

Climate Change

APPENDIX A3.1 II
ENVIRONMENTAL DATABASE & EMISSION FACTORS USED FROM THE LEAP SOFTWARE

ENVIRONMENTAL DATA BASE: Selected Sources and Effects		AIR EMISSIONS HYDROCARBONS METHANE	AIR EMISSIONS NITROGEN OXIDES TOTAL	AIR EMISSIONS SULFUR OXIDES TOTAL	AIR EMISSIONS PARTICULATES TOTAL	
*15/04/99 *15:07:07 All Demand and Transformation Sources						
DEMAND SOURCES		Fuel consumed	Coefficient	Coefficient	Coefficient	Fuel Content
Sector	Subsector					
	Enduse					
	Device					
INDUSTRY						
STANDARD EQUIPMENT						
BOILERS-DIST OIL						
	GENERIC	DIESEL/GAS OIL	8.93E-03KG / TE	2.00E-02LB / GAL	1.44E-01LB / GAL	1%S 2.00E-03LB / GAL
	COGENERATION	DIESEL/GAS OIL		2.00E-02LB / GAL	1.44E-01LB / GAL	1%S 2.00E-03LB / GAL
	GRADE 1 OR 2 FUEL * NO EC	DIESEL/GAS OIL		2.00E-02LB / GAL	1.50E-01LB / GAL	1%S 7.00E-03LB / GAL
	GRADE 4 FUEL * NO EC	DIESEL/GAS OIL		2.00E-02LB / GAL	1.44E-01LB / GAL	1%S 2.00E-03LB / GAL
	FOR CO PRODUCTION * NO EC	DIESEL/GAS OIL		2.00E-02LB / GAL	1.44E-01LB / GAL	1%S 2.00E-03LB / GAL
BOILERS-LPG						
	50/50 PROPANE/BUTANE * NO EC	LPG/BOTTLED GAS		1.32E-02LB / GAL	8.65E-02LB / GAL	1%S 2.80E-04LB / GAL
BOILERS-MSW						
	BOILER * MASS BURN FIRING	MUN. SOLID WASTE	2.10E-01KG / TE	1.95E+00KG / TE		
	SMALL MODULAR	MUN. SOLID WASTE	2.10E-01KG / TE	1.94E+00KG / TE		
BOILERS-NAT GAS						
	GENERIC	NATURAL GAS	5.07E-05KG / M3	2.36E-03KG / M3		
	COGENERATION * NO EC	NATURAL GAS		2.75E-04LB / FT3	6.00E-07LB / FT3	3.00E-06LB / FT3
	LARGE * > 100 GJ/HR (100 MMBTU/HR) * NO EC	NATURAL GAS		5.50E-04LB / FT3	6.00E-07LB / FT3	3.00E-06LB / FT3
	LOW NOX * LOW NOX BURNER	NATURAL GAS	5.07E-05KG / M3	1.18E-03KG / M3		
	MEDIUM * 10-100 GJ/HR (10-100 MMBTU/HR) * NO EC	NATURAL GAS		1.40E-04LB / FT3	6.00E-07LB / FT3	3.00E-06LB / FT3
	BOILER * SELECTIVE CATALYTIC REDUCTION	NATURAL GAS		1.00E-04LB / FT3	6.00E-07LB / FT3	3.00E-06LB / FT3
	SMALL * < 10 GJ/HR (10 MMBTU/HR) * NO EC	NATURAL GAS		1.40E-04LB / FT3	6.00E-07LB / FT3	3.00E-06LB / FT3
	FOR CO PRODUCTION * NO EC	NATURAL GAS		1.40E-04LB / FT3	6.00E-07LB / FT3	3.00E-06LB / FT3
BOILERS-RES OIL						
	GENERIC * NO EC	RESIDUAL/FUELOIL	1.22E-01KG / TE	6.67E+00KG / TE		
	COGENERATION	RESIDUAL/FUELOIL		5.50E-02LB / GAL	1.59E-01LB / GAL	1%S 1.20E-02LB / GAL
	LOW NOX * LOW NOX BURNER	RESIDUAL/FUELOIL	1.22E-01KG / TE	4.34E+00KG / TE		
	GRADE 5 FUEL * NO EC	RESIDUAL/FUELOIL		5.50E-02LB / GAL	1.59E-01LB / GAL	1%S 1.00E-02LB / GAL
	GRADE 6 FUEL * NO EC	RESIDUAL/FUELOIL		5.50E-02LB / GAL	1.59E-01LB / GAL	1%S 1.20E-02LB / GAL
	SELECTIVE CATALYTIC REDUCTION	RESIDUAL/FUELOIL	1.22E-01KG / TE	1.33E+00KG / TE		
	FOR CO PRODUCTION * NO EC	RESIDUAL/FUELOIL		5.50E-02LB / GAL	1.59E-01LB / GAL	1%S 1.20E-02LB / GAL
BOILERS-WASTE OIL						
	GENERIC * NO EC	WASTE OIL		2.00E-02LB / GAL	1.47E-01LB / GAL	1%S 6.10E-02LB / GAL
ENGINES-DIESEL						

ENVIRONMENTAL DATA BASE: Selected Sources and Effects		AIR EMISSIONS HYDROCARBONS METHANE	AIR EMISSIONS NITROGEN OXIDES TOTAL	AIR EMISSIONS SULFUR OXIDES TOTAL	AIR EMISSIONS PARTICULATES TOTAL
*15/04/99 *15:07:07					

All Demand and Transformation Sources		Fuel consumed	Coefficient	Coefficient	Coefficient	Fuel C	Coefficient
DEMAND SOURCES							
Sector							
Subsector							
Enduse							
Device							
INDUSTRY							
	GENERIC * NO EC	DIESEL/GAS OIL		4.69E-01LB / GAL	3.12E-02LB / GAL		3.35E-02LB / GAL
	LARGE BORE * NO EC	DIESEL/GAS OIL		5.00E-01LB / GAL	1.50E-01LB / GAL	1%S	5.00E-02LB / GAL
	ENGINES-GASOLINE						
	GENERIC * NO EC	GASOLINE		1.02E-01LB / GAL	5.31E-03LB / GAL		6.47E-03LB / GAL
	ENGINES-KEROSENE						
	GENERIC * NO EC	KEROSENE/JETFUEL		4.69E-01LB / GAL	6.20E-03LB / GAL		3.35E-02LB / GAL
	ENGINES-LPG						
	GENERIC * 50/50 PROPANE BUTANE * NO EC	LPG/BOTTLED GAS		1.39E-01LB / GAL	3.50E-04LB / GAL		5.00E-03LB / GAL
	ENGINES-NAT GAS						
	GENERIC * NO EC	NATURAL GAS		3.40E-03LB / FT3	6.00E-07LB / FT3		1.00E-05LB / FT3
	ENGINES-OIL						
	GENERIC * NO EC	RESIDUAL/FUELOIL		4.69E-01LB / GAL	1.55E-01LB / GAL	1%S	3.35E-02LB / GAL
	KILNS-COAL						
	GENERIC	COAL BITUMINOUS	3.08E-02KG / TE	1.54E+01KG / TE			
	LOW EXCESS AIR FIRING	COAL BITUMINOUS	3.08E-02KG / TE	1.32E+01KG / TE			
	LOW NOX BURNER	COAL BITUMINOUS	3.08E-02KG / TE	1.00E+01KG / TE			
	KILNS-NAT GAS						
	GENERIC	NATURAL GAS	3.90E-05KG / M3	3.90E-02KG / M3			
	LOW EXCESS AIR	NATURAL GAS	3.90E-05KG / M3	3.35E-02KG / M3			
	LOW NOX BURNER	NATURAL GAS	3.90E-05KG / M3	2.54E-02KG / M3			
	KILNS-OIL						
	GENERIC	RESIDUAL/FUELOIL	4.36E-02KG / TE	2.24E+01KG / TE			
	LOW EXCESS AIR FIRING	RESIDUAL/FUELOIL	4.36E-02KG / TE	1.92E+01KG / TE			
	LOW NOX BURNER	RESIDUAL/FUELOIL	4.36E-02KG / TE	1.45E+01KG / TE			
	TURBINES-DIESEL						
	GENERIC * NO EC	DIESEL/GAS OIL		6.78E-02LB / GAL	1.40E-01LB / GAL	1%S	5.00E-03LB / GAL
	FOODSTUFFS						
	BOILERS-OIL						
	GENERIC BOILER FOR PROCESS HEAT	RESIDUAL/FUELOIL					
	MINERAL PRODUCTS						
	KILNS-COAL						
	GENERIC * PRODUCING NON-METAL PRODUCTS	COAL BITUMINOUS					

ENVIRONMENTAL DATA BASE: Selected Sources and Effects		AIR EMISSIONS		AIR EMISSIONS		AIR EMISSIONS	
15/04/99		HYDROCARBONS		NITROGEN OXIDES		SULFUR OXIDES	
15:07:07		METHANE		TOTAL		TOTAL	
All Demand and Transformation Sources		COEFFICIENT		COEFFICIENT		COEFFICIENT	
		Fuel consumed	Coefficient	Coefficient	Coefficient	Fuel C	Coefficient
DEMAND SOURCES							
Sector							
Subsector							
Enduse							
Device							
INDUSTRY							
	PAPER PRODUCTS						
	BOILERS-COAL						
	GENERIC	COAL BITUMINOUS					

HOUSEHOLD		Fuel consumed					
GASOLINE							
SMALL ENGINES							
	2-STROKE LAWN AND GARDEN	GASOLINE		5.26E-03KG / GAL	1.80E-03KG / GAL	## S	2.36E-02KG / GAL
	4-STROKE LAWN AND GARDEN	GASOLINE		2.03E-02KG / GAL	2.37E-03KG / GAL	## S	2.82E-03KG / GAL
	4-STROKE MISCELLANEOUS	GASOLINE		3.12E-02KG / GAL	2.45E-03KG / GAL	## S	2.77E-03KG / GAL
KEROSENE							
COOKING							
	KEROSETTE-TYPE COOKSTOVE	KEROSENE/JETFUEL					5.00E+00G / KG
	NUTAN COOKSTOVE	KEROSENE/JETFUEL					2.80E+00G / KG
SPACE HEATING							
	GENERIC FURNACE * NO EC	KEROSENE/JETFUEL		2.30E+00KG / TE	1.70E+01KG / TE	1%S	3.00E+00KG / TE
	RADIANT STOVE	KEROSENE/JETFUEL		5.78E-01G / KG			1.60E-02G / KG
	CONVECTIVE STOVE	KEROSENE/JETFUEL		1.30E-01G / KG			1.70E-02G / KG
	MULTISTAGE STOVE	KEROSENE/JETFUEL		1.10E-01G / KG			
LIGHTING							
	GENERIC LAMPS	KEROSENE/JETFUEL					
LPG							
ALL-PURPOSE-LPG							
	GENERIC EQUIPMENT * US	LPG/BOTTLED GAS	2.40E-04LB / GAL	8.80E-03LB / GAL	9.00E-05LB / GAL	## S	2.65E-01LB / GAL
SPACE HEATING							
	GENERIC FURNACE * NO EC	LPG/BOTTLED GAS		1.80E+00KG / TE	2.00E-02KG / TE	1%S	4.20E-01KG / TE
	FURNACE	LPG/BOTTLED GAS	4.46E-02KG / TE	2.01E+00KG / TE			
NATURAL GAS							
ALL-PURPOSE NG							
	GENERIC EQUIPMENT FOR COOKING, WATER AND SP	NATURAL GAS					
COOKING							
	GENERIC	NATURAL GAS		3.90E-04KG / M3			1.95E-05KG / M3

ENVIRONMENTAL DATA BASE: Selected Sources and Effects		AIR EMISSIONS		AIR EMISSIONS		AIR EMISSIONS	
15/04/99		HYDROCARBONS		NITROGEN OXIDES		SULFUR OXIDES	
15:07:07		METHANE		TOTAL		TOTAL	
All Demand and Transformation Sources							
		Fuel consumed	Coefficient	Coefficient	Coefficient	Fuel C	Coefficient
DEMAND SOURCES							
Sector							
Subsector							
Enduse							
Device							
SPACE HEATING							
	HEATER * BLUERAY-TYPE	NATURAL GAS	2.73E-05KG / M3	2.66E-04KG / M3			
	BOILER * US * NO EC	NATURAL GAS	2.70E-06LB / FT3	1.00E-04LB / FT3	6.00E-07LB / FT3		3.00E-06LB / FT3
	HEATER * LOW NOx BURNER	NATURAL GAS	2.73E-05KG / M3	9.99E-04KG / M3			
	HEATER * PULSE COMBUSTION	NATURAL GAS	2.73E-05KG / M3	8.83E-04KG / M3			
	GENERIC HEATER * NO EC	NATURAL GAS		1.30E-03KG / M3	1.66E-02KG / M3	1%S	3.02E-04KG / M3
	GENERIC HEATER STOVE * US	NATURAL GAS		1.48E-03KG / M3			2.73E-04KG / M3
COMMERCIAL-INSTIT							
STANDARD EQUIPMENT							
	ALL PURPOSE-LPG						
	GENERIC EQUIPMENT * US	LPG/BOTTLED GAS	2.45E-04LB / GAL	1.08E+00G / L	9.00E-05LB / GAL	## S	2.80E-04LB / GAL
	BOILERS-DIST OIL						
	GENERIC	DIESEL/GAS OIL	3.13E-02KG / TE	2.74E+00KG / TE			
	GRADE 1 AND 2 * NO EC	DIESEL/GAS OIL		2.00E-02LB / GAL	1.44E-01LB / GAL	1%S	2.00E-03LB / GAL
	GRADE 4 * NO EC	DIESEL/GAS OIL		2.00E-02LB / GAL	1.50E-01LB / GAL	1%S	7.00E-03LB / GAL

BOILERS-LIG COAL								
PULVERIZED LIGNITE	COAL LIGNITE		1.40E+01LB / T	3.00E+01LB / T	1%S	6.30E+00LB / T		
TANGENTIALLY FIRED * PULVERIZED LIGNITE * NO EC	COAL LIGNITE		8.00E+00LB / T	3.00E+01LB / T	1%S	6.30E+00LB / T		
SPREADER-STOKER * NO EC	COAL LIGNITE		6.00E+00LB / T	3.00E+01LB / T	1%S	6.80E+00LB / T		
TRAVELING GRATE (OVERFEED) STOKER * NO EC	COAL LIGNITE		6.00E+00LB / T	3.00E+01LB / T	1%S	2.90E+00LB / T		
BOILERS-LPG								
GENERIC * 50/50 PROPANE/BUTANE	LPG/BOTTLED GAS							
BOILERS-NAT GAS								
GENERIC	NATURAL GAS	4.29E-05KG / M3	1.67E-03KG / M3					
SMALL * < 10 GJ/HR (10 MMBTU/HR) * NO EC	NATURAL GAS		1.00E-04LB / FT3	6.00E-07LB / FT3		3.00E-06LB / FT3		
MEDIUM * 10-100 GJ/HR (10-100 MMBTU/HR) * NO EC	NATURAL GAS		1.40E-04LB / FT3	6.00E-07LB / FT3		3.00E-06LB / FT3		
LARGE * > 100 GJ/HR (100 MMBTU/HR) * NO EC	NATURAL GAS		5.50E-04LB / FT3	6.00E-07LB / FT3		3.00E-06LB / FT3		
BOILERS-RESID OIL								
GENERIC	RESIDUAL/FUELOIL	6.54E-02KG / TE	6.75E+00KG / T					
GRADE 5 * NO EC	RESIDUAL/FUELOIL		5.50E-02LB / GAL	1.59E-01LB / GAL	1%S	1.00E-02LB / GAL		
GRADE 6 * NO EC	RESIDUAL/FUELOIL		5.50E-02LB / GAL	1.59E-01LB / GAL	1%S	1.20E-02LB / GAL		

ENVIRONMENTAL DATA BASE: Selected Sources and Effects		AIR EMISSIONS	AIR EMISSIONS	AIR EMISSIONS	AIR EMISSIONS
*15/04/99		HYDROCARBONS	NITROGEN OXIDES	SULFUR OXIDES	PARTICULATES
*15:07:07		METHANE	TOTAL	TOTAL	TOTAL
All Demand and Transformation Sources					
	Fuel consumed	Coefficient	Coefficient	Coefficient	Fuel C Coefficient
DEMAND SOURCES					
Sector					
Subsector					
Enduse					
Device					
TRANSPORTATION					
ROAD					
BUSES-DIESEL					
GENERIC * NO EC					
AVERAGE US CITY USE					
CARS-DIESEL					
US 1970 * E STD US 1970 * E 1990					
US 1975 * E STD US 1975 * E 1990					
US 1980 * E STD US 1980 * E 1990					
US 1985 * E STD US 1985 * E 1990					
US 1990 * E STD US 1990					
GENERIC					
CARS-GASOLINE					
GENERIC US * US STD EC					
US MEDIUM * 27 MI/GAL OR 8.75 L/100 KM * NO EC					
US 1965 * E STD US 1965 * E 1990 * US LEADED					
US 1970 * E STD US 1970 * E 1990 * US LEADED					
US 1975 * E STD US 1975 * E 1990 * US UNLEADED					
US 1980 * E STD US 1980 * E 1990 * US UNLEADED					
US 1985 * E STD US 1985 * E 1990 * US UNLEADED					
US 1990 * E STD US 1990 * E 1990 * US UNLEADED					
GENERIC * 3-WAY CATALYST					
GENERIC					
GENERIC * ENGINE CONTROL FOR EC					
GENERIC * OXIDATION CATALYST					
CARS-METHANOL					
GENERIC					
CARS-NAT GAS					

GENERIC * COMPRESSED FUEL MOTORCYCLES-GASOL 2 STROKE MOTOR-BIKES OR MO-PEDS * NO EC 2 STROKE MOTORCYCLES * NO EC	NATURAL GAS GASOLINE GASOLINE	4.68E-03KG / M3	5.46E-03KG / M3			
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ENVIRONMENTAL DATA BASE: Selected Sources and Effects *15/04/99 *15:07:07 All Demand and Transformation Sources		AIR EMISSIONS HYDROCARBONS METHANE	AIR EMISSIONS NITROGEN OXIDES TOTAL	AIR EMISSIONS SULFUR OXIDES TOTAL	AIR EMISSIONS PARTICULATES TOTAL		
		Fuel consumed	Coefficient	Coefficient	Coefficient	Fuel C	Coefficient
DEMAND SOURCES							
Sector							
Subsector							
Enduse							
Device							
Transportation							
	US 1965 * E STD US 1965 * E 1990 * US LEADED	GASOLINE		1.50E+01G / GAL			9.40E+00G / GAL
	US 1970 * E STD US 1970 * E 1990 * US LEADED	GASOLINE		1.50E+01G / GAL			9.40E+00G / GAL
	US 1975 * E STD US 1975 * E 1990 * US UNLEADED	GASOLINE		1.50E+01G / GAL			
	US 1980 * E STD US 1980 * E 1990 * US UNLEADED	GASOLINE		4.00E+01G / GAL			
	US 1985 * E STD US 1985 * E 1990 * US UNLEADED	GASOLINE		4.00E+01G / GAL			
	US 1990 * E STD US 1990 * E 1990 * US UNLEADED	GASOLINE		4.00E+01G / GAL			
TRUCK-BUSES-GASOL							
	HEAVY US 1965 * GVW>3900 KG*E STD US 1965*E	GASOLINE		6.04E+01G / GAL			2.44E+00G / GAL
	HEAVY US 1970 * GVW>3900 KG*E STD US 1970*E	GASOLINE		5.95E+01G / GAL			2.41E+00G / GAL
	HEAVY US 1975 * GVW>3900 KG*E STD US 1975*E	GASOLINE		4.90E+01G / GAL			2.56E+00G / GAL
	HEAVY US 1980 * GVW>3900 KG*E STD US 1980*E	GASOLINE		4.96E+01G / GAL			3.16E+00G / GAL
	HEAVY US 1985 * GVW>3900 KG*E STD US 1985*E	GASOLINE		4.50E+01G / GAL			3.38E+00G / GAL
	HEAVY US 1990 * GVW>3900 KG*E STD US 1990*E	GASOLINE		4.23E+01G / GAL			9.38E-01G / GAL
TRUCKS-DIESEL							
	GENERIC HEAVY	DIESEL/GAS OIL	3.57E-01KG / TE	5.36E+01KG / TE			
	HEAVY * LOW NOX CONTROL	DIESEL/GAS OIL	3.57E-01KG / TE	3.16E+01KG / TE			
	HEAVY US 1965 * GVW > 3900 KG * E STD US 1965	DIESEL/GAS OIL					4.55E+00G / GAL
	HEAVY US 1970 * GVW > 3900 KG * E STD US 1970	DIESEL/GAS OIL		1.33E+02G / GAL			4.48E+00G / GAL
	HEAVY US 1975 * GVW > 3900 KG * E STD US 1975	DIESEL/GAS OIL		1.36E+02G / GAL			4.76E+00G / GAL
	HEAVY US 1980 * GVW > 3900 KG * E STD US 1980	DIESEL/GAS OIL		1.13E+02G / GAL			5.88E+00G / GAL
	HEAVY US 1985 * GVW > 3900 KG * E STD US 1985	DIESEL/GAS OIL		1.00E+02G / GAL			6.30E+00G / GAL
	HEAVY US 1990 * GVW > 3900 KG * E STD US 1990	DIESEL/GAS OIL		6.16E+01G / GAL			6.44E+00G / GAL
	LIGHT US 1965 * GVW < 3900 KG * E STD US 1965 *	DIESEL/GAS OIL		3.82E+01G / GAL			8.48E+00G / GAL
	LIGHT US 1970 * GVW < 3900 KG * E STD US 1970 *	DIESEL/GAS OIL		3.60E+01G / GAL			8.48E+00G / GAL
	LIGHT US 1975 * GVW < 3900 KG * E STD US 1975 *	DIESEL/GAS OIL		3.60E+01G / GAL			9.28E+00G / GAL
	LIGHT US 1980 * GVW < 3900 KG * E STD US 1980 *	DIESEL/GAS OIL		4.51E+01G / GAL			1.29E+01G / GAL
	LIGHT US 1985 * GVW < 3900 KG * E STD 1985 * E 19	DIESEL/GAS OIL		3.52E+01G / GAL			6.21E+00G / GAL
	LIGHT US 1990 * GVW < 3900 KG * E STD US 1990	DIESEL/GAS OIL		2.16E+01G / GAL			6.24E+00G / GAL
TRUCKS-GASOLINE							
	HEAVY 3-WAY CATALYST	GASOLINE	8.59E-01KG / TE	2.02E+01KG / TE			
	HEAVY GENERIC	GASOLINE	2.77E+00KG / TE	3.37E+01KG / TE			
	HEAVY * ENGINE CONTROL FOR EC	GASOLINE	1.33E+00KG / TE	2.36E+01KG / TE			

ENVIRONMENTAL DATA BASE: Selected Sources and Effects *15/04/99 *15:07:07 All Demand and Transformation Sources		AIR EMISSIONS HYDROCARBONS METHANE	AIR EMISSIONS NITROGEN OXIDES TOTAL	AIR EMISSIONS SULFUR OXIDES TOTAL	AIR EMISSIONS PARTICULATES TOTAL		
		Fuel consumed	Coefficient	Coefficient	Coefficient	Fuel C	Coefficient
DEMAND SOURCES							

Sector	Subsector	Enduse	Device				
Transportation			HEAVY * OXIDATION CATALYST	GASOLINE	8.59E-01KG / TE	2.29E+01KG / TE	
			LIGHT US 1965 * GVW<2730 KG*E STD US 1965*E 19	GASOLINE		3.60E+01G / GAL	2.06E+00G / GAL
			LIGHT US 1970 * GVW<2730 KG*E STD US 1970*E 19	GASOLINE		4.56E+01G / GAL	7.31E-01G / GAL
			LIGHT US 1975 * GVW<2730 KG*E STD US 1975*E 19	GASOLINE		3.71E+01G / GAL	3.83E-01G / GAL
			LIGHT US 1980 * GVW<2730 KG*E STD US 1980*E 19	GASOLINE		4.51E+01G / GAL	5.31E-01G / GAL
			LIGHT US 1985 * GVW<2730 KG*E STD US 1985*E 19	GASOLINE		4.14E+01G / GAL	6.83E-01G / GAL
			LIGHT US 1990 * GVW<2730 KG*E STD US 1990*E 19	GASOLINE		2.16E+01G / GAL	7.92E-01G / GAL
			MEDIUM US 1965*GVW 2730-3900 KG*E STD US 196	GASOLINE		4.27E+01G / GAL	
			MEDIUM US 1970*GVW 2730-3900 KG*E STD US 197	GASOLINE		5.06E+01G / GAL	
			MEDIUM US 1975*GVW 2730-3900 KG*E STD US 197	GASOLINE		4.66E+01G / GAL	
			MEDIUM US 1980*GVW 2730-3900 KG*E STD US 198	GASOLINE		3.34E+01G / GAL	
			MEDIUM US 1985*GVW 2730-3900 KG*E STD US 198	GASOLINE		2.80E+01G / GAL	
			MEDIUM US 1990*GVW 2730-3900 KG*E STD US 199	GASOLINE		1.37E+01G / GAL	
			VEHICLES-DIESEL				
			UNSPECIFIED EUROPEAN	DIESEL/GAS OIL			
			VEHICLES-GASOLINE				
			UNSPECIFIED EUROPEAN	GASOLINE			2.00E+00KG / TE
AIR			ENGINES-GASOLINE				
			GENERIC	GASOLINE	2.77E+00KG / TE	3.70E+00KG / TE	
			JETS-KEROSENE				
			ALL JET TRANSPORTATION	KEROSENE/JETFUEL	9.07E-02KG / TE	1.31E+01KG / TE	
US AVERAGES				Fuel consumed			
INDUSTRIAL							
ALL INDUSTRIES							
			ALL NATURAL GAS COMBUSTION	NATURAL GAS	5.07E-05KG / M3	6.36E-04LB / FT3 / 2.10E-05LB / FT3	6.30E-06LB / FT3
			ALL BITUMINOUS COAL COMBUSTION	COAL BITUMINOUS	6.74E-02KG / TE	9.05E+00LB / T / 2.57E+01LB / T	1.87E+00LB / T
			ALL RESIDUAL OIL COMBUSTION	RESIDUAL/FUELOIL	1.16E-01KG / TE	7.40E-02LB / GAL / 2.54E-01LB / GAL	2.06E-02LB / GAL
			ALL DISTILLATE OIL COMBUSTION	RESIDUAL/FUELOIL	8.50E-03KG / TE	1.85E-02LB / GAL / 1.76E-02LB / GAL	1.96E-03LB / GAL
			ALL LPG COMBUSTION	LPG/BOTTLED GAS	8.50E-03KG / TE	3.63E-02LB / TE / 1.30E-03LB / TE	8.64E-04LB / TE
			ALL BIOMASS COMBUSTION	FIREWOOD	2.29E-01KG / TE	9.73E-01LB / T / 3.74E-01LB / T	9.32E-01LB / T

ENVIRONMENTAL DATA BASE: Selected Sources and Effects				AIR EMISSIONS	AIR EMISSIONS	AIR EMISSIONS	AIR EMISSIONS
15/04/99				HYDROCARBONS	NITROGEN OXIDES	SULFUR OXIDES	PARTICULATES
15:07:07				METHANE	TOTAL	TOTAL	TOTAL
All Demand and Transformation Sources							
			Fuel consumed	Coefficient	Coefficient	Coefficient	Fuel C Coefficient
DEMAND SOURCES							
Sector	Subsector	Enduse	Device				
			ALL METALURGICAL COAL COMBUSTION	COAL BITUMINOUS	6.74E-02KG / TE	9.05E+00LB / T / 2.57E+01LB / T	1.87E+00LB / T
			ALL MOTOR GASOLINE COMBUSTION	GASOLINE	2.64E+00KG / TE	4.25E-02LB / TE / 5.42E-03LB / TE	1.17E-03LB / TE
			ALL OTHER RENEWABLES" COMBUSTION"	MUN. SOLID WASTE	7.27E-06LB / LB	4.00E-03LB / GAL	2.94E-02LB / GAL
			PETROLEUM COKE USE (REFINERY)	PETROLEUM COKE		1.40E+01LB / T	3.90E+01LB / T
			NEW BIOMASS COGEN AND NEW INDUSTRIAL COGE	FIREWOOD	2.29E-01KG / TE	9.12E-04LB / LB	7.51E-05LB / LB
TRANSPORTATION							
PERSONAL-PRIVATE							

LIGHT TRUCK - GASOLINE 1	GASOLINE	1.27E+00KG / TE	9.74E-02LB / GAL /	5.10E-03LB / GAL	5.16E-02LB / GAL
LIGHT TRUCK - GASOLINE 2	GASOLINE	1.27E+00KG / TE	2.13E+01G / GAL /	8.00E-01G / GAL	4.36E+00G / GAL
LIGHT TRUCK - GASOLINE 3	GASOLINE	1.27E+00KG / TE	1.38E+01G / GAL /	8.00E-01G / GAL	2.48E+00G / GAL
Light Truck - Gasoline 4	GASOLINE	1.27E+00KG / TE	5.50E+00G / GAL	8.00E-01G / GAL	2.48E+00G / GAL
LIGHT TRUCK - DIESEL 1	DIESEL/GAS OIL	8.50E-02KG / TE	3.70E+01G / GAL	2.80E-02LB / GAL	6.21E+00G / GAL
LIGHT TRUCK - DIESEL 2	DIESEL/GAS OIL	8.50E-02KG / TE	2.13E+01G / GAL	4.80E+00G / GAL	4.36E+00G / GAL
LIGHT TRUCK - DIESEL 3	DIESEL/GAS OIL	8.50E-02KG / TE	1.38E+01G / GAL	1.60E+00G / GAL	2.48E+00G / GAL
Light Truck - Diesel 4	DIESEL/GAS OIL	8.50E-02KG / TE	5.50E+00G / GAL	1.60E+00G / GAL	2.48E+00G / GAL
LIGHT TRUCK - METHANOL	METHANOL	2.75E-04KG / L	2.39E-03KG / L	8.00E-01G / GAL	5.16E-02LB / GAL
LIGHT TRUCK - COMPRESSED NATURAL GAS	NATURAL GAS	1.16E+01G / M3	1.24E+00G / M3 /	6.00E-07LB / FT3	1.00E-05LB / FT3
LIGHT TRUCK - ELECTRIC	ELECTRICITY				
AUTOMOBILE - GASOLINE 1	GASOLINE	1.58E+00KG / TE	9.41E-02LB / GAL /	5.17E-03LB / GAL	7.41E-02LB / GAL
AUTOMOBILE - GASOLINE 2	GASOLINE	1.58E+00KG / TE	1.98E+01G / GAL /	1.23E-02KG / TE	3.81E+00G / GAL
AUTOMOBILE - GASOLINE 3	GASOLINE	1.58E+00KG / TE	1.38E+01G / GAL /	1.23E-02KG / TE	2.48E+00G / GAL
Automobile - Gasoline 4	GASOLINE	1.58E+00KG / TE	5.50E+00G / GAL	1.23E-02KG / TE	2.48E+00G / GAL
AUTOMOBILE - DIESEL 1	DIESEL/GAS OIL	8.50E-02KG / TE	4.00E+01G / GAL /	8.00E+00G / GAL	6.95E+00G / GAL
AUTOMOBILE - DIESEL 2	DIESEL/GAS OIL	8.50E-02KG / TE	1.98E+01G / GAL /	4.80E+00G / GAL	3.81E+00G / GAL
AUTOMOBILE - DIESEL 3	DIESEL/GAS OIL	8.50E-02KG / TE	1.38E+01G / GAL /	1.60E+00G / GAL	2.48E+00G / GAL
Automobile - Diesel 4	DIESEL/GAS OIL	8.50E-02KG / TE	5.50E+00G / GAL	1.60E+00G / GAL	2.48E+00G / GAL
AUTOMOBILE - METHANOL	METHANOL	2.75E-04KG / L	2.39E-03KG / L	1.23E-02KG / TE	2.48E+00G / GAL
AUTOMOBILE - COMPRESSED NATURAL GAS	NATURAL GAS	1.16E+01G / M3	1.24E+00G / M3 /	6.00E-07LB / FT3	1.00E-05LB / FT3
AUTOMOBILE - ELECTRIC	ELECTRICITY				
BUS - DIESEL 1	DIESEL/GAS OIL	8.50E-02KG / TE	2.08E-01LB / GAL /	4.80E+00G / GAL	7.94E-02LB / GAL
BUS - DIESEL 2	DIESEL/GAS OIL	8.50E-02KG / TE	2.08E-01LB / GAL /	2.80E-02LB / GAL	7.94E-02LB / GAL
BUS - DIESEL 3	DIESEL/GAS OIL	8.50E-02KG / TE	2.71E+01G / GAL /	2.80E-02LB / GAL	7.94E-02LB / GAL

ENVIRONMENTAL DATA BASE: Selected Sources and Effects		AIR EMISSIONS	AIR EMISSIONS	AIR EMISSIONS	AIR EMISSIONS	
15/04/99		HYDROCARBONS	NITROGEN OXIDES	SULFUR OXIDES	PARTICULATES	
15:07:07		METHANE	TOTAL	TOTAL	TOTAL	
All Demand and Transformation Sources						
	Fuel consumed	Coefficient	Coefficient	Coefficient	Fuel C Coefficient	
DEMAND SOURCES						
Sector						
Subsector						
Enduse						
Device						
Transportation						
	Bus - Diesel 4	DIESEL/GAS OIL	8.50E-02KG / TE	2.71E+01G / GAL	2.80E-02LB / GAL	7.94E-02LB / GAL
	BUS - GASOLINE	GASOLINE	2.64E+00KG / TE	2.71E+01G / GAL	1.08E-02LB / GAL	1.88E-01LB / GAL
	BUS - COMPRESSED NATURAL GAS	NATURAL GAS	1.16E+01G / M3	1.24E+00G / M3 /	6.00E-07LB / FT3	1.00E-05LB / FT3
	BUS - ELECTRIC	ELECTRICITY				
GLOBAL EN. SEC.						
INDUSTRIAL						
ALL END USES						
	OIL-FIRED DEVICES USING RESIDUAL OIL	RESIDUAL/FUELOIL	3.69E-03KG / TE	5.50E-02LB / GAL		
	OIL-FIRED DEVICES USING DISTILLATE (DIESEL) OIL	DIESEL/GAS OIL	8.92E-03KG / TE	2.00E-02LB / GAL		
	OIL-FIRED DEVICES USING AN AVG MIX OF 80%/20%	RESIDUAL/FUELOIL	4.74E-03KG / TE	4.80E-02LB / GAL		
	OIL-FIRED DEVICES USING AN AVG MIX OF 20%/80%	DIESEL/GAS OIL	7.87E-03KG / TE	2.70E-02LB / GAL		
	NATURAL GAS-FIRED DEVICES	NATURAL GAS	7.84E-07LB / FT3	5.50E-04LB / FT3		
	COAL-FIRED DEVICES (BITUMINOUS)	COAL BITUMINOUS	5.85E-02LB / T	9.59E+00KG / TE		
	COAL-FIRED DEVICES (LIGNITE)	COAL LIGNITE	5.85E-02LB / T	6.00E+00LB / T		
CORINAIR IND/HOUHO						
INDUSTRY						
LARGE BOILERS						
	RESIDUAL OIL; WALL OR BOTTOM FIRING < 50 MW	RESIDUAL/FUELOIL	1.25E-01KG / TE	7.47E+00KG / TE	2.03E+02G / TE	1%S
	RESIDUAL OIL; WALL OR BOTTOM FIRING 50 - 100 M	RESIDUAL/FUELOIL	1.25E-01KG / TE	7.89E+00KG / TE	2.03E+02G / TE	1%S

RESIDUAL OIL; WALL OR BOTTOM FIRING 100 - 300	RESIDUAL/FUELOIL	1.25E-01KG / TE	8.72E+00KG / TE	2.03E+02G / TE	1%S
RESIDUAL OIL; WALL OR BOTTOM FIRING > 300 MW	RESIDUAL/FUELOIL	1.25E-01KG / TE	1.08E+01KG / TE	2.03E+02G / TE	1%S
RESIDUAL OIL; TANGENTIAL FIRING < 50 MW	RESIDUAL/FUELOIL	1.25E-01KG / TE	5.81E+00KG / TE	2.03E+02G / TE	1%S
RESIDUAL OIL; TANGENTIAL FIRING 50 - 100 MW	RESIDUAL/FUELOIL	1.25E-01KG / TE	6.23E+00KG / TE	2.03E+02G / TE	1%S
RESIDUAL OIL; TANGENTIAL FIRING 100 - 300 MW	RESIDUAL/FUELOIL	1.25E-01KG / TE	7.06E+00KG / TE	2.03E+02G / TE	1%S
RESIDUAL OIL; TANGENTIAL FIRING > 300 MW	RESIDUAL/FUELOIL	1.25E-01KG / TE	8.72E+00KG / TE	2.03E+02G / TE	1%S
GAS OIL; ALL UNITS < 50 MW	DIESEL/GAS OIL	4.25E+01G / TE	3.40E+00KG / KG	2.00E+02G / TE	1%S
GAS OIL; ALL UNITS 50 - 300 MW	DIESEL/GAS OIL	4.25E+01G / TE	4.25E+00KG / TE	2.00E+02G / TE	1%S
NATURAL GAS; ALL UNITS < 50 MW	NATURAL GAS	1.42E-01G / M3	3.55E+00G / M3		
NATURAL GAS; ALL UNITS 50 - 100 MW	NATURAL GAS	3.55E-02G / L	4.43E+00G / M3		
NATURAL GAS; ALL UNITS 100 - 300 MW	NATURAL GAS	3.55E-02G / L	5.32E+00G / M3		
NATURAL GAS; ALL UNITS > 300 MW	NATURAL GAS	3.55E-02G / L	6.03E+00G / M3		
REFINERY GAS; ALL UNITS < 100 MW	OTHER GAS 1	8.70E-02G / M3	1.22E+01G / M3	3.80E-01G / M3	1%S