

Climate Change

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

ENVIRONMENTAL DATA BASE: Selected Sources and Effects		AIR EMISSIONS CARBON DIOXIDE NON-BIOGENIC		AIR EMISSIONS CARBON MONOXIDE TOTAL		AIR EMISSIONS HYDROCARBONS TOTAL	
*15/04/99 *15:07:07 All Demand and Transformation Sources		Fuel consumed	Coefficient	Fuel Contents	Coefficient	Coefficient	
DEMAND SOURCES							
Sector							
Subsector							
Enduse							
Device							
INDUSTRY							
STANDARD EQUIPMENT							
BOILERS-DIST OIL							
GENERIC		DIESEL/GAS OIL	3.14E+00KG / KG	86.50%C	5.00E-03LB / GAL	2.00E-04LB / GAL	
COGENERATION		DIESEL/GAS OIL	3.14E+00KG / KG	86.50%C			
GRADE 1 OR 2 FUEL * NO EC		DIESEL/GAS OIL	3.14E+00KG / KG	86.50%C	5.00E-03LB / GAL	2.00E-04LB / GAL	
GRADE 4 FUEL * NO EC		DIESEL/GAS OIL	3.14E+00KG / KG	86.50%C	5.00E-03LB / GAL	2.00E-04LB / GAL	
FOR CO PRODUCTION * NO EC		DIESEL/GAS OIL	3.14E+00KG / KG	86.50%C	5.00E-03LB / GAL	2.00E-04LB / GAL	
BOILERS-LPG							
50/50 PROPANE/BUTANE * NO EC		LPG/BOTTLED GAS	2.98E+00KG / KG	82%C	3.30E-03LB / GAL	2.60E-04LB / GAL	
BOILERS-MSW							
BOILER * MASS BURN FIRING		MUN. SOLID WASTE			1.33E+00KG / TE		
SMALL MODULAR		MUN. SOLID WASTE			2.65E-01KG / TE		
BOILERS-NAT GAS							
GENERIC		NATURAL GAS	1.85E+00KG / M3	73.40%C	5.85E-04KG / M3		
COGENERATION * NO EC		NATURAL GAS	1.85E+00KG / M3	73.40%C	4.00E-05LB / FT3	1.40E-06LB / FT3	
LARGE * > 100 GJ/HR (100 MMBTU/HR) * NO EC		NATURAL GAS	1.85E+00KG / M3	73.40%C	4.00E-05LB / FT3	1.40E-06LB / FT3	
LOW NOX * LOW NOX BURNER		NATURAL GAS	1.85E+00KG / M3	73.40%C	5.85E-04KG / M3		
MEDIUM * 10-100 GJ/HR (10-100 MMBTU/HR) * NO EC		NATURAL GAS	1.85E+00KG / M3	73.40%C	3.50E-05LB / FT3	2.80E-06LB / FT3	
BOILER * SELECTIVE CATALYTIC REDUCTION		NATURAL GAS	1.85E+00KG / M3	73.40%C			
SMALL * < 10 GJ/HR (10 MMBTU/HR) * NO EC		NATURAL GAS	1.85E+00KG / M3	73.40%C	2.00E-05LB / FT3	5.30E-06LB / FT3	
FOR CO PRODUCTION * NO EC		NATURAL GAS	1.85E+00KG / M3	73.40%C	3.50E-05LB / FT3	2.80E-06LB / FT3	
BOILERS-RES OIL							
GENERIC * NO EC		RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	6.10E-01KG / TE		
COGENERATION		RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	5.00E-03LB / GAL	2.80E-04LB / GAL	
LOW NOX * LOW NOX BURNER		RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	6.10E-01KG / TE		
GRADE 5 FUEL * NO EC		RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	5.00E-03LB / GAL	2.80E-04LB / GAL	
GRADE 6 FUEL * NO EC		RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	5.00E-03LB / GAL	2.80E-04LB / GAL	
SELECTIVE CATALYTIC REDUCTION		RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	5.62E-01KG / TE		
FOR CO PRODUCTION * NO EC		RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	5.00E-03LB / GAL	2.80E-04LB / GAL	
BOILERS-WASTE OIL							
GENERIC * NO EC		WASTE OIL	3.03E+00KG / KG	83.50%C	5.00E-03LB / GAL	1.00E-03LB / GAL	
ENGINES-DIESEL							

ENVIRON		AIR EMISSIONS CARBON DIOXIDE NON-BIOGENIC		AIR EMISSIONS CARBON MONOXIDE TOTAL		AIR EMISSIONS HYDROCARBONS TOTAL	
*15/04/99 *15:07:07							

All Demand and Transformation Sources		Fuel consumed	Coefficient	Fuel Contents	Coefficient	Coefficient
DEMAND SOURCES						
Sector						
	Subsector					
	Enduse					
	Device					
INDUSTRY						
	GENERIC * NO EC	DIESEL/GAS OIL	3.12E+00KG / KG	86.50%C	1.02E-01LB / GAL	3.21E-02LB / GAL
	LARGE BORE * NO EC	DIESEL/GAS OIL	3.11E+00KG / KG	86.50%C	1.30E-01LB / GAL	1.30E-02LB / GAL
	ENGINES-GASOLINE					
	GENERIC * NO EC	GASOLINE	2.07E+00KG / KG	84.60%C	3.94E+00LB / GAL	1.48E-01LB / GAL
	ENGINES-KEROSENE					
	GENERIC * NO EC	KEROSENE/JETFUEL	3.07E+00KG / KG	85%C	1.02E-01LB / GAL	3.21E-02LB / GAL
	ENGINES-LPG					
	GENERIC * 50/50 PROPANE BUTANE * NO EC	LPG/BOTTLED GAS	2.94E+00KG / KG	82%C	1.29E-01LB / GAL	8.30E-02LB / GAL
	ENGINES-NAT GAS					
	GENERIC * NO EC	NATURAL GAS	1.85E+00KG / M3	73.40%C	4.30E-04LB / FT3	8.29E-05LB / FT3
	ENGINES-OIL					
	GENERIC * NO EC	RESIDUAL/FUELOIL	3.04E+00KG / KG	84.40%C	1.02E-01LB / GAL	3.21E-02LB / GAL
	KILNS-COAL					
	GENERIC	COAL BITUMINOUS	2.71E+00KG / KG	74.60%C	2.31E+00KG / TE	
	LOW EXCESS AIR FIRING	COAL BITUMINOUS	2.71E+00KG / KG	74.60%C	2.31E+00KG / TE	
	LOW NOX BURNER	COAL BITUMINOUS	2.71E+00KG / KG	74.60%C	2.31E+00KG / TE	
	KILNS-NAT GAS					
	GENERIC	NATURAL GAS	1.85E+00KG / M3	73.40%C	2.93E-03KG / M3	
	LOW EXCESS AIR	NATURAL GAS	1.85E+00KG / M3	73.40%C	2.93E-03KG / M3	
	LOW NOX BURNER	NATURAL GAS	1.85E+00KG / M3	73.40%C	2.93E-03KG / M3	
	KILNS-OIL					
	GENERIC	RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	3.35E+00KG / TE	
	LOW EXCESS AIR FIRING	RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	3.35E+00KG / TE	
	LOW NOX BURNER	RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	3.35E+00KG / TE	
	TURBINES-DIESEL					
	GENERIC * NO EC	DIESEL/GAS OIL	3.14E+00KG / KG	86.50%C	1.54E-02LB / GAL	4.77E-03LB / GAL
	FOODSTUFFS					
	BOILERS-OIL					
	GENERIC BOILER FOR PROCESS HEAT	RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C		
	MINERAL PRODUCTS					
	KILNS-COAL					
	GENERIC * PRODUCING NON-METAL PRODUCTS	COAL BITUMINOUS	2.71E+00KG / KG	74.60%C		

ENVIRON 15/04/99 15:07:07 All Demand and Transformation Sources		AIR EMISSIONS CARBON DIOXIDE NON-BIOGENIC		AIR EMISSIONS CARBON MONOXIDE TOTAL	AIR EMISSIONS HYDROCARBONS TOTAL
		Fuel consumed	Coefficient	Coefficient	Coefficient
DEMAND SOURCES					
Sector					
	Subsector				
	Enduse				
	Device				
INDUSTRY					
	PAPER PRODUCTS				
	BOILERS-COAL				
	GENERIC	COAL BITUMINOUS	2.71E+00KG / KG	74.60%C	

HOUSEHOLD		Fuel consumed				
GASOLINE						
SMALL ENGINES						
	2-STROKE LAWN AND GARDEN	GASOLINE	2.16E+00KG / KG	84.60%C	1.62E+00KG / GAL	7.13E-01KG / GAL
	4-STROKE LAWN AND GARDEN	GASOLINE	2.07E+00KG / KG	84.60%C	1.79E+00KG / GAL	1.49E-01KG / GAL
	4-STROKE MISCELLANEOUS	GASOLINE	2.19E+00KG / KG	84.60%C	1.57E+00KG / GAL	9.55E-02KG / GAL
KEROSENE						
COOKING						
	KEROSETTE-TYPE COOKSTOVE	KEROSENE/JETFUEL	2.98E+00KG / KG	85%C	6.70E+01G / KG	
	NUTAN COOKSTOVE	KEROSENE/JETFUEL	3.03E+00KG / KG	85%C	4.10E+01G / KG	
SPACE HEATING						
	GENERIC FURNACE * NO EC	KEROSENE/JETFUEL	3.09E+00KG / KG	85%C	2.50E-01KG / TE	4.00E-01KG / TE
	RADIANT STOVE	KEROSENE/JETFUEL	3.09E+00KG / KG	85%C	4.48E+00G / KG	
	CONVECTIVE STOVE	KEROSENE/JETFUEL	3.09E+00KG / KG	85%C	3.00E-02G / KG	
	MULTISTAGE STOVE	KEROSENE/JETFUEL	3.09E+00KG / KG	85%C	6.00E-02G / KG	
LIGHTING						
	GENERIC LAMPS	KEROSENE/JETFUEL	3.09E+00KG / KG	85%C		
LPG						
ALL-PURPOSE-LPG						
	GENERIC EQUIPMENT * US	LPG/BOTTLED GAS	2.98E+00KG / KG	82%C	1.80E-03LB / GAL	7.10E-04LB / GAL
SPACE HEATING						
	GENERIC FURNACE * NO EC	LPG/BOTTLED GAS	2.98E+00KG / KG	82%C	4.40E-01KG / TE	1.70E-01KG / TE
	FURNACE	LPG/BOTTLED GAS	2.98E+00KG / KG	82%C	4.31E-01KG / TE	
NATURAL GAS						
ALL-PURPOSE NG						
	GENERIC EQUIPMENT FOR COOKING, WATER AND SP	NATURAL GAS	1.85E+00KG / M3	73.40%C		
COOKING						
	GENERIC	NATURAL GAS	1.85E+00KG / M3	73.40%C	9.75E-03KG / M3	1.95E-04KG / M3

ENVIRON *15/04/99 *15:07:07 All Demand and Transformation Sources		AIR EMISSIONS CARBON DIOXIDE NON-BIOGENIC		AIR EMISSIONS CARBON MONOXIDE TOTAL		AIR EMISSIONS HYDROCARBONS TOTAL	
		Fuel consumed	Coefficient	Fuel Contents	Coefficient	Coefficient	
DEMAND SOURCES							
Sector							
	Subsector						
	Enduse						
	Device						
SPACE HEATING							
	HEATER * BLUERAY-TYPE	NATURAL GAS	1.85E+00KG / M3	73.40%C	9.13E-05KG / M3		
	BOILER * US * NO EC	NATURAL GAS	1.85E+00KG / M3	73.40%C	2.00E-05LB / FT3	8.00E-06LB / FT3	
	HEATER * LOW NOx BURNER	NATURAL GAS	1.85E+00KG / M3	73.40%C	3.51E-04KG / M3		
	HEATER * PULSE COMBUSTION	NATURAL GAS	1.85E+00KG / M3	73.40%C	3.51E-04KG / M3		
	GENERIC HEATER * NO EC	NATURAL GAS	1.85E+00KG / M3	73.40%C	3.20E-04KG / M3	1.28E-04KG / M3	
	GENERIC HEATER STOVE * US	NATURAL GAS	1.85E+00KG / M3	73.40%C	3.90E-04KG / M3	1.56E-04KG / M3	
COMMERCIAL-INSTIT							
STANDARD EQUIPMENT							
	ALL PURPOSE-LPG						
	GENERIC EQUIPMENT * US	LPG/BOTTLED GAS	2.98E+00KG / KG	82%C	1.85E-03LB / GAL	7.30E-04LB / GAL	
	BOILERS-DIST OIL						
	GENERIC	DIESEL/GAS OIL	3.14E+00KG / KG	86.50%C	6.70E-01KG / TE		
	GRADE 1 AND 2 * NO EC	DIESEL/GAS OIL	3.14E+00KG / KG	86.50%C	5.00E-03LB / GAL	3.40E-04LB / GAL	
	GRADE 4 * NO EC	DIESEL/GAS OIL	3.14E+00KG / KG	86.50%C	5.00E-03LB / GAL	3.40E-04LB / GAL	

BOILERS-LIG COAL						
PULVERIZED LIGNITE	COAL LIGNITE	1.12E+00KG / KG	31%C	6.00E-01LB / T	7.00E-02LB / T	
TANGENTIALLY FIRED * PULVERIZED LIGNITE * NO EC	COAL LIGNITE	1.12E+00KG / KG	31%C	6.00E-01LB / T	7.00E-02LB / T	
SPREADER-STOKER * NO EC	COAL LIGNITE	1.12E+00KG / KG	31%C	5.00E+00LB / T	7.00E-02LB / T	
TRAVELING GRATE (OVERFEED) STOKER * NO EC	COAL LIGNITE	1.12E+00KG / KG	31%C	6.00E+00LB / T	7.00E-02LB / T	
BOILERS-LPG						
GENERIC * 50/50 PROPANE/BUTANE	LPG/BOTTLED GAS	2.98E+00KG / KG	82%C			
BOILERS-NAT GAS						
GENERIC	NATURAL GAS	1.85E+00KG / M3	73.40%C	3.51E-04KG / M3		
SMALL * < 10 GJ/HR (10 MMBTU/HR) * NO EC	NATURAL GAS	1.85E+00KG / M3	73.40%C	2.00E-05LB / FT3	5.30E-06LB / FT3	
MEDIUM * 10-100 GJ/HR (10-100 MMBTU/HR) * NO EC	NATURAL GAS	1.85E+00KG / M3	73.40%C	3.50E-05LB / FT3	2.80E-06LB / FT3	
LARGE * > 100 GJ/HR (100 MMBTU/HR) * NO EC	NATURAL GAS	1.85E+00KG / M3	73.40%C	4.00E-05LB / FT3	1.40E-06LB / FT3	
BOILERS-RESID OIL						
GENERIC	RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	6.97E-01KG / TE		
GRADE 5 * NO EC	RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	5.00E-03LB / GAL	1.13E-03LB / GAL	
GRADE 6 * NO EC	RESIDUAL/FUELOIL	3.06E+00KG / KG	84.40%C	5.00E-03LB / GAL	1.13E-03LB / GAL	

ENVIRON *15/04/99 *15:07:07 All Demand and Transformation Sources		AIR EMISSIONS CARBON DIOXIDE NON-BIOGENIC		AIR EMISSIONS CARBON MONOXIDE TOTAL		AIR EMISSIONS HYDROCARBONS TOTAL	
		Fuel consumed	Coefficient	Fuel Contents	Coefficient	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	NATURAL GAS	1.85E+00KG / M3	73.40%C	1.56E-04KG / M3	
MOTORCYCLES-GASOL					
2 STROKE MOTOR-BIKES OR MO-PEDS * NO EC	GASOLINE	3.07E+00KG / KG	84.60%C		
2 STROKE MOTORCYCLES * NO EC	GASOLINE	3.07E+00KG / KG	84.60%C		

ENVIRON *15/04/99 *15:07:07 All Demand and Transformation Sources		AIR EMISSIONS CARBON DIOXIDE NON-BIOGENIC		AIR EMISSIONS CARBON MONOXIDE TOTAL		AIR EMISSIONS HYDROCARBONS TOTAL	
		Fuel consumed	Coefficient	Fuel Contents	Coefficient	Coefficient	
DEMAND SOURCES							
Sector							
Subsector							
Enduse							
Device							
Transportation							
	US 1965 * E STD US 1965 * E 1990 * US LEADED	GASOLINE	2.01E+00KG / KG	84.60%C	1.89E+03G / GAL	5.95E+02G / GAL	
	US 1970 * E STD US 1970 * E 1990 * US LEADED	GASOLINE	2.01E+00KG / KG	84.60%C	1.89E+03G / GAL	5.95E+02G / GAL	
	US 1975 * E STD US 1975 * E 1990 * US UNLEADED	GASOLINE	2.01E+00KG / KG	84.60%C	1.89E+03G / GAL	5.95E+02G / GAL	
	US 1980 * E STD US 1980 * E 1990 * US UNLEADED	GASOLINE	2.48E+00KG / KG	84.60%C	1.06E+03G / GAL	3.70E+02G / GAL	
	US 1985 * E STD US 1985 * E 1990 * US UNLEADED	GASOLINE	2.49E+00KG / KG	84.60%C	1.04E+03G / GAL	3.45E+02G / GAL	
	US 1990 * E STD US 1990 * E 1990 * US UNLEADED	GASOLINE	2.55E+00KG / KG	84.60%C	9.25E+02G / GAL	2.50E+02G / GAL	
	TRUCK-BUSES-GASOL						
	HEAVY US 1965 * GVW>3900 KG*E STD US 1965*E	GASOLINE	1.96E+00KG / KG	84.60%C	1.98E+03G / GAL	2.39E+02G / GAL	
	HEAVY US 1970 * GVW>3900 KG*E STD US 1970*E	GASOLINE	2.08E+00KG / KG	84.60%C	1.77E+03G / GAL	1.52E+02G / GAL	
	HEAVY US 1975 * GVW>3900 KG*E STD US 1975*E	GASOLINE	2.18E+00KG / KG	84.60%C	1.59E+03G / GAL	1.33E+02G / GAL	
	HEAVY US 1980 * GVW>3900 KG*E STD US 1980*E	GASOLINE	2.28E+00KG / KG	84.60%C	1.40E+03G / GAL	1.11E+02G / GAL	
	HEAVY US 1985 * GVW>3900 KG*E STD US 1985*E	GASOLINE	2.84E+00KG / KG	84.60%C	4.08E+02G / GAL	4.41E+01G / GAL	
	HEAVY US 1990 * GVW>3900 KG*E STD US 1990*E	GASOLINE	3.00E+00KG / KG	84.60%C	1.22E+02G / GAL	2.67E+01G / GAL	
	TRUCKS-DIESEL						
	GENERIC HEAVY	DIESEL/GAS OIL	3.10E+00KG / KG	86.50%C	2.68E+01KG / TE		
	HEAVY * LOW NOX CONTROL	DIESEL/GAS OIL	3.10E+00KG / KG	86.50%C	2.47E+01KG / TE		
	HEAVY US 1965 * GVW > 3900 KG * E STD US 1965	DIESEL/GAS OIL	3.14E+00KG / KG	86.50%C			
	HEAVY US 1970 * GVW > 3900 KG * E STD US 1970	DIESEL/GAS OIL	3.09E+00KG / KG	86.50%C	1.11E+02G / GAL	4.07E+01G / GAL	
	HEAVY US 1975 * GVW > 3900 KG * E STD US 1975	DIESEL/GAS OIL	3.09E+00KG / KG	86.50%C	1.09E+02G / GAL	3.96E+01G / GAL	
	HEAVY US 1980 * GVW > 3900 KG * E STD US 1980	DIESEL/GAS OIL	3.10E+00KG / KG	86.50%C	8.58E+01G / GAL	3.36E+01G / GAL	
	HEAVY US 1985 * GVW > 3900 KG * E STD US 1985	DIESEL/GAS OIL	3.11E+00KG / KG	86.50%C	6.33E+01G / GAL	1.98E+01G / GAL	
	HEAVY US 1990 * GVW > 3900 KG * E STD US 1990	DIESEL/GAS OIL	3.12E+00KG / KG	86.50%C	4.46E+01G / GAL	1.32E+01G / GAL	
	LIGHT US 1965 * GVW < 3900 KG * E STD US 1965 *	DIESEL/GAS OIL	3.12E+00KG / KG	86.50%C	4.35E+01G / GAL	2.76E+01G / GAL	
	LIGHT US 1970 * GVW < 3900 KG * E STD US 1970 *	DIESEL/GAS OIL	3.12E+00KG / KG	86.50%C	4.03E+01G / GAL	2.54E+01G / GAL	
	LIGHT US 1975 * GVW < 3900 KG * E STD US 1975 *	DIESEL/GAS OIL	3.12E+00KG / KG	86.50%C	4.18E+01G / GAL	2.44E+01G / GAL	
	LIGHT US 1980 * GVW < 3900 KG * E STD US 1980 *	DIESEL/GAS OIL	3.12E+00KG / KG	86.50%C	5.15E+01G / GAL	3.06E+01G / GAL	
	LIGHT US 1985 * GVW < 3900 KG * E STD 1985 * E 19	DIESEL/GAS OIL	3.12E+00KG / KG	86.50%C	3.31E+01G / GAL	1.45E+01G / GAL	
	LIGHT US 1990 * GVW < 3900 KG * E STD US 1990	DIESEL/GAS OIL	3.13E+00KG / KG	86.50%C	3.12E+01G / GAL	9.60E+00G / GAL	
	TRUCKS-GASOLINE						
	HEAVY 3-WAY CATALYST	GASOLINE	3.03E+00KG / KG	84.60%C	2.65E+01KG / TE		
	HEAVY GENERIC	GASOLINE	1.68E+00KG / KG	84.60%C	8.82E+02KG / TE		
	HEAVY * ENGINE CONTROL FOR EC	GASOLINE	2.17E+00KG / KG	84.60%C	5.73E+02KG / TE		

ENVIRON *15/04/99 *15:07:07 All Demand and Transformation Sources		AIR EMISSIONS CARBON DIOXIDE NON-BIOGENIC		AIR EMISSIONS CARBON MONOXIDE TOTAL		AIR EMISSIONS HYDROCARBONS TOTAL	
		Fuel consumed	Coefficient	Fuel Contents	Coefficient	Coefficient	
DEMAND SOURCES							

Sector						
Subsector						
Enduse						
Device						
Transporatation		HEAVY * OXIDATION CATALYST	GASOLINE	2.93E+00KG / KG	84.60%C	8.82E+01KG / TE
		LIGHT US 1965 * GVW<2730 KG*E STD US 1965*E 19	GASOLINE	3.00E+00KG / KG	84.60%C	1.31E+02G / GAL 1.74E+02G / GAL
		LIGHT US 1970 * GVW<2730 KG*E STD US 1970*E 19	GASOLINE	2.48E+00KG / KG	84.60%C	1.06E+03G / GAL 1.57E+02G / GAL
		LIGHT US 1975 * GVW<2730 KG*E STD US 1975*E 19	GASOLINE	2.64E+00KG / KG	84.60%C	7.64E+02G / GAL 1.04E+02G / GAL
		LIGHT US 1980 * GVW<2730 KG*E STD US 1980*E 19	GASOLINE	2.66E+00KG / KG	84.60%C	7.36E+02G / GAL 9.02E+01G / GAL
		LIGHT US 1985 * GVW<2730 KG*E STD US 1985*E 19	GASOLINE	2.95E+00KG / KG	84.60%C	2.05E+02G / GAL 4.35E+01G / GAL
		LIGHT US 1990 * GVW<2730 KG*E STD US 1990*E 19	GASOLINE	2.99E+00KG / KG	84.60%C	1.40E+02G / GAL 3.36E+01G / GAL
		MEDIUM US 1965*GVW 2730-3900 KG*E STD US 196	GASOLINE	2.45E+00KG / KG	84.60%C	1.11E+03G / GAL 1.90E+02G / GAL
		MEDIUM US 1970*GVW 2730-3900 KG*E STD US 197	GASOLINE	2.59E+00KG / KG	84.60%C	8.55E+02G / GAL 1.28E+02G / GAL
		MEDIUM US 1975*GVW 2730-3900 KG*E STD US 197	GASOLINE	2.58E+00KG / KG	84.60%C	8.81E+02G / GAL 1.26E+02G / GAL
		MEDIUM US 1980*GVW 2730-3900 KG*E STD US 198	GASOLINE	2.77E+00KG / KG	84.60%C	5.41E+02G / GAL 6.21E+01G / GAL
		MEDIUM US 1985*GVW 2730-3900 KG*E STD US 198	GASOLINE	2.99E+00KG / KG	84.60%C	1.41E+02G / GAL 2.66E+01G / GAL
		MEDIUM US 1990*GVW 2730-3900 KG*E STD US 199	GASOLINE	3.02E+00KG / KG	84.60%C	8.82E+01G / GAL 1.98E+01G / GAL
		VEHICLES-DIESEL				
		UNSPECIFIED EUROPEAN	DIESEL/GAS OIL	3.14E+00KG / KG	86.50%C	
		VEHICLES-GASOLINE				
		UNSPECIFIED EUROPEAN	GASOLINE	3.07E+00KG / KG	84.60%C	
AIR		ENGINES-GASOLINE				
		GENERIC	GASOLINE	1.37E+00KG / KG	84.60%C	1.08E+03KG / TE
		JETS-KEROSENE				
		ALL JET TRANSPORTATION	KEROSENE/JETFUEL	3.08E+00KG / KG	85%C	5.44E+00KG / TE
US AVERAGES			Fuel consumed			
INDUSTRIAL						
ALL INDUSTRIES						
		ALL NATURAL GAS COMBUSTION	NATURAL GAS	1.96E+00KG / M3		9.60E-05LB / FT3 3.20E-05LB / FT3
		ALL BITUMINOUS COAL COMBUSTION	COAL BITUMINOUS	2.74E+03KG / TE		1.28E+00LB / T 8.80E-02LB / T
		ALL RESIDUAL OIL COMBUSTION	RESIDUAL/FUELOIL	3.09E+03KG / TE		1.10E-02LB / GAL 1.80E-03LB / GAL
		ALL DISTILLATE OIL COMBUSTION	RESIDUAL/FUELOIL	3.16E+03KG / TE		3.50E-03LB / GAL 6.30E-04LB / GAL
		ALL LPG COMBUSTION	LPG/BOTTLED GAS	3.01E+00KG / KG		4.75E-02LB / TE 8.64E-04LB / TE
		ALL BIOMASS COMBUSTION	FIREWOOD	1.46E+03KG / TE		1.64E+00LB / T 5.76E-01LB / T

ENVIRONMENTAL		AIR EMISSIONS		AIR EMISSIONS		AIR EMISSIONS	
*15/04/99		CARBON DIOXIDE		CARBON MONOXIDE		HYDROCARBONS	
*15:07:07		NON-BIOGENIC		TOTAL		TOTAL	
All Demand and Transformation Sources		Fuel consumed	Coefficient	Fuel Contents	Coefficient	Coefficient	
DEMAND SOURCES							
Sector							
Subsector							
Enduse							
Device							
		ALL METALURGICAL COAL COMBUSTION	COAL BITUMINOUS	2.74E+03KG / TE		1.28E+00LB / T	8.80E-02LB / T
		ALL MOTOR GASOLINE COMBUSTION	GASOLINE	3.08E+00KG / KG		1.66E+00LB / TE	8.42E-02LB / TE
		ALL OTHER RENEWABLES" COMBUSTION"	MUN. SOLID WASTE	6.06E-01KG / KG		1.00E-03LB / GAL	2.00E-04LB / GAL
		PETROLEUM COKE USE (REFINERY)	PETROLEUM COKE	3.12E+00KG / KG		6.00E-01LB / T	7.00E-02LB / T
		NEW BIOMASS COGEN AND NEW INDUSTRIAL COGE	FIREWOOD	1.92E+00LB / LB		1.64E+00LB / T	7.00E-04LB / LB
TRANSPORTATION							
PERSONAL-PRIVATE							

LIGHT TRUCK - GASOLINE 1	GASOLINE	3.08E+00KG / KG	6.25E-01LB / GAL	1.14E-01LB / GAL
LIGHT TRUCK - GASOLINE 2	GASOLINE	3.08E+00KG / KG	1.73E+02G / GAL	1.35E+01G / GAL
LIGHT TRUCK - GASOLINE 3	GASOLINE	3.08E+00KG / KG	1.04E+02G / GAL	7.70E+00G / GAL
Light Truck - Gasoline 4	GASOLINE	3.08E+00KG / KG	4.68E+01G / GAL	3.44E+00G / GAL
LIGHT TRUCK - DIESEL 1	DIESEL/GAS OIL	3.01E+00KG / KG	2.90E+02G / GAL	2.74E+01G / GAL
LIGHT TRUCK - DIESEL 2	DIESEL/GAS OIL	3.01E+00KG / KG	1.73E+02G / GAL	1.35E+01G / GAL
LIGHT TRUCK - DIESEL 3	DIESEL/GAS OIL	3.01E+00KG / KG	1.05E+02G / GAL	7.70E+00G / GAL
Light Truck - Diesel 4	DIESEL/GAS OIL	3.01E+00KG / KG	4.68E+01G / GAL	3.44E+00G / GAL
LIGHT TRUCK - METHANOL	METHANOL	1.12E+00KG / L	1.56E-01KG / L	7.70E+00G / GAL
LIGHT TRUCK - COMPRESSED NATURAL GAS	NATURAL GAS	4.10E+03G / M3	2.72E+00G / M3	3.88E-01G / M3
LIGHT TRUCK - ELECTRIC	ELECTRICITY			
AUTOMOBILE - GASOLINE 1	GASOLINE	3.08E+00KG / KG	6.05E-01LB / GAL	1.02E-01LB / GAL
AUTOMOBILE - GASOLINE 2	GASOLINE	3.08E+00KG / KG	9.62E+01G / GAL	9.12E+00G / GAL
AUTOMOBILE - GASOLINE 3	GASOLINE	3.08E+00KG / KG	1.05E+02G / GAL	7.70E+00G / GAL
Automobile - Gasoline 4	GASOLINE	3.08E+00KG / KG	4.68E+01G / GAL	3.44E+00G / GAL
AUTOMOBILE - DIESEL 1	DIESEL/GAS OIL	3.14E+03KG / TE	1.40E+02G / GAL	8.20E+00G / GAL
AUTOMOBILE - DIESEL 2	DIESEL/GAS OIL	3.14E+03KG / TE	9.62E+01G / GAL	9.12E+00G / GAL
AUTOMOBILE - DIESEL 3	DIESEL/GAS OIL	3.14E+03KG / TE	1.05E+02G / GAL	7.70E+00G / GAL
Automobile - Diesel 4	DIESEL/GAS OIL	3.14E+03KG / TE	4.68E+01G / GAL	3.44E+00G / GAL
AUTOMOBILE - METHANOL	METHANOL	1.12E+00KG / L	1.56E-01KG / TE	7.70E+00G / GAL
AUTOMOBILE - COMPRESSED NATURAL GAS	NATURAL GAS	4.10E+03G / M3	2.72E+00G / M3	3.88E-01G / M3
AUTOMOBILE - ELECTRIC	ELECTRICITY			
BUS - DIESEL 1	DIESEL/GAS OIL	3.01E+00KG / KG	1.31E-01LB / GAL	4.67E-02LB / GAL
BUS - DIESEL 2	DIESEL/GAS OIL	3.01E+00KG / KG	1.31E-01LB / GAL	4.67E-02LB / GAL
BUS - DIESEL 3	DIESEL/GAS OIL	3.01E+00KG / KG	1.27E+02G / GAL	9.79E+00G / GAL

ENVIRONMENTAL *15/04/99 *15:07:07 All Demand and Transformation Sources		AIR EMISSIONS CARBON DIOXIDE NON-BIOGENIC		AIR EMISSIONS CARBON MONOXIDE TOTAL	AIR EMISSIONS HYDROCARBONS TOTAL
		Fuel consumed	Coefficient	Fuel Contents	Coefficient
DEMAND SOURCES					
Sector					
Subsector					
Enduse					
Device					
Transportation					
	Bus - Diesel 4	DIESEL/GAS OIL	3.01E+00KG / KG	1.27E+02G / GAL	9.79E+00G / GAL
	BUS - GASOLINE	GASOLINE	3.08E+00KG / KG	5.77E+00LB / GAL	4.91E-01LB / GAL
	BUS - COMPRESSED NATURAL GAS	NATURAL GAS	4.10E+03G / M3	2.72E+00G / M3	3.88E-01G / M3
	BUS - ELECTRIC	ELECTRICITY			
GLOBAL EN. SEC.					
INDUSTRIAL					
ALL END USES					
	OIL-FIRED DEVICES USING RESIDUAL OIL	RESIDUAL/FUELOIL	3.06E+00KG / KG	5.00E-03LB / GAL	2.80E-04LB / GAL
	OIL-FIRED DEVICES USING DISTILLATE (DIESEL) OIL	DIESEL/GAS OIL	3.14E+00KG / KG	5.00E-03LB / GAL	2.00E-04LB / GAL
	OIL-FIRED DEVICES USING AN AVG MIX OF 80%/20%	RESIDUAL/FUELOIL	3.08E+00KG / KG	5.00E-03LB / GAL	2.64E-04LB / GAL
	OIL-FIRED DEVICES USING AN AVG MIX OF 20%/80%	DIESEL/GAS OIL	3.13E+00KG / KG	5.00E-03LB / GAL	2.16E-04LB / GAL
	NATURAL GAS-FIRED DEVICES	NATURAL GAS	1.85E+00KG / M3	4.00E-05LB / FT3	1.40E-06LB / FT3
	COAL-FIRED DEVICES (BITUMINOUS)	COAL BITUMINOUS	2.71E+00KG / KG	5.00E+00LB / T	7.00E-02LB / T
	COAL-FIRED DEVICES (LIGNITE)	COAL LIGNITE	1.13E+00KG / KG	5.00E+00LB / T	7.00E-02LB / T
CORINAIR IND/HOUHO					
INDUSTRY					
LARGE BOILERS					
	RESIDUAL OIL; WALL OR BOTTOM FIRING < 50 MW	RESIDUAL/FUELOIL			
	RESIDUAL OIL; WALL OR BOTTOM FIRING 50 - 100 M	RESIDUAL/FUELOIL			

RESIDUAL OIL; WALL OR BOTTOM FIRING 100 - 300	RESIDUAL/FUELOIL			
RESIDUAL OIL; WALL OR BOTTOM FIRING > 300 MW	RESIDUAL/FUELOIL			
RESIDUAL OIL; TANGENTIAL FIRING < 50 MW	RESIDUAL/FUELOIL			
RESIDUAL OIL; TANGENTIAL FIRING 50 - 100 MW	RESIDUAL/FUELOIL			
RESIDUAL OIL; TANGENTIAL FIRING 100 - 300 MW	RESIDUAL/FUELOIL			
RESIDUAL OIL; TANGENTIAL FIRING > 300 MW	RESIDUAL/FUELOIL			
GAS OIL; ALL UNITS < 50 MW	DIESEL/GAS OIL			
GAS OIL; ALL UNITS 50 - 300 MW	DIESEL/GAS OIL			
NATURAL GAS; ALL UNITS < 50 MW	NATURAL GAS			
NATURAL GAS; ALL UNITS 50 - 100 MW	NATURAL GAS			
NATURAL GAS; ALL UNITS 100 - 300 MW	NATURAL GAS			
NATURAL GAS; ALL UNITS > 300 MW	NATURAL GAS			
REFINERY GAS; ALL UNITS < 100 MW	OTHER GAS 1			