 5.1A-4 Calculation of Hourly, Daily and Annual Fuel Use

Table 5.1A-5 Calculation of Hourly, Daily, Quarterly and Annual Criteria Pollutant Emissions

Table 5.1A-6 Greenhouse Gas Emissions Calculations: Plant Operations

Table 5.1A-7 Calculation of Noncriteria Pollutant Emissions from the A2PP CTGs

Table 5.1A-8 Calculation of Noncriteria Pollutant Emissions from the Existing Units

Attachment 5.1A-1 SJVAPCD Permit to Operate for Almond Power Plant

Table 5.1A-1
TID Almond 2 Power Plant
Potential to Emit for the Existing Almond Power Plant CTG

Pollutant	EF, normal	EF, startups	EF, shutdowns	PE, max hour (lb/hr)	PE, max day (lb/day)	PE, annual (lb/year)
PM10	0.0044 lb/MMBtu	N/A	N/A	2	48	17,520
SOx	0.00285 lb/MMBtu	N/A	N/A	1.3	31.4	11,459
NOx	0.0110 lb/MMBtu	24.6 lb/event	4.1 lb/event	24.6	142.6	52,049
CO	0.0263 lb/MMbtu	40.8 lb/event	3.3 lb/event	40.8	367.1	136,413
VOC	0.0026 lb/MMBtu	N/A	N/A	1.2	28.6	10,454
NH3	15.1 lb/hr	N/A	N/A	15.1	362	132,130

EF: Emission factor
PE: Potential to emit
Max hourly heat input based on 459 MMBtu/hr
Source: SJVAPCD, "Notice of Preliminary Decision-- Authority to Construct, N-3299, April 2003.

Table 5.1A-2
TID Almond 2 Power Plant
Emissions from the Existing Almond Power Plant Emergency Diesel Fire Pump Engine

Parameter	
Power Output (bhp)	240
Fuel Consumption (Btu/hp-hr)	6,700
Higher Heating Value (Btu/gal)	135,100
Fuel Density (lb/gal)	7.0
Fuel Sulfur Content, wt	0.015%
Heat Input Rate (MMBtu/hr)	1.6
Exhaust Rate (dscfm @ 15% O2)	872
Exhaust Rate (dscfm @ 12% CO2)	317
Daily Operating Hours	24
Max. Annual Operating Hours	100
Historical Operating Hours	14.2

Device	IC Engine
Make	Cummins
Model	6CTA8.3-F1
Fuel	Diesel

Pollutant	Exhaust Concentraton (ppmvd @ 15% O2)	Emission Factors (g/bhp-hr)	Potential to Emit			Actual Emissions (tons)
			Hourly (lb)	Daily (lb)	Annual (tons)	
CO	388	2.78	1.5	35	0.07	1.04E-02
NOx	428	5.03	2.7	64	0.13	1.89E-02
PM10 ---->gr/dscf @ 12% O2	0.05	0.25	0.13	3	0.01	9.39E-04
SOx	2.9	0.0472	0.02	0.6	0.00	1.77E-04
VOC (as CH4)	227	0.93	0.49	12	0.02	3.49E-03

Notes

1. Power output (in bhp) was specified in the Permit to Operate.
2. Fuel consumption (in gal/hr) from Cummins engine spec.
3. Fuel density (lb/gal) reflects the typical value for diesel.
4. Fuel sulfur content (in wt%) and annual operating hours are limited by the ATCM and PTO.
5. Heat input rate was calcuated from the power output (in bhp), fuel consumption rate (in Btu/hp-hr), and higher heating value (in Btu/gal).
6. Exhaust flow rates at reference concentrations were calculated from the heat input rate and F-factors from 40 CFR Part 60 Method 19.
7. CO, NOx, PM10, and VOC emission factors (in g/bhp-hr) were obtained from Cummins exhaust
8. SOx emission factor (in g/bhp-hr) was calculated from the fuel consumption rate (in Btu/hp-hr), the higher heating value (in Btu/gal), the fuel density (in lb/gal), and the fuel sulfur content (in weight %).
9. Hourly emissions were calculated from the emissions factor (in g/bhp-hr) and the power output (in bhp). Daily and annual emissions were calculated from the hourly emissions and the corresponding operating hours.
10. Exhaust CO, NOx, SOx, and VOC concentrations (in ppmvd @ 15% O2) were calculated from the hourly emission rates and the exhaust flow rate at the reference O2 or CO2 concentrations. Exhaust PM and PM10 concentrations (in gr/dscf @ 12% CO2) were calculated from the hourly emission rates and the exhaust flow rate at the reference CO2 concentration.
11. Historical operating hours are actual operating hours during 2006 and 2007. Actual emissions are calculated from historical operating hours and hourly emission rates.

Table 5.1A-3
TID Almond 2 Power Plant
Emissions and Operating Parameters for Each CTG

Case	Cold Base	Cold Low	Avg. Base	Avg. Low	Hot Base	Hot Low	Standard
CTG Gross Power, MW	57.6	28.3	54.2	26.6	49.9	24.6	53.9
Ambient Temp, F	30	30	60	60	110	110	68
Turbine Load, %							
Evap Cooler On/Off	Off	Off	Off	Off	On	Off	On
CTG heat input, MMBtu/hr (HHV)	554.9	318.6	523.2	306.2	482.9	284.7	519.1
Turbine exhaust flow, lb/hr	1,181,561	799,342	1,123,597	753,908	1,074,513	724,632	1,121,948
Turbine exhaust flow, acfm	688,163	450,782	658,795	440,731	639,884	421,524	659,993
Turbine exhaust flow, dscfm	237,329	163,973	224,181	153,775	207,436	147,668	222,501
Turbine exhaust temp, F	877	846	881	890	878.3	882	881
Turbine exhaust, vol %							
O2 (dry)	14.02%	15.19%	14.03%	15.05%	14.05%	15.24%	14.04%
CO2 (dry)	3.95%	3.29%	3.94%	3.37%	3.93%	3.26%	3.94%
H2O	11.33%	8.64%	12.24%	9.42%	16.57%	9.59%	13.06%
Emissions							
NOx, ppmvd @ 15% O2	2.5	2.5	2.5	2.5	2.5	2.5	2.5
NOx, lb/hr	5.02	2.88	4.74	2.77	4.37	2.58	4.70
NOx, lb/MMBtu	0.0091	0.0091	0.0091	0.0091	0.0091	0.0091	0.0091
NOx, lb/MW-hr	0.0872	0.1018	0.0873	0.1040	0.0875	0.1046	0.0872
SO2, ppmvd @ 15% O2	0.56	0.56	0.56	0.56	0.56	0.56	0.56
SO2, lb/hr	1.56	0.90	1.47	0.86	1.36	0.80	1.46
SO2, lb/MMBtu	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028
SO2, lb/MW-hr	0.0271	0.0316	0.0271	0.0323	0.0272	0.0325	0.0271
CO, ppmvd @ 15% O2	4.0	4.0	4.0	4.0	4.0	4.0	4.0
CO, lb/hr	4.89	2.81	4.61	2.70	4.26	2.51	4.58
CO, lb/MMBtu	0.0088	0.0088	0.0088	0.0088	0.0088	0.0088	0.0088
VOC, ppmvd @ 15% O2	2.00	2.00	2.00	2.00	2.00	2.00	2.00
VOC, lb/hr	1.40	0.80	1.32	0.77	1.22	0.72	1.31
VOC, lb/MMBtu	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
PM10, lb/hr	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PM10, lb/MMBtu	0.0045	0.0078	0.0048	0.0082	0.0052	0.0088	0.0048
PM10, gr/dscf	0.00123	0.00178	0.00130	0.00190	0.00141	0.00198	0.00131
NH3, ppmvd@15% O2	10.0	10.0	10.0	10.0	10.0	10.0	10.0
NH3, lb/hr	7.44	4.27	7.01	4.10	6.47	3.82	6.96

Table 5.1A-4
TID Almond 2 Power Plant
Calculation of Daily and Annual Fuel Use

Quarter 1	Operating Hours			Max Hourly Fuel Use, MMBtu	Avg Hourly Fuel Use, MMBtu
	max. hour	hrs/day	hrs/qtr		
Each Turbine	1	24	2160	554.9	523.2
Total, 3 Turbines	1	24	2160	1664.8	1569.6
	Fuel Use				
	MMBtu/hr	MMBtu/day	MMBtu/qtr		
Each Turbine	554.9	13,318.3	1,130,112		
Total, 3 Turbines	1664.8	39,954.8	3,390,337		

Quarter 2	Operating Hours			Max Hourly Fuel Use, MMBtu	Avg Hourly Fuel Use, MMBtu
	max. hour	hrs/day	hrs/qtr		
Each Turbine	1	24	2184	554.9	523.2
Total, 3 Turbines	1	24	2184	1664.8	1569.6
	Fuel Use				
	MMBtu/hr	MMBtu/day	MMBtu/qtr		
Each Turbine	554.9	13,318.3	1,142,669		
Total, 3 Turbines	1664.8	39,954.8	3,428,008		

Quarter 3	Operating Hours			Max Hourly Fuel Use, MMBtu	Avg Hourly Fuel Use, MMBtu
	max. hour	hrs/day	hrs/qtr		
Each Turbine	1	24	2208	554.9	523.2
Total, 3 Turbines	1	24	2208	1664.8	1569.6
	Fuel Use				
	MMBtu/hr	MMBtu/day	MMBtu/qtr		
Each Turbine	554.9	13,318.3	1,155,226		
Total, 3 Turbines	1664.8	39,954.8	3,465,678		

Quarter 4	Operating Hours			Max Hourly Fuel Use, MMBtu	Avg Hourly Fuel Use, MMBtu
	max. hour	hrs/day	hrs/qtr		
Each Turbine	1	24	2208	554.9	523.2
Total, 3 Turbines	1	24	2208	1664.8	1569.6
	Fuel Use				
	MMBtu/hr	MMBtu/day	MMBtu/qtr		
Each Turbine	554.9	13,318.3	1,155,226		
Total, 3 Turbines	1664.8	39,954.8	3,465,678		

Total	Fuel Use		
	Max MMBtu/hr	MMBtu/day	MMBtu/yr
Each Turbine	554.9	13,318.3	4,583,234
Total, 3 Turbines	1,664.8	39,954.8	13,749,701

Table 5.1A-5
TID Almond 2 Power Plant
Calculations for Maximum Hourly, Daily, Quarterly and Annual Criteria Pollutant Emissions

Assumptions for Daily and Quarterly Operations	Startup Hours	Base Load Hours NOx, CO and VOC (1)	Base Load Hours SOx, PM10 and NH3 (2)	Total Hours
Daily	2	22	22	24 per day
Q1	90	1980	2070	2160 per quarter
Q2	91	2002	2093	2184 per quarter
Q3	92	2024	2116	2208 per quarter
Q4	92	2024	2116	2208 per quarter

Equipment	Hourly Emission Rates NOx (lbs/hr)	SOx (lbs/hr)	CO (lbs/hr)	VOC (lbs/hr)	PM10 (lbs/hr)	NH3 (lbs/hr)
Gas Turbine, max hourly	5.02	1.56	4.89	1.40	2.50	7.44
Gas Turbine, average	4.74	1.47	4.61	1.32	2.50	7.01
Gas Turbine, startups/shutdowns	25.00	1.56	40.00	2.00	2.50	7.44

Equipment	NOx Emissions Max lb/hr	Max lb/day	Max lb/Q1	Max lb/Q2	Max lb/Q3	Max lb/Q4	Total tons/yr
Gas Turbine, base	0.0	110.5	9,378.5	9,482.7	9,586.9	9,586.9	19.0
Gas Turbine, startups/shutdowns	25.0	50.0	2,250.0	2,275.0	2,300.0	2,300.0	4.6
Total, 3 CTGs only	75.0	481.6	34,885.4	35,273.0	35,660.6	35,660.6	70.7
Equipment	**SOx Emissions Max lb/hr**	**Max lb/day**	**Max lb/Q1**	**Max lb/Q2**	**Max lb/Q3**	**Max lb/Q4**	**Total tons/yr**
Gas Turbine, base	1.6	34.3	3,045.6	3,079.4	3,113.3	3,113.3	6.2
Gas Turbine, startups/shutdowns	0.0	3.1	140.4	142.0	143.6	143.6	0.3
Total, 3 CTGs only	4.7	112.4	9,558.1	9,664.3	9,770.5	9,770.5	19.4
Equipment	**CO Emissions Max lb/hr**	**Max lb/day**	**Max lb/Q1**	**Max lb/Q2**	**Max lb/Q3**	**Max lb/Q4**	**Total tons/yr**
Gas Turbine, base	0.0	107.7	9,136.1	9,237.6	9,339.1	9,339.1	18.5
Gas Turbine, startups/shutdowns	40.0	80.0	3,600.0	3,640.0	3,680.0	3,680.0	7.3
Total, 3 CTGs only	120.0	563.0	38,208.3	38,632.9	39,057.4	39,057.4	77.5
Equipment	**VOC Emissions Max lb/hr**	**Max lb/day**	**Max lb/Q1**	**Max lb/Q2**	**Max lb/Q3**	**Max lb/Q4**	**Total tons/yr**
Gas Turbine, base	0.0	30.8	2,616.4	2,645.5	2,674.6	2,674.6	5.3
Gas Turbine, startups/shutdowns	2.0	4.0	180.0	182.0	184.0	184.0	0.4
Total, 3 CTGs only	6.0	104.5	8,389.2	8,482.4	8,575.7	8,575.7	17.0
Equipment	**PM10/PM2.5 Emissions Max lb/hr**	**Max lb/day**	**Max lb/Q1**	**Max lb/Q2**	**Max lb/Q3**	**Max lb/Q4**	**Total tons/yr**
Gas Turbine, base	2.5	55.0	5,175.0	5,232.5	5,290.0	5,290.0	10.5
Gas Turbine, startups/shutdowns	0.0	5.0	225.0	227.5	230.0	230.0	0.5
Total, 3 CTGs only	7.5	180.0	16,200.0	16,380.0	16,560.0	16,560.0	32.9
Equipment	**NH3 Emissions Max lb/hr**	**Max lb/day**	**Max lb/Q1**	**Max lb/Q2**	**Max lb/Q3**	**Max lb/Q4**	**Total tons/yr**
Gas Turbine, base	7.4	163.7	14,518.8	14,680.1	14,841.5	14,841.5	29.4
Gas Turbine, startups/shutdowns	0.0	14.9	669.5	677.0	684.4	684.4	1.4
Total, 3 CTGs only	22.3	535.6	45,565.1	46,071.4	46,577.6	46,577.6	92.4

Notes:

1. The calculation of quarterly and annual NOx, CO and VOC emissions assumes that a CTG is down for one hour prior to startup. Therefore, quarterly and annual emissions are calculated assuming 1 hour of startup and shutdown and 22 hours of baseload operation each day.
2. The calculation of quarterly and annual SOx, PM10 and ammonia emissions assumes that the CTG operates full time.

Table 5.1A-6
TID Almond 2 Power Plant
Greenhouse Gas Emissions Calculations

Unit	Rated Capacity, MW	Operating Hours per year	Annual Fuel Use, MMBtu/yr (Note 1)	Estimated Gross MWh (Note 1)	Maximum Emissions, metric tonnes/yr				Estimated Emissions, metric tonnes/MWh		
					CO2	CH4	N2O	SF6	CO2	CH4	N2O
Each CTG	53.9	8760	4,583,234	475,072	242,316	4.12	0.46	--	0.510	8.68E-06	9.65E-07
Total, 3 CTGs	161.7	8760	13,749,701	1,425,217	726,947	12.37	1.37	1.60E-03	0.510	8.68E-06	9.65E-07
CO2-Equivalent					726,947	259.87	426.24	38.35			

Natural Gas GHG Emission Rates (2)

	Emission Factors, kg/MMBtu			Emission Factor
	CO2 (3)	CH4 (4)	N2O (4)	SF6 (6)
Natural Gas	52.870	9.00E-04	1.00E-04	n/a
Global Warming Potential (5)	1	21	310	23,900

Notes: 1. Based on annual average performance.
2. Calculation methods and emission factors from ARB, "Regulation for the Mandatory Reporting of Greenhouse Gas Emissions," December 5, 2007 (Staff's Suggested Modifications to the Originally Proposed Regulation Order Released October 19, 2007). http://www.arb.ca.gov/cc/ccei/reporting/GHGReportRegUpdate12_05_07.pdf
3. Appendix A, Table 4; heat content 1000 to 1025 Btu/scf.
4. Appendix A, Table 6.
5. Appendix A, Table 2.
6. Sulfur hexafluoride (SF6) will be used as an insulating medium in 6 new breakers: 5 @ 115 kV and 1 @ 69 kV. Applicant's electrical engineer estimates the SF6 contained in these breakers as follows: 115 kV, 44-64 lb each; 69 kV, 25-33 lb each. Breaker manufacturers guarantee leakage rates below 1%, so a maximum leakage rate of 1% per year is assumed.

Table 5.1A-7
TID Almond 2 Power Plant
Calculation of Noncriteria Pollutant Emissions from the CTGs

Compound	Emission Factor, lb/MMBtu (1)	Maximum Hourly Emissions, lb/hr (2)	Total Annual Emissions (3) tpy per CTG	tpy total, 3 CTGs
Ammonia	(4)	7.44	30.8	92.4
Propylene	7.68E-04	0.43	1.8	5.3
Hazardous Air Pollutants				
Acetaldehyde	4.00E-05	2.22E-02	9.17E-02	0.3
Acrolein	6.40E-06	3.55E-03	1.47E-02	4.4E-02
Benzene	1.20E-05	6.66E-03	2.75E-02	0.1
1,3-Butadiene	4.30E-07	2.39E-04	9.85E-04	3.0E-03
Ethylbenzene	3.20E-05	1.78E-02	7.33E-02	0.2
Formaldehyde	7.10E-04	0.39	1.6	4.9
Hexane	2.58E-04	0.14	0.59	1.8
Naphthalene	1.30E-06	7.21E-04	3.0E-03	8.9E-03
PAHs (5)	9.00E-07	4.99E-04	2.1E-03	6.2E-03
Propylene oxide	2.9E-05	1.61E-02	0.07	0.2
Toluene	1.3E-04	7.21E-02	0.30	0.9
Xylene	6.4E-05	3.55E-02	0.15	0.4
Total HAPs		0.71	2.9	8.8

Notes:

(1) All factors except individual PAHs, hexane and propylene from Ventura County APCD emission factors (taken from AP-42, Table 3.1.3).
Individual PAHs, hexane and propylene are CATEF mean results as AP-42 does not include factors for these compounds.

(2) Based on maximum hourly turbine fuel use of 555 MMBtu/hr (HHV) each

(3) Based on total annual fuel use of 4,583,234 MMBtu/yr each

(4) Based on 10 ppm ammonia slip from SCR system.

(5) Emission factors for individual PAHs (from CATEF) are adjusted proportionally so that sum of "Adjusted EF" plus naphthalene (1.30E-06, from AP-42, Table 3.1-3) equals Total PAH EF of 2.2 E-06 lb/MMBtu shown in AP-42, Table 3.1-3.

	Mean EF (Note 1)	Adjusted EF (Note 5)
PAHs (as B(a)P)		
Benzo(a)anthracene	2.25E-08	1.55E-07
Benzo(a)pyrene	1.38E-08	9.55E-08
Benzo(b)fluoranthrene	1.13E-08	7.76E-08
Benzo(k)fluoranthrene	1.10E-08	7.56E-08
Chrysene	2.51E-08	1.73E-07
Dibenz(a,h)anthracene	2.34E-08	1.61E-07
Indeno(1,2,3-cd)pyrene	2.34E-08	1.61E-07
Total	1.30E-07	9.00E-07

Table 5.1A-8
TID Almond 2 Power Plant
Calculation of Noncriteria Pollutant Emissions from the Existing CTG

Compound	Emission Factor, lb/MMBtu (1)	Hourly Emissions, lb/hr (2)	Total Annual Emissions, tpy (3)
Ammonia	(4)	15.10	66.1
Propylene	7.68E-04	0.38	1.7
Hazardous Air Pollutants			
Acetaldehyde	4.00E-05	1.98E-02	8.69E-02
Acrolein	6.40E-06	3.17E-03	1.39E-02
Benzene	1.20E-05	5.95E-03	2.61E-02
1,3-Butadiene	4.30E-07	2.13E-04	9.34E-04
Ethylbenzene	3.20E-05	1.59E-02	6.95E-02
Formaldehyde	7.10E-04	0.35	1.5
Hexane	2.58E-04	0.13	0.56
Naphthalene	1.30E-06	6.45E-04	2.8E-03
PAHs (5)	9.00E-07	4.46E-04	2.0E-03
Propylene oxide	2.9E-05	1.44E-02	0.06
Toluene	1.30E-04	6.45E-02	0.28
Xylene	6.40E-05	3.17E-02	0.14
Total HAPs		0.64	2.8

Notes:

(1) All factors except individual PAHs, hexane and propylene from Ventura County APCD emission factors (taken from AP-42, Table 3.1.3).
Individual PAHs, hexane and propylene are CATEF mean results as AP-42 does not include factors for these compounds.

(2) Based on maximum hourly turbine fuel use of 496 MMBtu/hr (HHV) each

(3) Based on total annual fuel use of 4,344,960 MMBtu/yr each

(4) Based on 25 ppm ammonia slip from SCR system.

(5) Emission factors for individual PAHs (from CATEF) are adjusted proportionally so that sum of "Adjusted EF" plus naphthalene (1.30E-06, from AP-42, Table 3.1-3) equals Total PAH EF of 2.2 E-06 lb/MMBtu shown in AP-42, Table 3.1-3.

	Mean EF (Note 1)	Adjusted EF (Note 5)
PAHs (as B(a)P)		
Benzo(a)anthracene	2.25E-08	1.55E-07
Benzo(a)pyrene	1.38E-08	9.55E-08
Benzo(b)fluoranthrene	1.13E-08	7.76E-08
Benzo(k)fluoranthrene	1.10E-08	7.56E-08
Chrysene	2.51E-08	1.73E-07
Dibenz(a,h)anthracene	2.34E-08	1.61E-07
Indeno(1,2,3-cd)pyrene	2.34E-08	1.61E-07
Total	1.30E-07	9.00E-07

Attachment 5.1A-1
SJVAPCD Permit to Operate
for Almond Power Plant

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

Permit to Operate

FACILITY: N-3299 **EXPIRATION DATE:** 06/30/2009

LEGAL OWNER OR OPERATOR: TURLOCK IRRIGATION DISTRICT
MAILING ADDRESS: PO BOX 949
TURLOCK, CA 95381

FACILITY LOCATION: 4500 CROWS LANDING ROAD
MODESTO, CA 95381

FACILITY DESCRIPTION: POWER GENERATION FACILITY

The Facility's Permit to Operate may include Facility-wide Requirements as well as requirements that apply to specific permit units.

This Permit to Operate remains valid through the permit expiration date listed above, subject to payment of annual permit fees and compliance with permit conditions and all applicable local, state, and federal regulations. This permit is valid only at the location specified above, and becomes void upon any transfer of ownership or location. Any modification of the equipment or operation, as defined in District Rule 2201, will require prior District approval. This permit shall be posted as prescribed in District Rule 2010.

Seyed Sadredin
Executive Director / APCO

David Warner
Director of Permit Services

Oct 4 2007 11:11AM – THAOC

10. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit

11. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit

12. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit

13. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit

14. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit

15. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit

16. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit

17. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit

18. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit

19. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit

20. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit

21. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit

22. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (11/15/01). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

23. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in the Table of Standards of District Rule 4601 (10/31/01) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit

24. All VOC-containing materials for architectural coatings subject to Rule 4601 (10/31/01) shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit

25. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (10/31/01). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit

26. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit

27. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit

28. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR 82, Subpart B. [40 CFR 82, Subpart B] Federally Enforceable Through Title V Permit

29. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8021 and 8011] Federally Enforceable Through Title V Permit

30. Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8031 and 8011] Federally Enforceable Through Title V Permit

31. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8041 and 8011] Federally Enforceable Through Title V Permit

32. Whenever open areas are disturbed or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8051 and 8011] Federally Enforceable Through Title V Permit

33. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8061 and Rule 8011] Federally Enforceable Through Title V Permit

34. Any unpaved vehicle/equipment area that anticipates more than 75 vehicle trips per day shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 100 vehicle trips per day shall comply with the requirements of Section 5.1.2 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8071 and Rule 8011] Federally Enforceable Through Title V Permit

35. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

36. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit

37. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit

38. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit

39. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), and Rule 111 (Kern, Tulare, Kings). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (11/15/01); 4601, sections 5.1, 5.2, 5.3, 5.8 and 8.0 (10/31/01); 8021 (11/15/01); 8031 (11/15/01); 8041 (11/15/01); 8051 (11/15/01); 8061 (11/15/01); and 8071 (11/15/01). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

41. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

42. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report begin January 1st of each year, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days of the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-3299-1-2 **EXPIRATION DATE:** 06/30/2009

EQUIPMENT DESCRIPTION:
240 HP CUMMINS DIESEL-FIRED EMERGENCY IC ENGINE WITH TURBOCHARGER AND AFTERCOOLER POWERING A FIRE PUMP

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.0] Federally Enforceable Through Title V Permit
2. NOx emissions shall not exceed 6.12 grams per horsepower-hour. [District NSR Rule] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 17 CCR 93115]
4. This engine shall be operated using only CARB certified diesel fuel. [17 CCR 93115]
5. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 1998 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
6. The permittee shall maintain records of hours of emergency and non-emergency operation. Records shall include the date, the number of hours of operation, and the purpose of the operation (e.g., load testing, weekly testing, rolling blackout, general area power outage, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
7. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [17 CCR 93115]
8. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: District Rule 4201 and County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-3299-3-2 **EXPIRATION DATE:** 06/30/2009

EQUIPMENT DESCRIPTION:
GENERAL ELECTRIC MODEL LM6000 459 MMBTU/HR (HHV) COMBINED CYCLE GAS TURBINE ENGINE WITH STEAM INJECTION, OXIDIZATION CATALYST, AMMONIA INJECTION, AND SELECTIVE CATALYTIC REDUCTION SERVING A 48 MW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. The heat recovery steam generator shall provide space for additional selective catalytic reduction catalyst and additional oxidation catalyst. The additional space shall be sufficient to house the quantity of catalyst material necessary to achieve and maintain compliance with the emission limits of this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The gas turbine engine and generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater except for up to three minutes in any hour. [District NSR Rule] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in proper operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for CO. The CEM shall meet the requirements of 40 CFR parts 60 and shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [District NSR Rule and District Rule 1080] Federally Enforceable Through Title V Permit
5. The permittee shall monitor and record the fuel flow rate to the turbine, the CO emission rate, the steam injection rate, the ammonia injection rate, the exhaust temperature both prior to and after the SCR unit, and the exhaust flow rate. A calculated exhaust flow rate may be utilized, provided a District approved calculation method is utilized. [District NSR Rule and District Rule 4703] Federally Enforceable Through Title V Permit
6. In accordance with 40 CFR, Part 60, Appendix F, 5.1, cylinder gas audits (CGA) or relative accuracy audits (RAA) of continuous emission monitors shall be conducted quarterly, except during quarters in which a relative accuracy test audit (RATA) is performed. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
7. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
8. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total will commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions total to determine compliance with annual emission limit will be compiled from the twelve most recent calendar months. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Startup and shutdown events shall not exceed 1,095 occurrences per calendar year. Startup emissions must be counted toward each applicable emission limit (lb/day and lb/yr). [District NSR Rule] Federally Enforceable Through Title V Permit

10. Emissions during startup and shutdown periods must be counted toward the applicable daily emission limitations. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The NOx emissions shall not exceed 60.0 lb/hr during start-up periods and shall not exceed 12.3 lb/hr during shutdown periods. [District NSR Rule] Federally Enforceable Through Title V Permit

12. The NOx emissions concentration during steady state operation shall not exceed 3.0 ppmvd @ 15% O2 over a 3 hour rolling average. Steady-state period refers to any periods that is not a start-up or shutdown period. [District NSR Rule; 40 CFR 60.332(b); 40 CFR 60.334(j)(1)(iii); and District Rule 4703] Federally Enforceable Through Title V Permit

13. The combined total NOx emissions from start-up, shutdown, and steady state operation shall not exceed 142.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

14. The CO emissions shall not exceed 40.8 lb/hr during start-up periods and shall not exceed 10.0 lb/hr during shutdown periods. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The CO emissions concentration during steady state operation shall not exceed 11.8 ppmvd @ 15% O2 over a 3 hour rolling average. Steady-state period refers to any periods that is not a start-up or shutdown period. [District NSR Rule and District Rule 4703] Federally Enforceable Through Title V Permit

16. The combined total CO emissions from start-up, shutdown, and steady state operation shall not exceed 367.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

17. The VOC emissions concentration shall not exceed 2.0 ppmvd @ 15% O2 over a 3 hour rolling average. [District NSR Rule] Federally Enforceable Through Title V Permit

18. The PM10 emissions rate shall not exceed 48.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

19. The SOx emission rate shall not exceed 31.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Ammonia (NH3) emissions concentration shall not exceed 25 ppmvd @ 15% O2 over a 24 hour rolling average. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Compliance with ammonia emission limit shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rule 4102]

22. The cumulative annual emissions shall not exceed either of the following limits: 52,049 lb/year for NOx or 10,454 lb/year for VOC. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Source testing to demonstrate compliance with the NOx (lb/day), CO (lb/day), VOC (ppmvd and lb/day), PM10 (lb/day), and NH3 (ppmvd) emission limits shall be conducted at least once every twelve months. [District NSR Rule] Federally Enforceable Through Title V Permit

24. VOC emissions (referenced as methane) shall be determined using EPA method 18 or EPA method 25. [District NSR Rule and District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

25. Source testing to measure concentrations of PM10 shall be conducted using EPA Methods 201 and 202, or EPA Methods 201A and 202, or CARB Method 501 in conjunction with CARB Method 5. Alternative source testing methods will be allowed provided prior written approval is received from both the District and the EPA. [District NSR Rule and District Rule 1081] Federally Enforceable Through Title V Permit

26. Ammonia (NH3) emissions shall be determined using BAAQMD Method ST-1B. [District Rule 4102]

27. The permittee shall retain records of the cumulative annual NOx and VOC emissions. The record shall be updated daily. [District NSR Rule] Federally Enforceable Through Title V Permit

28. The permittee shall maintain hourly records of NOx, CO and ammonia concentrations (ppmv @ 15% O2). [District NSR Rule and District Rules 2520, 9.4.1 and 4102] Federally Enforceable Through Title V Permit

29. The owner or operator shall certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx and O2 concentrations. NOx CEMS meeting the requirements of 40 CFR 75 may be used to meet the requirements 40 CFR 60.334. However, the missing data substitution methodology provided for in 40 CFR part 75, subpart D, is not required for purposes of identifying excess emissions. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in 40 CFR 60.7(c). [District Rule 4703, 6.2.1 and 40 CFR 60.334(b)] Federally Enforceable Through Title V Permit

30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [40 CFR 60.334(b)(2) and District Rule 1080, 6.4] Federally Enforceable Through Title V Permit

31. The NOx and O2 CEMS shall meet the requirements in Performance Specifications 2 and 3 (for diluent) of 40 CFR part 60, appendix B, except the 7-day calibration drift is based on unit operating days, not calendar days. Appendix F, Procedure 1 is not required. The relative accuracy test audit (RATA) of the NOx and diluent monitors may be performed individually or on a combined basis, i.e., the relative accuracy tests of the CEMS may be performed either: (i) On a ppm basis (for NOx) and a percent O2 basis for oxygen; or (ii) On a ppm at 15 percent O2 basis; or (iii) On a ppm basis (for NOx) and a percent CO2 basis (for a CO2 monitor that uses the procedures in Method 20 to correct the NOx data to 15 percent O2). [40 CFR 60.334(b)(1) and District Rule 1080] Federally Enforceable Through Title V Permit

32. As specified in §60.13(e)(2), during each full unit operating hour, each monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required to validate the hour. [40 CFR 60.334(b)(2) and District Rule 1080] Federally Enforceable Through Title V Permit

33. The CEMS shall be linked to a data logger which is compatible with the District's Data acquisition system. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit

34. The owner or operator shall maintain CEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device is inoperative, and emission measurements. [40 CFR 60.7(b) and District Rule 1080, 7.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

35. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [40 CFR 60.334(j), (j)(5) and District Rule 1080, 8.0] Federally Enforceable Through Title V Permit

36. Permittee shall maintain records of the occurrence and duration of any start-up or shutdown. [District Rule 4703, 6.2.8] Federally Enforceable Through Title V Permit

37. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit

38. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) which has a total sulfur content of less than or equal to 1.0 gr/100 scf. [District NSR Rule and 40 CFR 60.333(b)] Federally Enforceable Through Title V Permit

39. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.0] Federally Enforceable Through Title V Permit

40. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of the fuel shall be tested in accordance with 40 CFR 60.344(i). [40 CFR 60.344(i)] Federally Enforceable Through Title V Permit

41. Performance testing shall be conducted annually to measure NOx and CO emission concentrations using the following test methods: NOx (ppmv) - EPA Methods 7E or 20, or ARB Method 100; CO (ppmv) - EPA Method 10 or 10B, or ARB Method 100; stack gas oxygen - EPA Method 3, 3A or 20, or ARB Method 100. [District Rule 4703, 6.3.1, 6.4.1, & 6.4.3] Federally Enforceable Through Title V Permit

42. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in District Rule 1081, 3.0, & 6.0 (as amended 12/16/93). [District Rule 1081, 3.0 & 6.0] Federally Enforceable Through Title V Permit

43. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

44. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081, 7.2 & 7.3] Federally Enforceable Through Title V Permit

45. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

46. Results of the CEM system shall be averaged over a three hour period, using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [40 CFR 60.13, District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

47. Owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local time start-up and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used. [District Rule 4703, 6.2.6] Federally Enforceable Through Title V Permit

48. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit

49. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

50. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit

51. The owners and operators of each source and each affected unit at the source shall: (i) hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit

52. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit

53. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit

54. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit

55. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit

56. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit

57. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit

58. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

59. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

60. The owners and operators of each affected unit at the source shall keep and make readily available upon request the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit

61. The owners and operators of each affected unit at the source shall keep and make readily available upon request each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

62. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

San Joaquin Valley
Air Pollution Control District

FACILITY: N-3299-0-2 **EXPIRATION DATE:** 06/30/2009

FACILITY-WIDE REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit

2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit

3. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit

4. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (3/21/02). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit

5. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.12.1] Federally Enforceable Through Title V Permit

6. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit

7. Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit

8. The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit

9. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

63. Permittee shall submit reports of excess emissions for all periods of unit operation, including startup, shutdown, and malfunction in accordance with 40 CFR 60.344(j). [40 CFR 60.334(j)] Federally Enforceable Through Title V Permit

64. "Startup" shall be defined as the period of time, not to exceed two hours, during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. "Shutdown" shall be defined as the period of time, not to exceed two hours, during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District NSR Rule and District Rule 4703] Federally Enforceable Through Title V Permit

65. The owner or operator shall monitor the gas turbine exhaust gas NOx emissions using a system that meets EPA requirements as specified in 40 CFR Part 60 App. B, Spec. 2, 40 CFR Part 60 App. F, and 40 CFR Part 60.7 (c), 60.7 (d), and 60.13, or other systems that are acceptable to EPA. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit