

PM Speciation Profiles for Gas- and Oil-Fired Stationary Combustion —PM1101, PM1102, PM1103, PM1104 and PM1105

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1 Introduction

There are a few speciation profiles characterizing the PM emitted from internal and external gas- and oil-fired combustion in the current CARB speciation profile database [1]. For example, PM120 is the profile for gaseous material combustion. It applies to categories associated with natural gas, liquid petroleum gas and process gas combustion mostly for external boilers burning natural gas. The profile shows the emitted exhaust PM consists of 50% elemental carbon (EC), 20% sulfate and no organic carbon (OC). However, this profile is outdated and does not represent the composition of the related source emissions. The goal of this work is to update the following combustion profiles:

- PM111: Fuel Combustion—Residual
- PM113: Utility Boilers—Residual
- PM114: Stationary Internal Combustion Engine—Distillate Diesel
- PM115: Stationary Internal Combustion Engine—Gasoline
- PM116: Stationary Internal Combustion Engine—Diesel
- PM120: Gaseous Material Combustion
- PM123: Stationary Internal Combustion Engine—Gas
- PM125: Petroleum Heaters—Gas

All the above combustion profiles were created based on source tests and/or engineering estimates according to a 1979 KVB study [2], in which traditional stationary source sampling methods were used. During the tests, the filterable PM was sampled as the hot stack exhausts passed through the filter at high temperatures; and the condensable PM was collected when the filtered stack vapor was drawn through iced water impingers at low temperatures. Because the PM samples were taken at very high and very low temperatures, the traditional sampling methods could not properly account for the primary aerosol formation that happened in the ambient conditions after the exhausts leave the stack [3]. Therefore, the speciation profiles resulted from traditional sampling methods need to be updated.

To better characterize the emissions from industrial combustion sources, a joint industry and government program began to use dilution sampling techniques to measure and analyze PM samples from combustion systems beginning in 1998. This program was co-funded by the U.S. Department of Energy National Energy Technology Laboratory (DOE/NETL), California Energy Commission (CEC), Gas Research Institute (GRI), New York State Energy Research and Development Authority (NYSERDA) and the American

Petroleum Institute (API). The dilution method uses clean air to dilute the hot stack exhaust plume immediately in a mixing chamber. Because it mimics the formation of condensable particles in the ambient conditions before actual sampling for mass and chemical composition, the dilution sampling system is supposed to provide more representative measurements than the traditional methods [4]. Based on the test results of the multi-sponsor testing program, the following five PM speciation profiles were developed for the CARB speciation database:

- PM1101: Gas-Fired Boilers
- PM1102: Gas-Fired Process Heaters
- PM1103: Gas-Fired Combined Cycle and Cogeneration Plants
- PM1104: Oil-Fired Boilers (Residual)
- PM1105: Backup Generator Diesel Engines

2 Methodology

During the five-year stationary combustion program, source tests were performed on boilers, process heaters, and power plant units at various fuel evaluation facilities by GE Energy and Environmental Research Corporation (Irvine, CA) [5]. The test units and their characteristics are summarized in Table 1 for reference.

Table 1. Characteristic sources tested during the program [3]

<i>Site</i>	<i>Test Unit</i>	<i>Fuel</i>	<i>Control System</i>	<i>Maximum Heat Input Capacity (MMBtu/hour)</i>
Alpha	Refinery process heater	Refinery fuel gas	None	184.9
Bravo	Combined cycle-based cogeneration plant	Natural gas	Low NO _x combustors; SCR; CO oxidation catalyst	240 MW capacity, with duct burners
Charlie	Refinery process heater	Natural gas	SCR	300
Delta	Institutional boiler (dual fuel)	Natural gas	None	65
		No. 6 fuel oil		
Echo	Combined cycle-based cogeneration plant	Natural gas	Low NO _x combustors; SCR; CO oxidation catalyst	554 MW peak capacity, with duct burners
Foxtrot	Diesel engine backup generator	Low sulfur diesel	None	350 kW
Golf	Refinery cogeneration plant	Refinery fuel gas	Water injection, SCR, CO oxidation catalyst	48 MW capacity, with duct burners
A	Refinery boiler	Refinery fuel gas	None	650

<i>Site</i>	<i>Test Unit</i>	<i>Fuel</i>	<i>Control System</i>	<i>Maximum Heat Input Capacity (MMBtu/hour)</i>
B	Refinery process heater	Refinery fuel gas	None	114
C	Steam generator	Natural gas	None	62.5

2.1 Chemical Speciation Profiles

The speciation profiles were created by normalizing the measured mass of individual species to the reconstructed PM_{2.5} mass (i.e., sum of the species adjusted for element oxides and organic carbon speciation) rather than the measured PM_{2.5} total mass. The weight percentage of individual species was calculated for each test run. Then the individual profiles for each test run in the same category were combined to be the composite profile for this category. Overall five composite speciation profiles were derived from the testing data and adopted by U.S. EPA [5, 6]. However, the non-carbon organic matter (NCOM) and the oxygen associated with geological elements, two of the basic components of CARB PM speciation profiles, are not included in the five EPA profiles. Hence, the following steps are carried out to estimate the mass percentages of NCOM and species ‘Others’ based on the EPA profiles to form the new profiles that meet CARB’s needs:

- NCOM: based on the identified semi-volatile organic aerosol species, a factor of 1.08 was used to convert OC to OM (organic matter) [5]. The hydrogen and heteroatoms in the OM (i.e. NCOM) are then calculated by subtracting OC from OM [6].
- ‘Others’: the species group named ‘Others’ is created to capture the mass of oxygen associated with the five geological elements (i.e. Al, Si, Ca, Fe and Ti) using the following formula:

$$[Others] = 0.89 \times [Al] + 1.14 \times [Si] + 0.40 \times [Ca] + 0.43 \times [Fe] + 0.67 \times [Ti]$$

where [Al], [Si], [Ca], [Fe] and [Ti] are weight percentages of the five elements, respectively[7].

- Renormalizing: the weight percentages of all the species including NCOM and ‘Others’ are added up as the ‘new’ total PM_{2.5} mass; and then this ‘new’ sum is used as the denominator in calculating the renormalized speciation profile.

3 Results and Discussion

The details of profiles PM1101 to PM1105 are provided in Table 2. For gas-fired sources (PM1101, PM1102 and PM1103), the profiles indicate that the majority of PM is OC; sulfate, EC and other species are minor components. On the contrary, sulfate is the dominant species of the PM_{2.5} emitted from residual oil-fired boiler (PM1104) and EC is the major PM_{2.5} species for diesel engine exhausts (PM1105).

PM1101: Gas-Fired Boilers (external combustion)

The individual speciation profiles from all test runs on the boilers (Site A and Site Delta) /steam generators (Site C) were combined into this composite profile, which is dominated by carbon, with an average of 52.84% OC, and 11.26% EC (Table 2). Compared to the current profile PM120 (0% OC, 50% EC) that mainly used for gas-fired boilers, the new profile contains much higher OC but much lower EC. The gaseous combustion tests indicated that substantially all of the particulate matter in the stack was smaller than 2.5 μm ; thus, the ratios of $\text{PM}_{10}/\text{TPM}$ (total PM) and $\text{PM}_{2.5}/\text{TPM}$ are both set as 1.0.

PM1102: Gas-Fired Heaters (external combustion)

The individual speciation profiles from all runs on the three gas-fired process heaters (Site Alpha, Site Charlie and Site B) were combined into this composite profile. OC is the predominant species (55.10%), followed by sulfate (9.78%), EC (5.60%), and lesser fractions of other components (Table 2). Compared to the current profile PM125 (0% OC, 47% sulfate) for gas heaters, the new profile has much higher OC but much less sulfate. The size fraction profile for PM1101 will be used for PM1102, i.e., $\text{PM}_{10}/\text{TPM} = 1.0$ and $\text{PM}_{2.5}/\text{TPM} = 1.0$, which indicates that all of the particles generated from gaseous combustion are fine particles.

PM1103: Combined Cycle / Cogeneration Plants (internal combustion)

The individual speciation profiles from all test runs on the three units (Site Bravo, Site Echo and Site Golf) were combined into this composite profile. Similar to the other gas-fired combustion profiles (PM1101 and PM1102), OC is the dominant constituent (63.10%) followed by sulfate (12.06%) and other species (Table 2). Compared to the current profiles PM123 for internal gas combustion and PM115 for internal gasoline combustion (assumed the same as PM123 [1]), the new profile consists of much higher OC but lower sulfate and EC. Due to the lack of test data, the size fractions of PM1103 are assumed the same as PM123, i.e. $\text{PM}_{10}/\text{TPM} = 0.9940$ and $\text{PM}_{2.5}/\text{TPM} = 0.9920$.

PM1104: Oil-Fired Boilers (No. 6 Oil) (external combustion)

The test results of the boiler unit that fired with No. 6 oil (Site Delta) were averaged to obtain the oil-fired boilers speciation profile. Unlike the gaseous combustion PM, the oil combustion PM is dominated by sulfate (54.80%), which is due to the higher fuel sulfur and ash content compared to gas fuels (Table 2). There is 7.21% OC and 6.48% EC in the $\text{PM}_{2.5}$ mass. Compared to the current profiles PM111 and PM113 for residual oil external combustion, the new profile has higher sulfate and OC but lower EC content. The size fractions of PM111 are used for PM1104, in which $\text{PM}_{10}/\text{TPM}$ is 0.8700 and $\text{PM}_{2.5}/\text{TPM}$ is 0.7600.

PM1105: Backup Generator Diesel Engine (internal combustion)

The speciation profile is derived exclusively from test results performed on Site Foxtrot. Only EC and OC were detected during the tests. The profile for uncontrolled backup generator (BUG) diesel engines is dominated by EC (76.55%) and OC (21.62%) (Table 2). Compared to the current profiles PM114 and PM116 for internal diesel combustion, the new profile has much higher EC but less sulfur content. The size fractions of the off-road diesel profiles are used for PM1105, i.e., $PM_{10}/TPM = 0.9940$ and $PM_{2.5}/TPM = 0.9510$.

It has to be noticed that the chemical profiles discussed above are based on source testing for fine PM exhausts. For the complete PM profile update, a homogeneous chemical composition for the particles is assumed. That is, the chemical compositions of PM_{10} and TPM are assumed to be the same as that of $PM_{2.5}$ (Table 2).

Table 2. TPM, PM10 and PM2.5 speciation profiles for stationary combustion

Species	SAROAD	Profile No. & Name				
		PM1101 <i>Gas-Fired Boilers</i>	PM1102 <i>Gas-Fired Process Heaters</i>	PM1103 <i>Gas-Fired Combined Cycle & Cogeneration Plants</i>	PM1104 <i>Oil-Fired Boilers (No. 6 oil)</i>	PM1105 <i>Backup Generator Diesel Engines</i>
Aluminum	12101	1.04	1.16	0.37	1.37	
Ammonium	12301	1.39	3.29	5.57	3.01	
Antimony	12102				0.17	
Arsenic	12103	0.03			0.01	
Barium	12107		0.36		0.05	
Bromine	12109	0.02	0.01	0.03		
Cadmium	12110		0.04			
Calcium	12111	3.46	1.69	0.37	2.56	
Chloride	12203	0.26	0.89	2.78	0.15	
Chromium	12112	0.01	0.04		0.04	
Cobalt	12113	0.03	0.98	0.004	0.26	
Copper	12114	0.43	0.89	0.09	0.13	
EC	12116	11.26	5.60	2.32	6.48	76.65
Gallium	12124				0.01	
Iron	12126	1.91	2.22	0.84	2.10	
Lanthanum	12146				0.17	
Lead	12128	0.03	0.01	0.01	0.10	
Manganese	12132	0.09	0.04	0.02	0.04	
Molybdenum	12134			0.01	0.07	
NCOM	11103	4.23	4.41	5.05	0.58	1.83
Nickel	12136	0.43	0.05	0.03	4.29	
Nitrate	12306	0.78	2.22	2.51		
OC	11102	52.84	55.10	63.10	7.21	21.62
Phosphorus	12152	0.03	0.09		0.34	

<i>Species</i>	<i>SAROAD</i>	<i>Profile No. & Name</i>				
		<i>PM1101 Gas-Fired Boilers</i>	<i>PM1102 Gas-Fired Process Heaters</i>	<i>PM1103 Gas-Fired Combined Cycle & Cogeneration Plants</i>	<i>PM1104 Oil-Fired Boilers (No. 6 oil)</i>	<i>PM1105 Backup Generator Diesel Engines</i>
Potassium	12180	0.87	0.44	0.28	0.29	
Silicon	12165	5.02	3.11	1.67	4.20	
Strontium	12168	0.01	0.01		0.01	
Sulfate	12403	5.98	9.78	12.06	54.80	
Thallium	12173				0.001	
Tin	12160				0.03	
Titanium	12161	0.09	0.07	0.03	0.11	
Vanadium	12164	0.17	0.02	0.01	0.91	
Yttrium	12183				0.001	
Zinc	12167	0.69	1.24	0.09	2.47	
Zirconium	12185		0.004		0.003	
Others	12999	8.90	6.236	2.756	8.035	
<i>Total</i>		<i>100.00</i>	<i>100.000</i>	<i>100.000</i>	<i>100.000</i>	<i>100.00</i>

4 Estimated Impacts of the Profile Update on the Emission Inventory

The new profile PM1101 will replace the current profile PM120 for the categories of gas-fired boilers; the new profile PM1102 will replace the current profile PM125 for the categories of gas-fired heaters; the new profile PM1103 will replace the current profiles PM115 and PM123 for the categories of internal gaseous combustion; the new profile PM1104 will replace the current profiles PM111 and PM113 for the categories of external residual oil combustion; and the new profile PM1105 will replace the current profiles PM114 and PM116 for the categories of internal diesel combustion. The mapping of the new profiles to their associated EICs/SCCs is available in Appendix 1.

Using the new profiles to replace the currently-in-use combustion profiles, the changes in the major PM modeling species, including OC, EC, sulfate and nitrate, for 2012 statewide emissions are estimated in Table 3. Given the annual average PM_{2.5} emissions from gas- and oil-fired stationary combustion sources (see the categories in Appendix 1) of 19.50 tons/day [8], OC emissions increase from zero to 11.23 tons/day, which is more than half of the total PM_{2.5} mass. The emissions of nitrate increase more than five times while the emissions of EC and sulfate were both reduced about 70%.

Table 3. Changes on emissions of PM_{2.5} species for stationary combustion (2012)

Statewide Annual Ave. Emissions	Using Current PM Profiles (tons/day)	Using New PM Profiles (tons/day)	Change	
			Emissions (tons/day)	Percentage
OC	0.00	11.23	+11.23	N/A
EC	6.15	1.78	-4.37	-71.1%
Sulfate	6.11	2.05	-4.06	-66.4%
Nitrate	0.07	0.41	+0.34	+485.7%

5 Version Control

This section will be completed after management approval and after the CEIDARS FRACTION table and PMPROFILE table are updated. Version information from CEIDARS FRACTION table will be copied here.

References:

1. *California Air Resources Board Main Speciation Profiles*, 2015, California Air Resources Board, Accessed: August 20, 2015.
2. Taback, H.J., et al., "Fine Particle Emissions from Stationary and Miscellaneous Sources in the South Coast Air Basin". 1979(KVB 5806-783).
3. England, G.C., et al., "Dilution-Based Emissions Sampling from Stationary Sources: Part 2—Gas-Fired Combustors Compared with Other Fuel-Fired Systems". *Journal of the Air & Waste Management Association*, 2007. **57**(1): p. 79-93.
4. England, G.C., et al., "Dilution-Based Emissions Sampling from Stationary Sources: Part 1—Compact Sampler Methodology and Performance". *Journal of the Air & Waste Management Association*, 2007. **57**(1): p. 65-78.
5. England, G., O. Chang, and S. Wien, "Development of Fine Particulate Emission Factors and Speciation Profiles for Oil- and Gas-Fired Combustion Systems, Final Report". 2004: p. 132
6. *SPECIATE Version 4.4*, 2014, US EPA, Accessed: July 31, 2015.
7. Allen, P., "Developing PM Species Profiles for Emission Inventory", 2008.
8. *CEPAM*, 2015, California Air Resources Board, Accessed: August 12, 2015.

Appendix 1. EICs/SCCs to be Associated with Stationary Combustion

a. PM1101— Gas-Fired Boilers

EIC/SCC	NAMES			
10100601	EXTCOMB BOILER	ELECTRIC GENERATN	NG	>100MMBTU/HR EXTF
10100602	EXTCOMB BOILER	ELECTRIC GENERATN	NG	<100MMBTU/HR EXTF
10100603	EXTCOMB BOILER	ELECTRIC GENERATN	NG	<10MMBTU/HR **
10100604	EXTCOMB BOILER	ELECTRIC GENERATN	NG	TAN FIRED BOILERS
10100701	EXTCOMB BOILER	ELECTRIC GENERATN	PROCESS GAS	>100MMBTU/HR
10100702	EXTCOMB BOILER	ELECTRIC GENERATN	PROCESS GAS	<100MMBTU/HR
10100703	DUMMY NAME 10-30-81	EXTCOMB BOILER-ELECT	PROCESS GAS	<10MMBTU/HR
10101002	EXTCOMB BOILER	ELECTRIC GENERATN	LPG	PROPANE
10101501	EXTCOMB BOILER	ELECTRIC GENERATN	GEO THERM POWER PLNTS	OFF-GAS EJECTORS
10101502	EXTCOMB BOILER	ELECTRIC GENERATN	GEO THERM POWER PLNTS	COOLNG TOWER EXHAUST
10200601	EXTCOMB BOILER	INDUSTRIAL	NG	>100MMBTU/HR
10200602	EXTCOMB BOILER	INDUSTRIAL	NG	10-100MMBTU/HR
10200603	EXTCOMB BOILER	INDUSTRIAL	NG	<10MMBTU/HR
10200604	EXTCOMB BOILER	INDUSTRIAL	NG	COGENERATION
10200701	EXTCOMB BOILER	INDUSTRIAL	PROCESS GAS	PETROL REFINERY
10200702	EXTCOMB BOILER	INDUSTRIAL	PROCESS GAS	REFINERY 10-100**
10200703	EXTCOMB BOILER	INDUSTRIAL	PROCESS GAS	REFINERY <10 **
10200704	EXTCOMB BOILER	INDUSTRIAL	PROCESS GAS	BLAST FURNACE
10200707	EXTCOMB BOILER	INDUSTRIAL	PROCESS GAS	COKE OVEN
10200710	EXTCOMB BOILER	INDUSTRIAL	PROCESS GAS	COGENERATION
10200799	EXTCOMB BOILER	INDUSTRIAL	PROCESS GAS	OTHER/NOT CLASIFD
10201001	EXTCOMB BOILER	INDUSTRIAL	LPG	BUTANE
10201002	EXTCOMB BOILER	INDUSTRIAL	LPG	PROPANE
10201003	EXTCOMB BOILER	INDUSTRIAL	LPG	<10MMBTU/HR **
10201401	EXTCOMB BOILER	INDUSTRIAL	CO BOILER	NG
10201402	EXTCOMB BOILER	INDUSTRIAL	CO BOILER	PROCESS GAS
10201601	EXTCOMB BOILER	INDUSTRIAL	METHANOL	INDUSTRIAL BOILER
10201701	EXTCOMB BOILER	INDUSTRIAL	GASOLINE	INDUSTRIAL BOILER
10299997	DUMMY NAME 10-30-81	EXTCOMB BOILER-INDUS	OTHER/NOT CLASIFD	SPECIFY IN REMARK

<i>EIC/SCC</i>	<i>NAMES</i>			
10299999	DUMMY NAME 10-30-81	EXTCOMB BOILER-INDUS	OTHER/NOT CLASIFD	SPECIFY IN REMARK
10300601	EXTCOMB BOILER	COMMERCL-INSTUTNL	NG	>100MMBTU/HR
10300602	EXTCOMB BOILER	COMMERCL-INSTUTNL	NG	10-100MMBTU/HR
10300603	EXTCOMB BOILER	COMMERCL-INSTUTNL	NG	<10MMBTU/HR
10300701	EXTCOMB BOILER	COMMERCL-INSTUTNL	PROCESS GAS	SEWAGE GAS
10300702	DUMMY NAME 10-30-81	EXTCOMB BOILER-COMME	PROCESS GAS	SEWAGE 10-100
10300703	EXTCOMB BOILER	COMMERCL-INSTUTNL	PROCESS GAS	SEWAGE<10MMBTU/**
10300799	EXTCOMB BOILER	COMMERCL-INSTUTNL	PROCESS GAS	OTHER/NOT CLASIFD
10300811	EXTCOMB BOILER	COMMERCL-INSTUTNL	LANDFILL GAS	BOILER
10301001	EXTCOMB BOILER	COMMERCL-INSTUTNL	LPG	BUTANE
10301002	EXTCOMB BOILER	COMMERCL-INSTUTNL	LPG	PROPANE
10301003	EXTCOMB BOILER	COMMERCL-INSTUTNL	LPG	<10MMBTU/HR **
10399901	EXTCOMB	COMMERCL-INSTUTNL	OTHER FUELS	COMMERCIAL BOILER
10399997	DUMMY NAME 10-30-81	EXTCOMB BOILER-COMME	OTHER/NOT CLASIFD	SPECIFY IN REMARK
10500106	EXTCOMB BOILER	SPACE HEATER	INDUSTRIAL	NG
10500110	EXTCOMB BOILER	SPACE HEATER	INDUSTRIAL	LPG
10500199	DUMMY NAME 10-30-81	EXTCOMB BOILER-SPACE	INDUSTRIAL	OTHER-SPECIFY
10500206	EXTCOMB BOILER	SPACE HEATER	COMMERCL-INSTUTNL	NG
10500210	EXTCOMB BOILER	SPACE HEATER	COMMERCL-INSTUTNL	LPG
10500299	DUMMY NAME 10-30-81	EXTCOMB BOILER-SPACE	COMMERCL-INSTUTNL	OTHER-SPECIFY
30688701	INDUSTRIAL PROCESSES	PETROLEUM INDUSTRY	FLUIDCATALYTIC CRACK	FCCU START CO BOILER
1000501100000	ELECTRIC UTILITIES	BOILERS	NG	SUB-CATEGORY UNSPECIFIED
1000501240000	ELECTRIC UTILITIES	BOILERS	PROPANE	SUB-CATEGORY UNSPECIFIED
1000501300000	ELECTRIC UTILITIES	BOILERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
2000501100000	COGENERATION	BOILERS	NG	SUB-CATEGORY UNSPECIFIED
2000501300000	COGENERATION	BOILERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
3000501100000	OIL & GAS PRODN (COMBUSTION)	BOILERS	NG	SUB-CATEGORY UNSPECIFIED
3000501220000	OIL & GAS PRODN (COMBUSTION)	BOILERS	BUTANE	SUB-CATEGORY UNSPECIFIED
3000501240000	OIL & GAS PRODN (COMBUSTION)	BOILERS	PROPANE	SUB-CATEGORY UNSPECIFIED
3000501300000	OIL & GAS PRODN (COMBUSTION)	BOILERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED

<i>EIC/SCC</i>	<i>NAMES</i>			
4000501100000	PETROLEUM REFINING (COMBUSTION)	BOILERS	NG	SUB-CATEGORY UNSPECIFIED
4000501220000	PETROLEUM REFINING (COMBUSTION)	BOILERS	BUTANE	SUB-CATEGORY UNSPECIFIED
4000501240000	PETROLEUM REFINING (COMBUSTION)	BOILERS	PROPANE	SUB-CATEGORY UNSPECIFIED
4000501300000	PETROLEUM REFINING (COMBUSTION)	BOILERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
4000511000000	PETROLEUM REFINING (COMBUSTION)	BOILERS	GASOLINE (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
4000532200000	PETROLEUM REFINING (COMBUSTION)	BOILERS	METHANOL (METHYL ALCOHOL)	SUB-CATEGORY UNSPECIFIED
5000500120000	MANUFACTURING &INDUSTRIAL	BOILERS	FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5000501100000	MANUFACTURING &INDUSTRIAL	BOILERS	NG	SUB-CATEGORY UNSPECIFIED
5000501220000	MANUFACTURING &INDUSTRIAL	BOILERS	BUTANE	SUB-CATEGORY UNSPECIFIED
5000501240000	MANUFACTURING &INDUSTRIAL	BOILERS	PROPANE	SUB-CATEGORY UNSPECIFIED
5000501300000	MANUFACTURING &INDUSTRIAL	BOILERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
5000501420000	MANUFACTURING &INDUSTRIAL	BOILERS	LANDFILL GAS	SUB-CATEGORY UNSPECIFIED
5000501440000	MANUFACTURING &INDUSTRIAL	BOILERS	SEWAGE GAS	SUB-CATEGORY UNSPECIFIED
5000511000000	MANUFACTURING &INDUSTRIAL	BOILERS	GASOLINE (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5000532200000	MANUFACTURING &INDUSTRIAL	BOILERS	METHANOL (METHYL ALCOHOL)	SUB-CATEGORY UNSPECIFIED
5200501100000	FOOD &AGRICULTURAL PROCESSING	BOILERS	NG	SUB-CATEGORY UNSPECIFIED
5200501220000	FOOD &AGRICULTURAL PROCESSING	BOILERS	BUTANE	SUB-CATEGORY UNSPECIFIED
5200501240000	FOOD &AGRICULTURAL PROCESSING	BOILERS	PROPANE	SUB-CATEGORY UNSPECIFIED
5200501300000	FOOD &AGRICULTURAL PROCESSING	BOILERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
5200501440000	FOOD &AGRICULTURAL PROCESSING	BOILERS	SEWAGE GAS	SUB-CATEGORY UNSPECIFIED
5200511000000	FOOD &AGRICULTURAL PROCESSING	BOILERS	GASOLINE (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5200532200000	FOOD &AGRICULTURAL PROCESSING	BOILERS	METHANOL (METHYL ALCOHOL)	SUB-CATEGORY UNSPECIFIED

<i>EIC/SCC</i>	<i>NAMES</i>			
6000500120000	SERVICE &COMMERCIAL	BOILERS	FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
6000501100000	SERVICE &COMMERCIAL	BOILERS	NG	SUB-CATEGORY UNSPECIFIED
6000501120000	SERVICE &COMMERCIAL	BOILERS	CNG	SUB-CATEGORY UNSPECIFIED
6000501220000	SERVICE &COMMERCIAL	BOILERS	BUTANE	SUB-CATEGORY UNSPECIFIED
6000501240000	SERVICE &COMMERCIAL	BOILERS	PROPANE	SUB-CATEGORY UNSPECIFIED
6000501300000	SERVICE &COMMERCIAL	BOILERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
6000501420000	SERVICE &COMMERCIAL	BOILERS	LANDFILL GAS	SUB-CATEGORY UNSPECIFIED
6000501440000	SERVICE &COMMERCIAL	BOILERS	SEWAGE GAS	SUB-CATEGORY UNSPECIFIED

b. PM1102— Gas-Fired Heaters

<i>EIC/SCC</i>	<i>NAMES</i>			
30190003	CHEMICAL MFG	FUEL-FIRED EQMNT	PROCESS HEATERS	NG
30190004	CHEMICAL MFG	FUEL-FIRED EQMNT	PROCESS HEATERS	PROCESS GAS
30290003	FOOD/AGRICULTURE	FUEL-FIRED EQMNT	PROCESS HEATERS	NG
30290005	FOOD/AGRICULTURE	FUEL-FIRED EQMNT	PROCESS HEATERS	LPG
30390003	PRIMARY METALS	FUEL-FIRED EQMNT	PROCESS HEATERS	NG
30390004	PRIMARY METALS	FUEL-FIRED EQMNT	PROCESS HEATERS	PROCESS GAS
30490003	SECONDARY METALS	FUEL-FIRED EQMNT	PROCESS HEATERS	NG
30490004	SECONDARY METALS	FUEL-FIRED EQMNT	PROCESS HEATERS	PROCESS GAS
30500206	PETROLEUM INDRY	ASPHALT CONCRETE	ASPHALT HEATER	NG
30500209	PETROLEUM INDRY	ASPHALT CONCRETE	ASPHALT HEATER	LPG
30505020	MINERAL PRODUCTS	NONMETALLIC MINRL	ASPHALT HEATER	NG
30505023	MINERAL PRODUCTS	NONMETALLIC MINRL	ASPHALT HEATER	LP GAS
30590003	MINERAL PRODUCTS	FUEL-FIRED EQMNT	PROCESS HEATERS	NG
30600102	PETROLEUM INDRY	PETROLEUM REFNG	PROCESS HEATERS	GAS FIRED **
30600104	PETROLEUM INDRY	PETROLEUM REFNG	PROCESS HEATERS	GAS FIRED
30600105	PETROLEUM INDRY	PETROLEUM REFNG	PROCESS HEATERS	NG-FIRED
30600106	PETROLEUM INDRY	PETROLEUM REFNG	PROCESS HEATERS	PROCESS GAS-FIRED
30600107	PETROLEUM INDRY	PETROLEUM REFNG	PROCESS HEATERS	LPG FIRED
30600108	PETROLEUM INDRY	PETROLEUM REFNG	PROCESS HEATERS	LANDFILL GAS-FIRE
30600199	PETROLEUM INDRY	PETROLEUM REFNG	PROCESS HEATERS	NOT CLASSIFIED
30790003	WOOD PRODUCTS	FUEL FIRED EQMNT	PROCESS HEATERS	NG
30890003	RUBBER/PLASTICS	FUEL FIRED EQMNT	PROCESS HEATERS	NG
30890004	RUBBER/PLASTICS	FUEL FIRED EQMNT	PROCESS HEATERS	LPG
30990003	FABRICATED METALS	FUEL FIRED EQMNT	PROCESS HEATERS	NG
31000404	OIL & GAS PRODN	FUEL-FIRED EQMNT	PROCESS HEATERS	NG
31000405	OIL & GAS PRODN	FUEL-FIRED EQMNT	PROCESS HEATERS	PROCESS GAS
31000406	OIL & GAS PRODN	FUEL-FIRED EQMNT	PROCESS HEATERS	PROPANE/BUTANE

<i>EIC/SCC</i>	<i>NAMES</i>			
31390003	ELECTRICAL EQPMNT	FUEL FIRED EQPMNT	PROCESS HEATERS	NG
39900701	INDUSTRIAL PROCES	MIS IND-FUEL EQPT	PROCESS HTER/FURNACE	PROCESS GAS
39990003	INDUSTRIAL PROCES	MIS IND-FUEL EQPT	PROCESS HEATERS	NG
39990004	INDUSTRIAL PROCES	MIS IND-FUEL EQPT	PROCESS HEATERS	PROCESS GAS
40201001	ORGANIC SOLVENT	SURFACE COATING	OVEN HEATER	NG
40201004	ORGANIC SOLVENT	SURFACE COATING	OVEN HEATER	LPG
1001001100000	ELECTRIC UTILITIES	PROCESS HEATERS	NG	SUB-CATEGORY UNSPECIFIED
3001001000000	OIL & GAS PRODN (COMBUSTION)	PROCESS HEATERS	GASEOUS FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3001001100000	OIL & GAS PRODN (COMBUSTION)	PROCESS HEATERS	NG	SUB-CATEGORY UNSPECIFIED
3001001300000	OIL & GAS PRODN (COMBUSTION)	PROCESS HEATERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
4001001000000	PETROLEUM REFINING (COMBUSTION)	PROCESS HEATERS	GASEOUS FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
4001001100000	PETROLEUM REFINING (COMBUSTION)	PROCESS HEATERS	NG	SUB-CATEGORY UNSPECIFIED
4001001200000	PETROLEUM REFINING (COMBUSTION)	PROCESS HEATERS	LPG	SUB-CATEGORY UNSPECIFIED
4001001300000	PETROLEUM REFINING (COMBUSTION)	PROCESS HEATERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
5001001100000	MANUFACTURING &INDUSTRIAL	PROCESS HEATERS	NG	SUB-CATEGORY UNSPECIFIED
5001001200000	MANUFACTURING &INDUSTRIAL	PROCESS HEATERS	LPG	SUB-CATEGORY UNSPECIFIED
5001001300000	MANUFACTURING &INDUSTRIAL	PROCESS HEATERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
5001201100000	MANUFACTURING &INDUSTRIAL	OVEN HEATERS (FORCE DRYING SURFACE COATINGS)	NG	SUB-CATEGORY UNSPECIFIED
5001201200000	MANUFACTURING &INDUSTRIAL	OVEN HEATERS (FORCE DRYING SURFACE COATINGS)	LPG	SUB-CATEGORY UNSPECIFIED
5201001100000	FOOD &AGRICULTURAL PROCESSING	PROCESS HEATERS	NG	SUB-CATEGORY UNSPECIFIED
5201001200000	FOOD &AGRICULTURAL PROCESSING	PROCESS HEATERS	LPG	SUB-CATEGORY UNSPECIFIED
5201001300000	FOOD &AGRICULTURAL PROCESSING	PROCESS HEATERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
5201201100000	FOOD &AGRICULTURAL PROCESSING	OVEN HEATERS (FORCE DRYING SURFACE COATINGS)	NG	SUB-CATEGORY UNSPECIFIED
5201201200000	FOOD &AGRICULTURAL PROCESSING	OVEN HEATERS (FORCE DRYING SURFACE COATINGS)	LPG	SUB-CATEGORY UNSPECIFIED
6001001000000	SERVICE &COMMERCIAL	PROCESS HEATERS	GASEOUS FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED

<i>EIC/SCC</i>	<i>NAMES</i>			
6001001100000	SERVICE &COMMERCIAL	PROCESS HEATERS	NG	SUB-CATEGORY UNSPECIFIED
6001001200000	SERVICE &COMMERCIAL	PROCESS HEATERS	LPG	SUB-CATEGORY UNSPECIFIED
6001001300000	SERVICE &COMMERCIAL	PROCESS HEATERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
6001001420000	SERVICE &COMMERCIAL	PROCESS HEATERS	LANDFILL GAS	SUB-CATEGORY UNSPECIFIED
6001201100000	SERVICE &COMMERCIAL	OVEN HEATERS (FORCE DRYING SURFACE COATINGS)	NG	SUB-CATEGORY UNSPECIFIED
6001201200000	SERVICE &COMMERCIAL	OVEN HEATERS (FORCE DRYING SURFACE COATINGS)	LPG	SUB-CATEGORY UNSPECIFIED
9901001100000	OTHER (FUEL COMBUSTION)	PROCESS HEATERS	NG	SUB-CATEGORY UNSPECIFIED
9901001200000	OTHER (FUEL COMBUSTION)	PROCESS HEATERS	LPG	SUB-CATEGORY UNSPECIFIED
9901001300000	OTHER (FUEL COMBUSTION)	PROCESS HEATERS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED

c. PM1103— Combined Cycle / Cogeneration Plants

<i>EIC/SCC</i>	<i>NAMES</i>			
20100200				
20100201	INTERNALCOMBUSTION	ELECTRIC GENERATN	NG	TURBINE
20100202	INTERNALCOMBUSTION	ELECTRIC GENERATN	NG	RECIPROCATING
20100205	INTERNALCOMBUSTION	ELECTRIC GENERATN	NG	RECIP:CRNKCSE BLOWBY
20100207	INTERNALCOMBUSTION	ELECTRIC GENERATN	NG	RECIP:EXHAUST
20100209	INTERNALCOMBUSTION	ELECTRIC GENERATN	NG	TURBINE:EXHAUST
20100401	DUMMY NAME 10-30-81	INTERNAL COMBUSTION-E	RESIDUAL OIL	TURBINE
20100702	INTERNALCOMBUSTION	ELECTRIC GENERATN	PROCESS GAS	RECIPROCATING
20100707	INTERNALCOMBUSTION	ELECTRIC GENERATN	PROCESS GAS	RECIP:EXHAUST
20100801	INTERNALCOMBUSTION	ELECTRIC GENERATN	LANDFILL GAS	TURBINE
20100802	INTERNALCOMBUSTION	ELECTRIC GENERATN	LANDFILL GAS	RECIPROCATING
20100807	INTERNALCOMBUSTION	ELECTRIC GENERATN	LANDFILL GAS	RECIP:EXHAUST
20100809	INTERNALCOMBUSTION	ELECTRIC GENERATN	LANDFILL GAS	TURBINE:EXHAUST
20101001	INTERNALCOMBUSTION	ELECTRIC GENERATN	GEYSERS/GEOT HERML	STEAM TURBINE
20101010	INTERNALCOMBUSTION	ELECTRIC GENERATN	GEYSERS/GEOT HERML	WELL DRILL STEAM EMS
20101020	INTERNALCOMBUSTION	ELECTRIC GENERATN	GEYSERS/GEOT HERML	WELL PAD FUGI- BLOWDN
20101021	INTERNALCOMBUSTION	ELECTRIC GENERATN	GEYSERS/GEOT HERML	WELLPAD FUGI- VENT/LK
20101030	INTERNALCOMBUSTION	ELECTRIC GENERATN	GEYSERS/GEOT HERML	PIPELINE FUGI- BLOWDN
20101031	INTERNALCOMBUSTION	ELECTRIC GENERATN	GEYSERS/GEOT HERML	PIPELN FUGI- VENT/LK
20182599	INTERNALCOMBUSTION	ELECTRIC GENERATN	WASTEWATER	SPECIFY PNT OF GENRTN
20190099	INTERNALCOMBUSTION	MISCELLANEOUS	FLARES	HEAVY WATER
20199998	DUMMY NAME 10-30-81	INTERNAL COMBUSTION-E	OTHER/NOT CLASIFD	SPECIFY IN REMARK
20200201	INTERNALCOMBUSTION	INDUSTRIAL	NG	TURBINE
20200202	INTERNALCOMBUSTION	INDUSTRIAL	NG	RECIPROCATING
20200203	INTERNALCOMBUSTION	INDUSTRIAL	NG	TURBINE- COGENERTN
20200204	INTERNALCOMBUSTION	INDUSTRIAL	NG	ENGINE- COGENERATN
20200205	INTERNALCOMBUSTION	INDUSTRIAL	NG	RECIP:CRNKCSE BLOWBY
20200252	INTERNALCOMBUSTION	INDUSTRIAL	NG	2-CYCLE LEAN BURN
20200253	INTERNALCOMBUSTION	INDUSTRIAL	NG	4-CYLE RICH BURN

<i>EIC/SCC</i>	<i>NAMES</i>			
20200254	INTERNLCOMBUSTION	INDUSTRIAL	NG	4-CYCLE LEAN BURN
20200301	INTERNLCOMBUSTION	INDUSTRIAL	GASOLINE	RECIPROCATING
20200307	INTERNLCOMBUSTION	INDUSTRIAL	GASOLINE	RECIP:EXHAUST
20200402	INTERNLCOMBUSTION	INDUSTRIAL	LARGE BORE ENGINE	DUAL FUEL(OIL/GAS)
20200403	INTERNLCOMBUSTION	INDUSTRIAL	LARGE BORE ENGINE	COGNTRN-DUAL FUEL
20200407	INTERNLCOMBUSTION	INDUSTRIAL	LARGE BORE ENGINE	EXHAUST
20200501	INTERNLCOMBUSTION	INDUSTRIAL	RESIDUAL/CRU DEOIL	RECIPROCATING
20200701	INTERNL COMBUSTION	INDUSTRIAL	PROCESS GAS	TURBINE
20200702	INTERNLCOMBUSTION	INDUSTRIAL	PROCESS GAS	RECIPROCATING ENGINE
20200705	INTERNL COMBUSTION	INDUSTRIAL	REFINERY GAS	TURBINE
20200706	INTERNLCOMBUSTION	INDUSTRIAL	REFINERY GAS	RECIPROCATING
20200714	INTERNLCOMBUSTION	INDUSTRIAL	PROCESS GAS	TURBINE:EXHAUST
20200801	DUMMY NAME 10-30-81	INTERNL COMBUSTION-I	PROCESS GAS	TURBINE
20200802	DUMMY NAME 10-30-81	INTERNL COMBUSTION-I	PROCESS GAS	RECIPROCATING
20201001	INTERNLCOMBUSTION	INDUSTRIAL	PROPANE	RECIPROCATING
20201002	INTERNLCOMBUSTION	INDUSTRIAL	BUTANE	RECIPROCATING
20201003	INTERNLCOMBUSTION	INDUSTRIAL	PROPANE	TURBINE-COGENERTN
20201005	INTERNLCOMBUSTION	INDUSTRIAL	LPG:BUTANE	RECIP:CRNKCS E BLOWBY
20201012	INTERNLCOMBUSTION	INDUSTRIAL	LPG	LPG:RECIP
20201013	INTERNLCOMBUSTION	INDUSTRIAL	LPG	LPG:TURBINE:COGE N
20201101	INTERNLCOMBUSTION	INDUSTRIAL	DIGESTER GAS	RECIPROCATING
20201602	INTERNLCOMBUSTION	INDUSTRIAL	IC ENGINE	METHANOL:RECIP
20201607	INTERNLCOMBUSTION	INDUSTRIAL	IC ENGINE	RECIP:EXHAUST
20201609	INTERNLCOMBUSTION	INDUSTRIAL	IC ENGINE	TURBINE:EXHAUST
20201701	INTERNLCOMBUSTION	INDUSTRIAL	IC ENGINE	GASOLINE:TURBINE
20201702	INTERNLCOMBUSTION	INDUSTRIAL	IC ENGINE	GASOLINE:RECIP
20201707	INTERNLCOMBUSTION	INDUSTRIAL	IC ENGINE	RECIP:EXHAUST
20299901	INTERNAL COMBUSTION	INDUSTRIAL	OTHER FUELS	ICE RECIPROCATING
20299902	INTERNAL COMBUSTION	INDUSTRIAL	OTHER FUELS	INUSTRIAL TURBINES
20299997	DUMMY NAME 10-30-81	INTERNL COMBUSTION-I	OTHER/NOT CLASIFD	SPECIFY IN REMARK
20299998	DUMMY NAME 10-30-81	INTERNL COMBUSTION-I	OTHER/NOT CLASIFD	SPECIFY IN REMARK

<i>EIC/SCC</i>	<i>NAMES</i>			
20300201	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	NG	RECIPROCATING
20300202	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	NG	TURBINE
20300203	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	NG	TURBINE- COGENERATN
20300204	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	NG	ENGINE- COGENERATN
20300301	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	GASOLINE	RECIPROCATING
20300307	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	GASOLINE	RECIP:EXHAUST
20300701	INTERNL COMBUSTION	COMMERCL - INSTITUTL	DIGESTER GAS	TURBINE
20300702	INTERNL COMBUSTION	COMMERCL - INSTITUTL	DIGESTER GAS	RECIPROCATING
20300707	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	PROCESS GAS	RECIP:EXHAUST
20300709	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	PROCESS GAS	TURBINE:EXHAUST
20300801	INTERNL COMBUSTION	COMMERCL - INSTITUTL	LANDFILL GAS	TURBINE
20300802	INTERNL COMBUSTION	COMMERCL - INSTITUTL	LANDFILL GAS	RECIPROCATING
20301001	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	PROPANE	RECIPROCATING
20301005	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	LPG:BUTANE	RECIP:CRNKCE BLOWBY
20301007	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	LPG:BUTANE	RECIP:EXHAUST
20382599	INTERNLCOMBUSTION	COMMERCL-INSTUTNL	WASTEWATER	SPECIFY PNT OF GENRTN
20399901	INTERNAL COMBUSTION	COMMERCIAL/INSTITUT	OTHER FUELS	COM ICE RECIPROCAT
20399902	INTERNAL COMBUSTION	COMMERCIAL/INSTITUT	OTHER FUELS	COMMERCIAL TURBINE
20399997	DUMMY NAME 10-30-81	INTERNL COMBUSTION-C	OTHER/NOT CLASIFD	SPECIFY IN REMARK
20400301	INTERNLCOMBUSTION	ENGINE TESTING	TURBINE	NG
20400401	INTERNLCOMBUSTION	ENGINE TESTING	RECIPROCATIN G	GASOLINE
20482599	INTERNLCOMBUSTION	ENGINE TESTING	WASTEWATER	H2O DELUGE LIQ PROP
20499997	DUMMY NAME 10-30-81	INTERNL COMBUSTION-E	OTHER/NOT CLASIFD	SPECIFY IN REMARK
20499998	DUMMY NAME 10-30-81	INTERNL COMBUSTION-E	OTHER/NOT CLASIFD	SPECIFY IN REMARK
20499999	DUMMY NAME 10-30-81	INTERNL COMBUSTION-E	OTHER/NOT CLASIFD	SPECIFY IN REMARK
28888801	INTERNLCOMBUSTION	FUGITIVE EMISSION	NOT CLASSIFIED	OTHER
28888802	INTERNLCOMBUSTION	FUGITIVE EMISSION	NOT CLASSIFIED	OTHER
28888803	INTERNLCOMBUSTION	FUGITIVE EMISSION	NOT CLASSIFIED	OTHER
30203604	FOOD/AGRICULTURE	DEEP FAT FRYING	COOKING VATS	SNACK CHIPS
30291001	FOOD/AGRICULTURE	FUEL-FIRED EQPMNT	BROILING FOOD	NG

<i>EIC/SCC</i>	<i>NAMES</i>			
30390013	PRIMARY METALS	FUEL-FIRED EQPMNT	INCINERATORS	NG
30490013	SECONDARY METALS	FUEL-FIRED EQPMNT	INCINERATORS	NG
30490024	SECONDARY METALS	FUEL-FIRED EQPMNT	FLARES	PROCESS GAS
30490033	SECONDARY METALS	FUEL-FIRED EQPMNT	FURNACES	NG
30490034	SECONDARY METALS	FUEL-FIRED EQPMNT	FURNACES	PROCESS GAS
30590005	MINERAL PRODUCTS	FUEL-FIRED EQPMNT	LPG	
30590013	MINERAL PRODUCTS	FUEL-FIRED EQPMNT	INCINERATORS	NG
30622203	PETROLEUM INDTRY	PETROLEUM REFNG	VAPOR EXTRACTION	NG
30790003	WOOD PRODUCTS	FUEL FIRED EQPMNT	PROCESS HEATERS	NG
30890013	RUBBER/PLASTICS	FUEL FIRED EQPMNT	INCINERATORS	NG
30990013	FABRICATED METALS	FUEL FIRED EQPMNT	INCINERATORS	NG
30990023	FABRICATED METALS	FUEL FIRED EQPMNT	FLARES	NG
31000160	OIL & GAS PRODN	CRUDE OIL PRODN	FLARES	
31000414	OIL & GAS PRODN	FUEL-FIRED EQPMNT	STEAM GENERATORS	NG
31000415	OIL & GAS PRODN	FUEL-FIRED EQPMNT	STEAM GENERATORS	PROCESS GAS
39000601	INDUSTRIAL PROCES	INPROCESS FUEL	NG	ASPHALT DRYER **
39000602	INDUSTRIAL PROCES	INPROCESS FUEL	NG	CEMENT KILN/DRYER
39000603	INDUSTRIAL PROCES	INPROCESS FUEL	NG	LIME KILN
39000604	INDUSTRIAL PROCES	INPROCESS FUEL	NG	KAOLIN KILN **
39000605	INDUSTRIAL PROCES	INPROCESS FUEL	NG	METAL MELTING **
39000606	INDUSTRIAL PROCES	INPROCESS FUEL	NG	BRICK KILN/DRYS**
39000607	INDUSTRIAL PROCES	INPROCESS FUEL	NG	GYPSTUM KILN ETC**
39000608	INDUSTRIAL PROCES	INPROCESS FUEL	NG	GLASS FURNACE **
39000609	INDUSTRIAL PROCES	INPROCESS FUEL	NG	ROCK/GRAVEL DRY**
39000611	INDUSTRIAL PROCES	INPROCESS FUEL	NG	PERLITE FURNACE**
39000630	INDUSTRIAL PROCES	INPROCESS FUEL	NG	FEED/GRAIN DRYI**
39000631	INDUSTRIAL PROCES	INPROCESS FUEL	NG	FOOD- DRY/COOK/E**
39000632	INDUSTRIAL PROCES	INPROCESS FUEL	NG	FERTILIZER DRYI**
39000651	INDUSTRIAL PROCES	INPROCESS FUEL	NG	PLYWOOD-DRYERS **
39000652	INDUSTRIAL PROCES	INPROCESS FUEL	NG	PULP-RECOV BOIL**
39000689	INDUSTRIAL PROCES	INPROCESS FUEL	NG	NOT CLASSIFIED

<i>EIC/SCC</i>	<i>NAMES</i>			
39000699	INDUSTRIAL PROCES	INPROCESS FUEL	NG	NOT CLASSIFIED
39000701	INDUSTRIAL PROCES	INPROCESS FUEL	PROCESS GAS	CO/BLAST FURNACE
39000702	INDUSTRIAL PROCES	INPROCESS FUEL	PROCESS GAS	COKE OVEN GAS
39000788	INDUSTRIAL PROCES	INPROCESS FUEL	PROCESS GAS	NOT CLASSIFIED
39000797	INDUSTRIAL PROCES	INPROCESS FUEL	PROCESS GAS	NOT CLASSIFIED
39000798	INDUSTRIAL PROCES	INPROCESS FUEL	PROCESS GAS	NOT CLASSIFIED
39000799	INDUSTRIAL PROCES	INPROCESS FUEL	PROCESS GAS	NOT CLASSIFIED
39001089	INDUSTRIAL PROCES	INPROCESS FUEL	LPG	NOT CLASSIFIED
39001099	INDUSTRIAL PROCES	INPROCESS FUEL	LPG	NOT CLASSIFIED
39092050	INDUSTRIAL PROCES	INPROCESS FUEL	NG	WITHDRAWAL LOSS
39099997	DUMMY NAME 10-30-81	INDUSTRIAL PROCES-IN	OTHER/NOT CLASIFD	SPECIFY IN REMARK
39900601	INDUSTRIAL PROCES	MIS IND-FUEL EQPT	PROCESS HTER/FURNACE	NG
39901001	INDUSTRIAL PROCES	MIS IND-FUEL EQPT	PROCESS HTER/FURNACE	LPG
40290023	ORGANIC SOLVENT	SURFACE COATING	FLARES	NG
49090023	ORGANIC SOLVENT	MISCELLANEOUS	FLARES	NG
50100421	SOLID WASTE DISPL	GOVERNMENT	WASTE GAS RECOVERY	INTERNL COMBUSTN DEV
50190005	SOLID WASTE DISPL	GOVERNMENT	AUX.FUEL/NO EMSNS	DISTILLATE OIL
50190006	SOLID WASTE DISPL	GOVERNMENT	AUX.FUEL/NO EMSNS	NG
50190010	SOLID WASTE DISPL	GOVERNMENT	AUX.FUEL/NO EMSNS	LPG
50190097	DUMMY NAME 10-30-81	SOLID WASTE-GOVERNME	AUX.FUEL/NO EMSNS	OTHER/NOT CLASIFD
50200601	SOLID WASTE DISPL	COMMERCL/INSTITNL	LANDFILL DUMP	WASTE GAS FLARE
50290006	SOLID WASTE DISPL	COMMERCL/INSTITNL	AUX.FUEL/NO EMSNS	NG
50300601	SOLID WASTE DISPL	INDUSTRIAL	LANDFILL DUMP	WASTE GAS FLARE
50300789	SOLID WASTE DISPL	INDUSTRIAL	SLDG DGSTR GAS FLARE	
50390006	SOLID WASTE DISPL	INDUSTRIAL	AUX.FUEL/NO EMSNS	NG
50390097	DUMMY NAME 10-30-81	SOLID WASTE-INDUSTRI	AUX.FUEL/NO EMSNS	OTHER/NOT CLASIFD
1004001100000	ELECTRIC UTILITIES	I.C. RECIPROCATING ENGINES	NG	SUB-CATEGORY UNSPECIFIED
1004001300000	ELECTRIC UTILITIES	I.C. RECIPROCATING ENGINES	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
1004001420000	ELECTRIC UTILITIES	I.C. RECIPROCATING ENGINES	LANDFILL GAS	SUB-CATEGORY UNSPECIFIED
1004011000000	ELECTRIC UTILITIES	I.C. RECIPROCATING ENGINES	GASOLINE (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED

<i>EIC/SCC</i>	<i>NAMES</i>			
1004501100000	ELECTRIC UTILITIES	I.C. TURBINE ENGINES	NG	SUB-CATEGORY UNSPECIFIED
1004501120000	ELECTRIC UTILITIES	I.C. TURBINE ENGINES	CNG	SUB-CATEGORY UNSPECIFIED
1004501420000	ELECTRIC UTILITIES	I.C. TURBINE ENGINES	LANDFILL GAS	SUB-CATEGORY UNSPECIFIED
1007001100000	ELECTRIC UTILITIES	IN-PROCESS FUEL	NG	SUB-CATEGORY UNSPECIFIED
1007001200000	ELECTRIC UTILITIES	IN-PROCESS FUEL	LPG	SUB-CATEGORY UNSPECIFIED
1007001300000	ELECTRIC UTILITIES	IN-PROCESS FUEL	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
1099501000000	ELECTRIC UTILITIES	OTHER	GASEOUS FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
2004001100000	COGENERATION	I.C. RECIPROCATING ENGINES	NG	SUB-CATEGORY UNSPECIFIED
2004001420000	COGENERATION	I.C. RECIPROCATING ENGINES	LANDFILL GAS	SUB-CATEGORY UNSPECIFIED
2004501100000	COGENERATION	I.C. TURBINE ENGINES	NG	SUB-CATEGORY UNSPECIFIED
3001501100000	OIL & GAS PRODN (COMBUSTION)	STEAM GENERATORS	NG	SUB-CATEGORY UNSPECIFIED
3001501300000	OIL & GAS PRODN (COMBUSTION)	STEAM GENERATORS	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
3002001200000	OIL & GAS PRODN (COMBUSTION)	SPACE HEATING	LPG	SUB-CATEGORY UNSPECIFIED
3004001000000	OIL & GAS PRODN (COMBUSTION)	I.C. RECIPROCATING ENGINES	GASEOUS FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3004001100000	OIL & GAS PRODN (COMBUSTION)	I.C. RECIPROCATING ENGINES	NG	SUB-CATEGORY UNSPECIFIED
3004001240000	OIL & GAS PRODN (COMBUSTION)	I.C. RECIPROCATING ENGINES	PROPANE	SUB-CATEGORY UNSPECIFIED
3004001300000	OIL & GAS PRODN (COMBUSTION)	I.C. RECIPROCATING ENGINES	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
3004011000000	OIL & GAS PRODN (COMBUSTION)	I.C. RECIPROCATING ENGINES	GASOLINE (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3004016000000	OIL & GAS PRODN (COMBUSTION)	I.C. RECIPROCATING ENGINES	CRUDE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3004501100000	OIL & GAS PRODN (COMBUSTION)	I.C. TURBINE ENGINES	NG	SUB-CATEGORY UNSPECIFIED
3004501300000	OIL & GAS PRODN (COMBUSTION)	I.C. TURBINE ENGINES	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
3007001100000	OIL & GAS PRODN (COMBUSTION)	IN-PROCESS FUEL	NG	SUB-CATEGORY UNSPECIFIED
3007001200000	OIL & GAS PRODN (COMBUSTION)	IN-PROCESS FUEL	LPG	SUB-CATEGORY UNSPECIFIED
3007001300000	OIL & GAS PRODN (COMBUSTION)	IN-PROCESS FUEL	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
3030701000000	OIL & GAS PRODN (COMBUSTION)	COMPRESSORS LEAN BURN	GASEOUS FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3030701100000	OIL & GAS PRODN (COMBUSTION)	COMPRESSORS LEAN BURN	NG	SUB-CATEGORY UNSPECIFIED
3030901000000	OIL & GAS PRODN (COMBUSTION)	COMPRESSORS RICH BURN	GASEOUS FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3030901100000	OIL & GAS PRODN (COMBUSTION)	COMPRESSORS RICH BURN	NG	SUB-CATEGORY UNSPECIFIED
3099501000000	OIL & GAS PRODN (COMBUSTION)	OTHER	GASEOUS FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED

<i>EIC/SCC</i>	<i>NAMES</i>			
3099501100000	OIL & GAS PRODN (COMBUSTION)	OTHER	NG	SUB-CATEGORY UNSPECIFIED
3099516000000	OIL & GAS PRODN (COMBUSTION)	OTHER	CRUDE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
4002001100000	PETROLEUM REFINING (COMBUSTION)	SPACE HEATING	NG	SUB-CATEGORY UNSPECIFIED
4004001100000	PETROLEUM REFINING (COMBUSTION)	I.C. RECIPROCATING ENGINES	NG	SUB-CATEGORY UNSPECIFIED
4004001220000	PETROLEUM REFINING (COMBUSTION)	I.C. RECIPROCATING ENGINES	BUTANE	SUB-CATEGORY UNSPECIFIED
4004001240000	PETROLEUM REFINING (COMBUSTION)	I.C. RECIPROCATING ENGINES	PROPANE	SUB-CATEGORY UNSPECIFIED
4004001300000	PETROLEUM REFINING (COMBUSTION)	I.C. RECIPROCATING ENGINES	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
4004011000000	PETROLEUM REFINING (COMBUSTION)	I.C. RECIPROCATING ENGINES	GASOLINE (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
4004501100000	PETROLEUM REFINING (COMBUSTION)	I.C. TURBINE ENGINES	NG	SUB-CATEGORY UNSPECIFIED
4004501200000	PETROLEUM REFINING (COMBUSTION)	I.C. TURBINE ENGINES	LPG	SUB-CATEGORY UNSPECIFIED
4004501340000	PETROLEUM REFINING (COMBUSTION)	I.C. TURBINE ENGINES	REFINERY GAS	SUB-CATEGORY UNSPECIFIED
4007001100000	PETROLEUM REFINING (COMBUSTION)	IN-PROCESS FUEL	NG	SUB-CATEGORY UNSPECIFIED
4007001200000	PETROLEUM REFINING (COMBUSTION)	IN-PROCESS FUEL	LPG	SUB-CATEGORY UNSPECIFIED
4007001300000	PETROLEUM REFINING (COMBUSTION)	IN-PROCESS FUEL	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
4099501100000	PETROLEUM REFINING (COMBUSTION)	OTHER	NG	SUB-CATEGORY UNSPECIFIED
5002001100000	MANUFACTURING & INDUSTRIAL	SPACE HEATING	NG	SUB-CATEGORY UNSPECIFIED
5002001200000	MANUFACTURING & INDUSTRIAL	SPACE HEATING	LPG	SUB-CATEGORY UNSPECIFIED
5004000120000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5004001100000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	NG	SUB-CATEGORY UNSPECIFIED
5004001200000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	LPG	SUB-CATEGORY UNSPECIFIED
5004001220000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	BUTANE	SUB-CATEGORY UNSPECIFIED
5004001240000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	PROPANE	SUB-CATEGORY UNSPECIFIED
5004001300000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
5004001420000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	LANDFILL GAS	SUB-CATEGORY UNSPECIFIED
5004001460000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	DIGESTER GAS	SUB-CATEGORY UNSPECIFIED
5004011000000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	GASOLINE (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5004501100000	MANUFACTURING & INDUSTRIAL	I.C. TURBINE ENGINES	NG	SUB-CATEGORY UNSPECIFIED
5004501420000	MANUFACTURING & INDUSTRIAL	I.C. TURBINE ENGINES	LANDFILL GAS	SUB-CATEGORY UNSPECIFIED
5007001100000	MANUFACTURING & INDUSTRIAL	IN-PROCESS FUEL	NG	SUB-CATEGORY UNSPECIFIED

<i>EIC/SCC</i>	<i>NAMES</i>			
5007001200000	MANUFACTURING & INDUSTRIAL	IN-PROCESS FUEL	LPG	SUB-CATEGORY UNSPECIFIED
5007001300000	MANUFACTURING & INDUSTRIAL	IN-PROCESS FUEL	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
5099501100000	MANUFACTURING & INDUSTRIAL	OTHER	NG	SUB-CATEGORY UNSPECIFIED
5099501200000	MANUFACTURING & INDUSTRIAL	OTHER	LPG	SUB-CATEGORY UNSPECIFIED
5099501300000	MANUFACTURING & INDUSTRIAL	OTHER	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
5202001100000	FOOD & AGRICULTURAL PROCESSING	SPACE HEATING	NG	SUB-CATEGORY UNSPECIFIED
5202001200000	FOOD & AGRICULTURAL PROCESSING	SPACE HEATING	LPG	SUB-CATEGORY UNSPECIFIED
5204001100000	FOOD & AGRICULTURAL PROCESSING	I.C. RECIPROCATING ENGINES	NG	SUB-CATEGORY UNSPECIFIED
5204001220000	FOOD & AGRICULTURAL PROCESSING	I.C. RECIPROCATING ENGINES	BUTANE	SUB-CATEGORY UNSPECIFIED
5204001240000	FOOD & AGRICULTURAL PROCESSING	I.C. RECIPROCATING ENGINES	PROPANE	SUB-CATEGORY UNSPECIFIED
5204001460000	FOOD & AGRICULTURAL PROCESSING	I.C. RECIPROCATING ENGINES	DIGESTER GAS	SUB-CATEGORY UNSPECIFIED
5204011000000	FOOD & AGRICULTURAL PROCESSING	I.C. RECIPROCATING ENGINES	GASOLINE (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5204201100000	FOOD & AGRICULTURAL PROCESSING	AG. IRRIGATION I.C. ENGINES	NG	SUB-CATEGORY UNSPECIFIED
5204501100000	FOOD & AGRICULTURAL PROCESSING	I.C. TURBINE ENGINES	NG	SUB-CATEGORY UNSPECIFIED
5204501460000	FOOD & AGRICULTURAL PROCESSING	I.C. TURBINE ENGINES	DIGESTER GAS	SUB-CATEGORY UNSPECIFIED
5204511000000	FOOD & AGRICULTURAL PROCESSING	I.C. TURBINE ENGINES	GASOLINE (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5207001100000	FOOD & AGRICULTURAL PROCESSING	IN-PROCESS FUEL	NG	SUB-CATEGORY UNSPECIFIED
5207001200000	FOOD & AGRICULTURAL PROCESSING	IN-PROCESS FUEL	LPG	SUB-CATEGORY UNSPECIFIED
5299501100000	FOOD & AGRICULTURAL PROCESSING	OTHER	NG	SUB-CATEGORY UNSPECIFIED
6002001100000	SERVICE & COMMERCIAL	SPACE HEATING	NG	SUB-CATEGORY UNSPECIFIED
6002001200000	SERVICE & COMMERCIAL	SPACE HEATING	LPG	SUB-CATEGORY UNSPECIFIED
6003001100000	SERVICE & COMMERCIAL	WATER HEATING	NG	SUB-CATEGORY UNSPECIFIED
6004001100000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	NG	SUB-CATEGORY UNSPECIFIED
6004001220000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	BUTANE	SUB-CATEGORY UNSPECIFIED
6004001240000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	PROPANE	SUB-CATEGORY UNSPECIFIED
6004001300000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
6004001420000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	LANDFILL GAS	SUB-CATEGORY UNSPECIFIED
6004001460000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	DIGESTER GAS	SUB-CATEGORY UNSPECIFIED
6004011000000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	GASOLINE (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED

<i>EIC/SCC</i>	<i>NAMES</i>			
6004501100000	SERVICE & COMMERCIAL	I.C. TURBINE ENGINES	NG	SUB-CATEGORY UNSPECIFIED
6004501200000	SERVICE & COMMERCIAL	I.C. TURBINE ENGINES	LPG	SUB-CATEGORY UNSPECIFIED
6004501300000	SERVICE & COMMERCIAL	I.C. TURBINE ENGINES	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
6004501420000	SERVICE & COMMERCIAL	I.C. TURBINE ENGINES	LANDFILL GAS	SUB-CATEGORY UNSPECIFIED
6004501460000	SERVICE & COMMERCIAL	I.C. TURBINE ENGINES	DIGESTER GAS	SUB-CATEGORY UNSPECIFIED
6004512000000	SERVICE & COMMERCIAL	I.C. TURBINE ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
6007001100000	SERVICE & COMMERCIAL	IN-PROCESS FUEL	NG	SUB-CATEGORY UNSPECIFIED
6007001200000	SERVICE & COMMERCIAL	IN-PROCESS FUEL	LPG	SUB-CATEGORY UNSPECIFIED
6007001300000	SERVICE & COMMERCIAL	IN-PROCESS FUEL	PROCESS GAS	SUB-CATEGORY UNSPECIFIED
6099501100000	SERVICE & COMMERCIAL	OTHER	NG	SUB-CATEGORY UNSPECIFIED
6099501100005	SERVICE & COMMERCIAL	OTHER	NG	OTHER <1MMBTU/HR (SMAQMD ONLY)
6099501200000	SERVICE & COMMERCIAL	OTHER	LPG	SUB-CATEGORY UNSPECIFIED
11013201100000	SEWAGE TREATMENT	FLARES	NG	SUB-CATEGORY UNSPECIFIED
11013201360000	SEWAGE TREATMENT	FLARES	WASTE GAS	SUB-CATEGORY UNSPECIFIED
11099501100000	SEWAGE TREATMENT	OTHER	NG	SUB-CATEGORY UNSPECIFIED
11099512200000	SEWAGE TREATMENT	OTHER	DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
13013203240000	INCINERATORS	FLARES	SLUDGE (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
13099501100000	INCINERATORS	OTHER	NG	SUB-CATEGORY UNSPECIFIED
13099501200000	INCINERATORS	OTHER	LPG	SUB-CATEGORY UNSPECIFIED
13099512200000	INCINERATORS	OTHER	DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
19919001100000	OTHER (WASTE DISPOSAL)	VOLATILE ORGANIC WASTE DISPOSAL (EVAPORATION)	NG	SUB-CATEGORY UNSPECIFIED
32032001200000	PETROLEUM REFINING	VAPOR RECOVERY/FLARES	LPG	SUB-CATEGORY UNSPECIFIED
41040350180012	CHEMICAL	FIBERGLASS & FIBERGLASS PRODUCTS MANUFACTURING	FIBERGLASS	FIBERGLASS MANUFACTURING
42041860670000	FOOD & AGRICULTURE	AGRICULTURAL PRODUCTS PROCESSING LOSSES	SNACK CHIPS	SUB-CATEGORY UNSPECIFIED
86088001200000	OFF-ROAD EQUIPMENT	LIGHT-DUTY EQUIPMENT - FOUR STROKE	LPG	SUB-CATEGORY UNSPECIFIED
86088501100000	OFF-ROAD EQUIPMENT	LIGHT COMMERCIAL EQUIPMENT	NG	SUB-CATEGORY UNSPECIFIED

<i>EIC/SCC</i>	<i>NAMES</i>			
86088601100000	OFF-ROAD EQUIPMENT	INDUSTRIAL EQUIPMENT	NG	SUB-CATEGORY UNSPECIFIED
86088601100150	OFF-ROAD EQUIPMENT	INDUSTRIAL EQUIPMENT	NG	AERIAL LIFTS-C4-15-EXHAUST
86088601100180	OFF-ROAD EQUIPMENT	INDUSTRIAL EQUIPMENT	NG	AERIAL LIFTS-C4-25-EXHAUST
86088601102860	OFF-ROAD EQUIPMENT	INDUSTRIAL EQUIPMENT	NG	FORKLIFTS-C4-25-EXHAUST
86088601102880	OFF-ROAD EQUIPMENT	INDUSTRIAL EQUIPMENT	NG	FORKLIFTS-C4-50-EXHAUST
86088601102910	OFF-ROAD EQUIPMENT	INDUSTRIAL EQUIPMENT	NG	FORKLIFTS-C4-120-EXHAUST
86088601102940	OFF-ROAD EQUIPMENT	INDUSTRIAL EQUIPMENT	NG	FORKLIFTS-C4-175-EXHAUST
86088901100000	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	SUB-CATEGORY UNSPECIFIED
86088901100540	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	AIR CONDITIONER-C4-175-EXHAUST
86088901100710	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	BAGGAGE TUG-C4-120-EXHAUST
86088901100780	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	BELT LOADER-C4-120-EXHAUST
86088901100810	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	BOBTAIL-C4-120-EXHAUST
86088901100980	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	CARGO LOADER-C4-120-EXHAUST
86088901101020	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	CARGO TRACTOR-C4-175-EXHAUST
86088901101080	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	CATERING TRUCK-C4-250-EXHAUST
86088901102710	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	FORKLIFT-C4-50-EXHAUST
86088901103010	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	FUEL TRUCK-C4-175-EXHAUST
86088901104020	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	LAV TRUCK-C4-175-EXHAUST
86088901104170	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	LIFT-C4-120-EXHAUST
86088901104800	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	OTHER-C4-50-EXHAUST
86088901106070	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	PASSENGER STAND-C4-175-EXHAUST
86088901108090	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	SERVICE TRUCK-C4-250-EXHAUST
86088901108700	OFF-ROAD EQUIPMENT	AIRPORT GROUND SUPPORT EQUIPMENT	NG	SWEEPER-C4-50-EXHAUST
86090601103030	OFF-ROAD EQUIPMENT	COMMERCIAL (OTHER)	NG	GAS COMPRESSORS-C4-50-EXHAUST
86090601103040	OFF-ROAD EQUIPMENT	COMMERCIAL (OTHER)	NG	GAS COMPRESSORS-C4-120-EXHAUST
86090601103050	OFF-ROAD EQUIPMENT	COMMERCIAL (OTHER)	NG	GAS COMPRESSORS-C4-175-EXHAUST
86090601103060	OFF-ROAD EQUIPMENT	COMMERCIAL (OTHER)	NG	GAS COMPRESSORS-C4-250-EXHAUST
86090601103070	OFF-ROAD EQUIPMENT	COMMERCIAL (OTHER)	NG	GAS COMPRESSORS-C4-500-EXHAUST
86090601103600	OFF-ROAD EQUIPMENT	COMMERCIAL (OTHER)	NG	GENERATOR SETS-C4-120-EXHAUST

<i>EIC/SCC</i>	<i>NAMES</i>			
86090601103630	OFF-ROAD EQUIPMENT	COMMERCIAL (OTHER)	NG	GENERATOR SETS- C4-175-EXHAUST

d. PM1104— Oil-Fired Boilers (No. 6 Oil)

<i>EIC/SCC</i>	<i>NAMES</i>			
10100401	EXTCOMB BOILER	ELECTRIC GENERATN	RESIDUAL OIL	NO 6 OIL NORM FRG
10100402	EXTCOMB BOILER	ELECTRIC GENERATN	RESIDUAL OIL	10-100MMBTU/HR**
10100403	EXTCOMB BOILER	ELECTRIC GENERATN	RESIDUAL OIL	<10MMBTU/HR GEN**
10100404	EXTCOMB BOILER	ELECTRIC GENERATN	RESIDUAL OIL	NO 6 OIL TANG FRG
10100405	EXTCOMB BOILER	ELECTRIC GENERATN	RESIDUAL OIL	NO 5 OIL NORM FRG
10100406	EXTCOMB BOILER	ELECTRIC GENERATN	RESIDUAL OIL	NO 5 OIL TANG FRG
10199901	EXTERNAL COMBUSTION	ELECTRIC GENERATION	OTHER FUELS	UTILITY BOILERS
10200401	EXTCOMB BOILER	INDUSTRIAL	RESIDUAL OIL	NO 6 OIL
10200402	EXTCOMB BOILER	INDUSTRIAL	RESIDUAL OIL	10-100MMBTU/HR **
10200403	EXTCOMB BOILER	INDUSTRIAL	RESIDUAL OIL	<10MMBTU/HR **
10200404	EXTCOMB BOILER	INDUSTRIAL	RESIDUAL OIL	NO 5 OIL
10200405	EXTCOMB BOILER	INDUSTRIAL	RESIDUAL OIL	COGENERATION
10201404	EXTCOMB BOILER	INDUSTRIAL	CO BOILER	RESID OIL
10299901	EXTERNAL COMBUSTION	INDUSTRIAL	OTHER FUELS	INDUSTRIAL BOILER
10300401	EXTCOMB BOILER	COMMERCL-INSTUTNL	RESIDUAL OIL	NO 6 OIL
10300402	EXTCOMB BOILER	COMMERCL-INSTUTNL	RESIDUAL OIL	10-100MMBTU/HR **
10300403	EXTCOMB BOILER	COMMERCL-INSTUTNL	RESIDUAL OIL	<10MMBTU/HR **
10300404	EXTCOMB BOILER	COMMERCL-INSTUTNL	RESIDUAL OIL	NO 5 OIL
10500104	DUMMY NAME 10-30-81	EXTCOMB BOILER-SPACE	INDUSTRIAL	RESID OIL
10500204	DUMMY NAME 10-30-81	EXTCOMB BOILER-SPACE	COMMERCL-INSTUTNL	RESID OIL
30190002	CHEMICAL MFG	FUEL-FIRED EQMNT	PROCESS HEATERS	RESID OIL
30290002	FOOD/AGRICULTURE	FUEL-FIRED EQMNT	PROCESS HEATERS	RESID OIL
30490002	SECONDARY METALS	FUEL-FIRED EQMNT	PROCESS HEATERS	RESID OIL
30500207	PETROLEUM INDTRY	ASPHALT CONCRETE	ASPHALT HEATER	RESID OIL
30590002	MINERAL PRODUCTS	FUEL-FIRED EQMNT	PROCESS HEATERS	RESID OIL
31000402	OIL & GAS PRODN	FUEL-FIRED EQMNT	PROCESS HEATERS	RESID OIL
31000403	OIL & GAS PRODN	FUEL-FIRED EQMNT	PROCESS HEATERS	CRUDE OIL
31000412	OIL & GAS PRODN	FUEL-FIRED EQMNT	STEAM GENERATORS	RESID OIL

<i>EIC/SCC</i>	<i>NAMES</i>			
39000401	INDUSTRIAL PROCES	INPROCESS FUEL	RESIDUAL OIL	ASPHALT DRYER **
39000402	INDUSTRIAL PROCES	INPROCESS FUEL	RESIDUAL OIL	CEMENT KILN/DRYER
39000403	INDUSTRIAL PROCES	INPROCESS FUEL	RESIDUAL OIL	LIME KILN
39000405	INDUSTRIAL PROCES	INPROCESS FUEL	RESIDUAL OIL	METAL MELTING **
39000408	INDUSTRIAL PROCES	INPROCESS FUEL	RESIDUAL OIL	GLASS FURNACE **
39000409	INDUSTRIAL PROCES	INPROCESS FUEL	RESIDUAL OIL	ROCK/GRAVEL DRY**
39000430	INDUSTRIAL PROCES	INPROCESS FUEL	RESIDUAL OIL	FEED/GRAIN DRYI**
39000499	INDUSTRIAL PROCES	INPROCESS FUEL	RESIDUAL OIL	NOT CLASSIFIED
40201003	ORGANIC SOLVENT	SURFACE COATING	OVEN HEATER	RESID OIL
50390004	DUMMY NAME 10-30-81	SOLID WASTE-INDUSTRI	AUX.FUEL/NO EMSNS	RESID OIL
1000515300000	ELECTRIC UTILITIES	BOILERS	RESIDUAL OIL - GRADE #6 (BUNKER C)	SUB-CATEGORY UNSPECIFIED
1007015000000	ELECTRIC UTILITIES	IN-PROCESS FUEL	RESIDUAL OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3000515100000	OIL & GAS PRODUCTION (COMBUSTION)	BOILERS	RESIDUAL OIL - GRADE #4	SUB-CATEGORY UNSPECIFIED
3000515300000	OIL & GAS PRODUCTION (COMBUSTION)	BOILERS	RESIDUAL OIL - GRADE #6 (BUNKER C)	SUB-CATEGORY UNSPECIFIED
3001015000000	OIL & GAS PRODUCTION (COMBUSTION)	PROCESS HEATERS	RESIDUAL OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3001016000000	OIL & GAS PRODUCTION (COMBUSTION)	PROCESS HEATERS	CRUDE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3004116000000	OIL & GAS PRODUCTION (COMBUSTION)	HYDRAULIC FRACTURING ENGINES	CRUDE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
4000515100000	PETROLEUM REFINING (COMBUSTION)	BOILERS	RESIDUAL OIL - GRADE #4	SUB-CATEGORY UNSPECIFIED
4000515300000	PETROLEUM REFINING (COMBUSTION)	BOILERS	RESIDUAL OIL - GRADE #6 (BUNKER C)	SUB-CATEGORY UNSPECIFIED
5000515100000	MANUFACTURING & INDUSTRIAL	BOILERS	RESIDUAL OIL - GRADE #4	SUB-CATEGORY UNSPECIFIED
5000515200000	MANUFACTURING & INDUSTRIAL	BOILERS	RESIDUAL OIL - GRADE #5	SUB-CATEGORY UNSPECIFIED
5000515300000	MANUFACTURING & INDUSTRIAL	BOILERS	RESIDUAL OIL - GRADE #6 (BUNKER C)	SUB-CATEGORY UNSPECIFIED
5001015000000	MANUFACTURING & INDUSTRIAL	PROCESS HEATERS	RESIDUAL OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5007015000000	MANUFACTURING & INDUSTRIAL	IN-PROCESS FUEL	RESIDUAL OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5099515000000	MANUFACTURING & INDUSTRIAL	OTHER	RESIDUAL OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5200515100000	FOOD & AGRICULTURAL PROCESSING	BOILERS	RESIDUAL OIL - GRADE #4	SUB-CATEGORY UNSPECIFIED
5200515200000	FOOD & AGRICULTURAL PROCESSING	BOILERS	RESIDUAL OIL - GRADE #5	SUB-CATEGORY UNSPECIFIED

<i>EIC/SCC</i>	<i>NAMES</i>			
5200515300000	FOOD & AGRICULTURAL PROCESSING	BOILERS	RESIDUAL OIL - GRADE #6 (BUNKER C)	SUB-CATEGORY UNSPECIFIED
5201015000000	FOOD & AGRICULTURAL PROCESSING	PROCESS HEATERS	RESIDUAL OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5207015000000	FOOD & AGRICULTURAL PROCESSING	IN-PROCESS FUEL	RESIDUAL OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
6000515100000	SERVICE & COMMERCIAL	BOILERS	RESIDUAL OIL - GRADE #4	SUB-CATEGORY UNSPECIFIED
6000515200000	SERVICE & COMMERCIAL	BOILERS	RESIDUAL OIL - GRADE #5	SUB-CATEGORY UNSPECIFIED
6000515300000	SERVICE & COMMERCIAL	BOILERS	RESIDUAL OIL - GRADE #6 (BUNKER C)	SUB-CATEGORY UNSPECIFIED
6001015000000	SERVICE & COMMERCIAL	PROCESS HEATERS	RESIDUAL OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
6007015000000	SERVICE & COMMERCIAL	IN-PROCESS FUEL	RESIDUAL OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
6099515000000	SERVICE & COMMERCIAL	OTHER	RESIDUAL OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED

e. PM1105— Diesel Engines

<i>EIC/SCC</i>	<i>NAMES</i>			
20100101	INTERNLCOMBUSTION	ELECTRIC GENERATN	DIST.OIL/DIESEL	TURBINE
20100102	INTERNLCOMBUSTION	ELECTRIC GENERATN	DIST.OIL/DIESEL	RECIPROCATING
20100105	INTERNLCOMBUSTION	ELECTRIC GENERATN	DIST.OIL/DIESEL	RECIP:CRNKCSE BLOWBY
20100107	INTERNLCOMBUSTION	ELECTRIC GENERATN	DIST.OIL/DIESEL	RECIP:EXHAUST
20100109	INTERNLCOMBUSTION	ELECTRIC GENERATN	DIST.OIL/DIESEL	TURBINE:EXHAUST
20100301	INTERNLCOMBUSTION	ELECTRIC GENERATN	DIESEL	RECIPROCATING **
20100302	INTERNLCOMBUSTION	ELECTRIC GENERATN	DIESEL	TURBINE **
20200101	INTERNLCOMBUSTION	INDUSTRIAL	DIST.OIL/DIESEL	TURBINE
20200102	INTERNLCOMBUSTION	INDUSTRIAL	DIST.OIL/DIESEL	RECIPROCATING
20200103	INTERNLCOMBUSTION	INDUSTRIAL	DIST.OIL/DIESEL	TURBINE-COGENERATN
20200104	INTERNLCOMBUSTION	INDUSTRIAL	DIST.OIL/DIESEL	ENGINE- COGENERATN
20200106	INTERNLCOMBUSTION	INDUSTRIAL	DIST. OIL/DIESEL	RECIP:EVAP LOSSES
20200107	INTERNLCOMBUSTION	INDUSTRIAL	DIST. OIL/DIESEL	RECIP:EXHAUST
20200401	INTERNLCOMBUSTION	INDUSTRIAL	LARGE BORE ENGINE	DIESEL
20300101	INTERNLCOMBUSTION	COMMERCL- INSTUTNL	DIST.OIL/DIESEL	RECIPROCATING
20300102	INTERNLCOMBUSTION	COMMERCL- INSTUTNL	DIST.OIL/DIESEL	TURBINE
20300107	INTERNLCOMBUSTION	COMMERCL- INSTUTNL	DIST. OIL/DIESEL	RECIP:EXHAUST
20400302	INTERNLCOMBUSTION	ENGINE TESTING	TURBINE	DIESEL/KEROSENE
20400402	INTERNLCOMBUSTION	ENGINE TESTING	RECIPROCATING	DIESEL/KEROSENE
20400403	INTERNLCOMBUSTION	ENGINE TESTING	RECIPROCATING	DISTILLATE OIL
30490031	SECONDARY METALS	FUEL-FIRED EQPMNT	FURNACES	DIESEL OIL
1004012000000	ELECTRIC UTILITIES	I.C. RECIPROCATING ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
1004512000000	ELECTRIC UTILITIES	I.C. TURBINE ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
2004012000000	COGENERATION	I.C. RECIPROCATING ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
2004512000000	COGENERATION	I.C. TURBINE ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3004012000000	OIL & GAS PRODUCTION (COMBUSTION)	I.C. RECIPROCATING ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3004012100000	OIL & GAS PRODUCTION (COMBUSTION)	I.C. RECIPROCATING ENGINES	DIESEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3004012990000	OIL & GAS PRODUCTION (COMBUSTION)	I.C. RECIPROCATING ENGINES	DIESEL/KEROSENE	SUB-CATEGORY UNSPECIFIED
3004512000000	OIL & GAS PRODUCTION (COMBUSTION)	I.C. TURBINE ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3006012100000	OIL & GAS PRODUCTION (COMBUSTION)	DRILLING RIGS	DIESEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
3006512100000	OIL & GAS PRODUCTION (COMBUSTION)	WORKOVER RIGS	DIESEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
4004012100000	PETROLEUM REFINING (COMBUSTION)	I.C. RECIPROCATING ENGINES	DIESEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED

<i>EIC/SCC</i>	<i>NAMES</i>			
4004512000000	PETROLEUM REFINING (COMBUSTION)	I.C. TURBINE ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5001012200000	MANUFACTURING & INDUSTRIAL	PROCESS HEATERS	DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5004010000000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	LIQUID FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5004012000000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5004012100000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	DIESEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5004012990000	MANUFACTURING & INDUSTRIAL	I.C. RECIPROCATING ENGINES	DIESEL/KEROSENE	SUB-CATEGORY UNSPECIFIED
5004512000000	MANUFACTURING & INDUSTRIAL	I.C. TURBINE ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5004512990000	MANUFACTURING & INDUSTRIAL	I.C. TURBINE ENGINES	DIESEL/KEROSENE	SUB-CATEGORY UNSPECIFIED
5099512100000	MANUFACTURING & INDUSTRIAL	OTHER	DIESEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5204010000000	FOOD & AGRICULTURAL PROCESSING	I.C. RECIPROCATING ENGINES	LIQUID FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5204012000000	FOOD & AGRICULTURAL PROCESSING	I.C. RECIPROCATING ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5204012990000	FOOD & AGRICULTURAL PROCESSING	I.C. RECIPROCATING ENGINES	DIESEL/KEROSENE	SUB-CATEGORY UNSPECIFIED
5204212000000	FOOD & AGRICULTURAL PROCESSING	AG. IRRIGATION I.C. ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
5204212000010	FOOD & AGRICULTURAL PROCESSING	AG. IRRIGATION I.C. ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	STATIONARY
5204212000011	FOOD & AGRICULTURAL PROCESSING	AG. IRRIGATION I.C. ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	PORTABLE
5204512000000	FOOD & AGRICULTURAL PROCESSING	I.C. TURBINE ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
6004010000000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	LIQUID FUEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
6004012000000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	DIESEL/DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
6004012100000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	DIESEL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
6004012200000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	DISTILLATE OIL (UNSPECIFIED)	SUB-CATEGORY UNSPECIFIED
6004012990000	SERVICE & COMMERCIAL	I.C. RECIPROCATING ENGINES	DIESEL/KEROSENE	SUB-CATEGORY UNSPECIFIED
6004512990000	SERVICE & COMMERCIAL	I.C. TURBINE ENGINES	DIESEL/KEROSENE	SUB-CATEGORY UNSPECIFIED
9999513000000	OTHER (FUEL COMBUSTION)	OTHER	KEROSENE	SUB-CATEGORY UNSPECIFIED