Table B-4
Emission Source Test Results for Engines Using Fossil Fuel

Facility Name	District / State	Description of Basic Equipment	Method of control	Date tested	Engine or test #	Measured Concentrations (ppmvd @ 15%O2)*		
						NOX	VOC	CO
Claremont Club--Claremont	SCAQMD	(3) 86 bhp rich-burn engine cogeneration system	3-way catalyst: Miratech MN-11T-04F and air/fuel ratio controller	10/00	engine #1	0.112 gm/bhp-hr	0.035 gm/bhp-hr	0.091gm/bhp-hr
					engine #2	0.003 gm/bhp-hr	0.044 gm/bhp-hr	0.142 gm/bhp-hr
					engine #3	0.005 gm/bhp-hr	0.026 gm/bhp-hr	0.075 gm/bhp-hr
College of the Desert--Palm Desert	SCAQMD	161 bhp Tecochill/Tecogen 74000LE rich-burn engine driving a compressor	3-way catalyst and air/fuel ratio controller	1/99	NA	0.044 gm/bhp-hr or 7 ppmvd	0.085 gm/bhp-hr or 38 ppmvd	0.255 gm/bhp-hr or 64 ppmvd
Crestline Village Water District--Crestline	SCAQMD	94 bhp Ford LSG875 rich-burn engine driving a generator	3-way catalyst: Miratech MN-09-04F-D2 and air/fuel ratio controller	7/00	NA	<0.15 gm/bhp-hr or <20 ppmvd	0.02 gm/bhp-hr or 3 ppmvd	0.34 gm/bhp-hr or 31 ppmvd
Gill's Onions--Oxnard	Ventura Co. APCD	158 bhp Tecodrive 7400LE rich-burn engine driving refrigeration compressor and 250 bhp Waukesha F11 GSID driving air compressor	3-way catalyst and air/fuel ratio controller	1/00	Tecodrive #1	7	5.8	55
					Waukesha	5	1.4	10
Gill's Onions--Oxnard	Ventura Co. APCD	(2) 158 bhp Tecodrive 7400LE rich-burn engine driving a refrigeration compressor and 815 bhp Caterpillar G3512 rich-burn engine driving an air compressor	3-way catalyst and air/fuel ratio controller	11/00	Tecodrive #2	2	<0.5	30
					Tecodrive #3	8	<0.5	58
					Caterpillar	4.5	2.1	50
Gill's Onions--Oxnard	Ventura Co. APCD	158 bhp Tecodrive 7400LE rich-burn engine driving refrigeration a compressor and 250 bhp	3-way catalyst and air/fuel ratio controller	2/01	Tecodrive #1	0.8	<0.5	12

Table B-4
Emission Source Test Results for Engines Using Fossil Fuel

Facility Name	District / State	Description of Basic Equipment	Method of control	Date tested	Engine or test #	Measured Concentrations (ppmvd @ 15%O2)*		
						NOX	VOC	CO
		Waukesha F11 GSID rich-burn engine driving an air compressor			Waukesha	6.3	<0.5	6
Los Alamos Energy	Santa Barbara Co. APCD	(2) 713 bhp field gas-fired Caterpillar G398TAHC rich-burn engine driving a generator producing a total of 0.93 MW	3-way catalyst and air/fuel ratio controller	1997	engine #1	3.6	0.14	165
				1998	engine #1	65**	NA***	NA
				1999	engine #1	13	NA	NA
				1999	engine #1	11	NA	NA
				2000	engine #1	3	NA	NA
				1997	engine #2	0.6	0.16	87
				1998	engine #2	4	0.8	714
				1999	engine #2	5	NA	NA
				2000	engine #2	11	NA	NA
Los Angeles County, Metropolitan Transit Authority--Los Angeles	SCAQMD	400 bhp Caterpillar G3408TA HCR rich-burn engine driving a compressor	3-way catalyst: Johnson Mathey QXH50-8 and air/fuel ratio controller	9/99	NA	0.01gm/bhp-hr or <2 ppmvd	0.03 gm/bhp-hr or 7 ppmvd	0.12 gm/bhp-hr or 15 ppmvd

Table B-4
Emission Source Test Results for Engines Using Fossil Fuel

Facility Name	District / State	Description of Basic Equipment	Method of control	Date tested	Engine or test #	Measured Concentrations (ppmvd @ 15%O2)*		
						NOX	VOC	CO
Saba Petroleum	Santa Barbara Co. APCD	747 bhp Waukesha 3521GSI rich-burn engine driving a compressor	3-way catalyst and air/fuel ratio controller	1999	NA	0.14 gm/bhp-hr	0.04 gm/bhp-hr	0.36 gm/bhp-hr
				2000	NA	0.065 gm/bhp-hr	0.01 gm/bhp-hr	0.13 gm/bhp-hr
SB Linden--Linden, NJ	NJDEP	3,130 bhp Waukesha 12VAT27GL lean-burn engine driving a pump	SCR and oxidation catalyst	1997	test #1	16.5	NA	26.5
					test #2	13.9	NA	25.8
					test #3	14	NA	25.1
					test #4	15.6	NA	24.8
Trillium USA--Los Angeles	SCAQMD	(3) 607 bhp Caterpillar G3412TAA rich-burn engine driving a compressor	3-way catalyst: Miratech EQ-700-XX-D2 and tecodrive air/fuel ratio controller	11/00	Unit A	0.024 gm/bhp-hr	0.008 gm/bhp-hr	0.016 gm/bhp-hr
					Unit B	0.009 gm/bhp-hr	0.004 gm/bhp-hr	0.15 gm/bhp-hr
					Unit C	0.06 gm/bhp-hr	0.004 gm/bhp-hr	0.31 gm/bhp-hr
Trillium USA--West Hollywood	SCAQMD	(3) 607 bhp Caterpillar G3412TAA rich-burn engine driving a compressor	3-way catalyst: Miratech EQ-700-XX-D2 and tecodrive air/fuel ratio controller	8/00	Unit A	0.1 gm/bhp-hr	0.007 gm/bhp-hr	0.34 gm/bhp-hr
					Unit B	0.1 gm/bhp-hr	0.01 gm/bhp-hr	0.4 gm/bhp-hr
Tosco-Ventura Pump Station--Ventura	Ventura Co. APCD	415 bhp Caterpillar SP321P001-G379ASI rich-burn engine driving a pump	3-way catalyst and air/fuel ratio controller	ARB test 3/01	NA	1.2	58.4****	245

Table B-4
Emission Source Test Results for Engines Using Fossil Fuel

Facility Name	District / State	Description of Basic Equipment	Method of control	Date tested	Engine or test #	Measured Concentrations (ppmvd @ 15%O2)*		
						NOX	VOC	CO
				1/01	NA	3.4	6	180
Vintage Petroleum--Piru	Ventura Co. APCD	325 bhp Caterpillar 3406TD rich-burn engine driving a pump	3-way catalyst and air/fuel ratio controller	9/99	NA	7	76	381

* unless otherwise indicated

** original test did not meet district standard. After modifications, engine was retested.

*** test for CO and VOC taken in lb/day--no data available in ppm

**** total hydrocarbons

Table B-3
Emission Control Requirements for Engines Using Fossil Fuel

Facility Name	District / State	Description of Basic Equipment	Method of control	Permit Status	BACT Level (g/bhp-hr)*			
					NOX	VOC	CO	NH3
Aera Energy--Oilfield	SJVUAPCD	(5) 800 bhp Superior 8G-825 rich-burn engines or (3) 1478 bhp Waukesha 7042 GSI rich-burn engines driving natural gas compressors	3-way catalyst: Quick-Lid 3-DC74 and air/fuel ratio controller	ATC 1/01	0.071	0.069	0.603	NA
Claremont Club--Claremont	SCAQMD	(3) 86 bhp rich-burn engine cogeneration system	3-way catalyst: Miratech MN-11T-04F and air/fuel ratio controller	PTO 5/01	0.15	0.15	0.6	NA
College of the Desert--Palm Desert	SCAQMD	161 bhp Tecochill/Tecogen 74000LE rich-burn engine driving a compressor	3-way catalyst and air/fuel ratio controller	PTO 8/99	0.15	0.15	0.6	NA
Crestline Village Water District--Crestline	SCAQMD	94 bhp Ford LSG875 rich-burn engine driving a generator	3-way catalyst: Miratech MN-09-04F-D2 and air/fuel ratio controller	PTO 10/00	0.15	0.15	0.6	NA
Gill's Onions--Oxnard	Ventura Co. APCD	(3) 158 bhp Tecodrive 7400LE rich-burn engine driving refrigeration compressor; 250 bhp Waukesha F11 GSID rich-burn engine driving an air compressor; and 815 bhp Caterpillar G3512 rich-burn engine driving an air compressor	3-way catalyst and air/fuel ratio controller	ATC 4/98	9 ppmvd	27 ppmvd	62 ppmvd	NA
JST Energy LLC--Red Bluff	Tehama Co. APCD	(10) 3,928 bhp Wartsila 18V220SG lean-burn engine driving 2,926 KW generator for a total of 29 MW	SCR and oxidation catalyst: Miratech/Hug EM77/6 SCR and Oxicat oxidation catalyst	ATC 5/01	0.07 or 8 ppmvd	0.15 or 50 ppmvd	0.56 or 107 ppmvd	10 ppmvd

Table B-3
Emission Control Requirements for Engines Using Fossil Fuel

Facility Name	District / State	Description of Basic Equipment	Method of control	Permit Status	BACT Level (g/bhp-hr)*			
					NOX	VOC	CO	NH3
Kaiser Permanente--Los Angeles	SCAQMD	(4) 171 bhp Tecodrive model 7400LE rich-burn engines use to drive two compressors / chillers that will provide cooling for the facility	3-way catalyst: Miratech MN-11T-04F and tecodrive air/fuel ratio controller	PTC 12/99	0.15	0.15	0.6	NA
Los Angeles County, Metropolitan Transit Authority--Los Angeles	SCAQMD	400 bhp Caterpillar G3408TA HCR rich-burn engine driving a compressor	3-way catalyst: Johnson Mathey QXH50-8 and air/fuel ratio controller	PTO 9/99	0.15	0.15	0.6	NA
NEO California Power LLC--Chowchilla	SJVUAPCD	(16) 4,157 bhp Deutz TBG632V16 lean-burn engine driving 3,100 KW generator for total of 49.6 MW	SCR and oxidation catalyst	ATC 3/01	0.07	0.15	0.1	10 ppmvd
NEO California Power LLC--Red Bluff	Tehama Co. APCD	(16) 3,928 bhp Wartsila 18V220SG lean-burn engine driving 2,926 KW generator for a total of 46.7 MW	SCR and oxidation catalyst: Miratech/Hug EM77/6 SCR and Oxicat oxidation catalyst	ATC 4/01	0.07	0.15	0.56	10 ppmvd
Saba Petroleum	Santa Barbara Co. APCD	747 bhp Waukesha 3521GSI rich-burn engine driving a compressor	3-way catalyst and air/fuel ratio controller	ATC 10/98	0.15	0.3	0.75	NA
SB Linden--Linden, NJ	NJDEP	3,130 bhp Waukesha 12VAT27GL lean-burn engine driving a pump	SCR and oxidation catalyst	ATC 12/96	50 ppmvd	58 ppmvd	76 ppmvd	10 ppmvd
Tosco-Ventura Pump Station--Ventura	Ventura Co. APCD	415 bhp Caterpillar SP321P001G379ASI rich-burn engine driving a pump	3-way catalyst: Quick-Lid and air/fuel ratio controller	ATC 12/97	9 ppmvd	100 ppmvd	1,000 ppmvd	NA

Table B-3
Emission Control Requirements for Engines Using Fossil Fuel

Facility Name	District / State	Description of Basic Equipment	Method of control	Permit Status	BACT Level (g/bhp-hr)*			
					NOX	VOC	CO	NH3
Trillium USA--Los Angeles	SCAQMD	(3) 607 bhp Caterpillar G3412TAA rich-burn engine driving a compressor	3-way catalyst: Miratech EQ-700-XX-D2 and tecodrive air/fuel ratio controller	PTO 7/99	0.15	0.15	0.6	NA
Trillium USA--West Hollywood	SCAQMD	(3) 607 bhp Caterpillar G3412TAA rich-burn engine driving a compressor	3-way catalyst: Miratech EQ-700-XX-D2 and tecodrive air/fuel ratio controller	PTO 7/99	0.15	0.15	0.6	NA
Veterans Administration Medical Center--Brockton	Massachusetts	2,113 bhp Waukesha 8LAT27GL lean-burn engine driving a 1.5 MW generator	SCR and oxidation catalyst	ATC 4/01	0.15	0.6	0.16	5 ppmvd
Vintage Petroleum--Piru	Ventura Co. APCD	325 bhp Caterpillar 3406TA rich-burn engine driving a pump	3-way catalyst and air/fuel ratio controller	ATC 98	9 ppmvd	110 ppmvd	1,000 ppmvd	NA

* unless indicated otherwise (for example, ppmvd means parts per million by volume, dry at 15 pecent O2)

Table B-5
Emission Control Requirements for Engines And Gas Turbines Using Landfill Gas

Facility Name	District / State	Description of Basic Equipment	Method of control	BACT Level (g/bhp-hr)*			
				Permit Status	NOX	VOC	CO
County of Sacramento--Kiefer Landfill	Sacramento Metropolitan AQMD	(3) 4,230 bhp Caterpillar G3616 lean-burn engine driving a 3 MW electric generator	Lean-burn technology	ATC 8/98	0.55	NA	2.7
Energy Developments Inc--Azusa Landfill	SCAQMD	(5) 1,850 bhp Deutz TBG620 v16k lean-burn engine driving a generator	Lean-burn technology	PTC 5/00	0.6	0.17	2
Minnesota Methane Tajiguas Corporation-- Tajiguas Landfill	Santa Barbara Co. APCD	4,314 bhp Caterpillar 3616 lean-burn engine driving a 3 MW electric generator	Lean-burn technology	ATC 1/98	0.59	0.24	2.5
Riverside County Waste Management--Badlands	SCAQMD	1,777 bhp Deutz TBG620 v16k lean-burn engine driving a generator	Lean-burn technology	PTC 11/98	0.31	0.02	1.49
University of California at Los Angeles--Los Angeles	SCAQMD	(2) General Electric LM1600 generating 14.4 MW (140 MMBtu/hr) with heat recovery steam generator and steam turbine for total of 48 MW	Water injection and SCR	PTO 1995	6 ppmvd	NA	10 ppmvd

* unless otherwise indicated; ppmvd expressed at 15% O2.

Revised: July 23, 2001

Table B-7
Emission Source Test Results for Engines Using Landfill Gas

Facility Name	District / State	Description of Basic Equipment	Method of control	Date Tested	Engine tested	Measured (g/bhp-hr)*		
						NOX	VOC	CO
County of Sacramento--Kiefer Landfill	Sacramento Metropolitan AQMD	(3) 4,230 bhp Caterpillar G3616 lean-burn engine driving a 3 MW electric generator for a total of 9 MW	Lean-burn technology	1/00	#1	0.39 or 28 ppmvd	<0.15 or <50 ppmvd	1.73 or 209 ppmvd
					#2	0.41 or 31 ppmvd	<0.13 or <50 ppmvd	1.7 or 214 ppmvd
					#3	0.48 or 33 ppmvd	<0.15 or <50 ppmvd	1.9 or 213 ppmvd
Minnesota Methane --Lopez Landfill	SCAQMD	(2) 4,235 bhp Caterpillar G3616 lean-burn engine driving a 3.05 MW electric generator	Lean-burn technology	3/99	#1	0.41 or 27 ppmvd	0.05 or 9 ppmvd	1.73 or 189 ppmvd
					#2	0.56 or 35 ppmvd	0.09 or16 ppmvd	1.92 or 200 ppmvd
Minnesota Methane Tajiguas Corporation--Tajiguas Landfill	Santa Barbara Co. APCD	4,314 bhp Caterpillar 3616 lean-burn engine driving a 3 MW electric generator	Lean-burn technology	1/01	85-100 load	0.31 or 24 ppmvd	0.1 or 6 ppmvd	1.59 or 211 ppmvd
					75% load	0.27 or 20 ppmvd	0.22 or 14 ppmvd	1.8 or 213 ppmvd
					62% load	0.2 or 15 ppmvd	0.27 or 17 ppmvd	1.8 or 212 ppmvd
Minnesota Methane--Corona	SCAQMD	850 bhp Caterpillar G399TA lean-burn engine driving a generator	Lean-burn technology	1997	NA	0.6	0.2	1.5
Ogden Power Pacific--Stockton	SJVUAPCD	1,100 bhp Cooper 8GTLA lean-burn engine driving a generator	Lean-burn technology	12/00	NA	0.45 or 28 ppmvd	0.32 or 58 ppmvd	3.9 or 399 ppmvd

* unless otherwise indicated; ppmvd expressed at 15% O2

Table B-2
Emission Source Test Results for Combustion Turbine Electrical Generation Less Than 50 MW

Facility Name	District / State	Description of Basic Equipment	Method of control	Date Tested	Measured Concentrations (ppmvd @ 15%O2)			
					NOX	VOC	CO	NH3
California Institute of Technology, Pasadena	SCAQMD	Solar Centaur 50-TS900 generating 4.2 MW (58.9 MMBtu/hr) with heat recovery steam generator and steam turbine for total of 5 MW	Water injection / SCR	1/00	4.2	not measured	46	NA
Double C Limited--Oilfield	SJVUAPCD	General Electric LM2500 gas turbine (222 MMBtu/hr) with heat recovery steam generator producing 24 MW	Steam injection / SCR / oxidation catalyst	2/01	2.4	not measured	14.5	not measured
Federal Cold Storage Cogeneration	SCAQMD	General Electric LM2500-M-2 gas turbine (222 MMBtu/hr) and steam turbine producing 32 MW	Water injection/SCONOX	CEM data since 1995	2	not measured	1	NA
Genetics Institute--Andover, Massachusetts	Massachusetts	Solar Taurus 60 generating 5 MW (65 MMBtu/hr) with heat recovery steam generator equipped with duct burner	DLN / SCONOX	2/00 NG 50% load	0.27	NA	0	NA
				2/00 NG 65% load	0.34	NA	0	NA
				2/00 NG 85% load	0.42	NA	0	NA
				2/00 NG 100% load	1.42	NA	0	NA
				2/01 oil 50% load	1.28	NA	0	NA
				2/01 oil 65% load	2	NA	0	NA
				2/01 oil 85% load	2.06	NA	0	NA
				2/01 oil 100% load	5.93	NA	0	NA

Revised: July 23, 2001

Table B-2
Emission Source Test Results for Combustion Turbine Electrical Generation Less Than 50 MW

Facility Name	District / State	Description of Basic Equipment	Method of control	Date Tested	Measured Concentrations (ppmvd @ 15%O2)			
					NOX	VOC	CO	NH3
Genxon Power Systems -Santa Clara	BAAQMD	Kawasaki M1A-13 with Xonon generating 1.5 MW (22.9 MMBtu/hr)	XONON	12/98	2.9	2.7	3.9	NA
High Sierra Limited--Oilfield	SJVUAPCD	General Electric LM2500 gas turbine (222 MMBtu/hr) with heat recovery steam generator producing 25 MW	Steam injection / SCR / oxidation catalyst	3/01	3.6	<0.3	17	<2
Live Oak Limited--Oilfield	SJVUAPCD	General Electric LM5000 gas turbine (460 MMBtu/hr) with heat recovery steam generator producing 49 MW	Steam injection / SCR / oxidation catalyst	4/00	2	<1	1.3	10
Northern California Power--Lodi	SJVUAPCD	General Electric LM5000 gas turbine (460 MMBtu/hr) producing 49 MW	Steam injection / SCR / oxidation catalyst	7/00	2.75	not measured	11.5	24.5
University of California, San Francisco	BAAQMD	(2) Solar Taurus 60 generating 5 MW (76 MMBtu/hr) with heat recovery steam generator equipped with duct burner for total of 10 MW	SCR /oxidation catalyst	5/98 turbine S-9 NG	4	<0.6	0.6	3.2
				5/98 turbine S-11 NG	4.6	<0.6	1.1	3.3
				5/98 turbine S-9 oil	7.8	<1.1	0.6	20.1
				5/98 turbine S-11 oil	7.9	<1.1	1.1	16.1

Revised: July 23, 2001

Table B-1
Emission Control Requirements for Combustion Turbine Electrical Generation Less Than 50 MW

Facility Name	District / State	Description of Basic Equipment	Method of control	Permit Status	BACT Level (ppmvd @ 15%O2) One hour average			
					NOX	VOC	CO	NH3
Alliance Colton--Century	SCAQMD	(4) 10.5 MW General Electric 10B1 (116 MMBtu/hr) generating total of 40 MW	XONON or selective catalytic reduction (SCR)/CO oxidation catalyst	PTC 3/01	5	2	6	5 if SCR
Alliance Colton--Drews	SCAQMD	(4) 10.5 MW General Electric 10B1 (116 MMBtu/hr) generating total of 40 MW	XONON or SCR/CO oxidation catalyst	PTC 3/01	5	2	6	5 if SCR
B. Braun Medical (previously McGraw) -- Irvine	SCAQMD	Solar Centaur T-4701 (3.3 MW and 44.6 MMBtu/hr) and GS-4000 (2.8 MW and 42 MMBtu/hr) with heat recovery steam generator equipped with duct burner and generating a total of 6 MW	Water injection / SCR / oxidation catalyst	PTC 9/93	9**	NA	10**	10**
California Institute of Technology, Pasadena	SCAQMD	Solar Centaur 50-TS900 generating 4.2 MW (58.9 MMBtu/hr) with heat recovery steam generator and steam turbine for total of 5 MW	Water injection / SCR	PTC 9/96	9	lb/hr limits	lb/hr limits	20
CalPeak Power--Buttonwillow	SJVUAPCD	(2) 24.7 MW Pratt & Whitney FT-8 Twin Pac (246 MMBtu/hr) generating total of 49 MW	DLN combustors / SCR / oxidation catalyst	ATC 4/01	3.4*	2*	NA	10
CalPeak Power--Panoche	SJVUAPCD	(2) 24.7 MW Pratt & Whitney FT-8 Twin Pac (246 MMBtu/hr) generating total of 49 MW	Dry Low NOx (DLN) combustors / SCR / oxidation catalyst	ATC 4/01	3.4*	2*	NA	10

Revised: July 23, 2001

Table B-1
Emission Control Requirements for Combustion Turbine Electrical Generation Less Than 50 MW

Facility Name	District / State	Description of Basic Equipment	Method of control	Permit Status	BACT Level (ppmvd @ 15%O2) One hour average			
					NOX	VOC	CO	NH3
Double C Limited--Oilfield	SJVUAPCD	General Electric LM2500 gas turbine (222 MMBtu/hr) with heat recovery steam generator producing 24 MW	Steam injection / SCR / oxidation catalyst	PTO 7/98	4.5 *	NA	51*	20
Genetics Institute--Andover, Massachusetts	Massachusetts	Solar Taurus 60 generating 5 MW (65 MMBtu/hr) with heat recovery steam generator equipped with duct burner	DLN combustors / SCONOX	ATC 9/98	2.5 NG / 15 oil	NA	5	NA
Genxon Power Systems--Santa Clara	BAAQMD	Kawasaki M1A-13 with Xonon generating 1.5 MW (22.9 MMBtu/hr)	XONON	PTO 4/99	5*	5*	10*	NA
High Sierra Limited--Oilfield	SJVUAPCD	General Electric LM2500 gas turbine (222 MMBtu/hr) with heat recovery steam generator producing 25 MW	Steam injection / SCR / oxidation catalyst	PTO 6/98	4.5	NA	51	20
LADWP--Valley	SCAQMD	General Electric LM6000 enhanced Sprint gas turbine (466 MMBtu/hr) generating 47.4 MW	Water/steam injection-SCR and oxidation catalyst	ATC 5/01	5	2	6	5
Live Oak Limited--Oilfield	SJVUAPCD	General Electric LM5000 gas turbine (460 MMBtu/hr) with heat recovery steam generator producing 49 MW	Steam injection / SCR / oxidation catalyst	ATC 99	3.6*	0.6	11*	20

Revised: July 23, 2001

Table B-1
Emission Control Requirements for Combustion Turbine Electrical Generation Less Than 50 MW

Facility Name	District / State	Description of Basic Equipment	Method of control	Permit Status	BACT Level (ppmvd @ 15%O2) One hour average			
					NOX	VOC	CO	NH3
Northern California Power--Lodi	SJVUAPCD	General Electric LM5000 gas turbine (460 MMBtu/hr) producing 49 MW	Steam injection / SCR / oxidation catalyst	ATC 3/99	3*	none	200*	25
NRG Energy Center Round Mountain, LLC--Oilfield	SJVUAPCD	General Electric LM6000 enhanced Sprint gas turbine (466 MMBtu/hr) with heat recovery steam generator equipped with duct burner generating 47.4 MW	Water/steam injection-SCR and oxidation catalyst	ATC 4/01	2*; 2.5**	2	lb/hr limit	5
Redding Power--Redding	Shasta Co. APCD	Alstom GTX 100 (407 MMBtu/hr) with heat recovery steam generator producing 43 MW	SCONOX	ATC 3/01	2.5	1.4	6	NA
Saint Agnes Medical Center--Fresno	SJVUAPCD	(2) Solar Centaur 40 generating 3.5 MW (58.9 MMBtu/hr) producing a total of 7 MW	DLN combustors / SCR	ATC 2/00	5	6	50	10
San Joaquin Cogen--Lathrop	SJVUAPCD	General Electric LM5000 gas turbine (460 MMBtu/hr) with heat recovery steam generator producing 48.6 MW	Steam injection / SCR / oxidation catalyst	ATC 99	3.8**	NA	12**	20
University of California, San Diego	San Diego Co. APCD	(2) Solar Titan generating 12.9 MW (148.6 MMBtu/hr) for total of 25 MW	SoLoNox / SCONOX	ATC 1/01	2.5	NA	5	NA

Revised: July 23, 2001

Table B-1
Emission Control Requirements for Combustion Turbine Electrical Generation Less Than 50 MW

Facility Name	District / State	Description of Basic Equipment	Method of control	Permit Status	BACT Level (ppmvd @ 15%O2) One hour average			
					NOX	VOC	CO	NH3
University of California, San Francisco	BAAQMD	(2) Solar Taurus 60 generating 5 MW (76 MMBtu/hr) with heat recovery steam generator equipped with duct burner for total of 10 MW	SCR /oxidation catalyst	PTO 1998	5 NG / 8 oil*	0.01 lb/MMBtu	10*	10

* 3-hr average
** 15 minute rolling average

Revised: July 23, 2001

Table B-8
Emission Source Test Results for Engines or Turbines Using Digester Gas

Facility Name	District / State	Description of Basic Equipment	Method of control	Date tested	Engine tested	Measured (g/bhp-hr)*		
						NOX	VOC	CO
City of Stockton	SJVUAPCD	(3) 1,408 bhp Waukesha L7042GLD digester/natural gas lean-burn engine generating 1.05 MW each for a total of 3.15 MW; cogeneration: electricity used onsite and hot water generated for digester	Lean-burn technology	10/00 digester gas	#3	0.52 or 30 ppmvd	<0.16 or <26 ppmvd	2.6 or 243 ppmvd
				10/00 digester gas	#4	0.45 or 26 ppmvd	<0.16 or <25 ppmvd	2.5 or 233 ppmvd
				10/00 digester gas	#1	0.49 or 31 ppmvd	<0.14 or <25 ppmvd	2.4 or 245 ppmvd
				10/00 NG	#3	0.58 or 36 ppmvd	<0.16 or <27 ppmvd	2.5 or 255 ppmvd
				10/00 NG	#4	0.47 or 29 ppmvd	<0.155 or <27 ppmvd	2.5 or 250 ppmvd
				10/00 NG	#1	0.54 or 35 ppmvd	<0.14 or <27 ppmvd	2.5 or 266 ppmvd
Hemet/San Jacinto Regional Water Reclamation Facility--San Jacinto	SCAQMD	260 bhp Caterpillar G379 SI-TA-HCR spark ignition digester gas-fired engine, with pre-stratified charge system driving a aeration blower	Pre-stratified charge system	5/00	NA	0.487 or 32 ppmvd	0.539 or 101 ppmvd	1.524 or 163 ppmvd

Table B-8
Emission Source Test Results for Engines or Turbines Using Digester Gas

Facility Name	District / State	Description of Basic Equipment	Method of control	Date tested	Engine tested	Measured (g/bhp-hr)*		
						NOX	VOC	CO
Joint Water Pollution Control Plant--Carson	SCAQMD	(3) Solar Mars 90 turbines generating 9.9 MW (113 MMBtu/hr) with heat recovery steam generator and one 5.1 MW steam turbine for total of 34.8 MW	Water injection / SCR	12/99	Turbine #1	19.3 ppmvd	NA	12 ppmvd
					Turbine #2	21.5 ppmvd	NA	8 ppmvd
					Turbine #3	21.2 ppmvd	NA	19 ppmvd
Orange County Sanitation District--Huntington Beach	SCAQMD	4,166 bhp Cooper LSVB-16-SGC lean burn engine driving a 3 MW generator with heat recovery steam generator	Lean burn technology	6/96	NA	0.36	0.2	2
South East Regional Reclamation Authority--Dana Point	SCAQMD	636 bhp Waukesha 2895GL, lean burn digester gas/natural gas-fired engine driving blower with heat recovery to digester tanks	Lean burn technology	6/96	NA	0.36	0.2	2

* unless otherwise indicated; ppmvd expressed at 15% O2.

Table B-6
Emission Control Requirements for Engines or Turbines Using Digester Gas

Facility Name	District / State	Description of Basic Equipment	Method of control	Permit Status	BACT Level (g/bhp-hr)*		
					NOX	VOC	CO
City of Stockton	SJVUAPCD	(3) 1,408 bhp Waukesha L7042GLD digester/natural gas lean-burn engine generating 1.05 MW each for a total of 3.15 MW; cogeneration: electricity used onsite and hot water generated for digester	Lean-burn technology	ATC 10/99	1.25	0.75	2.65
Hemet/San Jacinto Regional Water Reclamation Facility--San Jacinto	SCAQMD	260 bhp Caterpillar G379 SI-TA-HCR spark ignition digester gas-fired, with pre-stratified charge system driving a aeration blower	Pre-stratified charge system	ATC 2/99	0.6	0.8	2.5
Joint Water Pollution Control Plant--Carson	SCAQMD	(3) Solar Mars 90 generating 9.9 MW (113 MMBtu/hr) with heat recovery steam generator and one 5.1 MW steam turbine for total of 34.8 MW	Water injection	ATC 7/00	25 ppmvd	NA	NA

* unless otherwise indicated; ppmvd expressed at 15% O2.