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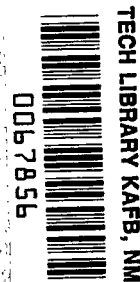
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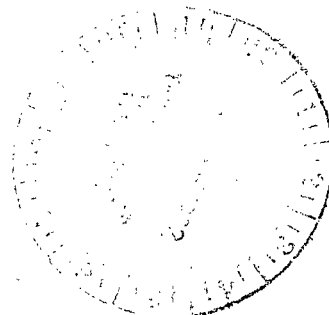
Thermodynamic and Transport Combustion Properties of Hydrocarbons With Air

III - Properties in U.S. Customary Units

Sanford Gordon



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Thermodynamic and Transport Combustion Properties of Hydrocarbons With Air

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Sanford Gordon
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NASA

National Aeronautics
and Space Administration

Scientific and Technical
Information Branch

Summary

Thermodynamic and transport combustion properties have been calculated for a wide range of conditions for the reaction of hydrocarbons with air. Three hydrogen-carbon atom ratios were selected to represent the range of aircraft fuels ($H/C = 1.7, 2.0, \text{ and } 2.1$). For each of these H/C ratios, combustion properties were calculated for the following conditions:

Equivalence ratio: 0, 0.25, 0.5, 0.75, 1.0, and 1.25

Water-dry air mass ratio: 0 and 0.03

Pressure, kPa: 1.01325, 10.1325, 101.325, 1013.25, and 5066.25 (or in atm: 0.01, 0.1, 1, 10, and 50)

Temperature, K: every 10 degrees from 200 to 900 K; every 50 degrees from 900 to 3000 K

Temperature, °R: every 20 degrees from 360° to 1600° R; every 100 degrees from 1600° to 5400° R

The properties presented are composition, density, molecular weight, enthalpy, entropy, specific heat at constant pressure, volume derivatives, isentropic exponent, velocity of sound, viscosity, thermal conductivity, and Prandtl number. Property tables are based on compositions that were calculated by assuming both (1) chemical equilibrium (for both homogeneous and heterogeneous phases) and (2) constant compositions for all temperatures. Properties in SI units are presented in part I (TP-1906) for the Kelvin temperature schedules, and the corresponding compositions are presented in part II (TP-1907). Properties in U.S. customary units are presented in this report for the Rankine temperature schedules, and corresponding compositions are presented in part IV (TP-1909).

Introduction

This report contains the same thermodynamic and transport properties as described in part I (ref. 1), except that values are given in U.S. customary (engineering) units rather than the SI (metric) units of part I. For details concerning the calculations, see part I. Tables of compositions corresponding to the properties tables in this report are given in part IV.

Tables

Symbols used in the equations of part I are defined there. For this report, only the corresponding symbols and units used in the combustion properties tables are presented in table I.

Conversion factors, presented in table II, permit converting the units in the properties tables of this report to the units of part I as well as to some other units. For each quantity presented in table II, the first line gives the conversion factor to SI units. Footnoted lines contain the factors needed to convert the part III values to the part I values.

The detailed numbers of the combustion properties tables are summarized in table III. The properties tables are presented at the end of this report. As a convenience in looking up combustion properties tables for various conditions, the discussion of the numbering system given in part I is repeated here.

The numbers for the combustion property tables consist of a numerical part and an alphabetical part, for example, table 10.3B. The five letters A through E are used to designate five types of tables that differ according to several assumptions made concerning composition. The conditions covered by these tables are summarized as follows:

Table	Type of composition	Equivalence ratio, ER	Temperature range, °R
A	Constant	≤ 1.0	360 to 5400
B	Equilibrium (homogeneous phase)	≤ 1.0	1600 to 5400
C	Equilibrium (heterogeneous phases)	≤ 1.0	360 to 760
D	Equilibrium (homogeneous phase)	1.25	360 to 5400
E	Equilibrium (heterogeneous phases)	1.25	360 to 1400

The numerical part of the table numbers can consist of a whole number (tables A and C) or a whole number plus one decimal place (tables B, D, and E). The whole number part for all tables depends on the type of air (dry or wet), the H/C ratio, and the equivalence ratio. These numbers are summarized as follows:

Hydrogen-carbon ratio, H/C	Dry air						Wet air					
	Equivalence ratio, ER											
	0	0.25	0.5	0.75	1.0	1.25	0	0.25	0.5	0.75	1.0	1.25
Whole number part of table numbers (tables A to E)												
Air only	1	---	---	---	---	---	17	---	---	---	---	---
1.7	---	2	3	4	5	6	---	18	19	20	21	22
2.0	---	7	8	9	10	11	---	23	24	25	26	27
2.1	---	12	13	14	15	16	---	28	29	30	31	32

In tables B, D, and E the decimal place is used to designate pressure as follows:

Pressure		Decimal part of table numbers (tables B, D, and E)
kPa	atm	
1.01325	0.01	0.1
10.1325	.1	.2
101.325	1.0	.3
1013.25	10	.4
5066.25	50	.5

As an example of the combustion properties table numbers summarized in table III, all table numbers for the conditions of dry air, H/C=2.0, and ER=1 start with 10. Thus, for these conditions and assumed constant compositions the table number is 10A; the low-temperature equilibrium table is 10C. The high-temperature equilibrium tables for this condition are divided into five tables (10.1B, 10.2B, 10.3B, 10.4B, and 10.5B) according to whether the pressure is 0.01, 0.1, 1, 10, or 50 atm.

Lewis Research Center
National Aeronautics and Space Administration
Cleveland, Ohio, November 27, 1981

Reference

- Gordon, Sanford: Thermodynamic and Transport Combustion Properties of Hydrocarbons with Air. I—Properties in SI Units. NASA TP-1906, 1982.

TABLE I. - SYMBOLS AND UNITS

Quantity	Symbol, part I text (NASA TP-1906)	Tables A to E	
		Symbol	U.S. customary units
Chemical equivalence ratio	r	CHEM. EQUIV. RATIO	
Conductivity	λ	COND	BTU/FT HR R
Specific heat at constant pressure	c_p	CP	BTU/LB R
Density	ρ	DENSITY	LB/FT ³
Derivative of logarithm of volume with respect to logarithm of pressure	$(\partial \ln v / \partial \ln P)_T$	DLVDLP	
Derivative of logarithm of volume with respect to logarithm of temperature	$(\partial \ln v / \partial \ln T)_p$	DLVDLT	
Equivalence ratio	ER	EQUIV. RATIO	
Fuel-air mass ratio	f/a	F/A	
Ratio of specific heats	γ	GAM	
Isentropic exponent	γ_s	(GAM)S	
Enthalpy	h	H	BTU/LB
Fuel hydrogen-carbon atom ratio	H/C	H/C	
Molecular weight	M	MW	
Pressure	P	P	LB/IN ² (also ATM)
Prandtl number	Pr	PRAN	
Entropy	s	ENTROPY	BTU/LB R
Temperature	T	T	R
Viscosity	η	VIS	LB/FT HR
Velocity of sound	a	VS	FT/S
Water - dry air mass ratio	w/a	W/A	

TABLE II. - CONVERSION FACTORS

To convert from-	To-	Multiply by-
Length		
ft	m (SI)	0.3048
cm	m	0.01
Mass		
lb	kg (SI)	0.45359237
lb	g	453.59237
g	kg	0.001
Pressure		
lb/in ²	N/m ² (SI)	6894.7572
lb/in ² ^a	atm	0.06804596
atm	lb/in ²	14.69595
Pa	N/m ²	1
kPa	N/m ²	1000
atm	N/m ²	101325
atm	kPa	101.325
kPa	atm	0.009869233
Density		
lb/ft ³	kg/m ³ (SI)	16.018463
lb/ft ³ ^a	g/cm ³	0.016018463
g/cm ³	lb/ft ³	62.42796
g/cm ³	kg/m ³	1000
Energy		
Btu	J (SI)	1055.056
cal (thermochemical)	J	4.184
cal	Btu	0.003965666
Btu	cal	252.1644
Specific energy		
Btu/lb	J/kg (SI)	2326.000
Btu/lb ^a	J/g	2.326000
J/g	J/kg	1000
J/g	Btu/lb	0.4299226
J/g	cal/g	0.23900574
Btu/lb	cal/g	0.5559274
cal/g	Btu/lb	1.798796

^aMultiply the values in these units in part III by the factor given to obtain the corresponding values in the units of part I.

TABLE II. - Concluded.

To convert from-	To-	Multiply by-
Specific energy per degree		
Btu/lb R	J/kg K	4186.801
Btu/lb R ^a	J/g K	4.186801
Btu/lb R	cal/g K	1.000669
J/g K	J/kg K	1000
J/g K	Btu/lb R	0.2388459
J/g K	cal/g K	0.2390057
Viscosity		
lb/ft hr	Ns/m ²	4.133789x10 ⁻⁴
lb/ft hr ^a	micropoise	4.133789x10 ³
kg/m s	Ns/m ² (SI)	1
micropoise	Ns/m ²	1x10 ⁻⁷
micropoise	lb/ft hr	2.419088x10 ⁻⁴
poise	Ns/m ²	0.1
poise	g/cm s	1
Thermal conductivity		
Btu/ft hr R	J/m s K	1.730735
Btu/ft hr R ^a	μJ/cm s K	1.730735x10 ⁴
μJ/cm s K	J/m s K (SI)	1x10 ⁻⁴
μJ/cm s K	Btu/ft hr R	5.777892x10 ⁻⁵

^aMultiply the values in these units in part III by the factor given to obtain the corresponding values in the units of part I.

(a) Dry air

Hydrogen-carbon ratio, H/C	Equivalence ratio, ER	Constant composition, all pressures	Equilibrium composition						Low temperatures, all pressures
			High temperatures						
			P = 0.01	P = 0.1	P = 1	P = 10	P = 50		
---	Air only	1A	1.1B	1.2B	1.3B	1.4B	1.5B	---	
1.7	0.25	2A	2.1B	2.2B	2.3B	2.4B	2.5B	2C	
	.5	3A	3.1B	3.2B	3.3B	3.4B	3.5B	3C	
	.75	4A	4.1B	4.2B	4.3B	4.4B	4.5B	4C	
	1.0	5A	5.1B	5.2B	5.3B	5.4B	5.5B	5C	
	1.25 (homogeneous)	---	6.1D	6.2D	6.3D	6.4D	6.5D	---	
1.25 (heterogeneous)	---	6.1E	6.2E	6.3E	6.4E	6.5E	---		
2.0	0.25	7A	7.1B	7.2B	7.3B	7.4B	7.5B	7C	
	.5	8A	8.1B	8.2B	8.3B	8.4B	8.5B	8C	
	.75	9A	9.1B	9.2B	9.3B	9.4B	9.5B	9C	
	1.0	10A	10.1B	10.2B	10.3B	10.4B	10.5B	10C	
	1.25 (homogeneous)	---	11.1D	11.2D	11.3D	11.4D	11.5D	---	
1.25 (heterogeneous)	---	11.1E	11.2E	11.3E	11.4E	11.5E	---		
2.1	0.25	12A	12.1B	12.2B	12.3B	12.4B	12.5B	12C	
	.5	13A	13.1B	13.2B	13.3B	13.4B	13.5B	13C	
	.75	14A	14.1B	14.2B	14.3B	14.4B	14.5B	14C	
	1.0	15A	15.1B	15.2B	15.3B	15.4B	15.5B	15C	
	1.25 (homogeneous)	---	16.1D	16.2D	16.3D	16.4D	16.5D	---	
1.25 (heterogeneous)	---	16.1E	16.2E	16.3E	16.4E	16.5E	---		

(b) Wet air (w/a = 0.03)

---	Air only	17A	17.1B	17.2B	17.3B	17.4B	17.5B	17C
1.7	0.25	18A	18.1B	18.2B	18.3B	18.4B	18.5B	18C
	.5	19A	19.1B	19.2B	19.3B	19.4B	19.5B	19C
	.75	20A	20.1B	20.2B	20.3B	20.4B	20.5B	20C
	1.0	21A	21.1B	21.2B	21.3B	21.4B	21.5B	21C
	1.25 (homogeneous)	---	22.1D	22.2D	22.3D	22.4D	22.5D	---
1.25 (heterogeneous)	---	22.1E	22.2E	22.3E	22.4E	22.5E	---	
2.0	0.25	23A	23.1B	23.2B	23.3B	23.4B	23.5B	23C
	.5	24A	24.1B	24.2B	24.3B	24.4B	24.5B	24C
	.75	25A	25.1B	25.2B	25.3B	25.4B	25.5B	25C
	1.0	26A	26.1B	26.2B	26.3B	26.4B	26.5B	26C
	1.25 (homogeneous)	---	27.1D	27.2D	27.3D	27.4D	27.5D	---
1.25 (heterogeneous)	---	27.1E	27.2E	27.3E	27.4E	27.5E	---	
2.1	0.25	28A	28.1B	28.2B	28.3B	28.4B	28.5B	28C
	.5	29A	29.1B	29.2B	29.3B	29.4B	29.5B	29C
	.75	30A	30.1B	30.2B	30.3B	30.4B	30.5B	30C
	1.0	31A	31.1B	31.2B	31.3B	31.4B	31.5B	31C
	1.25 (homogeneous)	---	32.1D	32.2D	32.3D	32.4D	32.5D	---
1.25 (heterogeneous)	---	32.1E	32.2E	32.3E	32.4E	32.5E	---	

TABLE 1A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

DRY AIR ONLY; F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO= 0.0015; MW= 28.9651;
 GASEOUS COMPOSITION: N2= .78084; O2= .20948; AR= .00937; CO2= .00032

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
360	1.1018-1	5.5091 0	-44.3	1.8585	1.7006	1.5427	1.3849	1.2745	0.2407	1.3982	929.5	.0322	.0106	.7339	360
380	1.0438-1	5.2191 0	-39.5	1.8715	1.7136	1.5557	1.3979	1.2875	0.2405	1.3988	955.2	.0337	.0111	.7319	380
400	9.9163-2	4.9582 0	-34.6	1.8838	1.7259	1.5681	1.4102	1.2998	0.2403	1.3993	980.2	.0352	.0116	.7297	400
420	9.4441-2	4.7221 0	-29.8	1.8955	1.7376	1.5798	1.4219	1.3116	0.2401	1.3996	1004.5	.0366	.0121	.7275	420
440	9.0149-2	4.5074 0	-25.0	1.9067	1.7488	1.5909	1.4331	1.3227	0.2400	1.3999	1028.3	.0381	.0126	.7255	440
460	8.6229-2	4.3115 0	-20.2	1.9173	1.7595	1.6016	1.4437	1.3334	0.2399	1.4001	1051.4	.0395	.0131	.7236	460
480	8.2636-2	4.1318 0	-15.4	1.9276	1.7697	1.6118	1.4540	1.3436	0.2399	1.4002	1074.1	.0408	.0136	.7221	480
500	7.9331-2	3.9665 0	-10.6	1.9373	1.7795	1.6216	1.4637	1.3534	0.2399	1.4002	1096.2	.0422	.0140	.7208	500
520	7.6280-2	3.8140 0	-5.9	1.9468	1.7889	1.6310	1.4732	1.3628	0.2399	1.4001	1117.9	.0435	.0145	.7198	520
537	7.3910-2	3.6955 0	-1.9	1.9543	1.7965	1.6386	1.4807	1.3704	0.2400	1.3999	1135.6	.0446	.0149	.7191	537
540	7.3454-2	3.6727 0	-1.1	1.9558	1.7979	1.6401	1.4822	1.3719	0.2400	1.3999	1139.1	.0448	.0149	.7190	540
560	7.0831-2	3.5416 0	3.8	1.9645	1.8067	1.6488	1.4909	1.3806	0.2401	1.3997	1159.9	.0460	.0154	.7188	560
580	6.8389-2	3.4194 0	8.6	1.9730	1.8151	1.6572	1.4994	1.3890	0.2402	1.3993	1180.3	.0473	.0158	.7187	580
600	6.6109-2	3.3055 0	13.4	1.9811	1.8233	1.6654	1.5075	1.3972	0.2404	1.3989	1200.3	.0485	.0162	.7188	600
620	6.3976-2	3.1988 0	18.2	1.9890	1.8311	1.6733	1.5154	1.4051	0.2406	1.3985	1220.0	.0497	.0166	.7189	620
640	6.1977-2	3.0989 0	23.0	1.9966	1.8388	1.6809	1.5231	1.4127	0.2408	1.3980	1239.3	.0509	.0171	.7189	640
660	6.0099-2	3.0050 0	27.8	2.0041	1.8462	1.6883	1.5305	1.4201	0.2411	1.3974	1258.2	.0521	.0175	.7189	660
680	5.8331-2	2.9166 0	32.6	2.0113	1.8534	1.6955	1.5377	1.4273	0.2414	1.3967	1276.8	.0532	.0179	.7189	680
700	5.6665-2	2.8332 0	37.5	2.0183	1.8604	1.7025	1.5447	1.4343	0.2417	1.3960	1295.1	.0544	.0183	.7188	700
720	5.5091-2	2.7545 0	42.3	2.0251	1.8672	1.7093	1.5515	1.4411	0.2420	1.3952	1313.2	.0555	.0187	.7188	720
740	5.3602-2	2.6801 0	47.1	2.0317	1.8739	1.7160	1.5581	1.4478	0.2424	1.3944	1330.9	.0566	.0191	.7187	740
760	5.2191-2	2.6096 0	52.0	2.0382	1.8803	1.7225	1.5646	1.4542	0.2428	1.3936	1348.3	.0577	.0195	.7185	760
780	5.0853-2	2.5427 0	56.9	2.0445	1.8866	1.7288	1.5709	1.4606	0.2432	1.3927	1365.5	.0588	.0199	.7184	780
800	4.9582-2	2.4791 0	61.7	2.0507	1.8928	1.7349	1.5771	1.4667	0.2436	1.3917	1382.5	.0598	.0203	.7183	800
820	4.8372-2	2.4186 0	66.6	2.0567	1.8988	1.7409	1.5831	1.4727	0.2440	1.3908	1399.1	.0609	.0207	.7181	820
840	4.7221-2	2.3610 0	71.5	2.0626	1.9047	1.7468	1.5890	1.4786	0.2445	1.3897	1415.6	.0619	.0211	.7180	840
860	4.6123-2	2.3061 0	76.4	2.0683	1.9105	1.7526	1.5947	1.4844	0.2449	1.3887	1431.8	.0630	.0215	.7179	860
880	4.5074-2	2.2537 0	81.3	2.0740	1.9161	1.7582	1.6004	1.4900	0.2454	1.3876	1447.8	.0640	.0219	.7178	880
900	4.4073-2	2.2036 0	86.2	2.0795	1.9216	1.7637	1.6059	1.4955	0.2459	1.3865	1463.6	.0650	.0223	.7178	900
920	4.3115-2	2.1557 0	91.1	2.0849	1.9270	1.7692	1.6113	1.5009	0.2465	1.3854	1479.1	.0660	.0227	.7178	920
940	4.2197-2	2.1099 0	96.0	2.0902	1.9323	1.7745	1.6166	1.5063	0.2470	1.3842	1494.5	.0670	.0230	.7178	940
960	4.1318-2	2.0659 0	101.0	2.0954	1.9375	1.7797	1.6218	1.5115	0.2475	1.3831	1509.7	.0680	.0234	.7178	960
980	4.0475-2	2.0237 0	106.0	2.1005	1.9426	1.7848	1.6269	1.5166	0.2481	1.3819	1524.7	.0689	.0238	.7179	980
1000	3.9665-2	1.9833 0	110.9	2.1055	1.9477	1.7898	1.6319	1.5216	0.2487	1.3807	1539.5	.0699	.0242	.7179	1000
1020	3.8888-2	1.9444 0	115.9	2.1105	1.9526	1.7947	1.6369	1.5265	0.2493	1.3794	1554.1	.0708	.0246	.7179	1020
1040	3.8140-2	1.9070 0	120.9	2.1153	1.9574	1.7996	1.6417	1.5314	0.2498	1.3782	1568.6	.0718	.0250	.7179	1040
1060	3.7420-2	1.8710 0	125.9	2.1201	1.9622	1.8043	1.6465	1.5361	0.2504	1.3770	1582.9	.0727	.0254	.7179	1060
1080	3.6727-2	1.8364 0	130.9	2.1248	1.9669	1.8090	1.6512	1.5408	0.2510	1.3757	1597.0	.0737	.0258	.7179	1080
1100	3.6059-2	1.8030 0	135.9	2.1294	1.9715	1.8136	1.6558	1.5454	0.2516	1.3745	1611.0	.0746	.0261	.7178	1100
1120	3.5416-2	1.7708 0	141.0	2.1339	1.9760	1.8182	1.6603	1.5500	0.2523	1.3732	1624.8	.0755	.0265	.7177	1120
1140	3.4794-2	1.7397 0	146.0	2.1384	1.9805	1.8226	1.6648	1.5544	0.2529	1.3719	1638.5	.0764	.0269	.7175	1140

TABLE 1A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

DRY AIR ONLY; F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO= 0.0015; MW= 28.9651;
 GASEOUS COMPOSITION: N2= .78084; O2= .20948; AR= .00937; CO2= .00032

T R	DENSITY		H BTU/LB	ENTROPY					CP BTU/ LB R	GAM	VS FT/S	VIS LB/ FT HR	COND BTU/ FT HR R	PRAN	T R
	(P=1.0) LB/FT3	(P=50.) LB/FT3		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
1160	3.4194-2	1.7097 0	151.1	2.1428	1.9849	1.8271	1.6692	1.5588	0.2535	1.3707	1652.1	.0773	.0273	.7174	1160
1180	3.3615-2	1.6807 0	156.2	2.1471	1.9893	1.8314	1.6735	1.5632	0.2541	1.3694	1665.5	.0782	.0277	.7173	1180
1200	3.3054-2	1.6527 0	161.3	2.1514	1.9935	1.8357	1.6778	1.5675	0.2548	1.3682	1678.8	.0791	.0281	.7171	1200
1220	3.2513-2	1.6256 0	166.4	2.1556	1.9977	1.8399	1.6820	1.5717	0.2554	1.3669	1691.9	.0800	.0285	.7170	1220
1240	3.1988-2	1.5994 0	171.5	2.1598	2.0019	1.8440	1.6862	1.5758	0.2561	1.3657	1704.9	.0809	.0289	.7168	1240
1260	3.1480-2	1.5740 0	176.6	2.1639	2.0060	1.8481	1.6903	1.5799	0.2567	1.3644	1717.9	.0818	.0293	.7167	1260
1280	3.0989-2	1.5494 0	181.7	2.1679	2.0101	1.8522	1.6943	1.5840	0.2573	1.3632	1730.7	.0827	.0297	.7165	1280
1300	3.0512-2	1.5256 0	186.9	2.1719	2.0141	1.8562	1.6983	1.5880	0.2580	1.3620	1743.3	.0835	.0301	.7164	1300
1320	3.0050-2	1.5025 0	192.1	2.1759	2.0180	1.8601	1.7023	1.5919	0.2586	1.3608	1755.9	.0844	.0305	.7162	1320
1340	2.9601-2	1.4801 0	197.2	2.1798	2.0219	1.8640	1.7062	1.5958	0.2592	1.3595	1768.4	.0852	.0309	.7161	1340
1360	2.9166-2	1.4583 0	202.4	2.1836	2.0257	1.8679	1.7100	1.5997	0.2599	1.3584	1780.7	.0861	.0312	.7159	1360
1380	2.8743-2	1.4372 0	207.6	2.1874	2.0295	1.8717	1.7138	1.6035	0.2605	1.3572	1793.0	.0869	.0316	.7158	1380
1400	2.8332-2	1.4166 0	212.8	2.1912	2.0333	1.8754	1.7176	1.6072	0.2611	1.3560	1805.2	.0878	.0320	.7157	1400
1420	2.7933-2	1.3967 0	218.1	2.1949	2.0370	1.8791	1.7213	1.6109	0.2618	1.3548	1817.3	.0886	.0324	.7156	1420
1440	2.7545-2	1.3773 0	223.3	2.1985	2.0407	1.8828	1.7249	1.6146	0.2624	1.3537	1829.2	.0894	.0328	.7155	1440
1460	2.7168-2	1.3584 0	228.6	2.2022	2.0443	1.8864	1.7286	1.6182	0.2630	1.3526	1841.1	.0903	.0332	.7154	1460
1480	2.6801-2	1.3400 0	233.8	2.2057	2.0479	1.8900	1.7321	1.6218	0.2636	1.3515	1852.9	.0911	.0336	.7152	1480
1500	2.6444-2	1.3222 0	239.1	2.2093	2.0514	1.8935	1.7357	1.6253	0.2642	1.3504	1864.7	.0919	.0340	.7151	1500
1520	2.6096-2	1.3048 0	244.4	2.2128	2.0549	1.8970	1.7392	1.6288	0.2648	1.3493	1876.3	.0927	.0343	.7150	1520
1540	2.5757-2	1.2878 0	249.7	2.2162	2.0584	1.9005	1.7426	1.6323	0.2654	1.3482	1887.9	.0935	.0347	.7150	1540
1560	2.5427-2	1.2713 0	255.0	2.2197	2.0618	1.9039	1.7461	1.6357	0.2660	1.3472	1899.3	.0943	.0351	.7149	1560
1580	2.5105-2	1.2552 0	260.4	2.2231	2.0652	1.9073	1.7495	1.6391	0.2666	1.3462	1910.8	.0951	.0355	.7148	1580
1600	2.4791-2	1.2395 0	265.7	2.2264	2.0686	1.9107	1.7528	1.6425	0.2672	1.3452	1922.1	.0959	.0358	.7147	1600
1620	2.4485-2	1.2242 0	271.0	2.2297	2.0719	1.9140	1.7561	1.6458	0.2678	1.3442	1933.4	.0967	.0362	.7146	1620
1640	2.4186-2	1.2093 0	276.4	2.2330	2.0752	1.9173	1.7594	1.6491	0.2683	1.3432	1944.6	.0975	.0366	.7145	1640
1660	2.3895-2	1.1947 0	281.8	2.2363	2.0784	1.9206	1.7627	1.6523	0.2689	1.3422	1955.7	.0982	.0370	.7144	1660
1680	2.3610-2	1.1805 0	287.2	2.2395	2.0816	1.9238	1.7659	1.6556	0.2694	1.3413	1966.7	.0990	.0373	.7144	1680
1700	2.3333-2	1.1666 0	292.6	2.2427	2.0848	1.9270	1.7691	1.6588	0.2700	1.3404	1977.7	.0998	.0377	.7143	1700
1720	2.3061-2	1.1531 0	298.0	2.2459	2.0880	1.9301	1.7723	1.6619	0.2705	1.3395	1988.7	.1005	.0381	.7142	1720
1740	2.2796-2	1.1398 0	303.4	2.2490	2.0911	1.9333	1.7754	1.6651	0.2710	1.3386	1999.6	.1013	.0384	.7142	1740
1760	2.2537-2	1.1269 0	308.8	2.2521	2.0942	1.9364	1.7785	1.6682	0.2715	1.3378	2010.4	.1021	.0388	.7141	1760
1780	2.2284-2	1.1142 0	314.2	2.2552	2.0973	1.9394	1.7816	1.6712	0.2720	1.3370	2021.1	.1028	.0392	.7141	1780
1800	2.2036-2	1.1018 0	319.7	2.2582	2.1003	1.9425	1.7846	1.6743	0.2725	1.3362	2031.8	.1036	.0395	.7140	1800
1900	2.0877-2	1.0438 0	347.0	2.2730	2.1151	1.9573	1.7994	1.6891	0.2748	1.3325	2084.7	.1072	.0413	.7142	1900
2000	1.9833-2	9.9164-1	374.6	2.2872	2.1293	1.9714	1.8136	1.7032	0.2769	1.3291	2136.1	.1108	.0430	.7145	2000
2100	1.8888-2	9.4441-1	402.4	2.3007	2.1428	1.9850	1.8271	1.7168	0.2789	1.3259	2186.2	.1143	.0446	.7149	2100
2200	1.8030-2	9.0149-1	430.4	2.3137	2.1559	1.9980	1.8401	1.7298	0.2808	1.3230	2235.2	.1178	.0462	.7154	2200
2300	1.7246-2	8.6229-1	458.6	2.3263	2.1684	2.0105	1.8527	1.7423	0.2826	1.3203	2283.1	.1211	.0478	.7159	2300
2400	1.6527-2	8.2636-1	486.9	2.3383	2.1805	2.0226	1.8647	1.7544	0.2844	1.3177	2329.9	.1245	.0494	.7163	2400
2500	1.5866-2	7.9331-1	515.4	2.3500	2.1921	2.0342	1.8764	1.7660	0.2860	1.3153	2375.8	.1277	.0509	.7168	2500

TABLE 1A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

DRY AIR ONLY; F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO= 0.0015; MW= 28.9651;
 GASEOUS COMPOSITION: N2= .78084; O2= .20948; AR= .00937; CO2= .00032

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
2600	1.5256-2	7.6280-1	544.1	2.3612	2.2033	2.0455	1.8876	1.7773	0.2875	1.3131	2420.8	.1309	.0525	.7172	2600
2700	1.4691-2	7.3454-1	573.0	2.3721	2.2142	2.0564	1.8985	1.7881	0.2890	1.3110	2465.0	.1340	.0540	.7175	2700
2800	1.4166-2	7.0831-1	601.9	2.3826	2.2248	2.0669	1.9090	1.7987	0.2904	1.3091	2508.4	.1371	.0555	.7175	2800
2900	1.3678-2	6.8389-1	631.0	2.3928	2.2350	2.0771	1.9192	1.8089	0.2916	1.3073	2551.0	.1402	.0570	.7174	2900
3000	1.3222-2	6.6109-1	660.2	2.4027	2.2449	2.0870	1.9291	1.8188	0.2929	1.3056	2593.0	.1432	.0585	.7172	3000
3100	1.2795-2	6.3976-1	689.6	2.4124	2.2545	2.0966	1.9388	1.8284	0.2940	1.3041	2634.3	.1462	.0599	.7171	3100
3200	1.2395-2	6.1977-1	719.1	2.4217	2.2639	2.1060	1.9481	1.8378	0.2951	1.3026	2674.9	.1491	.0614	.7170	3200
3300	1.2020-2	6.0099-1	748.6	2.4308	2.2730	2.1151	1.9572	1.8469	0.2962	1.3012	2715.0	.1520	.0628	.7169	3300
3400	1.1666-2	5.8331-1	778.3	2.4397	2.2818	2.1239	1.9661	1.8557	0.2971	1.3000	2754.4	.1549	.0642	.7168	3400
3500	1.1333-2	5.6665-1	808.0	2.4483	2.2904	2.1326	1.9747	1.8644	0.2981	1.2987	2793.3	.1577	.0656	.7167	3500
3600	1.1018-2	5.5091-1	837.9	2.4567	2.2988	2.1410	1.9831	1.8728	0.2989	1.2976	2831.7	.1605	.0670	.7166	3600
3700	1.0720-2	5.3602-1	867.8	2.4649	2.3070	2.1492	1.9913	1.8810	0.2997	1.2966	2869.6	.1633	.0683	.7169	3700
3800	1.0438-2	5.2191-1	897.8	2.4729	2.3150	2.1572	1.9993	1.8890	0.3005	1.2956	2907.0	.1661	.0696	.7171	3800
3900	1.0171-2	5.0853-1	927.9	2.4807	2.3229	2.1650	2.0071	1.8968	0.3013	1.2946	2944.0	.1688	.0709	.7174	3900
4000	9.9163-3	4.9582-1	958.1	2.4884	2.3305	2.1726	2.0148	1.9044	0.3020	1.2938	2980.5	.1715	.0722	.7178	4000
4100	9.6745-3	4.8372-1	988.3	2.4958	2.3380	2.1801	2.0222	1.9119	0.3026	1.2929	3016.5	.1742	.0734	.7181	4100
4200	9.4441-3	4.7221-1	1018.6	2.5031	2.3453	2.1874	2.0295	1.9192	0.3032	1.2921	3052.2	.1769	.0747	.7185	4200
4300	9.2245-3	4.6123-1	1049.0	2.5103	2.3524	2.1945	2.0367	1.9263	0.3038	1.2914	3087.4	.1795	.0759	.7190	4300
4400	9.0149-3	4.5074-1	1079.4	2.5173	2.3594	2.2015	2.0437	1.9333	0.3044	1.2907	3122.2	.1821	.0771	.7195	4400
4500	8.8145-3	4.4073-1	1109.8	2.5241	2.3662	2.2084	2.0505	1.9402	0.3049	1.2900	3156.7	.1847	.0783	.7200	4500
4600	8.6229-3	4.3115-1	1140.4	2.5308	2.3730	2.2151	2.0572	1.9469	0.3055	1.2894	3190.8	.1873	.0794	.7202	4600
4700	8.4394-3	4.2197-1	1170.9	2.5374	2.3795	2.2217	2.0638	1.9535	0.3060	1.2888	3224.6	.1899	.0806	.7205	4700
4800	8.2636-3	4.1318-1	1201.6	2.5438	2.3860	2.2281	2.0702	1.9599	0.3064	1.2882	3257.9	.1924	.0818	.7207	4800
4900	8.0950-3	4.0475-1	1232.2	2.5502	2.3923	2.2344	2.0766	1.9662	0.3069	1.2877	3291.0	.1950	.0830	.7209	4900
5000	7.9331-3	3.9665-1	1262.9	2.5564	2.3985	2.2406	2.0828	1.9724	0.3073	1.2872	3323.7	.1975	.0842	.7210	5000
5100	7.7775-3	3.8888-1	1293.7	2.5625	2.4046	2.2467	2.0889	1.9785	0.3077	1.2866	3356.1	.1999	.0853	.7212	5100
5200	7.6280-3	3.8140-1	1324.5	2.5684	2.4106	2.2527	2.0948	1.9845	0.3082	1.2862	3388.2	.2024	.0865	.7212	5200
5300	7.4840-3	3.7420-1	1355.3	2.5743	2.4164	2.2586	2.1007	1.9904	0.3086	1.2857	3420.0	.2049	.0876	.7213	5300
5400	7.3454-3	3.6727-1	1386.2	2.5801	2.4222	2.2643	2.1065	1.9961	0.3089	1.2852	3451.5	.2073	.0888	.7213	5400

TABLE 1.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

DRY AIR ONLY; F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO = 0.0015;

P = 0.14696 LB/IN² (0.01 ATM)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4791-4	265.7	2.2264	28.965	.096	1.0000	-1.0000	0.2673	1.3450	1922.0	.0359	.715	0.2672	1.3452	1922.1	.0358	.715
1700	2.3333-4	292.6	2.2427	28.965	.100	1.0000	-1.0000	0.2701	1.3401	1977.5	.0377	.714	0.2700	1.3404	1977.7	.0377	.714
1800	2.2036-4	319.7	2.2582	28.965	.104	1.0000	-1.0000	0.2728	1.3357	2031.5	.0396	.714	0.2725	1.3362	2031.8	.0395	.714
1900	2.0877-4	347.1	2.2731	28.965	.107	1.0000	-1.0000	0.2752	1.3318	2084.1	.0413	.714	0.2748	1.3325	2084.7	.0413	.714
2000	1.9833-4	374.8	2.2872	28.965	.111	1.0000	-1.0000	0.2776	1.3280	2135.2	.0431	.715	0.2769	1.3291	2136.1	.0430	.715
2100	1.8888-4	402.6	2.3008	28.965	.114	1.0000	-1.0000	0.2799	1.3244	2185.0	.0448	.715	0.2789	1.3259	2186.2	.0446	.715
2200	1.8030-4	430.7	2.3139	28.965	.118	1.0000	-1.0000	0.2822	1.3209	2233.4	.0465	.715	0.2808	1.3230	2235.2	.0462	.715
2300	1.7246-4	459.1	2.3265	28.965	.121	1.0000	-1.0000	0.2845	1.3175	2280.7	.0481	.716	0.2826	1.3203	2283.1	.0478	.716
2400	1.6527-4	487.7	2.3387	28.965	.124	1.0000	-1.0000	0.2868	1.3141	2326.7	.0498	.716	0.2844	1.3177	2329.9	.0494	.716
2500	1.5866-4	516.5	2.3504	28.965	.128	1.0000	-1.0000	0.2892	1.3108	2371.7	.0515	.717	0.2860	1.3153	2375.8	.0510	.717
2600	1.5256-4	545.5	2.3618	28.965	.131	1.0001	-1.0000	0.2916	1.3074	2415.6	.0532	.717	0.2875	1.3131	2420.8	.0525	.717
2700	1.4691-4	574.8	2.3729	28.965	.134	1.0002	-1.0000	0.2942	1.3039	2458.3	.0550	.717	0.2890	1.3111	2465.0	.0540	.718
2800	1.4166-4	604.3	2.3836	28.965	.137	1.0004	-1.0000	0.2971	1.3003	2500.0	.0568	.717	0.2904	1.3091	2508.4	.0555	.717
2900	1.3677-4	634.2	2.3941	28.964	.140	1.0007	-1.0000	0.3003	1.2964	2540.4	.0588	.716	0.2916	1.3073	2551.1	.0570	.717
3000	1.3221-4	664.4	2.4043	28.963	.143	1.0013	-1.0000	0.3040	1.2921	2579.6	.0609	.715	0.2929	1.3057	2593.1	.0585	.717
3100	1.2794-4	695.0	2.4144	28.961	.146	1.0023	-1.0001	0.3087	1.2871	2617.3	.0633	.713	0.2940	1.3041	2634.5	.0599	.717
3200	1.2393-4	726.2	2.4243	28.959	.149	1.0038	-1.0001	0.3146	1.2813	2653.3	.0661	.710	0.2951	1.3027	2675.3	.0614	.717
3300	1.2015-4	758.0	2.4341	28.954	.152	1.0063	-1.0002	0.3222	1.2744	2687.3	.0694	.706	0.2962	1.3014	2715.6	.0628	.717
3400	1.1659-4	790.7	2.4438	28.947	.155	1.0099	-1.0003	0.3323	1.2662	2719.3	.0736	.700	0.2971	1.3002	2755.5	.0642	.717
3500	1.1322-4	824.6	2.4536	28.937	.158	1.0153	-1.0005	0.3456	1.2566	2748.9	.0788	.692	0.2981	1.2991	2795.1	.0656	.717
3600	1.1002-4	860.0	2.4636	28.922	.161	1.0230	-1.0007	0.3632	1.2455	2776.3	.0854	.683	0.2990	1.2982	2834.5	.0670	.717
3700	1.0696-4	897.4	2.4739	28.899	.163	1.0337	-1.0011	0.3861	1.2331	2801.7	.0940	.671	0.2998	1.2974	2873.8	.0683	.717
3800	1.0403-4	937.4	2.4845	28.868	.166	1.0482	-1.0017	0.4156	1.2198	2825.5	.1048	.659	0.3006	1.2968	2913.2	.0697	.717
3900	1.0121-4	980.8	2.4958	28.825	.169	1.0676	-1.0024	0.4531	1.2061	2848.5	.1186	.645	0.3014	1.2964	2953.1	.0710	.717
4000	9.8485-5	1028.4	2.5078	28.767	.172	1.0928	-1.0034	0.5000	1.1926	2871.4	.1359	.631	0.3021	1.2962	2993.5	.0723	.717
4100	9.5827-5	1081.1	2.5209	28.690	.174	1.1248	-1.0047	0.5575	1.1798	2895.3	.1572	.618	0.3028	1.2963	3034.9	.0736	.717
4200	9.3222-5	1140.3	2.5351	28.591	.177	1.1645	-1.0063	0.6267	1.1682	2921.0	.1828	.607	0.3035	1.2968	3077.5	.0749	.718
4300	9.0652-5	1206.9	2.5508	28.465	.180	1.2124	-1.0083	0.7081	1.1581	2949.3	.2130	.597	0.3042	1.2976	3121.9	.0762	.718
4400	8.8105-5	1282.3	2.5681	28.309	.182	1.2686	-1.0108	0.8012	1.1496	2980.7	.2475	.590	0.3049	1.2989	3168.2	.0775	.717
4500	8.5569-5	1367.5	2.5872	28.118	.185	1.3323	-1.0136	0.9044	1.1428	3015.5	.2855	.586	0.3055	1.3007	3217.0	.0788	.717
4600	8.3037-5	1463.4	2.6083	27.893	.188	1.4016	-1.0169	1.0146	1.1376	3054.2	.3255	.585	0.3062	1.3030	3268.6	.0802	.717
4700	8.0510-5	1570.4	2.6313	27.632	.190	1.4732	-1.0203	1.1263	1.1340	3096.8	.3654	.587	0.3068	1.3059	3323.2	.0816	.716
4800	7.7994-5	1688.4	2.6562	27.338	.193	1.5423	-1.0238	1.2320	1.1318	3143.3	.4020	.592	0.3075	1.3093	3380.8	.0831	.715
4900	7.5504-5	1816.3	2.6825	27.016	.196	1.6030	-1.0271	1.3222	1.1309	3193.5	.4317	.600	0.3082	1.3133	3441.3	.0846	.713
5000	7.3062-5	1952.0	2.7100	26.676	.199	1.6484	-1.0298	1.3862	1.1314	3247.1	.4509	.611	0.3088	1.3177	3504.2	.0862	.712
5100	7.0696-5	2092.4	2.7377	26.329	.202	1.6723	-1.0316	1.4143	1.1332	3303.6	.4568	.624	0.3094	1.3223	3568.7	.0878	.710
5200	6.8436-5	2233.5	2.7651	25.987	.204	1.6704	-1.0322	1.4005	1.1364	3362.5	.4481	.639	0.3100	1.3271	3633.7	.0895	.708
5300	6.6307-5	2371.0	2.7914	25.663	.207	1.6423	-1.0316	1.3443	1.1412	3423.1	.4259	.654	0.3106	1.3318	3698.1	.0911	.707
5400	6.4331-5	2501.1	2.8157	25.368	.210	1.5916	-1.0298	1.2523	1.1476	3485.0	.3933	.669	0.3111	1.3362	3760.6	.0927	.705

TABLE 1.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

DRY AIR ONLY; F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO = 0.0015;

P = 1.46959 LB/IN2 (0.10 ATM)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4791-3	265.7	2.0686	28.965	.096	1.0000	-1.0000	0.2673	1.3450	1922.0	.0359	.715	0.2672	1.3452	1922.1	.0358	.715
1700	2.3333-3	292.6	2.0849	28.965	.100	1.0000	-1.0000	0.2701	1.3401	1977.5	.0377	.714	0.2700	1.3404	1977.7	.0377	.714
1800	2.2036-3	319.7	2.1004	28.965	.104	1.0000	-1.0000	0.2728	1.3357	2031.5	.0396	.714	0.2725	1.3362	2031.8	.0395	.714
1900	2.0877-3	347.1	2.1152	28.965	.107	1.0000	-1.0000	0.2752	1.3318	2084.1	.0413	.714	0.2748	1.3325	2084.7	.0413	.714
2000	1.9833-3	374.8	2.1294	28.965	.111	1.0000	-1.0000	0.2776	1.3280	2135.2	.0431	.715	0.2769	1.3291	2136.1	.0430	.715
2100	1.8888-3	402.6	2.1430	28.965	.114	1.0000	-1.0000	0.2799	1.3244	2185.0	.0448	.715	0.2789	1.3259	2186.2	.0446	.715
2200	1.8030-3	430.7	2.1560	28.965	.118	1.0000	-1.0000	0.2822	1.3209	2233.4	.0465	.715	0.2808	1.3230	2235.2	.0462	.715
2300	1.7246-3	459.1	2.1686	28.965	.121	1.0000	-1.0000	0.2845	1.3175	2280.7	.0481	.716	0.2826	1.3203	2283.1	.0478	.716
2400	1.6527-3	487.6	2.1808	28.965	.124	1.0000	-1.0000	0.2868	1.3141	2326.8	.0498	.716	0.2844	1.3177	2329.9	.0494	.716
2500	1.5866-3	516.4	2.1925	28.965	.128	1.0000	-1.0000	0.2891	1.3109	2371.8	.0515	.717	0.2860	1.3153	2375.8	.0510	.717
2600	1.5256-3	545.5	2.2039	28.965	.131	1.0000	-1.0000	0.2915	1.3076	2415.7	.0532	.717	0.2875	1.3131	2420.8	.0525	.717
2700	1.4691-3	574.7	2.2150	28.965	.134	1.0001	-1.0000	0.2939	1.3043	2458.7	.0549	.718	0.2890	1.3110	2465.0	.0540	.718
2800	1.4166-3	604.3	2.2257	28.965	.137	1.0001	-1.0000	0.2964	1.3010	2500.6	.0567	.717	0.2904	1.3091	2508.4	.0555	.717
2900	1.3678-3	634.0	2.2362	28.965	.140	1.0002	-1.0000	0.2990	1.2977	2541.6	.0585	.717	0.2916	1.3073	2551.1	.0570	.717
3000	1.3222-3	664.1	2.2463	28.964	.143	1.0004	-1.0000	0.3018	1.2942	2581.7	.0603	.717	0.2929	1.3057	2593.0	.0585	.717
3100	1.2795-3	694.4	2.2563	28.964	.146	1.0007	-1.0000	0.3049	1.2906	2620.7	.0623	.716	0.2940	1.3041	2634.3	.0599	.717
3200	1.2395-3	725.0	2.2660	28.963	.149	1.0012	-1.0000	0.3084	1.2867	2658.7	.0643	.715	0.2951	1.3026	2675.0	.0614	.717
3300	1.2018-3	756.1	2.2756	28.962	.152	1.0020	-1.0001	0.3124	1.2825	2695.5	.0666	.713	0.2962	1.3013	2715.2	.0628	.717
3400	1.1664-3	787.6	2.2850	28.960	.155	1.0031	-1.0001	0.3172	1.2778	2731.1	.0691	.711	0.2971	1.3000	2754.8	.0642	.717
3500	1.1329-3	819.6	2.2942	28.956	.158	1.0048	-1.0002	0.3231	1.2726	2765.5	.0720	.708	0.2981	1.2989	2793.9	.0656	.717
3600	1.1013-3	852.2	2.3034	28.951	.161	1.0073	-1.0002	0.3302	1.2666	2798.4	.0753	.704	0.2989	1.2978	2832.6	.0670	.717
3700	1.0713-3	885.7	2.3126	28.944	.163	1.0107	-1.0004	0.3391	1.2600	2829.8	.0792	.700	0.2997	1.2968	2871.0	.0683	.717
3800	1.0427-3	920.1	2.3218	28.934	.166	1.0154	-1.0005	0.3501	1.2525	2859.8	.0839	.694	0.3005	1.2960	2909.0	.0696	.717
3900	1.0155-3	955.8	2.3311	28.920	.169	1.0217	-1.0008	0.3638	1.2442	2888.3	.0896	.686	0.3013	1.2952	2946.9	.0709	.717
4000	9.8946-4	993.0	2.3405	28.902	.172	1.0301	-1.0011	0.3806	1.2352	2915.5	.0965	.677	0.3020	1.2946	2984.7	.0722	.718
4100	9.6449-4	1032.0	2.3501	28.877	.174	1.0408	-1.0015	0.4012	1.2257	2941.6	.1048	.667	0.3026	1.2941	3022.5	.0735	.718
4200	9.4045-4	1073.4	2.3601	28.844	.177	1.0545	-1.0021	0.4261	1.2159	2967.0	.1149	.657	0.3033	1.2937	3060.4	.0748	.718
4300	9.1723-4	1117.4	2.3704	28.801	.180	1.0716	-1.0028	0.4560	1.2061	2992.1	.1269	.646	0.3039	1.2935	3098.7	.0760	.719
4400	8.9470-4	1164.7	2.3813	28.747	.182	1.0926	-1.0037	0.4912	1.1964	3017.4	.1412	.634	0.3045	1.2934	3137.4	.0773	.719
4500	8.7276-4	1215.9	2.3928	28.679	.185	1.1179	-1.0048	0.5324	1.1872	3043.4	.1579	.624	0.3051	1.2936	3176.8	.0785	.719
4600	8.5130-4	1271.4	2.4050	28.596	.188	1.1478	-1.0062	0.5796	1.1788	3070.5	.1772	.614	0.3056	1.2940	3217.1	.0798	.719
4700	8.3024-4	1332.0	2.4180	28.495	.190	1.1826	-1.0078	0.6330	1.1712	3099.1	.1991	.605	0.3062	1.2947	3258.5	.0811	.719
4800	8.0950-4	1398.2	2.4320	28.374	.193	1.2222	-1.0097	0.6922	1.1645	3129.7	.2233	.598	0.3067	1.2957	3301.2	.0824	.719
4900	7.8900-4	1470.6	2.4469	28.232	.196	1.2662	-1.0119	0.7565	1.1589	3162.5	.2496	.593	0.3072	1.2970	3345.5	.0837	.718
5000	7.6871-4	1549.6	2.4629	28.067	.198	1.3138	-1.0144	0.8245	1.1544	3197.6	.2773	.590	0.3077	1.2986	3391.5	.0850	.717
5100	7.4860-4	1635.6	2.4799	27.879	.201	1.3638	-1.0170	0.8945	1.1509	3235.4	.3055	.588	0.3082	1.3005	3439.3	.0864	.717
5200	7.2868-4	1728.5	2.4979	27.670	.204	1.4144	-1.0198	0.9636	1.1484	3275.7	.3331	.589	0.3087	1.3029	3489.1	.0879	.716
5300	7.0898-4	1828.2	2.5169	27.439	.206	1.4633	-1.0226	1.0288	1.1469	3318.7	.3587	.592	0.3092	1.3055	3540.9	.0893	.715
5400	6.8955-4	1934.0	2.5367	27.191	.209	1.5079	-1.0253	1.0863	1.1463	3364.3	.3806	.597	0.3097	1.3086	3594.5	.0908	.713

TABLE 1.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

DRY AIR ONLY; F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO = 0.0015;

P = 14.6959 LB/IN2 (1.00 ATM)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4791-2	265.7	1.9107	28.965	.096	1.0000	-1.0000	0.2673	1.3450	1922.0	.0359	.715	0.2672	1.3452	1922.1	.0358	.715
1700	2.3333-2	292.6	1.9270	28.965	.100	1.0000	-1.0000	0.2701	1.3401	1977.5	.0377	.714	0.2700	1.3404	1977.7	.0377	.714
1800	2.2036-2	319.7	1.9425	28.965	.104	1.0000	-1.0000	0.2728	1.3357	2031.5	.0396	.714	0.2725	1.3362	2031.8	.0395	.714
1900	2.0877-2	347.1	1.9573	28.965	.107	1.0000	-1.0000	0.2752	1.3318	2084.1	.0413	.714	0.2748	1.3325	2084.7	.0413	.714
2000	1.9833-2	374.8	1.9715	28.965	.111	1.0000	-1.0000	0.2776	1.3280	2135.2	.0431	.715	0.2769	1.3291	2136.1	.0430	.715
2100	1.8888-2	402.6	1.9851	28.965	.114	1.0000	-1.0000	0.2799	1.3244	2185.0	.0448	.715	0.2789	1.3259	2186.2	.0446	.715
2200	1.8030-2	430.7	1.9982	28.965	.118	1.0000	-1.0000	0.2822	1.3209	2233.4	.0465	.715	0.2808	1.3230	2235.2	.0462	.715
2300	1.7246-2	459.1	2.0108	28.965	.121	1.0000	-1.0000	0.2845	1.3175	2280.7	.0481	.716	0.2826	1.3202	2283.1	.0478	.716
2400	1.6527-2	487.6	2.0229	28.965	.124	1.0000	-1.0000	0.2868	1.3142	2326.8	.0498	.716	0.2844	1.3177	2329.9	.0494	.716
2500	1.5866-2	516.4	2.0347	28.965	.128	1.0000	-1.0000	0.2891	1.3109	2371.8	.0515	.717	0.2860	1.3153	2375.8	.0510	.717
2600	1.5256-2	545.5	2.0461	28.965	.131	1.0000	-1.0000	0.2914	1.3076	2415.8	.0532	.717	0.2875	1.3131	2420.8	.0525	.717
2700	1.4691-2	574.7	2.0571	28.965	.134	1.0000	-1.0000	0.2938	1.3044	2458.8	.0549	.718	0.2890	1.3110	2465.0	.0540	.718
2800	1.4166-2	604.2	2.0678	28.965	.137	1.0000	-1.0000	0.2962	1.3013	2500.8	.0566	.718	0.2904	1.3091	2508.4	.0555	.717
2900	1.3678-2	634.0	2.0783	28.965	.140	1.0001	-1.0000	0.2986	1.2981	2542.0	.0584	.717	0.2916	1.3073	2551.0	.0570	.717
3000	1.3222-2	663.9	2.0884	28.965	.143	1.0001	-1.0000	0.3011	1.2949	2582.3	.0601	.717	0.2929	1.3056	2593.0	.0585	.717
3100	1.2795-2	694.2	2.0983	28.965	.146	1.0002	-1.0000	0.3037	1.2917	2621.8	.0619	.717	0.2940	1.3041	2634.3	.0599	.717
3200	1.2395-2	724.7	2.1080	28.965	.149	1.0004	-1.0000	0.3064	1.2885	2660.4	.0638	.716	0.2951	1.3026	2674.9	.0614	.717
3300	1.2019-2	755.5	2.1175	28.964	.152	1.0006	-1.0000	0.3093	1.2852	2698.2	.0657	.716	0.2962	1.3013	2715.0	.0628	.717
3400	1.1666-2	786.6	2.1268	28.963	.155	1.0010	-1.0000	0.3125	1.2818	2735.2	.0677	.715	0.2971	1.3000	2754.5	.0642	.717
3500	1.1332-2	818.0	2.1359	28.962	.158	1.0015	-1.0001	0.3159	1.2782	2771.3	.0698	.714	0.2980	1.2988	2793.5	.0656	.717
3600	1.1017-2	849.8	2.1448	28.961	.161	1.0023	-1.0001	0.3198	1.2744	2806.5	.0721	.713	0.2989	1.2977	2832.0	.0670	.717
3700	1.0718-2	881.9	2.1537	28.959	.163	1.0034	-1.0001	0.3241	1.2704	2840.9	.0745	.711	0.2997	1.2967	2870.1	.0683	.717
3800	1.0435-2	914.6	2.1624	28.956	.166	1.0049	-1.0002	0.3292	1.2662	2874.3	.0772	.709	0.3005	1.2957	2907.7	.0696	.717
3900	1.0166-2	947.8	2.1710	28.951	.169	1.0069	-1.0002	0.3350	1.2615	2906.8	.0802	.706	0.3012	1.2948	2944.9	.0709	.717
4000	9.9095-3	981.7	2.1796	28.945	.172	1.0096	-1.0004	0.3419	1.2566	2938.3	.0835	.703	0.3019	1.2940	2981.8	.0722	.718
4100	9.6651-3	1016.2	2.1881	28.937	.174	1.0130	-1.0005	0.3499	1.2512	2968.9	.0874	.698	0.3026	1.2933	3018.4	.0735	.718
4200	9.4316-3	1051.7	2.1966	28.927	.177	1.0175	-1.0007	0.3594	1.2455	2998.5	.0918	.693	0.3032	1.2927	3054.8	.0747	.719
4300	9.2079-3	1088.2	2.2052	28.913	.180	1.0231	-1.0009	0.3704	1.2394	3027.3	.0969	.687	0.3038	1.2921	3091.0	.0760	.719
4400	8.9931-3	1125.8	2.2139	28.895	.182	1.0301	-1.0012	0.3834	1.2330	3055.4	.1028	.680	0.3044	1.2917	3127.2	.0772	.719
4500	8.7865-3	1164.9	2.2227	28.873	.185	1.0386	-1.0016	0.3984	1.2265	3082.9	.1096	.673	0.3049	1.2913	3163.3	.0784	.720
4600	8.5873-3	1205.6	2.2316	28.845	.188	1.0490	-1.0021	0.4157	1.2198	3109.9	.1174	.664	0.3054	1.2910	3199.4	.0796	.720
4700	8.3946-3	1248.1	2.2408	28.811	.190	1.0613	-1.0026	0.4355	1.2131	3136.7	.1264	.656	0.3059	1.2908	3235.7	.0809	.720
4800	8.2079-3	1292.8	2.2502	28.770	.193	1.0759	-1.0033	0.4580	1.2065	3163.6	.1366	.647	0.3064	1.2908	3272.2	.0821	.720
4900	8.0265-3	1339.8	2.2599	28.720	.195	1.0929	-1.0042	0.4833	1.2001	3190.7	.1482	.638	0.3069	1.2909	3309.1	.0833	.720
5000	7.8497-3	1389.5	2.2699	28.661	.198	1.1125	-1.0051	0.5114	1.1941	3218.3	.1610	.629	0.3073	1.2911	3346.5	.0846	.720
5100	7.6770-3	1442.2	2.2803	28.591	.201	1.1346	-1.0063	0.5424	1.1884	3246.6	.1753	.621	0.3077	1.2915	3384.4	.0858	.720
5200	7.5079-3	1498.1	2.2912	28.509	.203	1.1594	-1.0076	0.5761	1.1833	3275.9	.1909	.614	0.3082	1.2921	3423.1	.0871	.719
5300	7.3421-3	1557.5	2.3025	28.416	.206	1.1868	-1.0091	0.6124	1.1788	3306.3	.2076	.607	0.3086	1.2928	3462.5	.0884	.719
5400	7.1790-3	1620.6	2.3143	28.309	.209	1.2164	-1.0107	0.6507	1.1748	3337.9	.2254	.602	0.3090	1.2937	3502.8	.0897	.718

TABLE 1.4B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

DRY AIR ONLY; F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO = 0.0015;

P = 146.959 LB/IN² (10.00 ATM)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4791-1	265.7	1.7528	28.965	.096	1.0000	-1.0000	0.2673	1.3450	1922.0	.0359	.715	0.2672	1.3452	1922.1	.0358	.715
1700	2.3333-1	292.6	1.7691	28.965	.100	1.0000	-1.0000	0.2701	1.3401	1977.5	.0377	.714	0.2700	1.3404	1977.7	.0377	.714
1800	2.2036-1	319.7	1.7846	28.965	.104	1.0000	-1.0000	0.2728	1.3357	2031.5	.0396	.714	0.2725	1.3362	2031.8	.0395	.714
1900	2.0877-1	347.1	1.7995	28.965	.107	1.0000	-1.0000	0.2752	1.3317	2084.1	.0413	.714	0.2748	1.3325	2084.7	.0413	.714
2000	1.9833-1	374.8	1.8136	28.965	.111	1.0000	-1.0000	0.2776	1.3280	2135.2	.0431	.715	0.2769	1.3291	2136.1	.0430	.715
2100	1.8888-1	402.6	1.8272	28.965	.114	1.0000	-1.0000	0.2799	1.3244	2184.9	.0448	.715	0.2789	1.3259	2186.2	.0446	.715
2200	1.8030-1	430.8	1.8403	28.965	.118	1.0000	-1.0000	0.2822	1.3209	2233.4	.0465	.715	0.2808	1.3230	2235.2	.0462	.715
2300	1.7246-1	459.1	1.8529	28.965	.121	1.0000	-1.0000	0.2845	1.3175	2280.7	.0481	.716	0.2826	1.3202	2283.1	.0478	.716
2400	1.6527-1	487.7	1.8651	28.965	.124	1.0000	-1.0000	0.2868	1.3141	2326.8	.0498	.716	0.2844	1.3177	2329.9	.0494	.716
2500	1.5866-1	516.4	1.8768	28.965	.128	1.0000	-1.0000	0.2891	1.3109	2371.8	.0515	.717	0.2860	1.3153	2375.8	.0510	.717
2600	1.5256-1	545.5	1.8882	28.965	.131	1.0000	-1.0000	0.2914	1.3076	2415.8	.0532	.717	0.2875	1.3131	2420.8	.0525	.717
2700	1.4691-1	574.7	1.8992	28.965	.134	1.0000	-1.0000	0.2937	1.3044	2458.8	.0549	.718	0.2890	1.3110	2465.0	.0540	.718
2800	1.4166-1	604.2	1.9100	28.965	.137	1.0000	-1.0000	0.2961	1.3013	2500.9	.0566	.718	0.2904	1.3091	2508.4	.0555	.717
2900	1.3678-1	633.9	1.9204	28.965	.140	1.0000	-1.0000	0.2985	1.2982	2542.1	.0583	.718	0.2916	1.3073	2551.0	.0570	.717
3000	1.3222-1	663.9	1.9306	28.965	.143	1.0000	-1.0000	0.3009	1.2951	2582.5	.0601	.717	0.2929	1.3056	2593.0	.0585	.717
3100	1.2795-1	694.1	1.9405	28.965	.146	1.0000	-1.0000	0.3033	1.2920	2622.1	.0618	.717	0.2940	1.3041	2634.2	.0599	.717
3200	1.2396-1	724.6	1.9501	28.965	.149	1.0001	-1.0000	0.3058	1.2890	2660.9	.0636	.717	0.2951	1.3026	2674.9	.0614	.717
3300	1.2020-1	755.3	1.9596	28.965	.152	1.0002	-1.0000	0.3084	1.2860	2699.0	.0654	.717	0.2962	1.3012	2714.9	.0628	.717
3400	1.1666-1	786.3	1.9688	28.965	.155	1.0003	-1.0000	0.3110	1.2830	2736.4	.0673	.716	0.2971	1.3000	2754.4	.0642	.717
3500	1.1333-1	817.5	1.9779	28.965	.158	1.0004	-1.0000	0.3137	1.2800	2773.1	.0691	.716	0.2980	1.2988	2793.4	.0656	.717
3600	1.1018-1	849.0	1.9868	28.964	.161	1.0007	-1.0000	0.3165	1.2770	2809.2	.0710	.716	0.2989	1.2976	2831.8	.0670	.717
3700	1.0720-1	880.8	1.9955	28.964	.163	1.0010	-1.0000	0.3194	1.2740	2844.6	.0730	.715	0.2997	1.2966	2869.7	.0683	.717
3800	1.0437-1	912.9	2.0040	28.963	.166	1.0015	-1.0001	0.3225	1.2709	2879.3	.0750	.715	0.3005	1.2956	2907.2	.0696	.717
3900	1.0169-1	945.3	2.0124	28.961	.169	1.0021	-1.0001	0.3259	1.2678	2913.4	.0771	.714	0.3012	1.2947	2944.3	.0709	.718
4000	9.9144-2	978.1	2.0207	28.959	.172	1.0030	-1.0001	0.3296	1.2645	2946.9	.0794	.713	0.3019	1.2939	2980.9	.0722	.718
4100	9.6717-2	1011.2	2.0289	28.957	.174	1.0041	-1.0002	0.3335	1.2612	2979.7	.0818	.711	0.3026	1.2931	3017.1	.0735	.718
4200	9.4404-2	1044.8	2.0370	28.954	.177	1.0055	-1.0002	0.3379	1.2578	3011.9	.0843	.710	0.3032	1.2924	3053.0	.0747	.719
4300	9.2195-2	1078.8	2.0450	28.949	.180	1.0073	-1.0003	0.3428	1.2543	3043.5	.0871	.708	0.3038	1.2917	3088.6	.0759	.719
4400	9.0082-2	1113.4	2.0530	28.944	.182	1.0095	-1.0004	0.3483	1.2506	3074.5	.0901	.705	0.3043	1.2911	3123.8	.0772	.719
4500	8.8059-2	1148.5	2.0609	28.937	.185	1.0123	-1.0005	0.3543	1.2468	3104.9	.0934	.702	0.3049	1.2905	3158.8	.0784	.720
4600	8.6118-2	1184.3	2.0687	28.928	.188	1.0157	-1.0007	0.3611	1.2429	3134.8	.0971	.698	0.3054	1.2900	3193.6	.0796	.720
4700	8.4254-2	1220.8	2.0766	28.917	.190	1.0197	-1.0009	0.3687	1.2389	3164.1	.1012	.693	0.3058	1.2896	3228.2	.0808	.720
4800	8.2460-2	1258.0	2.0844	28.903	.193	1.0246	-1.0011	0.3772	1.2348	3193.0	.1057	.688	0.3063	1.2892	3262.6	.0820	.720
4900	8.0732-2	1296.2	2.0923	28.887	.195	1.0303	-1.0014	0.3866	1.2306	3221.5	.1107	.683	0.3067	1.2889	3297.0	.0832	.720
5000	7.9063-2	1335.4	2.1002	28.868	.198	1.0369	-1.0017	0.3971	1.2263	3249.8	.1162	.677	0.3072	1.2886	3331.2	.0844	.721
5100	7.7451-2	1375.7	2.1082	28.844	.201	1.0447	-1.0021	0.4086	1.2221	3277.8	.1222	.671	0.3076	1.2884	3365.5	.0856	.720
5200	7.5889-2	1417.2	2.1162	28.817	.203	1.0535	-1.0026	0.4213	1.2180	3305.7	.1289	.664	0.3080	1.2883	3399.8	.0868	.720
5300	7.4375-2	1460.0	2.1244	28.785	.206	1.0635	-1.0031	0.4352	1.2139	3333.6	.1362	.657	0.3083	1.2882	3434.1	.0880	.720
5400	7.2903-2	1504.2	2.1327	28.748	.208	1.0748	-1.0037	0.4503	1.2099	3361.5	.1442	.650	0.3087	1.2883	3468.7	.0893	.720

TABLE 1.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

DRY AIR ONLY; F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO = 0.0015;

P = 734.797 LB/IN2 (50.00 ATM)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2395 0	265.7	1.6425	28.965	.096	1.0000	-1.0000	0.2673	1.3450	1921.9	.0359	.715	0.2672	1.3452	1922.1	.0358	.715
1700	1.1666 0	292.6	1.6588	28.965	.100	1.0000	-1.0000	0.2701	1.3401	1977.5	.0377	.714	0.2700	1.3404	1977.7	.0377	.714
1800	1.1018 0	319.7	1.6743	28.965	.104	1.0000	-1.0000	0.2728	1.3356	2031.4	.0396	.714	0.2725	1.3361	2031.8	.0395	.714
1900	1.0438 0	347.1	1.6891	28.965	.107	1.0000	-1.0000	0.2752	1.3317	2084.0	.0413	.714	0.2748	1.3325	2084.7	.0413	.714
2000	9.9164-1	374.8	1.7033	28.965	.111	1.0000	-1.0000	0.2776	1.3279	2135.2	.0431	.715	0.2769	1.3291	2136.1	.0430	.715
2100	9.4442-1	402.7	1.7169	28.965	.114	1.0000	-1.0000	0.2799	1.3243	2184.9	.0448	.715	0.2789	1.3259	2186.2	.0446	.715
2200	9.0150-1	430.8	1.7300	28.965	.118	1.0000	-1.0000	0.2822	1.3208	2233.4	.0465	.715	0.2808	1.3230	2235.2	.0462	.715
2300	8.6230-1	459.1	1.7426	28.966	.121	1.0000	-1.0000	0.2845	1.3174	2280.6	.0481	.716	0.2826	1.3202	2283.0	.0478	.716
2400	8.2638-1	487.7	1.7547	28.966	.124	0.9999	-1.0000	0.2868	1.3141	2326.7	.0498	.716	0.2844	1.3177	2329.9	.0494	.716
2500	7.9332-1	516.5	1.7665	28.966	.128	0.9999	-1.0000	0.2891	1.3108	2371.7	.0515	.717	0.2860	1.3153	2375.8	.0510	.717
2600	7.6281-1	545.5	1.7779	28.966	.131	0.9999	-1.0000	0.2914	1.3076	2415.7	.0532	.717	0.2875	1.3131	2420.8	.0525	.717
2700	7.3456-1	574.7	1.7889	28.966	.134	0.9999	-1.0000	0.2937	1.3044	2458.7	.0549	.718	0.2890	1.3110	2465.0	.0540	.718
2800	7.0833-1	604.2	1.7996	28.966	.137	0.9999	-1.0000	0.2961	1.3012	2500.8	.0566	.718	0.2904	1.3091	2508.4	.0555	.717
2900	6.8391-1	634.0	1.8101	28.966	.140	0.9999	-1.0000	0.2985	1.2981	2542.0	.0583	.718	0.2916	1.3073	2551.0	.0570	.717
3000	6.6111-1	663.9	1.8202	28.966	.143	0.9999	-1.0000	0.3008	1.2951	2582.4	.0601	.717	0.2929	1.3056	2592.9	.0585	.717
3100	6.3978-1	694.1	1.8301	28.966	.146	1.0000	-1.0000	0.3032	1.2921	2622.1	.0618	.717	0.2940	1.3041	2634.2	.0599	.717
3200	6.1979-1	724.6	1.8398	28.966	.149	1.0000	-1.0000	0.3057	1.2891	2660.9	.0636	.717	0.2951	1.3026	2674.9	.0614	.717
3300	6.0101-1	755.3	1.8492	28.966	.152	1.0000	-1.0000	0.3081	1.2862	2699.1	.0653	.717	0.2962	1.3012	2714.9	.0628	.717
3400	5.8333-1	786.2	1.8585	28.966	.155	1.0001	-1.0000	0.3106	1.2833	2736.6	.0671	.717	0.2971	1.2999	2754.4	.0642	.717
3500	5.6667-1	817.4	1.8675	28.966	.158	1.0001	-1.0000	0.3131	1.2804	2773.5	.0690	.717	0.2980	1.2987	2793.3	.0656	.717
3600	5.5092-1	848.8	1.8764	28.966	.161	1.0002	-1.0000	0.3156	1.2776	2809.8	.0708	.716	0.2989	1.2976	2831.7	.0670	.717
3700	5.3603-1	880.5	1.8850	28.966	.163	1.0004	-1.0000	0.3182	1.2748	2845.4	.0726	.716	0.2997	1.2966	2869.6	.0683	.717
3800	5.2191-1	912.5	1.8936	28.965	.166	1.0006	-1.0000	0.3209	1.2721	2880.5	.0745	.716	0.3005	1.2956	2907.1	.0696	.717
3900	5.0852-1	944.7	1.9019	28.965	.169	1.0009	-1.0001	0.3236	1.2693	2915.1	.0764	.716	0.3012	1.2947	2944.0	.0709	.718
4000	4.9580-1	977.2	1.9102	28.964	.172	1.0013	-1.0001	0.3264	1.2666	2949.1	.0783	.715	0.3019	1.2938	2980.6	.0722	.718
4100	4.8369-1	1010.0	1.9183	28.963	.174	1.0018	-1.0001	0.3294	1.2639	2982.6	.0803	.715	0.3026	1.2930	3016.7	.0735	.718
4200	4.7215-1	1043.1	1.9262	28.961	.177	1.0024	-1.0001	0.3324	1.2612	3015.6	.0824	.714	0.3032	1.2923	3052.5	.0747	.719
4300	4.6114-1	1076.5	1.9341	28.959	.180	1.0032	-1.0002	0.3357	1.2585	3048.1	.0846	.714	0.3038	1.2916	3087.9	.0759	.719
4400	4.5062-1	1110.2	1.9418	28.957	.182	1.0042	-1.0002	0.3392	1.2558	3080.1	.0869	.712	0.3043	1.2909	3122.9	.0772	.720
4500	4.4056-1	1144.3	1.9495	28.954	.185	1.0054	-1.0003	0.3429	1.2530	3111.7	.0893	.711	0.3048	1.2903	3157.6	.0784	.720
4600	4.3092-1	1178.8	1.9571	28.950	.188	1.0070	-1.0003	0.3470	1.2502	3142.8	.0918	.709	0.3053	1.2897	3192.1	.0796	.720
4700	4.2168-1	1213.7	1.9646	28.945	.190	1.0088	-1.0004	0.3513	1.2474	3173.4	.0945	.707	0.3058	1.2892	3226.2	.0808	.720
4800	4.1281-1	1249.1	1.9720	28.939	.193	1.0110	-1.0005	0.3560	1.2445	3203.7	.0975	.704	0.3063	1.2888	3260.1	.0820	.721
4900	4.0428-1	1284.9	1.9794	28.932	.195	1.0136	-1.0006	0.3611	1.2417	3233.5	.1006	.701	0.3067	1.2883	3293.7	.0832	.721
5000	3.9608-1	1321.3	1.9868	28.923	.198	1.0166	-1.0008	0.3666	1.2388	3263.0	.1040	.698	0.3071	1.2879	3327.2	.0844	.721
5100	3.8817-1	1358.3	1.9941	28.913	.201	1.0201	-1.0010	0.3726	1.2358	3292.2	.1076	.694	0.3075	1.2876	3360.4	.0856	.721
5200	3.8054-1	1395.9	2.0014	28.900	.203	1.0242	-1.0012	0.3792	1.2329	3321.1	.1116	.690	0.3079	1.2873	3393.5	.0868	.721
5300	3.7317-1	1434.1	2.0087	28.886	.206	1.0289	-1.0014	0.3862	1.2300	3349.8	.1158	.686	0.3083	1.2870	3426.5	.0880	.721
5400	3.6605-1	1473.1	2.0160	28.869	.208	1.0342	-1.0017	0.3938	1.2271	3378.2	.1204	.681	0.3086	1.2868	3459.4	.0892	.721

TABLE 2A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.017413; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.2511; MW = 29.0163;
 DRY AIR; GASEOUS COMPOSITION: CO2= .03650; H2O= .03076; N2= .76883; O2= .15469; AR= .00922

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
360	1.1038-1	5.5188 0	-365.8	1.8673	1.7097	1.5521	1.3945	1.2844	0.2423	1.3936	927.2	.0311	.0101	.7453	360
380	1.0457-1	5.2284 0	-361.0	1.8804	1.7228	1.5652	1.4076	1.2975	0.2423	1.3937	952.6	.0326	.0107	.7426	380
400	9.9339-2	4.9669 0	-356.1	1.8928	1.7352	1.5776	1.4200	1.3099	0.2422	1.3938	977.4	.0341	.0112	.7400	400
420	9.4608-2	4.7304 0	-351.3	1.9046	1.7470	1.5895	1.4319	1.3217	0.2423	1.3938	1001.5	.0356	.0117	.7374	420
440	9.0308-2	4.5154 0	-346.4	1.9159	1.7583	1.6007	1.4431	1.3330	0.2423	1.3936	1025.1	.0370	.0122	.7352	440
460	8.6381-2	4.3191 0	-341.6	1.9267	1.7691	1.6115	1.4539	1.3438	0.2424	1.3935	1048.0	.0384	.0127	.7332	460
480	8.2782-2	4.1391 0	-336.7	1.9370	1.7794	1.6218	1.4642	1.3541	0.2425	1.3932	1070.5	.0398	.0132	.7316	480
500	7.9471-2	3.9735 0	-331.9	1.9469	1.7893	1.6317	1.4741	1.3640	0.2426	1.3929	1092.4	.0412	.0137	.7303	500
520	7.6414-2	3.8207 0	-327.0	1.9564	1.7988	1.6412	1.4837	1.3735	0.2428	1.3925	1113.9	.0425	.0141	.7293	520
537	7.4041-2	3.7020 0	-323.0	1.9641	1.8065	1.6489	1.4913	1.3812	0.2430	1.3921	1131.4	.0436	.0145	.7287	537
540	7.3584-2	3.6792 0	-322.2	1.9656	1.8080	1.6504	1.4928	1.3827	0.2430	1.3920	1134.9	.0438	.0146	.7286	540
560	7.0956-2	3.5478 0	-317.3	1.9744	1.8168	1.6592	1.5017	1.3915	0.2433	1.3915	1155.5	.0451	.0151	.7284	560
580	6.8509-2	3.4255 0	-312.5	1.9830	1.8254	1.6678	1.5102	1.4001	0.2435	1.3909	1175.7	.0463	.0155	.7285	580
600	6.6226-2	3.3113 0	-307.6	1.9912	1.8336	1.6761	1.5185	1.4083	0.2438	1.3902	1195.5	.0476	.0159	.7286	600
620	6.4089-2	3.2045 0	-302.7	1.9992	1.8416	1.6841	1.5265	1.4163	0.2441	1.3895	1215.0	.0488	.0164	.7287	620
640	6.2087-2	3.1043 0	-297.8	2.0070	1.8494	1.6918	1.5342	1.4241	0.2445	1.3888	1234.1	.0500	.0168	.7287	640
660	6.0205-2	3.0103 0	-292.9	2.0145	1.8569	1.6993	1.5417	1.4316	0.2448	1.3880	1252.9	.0512	.0172	.7286	660
680	5.8435-2	2.9217 0	-288.0	2.0218	1.8642	1.7066	1.5491	1.4389	0.2452	1.3871	1271.3	.0524	.0176	.7284	680
700	5.6765-2	2.8382 0	-283.1	2.0289	1.8714	1.7138	1.5562	1.4460	0.2456	1.3862	1289.5	.0535	.0181	.7282	700
720	5.5188-2	2.7594 0	-278.2	2.0359	1.8783	1.7207	1.5631	1.4530	0.2461	1.3853	1307.3	.0547	.0185	.7280	720
740	5.3697-2	2.6848 0	-273.3	2.0426	1.8850	1.7274	1.5699	1.4597	0.2465	1.3843	1324.9	.0558	.0189	.7278	740
760	5.2284-2	2.6142 0	-268.3	2.0492	1.8916	1.7340	1.5764	1.4663	0.2470	1.3833	1342.2	.0569	.0193	.7277	760
780	5.0943-2	2.5471 0	-263.4	2.0556	1.8980	1.7404	1.5829	1.4727	0.2475	1.3823	1359.2	.0580	.0197	.7275	780
800	4.9669-2	2.4835 0	-258.4	2.0619	1.9043	1.7467	1.5891	1.4790	0.2480	1.3812	1376.0	.0591	.0201	.7274	800
820	4.8458-2	2.4229 0	-253.5	2.0680	1.9104	1.7528	1.5953	1.4851	0.2485	1.3801	1392.5	.0602	.0206	.7273	820
840	4.7304-2	2.3652 0	-248.5	2.0740	1.9164	1.7588	1.6013	1.4911	0.2490	1.3789	1408.8	.0612	.0210	.7272	840
860	4.6204-2	2.3102 0	-243.5	2.0799	1.9223	1.7647	1.6071	1.4970	0.2496	1.3778	1424.9	.0623	.0214	.7272	860
880	4.5154-2	2.2577 0	-238.5	2.0856	1.9280	1.7704	1.6129	1.5027	0.2502	1.3766	1440.8	.0633	.0218	.7271	880
900	4.4151-2	2.2075 0	-233.5	2.0913	1.9337	1.7761	1.6185	1.5083	0.2507	1.3754	1456.4	.0643	.0222	.7271	900
920	4.3191-2	2.1595 0	-228.5	2.0968	1.9392	1.7816	1.6240	1.5139	0.2513	1.3742	1471.8	.0653	.0226	.7271	920
940	4.2272-2	2.1136 0	-223.4	2.1022	1.9446	1.7870	1.6294	1.5193	0.2519	1.3730	1487.1	.0664	.0230	.7271	940
960	4.1391-2	2.0696 0	-218.4	2.1075	1.9499	1.7923	1.6347	1.5246	0.2526	1.3717	1502.1	.0674	.0234	.7270	960
980	4.0546-2	2.0273 0	-213.3	2.1127	1.9551	1.7975	1.6399	1.5298	0.2532	1.3705	1517.0	.0683	.0238	.7270	980
1000	3.9735-2	1.9868 0	-208.3	2.1178	1.9602	1.8027	1.6451	1.5349	0.2538	1.3692	1531.7	.0693	.0242	.7269	1000
1020	3.8956-2	1.9478 0	-203.2	2.1229	1.9653	1.8077	1.6501	1.5399	0.2545	1.3679	1546.2	.0703	.0246	.7268	1020
1040	3.8207-2	1.9104 0	-198.1	2.1278	1.9702	1.8126	1.6550	1.5449	0.2551	1.3666	1560.6	.0713	.0250	.7267	1040
1060	3.7486-2	1.8743 0	-193.0	2.1327	1.9751	1.8175	1.6599	1.5498	0.2558	1.3654	1574.8	.0722	.0254	.7266	1060
1080	3.6792-2	1.8396 0	-187.9	2.1375	1.9799	1.8223	1.6647	1.5545	0.2564	1.3641	1588.8	.0732	.0258	.7265	1080
1100	3.6123-2	1.8062 0	-182.7	2.1422	1.9846	1.8270	1.6694	1.5593	0.2571	1.3628	1602.7	.0741	.0262	.7263	1100
1120	3.5478-2	1.7739 0	-177.6	2.1468	1.9892	1.8316	1.6740	1.5639	0.2578	1.3615	1616.4	.0750	.0266	.7261	1120
1140	3.4856-2	1.7428 0	-172.4	2.1514	1.9938	1.8362	1.6786	1.5685	0.2584	1.3602	1630.0	.0760	.0270	.7259	1140

TABLE 2A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.017413; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.2511; MW = 29.0163;
 DRY AIR; GASEOUS COMPOSITION: CO2= .03650; H2O= .03076; N2= .76883; O2= .15469; AR= .00922

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
1160	3.4255-2	1.7127 0	-167.2	2.1559	1.9983	1.8407	1.6831	1.5730	0.2591	1.3589	1643.5	.0769	.0275	.7256	1160
1180	3.3674-2	1.6837 0	-162.1	2.1603	2.0027	1.8451	1.6876	1.5774	0.2598	1.3576	1656.8	.0778	.0279	.7254	1180
1200	3.3113-2	1.6556 0	-156.8	2.1647	2.0071	1.8495	1.6919	1.5818	0.2605	1.3564	1670.0	.0787	.0283	.7252	1200
1220	3.2570-2	1.6285 0	-151.6	2.1690	2.0114	1.8538	1.6962	1.5861	0.2612	1.3551	1683.1	.0796	.0287	.7249	1220
1240	3.2045-2	1.6022 0	-146.4	2.1733	2.0157	1.8581	1.7005	1.5903	0.2619	1.3538	1696.0	.0805	.0291	.7247	1240
1260	3.1536-2	1.5768 0	-141.2	2.1774	2.0199	1.8623	1.7047	1.5945	0.2626	1.3526	1708.9	.0814	.0295	.7244	1260
1280	3.1043-2	1.5522 0	-135.9	2.1816	2.0240	1.8664	1.7088	1.5987	0.2633	1.3513	1721.6	.0823	.0299	.7242	1280
1300	3.0566-2	1.5283 0	-130.6	2.1857	2.0281	1.8705	1.7129	1.6028	0.2639	1.3501	1734.2	.0832	.0303	.7240	1300
1320	3.0103-2	1.5051 0	-125.3	2.1897	2.0321	1.8745	1.7169	1.6068	0.2646	1.3488	1746.7	.0841	.0307	.7237	1320
1340	2.9653-2	1.4827 0	-120.0	2.1937	2.0361	1.8785	1.7209	1.6108	0.2653	1.3476	1759.1	.0849	.0311	.7235	1340
1360	2.9217-2	1.4609 0	-114.7	2.1976	2.0400	1.8825	1.7249	1.6147	0.2660	1.3464	1771.3	.0858	.0315	.7233	1360
1380	2.8794-2	1.4397 0	-109.4	2.2015	2.0439	1.8863	1.7288	1.6186	0.2667	1.3452	1783.5	.0866	.0320	.7231	1380
1400	2.8382-2	1.4191 0	-104.1	2.2054	2.0478	1.8902	1.7326	1.6224	0.2674	1.3441	1795.6	.0875	.0324	.7229	1400
1420	2.7983-2	1.3991 0	-98.7	2.2092	2.0516	1.8940	1.7364	1.6262	0.2680	1.3429	1807.6	.0883	.0328	.7227	1420
1440	2.7594-2	1.3797 0	-93.3	2.2129	2.0553	1.8977	1.7401	1.6300	0.2687	1.3417	1819.5	.0892	.0332	.7225	1440
1460	2.7216-2	1.3608 0	-88.0	2.2166	2.0590	1.9014	1.7439	1.6337	0.2694	1.3406	1831.3	.0900	.0336	.7223	1460
1480	2.6848-2	1.3424 0	-82.6	2.2203	2.0627	1.9051	1.7475	1.6374	0.2700	1.3395	1843.1	.0909	.0340	.7222	1480
1500	2.6490-2	1.3245 0	-77.2	2.2239	2.0663	1.9087	1.7512	1.6410	0.2707	1.3384	1854.7	.0917	.0344	.7220	1500
1520	2.6142-2	1.3071 0	-71.7	2.2275	2.0699	1.9123	1.7547	1.6446	0.2713	1.3373	1866.3	.0925	.0348	.7219	1520
1540	2.5802-2	1.2901 0	-66.3	2.2311	2.0735	1.9159	1.7583	1.6481	0.2720	1.3362	1877.8	.0933	.0352	.7217	1540
1560	2.5471-2	1.2736 0	-60.9	2.2346	2.0770	1.9194	1.7618	1.6517	0.2726	1.3352	1889.2	.0941	.0356	.7216	1560
1580	2.5149-2	1.2575 0	-55.4	2.2381	2.0805	1.9229	1.7653	1.6551	0.2733	1.3341	1900.5	.0949	.0360	.7215	1580
1600	2.4835-2	1.2417 0	-49.9	2.2415	2.0839	1.9263	1.7687	1.6586	0.2739	1.3331	1911.8	.0957	.0364	.7213	1600
1620	2.4528-2	1.2264 0	-44.4	2.2449	2.0873	1.9297	1.7721	1.6620	0.2745	1.3321	1923.0	.0965	.0367	.7212	1620
1640	2.4229-2	1.2114 0	-38.9	2.2483	2.0907	1.9331	1.7755	1.6654	0.2751	1.3311	1934.1	.0973	.0371	.7211	1640
1660	2.3937-2	1.1969 0	-33.4	2.2516	2.0940	1.9364	1.7788	1.6687	0.2757	1.3302	1945.2	.0981	.0375	.7210	1660
1680	2.3652-2	1.1826 0	-27.9	2.2549	2.0973	1.9397	1.7822	1.6720	0.2763	1.3292	1956.1	.0989	.0379	.7208	1680
1700	2.3374-2	1.1687 0	-22.4	2.2582	2.1006	1.9430	1.7854	1.6753	0.2769	1.3283	1967.1	.0997	.0383	.7207	1700
1720	2.3102-2	1.1551 0	-16.8	2.2614	2.1038	1.9463	1.7887	1.6785	0.2775	1.3274	1977.9	.1005	.0387	.7206	1720
1740	2.2836-2	1.1418 0	-11.3	2.2646	2.1071	1.9495	1.7919	1.6817	0.2780	1.3265	1988.7	.1013	.0391	.7205	1740
1760	2.2577-2	1.1288 0	-5.7	2.2678	2.1102	1.9526	1.7951	1.6849	0.2786	1.3257	1999.5	.1020	.0395	.7204	1760
1780	2.2323-2	1.1162 0	-0.1	2.2710	2.1134	1.9558	1.7982	1.6881	0.2791	1.3248	2010.2	.1028	.0398	.7203	1780
1800	2.2075-2	1.1038 0	5.4	2.2741	2.1165	1.9589	1.8013	1.6912	0.2797	1.3240	2020.8	.1035	.0402	.7203	1800
1900	2.0913-2	1.0457 0	33.5	2.2893	2.1317	1.9741	1.8165	1.7064	0.2822	1.3202	2073.2	.1073	.0420	.7201	1900
2000	1.9868-2	9.9339-1	61.9	2.3038	2.1462	1.9886	1.8311	1.7209	0.2845	1.3168	2124.3	.1109	.0438	.7201	2000
2100	1.8922-2	9.4608-1	90.4	2.3178	2.1602	2.0026	1.8450	1.7348	0.2867	1.3135	2174.1	.1145	.0456	.7203	2100
2200	1.8062-2	9.0308-1	119.2	2.3311	2.1736	2.0160	1.8584	1.7482	0.2888	1.3105	2222.7	.1180	.0473	.7204	2200
2300	1.7276-2	8.6382-1	148.2	2.3440	2.1864	2.0289	1.8713	1.7611	0.2908	1.3077	2270.2	.1215	.0490	.7206	2300
2400	1.6556-2	8.2782-1	177.4	2.3564	2.1989	2.0413	1.8837	1.7735	0.2927	1.3051	2316.7	.1248	.0507	.7208	2400
2500	1.5894-2	7.9471-1	206.7	2.3684	2.2108	2.0533	1.8957	1.7855	0.2945	1.3027	2362.3	.1281	.0524	.7209	2500

TABLE 2A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.017413; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.2511; MW = 29.0163;
 DRY AIR; GASEOUS COMPOSITION: CO2= .03650; H2O= .03076; N2= .76883; O2= .15469; AR= .00922

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
2600	1.5283-2	7.6414-1	236.3	2.3800	2.2224	2.0648	1.9073	1.7971	0.2962	1.3005	2407.0	.1314	.0540	.7210	2600
2700	1.4717-2	7.3584-1	266.0	2.3912	2.2336	2.0760	1.9185	1.8083	0.2978	1.2984	2450.9	.1346	.0556	.7211	2700
2800	1.4191-2	7.0956-1	295.8	2.4021	2.2445	2.0869	1.9293	1.8192	0.2993	1.2964	2494.0	.1378	.0572	.7209	2800
2900	1.3702-2	6.8509-1	325.8	2.4126	2.2550	2.0974	1.9398	1.8297	0.3008	1.2946	2536.4	.1409	.0588	.7206	2900
3000	1.3245-2	6.6226-1	356.0	2.4228	2.2652	2.1077	1.9501	1.8399	0.3021	1.2929	2578.0	.1440	.0604	.7203	3000
3100	1.2818-2	6.4089-1	386.3	2.4328	2.2752	2.1176	1.9600	1.8498	0.3034	1.2913	2619.0	.1470	.0620	.7199	3100
3200	1.2417-2	6.2087-1	416.7	2.4424	2.2848	2.1272	1.9696	1.8595	0.3046	1.2898	2659.4	.1501	.0635	.7196	3200
3300	1.2041-2	6.0205-1	447.2	2.4518	2.2942	2.1366	1.9790	1.8689	0.3057	1.2885	2699.2	.1530	.0650	.7193	3300
3400	1.1687-2	5.8435-1	477.8	2.4609	2.3034	2.1458	1.9882	1.8780	0.3068	1.2872	2738.4	.1560	.0665	.7190	3400
3500	1.1353-2	5.6765-1	508.5	2.4698	2.3123	2.1547	1.9971	1.8869	0.3078	1.2860	2777.1	.1589	.0680	.7187	3500
3600	1.1038-2	5.5188-1	539.3	2.4785	2.3209	2.1634	2.0058	1.8956	0.3087	1.2848	2815.3	.1618	.0695	.7184	3600
3700	1.0739-2	5.3697-1	570.3	2.4870	2.3294	2.1718	2.0142	1.9041	0.3096	1.2838	2852.9	.1646	.0709	.7184	3700
3800	1.0457-2	5.2284-1	601.3	2.4953	2.3377	2.1801	2.0225	1.9124	0.3104	1.2828	2890.1	.1674	.0724	.7183	3800
3900	1.0189-2	5.0943-1	632.4	2.5033	2.3458	2.1882	2.0306	1.9204	0.3112	1.2819	2926.8	.1702	.0738	.7183	3900
4000	9.9339-3	4.9669-1	663.5	2.5112	2.3536	2.1961	2.0385	1.9283	0.3120	1.2810	2963.1	.1730	.0751	.7183	4000
4100	9.6916-3	4.8458-1	694.8	2.5189	2.3614	2.2038	2.0462	1.9360	0.3127	1.2802	2999.0	.1757	.0765	.7183	4100
4200	9.4608-3	4.7304-1	726.1	2.5265	2.3689	2.2113	2.0537	1.9436	0.3134	1.2794	3034.4	.1784	.0778	.7184	4200
4300	9.2408-3	4.6204-1	757.4	2.5339	2.3763	2.2187	2.0611	1.9510	0.3140	1.2787	3069.4	.1811	.0792	.7184	4300
4400	9.0308-3	4.5154-1	788.9	2.5411	2.3835	2.2259	2.0683	1.9582	0.3146	1.2780	3104.1	.1838	.0805	.7185	4400
4500	8.8301-3	4.4151-1	820.4	2.5482	2.3906	2.2330	2.0754	1.9653	0.3152	1.2774	3138.4	.1865	.0818	.7186	4500
4600	8.6381-3	4.3191-1	851.9	2.5551	2.3975	2.2399	2.0823	1.9722	0.3158	1.2767	3172.3	.1891	.0831	.7185	4600
4700	8.4544-3	4.2272-1	883.5	2.5619	2.4043	2.2467	2.0891	1.9790	0.3163	1.2762	3205.9	.1917	.0844	.7183	4700
4800	8.2782-3	4.1391-1	915.2	2.5686	2.4110	2.2534	2.0958	1.9857	0.3168	1.2756	3239.1	.1943	.0857	.7182	4800
4900	8.1093-3	4.0546-1	946.9	2.5751	2.4175	2.2599	2.1023	1.9922	0.3173	1.2751	3272.0	.1969	.0870	.7180	4900
5000	7.9471-3	3.9735-1	978.6	2.5815	2.4239	2.2663	2.1088	1.9986	0.3177	1.2746	3304.5	.1994	.0883	.7178	5000
5100	7.7913-3	3.8956-1	1010.4	2.5878	2.4302	2.2726	2.1151	2.0049	0.3182	1.2741	3336.8	.2019	.0895	.7176	5100
5200	7.6414-3	3.8207-1	1042.2	2.5940	2.4364	2.2788	2.1212	2.0111	0.3186	1.2736	3368.7	.2044	.0908	.7174	5200
5300	7.4973-3	3.7486-1	1074.1	2.6001	2.4425	2.2849	2.1273	2.0172	0.3190	1.2732	3400.3	.2069	.0920	.7172	5300
5400	7.3584-3	3.6792-1	1106.0	2.6060	2.4484	2.2909	2.1333	2.0231	0.3194	1.2727	3431.7	.2094	.0933	.7169	5400

TABLE 2.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.017413; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 0.14696 LB/IN² (0.01 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4835-4	-49.9	2.2415	29.016	.096	1.0000	-1.0000	0.2740	1.3330	1911.7	.0364	.721	0.2739	1.3331	1911.8	.0364	.721
1700	2.3374-4	-22.4	2.2582	29.016	.100	1.0000	-1.0000	0.2770	1.3281	1966.9	.0383	.721	0.2769	1.3283	1967.1	.0383	.721
1800	2.2075-4	5.5	2.2741	29.016	.104	1.0000	-1.0000	0.2799	1.3236	2020.5	.0402	.720	0.2797	1.3240	2020.8	.0402	.720
1900	2.0913-4	33.6	2.2893	29.016	.107	1.0000	-1.0000	0.2826	1.3196	2072.8	.0421	.720	0.2822	1.3202	2073.2	.0420	.720
2000	1.9868-4	62.0	2.3039	29.016	.111	1.0000	-1.0000	0.2851	1.3159	2123.6	.0439	.720	0.2845	1.3168	2124.3	.0438	.720
2100	1.8922-4	90.6	2.3179	29.016	.115	1.0000	-1.0000	0.2876	1.3122	2173.0	.0457	.720	0.2867	1.3135	2174.1	.0456	.720
2200	1.8062-4	119.5	2.3313	29.016	.118	1.0000	-1.0000	0.2901	1.3087	2221.2	.0475	.720	0.2888	1.3105	2222.7	.0473	.720
2300	1.7276-4	148.7	2.3442	29.016	.121	1.0001	-1.0000	0.2927	1.3053	2268.1	.0493	.721	0.2908	1.3077	2270.2	.0490	.721
2400	1.6556-4	178.1	2.3568	29.016	.125	1.0001	-1.0000	0.2952	1.3019	2313.8	.0511	.721	0.2927	1.3051	2316.7	.0507	.721
2500	1.5894-4	207.7	2.3689	29.016	.128	1.0002	-1.0000	0.2979	1.2984	2358.4	.0530	.721	0.2945	1.3027	2362.3	.0524	.721
2600	1.5282-4	237.6	2.3806	29.016	.131	1.0004	-1.0000	0.3008	1.2948	2401.8	.0549	.720	0.2962	1.3005	2407.1	.0540	.721
2700	1.4716-4	267.9	2.3920	29.015	.135	1.0007	-1.0000	0.3040	1.2910	2444.0	.0569	.720	0.2978	1.2984	2451.0	.0556	.721
2800	1.4190-4	298.5	2.4031	29.014	.138	1.0011	-1.0000	0.3077	1.2869	2484.9	.0590	.718	0.2993	1.2964	2494.1	.0572	.721
2900	1.3700-4	329.4	2.4140	29.013	.141	1.0019	-1.0000	0.3121	1.2822	2524.3	.0614	.716	0.3008	1.2946	2536.6	.0588	.721
3000	1.3242-4	360.9	2.4247	29.010	.144	1.0031	-1.0001	0.3177	1.2767	2562.1	.0641	.713	0.3021	1.2930	2578.4	.0604	.720
3100	1.2814-4	393.0	2.4352	29.006	.147	1.0050	-1.0001	0.3248	1.2703	2598.1	.0674	.708	0.3034	1.2914	2619.6	.0620	.720
3200	1.2411-4	426.0	2.4457	29.001	.150	1.0080	-1.0002	0.3342	1.2626	2631.9	.0715	.701	0.3046	1.2900	2660.4	.0635	.720
3300	1.2031-4	460.0	2.4561	28.992	.153	1.0124	-1.0003	0.3467	1.2534	2663.3	.0768	.691	0.3057	1.2888	2700.7	.0650	.719
3400	1.1672-4	495.4	2.4667	28.978	.156	1.0190	-1.0005	0.3636	1.2425	2692.2	.0839	.676	0.3068	1.2877	2740.8	.0666	.719
3500	1.1330-4	532.9	2.4776	28.958	.159	1.0286	-1.0009	0.3863	1.2299	2718.6	.0935	.657	0.3078	1.2867	2780.7	.0681	.718
3600	1.1005-4	573.0	2.4889	28.930	.162	1.0422	-1.0013	0.4165	1.2161	2743.0	.1064	.633	0.3087	1.2860	2820.7	.0696	.718
3700	1.0692-4	616.5	2.5008	28.890	.165	1.0609	-1.0020	0.4560	1.2015	2766.0	.1240	.605	0.3096	1.2854	2861.0	.0710	.717
3800	1.0391-4	664.5	2.5136	28.833	.167	1.0862	-1.0029	0.5068	1.1869	2788.8	.1474	.575	0.3104	1.2852	2901.9	.0725	.716
3900	1.0098-4	718.3	2.5275	28.757	.170	1.1192	-1.0041	0.5705	1.1731	2812.5	.1778	.545	0.3112	1.2852	2943.8	.0739	.715
4000	9.8105-5	779.1	2.5429	28.656	.173	1.1611	-1.0057	0.6482	1.1607	2838.2	.2163	.517	0.3119	1.2856	2987.1	.0754	.714
4100	9.5274-5	848.4	2.5600	28.525	.175	1.2125	-1.0078	0.7401	1.1501	2866.9	.2629	.493	0.3126	1.2865	3032.2	.0769	.712
4200	9.2465-5	927.6	2.5791	28.359	.178	1.2731	-1.0103	0.8453	1.1415	2899.3	.3166	.475	0.3133	1.2879	3079.5	.0785	.710
4300	8.9665-5	1017.8	2.6004	28.155	.180	1.3422	-1.0133	0.9614	1.1349	2935.7	.3749	.463	0.3139	1.2898	3129.6	.0802	.706
4400	8.6866-5	1120.1	2.6239	27.910	.183	1.4175	-1.0167	1.0846	1.1301	2976.2	.4339	.457	0.3146	1.2923	3182.7	.0819	.702
4500	8.4069-5	1234.8	2.6496	27.626	.185	1.4956	-1.0204	1.2092	1.1269	3021.0	.4884	.459	0.3152	1.2954	3239.1	.0838	.697
4600	8.1282-5	1361.7	2.6775	27.303	.188	1.5719	-1.0242	1.3278	1.1251	3069.9	.5335	.468	0.3159	1.2991	3298.9	.0858	.692
4700	7.8521-5	1499.9	2.7072	26.949	.190	1.6405	-1.0278	1.4319	1.1245	3122.6	.5654	.482	0.3165	1.3034	3361.9	.0879	.685
4800	7.5809-5	1647.3	2.7383	26.572	.193	1.6955	-1.0310	1.5126	1.1249	3178.6	.5822	.501	0.3172	1.3082	3427.7	.0901	.679
4900	7.3175-5	1801.4	2.7700	26.183	.195	1.7320	-1.0334	1.5623	1.1264	3237.4	.5840	.523	0.3179	1.3133	3495.7	.0923	.673
5000	7.0645-5	1958.6	2.8018	25.794	.198	1.7466	-1.0349	1.5762	1.1288	3298.4	.5722	.546	0.3186	1.3186	3564.9	.0946	.667
5100	6.8247-5	2115.3	2.8328	25.417	.201	1.7378	-1.0352	1.5519	1.1323	3361.0	.5482	.568	0.3193	1.3240	3634.4	.0967	.662
5200	6.6000-5	2267.7	2.8624	25.062	.203	1.7061	-1.0345	1.4897	1.1368	3424.6	.5139	.590	0.3199	1.3292	3703.0	.0989	.658
5300	6.3920-5	2412.1	2.8899	24.739	.206	1.6538	-1.0326	1.3939	1.1427	3488.9	.4716	.609	0.3205	1.3341	3769.7	.1009	.655
5400	6.2012-5	2545.6	2.9149	24.453	.209	1.5858	-1.0299	1.2729	1.1501	3553.6	.4245	.626	0.3211	1.3385	3833.6	.1029	.652

TABLE 2.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.017413; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 1.46959 LB/IN2 (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR	PRAN
1600	2.4835-3	-49.9	2.0839	29.016	.096	1.0000	-1.0000	0.2740	1.3330	1911.7	.0364	.721	0.2739	1.3331	1911.8	.0364	.721
1700	2.3374-3	-22.4	2.1006	29.016	.100	1.0000	-1.0000	0.2770	1.3281	1966.9	.0383	.721	0.2769	1.3283	1967.1	.0383	.721
1800	2.2075-3	5.5	2.1165	29.016	.104	1.0000	-1.0000	0.2799	1.3236	2020.5	.0402	.720	0.2797	1.3240	2020.8	.0402	.720
1900	2.0913-3	33.6	2.1317	29.016	.107	1.0000	-1.0000	0.2825	1.3196	2072.8	.0421	.720	0.2822	1.3202	2073.2	.0420	.720
2000	1.9868-3	62.0	2.1463	29.016	.111	1.0000	-1.0000	0.2851	1.3159	2123.6	.0439	.720	0.2845	1.3168	2124.3	.0438	.720
2100	1.8922-3	90.6	2.1603	29.016	.115	1.0000	-1.0000	0.2876	1.3123	2173.0	.0457	.720	0.2867	1.3135	2174.1	.0456	.720
2200	1.8062-3	119.5	2.1737	29.016	.118	1.0000	-1.0000	0.2901	1.3088	2221.2	.0475	.720	0.2888	1.3105	2222.7	.0473	.720
2300	1.7276-3	148.6	2.1867	29.016	.121	1.0000	-1.0000	0.2926	1.3054	2268.2	.0493	.721	0.2908	1.3077	2270.2	.0490	.721
2400	1.6556-3	178.0	2.1992	29.016	.125	1.0001	-1.0000	0.2950	1.3021	2314.0	.0511	.721	0.2927	1.3051	2316.7	.0507	.721
2500	1.5894-3	207.7	2.2113	29.016	.128	1.0001	-1.0000	0.2976	1.2988	2358.8	.0529	.721	0.2945	1.3027	2362.3	.0524	.721
2600	1.5283-3	237.5	2.2230	29.016	.131	1.0002	-1.0000	0.3002	1.2955	2402.4	.0547	.721	0.2962	1.3005	2407.0	.0540	.721
2700	1.4717-3	267.7	2.2344	29.016	.135	1.0003	-1.0000	0.3029	1.2921	2445.0	.0566	.721	0.2978	1.2984	2450.9	.0556	.721
2800	1.4191-3	298.1	2.2454	29.015	.138	1.0005	-1.0000	0.3058	1.2887	2486.6	.0585	.720	0.2993	1.2964	2494.0	.0572	.721
2900	1.3701-3	328.9	2.2562	29.015	.141	1.0008	-1.0000	0.3091	1.2850	2527.0	.0606	.719	0.3008	1.2946	2536.5	.0588	.721
3000	1.3244-3	360.0	2.2667	29.014	.144	1.0013	-1.0000	0.3127	1.2811	2566.4	.0628	.718	0.3021	1.2929	2578.2	.0604	.720
3100	1.2816-3	391.4	2.2771	29.012	.147	1.0021	-1.0001	0.3169	1.2769	2604.5	.0651	.716	0.3034	1.2914	2619.3	.0620	.720
3200	1.2414-3	423.4	2.2872	29.010	.150	1.0031	-1.0001	0.3219	1.2721	2641.4	.0677	.713	0.3046	1.2899	2659.8	.0635	.720
3300	1.2037-3	455.8	2.2972	29.006	.153	1.0048	-1.0001	0.3280	1.2668	2676.9	.0708	.709	0.3057	1.2886	2699.8	.0650	.719
3400	1.1681-3	489.0	2.3071	29.001	.156	1.0071	-1.0002	0.3355	1.2607	2710.8	.0743	.704	0.3068	1.2874	2739.4	.0666	.719
3500	1.1344-3	523.0	2.3170	28.994	.159	1.0104	-1.0003	0.3450	1.2538	2743.2	.0786	.697	0.3078	1.2863	2778.5	.0680	.719
3600	1.1025-3	558.1	2.3268	28.983	.162	1.0151	-1.0005	0.3569	1.2459	2773.8	.0839	.688	0.3087	1.2853	2817.3	.0695	.718
3700	1.0722-3	594.5	2.3368	28.969	.165	1.0214	-1.0007	0.3720	1.2370	2802.8	.0905	.676	0.3096	1.2844	2855.9	.0710	.718
3800	1.0433-3	632.6	2.3470	28.949	.167	1.0300	-1.0010	0.3909	1.2273	2830.2	.0989	.662	0.3104	1.2837	2894.4	.0724	.718
3900	1.0156-3	672.8	2.3574	28.923	.170	1.0415	-1.0014	0.4146	1.2169	2856.3	.1096	.644	0.3112	1.2831	2933.0	.0738	.718
4000	9.8897-4	715.7	2.3683	28.887	.173	1.0563	-1.0019	0.4438	1.2061	2881.6	.1231	.623	0.3119	1.2827	2971.7	.0752	.717
4100	9.6329-4	761.8	2.3797	28.841	.176	1.0752	-1.0027	0.4793	1.1953	2906.7	.1400	.601	0.3126	1.2825	3010.8	.0766	.717
4200	9.3840-4	811.8	2.3917	28.781	.178	1.0987	-1.0036	0.5216	1.1849	2932.1	.1609	.578	0.3132	1.2825	3050.5	.0780	.716
4300	9.1415-4	866.4	2.4045	28.704	.181	1.1273	-1.0048	0.5711	1.1753	2958.6	.1862	.555	0.3138	1.2828	3091.0	.0794	.715
4400	8.9043-4	926.3	2.4183	28.610	.184	1.1612	-1.0063	0.6277	1.1666	2986.8	.2161	.533	0.3144	1.2833	3132.6	.0808	.714
4500	8.6712-4	992.1	2.4331	28.494	.186	1.2003	-1.0080	0.6909	1.1592	3017.0	.2503	.514	0.3150	1.2842	3175.4	.0823	.713
4600	8.4415-4	1064.6	2.4490	28.356	.189	1.2443	-1.0100	0.7597	1.1530	3049.6	.2882	.497	0.3155	1.2854	3219.9	.0838	.710
4700	8.2144-4	1144.2	2.4662	28.193	.191	1.2926	-1.0124	0.8330	1.1480	3084.8	.3287	.485	0.3160	1.2869	3266.0	.0853	.708
4800	7.9895-4	1231.3	2.4845	28.004	.194	1.3443	-1.0149	0.9089	1.1442	3122.7	.3699	.476	0.3164	1.2888	3314.1	.0870	.705
4900	7.7668-4	1326.0	2.5040	27.791	.196	1.3980	-1.0177	0.9855	1.1415	3163.4	.4099	.472	0.3169	1.2911	3364.3	.0887	.701
5000	7.5464-4	1428.4	2.5247	27.553	.199	1.4520	-1.0207	1.0605	1.1397	3206.7	.4465	.472	0.3174	1.2938	3416.6	.0905	.697
5100	7.3287-4	1538.0	2.5464	27.294	.201	1.5041	-1.0237	1.1308	1.1388	3252.7	.4775	.476	0.3179	1.2968	3471.0	.0924	.692
5200	7.1144-4	1654.3	2.5690	27.015	.204	1.5520	-1.0266	1.1933	1.1387	3301.2	.5014	.485	0.3184	1.3002	3527.5	.0943	.688
5300	6.9044-4	1776.3	2.5922	26.722	.206	1.5931	-1.0292	1.2447	1.1394	3352.0	.5172	.496	0.3189	1.3039	3585.8	.0964	.682
5400	6.6997-4	1902.7	2.6158	26.419	.209	1.6250	-1.0315	1.2819	1.1407	3404.8	.5245	.511	0.3194	1.3078	3645.6	.0985	.677

TABLE 2.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.017413; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 14.6959 LB/IN² (1.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS					FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4835-2	-49.9	1.9263	29.016	.096	1.0000	-1.0000	0.2740	1.3330	1911.7	.0364	.721	0.2739	1.3331	1911.8	.0364	.721
1700	2.3374-2	-22.4	1.9430	29.016	.100	1.0000	-1.0000	0.2770	1.3281	1966.9	.0383	.721	0.2769	1.3283	1967.1	.0383	.721
1800	2.2075-2	5.5	1.9589	29.016	.104	1.0000	-1.0000	0.2799	1.3236	2020.5	.0402	.720	0.2797	1.3240	2020.8	.0402	.720
1900	2.0913-2	33.6	1.9741	29.016	.107	1.0000	-1.0000	0.2825	1.3196	2072.8	.0421	.720	0.2822	1.3202	2073.2	.0420	.720
2000	1.9868-2	62.0	1.9887	29.016	.111	1.0000	-1.0000	0.2851	1.3159	2123.6	.0439	.720	0.2845	1.3168	2124.3	.0438	.720
2100	1.8922-2	90.6	2.0027	29.016	.115	1.0000	-1.0000	0.2876	1.3123	2173.0	.0457	.720	0.2867	1.3135	2174.1	.0456	.720
2200	1.8062-2	119.5	2.0161	29.016	.118	1.0000	-1.0000	0.2901	1.3088	2221.2	.0475	.720	0.2888	1.3105	2222.7	.0473	.720
2300	1.7276-2	148.6	2.0291	29.016	.121	1.0000	-1.0000	0.2925	1.3055	2268.2	.0493	.721	0.2908	1.3077	2270.2	.0490	.721
2400	1.6556-2	178.0	2.0416	29.016	.125	1.0000	-1.0000	0.2949	1.3022	2314.1	.0511	.721	0.2927	1.3051	2316.7	.0507	.721
2500	1.5894-2	207.6	2.0537	29.016	.128	1.0000	-1.0000	0.2974	1.2990	2358.9	.0529	.721	0.2945	1.3027	2362.3	.0524	.721
2600	1.5283-2	237.5	2.0654	29.016	.131	1.0001	-1.0000	0.2999	1.2958	2402.7	.0547	.721	0.2962	1.3005	2407.0	.0540	.721
2700	1.4717-2	267.6	2.0767	29.016	.135	1.0001	-1.0000	0.3024	1.2926	2445.5	.0565	.721	0.2978	1.2984	2450.9	.0556	.721
2800	1.4191-2	298.0	2.0878	29.016	.138	1.0002	-1.0000	0.3050	1.2895	2487.3	.0583	.721	0.2993	1.2964	2494.0	.0572	.721
2900	1.3702-2	328.6	2.0985	29.016	.141	1.0004	-1.0000	0.3078	1.2863	2528.2	.0602	.720	0.3008	1.2946	2536.4	.0588	.721
3000	1.3245-2	359.5	2.1090	29.015	.144	1.0006	-1.0000	0.3107	1.2830	2568.2	.0622	.719	0.3021	1.2929	2578.1	.0604	.720
3100	1.2817-2	390.7	2.1192	29.014	.147	1.0009	-1.0000	0.3138	1.2796	2607.2	.0642	.718	0.3034	1.2913	2619.2	.0620	.720
3200	1.2416-2	422.3	2.1293	29.013	.150	1.0014	-1.0000	0.3172	1.2760	2645.3	.0664	.717	0.3046	1.2899	2659.6	.0635	.720
3300	1.2039-2	454.2	2.1391	29.012	.153	1.0020	-1.0001	0.3210	1.2723	2682.4	.0687	.716	0.3057	1.2885	2699.5	.0650	.719
3400	1.1684-2	486.5	2.1487	29.010	.156	1.0029	-1.0001	0.3254	1.2683	2718.6	.0711	.714	0.3068	1.2873	2738.8	.0666	.719
3500	1.1349-2	519.3	2.1582	29.007	.159	1.0041	-1.0001	0.3303	1.2640	2753.7	.0738	.711	0.3078	1.2861	2777.7	.0680	.719
3600	1.1032-2	552.6	2.1676	29.003	.162	1.0058	-1.0002	0.3361	1.2593	2787.8	.0768	.708	0.3087	1.2850	2816.1	.0695	.718
3700	1.0732-2	586.6	2.1769	28.997	.165	1.0081	-1.0002	0.3430	1.2542	2820.8	.0802	.704	0.3096	1.2841	2854.2	.0710	.718
3800	1.0447-2	621.3	2.1862	28.990	.167	1.0111	-1.0004	0.3511	1.2486	2852.6	.0842	.698	0.3104	1.2832	2891.8	.0724	.718
3900	1.0176-2	656.8	2.1954	28.980	.170	1.0151	-1.0005	0.3609	1.2425	2883.3	.0888	.692	0.3112	1.2824	2929.2	.0738	.718
4000	9.9171-3	693.5	2.2047	28.967	.173	1.0203	-1.0007	0.3725	1.2359	2913.0	.0943	.683	0.3119	1.2817	2966.4	.0752	.718
4100	9.6696-3	731.4	2.2140	28.950	.176	1.0269	-1.0009	0.3864	1.2289	2941.7	.1009	.673	0.3126	1.2811	3003.4	.0765	.718
4200	9.4323-3	770.9	2.2235	28.929	.178	1.0353	-1.0013	0.4028	1.2216	2969.5	.1088	.661	0.3133	1.2806	3040.4	.0779	.718
4300	9.2042-3	812.1	2.2332	28.901	.181	1.0456	-1.0017	0.4221	1.2140	2996.7	.1181	.647	0.3139	1.2802	3077.4	.0793	.718
4400	8.9844-3	855.4	2.2432	28.867	.184	1.0582	-1.0022	0.4446	1.2063	3023.6	.1293	.632	0.3145	1.2800	3114.6	.0806	.717
4500	8.7718-3	901.1	2.2535	28.825	.186	1.0734	-1.0029	0.4705	1.1988	3050.5	.1425	.616	0.3150	1.2799	3152.0	.0819	.717
4600	8.5656-3	949.6	2.2641	28.773	.189	1.0912	-1.0036	0.4998	1.1916	3077.6	.1580	.598	0.3155	1.2800	3189.8	.0833	.716
4700	8.3651-3	1001.2	2.2752	28.710	.192	1.1119	-1.0046	0.5325	1.1848	3105.5	.1757	.581	0.3160	1.2802	3228.1	.0847	.715
4800	8.1696-3	1056.2	2.2868	28.636	.194	1.1355	-1.0057	0.5684	1.1787	3134.2	.1959	.563	0.3164	1.2807	3267.0	.0860	.714
4900	7.9784-3	1115.0	2.2989	28.548	.197	1.1617	-1.0070	0.6071	1.1732	3164.2	.2183	.547	0.3168	1.2813	3306.7	.0874	.713
5000	7.7911-3	1177.7	2.3116	28.447	.199	1.1905	-1.0085	0.6481	1.1685	3195.6	.2428	.532	0.3172	1.2821	3347.3	.0888	.712
5100	7.6073-3	1244.6	2.3249	28.331	.202	1.2216	-1.0101	0.6908	1.1646	3228.5	.2689	.518	0.3176	1.2832	3388.9	.0903	.710
5200	7.4266-3	1315.9	2.3387	28.201	.204	1.2545	-1.0119	0.7348	1.1614	3263.1	.2960	.507	0.3180	1.2844	3431.6	.0918	.708
5300	7.2489-3	1391.6	2.3531	28.055	.207	1.2888	-1.0138	0.7791	1.1589	3299.3	.3236	.498	0.3184	1.2859	3475.4	.0933	.705
5400	7.0740-3	1471.7	2.3681	27.895	.209	1.3241	-1.0159	0.8233	1.1571	3337.1	.3507	.491	0.3187	1.2876	3520.4	.0949	.703

TABLE 2.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.017413; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 146.959 LB/IN2 (10.00 ATM) DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4835-1	-49.9	1.7687	29.016	.096	1.0000	-1.0000	0.2740	1.3330	1911.7	.0364	.721	0.2739	1.3331	1911.8	.0364	.721
1700	2.3374-1	-22.4	1.7854	29.016	.100	1.0000	-1.0000	0.2770	1.3281	1966.9	.0383	.721	0.2769	1.3283	1967.1	.0383	.721
1800	2.2075-1	5.5	1.8014	29.016	.104	1.0000	-1.0000	0.2799	1.3236	2020.5	.0402	.720	0.2797	1.3240	2020.8	.0402	.720
1900	2.0913-1	33.6	1.8166	29.016	.107	1.0000	-1.0000	0.2825	1.3196	2072.8	.0421	.720	0.2822	1.3202	2073.2	.0420	.720
2000	1.9868-1	62.0	1.8311	29.016	.111	1.0000	-1.0000	0.2851	1.3159	2123.6	.0439	.720	0.2845	1.3168	2124.3	.0438	.720
2100	1.8922-1	90.6	1.8451	29.016	.115	1.0000	-1.0000	0.2876	1.3123	2173.0	.0457	.720	0.2867	1.3135	2174.1	.0456	.720
2200	1.8062-1	119.5	1.8585	29.016	.118	1.0000	-1.0000	0.2900	1.3088	2221.2	.0475	.720	0.2888	1.3105	2222.7	.0473	.720
2300	1.7276-1	148.6	1.8715	29.016	.121	1.0000	-1.0000	0.2925	1.3055	2268.3	.0493	.721	0.2908	1.3077	2270.2	.0490	.721
2400	1.6557-1	178.0	1.8840	29.016	.125	1.0000	-1.0000	0.2949	1.3022	2314.2	.0511	.721	0.2927	1.3051	2316.7	.0507	.721
2500	1.5894-1	207.6	1.8961	29.016	.128	1.0000	-1.0000	0.2973	1.2991	2359.0	.0528	.721	0.2945	1.3027	2362.3	.0524	.721
2600	1.5283-1	237.5	1.9078	29.016	.131	1.0000	-1.0000	0.2997	1.2959	2402.8	.0546	.721	0.2962	1.3005	2407.0	.0540	.721
2700	1.4717-1	267.6	1.9191	29.016	.135	1.0001	-1.0000	0.3021	1.2929	2445.7	.0564	.721	0.2978	1.2984	2450.9	.0556	.721
2800	1.4191-1	297.9	1.9302	29.016	.138	1.0001	-1.0000	0.3046	1.2898	2487.7	.0582	.721	0.2993	1.2964	2494.0	.0572	.721
2900	1.3702-1	328.5	1.9409	29.016	.141	1.0002	-1.0000	0.3072	1.2868	2528.7	.0601	.720	0.3008	1.2946	2536.4	.0588	.721
3000	1.3245-1	359.3	1.9513	29.016	.144	1.0003	-1.0000	0.3098	1.2838	2568.9	.0620	.720	0.3021	1.2929	2578.0	.0604	.720
3100	1.2818-1	390.4	1.9615	29.016	.147	1.0004	-1.0000	0.3125	1.2808	2608.3	.0639	.719	0.3034	1.2913	2619.1	.0620	.720
3200	1.2417-1	421.8	1.9715	29.015	.150	1.0006	-1.0000	0.3153	1.2777	2646.9	.0658	.719	0.3046	1.2899	2659.5	.0635	.720
3300	1.2040-1	453.5	1.9813	29.014	.153	1.0009	-1.0000	0.3182	1.2746	2684.7	.0678	.718	0.3057	1.2885	2699.3	.0650	.719
3400	1.1686-1	485.5	1.9908	29.014	.156	1.0013	-1.0000	0.3213	1.2714	2721.8	.0699	.717	0.3068	1.2872	2738.6	.0666	.719
3500	1.1351-1	517.8	2.0002	29.012	.159	1.0018	-1.0001	0.3247	1.2682	2758.1	.0721	.716	0.3078	1.2860	2777.4	.0680	.719
3600	1.1035-1	550.4	2.0094	29.011	.162	1.0024	-1.0001	0.3284	1.2649	2793.6	.0744	.714	0.3087	1.2849	2815.6	.0695	.718
3700	1.0736-1	583.5	2.0184	29.008	.165	1.0033	-1.0001	0.3324	1.2614	2828.3	.0768	.713	0.3096	1.2839	2853.5	.0710	.718
3800	1.0453-1	616.9	2.0273	29.005	.167	1.0045	-1.0001	0.3368	1.2578	2862.3	.0793	.711	0.3104	1.2830	2890.8	.0724	.718
3900	1.0183-1	650.8	2.0361	29.001	.170	1.0059	-1.0002	0.3418	1.2540	2895.6	.0821	.709	0.3112	1.2821	2927.8	.0738	.718
4000	9.9270-2	685.3	2.0449	28.996	.173	1.0078	-1.0003	0.3473	1.2500	2928.1	.0852	.706	0.3120	1.2813	2964.5	.0752	.718
4100	9.6828-2	720.3	2.0535	28.990	.176	1.0102	-1.0004	0.3537	1.2458	2959.8	.0886	.702	0.3126	1.2806	3000.8	.0765	.718
4200	9.4496-2	756.0	2.0621	28.982	.179	1.0132	-1.0005	0.3608	1.2414	2990.8	.0923	.698	0.3133	1.2799	3036.8	.0779	.718
4300	9.2266-2	792.5	2.0707	28.972	.181	1.0169	-1.0006	0.3690	1.2368	3021.1	.0966	.692	0.3139	1.2793	3072.6	.0792	.718
4400	9.0129-2	829.9	2.0793	28.959	.184	1.0214	-1.0008	0.3783	1.2320	3050.8	.1014	.686	0.3145	1.2788	3108.2	.0806	.718
4500	8.8079-2	868.2	2.0879	28.943	.187	1.0269	-1.0010	0.3888	1.2271	3079.9	.1069	.679	0.3151	1.2784	3143.6	.0819	.718
4600	8.6107-2	907.7	2.0966	28.924	.189	1.0334	-1.0013	0.4007	1.2220	3108.5	.1131	.670	0.3156	1.2781	3179.0	.0832	.718
4700	8.4208-2	948.4	2.1053	28.901	.192	1.0412	-1.0017	0.4141	1.2169	3136.8	.1202	.661	0.3161	1.2778	3214.3	.0845	.717
4800	8.2374-2	990.5	2.1142	28.873	.194	1.0502	-1.0021	0.4290	1.2118	3164.8	.1283	.650	0.3165	1.2776	3249.7	.0858	.717
4900	8.0601-2	1034.2	2.1232	28.840	.197	1.0606	-1.0026	0.4454	1.2068	3192.8	.1374	.639	0.3170	1.2775	3285.1	.0872	.716
5000	7.8883-2	1079.7	2.1324	28.802	.200	1.0725	-1.0031	0.4635	1.2019	3220.9	.1475	.627	0.3174	1.2776	3320.7	.0885	.716
5100	7.7216-2	1127.0	2.1418	28.757	.202	1.0859	-1.0038	0.4830	1.1973	3249.3	.1589	.614	0.3178	1.2777	3356.5	.0898	.715
5200	7.5594-2	1176.3	2.1514	28.705	.205	1.1007	-1.0046	0.5038	1.1930	3278.0	.1713	.602	0.3181	1.2779	3392.7	.0911	.714
5300	7.4014-2	1227.8	2.1612	28.645	.207	1.1169	-1.0054	0.5258	1.1891	3307.4	.1849	.589	0.3185	1.2783	3429.1	.0924	.714
5400	7.2473-2	1281.5	2.1712	28.578	.210	1.1343	-1.0064	0.5488	1.1856	3337.4	.1996	.576	0.3188	1.2787	3466.0	.0938	.713

TABLE 2.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.017413; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 734.797 LB/IN² (50.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2417 0	-49.9	1.6586	29.016	.096	1.0000	-1.0000	0.2740	1.3330	1911.7	.0364	.721	0.2739	1.3331	1911.8	.0364	.721
1700	1.1687 0	-22.4	1.6753	29.016	.100	1.0000	-1.0000	0.2770	1.3281	1966.9	.0383	.721	0.2769	1.3283	1967.1	.0383	.721
1800	1.1038 0	5.5	1.6912	29.016	.104	1.0000	-1.0000	0.2799	1.3236	2020.5	.0402	.720	0.2797	1.3240	2020.8	.0402	.720
1900	1.0457 0	33.6	1.7064	29.016	.107	1.0000	-1.0000	0.2826	1.3196	2072.7	.0421	.720	0.2822	1.3202	2073.2	.0420	.720
2000	9.9339-1	62.0	1.7210	29.016	.111	1.0000	-1.0000	0.2851	1.3158	2123.5	.0439	.720	0.2845	1.3167	2124.3	.0438	.720
2100	9.4609-1	90.6	1.7349	29.017	.115	1.0000	-1.0000	0.2876	1.3123	2173.0	.0457	.720	0.2867	1.3135	2174.0	.0456	.720
2200	9.0309-1	119.5	1.7484	29.017	.118	1.0000	-1.0000	0.2900	1.3088	2221.2	.0475	.720	0.2888	1.3105	2222.7	.0473	.720
2300	8.6382-1	148.6	1.7613	29.017	.121	1.0000	-1.0000	0.2925	1.3055	2268.2	.0493	.721	0.2908	1.3077	2270.2	.0490	.721
2400	8.2783-1	178.0	1.7738	29.017	.125	1.0000	-1.0000	0.2949	1.3022	2314.1	.0511	.721	0.2927	1.3051	2316.7	.0507	.721
2500	7.9472-1	207.6	1.7859	29.017	.128	1.0000	-1.0000	0.2973	1.2991	2359.0	.0528	.721	0.2945	1.3027	2362.3	.0524	.721
2600	7.6415-1	237.5	1.7976	29.017	.131	1.0000	-1.0000	0.2997	1.2960	2402.8	.0546	.721	0.2962	1.3005	2407.0	.0540	.721
2700	7.3585-1	267.5	1.8090	29.017	.135	1.0000	-1.0000	0.3021	1.2929	2445.7	.0564	.721	0.2978	1.2984	2450.9	.0556	.721
2800	7.0957-1	297.9	1.8200	29.017	.138	1.0000	-1.0000	0.3045	1.2899	2487.7	.0582	.721	0.2993	1.2964	2494.0	.0572	.721
2900	6.8510-1	328.4	1.8307	29.017	.141	1.0001	-1.0000	0.3069	1.2870	2528.9	.0600	.721	0.3008	1.2946	2536.3	.0588	.721
3000	6.6226-1	359.3	1.8412	29.016	.144	1.0001	-1.0000	0.3094	1.2841	2569.2	.0619	.720	0.3021	1.2929	2578.0	.0604	.720
3100	6.4090-1	390.3	1.8514	29.016	.147	1.0002	-1.0000	0.3120	1.2811	2608.7	.0637	.720	0.3034	1.2913	2619.0	.0620	.720
3200	6.2086-1	421.7	1.8613	29.016	.150	1.0003	-1.0000	0.3146	1.2783	2647.5	.0656	.719	0.3046	1.2898	2659.4	.0635	.720
3300	6.0204-1	453.2	1.8710	29.016	.153	1.0005	-1.0000	0.3172	1.2754	2685.5	.0676	.719	0.3057	1.2885	2699.2	.0650	.719
3400	5.8432-1	485.1	1.8805	29.015	.156	1.0007	-1.0000	0.3200	1.2725	2722.8	.0695	.718	0.3068	1.2872	2738.5	.0666	.719
3500	5.6762-1	517.3	1.8899	29.015	.159	1.0010	-1.0000	0.3229	1.2696	2759.5	.0715	.717	0.3078	1.2860	2777.2	.0680	.719
3600	5.5183-1	549.7	1.8990	29.014	.162	1.0013	-1.0001	0.3259	1.2667	2795.4	.0736	.716	0.3087	1.2849	2815.5	.0695	.718
3700	5.3689-1	582.4	1.9080	29.012	.165	1.0018	-1.0001	0.3291	1.2637	2830.8	.0757	.716	0.3096	1.2839	2853.2	.0710	.718
3800	5.2273-1	615.5	1.9168	29.011	.167	1.0024	-1.0001	0.3324	1.2608	2865.5	.0779	.715	0.3104	1.2829	2890.5	.0724	.718
3900	5.0929-1	648.9	1.9255	29.009	.170	1.0032	-1.0001	0.3360	1.2577	2899.5	.0802	.713	0.3112	1.2820	2927.4	.0738	.718
4000	4.9652-1	682.7	1.9340	29.006	.173	1.0042	-1.0002	0.3399	1.2546	2933.0	.0826	.712	0.3120	1.2812	2963.8	.0752	.718
4100	4.8435-1	716.9	1.9425	29.002	.176	1.0054	-1.0002	0.3441	1.2515	2965.9	.0852	.710	0.3127	1.2804	2999.9	.0765	.718
4200	4.7275-1	751.6	1.9508	28.998	.179	1.0069	-1.0003	0.3487	1.2482	2998.1	.0879	.708	0.3133	1.2797	3035.7	.0779	.718
4300	4.6167-1	786.7	1.9591	28.993	.181	1.0087	-1.0003	0.3537	1.2449	3029.9	.0909	.705	0.3139	1.2791	3071.1	.0792	.718
4400	4.5107-1	822.3	1.9673	28.986	.184	1.0110	-1.0004	0.3592	1.2415	3061.0	.0941	.702	0.3145	1.2785	3106.3	.0805	.718
4500	4.4093-1	858.5	1.9754	28.978	.187	1.0137	-1.0005	0.3653	1.2380	3091.6	.0976	.699	0.3151	1.2780	3141.2	.0819	.718
4600	4.3120-1	895.4	1.9835	28.969	.189	1.0169	-1.0007	0.3720	1.2344	3121.8	.1014	.694	0.3156	1.2775	3175.8	.0832	.718
4700	4.2185-1	933.0	1.9916	28.957	.192	1.0207	-1.0008	0.3795	1.2307	3151.5	.1056	.689	0.3161	1.2771	3210.3	.0845	.718
4800	4.1287-1	971.3	1.9997	28.943	.195	1.0252	-1.0010	0.3876	1.2270	3180.8	.1103	.684	0.3166	1.2767	3244.6	.0858	.718
4900	4.0421-1	1010.5	2.0077	28.926	.197	1.0304	-1.0013	0.3966	1.2232	3209.8	.1154	.677	0.3170	1.2764	3278.8	.0871	.717
5000	3.9586-1	1050.7	2.0159	28.907	.200	1.0364	-1.0016	0.4064	1.2195	3238.5	.1211	.670	0.3174	1.2762	3312.9	.0884	.717
5100	3.8779-1	1091.8	2.0240	28.884	.202	1.0433	-1.0019	0.4171	1.2158	3267.0	.1273	.663	0.3178	1.2760	3347.0	.0897	.716
5200	3.7998-1	1134.1	2.0322	28.858	.205	1.0510	-1.0023	0.4287	1.2121	3295.4	.1341	.654	0.3182	1.2759	3381.0	.0910	.716
5300	3.7242-1	1177.6	2.0405	28.827	.207	1.0596	-1.0027	0.4410	1.2086	3323.9	.1416	.645	0.3186	1.2759	3415.1	.0923	.715
5400	3.6509-1	1222.3	2.0489	28.793	.210	1.0691	-1.0033	0.4542	1.2053	3352.4	.1498	.636	0.3189	1.2760	3449.3	.0936	.715

TABLE 2C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.017413; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; DRY AIR

HETEROGENEOUS PHASE PROPERTIES										GAS PHASE PROPERTIES						
T	DENSITY	H	ENTROPY	MW	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	T
R	LB/FT ³	BTU/LB	BTU/LB R		BTU/LB R	LB/FT ³		LB/FT S			BTU/LB R		FT/S	BTU/FT HR R	R	R
PRESSURE = 0.01 ATM																
360	1.139-3	-389.0	1.8120	29.016	0.2510	1.117-3	29.364	.0319	1.000	-1.000	0.2385	1.3959	922	.0104	.734	360
400	1.021-3	-376.9	1.8437	29.016	0.4182	1.004-3	29.326	.0348	1.000	-1.000	0.2388	1.3958	973	.0114	.731	400
440	9.031-4	-346.4	1.9159	29.016	0.2423	9.031-4	29.016	.0370	1.000	-1.000	0.2423	1.3936	1025	.0122	.735	440
PRESSURE = 0.10 ATM																
360	1.139-2	-389.1	1.6590	29.016	0.2420	1.117-2	29.365	.0319	1.000	-1.000	0.2385	1.3959	922	.0104	.734	360
400	1.025-2	-379.2	1.6850	29.016	0.2592	1.005-2	29.361	.0349	1.000	-1.000	0.2384	1.3961	972	.0114	.730	400
440	9.278-3	-366.6	1.7149	29.016	0.4235	9.124-3	29.317	.0377	1.000	-1.000	0.2389	1.3957	1021	.0124	.727	440
480	8.278-3	-336.7	1.7794	29.016	0.2425	8.278-3	29.016	.0398	1.000	-1.000	0.2425	1.3932	1070	.0132	.732	480
520	7.641-3	-327.0	1.7988	29.016	0.2428	7.641-3	29.016	.0425	1.000	-1.000	0.2428	1.3925	1114	.0141	.729	520
PRESSURE = 1.00 ATM																
360	1.139-1	-389.1	1.5062	29.016	0.2411	1.117-1	29.365	.0319	1.000	-1.000	0.2385	1.3959	922	.0104	.734	360
400	1.025-1	-379.4	1.5317	29.016	0.2434	1.005-1	29.365	.0349	1.000	-1.000	0.2384	1.3961	972	.0114	.730	400
440	9.313-2	-369.4	1.5554	29.016	0.2604	9.138-2	29.361	.0378	1.000	-1.000	0.2385	1.3960	1020	.0124	.726	440
480	8.511-2	-357.5	1.5814	29.016	0.3667	8.367-2	29.326	.0405	1.000	-1.000	0.2390	1.3953	1066	.0134	.723	480
520	7.745-2	-335.9	1.6245	29.016	0.6601	7.681-2	29.166	.0428	1.000	-1.000	0.2411	1.3935	1111	.0142	.726	520
537	7.404-2	-323.0	1.6489	29.016	0.2430	7.404-2	29.016	.0436	1.000	-1.000	0.2430	1.3921	1131	.0145	.729	537
560	7.096-2	-317.3	1.6592	29.016	0.2433	7.096-2	29.016	.0451	1.000	-1.000	0.2433	1.3915	1156	.0151	.728	560
600	6.623-2	-307.6	1.6760	29.016	0.2438	6.623-2	29.016	.0476	1.000	-1.000	0.2438	1.3902	1196	.0159	.729	600
PRESSURE = 10.00 ATM																
360	1.138 0	-389.1	1.3534	29.016	0.2410	1.117 0	29.365	.0319	1.000	-1.000	0.2385	1.3959	922	.0104	.734	360
400	1.025 0	-379.4	1.3789	29.016	0.2419	1.005 0	29.365	.0349	1.000	-1.000	0.2384	1.3961	972	.0114	.730	400
440	9.314-1	-369.7	1.4020	29.016	0.2443	9.139-1	29.365	.0378	1.000	-1.000	0.2384	1.3960	1020	.0124	.726	440
480	8.536-1	-359.8	1.4236	29.016	0.2557	8.377-1	29.361	.0406	1.000	-1.000	0.2386	1.3955	1065	.0134	.723	480
520	7.868-1	-346.2	1.4510	29.016	0.2928	7.728-1	29.345	.0432	1.000	-1.000	0.2391	1.3947	1109	.0143	.721	520
537	7.614-1	-341.1	1.4606	29.016	0.3180	7.484-1	29.330	.0443	1.000	-1.000	0.2394	1.3942	1126	.0147	.721	537
560	7.272-1	-333.1	1.4752	29.016	0.3748	7.163-1	29.292	.0457	1.000	-1.000	0.2401	1.3934	1151	.0152	.722	560
600	6.698-1	-314.7	1.5068	29.016	0.5677	6.651-1	29.142	.0479	1.000	-1.000	0.2424	1.3911	1193	.0160	.725	600
640	6.209-1	-297.8	1.5342	29.016	0.2445	6.209-1	29.016	.0500	1.000	-1.000	0.2445	1.3888	1234	.0168	.729	640
680	5.843-1	-288.0	1.5491	29.016	0.2452	5.843-1	29.016	.0524	1.000	-1.000	0.2452	1.3871	1271	.0176	.728	680
PRESSURE = 50.00 ATM																
360	5.683 0	-389.1	1.2467	29.016	0.2410	5.585 0	29.365	.0319	1.000	-1.000	0.2385	1.3959	922	.0104	.734	360
400	5.116 0	-379.4	1.2721	29.016	0.2417	5.027 0	29.365	.0349	1.000	-1.000	0.2384	1.3961	972	.0114	.730	400
440	4.651 0	-369.7	1.2952	29.016	0.2428	4.570 0	29.365	.0378	1.000	-1.000	0.2384	1.3960	1020	.0124	.726	440
480	4.264 0	-360.0	1.3164	29.016	0.2459	4.189 0	29.365	.0406	1.000	-1.000	0.2386	1.3956	1065	.0134	.722	480
520	3.936 0	-347.1	1.3424	29.016	0.2613	3.866 0	29.361	.0433	1.000	-1.000	0.2389	1.3948	1108	.0143	.721	520
537	3.813 0	-342.7	1.3507	29.016	0.2664	3.746 0	29.358	.0443	1.000	-1.000	0.2391	1.3944	1126	.0147	.720	537
560	3.652 0	-336.3	1.3623	29.016	0.2777	3.589 0	29.351	.0458	1.000	-1.000	0.2395	1.3938	1150	.0152	.720	560
600	3.400 0	-324.6	1.3825	29.016	0.3150	3.346 0	29.321	.0482	1.000	-1.000	0.2403	1.3924	1190	.0161	.721	600
640	3.168 0	-310.6	1.4050	29.016	0.3881	3.129 0	29.250	.0505	1.000	-1.000	0.2418	1.3904	1230	.0169	.723	640
680	2.944 0	-292.8	1.4320	29.016	0.5171	2.931 0	29.104	.0526	1.000	-1.000	0.2442	1.3877	1270	.0177	.726	680
720	2.759 0	-278.2	1.4530	29.016	0.2461	2.759 0	29.016	.0547	1.000	-1.000	0.2461	1.3853	1307	.0185	.728	720
760	2.614 0	-268.3	1.4663	29.016	0.2470	2.614 0	29.016	.0569	1.000	-1.000	0.2470	1.3833	1342	.0193	.728	760

TABLE 3A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.034826; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5008; MW = 29.0659;
 DRY AIR; GASEOUS COMPOSITION: CO2= .07158; H2O= .06058; N2= .75719; O2= .10157; AR= .00908

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
360	1.1057-1	5.5283 0	-676.6	1.8685	1.7112	1.5539	1.3966	1.2866	0.2439	1.3892	924.9	.0300	.0097	.7568	360
380	1.0475-1	5.2373 0	-671.7	1.8817	1.7244	1.5671	1.4098	1.2998	0.2440	1.3889	950.2	.0316	.0102	.7534	380
400	9.9509-2	4.9754 0	-666.8	1.8942	1.7369	1.5796	1.4223	1.3123	0.2441	1.3886	974.7	.0330	.0108	.7502	400
420	9.4770-2	4.7385 0	-661.9	1.9061	1.7488	1.5915	1.4342	1.3242	0.2443	1.3882	998.7	.0345	.0113	.7474	420
440	9.0462-2	4.5231 0	-657.0	1.9175	1.7602	1.6029	1.4456	1.3356	0.2445	1.3878	1022.0	.0359	.0118	.7449	440
460	8.6529-2	4.3265 0	-652.1	1.9284	1.7711	1.6138	1.4564	1.3465	0.2447	1.3873	1044.8	.0373	.0123	.7428	460
480	8.2924-2	4.1462 0	-647.2	1.9388	1.7815	1.6242	1.4669	1.3569	0.2450	1.3867	1067.0	.0387	.0128	.7411	480
500	7.9607-2	3.9803 0	-642.3	1.9488	1.7915	1.6342	1.4769	1.3669	0.2453	1.3861	1088.8	.0401	.0133	.7398	500
520	7.6545-2	3.8273 0	-637.4	1.9584	1.8011	1.6438	1.4865	1.3765	0.2456	1.3854	1110.1	.0414	.0138	.7388	520
537	7.4167-2	3.7084 0	-633.3	1.9662	1.8089	1.6516	1.4942	1.3843	0.2459	1.3848	1127.5	.0425	.0142	.7382	537
540	7.3710-2	3.6855 0	-632.5	1.9677	1.8104	1.6531	1.4958	1.3858	0.2459	1.3846	1130.9	.0428	.0142	.7381	540
560	7.1078-2	3.5539 0	-627.6	1.9767	1.8194	1.6620	1.5047	1.3948	0.2463	1.3839	1151.4	.0440	.0147	.7380	560
580	6.8627-2	3.4313 0	-622.7	1.9853	1.8280	1.6707	1.5134	1.4034	0.2467	1.3830	1171.4	.0453	.0151	.7381	580
600	6.6339-2	3.3170 0	-617.7	1.9937	1.8364	1.6791	1.5217	1.4118	0.2471	1.3822	1191.0	.0466	.0156	.7382	600
620	6.4199-2	3.2100 0	-612.8	2.0018	1.8445	1.6872	1.5298	1.4199	0.2475	1.3812	1210.3	.0478	.0160	.7384	620
640	6.2193-2	3.1096 0	-607.8	2.0097	1.8523	1.6950	1.5377	1.4277	0.2480	1.3803	1229.3	.0490	.0165	.7384	640
660	6.0308-2	3.0154 0	-602.8	2.0173	1.8600	1.7027	1.5453	1.4354	0.2485	1.3793	1247.9	.0502	.0169	.7381	660
680	5.8534-2	2.9267 0	-597.9	2.0247	1.8674	1.7101	1.5528	1.4428	0.2489	1.3783	1266.2	.0514	.0174	.7378	680
700	5.6862-2	2.8431 0	-592.9	2.0320	1.8746	1.7173	1.5600	1.4500	0.2495	1.3772	1284.2	.0526	.0178	.7374	700
720	5.5283-2	2.7641 0	-587.9	2.0390	1.8817	1.7244	1.5670	1.4571	0.2500	1.3761	1301.9	.0538	.0182	.7370	720
740	5.3788-2	2.6894 0	-582.9	2.0458	1.8885	1.7312	1.5739	1.4639	0.2505	1.3750	1319.3	.0549	.0187	.7368	740
760	5.2373-2	2.6186 0	-577.9	2.0525	1.8952	1.7379	1.5806	1.4706	0.2511	1.3738	1336.4	.0560	.0191	.7366	760
780	5.1030-2	2.5515 0	-572.8	2.0591	1.9017	1.7444	1.5871	1.4771	0.2517	1.3727	1353.3	.0571	.0195	.7365	780
800	4.9754-2	2.4877 0	-567.8	2.0654	1.9081	1.7508	1.5935	1.4835	0.2523	1.3715	1370.0	.0582	.0199	.7364	800
820	4.8541-2	2.4270 0	-562.8	2.0717	1.9144	1.7570	1.5997	1.4898	0.2529	1.3702	1386.4	.0593	.0204	.7363	820
840	4.7385-2	2.3693 0	-557.7	2.0778	1.9205	1.7631	1.6058	1.4959	0.2535	1.3690	1402.5	.0604	.0208	.7363	840
860	4.6283-2	2.3142 0	-552.6	2.0838	1.9264	1.7691	1.6118	1.5018	0.2541	1.3678	1418.5	.0615	.0212	.7363	860
880	4.5231-2	2.2616 0	-547.5	2.0896	1.9323	1.7750	1.6176	1.5077	0.2547	1.3665	1434.2	.0625	.0216	.7363	880
900	4.4226-2	2.2113 0	-542.4	2.0953	1.9380	1.7807	1.6234	1.5134	0.2554	1.3652	1449.8	.0635	.0220	.7363	900
920	4.3265-2	2.1632 0	-537.3	2.1010	1.9436	1.7863	1.6290	1.5190	0.2561	1.3639	1465.1	.0646	.0225	.7362	920
940	4.2344-2	2.1172 0	-532.2	2.1065	1.9491	1.7918	1.6345	1.5245	0.2567	1.3626	1480.2	.0656	.0229	.7361	940
960	4.1462-2	2.0731 0	-527.0	2.1119	1.9546	1.7972	1.6399	1.5300	0.2574	1.3613	1495.2	.0666	.0233	.7360	960
980	4.0616-2	2.0308 0	-521.9	2.1172	1.9599	1.8026	1.6452	1.5353	0.2581	1.3600	1509.9	.0676	.0237	.7358	980
1000	3.9803-2	1.9902 0	-516.7	2.1224	1.9651	1.8078	1.6505	1.5405	0.2588	1.3587	1524.5	.0686	.0241	.7357	1000
1020	3.9023-2	1.9511 0	-511.5	2.1275	1.9702	1.8129	1.6556	1.5456	0.2595	1.3574	1539.0	.0696	.0246	.7355	1020
1040	3.8273-2	1.9136 0	-506.3	2.1326	1.9753	1.8180	1.6606	1.5507	0.2602	1.3561	1553.2	.0706	.0250	.7353	1040
1060	3.7550-2	1.8775 0	-501.1	2.1376	1.9802	1.8229	1.6656	1.5556	0.2609	1.3548	1567.3	.0716	.0254	.7352	1060
1080	3.6855-2	1.8428 0	-495.9	2.1424	1.9851	1.8278	1.6705	1.5605	0.2616	1.3534	1581.3	.0725	.0258	.7349	1080
1100	3.6185-2	1.8092 0	-490.7	2.1472	1.9899	1.8326	1.6753	1.5653	0.2624	1.3521	1595.1	.0735	.0262	.7346	1100
1120	3.5539-2	1.7769 0	-485.4	2.1520	1.9947	1.8373	1.6800	1.5701	0.2631	1.3508	1608.7	.0744	.0267	.7343	1120
1140	3.4915-2	1.7458 0	-480.1	2.1566	1.9993	1.8420	1.6847	1.5747	0.2638	1.3495	1622.2	.0754	.0271	.7340	1140

TABLE 3A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.034826; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5008; MW = 29.0659;
 DRY AIR; GASEOUS COMPOSITION: CO2= .07158; H2O= .06058; N2= .75719; O2= .10157; AR= .00908

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
1160	3.4313-2	1.7157 0	-474.9	2.1612	2.0039	1.8466	1.6893	1.5793	0.2645	1.3482	1635.6	.0763	.0275	.7337	1160
1180	3.3732-2	1.6866 0	-469.6	2.1658	2.0084	1.8511	1.6938	1.5838	0.2653	1.3469	1648.8	.0772	.0279	.7334	1180
1200	3.3170-2	1.6585 0	-464.2	2.1702	2.0129	1.8556	1.6983	1.5883	0.2660	1.3456	1662.0	.0782	.0284	.7330	1200
1220	3.2626-2	1.6313 0	-458.9	2.1746	2.0173	1.8600	1.7027	1.5927	0.2668	1.3443	1674.9	.0791	.0288	.7327	1220
1240	3.2100-2	1.6050 0	-453.6	2.1790	2.0217	1.8643	1.7070	1.5971	0.2675	1.3430	1687.8	.0800	.0292	.7324	1240
1260	3.1590-2	1.5795 0	-448.2	2.1833	2.0259	1.8686	1.7113	1.6013	0.2682	1.3418	1700.6	.0809	.0296	.7320	1260
1280	3.1096-2	1.5548 0	-442.8	2.1875	2.0302	1.8729	1.7155	1.6056	0.2690	1.3405	1713.2	.0818	.0301	.7317	1280
1300	3.0618-2	1.5309 0	-437.5	2.1917	2.0343	1.8770	1.7197	1.6098	0.2697	1.3393	1725.7	.0827	.0305	.7314	1300
1320	3.0154-2	1.5077 0	-432.1	2.1958	2.0385	1.8812	1.7238	1.6139	0.2704	1.3380	1738.2	.0836	.0309	.7311	1320
1340	2.9704-2	1.4852 0	-426.6	2.1999	2.0425	1.8852	1.7279	1.6179	0.2712	1.3368	1750.5	.0844	.0313	.7308	1340
1360	2.9267-2	1.4634 0	-421.2	2.2039	2.0466	1.8892	1.7319	1.6220	0.2719	1.3356	1762.7	.0853	.0318	.7305	1360
1380	2.8843-2	1.4422 0	-415.8	2.2079	2.0505	1.8932	1.7359	1.6259	0.2726	1.3344	1774.8	.0862	.0322	.7302	1380
1400	2.8431-2	1.4216 0	-410.3	2.2118	2.0545	1.8972	1.7398	1.6299	0.2734	1.3332	1786.8	.0871	.0326	.7299	1400
1420	2.8031-2	1.4015 0	-404.8	2.2157	2.0584	1.9010	1.7437	1.6338	0.2741	1.3320	1798.8	.0879	.0330	.7296	1420
1440	2.7641-2	1.3821 0	-399.3	2.2195	2.0622	1.9049	1.7476	1.6376	0.2748	1.3309	1810.6	.0888	.0334	.7293	1440
1460	2.7263-2	1.3631 0	-393.8	2.2233	2.0660	1.9087	1.7514	1.6414	0.2755	1.3297	1822.4	.0896	.0339	.7291	1460
1480	2.6894-2	1.3447 0	-388.3	2.2271	2.0697	1.9124	1.7551	1.6451	0.2762	1.3286	1834.0	.0905	.0343	.7289	1480
1500	2.6536-2	1.3268 0	-382.8	2.2308	2.0735	1.9161	1.7588	1.6489	0.2769	1.3275	1845.6	.0913	.0347	.7287	1500
1520	2.6186-2	1.3093 0	-377.2	2.2344	2.0771	1.9198	1.7625	1.6525	0.2776	1.3264	1857.1	.0921	.0351	.7285	1520
1540	2.5846-2	1.2923 0	-371.7	2.2381	2.0808	1.9234	1.7661	1.6562	0.2783	1.3253	1868.5	.0930	.0355	.7283	1540
1560	2.5515-2	1.2758 0	-366.1	2.2417	2.0844	1.9270	1.7697	1.6598	0.2790	1.3243	1879.9	.0938	.0359	.7281	1560
1580	2.5192-2	1.2596 0	-360.5	2.2452	2.0879	1.9306	1.7733	1.6633	0.2797	1.3233	1891.1	.0946	.0364	.7279	1580
1600	2.4877-2	1.2439 0	-354.9	2.2488	2.0914	1.9341	1.7768	1.6668	0.2804	1.3222	1902.3	.0954	.0368	.7277	1600
1620	2.4570-2	1.2285 0	-349.3	2.2522	2.0949	1.9376	1.7803	1.6703	0.2810	1.3212	1913.5	.0962	.0372	.7276	1620
1640	2.4270-2	1.2135 0	-343.7	2.2557	2.0984	1.9411	1.7837	1.6738	0.2817	1.3202	1924.5	.0970	.0376	.7274	1640
1660	2.3978-2	1.1989 0	-338.0	2.2591	2.1018	1.9445	1.7872	1.6772	0.2823	1.3193	1935.5	.0978	.0380	.7273	1660
1680	2.3693-2	1.1846 0	-332.4	2.2625	2.1052	1.9479	1.7905	1.6806	0.2830	1.3183	1946.4	.0986	.0384	.7271	1680
1700	2.3414-2	1.1707 0	-326.7	2.2659	2.1085	1.9512	1.7939	1.6839	0.2836	1.3174	1957.3	.0994	.0388	.7270	1700
1720	2.3142-2	1.1571 0	-321.0	2.2692	2.1119	1.9545	1.7972	1.6873	0.2842	1.3165	1968.1	.1002	.0392	.7268	1720
1740	2.2876-2	1.1438 0	-315.4	2.2725	2.1151	1.9578	1.8005	1.6905	0.2848	1.3156	1978.8	.1010	.0396	.7267	1740
1760	2.2616-2	1.1308 0	-309.7	2.2757	2.1184	1.9611	1.8038	1.6938	0.2854	1.3147	1989.5	.1018	.0400	.7265	1760
1780	2.2361-2	1.1181 0	-303.9	2.2789	2.1216	1.9643	1.8070	1.6970	0.2860	1.3139	2000.1	.1026	.0404	.7264	1780
1800	2.2113-2	1.1056 0	-298.2	2.2821	2.1248	1.9675	1.8102	1.7002	0.2866	1.3130	2010.7	.1033	.0408	.7263	1800
1900	2.0949-2	1.0475 0	-269.4	2.2977	2.1404	1.9831	1.8258	1.7158	0.2893	1.3092	2062.8	.1071	.0427	.7259	1900
2000	1.9902-2	9.9509-1	-240.4	2.3126	2.1553	1.9980	1.8407	1.7307	0.2919	1.3056	2113.5	.1109	.0446	.7256	2000
2100	1.8954-2	9.4770-1	-211.1	2.3269	2.1696	2.0123	1.8550	1.7450	0.2943	1.3024	2163.0	.1145	.0464	.7254	2100
2200	1.8092-2	9.0462-1	-181.5	2.3407	2.1833	2.0260	1.8687	1.7587	0.2966	1.2993	2211.3	.1180	.0483	.7253	2200
2300	1.7306-2	8.6529-1	-151.7	2.3539	2.1966	2.0393	1.8819	1.7720	0.2988	1.2965	2258.5	.1215	.0501	.7252	2300
2400	1.6585-2	8.2924-1	-121.8	2.3667	2.2093	2.0520	1.8947	1.7847	0.3008	1.2938	2304.7	.1250	.0519	.7251	2400
2500	1.5921-2	7.9607-1	-91.6	2.3790	2.2217	2.0643	1.9070	1.7971	0.3028	1.2914	2350.0	.1284	.0536	.7250	2500

TABLE 3A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO \square 1.700; F/A=0.034826; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5008; MW = 29.0659;
 DRY AIR; GASEOUS COMPOSITION: CO2= .07158; H2O= .06058; N2= .75719; O2= .10157; AR= .00908

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
2600	1.5309-2	7.6545-1	-61.2	2.3909	2.2336	2.0762	1.9189	1.8090	0.3046	1.2891	2394.5	.1317	.0553	.7248	2600
2700	1.4742-2	7.3710-1	-30.7	2.4024	2.2451	2.0878	1.9305	1.8205	0.3064	1.2870	2438.1	.1350	.0571	.7247	2700
2800	1.4215-2	7.1078-1	0.1	2.4136	2.2563	2.0990	1.9416	1.8317	0.3080	1.2851	2480.9	.1382	.0588	.7242	2800
2900	1.3725-2	6.8627-1	30.9	2.4244	2.2671	2.1098	1.9525	1.8425	0.3096	1.2832	2523.0	.1414	.0605	.7238	2900
3000	1.3268-2	6.6339-1	62.0	2.4349	2.2776	2.1203	1.9630	1.8530	0.3110	1.2815	2564.5	.1445	.0622	.7233	3000
3100	1.2840-2	6.4199-1	93.1	2.4452	2.2878	2.1305	1.9732	1.8632	0.3124	1.2799	2605.2	.1477	.0638	.7228	3100
3200	1.2439-2	6.2193-1	124.4	2.4551	2.2978	2.1405	1.9831	1.8732	0.3137	1.2785	2645.4	.1507	.0655	.7223	3200
3300	1.2062-2	6.0308-1	155.9	2.4648	2.3075	2.1501	1.9928	1.8829	0.3149	1.2771	2685.0	.1538	.0671	.7218	3300
3400	1.1707-2	5.8534-1	187.4	2.4742	2.3169	2.1596	2.0022	1.8923	0.3161	1.2758	2724.0	.1568	.0687	.7213	3400
3500	1.1372-2	5.6862-1	219.1	2.4834	2.3261	2.1687	2.0114	1.9015	0.3171	1.2746	2762.4	.1597	.0703	.7209	3500
3600	1.1056-2	5.5283-1	250.9	2.4923	2.3350	2.1777	2.0204	1.9104	0.3182	1.2735	2800.4	.1627	.0718	.7204	3600
3700	1.0758-2	5.3788-1	282.7	2.5010	2.3437	2.1864	2.0291	1.9191	0.3191	1.2724	2837.8	.1656	.0734	.7201	3700
3800	1.0475-2	5.2373-1	314.7	2.5096	2.3523	2.1949	2.0376	1.9277	0.3200	1.2714	2874.8	.1684	.0749	.7198	3800
3900	1.0206-2	5.1030-1	346.7	2.5179	2.3606	2.2033	2.0459	1.9360	0.3209	1.2705	2911.3	.1713	.0764	.7195	3900
4000	9.9509-3	4.9754-1	378.9	2.5260	2.3687	2.2114	2.0541	1.9441	0.3217	1.2696	2947.4	.1741	.0779	.7192	4000
4100	9.7081-3	4.8541-1	411.1	2.5340	2.3767	2.2193	2.0620	1.9521	0.3225	1.2688	2983.1	.1769	.0794	.7189	4100
4200	9.4770-3	4.7385-1	443.4	2.5418	2.3844	2.2271	2.0698	1.9598	0.3232	1.2681	3018.4	.1797	.0808	.7186	4200
4300	9.2566-3	4.6283-1	475.7	2.5494	2.3921	2.2347	2.0774	1.9675	0.3239	1.2674	3053.2	.1824	.0822	.7183	4300
4400	9.0462-3	4.5231-1	508.1	2.5568	2.3995	2.2422	2.0849	1.9749	0.3245	1.2667	3087.7	.1851	.0837	.7181	4400
4500	8.8452-3	4.4226-1	540.6	2.5641	2.4068	2.2495	2.0922	1.9822	0.3251	1.2661	3121.8	.1878	.0851	.7178	4500
4600	8.6529-3	4.3265-1	573.1	2.5713	2.4140	2.2566	2.0993	1.9894	0.3257	1.2655	3155.6	.1905	.0865	.7173	4600
4700	8.4688-3	4.2344-1	605.7	2.5783	2.4210	2.2637	2.1063	1.9964	0.3262	1.2649	3189.0	.1932	.0879	.7168	4700
4800	8.2924-3	4.1462-1	638.4	2.5852	2.4278	2.2705	2.1132	2.0032	0.3268	1.2644	3222.0	.1958	.0893	.7163	4800
4900	8.1231-3	4.0616-1	671.1	2.5919	2.4346	2.2773	2.1200	2.0100	0.3273	1.2638	3254.7	.1984	.0907	.7158	4900
5000	7.9607-3	3.9803-1	703.8	2.5985	2.4412	2.2839	2.1266	2.0166	0.3278	1.2634	3287.2	.2010	.0921	.7154	5000
5100	7.8046-3	3.9023-1	736.6	2.6050	2.4477	2.2904	2.1331	2.0231	0.3282	1.2629	3319.3	.2035	.0934	.7149	5100
5200	7.6545-3	3.8273-1	769.5	2.6114	2.4541	2.2968	2.1394	2.0295	0.3287	1.2624	3351.0	.2061	.0948	.7144	5200
5300	7.5101-3	3.7550-1	802.4	2.6177	2.4603	2.3030	2.1457	2.0357	0.3291	1.2620	3382.5	.2086	.0962	.7139	5300
5400	7.3710-3	3.6855-1	835.3	2.6238	2.4665	2.3092	2.1519	2.0419	0.3295	1.2616	3413.7	.2111	.0975	.7135	5400

TABLE 3.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.034826; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 0.14696 LB/IN2 (0.01 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4877-4	-354.9	2.2488	29.066	.095	1.0000	-1.0000	0.2804	1.3221	1902.3	.0368	.728	0.2804	1.3222	1902.3	.0368	.728
1700	2.3414-4	-326.7	2.2659	29.066	.099	1.0000	-1.0000	0.2837	1.3172	1957.2	.0388	.727	0.2836	1.3174	1957.3	.0388	.727
1800	2.2113-4	-298.2	2.2822	29.066	.103	1.0000	-1.0000	0.2868	1.3127	2010.5	.0408	.726	0.2866	1.3130	2010.7	.0408	.726
1900	2.0949-4	-269.4	2.2977	29.066	.107	1.0000	-1.0000	0.2896	1.3087	2062.4	.0428	.726	0.2893	1.3092	2062.8	.0427	.726
2000	1.9902-4	-240.3	2.3127	29.066	.111	1.0000	-1.0000	0.2924	1.3050	2112.9	.0447	.726	0.2919	1.3056	2113.5	.0446	.726
2100	1.8954-4	-210.9	2.3270	29.066	.114	1.0000	-1.0000	0.2950	1.3014	2162.1	.0466	.725	0.2943	1.3024	2163.0	.0464	.725
2200	1.8092-4	-181.3	2.3408	29.066	.118	1.0000	-1.0000	0.2977	1.2979	2210.1	.0485	.725	0.2966	1.2993	2211.3	.0483	.725
2300	1.7306-4	-151.4	2.3541	29.066	.122	1.0001	-1.0000	0.3003	1.2945	2256.8	.0503	.725	0.2988	1.2965	2258.5	.0501	.725
2400	1.6585-4	-121.2	2.3669	29.066	.125	1.0001	-1.0000	0.3030	1.2912	2302.4	.0523	.725	0.3008	1.2939	2304.7	.0519	.725
2500	1.5921-4	-90.7	2.3793	29.065	.128	1.0003	-1.0000	0.3059	1.2878	2346.8	.0542	.724	0.3028	1.2914	2350.1	.0536	.725
2600	1.5309-4	-60.0	2.3914	29.065	.132	1.0005	-1.0000	0.3089	1.2843	2390.0	.0562	.724	0.3046	1.2891	2394.5	.0553	.725
2700	1.4741-4	-28.9	2.4031	29.064	.135	1.0008	-1.0000	0.3124	1.2806	2432.0	.0583	.723	0.3064	1.2870	2438.2	.0571	.725
2800	1.4214-4	2.5	2.4146	29.063	.138	1.0014	-1.0000	0.3164	1.2764	2472.6	.0607	.721	0.3080	1.2851	2481.1	.0588	.724
2900	1.3723-4	34.4	2.4257	29.061	.141	1.0024	-1.0001	0.3215	1.2715	2511.7	.0633	.718	0.3096	1.2833	2523.3	.0605	.724
3000	1.3264-4	66.8	2.4367	29.058	.145	1.0040	-1.0001	0.3280	1.2657	2549.0	.0664	.714	0.3110	1.2816	2564.9	.0622	.723
3100	1.2834-4	100.0	2.4476	29.053	.148	1.0066	-1.0002	0.3367	1.2587	2584.1	.0703	.707	0.3124	1.2801	2606.0	.0638	.723
3200	1.2430-4	134.3	2.4585	29.045	.151	1.0106	-1.0003	0.3487	1.2500	2616.7	.0753	.698	0.3137	1.2787	2646.6	.0655	.722
3300	1.2048-4	169.9	2.4695	29.033	.154	1.0168	-1.0005	0.3652	1.2394	2646.6	.0820	.684	0.3149	1.2775	2686.9	.0671	.722
3400	1.1686-4	207.5	2.4807	29.015	.157	1.0260	-1.0007	0.3880	1.2269	2673.6	.0913	.666	0.3160	1.2764	2727.0	.0687	.721
3500	1.1342-4	247.8	2.4924	28.988	.160	1.0394	-1.0012	0.4191	1.2127	2698.2	.1042	.642	0.3171	1.2756	2767.2	.0703	.720
3600	1.1012-4	291.7	2.5047	28.948	.163	1.0585	-1.0018	0.4610	1.1975	2721.1	.1220	.614	0.3181	1.2750	2807.7	.0719	.719
3700	1.0693-4	340.4	2.5181	28.892	.165	1.0847	-1.0027	0.5160	1.1821	2743.5	.1465	.583	0.3190	1.2746	2848.9	.0735	.718
3800	1.0384-4	395.4	2.5327	28.814	.168	1.1196	-1.0039	0.5861	1.1675	2766.8	.1792	.550	0.3198	1.2747	2891.0	.0750	.717
3900	1.0081-4	458.2	2.5490	28.709	.171	1.1643	-1.0056	0.6726	1.1545	2792.5	.2217	.518	0.3206	1.2751	2934.7	.0766	.715
4000	9.7812-5	530.5	2.5673	28.570	.173	1.2195	-1.0077	0.7755	1.1437	2821.5	.2752	.489	0.3213	1.2760	2980.3	.0782	.712
4100	9.4836-5	613.8	2.5879	28.394	.176	1.2851	-1.0103	0.8937	1.1350	2854.6	.3397	.463	0.3220	1.2775	3028.5	.0799	.709
4200	9.1863-5	709.6	2.6110	28.174	.178	1.3603	-1.0135	1.0248	1.1284	2892.0	.4140	.442	0.3226	1.2796	3079.6	.0817	.705
4300	8.8884-5	819.1	2.6367	27.910	.181	1.4435	-1.0171	1.1656	1.1237	2933.9	.4953	.426	0.3232	1.2823	3134.1	.0836	.699
4400	8.5896-5	942.9	2.6652	27.599	.183	1.5323	-1.0212	1.3118	1.1206	2980.4	.5784	.416	0.3238	1.2857	3192.4	.0857	.693
4500	8.2904-5	1081.4	2.6963	27.243	.186	1.6228	-1.0256	1.4574	1.1188	3031.2	.6565	.412	0.3244	1.2898	3254.7	.0879	.685
4600	7.9922-5	1234.1	2.7299	26.847	.188	1.7096	-1.0300	1.5937	1.1181	3086.3	.7216	.415	0.3251	1.2946	3321.0	.0904	.675
4700	7.6973-5	1399.5	2.7654	26.418	.190	1.7848	-1.0342	1.7090	1.1185	3145.4	.7659	.424	0.3257	1.3000	3391.0	.0932	.665
4800	7.4088-5	1574.8	2.8023	25.969	.193	1.8399	-1.0376	1.7898	1.1199	3208.1	.7840	.440	0.3265	1.3059	3464.2	.0960	.655
4900	7.1306-5	1755.9	2.8397	25.515	.195	1.8673	-1.0398	1.8241	1.1223	3273.5	.7742	.459	0.3272	1.3121	3539.5	.0990	.644
5000	6.8666-5	1937.8	2.8764	25.071	.197	1.8629	-1.0406	1.8056	1.1256	3340.9	.7394	.482	0.3280	1.3184	3615.6	.1019	.635
5100	6.6199-5	2115.3	2.9116	24.654	.200	1.8277	-1.0399	1.7359	1.1301	3409.3	.6857	.506	0.3287	1.3245	3691.0	.1048	.627
5200	6.3926-5	2283.6	2.9443	24.274	.202	1.7668	-1.0378	1.6234	1.1357	3478.0	.6203	.530	0.3295	1.3304	3764.3	.1075	.620
5300	6.1855-5	2439.0	2.9739	23.940	.205	1.6876	-1.0347	1.4809	1.1426	3546.5	.5502	.552	0.3301	1.3356	3834.3	.1100	.615
5400	5.9984-5	2579.2	3.0001	23.653	.208	1.5985	-1.0309	1.3226	1.1512	3614.8	.4809	.571	0.3307	1.3403	3900.4	.1124	.611

TABLE 3.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.034826; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 1.46959 LB/IN2 (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVLT	DLVDLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4877-3	-354.9	2.0914	29.066	.095	1.0000	-1.0000	0.2804	1.3221	1902.3	.0368	.728	0.2804	1.3222	1902.3	.0368	.728
1700	2.3414-3	-326.7	2.1085	29.066	.099	1.0000	-1.0000	0.2837	1.3172	1957.2	.0388	.727	0.2836	1.3174	1957.3	.0388	.727
1800	2.2113-3	-298.2	2.1248	29.066	.103	1.0000	-1.0000	0.2868	1.3127	2010.5	.0408	.726	0.2866	1.3130	2010.7	.0408	.726
1900	2.0949-3	-269.4	2.1404	29.066	.107	1.0000	-1.0000	0.2896	1.3087	2062.4	.0427	.726	0.2893	1.3092	2062.8	.0427	.726
2000	1.9902-3	-240.3	2.1554	29.066	.111	1.0000	-1.0000	0.2923	1.3050	2113.0	.0447	.726	0.2919	1.3056	2113.5	.0446	.726
2100	1.8954-3	-210.9	2.1697	29.066	.114	1.0000	-1.0000	0.2950	1.3014	2162.2	.0466	.725	0.2943	1.3024	2163.0	.0464	.725
2200	1.8092-3	-181.3	2.1835	29.066	.118	1.0000	-1.0000	0.2976	1.2980	2210.1	.0484	.725	0.2966	1.2993	2211.3	.0483	.725
2300	1.7306-3	-151.4	2.1968	29.066	.122	1.0000	-1.0000	0.3002	1.2947	2256.9	.0503	.725	0.2988	1.2965	2258.5	.0501	.725
2400	1.6585-3	-121.2	2.2096	29.066	.125	1.0001	-1.0000	0.3028	1.2915	2302.6	.0522	.725	0.3008	1.2938	2304.7	.0519	.725
2500	1.5921-3	-90.8	2.2220	29.066	.128	1.0001	-1.0000	0.3054	1.2883	2347.2	.0541	.725	0.3028	1.2914	2350.0	.0536	.725
2600	1.5309-3	-60.1	2.2340	29.065	.132	1.0002	-1.0000	0.3081	1.2851	2390.8	.0560	.724	0.3046	1.2891	2394.5	.0553	.725
2700	1.4742-3	-29.2	2.2457	29.065	.135	1.0004	-1.0000	0.3109	1.2819	2433.2	.0580	.724	0.3064	1.2870	2438.1	.0571	.725
2800	1.4215-3	2.1	2.2571	29.065	.138	1.0007	-1.0000	0.3140	1.2785	2474.7	.0600	.723	0.3080	1.2851	2481.0	.0588	.724
2900	1.3724-3	33.6	2.2681	29.064	.141	1.0011	-1.0000	0.3175	1.2750	2515.0	.0622	.722	0.3096	1.2833	2523.2	.0605	.724
3000	1.3266-3	65.6	2.2790	29.062	.145	1.0017	-1.0000	0.3214	1.2711	2554.1	.0645	.720	0.3110	1.2816	2564.7	.0622	.723
3100	1.2837-3	97.9	2.2896	29.060	.148	1.0027	-1.0001	0.3262	1.2667	2592.0	.0671	.717	0.3124	1.2800	2605.6	.0638	.723
3200	1.2435-3	130.8	2.3000	29.057	.151	1.0042	-1.0001	0.3320	1.2617	2628.4	.0701	.714	0.3137	1.2786	2645.9	.0655	.722
3300	1.2056-3	164.4	2.3104	29.053	.154	1.0064	-1.0002	0.3394	1.2560	2663.3	.0736	.709	0.3149	1.2772	2685.8	.0671	.722
3400	1.1699-3	198.8	2.3206	29.046	.157	1.0096	-1.0003	0.3489	1.2492	2696.4	.0778	.703	0.3160	1.2760	2725.2	.0687	.721
3500	1.1361-3	234.3	2.3309	29.036	.160	1.0142	-1.0004	0.3611	1.2413	2727.5	.0832	.694	0.3171	1.2750	2764.3	.0703	.721
3600	1.1040-3	271.1	2.3413	29.022	.163	1.0207	-1.0006	0.3770	1.2322	2756.8	.0899	.682	0.3181	1.2740	2803.1	.0719	.720
3700	1.0734-3	309.8	2.3519	29.002	.166	1.0298	-1.0009	0.3976	1.2221	2784.2	.0987	.667	0.3191	1.2732	2841.9	.0734	.720
3800	1.0442-3	350.8	2.3628	28.974	.168	1.0421	-1.0013	0.4239	1.2110	2810.1	.1100	.649	0.3199	1.2726	2880.7	.0749	.719
3900	1.0161-3	394.8	2.3743	28.937	.171	1.0583	-1.0019	0.4570	1.1995	2835.1	.1246	.627	0.3208	1.2722	2919.8	.0764	.718
4000	9.8895-4	442.5	2.3863	28.887	.174	1.0794	-1.0027	0.4979	1.1879	2859.8	.1434	.604	0.3215	1.2720	2959.3	.0779	.717
4100	9.6264-4	494.7	2.3992	28.821	.177	1.1058	-1.0037	0.5472	1.1768	2885.0	.1669	.579	0.3222	1.2720	2999.5	.0794	.716
4200	9.3698-4	552.2	2.4131	28.737	.179	1.1380	-1.0050	0.6053	1.1667	2911.7	.1960	.554	0.3228	1.2724	3040.7	.0810	.715
4300	9.1183-4	616.0	2.4281	28.632	.182	1.1762	-1.0066	0.6716	1.1578	2940.3	.2310	.529	0.3234	1.2730	3083.1	.0825	.713
4400	8.8706-4	686.8	2.4443	28.502	.184	1.2201	-1.0084	0.7454	1.1504	2971.5	.2720	.505	0.3239	1.2740	3127.1	.0840	.711
4500	8.6261-4	765.3	2.4620	28.346	.187	1.2692	-1.0106	0.8252	1.1443	3005.4	.3189	.484	0.3244	1.2754	3172.9	.0856	.708
4600	8.3839-4	852.0	2.4810	28.162	.189	1.3229	-1.0131	0.9094	1.1397	3042.3	.3708	.464	0.3249	1.2772	3220.7	.0873	.705
4700	8.1438-4	947.3	2.5015	27.950	.192	1.3802	-1.0159	0.9966	1.1362	3082.1	.4263	.448	0.3253	1.2794	3270.6	.0891	.700
4800	7.9056-4	1051.3	2.5234	27.710	.194	1.4401	-1.0190	1.0850	1.1338	3124.9	.4834	.436	0.3257	1.2821	3322.9	.0910	.695
4900	7.6695-4	1164.2	2.5467	27.443	.197	1.5013	-1.0222	1.1726	1.1323	3170.6	.5393	.427	0.3262	1.2851	3377.7	.0930	.689
5000	7.4358-4	1285.8	2.5713	27.149	.199	1.5618	-1.0256	1.2570	1.1316	3219.0	.5910	.423	0.3266	1.2886	3435.0	.0951	.683
5100	7.2052-4	1415.4	2.5969	26.834	.201	1.6193	-1.0290	1.3348	1.1317	3270.2	.6348	.423	0.3271	1.2924	3494.7	.0975	.675
5200	6.9786-4	1552.4	2.6235	26.499	.204	1.6707	-1.0323	1.4018	1.1324	3324.0	.6678	.427	0.3276	1.2966	3556.7	.0999	.668
5300	6.7572-4	1695.3	2.6507	26.152	.206	1.7123	-1.0352	1.4533	1.1338	3380.1	.6873	.436	0.3281	1.3011	3620.8	.1025	.660
5400	6.5425-4	1842.4	2.6782	25.799	.208	1.7409	-1.0375	1.4847	1.1359	3438.2	.6920	.447	0.3287	1.3058	3686.4	.1052	.651

TABLE 3.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.034826; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 14.6959 LB/IN2 (1.00 ATM) DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4877-2	-354.9	1.9341	29.066	.095	1.0000	-1.0000	0.2804	1.3221	1902.3	.0368	.728	0.2804	1.3222	1902.3	.0368	.728
1700	2.3414-2	-326.7	1.9512	29.066	.099	1.0000	-1.0000	0.2837	1.3172	1957.2	.0388	.727	0.2836	1.3174	1957.3	.0388	.727
1800	2.2113-2	-298.2	1.9675	29.066	.103	1.0000	-1.0000	0.2868	1.3127	2010.5	.0408	.726	0.2866	1.3130	2010.7	.0408	.726
1900	2.0949-2	-269.4	1.9831	29.066	.107	1.0000	-1.0000	0.2896	1.3087	2062.4	.0427	.726	0.2893	1.3092	2062.8	.0427	.726
2000	1.9902-2	-240.3	1.9980	29.066	.111	1.0000	-1.0000	0.2923	1.3050	2113.0	.0447	.726	0.2919	1.3056	2113.5	.0446	.726
2100	1.8954-2	-210.9	2.0124	29.066	.114	1.0000	-1.0000	0.2950	1.3014	2162.2	.0466	.725	0.2943	1.3024	2163.0	.0464	.725
2200	1.8092-2	-181.3	2.0261	29.066	.118	1.0000	-1.0000	0.2976	1.2980	2210.2	.0484	.725	0.2966	1.2993	2211.3	.0483	.725
2300	1.7306-2	-151.4	2.0394	29.066	.122	1.0000	-1.0000	0.3001	1.2948	2257.0	.0503	.725	0.2988	1.2965	2258.5	.0501	.725
2400	1.6585-2	-121.2	2.0523	29.066	.125	1.0000	-1.0000	0.3026	1.2916	2302.7	.0522	.725	0.3008	1.2938	2304.7	.0519	.725
2500	1.5921-2	-90.9	2.0647	29.066	.128	1.0001	-1.0000	0.3052	1.2885	2347.4	.0540	.725	0.3028	1.2914	2350.0	.0536	.725
2600	1.5309-2	-60.2	2.0767	29.066	.132	1.0001	-1.0000	0.3077	1.2855	2391.1	.0559	.725	0.3046	1.2891	2394.5	.0553	.725
2700	1.4742-2	-29.3	2.0883	29.066	.135	1.0002	-1.0000	0.3103	1.2825	2433.8	.0578	.724	0.3064	1.2870	2438.1	.0571	.725
2800	1.4215-2	1.9	2.0997	29.065	.138	1.0003	-1.0000	0.3130	1.2795	2475.6	.0598	.724	0.3080	1.2851	2481.0	.0588	.724
2900	1.3725-2	33.3	2.1107	29.065	.141	1.0005	-1.0000	0.3158	1.2765	2516.4	.0618	.723	0.3096	1.2832	2523.1	.0605	.724
3000	1.3267-2	65.0	2.1215	29.064	.145	1.0008	-1.0000	0.3188	1.2733	2556.3	.0638	.722	0.3110	1.2815	2564.6	.0622	.723
3100	1.2839-2	97.0	2.1320	29.063	.148	1.0012	-1.0000	0.3221	1.2701	2595.3	.0660	.721	0.3124	1.2800	2605.4	.0638	.723
3200	1.2437-2	129.4	2.1422	29.062	.151	1.0018	-1.0000	0.3257	1.2666	2633.3	.0683	.719	0.3137	1.2785	2645.6	.0655	.722
3300	1.2059-2	162.2	2.1523	29.060	.154	1.0026	-1.0001	0.3300	1.2628	2670.2	.0707	.717	0.3149	1.2771	2685.3	.0671	.722
3400	1.1703-2	195.4	2.1623	29.057	.157	1.0038	-1.0001	0.3349	1.2587	2706.1	.0735	.715	0.3161	1.2759	2724.5	.0687	.721
3500	1.1367-2	229.2	2.1720	29.053	.160	1.0055	-1.0002	0.3408	1.2542	2740.8	.0765	.711	0.3171	1.2747	2763.2	.0703	.721
3600	1.1050-2	263.6	2.1817	29.048	.163	1.0079	-1.0002	0.3478	1.2491	2774.3	.0800	.707	0.3181	1.2737	2801.5	.0718	.720
3700	1.0748-2	298.8	2.1914	29.040	.166	1.0111	-1.0003	0.3555	1.2434	2806.5	.0841	.701	0.3191	1.2727	2839.5	.0734	.720
3800	1.0462-2	335.0	2.2010	29.030	.168	1.0154	-1.0005	0.3671	1.2371	2837.5	.0890	.695	0.3200	1.2719	2877.1	.0749	.720
3900	1.0189-2	372.3	2.2107	29.017	.171	1.0211	-1.0007	0.3801	1.2301	2867.1	.0949	.686	0.3208	1.2712	2914.6	.0764	.719
4000	9.9277-3	411.1	2.2205	28.998	.174	1.0286	-1.0010	0.3960	1.2225	2895.6	.1021	.675	0.3216	1.2705	2951.9	.0779	.719
4100	9.6777-3	451.7	2.2306	28.975	.177	1.0382	-1.0013	0.4153	1.2144	2923.0	.1108	.663	0.3223	1.2700	2989.2	.0794	.718
4200	9.4372-3	494.3	2.2408	28.944	.180	1.0503	-1.0018	0.4384	1.2061	2949.8	.1215	.648	0.3230	1.2697	3026.6	.0808	.718
4300	9.2053-3	539.5	2.2515	28.905	.182	1.0652	-1.0024	0.4657	1.1976	2976.3	.1344	.632	0.3236	1.2695	3064.3	.0823	.717
4400	8.9808-3	587.6	2.2625	28.856	.185	1.0832	-1.0031	0.4974	1.1894	3002.9	.1498	.614	0.3242	1.2695	3102.3	.0837	.716
4500	8.7628-3	639.1	2.2741	28.795	.188	1.1045	-1.0040	0.5335	1.1816	3030.0	.1681	.595	0.3247	1.2696	3140.9	.0852	.715
4600	8.5504-3	694.5	2.2863	28.722	.190	1.1291	-1.0051	0.5738	1.1744	3058.1	.1894	.576	0.3252	1.2700	3180.1	.0866	.714
4700	8.3429-3	754.0	2.2991	28.634	.193	1.1569	-1.0063	0.6178	1.1681	3087.5	.2139	.557	0.3257	1.2706	3220.2	.0881	.712
4800	8.1395-3	818.1	2.3126	28.530	.195	1.1876	-1.0078	0.6648	1.1626	3118.6	.2414	.537	0.3261	1.2714	3261.2	.0896	.710
4900	7.9400-3	887.0	2.3268	28.410	.198	1.2209	-1.0094	0.7139	1.1581	3151.3	.2719	.519	0.3264	1.2725	3303.3	.0911	.708
5000	7.7438-3	960.9	2.3417	28.274	.200	1.2562	-1.0112	0.7645	1.1544	3186.0	.3050	.502	0.3268	1.2738	3346.6	.0927	.706
5100	7.5508-3	1039.9	2.3573	28.121	.203	1.2932	-1.0132	0.8156	1.1516	3222.5	.3403	.485	0.3271	1.2753	3391.1	.0943	.703
5200	7.3608-3	1124.1	2.3737	27.951	.205	1.3315	-1.0153	0.8666	1.1495	3260.8	.3771	.471	0.3274	1.2771	3437.0	.0959	.700
5300	7.1738-3	1213.2	2.3907	27.764	.207	1.3705	-1.0175	0.9170	1.1481	3301.0	.4146	.459	0.3277	1.2792	3484.3	.0977	.696
5400	6.9898-3	1307.4	2.4083	27.563	.210	1.4099	-1.0199	0.9661	1.1472	3342.9	.4518	.448	0.3281	1.2814	3533.0	.0995	.692

TABLE 3.4B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.034826; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 146.959 LB/IN² (10.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4877-1	-354.9	1.7768	29.066	.095	1.0000	-1.0000	0.2804	1.3221	1902.3	.0368	.728	0.2804	1.3222	1902.3	.0368	.728
1700	2.3414-1	-326.7	1.7939	29.066	.099	1.0000	-1.0000	0.2837	1.3172	1957.2	.0388	.727	0.2836	1.3174	1957.3	.0388	.727
1800	2.2113-1	-298.2	1.8102	29.066	.103	1.0000	-1.0000	0.2868	1.3127	2010.5	.0408	.726	0.2866	1.3130	2010.7	.0408	.726
1900	2.0949-1	-269.4	1.8258	29.066	.107	1.0000	-1.0000	0.2896	1.3087	2062.4	.0427	.726	0.2893	1.3092	2062.8	.0427	.726
2000	1.9902-1	-240.3	1.8407	29.066	.111	1.0000	-1.0000	0.2923	1.3050	2113.0	.0447	.726	0.2919	1.3056	2113.5	.0446	.726
2100	1.8954-1	-210.9	1.8550	29.066	.114	1.0000	-1.0000	0.2950	1.3014	2162.2	.0466	.725	0.2943	1.3024	2162.9	.0464	.725
2200	1.8093-1	-181.3	1.8688	29.066	.118	1.0000	-1.0000	0.2976	1.2980	2210.2	.0484	.725	0.2966	1.2993	2211.3	.0483	.725
2300	1.7306-1	-151.4	1.8821	29.066	.122	1.0000	-1.0000	0.3001	1.2948	2257.0	.0503	.725	0.2988	1.2965	2258.5	.0501	.725
2400	1.6585-1	-121.3	1.8949	29.066	.125	1.0000	-1.0000	0.3026	1.2917	2302.8	.0522	.725	0.3008	1.2938	2304.7	.0519	.725
2500	1.5921-1	-90.9	1.9073	29.066	.128	1.0000	-1.0000	0.3050	1.2886	2347.5	.0540	.725	0.3028	1.2914	2350.0	.0536	.725
2600	1.5309-1	-60.2	1.9193	29.066	.132	1.0001	-1.0000	0.3075	1.2857	2391.3	.0559	.725	0.3046	1.2891	2394.5	.0553	.725
2700	1.4742-1	-29.4	1.9310	29.066	.135	1.0001	-1.0000	0.3100	1.2828	2434.1	.0577	.725	0.3064	1.2870	2438.1	.0571	.725
2800	1.4215-1	1.8	1.9423	29.066	.138	1.0001	-1.0000	0.3125	1.2800	2476.0	.0596	.724	0.3080	1.2851	2480.9	.0588	.724
2900	1.3725-1	33.1	1.9533	29.066	.141	1.0002	-1.0000	0.3150	1.2771	2517.1	.0616	.723	0.3096	1.2832	2523.1	.0605	.724
3000	1.3267-1	64.8	1.9640	29.065	.145	1.0004	-1.0000	0.3176	1.2743	2557.3	.0635	.723	0.3110	1.2815	2564.5	.0622	.723
3100	1.2839-1	96.6	1.9745	29.065	.148	1.0005	-1.0000	0.3203	1.2715	2596.7	.0655	.722	0.3124	1.2799	2605.3	.0638	.723
3200	1.2438-1	128.8	1.9847	29.064	.151	1.0008	-1.0000	0.3231	1.2686	2635.3	.0676	.721	0.3137	1.2785	2645.5	.0655	.722
3300	1.2061-1	161.3	1.9947	29.063	.154	1.0012	-1.0000	0.3262	1.2657	2673.1	.0697	.720	0.3149	1.2771	2685.1	.0671	.722
3400	1.1705-1	194.1	2.0045	29.062	.157	1.0017	-1.0000	0.3295	1.2627	2710.1	.0719	.719	0.3161	1.2758	2724.2	.0687	.721
3500	1.1370-1	227.2	2.0141	29.060	.160	1.0023	-1.0001	0.3331	1.2595	2746.3	.0742	.717	0.3171	1.2747	2762.8	.0703	.721
3600	1.1054-1	260.7	2.0235	29.058	.163	1.0033	-1.0001	0.3371	1.2562	2781.7	.0767	.715	0.3182	1.2736	2800.9	.0718	.720
3700	1.0754-1	294.6	2.0328	29.055	.166	1.0045	-1.0001	0.3416	1.2527	2816.3	.0793	.713	0.3191	1.2726	2838.5	.0734	.720
3800	1.0469-1	329.0	2.0420	29.051	.168	1.0061	-1.0002	0.3468	1.2489	2850.0	.0822	.711	0.3200	1.2716	2875.8	.0749	.720
3900	1.0199-1	364.0	2.0511	29.046	.171	1.0082	-1.0003	0.3528	1.2449	2882.8	.0854	.707	0.3209	1.2708	2912.7	.0764	.719
4000	9.9415-2	399.6	2.0601	29.039	.174	1.0109	-1.0004	0.3598	1.2405	2914.8	.0891	.703	0.3216	1.2700	2949.3	.0779	.719
4100	9.6961-2	436.0	2.0691	29.030	.177	1.0143	-1.0005	0.3679	1.2358	2945.9	.0932	.699	0.3224	1.2693	2985.5	.0794	.719
4200	9.4615-2	473.3	2.0781	29.018	.180	1.0187	-1.0006	0.3774	1.2308	2976.1	.0979	.693	0.3231	1.2687	3021.6	.0808	.718
4300	9.2368-2	511.5	2.0871	29.004	.182	1.0241	-1.0009	0.3884	1.2255	3005.6	.1033	.686	0.3237	1.2682	3057.5	.0823	.718
4400	9.0212-2	551.0	2.0961	28.986	.185	1.0307	-1.0011	0.4012	1.2199	3034.3	.1096	.678	0.3244	1.2678	3093.3	.0837	.717
4500	8.8139-2	591.9	2.1053	28.963	.188	1.0388	-1.0015	0.4160	1.2142	3062.6	.1168	.669	0.3249	1.2675	3129.1	.0851	.717
4600	8.6141-2	634.3	2.1147	28.935	.190	1.0484	-1.0019	0.4329	1.2083	3090.4	.1252	.658	0.3254	1.2672	3164.9	.0865	.716
4700	8.4210-2	678.5	2.1242	28.902	.193	1.0598	-1.0024	0.4520	1.2025	3118.1	.1349	.647	0.3259	1.2671	3200.8	.0880	.715
4800	8.2341-2	724.7	2.1339	28.862	.196	1.0729	-1.0030	0.4732	1.1968	3145.8	.1459	.634	0.3264	1.2671	3236.9	.0894	.715
4900	8.0527-2	773.2	2.1439	28.814	.198	1.0879	-1.0037	0.4966	1.1913	3173.8	.1584	.621	0.3268	1.2672	3273.3	.0908	.714
5000	7.8764-2	824.1	2.1542	28.758	.201	1.1046	-1.0045	0.5218	1.1863	3202.3	.1724	.608	0.3272	1.2675	3310.1	.0922	.713
5100	7.7046-2	877.6	2.1648	28.693	.203	1.1231	-1.0054	0.5487	1.1817	3231.5	.1880	.593	0.3276	1.2679	3347.3	.0936	.711
5200	7.5369-2	933.9	2.1757	28.619	.206	1.1430	-1.0064	0.5768	1.1776	3261.6	.2050	.579	0.3279	1.2684	3385.1	.0950	.710
5300	7.3731-2	993.0	2.1870	28.536	.208	1.1643	-1.0075	0.6058	1.1740	3292.6	.2234	.565	0.3282	1.2691	3423.4	.0964	.709
5400	7.2129-2	1055.1	2.1986	28.443	.211	1.1865	-1.0087	0.6352	1.1710	3324.7	.2432	.550	0.3285	1.2699	3462.3	.0979	.707

TABLE 3.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.034826; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 734.797 LB/IN2 (50.00 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM VS FT/S	COND BTU/ FT HR R	PRAN		
1600	1.2439 0	-354.9	1.6668	29.066	.095	1.0000	-1.0000	0.2804	1.3221	1902.2	.0368	.728	0.2804	1.3222	1902.3	.0368	.728
1700	1.1707 0	-326.7	1.6839	29.066	.099	1.0000	-1.0000	0.2837	1.3172	1957.1	.0388	.727	0.2836	1.3174	1957.3	.0388	.727
1800	1.1057 0	-298.2	1.7002	29.066	.103	1.0000	-1.0000	0.2868	1.3127	2010.4	.0408	.726	0.2866	1.3130	2010.7	.0408	.726
1900	1.0475 0	-269.4	1.7158	29.066	.107	1.0000	-1.0000	0.2896	1.3087	2062.4	.0427	.726	0.2893	1.3092	2062.8	.0427	.726
2000	9.9509-1	-240.3	1.7308	29.066	.111	1.0000	-1.0000	0.2923	1.3050	2112.9	.0447	.726	0.2919	1.3056	2113.5	.0446	.726
2100	9.4771-1	-210.9	1.7451	29.066	.114	1.0000	-1.0000	0.2950	1.3014	2162.2	.0466	.725	0.2943	1.3024	2162.9	.0464	.725
2200	9.0463-1	-181.3	1.7589	29.066	.118	1.0000	-1.0000	0.2976	1.2980	2210.2	.0484	.725	0.2966	1.2993	2211.3	.0483	.725
2300	8.6530-1	-151.4	1.7721	29.066	.122	1.0000	-1.0000	0.3001	1.2948	2257.0	.0503	.725	0.2988	1.2965	2258.5	.0501	.725
2400	8.2924-1	-121.3	1.7850	29.066	.125	1.0000	-1.0000	0.3026	1.2917	2302.8	.0521	.725	0.3008	1.2938	2304.7	.0519	.725
2500	7.9607-1	-90.9	1.7974	29.066	.128	1.0000	-1.0000	0.3050	1.2887	2347.5	.0540	.725	0.3028	1.2914	2350.0	.0536	.725
2600	7.6546-1	-60.3	1.8094	29.066	.132	1.0000	-1.0000	0.3074	1.2857	2391.3	.0558	.725	0.3046	1.2891	2394.5	.0553	.725
2700	7.3711-1	-29.4	1.8210	29.066	.135	1.0000	-1.0000	0.3098	1.2829	2434.2	.0577	.725	0.3064	1.2870	2438.1	.0571	.725
2800	7.1078-1	1.7	1.8323	29.066	.138	1.0001	-1.0000	0.3123	1.2801	2476.1	.0596	.724	0.3080	1.2851	2480.9	.0588	.724
2900	6.8627-1	33.1	1.8433	29.066	.141	1.0001	-1.0000	0.3147	1.2774	2517.3	.0615	.724	0.3096	1.2832	2523.0	.0605	.724
3000	6.6339-1	64.7	1.8541	29.066	.145	1.0002	-1.0000	0.3172	1.2747	2557.6	.0634	.723	0.3110	1.2815	2564.5	.0622	.723
3100	6.4198-1	96.5	1.8645	29.066	.148	1.0003	-1.0000	0.3197	1.2720	2597.2	.0653	.722	0.3124	1.2799	2605.3	.0638	.723
3200	6.2191-1	128.6	1.8747	29.065	.151	1.0005	-1.0000	0.3223	1.2694	2636.0	.0673	.722	0.3137	1.2785	2645.4	.0655	.722
3300	6.0306-1	161.0	1.8846	29.065	.154	1.0007	-1.0000	0.3249	1.2667	2674.1	.0693	.721	0.3149	1.2771	2685.0	.0671	.722
3400	5.8531-1	193.6	1.8944	29.064	.157	1.0009	-1.0000	0.3277	1.2640	2711.5	.0714	.720	0.3161	1.2758	2724.1	.0687	.721
3500	5.6856-1	226.5	1.9039	29.063	.160	1.0013	-1.0000	0.3306	1.2613	2748.1	.0735	.719	0.3171	1.2746	2762.6	.0703	.721
3600	5.5275-1	259.7	1.9133	29.062	.163	1.0018	-1.0001	0.3337	1.2585	2784.1	.0756	.718	0.3182	1.2735	2800.6	.0718	.720
3700	5.3778-1	293.3	1.9225	29.060	.166	1.0025	-1.0001	0.3371	1.2557	2819.4	.0779	.717	0.3191	1.2725	2838.2	.0734	.720
3800	5.2358-1	327.1	1.9315	29.058	.168	1.0033	-1.0001	0.3407	1.2528	2854.1	.0803	.715	0.3200	1.2715	2875.4	.0749	.720
3900	5.1011-1	361.4	1.9404	29.055	.171	1.0044	-1.0001	0.3447	1.2498	2888.0	.0828	.713	0.3209	1.2707	2912.1	.0764	.719
4000	4.9729-1	396.1	1.9492	29.051	.174	1.0058	-1.0002	0.3492	1.2466	2921.3	.0855	.711	0.3217	1.2699	2948.4	.0779	.719
4100	4.8508-1	431.3	1.9579	29.047	.177	1.0075	-1.0003	0.3542	1.2433	2953.9	.0884	.709	0.3224	1.2691	2984.4	.0794	.719
4200	4.7344-1	467.0	1.9665	29.041	.180	1.0096	-1.0003	0.3598	1.2398	2985.8	.0916	.706	0.3231	1.2684	3020.1	.0808	.719
4300	4.6231-1	503.2	1.9750	29.033	.182	1.0123	-1.0004	0.3661	1.2361	3017.1	.0951	.702	0.3238	1.2678	3055.5	.0823	.718
4400	4.5166-1	540.2	1.9835	29.024	.185	1.0156	-1.0006	0.3732	1.2323	3047.7	.0990	.698	0.3244	1.2673	3090.7	.0837	.718
4500	4.4145-1	577.9	1.9920	29.012	.188	1.0196	-1.0007	0.3813	1.2283	3077.7	.1033	.693	0.3250	1.2668	3125.6	.0851	.717
4600	4.3164-1	616.5	2.0005	28.998	.191	1.0244	-1.0009	0.3905	1.2241	3107.2	.1082	.688	0.3255	1.2664	3160.4	.0865	.717
4700	4.2221-1	656.1	2.0090	28.981	.193	1.0301	-1.0012	0.4008	1.2198	3136.2	.1136	.681	0.3260	1.2661	3195.1	.0880	.716
4800	4.1312-1	696.7	2.0175	28.961	.196	1.0368	-1.0015	0.4123	1.2155	3164.8	.1197	.674	0.3265	1.2658	3229.7	.0894	.715
4900	4.0435-1	738.6	2.0262	28.937	.198	1.0446	-1.0018	0.4252	1.2111	3193.2	.1266	.666	0.3270	1.2656	3264.3	.0908	.715
5000	3.9588-1	781.8	2.0349	28.908	.201	1.0535	-1.0023	0.4393	1.2067	3221.4	.1342	.658	0.3274	1.2655	3299.0	.0921	.714
5100	3.8766-1	826.5	2.0437	28.875	.204	1.0636	-1.0027	0.4547	1.2025	3249.6	.1427	.649	0.3278	1.2655	3333.7	.0935	.713
5200	3.7970-1	872.8	2.0527	28.836	.206	1.0749	-1.0033	0.4713	1.1984	3277.9	.1521	.639	0.3281	1.2656	3368.6	.0949	.712
5300	3.7196-1	920.8	2.0619	28.792	.209	1.0874	-1.0039	0.4890	1.1945	3306.5	.1623	.628	0.3285	1.2658	3403.7	.0963	.712
5400	3.6443-1	970.6	2.0712	28.741	.211	1.1009	-1.0046	0.5076	1.1909	3335.4	.1735	.618	0.3288	1.2660	3439.0	.0977	.711

TABLE 3C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO \approx 1.700; F/A = 0.034826; EQUIV.RATIO \approx 0.500; CHEM. EQUIV. RATIO \approx 0.5008;
 DRY AIR

T R	HETEROGENEOUS PHASE PROPERTIES					GAS PHASE PROPERTIES										T R
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R	DENSITY LB/FT ³	MW	VIS LB/ FT S	DLVHLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	
PRESSURE \approx 0.01 ATM																
360	1.177-3	-722.2	1.7623	29.066	0.2510	1.133-3	29.777	.0317	1.000	-1.000	0.2362	1.3935	915	.0102	.734	360
400	1.056-3	-710.2	1.7939	29.066	0.4138	1.018-3	29.738	.0346	1.000	-1.000	0.2369	1.3926	965	.0112	.731	400
440	9.218-4	-671.1	1.8857	29.066	2.1398	9.112-4	29.276	.0364	1.000	-1.000	0.2422	1.3890	1019	.0119	.739	440
PRESSURE = 0.10 ATM																
360	1.177-2	-722.3	1.6143	29.066	0.2423	1.133-2	29.778	.0317	1.000	-1.000	0.2362	1.3935	915	.0102	.734	360
400	1.059-2	-712.4	1.6404	29.066	0.2600	1.019-2	29.774	.0347	1.000	-1.000	0.2365	1.3929	965	.0112	.730	400
440	9.588-3	-699.8	1.6702	29.066	0.4200	9.252-3	29.728	.0374	1.000	-1.000	0.2373	1.3917	1012	.0122	.727	440
480	8.520-3	-667.5	1.7399	29.066	1.5181	8.379-3	29.370	.0394	1.000	-1.000	0.2417	1.3885	1062	.0130	.733	480
520	7.655-3	-637.4	1.8011	29.066	0.2456	7.655-3	29.066	.0414	1.000	-1.000	0.2456	1.3854	1110	.0138	.739	520
PRESSURE = 1.00 ATM																
360	1.177-1	-722.3	1.4664	29.066	0.2414	1.133-1	29.779	.0317	1.000	-1.000	0.2362	1.3935	915	.0102	.734	360
400	1.059-1	-712.6	1.4920	29.066	0.2447	1.019-1	29.778	.0347	1.000	-1.000	0.2364	1.3929	965	.0112	.730	400
440	9.625-2	-702.6	1.5159	29.066	0.2623	9.266-2	29.774	.0375	1.000	-1.000	0.2368	1.3920	1011	.0123	.726	440
480	8.796-2	-690.5	1.5420	29.066	0.3661	8.484-2	29.738	.0403	1.000	-1.000	0.2377	1.3907	1056	.0132	.724	480
520	8.005-2	-666.2	1.5908	29.066	0.6599	7.788-2	29.572	.0426	1.000	-1.000	0.2401	1.3884	1102	.0141	.726	520
537	7.649-2	-653.1	1.6154	29.066	0.9270	7.505-2	29.412	.0433	1.000	-1.000	0.2421	1.3868	1122	.0144	.730	537
560	7.108-2	-627.6	1.6620	29.066	0.2463	7.108-2	29.066	.0440	1.000	-1.000	0.2463	1.3839	1151	.0147	.738	560
600	6.634-2	-617.7	1.6791	29.066	0.2471	6.634-2	29.066	.0466	1.000	-1.000	0.2471	1.3822	1191	.0156	.738	600
PRESSURE = 10.00 ATM																
360	1.176 0	-722.3	1.3186	29.066	0.2414	1.133 0	29.778	.0317	1.000	-1.000	0.2362	1.3935	915	.0102	.734	360
400	1.059 0	-712.6	1.3442	29.066	0.2432	1.019 0	29.779	.0347	1.000	-1.000	0.2364	1.3929	964	.0112	.730	400
440	9.623-1	-702.8	1.3675	29.066	0.2466	9.268-1	29.778	.0376	1.000	-1.000	0.2368	1.3920	1011	.0123	.726	440
480	8.819-1	-692.8	1.3893	29.066	0.2587	8.495-1	29.774	.0403	1.000	-1.000	0.2373	1.3909	1056	.0132	.723	480
520	8.130-1	-676.1	1.4228	29.066	0.3046	7.837-1	29.758	.0430	1.000	-1.000	0.2381	1.3895	1099	.0142	.722	520
537	7.867-1	-670.9	1.4328	29.066	0.3290	7.589-1	29.742	.0440	1.000	-1.000	0.2385	1.3888	1116	.0146	.722	537
560	7.514-1	-662.6	1.4479	29.066	0.3841	7.263-1	29.702	.0455	1.000	-1.000	0.2393	1.3877	1141	.0151	.723	560
600	6.921-1	-644.0	1.4799	29.066	0.5710	6.744-1	29.547	.0476	1.000	-1.000	0.2418	1.3850	1183	.0158	.727	600
640	6.283-1	-614.1	1.5279	29.066	0.9695	6.244-1	29.181	.0493	1.000	-1.000	0.2467	1.3810	1227	.0165	.736	640
680	5.853-1	-597.9	1.5528	29.066	0.2489	5.853-1	29.066	.0514	1.000	-1.000	0.2489	1.3783	1266	.0174	.738	680
PRESSURE = 50.00 ATM																
360	5.862 0	-722.3	1.2153	29.066	0.2413	5.664 0	29.779	.0317	1.000	-1.000	0.2362	1.3935	915	.0102	.734	360
400	5.278 0	-712.6	1.2409	29.066	0.2431	5.097 0	29.779	.0347	1.000	-1.000	0.2364	1.3929	964	.0112	.730	400
440	4.800 0	-702.9	1.2641	29.066	0.2452	4.634 0	29.778	.0376	1.000	-1.000	0.2368	1.3920	1011	.0123	.726	440
480	4.401 0	-693.0	1.2856	29.066	0.2492	4.248 0	29.778	.0403	1.000	-1.000	0.2373	1.3909	1056	.0132	.723	480
520	4.063 0	-677.0	1.3178	29.066	0.2741	3.921 0	29.774	.0430	1.000	-1.000	0.2379	1.3896	1098	.0142	.721	520
537	3.936 0	-672.4	1.3265	29.066	0.2791	3.798 0	29.771	.0441	1.000	-1.000	0.2382	1.3890	1116	.0146	.721	537
560	3.770 0	-665.8	1.3386	29.066	0.2902	3.639 0	29.763	.0456	1.000	-1.000	0.2387	1.3880	1140	.0151	.721	560
600	3.510 0	-653.5	1.3597	29.066	0.3265	3.393 0	29.732	.0480	1.000	-1.000	0.2398	1.3861	1179	.0159	.722	600
640	3.271 0	-639.2	1.3828	29.066	0.3975	3.173 0	29.659	.0503	1.000	-1.000	0.2414	1.3838	1218	.0168	.725	640
680	3.040 0	-621.0	1.4103	29.066	0.5226	2.971 0	29.507	.0524	1.000	-1.000	0.2440	1.3809	1258	.0175	.728	680
720	2.803 0	-596.3	1.4456	29.066	0.7295	2.779 0	29.226	.0541	1.000	-1.000	0.2482	1.3770	1299	.0183	.734	720
760	2.619 0	-577.9	1.4706	29.066	0.2511	2.619 0	29.066	.0560	1.000	-1.000	0.2511	1.3738	1336	.0191	.737	760

TABLE 4A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.052240; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7504; MW = 29.1140;
 DRY AIR; GASEOUS COMPOSITION: CO2= .10562; H2O= .08952; N2= .74589; O2= .05002; AR= .00895

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
360	1.1075-1	5.5374 0	-977.0	1.8656	1.7086	1.5515	1.3945	1.2847	0.2454	1.3850	922.8	.0290	.0093	.7682	360
380	1.0492-1	5.2460 0	-972.1	1.8789	1.7218	1.5648	1.4077	1.2980	0.2457	1.3844	947.8	.0305	.0098	.7641	380
400	9.9673-2	4.9837 0	-967.2	1.8915	1.7345	1.5774	1.4203	1.3106	0.2460	1.3837	972.2	.0319	.0103	.7605	400
420	9.4927-2	4.7464 0	-962.3	1.9035	1.7465	1.5894	1.4324	1.3226	0.2463	1.3830	996.0	.0334	.0109	.7573	420
440	9.0612-2	4.5306 0	-957.3	1.9150	1.7579	1.6009	1.4438	1.3340	0.2467	1.3822	1019.1	.0348	.0114	.7546	440
460	8.6672-2	4.3336 0	-952.4	1.9260	1.7689	1.6118	1.4548	1.3450	0.2470	1.3814	1041.7	.0362	.0119	.7523	460
480	8.3061-2	4.1531 0	-947.4	1.9365	1.7794	1.6224	1.4653	1.3555	0.2474	1.3806	1063.8	.0376	.0124	.7505	480
500	7.9739-2	3.9869 0	-942.5	1.9466	1.7895	1.6325	1.4754	1.3656	0.2479	1.3797	1085.4	.0390	.0129	.7491	500
520	7.6672-2	3.8336 0	-937.5	1.9563	1.7993	1.6422	1.4852	1.3754	0.2483	1.3787	1106.5	.0403	.0134	.7481	520
537	7.4290-2	3.7145 0	-933.4	1.9642	1.8071	1.6501	1.4930	1.3832	0.2487	1.3779	1123.8	.0414	.0138	.7475	537
540	7.3832-2	3.6916 0	-932.6	1.9657	1.8086	1.6516	1.4945	1.3848	0.2488	1.3778	1127.2	.0417	.0139	.7474	540
560	7.1195-2	3.5598 0	-927.6	1.9748	1.8177	1.6606	1.5036	1.3938	0.2493	1.3767	1147.5	.0430	.0143	.7474	560
580	6.8740-2	3.4370 0	-922.6	1.9835	1.8265	1.6694	1.5123	1.4026	0.2498	1.3757	1167.3	.0442	.0148	.7475	580
600	6.6449-2	3.3224 0	-917.6	1.9920	1.8349	1.6779	1.5208	1.4110	0.2503	1.3746	1186.8	.0455	.0152	.7477	600
620	6.4305-2	3.2153 0	-912.6	2.0002	1.8432	1.6861	1.5290	1.4193	0.2508	1.3735	1205.9	.0468	.0157	.7479	620
640	6.2296-2	3.1148 0	-907.6	2.0082	1.8511	1.6941	1.5370	1.4272	0.2514	1.3724	1224.7	.0480	.0161	.7479	640
660	6.0408-2	3.0204 0	-902.5	2.0159	1.8589	1.7018	1.5447	1.4350	0.2520	1.3712	1243.2	.0492	.0166	.7475	660
680	5.8631-2	2.9316 0	-897.5	2.0235	1.8664	1.7093	1.5523	1.4425	0.2525	1.3700	1261.3	.0504	.0170	.7470	680
700	5.6956-2	2.8478 0	-892.4	2.0308	1.8737	1.7167	1.5596	1.4498	0.2531	1.3688	1279.2	.0516	.0175	.7464	700
720	5.5374-2	2.7687 0	-887.4	2.0379	1.8809	1.7238	1.5667	1.4570	0.2538	1.3676	1296.8	.0528	.0180	.7459	720
740	5.3878-2	2.6939 0	-882.3	2.0449	1.8878	1.7308	1.5737	1.4639	0.2544	1.3663	1314.0	.0539	.0184	.7456	740
760	5.2460-2	2.6230 0	-877.2	2.0517	1.8946	1.7376	1.5805	1.4707	0.2550	1.3651	1331.1	.0551	.0188	.7454	760
780	5.1115-2	2.5557 0	-872.1	2.0583	1.9013	1.7442	1.5871	1.4774	0.2557	1.3638	1347.8	.0562	.0193	.7453	780
800	4.9837-2	2.4918 0	-866.9	2.0648	1.9077	1.7507	1.5936	1.4838	0.2564	1.3625	1364.4	.0573	.0197	.7452	800
820	4.8621-2	2.4311 0	-861.8	2.0711	1.9141	1.7570	1.6000	1.4902	0.2571	1.3612	1380.6	.0584	.0201	.7451	820
840	4.7464-2	2.3732 0	-856.7	2.0773	1.9203	1.7632	1.6062	1.4964	0.2577	1.3599	1396.7	.0595	.0206	.7451	840
860	4.6360-2	2.3180 0	-851.5	2.0834	1.9264	1.7693	1.6122	1.5025	0.2584	1.3585	1412.5	.0605	.0210	.7451	860
880	4.5306-2	2.2653 0	-846.3	2.0894	1.9323	1.7752	1.6182	1.5084	0.2592	1.3572	1428.2	.0616	.0214	.7451	880
900	4.4299-2	2.2150 0	-841.1	2.0952	1.9381	1.7811	1.6240	1.5142	0.2599	1.3559	1443.6	.0627	.0219	.7452	900
920	4.3336-2	2.1668 0	-835.9	2.1009	1.9439	1.7868	1.6297	1.5200	0.2606	1.3545	1458.8	.0637	.0223	.7450	920
940	4.2414-2	2.1207 0	-830.7	2.1065	1.9495	1.7924	1.6353	1.5256	0.2613	1.3532	1473.9	.0647	.0227	.7449	940
960	4.1531-2	2.0765 0	-825.5	2.1120	1.9550	1.7979	1.6409	1.5311	0.2621	1.3518	1488.7	.0658	.0231	.7447	960
980	4.0683-2	2.0342 0	-820.2	2.1174	1.9604	1.8033	1.6463	1.5365	0.2628	1.3505	1503.4	.0668	.0236	.7445	980
1000	3.9869-2	1.9935 0	-815.0	2.1228	1.9657	1.8086	1.6516	1.5418	0.2636	1.3491	1517.9	.0678	.0240	.7442	1000
1020	3.9088-2	1.9544 0	-809.7	2.1280	1.9709	1.8139	1.6568	1.5470	0.2644	1.3478	1532.2	.0688	.0244	.7440	1020
1040	3.8336-2	1.9168 0	-804.4	2.1331	1.9761	1.8190	1.6620	1.5522	0.2651	1.3464	1546.4	.0698	.0249	.7437	1040
1060	3.7613-2	1.8806 0	-799.1	2.1382	1.9811	1.8241	1.6670	1.5572	0.2659	1.3450	1560.4	.0708	.0253	.7434	1060
1080	3.6916-2	1.8458 0	-793.8	2.1432	1.9861	1.8290	1.6720	1.5622	0.2667	1.3437	1574.3	.0717	.0257	.7431	1080
1100	3.6245-2	1.8122 0	-788.4	2.1481	1.9910	1.8340	1.6769	1.5671	0.2674	1.3424	1588.0	.0727	.0262	.7427	1100
1120	3.5598-2	1.7799 0	-783.1	2.1529	1.9958	1.8388	1.6817	1.5719	0.2682	1.3410	1601.6	.0737	.0266	.7423	1120
1140	3.4973-2	1.7487 0	-777.7	2.1576	2.0006	1.8435	1.6865	1.5767	0.2690	1.3397	1615.0	.0746	.0271	.7419	1140

TABLE 4A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.052240; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7504; MW = 29.1140;
 DRY AIR; GASEOUS COMPOSITION: CO2= .10562; H2O= .08952; N2= .74589; O2= .05002; AR= .00895

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN'	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
1160	3.4370-2	1.7185 0	-772.3	2.1623	2.0053	1.8482	1.6912	1.5814	0.2698	1.3384	1628.3	.0756	.0275	.7414	1160
1180	3.3788-2	1.6894 0	-766.9	2.1670	2.0099	1.8528	1.6958	1.5860	0.2706	1.3371	1641.5	.0765	.0279	.7410	1180
1200	3.3224-2	1.6612 0	-761.5	2.1715	2.0144	1.8574	1.7003	1.5906	0.2714	1.3358	1654.5	.0775	.0284	.7406	1200
1220	3.2680-2	1.6340 0	-756.0	2.1760	2.0189	1.8619	1.7048	1.5950	0.2721	1.3345	1667.4	.0784	.0288	.7402	1220
1240	3.2153-2	1.6076 0	-750.6	2.1804	2.0234	1.8663	1.7093	1.5995	0.2729	1.3332	1680.2	.0793	.0293	.7397	1240
1260	3.1642-2	1.5821 0	-745.1	2.1848	2.0277	1.8707	1.7136	1.6038	0.2737	1.3319	1692.9	.0802	.0297	.7393	1260
1280	3.1148-2	1.5574 0	-739.6	2.1891	2.0321	1.8750	1.7179	1.6082	0.2745	1.3306	1705.5	.0811	.0301	.7389	1280
1300	3.0669-2	1.5334 0	-734.1	2.1934	2.0363	1.8793	1.7222	1.6124	0.2753	1.3294	1717.9	.0820	.0306	.7385	1300
1320	3.0204-2	1.5102 0	-728.6	2.1976	2.0405	1.8835	1.7264	1.6166	0.2761	1.3281	1730.3	.0829	.0310	.7381	1320
1340	2.9753-2	1.4877 0	-723.1	2.2017	2.0447	1.8876	1.7306	1.6208	0.2769	1.3269	1742.6	.0838	.0315	.7377	1340
1360	2.9316-2	1.4658 0	-717.6	2.2059	2.0488	1.8917	1.7347	1.6249	0.2776	1.3257	1754.7	.0847	.0319	.7373	1360
1380	2.8891-2	1.4445 0	-712.0	2.2099	2.0529	1.8958	1.7387	1.6290	0.2784	1.3245	1766.8	.0856	.0323	.7369	1380
1400	2.8478-2	1.4239 0	-706.4	2.2139	2.0569	1.8998	1.7427	1.6330	0.2792	1.3233	1778.7	.0865	.0328	.7366	1400
1420	2.8077-2	1.4039 0	-700.8	2.2179	2.0608	1.9038	1.7467	1.6369	0.2799	1.3221	1790.6	.0873	.0332	.7362	1420
1440	2.7687-2	1.3844 0	-695.2	2.2218	2.0648	1.9077	1.7506	1.6409	0.2807	1.3210	1802.4	.0882	.0336	.7359	1440
1460	2.7308-2	1.3654 0	-689.6	2.2257	2.0686	1.9116	1.7545	1.6447	0.2815	1.3199	1814.1	.0891	.0341	.7356	1460
1480	2.6939-2	1.3469 0	-684.0	2.2295	2.0725	1.9154	1.7583	1.6486	0.2822	1.3187	1825.7	.0899	.0345	.7353	1480
1500	2.6580-2	1.3290 0	-678.3	2.2333	2.0763	1.9192	1.7621	1.6524	0.2830	1.3176	1837.2	.0908	.0349	.7351	1500
1520	2.6230-2	1.3115 0	-672.6	2.2371	2.0800	1.9230	1.7659	1.6561	0.2837	1.3165	1848.6	.0916	.0354	.7348	1520
1540	2.5889-2	1.2945 0	-667.0	2.2408	2.0837	1.9267	1.7696	1.6598	0.2844	1.3155	1860.0	.0925	.0358	.7346	1540
1560	2.5557-2	1.2779 0	-661.3	2.2445	2.0874	1.9303	1.7733	1.6635	0.2852	1.3144	1871.3	.0933	.0362	.7343	1560
1580	2.5234-2	1.2617 0	-655.6	2.2481	2.0910	1.9340	1.7769	1.6671	0.2859	1.3133	1882.5	.0941	.0367	.7341	1580
1600	2.4918-2	1.2459 0	-649.8	2.2517	2.0946	1.9376	1.7805	1.6707	0.2866	1.3123	1893.6	.0949	.0371	.7339	1600
1620	2.4611-2	1.2305 0	-644.1	2.2553	2.0982	1.9411	1.7841	1.6743	0.2873	1.3113	1904.7	.0958	.0375	.7337	1620
1640	2.4311-2	1.2155 0	-638.3	2.2588	2.1017	1.9447	1.7876	1.6778	0.2880	1.3103	1915.7	.0966	.0379	.7335	1640
1660	2.4018-2	1.2009 0	-632.6	2.2623	2.1052	1.9482	1.7911	1.6813	0.2887	1.3094	1926.6	.0974	.0383	.7333	1660
1680	2.3732-2	1.1866 0	-626.8	2.2657	2.1087	1.9516	1.7946	1.6848	0.2894	1.3084	1937.5	.0982	.0388	.7331	1680
1700	2.3453-2	1.1726 0	-621.0	2.2692	2.1121	1.9551	1.7980	1.6882	0.2901	1.3075	1948.3	.0990	.0392	.7329	1700
1720	2.3180-2	1.1590 0	-615.2	2.2726	2.1155	1.9585	1.8014	1.6916	0.2907	1.3065	1959.0	.0998	.0396	.7327	1720
1740	2.2913-2	1.1457 0	-609.4	2.2759	2.1189	1.9618	1.8048	1.6950	0.2914	1.3056	1969.7	.1006	.0400	.7325	1740
1760	2.2653-2	1.1327 0	-603.5	2.2793	2.1222	1.9652	1.8081	1.6983	0.2920	1.3048	1980.3	.1014	.0404	.7324	1760
1780	2.2399-2	1.1199 0	-597.7	2.2826	2.1255	1.9685	1.8114	1.7016	0.2927	1.3039	1990.9	.1022	.0408	.7322	1780
1800	2.2150-2	1.1075 0	-591.8	2.2858	2.1288	1.9717	1.8147	1.7049	0.2933	1.3031	2001.4	.1030	.0413	.7320	1800
1900	2.0984-2	1.0492 0	-562.3	2.3018	2.1447	1.9877	1.8306	1.7208	0.2962	1.2992	2053.2	.1068	.0433	.7313	1900
2000	1.9935-2	9.9673-1	-532.6	2.3170	2.1600	2.0029	1.8459	1.7361	0.2990	1.2956	2103.6	.1106	.0452	.7308	2000
2100	1.8985-2	9.4927-1	-502.6	2.3317	2.1746	2.0176	1.8605	1.7507	0.3016	1.2923	2152.8	.1143	.0472	.7303	2100
2200	1.8122-2	9.0612-1	-472.3	2.3458	2.1887	2.0317	1.8746	1.7648	0.3041	1.2892	2200.8	.1179	.0491	.7299	2200
2300	1.7334-2	8.6673-1	-441.7	2.3594	2.2023	2.0452	1.8882	1.7784	0.3064	1.2863	2247.8	.1214	.0510	.7295	2300
2400	1.6612-2	8.3061-1	-411.0	2.3724	2.2154	2.0583	1.9013	1.7915	0.3087	1.2837	2293.8	.1249	.0529	.7292	2400
2500	1.5948-2	7.9739-1	-380.0	2.3851	2.2280	2.0710	1.9139	1.8041	0.3108	1.2812	2338.8	.1284	.0547	.7288	2500

TABLE 4A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.052240; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7504; MW = 29.1140;
 DRY AIR; GASEOUS COMPOSITION: CO2= .10562; H2O= .08952; N2= .74589; O2= .05002; AR= .00895

T R	DENSITY (P=1.0) (P=50.)		H BTU/LB	ENTROPY (P=.01) (P=.10) (P=1.0) (P=10.) (P=50.)					CP BTU/ LB R	GAM	VS FT/S	VIS LB/ FT HR	COND BTU/ FT HR R	PRAN	T R
	LB/FT3	LB/FT3		BTU/LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R							
2600	1.5334-2	7.6672-1	-348.8	2.3973	2.2403	2.0832	1.9261	1.8164	0.3127	1.2789	2383.0	.1318	.0566	.7285	2600
2700	1.4766-2	7.3832-1	-317.5	2.4092	2.2521	2.0950	1.9380	1.8282	0.3146	1.2768	2426.4	.1351	.0584	.7281	2700
2800	1.4239-2	7.1195-1	-285.9	2.4206	2.2636	2.1065	1.9495	1.8397	0.3164	1.2748	2469.0	.1384	.0602	.7275	2800
2900	1.3748-2	6.8740-1	-254.2	2.4318	2.2747	2.1176	1.9606	1.8508	0.3181	1.2730	2510.9	.1416	.0620	.7269	2900
3000	1.3290-2	6.6449-1	-222.3	2.4426	2.2855	2.1285	1.9714	1.8616	0.3196	1.2713	2552.1	.1448	.0637	.7263	3000
3100	1.2861-2	6.4305-1	-190.3	2.4531	2.2960	2.1390	1.9819	1.8721	0.3211	1.2697	2592.7	.1480	.0655	.7256	3100
3200	1.2459-2	6.2296-1	-158.1	2.4633	2.3062	2.1492	1.9921	1.8823	0.3225	1.2682	2632.6	.1511	.0672	.7250	3200
3300	1.2082-2	6.0408-1	-125.8	2.4732	2.3162	2.1591	2.0021	1.8923	0.3238	1.2668	2672.0	.1542	.0690	.7244	3300
3400	1.1726-2	5.8631-1	-93.3	2.4829	2.3259	2.1688	2.0117	1.9020	0.3251	1.2656	2710.8	.1573	.0707	.7237	3400
3500	1.1391-2	5.6956-1	-60.8	2.4924	2.3353	2.1782	2.0212	1.9114	0.3262	1.2644	2749.1	.1603	.0723	.7230	3500
3600	1.1075-2	5.5374-1	-28.1	2.5016	2.3445	2.1875	2.0304	1.9206	0.3273	1.2632	2786.8	.1633	.0740	.7224	3600
3700	1.0775-2	5.3878-1	4.7	2.5106	2.3535	2.1964	2.0394	1.9296	0.3283	1.2622	2824.1	.1663	.0756	.7219	3700
3800	1.0492-2	5.2460-1	37.6	2.5193	2.3623	2.2052	2.0481	1.9384	0.3293	1.2612	2860.9	.1692	.0772	.7213	3800
3900	1.0223-2	5.1115-1	70.6	2.5279	2.3708	2.2138	2.0567	1.9469	0.3302	1.2603	2897.3	.1721	.0788	.7208	3900
4000	9.9673-3	4.9837-1	103.6	2.5363	2.3792	2.2221	2.0651	1.9553	0.3311	1.2595	2933.2	.1750	.0804	.7202	4000
4100	9.7242-3	4.8621-1	136.8	2.5444	2.3874	2.2303	2.0733	1.9635	0.3319	1.2587	2968.7	.1778	.0820	.7197	4100
4200	9.4927-3	4.7464-1	170.0	2.5525	2.3954	2.2383	2.0813	1.9715	0.3327	1.2579	3003.8	.1806	.0835	.7191	4200
4300	9.2719-3	4.6360-1	203.3	2.5603	2.4032	2.2462	2.0891	1.9793	0.3334	1.2572	3038.5	.1834	.0851	.7185	4300
4400	9.0612-3	4.5306-1	236.7	2.5680	2.4109	2.2538	2.0968	1.9870	0.3341	1.2566	3072.8	.1862	.0866	.7179	4400
4500	8.8599-3	4.4299-1	270.1	2.5755	2.4184	2.2614	2.1043	1.9945	0.3347	1.2560	3106.8	.1889	.0881	.7173	4500
4600	8.6672-3	4.3336-1	303.6	2.5828	2.4258	2.2687	2.1117	2.0019	0.3353	1.2554	3140.4	.1916	.0897	.7165	4600
4700	8.4828-3	4.2414-1	337.2	2.5901	2.4330	2.2759	2.1189	2.0091	0.3359	1.2548	3173.6	.1943	.0912	.7157	4700
4800	8.3061-3	4.1531-1	370.8	2.5971	2.4401	2.2830	2.1260	2.0162	0.3364	1.2543	3206.5	.1969	.0927	.7149	4800
4900	8.1366-3	4.0683-1	404.5	2.6041	2.4470	2.2900	2.1329	2.0231	0.3370	1.2538	3239.1	.1996	.0942	.7142	4900
5000	7.9739-3	3.9869-1	438.2	2.6109	2.4538	2.2968	2.1397	2.0299	0.3375	1.2533	3271.4	.2022	.0956	.7135	5000
5100	7.8175-3	3.9088-1	472.0	2.6176	2.4605	2.3035	2.1464	2.0366	0.3379	1.2529	3303.3	.2048	.0971	.7127	5100
5200	7.6672-3	3.8336-1	505.8	2.6241	2.4671	2.3100	2.1530	2.0432	0.3384	1.2525	3335.0	.2074	.0986	.7120	5200
5300	7.5225-3	3.7613-1	539.6	2.6306	2.4735	2.3165	2.1594	2.0496	0.3388	1.2520	3366.4	.2099	.1000	.7113	5300
5400	7.3832-3	3.6916-1	573.5	2.6369	2.4799	2.3228	2.1658	2.0560	0.3393	1.2516	3397.4	.2125	.1014	.7107	5400

TABLE 4.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.052240; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 0.14696 LB/IN² (0.01 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4918-4	-649.8	2.2517	29.114	.095	1.0000	-1.0000	0.2866	1.3123	1893.6	.0371	.734	0.2866	1.3123	1893.6	.0371	.734
1700	2.3453-4	-621.0	2.2692	29.114	.099	1.0000	-1.0000	0.2901	1.3073	1948.2	.0392	.733	0.2901	1.3075	1948.3	.0392	.733
1800	2.2150-4	-591.8	2.2859	29.114	.103	1.0000	-1.0000	0.2934	1.3029	2001.2	.0413	.732	0.2933	1.3031	2001.4	.0413	.732
1900	2.0984-4	-562.3	2.3018	29.114	.107	1.0000	-1.0000	0.2964	1.2989	2052.9	.0433	.731	0.2962	1.2992	2053.2	.0433	.731
2000	1.9935-4	-532.5	2.3171	29.114	.111	1.0000	-1.0000	0.2993	1.2951	2103.2	.0453	.731	0.2990	1.2956	2103.6	.0452	.731
2100	1.8985-4	-502.4	2.3318	29.114	.114	1.0000	-1.0000	0.3021	1.2916	2152.2	.0473	.730	0.3016	1.2923	2152.8	.0472	.730
2200	1.8122-4	-472.1	2.3459	29.114	.118	1.0000	-1.0000	0.3049	1.2882	2200.0	.0492	.730	0.3041	1.2892	2200.8	.0491	.730
2300	1.7334-4	-441.5	2.3595	29.114	.121	1.0001	-1.0000	0.3076	1.2849	2246.6	.0512	.729	0.3064	1.2863	2247.8	.0510	.730
2400	1.6612-4	-410.6	2.3726	29.114	.125	1.0002	-1.0000	0.3104	1.2817	2292.0	.0532	.729	0.3087	1.2837	2293.8	.0529	.729
2500	1.5947-4	-379.4	2.3854	29.114	.128	1.0003	-1.0000	0.3133	1.2785	2336.4	.0552	.728	0.3108	1.2812	2338.8	.0547	.729
2600	1.5334-4	-347.9	2.3977	29.113	.132	1.0005	-1.0000	0.3164	1.2752	2379.5	.0573	.727	0.3127	1.2789	2383.0	.0566	.728
2700	1.4766-4	-316.1	2.4097	29.112	.135	1.0010	-1.0000	0.3201	1.2715	2421.4	.0596	.726	0.3146	1.2768	2426.5	.0584	.728
2800	1.4237-4	-283.9	2.4214	29.111	.138	1.0017	-1.0000	0.3245	1.2673	2461.8	.0621	.723	0.3164	1.2749	2469.2	.0602	.727
2900	1.3745-4	-251.1	2.4329	29.108	.142	1.0031	-1.0001	0.3304	1.2622	2500.4	.0650	.720	0.3181	1.2731	2511.2	.0620	.727
3000	1.3285-4	-217.7	2.4443	29.104	.145	1.0053	-1.0001	0.3383	1.2558	2536.9	.0686	.714	0.3196	1.2714	2552.6	.0637	.726
3100	1.2854-4	-183.4	2.4555	29.098	.148	1.0089	-1.0002	0.3495	1.2477	2570.8	.0733	.706	0.3211	1.2699	2593.6	.0655	.725
3200	1.2448-4	-147.6	2.4669	29.087	.151	1.0146	-1.0004	0.3656	1.2374	2601.7	.0797	.693	0.3225	1.2686	2634.2	.0672	.725
3300	1.2064-4	-110.0	2.4784	29.070	.154	1.0236	-1.0006	0.3885	1.2249	2629.3	.0886	.676	0.3238	1.2674	2674.6	.0690	.724
3400	1.1698-4	-69.6	2.4905	29.045	.157	1.0370	-1.0011	0.4207	1.2102	2654.0	.1011	.654	0.3250	1.2665	2715.0	.0707	.723
3500	1.1349-4	-25.5	2.5033	29.006	.160	1.0565	-1.0017	0.4651	1.1942	2676.7	.1187	.627	0.3261	1.2658	2755.7	.0724	.722
3600	1.1012-4	23.9	2.5172	28.949	.163	1.0836	-1.0026	0.5240	1.1781	2698.9	.1430	.598	0.3271	1.2654	2797.1	.0740	.720
3700	1.0685-4	79.9	2.5325	28.869	.166	1.1196	-1.0038	0.5992	1.1630	2722.3	.1756	.566	0.3280	1.2653	2839.6	.0757	.719
3800	1.0365-4	144.3	2.5497	28.761	.169	1.1655	-1.0054	0.6913	1.1498	2748.3	.2179	.535	0.3289	1.2658	2883.6	.0774	.717
3900	1.0048-4	218.7	2.5690	28.617	.171	1.2214	-1.0075	0.7993	1.1390	2778.1	.2712	.505	0.3296	1.2667	2929.7	.0791	.714
4000	9.7346-5	304.6	2.5908	28.434	.174	1.2869	-1.0100	0.9214	1.1306	2812.1	.3361	.477	0.3303	1.2682	2978.3	.0808	.710
4100	9.4217-5	403.3	2.6151	28.208	.176	1.3613	-1.0130	1.0555	1.1244	2850.5	.4128	.451	0.3309	1.2703	3029.8	.0827	.706
4200	9.1087-5	516.0	2.6423	27.936	.179	1.4438	-1.0165	1.1995	1.1199	2893.2	.5003	.428	0.3314	1.2730	3084.8	.0847	.700
4300	8.7954-5	643.5	2.6723	27.618	.181	1.5333	-1.0205	1.3514	1.1168	2940.3	.5962	.410	0.3320	1.2765	3143.5	.0868	.692
4400	8.4816-5	786.5	2.7051	27.252	.183	1.6280	-1.0250	1.5083	1.1150	2991.7	.6957	.397	0.3325	1.2806	3206.3	.0892	.683
4500	8.1680-5	945.2	2.7408	26.841	.185	1.7246	-1.0297	1.6651	1.1141	3047.5	.7916	.390	0.3332	1.2855	3273.5	.0919	.672
4600	7.8562-5	1119.2	2.7790	26.390	.188	1.8170	-1.0346	1.8126	1.1142	3107.5	.8743	.389	0.3338	1.2910	3345.0	.0949	.660
4700	7.5484-5	1306.9	2.8194	25.907	.190	1.8965	-1.0391	1.9370	1.1151	3171.5	.9332	.394	0.3346	1.2972	3420.7	.0981	.647
4800	7.2483-5	1505.2	2.8611	25.406	.192	1.9526	-1.0428	2.0211	1.1169	3239.1	.9594	.405	0.3353	1.3039	3499.8	.1016	.634
4900	6.9602-5	1709.2	2.9032	24.905	.194	1.9754	-1.0450	2.0486	1.1197	3309.6	.9481	.420	0.3362	1.3110	3581.1	.1052	.621
5000	6.6885-5	1912.7	2.9443	24.421	.197	1.9595	-1.0454	2.0102	1.1235	3381.8	.9012	.439	0.3370	1.3180	3662.9	.1088	.609
5100	6.4370-5	2109.1	2.9832	23.973	.199	1.9062	-1.0440	1.9079	1.1284	3454.8	.8264	.459	0.3378	1.3249	3743.5	.1123	.598
5200	6.2078-5	2292.6	3.0189	23.573	.201	1.8232	-1.0409	1.7552	1.1346	3527.7	.7353	.481	0.3386	1.3312	3821.0	.1156	.590
5300	6.0016-5	2459.2	3.0506	23.228	.204	1.7222	-1.0367	1.5722	1.1423	3599.9	.6395	.501	0.3393	1.3368	3894.3	.1187	.583
5400	5.8173-5	2606.8	3.0782	22.939	.206	1.6147	-1.0320	1.3794	1.1516	3671.4	.5478	.520	0.3400	1.3416	3962.7	.1215	.578

TABLE 4.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.052240; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 1.46959 LB/IN² (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4918-3	-649.8	2.0946	29.114	.095	1.0000	-1.0000	0.2866	1.3123	1893.6	.0371	.734	0.2866	1.3123	1893.6	.0371	.734
1700	2.3453-3	-621.0	2.1121	29.114	.099	1.0000	-1.0000	0.2901	1.3074	1948.2	.0392	.733	0.2901	1.3075	1948.3	.0392	.733
1800	2.2150-3	-591.8	2.1288	29.114	.103	1.0000	-1.0000	0.2934	1.3029	2001.2	.0413	.732	0.2933	1.3031	2001.4	.0413	.732
1900	2.0984-3	-562.3	2.1447	29.114	.107	1.0000	-1.0000	0.2964	1.2989	2052.9	.0433	.731	0.2962	1.2992	2053.2	.0433	.731
2000	1.9935-3	-532.5	2.1600	29.114	.111	1.0000	-1.0000	0.2993	1.2951	2103.2	.0453	.731	0.2990	1.2956	2103.6	.0452	.731
2100	1.8985-3	-502.4	2.1747	29.114	.114	1.0000	-1.0000	0.3021	1.2916	2152.2	.0473	.730	0.3016	1.2923	2152.8	.0472	.730
2200	1.8122-3	-472.1	2.1888	29.114	.118	1.0000	-1.0000	0.3048	1.2883	2200.0	.0492	.730	0.3041	1.2892	2200.8	.0491	.730
2300	1.7334-3	-441.5	2.2024	29.114	.121	1.0000	-1.0000	0.3075	1.2851	2246.7	.0512	.729	0.3064	1.2863	2247.8	.0510	.730
2400	1.6612-3	-410.6	2.2156	29.114	.125	1.0001	-1.0000	0.3101	1.2820	2292.3	.0531	.729	0.3087	1.2837	2293.8	.0529	.729
2500	1.5948-3	-379.5	2.2283	29.114	.128	1.0001	-1.0000	0.3128	1.2790	2336.8	.0551	.729	0.3108	1.2812	2338.8	.0547	.729
2600	1.5334-3	-348.0	2.2406	29.114	.132	1.0003	-1.0000	0.3155	1.2760	2380.3	.0571	.728	0.3127	1.2789	2383.0	.0566	.728
2700	1.4766-3	-316.4	2.2526	29.113	.135	1.0004	-1.0000	0.3184	1.2730	2422.8	.0591	.727	0.3146	1.2768	2426.4	.0584	.728
2800	1.4238-3	-284.4	2.2642	29.113	.138	1.0008	-1.0000	0.3215	1.2698	2464.2	.0613	.726	0.3164	1.2749	2469.1	.0602	.727
2900	1.3747-3	-252.0	2.2755	29.112	.142	1.0013	-1.0000	0.3251	1.2663	2504.4	.0636	.724	0.3181	1.2730	2511.0	.0620	.727
3000	1.3288-3	-219.3	2.2866	29.110	.145	1.0021	-1.0000	0.3295	1.2624	2543.4	.0661	.722	0.3196	1.2713	2552.3	.0637	.726
3100	1.2858-3	-186.1	2.2975	29.107	.148	1.0034	-1.0001	0.3349	1.2579	2580.9	.0690	.719	0.3211	1.2698	2593.0	.0655	.726
3200	1.2455-3	-152.3	2.3083	29.103	.151	1.0054	-1.0001	0.3419	1.2525	2616.7	.0723	.714	0.3225	1.2684	2633.2	.0672	.725
3300	1.2075-3	-117.7	2.3189	29.097	.154	1.0085	-1.0002	0.3512	1.2460	2650.6	.0765	.708	0.3238	1.2671	2673.0	.0690	.724
3400	1.1716-3	-81.9	2.3296	29.088	.157	1.0132	-1.0004	0.3637	1.2381	2682.4	.0818	.700	0.3250	1.2659	2712.4	.0707	.723
3500	1.1376-3	-44.8	2.3403	29.074	.160	1.0199	-1.0006	0.3805	1.2287	2711.9	.0886	.688	0.3262	1.2649	2751.5	.0723	.723
3600	1.1052-3	-5.6	2.3514	29.054	.163	1.0296	-1.0009	0.4029	1.2179	2739.2	.0976	.674	0.3272	1.2640	2790.5	.0740	.722
3700	1.0743-3	36.0	2.3628	29.026	.166	1.0429	-1.0013	0.4322	1.2061	2764.8	.1094	.656	0.3282	1.2633	2829.7	.0756	.721
3800	1.0446-3	81.1	2.3748	28.986	.169	1.0608	-1.0019	0.4696	1.1936	2789.3	.1249	.636	0.3291	1.2629	2869.1	.0773	.720
3900	1.0159-3	130.3	2.3876	28.932	.172	1.0839	-1.0028	0.5161	1.1813	2813.8	.1447	.613	0.3300	1.2627	2909.1	.0789	.719
4000	9.8805-4	184.6	2.4013	28.860	.175	1.1129	-1.0038	0.5721	1.1698	2839.2	.1695	.589	0.3307	1.2627	2949.9	.0805	.717
4100	9.6086-4	245.0	2.4162	28.768	.177	1.1478	-1.0052	0.6371	1.1595	2866.4	.2000	.565	0.3314	1.2631	2991.8	.0821	.716
4200	9.3420-4	312.3	2.4324	28.652	.180	1.1884	-1.0068	0.7102	1.1508	2896.1	.2366	.540	0.3320	1.2639	3035.0	.0837	.713
4300	9.0796-4	387.3	2.4501	28.510	.182	1.2343	-1.0087	0.7898	1.1438	2928.7	.2794	.516	0.3325	1.2650	3080.0	.0853	.711
4400	8.8206-4	470.4	2.4692	28.341	.185	1.2848	-1.0109	0.8743	1.1382	2964.1	.3284	.492	0.3330	1.2665	3126.7	.0870	.708
4500	8.5644-4	562.2	2.4898	28.143	.187	1.3392	-1.0133	0.9625	1.1340	3002.6	.3836	.470	0.3334	1.2685	3175.6	.0888	.704
4600	8.3107-4	663.0	2.5120	27.917	.190	1.3970	-1.0161	1.0531	1.1309	3043.9	.4444	.450	0.3338	1.2708	3226.7	.0906	.699
4700	8.0596-4	772.9	2.5356	27.661	.192	1.4578	-1.0191	1.1454	1.1288	3088.1	.5096	.432	0.3342	1.2736	3280.1	.0926	.693
4800	7.8108-4	892.1	2.5607	27.378	.194	1.5208	-1.0224	1.2384	1.1275	3135.1	.5773	.417	0.3346	1.2768	3336.1	.0948	.686
4900	7.5647-4	1020.6	2.5872	27.068	.197	1.5851	-1.0259	1.3308	1.1269	3184.8	.6448	.406	0.3350	1.2804	3394.8	.0971	.678
5000	7.3216-4	1158.2	2.6150	26.732	.199	1.6488	-1.0295	1.4203	1.1269	3237.3	.7084	.399	0.3354	1.2844	3456.1	.0996	.670
5100	7.0821-4	1304.4	2.6439	26.375	.201	1.7093	-1.0332	1.5031	1.1276	3292.5	.7639	.396	0.3359	1.2889	3520.1	.1023	.660
5200	6.8472-4	1458.4	2.6738	26.000	.203	1.7629	-1.0367	1.5742	1.1288	3350.2	.8070	.397	0.3364	1.2937	3586.7	.1052	.650
5300	6.6183-4	1618.7	2.7044	25.614	.206	1.8055	-1.0398	1.6277	1.1305	3410.4	.8337	.401	0.3370	1.2988	3655.4	.1083	.640
5400	6.3969-4	1783.2	2.7351	25.225	.208	1.8328	-1.0422	1.6574	1.1330	3472.6	.8415	.410	0.3376	1.3041	3725.7	.1115	.629

TABLE 4.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO \square 1.700; F/A \square 0.052240; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 14.6959 LB/IN² (1.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4918-2	-649.8	1.9376	29.114	.095	1.0000	-1.0000	0.2866	1.3123	1893.6	.0371	.734	0.2866	1.3123	1893.6	.0371	.734
1700	2.3453-2	-621.0	1.9551	29.114	.099	1.0000	-1.0000	0.2901	1.3074	1948.2	.0392	.733	0.2901	1.3075	1948.3	.0392	.733
1800	2.2150-2	-591.8	1.9717	29.114	.103	1.0000	-1.0000	0.2934	1.3029	2001.2	.0413	.732	0.2933	1.3031	2001.4	.0413	.732
1900	2.0984-2	-562.3	1.9877	29.114	.107	1.0000	-1.0000	0.2964	1.2989	2052.9	.0433	.731	0.2962	1.2992	2053.2	.0433	.731
2000	1.9935-2	-532.5	2.0030	29.114	.111	1.0000	-1.0000	0.2993	1.2952	2103.2	.0453	.731	0.2990	1.2956	2103.6	.0452	.731
2100	1.8985-2	-502.4	2.0176	29.114	.114	1.0000	-1.0000	0.3021	1.2916	2152.3	.0473	.730	0.3016	1.2923	2152.8	.0472	.730
2200	1.8122-2	-472.1	2.0318	29.114	.118	1.0000	-1.0000	0.3048	1.2883	2200.1	.0492	.730	0.3041	1.2892	2200.8	.0491	.730
2300	1.7334-2	-441.5	2.0454	29.114	.121	1.0000	-1.0000	0.3074	1.2852	2246.8	.0512	.730	0.3064	1.2863	2247.8	.0510	.730
2400	1.6612-2	-410.6	2.0585	29.114	.125	1.0000	-1.0000	0.3100	1.2822	2292.4	.0531	.729	0.3087	1.2837	2293.8	.0529	.729
2500	1.5948-2	-379.5	2.0712	29.114	.128	1.0001	-1.0000	0.3125	1.2793	2337.0	.0550	.729	0.3108	1.2812	2338.8	.0547	.729
2600	1.5334-2	-348.1	2.0835	29.114	.132	1.0001	-1.0000	0.3150	1.2764	2380.7	.0570	.728	0.3127	1.2789	2383.0	.0566	.728
2700	1.4766-2	-316.5	2.0954	29.114	.135	1.0002	-1.0000	0.3176	1.2736	2423.4	.0590	.728	0.3146	1.2768	2426.4	.0584	.728
2800	1.4239-2	-284.6	2.1070	29.113	.138	1.0004	-1.0000	0.3203	1.2709	2465.2	.0610	.727	0.3164	1.2748	2469.0	.0602	.727
2900	1.3747-2	-252.4	2.1183	29.113	.142	1.0006	-1.0000	0.3230	1.2680	2506.0	.0630	.726	0.3181	1.2730	2510.9	.0620	.727
3000	1.3289-2	-220.0	2.1293	29.112	.145	1.0009	-1.0000	0.3261	1.2651	2546.0	.0652	.725	0.3196	1.2713	2552.2	.0637	.726
3100	1.2860-2	-187.2	2.1401	29.111	.148	1.0014	-1.0000	0.3295	1.2620	2584.9	.0674	.723	0.3211	1.2697	2592.8	.0655	.726
3200	1.2457-2	-154.1	2.1506	29.109	.151	1.0022	-1.0001	0.3334	1.2586	2622.8	.0699	.721	0.3225	1.2683	2632.9	.0672	.725
3300	1.2079-2	-120.5	2.1609	29.107	.154	1.0033	-1.0001	0.3381	1.2548	2659.5	.0726	.719	0.3238	1.2669	2672.4	.0690	.724
3400	1.1722-2	-86.4	2.1711	29.103	.157	1.0050	-1.0001	0.3439	1.2504	2695.0	.0756	.715	0.3250	1.2657	2711.4	.0707	.724
3500	1.1385-2	-51.7	2.1812	29.098	.160	1.0074	-1.0002	0.3511	1.2454	2729.1	.0792	.711	0.3262	1.2646	2750.0	.0723	.723
3600	1.1066-2	-16.1	2.1912	29.091	.163	1.0108	-1.0003	0.3602	1.2397	2761.8	.0834	.705	0.3273	1.2635	2788.3	.0740	.722
3700	1.0763-2	20.4	2.2012	29.081	.166	1.0155	-1.0005	0.3717	1.2330	2792.9	.0885	.698	0.3283	1.2626	2826.2	.0756	.722
3800	1.0475-2	58.3	2.2113	29.066	.169	1.0219	-1.0007	0.3863	1.2255	2822.4	.0947	.690	0.3292	1.2619	2864.0	.0772	.721
3900	1.0199-2	97.8	2.2216	29.047	.172	1.0304	-1.0010	0.4046	1.2172	2850.5	.1025	.679	0.3301	1.2612	2901.6	.0788	.720
4000	9.9353-3	139.4	2.2321	29.020	.175	1.0415	-1.0014	0.4273	1.2082	2877.5	.1121	.666	0.3309	1.2607	2939.3	.0804	.719
4100	9.6814-3	183.4	2.2430	28.986	.178	1.0556	-1.0019	0.4548	1.1990	2903.8	.1240	.652	0.3317	1.2603	2977.2	.0820	.718
4200	9.4364-3	230.5	2.2543	28.941	.180	1.0730	-1.0026	0.4876	1.1897	2929.9	.1384	.636	0.3324	1.2602	3015.4	.0836	.717
4300	9.1989-3	281.1	2.2662	28.885	.183	1.0940	-1.0034	0.5255	1.1809	2956.5	.1556	.618	0.3330	1.2602	3054.1	.0851	.716
4400	8.9680-3	335.8	2.2788	28.814	.186	1.1185	-1.0044	0.5682	1.1728	2984.0	.1758	.600	0.3335	1.2604	3093.5	.0866	.715
4500	8.7427-3	394.9	2.2921	28.729	.188	1.1462	-1.0056	0.6151	1.1656	3012.9	.1992	.581	0.3340	1.2609	3133.7	.0882	.713
4600	8.5224-3	458.9	2.3061	28.627	.191	1.1770	-1.0069	0.6652	1.1595	3043.6	.2258	.562	0.3345	1.2617	3174.9	.0898	.711
4700	8.3064-3	528.0	2.3210	28.509	.193	1.2102	-1.0084	0.7176	1.1544	3076.1	.2555	.543	0.3349	1.2626	3217.1	.0913	.709
4800	8.0945-3	602.4	2.3367	28.372	.196	1.2454	-1.0101	0.7712	1.1503	3110.6	.2884	.524	0.3352	1.2639	3260.6	.0930	.706
4900	7.8863-3	682.3	2.3531	28.219	.198	1.2821	-1.0119	0.8253	1.1471	3147.0	.3242	.505	0.3356	1.2654	3305.3	.0946	.703
5000	7.6818-3	767.5	2.3703	28.047	.201	1.3201	-1.0139	0.8792	1.1447	3185.3	.3628	.486	0.3358	1.2671	3351.3	.0963	.700
5100	7.4807-3	858.1	2.3883	27.860	.203	1.3591	-1.0160	0.9327	1.1431	3225.5	.4039	.469	0.3361	1.2691	3398.7	.0981	.696
5200	7.2830-3	954.0	2.4069	27.655	.205	1.3989	-1.0183	0.9854	1.1420	3267.4	.4469	.453	0.3364	1.2714	3447.6	.0999	.691
5300	7.0888-3	1055.1	2.4262	27.435	.208	1.4393	-1.0207	1.0371	1.1414	3311.1	.4912	.438	0.3367	1.2739	3497.9	.1019	.686
5400	6.8980-3	1161.4	2.4460	27.201	.210	1.4800	-1.0232	1.0877	1.1413	3356.4	.5356	.426	0.3370	1.2766	3549.7	.1039	.681

TABLE 4.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.052240; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 146.959 LB/IN2 (10.00 ATM) DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLVDLT	DLVDLP	REACTING COMPOSITIONS					FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4918-1	-649.8	1.7805	29.114	.095	1.0000	-1.0000	0.2866	1.3123	1893.6	.0371	.734	0.2866	1.3123	1893.6	.0371	.734
1700	2.3453-1	-621.0	1.7980	29.114	.099	1.0000	-1.0000	0.2901	1.3073	1948.2	.0392	.733	0.2901	1.3075	1948.3	.0392	.733
1800	2.2150-1	-591.8	1.8147	29.114	.103	1.0000	-1.0000	0.2934	1.3029	2001.2	.0413	.732	0.2933	1.3031	2001.4	.0413	.732
1900	2.0984-1	-562.3	1.8306	29.114	.107	1.0000	-1.0000	0.2964	1.2989	2052.9	.0433	.731	0.2962	1.2992	2053.2	.0433	.731
2000	1.9935-1	-532.5	1.8459	29.114	.111	1.0000	-1.0000	0.2993	1.2952	2103.2	.0453	.731	0.2990	1.2956	2103.6	.0452	.731
2100	1.8985-1	-502.5	1.8606	29.114	.114	1.0000	-1.0000	0.3021	1.2916	2152.3	.0473	.730	0.3016	1.2923	2152.8	.0472	.730
2200	1.8122-1	-472.1	1.8747	29.114	.118	1.0000	-1.0000	0.3048	1.2883	2200.1	.0492	.730	0.3041	1.2892	2200.8	.0491	.730
2300	1.7335-1	-441.5	1.8883	29.114	.121	1.0000	-1.0000	0.3074	1.2852	2246.8	.0512	.730	0.3064	1.2863	2247.8	.0510	.730
2400	1.6612-1	-410.6	1.9014	29.114	.125	1.0000	-1.0000	0.3099	1.2822	2292.5	.0531	.729	0.3087	1.2837	2293.8	.0529	.729
2500	1.5948-1	-379.5	1.9141	29.114	.128	1.0000	-1.0000	0.3124	1.2794	2337.1	.0550	.729	0.3108	1.2812	2338.8	.0547	.729
2600	1.5334-1	-348.2	1.9264	29.114	.132	1.0001	-1.0000	0.3148	1.2766	2380.8	.0569	.728	0.3127	1.2789	2383.0	.0566	.728
2700	1.4766-1	-316.6	1.9384	29.114	.135	1.0001	-1.0000	0.3173	1.2740	2423.7	.0589	.728	0.3146	1.2768	2426.4	.0584	.728
2800	1.4239-1	-284.7	1.9499	29.114	.138	1.0002	-1.0000	0.3197	1.2713	2465.6	.0608	.727	0.3164	1.2748	2469.0	.0602	.727
2900	1.3748-1	-252.6	1.9612	29.114	.142	1.0003	-1.0000	0.3221	1.2688	2506.7	.0628	.726	0.3181	1.2730	2510.9	.0620	.727
3000	1.3289-1	-220.3	1.9722	29.113	.145	1.0004	-1.0000	0.3247	1.2662	2547.0	.0648	.726	0.3196	1.2713	2552.1	.0637	.726
3100	1.2860-1	-187.7	1.9829	29.113	.148	1.0006	-1.0000	0.3273	1.2637	2586.5	.0669	.725	0.3211	1.2697	2592.7	.0655	.726
3200	1.2458-1	-154.8	1.9933	29.112	.151	1.0010	-1.0000	0.3301	1.2610	2625.2	.0690	.723	0.3225	1.2683	2632.7	.0672	.725
3300	1.2080-1	-121.6	2.0035	29.111	.154	1.0014	-1.0000	0.3332	1.2583	2663.1	.0712	.722	0.3238	1.2669	2672.2	.0690	.724
3400	1.1724-1	-88.2	2.0135	29.109	.157	1.0020	-1.0001	0.3366	1.2554	2700.1	.0735	.720	0.3251	1.2656	2711.1	.0707	.724
3500	1.1389-1	-54.3	2.0233	29.107	.160	1.0029	-1.0001	0.3404	1.2523	2736.3	.0760	.719	0.3262	1.2645	2749.5	.0723	.723
3600	1.1071-1	-20.1	2.0330	29.104	.163	1.0042	-1.0001	0.3449	1.2490	2771.5	.0787	.716	0.3273	1.2634	2787.4	.0740	.722
3700	1.0770-1	14.7	2.0425	29.100	.166	1.0059	-1.0002	0.3502	1.2453	2805.7	.0816	.713	0.3283	1.2624	2825.0	.0756	.722
3800	1.0485-1	50.0	2.0519	29.095	.169	1.0082	-1.0003	0.3566	1.2412	2839.0	.0850	.710	0.3293	1.2615	2862.1	.0772	.721
3900	1.0214-1	86.1	2.0613	29.088	.172	1.0112	-1.0004	0.3642	1.2366	2871.2	.0888	.706	0.3302	1.2607	2899.0	.0788	.721
4000	9.9551-2	122.9	2.0706	29.078	.175	1.0152	-1.0005	0.3734	1.2316	2902.3	.0932	.701	0.3310	1.2599	2935.5	.0804	.720
4100	9.7080-2	160.8	2.0799	29.065	.178	1.0204	-1.0007	0.3844	1.2260	2932.3	.0984	.695	0.3318	1.2593	2971.9	.0820	.719
4200	9.4715-2	199.9	2.0894	29.049	.181	1.0269	-1.0009	0.3977	1.2200	2961.5	.1045	.687	0.3325	1.2588	3008.1	.0835	.719
4300	9.2445-2	240.4	2.0989	29.028	.183	1.0350	-1.0012	0.4134	1.2136	2989.8	.1116	.679	0.3332	1.2584	3044.3	.0851	.718
4400	9.0261-2	282.7	2.1086	29.001	.186	1.0450	-1.0016	0.4318	1.2070	3017.5	.1200	.669	0.3338	1.2580	3080.6	.0866	.717
4500	8.8155-2	326.9	2.1185	28.968	.189	1.0570	-1.0021	0.4530	1.2004	3044.9	.1298	.659	0.3344	1.2579	3116.9	.0881	.716
4600	8.6118-2	373.4	2.1288	28.928	.191	1.0710	-1.0027	0.4770	1.1938	3072.2	.1411	.647	0.3349	1.2578	3153.5	.0897	.715
4700	8.4143-2	422.4	2.1393	28.879	.194	1.0871	-1.0034	0.5036	1.1876	3099.9	.1540	.635	0.3354	1.2579	3190.4	.0912	.714
4800	8.2223-2	474.2	2.1502	28.820	.197	1.1052	-1.0042	0.5325	1.1818	3128.2	.1684	.622	0.3359	1.2581	3227.7	.0927	.712
4900	8.0355-2	528.9	2.1615	28.752	.199	1.1250	-1.0051	0.5633	1.1765	3157.4	.1845	.608	0.3362	1.2585	3265.5	.0942	.711
5000	7.8532-2	586.9	2.1732	28.674	.202	1.1464	-1.0062	0.5954	1.1719	3187.6	.2021	.594	0.3366	1.2591	3303.9	.0957	.709
5100	7.6753-2	648.0	2.1853	28.584	.204	1.1690	-1.0073	0.6282	1.1680	3218.9	.2212	.580	0.3369	1.2598	3343.0	.0972	.708
5200	7.5013-2	712.5	2.1978	28.484	.207	1.1925	-1.0085	0.6612	1.1648	3251.5	.2417	.565	0.3372	1.2606	3382.7	.0987	.706
5300	7.3311-2	780.3	2.2107	28.373	.209	1.2166	-1.0098	0.6939	1.1621	3285.3	.2635	.550	0.3375	1.2617	3423.1	.1002	.704
5400	7.1647-2	851.3	2.2240	28.252	.211	1.2411	-1.0111	0.7259	1.1601	3320.4	.2866	.535	0.3377	1.2628	3464.2	.1018	.701

TABLE 4.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.052240; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 734.797 LB/IN² (50.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2459 0	-649.8	1.6707	29.114	.095	1.0000	-1.0000	0.2867	1.3123	1893.6	.0371	.734	0.2866	1.3123	1893.6	.0371	.734
1700	1.1726 0	-621.0	1.6882	29.114	.099	1.0000	-1.0000	0.2901	1.3073	1948.2	.0392	.733	0.2901	1.3075	1948.3	.0392	.733
1800	1.1075 0	-591.8	1.7049	29.114	.103	1.0000	-1.0000	0.2934	1.3029	2001.2	.0413	.732	0.2933	1.3031	2001.4	.0413	.732
1900	1.0492 0	-562.3	1.7209	29.114	.107	1.0000	-1.0000	0.2964	1.2989	2052.9	.0433	.731	0.2962	1.2992	2053.2	.0433	.731
2000	9.9674-1	-532.5	1.7361	29.114	.111	1.0000	-1.0000	0.2993	1.2951	2103.2	.0453	.731	0.2990	1.2956	2103.6	.0452	.731
2100	9.4927-1	-502.4	1.7508	29.114	.114	1.0000	-1.0000	0.3021	1.2916	2152.3	.0473	.730	0.3016	1.2923	2152.8	.0472	.730
2200	9.0612-1	-472.1	1.7649	29.114	.118	1.0000	-1.0000	0.3048	1.2883	2200.1	.0492	.730	0.3041	1.2892	2200.8	.0491	.730
2300	8.6673-1	-441.5	1.7785	29.114	.121	1.0000	-1.0000	0.3074	1.2852	2246.8	.0512	.730	0.3064	1.2863	2247.8	.0510	.730
2400	8.3061-1	-410.6	1.7917	29.114	.125	1.0000	-1.0000	0.3099	1.2822	2292.5	.0531	.729	0.3087	1.2837	2293.7	.0529	.729
2500	7.9739-1	-379.5	1.8044	29.114	.128	1.0000	-1.0000	0.3123	1.2794	2337.2	.0550	.729	0.3108	1.2812	2338.8	.0547	.729
2600	7.6672-1	-348.2	1.8167	29.114	.132	1.0000	-1.0000	0.3147	1.2767	2380.9	.0569	.728	0.3127	1.2789	2383.0	.0566	.728
2700	7.3832-1	-316.6	1.8286	29.114	.135	1.0001	-1.0000	0.3171	1.2741	2423.8	.0588	.728	0.3146	1.2768	2426.4	.0584	.728
2800	7.1195-1	-284.7	1.8401	29.114	.138	1.0001	-1.0000	0.3195	1.2715	2465.8	.0608	.727	0.3164	1.2748	2469.0	.0602	.727
2900	6.8740-1	-252.7	1.8514	29.114	.142	1.0002	-1.0000	0.3218	1.2690	2507.0	.0627	.727	0.3181	1.2730	2510.9	.0620	.727
3000	6.6448-1	-220.4	1.8624	29.114	.145	1.0002	-1.0000	0.3242	1.2666	2547.4	.0647	.726	0.3196	1.2713	2552.1	.0637	.726
3100	6.4304-1	-187.8	1.8730	29.113	.148	1.0004	-1.0000	0.3266	1.2642	2587.1	.0667	.725	0.3211	1.2697	2592.7	.0655	.726
3200	6.2294-1	-155.1	1.8834	29.113	.151	1.0005	-1.0000	0.3290	1.2619	2626.0	.0687	.724	0.3225	1.2682	2632.7	.0672	.725
3300	6.0405-1	-122.0	1.8936	29.112	.154	1.0008	-1.0000	0.3316	1.2595	2664.3	.0707	.723	0.3238	1.2669	2672.1	.0690	.724
3400	5.8626-1	-88.7	1.9035	29.112	.157	1.0011	-1.0000	0.3343	1.2570	2701.7	.0728	.722	0.3251	1.2656	2710.9	.0707	.724
3500	5.6949-1	-55.2	1.9133	29.110	.160	1.0016	-1.0000	0.3372	1.2545	2738.5	.0750	.721	0.3262	1.2644	2749.3	.0723	.723
3600	5.5364-1	-21.3	1.9228	29.109	.163	1.0023	-1.0001	0.3404	1.2519	2774.6	.0773	.719	0.3273	1.2633	2787.2	.0740	.722
3700	5.3864-1	12.9	1.9322	29.107	.166	1.0031	-1.0001	0.3440	1.2492	2809.9	.0797	.718	0.3283	1.2623	2824.6	.0756	.722
3800	5.2441-1	47.5	1.9414	29.104	.169	1.0043	-1.0001	0.3480	1.2463	2844.4	.0823	.716	0.3293	1.2614	2861.6	.0772	.721
3900	5.1090-1	82.6	1.9505	29.100	.172	1.0058	-1.0002	0.3526	1.2432	2878.2	.0851	.713	0.3302	1.2605	2898.2	.0788	.721
4000	4.9804-1	118.1	1.9595	29.095	.175	1.0077	-1.0003	0.3579	1.2398	2911.1	.0881	.711	0.3310	1.2597	2934.4	.0804	.720
4100	4.8579-1	154.2	1.9684	29.089	.178	1.0103	-1.0003	0.3641	1.2361	2943.2	.0915	.707	0.3318	1.2590	2970.4	.0820	.720
4200	4.7409-1	190.9	1.9773	29.080	.181	1.0135	-1.0005	0.3713	1.2322	2974.6	.0953	.703	0.3326	1.2584	3006.0	.0835	.719
4300	4.6289-1	228.5	1.9861	29.070	.183	1.0175	-1.0006	0.3798	1.2279	3005.1	.0997	.699	0.3333	1.2578	3041.5	.0851	.718
4400	4.5217-1	266.9	1.9949	29.057	.186	1.0225	-1.0008	0.3897	1.2233	3034.9	.1046	.694	0.3339	1.2573	3076.8	.0866	.717
4500	4.4187-1	306.5	2.0038	29.040	.189	1.0286	-1.0011	0.4011	1.2185	3064.0	.1102	.688	0.3345	1.2569	3111.9	.0881	.717
4600	4.3196-1	347.2	2.0128	29.020	.192	1.0359	-1.0014	0.4142	1.2135	3092.5	.1166	.681	0.3351	1.2566	3147.0	.0897	.716
4700	4.2240-1	389.4	2.0218	28.995	.194	1.0445	-1.0017	0.4291	1.2083	3120.7	.1238	.673	0.3356	1.2564	3182.1	.0912	.715
4800	4.1317-1	433.1	2.0311	28.964	.197	1.0545	-1.0022	0.4457	1.2032	3148.6	.1320	.665	0.3361	1.2563	3217.3	.0927	.714
4900	4.0424-1	478.6	2.0404	28.929	.199	1.0660	-1.0027	0.4641	1.1981	3176.5	.1411	.656	0.3365	1.2562	3252.6	.0942	.713
5000	3.9558-1	526.0	2.0500	28.886	.202	1.0788	-1.0033	0.4841	1.1933	3204.7	.1513	.646	0.3370	1.2563	3288.2	.0956	.712
5100	3.8716-1	575.4	2.0598	28.837	.204	1.0930	-1.0040	0.5054	1.1888	3233.2	.1624	.636	0.3373	1.2565	3324.0	.0971	.710
5200	3.7898-1	627.1	2.0698	28.781	.207	1.1083	-1.0047	0.5278	1.1847	3262.2	.1745	.626	0.3377	1.2568	3360.1	.0986	.709
5300	3.7100-1	681.0	2.0801	28.717	.209	1.1246	-1.0055	0.5508	1.1810	3291.9	.1875	.615	0.3380	1.2572	3396.5	.1000	.708
5400	3.6323-1	737.2	2.0906	28.646	.212	1.1416	-1.0064	0.5742	1.1777	3322.4	.2014	.604	0.3383	1.2578	3433.4	.1015	.707

TABLE 4C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.052240; EQUIV.RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504;
 DRY AIR

T R	HETEROGENEOUS PHASE PROPERTIES					GAS PHASE PROPERTIES					(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	T R	
	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R	DENSITY LB/FT3	MW	VIS LB/ FT S	DLV DLT	DLV DLP						CP BTU/ LB R
PRESSURE = 0.01 ATM																
360	1.216-3	-1044.4	1.7113	29.114	0.2510	1.149-3	30.203	.0314	1.000	-1.000	0.2339	1.3910	908	.0100	.734	360
400	1.091-3	-1032.4	1.7427	29.114	0.4096	1.033-3	30.163	.0343	1.000	-1.000	0.2349	1.3894	957	.0110	.731	400
440	9.527-4	-994.3	1.8325	29.114	2.0807	9.239-4	29.685	.0361	1.000	-1.000	0.2405	1.3853	1010	.0117	.740	440
PRESSURE = 0.10 ATM																
360	1.216-2	-1044.5	1.5680	29.114	0.2426	1.149-2	30.205	.0314	1.000	-1.000	0.2339	1.3910	908	.0100	.734	360
400	1.094-2	-1034.5	1.5942	29.114	0.2608	1.034-2	30.201	.0344	1.000	-1.000	0.2345	1.3896	957	.0110	.730	400
440	9.910-3	-1022.0	1.6240	29.114	0.4167	9.385-3	30.153	.0372	1.000	-1.000	0.2357	1.3878	1003	.0120	.727	440
480	8.806-3	-990.3	1.6924	29.114	1.4802	8.497-3	29.781	.0391	1.000	-1.000	0.2403	1.3840	1053	.0128	.734	480
520	7.667-3	-937.5	1.7993	29.114	0.2483	7.667-3	29.114	.0403	1.000	-1.000	0.2483	1.3787	1107	.0134	.748	520
PRESSURE = 1.00 ATM																
360	1.216-1	-1044.5	1.4250	29.114	0.2417	1.149-1	30.205	.0314	1.000	-1.000	0.2339	1.3910	908	.0100	.734	360
400	1.095-1	-1034.8	1.4507	29.114	0.2460	1.034-1	30.205	.0344	1.000	-1.000	0.2345	1.3896	957	.0110	.730	400
440	9.947-2	-1024.7	1.4747	29.114	0.2640	9.399-2	30.200	.0373	1.000	-1.000	0.2352	1.3880	1003	.0121	.726	440
480	9.090-2	-1012.6	1.5009	29.114	0.3656	8.605-2	30.163	.0400	1.000	-1.000	0.2364	1.3861	1047	.0130	.724	480
520	8.273-2	-985.5	1.5551	29.114	0.6598	7.898-2	29.991	.0423	1.000	-1.000	0.2390	1.3833	1092	.0139	.727	520
537	7.905-2	-972.6	1.5796	29.114	0.9183	7.611-2	29.826	.0430	1.000	-1.000	0.2411	1.3816	1112	.0142	.731	537
560	7.312-2	-944.5	1.6308	29.114	1.5604	7.193-2	29.414	.0436	1.000	-1.000	0.2460	1.3783	1142	.0145	.740	560
600	6.645-2	-917.6	1.6779	29.114	0.2503	6.645-2	29.114	.0455	1.000	-1.000	0.2503	1.3746	1187	.0152	.748	600
PRESSURE = 10.00 ATM																
360	1.215 0	-1044.5	1.2820	29.114	0.2416	1.149 0	30.205	.0314	1.000	-1.000	0.2339	1.3910	908	.0100	.734	360
400	1.094 0	-1034.8	1.3076	29.114	0.2445	1.034 0	30.205	.0344	1.000	-1.000	0.2345	1.3896	957	.0110	.730	400
440	9.942-1	-1024.9	1.3311	29.114	0.2489	9.401-1	30.205	.0373	1.000	-1.000	0.2352	1.3880	1003	.0121	.726	440
480	9.112-1	-1014.8	1.3532	29.114	0.2617	8.616-1	30.201	.0401	1.000	-1.000	0.2360	1.3863	1047	.0131	.723	480
520	8.400-1	-995.2	1.3926	29.114	0.3160	7.949-1	30.184	.0427	1.000	-1.000	0.2370	1.3843	1089	.0140	.722	520
537	8.128-1	-989.7	1.4029	29.114	0.3397	7.698-1	30.167	.0438	1.000	-1.000	0.2376	1.3833	1106	.0144	.722	537
560	7.764-1	-981.2	1.4184	29.114	0.3931	7.367-1	30.126	.0452	1.000	-1.000	0.2385	1.3819	1130	.0149	.724	560
600	7.151-1	-962.4	1.4509	29.114	0.5742	6.839-1	29.965	.0474	1.000	-1.000	0.2412	1.3789	1172	.0157	.728	600
640	6.493-1	-932.6	1.4987	29.114	0.9601	6.330-1	29.586	.0490	1.000	-1.000	0.2462	1.3747	1216	.0164	.737	640
680	5.863-1	-897.5	1.5523	29.114	0.2525	5.863-1	29.114	.0504	1.000	-1.000	0.2525	1.3700	1261	.0170	.747	680
PRESSURE = 50.00 ATM																
360	6.046 0	-1044.5	1.1820	29.114	0.2416	5.745 0	30.205	.0314	1.000	-1.000	0.2339	1.3910	908	.0100	.734	360
400	5.445 0	-1034.8	1.2076	29.114	0.2444	5.170 0	30.205	.0344	1.000	-1.000	0.2345	1.3896	957	.0110	.730	400
440	4.952 0	-1024.9	1.2311	29.114	0.2475	4.700 0	30.205	.0373	1.000	-1.000	0.2352	1.3880	1003	.0121	.726	440
480	4.541 0	-1014.9	1.2528	29.114	0.2525	4.309 0	30.204	.0401	1.000	-1.000	0.2360	1.3863	1047	.0131	.723	480
520	4.193 0	-996.0	1.2909	29.114	0.2865	3.977 0	30.201	.0428	1.000	-1.000	0.2368	1.3843	1089	.0140	.722	520
537	4.063 0	-991.2	1.3000	29.114	0.2914	3.853 0	30.198	.0439	1.000	-1.000	0.2372	1.3835	1106	.0144	.722	537
560	3.891 0	-984.3	1.3127	29.114	0.3022	3.691 0	30.189	.0454	1.000	-1.000	0.2379	1.3822	1129	.0149	.722	560
600	3.623 0	-971.6	1.3346	29.114	0.3376	3.442 0	30.157	.0478	1.000	-1.000	0.2392	1.3799	1168	.0158	.724	600
640	3.377 0	-956.8	1.3583	29.114	0.4066	3.218 0	30.081	.0501	1.000	-1.000	0.2410	1.3772	1207	.0166	.726	640
680	3.139 0	-938.4	1.3863	29.114	0.5279	3.013 0	29.924	.0521	1.000	-1.000	0.2438	1.3741	1246	.0174	.730	680
720	2.894 0	-913.5	1.4217	29.114	0.7285	2.818 0	29.632	.0538	1.000	-1.000	0.2481	1.3701	1287	.0182	.736	720
760	2.629 0	-878.4	1.4691	29.114	1.0534	2.625 0	29.138	.0551	1.000	-1.000	0.2548	1.3652	1331	.0188	.745	760

TABLE 5A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.069653; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 29.1608;
 DRY AIR; GASEOUS COMPOSITION: CO2= .13866; H2O= .11760; N2= .73493; O2= .00000; AR= .00881

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	
360	1.1093-1	5.5463 0	-1267.7	1.8567	1.6999	1.5431	1.3863	1.2767	0.2468	1.3810	920.7	.0279	.0088	.7795	360
380	1.0509-1	5.2544 0	-1262.7	1.8701	1.7133	1.5565	1.3997	1.2901	0.2473	1.3801	945.6	.0294	.0094	.7747	380
400	9.9833-2	4.9917 0	-1257.8	1.8828	1.7260	1.5692	1.4124	1.3028	0.2477	1.3791	969.8	.0308	.0099	.7706	400
420	9.5079-2	4.7540 0	-1252.8	1.8949	1.7381	1.5813	1.4245	1.3149	0.2482	1.3781	993.4	.0323	.0104	.7670	420
440	9.0758-2	4.5379 0	-1247.8	1.9064	1.7496	1.5928	1.4360	1.3264	0.2487	1.3770	1016.4	.0337	.0110	.7641	440
460	8.6812-2	4.3406 0	-1242.9	1.9175	1.7607	1.6039	1.4471	1.3375	0.2493	1.3759	1038.8	.0351	.0115	.7616	460
480	8.3194-2	4.1597 0	-1237.9	1.9281	1.7713	1.6145	1.4577	1.3481	0.2498	1.3748	1060.7	.0365	.0120	.7597	480
500	7.9867-2	3.9933 0	-1232.9	1.9383	1.7815	1.6247	1.4679	1.3583	0.2503	1.3737	1082.2	.0379	.0125	.7582	500
520	7.6795-2	3.8397 0	-1227.9	1.9482	1.7914	1.6345	1.4777	1.3681	0.2509	1.3725	1103.1	.0392	.0130	.7572	520
537	7.4410-2	3.7205 0	-1223.7	1.9561	1.7993	1.6425	1.4857	1.3761	0.2514	1.3715	1120.3	.0403	.0134	.7566	537
540	7.3951-2	3.6975 0	-1222.8	1.9576	1.8008	1.6440	1.4872	1.3776	0.2515	1.3713	1123.6	.0405	.0135	.7565	540
560	7.1310-2	3.5655 0	-1217.8	1.9668	1.8100	1.6532	1.4964	1.3868	0.2521	1.3701	1143.8	.0418	.0139	.7565	560
580	6.8851-2	3.4425 0	-1212.8	1.9757	1.8188	1.6620	1.5052	1.3956	0.2527	1.3689	1163.5	.0431	.0144	.7567	580
600	6.6556-2	3.3278 0	-1207.7	1.9842	1.8274	1.6706	1.5138	1.4042	0.2534	1.3676	1182.8	.0444	.0149	.7570	600
620	6.4409-2	3.2204 0	-1202.6	1.9926	1.8357	1.6789	1.5221	1.4125	0.2540	1.3663	1201.8	.0456	.0153	.7572	620
640	6.2396-2	3.1198 0	-1197.5	2.0006	1.8438	1.6870	1.5302	1.4206	0.2547	1.3650	1220.5	.0469	.0158	.7571	640
660	6.0505-2	3.0253 0	-1192.4	2.0085	1.8517	1.6949	1.5381	1.4284	0.2553	1.3637	1238.8	.0481	.0162	.7565	660
680	5.8726-2	2.9363 0	-1187.3	2.0161	1.8593	1.7025	1.5457	1.4361	0.2560	1.3624	1256.8	.0493	.0167	.7559	680
700	5.7048-2	2.8524 0	-1182.2	2.0235	1.8667	1.7099	1.5531	1.4435	0.2567	1.3610	1274.5	.0505	.0172	.7552	700
720	5.5463-2	2.7732 0	-1177.1	2.0308	1.8740	1.7172	1.5604	1.4508	0.2574	1.3597	1292.0	.0517	.0176	.7545	720
740	5.3964-2	2.6982 0	-1171.9	2.0378	1.8810	1.7242	1.5674	1.4578	0.2581	1.3583	1309.1	.0529	.0181	.7541	740
760	5.2544-2	2.6272 0	-1166.7	2.0447	1.8879	1.7311	1.5743	1.4647	0.2589	1.3570	1326.0	.0540	.0185	.7539	760
780	5.1197-2	2.5598 0	-1161.5	2.0515	1.8947	1.7379	1.5811	1.4714	0.2596	1.3556	1342.7	.0552	.0190	.7538	780
800	4.9917-2	2.4958 0	-1156.3	2.0581	1.9012	1.7444	1.5876	1.4780	0.2604	1.3542	1359.1	.0563	.0194	.7536	800
820	4.8699-2	2.4350 0	-1151.1	2.0645	1.9077	1.7509	1.5941	1.4845	0.2611	1.3528	1375.3	.0574	.0199	.7536	820
840	4.7540-2	2.3770 0	-1145.9	2.0708	1.9140	1.7572	1.6004	1.4908	0.2619	1.3514	1391.2	.0585	.0203	.7536	840
860	4.6434-2	2.3217 0	-1140.7	2.0770	1.9202	1.7634	1.6065	1.4969	0.2627	1.3500	1407.0	.0595	.0208	.7536	860
880	4.5379-2	2.2689 0	-1135.4	2.0830	1.9262	1.7694	1.6126	1.5030	0.2634	1.3486	1422.5	.0606	.0212	.7537	880
900	4.4370-2	2.2185 0	-1130.1	2.0889	1.9321	1.7753	1.6185	1.5089	0.2642	1.3472	1437.8	.0617	.0216	.7538	900
920	4.3406-2	2.1703 0	-1124.8	2.0948	1.9380	1.7811	1.6243	1.5147	0.2650	1.3458	1453.0	.0627	.0221	.7536	920
940	4.2482-2	2.1241 0	-1119.5	2.1005	1.9437	1.7869	1.6300	1.5204	0.2658	1.3444	1467.9	.0638	.0225	.7533	940
960	4.1597-2	2.0799 0	-1114.2	2.1061	1.9493	1.7925	1.6356	1.5260	0.2666	1.3430	1482.7	.0648	.0229	.7530	960
980	4.0748-2	2.0374 0	-1108.8	2.1116	1.9548	1.7980	1.6412	1.5316	0.2674	1.3416	1497.3	.0658	.0234	.7527	980
1000	3.9933-2	1.9967 0	-1103.5	2.1170	1.9602	1.8034	1.6466	1.5370	0.2682	1.3403	1511.7	.0669	.0238	.7524	1000
1020	3.9150-2	1.9575 0	-1098.1	2.1223	1.9655	1.8087	1.6519	1.5423	0.2691	1.3389	1525.9	.0679	.0243	.7520	1020
1040	3.8397-2	1.9199 0	-1092.7	2.1275	1.9707	1.8139	1.6571	1.5475	0.2699	1.3375	1540.0	.0689	.0247	.7517	1040
1060	3.7673-2	1.8836 0	-1087.3	2.1327	1.9759	1.8191	1.6623	1.5527	0.2707	1.3361	1554.0	.0699	.0252	.7513	1060
1080	3.6975-2	1.8488 0	-1081.9	2.1378	1.9809	1.8241	1.6673	1.5577	0.2715	1.3348	1567.8	.0709	.0256	.7509	1080
1100	3.6303-2	1.8152 0	-1076.5	2.1427	1.9859	1.8291	1.6723	1.5627	0.2724	1.3334	1581.4	.0719	.0261	.7504	1100
1120	3.5655-2	1.7827 0	-1071.0	2.1477	1.9909	1.8340	1.6772	1.5676	0.2732	1.3320	1594.9	.0728	.0265	.7499	1120
1140	3.5029-2	1.7515 0	-1065.5	2.1525	1.9957	1.8389	1.6821	1.5725	0.2740	1.3307	1608.3	.0738	.0270	.7494	1140

TABLE 5A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.069653; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 29.1608;
 DRY AIR; GASEOUS COMPOSITION: CO2= .13866; H2O= .11760; N2= .73493; O2= .00000; AR= .00881

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
1160	3.4425-2	1.7213 0	-1060.0	2.1573	2.0005	1.8437	1.6869	1.5773	0.2749	1.3294	1621.5	.0747	.0274	.7488	1160
1180	3.3842-2	1.6921 0	-1054.5	2.1620	2.0052	1.8484	1.6916	1.5820	0.2757	1.3280	1634.6	.0757	.0279	.7483	1180
1200	3.3278-2	1.6639 0	-1049.0	2.1666	2.0098	1.8530	1.6962	1.5866	0.2765	1.3267	1647.6	.0766	.0283	.7478	1200
1220	3.2732-2	1.6366 0	-1043.5	2.1712	2.0144	1.8576	1.7008	1.5912	0.2774	1.3254	1660.4	.0776	.0288	.7473	1220
1240	3.2204-2	1.6102 0	-1037.9	2.1757	2.0189	1.8621	1.7053	1.5957	0.2782	1.3241	1673.2	.0785	.0292	.7468	1240
1260	3.1693-2	1.5847 0	-1032.4	2.1802	2.0234	1.8666	1.7098	1.6002	0.2790	1.3229	1685.8	.0794	.0297	.7463	1260
1280	3.1198-2	1.5599 0	-1026.8	2.1846	2.0278	1.8710	1.7142	1.6046	0.2799	1.3216	1698.3	.0804	.0302	.7458	1280
1300	3.0718-2	1.5359 0	-1021.2	2.1889	2.0321	1.8753	1.7185	1.6089	0.2807	1.3203	1710.7	.0813	.0306	.7453	1300
1320	3.0253-2	1.5126 0	-1015.5	2.1932	2.0364	1.8796	1.7228	1.6132	0.2815	1.3191	1723.0	.0822	.0311	.7448	1320
1340	2.9801-2	1.4901 0	-1009.9	2.1975	2.0406	1.8838	1.7270	1.6174	0.2823	1.3179	1735.2	.0831	.0315	.7443	1340
1360	2.9363-2	1.4681 0	-1004.2	2.2016	2.0448	1.8880	1.7312	1.6216	0.2832	1.3167	1747.3	.0840	.0320	.7438	1360
1380	2.8937-2	1.4469 0	-998.6	2.2058	2.0490	1.8922	1.7354	1.6258	0.2840	1.3155	1759.3	.0849	.0324	.7434	1380
1400	2.8524-2	1.4262 0	-992.9	2.2099	2.0531	1.8963	1.7395	1.6299	0.2848	1.3143	1771.2	.0858	.0329	.7429	1400
1420	2.8122-2	1.4061 0	-987.2	2.2139	2.0571	1.9003	1.7435	1.6339	0.2856	1.3131	1783.0	.0866	.0333	.7425	1420
1440	2.7731-2	1.3866 0	-981.5	2.2179	2.0611	1.9043	1.7475	1.6379	0.2864	1.3119	1794.7	.0875	.0338	.7421	1440
1460	2.7352-2	1.3676 0	-975.7	2.2219	2.0651	1.9083	1.7515	1.6419	0.2872	1.3108	1806.4	.0884	.0342	.7417	1460
1480	2.6982-2	1.3491 0	-970.0	2.2258	2.0690	1.9122	1.7554	1.6458	0.2880	1.3097	1817.9	.0892	.0347	.7414	1480
1500	2.6622-2	1.3311 0	-964.2	2.2297	2.0729	1.9160	1.7592	1.6496	0.2888	1.3086	1829.4	.0901	.0351	.7411	1500
1520	2.6272-2	1.3136 0	-958.4	2.2335	2.0767	1.9199	1.7631	1.6535	0.2896	1.3075	1840.8	.0910	.0356	.7408	1520
1540	2.5931-2	1.2965 0	-952.6	2.2373	2.0805	1.9237	1.7669	1.6573	0.2904	1.3064	1852.1	.0918	.0360	.7405	1540
1560	2.5598-2	1.2799 0	-946.8	2.2410	2.0842	1.9274	1.7706	1.6610	0.2911	1.3053	1863.3	.0927	.0364	.7402	1560
1580	2.5274-2	1.2637 0	-941.0	2.2447	2.0879	1.9311	1.7743	1.6647	0.2919	1.3043	1874.5	.0935	.0369	.7400	1580
1600	2.4958-2	1.2479 0	-935.1	2.2484	2.0916	1.9348	1.7780	1.6684	0.2927	1.3033	1885.6	.0943	.0373	.7397	1600
1620	2.4650-2	1.2325 0	-929.3	2.2521	2.0953	1.9384	1.7816	1.6720	0.2934	1.3023	1896.6	.0952	.0378	.7395	1620
1640	2.4350-2	1.2175 0	-923.4	2.2557	2.0989	1.9421	1.7852	1.6756	0.2941	1.3013	1907.5	.0960	.0382	.7392	1640
1660	2.4056-2	1.2028 0	-917.5	2.2592	2.1024	1.9456	1.7888	1.6792	0.2949	1.3003	1918.4	.0968	.0386	.7390	1660
1680	2.3770-2	1.1885 0	-911.6	2.2628	2.1060	1.9492	1.7924	1.6827	0.2956	1.2993	1929.2	.0976	.0391	.7387	1680
1700	2.3490-2	1.1745 0	-905.7	2.2663	2.1095	1.9527	1.7959	1.6863	0.2963	1.2984	1940.0	.0984	.0395	.7385	1700
1720	2.3217-2	1.1609 0	-899.7	2.2697	2.1129	1.9561	1.7993	1.6897	0.2970	1.2975	1950.7	.0992	.0399	.7383	1720
1740	2.2950-2	1.1475 0	-893.8	2.2732	2.1164	1.9596	1.8028	1.6932	0.2977	1.2966	1961.3	.1001	.0404	.7381	1740
1760	2.2689-2	1.1345 0	-887.8	2.2766	2.1198	1.9630	1.8062	1.6966	0.2984	1.2957	1971.8	.1009	.0408	.7379	1760
1780	2.2434-2	1.1217 0	-881.9	2.2800	2.1232	1.9664	1.8095	1.6999	0.2991	1.2948	1982.3	.1017	.0412	.7376	1780
1800	2.2185-2	1.1093 0	-875.9	2.2833	2.1265	1.9697	1.8129	1.7033	0.2998	1.2940	1992.8	.1024	.0416	.7375	1800
1900	2.1018-2	1.0509 0	-845.7	2.2996	2.1428	1.9860	1.8292	1.7196	0.3029	1.2901	2044.3	.1063	.0437	.7365	1900
2000	1.9967-2	9.9833-1	-815.3	2.3152	2.1584	2.0016	1.8448	1.7352	0.3059	1.2864	2094.5	.1102	.0458	.7356	2000
2100	1.9016-2	9.5079-1	-784.6	2.3302	2.1734	2.0166	1.8598	1.7502	0.3087	1.2831	2143.4	.1139	.0478	.7349	2100
2200	1.8152-2	9.0758-1	-753.6	2.3446	2.1878	2.0310	1.8742	1.7646	0.3113	1.2800	2191.2	.1175	.0498	.7342	2200
2300	1.7362-2	8.6812-1	-722.3	2.3585	2.2017	2.0449	1.8881	1.7785	0.3138	1.2771	2237.9	.1212	.0518	.7336	2300
2400	1.6639-2	8.3195-1	-690.8	2.3719	2.2151	2.0583	1.9015	1.7919	0.3162	1.2745	2283.7	.1247	.0538	.7330	2400
2500	1.5973-2	7.9867-1	-659.1	2.3849	2.2281	2.0713	1.9145	1.8049	0.3185	1.2720	2328.5	.1282	.0557	.7325	2500

TABLE 5A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO \square 1.700; F/A=0.069653; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW \square 29.1608;
 DRY AIR; GASEOUS COMPOSITION: CO2= .13866; H2O= .11760; N2= .73493; O2= .00000; AR= .00881

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT ³	LB/FT ³	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	R	
2600	1.5359-2	7.6795-1	-627.1	2.3974	2.2406	2.0838	1.9270	1.8174	0.3206	1.2697	2372.5	.1316	.0577	.7319	2600
2700	1.4790-2	7.3951-1	-595.0	2.4096	2.2528	2.0959	1.9391	1.8295	0.3226	1.2676	2415.6	.1350	.0596	.7313	2700
2800	1.4262-2	7.1310-1	-562.6	2.4213	2.2645	2.1077	1.9509	1.8413	0.3245	1.2656	2458.1	.1384	.0615	.7305	2800
2900	1.3770-2	6.8851-1	-530.1	2.4327	2.2759	2.1191	1.9623	1.8527	0.3263	1.2638	2499.7	.1417	.0633	.7298	2900
3000	1.3311-2	6.6556-1	-497.3	2.4438	2.2870	2.1302	1.9734	1.8638	0.3280	1.2621	2540.8	.1449	.0652	.7291	3000
3100	1.2882-2	6.4409-1	-464.5	2.4546	2.2978	2.1410	1.9842	1.8746	0.3296	1.2605	2581.1	.1482	.0670	.7283	3100
3200	1.2479-2	6.2396-1	-431.4	2.4651	2.3083	2.1515	1.9947	1.8851	0.3310	1.2590	2620.9	.1514	.0689	.7275	3200
3300	1.2101-2	6.0505-1	-398.3	2.4753	2.3185	2.1617	2.0049	1.8953	0.3324	1.2576	2660.1	.1545	.0707	.7267	3300
3400	1.1745-2	5.8726-1	-364.9	2.4853	2.3284	2.1716	2.0148	1.9052	0.3338	1.2563	2698.7	.1576	.0725	.7260	3400
3500	1.1410-2	5.7048-1	-331.5	2.4949	2.3381	2.1813	2.0245	1.9149	0.3350	1.2552	2736.8	.1607	.0742	.7251	3500
3600	1.1093-2	5.5463-1	-297.9	2.5044	2.3476	2.1908	2.0340	1.9244	0.3362	1.2540	2774.4	.1637	.0760	.7243	3600
3700	1.0793-2	5.3964-1	-264.3	2.5136	2.3568	2.2000	2.0432	1.9336	0.3373	1.2530	2811.5	.1667	.0777	.7236	3700
3800	1.0509-2	5.2544-1	-230.5	2.5226	2.3658	2.2090	2.0522	1.9426	0.3383	1.2520	2848.2	.1697	.0794	.7229	3800
3900	1.0239-2	5.1197-1	-196.6	2.5314	2.3746	2.2178	2.0610	1.9514	0.3393	1.2511	2884.4	.1726	.0811	.7221	3900
4000	9.9833-3	4.9917-1	-162.6	2.5400	2.3832	2.2264	2.0696	1.9600	0.3402	1.2503	2920.1	.1755	.0828	.7213	4000
4100	9.7398-3	4.8699-1	-128.6	2.5484	2.3916	2.2348	2.0780	1.9684	0.3410	1.2495	2955.5	.1784	.0844	.7205	4100
4200	9.5079-3	4.7540-1	-94.4	2.5567	2.3999	2.2431	2.0863	1.9766	0.3418	1.2488	2990.4	.1813	.0861	.7197	4200
4300	9.2868-3	4.6434-1	-60.2	2.5647	2.4079	2.2511	2.0943	1.9847	0.3426	1.2481	3025.0	.1841	.0877	.7188	4300
4400	9.0758-3	4.5379-1	-25.9	2.5726	2.4158	2.2590	2.1022	1.9926	0.3433	1.2475	3059.2	.1869	.0894	.7179	4400
4500	8.8741-3	4.4370-1	8.4	2.5803	2.4235	2.2667	2.1099	2.0003	0.3440	1.2469	3093.0	.1897	.0910	.7170	4500
4600	8.6812-3	4.3406-1	42.9	2.5879	2.4311	2.2743	2.1175	2.0079	0.3446	1.2463	3126.5	.1924	.0926	.7159	4600
4700	8.4965-3	4.2482-1	77.4	2.5953	2.4385	2.2817	2.1249	2.0153	0.3452	1.2457	3159.6	.1951	.0942	.7149	4700
4800	8.3194-3	4.1597-1	111.9	2.6026	2.4458	2.2890	2.1322	2.0226	0.3458	1.2452	3192.4	.1978	.0958	.7139	4800
4900	8.1497-3	4.0748-1	146.5	2.6097	2.4529	2.2961	2.1393	2.0297	0.3463	1.2448	3224.8	.2005	.0974	.7129	4900
5000	7.9867-3	3.9933-1	181.2	2.6167	2.4599	2.3031	2.1463	2.0367	0.3469	1.2443	3257.0	.2031	.0990	.7119	5000
5100	7.8301-3	3.9150-1	215.9	2.6236	2.4668	2.3100	2.1532	2.0436	0.3473	1.2439	3288.8	.2057	.1005	.7110	5100
5200	7.6795-3	3.8397-1	250.6	2.6304	2.4735	2.3167	2.1599	2.0503	0.3478	1.2435	3320.3	.2083	.1021	.7101	5200
5300	7.5346-3	3.7673-1	285.4	2.6370	2.4802	2.3234	2.1666	2.0570	0.3483	1.2431	3351.6	.2109	.1036	.7092	5300
5400	7.3951-3	3.6975-1	320.3	2.6435	2.4867	2.3299	2.1731	2.0635	0.3487	1.2427	3382.5	.2135	.1051	.7083	5400

TABLE 5.1B - PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.069653; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 0.14696 LB/IN2 (0.01 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLVLT	DLVDLP	REACTING COMPOSITIONS					FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4958-4	-935.1	2.2484	29.161	.094	1.0000	-1.0000	0.2927	1.3033	1885.6	.0373	.740	0.2927	1.3033	1885.6	.0373	.740
1700	2.3490-4	-905.7	2.2663	29.161	.098	1.0000	-1.0000	0.2963	1.2984	1940.0	.0395	.739	0.2963	1.2984	1940.0	.0395	.739
1800	2.2185-4	-875.9	2.2833	29.161	.102	1.0000	-1.0000	0.2998	1.2940	1992.8	.0416	.737	0.2998	1.2940	1992.8	.0416	.737
1900	2.1018-4	-845.7	2.2996	29.161	.106	1.0000	-1.0000	0.3029	1.2900	2044.3	.0437	.736	0.3029	1.2901	2044.3	.0437	.736
2000	1.9967-4	-815.3	2.3152	29.161	.110	1.0000	-1.0000	0.3060	1.2863	2094.3	.0458	.735	0.3059	1.2864	2094.5	.0458	.736
2100	1.9016-4	-784.5	2.3302	29.161	.114	1.0001	-1.0000	0.3090	1.2828	2143.1	.0479	.735	0.3087	1.2831	2143.4	.0478	.735
2200	1.8151-4	-753.5	2.3447	29.160	.118	1.0002	-1.0000	0.3120	1.2793	2190.6	.0500	.734	0.3113	1.2800	2191.2	.0498	.734
2300	1.7362-4	-722.1	2.3586	29.160	.121	1.0004	-1.0000	0.3153	1.2758	2236.8	.0521	.733	0.3138	1.2771	2237.9	.0518	.734
2400	1.6638-4	-690.4	2.3721	29.159	.125	1.0008	-1.0000	0.3189	1.2720	2281.6	.0544	.731	0.3162	1.2745	2283.7	.0538	.733
2500	1.5972-4	-658.3	2.3852	29.158	.128	1.0014	-1.0000	0.3233	1.2678	2324.8	.0568	.730	0.3185	1.2720	2328.6	.0557	.732
2600	1.5356-4	-625.7	2.3980	29.156	.132	1.0026	-1.0001	0.3288	1.2628	2366.3	.0595	.727	0.3206	1.2698	2372.7	.0577	.732
2700	1.4786-4	-592.5	2.4105	29.152	.135	1.0044	-1.0001	0.3361	1.2568	2405.7	.0626	.724	0.3226	1.2677	2416.1	.0596	.731
2800	1.4255-4	-558.4	2.4229	29.146	.138	1.0072	-1.0002	0.3458	1.2495	2443.0	.0664	.720	0.3245	1.2658	2458.9	.0615	.730
2900	1.3759-4	-523.2	2.4353	29.137	.142	1.0113	-1.0003	0.3589	1.2406	2477.8	.0712	.714	0.3263	1.2641	2501.1	.0633	.729
3000	1.3294-4	-486.5	2.4477	29.123	.145	1.0174	-1.0004	0.3763	1.2302	2510.2	.0771	.707	0.3279	1.2626	2542.9	.0652	.729
3100	1.2856-4	-447.8	2.4604	29.102	.148	1.0259	-1.0007	0.3993	1.2184	2540.2	.0849	.697	0.3294	1.2612	2584.5	.0671	.728
3200	1.2442-4	-406.4	2.4735	29.073	.151	1.0377	-1.0010	0.4290	1.2054	2568.4	.0949	.684	0.3309	1.2601	2626.0	.0689	.726
3300	1.2048-4	-361.7	2.4873	29.033	.154	1.0534	-1.0015	0.4670	1.1920	2595.4	.1079	.668	0.3322	1.2593	2667.7	.0707	.725
3400	1.1672-4	-312.7	2.5019	28.978	.157	1.0740	-1.0021	0.5145	1.1786	2622.1	.1249	.648	0.3334	1.2587	2709.8	.0725	.724
3500	1.1310-4	-258.4	2.5176	28.906	.160	1.1003	-1.0029	0.5727	1.1659	2649.3	.1469	.625	0.3345	1.2585	2752.5	.0743	.722
3600	1.0960-4	-197.8	2.5347	28.811	.163	1.1331	-1.0040	0.6426	1.1543	2677.9	.1751	.599	0.3355	1.2586	2796.2	.0760	.720
3700	1.0619-4	-129.5	2.5534	28.691	.166	1.1733	-1.0054	0.7249	1.1442	2708.6	.2110	.570	0.3364	1.2590	2841.3	.0778	.717
3800	1.0285-4	-52.4	2.5740	28.541	.169	1.2215	-1.0072	0.8201	1.1356	2741.8	.2561	.540	0.3372	1.2600	2888.1	.0796	.714
3900	9.9571-5	34.9	2.5967	28.357	.171	1.2781	-1.0093	0.9282	1.1286	2778.0	.3122	.509	0.3379	1.2614	2937.0	.0814	.711
4000	9.6323-5	133.7	2.6217	28.135	.174	1.3434	-1.0119	1.0489	1.1230	2817.4	.3807	.479	0.3385	1.2634	2988.4	.0834	.706
4100	9.3097-5	245.1	2.6492	27.873	.176	1.4177	-1.0150	1.1821	1.1187	2860.4	.4625	.450	0.3391	1.2660	3042.8	.0854	.700
4200	8.9882-5	370.5	2.6794	27.567	.179	1.5009	-1.0186	1.3273	1.1156	2907.1	.5575	.425	0.3397	1.2691	3100.6	.0876	.692
4300	8.6672-5	511.0	2.7124	27.215	.181	1.5924	-1.0228	1.4835	1.1135	2957.6	.6638	.404	0.3403	1.2730	3162.3	.0901	.683
4400	8.3463-5	667.5	2.7484	26.817	.183	1.6905	-1.0275	1.6478	1.1123	3012.3	.7767	.388	0.3409	1.2776	3228.3	.0928	.672
4500	8.0261-5	840.6	2.7873	26.374	.185	1.7914	-1.0325	1.8147	1.1119	3071.2	.8886	.378	0.3415	1.2828	3298.9	.0959	.659
4600	7.7079-5	1030.2	2.8290	25.892	.187	1.8887	-1.0377	1.9735	1.1123	3134.5	.9887	.374	0.3422	1.2889	3374.2	.0993	.645
4700	7.3942-5	1234.5	2.8729	25.378	.189	1.9723	-1.0425	2.1082	1.1134	3202.0	****	.375	0.3430	1.2956	3453.9	.1031	.630
4800	7.0887-5	1450.3	2.9183	24.847	.191	2.0304	-1.0464	2.1986	1.1154	3273.2	****	.382	0.3439	1.3028	3537.4	.1071	.615
4900	6.7961-5	1672.1	2.9641	24.318	.194	2.0516	-1.0487	2.2248	1.1184	3347.3	****	.393	0.3448	1.3104	3623.2	.1113	.600
5000	6.5212-5	1892.7	3.0086	23.810	.196	2.0290	-1.0489	2.1748	1.1223	3423.2	****	.408	0.3457	1.3180	3709.5	.1155	.586
5100	6.2680-5	2104.6	3.0506	23.343	.198	1.9639	-1.0470	2.0503	1.1275	3499.7	.9566	.425	0.3466	1.3253	3794.2	.1196	.574
5200	6.0389-5	2300.9	3.0887	22.931	.200	1.8658	-1.0432	1.8677	1.1340	3575.7	.8462	.442	0.3475	1.3320	3875.3	.1234	.564
5300	5.8344-5	2477.0	3.1223	22.581	.203	1.7490	-1.0383	1.6530	1.1421	3650.8	.7289	.460	0.3482	1.3379	3951.3	.1270	.556
5400	5.6532-5	2631.2	3.1511	22.292	.205	1.6278	-1.0329	1.4320	1.1520	3724.9	.6174	.476	0.3489	1.3428	4021.6	.1303	.550

TABLE 5.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.069653; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 1.46959 LB/IN² (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4958-3	-935.1	2.0916	29.161	.094	1.0000	-1.0000	0.2927	1.3033	1885.6	.0373	.740	0.2927	1.3033	1885.6	.0373	.740
1700	2.3490-3	-905.7	2.1095	29.161	.098	1.0000	-1.0000	0.2963	1.2984	1940.0	.0395	.738	0.2963	1.2984	1940.0	.0395	.738
1800	2.2185-3	-875.9	2.1265	29.161	.102	1.0000	-1.0000	0.2998	1.2940	1992.8	.0416	.737	0.2998	1.2940	1992.8	.0416	.737
1900	2.1018-3	-845.7	2.1428	29.161	.106	1.0000	-1.0000	0.3029	1.2900	2044.3	.0437	.736	0.3029	1.2901	2044.3	.0437	.736
2000	1.9967-3	-815.3	2.1584	29.161	.110	1.0000	-1.0000	0.3059	1.2864	2094.4	.0458	.736	0.3059	1.2864	2094.5	.0458	.736
2100	1.9016-3	-784.6	2.1734	29.161	.114	1.0000	-1.0000	0.3088	1.2829	2143.3	.0479	.735	0.3087	1.2831	2143.4	.0478	.735
2200	1.8151-3	-753.5	2.1878	29.161	.118	1.0001	-1.0000	0.3117	1.2797	2190.9	.0499	.734	0.3113	1.2800	2191.2	.0498	.734
2300	1.7362-3	-722.2	2.2018	29.160	.121	1.0002	-1.0000	0.3145	1.2765	2237.4	.0520	.733	0.3138	1.2771	2237.9	.0518	.734
2400	1.6639-3	-690.6	2.2152	29.160	.125	1.0004	-1.0000	0.3175	1.2733	2282.7	.0541	.732	0.3162	1.2745	2283.7	.0538	.733
2500	1.5973-3	-658.7	2.2282	29.160	.128	1.0007	-1.0000	0.3208	1.2700	2326.7	.0562	.731	0.3185	1.2720	2328.6	.0557	.732
2600	1.5358-3	-626.5	2.2409	29.158	.132	1.0012	-1.0000	0.3245	1.2664	2369.5	.0585	.730	0.3206	1.2697	2372.6	.0577	.732
2700	1.4788-3	-593.8	2.2532	29.157	.135	1.0020	-1.0000	0.3290	1.2623	2410.8	.0610	.728	0.3226	1.2676	2415.9	.0596	.731
2800	1.4259-3	-560.6	2.2653	29.154	.138	1.0033	-1.0001	0.3346	1.2577	2450.6	.0638	.726	0.3245	1.2657	2458.4	.0615	.730
2900	1.3765-3	-526.8	2.2771	29.150	.142	1.0053	-1.0001	0.3417	1.2522	2488.7	.0669	.723	0.3263	1.2639	2500.4	.0633	.730
3000	1.3303-3	-492.2	2.2889	29.143	.145	1.0081	-1.0002	0.3507	1.2457	2525.0	.0707	.719	0.3279	1.2623	2541.8	.0652	.729
3100	1.2870-3	-456.6	2.3005	29.133	.148	1.0121	-1.0003	0.3624	1.2382	2559.4	.0751	.715	0.3295	1.2608	2582.7	.0670	.728
3200	1.2462-3	-419.6	2.3123	29.120	.151	1.0175	-1.0005	0.3771	1.2296	2592.0	.0805	.709	0.3310	1.2595	2623.3	.0689	.727
3300	1.2076-3	-381.0	2.3242	29.101	.154	1.0248	-1.0007	0.3957	1.2201	2622.8	.0871	.701	0.3323	1.2584	2663.6	.0707	.726
3400	1.1711-3	-340.3	2.3363	29.076	.157	1.0344	-1.0010	0.4188	1.2099	2652.3	.0953	.692	0.3336	1.2575	2703.9	.0725	.725
3500	1.1363-3	-297.1	2.3488	29.042	.160	1.0466	-1.0013	0.4470	1.1994	2680.8	.1054	.681	0.3348	1.2567	2744.1	.0742	.724
3600	1.1031-3	-250.7	2.3619	28.998	.163	1.0620	-1.0019	0.4810	1.1887	2708.8	.1178	.667	0.3358	1.2562	2784.6	.0760	.722
3700	1.0711-3	-200.7	2.3756	28.941	.166	1.0810	-1.0025	0.5211	1.1784	2736.9	.1331	.651	0.3368	1.2558	2825.4	.0777	.721
3800	1.0404-3	-146.3	2.3901	28.870	.169	1.1040	-1.0033	0.5678	1.1687	2765.6	.1517	.633	0.3377	1.2558	2866.8	.0794	.720
3900	1.0106-3	-86.9	2.4055	28.782	.172	1.1312	-1.0043	0.6212	1.1599	2795.4	.1742	.613	0.3385	1.2560	2908.9	.0811	.718
4000	9.8173-4	-21.8	2.4220	28.676	.175	1.1628	-1.0055	0.6811	1.1521	2826.7	.2014	.591	0.3392	1.2565	2952.0	.0828	.716
4100	9.5353-4	49.5	2.4396	28.548	.177	1.1990	-1.0069	0.7474	1.1454	2859.8	.2338	.567	0.3398	1.2574	2996.4	.0845	.713
4200	9.2593-4	127.8	2.4585	28.398	.180	1.2398	-1.0086	0.8195	1.1397	2895.0	.2721	.542	0.3404	1.2585	3042.1	.0863	.710
4300	8.9883-4	213.6	2.4787	28.224	.182	1.2850	-1.0105	0.8970	1.1351	2932.3	.3170	.516	0.3409	1.2601	3089.5	.0881	.706
4400	8.7218-4	307.4	2.5002	28.024	.185	1.3346	-1.0127	0.9792	1.1315	2972.0	.3688	.491	0.3414	1.2620	3138.7	.0899	.702
4500	8.4591-4	409.6	2.5232	27.797	.187	1.3884	-1.0152	1.0657	1.1287	3014.1	.4280	.466	0.3418	1.2643	3190.0	.0918	.697
4600	8.1997-4	520.7	2.5476	27.544	.190	1.4463	-1.0180	1.1561	1.1267	3058.7	.4941	.444	0.3422	1.2670	3243.5	.0939	.691
4700	7.9434-4	640.9	2.5734	27.263	.192	1.5079	-1.0212	1.2498	1.1253	3105.8	.5662	.424	0.3426	1.2701	3299.5	.0962	.683
4800	7.6900-4	770.7	2.6008	26.954	.194	1.5726	-1.0246	1.3462	1.1246	3155.5	.6425	.407	0.3430	1.2736	3358.0	.0986	.675
4900	7.4396-4	910.2	2.6295	26.620	.196	1.6393	-1.0283	1.4434	1.1244	3207.8	.7201	.394	0.3434	1.2775	3419.4	.1012	.666
5000	7.1924-4	1059.3	2.6597	26.261	.199	1.7060	-1.0322	1.5387	1.1247	3263.0	.7950	.384	0.3439	1.2819	3483.6	.1041	.656
5100	6.9490-4	1217.7	2.6910	25.880	.201	1.7695	-1.0361	1.6277	1.1255	3320.9	.8623	.379	0.3444	1.2867	3550.6	.1072	.645
5200	6.7106-4	1384.5	2.7234	25.482	.203	1.8257	-1.0398	1.7045	1.1269	3381.4	.9165	.377	0.3450	1.2919	3620.4	.1106	.633
5300	6.4783-4	1558.0	2.7564	25.073	.205	1.8699	-1.0431	1.7618	1.1288	3444.4	.9526	.379	0.3456	1.2974	3692.6	.1141	.621
5400	6.2540-4	1735.9	2.7897	24.661	.207	1.8973	-1.0456	1.7927	1.1314	3509.6	.9667	.384	0.3462	1.3031	3766.5	.1178	.609

TABLE 5.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.069653; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 14.6959 LB/IN2 (1.00 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLVDLT	DLVDLP	REACTING COMPOSITIONS				PRAN	FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R		CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4958-2	-935.1	1.9348	29.161	.094	1.0000	-1.0000	0.2927	1.3033	1885.6	.0373	.740	0.2927	1.3033	1885.6	.0373	.740
1700	2.3490-2	-905.7	1.9527	29.161	.098	1.0000	-1.0000	0.2963	1.2984	1940.0	.0395	.739	0.2963	1.2984	1940.0	.0395	.739
1800	2.2185-2	-875.9	1.9697	29.161	.102	1.0000	-1.0000	0.2998	1.2940	1992.8	.0416	.737	0.2998	1.2940	1992.8	.0416	.737
1900	2.1018-2	-845.7	1.9860	29.161	.106	1.0000	-1.0000	0.3029	1.2900	2044.3	.0437	.736	0.3029	1.2901	2044.3	.0437	.736
2000	1.9967-2	-815.3	2.0016	29.161	.110	1.0000	-1.0000	0.3059	1.2864	2094.4	.0458	.736	0.3059	1.2864	2094.5	.0458	.736
2100	1.9016-2	-784.6	2.0166	29.161	.114	1.0000	-1.0000	0.3087	1.2830	2143.3	.0478	.735	0.3087	1.2831	2143.4	.0478	.735
2200	1.8151-2	-753.6	2.0310	29.161	.118	1.0000	-1.0000	0.3115	1.2798	2191.1	.0499	.734	0.3113	1.2800	2191.2	.0498	.734
2300	1.7362-2	-722.3	2.0449	29.161	.121	1.0001	-1.0000	0.3142	1.2768	2237.7	.0519	.733	0.3138	1.2771	2237.9	.0518	.734
2400	1.6639-2	-690.7	2.0584	29.160	.125	1.0002	-1.0000	0.3168	1.2739	2283.2	.0539	.733	0.3162	1.2745	2283.7	.0538	.733
2500	1.5973-2	-658.9	2.0713	29.160	.128	1.0003	-1.0000	0.3196	1.2710	2327.6	.0560	.732	0.3185	1.2720	2328.5	.0557	.732
2600	1.5358-2	-626.8	2.0839	29.160	.132	1.0006	-1.0000	0.3225	1.2681	2371.0	.0581	.731	0.3206	1.2697	2372.5	.0577	.732
2700	1.4789-2	-594.4	2.0962	29.159	.135	1.0010	-1.0000	0.3257	1.2650	2413.3	.0602	.730	0.3226	1.2676	2415.7	.0596	.731
2800	1.4260-2	-561.6	2.1081	29.158	.138	1.0016	-1.0000	0.3293	1.2617	2454.4	.0626	.728	0.3245	1.2656	2458.2	.0615	.730
2900	1.3768-2	-528.5	2.1197	29.155	.142	1.0025	-1.0001	0.3336	1.2580	2494.3	.0650	.727	0.3263	1.2638	2500.0	.0633	.730
3000	1.3307-2	-494.9	2.1311	29.152	.145	1.0038	-1.0001	0.3388	1.2539	2532.9	.0678	.725	0.3280	1.2622	2541.2	.0652	.729
3100	1.2876-2	-460.7	2.1423	29.148	.148	1.0057	-1.0001	0.3452	1.2492	2570.1	.0708	.722	0.3295	1.2606	2581.9	.0670	.728
3200	1.2471-2	-425.8	2.1534	29.142	.151	1.0082	-1.0002	0.3530	1.2438	2605.9	.0743	.719	0.3310	1.2592	2622.0	.0689	.727
3300	1.2089-2	-390.0	2.1644	29.133	.154	1.0116	-1.0003	0.3626	1.2378	2640.3	.0783	.716	0.3324	1.2580	2661.8	.0707	.726
3400	1.1729-2	-353.2	2.1754	29.121	.158	1.0161	-1.0004	0.3743	1.2310	2673.2	.0829	.711	0.3337	1.2569	2701.1	.0725	.726
3500	1.1388-2	-315.1	2.1864	29.105	.161	1.0219	-1.0006	0.3884	1.2237	2704.9	.0884	.706	0.3349	1.2559	2740.3	.0742	.725
3600	1.1063-2	-275.4	2.1976	29.084	.164	1.0292	-1.0009	0.4054	1.2159	2735.5	.0948	.699	0.3360	1.2550	2779.2	.0760	.724
3700	1.0754-2	-233.9	2.2090	29.057	.167	1.0382	-1.0012	0.4254	1.2078	2765.2	.1024	.692	0.3370	1.2544	2818.0	.0777	.723
3800	1.0459-2	-190.2	2.2206	29.024	.169	1.0493	-1.0015	0.4487	1.1995	2794.4	.1113	.683	0.3380	1.2538	2856.9	.0794	.721
3900	1.0176-2	-144.1	2.2326	28.982	.172	1.0642	-1.0020	0.4756	1.1914	2823.3	.1217	.673	0.3389	1.2535	2895.9	.0811	.720
4000	9.9044-3	-95.0	2.2450	28.930	.175	1.0780	-1.0026	0.5060	1.1835	2852.4	.1339	.662	0.3397	1.2533	2935.2	.0827	.719
4100	9.6422-3	-42.7	2.2579	28.868	.178	1.0960	-1.0032	0.5401	1.1761	2881.8	.1481	.649	0.3404	1.2533	2974.9	.0844	.718
4200	9.3886-3	13.1	2.2714	28.795	.181	1.1165	-1.0041	0.5777	1.1693	2912.0	.1646	.634	0.3410	1.2535	3015.0	.0860	.716
4300	9.1427-3	72.9	2.2855	28.708	.183	1.1397	-1.0050	0.6185	1.1631	2943.1	.1835	.618	0.3416	1.2539	3055.8	.0877	.714
4400	8.9037-3	136.9	2.3002	28.608	.186	1.1652	-1.0061	0.6623	1.1577	2975.4	.2051	.600	0.3421	1.2545	3097.3	.0893	.712
4500	8.6709-3	205.5	2.3156	28.493	.189	1.1932	-1.0073	0.7086	1.1531	3009.0	.2296	.582	0.3426	1.2554	3139.7	.0910	.710
4600	8.4437-3	278.7	2.3317	28.363	.191	1.2234	-1.0087	0.7569	1.1491	3044.1	.2573	.562	0.3430	1.2565	3183.0	.0927	.707
4700	8.2216-3	356.9	2.3485	28.218	.194	1.2556	-1.0102	0.8068	1.1459	3080.6	.2884	.541	0.3434	1.2578	3227.4	.0944	.704
4800	8.0043-3	440.1	2.3660	28.056	.196	1.2896	-1.0119	0.8578	1.1434	3118.6	.3229	.520	0.3437	1.2593	3273.0	.0962	.700
4900	7.7914-3	528.5	2.3842	27.879	.198	1.3253	-1.0137	0.9096	1.1414	3158.2	.3610	.500	0.3440	1.2611	3319.7	.0980	.696
5000	7.5828-3	622.0	2.4031	27.686	.201	1.3626	-1.0157	0.9620	1.1399	3199.3	.4027	.479	0.3443	1.2631	3367.8	.0998	.692
5100	7.3781-3	720.9	2.4227	27.478	.203	1.4013	-1.0178	1.0147	1.1390	3242.1	.4476	.460	0.3446	1.2654	3417.2	.1018	.687
5200	7.1773-3	825.0	2.4429	27.254	.205	1.4414	-1.0202	1.0677	1.1385	3286.3	.4953	.442	0.3449	1.2679	3468.1	.1039	.682
5300	6.9802-3	934.4	2.4638	27.015	.208	1.4825	-1.0227	1.1207	1.1383	3332.2	.5451	.427	0.3451	1.2706	3520.5	.1060	.675
5400	6.7868-3	1049.1	2.4852	26.762	.210	1.5245	-1.0253	1.1734	1.1385	3379.7	.5959	.413	0.3454	1.2736	3574.5	.1084	.669

TABLE 5.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.069653; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 146.959 LB/IN2 (10.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS					FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4958-1	-935.1	1.7780	29.161	.094	1.0000	-1.0000	0.2927	1.3033	1885.6	.0373	.740	0.2927	1.3033	1885.6	.0373	.740
1700	2.3490-1	-905.7	1.7959	29.161	.098	1.0000	-1.0000	0.2963	1.2984	1940.0	.0395	.739	0.2963	1.2984	1940.0	.0395	.739
1800	2.2185-1	-875.9	1.8129	29.161	.102	1.0000	-1.0000	0.2998	1.2940	1992.8	.0416	.737	0.2998	1.2940	1992.8	.0416	.737
1900	2.1018-1	-845.7	1.8292	29.161	.106	1.0000	-1.0000	0.3029	1.2901	2044.3	.0437	.736	0.3029	1.2901	2044.3	.0437	.736
2000	1.9967-1	-815.3	1.8448	29.161	.110	1.0000	-1.0000	0.3059	1.2864	2094.5	.0458	.736	0.3059	1.2864	2094.5	.0458	.736
2100	1.9016-1	-784.6	1.8598	29.161	.114	1.0000	-1.0000	0.3087	1.2831	2143.4	.0478	.735	0.3087	1.2831	2143.4	.0478	.735
2200	1.8152-1	-753.6	1.8742	29.161	.118	1.0000	-1.0000	0.3114	1.2799	2191.1	.0499	.734	0.3113	1.2800	2191.2	.0498	.734
2300	1.7362-1	-722.3	1.8881	29.161	.121	1.0000	-1.0000	0.3140	1.2770	2237.8	.0519	.734	0.3139	1.2771	2237.9	.0518	.734
2400	1.6639-1	-690.8	1.9015	29.161	.125	1.0001	-1.0000	0.3165	1.2742	2283.4	.0539	.733	0.3162	1.2745	2283.7	.0538	.733
2500	1.5973-1	-659.0	1.9145	29.160	.128	1.0002	-1.0000	0.3190	1.2715	2328.1	.0559	.732	0.3185	1.2720	2328.5	.0557	.732
2600	1.5359-1	-627.0	1.9271	29.160	.132	1.0003	-1.0000	0.3215	1.2689	2371.8	.0579	.731	0.3206	1.2697	2372.5	.0577	.732
2700	1.4790-1	-594.7	1.9392	29.160	.135	1.0005	-1.0000	0.3241	1.2663	2414.5	.0599	.731	0.3226	1.2676	2415.7	.0596	.731
2800	1.4261-1	-562.1	1.9511	29.159	.138	1.0007	-1.0000	0.3268	1.2637	2456.3	.0620	.730	0.3245	1.2656	2458.1	.0615	.731
2900	1.3769-1	-529.3	1.9626	29.158	.142	1.0012	-1.0000	0.3298	1.2609	2497.1	.0642	.728	0.3263	1.2638	2499.9	.0633	.730
3000	1.3309-1	-496.2	1.9738	29.157	.145	1.0018	-1.0000	0.3332	1.2580	2536.9	.0664	.727	0.3280	1.2621	2541.0	.0652	.729
3100	1.2879-1	-462.6	1.9848	29.155	.148	1.0027	-1.0001	0.3371	1.2548	2575.6	.0688	.726	0.3295	1.2605	2581.5	.0670	.728
3200	1.2475-1	-428.7	1.9956	29.152	.151	1.0039	-1.0001	0.3416	1.2513	2613.3	.0714	.724	0.3310	1.2591	2621.4	.0689	.727
3300	1.2095-1	-394.3	2.0062	29.147	.154	1.0055	-1.0001	0.3470	1.2475	2649.9	.0743	.722	0.3324	1.2578	2660.9	.0707	.727
3400	1.1737-1	-359.3	2.0166	29.142	.158	1.0077	-1.0002	0.3533	1.2432	2685.4	.0774	.719	0.3337	1.2566	2699.9	.0725	.726
3500	1.1399-1	-323.6	2.0270	29.134	.161	1.0104	-1.0003	0.3608	1.2385	2719.8	.0809	.717	0.3349	1.2555	2738.5	.0742	.725
3600	1.1079-1	-287.1	2.0373	29.124	.164	1.0139	-1.0004	0.3696	1.2334	2753.2	.0848	.713	0.3361	1.2545	2776.7	.0760	.724
3700	1.0775-1	-249.6	2.0475	29.112	.167	1.0182	-1.0005	0.3799	1.2279	2785.6	.0892	.710	0.3372	1.2537	2814.6	.0777	.723
3800	1.0485-1	-211.0	2.0578	29.096	.170	1.0235	-1.0007	0.3919	1.2221	2817.0	.0942	.706	0.3381	1.2529	2852.3	.0794	.722
3900	1.0209-1	-171.2	2.0682	29.075	.172	1.0298	-1.0009	0.4056	1.2160	2847.8	.0998	.701	0.3391	1.2523	2889.9	.0811	.721
4000	9.9457-2	-129.9	2.0786	29.051	.175	1.0374	-1.0012	0.4212	1.2099	2877.9	.1062	.695	0.3399	1.2517	2927.3	.0827	.720
4100	9.6931-2	-86.9	2.0892	29.021	.178	1.0463	-1.0015	0.4388	1.2036	2907.7	.1135	.689	0.3407	1.2513	2964.7	.0844	.719
4200	9.4506-2	-42.0	2.1001	28.985	.181	1.0565	-1.0019	0.4583	1.1975	2937.3	.1216	.682	0.3414	1.2510	3002.2	.0860	.718
4300	9.2174-2	4.9	2.1111	28.943	.184	1.0682	-1.0024	0.4799	1.1916	2966.8	.1308	.674	0.3421	1.2509	3039.8	.0877	.717
4400	8.9924-2	54.0	2.1224	28.893	.186	1.0814	-1.0029	0.5033	1.1859	2996.6	.1410	.665	0.3427	1.2509	3077.5	.0893	.715
4500	8.7751-2	105.6	2.1340	28.836	.189	1.0961	-1.0035	0.5285	1.1807	3026.7	.1525	.655	0.3432	1.2510	3115.6	.0909	.714
4600	8.5647-2	159.7	2.1459	28.770	.192	1.1121	-1.0042	0.5553	1.1758	3057.4	.1652	.645	0.3437	1.2513	3153.9	.0925	.712
4700	8.3608-2	216.7	2.1581	28.695	.194	1.1296	-1.0050	0.5834	1.1714	3088.7	.1791	.633	0.3442	1.2517	3192.7	.0941	.711
4800	8.1627-2	276.5	2.1707	28.611	.197	1.1483	-1.0059	0.6126	1.1676	3120.7	.1945	.620	0.3446	1.2522	3231.9	.0957	.709
4900	7.9701-2	339.2	2.1836	28.518	.199	1.1681	-1.0068	0.6426	1.1642	3153.7	.2113	.607	0.3449	1.2529	3271.6	.0973	.707
5000	7.7826-2	405.0	2.1969	28.416	.202	1.1889	-1.0078	0.6731	1.1613	3187.5	.2295	.592	0.3453	1.2538	3311.9	.0989	.705
5100	7.5999-2	473.9	2.2106	28.304	.204	1.2106	-1.0090	0.7038	1.1589	3222.2	.2492	.577	0.3456	1.2548	3352.8	.1006	.702
5200	7.4217-2	545.8	2.2245	28.182	.207	1.2329	-1.0102	0.7344	1.1570	3258.0	.2705	.561	0.3458	1.2559	3394.4	.1022	.700
5300	7.2479-2	620.7	2.2388	28.051	.209	1.2557	-1.0114	0.7647	1.1555	3294.6	.2934	.545	0.3461	1.2572	3436.6	.1039	.697
5400	7.0782-2	698.7	2.2534	27.911	.212	1.2790	-1.0128	0.7945	1.1544	3332.3	.3179	.529	0.3463	1.2586	3479.5	.1055	.694

TABLE 5.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.069653; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 734.797 LB/IN2 (50.00 ATM) DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS							FROZEN COMPOSITIONS				
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR	PRAN
1600	1.2479 0	-935.1	1.6684	29.161	.094	1.0000	-1.0000	0.2927	1.3033	1885.6	.0373	.740	0.2927	1.3033	1885.6	.0373	.740
1700	1.1745 0	-905.7	1.6863	29.161	.098	1.0000	-1.0000	0.2963	1.2984	1940.0	.0395	.739	0.2963	1.2984	1940.0	.0395	.739
1800	1.1093 0	-875.9	1.7033	29.161	.102	1.0000	-1.0000	0.2998	1.2940	1992.8	.0416	.737	0.2998	1.2940	1992.8	.0416	.737
1900	1.0509 0	-845.7	1.7196	29.161	.106	1.0000	-1.0000	0.3029	1.2901	2044.3	.0437	.736	0.3029	1.2901	2044.3	.0437	.736
2000	9.9834-1	-815.3	1.7352	29.161	.110	1.0000	-1.0000	0.3059	1.2864	2094.5	.0458	.736	0.3059	1.2864	2094.5	.0458	.736
2100	9.5080-1	-784.6	1.7502	29.161	.114	1.0000	-1.0000	0.3087	1.2831	2143.4	.0478	.735	0.3087	1.2831	2143.4	.0478	.735
2200	9.0758-1	-753.6	1.7646	29.161	.118	1.0000	-1.0000	0.3114	1.2799	2191.1	.0499	.734	0.3113	1.2800	2191.2	.0498	.734
2300	8.6812-1	-722.3	1.7785	29.161	.121	1.0000	-1.0000	0.3139	1.2770	2237.8	.0519	.734	0.3139	1.2771	2237.9	.0518	.734
2400	8.3194-1	-690.8	1.7919	29.161	.125	1.0000	-1.0000	0.3164	1.2743	2283.5	.0538	.733	0.3162	1.2745	2283.7	.0538	.733
2500	7.9866-1	-659.0	1.8049	29.161	.128	1.0001	-1.0000	0.3188	1.2717	2328.2	.0558	.732	0.3185	1.2720	2328.5	.0557	.732
2600	7.6794-1	-627.0	1.8174	29.160	.132	1.0002	-1.0000	0.3212	1.2692	2372.0	.0578	.732	0.3206	1.2697	2372.5	.0577	.732
2700	7.3949-1	-594.8	1.8296	29.160	.135	1.0003	-1.0000	0.3235	1.2668	2414.9	.0598	.731	0.3226	1.2676	2415.7	.0596	.731
2800	7.1307-1	-562.3	1.8414	29.160	.138	1.0004	-1.0000	0.3259	1.2644	2457.0	.0618	.730	0.3245	1.2656	2458.1	.0615	.731
2900	6.8847-1	-529.6	1.8529	29.159	.142	1.0007	-1.0000	0.3284	1.2620	2498.1	.0638	.729	0.3263	1.2638	2499.8	.0633	.730
3000	6.6550-1	-496.6	1.8641	29.158	.145	1.0011	-1.0000	0.3312	1.2596	2538.4	.0659	.728	0.3280	1.2621	2540.9	.0652	.729
3100	6.4401-1	-463.4	1.8750	29.157	.148	1.0016	-1.0000	0.3341	1.2570	2577.7	.0681	.727	0.3295	1.2605	2581.4	.0670	.728
3200	6.2384-1	-429.8	1.8856	29.155	.151	1.0023	-1.0001	0.3375	1.2543	2616.2	.0704	.725	0.3310	1.2591	2621.2	.0689	.727
3300	6.0489-1	-395.8	1.8961	29.153	.154	1.0033	-1.0001	0.3413	1.2513	2653.8	.0728	.724	0.3324	1.2577	2660.6	.0707	.727
3400	5.8703-1	-361.5	1.9063	29.149	.158	1.0046	-1.0001	0.3456	1.2481	2690.4	.0754	.722	0.3337	1.2565	2699.4	.0725	.726
3500	5.7017-1	-326.7	1.9164	29.145	.161	1.0062	-1.0002	0.3507	1.2447	2726.1	.0782	.720	0.3350	1.2554	2737.8	.0742	.725
3600	5.5422-1	-291.4	1.9264	29.139	.164	1.0083	-1.0002	0.3565	1.2409	2760.9	.0813	.718	0.3361	1.2543	2775.8	.0760	.724
3700	5.3910-1	-255.4	1.9362	29.131	.167	1.0109	-1.0003	0.3631	1.2369	2794.8	.0846	.716	0.3372	1.2534	2813.4	.0777	.723
3800	5.2474-1	-218.7	1.9460	29.122	.170	1.0140	-1.0004	0.3708	1.2325	2827.8	.0882	.713	0.3382	1.2526	2850.7	.0794	.723
3900	5.1107-1	-181.2	1.9558	29.110	.173	1.0179	-1.0006	0.3796	1.2280	2860.0	.0922	.710	0.3391	1.2518	2887.7	.0811	.722
4000	4.9804-1	-142.7	1.9655	29.095	.175	1.0224	-1.0007	0.3895	1.2232	2891.6	.0967	.707	0.3400	1.2512	2924.4	.0828	.721
4100	4.8559-1	-103.2	1.9752	29.077	.178	1.0278	-1.0009	0.4007	1.2183	2922.5	.1016	.703	0.3408	1.2506	2961.0	.0844	.720
4200	4.7368-1	-62.6	1.9850	29.055	.181	1.0341	-1.0011	0.4131	1.2133	2952.9	.1071	.699	0.3416	1.2501	2997.5	.0861	.719
4300	4.6225-1	-20.6	1.9949	29.030	.184	1.0413	-1.0014	0.4268	1.2082	2983.0	.1131	.694	0.3423	1.2498	3033.9	.0877	.718
4400	4.5128-1	22.9	2.0049	28.999	.187	1.0494	-1.0017	0.4419	1.2033	3012.9	.1198	.688	0.3429	1.2495	3070.2	.0893	.717
4500	4.4071-1	67.8	2.0150	28.964	.189	1.0586	-1.0021	0.4582	1.1984	3042.6	.1271	.683	0.3435	1.2494	3106.6	.0909	.715
4600	4.3053-1	114.5	2.0253	28.924	.192	1.0688	-1.0026	0.4756	1.1938	3072.4	.1351	.676	0.3441	1.2493	3143.0	.0925	.714
4700	4.2070-1	163.0	2.0357	28.878	.195	1.0799	-1.0030	0.4942	1.1894	3102.4	.1438	.669	0.3446	1.2494	3179.6	.0941	.713
4800	4.1119-1	213.4	2.0463	28.826	.197	1.0921	-1.0036	0.5138	1.1853	3132.6	.1533	.661	0.3450	1.2495	3216.4	.0957	.711
4900	4.0198-1	265.8	2.0571	28.767	.200	1.1051	-1.0042	0.5342	1.1815	3163.3	.1636	.653	0.3454	1.2498	3253.3	.0973	.710
5000	3.9305-1	320.3	2.0681	28.702	.202	1.1190	-1.0048	0.5553	1.1781	3194.4	.1746	.644	0.3458	1.2501	3290.6	.0989	.708
5100	3.8438-1	376.9	2.0793	28.630	.205	1.1337	-1.0056	0.5768	1.1751	3226.0	.1864	.634	0.3461	1.2506	3328.1	.1004	.706
5200	3.7596-1	435.6	2.0907	28.552	.207	1.1490	-1.0063	0.5986	1.1724	3258.3	.1991	.624	0.3465	1.2512	3366.0	.1020	.705
5300	3.6776-1	496.6	2.1023	28.467	.210	1.1648	-1.0072	0.6204	1.1701	3291.2	.2125	.613	0.3467	1.2519	3404.2	.1035	.703
5400	3.5979-1	559.7	2.1141	28.375	.212	1.1811	-1.0081	0.6421	1.1682	3324.7	.2268	.601	0.3470	1.2527	3442.8	.1051	.701

TABLE 5C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.069653; EQUIV.RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000;
 DRY AIR

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES					T R		
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S		COND BTU/ FT HR R	PRAN
PRESSURE = 0.01 ATM																
360	1.257-3	-1356.1	1.6565	29.161	0.2510	1.166-3	30.644	.0311	1.000	-1.000	0.2316	1.3885	901	.0098	.734	360
400	1.127-3	-1344.1	1.6878	29.161	0.4055	1.048-3	30.603	.0340	1.000	-1.000	0.2330	1.3861	949	.0108	.731	400
440	9.846-4	-1306.8	1.7756	29.161	2.0235	9.370-4	30.107	.0358	1.000	-1.000	0.2389	1.3814	1002	.0115	.740	440
PRESSURE = 0.10 ATM																
360	1.257-2	-1356.2	1.5179	29.161	0.2428	1.166-2	30.646	.0311	1.000	-1.000	0.2316	1.3885	901	.0098	.734	360
400	1.131-2	-1346.2	1.5441	29.161	0.2615	1.049-2	30.642	.0341	1.000	-1.000	0.2326	1.3863	949	.0109	.730	400
440	1.024-2	-1333.7	1.5738	29.161	0.4134	9.521-3	30.592	.0369	1.000	-1.000	0.2341	1.3837	995	.0119	.727	440
480	9.100-3	-1302.5	1.6410	29.161	1.4435	8.618-3	30.207	.0388	1.000	-1.000	0.2389	1.3796	1044	.0126	.735	480
520	7.679-3	-1227.9	1.7914	29.161	0.2509	7.679-3	29.161	.0392	1.000	-1.000	0.2509	1.3725	1103	.0130	.757	520
PRESSURE = 1.00 ATM																
360	1.257-1	-1356.2	1.3795	29.161	0.2420	1.166-1	30.646	.0311	1.000	-1.000	0.2316	1.3885	901	.0098	.734	360
400	1.131-1	-1346.4	1.4052	29.161	0.2472	1.049-1	30.646	.0341	1.000	-1.000	0.2325	1.3863	949	.0109	.730	400
440	1.028-1	-1336.3	1.4294	29.161	0.2657	9.536-2	30.641	.0370	1.000	-1.000	0.2336	1.3840	994	.0119	.726	440
480	9.394-2	-1324.2	1.4556	29.161	0.3651	8.731-2	30.602	.0397	1.000	-1.000	0.2350	1.3814	1038	.0129	.725	480
520	8.549-2	-1294.5	1.5151	29.161	0.6597	8.012-2	30.424	.0420	1.000	-1.000	0.2379	1.3781	1082	.0137	.728	520
537	8.170-2	-1281.6	1.5396	29.161	0.9099	7.720-2	30.253	.0427	1.000	-1.000	0.2401	1.3763	1102	.0140	.732	537
560	7.556-2	-1253.9	1.5900	29.161	1.5313	7.294-2	29.826	.0433	1.000	-1.000	0.2451	1.3729	1132	.0143	.742	560
600	6.656-2	-1207.7	1.6706	29.161	0.2534	6.656-2	29.161	.0444	1.000	-1.000	0.2534	1.3676	1183	.0149	.757	600
PRESSURE = 10.00 ATM																
360	1.255 0	-1356.2	1.2411	29.161	0.2419	1.166 0	30.646	.0311	1.000	-1.000	0.2316	1.3885	901	.0098	.734	360
400	1.130 0	-1346.4	1.2668	29.161	0.2458	1.049 0	30.646	.0341	1.000	-1.000	0.2325	1.3863	949	.0109	.730	400
440	1.027 0	-1336.5	1.2904	29.161	0.2511	9.538-1	30.646	.0370	1.000	-1.000	0.2336	1.3840	994	.0119	.726	440
480	9.414-1	-1326.3	1.3127	29.161	0.2645	8.742-1	30.642	.0398	1.000	-1.000	0.2347	1.3816	1037	.0129	.724	480
520	8.679-1	-1303.8	1.3579	29.161	0.3270	8.065-1	30.624	.0424	1.000	-1.000	0.2360	1.3790	1079	.0139	.723	520
537	8.398-1	-1298.2	1.3686	29.161	0.3500	7.810-1	30.607	.0435	1.000	-1.000	0.2366	1.3778	1096	.0142	.723	537
560	8.022-1	-1289.5	1.3845	29.161	0.4018	7.474-1	30.564	.0449	1.000	-1.000	0.2377	1.3762	1120	.0147	.725	560
600	7.389-1	-1270.4	1.4174	29.161	0.5773	6.938-1	30.398	.0471	1.000	-1.000	0.2406	1.3728	1161	.0155	.729	600
640	6.708-1	-1240.7	1.4651	29.161	0.9509	6.420-1	30.004	.0487	1.000	-1.000	0.2458	1.3685	1205	.0162	.739	640
680	5.888-1	-1188.9	1.5434	29.161	1.7434	5.878-1	29.189	.0494	1.000	-1.000	0.2557	1.3625	1256	.0167	.755	680
PRESSURE = 50.00 ATM																
360	6.236 0	-1356.2	1.1444	29.161	0.2419	5.829 0	30.646	.0311	1.000	-1.000	0.2316	1.3885	901	.0098	.734	360
400	5.617 0	-1346.4	1.1701	29.161	0.2456	5.246 0	30.646	.0341	1.000	-1.000	0.2325	1.3863	949	.0109	.730	400
440	5.109 0	-1336.5	1.1937	29.161	0.2498	4.769 0	30.646	.0370	1.000	-1.000	0.2335	1.3840	994	.0119	.726	440
480	4.686 0	-1326.4	1.2156	29.161	0.2556	4.371 0	30.645	.0398	1.000	-1.000	0.2346	1.3816	1037	.0129	.724	480
520	4.328 0	-1304.6	1.2595	29.161	0.2985	4.035 0	30.642	.0425	1.000	-1.000	0.2358	1.3791	1079	.0139	.722	520
537	4.193 0	-1299.6	1.2690	29.161	0.3032	3.909 0	30.638	.0436	1.000	-1.000	0.2363	1.3780	1095	.0143	.722	537
560	4.017 0	-1292.4	1.2821	29.161	0.3139	3.745 0	30.630	.0451	1.000	-1.000	0.2371	1.3764	1119	.0148	.723	560
600	3.740 0	-1279.3	1.3048	29.161	0.3483	3.492 0	30.597	.0475	1.000	-1.000	0.2386	1.3737	1157	.0157	.725	600
640	3.486 0	-1264.1	1.3292	29.161	0.4154	3.265 0	30.518	.0498	1.000	-1.000	0.2406	1.3706	1195	.0165	.728	640
680	3.240 0	-1245.4	1.3576	29.161	0.5331	3.057 0	30.355	.0519	1.000	-1.000	0.2436	1.3672	1234	.0173	.732	680
720	2.988 0	-1220.5	1.3932	29.161	0.7275	2.858 0	30.053	.0536	1.000	-1.000	0.2480	1.3633	1274	.0180	.738	720
760	2.714 0	-1185.6	1.4402	29.161	1.0423	2.661 0	29.541	.0548	1.000	-1.000	0.2548	1.3585	1318	.0187	.747	760

TABLE 6.1D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 0.14696 LB/IN2 (0.01 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS							FROZEN COMPOSITIONS				
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN		
360	1.1110-3	-1261.9	1.8598	29.206	.028	1.0000	-1.0000	0.2465	1.3809	920.0	.0090	.771	0.2465	1.3809	920.0	.0090	.771
380	1.0525-3	-1256.9	1.8732	29.206	.030	1.0000	-1.0000	0.2470	1.3798	944.8	.0095	.767	0.2470	1.3798	944.8	.0095	.767
400	9.9989-4	-1252.0	1.8859	29.206	.031	1.0000	-1.0000	0.2476	1.3786	968.9	.0101	.763	0.2476	1.3786	968.9	.0101	.763
420	9.5228-4	-1247.0	1.8979	29.206	.032	1.0000	-1.0000	0.2482	1.3773	992.4	.0106	.760	0.2482	1.3773	992.4	.0106	.760
440	9.0899-4	-1242.1	1.9095	29.206	.034	1.0000	-1.0000	0.2488	1.3760	1015.2	.0111	.757	0.2488	1.3761	1015.2	.0111	.757
460	8.6947-4	-1237.1	1.9206	29.206	.035	1.0000	-1.0000	0.2495	1.3747	1037.5	.0117	.755	0.2494	1.3747	1037.6	.0117	.755
480	8.3324-4	-1232.1	1.9312	29.206	.037	1.0000	-1.0000	0.2502	1.3733	1059.3	.0122	.753	0.2501	1.3734	1059.4	.0122	.753
500	7.9991-4	-1227.1	1.9414	29.206	.038	1.0001	-1.0000	0.2509	1.3718	1080.6	.0127	.751	0.2508	1.3720	1080.7	.0127	.752
520	7.6914-4	-1222.0	1.9513	29.206	.039	1.0001	-1.0000	0.2517	1.3702	1101.4	.0132	.749	0.2514	1.3706	1101.5	.0132	.751
537	7.4525-4	-1217.8	1.9593	29.206	.040	1.0002	-1.0000	0.2524	1.3688	1118.3	.0137	.748	0.2520	1.3695	1118.6	.0136	.750
540	7.4065-4	-1217.0	1.9608	29.206	.041	1.0002	-1.0000	0.2526	1.3685	1121.6	.0138	.747	0.2522	1.3692	1121.9	.0137	.750
560	7.1419-4	-1211.9	1.9700	29.206	.042	1.0003	-1.0000	0.2536	1.3666	1141.4	.0143	.745	0.2529	1.3678	1141.9	.0142	.750
580	6.8955-4	-1206.8	1.9789	29.205	.043	1.0006	-1.0000	0.2548	1.3645	1160.7	.0148	.743	0.2536	1.3663	1161.5	.0146	.751
600	6.6655-4	-1201.7	1.9876	29.204	.045	1.0009	-1.0000	0.2563	1.3620	1179.5	.0155	.738	0.2544	1.3648	1180.7	.0151	.751
620	6.4502-4	-1196.6	1.9960	29.203	.046	1.0014	-1.0000	0.2580	1.3591	1197.8	.0161	.732	0.2552	1.3633	1199.6	.0156	.751
640	6.2483-4	-1191.4	2.0043	29.202	.047	1.0022	-1.0001	0.2603	1.3557	1215.4	.0169	.724	0.2560	1.3618	1218.2	.0160	.751
660	6.0585-4	-1186.2	2.0123	29.199	.048	1.0033	-1.0001	0.2630	1.3517	1232.5	.0178	.712	0.2568	1.3603	1236.4	.0165	.750
680	5.8796-4	-1180.9	2.0202	29.196	.049	1.0048	-1.0002	0.2665	1.3469	1248.9	.0189	.698	0.2576	1.3588	1254.4	.0170	.750
700	5.7106-4	-1175.5	2.0280	29.191	.051	1.0069	-1.0003	0.2708	1.3412	1264.6	.0201	.681	0.2585	1.3572	1272.1	.0175	.749
720	5.5507-4	-1170.0	2.0357	29.184	.052	1.0097	-1.0004	0.2762	1.3347	1279.5	.0216	.661	0.2593	1.3557	1289.6	.0180	.748
740	5.3990-4	-1164.5	2.0433	29.175	.053	1.0133	-1.0005	0.2828	1.3272	1293.7	.0234	.639	0.2602	1.3542	1306.8	.0185	.747
760	5.2548-4	-1158.7	2.0510	29.163	.054	1.0178	-1.0007	0.2909	1.3189	1307.2	.0255	.616	0.2612	1.3527	1323.9	.0189	.746
780	5.1173-4	-1152.8	2.0587	29.147	.055	1.0236	-1.0010	0.3006	1.3097	1320.1	.0280	.593	0.2622	1.3512	1340.8	.0194	.744
800	4.9859-4	-1146.7	2.0664	29.127	.056	1.0307	-1.0013	0.3122	1.2998	1332.3	.0309	.570	0.2632	1.3497	1357.6	.0200	.743
820	4.8601-4	-1140.3	2.0743	29.102	.057	1.0392	-1.0017	0.3257	1.2896	1344.1	.0341	.549	0.2642	1.3482	1374.3	.0205	.741
840	4.7394-4	-1133.6	2.0823	29.071	.059	1.0492	-1.0022	0.3412	1.2791	1355.6	.0376	.531	0.2653	1.3468	1391.0	.0210	.739
860	4.6232-4	-1126.6	2.0906	29.034	.060	1.0609	-1.0028	0.3588	1.2687	1366.9	.0414	.516	0.2664	1.3454	1407.6	.0216	.737
880	4.5111-4	-1119.3	2.0990	28.989	.061	1.0740	-1.0034	0.3783	1.2586	1378.3	.0454	.505	0.2676	1.3441	1424.3	.0221	.734
900	4.4029-4	-1111.5	2.1078	28.936	.062	1.0885	-1.0042	0.3995	1.2490	1389.8	.0495	.499	0.2688	1.3428	1441.0	.0227	.730
920	4.2981-4	-1103.3	2.1168	28.875	.063	1.1040	-1.0050	0.4221	1.2401	1401.6	.0534	.496	0.2701	1.3416	1457.8	.0234	.726
940	4.1965-4	-1094.6	2.1261	28.806	.064	1.1202	-1.0058	0.4457	1.2320	1413.8	.0572	.498	0.2714	1.3405	1474.8	.0240	.722
960	4.0980-4	-1085.5	2.1358	28.728	.065	1.1364	-1.0067	0.4695	1.2246	1426.4	.0605	.504	0.2728	1.3394	1491.8	.0247	.717
980	4.0024-4	-1075.8	2.1457	28.643	.066	1.1521	-1.0075	0.4930	1.2182	1439.6	.0633	.514	0.2742	1.3385	1509.0	.0254	.712
1000	3.9098-4	-1065.8	2.1559	28.551	.067	1.1662	-1.0083	0.5150	1.2127	1453.2	.0654	.528	0.2756	1.3376	1526.2	.0261	.707
1020	3.8201-4	-1055.3	2.1663	28.453	.068	1.1776	-1.0089	0.5342	1.2081	1467.4	.0667	.545	0.2770	1.3368	1543.6	.0268	.702
1040	3.7334-4	-1044.4	2.1768	28.353	.069	1.1848	-1.0093	0.5483	1.2048	1482.3	.0669	.565	0.2784	1.3361	1561.0	.0276	.697
1060	3.6500-4	-1033.4	2.1873	28.253	.070	1.1855	-1.0094	0.5544	1.2031	1498.1	.0659	.589	0.2798	1.3355	1578.4	.0283	.692
1080	3.5703-4	-1022.3	2.1976	28.157	.071	1.1773	-1.0090	0.5483	1.2038	1515.2	.0634	.614	0.2811	1.3349	1595.5	.0290	.688
1100	3.4945-4	-1011.5	2.2075	28.070	.072	1.1581	-1.0080	0.5267	1.2080	1534.2	.0592	.640	0.2824	1.3343	1612.4	.0297	.684
1120	3.4232-4	-1001.4	2.2167	27.997	.073	1.1285	-1.0065	0.4895	1.2166	1555.6	.0538	.663	0.2835	1.3337	1628.7	.0303	.682
1140	3.3565-4	-992.0	2.2250	27.942	.074	1.0935	-1.0048	0.4438	1.2296	1579.3	.0482	.678	0.2845	1.3330	1644.4	.0309	.680

TABLE 6.1D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 0.14696 LB/IN² (0.01 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.2943-4	-983.6	2.2323	27.905	.075	1.0610	-1.0031	0.4007	1.2451	1604.2	.0436	.686	0.2854	1.3322	1659.3	.0314	.679
1180	3.2358-4	-975.9	2.2388	27.882	.076	1.0365	-1.0019	0.3682	1.2593	1627.8	.0405	.687	0.2863	1.3312	1673.7	.0319	.679
1200	3.1804-4	-968.8	2.2448	27.869	.076	1.0207	-1.0011	0.3477	1.2698	1648.8	.0388	.685	0.2870	1.3302	1687.6	.0323	.679
1220	3.1274-4	-962.0	2.2505	27.862	.077	1.0114	-1.0006	0.3360	1.2762	1666.9	.0380	.684	0.2878	1.3292	1701.1	.0328	.680
1240	3.0765-4	-955.3	2.2559	27.858	.078	1.0062	-1.0003	0.3298	1.2796	1682.8	.0378	.682	0.2885	1.3281	1714.4	.0332	.680
1260	3.0275-4	-948.7	2.2611	27.856	.079	1.0034	-1.0002	0.3268	1.2812	1697.5	.0379	.682	0.2892	1.3271	1727.6	.0336	.681
1280	2.9800-4	-942.2	2.2663	27.855	.080	1.0019	-1.0001	0.3254	1.2818	1711.3	.0382	.682	0.2900	1.3260	1740.6	.0340	.682
1300	2.9341-4	-935.7	2.2713	27.854	.081	1.0011	-1.0001	0.3249	1.2818	1724.7	.0385	.682	0.2907	1.3250	1753.5	.0344	.682
1320	2.8896-4	-929.2	2.2763	27.854	.082	1.0006	-1.0000	0.3248	1.2816	1737.8	.0389	.682	0.2914	1.3239	1766.2	.0349	.683
1340	2.8465-4	-922.7	2.2812	27.853	.083	1.0003	-1.0000	0.3249	1.2814	1750.7	.0393	.682	0.2921	1.3229	1778.9	.0353	.684
1360	2.8046-4	-916.2	2.2860	27.853	.083	1.0002	-1.0000	0.3251	1.2811	1763.5	.0398	.682	0.2928	1.3219	1791.4	.0357	.685
1380	2.7640-4	-909.7	2.2907	27.853	.084	1.0001	-1.0000	0.3253	1.2808	1776.2	.0402	.682	0.2935	1.3209	1803.8	.0361	.686
1400	2.7245-4	-903.2	2.2954	27.853	.085	1.0001	-1.0000	0.3255	1.2805	1788.9	.0406	.683	0.2942	1.3199	1816.2	.0365	.686
1420	2.6861-4	-896.7	2.3000	27.853	.086	1.0000	-1.0000	0.3257	1.2803	1801.4	.0410	.683	0.2949	1.3189	1828.4	.0369	.687
1440	2.6488-4	-890.2	2.3046	27.853	.087	1.0000	-1.0000	0.3259	1.2801	1813.9	.0414	.683	0.2956	1.3179	1840.5	.0373	.688
1460	2.6125-4	-883.7	2.3091	27.853	.088	1.0000	-1.0000	0.3260	1.2799	1826.4	.0418	.684	0.2963	1.3169	1852.6	.0377	.689
1480	2.5772-4	-877.1	2.3135	27.853	.088	1.0000	-1.0000	0.3262	1.2797	1838.7	.0422	.684	0.2970	1.3159	1864.6	.0381	.689
1500	2.5428-4	-870.6	2.3179	27.853	.089	1.0000	-1.0000	0.3263	1.2796	1851.0	.0426	.684	0.2977	1.3150	1876.4	.0385	.690
1520	2.5094-4	-864.1	2.3222	27.853	.090	1.0000	-1.0000	0.3264	1.2795	1863.2	.0429	.685	0.2983	1.3140	1888.2	.0389	.691
1540	2.4768-4	-857.6	2.3265	27.853	.091	1.0000	-1.0000	0.3265	1.2794	1875.4	.0433	.685	0.2990	1.3131	1899.9	.0393	.692
1560	2.4450-4	-851.0	2.3307	27.853	.092	1.0000	-1.0000	0.3265	1.2793	1887.5	.0437	.686	0.2997	1.3122	1911.5	.0397	.692
1580	2.4141-4	-844.5	2.3349	27.853	.092	1.0000	-1.0000	0.3266	1.2793	1899.5	.0440	.686	0.3004	1.3113	1923.1	.0401	.693
1600	2.3839-4	-838.0	2.3390	27.853	.093	1.0000	-1.0000	0.3267	1.2792	1911.4	.0444	.686	0.3010	1.3104	1934.6	.0405	.694
1620	2.3545-4	-831.4	2.3430	27.853	.094	1.0000	-1.0000	0.3267	1.2791	1923.3	.0448	.687	0.3017	1.3095	1946.0	.0409	.694
1640	2.3258-4	-824.9	2.3470	27.853	.095	1.0000	-1.0000	0.3268	1.2791	1935.1	.0451	.687	0.3023	1.3086	1957.3	.0413	.695
1660	2.2978-4	-818.4	2.3510	27.853	.096	1.0000	-1.0000	0.3268	1.2790	1946.8	.0455	.688	0.3030	1.3078	1968.5	.0417	.696
1680	2.2704-4	-811.8	2.3549	27.853	.096	1.0000	-1.0000	0.3268	1.2790	1958.5	.0458	.688	0.3036	1.3069	1979.7	.0421	.696
1700	2.2437-4	-805.3	2.3588	27.853	.097	1.0000	-1.0000	0.3269	1.2790	1970.1	.0462	.689	0.3042	1.3061	1990.8	.0425	.697
1720	2.2176-4	-798.8	2.3626	27.853	.098	1.0000	-1.0000	0.3269	1.2789	1981.6	.0465	.689	0.3049	1.3053	2001.9	.0429	.697
1740	2.1921-4	-792.2	2.3664	27.853	.099	1.0000	-1.0000	0.3270	1.2789	1993.0	.0468	.690	0.3055	1.3045	2012.9	.0432	.698
1760	2.1672-4	-785.7	2.3701	27.853	.100	1.0000	-1.0000	0.3270	1.2788	2004.4	.0472	.690	0.3061	1.3037	2023.8	.0436	.698
1780	2.1428-4	-779.1	2.3738	27.853	.100	1.0000	-1.0000	0.3271	1.2788	2015.7	.0475	.690	0.3067	1.3029	2034.7	.0440	.699
1800	2.1190-4	-772.6	2.3775	27.853	.101	1.0000	-1.0000	0.3271	1.2787	2027.0	.0479	.691	0.3073	1.3022	2045.5	.0444	.699
1900	2.0075-4	-739.9	2.3952	27.853	.105	1.0000	-1.0000	0.3274	1.2784	2082.3	.0495	.693	0.3101	1.2986	2098.7	.0464	.701
2000	1.9071-4	-707.1	2.4120	27.853	.109	1.0000	-1.0000	0.3278	1.2779	2136.0	.0512	.695	0.3128	1.2953	2150.4	.0483	.703
2100	1.8163-4	-674.3	2.4280	27.853	.112	1.0000	-1.0000	0.3284	1.2773	2188.1	.0529	.696	0.3153	1.2922	2200.9	.0502	.705
2200	1.7338-4	-641.4	2.4433	27.853	.116	1.0000	-1.0000	0.3292	1.2764	2238.9	.0546	.698	0.3178	1.2892	2250.1	.0521	.706
2300	1.6584-4	-608.5	2.4579	27.853	.119	1.0000	-1.0000	0.3302	1.2754	2288.3	.0563	.699	0.3202	1.2865	2298.2	.0540	.707
2400	1.5893-4	-575.4	2.4720	27.853	.123	1.0000	-1.0000	0.3312	1.2743	2336.5	.0580	.700	0.3224	1.2839	2345.3	.0559	.708
2500	1.5257-4	-542.2	2.4855	27.853	.126	1.0001	-1.0000	0.3324	1.2731	2383.6	.0598	.701	0.3245	1.2815	2391.5	.0577	.709

TABLE 6.1D CONCLUDED - PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 0.14696 LB/IN2 (0.01 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4670-4	-508.9	2.4986	27.853	.130	1.0002	-1.0000	0.3337	1.2718	2429.5	.0617	.700	0.3266	1.2793	2436.7	.0596	.709
2700	1.4127-4	-475.5	2.5112	27.853	.133	1.0003	-1.0000	0.3352	1.2703	2474.4	.0637	.699	0.3285	1.2772	2481.1	.0615	.710
2800	1.3622-4	-441.8	2.5234	27.852	.136	1.0006	-1.0000	0.3370	1.2687	2518.2	.0660	.696	0.3303	1.2752	2524.7	.0633	.710
2900	1.3152-4	-408.0	2.5353	27.852	.139	1.0010	-1.0000	0.3393	1.2667	2560.8	.0685	.690	0.3321	1.2734	2567.6	.0652	.710
3000	1.2713-4	-374.0	2.5469	27.850	.143	1.0018	-1.0001	0.3423	1.2642	2602.1	.0717	.681	0.3337	1.2717	2609.8	.0670	.710
3100	1.2302-4	-339.5	2.5581	27.848	.146	1.0031	-1.0001	0.3465	1.2610	2641.9	.0756	.669	0.3353	1.2701	2651.4	.0689	.710
3200	1.1916-4	-304.6	2.5692	27.844	.149	1.0052	-1.0002	0.3526	1.2567	2679.6	.0806	.652	0.3368	1.2687	2692.5	.0707	.710
3300	1.1552-4	-268.9	2.5802	27.839	.152	1.0087	-1.0003	0.3619	1.2505	2714.8	.0874	.630	0.3381	1.2674	2733.0	.0726	.709
3400	1.1209-4	-232.1	2.5912	27.829	.155	1.0147	-1.0005	0.3765	1.2417	2746.4	.0967	.604	0.3395	1.2662	2773.3	.0744	.708
3500	1.0882-4	-193.3	2.6024	27.814	.158	1.0247	-1.0008	0.4002	1.2293	2773.4	.1098	.577	0.3407	1.2651	2813.4	.0763	.707
3600	1.0571-4	-151.5	2.6142	27.788	.161	1.0417	-1.0013	0.4389	1.2126	2794.7	.1290	.549	0.3419	1.2643	2853.7	.0781	.706
3700	1.0269-4	-104.7	2.6270	27.747	.164	1.0700	-1.0023	0.5016	1.1920	2811.3	.1572	.524	0.3430	1.2637	2894.5	.0800	.704
3800	9.9750-5	-50.1	2.6416	27.680	.167	1.1149	-1.0038	0.5973	1.1702	2826.2	.1987	.502	0.3440	1.2635	2936.7	.0819	.702
3900	9.6826-5	16.0	2.6587	27.575	.170	1.1792	-1.0061	0.7299	1.1508	2844.7	.2575	.482	0.3449	1.2639	2981.2	.0840	.698
4000	9.3884-5	96.9	2.6792	27.423	.173	1.2615	-1.0092	0.8933	1.1361	2870.4	.3352	.460	0.3458	1.2649	3028.8	.0861	.693
4100	9.0900-5	195.3	2.7035	27.215	.175	1.3569	-1.0130	1.0758	1.1260	2904.2	.4314	.437	0.3466	1.2667	3080.3	.0883	.687
4200	8.7867-5	312.4	2.7317	26.949	.178	1.4612	-1.0173	1.2682	1.1195	2945.4	.5438	.414	0.3473	1.2693	3136.2	.0908	.679
4300	8.4788-5	449.1	2.7639	26.624	.180	1.5718	-1.0221	1.4660	1.1155	2993.0	.6694	.394	0.3480	1.2728	3197.1	.0935	.669
4400	8.1672-5	605.7	2.7999	26.242	.182	1.6865	-1.0275	1.6663	1.1132	3046.4	.8032	.378	0.3487	1.2772	3263.0	.0966	.658
4500	7.8533-5	782.3	2.8395	25.806	.184	1.8016	-1.0331	1.8641	1.1122	3105.3	.9370	.367	0.3495	1.2824	3334.4	.1000	.644
4600	7.5393-5	978.1	2.8826	25.325	.186	1.9107	-1.0388	2.0491	1.1123	3169.4	*****	.361	0.3503	1.2884	3411.1	.1039	.629
4700	7.2282-5	1191.1	2.9284	24.808	.188	2.0037	-1.0440	2.2048	1.1132	3238.3	*****	.360	0.3512	1.2953	3493.0	.1081	.612
4800	6.9245-5	1417.3	2.9760	24.271	.191	2.0682	-1.0482	2.3099	1.1152	3311.4	*****	.364	0.3521	1.3027	3579.0	.1126	.596
4900	6.6333-5	1650.7	3.0241	23.735	.193	2.0921	-1.0507	2.3430	1.1181	3387.7	*****	.372	0.3531	1.3105	3667.6	.1173	.580
5000	6.3598-5	1883.1	3.0711	23.221	.195	2.0681	-1.0509	2.2903	1.1221	3465.9	*****	.383	0.3541	1.3184	3756.9	.1221	.565
5100	6.1084-5	2105.9	3.1152	22.749	.197	1.9975	-1.0488	2.1537	1.1273	3544.8	*****	.397	0.3551	1.3259	3844.4	.1267	.553
5200	5.8818-5	2311.6	3.1552	22.335	.199	1.8908	-1.0447	1.9521	1.1340	3623.1	.9471	.411	0.3560	1.3329	3928.0	.1310	.542
5300	5.6805-5	2495.2	3.1901	21.985	.202	1.7644	-1.0393	1.7154	1.1424	3700.4	.8133	.426	0.3569	1.3389	4006.0	.1350	.534
5400	5.5029-5	2654.6	3.2199	21.699	.204	1.6344	-1.0334	1.4742	1.1527	3776.5	.6852	.440	0.3576	1.3439	4077.8	.1387	.527

TABLE 6.2D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN² (0.10 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.1110-2	-1261.9	1.7033	29.206	.028	1.0000	-1.0000	0.2465	1.3809	920.0	.0090	.771	0.2465	1.3809	920.0	.0090	.771
380	1.0525-2	-1256.9	1.7166	29.206	.030	1.0000	-1.0000	0.2470	1.3798	944.8	.0095	.767	0.2470	1.3798	944.8	.0095	.767
400	9.9989-3	-1252.0	1.7293	29.206	.031	1.0000	-1.0000	0.2476	1.3786	968.9	.0101	.763	0.2476	1.3786	968.9	.0101	.763
420	9.5227-3	-1247.0	1.7414	29.206	.032	1.0000	-1.0000	0.2482	1.3773	992.4	.0106	.760	0.2482	1.3773	992.4	.0106	.760
440	9.0899-3	-1242.1	1.7529	29.206	.034	1.0000	-1.0000	0.2488	1.3760	1015.2	.0111	.757	0.2488	1.3761	1015.2	.0111	.757
460	8.6947-3	-1237.1	1.7640	29.206	.035	1.0000	-1.0000	0.2494	1.3747	1037.6	.0117	.755	0.2494	1.3747	1037.6	.0117	.755
480	8.3324-3	-1232.1	1.7746	29.206	.037	1.0000	-1.0000	0.2501	1.3734	1059.4	.0122	.753	0.2501	1.3734	1059.4	.0122	.753
500	7.9991-3	-1227.1	1.7849	29.206	.038	1.0000	-1.0000	0.2508	1.3720	1080.6	.0127	.752	0.2508	1.3720	1080.7	.0127	.752
520	7.6914-3	-1222.0	1.7947	29.206	.039	1.0000	-1.0000	0.2515	1.3705	1101.5	.0132	.750	0.2514	1.3706	1101.5	.0132	.751
537	7.4525-3	-1217.8	1.8027	29.206	.040	1.0001	-1.0000	0.2522	1.3693	1118.5	.0136	.750	0.2520	1.3695	1118.5	.0136	.750
540	7.4065-3	-1217.0	1.8042	29.206	.041	1.0001	-1.0000	0.2523	1.3690	1121.8	.0137	.749	0.2522	1.3692	1121.9	.0137	.750
560	7.1420-3	-1211.9	1.8134	29.206	.042	1.0001	-1.0000	0.2531	1.3674	1141.8	.0142	.749	0.2529	1.3678	1141.9	.0142	.750
580	6.8957-3	-1206.9	1.8223	29.206	.043	1.0002	-1.0000	0.2540	1.3657	1161.2	.0147	.748	0.2536	1.3663	1161.5	.0146	.751
600	6.6658-3	-1201.8	1.8309	29.206	.045	1.0003	-1.0000	0.2550	1.3639	1180.3	.0152	.747	0.2544	1.3648	1180.7	.0151	.751
620	6.4507-3	-1196.7	1.8393	29.205	.046	1.0005	-1.0000	0.2561	1.3620	1199.0	.0157	.745	0.2551	1.3633	1199.6	.0155	.751
640	6.2490-3	-1191.5	1.8475	29.205	.047	1.0007	-1.0000	0.2573	1.3598	1217.2	.0163	.742	0.2559	1.3618	1218.1	.0160	.751
660	6.0595-3	-1186.4	1.8554	29.204	.048	1.0010	-1.0000	0.2587	1.3575	1235.0	.0169	.738	0.2567	1.3603	1236.3	.0165	.751
680	5.8810-3	-1181.2	1.8632	29.203	.049	1.0015	-1.0001	0.2604	1.3548	1252.4	.0176	.732	0.2576	1.3587	1254.2	.0170	.750
700	5.7127-3	-1176.0	1.8707	29.201	.051	1.0022	-1.0001	0.2623	1.3519	1269.4	.0183	.725	0.2584	1.3572	1271.8	.0175	.749
720	5.5536-3	-1170.7	1.8782	29.199	.052	1.0031	-1.0001	0.2646	1.3485	1285.8	.0191	.717	0.2592	1.3557	1289.2	.0179	.749
740	5.4030-3	-1165.4	1.8854	29.196	.053	1.0043	-1.0002	0.2674	1.3448	1301.8	.0200	.707	0.2601	1.3541	1306.3	.0184	.748
760	5.2601-3	-1160.0	1.8926	29.192	.054	1.0058	-1.0002	0.2706	1.3406	1317.3	.0211	.695	0.2610	1.3525	1323.2	.0189	.748
780	5.1243-3	-1154.5	1.8997	29.187	.055	1.0077	-1.0003	0.2744	1.3359	1332.3	.0222	.681	0.2619	1.3510	1339.8	.0193	.747
800	4.9951-3	-1149.0	1.9067	29.181	.056	1.0101	-1.0004	0.2789	1.3307	1346.8	.0236	.666	0.2628	1.3494	1356.2	.0198	.747
820	4.8719-3	-1143.4	1.9136	29.172	.057	1.0131	-1.0006	0.2842	1.3249	1360.8	.0251	.650	0.2637	1.3479	1372.5	.0203	.746
840	4.7542-3	-1137.6	1.9206	29.162	.059	1.0167	-1.0007	0.2904	1.3187	1374.2	.0268	.633	0.2647	1.3464	1388.6	.0208	.745
860	4.6415-3	-1131.8	1.9275	29.149	.060	1.0211	-1.0010	0.2975	1.3119	1387.3	.0288	.615	0.2657	1.3449	1404.6	.0213	.745
880	4.5336-3	-1125.7	1.9344	29.133	.061	1.0263	-1.0012	0.3058	1.3048	1399.9	.0310	.598	0.2667	1.3434	1420.4	.0218	.744
900	4.4299-3	-1119.5	1.9414	29.114	.062	1.0324	-1.0015	0.3151	1.2973	1412.1	.0334	.582	0.2677	1.3419	1436.1	.0223	.742
920	4.3302-3	-1113.1	1.9484	29.091	.063	1.0395	-1.0019	0.3257	1.2896	1424.0	.0361	.567	0.2687	1.3405	1451.8	.0228	.741
940	4.2341-3	-1106.5	1.9556	29.064	.064	1.0475	-1.0023	0.3376	1.2816	1435.6	.0389	.553	0.2698	1.3391	1467.4	.0233	.739
960	4.1414-3	-1099.6	1.9628	29.032	.065	1.0567	-1.0028	0.3509	1.2736	1447.1	.0420	.542	0.2709	1.3377	1483.0	.0239	.736
980	4.0517-3	-1092.4	1.9702	28.995	.066	1.0668	-1.0033	0.3655	1.2657	1458.4	.0451	.533	0.2721	1.3364	1498.6	.0244	.734
1000	3.9649-3	-1085.0	1.9777	28.953	.067	1.0780	-1.0039	0.3815	1.2578	1469.7	.0484	.527	0.2732	1.3352	1514.2	.0250	.731
1020	3.8807-3	-1077.2	1.9855	28.905	.068	1.0900	-1.0046	0.3989	1.2501	1481.0	.0517	.524	0.2744	1.3340	1529.9	.0256	.728
1040	3.7989-3	-1069.0	1.9934	28.851	.069	1.1030	-1.0053	0.4176	1.2426	1492.3	.0550	.523	0.2756	1.3329	1545.6	.0262	.725
1060	3.7195-3	-1060.5	2.0015	28.791	.070	1.1165	-1.0061	0.4374	1.2354	1503.8	.0582	.525	0.2768	1.3318	1561.4	.0268	.721
1080	3.6422-3	-1051.5	2.0099	28.724	.071	1.1305	-1.0068	0.4582	1.2285	1515.4	.0612	.531	0.2781	1.3309	1577.3	.0275	.718
1100	3.5670-3	-1042.1	2.0185	28.652	.072	1.1445	-1.0076	0.4796	1.2221	1527.3	.0640	.538	0.2793	1.3300	1593.3	.0281	.714
1120	3.4937-3	-1032.3	2.0273	28.574	.073	1.1580	-1.0083	0.5008	1.2162	1539.5	.0664	.549	0.2806	1.3292	1609.5	.0288	.710
1140	3.4225-3	-1022.1	2.0364	28.491	.074	1.1701	-1.0090	0.5208	1.2110	1552.1	.0684	.562	0.2819	1.3285	1625.7	.0294	.706

TABLE 6.2D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN2 (0.10 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.3532-3	-1011.5	2.0456	28.404	.075	1.1796	-1.0095	0.5380	1.2067	1565.3	.0696	.577	0.2831	1.3279	1642.1	.0301	.702
1180	3.2861-3	-1000.6	2.0549	28.316	.076	1.1849	-1.0098	0.5498	1.2038	1579.3	.0698	.595	0.2843	1.3274	1658.4	.0308	.698
1200	3.2213-3	-989.6	2.0642	28.228	.076	1.1840	-1.0097	0.5532	1.2027	1594.4	.0688	.615	0.2855	1.3270	1674.7	.0315	.694
1220	3.1591-3	-978.6	2.0733	28.144	.077	1.1747	-1.0093	0.5451	1.2039	1610.8	.0663	.636	0.2866	1.3266	1690.9	.0321	.691
1240	3.0997-3	-967.9	2.0820	28.068	.078	1.1561	-1.0083	0.5238	1.2081	1629.0	.0624	.657	0.2877	1.3261	1706.7	.0327	.689
1260	3.0436-3	-957.7	2.0901	28.004	.079	1.1295	-1.0069	0.4908	1.2157	1649.1	.0576	.674	0.2887	1.3256	1722.1	.0333	.687
1280	2.9906-3	-948.3	2.0975	27.953	.080	1.0988	-1.0053	0.4518	1.2264	1671.0	.0527	.686	0.2896	1.3250	1736.9	.0338	.685
1300	2.9408-3	-939.6	2.1042	27.917	.081	1.0697	-1.0037	0.4142	1.2388	1693.6	.0484	.691	0.2905	1.3243	1751.1	.0343	.685
1320	2.8937-3	-931.7	2.1103	27.893	.082	1.0460	-1.0025	0.3836	1.2509	1715.6	.0453	.692	0.2913	1.3235	1764.7	.0348	.685
1340	2.8489-3	-924.2	2.1159	27.877	.083	1.0290	-1.0016	0.3618	1.2609	1735.9	.0433	.690	0.2920	1.3226	1777.9	.0352	.685
1360	2.8061-3	-917.1	2.1212	27.868	.083	1.0178	-1.0010	0.3476	1.2680	1754.1	.0422	.688	0.2928	1.3217	1790.8	.0356	.685
1380	2.7648-3	-910.3	2.1262	27.862	.084	1.0108	-1.0006	0.3389	1.2728	1770.4	.0416	.686	0.2935	1.3208	1803.5	.0361	.686
1400	2.7250-3	-903.6	2.1310	27.858	.085	1.0065	-1.0004	0.3337	1.2756	1785.3	.0415	.685	0.2942	1.3198	1815.9	.0365	.687
1420	2.6864-3	-896.9	2.1357	27.856	.086	1.0040	-1.0002	0.3306	1.2773	1799.3	.0415	.685	0.2949	1.3188	1828.3	.0369	.687
1440	2.6490-3	-890.3	2.1403	27.855	.087	1.0024	-1.0001	0.3289	1.2783	1812.6	.0417	.684	0.2956	1.3178	1840.5	.0373	.688
1460	2.6126-3	-883.8	2.1449	27.854	.088	1.0015	-1.0001	0.3279	1.2788	1825.6	.0420	.684	0.2963	1.3169	1852.5	.0377	.689
1480	2.5773-3	-877.2	2.1493	27.854	.088	1.0009	-1.0001	0.3273	1.2791	1838.2	.0423	.684	0.2970	1.3159	1864.5	.0381	.689
1500	2.5429-3	-870.7	2.1537	27.854	.089	1.0006	-1.0000	0.3270	1.2792	1850.7	.0426	.685	0.2977	1.3150	1876.4	.0385	.690
1520	2.5094-3	-864.1	2.1580	27.854	.090	1.0004	-1.0000	0.3268	1.2792	1863.0	.0430	.685	0.2983	1.3140	1888.2	.0389	.691
1540	2.4768-3	-857.6	2.1623	27.853	.091	1.0002	-1.0000	0.3268	1.2792	1875.3	.0433	.685	0.2990	1.3131	1899.9	.0393	.692
1560	2.4451-3	-851.0	2.1665	27.853	.092	1.0002	-1.0000	0.3267	1.2792	1887.4	.0437	.686	0.2997	1.3122	1911.5	.0397	.692
1580	2.4141-3	-844.5	2.1707	27.853	.092	1.0001	-1.0000	0.3267	1.2792	1899.4	.0440	.686	0.3004	1.3113	1923.1	.0401	.693
1600	2.3839-3	-838.0	2.1748	27.853	.093	1.0001	-1.0000	0.3267	1.2792	1911.4	.0444	.687	0.3010	1.3104	1934.6	.0405	.694
1620	2.3545-3	-831.4	2.1788	27.853	.094	1.0001	-1.0000	0.3268	1.2791	1923.3	.0448	.687	0.3017	1.3095	1946.0	.0409	.694
1640	2.3258-3	-824.9	2.1829	27.853	.095	1.0000	-1.0000	0.3268	1.2791	1935.1	.0451	.687	0.3023	1.3086	1957.3	.0413	.695
1660	2.2978-3	-818.4	2.1868	27.853	.096	1.0000	-1.0000	0.3268	1.2790	1946.8	.0455	.688	0.3030	1.3078	1968.5	.0417	.696
1680	2.2704-3	-811.8	2.1907	27.853	.096	1.0000	-1.0000	0.3269	1.2790	1958.5	.0458	.688	0.3036	1.3069	1979.7	.0421	.696
1700	2.2437-3	-805.3	2.1946	27.853	.097	1.0000	-1.0000	0.3269	1.2789	1970.1	.0462	.689	0.3042	1.3061	1990.8	.0425	.697
1720	2.2176-3	-798.8	2.1984	27.853	.098	1.0000	-1.0000	0.3269	1.2789	1981.6	.0465	.689	0.3049	1.3053	2001.9	.0429	.697
1740	2.1921-3	-792.2	2.2022	27.853	.099	1.0000	-1.0000	0.3270	1.2789	1993.0	.0468	.690	0.3055	1.3045	2012.9	.0432	.698
1760	2.1672-3	-785.7	2.2059	27.853	.100	1.0000	-1.0000	0.3270	1.2788	2004.4	.0472	.690	0.3061	1.3037	2023.8	.0436	.698
1780	2.1428-3	-779.1	2.2096	27.853	.100	1.0000	-1.0000	0.3271	1.2788	2015.7	.0475	.690	0.3067	1.3029	2034.7	.0440	.699
1800	2.1190-3	-772.6	2.2133	27.853	.101	1.0000	-1.0000	0.3271	1.2787	2027.0	.0479	.691	0.3073	1.3022	2045.5	.0444	.699
1900	2.0075-3	-739.9	2.2310	27.853	.105	1.0000	-1.0000	0.3274	1.2784	2082.3	.0495	.693	0.3101	1.2986	2098.7	.0464	.701
2000	1.9071-3	-707.1	2.2478	27.853	.109	1.0000	-1.0000	0.3278	1.2779	2136.0	.0512	.695	0.3128	1.2953	2150.4	.0483	.703
2100	1.8163-3	-674.3	2.2638	27.853	.112	1.0000	-1.0000	0.3284	1.2773	2188.2	.0529	.697	0.3153	1.2922	2200.9	.0502	.705
2200	1.7338-3	-641.4	2.2791	27.853	.116	1.0000	-1.0000	0.3292	1.2764	2238.9	.0546	.698	0.3178	1.2892	2250.1	.0521	.706
2300	1.6584-3	-608.5	2.2937	27.853	.119	1.0000	-1.0000	0.3301	1.2754	2288.4	.0563	.700	0.3202	1.2865	2298.2	.0540	.707
2400	1.5893-3	-575.4	2.3078	27.853	.123	1.0000	-1.0000	0.3312	1.2744	2336.6	.0580	.701	0.3224	1.2839	2345.3	.0559	.708
2500	1.5257-3	-542.2	2.3214	27.853	.126	1.0000	-1.0000	0.3323	1.2732	2383.7	.0597	.702	0.3245	1.2815	2391.5	.0577	.709

TABLE 6.2D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN2 (0.10 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4670-3	-508.9	2.3344	27.853	.130	1.0000	-1.0000	0.3334	1.2720	2429.7	.0615	.703	0.3266	1.2793	2436.7	.0596	.709
2700	1.4127-3	-475.5	2.3470	27.853	.133	1.0001	-1.0000	0.3347	1.2708	2474.8	.0633	.703	0.3285	1.2772	2481.1	.0615	.710
2800	1.3622-3	-442.0	2.3592	27.853	.136	1.0002	-1.0000	0.3360	1.2694	2518.9	.0652	.702	0.3303	1.2752	2524.7	.0633	.710
2900	1.3152-3	-408.3	2.3710	27.853	.139	1.0003	-1.0000	0.3375	1.2680	2562.1	.0672	.701	0.3321	1.2734	2567.5	.0652	.710
3000	1.2714-3	-374.5	2.3825	27.852	.143	1.0006	-1.0000	0.3392	1.2664	2604.3	.0693	.698	0.3337	1.2717	2609.7	.0670	.710
3100	1.2303-3	-340.5	2.3937	27.852	.146	1.0010	-1.0000	0.3413	1.2647	2645.5	.0717	.694	0.3353	1.2701	2651.2	.0689	.710
3200	1.1918-3	-306.2	2.4045	27.850	.149	1.0016	-1.0000	0.3439	1.2626	2685.7	.0745	.688	0.3367	1.2686	2692.1	.0707	.710
3300	1.1557-3	-271.7	2.4152	27.849	.152	1.0026	-1.0001	0.3473	1.2600	2724.6	.0778	.679	0.3381	1.2673	2732.4	.0725	.710
3400	1.1216-3	-236.7	2.4256	27.846	.155	1.0042	-1.0001	0.3520	1.2566	2762.0	.0818	.668	0.3394	1.2660	2772.3	.0743	.709
3500	1.0893-3	-201.2	2.4359	27.842	.158	1.0068	-1.0002	0.3587	1.2521	2797.5	.0868	.654	0.3407	1.2648	2811.7	.0761	.708
3600	1.0588-3	-164.9	2.4461	27.835	.161	1.0108	-1.0003	0.3685	1.2460	2830.6	.0933	.637	0.3418	1.2637	2850.7	.0779	.708
3700	1.0298-3	-127.3	2.4564	27.824	.164	1.0171	-1.0006	0.3833	1.2377	2860.7	.1019	.618	0.3430	1.2628	2889.5	.0797	.707
3800	1.0021-3	-88.0	2.4669	27.808	.167	1.0271	-1.0009	0.4056	1.2268	2887.0	.1136	.597	0.3440	1.2620	2928.2	.0815	.706
3900	9.7557-4	-45.8	2.4779	27.783	.170	1.0428	-1.0014	0.4393	1.2129	2909.4	.1296	.577	0.3450	1.2614	2967.0	.0833	.705
4000	9.4988-4	0.4	2.4896	27.745	.173	1.0667	-1.0023	0.4887	1.1967	2928.7	.1520	.557	0.3459	1.2609	3006.4	.0852	.703
4100	9.2482-4	52.6	2.5024	27.689	.176	1.1012	-1.0036	0.5578	1.1797	2947.1	.1825	.537	0.3467	1.2608	3046.7	.0870	.701
4200	9.0012-4	112.7	2.5169	27.607	.179	1.1474	-1.0053	0.6471	1.1642	2967.5	.2230	.518	0.3475	1.2611	3088.5	.0889	.698
4300	8.7558-4	182.5	2.5333	27.493	.181	1.2043	-1.0076	0.7529	1.1515	2992.3	.2742	.498	0.3481	1.2618	3132.4	.0909	.694
4400	8.5104-4	263.6	2.5520	27.344	.184	1.2691	-1.0103	0.8690	1.1419	3022.6	.3356	.476	0.3488	1.2630	3178.8	.0929	.690
4500	8.2648-4	356.5	2.5728	27.159	.186	1.3389	-1.0134	0.9895	1.1352	3058.1	.4062	.454	0.3493	1.2647	3227.9	.0951	.685
4600	8.0187-4	461.5	2.5959	26.936	.189	1.4120	-1.0167	1.1111	1.1307	3098.5	.4851	.432	0.3499	1.2670	3280.0	.0974	.678
4700	7.7726-4	578.7	2.6211	26.676	.191	1.4874	-1.0204	1.2325	1.1277	3143.0	.5707	.413	0.3504	1.2698	3335.2	.1000	.670
4800	7.5269-4	708.0	2.6483	26.383	.193	1.5643	-1.0243	1.3529	1.1259	3191.3	.6611	.396	0.3509	1.2731	3393.6	.1027	.661
4900	7.2822-4	849.2	2.6774	26.057	.196	1.6417	-1.0285	1.4710	1.1250	3243.3	.7533	.382	0.3514	1.2770	3455.3	.1056	.651
5000	7.0392-4	1002.0	2.7083	25.702	.198	1.7175	-1.0328	1.5844	1.1249	3298.6	.8431	.372	0.3519	1.2813	3520.4	.1088	.640
5100	6.7990-4	1165.8	2.7407	25.321	.200	1.7888	-1.0371	1.6888	1.1255	3357.3	.9251	.365	0.3525	1.2861	3588.8	.1123	.628
5200	6.5628-4	1339.3	2.7744	24.920	.202	1.8513	-1.0411	1.7781	1.1267	3419.0	.9934	.362	0.3532	1.2914	3660.3	.1160	.615
5300	6.3323-4	1520.7	2.8090	24.508	.204	1.9001	-1.0447	1.8450	1.1286	3483.5	****	.362	0.3538	1.2970	3734.4	.1200	.602
5400	6.1094-4	1707.3	2.8439	24.091	.206	1.9304	-1.0474	1.8820	1.1311	3550.4	****	.365	0.3545	1.3029	3810.6	.1241	.590

TABLE 6.3D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN2 (1.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.1110-1	-1261.9	1.5467	29.206	.028	1.0000	-1.0000	0.2465	1.3809	920.0	.0090	.771	0.2465	1.3809	920.0	.0090	.771
380	1.0525-1	-1256.9	1.5600	29.206	.030	1.0000	-1.0000	0.2470	1.3798	944.8	.0095	.767	0.2470	1.3798	944.8	.0095	.767
400	9.9989-2	-1252.0	1.5727	29.206	.031	1.0000	-1.0000	0.2476	1.3786	968.9	.0101	.763	0.2476	1.3786	968.9	.0101	.763
420	9.5227-2	-1247.0	1.5848	29.206	.032	1.0000	-1.0000	0.2482	1.3773	992.4	.0106	.760	0.2482	1.3773	992.4	.0106	.760
440	9.0899-2	-1242.1	1.5964	29.206	.034	1.0000	-1.0000	0.2488	1.3760	1015.2	.0111	.757	0.2488	1.3761	1015.2	.0111	.757
460	8.6947-2	-1237.1	1.6075	29.206	.035	1.0000	-1.0000	0.2494	1.3747	1037.6	.0117	.755	0.2494	1.3747	1037.6	.0117	.755
480	8.3324-2	-1232.1	1.6181	29.206	.037	1.0000	-1.0000	0.2501	1.3734	1059.4	.0122	.753	0.2501	1.3734	1059.4	.0122	.753
500	7.9991-2	-1227.1	1.6283	29.206	.038	1.0000	-1.0000	0.2508	1.3720	1080.7	.0127	.752	0.2508	1.3720	1080.7	.0127	.752
520	7.6914-2	-1222.0	1.6382	29.206	.039	1.0000	-1.0000	0.2515	1.3706	1101.5	.0132	.751	0.2514	1.3706	1101.5	.0132	.751
537	7.4525-2	-1217.8	1.6461	29.206	.040	1.0000	-1.0000	0.2521	1.3694	1118.5	.0136	.750	0.2520	1.3695	1118.5	.0136	.750
540	7.4066-2	-1217.0	1.6477	29.206	.041	1.0000	-1.0000	0.2522	1.3691	1121.9	.0137	.750	0.2522	1.3692	1121.9	.0137	.750
560	7.1420-2	-1212.0	1.6568	29.206	.042	1.0000	-1.0000	0.2530	1.3676	1141.8	.0142	.750	0.2529	1.3678	1141.9	.0142	.750
580	6.8958-2	-1206.9	1.6657	29.206	.043	1.0001	-1.0000	0.2537	1.3661	1161.4	.0146	.750	0.2536	1.3663	1161.5	.0146	.751
600	6.6659-2	-1201.8	1.6744	29.206	.045	1.0001	-1.0000	0.2546	1.3645	1180.6	.0151	.750	0.2544	1.3648	1180.7	.0151	.751
620	6.4508-2	-1196.7	1.6827	29.206	.046	1.0001	-1.0000	0.2554	1.3629	1199.4	.0156	.749	0.2551	1.3633	1199.6	.0155	.751
640	6.2492-2	-1191.6	1.6908	29.206	.047	1.0002	-1.0000	0.2564	1.3612	1217.8	.0161	.748	0.2559	1.3618	1218.1	.0160	.751
660	6.0598-2	-1186.4	1.6987	29.205	.048	1.0003	-1.0000	0.2574	1.3594	1235.9	.0166	.747	0.2567	1.3603	1236.3	.0165	.751
680	5.8815-2	-1181.3	1.7064	29.205	.049	1.0005	-1.0000	0.2584	1.3575	1253.6	.0172	.745	0.2575	1.3587	1254.2	.0170	.750
700	5.7134-2	-1176.1	1.7140	29.205	.051	1.0007	-1.0000	0.2596	1.3555	1271.0	.0177	.742	0.2584	1.3572	1271.8	.0174	.750
720	5.5545-2	-1170.9	1.7213	29.204	.052	1.0010	-1.0000	0.2609	1.3533	1288.0	.0183	.738	0.2592	1.3556	1289.1	.0179	.749
740	5.4042-2	-1165.7	1.7285	29.203	.053	1.0013	-1.0001	0.2624	1.3510	1304.7	.0189	.735	0.2601	1.3541	1306.1	.0184	.749
760	5.2618-2	-1160.4	1.7355	29.202	.054	1.0018	-1.0001	0.2640	1.3485	1321.0	.0196	.730	0.2609	1.3525	1322.9	.0188	.749
780	5.1266-2	-1155.1	1.7424	29.200	.055	1.0024	-1.0001	0.2658	1.3459	1337.0	.0202	.725	0.2618	1.3509	1339.5	.0193	.748
800	4.9981-2	-1149.8	1.7491	29.198	.056	1.0032	-1.0001	0.2679	1.3430	1352.6	.0210	.718	0.2627	1.3494	1355.8	.0198	.748
820	4.8757-2	-1144.4	1.7557	29.195	.057	1.0042	-1.0002	0.2702	1.3399	1367.9	.0218	.711	0.2636	1.3478	1371.9	.0202	.748
840	4.7591-2	-1139.0	1.7623	29.192	.058	1.0054	-1.0002	0.2728	1.3365	1382.8	.0227	.703	0.2645	1.3462	1387.8	.0207	.748
860	4.6477-2	-1133.5	1.7687	29.188	.060	1.0069	-1.0003	0.2758	1.3329	1397.4	.0237	.693	0.2654	1.3447	1403.5	.0212	.747
880	4.5413-2	-1127.9	1.7751	29.183	.061	1.0086	-1.0004	0.2792	1.3290	1411.6	.0248	.683	0.2664	1.3431	1419.1	.0216	.747
900	4.4394-2	-1122.3	1.7814	29.176	.062	1.0107	-1.0005	0.2830	1.3248	1425.4	.0260	.672	0.2673	1.3416	1434.4	.0221	.747
920	4.3418-2	-1116.6	1.7877	29.169	.063	1.0132	-1.0006	0.2873	1.3203	1438.9	.0273	.660	0.2683	1.3401	1449.7	.0226	.746
940	4.2481-2	-1110.8	1.7939	29.160	.064	1.0162	-1.0008	0.2922	1.3156	1452.1	.0288	.648	0.2692	1.3386	1464.7	.0230	.745
960	4.1580-2	-1104.9	1.8001	29.149	.065	1.0196	-1.0010	0.2977	1.3105	1464.9	.0303	.636	0.2702	1.3371	1479.7	.0235	.744
980	4.0713-2	-1098.9	1.8063	29.136	.066	1.0235	-1.0012	0.3039	1.3051	1477.4	.0321	.623	0.2712	1.3356	1494.5	.0240	.743
1000	3.9878-2	-1092.8	1.8126	29.121	.067	1.0280	-1.0014	0.3108	1.2995	1489.6	.0340	.611	0.2722	1.3342	1509.3	.0245	.742
1020	3.9073-2	-1086.5	1.8188	29.103	.068	1.0332	-1.0017	0.3185	1.2937	1501.4	.0360	.600	0.2733	1.3328	1524.0	.0250	.741
1040	3.8295-2	-1080.0	1.8250	29.083	.069	1.0390	-1.0020	0.3270	1.2876	1513.0	.0382	.589	0.2743	1.3314	1538.6	.0255	.739
1060	3.7542-2	-1073.4	1.8314	29.059	.070	1.0455	-1.0024	0.3366	1.2813	1524.4	.0405	.580	0.2754	1.3301	1553.2	.0261	.737
1080	3.6813-2	-1066.5	1.8378	29.033	.071	1.0528	-1.0028	0.3472	1.2749	1535.5	.0430	.572	0.2764	1.3288	1567.7	.0266	.736
1100	3.6106-2	-1059.5	1.8442	29.002	.072	1.0609	-1.0033	0.3588	1.2683	1546.5	.0456	.565	0.2775	1.3275	1582.2	.0272	.733
1120	3.5419-2	-1052.2	1.8508	28.968	.073	1.0698	-1.0038	0.3716	1.2616	1557.3	.0483	.560	0.2786	1.3264	1596.8	.0277	.731
1140	3.4752-2	-1044.6	1.8575	28.930	.074	1.0796	-1.0043	0.3857	1.2549	1568.0	.0510	.557	0.2797	1.3252	1611.3	.0283	.729

TABLE 6.3D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
 (ONLY GAS PHASE PERMITTED)

 FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN² (1.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.4103-2	-1036.7	1.8643	28.887	.075	1.0901	-1.0049	0.4009	1.2482	1578.6	.0539	.555	0.2808	1.3242	1626.0	.0288	.726
1180	3.3470-2	-1028.6	1.8713	28.840	.076	1.1015	-1.0056	0.4174	1.2416	1589.2	.0568	.555	0.2819	1.3232	1640.6	.0294	.724
1200	3.2853-2	-1020.0	1.8785	28.788	.076	1.1135	-1.0062	0.4351	1.2351	1599.9	.0597	.557	0.2831	1.3222	1655.4	.0300	.721
1220	3.2250-2	-1011.2	1.8858	28.731	.077	1.1260	-1.0069	0.4536	1.2289	1610.7	.0626	.561	0.2842	1.3214	1670.3	.0306	.718
1240	3.1662-2	-1001.9	1.8934	28.670	.078	1.1387	-1.0077	0.4727	1.2231	1621.8	.0654	.566	0.2853	1.3207	1685.2	.0312	.715
1260	3.1087-2	-992.2	1.9011	28.603	.079	1.1513	-1.0084	0.4917	1.2177	1633.1	.0679	.574	0.2864	1.3200	1700.3	.0318	.712
1280	3.0526-2	-982.2	1.9090	28.532	.080	1.1630	-1.0090	0.5099	1.2130	1644.9	.0701	.583	0.2875	1.3194	1715.5	.0325	.709
1300	2.9978-2	-971.9	1.9170	28.458	.081	1.1731	-1.0096	0.5260	1.2092	1657.2	.0718	.593	0.2886	1.3189	1730.8	.0331	.707
1320	2.9444-2	-961.2	1.9251	28.381	.082	1.1804	-1.0100	0.5385	1.2063	1670.2	.0727	.606	0.2896	1.3185	1746.1	.0337	.704
1340	2.8925-2	-950.4	1.9333	28.303	.083	1.1837	-1.0102	0.5456	1.2048	1684.0	.0728	.620	0.2907	1.3182	1761.5	.0343	.701
1360	2.8422-2	-939.4	1.9414	28.227	.084	1.1815	-1.0101	0.5454	1.2047	1698.8	.0717	.635	0.2917	1.3179	1776.8	.0349	.699
1380	2.7938-2	-928.6	1.9493	28.154	.084	1.1727	-1.0097	0.5365	1.2065	1714.7	.0695	.651	0.2927	1.3176	1791.9	.0355	.696
1400	2.7473-2	-918.0	1.9569	28.087	.085	1.1572	-1.0088	0.5184	1.2104	1731.9	.0662	.667	0.2936	1.3172	1806.8	.0360	.695
1420	2.7030-2	-907.9	1.9641	28.028	.086	1.1357	-1.0077	0.4925	1.2164	1750.5	.0623	.680	0.2945	1.3169	1821.3	.0365	.693
1440	2.6608-2	-898.4	1.9708	27.980	.087	1.1108	-1.0063	0.4618	1.2245	1770.1	.0581	.690	0.2953	1.3164	1835.3	.0370	.692
1460	2.6209-2	-889.4	1.9769	27.942	.088	1.0855	-1.0049	0.4305	1.2340	1790.4	.0543	.695	0.2961	1.3158	1848.9	.0375	.692
1480	2.5828-2	-881.1	1.9826	27.914	.088	1.0627	-1.0036	0.4025	1.2438	1810.7	.0511	.697	0.2968	1.3152	1862.0	.0380	.691
1500	2.5466-2	-873.3	1.9878	27.894	.089	1.0443	-1.0026	0.3798	1.2529	1830.2	.0487	.696	0.2976	1.3145	1874.7	.0384	.691
1520	2.5118-2	-865.9	1.9927	27.880	.090	1.0304	-1.0018	0.3628	1.2605	1848.4	.0471	.694	0.2983	1.3137	1887.1	.0388	.692
1540	2.4784-2	-858.8	1.9974	27.871	.091	1.0205	-1.0012	0.3508	1.2663	1865.1	.0461	.692	0.2990	1.3129	1899.1	.0393	.692
1560	2.4461-2	-851.8	2.0019	27.865	.092	1.0137	-1.0008	0.3427	1.2705	1880.5	.0455	.691	0.2997	1.3120	1911.0	.0397	.693
1580	2.4148-2	-845.0	2.0062	27.861	.092	1.0091	-1.0006	0.3372	1.2733	1894.8	.0452	.690	0.3003	1.3112	1922.7	.0401	.693
1600	2.3844-2	-838.3	2.0104	27.859	.093	1.0061	-1.0004	0.3337	1.2753	1908.3	.0452	.689	0.3010	1.3103	1934.3	.0405	.694
1620	2.3548-2	-831.7	2.0145	27.857	.094	1.0041	-1.0003	0.3314	1.2765	1921.2	.0453	.689	0.3017	1.3094	1945.8	.0409	.694
1640	2.3260-2	-825.1	2.0186	27.856	.095	1.0027	-1.0002	0.3299	1.2774	1933.7	.0455	.688	0.3023	1.3086	1957.2	.0413	.695
1660	2.2979-2	-818.5	2.0226	27.855	.096	1.0019	-1.0001	0.3289	1.2779	1945.9	.0457	.689	0.3030	1.3077	1968.5	.0417	.696
1680	2.2705-2	-811.9	2.0265	27.854	.096	1.0013	-1.0001	0.3283	1.2782	1957.8	.0460	.689	0.3036	1.3069	1979.7	.0421	.696
1700	2.2438-2	-805.4	2.0304	27.854	.097	1.0009	-1.0001	0.3279	1.2784	1969.6	.0463	.689	0.3042	1.3061	1990.8	.0425	.697
1720	2.2177-2	-798.8	2.0342	27.854	.098	1.0006	-1.0000	0.3276	1.2786	1981.3	.0466	.689	0.3049	1.3053	2001.9	.0429	.697
1740	2.1922-2	-792.3	2.0380	27.854	.099	1.0004	-1.0000	0.3274	1.2786	1992.8	.0469	.690	0.3055	1.3045	2012.9	.0432	.698
1760	2.1672-2	-785.7	2.0418	27.854	.100	1.0003	-1.0000	0.3273	1.2786	2004.3	.0472	.690	0.3061	1.3037	2023.8	.0436	.698
1780	2.1429-2	-779.2	2.0455	27.854	.100	1.0002	-1.0000	0.3273	1.2787	2015.6	.0476	.691	0.3067	1.3029	2034.7	.0440	.699
1800	2.1191-2	-772.6	2.0491	27.853	.101	1.0002	-1.0000	0.3273	1.2786	2026.9	.0479	.691	0.3073	1.3022	2045.5	.0444	.699
1900	2.0075-2	-739.9	2.0668	27.853	.105	1.0001	-1.0000	0.3274	1.2784	2082.3	.0496	.693	0.3101	1.2986	2098.7	.0464	.701
2000	1.9071-2	-707.1	2.0836	27.853	.109	1.0000	-1.0000	0.3278	1.2779	2136.0	.0512	.695	0.3128	1.2953	2150.4	.0483	.703
2100	1.8163-2	-674.3	2.0996	27.853	.112	1.0000	-1.0000	0.3284	1.2773	2188.1	.0529	.697	0.3153	1.2922	2200.9	.0502	.705
2200	1.7338-2	-641.4	2.1149	27.853	.116	1.0000	-1.0000	0.3292	1.2764	2238.9	.0546	.698	0.3178	1.2892	2250.1	.0521	.706
2300	1.6584-2	-608.5	2.1296	27.853	.119	1.0000	-1.0000	0.3301	1.2755	2288.4	.0563	.700	0.3202	1.2865	2298.2	.0540	.707
2400	1.5893-2	-575.4	2.1436	27.853	.123	1.0000	-1.0000	0.3311	1.2744	2336.6	.0580	.701	0.3224	1.2839	2345.3	.0559	.708
2500	1.5257-2	-542.2	2.1572	27.853	.126	1.0000	-1.0000	0.3322	1.2733	2383.7	.0597	.702	0.3245	1.2815	2391.5	.0577	.709

TABLE 6.3D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN² (1.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS					FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4670-2	-509.0	2.1702	27.853	.130	1.0000	-1.0000	0.3333	1.2721	2429.8	.0614	.703	0.3266	1.2793	2436.7	.0596	.709
2700	1.4127-2	-475.6	2.1828	27.853	.133	1.0000	-1.0000	0.3345	1.2709	2474.9	.0631	.704	0.3285	1.2772	2481.1	.0615	.710
2800	1.3622-2	-442.0	2.1950	27.853	.136	1.0001	-1.0000	0.3357	1.2697	2519.1	.0649	.704	0.3303	1.2752	2524.7	.0633	.710
2900	1.3153-2	-408.4	2.2068	27.853	.139	1.0001	-1.0000	0.3370	1.2684	2562.5	.0667	.704	0.3321	1.2734	2567.5	.0652	.710
3000	1.2714-2	-374.6	2.2183	27.853	.143	1.0002	-1.0000	0.3383	1.2671	2605.0	.0686	.703	0.3337	1.2717	2609.7	.0670	.710
3100	1.2304-2	-340.7	2.2294	27.853	.146	1.0003	-1.0000	0.3397	1.2658	2646.7	.0705	.702	0.3353	1.2701	2651.1	.0688	.710
3200	1.1919-2	-306.7	2.2402	27.852	.149	1.0005	-1.0000	0.3412	1.2644	2687.6	.0726	.700	0.3367	1.2686	2692.0	.0707	.710
3300	1.1558-2	-272.5	2.2507	27.852	.152	1.0008	-1.0000	0.3430	1.2629	2727.6	.0748	.697	0.3381	1.2672	2732.3	.0725	.710
3400	1.1218-2	-238.1	2.2610	27.851	.155	1.0013	-1.0000	0.3451	1.2612	2766.8	.0772	.693	0.3394	1.2659	2772.0	.0743	.709
3500	1.0897-2	-203.4	2.2710	27.850	.158	1.0020	-1.0001	0.3478	1.2592	2805.0	.0800	.688	0.3407	1.2647	2811.2	.0761	.709
3600	1.0593-2	-168.5	2.2809	27.848	.161	1.0032	-1.0001	0.3512	1.2567	2842.1	.0831	.681	0.3418	1.2636	2849.9	.0779	.708
3700	1.0306-2	-133.2	2.2906	27.845	.164	1.0048	-1.0002	0.3557	1.2535	2877.8	.0869	.673	0.3429	1.2626	2888.2	.0796	.708
3800	1.0033-2	-97.3	2.3001	27.840	.167	1.0073	-1.0002	0.3620	1.2495	2912.0	.0914	.663	0.3440	1.2616	2926.1	.0814	.707
3900	9.7733-3	-60.7	2.3096	27.834	.170	1.0111	-1.0004	0.3707	1.2444	2944.3	.0969	.651	0.3449	1.2608	2963.7	.0831	.706
4000	9.5257-3	-23.0	2.3192	27.824	.173	1.0166	-1.0006	0.3830	1.2377	2974.4	.1040	.638	0.3459	1.2600	3001.0	.0849	.706
4100	9.2886-3	16.1	2.3288	27.810	.176	1.0248	-1.0009	0.4002	1.2293	3001.8	.1130	.623	0.3467	1.2594	3038.3	.0867	.704
4200	9.0609-3	57.2	2.3387	27.790	.179	1.0366	-1.0013	0.4243	1.2190	3026.6	.1248	.608	0.3475	1.2588	3075.6	.0884	.703
4300	8.8409-3	101.2	2.3491	27.761	.182	1.0533	-1.0019	0.4572	1.2072	3049.2	.1401	.593	0.3483	1.2585	3113.2	.0902	.702
4400	8.6272-3	149.0	2.3601	27.720	.184	1.0762	-1.0028	0.5006	1.1946	3070.6	.1600	.577	0.3490	1.2583	3151.3	.0920	.700
4500	8.4184-3	201.7	2.3719	27.663	.187	1.1058	-1.0040	0.5549	1.1823	3092.3	.1851	.561	0.3496	1.2584	3190.2	.0938	.698
4600	8.2131-3	260.3	2.3848	27.588	.190	1.1420	-1.0055	0.6188	1.1712	3116.0	.2159	.544	0.3502	1.2587	3230.3	.0957	.695
4700	8.0103-3	325.7	2.3989	27.492	.192	1.1835	-1.0073	0.6896	1.1620	3142.7	.2523	.526	0.3507	1.2594	3271.8	.0976	.692
4800	7.8095-3	398.3	2.4141	27.374	.195	1.2287	-1.0094	0.7638	1.1547	3172.9	.2938	.507	0.3512	1.2604	3314.9	.0995	.688
4900	7.6105-3	478.5	2.4307	27.232	.197	1.2761	-1.0117	0.8388	1.1493	3206.6	.3400	.487	0.3516	1.2617	3359.7	.1015	.684
5000	7.4132-3	566.1	2.4484	27.067	.200	1.3247	-1.0141	0.9128	1.1454	3243.5	.3903	.468	0.3520	1.2633	3406.3	.1036	.679
5100	7.2177-3	661.0	2.4672	26.880	.202	1.3739	-1.0167	0.9851	1.1427	3283.2	.4443	.449	0.3524	1.2653	3454.8	.1058	.674
5200	7.0243-3	763.0	2.4870	26.673	.205	1.4235	-1.0194	1.0554	1.1410	3325.6	.5013	.431	0.3528	1.2675	3505.2	.1081	.668
5300	6.8332-3	872.0	2.5077	26.446	.207	1.4732	-1.0223	1.1237	1.1399	3370.2	.5604	.415	0.3531	1.2701	3557.4	.1105	.661
5400	6.6445-3	987.7	2.5293	26.201	.209	1.5228	-1.0253	1.1898	1.1395	3417.1	.6207	.401	0.3535	1.2729	3611.6	.1131	.654

TABLE 6.4D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN² (10.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN			
360	1.1110	0	-1261.9	1.3901	29.206	.028	1.0000	-1.0000	0.2465	1.3809	920.0	.0090	.771	0.2465	1.3809	920.0	.0090	.771
380	1.0525	0	-1256.9	1.4035	29.206	.030	1.0000	-1.0000	0.2470	1.3798	944.8	.0095	.767	0.2470	1.3798	944.8	.0095	.767
400	9.9989	-1	-1252.0	1.4162	29.206	.031	1.0000	-1.0000	0.2476	1.3786	968.9	.0101	.763	0.2476	1.3786	968.9	.0101	.763
420	9.5227	-1	-1247.0	1.4283	29.206	.032	1.0000	-1.0000	0.2482	1.3773	992.4	.0106	.760	0.2482	1.3773	992.4	.0106	.760
440	9.0899	-1	-1242.1	1.4398	29.206	.034	1.0000	-1.0000	0.2488	1.3760	1015.2	.0111	.757	0.2488	1.3761	1015.2	.0111	.757
460	8.6947	-1	-1237.1	1.4509	29.206	.035	1.0000	-1.0000	0.2494	1.3747	1037.6	.0117	.755	0.2494	1.3747	1037.6	.0117	.755
480	8.3324	-1	-1232.1	1.4615	29.206	.037	1.0000	-1.0000	0.2501	1.3734	1059.4	.0122	.753	0.2501	1.3734	1059.4	.0122	.753
500	7.9991	-1	-1227.1	1.4717	29.206	.038	1.0000	-1.0000	0.2508	1.3720	1080.7	.0127	.752	0.2508	1.3720	1080.7	.0127	.752
520	7.6914	-1	-1222.0	1.4816	29.206	.039	1.0000	-1.0000	0.2515	1.3706	1101.5	.0132	.751	0.2514	1.3706	1101.5	.0132	.751
537	7.4525	-1	-1217.8	1.4895	29.206	.040	1.0000	-1.0000	0.2521	1.3694	1118.5	.0136	.750	0.2520	1.3695	1118.5	.0136	.750
540	7.4066	-1	-1217.0	1.4911	29.206	.041	1.0000	-1.0000	0.2522	1.3692	1121.9	.0137	.750	0.2522	1.3692	1121.9	.0137	.750
560	7.1421	-1	-1212.0	1.5003	29.206	.042	1.0000	-1.0000	0.2529	1.3677	1141.9	.0142	.750	0.2529	1.3678	1141.9	.0142	.750
580	6.8958	-1	-1206.9	1.5092	29.206	.043	1.0000	-1.0000	0.2537	1.3662	1161.4	.0146	.750	0.2536	1.3663	1161.5	.0146	.751
600	6.6659	-1	-1201.8	1.5178	29.206	.045	1.0000	-1.0000	0.2544	1.3647	1180.6	.0151	.751	0.2544	1.3648	1180.7	.0151	.751
620	6.4509	-1	-1196.7	1.5261	29.206	.046	1.0000	-1.0000	0.2553	1.3631	1199.5	.0156	.751	0.2551	1.3633	1199.6	.0155	.751
640	6.2493	-1	-1191.6	1.5343	29.206	.047	1.0001	-1.0000	0.2561	1.3616	1218.0	.0160	.750	0.2559	1.3618	1218.1	.0160	.751
660	6.0599	-1	-1186.5	1.5421	29.206	.048	1.0001	-1.0000	0.2569	1.3599	1236.1	.0165	.750	0.2567	1.3603	1236.3	.0165	.751
680	5.8816	-1	-1181.3	1.5498	29.206	.049	1.0001	-1.0000	0.2578	1.3583	1253.9	.0170	.749	0.2575	1.3587	1254.2	.0170	.750
700	5.7136	-1	-1176.2	1.5573	29.206	.051	1.0002	-1.0000	0.2588	1.3566	1271.5	.0175	.747	0.2584	1.3572	1271.7	.0174	.750
720	5.5548	-1	-1171.0	1.5646	29.206	.052	1.0003	-1.0000	0.2598	1.3548	1288.7	.0180	.746	0.2592	1.3556	1289.0	.0179	.749
740	5.4046	-1	-1165.8	1.5718	29.205	.053	1.0004	-1.0000	0.2608	1.3530	1305.6	.0185	.744	0.2600	1.3541	1306.1	.0184	.749
760	5.2623	-1	-1160.5	1.5787	29.205	.054	1.0006	-1.0000	0.2619	1.3512	1322.2	.0191	.743	0.2609	1.3525	1322.9	.0188	.749
780	5.1273	-1	-1155.3	1.5855	29.204	.055	1.0008	-1.0000	0.2631	1.3492	1338.5	.0196	.741	0.2618	1.3509	1339.4	.0193	.749
800	4.9990	-1	-1150.0	1.5922	29.204	.056	1.0010	-1.0000	0.2643	1.3472	1354.6	.0201	.739	0.2626	1.3493	1355.7	.0198	.749
820	4.8770	-1	-1144.7	1.5988	29.203	.057	1.0013	-1.0001	0.2657	1.3451	1370.4	.0207	.736	0.2635	1.3478	1371.7	.0202	.748
840	4.7607	-1	-1139.4	1.6052	29.202	.058	1.0017	-1.0001	0.2671	1.3429	1385.9	.0213	.733	0.2644	1.3462	1387.6	.0207	.748
860	4.6498	-1	-1134.0	1.6115	29.201	.060	1.0022	-1.0001	0.2687	1.3407	1401.1	.0219	.729	0.2653	1.3446	1403.2	.0211	.748
880	4.5438	-1	-1128.6	1.6177	29.199	.061	1.0027	-1.0001	0.2704	1.3383	1416.1	.0226	.725	0.2663	1.3431	1418.6	.0216	.748
900	4.4425	-1	-1123.2	1.6238	29.197	.062	1.0034	-1.0002	0.2722	1.3358	1430.8	.0233	.721	0.2672	1.3415	1433.9	.0220	.748
920	4.3456	-1	-1117.7	1.6298	29.195	.063	1.0042	-1.0002	0.2743	1.3331	1445.3	.0240	.715	0.2681	1.3400	1448.9	.0225	.748
940	4.2527	-1	-1112.2	1.6357	29.192	.064	1.0052	-1.0003	0.2765	1.3304	1459.4	.0249	.709	0.2691	1.3384	1463.8	.0230	.747
960	4.1636	-1	-1106.7	1.6416	29.188	.065	1.0063	-1.0003	0.2789	1.3275	1473.4	.0257	.703	0.2700	1.3369	1478.6	.0234	.747
980	4.0781	-1	-1101.1	1.6473	29.184	.066	1.0077	-1.0004	0.2816	1.3244	1487.0	.0266	.696	0.2710	1.3354	1493.2	.0239	.746
1000	3.9958	-1	-1095.4	1.6530	29.179	.067	1.0092	-1.0005	0.2846	1.3212	1500.4	.0276	.689	0.2719	1.3339	1507.6	.0244	.746
1020	3.9167	-1	-1089.7	1.6587	29.173	.068	1.0110	-1.0006	0.2879	1.3177	1513.5	.0287	.681	0.2729	1.3324	1521.9	.0248	.745
1040	3.8405	-1	-1083.9	1.6643	29.166	.069	1.0130	-1.0007	0.2915	1.3141	1526.4	.0298	.673	0.2739	1.3309	1536.1	.0253	.744
1060	3.7670	-1	-1078.0	1.6699	29.158	.070	1.0154	-1.0008	0.2954	1.3104	1539.0	.0310	.664	0.2748	1.3294	1550.1	.0258	.743
1080	3.6961	-1	-1072.1	1.6755	29.149	.071	1.0180	-1.0010	0.2998	1.3064	1551.3	.0323	.656	0.2758	1.3280	1564.1	.0263	.743
1100	3.6276	-1	-1066.0	1.6810	29.139	.072	1.0211	-1.0011	0.3047	1.3022	1563.4	.0337	.648	0.2768	1.3266	1578.0	.0268	.742
1120	3.5613	-1	-1059.9	1.6866	29.127	.073	1.0245	-1.0013	0.3101	1.2978	1575.2	.0352	.640	0.2778	1.3252	1591.7	.0273	.740
1140	3.4972	-1	-1053.6	1.6921	29.113	.074	1.0284	-1.0016	0.3160	1.2932	1586.7	.0368	.632	0.2788	1.3239	1605.5	.0278	.739

TABLE 6.4D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN2 (10.00 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.4351-1	-1047.2	1.6977	29.098	.075	1.0327	-1.0018	0.3225	1.2884	1598.0	.0385	.624	0.2798	1.3226	1619.1	.0283	.738
1180	3.3749-1	-1040.7	1.7032	29.080	.076	1.0375	-1.0021	0.3298	1.2834	1609.1	.0404	.617	0.2808	1.3213	1632.7	.0288	.737
1200	3.3164-1	-1034.1	1.7088	29.061	.076	1.0429	-1.0024	0.3377	1.2783	1620.0	.0423	.611	0.2818	1.3201	1646.3	.0293	.735
1220	3.2595-1	-1027.2	1.7145	29.039	.077	1.0489	-1.0027	0.3464	1.2729	1630.6	.0443	.605	0.2829	1.3189	1659.8	.0298	.734
1240	3.2042-1	-1020.2	1.7202	29.014	.078	1.0555	-1.0031	0.3560	1.2675	1641.1	.0464	.601	0.2839	1.3177	1673.3	.0304	.732
1260	3.1504-1	-1013.0	1.7260	28.987	.079	1.0627	-1.0036	0.3665	1.2620	1651.5	.0487	.597	0.2849	1.3166	1686.9	.0309	.731
1280	3.0979-1	-1005.5	1.7318	28.956	.080	1.0706	-1.0040	0.3778	1.2564	1661.7	.0510	.594	0.2859	1.3156	1700.4	.0314	.729
1300	3.0467-1	-997.8	1.7378	28.923	.081	1.0792	-1.0045	0.3900	1.2508	1671.9	.0534	.591	0.2869	1.3146	1714.0	.0320	.727
1320	2.9967-1	-989.9	1.7439	28.886	.082	1.0884	-1.0050	0.4032	1.2453	1682.1	.0559	.590	0.2879	1.3137	1727.6	.0325	.725
1340	2.9479-1	-981.7	1.7500	28.845	.083	1.0982	-1.0056	0.4171	1.2399	1692.3	.0585	.590	0.2889	1.3128	1741.3	.0331	.724
1360	2.9001-1	-973.2	1.7563	28.801	.084	1.1086	-1.0062	0.4316	1.2347	1702.6	.0611	.591	0.2899	1.3120	1755.1	.0336	.722
1380	2.8533-1	-964.4	1.7627	28.753	.085	1.1192	-1.0069	0.4466	1.2298	1713.1	.0636	.593	0.2909	1.3113	1768.9	.0342	.720
1400	2.8075-1	-955.4	1.7692	28.702	.085	1.1301	-1.0075	0.4618	1.2252	1723.8	.0661	.596	0.2919	1.3107	1782.9	.0347	.718
1420	2.7626-1	-946.0	1.7759	28.647	.086	1.1408	-1.0081	0.4768	1.2211	1734.8	.0685	.600	0.2929	1.3101	1796.9	.0353	.716
1440	2.7187-1	-936.3	1.7827	28.588	.087	1.1511	-1.0088	0.4911	1.2175	1746.2	.0706	.605	0.2938	1.3096	1811.0	.0358	.714
1460	2.6757-1	-926.3	1.7895	28.527	.088	1.1603	-1.0093	0.5041	1.2145	1758.0	.0724	.612	0.2947	1.3092	1825.2	.0364	.712
1480	2.6337-1	-916.1	1.7965	28.463	.089	1.1680	-1.0098	0.5150	1.2122	1770.2	.0738	.619	0.2957	1.3089	1839.5	.0369	.710
1500	2.5926-1	-905.8	1.8034	28.398	.089	1.1736	-1.0102	0.5230	1.2106	1783.1	.0746	.627	0.2966	1.3086	1853.8	.0375	.708
1520	2.5525-1	-895.2	1.8104	28.332	.090	1.1763	-1.0104	0.5273	1.2099	1796.5	.0747	.637	0.2974	1.3083	1868.1	.0380	.706
1540	2.5136-1	-884.7	1.8173	28.267	.091	1.1754	-1.0104	0.5272	1.2102	1810.6	.0742	.647	0.2983	1.3081	1882.4	.0385	.705
1560	2.4758-1	-874.2	1.8241	28.204	.092	1.1705	-1.0102	0.5219	1.2116	1825.4	.0729	.658	0.2991	1.3079	1896.5	.0391	.703
1580	2.4393-1	-863.9	1.8307	28.144	.093	1.1612	-1.0097	0.5114	1.2141	1840.9	.0708	.669	0.2999	1.3077	1910.5	.0396	.702
1600	2.4041-1	-853.8	1.8370	28.090	.093	1.1478	-1.0090	0.4958	1.2179	1857.2	.0682	.679	0.3007	1.3074	1924.2	.0401	.701
1620	2.3703-1	-844.0	1.8430	28.041	.094	1.1310	-1.0080	0.4761	1.2229	1874.2	.0652	.688	0.3014	1.3071	1937.7	.0406	.700
1640	2.3379-1	-834.7	1.8488	27.999	.095	1.1121	-1.0069	0.4540	1.2290	1891.8	.0620	.695	0.3021	1.3067	1950.8	.0410	.699
1660	2.3069-1	-825.9	1.8541	27.964	.096	1.0925	-1.0058	0.4312	1.2358	1909.8	.0590	.700	0.3028	1.3063	1963.5	.0415	.699
1680	2.2772-1	-817.5	1.8592	27.936	.097	1.0739	-1.0046	0.4097	1.2429	1927.8	.0563	.702	0.3035	1.3058	1976.0	.0419	.698
1700	2.2487-1	-809.5	1.8639	27.915	.097	1.0573	-1.0036	0.3907	1.2499	1945.4	.0541	.702	0.3042	1.3053	1988.0	.0424	.698
1720	2.2212-1	-801.8	1.8684	27.898	.098	1.0435	-1.0028	0.3749	1.2562	1962.3	.0524	.701	0.3048	1.3047	1999.8	.0428	.699
1740	2.1947-1	-794.5	1.8726	27.886	.099	1.0324	-1.0021	0.3624	1.2616	1978.3	.0512	.699	0.3054	1.3040	2011.3	.0432	.699
1760	2.1691-1	-787.3	1.8767	27.877	.100	1.0239	-1.0016	0.3529	1.2659	1993.4	.0504	.698	0.3061	1.3034	2022.7	.0436	.699
1780	2.1442-1	-780.3	1.8807	27.871	.100	1.0175	-1.0012	0.3458	1.2693	2007.6	.0498	.696	0.3067	1.3027	2033.8	.0440	.699
1800	2.1200-1	-773.5	1.8845	27.866	.101	1.0127	-1.0009	0.3406	1.2718	2021.0	.0495	.695	0.3073	1.3020	2044.9	.0444	.700
1900	2.0077-1	-740.1	1.9025	27.856	.105	1.0028	-1.0002	0.3301	1.2771	2081.1	.0499	.694	0.3101	1.2986	2098.5	.0463	.701
2000	1.9072-1	-707.2	1.9194	27.854	.109	1.0007	-1.0001	0.3285	1.2776	2135.7	.0513	.695	0.3128	1.2953	2150.4	.0483	.703
2100	1.8164-1	-674.3	1.9354	27.854	.112	1.0003	-1.0000	0.3286	1.2772	2188.1	.0529	.697	0.3153	1.2922	2200.8	.0502	.705
2200	1.7338-1	-641.4	1.9507	27.853	.116	1.0001	-1.0000	0.3293	1.2764	2238.9	.0546	.698	0.3178	1.2892	2250.1	.0521	.706
2300	1.6584-1	-608.5	1.9654	27.853	.119	1.0001	-1.0000	0.3302	1.2755	2288.3	.0563	.700	0.3202	1.2865	2298.2	.0540	.707
2400	1.5893-1	-575.4	1.9795	27.853	.123	1.0000	-1.0000	0.3312	1.2744	2336.6	.0580	.701	0.3224	1.2839	2345.3	.0559	.708
2500	1.5257-1	-542.2	1.9930	27.853	.126	1.0000	-1.0000	0.3322	1.2733	2383.7	.0597	.702	0.3245	1.2815	2391.5	.0577	.709

TABLE 6.4D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN² (10.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLVLT	DLVDLP	REACTING COMPOSITIONS (GAM)S				FROZEN COMPOSITIONS (GAM)S					
								CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN		
2600	1.4670-1	-509.0	2.0061	27.853	.130	1.0000	-1.0000	0.3333	1.2721	2429.8	.0614	.703	0.3266	1.2793	2436.7	.0596	.709
2700	1.4127-1	-475.6	2.0187	27.853	.133	1.0000	-1.0000	0.3345	1.2709	2475.0	.0631	.704	0.3285	1.2772	2481.1	.0615	.710
2800	1.3622-1	-442.1	2.0309	27.853	.136	1.0000	-1.0000	0.3356	1.2697	2519.2	.0648	.705	0.3303	1.2752	2524.7	.0633	.710
2900	1.3153-1	-408.4	2.0427	27.853	.139	1.0000	-1.0000	0.3368	1.2685	2562.6	.0666	.705	0.3321	1.2734	2567.5	.0652	.710
3000	1.2714-1	-374.7	2.0541	27.853	.143	1.0001	-1.0000	0.3380	1.2674	2605.2	.0684	.705	0.3337	1.2717	2609.6	.0670	.710
3100	1.2304-1	-340.8	2.0652	27.853	.146	1.0001	-1.0000	0.3392	1.2662	2647.0	.0702	.705	0.3353	1.2701	2651.1	.0688	.710
3200	1.1919-1	-306.9	2.0760	27.853	.149	1.0002	-1.0000	0.3404	1.2650	2688.2	.0720	.704	0.3367	1.2686	2692.0	.0707	.710
3300	1.1558-1	-272.8	2.0865	27.853	.152	1.0003	-1.0000	0.3417	1.2638	2728.6	.0739	.704	0.3381	1.2672	2732.2	.0725	.710
3400	1.1218-1	-238.5	2.0967	27.852	.155	1.0004	-1.0000	0.3430	1.2626	2768.3	.0758	.702	0.3394	1.2659	2771.9	.0743	.709
3500	1.0897-1	-204.1	2.1067	27.852	.158	1.0006	-1.0000	0.3445	1.2613	2807.3	.0779	.700	0.3407	1.2647	2811.0	.0761	.709
3600	1.0595-1	-169.6	2.1164	27.851	.161	1.0010	-1.0000	0.3462	1.2600	2845.6	.0800	.698	0.3418	1.2636	2849.6	.0778	.708
3700	1.0308-1	-134.9	2.1259	27.851	.164	1.0015	-1.0000	0.3482	1.2584	2883.1	.0823	.695	0.3429	1.2625	2887.8	.0796	.708
3800	1.0036-1	-100.0	2.1352	27.849	.167	1.0022	-1.0001	0.3506	1.2566	2919.8	.0849	.691	0.3440	1.2615	2925.5	.0813	.708
3900	9.7781-2	-64.7	2.1444	27.847	.170	1.0032	-1.0001	0.3536	1.2545	2955.6	.0877	.686	0.3449	1.2606	2962.8	.0831	.707
4000	9.5327-2	-29.2	2.1534	27.844	.173	1.0047	-1.0002	0.3575	1.2519	2990.3	.0910	.681	0.3459	1.2598	2999.7	.0848	.706
4100	9.2989-2	6.8	2.1622	27.841	.176	1.0068	-1.0002	0.3625	1.2488	3023.8	.0947	.674	0.3467	1.2590	3036.2	.0865	.706
4200	9.0757-2	43.4	2.1711	27.835	.179	1.0097	-1.0003	0.3691	1.2449	3056.0	.0992	.666	0.3475	1.2583	3072.5	.0883	.705
4300	8.8622-2	80.7	2.1798	27.827	.182	1.0139	-1.0005	0.3779	1.2401	3086.7	.1045	.657	0.3483	1.2577	3108.5	.0900	.704
4400	8.6575-2	119.0	2.1887	27.817	.185	1.0195	-1.0007	0.3894	1.2343	3115.7	.1110	.648	0.3490	1.2571	3144.3	.0917	.703
4500	8.4607-2	158.7	2.1976	27.802	.187	1.0273	-1.0010	0.4046	1.2274	3142.9	.1189	.638	0.3497	1.2567	3180.1	.0935	.701
4600	8.2709-2	200.1	2.2067	27.783	.190	1.0376	-1.0014	0.4241	1.2195	3168.5	.1287	.627	0.3504	1.2563	3215.9	.0952	.700
4700	8.0873-2	243.7	2.2160	27.756	.193	1.0512	-1.0020	0.4488	1.2109	3192.9	.1406	.616	0.3509	1.2561	3251.9	.0970	.698
4800	7.9089-2	290.0	2.2258	27.722	.196	1.0684	-1.0027	0.4791	1.2019	3216.6	.1552	.604	0.3515	1.2560	3288.2	.0987	.696
4900	7.7349-2	339.7	2.2360	27.677	.198	1.0893	-1.0036	0.5149	1.1930	3240.6	.1726	.592	0.3520	1.2560	3325.1	.1005	.695
5000	7.5647-2	393.2	2.2468	27.620	.201	1.1139	-1.0047	0.5553	1.1847	3265.5	.1928	.578	0.3525	1.2563	3362.6	.1022	.693
5100	7.3977-2	450.9	2.2583	27.551	.203	1.1414	-1.0060	0.5991	1.1775	3292.0	.2160	.564	0.3529	1.2567	3400.9	.1040	.690
5200	7.2335-2	513.1	2.2703	27.467	.206	1.1711	-1.0074	0.6447	1.1715	3320.7	.2417	.549	0.3533	1.2573	3440.2	.1058	.688
5300	7.0719-2	579.8	2.2831	27.370	.208	1.2021	-1.0090	0.6905	1.1666	3351.4	.2698	.534	0.3536	1.2581	3480.4	.1076	.685
5400	6.9127-2	651.1	2.2964	27.259	.211	1.2337	-1.0107	0.7355	1.1629	3384.4	.2999	.517	0.3540	1.2592	3521.7	.1095	.682

TABLE 6.5D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN2 (50.00 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLVLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
360	5.5549	0	-1261.9	1.2807	29.206	.028	1.0000	-1.0000	0.2465	1.3809	920.0	.0090	.771	0.2465	1.3809	920.0	.0090	.771
380	5.2625	0	-1256.9	1.2940	29.206	.030	1.0000	-1.0000	0.2470	1.3798	944.8	.0095	.767	0.2470	1.3798	944.8	.0095	.767
400	4.9994	0	-1252.0	1.3067	29.206	.031	1.0000	-1.0000	0.2476	1.3786	968.9	.0101	.763	0.2476	1.3786	968.9	.0101	.763
420	4.7614	0	-1247.0	1.3188	29.206	.032	1.0000	-1.0000	0.2482	1.3773	992.4	.0106	.760	0.2482	1.3773	992.4	.0106	.760
440	4.5449	0	-1242.1	1.3304	29.206	.034	1.0000	-1.0000	0.2488	1.3760	1015.2	.0111	.757	0.2488	1.3761	1015.2	.0111	.757
460	4.3473	0	-1237.1	1.3415	29.206	.035	1.0000	-1.0000	0.2494	1.3747	1037.6	.0117	.755	0.2494	1.3747	1037.6	.0117	.755
480	4.1662	0	-1232.1	1.3521	29.206	.037	1.0000	-1.0000	0.2501	1.3734	1059.4	.0122	.753	0.2501	1.3734	1059.4	.0122	.753
500	3.9996	0	-1227.1	1.3623	29.206	.038	1.0000	-1.0000	0.2508	1.3720	1080.7	.0127	.752	0.2508	1.3720	1080.7	.0127	.752
520	3.8457	0	-1222.0	1.3722	29.206	.039	1.0000	-1.0000	0.2515	1.3706	1101.5	.0132	.751	0.2514	1.3706	1101.5	.0132	.751
537	3.7263	0	-1217.8	1.3801	29.206	.040	1.0000	-1.0000	0.2521	1.3694	1118.5	.0136	.750	0.2520	1.3695	1118.5	.0136	.750
540	3.7033	0	-1217.0	1.3817	29.206	.041	1.0000	-1.0000	0.2522	1.3692	1121.9	.0137	.750	0.2522	1.3692	1121.9	.0137	.750
560	3.5710	0	-1212.0	1.3908	29.206	.042	1.0000	-1.0000	0.2529	1.3677	1141.9	.0142	.750	0.2529	1.3678	1141.9	.0142	.750
580	3.4479	0	-1206.9	1.3997	29.206	.043	1.0000	-1.0000	0.2537	1.3662	1161.5	.0146	.751	0.2536	1.3663	1161.5	.0146	.751
600	3.3330	0	-1201.8	1.4083	29.206	.045	1.0000	-1.0000	0.2544	1.3647	1180.7	.0151	.751	0.2544	1.3648	1180.7	.0151	.751
620	3.2255	0	-1196.7	1.4167	29.206	.046	1.0000	-1.0000	0.2552	1.3632	1199.5	.0156	.751	0.2551	1.3633	1199.6	.0155	.751
640	3.1247	0	-1191.6	1.4248	29.206	.047	1.0000	-1.0000	0.2560	1.3616	1218.0	.0160	.751	0.2559	1.3618	1218.1	.0160	.751
660	3.0300	0	-1186.5	1.4327	29.206	.048	1.0000	-1.0000	0.2568	1.3601	1236.2	.0165	.750	0.2567	1.3603	1236.3	.0165	.751
680	2.9408	0	-1181.3	1.4404	29.206	.049	1.0000	-1.0000	0.2577	1.3585	1254.0	.0170	.750	0.2575	1.3587	1254.1	.0170	.750
700	2.8568	0	-1176.2	1.4479	29.206	.051	1.0001	-1.0000	0.2586	1.3568	1271.6	.0175	.749	0.2584	1.3572	1271.7	.0174	.750
720	2.7775	0	-1171.0	1.4552	29.206	.052	1.0001	-1.0000	0.2595	1.3552	1288.8	.0180	.748	0.2592	1.3556	1289.0	.0179	.749
740	2.7024	0	-1165.8	1.4623	29.206	.053	1.0002	-1.0000	0.2604	1.3535	1305.8	.0185	.747	0.2600	1.3541	1306.1	.0184	.749
760	2.6312	0	-1160.6	1.4692	29.206	.054	1.0002	-1.0000	0.2614	1.3518	1322.5	.0189	.746	0.2609	1.3525	1322.8	.0188	.749
780	2.5638	0	-1155.3	1.4761	29.206	.055	1.0003	-1.0000	0.2624	1.3501	1338.9	.0194	.745	0.2618	1.3509	1339.3	.0193	.749
800	2.4996	0	-1150.1	1.4827	29.205	.056	1.0004	-1.0000	0.2634	1.3483	1355.1	.0199	.744	0.2626	1.3493	1355.6	.0198	.749
820	2.4387	0	-1144.8	1.4892	29.205	.057	1.0006	-1.0000	0.2645	1.3465	1371.0	.0204	.743	0.2635	1.3478	1371.7	.0202	.749
840	2.3806	0	-1139.5	1.4956	29.205	.058	1.0007	-1.0000	0.2657	1.3446	1386.7	.0210	.741	0.2644	1.3462	1387.5	.0207	.748
860	2.3251	0	-1134.2	1.5019	29.204	.060	1.0009	-1.0000	0.2669	1.3427	1402.1	.0215	.740	0.2653	1.3446	1403.1	.0211	.748
880	2.2722	0	-1128.8	1.5080	29.203	.061	1.0012	-1.0001	0.2681	1.3408	1417.3	.0220	.738	0.2662	1.3430	1418.5	.0216	.748
900	2.2217	0	-1123.4	1.5141	29.202	.062	1.0015	-1.0001	0.2695	1.3388	1432.3	.0226	.736	0.2671	1.3415	1433.7	.0220	.748
920	2.1733	0	-1118.0	1.5200	29.201	.063	1.0019	-1.0001	0.2709	1.3367	1447.0	.0232	.733	0.2681	1.3399	1448.8	.0225	.748
940	2.1270	0	-1112.6	1.5258	29.200	.064	1.0023	-1.0001	0.2724	1.3346	1461.5	.0238	.730	0.2690	1.3384	1463.6	.0229	.748
960	2.0825	0	-1107.1	1.5316	29.198	.065	1.0028	-1.0001	0.2740	1.3324	1475.8	.0244	.726	0.2699	1.3368	1478.3	.0234	.747
980	2.0399	0	-1101.6	1.5373	29.197	.066	1.0034	-1.0002	0.2757	1.3301	1489.9	.0251	.723	0.2709	1.3353	1492.8	.0239	.747
1000	1.9990	0	-1096.1	1.5429	29.194	.067	1.0041	-1.0002	0.2776	1.3277	1503.7	.0258	.718	0.2718	1.3338	1507.1	.0243	.747
1020	1.9596	0	-1090.5	1.5484	29.192	.068	1.0049	-1.0003	0.2796	1.3253	1517.3	.0266	.714	0.2728	1.3323	1521.3	.0248	.746
1040	1.9217	0	-1084.9	1.5538	29.189	.069	1.0058	-1.0003	0.2818	1.3227	1530.8	.0273	.709	0.2737	1.3308	1535.4	.0253	.746
1060	1.8852	0	-1079.3	1.5592	29.185	.070	1.0069	-1.0004	0.2841	1.3201	1543.9	.0282	.704	0.2747	1.3293	1549.3	.0257	.745
1080	1.8501	0	-1073.6	1.5645	29.181	.071	1.0082	-1.0004	0.2866	1.3173	1556.9	.0290	.699	0.2757	1.3278	1563.1	.0262	.744
1100	1.8161	0	-1067.8	1.5698	29.176	.072	1.0096	-1.0005	0.2894	1.3144	1569.7	.0300	.693	0.2766	1.3264	1576.8	.0267	.744
1120	1.7834	0	-1062.0	1.5751	29.171	.073	1.0112	-1.0006	0.2924	1.3114	1582.2	.0309	.687	0.2776	1.3249	1590.4	.0272	.743
1140	1.7517	0	-1056.1	1.5803	29.165	.074	1.0130	-1.0007	0.2957	1.3082	1594.5	.0320	.681	0.2786	1.3235	1603.8	.0276	.742

TABLE 6.5D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN2 (50.00 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1160	1.7211	0	-1050.2	1.5854	29.158	.075	1.0151	-1.0008	0.2993	1.3049	1606.6	.0331	.675	0.2795	1.3221	1617.2	.0281	.741
1180	1.6914	0	-1044.1	1.5906	29.149	.076	1.0174	-1.0010	0.3032	1.3014	1618.4	.0342	.669	0.2805	1.3208	1630.4	.0286	.740
1200	1.6627	0	-1038.0	1.5957	29.140	.076	1.0200	-1.0011	0.3075	1.2978	1630.1	.0355	.663	0.2815	1.3194	1643.6	.0291	.740
1220	1.6349	0	-1031.8	1.6008	29.130	.077	1.0229	-1.0013	0.3122	1.2940	1641.5	.0368	.657	0.2825	1.3181	1656.7	.0296	.739
1240	1.6079	0	-1025.5	1.6060	29.118	.078	1.0262	-1.0015	0.3173	1.2901	1652.7	.0381	.652	0.2834	1.3169	1669.8	.0301	.738
1260	1.5816	0	-1019.1	1.6111	29.105	.079	1.0298	-1.0017	0.3229	1.2860	1663.7	.0396	.646	0.2844	1.3156	1682.8	.0306	.737
1280	1.5562	0	-1012.6	1.6162	29.091	.080	1.0339	-1.0020	0.3290	1.2817	1674.5	.0411	.641	0.2854	1.3144	1695.7	.0311	.735
1300	1.5314	0	-1006.0	1.6214	29.074	.081	1.0384	-1.0022	0.3357	1.2774	1685.2	.0428	.636	0.2864	1.3132	1708.6	.0316	.734
1320	1.5072	0	-999.2	1.6266	29.056	.082	1.0433	-1.0025	0.3430	1.2729	1695.6	.0445	.632	0.2873	1.3121	1721.5	.0321	.733
1340	1.4837	0	-992.2	1.6318	29.036	.083	1.0487	-1.0028	0.3508	1.2683	1705.9	.0463	.628	0.2883	1.3110	1734.4	.0326	.732
1360	1.4608	0	-985.1	1.6370	29.014	.084	1.0546	-1.0032	0.3593	1.2637	1716.1	.0482	.624	0.2893	1.3100	1747.3	.0331	.731
1380	1.4384	0	-977.9	1.6423	28.990	.085	1.0610	-1.0036	0.3684	1.2591	1726.3	.0501	.621	0.2902	1.3090	1760.1	.0336	.730
1400	1.4165	0	-970.4	1.6477	28.963	.085	1.0680	-1.0040	0.3781	1.2544	1736.3	.0522	.619	0.2912	1.3080	1773.0	.0341	.728
1420	1.3951	0	-962.7	1.6531	28.933	.086	1.0754	-1.0044	0.3885	1.2498	1746.4	.0543	.617	0.2921	1.3071	1786.0	.0347	.727
1440	1.3742	0	-954.9	1.6587	28.901	.087	1.0833	-1.0049	0.3994	1.2454	1756.4	.0565	.616	0.2930	1.3063	1798.9	.0352	.726
1460	1.3538	0	-946.8	1.6642	28.867	.088	1.0917	-1.0054	0.4107	1.2410	1766.6	.0587	.615	0.2940	1.3055	1811.9	.0357	.724
1480	1.3337	0	-938.4	1.6699	28.829	.089	1.1004	-1.0059	0.4225	1.2369	1776.8	.0610	.615	0.2949	1.3048	1825.0	.0362	.723
1500	1.3141	0	-929.9	1.6757	28.788	.090	1.1094	-1.0065	0.4344	1.2329	1787.2	.0632	.616	0.2958	1.3042	1838.1	.0367	.722
1520	1.2949	0	-921.1	1.6815	28.745	.090	1.1185	-1.0071	0.4464	1.2293	1797.8	.0654	.617	0.2967	1.3036	1851.3	.0372	.720
1540	1.2760	0	-912.0	1.6874	28.699	.091	1.1275	-1.0076	0.4582	1.2260	1808.6	.0675	.619	0.2975	1.3031	1864.6	.0378	.719
1560	1.2575	0	-902.7	1.6934	28.650	.092	1.1364	-1.0082	0.4696	1.2231	1819.7	.0695	.622	0.2984	1.3026	1877.9	.0383	.718
1580	1.2394	0	-893.2	1.6994	28.599	.093	1.1447	-1.0087	0.4802	1.2206	1831.1	.0713	.625	0.2992	1.3022	1891.3	.0388	.716
1600	1.2216	0	-883.5	1.7055	28.545	.094	1.1522	-1.0093	0.4897	1.2185	1842.8	.0728	.629	0.3001	1.3018	1904.7	.0393	.715
1620	1.2042	0	-873.6	1.7117	28.490	.094	1.1585	-1.0097	0.4977	1.2170	1854.9	.0741	.634	0.3009	1.3015	1918.2	.0398	.713
1640	1.1871	0	-863.6	1.7178	28.434	.095	1.1634	-1.0101	0.5038	1.2159	1867.3	.0749	.640	0.3016	1.3013	1931.8	.0403	.712
1660	1.1705	0	-853.5	1.7240	28.377	.096	1.1664	-1.0103	0.5075	1.2155	1880.2	.0754	.646	0.3024	1.3011	1945.3	.0408	.711
1680	1.1542	0	-843.3	1.7300	28.320	.097	1.1672	-1.0104	0.5085	1.2157	1893.5	.0753	.653	0.3032	1.3009	1958.8	.0413	.709
1700	1.1384	0	-833.2	1.7361	28.265	.097	1.1654	-1.0104	0.5065	1.2165	1907.3	.0748	.660	0.3039	1.3007	1972.3	.0418	.708
1720	1.1230	0	-823.1	1.7419	28.211	.098	1.1608	-1.0102	0.5013	1.2181	1921.6	.0737	.668	0.3046	1.3006	1985.6	.0423	.707
1740	1.1081	0	-813.2	1.7477	28.159	.099	1.1534	-1.0098	0.4928	1.2204	1936.3	.0721	.676	0.3053	1.3004	1998.8	.0428	.706
1760	1.0937	0	-803.4	1.7533	28.112	.100	1.1433	-1.0093	0.4812	1.2234	1951.5	.0702	.684	0.3059	1.3002	2011.8	.0433	.705
1780	1.0797	0	-793.9	1.7586	28.068	.100	1.1308	-1.0085	0.4672	1.2272	1967.1	.0680	.691	0.3066	1.3000	2024.6	.0437	.705
1800	1.0662	0	-784.7	1.7638	28.029	.101	1.1166	-1.0077	0.4513	1.2317	1983.1	.0656	.696	0.3072	1.2998	2037.2	.0442	.704
1900	1.0057	0	-743.7	1.7860	27.908	.105	1.0467	-1.0032	0.3752	1.2572	2062.9	.0559	.704	0.3101	1.2978	2096.0	.0463	.703
2000	9.5412	-1	-708.2	1.8042	27.869	.109	1.0135	-1.0010	0.3409	1.2718	2130.2	.0529	.699	0.3128	1.2951	2149.6	.0483	.704
2100	9.0834	-1	-674.6	1.8206	27.859	.112	1.0039	-1.0003	0.3320	1.2757	2186.6	.0534	.698	0.3153	1.2921	2200.6	.0502	.705
2200	8.6696	-1	-641.6	1.8359	27.856	.116	1.0013	-1.0001	0.3303	1.2760	2238.4	.0547	.699	0.3178	1.2892	2250.0	.0521	.706
2300	8.2923	-1	-608.5	1.8506	27.855	.119	1.0006	-1.0001	0.3305	1.2753	2288.2	.0563	.700	0.3202	1.2865	2298.2	.0540	.707
2400	7.9466	-1	-575.4	1.8647	27.854	.123	1.0003	-1.0000	0.3313	1.2743	2336.5	.0580	.701	0.3224	1.2839	2345.3	.0559	.708
2500	7.6287	-1	-542.3	1.8783	27.854	.126	1.0002	-1.0000	0.3323	1.2733	2383.7	.0597	.702	0.3245	1.2815	2391.4	.0577	.709

TABLE 6.5D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN2 (50.00 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	7.3353-1	-509.0	1.8913	27.854	.130	1.0001	-1.0000	0.3334	1.2721	2429.8	.0614	.703	0.3266	1.2793	2436.7	.0596	.709
2700	7.0636-1	-475.6	1.9039	27.854	.133	1.0001	-1.0000	0.3345	1.2709	2475.0	.0631	.704	0.3285	1.2772	2481.0	.0615	.710
2800	6.8113-1	-442.1	1.9161	27.853	.136	1.0001	-1.0000	0.3356	1.2697	2519.2	.0648	.705	0.3303	1.2752	2524.6	.0633	.710
2900	6.5764-1	-408.5	1.9279	27.853	.139	1.0001	-1.0000	0.3368	1.2686	2562.6	.0666	.705	0.3321	1.2734	2567.5	.0652	.710
3000	6.3571-1	-374.7	1.9393	27.853	.143	1.0001	-1.0000	0.3379	1.2674	2605.2	.0683	.706	0.3337	1.2717	2609.6	.0670	.710
3100	6.1521-1	-340.9	1.9504	27.853	.146	1.0001	-1.0000	0.3391	1.2663	2647.1	.0701	.706	0.3353	1.2701	2651.1	.0688	.710
3200	5.9598-1	-306.9	1.9612	27.853	.149	1.0001	-1.0000	0.3402	1.2652	2688.3	.0718	.706	0.3367	1.2686	2691.9	.0707	.710
3300	5.7792-1	-272.8	1.9717	27.853	.152	1.0001	-1.0000	0.3414	1.2641	2728.8	.0736	.705	0.3381	1.2672	2732.2	.0725	.710
3400	5.6092-1	-238.6	1.9819	27.853	.155	1.0002	-1.0000	0.3425	1.2630	2768.7	.0755	.705	0.3394	1.2659	2771.9	.0743	.709
3500	5.4489-1	-204.3	1.9919	27.853	.158	1.0003	-1.0000	0.3437	1.2619	2807.9	.0773	.704	0.3407	1.2647	2811.0	.0761	.709
3600	5.2975-1	-169.9	2.0016	27.852	.161	1.0004	-1.0000	0.3450	1.2608	2846.4	.0792	.702	0.3418	1.2636	2849.6	.0778	.709
3700	5.1542-1	-135.3	2.0110	27.852	.164	1.0007	-1.0000	0.3464	1.2596	2884.4	.0812	.701	0.3429	1.2625	2887.7	.0796	.708
3800	5.0185-1	-100.6	2.0203	27.851	.167	1.0010	-1.0000	0.3479	1.2584	2921.7	.0833	.699	0.3440	1.2615	2925.3	.0813	.708
3900	4.8896-1	-65.7	2.0293	27.851	.170	1.0014	-1.0000	0.3497	1.2570	2958.3	.0855	.697	0.3449	1.2606	2962.5	.0831	.707
4000	4.7672-1	-30.7	2.0382	27.849	.173	1.0020	-1.0001	0.3517	1.2555	2994.3	.0878	.694	0.3459	1.2597	2999.3	.0848	.706
4100	4.6506-1	4.6	2.0469	27.848	.176	1.0029	-1.0001	0.3543	1.2537	3029.4	.0904	.690	0.3467	1.2589	3035.7	.0865	.706
4200	4.5395-1	40.2	2.0555	27.845	.179	1.0041	-1.0001	0.3574	1.2516	3063.7	.0933	.686	0.3475	1.2582	3071.7	.0882	.705
4300	4.4334-1	76.1	2.0640	27.842	.182	1.0058	-1.0002	0.3614	1.2491	3097.1	.0965	.681	0.3483	1.2575	3107.4	.0900	.704
4400	4.3320-1	112.5	2.0723	27.838	.185	1.0080	-1.0003	0.3664	1.2462	3129.4	.1002	.676	0.3490	1.2569	3142.8	.0917	.703
4500	4.2348-1	149.5	2.0806	27.832	.187	1.0110	-1.0004	0.3727	1.2427	3160.6	.1044	.669	0.3497	1.2563	3178.0	.0934	.702
4600	4.1416-1	187.1	2.0889	27.824	.190	1.0150	-1.0006	0.3808	1.2385	3190.6	.1093	.663	0.3504	1.2558	3212.9	.0951	.701
4700	4.0519-1	225.7	2.0972	27.813	.193	1.0203	-1.0008	0.3909	1.2336	3219.4	.1152	.655	0.3510	1.2554	3247.7	.0968	.700
4800	3.9656-1	265.4	2.1056	27.800	.196	1.0272	-1.0011	0.4037	1.2280	3246.8	.1221	.647	0.3516	1.2550	3282.4	.0985	.698
4900	3.8821-1	306.5	2.1140	27.782	.198	1.0359	-1.0014	0.4194	1.2217	3273.2	.1302	.639	0.3521	1.2547	3317.1	.1002	.697
5000	3.8013-1	349.4	2.1227	27.759	.201	1.0469	-1.0019	0.4384	1.2150	3298.7	.1398	.631	0.3526	1.2545	3351.9	.1019	.696
5100	3.7228-1	394.3	2.1316	27.729	.204	1.0602	-1.0025	0.4608	1.2081	3323.7	.1511	.622	0.3531	1.2544	3386.9	.1036	.694
5200	3.6464-1	441.7	2.1408	27.693	.206	1.0760	-1.0032	0.4865	1.2012	3348.8	.1641	.612	0.3535	1.2545	3422.2	.1053	.693
5300	3.5719-1	491.7	2.1503	27.648	.209	1.0942	-1.0041	0.5150	1.1946	3374.3	.1788	.602	0.3539	1.2546	3458.0	.1070	.691
5400	3.4989-1	544.7	2.1602	27.594	.211	1.1143	-1.0050	0.5456	1.1887	3400.8	.1954	.591	0.3543	1.2549	3494.2	.1087	.689

TABLE 6.1E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO $\bar{\nu}$ 1.250; CHEM. EQUIV. RATIO $\bar{\nu}$ 1.2496; P = 0.14696 LB/IN² (0.01 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS							GAS PHASE PROPERTIES FROZEN COMPOSITIONS						
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R	
360	1.299-3	-1376.5	1.6085	27.853	0.252	.243	1.157-3	30.418	.031	1.0000	-1.000	.233	1.389	904	.010	.735	.233	1.389	.010	.735
400	1.165-3	-1364.6	1.6398	27.853	0.402	.247	1.040-3	30.377	.034	1.0000	-1.000	.234	1.387	953	.011	.731	.234	1.387	.011	.731
440	1.018-3	-1328.0	1.7257	27.854	1.975	.252	9.303-4	29.890	.036	1.0000	-1.000	.240	1.383	1006	.012	.740	.240	1.383	.012	.740
480	8.332-4	-1237.5	1.9250	27.887	0.254	.252	8.170-4	28.638	.036	1.0000	-1.000	.254	1.375	1070	.012	.767	.254	1.375	.012	.767
520	7.691-4	-1227.3	1.9455	27.910	0.257	.254	7.545-4	28.648	.039	1.0001	-1.000	.256	1.372	1113	.013	.763	.255	1.372	.013	.764
537	7.452-4	-1223.0	1.9536	27.922	0.258	.254	7.312-4	28.654	.040	1.0001	-1.000	.256	1.371	1130	.013	.761	.256	1.372	.013	.763
560	7.142-4	-1217.0	1.9646	27.941	0.259	.255	7.009-4	28.662	.041	1.0002	-1.000	.257	1.369	1153	.014	.759	.256	1.370	.014	.763
600	6.666-4	-1206.6	1.9826	27.979	0.262	.256	6.546-4	28.679	.044	1.0006	-1.000	.259	1.366	1192	.015	.753	.258	1.368	.015	.763
640	6.249-4	-1196.0	1.9996	28.023	0.266	.258	6.140-4	28.697	.046	1.0017	-1.000	.262	1.360	1228	.016	.740	.259	1.365	.016	.762
680	5.880-4	-1185.2	2.0159	28.071	0.272	.259	5.783-4	28.716	.049	1.0038	-1.000	.267	1.353	1262	.018	.716	.260	1.362	.017	.759
720	5.551-4	-1174.2	2.0317	28.121	0.282	.261	5.465-4	28.732	.051	1.0079	-1.000	.275	1.342	1293	.021	.682	.261	1.360	.018	.756
760	5.256-4	-1162.6	2.0473	28.170	0.296	.263	5.179-4	28.743	.054	1.0150	-1.001	.288	1.327	1321	.024	.639	.263	1.357	.019	.754
800	4.988-4	-1150.4	2.0630	28.212	0.316	.264	4.920-4	28.743	.056	1.0263	-1.001	.307	1.309	1346	.029	.596	.264	1.354	.020	.750
840	4.742-4	-1137.2	2.0790	28.243	0.344	.266	4.683-4	28.727	.058	1.0425	-1.002	.332	1.289	1369	.034	.560	.266	1.351	.021	.746
880	4.514-4	-1122.8	2.0958	28.259	0.379	.268	4.465-4	28.690	.060	1.0637	-1.003	.364	1.269	1391	.041	.538	.268	1.348	.022	.740
920	4.302-4	-1106.8	2.1136	28.255	0.420	.271	4.261-4	28.627	.062	1.0884	-1.004	.400	1.252	1414	.047	.532	.270	1.345	.023	.732
960	4.103-4	-1089.2	2.1324	28.230	0.464	.273	4.071-4	28.538	.065	1.1135	-1.006	.436	1.238	1439	.052	.542	.273	1.342	.024	.723
1000	3.916-4	-1069.7	2.1522	28.189	0.510	.276	3.892-4	28.424	.067	1.1347	-1.007	.468	1.228	1465	.055	.565	.276	1.340	.026	.712
1040	3.741-4	-1048.3	2.1732	28.136	0.558	.278	3.725-4	28.292	.069	1.1484	-1.008	.493	1.220	1493	.057	.596	.278	1.337	.027	.701
1080	3.575-4	-1025.0	2.1952	28.081	0.613	.281	3.569-4	28.146	.071	1.1525	-1.008	.510	1.214	1522	.058	.628	.281	1.335	.029	.690
1120	3.423-4	-1001.4	2.2167	27.997	0.490	.283	3.423-4	27.997	.073	1.1285	-1.007	.490	1.217	1556	.054	.663	.283	1.334	.030	.682
1160	3.294-4	-983.6	2.2323	27.905	0.401	.285	3.294-4	27.905	.075	1.0610	-1.003	.401	1.245	1604	.044	.686	.285	1.332	.031	.679
1200	3.180-4	-968.8	2.2448	27.869	0.348	.287	3.180-4	27.869	.076	1.0207	-1.001	.348	1.270	1649	.039	.685	.287	1.330	.032	.679
1240	3.077-4	-955.3	2.2559	27.858	0.330	.289	3.077-4	27.858	.078	1.0062	-1.000	.330	1.280	1683	.038	.682	.289	1.328	.033	.680
1280	2.980-4	-942.2	2.2663	27.855	0.325	.290	2.980-4	27.855	.080	1.0019	-1.000	.325	1.282	1711	.038	.682	.290	1.326	.034	.682
1320	2.890-4	-929.2	2.2763	27.854	0.325	.291	2.890-4	27.854	.082	1.0006	-1.000	.325	1.282	1738	.039	.682	.291	1.324	.035	.683
1360	2.805-4	-916.2	2.2860	27.853	0.325	.293	2.805-4	27.853	.083	1.0002	-1.000	.325	1.281	1764	.040	.682	.293	1.322	.036	.685
1400	2.724-4	-903.2	2.2954	27.853	0.326	.294	2.724-4	27.853	.085	1.0001	-1.000	.326	1.281	1789	.041	.683	.294	1.320	.036	.686

TABLE 6.2E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN² (0.10 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS										GAS PHASE PROPERTIES FROZEN COMPOSITIONS				
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLVLT	DLVDLP	CP (GAM)	VS	COND	PRAN	CP	GAM	COND	PRAN	
R	L /FT3	BTU/LB	BTU/ LB R		BTU/ LB R	BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R	BTU/ LB R		BTU/ FT S R		
360	1.299-2	-1376.6	1.4743	27.853	0.244	.243	1.157-2	30.420	.031	1.0000	-1.000	.233	1.389	904	.010	.735	.233	1.389	.010	.735
400	1.169-2	-1366.6	1.5007	27.853	0.263	.247	1.041-2	30.416	.034	1.0000	-1.000	.234	1.387	952	.011	.730	.234	1.387	.011	.730
440	1.058-2	-1354.1	1.5304	27.853	0.411	.252	9.451-3	30.367	.037	1.0000	-1.000	.235	1.385	999	.012	.727	.235	1.385	.012	.727
480	9.405-3	-1323.4	1.5965	27.855	1.414	.256	8.556-3	29.989	.039	1.0000	-1.000	.240	1.381	1048	.013	.734	.240	1.381	.013	.734
520	7.691-3	-1227.3	1.7889	27.910	0.257	.254	7.545-3	28.648	.039	1.0000	-1.000	.255	1.372	1113	.013	.764	.255	1.372	.013	.764
537	7.453-3	-1223.0	1.7970	27.922	0.257	.254	7.312-3	28.654	.040	1.0000	-1.000	.256	1.371	1130	.013	.763	.256	1.371	.013	.763
560	7.142-3	-1217.0	1.8080	27.941	0.259	.255	7.009-3	28.662	.041	1.0001	-1.000	.257	1.370	1154	.014	.762	.256	1.370	.014	.763
600	6.666-3	-1206.6	1.8259	27.979	0.261	.256	6.546-3	28.679	.044	1.0002	-1.000	.258	1.367	1193	.015	.760	.258	1.368	.015	.763
640	6.249-3	-1196.1	1.8429	28.023	0.264	.258	6.141-3	28.699	.046	1.0005	-1.000	.260	1.364	1230	.016	.755	.259	1.365	.016	.762
680	5.881-3	-1185.5	1.8590	28.073	0.267	.259	5.784-3	28.720	.049	1.0012	-1.000	.262	1.359	1265	.017	.745	.260	1.362	.017	.760
720	5.554-3	-1174.7	1.8743	28.125	0.271	.261	5.466-3	28.741	.051	1.0026	-1.000	.266	1.354	1298	.019	.730	.261	1.360	.018	.757
760	5.260-3	-1163.8	1.8891	28.178	0.277	.262	5.182-3	28.761	.053	1.0049	-1.000	.271	1.346	1330	.020	.708	.263	1.357	.019	.756
800	4.996-3	-1152.6	1.9035	28.230	0.285	.264	4.926-3	28.778	.056	1.0088	-1.000	.278	1.337	1359	.023	.681	.264	1.354	.020	.754
840	4.755-3	-1141.0	1.9177	28.278	0.296	.266	4.693-3	28.789	.058	1.0149	-1.001	.289	1.325	1386	.026	.648	.266	1.351	.020	.752
880	4.535-3	-1128.8	1.9317	28.319	0.310	.268	4.480-3	28.792	.060	1.0237	-1.001	.303	1.311	1412	.030	.615	.267	1.347	.021	.750
920	4.331-3	-1116.1	1.9459	28.351	0.329	.270	4.284-3	28.782	.062	1.0357	-1.002	.321	1.297	1436	.034	.584	.269	1.344	.022	.747
960	4.143-3	-1102.4	1.9605	28.369	0.353	.272	4.102-3	28.758	.064	1.0512	-1.003	.344	1.281	1458	.039	.561	.271	1.341	.024	.742
1000	3.967-3	-1087.7	1.9754	28.372	0.382	.274	3.932-3	28.716	.067	1.0699	-1.004	.370	1.266	1481	.045	.548	.273	1.339	.025	.736
1040	3.802-3	-1071.8	1.9910	28.360	0.415	.276	3.773-3	28.655	.069	1.0912	-1.005	.400	1.252	1503	.050	.545	.276	1.336	.026	.729
1080	3.646-3	-1054.4	2.0074	28.332	0.454	.278	3.623-3	28.574	.071	1.1139	-1.006	.433	1.239	1526	.055	.553	.278	1.333	.027	.721
1120	3.498-3	-1035.4	2.0248	28.291	0.500	.281	3.481-3	28.473	.073	1.1364	-1.007	.468	1.227	1549	.060	.570	.280	1.331	.029	.713
1160	3.357-3	-1014.3	2.0432	28.240	0.554	.283	3.347-3	28.355	.075	1.1570	-1.008	.504	1.216	1573	.063	.594	.283	1.329	.030	.704
1200	3.223-3	-990.9	2.0631	28.186	0.623	.286	3.220-3	28.219	.076	1.1735	-1.009	.537	1.206	1597	.066	.621	.285	1.327	.031	.695
1240	3.100-3	-967.9	2.0820	28.068	0.524	.288	3.100-3	28.068	.078	1.1561	-1.008	.524	1.208	1629	.062	.657	.288	1.326	.033	.689
1280	2.991-3	-948.3	2.0975	27.953	0.452	.290	2.991-3	27.953	.080	1.0988	-1.005	.452	1.226	1671	.053	.686	.290	1.325	.034	.685
1320	2.894-3	-931.7	2.1103	27.893	0.384	.291	2.894-3	27.893	.082	1.0460	-1.002	.384	1.251	1716	.045	.692	.291	1.324	.035	.685
1360	2.806-3	-917.1	2.1212	27.868	0.348	.293	2.806-3	27.868	.083	1.0178	-1.001	.348	1.268	1754	.042	.688	.293	1.322	.036	.685
1400	2.725-3	-903.6	2.1310	27.858	0.334	.294	2.725-3	27.858	.085	1.0065	-1.000	.334	1.276	1785	.041	.685	.294	1.320	.036	.687

TABLE 6.3E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN² (1.00 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS							GAS PHASE PROPERTIES FROZEN COMPOSITIONS						
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT ³	BTU/LB	BTU/ LB R		BTU/ LB R	BTU/ LB R	LB/FT ³		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R	
360	1.299-1	-1376.6	1.3404	27.853	0.243	.243	1.157-1	30.420	.031	1.0000	-1.000	.233	1.389	904	.010	.735	.233	1.389	.010	.735
400	1.169-1	-1366.8	1.3663	27.853	0.249	.247	1.041-1	30.419	.034	1.0000	-1.000	.234	1.387	952	.011	.730	.234	1.387	.011	.730
440	1.062-1	-1356.5	1.3907	27.853	0.268	.252	9.466-2	30.415	.037	1.0000	-1.000	.235	1.385	998	.012	.726	.235	1.385	.012	.726
480	9.709-2	-1344.4	1.4170	27.853	0.365	.257	8.666-2	30.377	.040	1.0000	-1.000	.236	1.383	1042	.013	.725	.236	1.383	.013	.725
520	8.835-2	-1312.2	1.4817	27.854	0.661	.298	7.954-2	30.202	.042	1.0000	-1.000	.239	1.380	1087	.014	.728	.239	1.380	.014	.728
537	8.442-2	-1299.3	1.5061	27.856	0.908	.294	7.664-2	30.034	.043	1.0000	-1.000	.241	1.378	1107	.014	.731	.241	1.378	.014	.731
560	7.804-2	-1271.6	1.5565	27.869	1.539	.284	7.242-2	29.614	.043	1.0000	-1.000	.246	1.375	1137	.014	.741	.246	1.375	.014	.741
600	6.666-2	-1206.6	1.6694	27.979	0.261	.256	6.546-2	28.679	.044	1.0001	-1.000	.258	1.368	1193	.015	.762	.258	1.368	.015	.763
640	6.249-2	-1196.1	1.6863	28.024	0.263	.258	6.141-2	28.699	.046	1.0002	-1.000	.259	1.365	1230	.016	.760	.259	1.365	.016	.762
680	5.881-2	-1185.6	1.7023	28.073	0.265	.259	5.784-2	28.721	.049	1.0004	-1.000	.261	1.361	1266	.017	.755	.260	1.362	.017	.760
720	5.555-2	-1174.9	1.7175	28.126	0.268	.261	5.467-2	28.744	.051	1.0008	-1.000	.263	1.358	1300	.018	.748	.261	1.360	.018	.758
760	5.262-2	-1164.1	1.7320	28.181	0.271	.262	5.183-2	28.767	.053	1.0016	-1.000	.265	1.353	1333	.019	.740	.263	1.357	.019	.756
800	4.998-2	-1153.3	1.7460	28.237	0.274	.264	4.928-2	28.790	.056	1.0028	-1.000	.269	1.348	1365	.021	.728	.264	1.354	.019	.755
840	4.759-2	-1142.2	1.7595	28.290	0.279	.266	4.697-2	28.810	.058	1.0049	-1.000	.273	1.342	1395	.022	.712	.266	1.350	.020	.754
880	4.542-2	-1130.9	1.7726	28.342	0.285	.267	4.486-2	28.827	.060	1.0079	-1.000	.279	1.334	1423	.024	.693	.267	1.347	.021	.753
920	4.342-2	-1119.4	1.7854	28.388	0.292	.269	4.293-2	28.840	.062	1.0122	-1.001	.287	1.326	1450	.027	.670	.269	1.344	.022	.752
960	4.158-2	-1107.5	1.7981	28.429	0.302	.271	4.115-2	28.846	.064	1.0182	-1.001	.296	1.316	1476	.030	.645	.271	1.341	.023	.750
1000	3.988-2	-1095.2	1.8107	28.462	0.315	.273	3.950-2	28.845	.067	1.0261	-1.001	.308	1.305	1500	.033	.621	.273	1.338	.024	.747
1040	3.830-2	-1082.3	1.8233	28.486	0.330	.275	3.797-2	28.834	.069	1.0363	-1.002	.323	1.294	1523	.037	.600	.274	1.335	.025	.743
1080	3.682-2	-1068.7	1.8361	28.499	0.349	.277	3.653-2	28.812	.071	1.0489	-1.003	.341	1.281	1545	.041	.583	.276	1.332	.026	.739
1120	3.543-2	-1054.3	1.8491	28.501	0.372	.279	3.519-2	28.778	.073	1.0643	-1.004	.363	1.269	1567	.046	.571	.279	1.329	.028	.735
1160	3.412-2	-1038.9	1.8627	28.492	0.400	.281	3.392-2	28.729	.074	1.0823	-1.005	.389	1.256	1588	.051	.567	.281	1.327	.029	.729
1200	3.287-2	-1022.3	1.8768	28.471	0.434	.283	3.271-2	28.665	.076	1.1031	-1.006	.419	1.243	1608	.056	.569	.283	1.324	.030	.723
1240	3.169-2	-1004.1	1.8917	28.440	0.476	.285	3.157-2	28.585	.078	1.1262	-1.007	.454	1.230	1629	.061	.577	.285	1.322	.031	.717
1280	3.055-2	-984.1	1.9075	28.400	0.527	.288	3.048-2	28.488	.080	1.1512	-1.008	.492	1.218	1650	.067	.591	.287	1.320	.032	.711
1320	2.945-2	-961.8	1.9247	28.355	0.591	.290	2.944-2	28.374	.082	1.1765	-1.010	.533	1.208	1671	.072	.608	.290	1.319	.034	.704
1360	2.842-2	-939.4	1.9414	28.227	0.545	.292	2.842-2	28.227	.084	1.1815	-1.010	.545	1.205	1699	.072	.635	.292	1.318	.035	.699
1400	2.747-2	-918.0	1.9569	28.087	0.518	.294	2.747-2	28.087	.085	1.1572	-1.009	.518	1.210	1732	.066	.667	.294	1.317	.036	.695

TABLE 6.4E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN2 (10.00 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS							GAS PHASE PROPERTIES FROZEN COMPOSITIONS				
T	DENSITY	H	ENTROPY	MW	CP REACT	CP FROZ	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)	S VS	COND PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		BTU/ LB R	BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R	BTU/ LB R		BTU/ FT S R	
360	1.296 0	-1376.6	1.2065	27.853	0.243	.243	1.157 0	30.420	.031	1.0000	-1.000	.233	1.389	904 .010 .735	.233	1.389	.010	.735
400	1.167 0	-1366.8	1.2324	27.853	0.247	.247	1.041 0	30.420	.034	1.0000	-1.000	.234	1.387	952 .011 .730	.234	1.387	.011	.730
440	1.061 0	-1356.8	1.2562	27.853	0.254	.252	9.467-1	30.419	.037	1.0000	-1.000	.235	1.385	998 .012 .726	.235	1.385	.012	.726
480	9.725-1	-1346.4	1.2788	27.853	0.268	.257	8.677-1	30.416	.040	1.0000	-1.000	.236	1.383	1042 .013 .724	.236	1.383	.013	.724
520	8.966-1	-1321.2	1.3295	27.853	0.338	.303	8.005-1	30.398	.042	1.0000	-1.000	.237	1.381	1084 .014 .723	.237	1.381	.014	.723
537	8.676-1	-1315.4	1.3405	27.853	0.360	.303	7.752-1	30.381	.044	1.0000	-1.000	.237	1.380	1101 .014 .723	.237	1.380	.014	.723
560	8.287-1	-1306.5	1.3568	27.853	0.411	.302	7.419-1	30.339	.045	1.0000	-1.000	.238	1.378	1125 .015 .724	.238	1.378	.015	.724
600	7.633-1	-1287.1	1.3903	27.855	0.584	.300	6.887-1	30.176	.047	1.0000	-1.000	.241	1.375	1166 .016 .729	.241	1.375	.016	.729
640	6.925-1	-1257.0	1.4386	27.872	0.972	.292	6.374-1	29.789	.049	1.0000	-1.000	.247	1.371	1210 .016 .738	.246	1.371	.016	.738
680	6.044-1	-1202.1	1.5216	28.003	1.934	.269	5.837-1	28.987	.049	1.0001	-1.000	.257	1.364	1261 .017 .754	.257	1.364	.017	.755
720	5.554-1	-1175.0	1.5608	28.127	0.267	.261	5.467-1	28.745	.051	1.0002	-1.000	.262	1.359	1301 .018 .755	.261	1.360	.018	.758
760	5.262-1	-1164.3	1.5753	28.182	0.269	.262	5.184-1	28.769	.053	1.0005	-1.000	.263	1.355	1334 .019 .751	.263	1.357	.019	.757
800	4.999-1	-1153.5	1.5892	28.239	0.271	.264	4.929-1	28.793	.056	1.0009	-1.000	.266	1.352	1366 .020 .747	.264	1.354	.019	.756
840	4.761-1	-1142.6	1.6024	28.295	0.273	.266	4.698-1	28.817	.058	1.0015	-1.000	.268	1.347	1397 .021 .741	.266	1.350	.020	.755
880	4.544-1	-1131.6	1.6152	28.349	0.276	.267	4.488-1	28.839	.060	1.0025	-1.000	.271	1.343	1427 .022 .733	.267	1.347	.021	.755
920	4.346-1	-1120.5	1.6276	28.401	0.280	.269	4.296-1	28.859	.062	1.0039	-1.000	.275	1.338	1456 .024 .722	.269	1.344	.022	.754
960	4.164-1	-1109.2	1.6396	28.450	0.284	.271	4.119-1	28.877	.064	1.0059	-1.000	.279	1.332	1484 .025 .709	.270	1.341	.023	.752
1000	3.996-1	-1097.7	1.6513	28.495	0.289	.273	3.956-1	28.891	.066	1.0087	-1.000	.284	1.326	1510 .027 .695	.272	1.338	.024	.751
1040	3.841-1	-1086.0	1.6627	28.535	0.296	.275	3.806-1	28.902	.069	1.0123	-1.001	.291	1.319	1536 .029 .678	.274	1.335	.025	.749
1080	3.696-1	-1074.1	1.6740	28.570	0.303	.276	3.665-1	28.907	.071	1.0171	-1.001	.298	1.311	1561 .032 .661	.276	1.332	.026	.747
1120	3.562-1	-1061.8	1.6852	28.599	0.313	.278	3.534-1	28.907	.072	1.0231	-1.001	.308	1.303	1584 .035 .645	.278	1.329	.027	.744
1160	3.436-1	-1049.0	1.6964	28.621	0.325	.280	3.412-1	28.900	.074	1.0308	-1.002	.319	1.293	1607 .038 .629	.280	1.326	.028	.741
1200	3.317-1	-1035.8	1.7076	28.636	0.339	.282	3.296-1	28.886	.076	1.0403	-1.002	.333	1.284	1628 .041 .616	.282	1.323	.029	.738
1240	3.205-1	-1021.9	1.7190	28.643	0.357	.284	3.188-1	28.863	.078	1.0519	-1.003	.350	1.273	1649 .045 .606	.284	1.320	.030	.735
1280	3.099-1	-1007.2	1.7307	28.643	0.378	.286	3.084-1	28.830	.080	1.0660	-1.004	.370	1.262	1669 .050 .599	.286	1.318	.031	.731
1320	2.998-1	-991.5	1.7427	28.635	0.405	.288	2.986-1	28.787	.082	1.0827	-1.005	.394	1.251	1689 .054 .595	.288	1.315	.032	.727
1360	2.901-1	-974.7	1.7552	28.620	0.437	.290	2.893-1	28.732	.084	1.1023	-1.006	.422	1.239	1708 .059 .596	.290	1.313	.034	.723
1400	2.809-1	-956.5	1.7685	28.598	0.476	.292	2.804-1	28.664	.085	1.1248	-1.007	.454	1.228	1727 .065 .600	.292	1.311	.035	.718

TABLE 6.5E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.087066; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN² (50.00 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS									
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN	
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R		
360	6.425	0	-1376.6	1.1130	27.853	0.243	5.786	0	30.420	.031	1.0000	-1.000	.233	1.389	904	.010	.233	1.389	.010	.735	
400	5.789	0	-1366.8	1.1388	27.853	0.247	5.207	0	30.420	.034	1.0000	-1.000	.234	1.387	952	.011	.234	1.387	.011	.730	
440	5.267	0	-1356.8	1.1626	27.853	0.252	4.734	0	30.420	.037	1.0000	-1.000	.235	1.385	998	.012	.235	1.385	.012	.726	
480	4.832	0	-1346.6	1.1848	27.853	0.259	4.339	0	30.419	.040	1.0000	-1.000	.236	1.383	1042	.013	.236	1.383	.013	.723	
520	4.464	0	-1322.0	1.2344	27.853	0.310	4.005	0	30.415	.043	1.0000	-1.000	.237	1.381	1083	.014	.237	1.381	.014	.722	
537	4.325	0	-1316.8	1.2442	27.853	0.315	3.880	0	30.412	.044	1.0000	-1.000	.237	1.380	1100	.014	.237	1.380	.014	.722	
560	4.143	0	-1309.4	1.2578	27.853	0.325	3.717	0	30.404	.045	1.0000	-1.000	.238	1.379	1124	.015	.238	1.379	.015	.723	
600	3.859	0	-1295.7	1.2813	27.853	0.359	3.466	0	30.371	.048	1.0000	-1.000	.239	1.376	1163	.016	.239	1.376	.016	.724	
640	3.597	0	-1280.2	1.3063	27.854	0.425	3.241	0	30.294	.050	1.0000	-1.000	.241	1.373	1201	.017	.241	1.373	.017	.727	
680	3.343	0	-1261.0	1.3354	27.858	0.545	3.034	0	30.134	.052	1.0000	-1.000	.244	1.370	1240	.017	.244	1.370	.017	.731	
720	3.080	0	-1235.4	1.3719	27.881	0.758	2.837	0	29.836	.054	1.0000	-1.000	.249	1.366	1280	.018	.249	1.366	.018	.737	
760	2.786	0	-1197.9	1.4225	27.984	1.166	2.643	0	29.332	.055	1.0001	-1.000	.256	1.360	1324	.019	.256	1.360	.019	.745	
800	2.499	0	-1153.5	1.4796	28.239	0.270	2.464	0	28.795	.056	1.0004	-1.000	.265	1.353	1367	.020	.264	1.354	.019	.756	
840	2.380	0	-1142.7	1.4929	28.296	0.272	2.349	0	28.819	.058	1.0007	-1.000	.267	1.349	1398	.021	.266	1.350	.020	.755	
880	2.272	0	-1131.8	1.5056	28.351	0.274	2.244	0	28.842	.060	1.0011	-1.000	.269	1.345	1428	.022	.267	1.347	.021	.755	
920	2.173	0	-1120.8	1.5178	28.405	0.277	2.148	0	28.865	.062	1.0017	-1.000	.271	1.341	1458	.023	.269	1.344	.022	.754	
960	2.082	0	-1109.6	1.5296	28.456	0.279	2.060	0	28.885	.064	1.0026	-1.000	.274	1.337	1486	.024	.270	1.341	.023	.753	
1000	1.999	0	-1098.4	1.5411	28.504	0.282	1.979	0	28.904	.066	1.0039	-1.000	.278	1.332	1514	.025	.272	1.338	.024	.752	
1040	1.922	0	-1087.0	1.5522	28.549	0.286	1.904	0	28.920	.069	1.0056	-1.000	.281	1.327	1540	.027	.274	1.335	.025	.750	
1080	1.850	0	-1075.5	1.5631	28.590	0.291	1.834	0	28.933	.071	1.0078	-1.000	.286	1.321	1566	.029	.276	1.331	.026	.749	
1120	1.783	0	-1063.8	1.5738	28.627	0.296	1.769	0	28.944	.072	1.0106	-1.001	.291	1.315	1591	.031	.278	1.328	.027	.747	
1160	1.721	0	-1051.8	1.5843	28.660	0.302	1.709	0	28.950	.074	1.0143	-1.001	.298	1.309	1615	.033	.279	1.325	.028	.745	
1200	1.663	0	-1039.6	1.5946	28.688	0.310	1.652	0	28.952	.076	1.0190	-1.001	.306	1.302	1638	.035	.281	1.322	.029	.742	
1240	1.608	0	-1027.0	1.6050	28.711	0.319	1.599	0	28.950	.078	1.0248	-1.001	.315	1.294	1660	.038	.283	1.320	.030	.740	
1280	1.556	0	-1014.0	1.6153	28.729	0.331	1.548	0	28.942	.080	1.0320	-1.002	.326	1.286	1682	.040	.285	1.317	.031	.738	
1320	1.507	0	-1000.5	1.6256	28.741	0.344	1.501	0	28.928	.082	1.0408	-1.002	.339	1.277	1702	.044	.287	1.314	.032	.735	
1360	1.461	0	-986.4	1.6361	28.748	0.361	1.455	0	28.907	.084	1.0516	-1.003	.354	1.268	1722	.047	.289	1.312	.033	.732	
1400	1.417	0	-971.6	1.6469	28.750	0.381	1.412	0	28.878	.085	1.0645	-1.004	.373	1.258	1742	.051	.291	1.310	.034	.730	

TABLE 7A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.016907; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.2511; MW = 28.9495;
 DRY AIR; GASEOUS COMPOSITION: CO2= .03463; H2O= .03431; N2= .76744; O2= .15441; AR= .00920

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=50.)								
R	LB/FT3	LB/FT3	BTU/LB	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	FT/S	LB/FT HR	BTU/FT HR R	R		
360	1.1012-1	5.5061 0	-368.5	1.8715	1.7135	1.5556	1.3976	1.2872	0.2430	1.3934	928.2	.0310	.0101	.7467	360
380	1.0433-1	5.2163 0	-363.6	1.8846	1.7267	1.5687	1.4108	1.3003	0.2429	1.3936	953.7	.0326	.0106	.7439	380
400	9.9110-2	4.9555 0	-358.8	1.8971	1.7391	1.5812	1.4232	1.3128	0.2429	1.3937	978.5	.0340	.0112	.7412	400
420	9.4390-2	4.7195 0	-353.9	1.9089	1.7510	1.5930	1.4351	1.3247	0.2429	1.3936	1002.6	.0355	.0117	.7386	420
440	9.0100-2	4.5050 0	-349.1	1.9202	1.7623	1.6043	1.4464	1.3360	0.2429	1.3936	1026.2	.0369	.0122	.7363	440
460	8.6183-2	4.3091 0	-344.2	1.9310	1.7731	1.6151	1.4572	1.3468	0.2430	1.3934	1049.2	.0383	.0127	.7343	460
480	8.2592-2	4.1296 0	-339.4	1.9414	1.7834	1.6254	1.4675	1.3571	0.2431	1.3931	1071.7	.0397	.0132	.7326	480
500	7.9288-2	3.9644 0	-334.5	1.9513	1.7933	1.6354	1.4774	1.3670	0.2432	1.3928	1093.7	.0411	.0137	.7313	500
520	7.6238-2	3.8119 0	-329.6	1.9608	1.8029	1.6449	1.4870	1.3766	0.2434	1.3924	1115.2	.0424	.0141	.7303	520
537	7.3870-2	3.6935 0	-325.6	1.9685	1.8106	1.6526	1.4946	1.3842	0.2436	1.3921	1132.7	.0435	.0145	.7296	537
540	7.3415-2	3.6707 0	-324.8	1.9700	1.8121	1.6541	1.4962	1.3858	0.2436	1.3920	1136.2	.0437	.0146	.7295	540
560	7.0793-2	3.5396 0	-319.9	1.9789	1.8209	1.6630	1.5050	1.3946	0.2438	1.3915	1156.8	.0450	.0150	.7294	560
580	6.8352-2	3.4176 0	-315.0	1.9874	1.8295	1.6715	1.5136	1.4032	0.2441	1.3909	1177.1	.0463	.0155	.7294	580
600	6.6073-2	3.3037 0	-310.1	1.9957	1.8378	1.6798	1.5219	1.4115	0.2444	1.3903	1196.9	.0475	.0159	.7295	600
620	6.3942-2	3.1971 0	-305.2	2.0037	1.8458	1.6878	1.5299	1.4195	0.2447	1.3896	1216.4	.0487	.0163	.7296	620
640	6.1944-2	3.0972 0	-300.3	2.0115	1.8536	1.6956	1.5376	1.4272	0.2450	1.3888	1235.5	.0499	.0168	.7296	640
660	6.0067-2	3.0033 0	-295.4	2.0190	1.8611	1.7031	1.5452	1.4348	0.2454	1.3880	1254.3	.0511	.0172	.7294	660
680	5.8300-2	2.9150 0	-290.5	2.0264	1.8684	1.7105	1.5525	1.4421	0.2458	1.3872	1272.8	.0523	.0176	.7292	680
700	5.6634-2	2.8317 0	-285.6	2.0335	1.8756	1.7176	1.5597	1.4493	0.2462	1.3863	1291.0	.0534	.0180	.7290	700
720	5.5061-2	2.7531 0	-280.7	2.0405	1.8825	1.7245	1.5666	1.4562	0.2466	1.3854	1308.9	.0546	.0185	.7287	720
740	5.3573-2	2.6786 0	-275.7	2.0472	1.8893	1.7313	1.5734	1.4630	0.2470	1.3844	1326.5	.0557	.0189	.7285	740
760	5.2163-2	2.6082 0	-270.8	2.0538	1.8959	1.7379	1.5800	1.4696	0.2475	1.3834	1343.8	.0568	.0193	.7284	760
780	5.0826-2	2.5413 0	-265.8	2.0602	1.9023	1.7443	1.5864	1.4760	0.2480	1.3824	1360.8	.0579	.0197	.7282	780
800	4.9555-2	2.4777 0	-260.9	2.0665	1.9086	1.7506	1.5927	1.4823	0.2485	1.3813	1377.6	.0590	.0201	.7281	800
820	4.8346-2	2.4173 0	-255.9	2.0727	1.9147	1.7568	1.5988	1.4884	0.2490	1.3802	1394.2	.0601	.0206	.7280	820
840	4.7195-2	2.3598 0	-250.9	2.0787	1.9207	1.7628	1.6048	1.4944	0.2496	1.3791	1410.5	.0611	.0210	.7279	840
860	4.6098-2	2.3049 0	-245.9	2.0846	1.9266	1.7687	1.6107	1.5003	0.2501	1.3779	1426.6	.0622	.0214	.7279	860
880	4.5050-2	2.2525 0	-240.9	2.0903	1.9324	1.7744	1.6165	1.5061	0.2507	1.3767	1442.5	.0632	.0218	.7278	880
900	4.4049-2	2.2024 0	-235.9	2.0960	1.9380	1.7801	1.6221	1.5117	0.2513	1.3755	1458.2	.0642	.0222	.7278	900
920	4.3091-2	2.1546 0	-230.9	2.1015	1.9435	1.7856	1.6276	1.5172	0.2518	1.3743	1473.6	.0653	.0226	.7278	920
940	4.2174-2	2.1087 0	-225.8	2.1069	1.9490	1.7910	1.6331	1.5226	0.2525	1.3731	1488.9	.0663	.0230	.7277	940
960	4.1296-2	2.0648 0	-220.8	2.1122	1.9543	1.7963	1.6384	1.5280	0.2531	1.3719	1504.0	.0673	.0234	.7277	960
980	4.0453-2	2.0227 0	-215.7	2.1175	1.9595	1.8015	1.6436	1.5332	0.2537	1.3706	1518.9	.0683	.0238	.7276	980
1000	3.9644-2	1.9822 0	-210.6	2.1226	1.9646	1.8067	1.6487	1.5383	0.2543	1.3694	1533.6	.0692	.0242	.7275	1000
1020	3.8867-2	1.9433 0	-205.5	2.1276	1.9697	1.8117	1.6538	1.5434	0.2550	1.3681	1548.1	.0702	.0246	.7275	1020
1040	3.8119-2	1.9060 0	-200.4	2.1326	1.9746	1.8167	1.6587	1.5483	0.2556	1.3668	1562.5	.0712	.0250	.7274	1040
1060	3.7400-2	1.8700 0	-195.3	2.1375	1.9795	1.8216	1.6636	1.5532	0.2563	1.3655	1576.7	.0721	.0254	.7273	1060
1080	3.6707-2	1.8354 0	-190.2	2.1423	1.9843	1.8264	1.6684	1.5580	0.2569	1.3642	1590.7	.0731	.0258	.7271	1080
1100	3.6040-2	1.8020 0	-185.0	2.1470	1.9890	1.8311	1.6731	1.5627	0.2576	1.3629	1604.6	.0740	.0262	.7269	1100
1120	3.5396-2	1.7698 0	-179.9	2.1516	1.9937	1.8357	1.6778	1.5674	0.2583	1.3617	1618.4	.0750	.0266	.7267	1120
1140	3.4775-2	1.7388 0	-174.7	2.1562	1.9982	1.8403	1.6823	1.5719	0.2589	1.3604	1632.0	.0759	.0271	.7265	1140

TABLE 7A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000;
DRY AIR;F/A=0.016907; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.2511; MW = 28.9495;
GASEOUS COMPOSITION: CO2= .03463; H2O= .03431; N2= .76744; O2= .15441; AR= .00920

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	
1160	3.4176-2	1.7088 0	-169.5	2.1607	2.0028	1.8448	1.6869	1.5765	0.2596	1.3591	1645.5	.0768	.0275	.7262	1160
1180	3.3597-2	1.6798 0	-164.3	2.1652	2.0072	1.8492	1.6913	1.5809	0.2603	1.3578	1658.8	.0777	.0279	.7260	1180
1200	3.3037-2	1.6518 0	-159.1	2.1695	2.0116	1.8536	1.6957	1.5853	0.2610	1.3565	1672.0	.0786	.0283	.7257	1200
1220	3.2495-2	1.6248 0	-153.9	2.1739	2.0159	1.8580	1.7000	1.5896	0.2617	1.3553	1685.1	.0795	.0287	.7255	1220
1240	3.1971-2	1.5985 0	-148.6	2.1781	2.0202	1.8622	1.7043	1.5939	0.2624	1.3540	1698.1	.0804	.0291	.7252	1240
1260	3.1463-2	1.5732 0	-143.4	2.1823	2.0244	1.8664	1.7085	1.5981	0.2631	1.3527	1710.9	.0813	.0295	.7250	1260
1280	3.0972-2	1.5486 0	-138.1	2.1865	2.0285	1.8706	1.7126	1.6022	0.2638	1.3515	1723.7	.0822	.0299	.7247	1280
1300	3.0495-2	1.5248 0	-132.8	2.1906	2.0326	1.8747	1.7167	1.6063	0.2645	1.3502	1736.3	.0831	.0303	.7245	1300
1320	3.0033-2	1.5017 0	-127.5	2.1946	2.0367	1.8787	1.7207	1.6103	0.2651	1.3490	1748.8	.0840	.0307	.7242	1320
1340	2.9585-2	1.4793 0	-122.2	2.1986	2.0406	1.8827	1.7247	1.6143	0.2658	1.3478	1761.2	.0848	.0312	.7240	1340
1360	2.9150-2	1.4575 0	-116.9	2.2025	2.0446	1.8866	1.7287	1.6183	0.2665	1.3466	1773.5	.0857	.0316	.7238	1360
1380	2.8728-2	1.4364 0	-111.5	2.2064	2.0485	1.8905	1.7326	1.6222	0.2672	1.3454	1785.7	.0866	.0320	.7236	1380
1400	2.8317-2	1.4159 0	-106.2	2.2103	2.0523	1.8944	1.7364	1.6260	0.2679	1.3442	1797.8	.0874	.0324	.7234	1400
1420	2.7918-2	1.3959 0	-100.8	2.2141	2.0561	1.8982	1.7402	1.6298	0.2686	1.3431	1809.8	.0883	.0328	.7232	1420
1440	2.7531-2	1.3765 0	-95.5	2.2179	2.0599	1.9019	1.7440	1.6336	0.2692	1.3419	1821.7	.0891	.0332	.7230	1440
1460	2.7153-2	1.3577 0	-90.1	2.2216	2.0636	1.9057	1.7477	1.6373	0.2699	1.3408	1833.6	.0900	.0336	.7228	1460
1480	2.6786-2	1.3393 0	-84.7	2.2252	2.0673	1.9093	1.7514	1.6410	0.2706	1.3396	1845.3	.0908	.0340	.7226	1480
1500	2.6429-2	1.3215 0	-79.2	2.2289	2.0709	1.9130	1.7550	1.6446	0.2712	1.3385	1857.0	.0916	.0344	.7225	1500
1520	2.6082-2	1.3041 0	-73.8	2.2325	2.0745	1.9166	1.7586	1.6482	0.2719	1.3375	1868.6	.0924	.0348	.7223	1520
1540	2.5743-2	1.2871 0	-68.4	2.2360	2.0781	1.9201	1.7622	1.6518	0.2725	1.3364	1880.1	.0933	.0352	.7222	1540
1560	2.5413-2	1.2706 0	-62.9	2.2396	2.0816	1.9237	1.7657	1.6553	0.2732	1.3353	1891.5	.0941	.0356	.7220	1560
1580	2.5091-2	1.2546 0	-57.4	2.2430	2.0851	1.9271	1.7692	1.6588	0.2738	1.3343	1902.8	.0949	.0360	.7219	1580
1600	2.4777-2	1.2389 0	-52.0	2.2465	2.0885	1.9306	1.7726	1.6622	0.2744	1.3333	1914.1	.0957	.0364	.7217	1600
1620	2.4472-2	1.2236 0	-46.5	2.2499	2.0920	1.9340	1.7760	1.6656	0.2750	1.3323	1925.3	.0965	.0368	.7216	1620
1640	2.4173-2	1.2087 0	-41.0	2.2533	2.0953	1.9374	1.7794	1.6690	0.2757	1.3313	1936.4	.0973	.0372	.7215	1640
1660	2.3882-2	1.1941 0	-35.4	2.2566	2.0987	1.9407	1.7828	1.6724	0.2763	1.3303	1947.5	.0981	.0376	.7213	1660
1680	2.3598-2	1.1799 0	-29.9	2.2599	2.1020	1.9440	1.7861	1.6757	0.2769	1.3294	1958.5	.0989	.0379	.7212	1680
1700	2.3320-2	1.1660 0	-24.4	2.2632	2.1053	1.9473	1.7894	1.6790	0.2774	1.3285	1969.4	.0996	.0383	.7211	1700
1720	2.3049-2	1.1524 0	-18.8	2.2665	2.1085	1.9506	1.7926	1.6822	0.2780	1.3276	1980.3	.1004	.0387	.7210	1720
1740	2.2784-2	1.1392 0	-13.2	2.2697	2.1117	1.9538	1.7958	1.6854	0.2786	1.3267	1991.1	.1012	.0391	.7209	1740
1760	2.2525-2	1.1262 0	-7.7	2.2729	2.1149	1.9570	1.7990	1.6886	0.2791	1.3258	2001.9	.1020	.0395	.7208	1760
1780	2.2272-2	1.1136 0	-2.1	2.2760	2.1181	1.9601	1.8022	1.6918	0.2797	1.3250	2012.6	.1027	.0399	.7207	1780
1800	2.2024-2	1.1012 0	3.5	2.2792	2.1212	1.9633	1.8053	1.6949	0.2802	1.3241	2023.2	.1035	.0402	.7206	1800
1900	2.0865-2	1.0433 0	31.7	2.2944	2.1364	1.9785	1.8205	1.7101	0.2827	1.3203	2075.7	.1072	.0421	.7205	1900
2000	1.9822-2	9.9110-1	60.1	2.3089	2.1510	1.9930	1.8351	1.7247	0.2851	1.3168	2126.8	.1109	.0439	.7205	2000
2100	1.8878-2	9.4390-1	88.7	2.3229	2.1650	2.0070	1.8490	1.7386	0.2873	1.3136	2176.6	.1145	.0456	.7206	2100
2200	1.8020-2	9.0100-1	117.5	2.3363	2.1784	2.0204	1.8625	1.7521	0.2895	1.3106	2225.3	.1180	.0474	.7207	2200
2300	1.7236-2	8.6183-1	146.6	2.3492	2.1913	2.0333	1.8754	1.7650	0.2915	1.3078	2272.9	.1214	.0491	.7208	2300
2400	1.6518-2	8.2592-1	175.8	2.3617	2.2037	2.0458	1.8878	1.7774	0.2934	1.3052	2319.4	.1248	.0508	.7210	2400
2500	1.5858-2	7.9288-1	205.3	2.3737	2.2157	2.0578	1.8998	1.7894	0.2952	1.3027	2365.1	.1281	.0524	.7211	2500

TABLE 7A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.016907; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.2511; MW = 28.9495;
 DRY AIR; GASEOUS COMPOSITION: CO2= .03463; H2O= .03431; N2= .76744; O2= .15441; AR= .00920

T R	DENSITY (P=1.0) (P=50.)		H BTU/LB	ENTROPY (P=.01) (P=.10) (P=1.0) (P=10.) (P=50.)					CP BTU/ LB R	GAM	VS FT/S	VIS LB/ FT HR	COND BTU/ FT HR R	PRAN	T R
	LB/FT3	LB/FT3		BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R							
2600	1.5248-2	7.6238-1	234.9	2.3853	2.2274	2.0694	1.9114	1.8010	0.2969	1.3005	2409.8	.1314	.0541	.7212	2600
2700	1.4683-2	7.3415-1	264.6	2.3965	2.2386	2.0806	1.9227	1.8123	0.2985	1.2984	2453.7	.1346	.0557	.7213	2700
2800	1.4159-2	7.0793-1	294.6	2.4074	2.2495	2.0915	1.9336	1.8232	0.3000	1.2964	2496.9	.1378	.0573	.7210	2800
2900	1.3670-2	6.8352-1	324.6	2.4180	2.2600	2.1021	1.9441	1.8337	0.3015	1.2946	2539.3	.1409	.0589	.7207	2900
3000	1.3215-2	6.6073-1	354.8	2.4282	2.2703	2.1123	1.9544	1.8440	0.3028	1.2929	2581.0	.1440	.0605	.7204	3000
3100	1.2788-2	6.3942-1	385.2	2.4382	2.2802	2.1223	1.9643	1.8539	0.3041	1.2913	2622.0	.1470	.0621	.7200	3100
3200	1.2389-2	6.1944-1	415.7	2.4478	2.2899	2.1319	1.9740	1.8636	0.3053	1.2898	2662.4	.1500	.0636	.7197	3200
3300	1.2013-2	6.0067-1	446.3	2.4573	2.2993	2.1414	1.9834	1.8730	0.3064	1.2884	2702.3	.1530	.0652	.7194	3300
3400	1.1660-2	5.8300-1	477.0	2.4664	2.3085	2.1505	1.9926	1.8822	0.3075	1.2871	2741.5	.1560	.0667	.7190	3400
3500	1.1327-2	5.6634-1	507.8	2.4753	2.3174	2.1594	2.0015	1.8911	0.3085	1.2859	2780.2	.1589	.0682	.7187	3500
3600	1.1012-2	5.5061-1	538.7	2.4841	2.3261	2.1681	2.0102	1.8998	0.3095	1.2848	2818.4	.1617	.0697	.7184	3600
3700	1.0715-2	5.3573-1	569.6	2.4925	2.3346	2.1766	2.0187	1.9083	0.3104	1.2837	2856.1	.1646	.0711	.7183	3700
3800	1.0433-2	5.2163-1	600.7	2.5008	2.3429	2.1849	2.0270	1.9166	0.3112	1.2827	2893.3	.1674	.0725	.7183	3800
3900	1.0165-2	5.0826-1	631.9	2.5089	2.3510	2.1930	2.0351	1.9247	0.3120	1.2818	2930.1	.1702	.0740	.7183	3900
4000	9.9110-3	4.9555-1	663.1	2.5168	2.3589	2.2009	2.0430	1.9326	0.3128	1.2809	2966.4	.1730	.0753	.7182	4000
4100	9.6693-3	4.8346-1	694.5	2.5246	2.3666	2.2087	2.0507	1.9403	0.3135	1.2801	3002.3	.1757	.0767	.7182	4100
4200	9.4390-3	4.7195-1	725.8	2.5321	2.3742	2.2162	2.0583	1.9479	0.3142	1.2793	3037.8	.1785	.0781	.7183	4200
4300	9.2195-3	4.6098-1	757.3	2.5395	2.3816	2.2236	2.0657	1.9553	0.3149	1.2786	3072.8	.1812	.0794	.7183	4300
4400	9.0100-3	4.5050-1	788.8	2.5468	2.3888	2.2309	2.0729	1.9625	0.3155	1.2779	3107.5	.1838	.0807	.7183	4400
4500	8.8098-3	4.4049-1	820.4	2.5539	2.3959	2.2380	2.0800	1.9696	0.3160	1.2772	3141.8	.1865	.0820	.7184	4500
4600	8.6183-3	4.3091-1	852.0	2.5608	2.4029	2.2449	2.0870	1.9766	0.3166	1.2766	3175.8	.1891	.0834	.7182	4600
4700	8.4349-3	4.2174-1	883.7	2.5676	2.4097	2.2517	2.0938	1.9834	0.3171	1.2760	3209.4	.1917	.0847	.7181	4700
4800	8.2592-3	4.1296-1	915.4	2.5743	2.4164	2.2584	2.1005	1.9901	0.3176	1.2754	3242.6	.1943	.0860	.7179	4800
4900	8.0906-3	4.0453-1	947.2	2.5809	2.4229	2.2650	2.1070	1.9966	0.3181	1.2749	3275.5	.1969	.0873	.7177	4900
5000	7.9288-3	3.9644-1	979.1	2.5873	2.4294	2.2714	2.1135	2.0031	0.3186	1.2744	3308.1	.1994	.0886	.7175	5000
5100	7.7733-3	3.8867-1	1011.0	2.5936	2.4357	2.2777	2.1198	2.0094	0.3190	1.2739	3340.4	.2020	.0898	.7172	5100
5200	7.6238-3	3.8119-1	1042.9	2.5998	2.4419	2.2839	2.1260	2.0156	0.3195	1.2734	3372.4	.2045	.0911	.7170	5200
5300	7.4800-3	3.7400-1	1074.8	2.6059	2.4480	2.2900	2.1321	2.0217	0.3199	1.2730	3404.0	.2070	.0924	.7168	5300
5400	7.3415-3	3.6707-1	1106.9	2.6119	2.4539	2.2960	2.1380	2.0276	0.3203	1.2725	3435.4	.2095	.0936	.7165	5400

TABLE 7.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016907; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 0.14696 LB/IN2 (0.01 ATM DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4777-4	-51.9	2.2465	28.949	.096	1.0000	-1.0000	0.2745	1.3331	1914.0	.0364	.722	0.2744	1.3333	1914.1	.0364	.722
1700	2.3320-4	-24.3	2.2632	28.949	.100	1.0000	-1.0000	0.2776	1.3282	1969.3	.0384	.721	0.2774	1.3285	1969.4	.0383	.721
1800	2.2024-4	3.6	2.2792	28.949	.103	1.0000	-1.0000	0.2805	1.3237	2022.9	.0403	.721	0.2802	1.3241	2023.2	.0402	.721
1900	2.0865-4	31.7	2.2944	28.949	.107	1.0000	-1.0000	0.2831	1.3198	2075.2	.0421	.721	0.2827	1.3203	2075.7	.0421	.720
2000	1.9822-4	60.2	2.3090	28.949	.111	1.0000	-1.0000	0.2857	1.3160	2126.1	.0440	.721	0.2851	1.3168	2126.8	.0439	.720
2100	1.8878-4	88.9	2.3230	28.949	.114	1.0000	-1.0000	0.2882	1.3123	2175.6	.0458	.721	0.2873	1.3136	2176.6	.0456	.721
2200	1.8020-4	117.8	2.3365	28.949	.118	1.0000	-1.0000	0.2908	1.3088	2223.8	.0476	.721	0.2895	1.3106	2225.3	.0474	.721
2300	1.7236-4	147.0	2.3495	28.949	.121	1.0001	-1.0000	0.2933	1.3053	2270.7	.0494	.721	0.2915	1.3078	2272.9	.0491	.721
2400	1.6518-4	176.5	2.3620	28.949	.125	1.0001	-1.0000	0.2959	1.3019	2316.5	.0512	.721	0.2934	1.3052	2319.4	.0508	.721
2500	1.5857-4	206.2	2.3741	28.949	.128	1.0002	-1.0000	0.2986	1.2984	2361.1	.0531	.721	0.2952	1.3027	2365.1	.0524	.721
2600	1.5247-4	236.2	2.3859	28.949	.131	1.0004	-1.0000	0.3015	1.2948	2404.5	.0550	.720	0.2969	1.3005	2409.8	.0541	.721
2700	1.4682-4	266.5	2.3973	28.948	.135	1.0007	-1.0000	0.3048	1.2909	2446.7	.0570	.720	0.2985	1.2984	2453.8	.0557	.721
2800	1.4157-4	297.2	2.4085	28.947	.138	1.0012	-1.0000	0.3085	1.2867	2487.6	.0592	.718	0.3000	1.2964	2497.0	.0573	.721
2900	1.3669-4	328.3	2.4194	28.946	.141	1.0019	-1.0000	0.3130	1.2820	2527.1	.0616	.716	0.3015	1.2946	2539.5	.0589	.721
3000	1.3212-4	359.9	2.4301	28.943	.144	1.0032	-1.0001	0.3186	1.2765	2564.9	.0644	.713	0.3028	1.2930	2581.3	.0605	.720
3100	1.2784-4	392.1	2.4406	28.939	.147	1.0051	-1.0001	0.3258	1.2700	2600.8	.0677	.708	0.3041	1.2914	2622.6	.0621	.720
3200	1.2382-4	425.1	2.4511	28.933	.150	1.0081	-1.0002	0.3353	1.2623	2634.6	.0719	.700	0.3053	1.2900	2663.4	.0637	.720
3300	1.2003-4	459.2	2.4616	28.924	.153	1.0126	-1.0003	0.3480	1.2530	2666.0	.0773	.689	0.3064	1.2887	2703.8	.0652	.719
3400	1.1644-4	494.8	2.4723	28.911	.156	1.0192	-1.0006	0.3651	1.2421	2694.9	.0845	.674	0.3075	1.2876	2743.9	.0667	.719
3500	1.1304-4	532.4	2.4832	28.891	.159	1.0289	-1.0009	0.3880	1.2295	2721.4	.0942	.654	0.3085	1.2867	2783.9	.0682	.718
3600	1.0979-4	572.7	2.4945	28.862	.162	1.0425	-1.0013	0.4183	1.2157	2745.8	.1075	.629	0.3095	1.2859	2823.9	.0697	.718
3700	1.0667-4	616.4	2.5065	28.822	.165	1.0614	-1.0020	0.4582	1.2011	2768.9	.1255	.600	0.3104	1.2854	2864.3	.0712	.717
3800	1.0366-4	664.7	2.5194	28.765	.167	1.0868	-1.0029	0.5093	1.1865	2791.7	.1496	.570	0.3112	1.2851	2905.3	.0727	.716
3900	1.0074-4	718.7	2.5334	28.689	.170	1.1201	-1.0041	0.5737	1.1727	2815.4	.1810	.539	0.3120	1.2851	2947.2	.0742	.715
4000	9.7868-5	779.9	2.5489	28.587	.173	1.1625	-1.0058	0.6524	1.1603	2841.2	.2209	.510	0.3127	1.2856	2990.6	.0757	.714
4100	9.5040-5	849.7	2.5661	28.455	.175	1.2145	-1.0078	0.7458	1.1497	2869.9	.2694	.485	0.3134	1.2864	3035.8	.0772	.712
4200	9.2232-5	929.5	2.5853	28.288	.178	1.2763	-1.0104	0.8531	1.1411	2902.4	.3257	.466	0.3141	1.2878	3083.3	.0788	.709
4300	8.9431-5	1020.7	2.6068	28.081	.180	1.3470	-1.0135	0.9721	1.1344	2938.9	.3872	.453	0.3148	1.2897	3133.6	.0805	.706
4400	8.6628-5	1124.2	2.6306	27.834	.183	1.4244	-1.0170	1.0991	1.1296	2979.6	.4498	.447	0.3155	1.2923	3187.0	.0823	.701
4500	8.3823-5	1240.6	2.6567	27.545	.185	1.5052	-1.0208	1.2284	1.1263	3024.7	.5081	.448	0.3161	1.2954	3243.8	.0842	.696
4600	8.1024-5	1369.7	2.6851	27.217	.188	1.5843	-1.0247	1.3521	1.1245	3074.0	.5565	.456	0.3168	1.2992	3304.2	.0863	.690
4700	7.8249-5	1510.5	2.7154	26.856	.190	1.6557	-1.0285	1.4610	1.1239	3127.2	.5907	.471	0.3175	1.3036	3368.0	.0885	.683
4800	7.5521-5	1661.1	2.7471	26.471	.193	1.7127	-1.0318	1.5452	1.1244	3183.9	.6083	.490	0.3182	1.3085	3434.6	.0908	.676
4900	7.2870-5	1818.5	2.7795	26.074	.195	1.7500	-1.0343	1.5965	1.1259	3243.4	.6092	.512	0.3189	1.3137	3503.6	.0931	.669
5000	7.0326-5	1979.1	2.8120	25.677	.198	1.7640	-1.0357	1.6097	1.1284	3305.2	.5950	.536	0.3197	1.3192	3573.8	.0954	.663
5100	6.7916-5	2139.1	2.8436	25.293	.201	1.7536	-1.0361	1.5828	1.1319	3368.6	.5680	.559	0.3203	1.3247	3644.2	.0977	.658
5200	6.5661-5	2294.4	2.8738	24.933	.203	1.7197	-1.0352	1.5170	1.1365	3432.9	.5305	.582	0.3210	1.3300	3713.7	.0999	.653
5300	6.3576-5	2441.3	2.9018	24.606	.206	1.6651	-1.0332	1.4173	1.1424	3497.8	.4852	.602	0.3216	1.3350	3781.2	.1020	.650
5400	6.1667-5	2577.0	2.9272	24.317	.209	1.5950	-1.0304	1.2926	1.1498	3563.1	.4356	.620	0.3222	1.3395	3845.7	.1041	.646

TABLE 7.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016907; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 1.46959 LB/IN² (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM) VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	FROZEN GAM VS FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4777-3	-51.9	2.0885	28.949	.096	1.0000	-1.0000	0.2745	1.3331	1914.0	.0364	.722	0.2744	1.3333	1914.1	.0364	.722
1700	2.3320-3	-24.3	2.1053	28.949	.100	1.0000	-1.0000	0.2776	1.3282	1969.3	.0384	.721	0.2774	1.3285	1969.4	.0383	.721
1800	2.2024-3	3.6	2.1212	28.949	.103	1.0000	-1.0000	0.2805	1.3237	2022.9	.0403	.721	0.2802	1.3241	2023.2	.0402	.721
1900	2.0865-3	31.7	2.1365	28.949	.107	1.0000	-1.0000	0.2831	1.3198	2075.2	.0421	.721	0.2827	1.3203	2075.7	.0421	.720
2000	1.9822-3	60.2	2.1511	28.949	.111	1.0000	-1.0000	0.2857	1.3160	2126.1	.0440	.721	0.2851	1.3168	2126.8	.0439	.720
2100	1.8878-3	88.9	2.1651	28.949	.114	1.0000	-1.0000	0.2882	1.3124	2175.6	.0458	.721	0.2873	1.3136	2176.6	.0456	.721
2200	1.8020-3	117.8	2.1785	28.949	.118	1.0000	-1.0000	0.2907	1.3089	2223.8	.0476	.721	0.2895	1.3106	2225.3	.0474	.721
2300	1.7236-3	147.0	2.1915	28.949	.121	1.0000	-1.0000	0.2932	1.3055	2270.9	.0494	.721	0.2915	1.3078	2272.9	.0491	.721
2400	1.6518-3	176.5	2.2040	28.949	.125	1.0001	-1.0000	0.2957	1.3021	2316.7	.0512	.721	0.2934	1.3052	2319.4	.0508	.721
2500	1.5857-3	206.2	2.2161	28.949	.128	1.0001	-1.0000	0.2982	1.2988	2361.5	.0530	.721	0.2952	1.3027	2365.1	.0524	.721
2600	1.5247-3	236.1	2.2279	28.949	.131	1.0002	-1.0000	0.3009	1.2955	2405.2	.0548	.721	0.2969	1.3005	2409.8	.0541	.721
2700	1.4683-3	266.3	2.2393	28.949	.135	1.0003	-1.0000	0.3036	1.2921	2447.8	.0567	.721	0.2985	1.2984	2453.8	.0557	.721
2800	1.4158-3	296.9	2.2504	28.948	.138	1.0005	-1.0000	0.3066	1.2886	2489.4	.0587	.720	0.3000	1.2964	2496.9	.0573	.721
2900	1.3669-3	327.7	2.2612	28.948	.141	1.0009	-1.0000	0.3099	1.2849	2529.9	.0607	.719	0.3015	1.2946	2539.4	.0589	.721
3000	1.3213-3	358.8	2.2718	28.947	.144	1.0014	-1.0000	0.3136	1.2810	2569.2	.0629	.718	0.3028	1.2929	2581.1	.0605	.720
3100	1.2786-3	390.4	2.2821	28.945	.147	1.0021	-1.0001	0.3178	1.2767	2607.4	.0653	.716	0.3041	1.2913	2622.3	.0621	.720
3200	1.2386-3	422.4	2.2923	28.943	.150	1.0032	-1.0001	0.3229	1.2719	2644.2	.0680	.713	0.3053	1.2899	2662.9	.0637	.720
3300	1.2009-3	455.0	2.3023	28.939	.153	1.0049	-1.0001	0.3291	1.2665	2679.7	.0710	.709	0.3064	1.2886	2702.9	.0652	.719
3400	1.1654-3	488.3	2.3123	28.934	.156	1.0072	-1.0002	0.3367	1.2604	2713.7	.0746	.704	0.3075	1.2873	2742.5	.0667	.719
3500	1.1318-3	522.4	2.3222	28.927	.159	1.0106	-1.0003	0.3462	1.2534	2746.0	.0790	.697	0.3085	1.2862	2781.7	.0682	.719
3600	1.1000-3	557.6	2.3321	28.916	.162	1.0152	-1.0005	0.3583	1.2455	2776.6	.0844	.687	0.3095	1.2852	2820.5	.0697	.718
3700	1.0697-3	594.2	2.3421	28.902	.165	1.0217	-1.0007	0.3735	1.2367	2805.6	.0911	.675	0.3104	1.2843	2859.2	.0712	.718
3800	1.0408-3	632.5	2.3523	28.882	.167	1.0303	-1.0010	0.3925	1.2269	2833.1	.0997	.659	0.3112	1.2836	2897.7	.0726	.718
3900	1.0132-3	672.9	2.3628	28.855	.170	1.0418	-1.0014	0.4164	1.2165	2859.2	.1106	.641	0.3120	1.2830	2936.3	.0740	.717
4000	9.8664-4	715.9	2.3737	28.819	.173	1.0567	-1.0020	0.4458	1.2058	2884.6	.1244	.619	0.3127	1.2826	2975.1	.0754	.717
4100	9.6101-4	762.2	2.3851	28.772	.176	1.0757	-1.0027	0.4815	1.1950	2909.7	.1418	.596	0.3134	1.2824	3014.2	.0768	.717
4200	9.3617-4	812.4	2.3972	28.712	.178	1.0994	-1.0036	0.5242	1.1846	2935.2	.1633	.572	0.3141	1.2824	3054.0	.0782	.716
4300	9.1196-4	867.3	2.4101	28.636	.181	1.1282	-1.0048	0.5742	1.1749	2961.8	.1894	.548	0.3147	1.2827	3094.6	.0797	.715
4400	8.8827-4	927.5	2.4240	28.541	.184	1.1624	-1.0063	0.6314	1.1663	2989.9	.2204	.526	0.3153	1.2832	3136.2	.0811	.714
4500	8.6500-4	993.8	2.4389	28.424	.186	1.2020	-1.0081	0.6956	1.1588	3020.2	.2560	.506	0.3158	1.2841	3179.2	.0826	.712
4600	8.4204-4	1066.8	2.4549	28.285	.189	1.2468	-1.0101	0.7658	1.1526	3052.8	.2956	.489	0.3163	1.2853	3223.8	.0841	.710
4700	8.1933-4	1147.1	2.4722	28.120	.191	1.2962	-1.0125	0.8408	1.1476	3088.1	.3382	.475	0.3168	1.2868	3270.1	.0857	.707
4800	7.9683-4	1235.1	2.4907	27.930	.194	1.3492	-1.0152	0.9189	1.1437	3126.2	.3818	.466	0.3173	1.2887	3318.4	.0874	.704
4900	7.7453-4	1331.0	2.5104	27.714	.196	1.4045	-1.0181	0.9982	1.1410	3167.0	.4244	.461	0.3178	1.2911	3368.9	.0891	.700
5000	7.5244-4	1434.7	2.5314	27.473	.199	1.4603	-1.0211	1.0760	1.1392	3210.6	.4635	.461	0.3183	1.2938	3421.6	.0910	.695
5100	7.3060-4	1546.0	2.5534	27.209	.201	1.5144	-1.0242	1.1494	1.1382	3257.0	.4967	.466	0.3188	1.2969	3476.5	.0929	.690
5200	7.0908-4	1664.3	2.5764	26.925	.204	1.5642	-1.0272	1.2148	1.1381	3305.8	.5223	.474	0.3194	1.3003	3533.5	.0950	.685
5300	6.8798-4	1788.6	2.6001	26.626	.206	1.6068	-1.0299	1.2686	1.1388	3357.1	.5391	.485	0.3199	1.3040	3592.5	.0971	.680
5400	6.6741-4	1917.5	2.6242	26.318	.209	1.6397	-1.0323	1.3074	1.1401	3410.4	.5465	.500	0.3204	1.3080	3653.0	.0993	.674

TABLE 7.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016907; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 14.6959 LB/IN2 (1.00 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	VS (GAM)S FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4777-2	-51.9	1.9306	28.949	.096	1.0000	-1.0000	0.2745	1.3331	1914.0	.0364	.722	0.2744	1.3333	1914.1	.0364	.722
1700	2.3320-2	-24.3	1.9473	28.949	.100	1.0000	-1.0000	0.2776	1.3282	1969.3	.0384	.721	0.2774	1.3285	1969.4	.0383	.721
1800	2.2024-2	3.6	1.9633	28.949	.103	1.0000	-1.0000	0.2805	1.3237	2022.9	.0403	.721	0.2802	1.3241	2023.2	.0402	.721
1900	2.0865-2	31.7	1.9785	28.949	.107	1.0000	-1.0000	0.2831	1.3198	2075.2	.0421	.721	0.2827	1.3203	2075.7	.0421	.720
2000	1.9822-2	60.2	1.9931	28.949	.111	1.0000	-1.0000	0.2857	1.3160	2126.1	.0440	.721	0.2851	1.3168	2126.8	.0439	.720
2100	1.8878-2	88.9	2.0071	28.949	.114	1.0000	-1.0000	0.2882	1.3124	2175.6	.0458	.721	0.2873	1.3136	2176.6	.0456	.721
2200	1.8020-2	117.8	2.0206	28.949	.118	1.0000	-1.0000	0.2907	1.3089	2223.9	.0476	.721	0.2895	1.3106	2225.3	.0474	.721
2300	1.7237-2	147.0	2.0335	28.949	.121	1.0000	-1.0000	0.2931	1.3055	2270.9	.0494	.721	0.2915	1.3078	2272.9	.0491	.721
2400	1.6518-2	176.5	2.0461	28.949	.125	1.0000	-1.0000	0.2956	1.3022	2316.8	.0512	.721	0.2934	1.3052	2319.4	.0508	.721
2500	1.5858-2	206.1	2.0582	28.949	.128	1.0001	-1.0000	0.2980	1.2990	2361.7	.0529	.721	0.2952	1.3027	2365.1	.0524	.721
2600	1.5248-2	236.1	2.0699	28.949	.131	1.0001	-1.0000	0.3005	1.2958	2405.5	.0547	.721	0.2969	1.3005	2409.8	.0541	.721
2700	1.4683-2	266.2	2.0813	28.949	.135	1.0002	-1.0000	0.3031	1.2926	2448.3	.0566	.721	0.2985	1.2984	2453.7	.0557	.721
2800	1.4158-2	296.7	2.0924	28.949	.138	1.0003	-1.0000	0.3058	1.2894	2490.2	.0584	.721	0.3000	1.2964	2496.9	.0573	.721
2900	1.3670-2	327.4	2.1032	28.949	.141	1.0004	-1.0000	0.3085	1.2862	2531.1	.0604	.720	0.3015	1.2946	2539.3	.0589	.721
3000	1.3214-2	358.4	2.1137	28.948	.144	1.0006	-1.0000	0.3115	1.2829	2571.0	.0623	.719	0.3028	1.2929	2581.0	.0605	.720
3100	1.2787-2	389.7	2.1239	28.947	.147	1.0009	-1.0000	0.3146	1.2795	2610.1	.0644	.718	0.3041	1.2913	2622.1	.0621	.720
3200	1.2387-2	421.3	2.1340	28.946	.150	1.0014	-1.0000	0.3181	1.2759	2648.2	.0666	.717	0.3053	1.2898	2662.6	.0637	.720
3300	1.2011-2	453.3	2.1438	28.945	.153	1.0021	-1.0001	0.3220	1.2721	2685.3	.0689	.716	0.3064	1.2885	2702.6	.0652	.719
3400	1.1657-2	485.8	2.1535	28.943	.156	1.0030	-1.0001	0.3264	1.2681	2721.5	.0713	.713	0.3075	1.2872	2741.9	.0667	.719
3500	1.1323-2	518.6	2.1630	28.940	.159	1.0042	-1.0001	0.3314	1.2637	2756.6	.0741	.711	0.3085	1.2860	2780.9	.0682	.719
3600	1.1007-2	552.1	2.1724	28.936	.162	1.0059	-1.0002	0.3373	1.2590	2790.7	.0771	.707	0.3095	1.2850	2819.3	.0697	.718
3700	1.0707-2	586.1	2.1818	28.930	.165	1.0082	-1.0003	0.3442	1.2539	2823.7	.0806	.703	0.3104	1.2840	2857.4	.0711	.718
3800	1.0423-2	620.9	2.1911	28.923	.167	1.0113	-1.0004	0.3524	1.2483	2855.6	.0846	.698	0.3112	1.2831	2895.1	.0726	.718
3900	1.0152-2	656.7	2.2003	28.913	.170	1.0153	-1.0005	0.3623	1.2422	2886.3	.0893	.690	0.3120	1.2823	2932.5	.0740	.718
4000	9.8939-3	693.5	2.2097	28.900	.173	1.0205	-1.0007	0.3740	1.2356	2916.0	.0949	.682	0.3128	1.2816	2969.8	.0754	.718
4100	9.6470-3	731.5	2.2191	28.883	.176	1.0272	-1.0009	0.3879	1.2286	2944.7	.1016	.671	0.3135	1.2810	3006.8	.0768	.718
4200	9.4102-3	771.1	2.2286	28.861	.178	1.0355	-1.0013	0.4045	1.2212	2972.6	.1096	.659	0.3141	1.2805	3043.9	.0781	.718
4300	9.1826-3	812.5	2.2383	28.833	.181	1.0459	-1.0017	0.4239	1.2137	2999.9	.1192	.644	0.3147	1.2801	3080.9	.0795	.717
4400	8.9632-3	856.0	2.2483	28.799	.184	1.0586	-1.0022	0.4465	1.2060	3026.8	.1306	.628	0.3153	1.2799	3118.1	.0809	.717
4500	8.7510-3	901.9	2.2587	28.756	.186	1.0738	-1.0029	0.4725	1.1985	3053.7	.1442	.611	0.3159	1.2798	3155.6	.0822	.717
4600	8.5453-3	950.6	2.2694	28.704	.189	1.0918	-1.0037	0.5020	1.1913	3080.9	.1600	.593	0.3164	1.2799	3193.4	.0836	.716
4700	8.3451-3	1002.5	2.2805	28.641	.192	1.1126	-1.0046	0.5350	1.1846	3108.8	.1783	.575	0.3169	1.2801	3231.8	.0849	.715
4800	8.1499-3	1057.7	2.2921	28.567	.194	1.1363	-1.0057	0.5713	1.1784	3137.6	.1991	.557	0.3173	1.2806	3270.8	.0863	.714
4900	7.9591-3	1116.8	2.3043	28.479	.197	1.1629	-1.0070	0.6105	1.1729	3167.6	.2224	.540	0.3177	1.2812	3310.6	.0877	.712
5000	7.7720-3	1179.9	2.3171	28.377	.199	1.1921	-1.0085	0.6521	1.1682	3199.1	.2479	.524	0.3181	1.2820	3351.3	.0892	.711
5100	7.5883-3	1247.3	2.3304	28.261	.202	1.2237	-1.0102	0.6958	1.1642	3232.0	.2751	.510	0.3185	1.2830	3393.0	.0907	.709
5200	7.4078-3	1319.1	2.3444	28.129	.204	1.2573	-1.0120	0.7407	1.1610	3266.6	.3037	.498	0.3189	1.2843	3435.8	.0922	.707
5300	7.2301-3	1395.5	2.3589	27.982	.207	1.2925	-1.0140	0.7864	1.1584	3302.9	.3328	.489	0.3193	1.2858	3479.7	.0937	.704
5400	7.0551-3	1476.4	2.3740	27.820	.209	1.3287	-1.0161	0.8319	1.1566	3340.9	.3615	.482	0.3197	1.2875	3525.0	.0954	.701

TABLE 7.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016907; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 146.959 LB/IN² (10.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4778-1	-51.9	1.7726	28.949	.096	1.0000	-1.0000	0.2745	1.3331	1914.0	.0364	.722	0.2744	1.3333	1914.1	.0364	.722
1700	2.3320-1	-24.3	1.7894	28.950	.100	1.0000	-1.0000	0.2776	1.3282	1969.3	.0384	.721	0.2774	1.3285	1969.4	.0383	.721
1800	2.2024-1	3.6	1.8053	28.950	.103	1.0000	-1.0000	0.2805	1.3237	2022.9	.0403	.721	0.2802	1.3241	2023.2	.0402	.721
1900	2.0865-1	31.8	1.8206	28.950	.107	1.0000	-1.0000	0.2831	1.3198	2075.2	.0421	.721	0.2827	1.3203	2075.7	.0421	.720
2000	1.9822-1	60.2	1.8351	28.950	.111	1.0000	-1.0000	0.2857	1.3160	2126.1	.0440	.721	0.2851	1.3168	2126.8	.0439	.720
2100	1.8878-1	88.9	1.8491	28.950	.114	1.0000	-1.0000	0.2882	1.3124	2175.6	.0458	.721	0.2873	1.3136	2176.6	.0456	.721
2200	1.8020-1	117.8	1.8626	28.950	.118	1.0000	-1.0000	0.2907	1.3089	2223.9	.0476	.721	0.2895	1.3106	2225.3	.0474	.721
2300	1.7237-1	147.0	1.8756	28.950	.121	1.0000	-1.0000	0.2931	1.3055	2270.9	.0494	.721	0.2915	1.3078	2272.9	.0491	.721
2400	1.6518-1	176.5	1.8881	28.950	.125	1.0000	-1.0000	0.2955	1.3023	2316.9	.0511	.721	0.2934	1.3052	2319.4	.0508	.721
2500	1.5858-1	206.1	1.9002	28.950	.128	1.0000	-1.0000	0.2980	1.2991	2361.7	.0529	.721	0.2952	1.3027	2365.1	.0524	.721
2600	1.5248-1	236.0	1.9120	28.950	.131	1.0000	-1.0000	0.3004	1.2960	2405.6	.0547	.721	0.2969	1.3005	2409.8	.0541	.721
2700	1.4683-1	266.2	1.9233	28.950	.135	1.0001	-1.0000	0.3028	1.2929	2448.5	.0565	.721	0.2985	1.2984	2453.7	.0557	.721
2800	1.4159-1	296.6	1.9344	28.949	.138	1.0001	-1.0000	0.3053	1.2898	2490.5	.0583	.721	0.3000	1.2964	2496.9	.0573	.721
2900	1.3670-1	327.3	1.9452	28.949	.141	1.0002	-1.0000	0.3079	1.2868	2531.6	.0602	.721	0.3015	1.2946	2539.3	.0589	.721
3000	1.3214-1	358.2	1.9556	28.949	.144	1.0003	-1.0000	0.3105	1.2837	2571.9	.0621	.720	0.3028	1.2929	2581.0	.0605	.720
3100	1.2788-1	389.4	1.9659	28.949	.147	1.0004	-1.0000	0.3132	1.2807	2611.3	.0640	.719	0.3041	1.2913	2622.1	.0621	.720
3200	1.2388-1	420.8	1.9759	28.948	.150	1.0006	-1.0000	0.3161	1.2776	2649.9	.0660	.719	0.3053	1.2898	2662.5	.0637	.720
3300	1.2013-1	452.6	1.9856	28.948	.153	1.0009	-1.0000	0.3191	1.2745	2687.7	.0680	.718	0.3064	1.2884	2702.4	.0652	.719
3400	1.1659-1	484.7	1.9952	28.947	.156	1.0013	-1.0000	0.3222	1.2713	2724.8	.0701	.717	0.3075	1.2872	2741.7	.0667	.719
3500	1.1325-1	517.1	2.0046	28.945	.159	1.0018	-1.0001	0.3257	1.2680	2761.1	.0723	.716	0.3085	1.2860	2780.5	.0682	.719
3600	1.1010-1	549.8	2.0138	28.944	.162	1.0025	-1.0001	0.3294	1.2647	2796.6	.0746	.714	0.3095	1.2849	2818.8	.0697	.718
3700	1.0712-1	582.9	2.0229	28.941	.165	1.0034	-1.0001	0.3334	1.2612	2831.4	.0770	.713	0.3104	1.2838	2856.7	.0711	.718
3800	1.0429-1	616.5	2.0318	28.938	.167	1.0046	-1.0001	0.3379	1.2575	2865.4	.0796	.711	0.3112	1.2829	2894.1	.0726	.718
3900	1.0160-1	650.5	2.0407	28.934	.170	1.0061	-1.0002	0.3429	1.2537	2898.6	.0825	.708	0.3120	1.2820	2931.1	.0740	.718
4000	9.9040-2	685.1	2.0494	28.929	.173	1.0080	-1.0003	0.3486	1.2497	2931.1	.0856	.705	0.3128	1.2812	2967.8	.0754	.718
4100	9.6603-2	720.3	2.0581	28.923	.176	1.0104	-1.0004	0.3549	1.2455	2962.9	.0890	.701	0.3135	1.2805	3004.2	.0767	.718
4200	9.4276-2	756.1	2.0668	28.914	.179	1.0134	-1.0005	0.3622	1.2411	2993.9	.0928	.697	0.3141	1.2798	3040.2	.0781	.718
4300	9.2050-2	792.7	2.0754	28.904	.181	1.0171	-1.0006	0.3704	1.2365	3024.3	.0971	.691	0.3148	1.2792	3076.1	.0795	.718
4400	8.9918-2	830.2	2.0840	28.891	.184	1.0216	-1.0008	0.3797	1.2317	3054.0	.1020	.685	0.3153	1.2787	3111.7	.0808	.718
4500	8.7872-2	868.7	2.0926	28.875	.187	1.0271	-1.0010	0.3903	1.2268	3083.1	.1076	.677	0.3159	1.2783	3147.2	.0821	.718
4600	8.5905-2	908.4	2.1014	28.856	.189	1.0337	-1.0013	0.4023	1.2217	3111.8	.1140	.668	0.3164	1.2779	3182.6	.0835	.717
4700	8.4009-2	949.2	2.1101	28.833	.192	1.0415	-1.0017	0.4157	1.2166	3140.1	.1212	.658	0.3169	1.2777	3217.9	.0848	.717
4800	8.2180-2	991.5	2.1191	28.805	.194	1.0505	-1.0021	0.4307	1.2115	3168.2	.1294	.647	0.3174	1.2775	3253.3	.0861	.717
4900	8.0410-2	1035.4	2.1281	28.772	.197	1.0610	-1.0026	0.4472	1.2065	3196.2	.1387	.635	0.3178	1.2774	3288.8	.0875	.716
5000	7.8696-2	1081.0	2.1373	28.733	.200	1.0729	-1.0032	0.4653	1.2017	3224.4	.1491	.623	0.3182	1.2774	3324.5	.0888	.715
5100	7.7031-2	1128.5	2.1467	28.688	.202	1.0863	-1.0038	0.4850	1.1971	3252.8	.1607	.610	0.3186	1.2775	3360.4	.0901	.715
5200	7.5413-2	1178.1	2.1563	28.636	.205	1.1012	-1.0046	0.5060	1.1928	3281.6	.1735	.597	0.3190	1.2778	3396.5	.0914	.714
5300	7.3836-2	1229.8	2.1662	28.576	.207	1.1175	-1.0055	0.5282	1.1888	3311.0	.1875	.583	0.3194	1.2781	3433.1	.0928	.713
5400	7.2298-2	1283.8	2.1763	28.509	.210	1.1352	-1.0064	0.5514	1.1853	3341.1	.2027	.570	0.3197	1.2786	3470.0	.0941	.712

TABLE 7.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016907; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 734.797 LB/IN² (50.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN		
1600	1.2389 0	-51.9	1.6622	28.950	.096	1.0000	-1.0000	0.2745	1.3331	1914.0	.0364	.722	0.2744	1.3333	1914.1	.0364	.722
1700	1.1660 0	-24.3	1.6790	28.950	.100	1.0000	-1.0000	0.2776	1.3282	1969.3	.0384	.721	0.2774	1.3285	1969.4	.0383	.721
1800	1.1012 0	3.6	1.6949	28.950	.103	1.0000	-1.0000	0.2805	1.3237	2022.9	.0403	.721	0.2802	1.3241	2023.2	.0402	.721
1900	1.0433 0	31.8	1.7102	28.950	.107	1.0000	-1.0000	0.2831	1.3197	2075.2	.0421	.721	0.2827	1.3203	2075.7	.0421	.720
2000	9.9111-1	60.2	1.7247	28.950	.111	1.0000	-1.0000	0.2857	1.3159	2126.1	.0440	.721	0.2851	1.3168	2126.8	.0439	.720
2100	9.4391-1	88.9	1.7387	28.950	.114	1.0000	-1.0000	0.2882	1.3123	2175.6	.0458	.721	0.2873	1.3136	2176.6	.0456	.721
2200	9.0101-1	117.8	1.7522	28.950	.118	1.0000	-1.0000	0.2907	1.3089	2223.8	.0476	.721	0.2895	1.3106	2225.3	.0474	.721
2300	8.6184-1	147.0	1.7652	28.950	.121	1.0000	-1.0000	0.2931	1.3055	2270.9	.0494	.721	0.2915	1.3078	2272.9	.0491	.721
2400	8.2593-1	176.5	1.7777	28.950	.125	1.0000	-1.0000	0.2955	1.3023	2316.8	.0511	.721	0.2934	1.3052	2319.4	.0508	.721
2500	7.9289-1	206.1	1.7898	28.950	.128	1.0000	-1.0000	0.2979	1.2991	2361.7	.0529	.721	0.2952	1.3027	2365.0	.0524	.721
2600	7.6239-1	236.0	1.8016	28.950	.131	1.0000	-1.0000	0.3003	1.2960	2405.6	.0547	.721	0.2969	1.3005	2409.8	.0541	.721
2700	7.3416-1	266.2	1.8129	28.950	.135	1.0000	-1.0000	0.3028	1.2929	2448.6	.0565	.721	0.2985	1.2984	2453.7	.0557	.721
2800	7.0794-1	296.6	1.8240	28.950	.138	1.0000	-1.0000	0.3052	1.2899	2490.6	.0583	.721	0.3000	1.2964	2496.8	.0573	.721
2900	6.8352-1	327.2	1.8347	28.950	.141	1.0001	-1.0000	0.3077	1.2870	2531.8	.0601	.721	0.3015	1.2946	2539.2	.0589	.721
3000	6.6074-1	358.1	1.8452	28.950	.144	1.0001	-1.0000	0.3102	1.2840	2572.1	.0620	.720	0.3028	1.2929	2581.0	.0605	.720
3100	6.3942-1	389.3	1.8554	28.949	.147	1.0002	-1.0000	0.3127	1.2811	2611.7	.0639	.720	0.3041	1.2913	2622.0	.0621	.720
3200	6.1943-1	420.7	1.8654	28.949	.150	1.0003	-1.0000	0.3154	1.2782	2650.4	.0658	.719	0.3053	1.2898	2662.5	.0637	.720
3300	6.0065-1	452.3	1.8751	28.949	.153	1.0005	-1.0000	0.3181	1.2753	2688.5	.0677	.719	0.3064	1.2884	2702.3	.0652	.719
3400	5.8298-1	484.3	1.8847	28.948	.156	1.0007	-1.0000	0.3209	1.2724	2725.8	.0697	.718	0.3075	1.2871	2741.6	.0667	.719
3500	5.6631-1	516.5	1.8940	28.948	.159	1.0010	-1.0000	0.3238	1.2695	2762.5	.0717	.717	0.3085	1.2859	2780.4	.0682	.719
3600	5.5056-1	549.1	1.9032	28.947	.162	1.0014	-1.0001	0.3268	1.2665	2798.5	.0738	.716	0.3095	1.2848	2818.6	.0697	.718
3700	5.3565-1	581.9	1.9122	28.945	.165	1.0019	-1.0001	0.3300	1.2636	2833.8	.0760	.715	0.3104	1.2838	2856.4	.0711	.718
3800	5.2153-1	615.1	1.9210	28.944	.167	1.0025	-1.0001	0.3334	1.2606	2868.6	.0782	.714	0.3112	1.2828	2893.7	.0726	.718
3900	5.0812-1	648.6	1.9297	28.941	.170	1.0033	-1.0001	0.3371	1.2575	2902.6	.0805	.713	0.3120	1.2819	2930.7	.0740	.718
4000	4.9537-1	682.5	1.9383	28.939	.173	1.0043	-1.0002	0.3410	1.2544	2936.1	.0829	.712	0.3128	1.2811	2967.2	.0754	.718
4100	4.8323-1	716.8	1.9468	28.935	.176	1.0055	-1.0002	0.3452	1.2512	2969.0	.0855	.710	0.3135	1.2803	3003.3	.0767	.718
4200	4.7165-1	751.6	1.9552	28.931	.179	1.0070	-1.0003	0.3499	1.2480	3001.3	.0883	.707	0.3141	1.2796	3039.1	.0781	.718
4300	4.6059-1	786.8	1.9635	28.925	.181	1.0089	-1.0003	0.3549	1.2446	3033.0	.0913	.705	0.3148	1.2790	3074.6	.0795	.718
4400	4.5002-1	822.6	1.9717	28.919	.184	1.0112	-1.0004	0.3605	1.2412	3064.2	.0945	.702	0.3154	1.2784	3109.8	.0808	.718
4500	4.3990-1	858.9	1.9799	28.911	.187	1.0139	-1.0005	0.3667	1.2377	3094.9	.0981	.698	0.3159	1.2778	3144.7	.0821	.718
4600	4.3019-1	895.9	1.9880	28.901	.189	1.0171	-1.0007	0.3734	1.2341	3125.1	.1020	.693	0.3165	1.2774	3179.4	.0834	.718
4700	4.2086-1	933.6	1.9961	28.889	.192	1.0210	-1.0009	0.3809	1.2304	3154.8	.1062	.688	0.3170	1.2769	3213.9	.0848	.718
4800	4.1190-1	972.1	2.0042	28.875	.195	1.0255	-1.0011	0.3891	1.2267	3184.1	.1110	.682	0.3174	1.2766	3248.2	.0861	.717
4900	4.0326-1	1011.5	2.0123	28.858	.197	1.0307	-1.0013	0.3981	1.2230	3213.2	.1162	.675	0.3179	1.2763	3282.5	.0874	.717
5000	3.9492-1	1051.8	2.0205	28.839	.200	1.0367	-1.0016	0.4080	1.2192	3241.9	.1219	.668	0.3183	1.2761	3316.6	.0887	.717
5100	3.8687-1	1093.1	2.0286	28.816	.202	1.0435	-1.0019	0.4187	1.2155	3270.5	.1283	.660	0.3187	1.2759	3350.7	.0900	.716
5200	3.7908-1	1135.6	2.0369	28.789	.205	1.0513	-1.0023	0.4303	1.2119	3299.0	.1353	.651	0.3191	1.2758	3384.9	.0913	.716
5300	3.7154-1	1179.2	2.0452	28.759	.207	1.0599	-1.0028	0.4428	1.2084	3327.5	.1429	.642	0.3195	1.2758	3419.0	.0926	.715
5400	3.6422-1	1224.1	2.0536	28.724	.210	1.0695	-1.0033	0.4560	1.2050	3356.1	.1512	.633	0.3198	1.2758	3453.3	.0939	.714

TABLE 7C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016907; EQUIV.RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511;
 DRY AIR

T R	HETEROGENEOUS PHASE PROPERTIES					GAS PHASE PROPERTIES					(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	T R	
	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R	DENSITY LB/FT3	MW	VIS LB/ FT S	DLV DLT	DLV DLP						CP BTU/ LB R
PRESSURE = 0.01 ATM																
360	1.140-3	-394.4	1.8099	28.949	0.2515	1.116-3	29.336	.0319	1.000	-1.000	0.2386	1.3960	923	.0104	.734	360
400	1.023-3	-382.3	1.8416	28.949	0.4185	1.003-3	29.299	.0348	1.000	-1.000	0.2389	1.3960	973	.0114	.731	400
440	9.010-4	-349.1	1.9202	28.949	0.2429	9.010-4	28.949	.0369	1.000	-1.000	0.2429	1.3936	1026	.0122	.736	440
PRESSURE = 0.10 ATM																
360	1.140-2	-394.5	1.6570	28.949	0.2425	1.116-2	29.338	.0319	1.000	-1.000	0.2386	1.3960	923	.0104	.734	360
400	1.026-2	-384.6	1.6831	28.949	0.2597	1.004-2	29.334	.0349	1.000	-1.000	0.2386	1.3962	973	.0114	.730	400
440	9.290-3	-372.0	1.7130	28.949	0.4239	9.116-3	29.290	.0377	1.000	-1.000	0.2391	1.3959	1021	.0124	.727	440
480	8.259-3	-339.4	1.7834	28.949	0.2431	8.259-3	28.949	.0397	1.000	-1.000	0.2431	1.3931	1072	.0132	.733	480
520	7.624-3	-329.6	1.8029	28.949	0.2434	7.624-3	28.949	.0424	1.000	-1.000	0.2434	1.3924	1115	.0141	.730	520
PRESSURE = 1.00 ATM																
360	1.140-1	-394.5	1.5045	28.949	0.2416	1.116-1	29.338	.0319	1.000	-1.000	0.2386	1.3960	923	.0104	.734	360
400	1.026-1	-384.8	1.5300	28.949	0.2440	1.004-1	29.338	.0349	1.000	-1.000	0.2385	1.3962	973	.0114	.730	400
440	9.326-2	-374.8	1.5538	28.949	0.2610	9.129-2	29.333	.0378	1.000	-1.000	0.2386	1.3961	1020	.0124	.726	440
480	8.523-2	-362.8	1.5798	28.949	0.3672	8.359-2	29.299	.0405	1.000	-1.000	0.2391	1.3955	1066	.0134	.723	480
520	7.756-2	-340.9	1.6237	28.949	0.6613	7.674-2	29.139	.0428	1.000	-1.000	0.2412	1.3938	1112	.0142	.725	520
537	7.411-2	-327.7	1.6486	28.949	0.9369	7.396-2	28.986	.0436	1.000	-1.000	0.2431	1.3923	1132	.0145	.729	537
560	7.079-2	-319.9	1.6630	28.949	0.2438	7.079-2	28.949	.0450	1.000	-1.000	0.2438	1.3915	1157	.0150	.729	560
600	6.607-2	-310.1	1.6798	28.949	0.2444	6.607-2	28.949	.0475	1.000	-1.000	0.2444	1.3903	1197	.0159	.729	600
PRESSURE = 10.00 ATM																
360	1.140 0	-394.5	1.3519	28.949	0.2415	1.116 0	29.338	.0319	1.000	-1.000	0.2386	1.3960	923	.0104	.734	360
400	1.026 0	-384.8	1.3774	28.949	0.2424	1.004 0	29.338	.0349	1.000	-1.000	0.2385	1.3963	973	.0114	.730	400
440	9.327-1	-375.1	1.4006	28.949	0.2449	9.131-1	29.338	.0378	1.000	-1.000	0.2385	1.3962	1020	.0124	.726	440
480	8.547-1	-365.1	1.4223	28.949	0.2564	8.369-1	29.334	.0406	1.000	-1.000	0.2388	1.3958	1066	.0134	.723	480
520	7.879-1	-351.1	1.4504	28.949	0.2946	7.721-1	29.318	.0432	1.000	-1.000	0.2392	1.3950	1109	.0143	.721	520
537	7.624-1	-346.0	1.4601	28.949	0.3197	7.477-1	29.303	.0443	1.000	-1.000	0.2396	1.3945	1127	.0147	.721	537
560	7.282-1	-338.0	1.4748	28.949	0.3765	7.156-1	29.264	.0457	1.000	-1.000	0.2402	1.3937	1152	.0152	.722	560
600	6.707-1	-319.6	1.5064	28.949	0.5691	6.645-1	29.115	.0479	1.000	-1.000	0.2425	1.3914	1194	.0160	.725	600
640	6.194-1	-300.3	1.5376	28.949	0.2450	6.194-1	28.949	.0499	1.000	-1.000	0.2450	1.3888	1236	.0168	.730	640
680	5.830-1	-290.5	1.5525	28.949	0.2458	5.830-1	28.949	.0523	1.000	-1.000	0.2458	1.3872	1273	.0176	.729	680
PRESSURE = 50.00 ATM																
360	5.690 0	-394.5	1.2453	28.949	0.2415	5.580 0	29.338	.0319	1.000	-1.000	0.2386	1.3960	923	.0104	.734	360
400	5.122 0	-384.8	1.2708	28.949	0.2423	5.022 0	29.338	.0349	1.000	-1.000	0.2385	1.3962	973	.0114	.730	400
440	4.657 0	-375.1	1.2939	28.949	0.2435	4.565 0	29.338	.0378	1.000	-1.000	0.2385	1.3962	1020	.0124	.726	440
480	4.269 0	-365.3	1.3152	28.949	0.2466	4.185 0	29.337	.0406	1.000	-1.000	0.2387	1.3958	1066	.0134	.722	480
520	3.941 0	-352.0	1.3420	28.949	0.2631	3.863 0	29.334	.0433	1.000	-1.000	0.2390	1.3951	1109	.0144	.721	520
537	3.817 0	-347.6	1.3504	28.949	0.2682	3.742 0	29.331	.0443	1.000	-1.000	0.2392	1.3947	1126	.0147	.720	537
560	3.656 0	-341.2	1.3620	28.949	0.2795	3.585 0	29.323	.0458	1.000	-1.000	0.2396	1.3941	1151	.0152	.720	560
600	3.404 0	-329.4	1.3824	28.949	0.3167	3.343 0	29.293	.0482	1.000	-1.000	0.2404	1.3927	1191	.0161	.721	600
640	3.172 0	-315.4	1.4049	28.949	0.3897	3.126 0	29.223	.0505	1.000	-1.000	0.2419	1.3908	1231	.0169	.723	640
680	2.948 0	-297.5	1.4321	28.949	0.5185	2.928 0	29.077	.0526	1.000	-1.000	0.2443	1.3881	1270	.0177	.726	680
720	2.753 0	-280.7	1.4562	28.949	0.2466	2.753 0	28.949	.0546	1.000	-1.000	0.2466	1.3854	1309	.0185	.729	720
760	2.608 0	-270.8	1.4695	28.949	0.2475	2.608 0	28.949	.0568	1.000	-1.000	0.2475	1.3834	1344	.0193	.728	760

TABLE 8A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.033814; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5008; MW = 28.9344;
 DRY AIR; GASEOUS COMPOSITION: CO2= .06778; H2O= .06747; N2= .75450; O2= .10120; AR= .00905

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
360	1.1006-1	5.5032 0	-682.1	1.8766	1.7186	1.5605	1.4025	1.2920	0.2451	1.3889	926.9	.0299	.0096	.7593	360
380	1.0427-1	5.2136 0	-677.2	1.8898	1.7318	1.5738	1.4157	1.3053	0.2452	1.3887	952.2	.0314	.0102	.7558	380
400	9.9058-2	4.9529 0	-672.3	1.9024	1.7444	1.5864	1.4283	1.3179	0.2453	1.3884	976.9	.0329	.0107	.7526	400
420	9.4341-2	4.7171 0	-667.4	1.9144	1.7564	1.5983	1.4403	1.3298	0.2455	1.3880	1000.9	.0343	.0112	.7496	420
440	9.0053-2	4.5026 0	-662.5	1.9258	1.7678	1.6098	1.4517	1.3413	0.2457	1.3876	1024.3	.0358	.0118	.7471	440
460	8.6138-2	4.3069 0	-657.6	1.9368	1.7787	1.6207	1.4626	1.3522	0.2459	1.3871	1047.1	.0372	.0123	.7449	460
480	8.2549-2	4.1274 0	-652.7	1.9472	1.7892	1.6312	1.4731	1.3627	0.2462	1.3866	1069.4	.0386	.0128	.7431	480
500	7.9247-2	3.9623 0	-647.7	1.9573	1.7992	1.6412	1.4832	1.3727	0.2464	1.3860	1091.3	.0399	.0133	.7417	500
520	7.6199-2	3.8099 0	-642.8	1.9669	1.8089	1.6509	1.4928	1.3824	0.2467	1.3854	1112.6	.0413	.0137	.7407	520
537	7.3832-2	3.6916 0	-638.7	1.9747	1.8167	1.6587	1.5006	1.3902	0.2470	1.3848	1130.1	.0424	.0141	.7400	537
540	7.3376-2	3.6688 0	-637.9	1.9763	1.8182	1.6602	1.5022	1.3917	0.2471	1.3846	1133.5	.0426	.0142	.7399	540
560	7.0756-2	3.5378 0	-632.9	1.9853	1.8272	1.6692	1.5112	1.4007	0.2474	1.3839	1154.0	.0439	.0147	.7398	560
580	6.8316-2	3.4158 0	-628.0	1.9939	1.8359	1.6779	1.5198	1.4094	0.2478	1.3831	1174.1	.0451	.0151	.7399	580
600	6.6039-2	3.3019 0	-623.0	2.0024	1.8443	1.6863	1.5283	1.4178	0.2482	1.3822	1193.8	.0464	.0156	.7400	600
620	6.3908-2	3.1954 0	-618.1	2.0105	1.8525	1.6944	1.5364	1.4259	0.2486	1.3813	1213.1	.0476	.0160	.7402	620
640	6.1911-2	3.0956 0	-613.1	2.0184	1.8604	1.7023	1.5443	1.4338	0.2491	1.3804	1232.1	.0489	.0164	.7401	640
660	6.0035-2	3.0018 0	-608.1	2.0261	1.8680	1.7100	1.5520	1.4415	0.2495	1.3794	1250.8	.0501	.0169	.7398	660
680	5.8270-2	2.9135 0	-603.1	2.0335	1.8755	1.7175	1.5594	1.4490	0.2500	1.3784	1269.1	.0513	.0173	.7394	680
700	5.6605-2	2.8302 0	-598.1	2.0408	1.8827	1.7247	1.5667	1.4562	0.2505	1.3774	1287.2	.0524	.0178	.7389	700
720	5.5032-2	2.7516 0	-593.1	2.0478	1.8898	1.7318	1.5737	1.4633	0.2510	1.3763	1304.9	.0536	.0182	.7385	720
740	5.3545-2	2.6773 0	-588.0	2.0547	1.8967	1.7387	1.5806	1.4702	0.2516	1.3752	1322.4	.0547	.0186	.7382	740
760	5.2136-2	2.6068 0	-583.0	2.0614	1.9034	1.7454	1.5873	1.4769	0.2521	1.3740	1339.6	.0559	.0191	.7380	760
780	5.0799-2	2.5400 0	-578.0	2.0680	1.9100	1.7519	1.5939	1.4834	0.2527	1.3729	1356.5	.0570	.0195	.7379	780
800	4.9529-2	2.4765 0	-572.9	2.0744	1.9164	1.7583	1.6003	1.4898	0.2533	1.3717	1373.2	.0581	.0199	.7378	800
820	4.8321-2	2.4161 0	-567.8	2.0807	1.9226	1.7646	1.6066	1.4961	0.2539	1.3705	1389.6	.0591	.0204	.7377	820
840	4.7171-2	2.3585 0	-562.8	2.0868	1.9288	1.7707	1.6127	1.5022	0.2545	1.3693	1405.9	.0602	.0208	.7376	840
860	4.6074-2	2.3037 0	-557.7	2.0928	1.9348	1.7767	1.6187	1.5082	0.2551	1.3680	1421.9	.0613	.0212	.7376	860
880	4.5026-2	2.2513 0	-552.5	2.0987	1.9406	1.7826	1.6246	1.5141	0.2557	1.3668	1437.6	.0623	.0216	.7376	880
900	4.4026-2	2.2013 0	-547.4	2.1044	1.9464	1.7883	1.6303	1.5199	0.2564	1.3655	1453.2	.0634	.0220	.7376	900
920	4.3069-2	2.1534 0	-542.3	2.1101	1.9520	1.7940	1.6360	1.5255	0.2571	1.3642	1468.6	.0644	.0224	.7375	920
940	4.2152-2	2.1076 0	-537.1	2.1156	1.9576	1.7995	1.6415	1.5310	0.2577	1.3630	1483.8	.0654	.0229	.7374	940
960	4.1274-2	2.0637 0	-532.0	2.1210	1.9630	1.8050	1.6469	1.5365	0.2584	1.3617	1498.7	.0664	.0233	.7373	960
980	4.0432-2	2.0216 0	-526.8	2.1264	1.9683	1.8103	1.6523	1.5418	0.2591	1.3604	1513.6	.0674	.0237	.7371	980
1000	3.9623-2	1.9812 0	-521.6	2.1316	1.9736	1.8155	1.6575	1.5470	0.2598	1.3591	1528.2	.0684	.0241	.7370	1000
1020	3.8846-2	1.9423 0	-516.4	2.1368	1.9787	1.8207	1.6627	1.5522	0.2605	1.3577	1542.6	.0694	.0245	.7368	1020
1040	3.8099-2	1.9050 0	-511.2	2.1418	1.9838	1.8258	1.6677	1.5573	0.2612	1.3564	1556.9	.0704	.0250	.7366	1040
1060	3.7380-2	1.8690 0	-506.0	2.1468	1.9888	1.8307	1.6727	1.5622	0.2619	1.3551	1571.1	.0714	.0254	.7364	1060
1080	3.6688-2	1.8344 0	-500.7	2.1517	1.9937	1.8356	1.6776	1.5671	0.2626	1.3538	1585.1	.0723	.0258	.7361	1080
1100	3.6021-2	1.8011 0	-495.5	2.1565	1.9985	1.8405	1.6824	1.5720	0.2634	1.3525	1598.9	.0733	.0262	.7358	1100
1120	3.5378-2	1.7689 0	-490.2	2.1613	2.0032	1.8452	1.6872	1.5767	0.2641	1.3512	1612.6	.0743	.0267	.7355	1120
1140	3.4757-2	1.7379 0	-484.9	2.1660	2.0079	1.8499	1.6919	1.5814	0.2648	1.3499	1626.1	.0752	.0271	.7351	1140

TABLE 8A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.033814; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5008; MW = 28.9344;
 DRY AIR; GASEOUS COMPOSITION: CO2= .06778; H2O= .06747; N2= .75450; O2= .10120; AR= .00905

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	FT/S	LB/FT HR	BTU/FT HR R	R		
1160	3.4158-2	1.7079 0	-479.6	2.1706	2.0125	1.8545	1.6965	1.5860	0.2655	1.3485	1639.5	.0761	.0275	.7348	1160
1180	3.3579-2	1.6790 0	-474.3	2.1751	2.0171	1.8591	1.7010	1.5906	0.2663	1.3472	1652.8	.0771	.0279	.7345	1180
1200	3.3019-2	1.6510 0	-468.9	2.1796	2.0216	1.8635	1.7055	1.5950	0.2670	1.3460	1666.0	.0780	.0284	.7341	1200
1220	3.2478-2	1.6239 0	-463.6	2.1840	2.0260	1.8680	1.7099	1.5995	0.2678	1.3447	1679.0	.0789	.0288	.7338	1220
1240	3.1954-2	1.5977 0	-458.2	2.1884	2.0303	1.8723	1.7143	1.6038	0.2685	1.3434	1691.9	.0798	.0292	.7334	1240
1260	3.1447-2	1.5724 0	-452.9	2.1927	2.0346	1.8766	1.7186	1.6081	0.2692	1.3421	1704.7	.0807	.0297	.7331	1260
1280	3.0956-2	1.5478 0	-447.5	2.1969	2.0389	1.8809	1.7228	1.6124	0.2700	1.3409	1717.3	.0816	.0301	.7327	1280
1300	3.0479-2	1.5240 0	-442.1	2.2011	2.0431	1.8851	1.7270	1.6166	0.2707	1.3396	1729.9	.0825	.0305	.7324	1300
1320	3.0018-2	1.5009 0	-436.6	2.2053	2.0472	1.8892	1.7312	1.6207	0.2715	1.3384	1742.3	.0834	.0309	.7321	1320
1340	2.9570-2	1.4785 0	-431.2	2.2093	2.0513	1.8933	1.7352	1.6248	0.2722	1.3372	1754.7	.0843	.0314	.7317	1340
1360	2.9135-2	1.4567 0	-425.7	2.2134	2.0554	1.8973	1.7393	1.6288	0.2729	1.3359	1766.9	.0852	.0318	.7314	1360
1380	2.8713-2	1.4356 0	-420.3	2.2174	2.0593	1.9013	1.7433	1.6328	0.2737	1.3347	1779.1	.0860	.0322	.7311	1380
1400	2.8302-2	1.4151 0	-414.8	2.2213	2.0633	1.9053	1.7472	1.6368	0.2744	1.3336	1791.1	.0869	.0326	.7308	1400
1420	2.7904-2	1.3952 0	-409.3	2.2252	2.0672	1.9091	1.7511	1.6407	0.2751	1.3324	1803.1	.0878	.0331	.7305	1420
1440	2.7516-2	1.3758 0	-403.8	2.2291	2.0710	1.9130	1.7550	1.6445	0.2758	1.3312	1815.0	.0886	.0335	.7302	1440
1460	2.7139-2	1.3570 0	-398.3	2.2329	2.0748	1.9168	1.7588	1.6483	0.2766	1.3301	1826.7	.0895	.0339	.7300	1460
1480	2.6772-2	1.3386 0	-392.7	2.2366	2.0786	1.9206	1.7625	1.6521	0.2773	1.3290	1838.4	.0903	.0343	.7298	1480
1500	2.6416-2	1.3208 0	-387.2	2.2404	2.0823	1.9243	1.7663	1.6558	0.2780	1.3279	1850.0	.0912	.0347	.7296	1500
1520	2.6068-2	1.3034 0	-381.6	2.2441	2.0860	1.9280	1.7700	1.6595	0.2787	1.3268	1861.6	.0920	.0352	.7293	1520
1540	2.5729-2	1.2865 0	-376.0	2.2477	2.0897	1.9316	1.7736	1.6631	0.2794	1.3257	1873.0	.0928	.0356	.7291	1540
1560	2.5400-2	1.2700 0	-370.4	2.2513	2.0933	1.9352	1.7772	1.6668	0.2801	1.3246	1884.4	.0937	.0360	.7289	1560
1580	2.5078-2	1.2539 0	-364.8	2.2549	2.0969	1.9388	1.7808	1.6703	0.2807	1.3236	1895.7	.0945	.0364	.7287	1580
1600	2.4765-2	1.2382 0	-359.2	2.2584	2.1004	1.9424	1.7843	1.6739	0.2814	1.3226	1906.9	.0953	.0368	.7286	1600
1620	2.4459-2	1.2229 0	-353.6	2.2619	2.1039	1.9459	1.7878	1.6774	0.2821	1.3215	1918.0	.0961	.0372	.7284	1620
1640	2.4161-2	1.2080 0	-347.9	2.2654	2.1074	1.9493	1.7913	1.6808	0.2827	1.3206	1929.1	.0969	.0376	.7282	1640
1660	2.3869-2	1.1935 0	-342.3	2.2688	2.1108	1.9528	1.7947	1.6843	0.2834	1.3196	1940.1	.0977	.0380	.7280	1660
1680	2.3585-2	1.1793 0	-336.6	2.2722	2.1142	1.9561	1.7981	1.6877	0.2840	1.3186	1951.1	.0985	.0384	.7279	1680
1700	2.3308-2	1.1654 0	-330.9	2.2756	2.1175	1.9595	1.8015	1.6910	0.2847	1.3177	1962.0	.0993	.0388	.7277	1700
1720	2.3037-2	1.1518 0	-325.2	2.2789	2.1209	1.9628	1.8048	1.6944	0.2853	1.3168	1972.8	.1001	.0393	.7276	1720
1740	2.2772-2	1.1386 0	-319.5	2.2822	2.1242	1.9662	1.8081	1.6977	0.2859	1.3159	1983.5	.1009	.0397	.7274	1740
1760	2.2513-2	1.1257 0	-313.8	2.2855	2.1275	1.9694	1.8114	1.7009	0.2865	1.3150	1994.2	.1017	.0401	.7273	1760
1780	2.2260-2	1.1130 0	-308.0	2.2887	2.1307	1.9727	1.8146	1.7042	0.2871	1.3141	2004.9	.1024	.0405	.7271	1780
1800	2.2013-2	1.1006 0	-302.3	2.2919	2.1339	1.9759	1.8178	1.7074	0.2877	1.3133	2015.5	.1032	.0408	.7270	1800
1900	2.0854-2	1.0427 0	-273.4	2.3076	2.1495	1.9915	1.8335	1.7230	0.2904	1.3094	2067.6	.1070	.0428	.7265	1900
2000	1.9812-2	9.9058-1	-244.2	2.3225	2.1645	2.0065	1.8484	1.7380	0.2930	1.3059	2118.5	.1107	.0447	.7262	2000
2100	1.8868-2	9.4341-1	-214.8	2.3369	2.1789	2.0208	1.8628	1.7523	0.2955	1.3025	2168.0	.1144	.0466	.7260	2100
2200	1.8011-2	9.0053-1	-185.1	2.3507	2.1927	2.0346	1.8766	1.7661	0.2978	1.2995	2216.4	.1180	.0484	.7259	2200
2300	1.7228-2	8.6138-1	-155.2	2.3640	2.2059	2.0479	1.8899	1.7794	0.3000	1.2966	2263.7	.1215	.0502	.7257	2300
2400	1.6510-2	8.2549-1	-125.1	2.3768	2.2188	2.0607	1.9027	1.7922	0.3021	1.2940	2310.1	.1249	.0520	.7256	2400
2500	1.5849-2	7.9247-1	-94.8	2.3892	2.2311	2.0731	1.9151	1.8046	0.3041	1.2915	2355.5	.1283	.0538	.7254	2500

TABLE 8A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.033814; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5008; MW = 28.9344;
 DRY AIR; GASEOUS COMPOSITION: CO2= .06778; H2O= .06747; N2= .75450; O2= .10120; AR= .00905

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT ³	LB/FT ³	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
2600	1.5240-2	7.6199-1	-64.3	2.4011	2.2431	2.0851	1.9270	1.8166	0.3060	1.2892	2400.0	.1316	.0555	.7253	2600
2700	1.4675-2	7.3376-1	-33.6	2.4127	2.2547	2.0966	1.9386	1.8281	0.3077	1.2871	2443.7	.1349	.0572	.7250	2700
2800	1.4151-2	7.0756-1	-2.8	2.4239	2.2659	2.1079	1.9498	1.8394	0.3094	1.2851	2486.6	.1381	.0590	.7246	2800
2900	1.3663-2	6.8316-1	28.3	2.4348	2.2768	2.1187	1.9607	1.8503	0.3110	1.2832	2528.8	.1413	.0607	.7241	2900
3000	1.3208-2	6.6039-1	59.4	2.4454	2.2873	2.1293	1.9713	1.8608	0.3124	1.2815	2570.3	.1445	.0624	.7236	3000
3100	1.2782-2	6.3909-1	90.8	2.4556	2.2976	2.1396	1.9815	1.8711	0.3138	1.2799	2611.1	.1476	.0641	.7231	3100
3200	1.2382-2	6.1911-1	122.2	2.4656	2.3076	2.1496	1.9915	1.8811	0.3152	1.2784	2651.4	.1507	.0657	.7225	3200
3300	1.2007-2	6.0035-1	153.8	2.4754	2.3173	2.1593	2.0012	1.8908	0.3164	1.2770	2691.0	.1537	.0674	.7220	3300
3400	1.1654-2	5.8270-1	185.5	2.4848	2.3268	2.1687	2.0107	1.9003	0.3176	1.2757	2730.1	.1567	.0690	.7215	3400
3500	1.1321-2	5.6605-1	217.3	2.4940	2.3360	2.1780	2.0199	1.9095	0.3187	1.2745	2768.6	.1597	.0706	.7210	3500
3600	1.1006-2	5.5032-1	249.2	2.5030	2.3450	2.1870	2.0289	1.9185	0.3197	1.2734	2806.6	.1626	.0722	.7204	3600
3700	1.0709-2	5.3545-1	281.2	2.5118	2.3538	2.1957	2.0377	1.9272	0.3207	1.2723	2844.1	.1656	.0737	.7201	3700
3800	1.0427-2	5.2136-1	313.3	2.5204	2.3623	2.2043	2.0463	1.9358	0.3216	1.2713	2881.2	.1684	.0753	.7198	3800
3900	1.0160-2	5.0799-1	345.5	2.5287	2.3707	2.2127	2.0546	1.9442	0.3225	1.2704	2917.8	.1713	.0768	.7194	3900
4000	9.9058-3	4.9529-1	377.8	2.5369	2.3789	2.2208	2.0628	1.9523	0.3233	1.2695	2954.0	.1741	.0783	.7191	4000
4100	9.6642-3	4.8321-1	410.2	2.5449	2.3869	2.2288	2.0708	1.9603	0.3241	1.2687	2989.7	.1769	.0798	.7188	4100
4200	9.4341-3	4.7171-1	442.7	2.5527	2.3947	2.2366	2.0786	1.9682	0.3248	1.2679	3025.0	.1797	.0812	.7185	4200
4300	9.2147-3	4.6074-1	475.2	2.5604	2.4023	2.2443	2.0863	1.9758	0.3255	1.2672	3059.9	.1824	.0827	.7181	4300
4400	9.0053-3	4.5026-1	507.8	2.5679	2.4098	2.2518	2.0938	1.9833	0.3262	1.2665	3094.5	.1852	.0841	.7178	4400
4500	8.8052-3	4.4026-1	540.4	2.5752	2.4172	2.2591	2.1011	1.9906	0.3268	1.2659	3128.6	.1879	.0856	.7175	4500
4600	8.6138-3	4.3069-1	573.1	2.5824	2.4244	2.2663	2.1083	1.9978	0.3274	1.2653	3162.5	.1905	.0870	.7169	4600
4700	8.4305-3	4.2152-1	605.9	2.5894	2.4314	2.2734	2.1153	2.0049	0.3279	1.2647	3195.9	.1932	.0884	.7164	4700
4800	8.2548-3	4.1274-1	638.7	2.5963	2.4383	2.2803	2.1222	2.0118	0.3285	1.2641	3229.0	.1958	.0899	.7159	4800
4900	8.0864-3	4.0432-1	671.6	2.6031	2.4451	2.2871	2.1290	2.0186	0.3290	1.2636	3261.8	.1984	.0913	.7153	4900
5000	7.9247-3	3.9623-1	704.5	2.6098	2.4517	2.2937	2.1357	2.0252	0.3295	1.2631	3294.3	.2010	.0927	.7148	5000
5100	7.7693-3	3.8846-1	737.5	2.6163	2.4583	2.3002	2.1422	2.0317	0.3300	1.2626	3326.5	.2036	.0940	.7143	5100
5200	7.6199-3	3.8099-1	770.5	2.6227	2.4647	2.3066	2.1486	2.0381	0.3304	1.2622	3358.3	.2062	.0954	.7138	5200
5300	7.4761-3	3.7380-1	803.5	2.6290	2.4710	2.3129	2.1549	2.0444	0.3308	1.2617	3389.9	.2087	.0968	.7133	5300
5400	7.3376-3	3.6688-1	836.7	2.6352	2.4772	2.3191	2.1611	2.0506	0.3313	1.2613	3421.1	.2112	.0982	.7128	5400

TABLE 8.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.033814; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 0.14696 LB/IN2 (0.01 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4765-4	-359.2	2.2584	28.934	.095	1.0000	-1.0000	0.2815	1.3225	1906.8	.0368	.729	0.2814	1.3226	1906.9	.0368	.729
1700	2.3308-4	-330.9	2.2756	28.934	.099	1.0000	-1.0000	0.2848	1.3175	1961.8	.0389	.728	0.2847	1.3177	1962.0	.0388	.728
1800	2.2013-4	-302.2	2.2920	28.934	.103	1.0000	-1.0000	0.2879	1.3130	2015.2	.0409	.727	0.2877	1.3133	2015.5	.0408	.727
1900	2.0854-4	-273.3	2.3076	28.934	.107	1.0000	-1.0000	0.2908	1.3090	2067.3	.0428	.727	0.2904	1.3094	2067.6	.0428	.727
2000	1.9812-4	-244.1	2.3226	28.934	.111	1.0000	-1.0000	0.2935	1.3052	2117.9	.0448	.726	0.2930	1.3059	2118.5	.0447	.726
2100	1.8868-4	-214.6	2.3370	28.934	.114	1.0000	-1.0000	0.2962	1.3015	2167.2	.0467	.726	0.2955	1.3025	2168.0	.0466	.726
2200	1.8011-4	-184.9	2.3508	28.934	.118	1.0000	-1.0000	0.2989	1.2981	2215.2	.0486	.726	0.2978	1.2995	2216.4	.0484	.726
2300	1.7227-4	-154.8	2.3642	28.934	.121	1.0001	-1.0000	0.3016	1.2947	2262.0	.0505	.726	0.3000	1.2966	2263.7	.0502	.726
2400	1.6510-4	-124.5	2.3771	28.934	.125	1.0001	-1.0000	0.3043	1.2913	2307.7	.0524	.725	0.3021	1.2940	2310.1	.0520	.726
2500	1.5849-4	-94.0	2.3895	28.934	.128	1.0003	-1.0000	0.3072	1.2879	2352.2	.0544	.725	0.3041	1.2915	2355.5	.0538	.725
2600	1.5239-4	-63.1	2.4017	28.933	.132	1.0005	-1.0000	0.3103	1.2843	2395.5	.0564	.724	0.3060	1.2892	2400.0	.0555	.725
2700	1.4674-4	-31.9	2.4134	28.933	.135	1.0009	-1.0000	0.3138	1.2805	2437.5	.0585	.723	0.3077	1.2871	2443.7	.0573	.725
2800	1.4150-4	-0.3	2.4249	28.932	.138	1.0015	-1.0000	0.3180	1.2763	2478.2	.0609	.721	0.3094	1.2851	2486.7	.0590	.725
2900	1.3661-4	31.8	2.4362	28.930	.141	1.0025	-1.0001	0.3231	1.2714	2517.3	.0636	.718	0.3110	1.2833	2529.0	.0607	.724
3000	1.3204-4	64.4	2.4472	28.926	.144	1.0041	-1.0001	0.3297	1.2656	2554.6	.0668	.714	0.3124	1.2816	2570.7	.0624	.724
3100	1.2776-4	97.8	2.4582	28.921	.148	1.0067	-1.0002	0.3386	1.2585	2589.7	.0707	.707	0.3138	1.2801	2611.9	.0641	.723
3200	1.2373-4	132.2	2.4691	28.913	.151	1.0108	-1.0003	0.3506	1.2497	2622.4	.0758	.697	0.3151	1.2787	2652.6	.0657	.722
3300	1.1993-4	168.0	2.4801	28.901	.154	1.0169	-1.0005	0.3673	1.2392	2652.3	.0827	.683	0.3164	1.2774	2693.0	.0674	.722
3400	1.1633-4	205.9	2.4914	28.883	.157	1.0261	-1.0007	0.3902	1.2267	2679.5	.0922	.663	0.3175	1.2764	2733.2	.0690	.721
3500	1.1290-4	246.4	2.5031	28.856	.160	1.0396	-1.0012	0.4214	1.2126	2704.2	.1054	.638	0.3186	1.2755	2773.5	.0706	.720
3600	1.0962-4	290.5	2.5156	28.817	.163	1.0586	-1.0018	0.4635	1.1974	2727.2	.1237	.609	0.3196	1.2749	2814.0	.0722	.719
3700	1.0645-4	339.5	2.5290	28.760	.165	1.0849	-1.0027	0.5187	1.1820	2749.7	.1488	.576	0.3206	1.2745	2855.2	.0738	.718
3800	1.0337-4	394.8	2.5437	28.683	.168	1.1199	-1.0039	0.5892	1.1674	2773.1	.1826	.542	0.3214	1.2745	2897.5	.0754	.716
3900	1.0035-4	457.9	2.5601	28.578	.171	1.1649	-1.0056	0.6766	1.1544	2798.8	.2267	.510	0.3222	1.2750	2941.3	.0770	.715
4000	9.7363-5	530.6	2.5785	28.439	.173	1.2207	-1.0077	0.7809	1.1435	2827.8	.2824	.480	0.3230	1.2759	2987.0	.0787	.712
4100	9.4397-5	614.6	2.5993	28.262	.176	1.2873	-1.0104	0.9015	1.1348	2860.9	.3499	.453	0.3236	1.2773	3035.3	.0804	.708
4200	9.1431-5	711.4	2.6226	28.042	.178	1.3643	-1.0136	1.0361	1.1281	2898.5	.4283	.432	0.3243	1.2794	3086.7	.0822	.704
4300	8.8455-5	822.2	2.6487	27.775	.181	1.4500	-1.0174	1.1820	1.1233	2940.5	.5145	.416	0.3249	1.2821	3141.5	.0842	.698
4400	8.5465-5	948.0	2.6776	27.460	.183	1.5423	-1.0216	1.3350	1.1201	2987.2	.6037	.405	0.3255	1.2856	3200.3	.0864	.691
4500	8.2466-5	1089.3	2.7093	27.099	.186	1.6374	-1.0262	1.4892	1.1182	3038.5	.6886	.401	0.3262	1.2898	3263.2	.0887	.682
4600	7.9470-5	1245.6	2.7437	26.695	.188	1.7294	-1.0309	1.6353	1.1175	3094.2	.7606	.404	0.3269	1.2946	3330.5	.0914	.672
4700	7.6500-5	1415.7	2.7802	26.256	.190	1.8101	-1.0353	1.7608	1.1178	3154.2	.8110	.413	0.3276	1.3001	3401.7	.0942	.661
4800	7.3590-5	1596.6	2.8183	25.794	.193	1.8701	-1.0390	1.8509	1.1191	3217.9	.8333	.428	0.3284	1.3062	3476.4	.0973	.650
4900	7.0780-5	1784.2	2.8570	25.326	.195	1.9010	-1.0415	1.8918	1.1215	3284.5	.8251	.447	0.3292	1.3126	3553.5	.1004	.639
5000	6.8111-5	1973.1	2.8952	24.869	.197	1.8978	-1.0424	1.8759	1.1248	3353.2	.7887	.469	0.3300	1.3192	3631.4	.1035	.629
5100	6.5619-5	2157.5	2.9317	24.438	.200	1.8613	-1.0416	1.8041	1.1292	3423.0	.7308	.493	0.3308	1.3256	3708.8	.1066	.620
5200	6.3327-5	2332.3	2.9656	24.047	.202	1.7971	-1.0394	1.6857	1.1348	3493.0	.6596	.517	0.3316	1.3317	3783.9	.1094	.613
5300	6.1243-5	2496.4	2.9964	23.702	.205	1.7135	-1.0361	1.5351	1.1418	3562.8	.5832	.539	0.3323	1.3372	3855.7	.1121	.607
5400	5.9364-5	2638.8	3.0235	23.409	.208	1.6198	-1.0321	1.3682	1.1503	3632.2	.5079	.559	0.3329	1.3420	3923.3	.1147	.602

TABLE 8.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO \square 2.000; F/A \square 0.033814; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO \square 0.5008; P = 1.46959 LB/IN² (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM VS FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4765-3	-359.2	2.1004	28.934	.095	1.0000	-1.0000	0.2815	1.3225	1906.8	.0368	.729	0.2814	1.3226	1906.9	.0368	.729
1700	2.3308-3	-330.9	2.1176	28.934	.099	1.0000	-1.0000	0.2848	1.3175	1961.8	.0389	.728	0.2847	1.3177	1962.0	.0388	.728
1800	2.2013-3	-302.2	2.1339	28.934	.103	1.0000	-1.0000	0.2879	1.3130	2015.2	.0409	.727	0.2877	1.3133	2015.5	.0408	.727
1900	2.0854-3	-273.3	2.1496	28.934	.107	1.0000	-1.0000	0.2908	1.3090	2067.3	.0428	.727	0.2904	1.3094	2067.6	.0428	.727
2000	1.9812-3	-244.1	2.1646	28.934	.111	1.0000	-1.0000	0.2935	1.3052	2117.9	.0448	.726	0.2930	1.3059	2118.5	.0447	.726
2100	1.8868-3	-214.6	2.1789	28.934	.114	1.0000	-1.0000	0.2962	1.3016	2167.2	.0467	.726	0.2955	1.3025	2168.0	.0466	.726
2200	1.8011-3	-184.9	2.1928	28.934	.118	1.0000	-1.0000	0.2989	1.2981	2215.3	.0486	.726	0.2978	1.2995	2216.4	.0484	.726
2300	1.7227-3	-154.8	2.2061	28.934	.121	1.0000	-1.0000	0.3015	1.2948	2262.2	.0505	.726	0.3000	1.2966	2263.7	.0502	.726
2400	1.6510-3	-124.6	2.2190	28.934	.125	1.0001	-1.0000	0.3041	1.2916	2307.9	.0523	.725	0.3021	1.2940	2310.1	.0520	.726
2500	1.5849-3	-94.0	2.2315	28.934	.128	1.0001	-1.0000	0.3067	1.2884	2352.6	.0543	.725	0.3041	1.2915	2355.5	.0538	.725
2600	1.5239-3	-63.2	2.2436	28.934	.132	1.0002	-1.0000	0.3095	1.2852	2396.2	.0562	.725	0.3060	1.2892	2400.0	.0555	.725
2700	1.4675-3	-32.1	2.2553	28.934	.135	1.0004	-1.0000	0.3124	1.2819	2438.8	.0582	.724	0.3077	1.2871	2443.7	.0573	.725
2800	1.4150-3	-0.7	2.2667	28.933	.138	1.0007	-1.0000	0.3155	1.2785	2480.3	.0603	.723	0.3094	1.2851	2486.7	.0590	.725
2900	1.3662-3	31.0	2.2778	28.932	.141	1.0011	-1.0000	0.3190	1.2749	2520.6	.0625	.722	0.3110	1.2833	2528.9	.0607	.724
3000	1.3206-3	63.1	2.2887	28.931	.144	1.0017	-1.0000	0.3230	1.2710	2559.8	.0648	.720	0.3124	1.2816	2570.5	.0624	.724
3100	1.2779-3	95.6	2.2994	28.929	.148	1.0027	-1.0001	0.3279	1.2666	2597.7	.0675	.717	0.3138	1.2800	2611.5	.0641	.723
3200	1.2378-3	128.7	2.3099	28.925	.151	1.0042	-1.0001	0.3338	1.2615	2634.2	.0705	.714	0.3151	1.2785	2651.9	.0657	.722
3300	1.2001-3	162.4	2.3203	28.921	.154	1.0065	-1.0002	0.3413	1.2557	2669.1	.0740	.709	0.3164	1.2772	2691.8	.0674	.722
3400	1.1646-3	197.0	2.3306	28.914	.157	1.0097	-1.0003	0.3508	1.2489	2702.2	.0784	.702	0.3175	1.2760	2731.3	.0690	.721
3500	1.1309-3	232.7	2.3409	28.904	.160	1.0143	-1.0004	0.3632	1.2411	2733.5	.0838	.692	0.3186	1.2749	2770.5	.0706	.721
3600	1.0990-3	269.8	2.3514	28.890	.163	1.0209	-1.0006	0.3791	1.2320	2762.8	.0907	.680	0.3197	1.2739	2809.4	.0722	.720
3700	1.0685-3	308.7	2.3620	28.870	.166	1.0299	-1.0009	0.3998	1.2219	2790.3	.0996	.664	0.3206	1.2731	2848.3	.0738	.719
3800	1.0394-3	349.9	2.3730	28.842	.168	1.0422	-1.0013	0.4261	1.2109	2816.4	.1112	.645	0.3215	1.2725	2887.1	.0753	.719
3900	1.0114-3	394.1	2.3845	28.805	.171	1.0584	-1.0019	0.4593	1.1994	2841.4	.1262	.623	0.3224	1.2721	2926.3	.0768	.718
4000	9.8445-4	442.0	2.3966	28.755	.174	1.0794	-1.0027	0.5003	1.1878	2866.2	.1454	.598	0.3231	1.2718	2965.9	.0784	.717
4100	9.5826-4	494.5	2.4096	28.690	.177	1.1058	-1.0037	0.5499	1.1768	2891.6	.1697	.572	0.3238	1.2719	3006.2	.0799	.716
4200	9.3271-4	552.3	2.4235	28.606	.179	1.1382	-1.0050	0.6083	1.1666	2918.3	.1997	.546	0.3245	1.2722	3047.4	.0814	.714
4300	9.0766-4	616.4	2.4386	28.501	.182	1.1766	-1.0066	0.6754	1.1577	2946.9	.2360	.521	0.3251	1.2728	3090.0	.0830	.713
4400	8.8300-4	687.6	2.4550	28.371	.184	1.2210	-1.0085	0.7502	1.1502	2978.1	.2788	.496	0.3256	1.2738	3134.0	.0846	.710
4500	8.5863-4	766.7	2.4727	28.215	.187	1.2710	-1.0107	0.8317	1.1441	3012.1	.3278	.474	0.3261	1.2752	3179.9	.0862	.707
4600	8.3448-4	854.1	2.4919	28.031	.189	1.3259	-1.0133	0.9183	1.1394	3049.0	.3825	.455	0.3266	1.2770	3227.9	.0879	.703
4700	8.1051-4	950.5	2.5127	27.818	.192	1.3849	-1.0161	1.0086	1.1359	3089.0	.4414	.438	0.3271	1.2792	3278.1	.0898	.699
4800	7.8671-4	1055.9	2.5349	27.575	.194	1.4471	-1.0193	1.1010	1.1334	3131.9	.5024	.426	0.3275	1.2818	3330.7	.0917	.693
4900	7.6308-4	1170.6	2.5585	27.304	.197	1.5111	-1.0227	1.1934	1.1318	3177.8	.5628	.417	0.3280	1.2849	3386.0	.0938	.687
5000	7.3966-4	1294.5	2.5835	27.007	.199	1.5749	-1.0263	1.2834	1.1310	3226.7	.6191	.412	0.3285	1.2884	3443.9	.0961	.680
5100	7.1651-4	1427.1	2.6098	26.684	.201	1.6360	-1.0298	1.3673	1.1310	3278.3	.6677	.412	0.3290	1.2923	3504.4	.0985	.672
5200	6.9373-4	1567.6	2.6371	26.343	.204	1.6911	-1.0333	1.4405	1.1317	3332.7	.7048	.416	0.3295	1.2966	3567.4	.1011	.664
5300	6.7144-4	1714.7	2.6651	25.986	.206	1.7363	-1.0364	1.4979	1.1330	3389.6	.7278	.424	0.3301	1.3013	3632.6	.1038	.655
5400	6.4979-4	1866.5	2.6935	25.623	.208	1.7678	-1.0389	1.5342	1.1350	3448.7	.7348	.435	0.3307	1.3062	3699.5	.1066	.647

TABLE 8.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.033814; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 14.6959 LB/IN² (1.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4765-2	-359.2	1.9424	28.934	.095	1.0000	-1.0000	0.2815	1.3225	1906.8	.0368	.729	0.2814	1.3226	1906.9	.0368	.729
1700	2.3308-2	-330.9	1.9595	28.934	.099	1.0000	-1.0000	0.2848	1.3175	1961.8	.0389	.728	0.2847	1.3177	1962.0	.0388	.728
1800	2.2013-2	-302.2	1.9759	28.934	.103	1.0000	-1.0000	0.2879	1.3130	2015.2	.0409	.727	0.2877	1.3133	2015.5	.0408	.727
1900	2.0854-2	-273.3	1.9915	28.934	.107	1.0000	-1.0000	0.2908	1.3090	2067.3	.0428	.727	0.2904	1.3094	2067.6	.0428	.727
2000	1.9812-2	-244.1	2.0065	28.934	.111	1.0000	-1.0000	0.2935	1.3052	2117.9	.0448	.726	0.2930	1.3059	2118.5	.0447	.726
2100	1.8868-2	-214.6	2.0209	28.934	.114	1.0000	-1.0000	0.2962	1.3016	2167.2	.0467	.726	0.2955	1.3025	2168.0	.0466	.726
2200	1.8011-2	-184.9	2.0347	28.934	.118	1.0000	-1.0000	0.2988	1.2982	2215.3	.0486	.726	0.2978	1.2995	2216.4	.0484	.726
2300	1.7228-2	-154.9	2.0481	28.934	.121	1.0000	-1.0000	0.3014	1.2949	2262.2	.0504	.726	0.3000	1.2966	2263.7	.0502	.726
2400	1.6510-2	-124.6	2.0610	28.934	.125	1.0000	-1.0000	0.3039	1.2917	2308.1	.0523	.726	0.3021	1.2940	2310.1	.0520	.726
2500	1.5849-2	-94.1	2.0734	28.934	.128	1.0001	-1.0000	0.3065	1.2886	2352.8	.0542	.725	0.3041	1.2915	2355.5	.0538	.725
2600	1.5240-2	-63.3	2.0855	28.934	.132	1.0001	-1.0000	0.3091	1.2856	2396.6	.0561	.725	0.3060	1.2892	2400.0	.0555	.725
2700	1.4675-2	-32.3	2.0972	28.934	.135	1.0002	-1.0000	0.3117	1.2825	2439.4	.0580	.725	0.3077	1.2871	2443.7	.0572	.725
2800	1.4151-2	-1.0	2.1086	28.934	.138	1.0003	-1.0000	0.3144	1.2795	2481.2	.0600	.724	0.3094	1.2851	2486.6	.0590	.725
2900	1.3663-2	30.6	2.1197	28.933	.141	1.0005	-1.0000	0.3172	1.2764	2522.1	.0620	.723	0.3110	1.2832	2528.8	.0607	.724
3000	1.3207-2	62.5	2.1305	28.933	.144	1.0008	-1.0000	0.3203	1.2733	2562.1	.0641	.722	0.3124	1.2815	2570.4	.0624	.724
3100	1.2781-2	94.7	2.1410	28.932	.148	1.0012	-1.0000	0.3236	1.2700	2601.1	.0663	.721	0.3138	1.2799	2611.3	.0641	.723
3200	1.2381-2	127.2	2.1514	28.930	.151	1.0018	-1.0000	0.3274	1.2664	2639.1	.0686	.719	0.3151	1.2785	2651.6	.0657	.723
3300	1.2005-2	160.2	2.1615	28.928	.154	1.0027	-1.0001	0.3317	1.2627	2676.1	.0711	.717	0.3164	1.2771	2691.4	.0674	.722
3400	1.1650-2	193.6	2.1715	28.925	.157	1.0039	-1.0001	0.3367	1.2585	2712.0	.0739	.714	0.3176	1.2758	2730.6	.0690	.721
3500	1.1316-2	227.6	2.1813	28.922	.160	1.0056	-1.0002	0.3426	1.2540	2746.8	.0770	.711	0.3187	1.2747	2769.4	.0706	.721
3600	1.0999-2	262.2	2.1911	28.916	.163	1.0080	-1.0002	0.3498	1.2489	2780.4	.0806	.706	0.3197	1.2736	2807.8	.0722	.720
3700	1.0699-2	297.6	2.2008	28.908	.166	1.0112	-1.0003	0.3585	1.2432	2812.7	.0847	.701	0.3207	1.2726	2845.8	.0737	.720
3800	1.0414-2	333.9	2.2105	28.898	.168	1.0155	-1.0005	0.3692	1.2368	2843.7	.0897	.693	0.3216	1.2718	2883.5	.0753	.720
3900	1.0142-2	371.5	2.2202	28.885	.171	1.0213	-1.0007	0.3822	1.2299	2873.4	.0957	.684	0.3224	1.2710	2921.1	.0768	.719
4000	9.8826-3	410.5	2.2301	28.866	.174	1.0287	-1.0010	0.3982	1.2223	2901.9	.1030	.673	0.3232	1.2704	2958.5	.0783	.719
4100	9.6336-3	451.2	2.2402	28.843	.177	1.0383	-1.0013	0.4175	1.2143	2929.5	.1119	.660	0.3240	1.2699	2995.9	.0798	.718
4200	9.3943-3	494.1	2.2505	28.812	.180	1.0503	-1.0018	0.4406	1.2060	2956.4	.1228	.644	0.3246	1.2695	3033.3	.0813	.717
4300	9.1634-3	539.5	2.2612	28.773	.182	1.0651	-1.0024	0.4679	1.1976	2983.0	.1360	.627	0.3253	1.2693	3071.1	.0828	.717
4400	8.9400-3	587.8	2.2723	28.724	.185	1.0831	-1.0031	0.4997	1.1893	3009.7	.1518	.609	0.3259	1.2693	3109.2	.0842	.716
4500	8.7229-3	639.6	2.2839	28.664	.188	1.1044	-1.0040	0.5360	1.1816	3036.9	.1706	.589	0.3264	1.2694	3147.8	.0857	.715
4600	8.5115-3	695.2	2.2961	28.591	.190	1.1291	-1.0051	0.5765	1.1744	3065.1	.1926	.569	0.3269	1.2698	3187.1	.0872	.713
4700	8.3049-3	755.0	2.3090	28.503	.193	1.1570	-1.0064	0.6208	1.1680	3094.5	.2179	.549	0.3274	1.2703	3227.2	.0887	.711
4800	8.1024-3	819.4	2.3225	28.400	.195	1.1880	-1.0078	0.6684	1.1626	3125.6	.2466	.529	0.3278	1.2711	3268.3	.0902	.709
4900	7.9037-3	888.8	2.3368	28.281	.198	1.2217	-1.0095	0.7185	1.1580	3158.4	.2784	.510	0.3282	1.2722	3310.5	.0918	.707
5000	7.7082-3	963.2	2.3519	28.144	.200	1.2577	-1.0113	0.7702	1.1542	3193.0	.3131	.492	0.3286	1.2735	3353.9	.0934	.705
5100	7.5158-3	1042.8	2.3676	27.990	.203	1.2957	-1.0133	0.8228	1.1513	3229.6	.3503	.476	0.3289	1.2750	3398.6	.0950	.701
5200	7.3263-3	1127.8	2.3841	27.820	.205	1.3351	-1.0155	0.8758	1.1492	3268.0	.3894	.461	0.3292	1.2768	3444.7	.0967	.698
5300	7.1396-3	1218.0	2.4013	27.632	.207	1.3756	-1.0178	0.9285	1.1477	3308.3	.4295	.448	0.3296	1.2789	3492.3	.0985	.694
5400	6.9557-3	1313.4	2.4192	27.428	.210	1.4167	-1.0203	0.9804	1.1467	3350.4	.4695	.438	0.3299	1.2812	3541.3	.1004	.689

TABLE 8.4B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.033814; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 146.959 LB/IN² (10.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4765-1	-359.2	1.7843	28.934	.095	1.0000	-1.0000	0.2815	1.3225	1906.8	.0368	.729	0.2814	1.3226	1906.9	.0368	.729
1700	2.3308-1	-330.9	1.8015	28.934	.099	1.0000	-1.0000	0.2848	1.3175	1961.8	.0389	.728	0.2847	1.3177	1962.0	.0388	.728
1800	2.2013-1	-302.2	1.8179	28.934	.103	1.0000	-1.0000	0.2879	1.3130	2015.2	.0409	.727	0.2877	1.3133	2015.5	.0408	.727
1900	2.0854-1	-273.3	1.8335	28.934	.107	1.0000	-1.0000	0.2908	1.3090	2067.3	.0428	.727	0.2904	1.3094	2067.6	.0428	.727
2000	1.9812-1	-244.1	1.8485	28.934	.111	1.0000	-1.0000	0.2935	1.3052	2117.9	.0448	.726	0.2930	1.3059	2118.5	.0447	.726
2100	1.8868-1	-214.6	1.8629	28.934	.114	1.0000	-1.0000	0.2962	1.3016	2167.2	.0467	.726	0.2955	1.3025	2168.0	.0466	.726
2200	1.8011-1	-184.9	1.8767	28.934	.118	1.0000	-1.0000	0.2988	1.2982	2215.3	.0486	.726	0.2978	1.2995	2216.4	.0484	.726
2300	1.7228-1	-154.9	1.8900	28.934	.121	1.0000	-1.0000	0.3013	1.2949	2262.3	.0504	.726	0.3000	1.2966	2263.7	.0502	.726
2400	1.6510-1	-124.6	1.9029	28.934	.125	1.0000	-1.0000	0.3039	1.2918	2308.1	.0523	.726	0.3021	1.2940	2310.1	.0520	.726
2500	1.5849-1	-94.1	1.9154	28.934	.128	1.0000	-1.0000	0.3064	1.2887	2352.9	.0542	.725	0.3041	1.2915	2355.4	.0538	.725
2600	1.5240-1	-63.3	1.9274	28.934	.132	1.0001	-1.0000	0.3088	1.2857	2396.7	.0560	.725	0.3060	1.2892	2400.0	.0555	.725
2700	1.4675-1	-32.3	1.9391	28.934	.135	1.0001	-1.0000	0.3113	1.2828	2439.6	.0579	.725	0.3077	1.2871	2443.7	.0572	.725
2800	1.4151-1	-1.1	1.9505	28.934	.138	1.0002	-1.0000	0.3139	1.2800	2481.6	.0599	.724	0.3094	1.2851	2486.6	.0590	.725
2900	1.3663-1	30.5	1.9616	28.934	.141	1.0002	-1.0000	0.3164	1.2771	2522.8	.0618	.724	0.3110	1.2832	2528.8	.0607	.724
3000	1.3207-1	62.2	1.9723	28.934	.144	1.0004	-1.0000	0.3191	1.2743	2563.1	.0638	.723	0.3124	1.2815	2570.3	.0624	.724
3100	1.2781-1	94.3	1.9829	28.933	.148	1.0006	-1.0000	0.3218	1.2714	2602.5	.0658	.722	0.3138	1.2799	2611.2	.0641	.723
3200	1.2381-1	126.6	1.9931	28.933	.151	1.0008	-1.0000	0.3247	1.2686	2641.2	.0679	.721	0.3151	1.2784	2651.5	.0657	.723
3300	1.2006-1	159.2	2.0032	28.932	.154	1.0012	-1.0000	0.3278	1.2656	2679.1	.0700	.720	0.3164	1.2771	2691.2	.0674	.722
3400	1.1652-1	192.2	2.0130	28.930	.157	1.0017	-1.0000	0.3311	1.2626	2716.1	.0722	.719	0.3176	1.2758	2730.3	.0690	.721
3500	1.1319-1	225.5	2.0226	28.929	.160	1.0024	-1.0001	0.3348	1.2594	2752.4	.0746	.717	0.3187	1.2746	2769.0	.0706	.721
3600	1.1003-1	259.1	2.0321	28.926	.163	1.0033	-1.0001	0.3389	1.2560	2787.8	.0771	.715	0.3197	1.2735	2807.1	.0722	.720
3700	1.0705-1	293.3	2.0415	28.923	.166	1.0046	-1.0001	0.3435	1.2525	2822.4	.0798	.713	0.3207	1.2725	2844.9	.0737	.720
3800	1.0422-1	327.9	2.0507	28.919	.168	1.0062	-1.0002	0.3487	1.2487	2856.2	.0827	.710	0.3216	1.2715	2882.2	.0753	.720
3900	1.0153-1	363.0	2.0598	28.914	.171	1.0083	-1.0003	0.3548	1.2446	2889.1	.0860	.707	0.3224	1.2707	2919.2	.0768	.719
4000	9.8964-2	398.9	2.0689	28.907	.174	1.0110	-1.0004	0.3618	1.2402	2921.1	.0897	.703	0.3233	1.2699	2955.8	.0783	.719
4100	9.6520-2	435.4	2.0779	28.898	.177	1.0144	-1.0005	0.3700	1.2356	2952.3	.0939	.698	0.3240	1.2692	2992.2	.0798	.719
4200	9.4184-2	472.9	2.0870	28.886	.180	1.0188	-1.0007	0.3795	1.2306	2982.6	.0986	.691	0.3247	1.2686	3028.3	.0813	.718
4300	9.1948-2	511.4	2.0960	28.872	.182	1.0242	-1.0009	0.3906	1.2253	3012.2	.1042	.684	0.3254	1.2680	3064.3	.0827	.718
4400	8.9801-2	551.1	2.1051	28.854	.185	1.0308	-1.0011	0.4034	1.2197	3041.1	.1105	.676	0.3260	1.2676	3100.2	.0842	.717
4500	8.7737-2	592.1	2.1144	28.831	.188	1.0388	-1.0015	0.4182	1.2140	3069.4	.1179	.666	0.3266	1.2673	3136.0	.0856	.717
4600	8.5748-2	634.8	2.1237	28.804	.190	1.0484	-1.0019	0.4351	1.2082	3097.3	.1265	.655	0.3271	1.2670	3171.9	.0871	.716
4700	8.3827-2	679.2	2.1333	28.770	.193	1.0597	-1.0024	0.4541	1.2024	3125.1	.1364	.643	0.3276	1.2669	3207.8	.0885	.715
4800	8.1966-2	725.7	2.1431	28.730	.196	1.0728	-1.0030	0.4754	1.1967	3152.9	.1477	.630	0.3281	1.2669	3244.0	.0899	.714
4900	8.0161-2	774.4	2.1531	28.683	.198	1.0877	-1.0036	0.4988	1.1913	3181.0	.1605	.616	0.3285	1.2670	3280.5	.0914	.713
5000	7.8406-2	825.5	2.1634	28.627	.201	1.1045	-1.0044	0.5241	1.1863	3209.6	.1749	.602	0.3290	1.2672	3317.3	.0928	.712
5100	7.6696-2	879.2	2.1741	28.563	.203	1.1229	-1.0054	0.5511	1.1816	3238.9	.1908	.587	0.3293	1.2676	3354.6	.0942	.711
5200	7.5027-2	935.8	2.1851	28.489	.206	1.1430	-1.0064	0.5795	1.1775	3269.0	.2084	.572	0.3297	1.2681	3392.4	.0957	.709
5300	7.3396-2	995.2	2.1964	28.406	.208	1.1644	-1.0075	0.6088	1.1740	3300.1	.2276	.557	0.3300	1.2688	3430.8	.0971	.708
5400	7.1801-2	1057.5	2.2080	28.313	.211	1.1869	-1.0087	0.6386	1.1709	3332.2	.2482	.542	0.3303	1.2696	3469.8	.0986	.706

TABLE 8.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.033814; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 734.797 LB/IN2 (50.00 ATM) DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2382 0	-359.2	1.6739	28.934	.095	1.0000	-1.0000	0.2815	1.3224	1906.8	.0368	.729	0.2814	1.3226	1906.9	.0368	.729
1700	1.1654 0	-330.9	1.6910	28.934	.099	1.0000	-1.0000	0.2848	1.3175	1961.8	.0389	.728	0.2847	1.3177	1962.0	.0388	.728
1800	1.1006 0	-302.2	1.7074	28.934	.103	1.0000	-1.0000	0.2879	1.3130	2015.2	.0409	.727	0.2877	1.3133	2015.5	.0408	.727
1900	1.0427 0	-273.3	1.7230	28.934	.107	1.0000	-1.0000	0.2908	1.3090	2067.3	.0428	.727	0.2904	1.3094	2067.6	.0428	.727
2000	9.9059-1	-244.1	1.7380	28.934	.111	1.0000	-1.0000	0.2935	1.3052	2117.9	.0448	.726	0.2930	1.3059	2118.5	.0447	.726
2100	9.4342-1	-214.6	1.7524	28.935	.114	1.0000	-1.0000	0.2962	1.3016	2167.2	.0467	.726	0.2955	1.3025	2168.0	.0466	.726
2200	9.0053-1	-184.9	1.7662	28.935	.118	1.0000	-1.0000	0.2988	1.2982	2215.3	.0485	.726	0.2978	1.2995	2216.4	.0484	.726
2300	8.6138-1	-154.9	1.7796	28.935	.121	1.0000	-1.0000	0.3013	1.2949	2262.3	.0504	.726	0.3000	1.2966	2263.7	.0502	.726
2400	8.2549-1	-124.6	1.7925	28.935	.125	1.0000	-1.0000	0.3038	1.2918	2308.1	.0523	.726	0.3021	1.2940	2310.1	.0520	.726
2500	7.9247-1	-94.1	1.8049	28.935	.128	1.0000	-1.0000	0.3063	1.2887	2352.9	.0542	.725	0.3041	1.2915	2355.4	.0538	.725
2600	7.6199-1	-63.3	1.8170	28.935	.132	1.0000	-1.0000	0.3088	1.2858	2396.8	.0560	.725	0.3060	1.2892	2400.0	.0555	.725
2700	7.3377-1	-32.3	1.8287	28.935	.135	1.0000	-1.0000	0.3112	1.2829	2439.7	.0579	.725	0.3077	1.2871	2443.6	.0572	.725
2800	7.0756-1	-1.1	1.8400	28.934	.138	1.0001	-1.0000	0.3137	1.2801	2481.8	.0598	.725	0.3094	1.2851	2486.6	.0590	.725
2900	6.8316-1	30.4	1.8511	28.934	.141	1.0001	-1.0000	0.3161	1.2774	2523.0	.0617	.724	0.3110	1.2832	2528.8	.0607	.724
3000	6.6038-1	62.1	1.8619	28.934	.144	1.0002	-1.0000	0.3186	1.2747	2563.4	.0637	.723	0.3124	1.2815	2570.3	.0624	.724
3100	6.3908-1	94.1	1.8723	28.934	.148	1.0003	-1.0000	0.3212	1.2720	2603.0	.0656	.723	0.3138	1.2799	2611.2	.0641	.723
3200	6.1910-1	126.4	1.8826	28.934	.151	1.0005	-1.0000	0.3238	1.2693	2641.9	.0676	.722	0.3151	1.2784	2651.4	.0657	.723
3300	6.0033-1	158.9	1.8926	28.933	.154	1.0007	-1.0000	0.3265	1.2666	2680.1	.0696	.721	0.3164	1.2770	2691.1	.0674	.722
3400	5.8265-1	191.7	1.9024	28.932	.157	1.0010	-1.0000	0.3293	1.2639	2717.5	.0717	.720	0.3176	1.2757	2730.2	.0690	.722
3500	5.6599-1	224.8	1.9120	28.931	.160	1.0014	-1.0000	0.3323	1.2612	2754.2	.0738	.719	0.3187	1.2745	2768.8	.0706	.721
3600	5.5024-1	258.1	1.9214	28.930	.163	1.0019	-1.0001	0.3355	1.2584	2790.3	.0760	.718	0.3197	1.2734	2806.9	.0722	.720
3700	5.3534-1	291.9	1.9306	28.928	.166	1.0025	-1.0001	0.3389	1.2555	2825.6	.0783	.716	0.3207	1.2724	2844.5	.0737	.720
3800	5.2121-1	325.9	1.9397	28.926	.168	1.0034	-1.0001	0.3426	1.2526	2860.3	.0807	.715	0.3216	1.2714	2881.8	.0753	.720
3900	5.0779-1	360.4	1.9486	28.923	.171	1.0045	-1.0002	0.3466	1.2495	2894.3	.0833	.713	0.3225	1.2705	2918.6	.0768	.719
4000	4.9503-1	395.3	1.9575	28.919	.174	1.0059	-1.0002	0.3511	1.2464	2927.7	.0860	.711	0.3233	1.2697	2955.0	.0783	.719
4100	4.8288-1	430.6	1.9662	28.915	.177	1.0076	-1.0003	0.3561	1.2430	2960.3	.0890	.708	0.3240	1.2690	2991.0	.0798	.719
4200	4.7129-1	466.5	1.9748	28.909	.180	1.0098	-1.0003	0.3618	1.2395	2992.3	.0922	.705	0.3247	1.2683	3026.8	.0813	.718
4300	4.6021-1	503.0	1.9834	28.901	.182	1.0124	-1.0005	0.3682	1.2359	3023.7	.0958	.701	0.3254	1.2677	3062.3	.0827	.718
4400	4.4960-1	540.2	1.9920	28.892	.185	1.0157	-1.0006	0.3753	1.2321	3054.4	.0997	.697	0.3261	1.2671	3097.5	.0842	.717
4500	4.3944-1	578.1	2.0005	28.880	.188	1.0197	-1.0007	0.3835	1.2281	3084.5	.1041	.692	0.3267	1.2666	3132.5	.0856	.717
4600	4.2967-1	616.9	2.0090	28.866	.191	1.0245	-1.0009	0.3926	1.2239	3114.0	.1091	.686	0.3272	1.2662	3167.4	.0871	.716
4700	4.2029-1	656.7	2.0176	28.849	.193	1.0302	-1.0012	0.4029	1.2197	3143.2	.1146	.679	0.3277	1.2659	3202.1	.0885	.716
4800	4.1124-1	697.5	2.0262	28.829	.196	1.0368	-1.0015	0.4145	1.2153	3171.9	.1208	.672	0.3282	1.2656	3236.8	.0899	.715
4900	4.0251-1	739.6	2.0349	28.805	.198	1.0446	-1.0018	0.4273	1.2110	3200.3	.1278	.664	0.3287	1.2654	3271.5	.0913	.714
5000	3.9407-1	783.0	2.0436	28.777	.201	1.0535	-1.0023	0.4414	1.2066	3228.6	.1356	.655	0.3291	1.2653	3306.2	.0927	.713
5100	3.8590-1	827.9	2.0525	28.743	.204	1.0635	-1.0027	0.4568	1.2024	3256.9	.1442	.645	0.3295	1.2653	3341.0	.0941	.713
5200	3.7797-1	874.4	2.0616	28.705	.206	1.0748	-1.0033	0.4734	1.1983	3285.3	.1538	.635	0.3299	1.2653	3375.9	.0955	.712
5300	3.7027-1	922.7	2.0707	28.661	.209	1.0872	-1.0039	0.4911	1.1945	3314.0	.1643	.624	0.3303	1.2655	3411.1	.0969	.711
5400	3.6277-1	972.7	2.0801	28.610	.211	1.1006	-1.0046	0.5098	1.1909	3343.0	.1757	.612	0.3306	1.2658	3446.5	.0983	.710

TABLE 8C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.033814; EQUIV.RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008;
 DRY AIR

T R	HETEROGENEOUS PHASE PROPERTIES					GAS PHASE PROPERTIES							COND BTU/ FT HR R	PRAN R	T R	
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R	DENSITY LB/FT ³	MW	VIS LB/ FT S	DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S				VS FT/S
PRESSURE = 0.01 ATM																
360	1.180-3	-733.2	1.7583	28.934	0.2519	1.131-3	29.722	.0317	1.000	-1.000	0.2365	1.3937	916	.0102	.734	360
400	1.059-3	-721.1	1.7899	28.934	0.4144	1.016-3	29.684	.0346	1.000	-1.000	0.2372	1.3929	966	.0112	.731	400
440	9.244-4	-682.2	1.8816	28.934	2.1357	9.095-4	29.224	.0364	1.000	-1.000	0.2425	1.3894	1020	.0119	.739	440
PRESSURE = 0.10 ATM																
360	1.180-2	-733.3	1.6106	28.934	0.2432	1.131-2	29.724	.0317	1.000	-1.000	0.2365	1.3937	916	.0102	.734	360
400	1.062-2	-723.4	1.6368	28.934	0.2610	1.017-2	29.720	.0347	1.000	-1.000	0.2368	1.3932	966	.0112	.730	400
440	9.616-3	-710.8	1.6667	28.934	0.4208	9.236-3	29.674	.0374	1.000	-1.000	0.2376	1.3921	1013	.0122	.727	440
480	8.544-3	-678.4	1.7365	28.934	1.5159	8.364-3	29.317	.0394	1.000	-1.000	0.2419	1.3889	1063	.0130	.733	480
520	7.620-3	-642.8	1.8089	28.934	0.2467	7.620-3	28.934	.0413	1.000	-1.000	0.2467	1.3854	1113	.0137	.741	520
PRESSURE = 1.00 ATM																
360	1.180-1	-733.3	1.4632	28.934	0.2424	1.131-1	29.724	.0317	1.000	-1.000	0.2365	1.3937	916	.0102	.734	360
400	1.062-1	-723.6	1.4889	28.934	0.2458	1.018-1	29.724	.0347	1.000	-1.000	0.2367	1.3932	965	.0112	.730	400
440	9.652-2	-713.5	1.5129	28.934	0.2634	9.250-2	29.719	.0375	1.000	-1.000	0.2371	1.3924	1012	.0123	.726	440
480	8.821-2	-701.4	1.5391	28.934	0.3672	8.469-2	29.684	.0403	1.000	-1.000	0.2379	1.3911	1058	.0132	.724	480
520	8.027-2	-676.3	1.5893	28.934	0.6624	7.774-2	29.519	.0426	1.000	-1.000	0.2403	1.3889	1103	.0141	.726	520
537	7.671-2	-663.2	1.6141	28.934	0.9288	7.492-2	29.360	.0433	1.000	-1.000	0.2423	1.3873	1123	.0144	.730	537
560	7.095-2	-634.7	1.6660	28.934	1.5903	7.083-2	28.964	.0439	1.000	-1.000	0.2471	1.3841	1153	.0147	.739	560
600	6.604-2	-623.0	1.6863	28.934	0.2482	6.604-2	28.934	.0464	1.000	-1.000	0.2482	1.3822	1194	.0156	.740	600
PRESSURE = 10.00 ATM																
360	1.179 0	-733.3	1.3158	28.934	0.2423	1.131 0	29.724	.0317	1.000	-1.000	0.2365	1.3937	916	.0102	.734	360
400	1.061 0	-723.6	1.3415	28.934	0.2443	1.018 0	29.724	.0347	1.000	-1.000	0.2367	1.3932	965	.0112	.730	400
440	9.650-1	-713.8	1.3649	28.934	0.2478	9.251-1	29.724	.0376	1.000	-1.000	0.2371	1.3924	1012	.0123	.726	440
480	8.843-1	-703.7	1.3869	28.934	0.2601	8.479-1	29.720	.0403	1.000	-1.000	0.2376	1.3914	1057	.0133	.723	480
520	8.152-1	-686.2	1.4219	28.934	0.3081	7.822-1	29.704	.0430	1.000	-1.000	0.2383	1.3900	1100	.0142	.722	520
537	7.889-1	-680.9	1.4319	28.934	0.3324	7.575-1	29.688	.0440	1.000	-1.000	0.2387	1.3893	1117	.0146	.722	537
560	7.535-1	-672.6	1.4471	28.934	0.3874	7.250-1	29.648	.0455	1.000	-1.000	0.2395	1.3882	1142	.0151	.723	560
600	6.940-1	-653.8	1.4794	28.934	0.5737	6.732-1	29.494	.0476	1.000	-1.000	0.2419	1.3856	1184	.0159	.727	600
640	6.301-1	-623.9	1.5275	28.934	0.9711	6.233-1	29.129	.0493	1.000	-1.000	0.2468	1.3816	1229	.0165	.736	640
680	5.827-1	-603.1	1.5594	28.934	0.2500	5.827-1	28.934	.0513	1.000	-1.000	0.2500	1.3784	1269	.0173	.739	680
PRESSURE = 50.00 ATM																
360	5.876 0	-733.3	1.2128	28.934	0.2423	5.653 0	29.724	.0317	1.000	-1.000	0.2365	1.3937	916	.0102	.734	360
400	5.291 0	-723.6	1.2384	28.934	0.2441	5.088 0	29.724	.0347	1.000	-1.000	0.2367	1.3932	965	.0112	.730	400
440	4.811 0	-713.8	1.2618	28.934	0.2465	4.626 0	29.724	.0376	1.000	-1.000	0.2371	1.3924	1012	.0123	.726	440
480	4.411 0	-703.9	1.2834	28.934	0.2506	4.240 0	29.724	.0403	1.000	-1.000	0.2375	1.3914	1057	.0133	.723	480
520	4.073 0	-687.1	1.3171	28.934	0.2777	3.913 0	29.720	.0430	1.000	-1.000	0.2381	1.3901	1100	.0142	.721	520
537	3.946 0	-682.4	1.3259	28.934	0.2826	3.791 0	29.717	.0441	1.000	-1.000	0.2384	1.3895	1117	.0146	.721	537
560	3.779 0	-675.7	1.3382	28.934	0.2937	3.633 0	29.709	.0456	1.000	-1.000	0.2389	1.3886	1141	.0151	.721	560
600	3.519 0	-663.3	1.3595	28.934	0.3299	3.387 0	29.678	.0480	1.000	-1.000	0.2399	1.3867	1181	.0160	.722	600
640	3.279 0	-648.9	1.3828	28.934	0.4007	3.167 0	29.605	.0503	1.000	-1.000	0.2416	1.3845	1220	.0168	.724	640
680	3.048 0	-630.6	1.4105	28.934	0.5254	2.966 0	29.454	.0523	1.000	-1.000	0.2441	1.3816	1259	.0176	.728	680
720	2.810 0	-605.8	1.4459	28.934	0.7318	2.774 0	29.174	.0541	1.000	-1.000	0.2483	1.3777	1300	.0183	.734	720
760	2.607 0	-583.0	1.4769	28.934	0.2521	2.607 0	28.934	.0559	1.000	-1.000	0.2521	1.3740	1340	.0191	.738	760

TABLE 9A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.050721; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7504; MW = 28.9198;
 DRY AIR; GASEOUS COMPOSITION: CO2= .09983; H2O= .09953; N2= .74198; O2= .04976; AR= .00890

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=50.)								
R	LB/FT3	LB/FT3	BTU/LB	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	FT/S	LB/FT HR	BTU/FT HR R	R		
360	1.1001-1	5.5005 0	-985.7	1.8774	1.7193	1.5612	1.4031	1.2925	0.2472	1.3846	925.7	.0287	.0092	.7719	360
380	1.0422-1	5.2110 0	-980.7	1.8908	1.7327	1.5745	1.4164	1.3059	0.2475	1.3840	950.9	.0302	.0097	.7676	380
400	9.9008-2	4.9504 0	-975.8	1.9035	1.7454	1.5872	1.4291	1.3186	0.2478	1.3834	975.4	.0317	.0103	.7638	400
420	9.4294-2	4.7147 0	-970.8	1.9156	1.7575	1.5993	1.4412	1.3307	0.2481	1.3828	999.2	.0331	.0108	.7605	420
440	9.0007-2	4.5004 0	-965.9	1.9271	1.7690	1.6109	1.4528	1.3423	0.2484	1.3821	1022.5	.0346	.0113	.7577	440
460	8.6094-2	4.3047 0	-960.9	1.9382	1.7800	1.6219	1.4638	1.3533	0.2488	1.3813	1045.2	.0360	.0119	.7553	460
480	8.2507-2	4.1253 0	-955.9	1.9488	1.7906	1.6325	1.4744	1.3639	0.2491	1.3805	1067.3	.0374	.0124	.7534	480
500	7.9207-2	3.9603 0	-950.9	1.9589	1.8008	1.6427	1.4846	1.3741	0.2495	1.3796	1089.0	.0387	.0129	.7519	500
520	7.6160-2	3.8080 0	-945.9	1.9687	1.8106	1.6525	1.4944	1.3839	0.2500	1.3787	1110.2	.0401	.0133	.7508	520
537	7.3794-2	3.6897 0	-941.8	1.9766	1.8185	1.6604	1.5023	1.3918	0.2504	1.3780	1127.6	.0412	.0137	.7502	537
540	7.3339-2	3.6670 0	-940.9	1.9782	1.8201	1.6619	1.5038	1.3933	0.2504	1.3778	1131.0	.0414	.0138	.7501	540
560	7.0720-2	3.5360 0	-935.9	1.9873	1.8292	1.6711	1.5129	1.4024	0.2509	1.3768	1151.3	.0427	.0143	.7500	560
580	6.8282-2	3.4141 0	-930.9	1.9961	1.8380	1.6799	1.5218	1.4112	0.2514	1.3758	1171.3	.0440	.0147	.7501	580
600	6.6005-2	3.3003 0	-925.9	2.0046	1.8465	1.6884	1.5303	1.4198	0.2519	1.3748	1190.9	.0452	.0152	.7503	600
620	6.3876-2	3.1938 0	-920.8	2.0129	1.8548	1.6967	1.5386	1.4280	0.2524	1.3737	1210.1	.0465	.0156	.7505	620
640	6.1880-2	3.0940 0	-915.8	2.0209	1.8628	1.7047	1.5466	1.4361	0.2530	1.3726	1228.9	.0477	.0161	.7504	640
660	6.0005-2	3.0002 0	-910.7	2.0287	1.8706	1.7125	1.5544	1.4439	0.2535	1.3715	1247.5	.0489	.0165	.7499	660
680	5.8240-2	2.9120 0	-905.6	2.0363	1.8782	1.7201	1.5620	1.4514	0.2541	1.3703	1265.7	.0501	.0170	.7493	680
700	5.6576-2	2.8288 0	-900.5	2.0437	1.8856	1.7274	1.5693	1.4588	0.2547	1.3691	1283.6	.0513	.0175	.7487	700
720	5.5005-2	2.7502 0	-895.4	2.0509	1.8927	1.7346	1.5765	1.4660	0.2553	1.3679	1301.3	.0525	.0179	.7480	720
740	5.3518-2	2.6759 0	-890.3	2.0579	1.8997	1.7416	1.5835	1.4730	0.2559	1.3667	1318.6	.0537	.0184	.7477	740
760	5.2110-2	2.6055 0	-885.2	2.0647	1.9066	1.7485	1.5903	1.4798	0.2566	1.3654	1335.7	.0548	.0188	.7475	760
780	5.0773-2	2.5387 0	-880.1	2.0714	1.9132	1.7551	1.5970	1.4865	0.2572	1.3642	1352.5	.0559	.0192	.7473	780
800	4.9504-2	2.4752 0	-874.9	2.0779	1.9198	1.7617	1.6035	1.4930	0.2579	1.3629	1369.1	.0570	.0197	.7472	800
820	4.8297-2	2.4148 0	-869.7	2.0843	1.9261	1.7680	1.6099	1.4994	0.2586	1.3616	1385.5	.0581	.0201	.7471	820
840	4.7147-2	2.3573 0	-864.6	2.0905	1.9324	1.7743	1.6162	1.5056	0.2593	1.3603	1401.6	.0592	.0205	.7471	840
860	4.6050-2	2.3025 0	-859.4	2.0966	1.9385	1.7804	1.6223	1.5118	0.2600	1.3590	1417.5	.0603	.0210	.7471	860
880	4.5004-2	2.2502 0	-854.2	2.1026	1.9445	1.7864	1.6283	1.5177	0.2607	1.3577	1433.2	.0613	.0214	.7471	880
900	4.4004-2	2.2002 0	-848.9	2.1085	1.9503	1.7922	1.6341	1.5236	0.2614	1.3563	1448.7	.0624	.0218	.7472	900
920	4.3047-2	2.1524 0	-843.7	2.1142	1.9561	1.7980	1.6399	1.5294	0.2621	1.3550	1464.0	.0634	.0223	.7470	920
940	4.2131-2	2.1066 0	-838.5	2.1199	1.9617	1.8036	1.6455	1.5350	0.2628	1.3537	1479.1	.0645	.0227	.7468	940
960	4.1253-2	2.0627 0	-833.2	2.1254	1.9673	1.8092	1.6511	1.5405	0.2636	1.3523	1494.0	.0655	.0231	.7466	960
980	4.0412-2	2.0206 0	-827.9	2.1308	1.9727	1.8146	1.6565	1.5460	0.2643	1.3510	1508.7	.0665	.0236	.7463	980
1000	3.9603-2	1.9802 0	-822.6	2.1362	1.9781	1.8200	1.6618	1.5513	0.2651	1.3496	1523.3	.0675	.0240	.7461	1000
1020	3.8827-2	1.9413 0	-817.3	2.1414	1.9833	1.8252	1.6671	1.5566	0.2658	1.3483	1537.6	.0685	.0244	.7458	1020
1040	3.8080-2	1.9040 0	-812.0	2.1466	1.9885	1.8304	1.6723	1.5618	0.2666	1.3469	1551.9	.0695	.0249	.7455	1040
1060	3.7362-2	1.8681 0	-806.6	2.1517	1.9936	1.8355	1.6774	1.5668	0.2674	1.3456	1565.9	.0705	.0253	.7451	1060
1080	3.6670-2	1.8335 0	-801.3	2.1567	1.9986	1.8405	1.6824	1.5718	0.2681	1.3442	1579.9	.0715	.0257	.7448	1080
1100	3.6003-2	1.8001 0	-795.9	2.1616	2.0035	1.8454	1.6873	1.5768	0.2689	1.3429	1593.6	.0725	.0262	.7444	1100
1120	3.5360-2	1.7680 0	-790.5	2.1665	2.0084	1.8503	1.6921	1.5816	0.2697	1.3416	1607.2	.0734	.0266	.7440	1120
1140	3.4740-2	1.7370 0	-785.1	2.1713	2.0132	1.8550	1.6969	1.5864	0.2705	1.3402	1620.7	.0744	.0271	.7435	1140

TABLE 9A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.050721; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7504; MW = 28.9198;
 DRY AIR; GASEOUS COMPOSITION: CO2= .09983; H2O= .09953; N2= .74198; O2= .04976; AR= .00890

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	R	
1160	3.4141-2	1.7070 0	-779.7	2.1760	2.0179	1.8597	1.7016	1.5911	0.2713	1.3389	1634.1	.0753	.0275	.7431	1160
1180	3.3562-2	1.6781 0	-774.3	2.1806	2.0225	1.8644	1.7063	1.5958	0.2721	1.3376	1647.3	.0763	.0279	.7426	1180
1200	3.3003-2	1.6501 0	-768.8	2.1852	2.0271	1.8690	1.7109	1.6003	0.2728	1.3363	1660.4	.0772	.0284	.7422	1200
1220	3.2462-2	1.6231 0	-763.4	2.1897	2.0316	1.8735	1.7154	1.6049	0.2736	1.3350	1673.4	.0781	.0288	.7417	1220
1240	3.1938-2	1.5969 0	-757.9	2.1942	2.0361	1.8779	1.7198	1.6093	0.2744	1.3337	1686.2	.0791	.0293	.7413	1240
1260	3.1431-2	1.5716 0	-752.4	2.1986	2.0405	1.8823	1.7242	1.6137	0.2752	1.3325	1698.9	.0800	.0297	.7408	1260
1280	3.0940-2	1.5470 0	-746.9	2.2029	2.0448	1.8867	1.7286	1.6180	0.2760	1.3312	1711.6	.0809	.0302	.7404	1280
1300	3.0464-2	1.5232 0	-741.3	2.2072	2.0491	1.8910	1.7329	1.6223	0.2768	1.3299	1724.1	.0818	.0306	.7400	1300
1320	3.0002-2	1.5001 0	-735.8	2.2114	2.0533	1.8952	1.7371	1.6266	0.2776	1.3287	1736.5	.0827	.0310	.7396	1320
1340	2.9555-2	1.4777 0	-730.2	2.2156	2.0575	1.8994	1.7413	1.6307	0.2784	1.3275	1748.8	.0836	.0315	.7391	1340
1360	2.9120-2	1.4560 0	-724.7	2.2197	2.0616	1.9035	1.7454	1.6349	0.2791	1.3262	1761.0	.0845	.0319	.7387	1360
1380	2.8698-2	1.4349 0	-719.1	2.2238	2.0657	1.9076	1.7495	1.6390	0.2799	1.3250	1773.1	.0854	.0324	.7383	1380
1400	2.8288-2	1.4144 0	-713.5	2.2278	2.0697	1.9116	1.7535	1.6430	0.2807	1.3239	1785.1	.0862	.0328	.7379	1400
1420	2.7890-2	1.3945 0	-707.9	2.2318	2.0737	1.9156	1.7575	1.6470	0.2815	1.3227	1797.0	.0871	.0332	.7376	1420
1440	2.7502-2	1.3751 0	-702.2	2.2358	2.0777	1.9196	1.7614	1.6509	0.2822	1.3215	1808.8	.0880	.0337	.7372	1440
1460	2.7126-2	1.3563 0	-696.6	2.2397	2.0816	1.9234	1.7653	1.6548	0.2830	1.3204	1820.5	.0888	.0341	.7369	1460
1480	2.6759-2	1.3379 0	-690.9	2.2435	2.0854	1.9273	1.7692	1.6587	0.2838	1.3193	1832.2	.0897	.0346	.7366	1480
1500	2.6402-2	1.3201 0	-685.2	2.2473	2.0892	1.9311	1.7730	1.6625	0.2845	1.3181	1843.7	.0906	.0350	.7363	1500
1520	2.6055-2	1.3027 0	-679.5	2.2511	2.0930	1.9349	1.7768	1.6663	0.2853	1.3170	1855.2	.0914	.0354	.7361	1520
1540	2.5716-2	1.2858 0	-673.8	2.2549	2.0967	1.9386	1.7805	1.6700	0.2860	1.3160	1866.6	.0922	.0359	.7358	1540
1560	2.5387-2	1.2693 0	-668.1	2.2585	2.1004	1.9423	1.7842	1.6737	0.2867	1.3149	1877.9	.0931	.0363	.7356	1560
1580	2.5065-2	1.2533 0	-662.3	2.2622	2.1041	1.9460	1.7879	1.6773	0.2875	1.3139	1889.2	.0939	.0367	.7353	1580
1600	2.4752-2	1.2376 0	-656.6	2.2658	2.1077	1.9496	1.7915	1.6810	0.2882	1.3128	1900.3	.0947	.0371	.7351	1600
1620	2.4446-2	1.2223 0	-650.8	2.2694	2.1113	1.9532	1.7951	1.6846	0.2889	1.3118	1911.4	.0956	.0376	.7349	1620
1640	2.4148-2	1.2074 0	-645.0	2.2730	2.1148	1.9567	1.7986	1.6881	0.2896	1.3108	1922.5	.0964	.0380	.7346	1640
1660	2.3857-2	1.1929 0	-639.2	2.2765	2.1184	1.9602	1.8021	1.6916	0.2903	1.3098	1933.4	.0972	.0384	.7344	1660
1680	2.3573-2	1.1787 0	-633.4	2.2800	2.1218	1.9637	1.8056	1.6951	0.2910	1.3089	1944.3	.0980	.0388	.7342	1680
1700	2.3296-2	1.1648 0	-627.6	2.2834	2.1253	1.9672	1.8091	1.6985	0.2917	1.3079	1955.2	.0988	.0393	.7340	1700
1720	2.3025-2	1.1513 0	-621.7	2.2868	2.1287	1.9706	1.8125	1.7020	0.2923	1.3070	1965.9	.0996	.0397	.7338	1720
1740	2.2761-2	1.1380 0	-615.9	2.2902	2.1321	1.9740	1.8159	1.7053	0.2930	1.3061	1976.7	.1004	.0401	.7336	1740
1760	2.2502-2	1.1251 0	-610.0	2.2936	2.1354	1.9773	1.8192	1.7087	0.2937	1.3052	1987.3	.1012	.0405	.7334	1760
1780	2.2249-2	1.1125 0	-604.1	2.2969	2.1388	1.9806	1.8225	1.7120	0.2943	1.3043	1997.9	.1020	.0409	.7333	1780
1800	2.2002-2	1.1001 0	-598.3	2.3002	2.1421	1.9839	1.8258	1.7153	0.2949	1.3035	2008.4	.1028	.0414	.7331	1800
1900	2.0844-2	1.0422 0	-568.6	2.3162	2.1581	2.0000	1.8419	1.7313	0.2979	1.2996	2060.4	.1066	.0434	.7323	1900
2000	1.9802-2	9.9008-1	-538.7	2.3315	2.1734	2.0153	1.8572	1.7467	0.3007	1.2959	2110.9	.1104	.0454	.7317	2000
2100	1.8859-2	9.4294-1	-508.5	2.3463	2.1882	2.0301	1.8719	1.7614	0.3034	1.2926	2160.2	.1141	.0473	.7312	2100
2200	1.8001-2	9.0008-1	-478.0	2.3605	2.2023	2.0442	1.8861	1.7756	0.3059	1.2895	2208.4	.1177	.0493	.7308	2200
2300	1.7219-2	8.6094-1	-447.3	2.3741	2.2160	2.0579	1.8998	1.7892	0.3083	1.2866	2255.5	.1213	.0512	.7303	2300
2400	1.6501-2	8.2507-1	-416.4	2.3873	2.2292	2.0710	1.9129	1.8024	0.3106	1.2839	2301.6	.1248	.0531	.7299	2400
2500	1.5841-2	7.9207-1	-385.2	2.4000	2.2419	2.0838	1.9257	1.8151	0.3127	1.2814	2346.8	.1282	.0550	.7295	2500

TABLE 9A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.050721; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7504; MW = 28.9198;
 DRY AIR; GASEOUS COMPOSITION: CO2= .09983; H2O= .09953; N2= .74198; O2= .04976; AR= .00890

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
2600	1.5232-2	7.6160-1	-353.8	2.4123	2.2542	2.0961	1.9380	1.8274	0.3147	1.2791	2391.1	.1316	.0568	.7291	2600
2700	1.4668-2	7.3339-1	-322.2	2.4242	2.2661	2.1080	1.9499	1.8394	0.3166	1.2769	2434.6	.1350	.0587	.7287	2700
2800	1.4144-2	7.0720-1	-290.5	2.4358	2.2776	2.1195	1.9614	1.8509	0.3184	1.2749	2477.4	.1383	.0605	.7280	2800
2900	1.3656-2	6.8282-1	-258.6	2.4470	2.2889	2.1307	1.9726	1.8621	0.3201	1.2731	2519.4	.1416	.0623	.7274	2900
3000	1.3201-2	6.6005-1	-226.5	2.4578	2.2997	2.1416	1.9835	1.8730	0.3217	1.2713	2560.7	.1448	.0641	.7267	3000
3100	1.2775-2	6.3876-1	-194.2	2.4684	2.3103	2.1522	1.9941	1.8836	0.3233	1.2697	2601.4	.1480	.0659	.7260	3100
3200	1.2376-2	6.1880-1	-161.8	2.4787	2.3206	2.1625	2.0044	1.8938	0.3247	1.2682	2641.4	.1511	.0676	.7254	3200
3300	1.2001-2	6.0005-1	-129.3	2.4887	2.3306	2.1725	2.0144	1.9039	0.3260	1.2668	2680.9	.1542	.0694	.7247	3300
3400	1.1648-2	5.8240-1	-96.6	2.4985	2.3404	2.1822	2.0241	1.9136	0.3273	1.2655	2719.8	.1573	.0711	.7240	3400
3500	1.1315-2	5.6576-1	-63.8	2.5080	2.3499	2.1917	2.0336	1.9231	0.3285	1.2643	2758.2	.1603	.0728	.7232	3500
3600	1.1001-2	5.5005-1	-30.9	2.5172	2.3591	2.2010	2.0429	1.9324	0.3296	1.2632	2796.1	.1633	.0745	.7225	3600
3700	1.0704-2	5.3518-1	2.1	2.5263	2.3682	2.2101	2.0519	1.9414	0.3307	1.2621	2833.5	.1663	.0761	.7220	3700
3800	1.0422-2	5.2110-1	35.2	2.5351	2.3770	2.2189	2.0608	1.9503	0.3316	1.2611	2870.4	.1692	.0778	.7214	3800
3900	1.0155-2	5.0773-1	68.4	2.5437	2.3856	2.2275	2.0694	1.9589	0.3326	1.2602	2906.8	.1721	.0794	.7208	3900
4000	9.9008-3	4.9504-1	101.7	2.5522	2.3941	2.2360	2.0778	1.9673	0.3335	1.2593	2942.8	.1750	.0810	.7202	4000
4100	9.6593-3	4.8297-1	135.1	2.5604	2.4023	2.2442	2.0861	1.9756	0.3343	1.2585	2978.4	.1778	.0826	.7196	4100
4200	9.4293-3	4.7147-1	168.6	2.5685	2.4104	2.2523	2.0941	1.9836	0.3351	1.2577	3013.6	.1806	.0842	.7189	4200
4300	9.2101-3	4.6050-1	202.1	2.5764	2.4183	2.2602	2.1020	1.9915	0.3358	1.2570	3048.4	.1834	.0858	.7183	4300
4400	9.0007-3	4.5004-1	235.7	2.5841	2.4260	2.2679	2.1098	1.9993	0.3365	1.2564	3082.8	.1862	.0873	.7176	4400
4500	8.8007-3	4.4004-1	269.4	2.5917	2.4336	2.2755	2.1173	2.0068	0.3372	1.2557	3116.9	.1889	.0889	.7169	4500
4600	8.6094-3	4.3047-1	303.2	2.5991	2.4410	2.2829	2.1248	2.0142	0.3378	1.2551	3150.6	.1917	.0904	.7161	4600
4700	8.4262-3	4.2131-1	337.0	2.6064	2.4483	2.2901	2.1320	2.0215	0.3384	1.2546	3183.9	.1944	.0920	.7152	4700
4800	8.2507-3	4.1253-1	370.9	2.6135	2.4554	2.2973	2.1392	2.0286	0.3390	1.2540	3216.9	.1970	.0935	.7144	4800
4900	8.0823-3	4.0412-1	404.8	2.6205	2.4624	2.3043	2.1462	2.0356	0.3395	1.2535	3249.6	.1997	.0950	.7136	4900
5000	7.9207-3	3.9603-1	438.8	2.6274	2.4692	2.3111	2.1530	2.0425	0.3400	1.2531	3282.0	.2023	.0965	.7128	5000
5100	7.7653-3	3.8827-1	472.8	2.6341	2.4760	2.3179	2.1598	2.0492	0.3405	1.2526	3314.0	.2049	.0980	.7121	5100
5200	7.6160-3	3.8080-1	506.9	2.6407	2.4826	2.3245	2.1664	2.0559	0.3410	1.2522	3345.8	.2075	.0995	.7113	5200
5300	7.4723-3	3.7362-1	541.0	2.6472	2.4891	2.3310	2.1729	2.0624	0.3415	1.2517	3377.2	.2101	.1009	.7106	5300
5400	7.3339-3	3.6670-1	575.2	2.6536	2.4955	2.3374	2.1793	2.0687	0.3419	1.2513	3408.4	.2126	.1024	.7099	5400

TABLE 9.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.050721; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 0.14696 LB/IN2 (0.01 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4752-4	-656.6	2.2658	28.920	.095	1.0000	-1.0000	0.2882	1.3128	1900.3	.0371	.735	0.2882	1.3128	1900.3	.0371	.735
1700	2.3296-4	-627.6	2.2834	28.920	.099	1.0000	-1.0000	0.2917	1.3078	1955.1	.0393	.734	0.2917	1.3079	1955.2	.0393	.734
1800	2.2002-4	-598.2	2.3002	28.920	.103	1.0000	-1.0000	0.2951	1.3033	2008.3	.0414	.733	0.2949	1.3035	2008.4	.0414	.733
1900	2.0844-4	-568.6	2.3162	28.920	.107	1.0000	-1.0000	0.2981	1.2993	2060.1	.0434	.732	0.2979	1.2996	2060.4	.0434	.732
2000	1.9802-4	-538.6	2.3316	28.920	.110	1.0000	-1.0000	0.3011	1.2955	2110.6	.0454	.732	0.3007	1.2959	2110.9	.0454	.732
2100	1.8859-4	-508.4	2.3463	28.920	.114	1.0000	-1.0000	0.3039	1.2919	2159.7	.0474	.731	0.3034	1.2926	2160.2	.0473	.731
2200	1.8001-4	-477.8	2.3605	28.920	.118	1.0000	-1.0000	0.3067	1.2885	2207.6	.0494	.731	0.3059	1.2895	2208.4	.0493	.731
2300	1.7219-4	-447.0	2.3742	28.920	.121	1.0001	-1.0000	0.3095	1.2852	2254.3	.0514	.730	0.3083	1.2866	2255.5	.0512	.730
2400	1.6501-4	-415.9	2.3875	28.919	.125	1.0002	-1.0000	0.3123	1.2819	2299.9	.0534	.730	0.3106	1.2839	2301.6	.0531	.730
2500	1.5841-4	-384.5	2.4003	28.919	.128	1.0003	-1.0000	0.3153	1.2787	2344.3	.0555	.729	0.3127	1.2814	2346.8	.0550	.730
2600	1.5231-4	-352.9	2.4127	28.919	.132	1.0006	-1.0000	0.3185	1.2752	2387.6	.0576	.728	0.3147	1.2791	2391.2	.0568	.729
2700	1.4667-4	-320.8	2.4248	28.918	.135	1.0010	-1.0000	0.3222	1.2715	2429.5	.0599	.726	0.3166	1.2769	2434.7	.0587	.729
2800	1.4142-4	-288.4	2.4366	28.916	.138	1.0018	-1.0000	0.3267	1.2673	2470.0	.0625	.724	0.3184	1.2750	2477.5	.0605	.728
2900	1.3654-4	-255.4	2.4482	28.914	.142	1.0031	-1.0001	0.3326	1.2621	2508.8	.0654	.720	0.3201	1.2731	2519.7	.0623	.727
3000	1.3197-4	-221.8	2.4596	28.910	.145	1.0053	-1.0001	0.3407	1.2557	2545.4	.0691	.714	0.3217	1.2715	2561.2	.0641	.727
3100	1.2768-4	-187.2	2.4709	28.903	.148	1.0089	-1.0002	0.3520	1.2476	2579.4	.0739	.705	0.3232	1.2699	2602.3	.0659	.726
3200	1.2364-4	-151.2	2.4823	28.893	.151	1.0147	-1.0004	0.3681	1.2374	2610.4	.0804	.692	0.3247	1.2686	2643.0	.0676	.725
3300	1.1983-4	-113.4	2.4940	28.876	.154	1.0235	-1.0006	0.3910	1.2249	2638.2	.0895	.674	0.3260	1.2674	2683.5	.0694	.724
3400	1.1620-4	-72.7	2.5061	28.850	.157	1.0369	-1.0011	0.4232	1.2104	2663.1	.1023	.650	0.3272	1.2664	2724.0	.0711	.723
3500	1.1273-4	-28.3	2.5190	28.812	.160	1.0562	-1.0017	0.4675	1.1945	2685.9	.1204	.622	0.3284	1.2657	2764.9	.0728	.722
3600	1.0939-4	21.3	2.5329	28.756	.163	1.0832	-1.0025	0.5265	1.1784	2708.2	.1453	.591	0.3294	1.2653	2806.3	.0746	.720
3700	1.0614-4	77.5	2.5484	28.677	.166	1.1192	-1.0038	0.6020	1.1632	2731.7	.1789	.558	0.3304	1.2652	2848.9	.0763	.719
3800	1.0296-4	142.2	2.5656	28.569	.169	1.1651	-1.0054	0.6946	1.1500	2757.8	.2226	.526	0.3312	1.2656	2893.0	.0780	.716
3900	9.9817-5	217.0	2.5850	28.427	.171	1.2214	-1.0075	0.8039	1.1392	2787.5	.2780	.495	0.3320	1.2665	2939.2	.0797	.713
4000	9.6699-5	303.5	2.6069	28.245	.174	1.2877	-1.0100	0.9283	1.1306	2821.5	.3458	.467	0.3327	1.2680	2988.0	.0815	.710
4100	9.3587-5	403.1	2.6315	28.020	.176	1.3637	-1.0131	1.0660	1.1243	2860.0	.4263	.441	0.3333	1.2700	3039.7	.0834	.705
4200	9.0471-5	517.1	2.6590	27.747	.179	1.4486	-1.0167	1.2152	1.1196	2902.8	.5188	.419	0.3340	1.2728	3094.9	.0855	.698
4300	8.7345-5	646.5	2.6894	27.426	.181	1.5416	-1.0209	1.3744	1.1165	2950.1	.6210	.401	0.3346	1.2762	3154.1	.0878	.690
4400	8.4208-5	792.2	2.7229	27.057	.183	1.6411	-1.0255	1.5408	1.1145	3001.9	.7282	.388	0.3352	1.2804	3217.5	.0903	.681
4500	8.1066-5	954.7	2.7594	26.639	.185	1.7435	-1.0306	1.7093	1.1136	3058.3	.8329	.381	0.3358	1.2853	3285.6	.0931	.669
4600	7.7933-5	1133.9	2.7988	26.178	.188	1.8428	-1.0358	1.8705	1.1136	3119.1	.9251	.379	0.3366	1.2910	3358.4	.0962	.656
4700	7.4832-5	1328.1	2.8405	25.683	.190	1.9298	-1.0406	2.0095	1.1144	3184.3	.9932	.384	0.3374	1.2974	3435.7	.0997	.642
4800	7.1802-5	1534.4	2.8840	25.167	.192	1.9929	-1.0446	2.1076	1.1161	3253.3	****	.394	0.3382	1.3043	3516.9	.1034	.628
4900	6.8886-5	1747.6	2.9279	24.649	.194	2.0213	-1.0472	2.1463	1.1188	3325.4	****	.409	0.3391	1.3116	3600.6	.1073	.614
5000	6.6134-5	1961.3	2.9711	24.147	.197	2.0084	-1.0478	2.1139	1.1225	3399.5	.9737	.427	0.3400	1.3191	3685.1	.1111	.601
5100	6.3585-5	2168.1	3.0120	23.680	.199	1.9547	-1.0464	2.0112	1.1273	3474.4	.8952	.447	0.3409	1.3263	3768.5	.1149	.590
5200	6.1265-5	2361.6	3.0496	23.264	.201	1.8684	-1.0432	1.8518	1.1334	3549.1	.7971	.468	0.3417	1.3330	3848.9	.1184	.581
5300	5.9182-5	2537.3	3.0831	22.905	.204	1.7618	-1.0388	1.6577	1.1409	3623.0	.6925	.488	0.3425	1.3389	3924.8	.1217	.574
5400	5.7325-5	2692.8	3.1122	22.605	.206	1.6480	-1.0338	1.4520	1.1501	3696.0	.5918	.506	0.3432	1.3440	3995.5	.1247	.568

TABLE 9.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.050721; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 1.46959 LB/IN² (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS					FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4752-3	-656.6	2.1077	28.920	.095	1.0000	-1.0000	0.2882	1.3128	1900.3	.0371	.735	0.2882	1.3128	1900.3	.0371	.735
1700	2.3296-3	-627.6	2.1253	28.920	.099	1.0000	-1.0000	0.2917	1.3078	1955.1	.0393	.734	0.2917	1.3079	1955.2	.0393	.734
1800	2.2002-3	-598.2	2.1421	28.920	.103	1.0000	-1.0000	0.2951	1.3033	2008.3	.0414	.733	0.2949	1.3035	2008.4	.0414	.733
1900	2.0844-3	-568.6	2.1581	28.920	.107	1.0000	-1.0000	0.2981	1.2993	2060.1	.0434	.732	0.2979	1.2996	2060.4	.0434	.732
2000	1.9802-3	-538.6	2.1735	28.920	.110	1.0000	-1.0000	0.3011	1.2955	2110.6	.0454	.732	0.3007	1.2959	2110.9	.0454	.732
2100	1.8859-3	-508.4	2.1882	28.920	.114	1.0000	-1.0000	0.3039	1.2919	2159.7	.0474	.731	0.3034	1.2926	2160.2	.0473	.731
2200	1.8001-3	-477.8	2.2024	28.920	.118	1.0000	-1.0000	0.3067	1.2886	2207.7	.0494	.731	0.3059	1.2895	2208.4	.0493	.731
2300	1.7219-3	-447.0	2.2161	28.920	.121	1.0000	-1.0000	0.3094	1.2853	2254.4	.0514	.730	0.3083	1.2866	2255.5	.0512	.730
2400	1.6501-3	-416.0	2.2293	28.920	.125	1.0001	-1.0000	0.3120	1.2822	2300.1	.0534	.730	0.3106	1.2839	2301.6	.0531	.730
2500	1.5841-3	-384.6	2.2421	28.919	.128	1.0001	-1.0000	0.3147	1.2792	2344.8	.0554	.729	0.3127	1.2814	2346.8	.0550	.730
2600	1.5232-3	-353.0	2.2545	28.919	.132	1.0003	-1.0000	0.3175	1.2761	2388.4	.0574	.729	0.3147	1.2791	2391.2	.0568	.729
2700	1.4667-3	-321.1	2.2666	28.919	.135	1.0005	-1.0000	0.3204	1.2731	2431.0	.0594	.728	0.3166	1.2769	2434.7	.0587	.729
2800	1.4143-3	-288.9	2.2783	28.918	.138	1.0008	-1.0000	0.3236	1.2698	2472.5	.0616	.726	0.3184	1.2749	2477.4	.0605	.728
2900	1.3655-3	-256.4	2.2897	28.917	.142	1.0013	-1.0000	0.3273	1.2663	2512.8	.0640	.725	0.3201	1.2731	2519.5	.0623	.727
3000	1.3199-3	-223.4	2.3009	28.916	.145	1.0021	-1.0000	0.3317	1.2624	2551.9	.0665	.722	0.3217	1.2714	2560.9	.0641	.727
3100	1.2772-3	-190.0	2.3118	28.913	.148	1.0034	-1.0001	0.3372	1.2578	2589.5	.0694	.719	0.3233	1.2698	2601.8	.0659	.726
3200	1.2371-3	-155.9	2.3226	28.909	.151	1.0055	-1.0001	0.3443	1.2524	2625.4	.0729	.714	0.3247	1.2684	2642.1	.0676	.725
3300	1.1994-3	-121.0	2.3334	28.903	.154	1.0086	-1.0002	0.3537	1.2459	2659.4	.0771	.707	0.3260	1.2670	2681.9	.0694	.724
3400	1.1637-3	-85.1	2.3441	28.894	.157	1.0132	-1.0004	0.3663	1.2380	2691.3	.0825	.698	0.3273	1.2659	2721.4	.0711	.724
3500	1.1300-3	-47.7	2.3550	28.880	.160	1.0199	-1.0006	0.3831	1.2287	2721.0	.0895	.686	0.3284	1.2648	2760.7	.0728	.723
3600	1.0978-3	-8.3	2.3661	28.860	.163	1.0294	-1.0009	0.4054	1.2180	2748.5	.0986	.671	0.3295	1.2639	2799.8	.0745	.722
3700	1.0671-3	33.7	2.3775	28.832	.166	1.0427	-1.0013	0.4346	1.2062	2774.3	.1107	.652	0.3305	1.2632	2839.0	.0762	.721
3800	1.0376-3	78.9	2.3896	28.793	.169	1.0604	-1.0019	0.4719	1.1939	2799.0	.1265	.631	0.3315	1.2627	2878.6	.0778	.720
3900	1.0091-3	128.3	2.4024	28.739	.172	1.0834	-1.0027	0.5184	1.1816	2823.6	.1468	.607	0.3323	1.2625	2918.6	.0795	.719
4000	9.8148-4	182.9	2.4163	28.669	.175	1.1122	-1.0038	0.5745	1.1701	2849.0	.1723	.582	0.3331	1.2626	2959.5	.0811	.717
4100	9.5450-4	243.6	2.4312	28.577	.177	1.1471	-1.0051	0.6398	1.1598	2876.3	.2038	.557	0.3338	1.2629	3001.5	.0827	.715
4200	9.2803-4	311.2	2.4475	28.463	.180	1.1879	-1.0068	0.7135	1.1510	2906.0	.2417	.531	0.3344	1.2636	3044.8	.0844	.713
4300	9.0197-4	386.5	2.4652	28.322	.182	1.2342	-1.0087	0.7943	1.1439	2938.5	.2862	.506	0.3350	1.2647	3089.8	.0861	.710
4400	8.7623-4	470.2	2.4845	28.154	.185	1.2854	-1.0109	0.8806	1.1382	2974.0	.3375	.483	0.3355	1.2662	3136.7	.0878	.707
4500	8.5076-4	562.8	2.5053	27.956	.187	1.3410	-1.0134	0.9713	1.1339	3012.5	.3955	.460	0.3360	1.2681	3185.7	.0896	.702
4600	8.2551-4	664.6	2.5276	27.730	.190	1.4007	-1.0162	1.0654	1.1307	3053.9	.4598	.440	0.3364	1.2705	3237.1	.0916	.697
4700	8.0048-4	775.9	2.5516	27.473	.192	1.4638	-1.0194	1.1623	1.1285	3098.2	.5293	.422	0.3368	1.2732	3290.9	.0937	.691
4800	7.7565-4	897.1	2.5771	27.188	.194	1.5300	-1.0228	1.2610	1.1271	3145.5	.6020	.407	0.3373	1.2764	3347.3	.0959	.684
4900	7.5104-4	1028.2	2.6041	26.873	.197	1.5980	-1.0265	1.3602	1.1264	3195.6	.6752	.396	0.3377	1.2801	3406.6	.0983	.675
5000	7.2668-4	1169.1	2.6326	26.533	.199	1.6661	-1.0304	1.4575	1.1263	3248.6	.7450	.389	0.3382	1.2842	3468.8	.1010	.666
5100	7.0264-4	1319.5	2.6624	26.168	.201	1.7314	-1.0343	1.5489	1.1268	3304.4	.8070	.386	0.3387	1.2887	3533.8	.1038	.656
5200	6.7901-4	1478.5	2.6932	25.784	.203	1.7901	-1.0381	1.6289	1.1279	3363.1	.8564	.387	0.3393	1.2937	3601.7	.1069	.645
5300	6.5594-4	1644.6	2.7249	25.387	.206	1.8376	-1.0415	1.6910	1.1296	3424.3	.8888	.391	0.3399	1.2989	3671.9	.1102	.634
5400	6.3359-4	1815.8	2.7569	24.984	.208	1.8694	-1.0441	1.7284	1.1320	3487.7	.9009	.399	0.3405	1.3045	3744.1	.1136	.623

TABLE 9.3B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.050721; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 14.6959 LB/IN² (1.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM VS FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4752-2	-656.6	1.9496	28.920	.095	1.0000	-1.0000	0.2882	1.3128	1900.3	.0371	.735	0.2882	1.3128	1900.3	.0371	.735
1700	2.3296-2	-627.6	1.9672	28.920	.099	1.0000	-1.0000	0.2917	1.3078	1955.1	.0393	.734	0.2917	1.3079	1955.2	.0393	.734
1800	2.2002-2	-598.2	1.9840	28.920	.103	1.0000	-1.0000	0.2951	1.3033	2008.3	.0414	.733	0.2949	1.3035	2008.4	.0414	.733
1900	2.0844-2	-568.6	2.0000	28.920	.107	1.0000	-1.0000	0.2981	1.2993	2060.1	.0434	.732	0.2979	1.2996	2060.4	.0434	.732
2000	1.9802-2	-538.6	2.0154	28.920	.110	1.0000	-1.0000	0.3010	1.2955	2110.6	.0454	.732	0.3007	1.2959	2110.9	.0454	.732
2100	1.8859-2	-508.4	2.0301	28.920	.114	1.0000	-1.0000	0.3039	1.2920	2159.7	.0474	.731	0.3034	1.2926	2160.2	.0473	.731
2200	1.8001-2	-477.8	2.0443	28.920	.118	1.0000	-1.0000	0.3066	1.2886	2207.7	.0494	.731	0.3059	1.2895	2208.4	.0493	.731
2300	1.7219-2	-447.0	2.0580	28.920	.121	1.0000	-1.0000	0.3093	1.2854	2254.5	.0514	.730	0.3083	1.2866	2255.5	.0512	.730
2400	1.6501-2	-416.0	2.0712	28.920	.125	1.0000	-1.0000	0.3119	1.2824	2300.3	.0533	.730	0.3106	1.2839	2301.6	.0531	.730
2500	1.5841-2	-384.7	2.0840	28.920	.128	1.0001	-1.0000	0.3145	1.2794	2345.0	.0553	.729	0.3127	1.2814	2346.8	.0550	.730
2600	1.5232-2	-353.1	2.0964	28.919	.132	1.0001	-1.0000	0.3170	1.2766	2388.8	.0573	.729	0.3147	1.2791	2391.1	.0568	.729
2700	1.4668-2	-321.3	2.1084	28.919	.135	1.0002	-1.0000	0.3197	1.2737	2431.6	.0592	.728	0.3166	1.2769	2434.6	.0587	.729
2800	1.4144-2	-289.2	2.1201	28.919	.138	1.0004	-1.0000	0.3224	1.2709	2473.5	.0613	.727	0.3184	1.2749	2477.4	.0605	.728
2900	1.3656-2	-256.8	2.1314	28.919	.142	1.0006	-1.0000	0.3252	1.2681	2514.5	.0634	.726	0.3201	1.2731	2519.4	.0623	.727
3000	1.3200-2	-224.1	2.1425	28.918	.145	1.0009	-1.0000	0.3283	1.2651	2554.5	.0656	.725	0.3217	1.2714	2560.8	.0641	.727
3100	1.2774-2	-191.1	2.1533	28.917	.148	1.0014	-1.0000	0.3318	1.2619	2593.5	.0679	.723	0.3233	1.2698	2601.5	.0659	.726
3200	1.2374-2	-157.7	2.1639	28.915	.151	1.0022	-1.0001	0.3358	1.2585	2631.5	.0703	.721	0.3247	1.2683	2641.7	.0676	.725
3300	1.1998-2	-123.9	2.1743	28.913	.154	1.0034	-1.0001	0.3405	1.2547	2668.4	.0731	.718	0.3260	1.2669	2681.3	.0694	.725
3400	1.1644-2	-89.6	2.1846	28.909	.157	1.0050	-1.0001	0.3463	1.2503	2704.0	.0762	.715	0.3273	1.2657	2720.5	.0711	.724
3500	1.1309-2	-54.6	2.1947	28.904	.160	1.0074	-1.0002	0.3536	1.2453	2738.2	.0798	.710	0.3285	1.2645	2759.2	.0728	.723
3600	1.0992-2	-18.8	2.2048	28.897	.163	1.0108	-1.0003	0.3627	1.2396	2771.0	.0841	.704	0.3296	1.2635	2797.5	.0745	.722
3700	1.0691-2	18.0	2.2149	28.886	.166	1.0154	-1.0005	0.3742	1.2330	2802.2	.0893	.697	0.3306	1.2625	2835.6	.0761	.722
3800	1.0405-2	56.1	2.2251	28.872	.169	1.0218	-1.0007	0.3888	1.2255	2831.9	.0956	.688	0.3316	1.2617	2873.4	.0778	.721
3900	1.0131-2	95.9	2.2354	28.853	.172	1.0302	-1.0010	0.4071	1.2172	2860.2	.1036	.676	0.3325	1.2611	2911.2	.0794	.720
4000	9.8690-3	137.7	2.2460	28.827	.175	1.0412	-1.0014	0.4297	1.2084	2887.3	.1134	.663	0.3333	1.2605	2949.0	.0810	.719
4100	9.6169-3	182.0	2.2569	28.793	.178	1.0552	-1.0019	0.4571	1.1992	2913.8	.1254	.647	0.3341	1.2602	2986.9	.0826	.718
4200	9.3736-3	229.3	2.2683	28.749	.180	1.0725	-1.0025	0.4898	1.1900	2940.0	.1401	.631	0.3348	1.2600	3025.2	.0842	.717
4300	9.1378-3	280.1	2.2803	28.693	.183	1.0933	-1.0034	0.5276	1.1812	2966.7	.1578	.612	0.3354	1.2600	3064.0	.0858	.716
4400	8.9086-3	335.0	2.2929	28.624	.186	1.1176	-1.0044	0.5704	1.1731	2994.3	.1786	.593	0.3360	1.2602	3103.5	.0874	.714
4500	8.6850-3	394.3	2.3062	28.539	.188	1.1454	-1.0055	0.6175	1.1659	3023.3	.2027	.574	0.3365	1.2606	3143.7	.0890	.713
4600	8.4663-3	458.6	2.3203	28.439	.191	1.1762	-1.0069	0.6681	1.1597	3053.9	.2302	.554	0.3370	1.2613	3185.0	.0906	.710
4700	8.2519-3	528.0	2.3353	28.321	.193	1.2096	-1.0084	0.7211	1.1545	3086.5	.2611	.534	0.3374	1.2623	3227.3	.0922	.708
4800	8.0414-3	602.9	2.3510	28.186	.196	1.2453	-1.0101	0.7758	1.1504	3120.9	.2954	.514	0.3378	1.2635	3270.8	.0939	.705
4900	7.8346-3	683.2	2.3676	28.033	.198	1.2828	-1.0120	0.8313	1.1471	3157.4	.3330	.495	0.3382	1.2650	3315.6	.0956	.702
5000	7.6311-3	769.1	2.3849	27.863	.201	1.3218	-1.0140	0.8871	1.1446	3195.7	.3737	.476	0.3385	1.2667	3361.8	.0973	.698
5100	7.4311-3	860.7	2.4031	27.675	.203	1.3621	-1.0162	0.9429	1.1429	3236.0	.4173	.459	0.3388	1.2687	3409.5	.0991	.694
5200	7.2342-3	957.7	2.4219	27.470	.205	1.4036	-1.0185	0.9985	1.1417	3278.0	.4632	.443	0.3391	1.2709	3458.6	.1011	.689
5300	7.0405-3	1060.3	2.4414	27.249	.208	1.4460	-1.0210	1.0537	1.1410	3321.8	.5107	.429	0.3394	1.2734	3509.3	.1031	.684
5400	6.8500-3	1168.5	2.4617	27.012	.210	1.4891	-1.0237	1.1083	1.1408	3367.4	.5587	.417	0.3397	1.2762	3561.6	.1052	.678

TABLE 9.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.050721; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 146.959 LB/IN2 (10.00 ATM) DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4752-1	-656.6	1.7915	28.920	.095	1.0000	-1.0000	0.2882	1.3128	1900.3	.0371	.735	0.2882	1.3128	1900.3	.0371	.735
1700	2.3296-1	-627.6	1.8091	28.920	.099	1.0000	-1.0000	0.2917	1.3078	1955.1	.0393	.734	0.2917	1.3079	1955.2	.0393	.734
1800	2.2002-1	-598.2	1.8258	28.920	.103	1.0000	-1.0000	0.2951	1.3033	2008.3	.0414	.733	0.2949	1.3035	2008.4	.0414	.733
1900	2.0844-1	-568.6	1.8419	28.920	.107	1.0000	-1.0000	0.2981	1.2993	2060.1	.0434	.732	0.2979	1.2996	2060.4	.0434	.732
2000	1.9802-1	-538.6	1.8572	28.920	.110	1.0000	-1.0000	0.3010	1.2955	2110.6	.0454	.732	0.3007	1.2959	2110.9	.0454	.732
2100	1.8859-1	-508.4	1.8720	28.920	.114	1.0000	-1.0000	0.3039	1.2920	2159.7	.0474	.731	0.3034	1.2926	2160.2	.0473	.731
2200	1.8001-1	-477.8	1.8862	28.920	.118	1.0000	-1.0000	0.3066	1.2886	2207.7	.0494	.731	0.3059	1.2895	2208.4	.0493	.731
2300	1.7219-1	-447.0	1.8999	28.920	.121	1.0000	-1.0000	0.3092	1.2854	2254.5	.0514	.730	0.3083	1.2866	2255.5	.0512	.730
2400	1.6501-1	-416.0	1.9131	28.920	.125	1.0000	-1.0000	0.3118	1.2824	2300.3	.0533	.730	0.3106	1.2839	2301.6	.0531	.730
2500	1.5841-1	-384.7	1.9259	28.920	.128	1.0000	-1.0000	0.3143	1.2795	2345.1	.0553	.730	0.3127	1.2814	2346.8	.0550	.730
2600	1.5232-1	-353.1	1.9383	28.920	.132	1.0001	-1.0000	0.3168	1.2768	2389.0	.0572	.729	0.3147	1.2791	2391.1	.0568	.729
2700	1.4668-1	-321.3	1.9503	28.920	.135	1.0001	-1.0000	0.3193	1.2741	2431.9	.0592	.729	0.3166	1.2769	2434.6	.0587	.729
2800	1.4144-1	-289.3	1.9619	28.919	.138	1.0002	-1.0000	0.3218	1.2714	2474.0	.0611	.728	0.3184	1.2749	2477.4	.0605	.728
2900	1.3656-1	-257.0	1.9733	28.919	.142	1.0003	-1.0000	0.3243	1.2688	2515.2	.0631	.727	0.3201	1.2731	2519.4	.0623	.727
3000	1.3201-1	-224.4	1.9843	28.919	.145	1.0004	-1.0000	0.3268	1.2663	2555.6	.0652	.726	0.3217	1.2713	2560.7	.0641	.727
3100	1.2775-1	-191.6	1.9950	28.918	.148	1.0007	-1.0000	0.3295	1.2637	2595.2	.0673	.725	0.3233	1.2697	2601.5	.0659	.726
3200	1.2375-1	-158.5	2.0056	28.918	.151	1.0010	-1.0000	0.3324	1.2610	2634.0	.0694	.724	0.3247	1.2682	2641.6	.0676	.725
3300	1.2000-1	-125.1	2.0158	28.917	.154	1.0014	-1.0000	0.3355	1.2582	2672.0	.0716	.722	0.3260	1.2669	2681.1	.0694	.725
3400	1.1646-1	-91.4	2.0259	28.915	.157	1.0021	-1.0001	0.3390	1.2553	2709.1	.0740	.721	0.3273	1.2656	2720.1	.0711	.724
3500	1.1313-1	-57.3	2.0358	28.913	.160	1.0030	-1.0001	0.3429	1.2522	2745.3	.0765	.718	0.3285	1.2644	2758.6	.0728	.723
3600	1.0997-1	-22.8	2.0455	28.910	.163	1.0042	-1.0001	0.3474	1.2488	2780.7	.0792	.716	0.3296	1.2633	2796.7	.0745	.722
3700	1.0699-1	12.2	2.0551	28.906	.166	1.0059	-1.0002	0.3528	1.2451	2815.0	.0823	.713	0.3306	1.2623	2834.3	.0761	.722
3800	1.0415-1	47.8	2.0646	28.901	.169	1.0082	-1.0003	0.3591	1.2410	2848.4	.0857	.709	0.3316	1.2614	2871.6	.0778	.721
3900	1.0145-1	84.1	2.0740	28.893	.172	1.0112	-1.0004	0.3668	1.2365	2880.7	.0895	.705	0.3325	1.2605	2908.5	.0794	.721
4000	9.8885-2	121.2	2.0834	28.884	.175	1.0152	-1.0005	0.3760	1.2315	2911.9	.0940	.699	0.3334	1.2598	2945.2	.0810	.720
4100	9.6431-2	159.3	2.0928	28.871	.178	1.0203	-1.0007	0.3870	1.2260	2942.1	.0993	.693	0.3342	1.2591	2981.7	.0826	.719
4200	9.4082-2	198.7	2.1023	28.855	.181	1.0267	-1.0009	0.4002	1.2200	2971.4	.1055	.685	0.3350	1.2586	3018.0	.0842	.718
4300	9.1828-2	239.5	2.1119	28.834	.183	1.0348	-1.0012	0.4159	1.2137	2999.9	.1128	.676	0.3357	1.2582	3054.3	.0858	.718
4400	8.9660-2	282.0	2.1217	28.808	.186	1.0446	-1.0016	0.4342	1.2072	3027.8	.1213	.666	0.3363	1.2578	3090.6	.0873	.717
4500	8.7568-2	326.4	2.1316	28.775	.189	1.0565	-1.0021	0.4553	1.2006	3055.3	.1313	.655	0.3369	1.2576	3127.0	.0889	.716
4600	8.5545-2	373.1	2.1419	28.735	.191	1.0703	-1.0027	0.4792	1.1941	3082.8	.1428	.642	0.3374	1.2575	3163.7	.0904	.714
4700	8.3585-2	422.3	2.1525	28.687	.194	1.0863	-1.0034	0.5057	1.1878	3110.6	.1559	.629	0.3380	1.2576	3200.7	.0920	.713
4800	8.1680-2	474.3	2.1634	28.630	.197	1.1043	-1.0042	0.5347	1.1820	3139.0	.1707	.616	0.3384	1.2578	3238.0	.0935	.712
4900	7.9825-2	529.3	2.1748	28.563	.199	1.1241	-1.0051	0.5655	1.1768	3168.2	.1872	.602	0.3388	1.2582	3275.9	.0951	.710
5000	7.8016-2	587.5	2.1865	28.485	.202	1.1454	-1.0061	0.5977	1.1722	3198.4	.2054	.587	0.3392	1.2587	3314.4	.0966	.708
5100	7.6249-2	648.9	2.1987	28.397	.204	1.1681	-1.0073	0.6309	1.1682	3229.8	.2251	.572	0.3395	1.2594	3353.5	.0981	.707
5200	7.4522-2	713.7	2.2113	28.298	.207	1.1918	-1.0085	0.6643	1.1649	3262.4	.2464	.557	0.3399	1.2602	3393.2	.0997	.705
5300	7.2833-2	781.8	2.2242	28.188	.209	1.2162	-1.0098	0.6976	1.1622	3296.2	.2693	.542	0.3401	1.2612	3433.7	.1013	.702
5400	7.1180-2	853.2	2.2376	28.068	.211	1.2411	-1.0112	0.7304	1.1601	3331.3	.2935	.526	0.3404	1.2624	3475.0	.1029	.700

TABLE 9.5B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.050721; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 734.797 LB/IN² (50.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2376 0	-656.6	1.6810	28.920	.095	1.0000	-1.0000	0.2882	1.3128	1900.3	.0371	.735	0.2882	1.3128	1900.3	.0371	.735
1700	1.1648 0	-627.6	1.6986	28.920	.099	1.0000	-1.0000	0.2917	1.3078	1955.1	.0393	.734	0.2917	1.3079	1955.2	.0393	.734
1800	1.1001 0	-598.2	1.7153	28.920	.103	1.0000	-1.0000	0.2951	1.3033	2008.3	.0414	.733	0.2949	1.3035	2008.4	.0414	.733
1900	1.0422 0	-568.6	1.7314	28.920	.107	1.0000	-1.0000	0.2981	1.2993	2060.1	.0434	.732	0.2979	1.2996	2060.4	.0434	.732
2000	9.9008-1	-538.6	1.7467	28.920	.110	1.0000	-1.0000	0.3010	1.2955	2110.6	.0454	.732	0.3007	1.2959	2110.9	.0454	.732
2100	9.4294-1	-508.4	1.7615	28.920	.114	1.0000	-1.0000	0.3039	1.2920	2159.7	.0474	.731	0.3034	1.2926	2160.2	.0473	.731
2200	9.0008-1	-477.8	1.7757	28.920	.118	1.0000	-1.0000	0.3066	1.2886	2207.7	.0494	.731	0.3059	1.2894	2208.4	.0493	.731
2300	8.6094-1	-447.0	1.7894	28.920	.121	1.0000	-1.0000	0.3092	1.2855	2254.5	.0514	.730	0.3083	1.2866	2255.5	.0512	.730
2400	8.2507-1	-416.0	1.8026	28.920	.125	1.0000	-1.0000	0.3118	1.2825	2300.3	.0533	.730	0.3106	1.2839	2301.6	.0531	.730
2500	7.9207-1	-384.7	1.8154	28.920	.128	1.0000	-1.0000	0.3143	1.2796	2345.2	.0552	.730	0.3127	1.2814	2346.8	.0550	.730
2600	7.6160-1	-353.1	1.8277	28.920	.132	1.0000	-1.0000	0.3167	1.2768	2389.0	.0572	.729	0.3147	1.2791	2391.1	.0568	.729
2700	7.3339-1	-321.3	1.8397	28.920	.135	1.0001	-1.0000	0.3192	1.2742	2432.0	.0591	.729	0.3166	1.2769	2434.6	.0587	.729
2800	7.0720-1	-289.3	1.8514	28.920	.138	1.0001	-1.0000	0.3215	1.2716	2474.1	.0611	.728	0.3184	1.2749	2477.4	.0605	.728
2900	6.8281-1	-257.0	1.8627	28.920	.142	1.0002	-1.0000	0.3239	1.2691	2515.5	.0631	.727	0.3201	1.2731	2519.4	.0623	.727
3000	6.6005-1	-224.5	1.8737	28.919	.145	1.0003	-1.0000	0.3263	1.2667	2556.0	.0650	.726	0.3217	1.2713	2560.7	.0641	.727
3100	6.3875-1	-191.8	1.8845	28.919	.148	1.0004	-1.0000	0.3288	1.2642	2595.8	.0671	.725	0.3233	1.2697	2601.4	.0659	.726
3200	6.1878-1	-158.8	1.8949	28.919	.151	1.0006	-1.0000	0.3313	1.2618	2634.8	.0691	.725	0.3247	1.2682	2641.5	.0676	.725
3300	6.0001-1	-125.5	1.9052	28.918	.154	1.0008	-1.0000	0.3339	1.2594	2673.1	.0712	.723	0.3260	1.2668	2681.0	.0694	.725
3400	5.8235-1	-92.0	1.9152	28.917	.157	1.0012	-1.0000	0.3367	1.2570	2710.7	.0733	.722	0.3273	1.2656	2720.0	.0711	.724
3500	5.6569-1	-58.2	1.9250	28.916	.160	1.0016	-1.0000	0.3396	1.2544	2747.6	.0755	.721	0.3285	1.2644	2758.4	.0728	.723
3600	5.4994-1	-24.0	1.9346	28.914	.163	1.0023	-1.0001	0.3429	1.2518	2783.7	.0779	.719	0.3296	1.2632	2796.4	.0745	.723
3700	5.3504-1	10.4	1.9440	28.912	.166	1.0032	-1.0001	0.3465	1.2491	2819.1	.0803	.717	0.3306	1.2622	2833.9	.0761	.722
3800	5.2091-1	45.3	1.9533	28.909	.169	1.0043	-1.0001	0.3505	1.2461	2853.8	.0829	.715	0.3316	1.2613	2871.0	.0778	.721
3900	5.0749-1	80.5	1.9625	28.906	.172	1.0058	-1.0002	0.3552	1.2430	2887.6	.0857	.713	0.3326	1.2604	2907.7	.0794	.721
4000	4.9471-1	116.3	1.9716	28.901	.175	1.0078	-1.0003	0.3605	1.2396	2920.7	.0888	.710	0.3334	1.2596	2944.1	.0810	.720
4100	4.8254-1	152.7	1.9805	28.894	.178	1.0103	-1.0003	0.3667	1.2360	2953.0	.0923	.706	0.3342	1.2589	2980.2	.0826	.719
4200	4.7092-1	189.7	1.9895	28.886	.181	1.0135	-1.0005	0.3740	1.2321	2984.4	.0962	.702	0.3350	1.2582	3015.9	.0842	.719
4300	4.5980-1	227.5	1.9984	28.876	.183	1.0174	-1.0006	0.3824	1.2278	3015.1	.1006	.697	0.3357	1.2576	3051.5	.0858	.718
4400	4.4915-1	266.2	2.0073	28.862	.186	1.0224	-1.0008	0.3923	1.2233	3045.0	.1055	.692	0.3364	1.2571	3086.8	.0873	.717
4500	4.3891-1	306.0	2.0162	28.846	.189	1.0284	-1.0011	0.4036	1.2185	3074.3	.1112	.685	0.3370	1.2567	3122.1	.0889	.716
4600	4.2907-1	347.0	2.0252	28.826	.192	1.0356	-1.0014	0.4167	1.2135	3103.0	.1177	.678	0.3376	1.2564	3157.3	.0904	.715
4700	4.1959-1	389.4	2.0343	28.801	.194	1.0441	-1.0017	0.4314	1.2085	3131.3	.1251	.670	0.3381	1.2561	3192.5	.0920	.714
4800	4.1042-1	433.4	2.0436	28.772	.197	1.0540	-1.0022	0.4480	1.2034	3159.4	.1334	.661	0.3386	1.2560	3227.7	.0935	.713
4900	4.0155-1	479.1	2.0530	28.736	.199	1.0653	-1.0027	0.4663	1.1984	3187.4	.1427	.652	0.3391	1.2559	3263.1	.0950	.712
5000	3.9295-1	526.7	2.0626	28.695	.202	1.0780	-1.0033	0.4862	1.1936	3215.6	.1531	.642	0.3395	1.2560	3298.7	.0965	.711
5100	3.8460-1	576.4	2.0725	28.647	.205	1.0921	-1.0039	0.5075	1.1890	3244.2	.1645	.631	0.3399	1.2562	3334.6	.0980	.710
5200	3.7648-1	628.2	2.0825	28.591	.207	1.1073	-1.0047	0.5299	1.1849	3273.4	.1769	.620	0.3403	1.2565	3370.7	.0995	.708
5300	3.6856-1	682.4	2.0928	28.529	.210	1.1235	-1.0055	0.5530	1.1812	3303.1	.1903	.609	0.3406	1.2569	3407.3	.1010	.707
5400	3.6085-1	738.8	2.1034	28.458	.212	1.1406	-1.0064	0.5765	1.1780	3333.7	.2046	.598	0.3409	1.2574	3444.2	.1025	.705

TABLE 9C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.050721; EQUIV.RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504;
 DRY AIR

T R	HETEROGENEOUS PHASE PROPERTIES					GAS PHASE PROPERTIES										T R
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R	DENSITY LB/FT ³	MW	VIS LB/ FT S	DLVLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	
PRESSURE = 0.01 ATM																
360	1.221-3	-1061.1	1.7054	28.920	0.2523	1.146-3	30.123	.0314	1.000	-1.000	0.2344	1.3913	909	.0100	.734	360
400	1.096-3	-1049.1	1.7370	28.920	0.4105	1.030-3	30.083	.0343	1.000	-1.000	0.2354	1.3898	959	.0110	.731	400
440	9.569-4	-1011.0	1.8266	28.920	2.0745	9.215-4	29.608	.0361	1.000	-1.000	0.2410	1.3857	1012	.0118	.740	440
PRESSURE = 0.10 ATM																
360	1.222-2	-1061.2	1.5627	28.920	0.2440	1.146-2	30.125	.0314	1.000	-1.000	0.2344	1.3913	909	.0100	.734	360
400	1.099-2	-1051.2	1.5891	28.920	0.2623	1.031-2	30.121	.0344	1.000	-1.000	0.2350	1.3900	958	.0111	.730	400
440	9.953-3	-1038.6	1.6190	28.920	0.4177	9.360-3	30.073	.0372	1.000	-1.000	0.2361	1.3883	1005	.0121	.727	440
480	8.844-3	-1006.9	1.6873	28.920	1.4769	8.474-3	29.704	.0391	1.000	-1.000	0.2407	1.3846	1055	.0128	.734	480
520	7.616-3	-945.9	1.8106	28.920	0.2500	7.616-3	28.920	.0401	1.000	-1.000	0.2500	1.3787	1110	.0133	.751	520
PRESSURE = 1.00 ATM																
360	1.222-1	-1061.2	1.4203	28.920	0.2431	1.146-1	30.125	.0314	1.000	-1.000	0.2344	1.3913	909	.0100	.734	360
400	1.099-1	-1051.4	1.4461	28.920	0.2476	1.031-1	30.124	.0344	1.000	-1.000	0.2349	1.3900	958	.0111	.730	400
440	9.990-2	-1041.2	1.4703	28.920	0.2658	9.374-2	30.120	.0373	1.000	-1.000	0.2356	1.3885	1004	.0121	.726	440
480	9.130-2	-1029.1	1.4966	28.920	0.3671	8.583-2	30.083	.0400	1.000	-1.000	0.2367	1.3867	1049	.0131	.724	480
520	8.309-2	-1001.0	1.5531	28.920	0.6635	7.877-2	29.912	.0423	1.000	-1.000	0.2393	1.3839	1094	.0139	.727	520
537	7.940-2	-988.0	1.5777	28.920	0.9208	7.591-2	29.748	.0430	1.000	-1.000	0.2414	1.3823	1113	.0142	.731	537
560	7.344-2	-959.8	1.6289	28.920	1.5601	7.175-2	29.339	.0436	1.000	-1.000	0.2463	1.3790	1144	.0145	.740	560
600	6.601-2	-925.9	1.6884	28.920	0.2519	6.601-2	28.920	.0452	1.000	-1.000	0.2519	1.3748	1191	.0152	.750	600
PRESSURE = 10.00 ATM																
360	1.220 0	-1061.2	1.2779	28.920	0.2430	1.146 0	30.125	.0314	1.000	-1.000	0.2344	1.3913	909	.0100	.734	360
400	1.098 0	-1051.4	1.3037	28.920	0.2461	1.031 0	30.125	.0344	1.000	-1.000	0.2349	1.3901	958	.0111	.730	400
440	9.984-1	-1041.5	1.3273	28.920	0.2507	9.376-1	30.124	.0373	1.000	-1.000	0.2356	1.3886	1004	.0121	.726	440
480	9.150-1	-1031.3	1.3496	28.920	0.2636	8.593-1	30.121	.0401	1.000	-1.000	0.2363	1.3869	1048	.0131	.723	480
520	8.436-1	-1010.6	1.3913	28.920	0.3212	7.928-1	30.104	.0427	1.000	-1.000	0.2373	1.3850	1091	.0140	.722	520
537	8.163-1	-1005.0	1.4018	28.920	0.3447	7.677-1	30.087	.0438	1.000	-1.000	0.2379	1.3841	1108	.0144	.722	537
560	7.797-1	-996.4	1.4175	28.920	0.3979	7.348-1	30.046	.0452	1.000	-1.000	0.2388	1.3827	1132	.0149	.723	560
600	7.182-1	-977.4	1.4502	28.920	0.5782	6.821-1	29.887	.0474	1.000	-1.000	0.2414	1.3798	1174	.0157	.728	600
640	6.520-1	-947.5	1.4983	28.920	0.9624	6.314-1	29.509	.0490	1.000	-1.000	0.2465	1.3756	1218	.0164	.737	640
680	5.824-1	-905.6	1.5620	28.920	0.2541	5.824-1	28.920	.0501	1.000	-1.000	0.2541	1.3703	1266	.0170	.749	680
PRESSURE = 50.00 ATM																
360	6.068 0	-1061.2	1.1784	28.920	0.2430	5.730 0	30.125	.0314	1.000	-1.000	0.2344	1.3913	909	.0100	.734	360
400	5.465 0	-1051.4	1.2042	28.920	0.2460	5.157 0	30.125	.0344	1.000	-1.000	0.2349	1.3901	958	.0111	.730	400
440	4.971 0	-1041.5	1.2278	28.920	0.2493	4.688 0	30.125	.0373	1.000	-1.000	0.2356	1.3886	1004	.0121	.726	440
480	4.558 0	-1031.5	1.2497	28.920	0.2545	4.297 0	30.124	.0401	1.000	-1.000	0.2363	1.3869	1048	.0131	.723	480
520	4.210 0	-1011.4	1.2901	28.920	0.2918	3.966 0	30.121	.0428	1.000	-1.000	0.2372	1.3851	1090	.0141	.722	520
537	4.078 0	-1006.5	1.2993	28.920	0.2966	3.843 0	30.117	.0439	1.000	-1.000	0.2375	1.3842	1107	.0144	.722	537
560	3.907 0	-999.5	1.3122	28.920	0.3074	3.681 0	30.109	.0453	1.000	-1.000	0.2382	1.3830	1131	.0150	.722	560
600	3.638 0	-986.6	1.3344	28.920	0.3426	3.432 0	30.077	.0478	1.000	-1.000	0.2394	1.3808	1170	.0158	.723	600
640	3.390 0	-971.6	1.3585	28.920	0.4113	3.210 0	30.002	.0501	1.000	-1.000	0.2412	1.3781	1209	.0166	.726	640
680	3.151 0	-953.0	1.3868	28.920	0.5321	3.005 0	29.846	.0521	1.000	-1.000	0.2440	1.3750	1248	.0174	.730	680
720	2.906 0	-928.0	1.4224	28.920	0.7319	2.811 0	29.556	.0538	1.000	-1.000	0.2482	1.3711	1289	.0182	.736	720
760	2.639 0	-892.8	1.4699	28.920	1.0554	2.619 0	29.065	.0551	1.000	-1.000	0.2549	1.3662	1333	.0189	.745	760

TABLE 10A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.067628; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.9056;
 DRY AIR; GASEOUS COMPOSITION: CO2= .13083; H2O= .13054; N2= .72988; O2= .00000; AR= .00875

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
360	1.0996-1	5.4978 0	-1279.6	1.8720	1.7138	1.5556	1.3974	1.2869	0.2492	1.3805	924.6	.0276	.0088	.7843	360
380	1.0417-1	5.2084 0	-1274.6	1.8855	1.7273	1.5691	1.4109	1.3004	0.2497	1.3797	949.6	.0290	.0093	.7792	380
400	9.8960-2	4.9480 0	-1269.6	1.8983	1.7401	1.5819	1.4237	1.3132	0.2501	1.3787	974.0	.0305	.0098	.7749	400
420	9.4247-2	4.7124 0	-1264.6	1.9105	1.7523	1.5941	1.4360	1.3254	0.2505	1.3778	997.7	.0320	.0104	.7712	420
440	8.9963-2	4.4982 0	-1259.6	1.9222	1.7640	1.6058	1.4476	1.3371	0.2510	1.3768	1020.8	.0334	.0109	.7680	440
460	8.6052-2	4.3026 0	-1254.6	1.9334	1.7752	1.6170	1.4588	1.3482	0.2515	1.3758	1043.3	.0348	.0114	.7655	460
480	8.2466-2	4.1233 0	-1249.5	1.9441	1.7859	1.6277	1.4695	1.3589	0.2520	1.3747	1065.4	.0362	.0119	.7634	480
500	7.9168-2	3.9584 0	-1244.5	1.9544	1.7962	1.6380	1.4798	1.3692	0.2526	1.3737	1086.9	.0375	.0124	.7618	500
520	7.6123-2	3.8061 0	-1239.4	1.9643	1.8061	1.6479	1.4897	1.3792	0.2531	1.3725	1108.0	.0389	.0129	.7607	520
537	7.3758-2	3.6879 0	-1235.2	1.9723	1.8141	1.6559	1.4977	1.3871	0.2536	1.3716	1125.2	.0400	.0133	.7601	537
540	7.3304-2	3.6652 0	-1234.4	1.9739	1.8157	1.6575	1.4993	1.3887	0.2537	1.3714	1128.6	.0402	.0134	.7600	540
560	7.0686-2	3.5343 0	-1229.3	1.9831	1.8249	1.6667	1.5085	1.3980	0.2543	1.3702	1148.9	.0415	.0139	.7599	560
580	6.8248-2	3.4124 0	-1224.2	1.9920	1.8338	1.6756	1.5175	1.4069	0.2549	1.3690	1168.7	.0428	.0143	.7601	580
600	6.5973-2	3.2987 0	-1219.1	2.0007	1.8425	1.6843	1.5261	1.4155	0.2555	1.3678	1188.1	.0440	.0148	.7603	600
620	6.3845-2	3.1923 0	-1214.0	2.0091	1.8509	1.6927	1.5345	1.4239	0.2561	1.3666	1207.2	.0453	.0153	.7605	620
640	6.1850-2	3.0925 0	-1208.8	2.0172	1.8590	1.7008	1.5426	1.4321	0.2568	1.3653	1226.0	.0465	.0157	.7603	640
660	5.9976-2	2.9988 0	-1203.7	2.0251	1.8669	1.7087	1.5505	1.4400	0.2574	1.3641	1244.4	.0478	.0162	.7596	660
680	5.8212-2	2.9106 0	-1198.5	2.0328	1.8746	1.7164	1.5582	1.4477	0.2581	1.3628	1262.5	.0490	.0167	.7589	680
700	5.6548-2	2.8274 0	-1193.4	2.0403	1.8821	1.7239	1.5657	1.4552	0.2588	1.3615	1280.3	.0502	.0171	.7580	700
720	5.4978-2	2.7489 0	-1188.2	2.0476	1.8894	1.7312	1.5730	1.4625	0.2595	1.3601	1297.9	.0514	.0176	.7572	720
740	5.3492-2	2.6746 0	-1183.0	2.0547	1.8965	1.7383	1.5801	1.4696	0.2602	1.3588	1315.1	.0525	.0181	.7568	740
760	5.2084-2	2.6042 0	-1177.8	2.0617	1.9035	1.7453	1.5871	1.4765	0.2609	1.3575	1332.1	.0537	.0185	.7565	760
780	5.0749-2	2.5374 0	-1172.6	2.0685	1.9103	1.7521	1.5939	1.4833	0.2616	1.3561	1348.9	.0548	.0190	.7563	780
800	4.9480-2	2.4740 0	-1167.3	2.0751	1.9169	1.7587	1.6005	1.4899	0.2624	1.3548	1365.4	.0559	.0194	.7562	800
820	4.8273-2	2.4137 0	-1162.1	2.0816	1.9234	1.7652	1.6070	1.4964	0.2631	1.3534	1381.6	.0570	.0198	.7561	820
840	4.7124-2	2.3562 0	-1156.8	2.0879	1.9297	1.7715	1.6134	1.5028	0.2639	1.3520	1397.7	.0581	.0203	.7561	840
860	4.6028-2	2.3014 0	-1151.5	2.0941	1.9360	1.7778	1.6196	1.5090	0.2646	1.3506	1413.5	.0592	.0207	.7562	860
880	4.4982-2	2.2491 0	-1146.2	2.1002	1.9420	1.7839	1.6257	1.5151	0.2654	1.3493	1429.1	.0603	.0212	.7562	880
900	4.3982-2	2.1991 0	-1140.9	2.1062	1.9480	1.7898	1.6316	1.5211	0.2662	1.3479	1444.5	.0613	.0216	.7563	900
920	4.3026-2	2.1513 0	-1135.6	2.1121	1.9539	1.7957	1.6375	1.5269	0.2670	1.3465	1459.7	.0624	.0220	.7561	920
940	4.2111-2	2.1055 0	-1130.2	2.1178	1.9596	1.8014	1.6432	1.5327	0.2678	1.3451	1474.7	.0634	.0225	.7558	940
960	4.1233-2	2.0617 0	-1124.9	2.1235	1.9653	1.8071	1.6489	1.5383	0.2686	1.3437	1489.6	.0645	.0229	.7555	960
980	4.0392-2	2.0196 0	-1119.5	2.1290	1.9708	1.8126	1.6544	1.5439	0.2694	1.3423	1504.2	.0655	.0234	.7552	980
1000	3.9584-2	1.9792 0	-1114.1	2.1345	1.9763	1.8181	1.6599	1.5493	0.2702	1.3410	1518.7	.0665	.0238	.7548	1000
1020	3.8808-2	1.9404 0	-1108.7	2.1398	1.9816	1.8234	1.6652	1.5547	0.2710	1.3396	1533.1	.0675	.0243	.7544	1020
1040	3.8061-2	1.9031 0	-1103.2	2.1451	1.9869	1.8287	1.6705	1.5599	0.2718	1.3382	1547.2	.0685	.0247	.7540	1040
1060	3.7343-2	1.8672 0	-1097.8	2.1503	1.9921	1.8339	1.6757	1.5651	0.2727	1.3368	1561.2	.0695	.0252	.7535	1060
1080	3.6652-2	1.8326 0	-1092.3	2.1554	1.9972	1.8390	1.6808	1.5702	0.2735	1.3355	1575.1	.0705	.0256	.7531	1080
1100	3.5985-2	1.7993 0	-1086.9	2.1604	2.0022	1.8440	1.6858	1.5753	0.2743	1.3341	1588.8	.0715	.0261	.7526	1100
1120	3.5343-2	1.7671 0	-1081.4	2.1654	2.0072	1.8490	1.6908	1.5802	0.2751	1.3328	1602.4	.0725	.0265	.7521	1120
1140	3.4723-2	1.7361 0	-1075.9	2.1702	2.0120	1.8539	1.6957	1.5851	0.2760	1.3314	1615.8	.0735	.0270	.7515	1140

TABLE 10A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.067628; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.9056;
 DRY AIR; GASEOUS COMPOSITION: CO2= .13083; H2O= .13054; N2= .72988; O2= .00000; AR= .00875

T R	DENSITY		H BTU/LB	ENTROPY					CP BTU/ LB R	GAM	VS FT/S	VIS LB/ FT HR	COND BTU/ FT HR R	PRAN R	T R
	(P=1.0) LB/FT3	(P=50.) LB/FT3		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
1160	3.4124-2	1.7062 0	-1070.3	2.1750	2.0168	1.8587	1.7005	1.5899	0.2768	1.3301	1629.1	.0744	.0274	.7510	1160
1180	3.3546-2	1.6773 0	-1064.8	2.1798	2.0216	1.8634	1.7052	1.5946	0.2777	1.3288	1642.3	.0754	.0279	.7504	1180
1200	3.2987-2	1.6493 0	-1059.2	2.1845	2.0263	1.8681	1.7099	1.5993	0.2785	1.3275	1655.3	.0763	.0283	.7499	1200
1220	3.2446-2	1.6223 0	-1053.6	2.1891	2.0309	1.8727	1.7145	1.6039	0.2793	1.3262	1668.2	.0773	.0288	.7493	1220
1240	3.1923-2	1.5961 0	-1048.0	2.1936	2.0354	1.8772	1.7190	1.6085	0.2802	1.3249	1681.0	.0782	.0293	.7488	1240
1260	3.1416-2	1.5708 0	-1042.4	2.1981	2.0399	1.8817	1.7235	1.6130	0.2810	1.3236	1693.7	.0791	.0297	.7483	1260
1280	3.0925-2	1.5462 0	-1036.8	2.2025	2.0443	1.8862	1.7280	1.6174	0.2818	1.3223	1706.3	.0800	.0302	.7477	1280
1300	3.0449-2	1.5225 0	-1031.2	2.2069	2.0487	1.8905	1.7323	1.6218	0.2827	1.3211	1718.7	.0810	.0306	.7472	1300
1320	2.9988-2	1.4994 0	-1025.5	2.2112	2.0530	1.8948	1.7367	1.6261	0.2835	1.3198	1731.1	.0819	.0311	.7467	1320
1340	2.9540-2	1.4770 0	-1019.8	2.2155	2.0573	1.8991	1.7409	1.6304	0.2843	1.3186	1743.3	.0828	.0315	.7462	1340
1360	2.9106-2	1.4553 0	-1014.1	2.2197	2.0615	1.9033	1.7451	1.6346	0.2852	1.3174	1755.5	.0837	.0320	.7457	1360
1380	2.8684-2	1.4342 0	-1008.4	2.2239	2.0657	1.9075	1.7493	1.6387	0.2860	1.3162	1767.6	.0846	.0325	.7452	1380
1400	2.8274-2	1.4137 0	-1002.7	2.2280	2.0698	1.9116	1.7534	1.6429	0.2868	1.3150	1779.5	.0855	.0329	.7447	1400
1420	2.7876-2	1.3938 0	-996.9	2.2321	2.0739	1.9157	1.7575	1.6469	0.2876	1.3138	1791.4	.0863	.0334	.7443	1420
1440	2.7489-2	1.3744 0	-991.2	2.2361	2.0779	1.9197	1.7615	1.6510	0.2884	1.3127	1803.1	.0872	.0338	.7438	1440
1460	2.7112-2	1.3556 0	-985.4	2.2401	2.0819	1.9237	1.7655	1.6550	0.2892	1.3115	1814.8	.0881	.0343	.7435	1460
1480	2.6746-2	1.3373 0	-979.6	2.2440	2.0858	1.9277	1.7695	1.6589	0.2900	1.3104	1826.4	.0890	.0347	.7431	1480
1500	2.6389-2	1.3195 0	-973.8	2.2479	2.0897	1.9316	1.7734	1.6628	0.2908	1.3093	1838.0	.0898	.0352	.7428	1500
1520	2.6042-2	1.3021 0	-968.0	2.2518	2.0936	1.9354	1.7772	1.6666	0.2916	1.3082	1849.4	.0907	.0356	.7425	1520
1540	2.5704-2	1.2852 0	-962.1	2.2556	2.0974	1.9392	1.7810	1.6705	0.2924	1.3071	1860.7	.0915	.0361	.7421	1540
1560	2.5374-2	1.2687 0	-956.3	2.2594	2.1012	1.9430	1.7848	1.6742	0.2932	1.3060	1872.0	.0924	.0365	.7418	1560
1580	2.5053-2	1.2527 0	-950.4	2.2631	2.1049	1.9467	1.7886	1.6780	0.2940	1.3050	1883.2	.0932	.0370	.7416	1580
1600	2.4740-2	1.2370 0	-944.5	2.2668	2.1086	1.9504	1.7923	1.6817	0.2947	1.3039	1894.4	.0941	.0374	.7413	1600
1620	2.4435-2	1.2217 0	-938.6	2.2705	2.1123	1.9541	1.7959	1.6854	0.2955	1.3029	1905.4	.0949	.0378	.7410	1620
1640	2.4137-2	1.2068 0	-932.7	2.2741	2.1159	1.9577	1.7996	1.6890	0.2962	1.3019	1916.4	.0957	.0383	.7407	1640
1660	2.3846-2	1.1923 0	-926.8	2.2777	2.1195	1.9613	1.8031	1.6926	0.2970	1.3010	1927.3	.0965	.0387	.7405	1660
1680	2.3562-2	1.1781 0	-920.8	2.2813	2.1231	1.9649	1.8067	1.6961	0.2977	1.3000	1938.2	.0974	.0392	.7402	1680
1700	2.3285-2	1.1642 0	-914.9	2.2848	2.1266	1.9684	1.8102	1.6997	0.2984	1.2990	1949.0	.0982	.0396	.7400	1700
1720	2.3014-2	1.1507 0	-908.9	2.2883	2.1301	1.9719	1.8137	1.7032	0.2992	1.2981	1959.7	.0990	.0400	.7397	1720
1740	2.2749-2	1.1375 0	-902.9	2.2918	2.1336	1.9754	1.8172	1.7066	0.2999	1.2972	1970.4	.0998	.0405	.7395	1740
1760	2.2491-2	1.1245 0	-896.9	2.2952	2.1370	1.9788	1.8206	1.7101	0.3006	1.2963	1981.0	.1006	.0409	.7393	1760
1780	2.2238-2	1.1119 0	-890.9	2.2986	2.1404	1.9822	1.8240	1.7135	0.3012	1.2954	1991.5	.1014	.0413	.7390	1780
1800	2.1991-2	1.0996 0	-884.8	2.3020	2.1438	1.9856	1.8274	1.7168	0.3019	1.2946	2002.0	.1022	.0418	.7388	1800
1900	2.0834-2	1.0417 0	-854.5	2.3184	2.1602	2.0020	1.8438	1.7332	0.3051	1.2906	2053.7	.1061	.0439	.7378	1900
2000	1.9792-2	9.8960-1	-823.8	2.3341	2.1759	2.0177	1.8595	1.7490	0.3081	1.2869	2104.1	.1099	.0460	.7369	2000
2100	1.8849-2	9.4247-1	-792.9	2.3492	2.1910	2.0328	1.8746	1.7641	0.3110	1.2835	2153.2	.1137	.0480	.7361	2100
2200	1.7993-2	8.9963-1	-761.6	2.3637	2.2056	2.0474	1.8892	1.7786	0.3137	1.2804	2201.2	.1174	.0501	.7354	2200
2300	1.7210-2	8.6052-1	-730.1	2.3777	2.2196	2.0614	1.9032	1.7926	0.3163	1.2775	2248.1	.1210	.0521	.7347	2300
2400	1.6493-2	8.2467-1	-698.4	2.3913	2.2331	2.0749	1.9167	1.8061	0.3187	1.2748	2294.0	.1245	.0541	.7340	2400
2500	1.5834-2	7.9168-1	-666.4	2.4043	2.2461	2.0879	1.9297	1.8192	0.3210	1.2723	2339.0	.1280	.0560	.7334	2500

TABLE 10A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.067628; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.9056;
 DRY AIR; GASEOUS COMPOSITION: CO2= .13083; H2O= .13054; N2= .72988; O2= .00000; AR= .00875

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	FT/S	LB/FT HR	BTU/FT HR R	R	R
2600	1.5225-2	7.6123-1	-634.2	2.4170	2.2588	2.1006	1.9424	1.8318	0.3232	1.2699	2383.1	.1315	.0580	.7328	2600
2700	1.4661-2	7.3304-1	-601.7	2.4292	2.2710	2.1128	1.9546	1.8440	0.3253	1.2678	2426.5	.1349	.0599	.7321	2700
2800	1.4137-2	7.0686-1	-569.1	2.4411	2.2829	2.1247	1.9665	1.8559	0.3272	1.2658	2469.0	.1383	.0619	.7313	2800
2900	1.3650-2	6.8248-1	-536.3	2.4526	2.2944	2.1362	1.9780	1.8674	0.3290	1.2639	2510.9	.1416	.0638	.7305	2900
3000	1.3195-2	6.5973-1	-503.3	2.4638	2.3056	2.1474	1.9892	1.8786	0.3308	1.2622	2552.1	.1449	.0657	.7297	3000
3100	1.2769-2	6.3845-1	-470.2	2.4746	2.3164	2.1582	2.0001	1.8895	0.3324	1.2606	2592.6	.1481	.0675	.7289	3100
3200	1.2370-2	6.1850-1	-436.8	2.4852	2.3270	2.1688	2.0106	1.9001	0.3339	1.2590	2632.5	.1513	.0694	.7281	3200
3300	1.1995-2	5.9976-1	-403.4	2.4955	2.3373	2.1791	2.0209	1.9104	0.3353	1.2576	2671.8	.1544	.0712	.7272	3300
3400	1.1642-2	5.8212-1	-369.8	2.5055	2.3473	2.1891	2.0310	1.9204	0.3367	1.2563	2710.6	.1576	.0730	.7263	3400
3500	1.1310-2	5.6548-1	-336.0	2.5153	2.3571	2.1989	2.0407	1.9302	0.3380	1.2551	2748.9	.1606	.0748	.7255	3500
3600	1.0996-2	5.4978-1	-302.2	2.5248	2.3667	2.2085	2.0503	1.9397	0.3392	1.2540	2786.6	.1637	.0766	.7246	3600
3700	1.0698-2	5.3492-1	-268.2	2.5342	2.3760	2.2178	2.0596	1.9490	0.3403	1.2529	2823.8	.1667	.0784	.7238	3700
3800	1.0417-2	5.2084-1	-234.1	2.5432	2.3851	2.2269	2.0687	1.9581	0.3414	1.2520	2860.6	.1697	.0801	.7230	3800
3900	1.0150-2	5.0749-1	-199.9	2.5521	2.3939	2.2357	2.0776	1.9670	0.3424	1.2510	2897.0	.1726	.0818	.7222	3900
4000	9.8960-3	4.9480-1	-165.6	2.5608	2.4026	2.2444	2.0862	1.9757	0.3433	1.2502	2932.9	.1756	.0836	.7213	4000
4100	9.6546-3	4.8273-1	-131.3	2.5693	2.4111	2.2529	2.0947	1.9842	0.3442	1.2494	2968.3	.1785	.0853	.7205	4100
4200	9.4247-3	4.7124-1	-96.8	2.5776	2.4194	2.2612	2.1030	1.9925	0.3450	1.2486	3003.4	.1813	.0869	.7196	4200
4300	9.2056-3	4.6028-1	-62.3	2.5857	2.4275	2.2693	2.1112	2.0006	0.3458	1.2479	3038.1	.1842	.0886	.7186	4300
4400	8.9963-3	4.4982-1	-27.7	2.5937	2.4355	2.2773	2.1191	2.0085	0.3465	1.2473	3072.4	.1870	.0903	.7177	4400
4500	8.7964-3	4.3982-1	7.0	2.6015	2.4433	2.2851	2.1269	2.0163	0.3472	1.2466	3106.4	.1897	.0919	.7167	4500
4600	8.6052-3	4.3026-1	41.8	2.6091	2.4509	2.2927	2.1345	2.0240	0.3479	1.2461	3139.9	.1925	.0936	.7155	4600
4700	8.4221-3	4.2111-1	76.6	2.6166	2.4584	2.3002	2.1420	2.0315	0.3485	1.2455	3173.2	.1952	.0952	.7144	4700
4800	8.2466-3	4.1233-1	111.5	2.6240	2.4658	2.3076	2.1494	2.0388	0.3491	1.2450	3206.1	.1979	.0969	.7133	4800
4900	8.0783-3	4.0392-1	146.4	2.6312	2.4730	2.3148	2.1566	2.0460	0.3497	1.2445	3238.7	.2006	.0985	.7123	4900
5000	7.9168-3	3.9584-1	181.4	2.6382	2.4800	2.3218	2.1637	2.0531	0.3502	1.2440	3270.9	.2033	.1001	.7112	5000
5100	7.7615-3	3.8808-1	216.5	2.6452	2.4870	2.3288	2.1706	2.0600	0.3508	1.2436	3302.9	.2059	.1017	.7103	5100
5200	7.6123-3	3.8061-1	251.6	2.6520	2.4938	2.3356	2.1774	2.0668	0.3512	1.2432	3334.5	.2085	.1033	.7093	5200
5300	7.4687-3	3.7343-1	286.7	2.6587	2.5005	2.3423	2.1841	2.0735	0.3517	1.2427	3365.9	.2111	.1048	.7084	5300
5400	7.3304-3	3.6652-1	321.9	2.6653	2.5071	2.3489	2.1907	2.0801	0.3522	1.2424	3397.0	.2137	.1064	.7075	5400

TABLE 10.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.067628; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 0.14696 LB/IN2 (0.01 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS							FROZEN COMPOSITIONS				
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4740-4	-944.5	2.2668	28.906	.094	1.0000	-1.0000	0.2947	1.3039	1894.4	.0374	.741	0.2947	1.3039	1894.4	.0374	.741
1700	2.3285-4	-914.9	2.2848	28.906	.098	1.0000	-1.0000	0.2984	1.2990	1949.0	.0396	.740	0.2984	1.2990	1949.0	.0396	.740
1800	2.1991-4	-884.8	2.3020	28.906	.102	1.0000	-1.0000	0.3019	1.2946	2002.0	.0418	.739	0.3019	1.2946	2002.0	.0418	.739
1900	2.0834-4	-854.5	2.3184	28.906	.106	1.0000	-1.0000	0.3052	1.2905	2053.7	.0439	.738	0.3051	1.2906	2053.7	.0439	.738
2000	1.9792-4	-823.8	2.3341	28.906	.110	1.0000	-1.0000	0.3083	1.2868	2104.0	.0460	.737	0.3081	1.2869	2104.1	.0460	.737
2100	1.8849-4	-792.8	2.3492	28.905	.114	1.0001	-1.0000	0.3113	1.2832	2152.9	.0481	.736	0.3110	1.2835	2153.2	.0480	.736
2200	1.7992-4	-761.5	2.3638	28.905	.117	1.0002	-1.0000	0.3144	1.2797	2200.6	.0502	.735	0.3137	1.2804	2201.2	.0501	.735
2300	1.7210-4	-729.9	2.3778	28.905	.121	1.0004	-1.0000	0.3177	1.2761	2246.9	.0524	.734	0.3163	1.2775	2248.1	.0521	.735
2400	1.6493-4	-698.0	2.3914	28.904	.125	1.0008	-1.0000	0.3214	1.2724	2291.9	.0547	.732	0.3187	1.2748	2294.1	.0541	.734
2500	1.5832-4	-665.6	2.4046	28.903	.128	1.0014	-1.0000	0.3259	1.2681	2335.3	.0571	.730	0.3210	1.2723	2339.1	.0560	.733
2600	1.5222-4	-632.8	2.4175	28.901	.131	1.0026	-1.0001	0.3314	1.2631	2377.0	.0599	.728	0.3232	1.2700	2383.4	.0580	.733
2700	1.4656-4	-599.3	2.4302	28.897	.135	1.0043	-1.0001	0.3387	1.2571	2416.6	.0630	.725	0.3253	1.2679	2426.9	.0599	.732
2800	1.4130-4	-564.9	2.4427	28.891	.138	1.0071	-1.0002	0.3485	1.2498	2454.1	.0669	.720	0.3272	1.2660	2469.8	.0619	.731
2900	1.3638-4	-529.5	2.4551	28.882	.142	1.0112	-1.0003	0.3615	1.2410	2489.1	.0717	.714	0.3290	1.2642	2512.2	.0638	.730
3000	1.3178-4	-492.5	2.4676	28.868	.145	1.0172	-1.0004	0.3789	1.2307	2521.6	.0778	.706	0.3307	1.2627	2554.2	.0657	.729
3100	1.2744-4	-453.5	2.4804	28.848	.148	1.0257	-1.0007	0.4018	1.2189	2551.9	.0856	.695	0.3323	1.2613	2595.9	.0675	.728
3200	1.2333-4	-411.9	2.4936	28.820	.151	1.0373	-1.0010	0.4315	1.2060	2580.3	.0958	.681	0.3338	1.2602	2637.6	.0694	.727
3300	1.1943-4	-366.9	2.5075	28.780	.154	1.0529	-1.0015	0.4695	1.1926	2607.5	.1090	.664	0.3351	1.2593	2679.4	.0712	.725
3400	1.1570-4	-317.7	2.5222	28.726	.157	1.0733	-1.0021	0.5170	1.1792	2634.2	.1264	.643	0.3364	1.2587	2721.6	.0731	.724
3500	1.1212-4	-263.2	2.5379	28.655	.160	1.0995	-1.0029	0.5753	1.1664	2661.5	.1488	.619	0.3375	1.2584	2764.4	.0749	.722
3600	1.0865-4	-202.2	2.5551	28.562	.163	1.1322	-1.0040	0.6455	1.1548	2690.1	.1778	.592	0.3386	1.2584	2808.2	.0767	.720
3700	1.0527-4	-133.6	2.5739	28.444	.166	1.1725	-1.0054	0.7286	1.1446	2720.8	.2148	.563	0.3395	1.2589	2853.4	.0785	.717
3800	1.0197-4	-56.1	2.5946	28.296	.169	1.2209	-1.0072	0.8250	1.1359	2754.0	.2615	.532	0.3403	1.2598	2900.3	.0804	.714
3900	9.8716-5	31.8	2.6174	28.113	.171	1.2781	-1.0094	0.9351	1.1287	2790.2	.3199	.501	0.3411	1.2612	2949.4	.0823	.710
4000	9.5494-5	131.4	2.6426	27.893	.174	1.3447	-1.0120	1.0590	1.1230	2829.7	.3915	.470	0.3418	1.2631	3001.0	.0843	.705
4100	9.2291-5	244.1	2.6704	27.632	.176	1.4209	-1.0152	1.1970	1.1187	2872.8	.4776	.442	0.3424	1.2656	3055.7	.0864	.698
4200	8.9094-5	371.3	2.7011	27.325	.179	1.5071	-1.0189	1.3489	1.1154	2919.6	.5783	.416	0.3431	1.2688	3113.9	.0888	.690
4300	8.5895-5	514.3	2.7347	26.971	.181	1.6028	-1.0232	1.5140	1.1132	2970.5	.6918	.396	0.3437	1.2726	3176.2	.0913	.680
4400	8.2690-5	674.4	2.7715	26.569	.183	1.7064	-1.0282	1.6902	1.1119	3025.7	.8136	.380	0.3443	1.2772	3243.0	.0942	.669
4500	7.9483-5	852.5	2.8115	26.119	.185	1.8143	-1.0335	1.8714	1.1113	3085.5	.9361	.370	0.3451	1.2826	3314.7	.0975	.655
4600	7.6287-5	1048.5	2.8546	25.626	.187	1.9196	-1.0391	2.0471	1.1116	3149.8	*****	.366	0.3459	1.2888	3391.5	.1011	.640
4700	7.3127-5	1261.2	2.9003	25.098	.189	2.0121	-1.0443	2.2000	1.1127	3218.7	*****	.367	0.3467	1.2957	3473.3	.1051	.624
4800	7.0041-5	1487.0	2.9479	24.550	.191	2.0788	-1.0486	2.3082	1.1146	3291.6	*****	.373	0.3477	1.3032	3559.3	.1094	.608
4900	6.7078-5	1720.6	2.9960	24.001	.193	2.1072	-1.0513	2.3495	1.1174	3367.8	*****	.383	0.3487	1.3111	3648.1	.1139	.592
5000	6.4289-5	1954.2	3.0432	23.473	.196	2.0891	-1.0518	2.3088	1.1212	3445.9	*****	.397	0.3497	1.3192	3737.8	.1184	.578
5100	6.1718-5	2179.6	3.0879	22.985	.198	2.0248	-1.0500	2.1857	1.1262	3524.8	*****	.413	0.3507	1.3269	3826.1	.1228	.565
5200	5.9394-5	2389.1	3.1286	22.553	.200	1.9236	-1.0462	1.9964	1.1325	3603.1	.9287	.430	0.3516	1.3341	3910.7	.1270	.554
5300	5.7323-5	2577.6	3.1645	22.185	.203	1.8006	-1.0410	1.7684	1.1404	3680.4	.8011	.447	0.3524	1.3405	3990.2	.1308	.546
5400	5.5492-5	2742.5	3.1953	21.882	.205	1.6718	-1.0352	1.5309	1.1500	3756.4	.6781	.463	0.3532	1.3458	4063.6	.1343	.540

TABLE 10.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.067628; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 1.46959 LB/IN2 (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4740-3	-944.5	2.1086	28.906	.094	1.0000	-1.0000	0.2947	1.3040	1894.4	.0374	.741	0.2947	1.3039	1894.4	.0374	.741
1700	2.3285-3	-914.9	2.1266	28.906	.098	1.0000	-1.0000	0.2984	1.2990	1949.0	.0396	.740	0.2984	1.2990	1949.0	.0396	.740
1800	2.1991-3	-884.8	2.1438	28.906	.102	1.0000	-1.0000	0.3019	1.2946	2002.0	.0418	.739	0.3019	1.2946	2002.0	.0418	.739
1900	2.0834-3	-854.5	2.1602	28.906	.106	1.0000	-1.0000	0.3051	1.2906	2053.7	.0439	.738	0.3051	1.2906	2053.7	.0439	.738
2000	1.9792-3	-823.8	2.1759	28.906	.110	1.0000	-1.0000	0.3082	1.2869	2104.0	.0460	.737	0.3081	1.2869	2104.1	.0460	.737
2100	1.8849-3	-792.8	2.1910	28.906	.114	1.0000	-1.0000	0.3112	1.2834	2153.1	.0481	.736	0.3110	1.2835	2153.2	.0480	.736
2200	1.7993-3	-761.6	2.2056	28.905	.117	1.0001	-1.0000	0.3141	1.2801	2200.9	.0501	.735	0.3137	1.2804	2201.2	.0501	.735
2300	1.7210-3	-730.0	2.2196	28.905	.121	1.0002	-1.0000	0.3170	1.2768	2247.5	.0522	.734	0.3163	1.2775	2248.1	.0521	.735
2400	1.6493-3	-698.2	2.2332	28.905	.125	1.0004	-1.0000	0.3200	1.2736	2293.0	.0543	.733	0.3187	1.2748	2294.0	.0541	.734
2500	1.5833-3	-666.0	2.2463	28.904	.128	1.0007	-1.0000	0.3233	1.2703	2337.2	.0565	.732	0.3210	1.2723	2339.1	.0560	.733
2600	1.5223-3	-633.5	2.2590	28.903	.131	1.0012	-1.0000	0.3271	1.2667	2380.2	.0589	.731	0.3232	1.2700	2383.3	.0580	.733
2700	1.4659-3	-600.6	2.2715	28.902	.135	1.0020	-1.0000	0.3316	1.2626	2421.7	.0614	.729	0.3253	1.2678	2426.7	.0599	.732
2800	1.4134-3	-567.1	2.2836	28.899	.138	1.0033	-1.0001	0.3372	1.2579	2461.7	.0642	.726	0.3272	1.2659	2469.4	.0619	.731
2900	1.3644-3	-533.1	2.2956	28.895	.142	1.0052	-1.0001	0.3443	1.2524	2500.0	.0674	.723	0.3290	1.2640	2511.5	.0638	.730
3000	1.3187-3	-498.2	2.3074	28.888	.145	1.0080	-1.0002	0.3534	1.2460	2536.4	.0712	.719	0.3307	1.2624	2553.1	.0657	.729
3100	1.2757-3	-462.3	2.3192	28.879	.148	1.0119	-1.0003	0.3650	1.2385	2571.1	.0757	.714	0.3323	1.2609	2594.2	.0675	.729
3200	1.2353-3	-425.1	2.3310	28.866	.151	1.0173	-1.0005	0.3798	1.2300	2603.8	.0812	.708	0.3338	1.2596	2634.9	.0694	.728
3300	1.1971-3	-386.2	2.3429	28.847	.154	1.0245	-1.0007	0.3983	1.2206	2634.9	.0879	.700	0.3352	1.2584	2675.4	.0712	.726
3400	1.1609-3	-345.3	2.3552	28.822	.157	1.0340	-1.0010	0.4213	1.2105	2664.5	.0962	.690	0.3365	1.2574	2715.7	.0730	.725
3500	1.1264-3	-301.8	2.3678	28.789	.160	1.0461	-1.0013	0.4495	1.1999	2693.1	.1064	.678	0.3377	1.2566	2756.1	.0748	.724
3600	1.0935-3	-255.2	2.3809	28.746	.163	1.0613	-1.0018	0.4834	1.1893	2721.3	.1190	.664	0.3389	1.2561	2796.6	.0766	.723
3700	1.0619-3	-204.9	2.3947	28.690	.166	1.0802	-1.0025	0.5235	1.1790	2749.5	.1346	.647	0.3399	1.2557	2837.6	.0784	.721
3800	1.0314-3	-150.3	2.4092	28.621	.169	1.1030	-1.0033	0.5703	1.1692	2778.2	.1536	.628	0.3408	1.2556	2879.0	.0801	.719
3900	1.0019-3	-90.6	2.4247	28.535	.172	1.1301	-1.0043	0.6239	1.1604	2808.1	.1767	.607	0.3416	1.2558	2921.3	.0819	.717
4000	9.7330-4	-25.3	2.4413	28.430	.175	1.1617	-1.0055	0.6843	1.1525	2839.4	.2047	.584	0.3424	1.2563	2964.5	.0836	.715
4100	9.4537-4	46.5	2.4590	28.304	.177	1.1980	-1.0069	0.7513	1.1457	2872.5	.2382	.560	0.3431	1.2571	3009.0	.0854	.712
4200	9.1802-4	125.2	2.4779	28.156	.180	1.2391	-1.0086	0.8246	1.1400	2907.7	.2779	.534	0.3437	1.2582	3054.8	.0872	.709
4300	8.9117-4	211.6	2.4983	27.983	.182	1.2850	-1.0105	0.9037	1.1353	2945.1	.3248	.508	0.3442	1.2597	3102.3	.0891	.705
4400	8.6473-4	306.1	2.5200	27.784	.185	1.3357	-1.0128	0.9884	1.1315	2984.8	.3792	.482	0.3447	1.2616	3151.7	.0910	.701
4500	8.3865-4	409.4	2.5432	27.559	.187	1.3910	-1.0154	1.0783	1.1286	3027.0	.4415	.458	0.3452	1.2638	3203.2	.0930	.695
4600	8.1287-4	522.0	2.5679	27.305	.190	1.4511	-1.0183	1.1732	1.1265	3071.7	.5116	.435	0.3456	1.2665	3257.1	.0952	.688
4700	7.8735-4	644.2	2.5942	27.023	.192	1.5156	-1.0215	1.2727	1.1250	3119.1	.5886	.415	0.3461	1.2696	3313.5	.0976	.681
4800	7.6208-4	776.6	2.6221	26.712	.194	1.5841	-1.0251	1.3761	1.1241	3169.1	.6708	.398	0.3465	1.2731	3372.6	.1001	.672
4900	7.3706-4	919.5	2.6516	26.373	.196	1.6552	-1.0291	1.4818	1.1238	3222.0	.7551	.385	0.3470	1.2771	3434.8	.1029	.662
5000	7.1230-4	1073.0	2.6826	26.007	.199	1.7270	-1.0332	1.5867	1.1240	3277.8	.8375	.376	0.3475	1.2816	3500.0	.1059	.651
5100	6.8788-4	1236.7	2.7150	25.618	.201	1.7962	-1.0374	1.6863	1.1248	3336.6	.9127	.371	0.3481	1.2865	3568.4	.1092	.640
5200	6.6389-4	1409.9	2.7486	25.209	.203	1.8585	-1.0414	1.7741	1.1260	3398.3	.9751	.369	0.3487	1.2918	3639.9	.1128	.627
5300	6.4048-4	1590.9	2.7831	24.788	.205	1.9086	-1.0450	1.8424	1.1279	3462.7	*****	.371	0.3494	1.2975	3714.0	.1165	.615
5400	6.1782-4	1777.4	2.8179	24.362	.207	1.9415	-1.0479	1.8832	1.1303	3529.4	*****	.375	0.3501	1.3035	3790.1	.1205	.602

TABLE 10.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.067628; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 14.6959 LB/IN² (1.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4740-2	-944.5	1.9504	28.906	.094	1.0000	-1.0000	0.2947	1.3040	1894.4	.0374	.741	0.2947	1.3039	1894.4	.0374	.741
1700	2.3285-2	-914.9	1.9684	28.906	.098	1.0000	-1.0000	0.2984	1.2990	1949.0	.0396	.740	0.2984	1.2990	1949.0	.0396	.740
1800	2.1991-2	-884.8	1.9856	28.906	.102	1.0000	-1.0000	0.3019	1.2946	2002.0	.0418	.739	0.3019	1.2946	2002.0	.0418	.739
1900	2.0834-2	-854.5	2.0020	28.906	.106	1.0000	-1.0000	0.3051	1.2906	2053.7	.0439	.738	0.3051	1.2906	2053.7	.0439	.738
2000	1.9792-2	-823.8	2.0177	28.906	.110	1.0000	-1.0000	0.3082	1.2869	2104.1	.0460	.737	0.3081	1.2869	2104.1	.0460	.737
2100	1.8849-2	-792.9	2.0328	28.906	.114	1.0000	-1.0000	0.3111	1.2835	2153.1	.0480	.736	0.3110	1.2835	2153.2	.0480	.736
2200	1.7993-2	-761.6	2.0474	28.906	.117	1.0000	-1.0000	0.3139	1.2802	2201.0	.0501	.735	0.3137	1.2804	2201.2	.0501	.735
2300	1.7210-2	-730.1	2.0614	28.905	.121	1.0001	-1.0000	0.3166	1.2772	2247.8	.0521	.734	0.3163	1.2775	2248.1	.0521	.735
2400	1.6493-2	-698.3	2.0749	28.905	.125	1.0002	-1.0000	0.3193	1.2742	2293.5	.0542	.734	0.3187	1.2748	2294.0	.0541	.734
2500	1.5833-2	-666.2	2.0880	28.905	.128	1.0003	-1.0000	0.3221	1.2713	2338.2	.0563	.733	0.3210	1.2723	2339.0	.0560	.733
2600	1.5224-2	-633.8	2.1007	28.905	.131	1.0006	-1.0000	0.3251	1.2684	2381.7	.0584	.732	0.3232	1.2699	2383.2	.0580	.733
2700	1.4660-2	-601.2	2.1130	28.904	.135	1.0010	-1.0000	0.3283	1.2653	2424.2	.0606	.731	0.3253	1.2678	2426.6	.0599	.732
2800	1.4136-2	-568.2	2.1250	28.902	.138	1.0016	-1.0000	0.3320	1.2619	2465.4	.0630	.729	0.3272	1.2658	2469.2	.0619	.731
2900	1.3647-2	-534.8	2.1368	28.900	.142	1.0025	-1.0001	0.3363	1.2583	2505.5	.0655	.727	0.3290	1.2640	2511.2	.0638	.730
3000	1.3191-2	-500.9	2.1482	28.897	.145	1.0038	-1.0001	0.3416	1.2541	2544.3	.0682	.725	0.3307	1.2623	2552.5	.0657	.730
3100	1.2763-2	-466.4	2.1595	28.893	.148	1.0056	-1.0001	0.3479	1.2494	2581.7	.0713	.722	0.3324	1.2607	2593.3	.0675	.729
3200	1.2362-2	-431.2	2.1707	28.887	.151	1.0081	-1.0002	0.3557	1.2441	2617.6	.0748	.719	0.3339	1.2593	2633.6	.0694	.728
3300	1.1984-2	-395.2	2.1818	28.878	.154	1.0115	-1.0003	0.3653	1.2380	2652.2	.0789	.715	0.3353	1.2580	2673.5	.0712	.727
3400	1.1627-2	-358.1	2.1929	28.866	.157	1.0159	-1.0004	0.3770	1.2314	2685.4	.0836	.710	0.3366	1.2569	2713.0	.0730	.726
3500	1.1288-2	-319.7	2.2040	28.851	.161	1.0216	-1.0006	0.3911	1.2241	2717.2	.0891	.705	0.3379	1.2558	2752.3	.0748	.725
3600	1.0967-2	-279.8	2.2152	28.830	.164	1.0288	-1.0008	0.4080	1.2163	2748.0	.0956	.698	0.3390	1.2550	2791.3	.0766	.724
3700	1.0661-2	-238.0	2.2267	28.804	.167	1.0377	-1.0011	0.4279	1.2082	2777.9	.1033	.690	0.3401	1.2543	2830.3	.0784	.723
3800	1.0368-2	-194.1	2.2384	28.771	.169	1.0486	-1.0015	0.4512	1.2000	2807.2	.1123	.681	0.3411	1.2537	2869.3	.0801	.722
3900	1.0088-2	-147.7	2.2505	28.730	.172	1.0617	-1.0020	0.4780	1.1919	2836.3	.1229	.670	0.3420	1.2533	2908.4	.0818	.720
4000	9.8188-3	-98.4	2.2629	28.680	.175	1.0771	-1.0025	0.5085	1.1840	2865.4	.1354	.658	0.3428	1.2531	2947.8	.0835	.719
4100	9.5590-3	-45.8	2.2759	28.619	.178	1.0949	-1.0032	0.5426	1.1766	2895.0	.1499	.644	0.3436	1.2531	2987.5	.0852	.717
4200	9.3079-3	10.3	2.2894	28.547	.181	1.1154	-1.0040	0.5802	1.1698	2925.2	.1667	.629	0.3443	1.2532	3027.8	.0869	.716
4300	9.0643-3	70.3	2.3036	28.462	.183	1.1384	-1.0050	0.6213	1.1636	2956.4	.1861	.612	0.3449	1.2536	3068.6	.0886	.714
4400	8.8277-3	134.6	2.3183	28.364	.186	1.1640	-1.0060	0.6654	1.1581	2988.7	.2083	.594	0.3454	1.2542	3110.2	.0903	.711
4500	8.5971-3	203.5	2.3338	28.251	.189	1.1920	-1.0073	0.7122	1.1534	3022.4	.2337	.575	0.3459	1.2550	3152.7	.0920	.709
4600	8.3720-3	277.1	2.3500	28.122	.191	1.2225	-1.0086	0.7612	1.1494	3057.4	.2625	.554	0.3464	1.2561	3196.1	.0938	.706
4700	8.1520-3	355.8	2.3669	27.978	.194	1.2551	-1.0102	0.8122	1.1461	3094.0	.2949	.533	0.3468	1.2573	3240.6	.0956	.702
4800	7.9365-3	439.6	2.3846	27.819	.196	1.2898	-1.0119	0.8647	1.1434	3132.0	.3311	.512	0.3472	1.2589	3286.3	.0974	.699
4900	7.7253-3	528.8	2.4029	27.642	.198	1.3264	-1.0138	0.9185	1.1414	3171.7	.3712	.491	0.3475	1.2606	3333.2	.0993	.694
5000	7.5182-3	623.3	2.4220	27.450	.201	1.3650	-1.0158	0.9733	1.1398	3212.9	.4153	.471	0.3478	1.2626	3381.5	.1012	.690
5100	7.3148-3	723.5	2.4419	27.242	.203	1.4054	-1.0181	1.0291	1.1388	3255.7	.4631	.451	0.3481	1.2649	3431.2	.1033	.685
5200	7.1150-3	829.2	2.4624	27.017	.205	1.4476	-1.0205	1.0858	1.1381	3300.2	.5141	.434	0.3485	1.2673	3482.5	.1054	.679
5300	6.9186-3	940.6	2.4836	26.777	.208	1.4912	-1.0231	1.1431	1.1379	3346.3	.5677	.418	0.3488	1.2701	3535.4	.1077	.672
5400	6.7256-3	1057.8	2.5055	26.521	.210	1.5361	-1.0259	1.2007	1.1380	3394.1	.6227	.405	0.3491	1.2730	3590.0	.1101	.665

TABLE 10.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.067628; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 146.959 LB/IN2 (10.00 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4740-1	-944.5	1.7923	28.906	.094	1.0000	-1.0000	0.2947	1.3039	1894.4	.0374	.741	0.2947	1.3039	1894.4	.0374	.741
1700	2.3285-1	-914.9	1.8102	28.906	.098	1.0000	-1.0000	0.2984	1.2990	1949.0	.0396	.740	0.2984	1.2990	1949.0	.0396	.740
1800	2.1991-1	-884.8	1.8274	28.906	.102	1.0000	-1.0000	0.3019	1.2946	2002.0	.0418	.739	0.3019	1.2946	2002.0	.0418	.739
1900	2.0834-1	-854.5	1.8438	28.906	.106	1.0000	-1.0000	0.3051	1.2906	2053.7	.0439	.738	0.3051	1.2906	2053.7	.0439	.738
2000	1.9792-1	-823.8	1.8595	28.906	.110	1.0000	-1.0000	0.3082	1.2869	2104.1	.0460	.737	0.3081	1.2869	2104.1	.0460	.737
2100	1.8850-1	-792.9	1.8746	28.906	.114	1.0000	-1.0000	0.3110	1.2835	2153.2	.0480	.736	0.3110	1.2835	2153.2	.0480	.736
2200	1.7993-1	-761.6	1.8892	28.906	.117	1.0000	-1.0000	0.3138	1.2803	2201.1	.0501	.735	0.3137	1.2804	2201.2	.0501	.735
2300	1.7210-1	-730.1	1.9032	28.906	.121	1.0000	-1.0000	0.3165	1.2773	2248.0	.0521	.735	0.3163	1.2775	2248.1	.0521	.735
2400	1.6493-1	-698.3	1.9167	28.905	.125	1.0001	-1.0000	0.3190	1.2745	2293.8	.0541	.734	0.3187	1.2748	2294.0	.0541	.734
2500	1.5833-1	-666.3	1.9298	28.905	.128	1.0002	-1.0000	0.3216	1.2718	2338.6	.0562	.733	0.3210	1.2723	2339.0	.0560	.733
2600	1.5224-1	-634.0	1.9424	28.905	.131	1.0003	-1.0000	0.3241	1.2692	2382.4	.0582	.732	0.3232	1.2699	2383.2	.0580	.733
2700	1.4660-1	-601.5	1.9547	28.905	.135	1.0005	-1.0000	0.3267	1.2665	2425.3	.0603	.731	0.3253	1.2678	2426.5	.0599	.732
2800	1.4136-1	-568.7	1.9667	28.904	.138	1.0007	-1.0000	0.3295	1.2639	2467.3	.0624	.730	0.3272	1.2658	2469.1	.0619	.731
2900	1.3648-1	-535.6	1.9783	28.903	.142	1.0012	-1.0000	0.3326	1.2611	2508.2	.0646	.729	0.3290	1.2639	2511.0	.0638	.730
3000	1.3193-1	-502.1	1.9896	28.902	.145	1.0018	-1.0000	0.3360	1.2582	2548.2	.0669	.727	0.3307	1.2622	2552.3	.0657	.730
3100	1.2766-1	-468.3	2.0007	28.900	.148	1.0027	-1.0001	0.3399	1.2550	2587.1	.0693	.726	0.3324	1.2606	2592.9	.0675	.729
3200	1.2366-1	-434.1	2.0115	28.897	.151	1.0038	-1.0001	0.3444	1.2515	2625.0	.0720	.724	0.3339	1.2592	2633.0	.0694	.728
3300	1.1990-1	-399.4	2.0222	28.893	.154	1.0054	-1.0001	0.3498	1.2476	2661.8	.0748	.722	0.3353	1.2578	2672.6	.0712	.727
3400	1.1635-1	-364.1	2.0328	28.887	.158	1.0075	-1.0002	0.3561	1.2434	2697.5	.0780	.719	0.3367	1.2566	2711.7	.0730	.726
3500	1.1300-1	-328.2	2.0432	28.880	.161	1.0102	-1.0003	0.3636	1.2387	2732.1	.0815	.716	0.3379	1.2555	2750.5	.0748	.725
3600	1.0982-1	-291.4	2.0535	28.870	.164	1.0137	-1.0004	0.3724	1.2336	2765.6	.0855	.713	0.3391	1.2545	2788.8	.0766	.724
3700	1.0681-1	-253.6	2.0639	28.858	.167	1.0179	-1.0005	0.3827	1.2282	2798.1	.0899	.709	0.3402	1.2536	2826.9	.0784	.723
3800	1.0394-1	-214.8	2.0742	28.842	.170	1.0231	-1.0007	0.3946	1.2224	2829.8	.0950	.704	0.3412	1.2528	2864.7	.0801	.722
3900	1.0120-1	-174.7	2.0847	28.822	.172	1.0294	-1.0009	0.4083	1.2164	2860.7	.1007	.699	0.3422	1.2521	2902.4	.0818	.721
4000	9.8592-2	-133.1	2.0952	28.798	.175	1.0369	-1.0012	0.4238	1.2103	2891.0	.1072	.694	0.3431	1.2516	2940.0	.0835	.720
4100	9.6089-2	-89.8	2.1059	28.769	.178	1.0457	-1.0015	0.4414	1.2041	2920.9	.1145	.687	0.3439	1.2511	2977.5	.0852	.719
4200	9.3687-2	-44.7	2.1167	28.734	.181	1.0558	-1.0019	0.4609	1.1980	2950.6	.1228	.679	0.3446	1.2508	3015.0	.0869	.718
4300	9.1376-2	2.4	2.1278	28.692	.184	1.0674	-1.0024	0.4824	1.1920	2980.3	.1321	.671	0.3453	1.2507	3052.7	.0886	.716
4400	8.9148-2	51.8	2.1392	28.644	.186	1.0804	-1.0029	0.5058	1.1864	3010.2	.1426	.662	0.3460	1.2506	3090.6	.0902	.715
4500	8.6996-2	103.6	2.1508	28.587	.189	1.0949	-1.0035	0.5310	1.1811	3040.4	.1542	.651	0.3465	1.2507	3128.7	.0919	.713
4600	8.4913-2	158.1	2.1628	28.523	.192	1.1109	-1.0042	0.5578	1.1763	3071.1	.1672	.640	0.3471	1.2509	3167.1	.0935	.712
4700	8.2893-2	215.2	2.1751	28.450	.194	1.1283	-1.0050	0.5860	1.1719	3102.5	.1815	.628	0.3475	1.2513	3206.0	.0952	.710
4800	8.0931-2	275.3	2.1877	28.368	.197	1.1469	-1.0058	0.6155	1.1680	3134.6	.1973	.614	0.3480	1.2518	3245.3	.0969	.708
4900	7.9024-2	338.4	2.2007	28.276	.200	1.1668	-1.0068	0.6457	1.1645	3167.6	.2146	.600	0.3484	1.2525	3285.1	.0985	.706
5000	7.7167-2	404.5	2.2141	28.175	.202	1.1877	-1.0078	0.6766	1.1616	3201.5	.2335	.585	0.3487	1.2533	3325.4	.1002	.703
5100	7.5357-2	473.7	2.2278	28.064	.204	1.2095	-1.0089	0.7079	1.1592	3236.3	.2540	.570	0.3490	1.2543	3366.4	.1018	.701
5200	7.3592-2	546.1	2.2418	27.944	.207	1.2321	-1.0101	0.7392	1.1572	3272.0	.2763	.554	0.3493	1.2554	3408.1	.1035	.698
5300	7.1869-2	621.5	2.2562	27.815	.209	1.2554	-1.0114	0.7704	1.1556	3308.7	.3003	.537	0.3496	1.2566	3450.4	.1052	.695
5400	7.0186-2	700.1	2.2709	27.676	.212	1.2793	-1.0128	0.8013	1.1544	3346.4	.3260	.520	0.3498	1.2580	3493.4	.1070	.692

TABLE 10.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.067628; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 734.797 LB/IN2 (50.00 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2370 0	-944.5	1.6817	28.906	.094	1.0000	-1.0000	0.2947	1.3040	1894.4	.0374	.741	0.2947	1.3039	1894.4	.0374	.741
1700	1.1642 0	-914.9	1.6997	28.906	.098	1.0000	-1.0000	0.2984	1.2990	1949.0	.0396	.740	0.2984	1.2990	1949.0	.0396	.740
1800	1.0996 0	-884.8	1.7168	28.906	.102	1.0000	-1.0000	0.3019	1.2946	2002.0	.0418	.739	0.3019	1.2946	2002.0	.0418	.739
1900	1.0417 0	-854.5	1.7332	28.906	.106	1.0000	-1.0000	0.3051	1.2906	2053.7	.0439	.738	0.3051	1.2906	2053.7	.0439	.738
2000	9.8960-1	-823.8	1.7490	28.906	.110	1.0000	-1.0000	0.3082	1.2869	2104.1	.0460	.737	0.3081	1.2869	2104.1	.0460	.737
2100	9.4248-1	-792.9	1.7641	28.906	.114	1.0000	-1.0000	0.3110	1.2835	2153.2	.0480	.736	0.3110	1.2835	2153.2	.0480	.736
2200	8.9964-1	-761.6	1.7786	28.906	.117	1.0000	-1.0000	0.3138	1.2803	2201.1	.0501	.735	0.3137	1.2804	2201.2	.0501	.735
2300	8.6052-1	-730.1	1.7926	28.906	.121	1.0000	-1.0000	0.3164	1.2774	2248.0	.0521	.735	0.3163	1.2775	2248.1	.0521	.735
2400	8.2466-1	-698.3	1.8061	28.906	.125	1.0000	-1.0000	0.3189	1.2746	2293.9	.0541	.734	0.3187	1.2748	2294.0	.0541	.734
2500	7.9167-1	-666.3	1.8192	28.905	.128	1.0001	-1.0000	0.3214	1.2720	2338.8	.0561	.733	0.3210	1.2723	2339.0	.0560	.733
2600	7.6122-1	-634.1	1.8318	28.905	.131	1.0002	-1.0000	0.3238	1.2695	2382.7	.0581	.732	0.3232	1.2699	2383.2	.0580	.733
2700	7.3302-1	-601.6	1.8441	28.905	.135	1.0003	-1.0000	0.3262	1.2670	2425.8	.0601	.732	0.3253	1.2678	2426.5	.0599	.732
2800	7.0683-1	-568.8	1.8560	28.905	.138	1.0004	-1.0000	0.3286	1.2646	2468.0	.0622	.731	0.3272	1.2658	2469.1	.0619	.731
2900	6.8245-1	-535.9	1.8676	28.904	.142	1.0007	-1.0000	0.3312	1.2622	2509.3	.0643	.730	0.3290	1.2639	2511.0	.0638	.730
3000	6.5968-1	-502.6	1.8789	28.903	.145	1.0011	-1.0000	0.3339	1.2597	2549.7	.0664	.728	0.3308	1.2622	2552.2	.0657	.730
3100	6.3837-1	-469.1	1.8899	28.902	.148	1.0016	-1.0000	0.3369	1.2571	2589.2	.0686	.727	0.3324	1.2606	2592.8	.0675	.729
3200	6.1838-1	-435.2	1.9006	28.900	.151	1.0023	-1.0001	0.3403	1.2544	2627.9	.0709	.726	0.3339	1.2591	2632.8	.0694	.728
3300	5.9960-1	-401.0	1.9111	28.898	.154	1.0033	-1.0001	0.3441	1.2514	2665.6	.0734	.724	0.3353	1.2578	2672.3	.0712	.727
3400	5.8189-1	-366.4	1.9215	28.895	.158	1.0045	-1.0001	0.3485	1.2482	2702.4	.0760	.722	0.3367	1.2565	2711.3	.0730	.726
3500	5.6518-1	-331.3	1.9316	28.890	.161	1.0061	-1.0002	0.3535	1.2448	2738.3	.0789	.720	0.3379	1.2553	2749.8	.0748	.725
3600	5.4937-1	-295.6	1.9417	28.884	.164	1.0082	-1.0002	0.3593	1.2411	2773.2	.0819	.718	0.3391	1.2543	2787.9	.0766	.724
3700	5.3439-1	-259.4	1.9516	28.877	.167	1.0107	-1.0003	0.3660	1.2370	2807.3	.0853	.715	0.3402	1.2533	2825.7	.0784	.724
3800	5.2015-1	-222.4	1.9615	28.867	.170	1.0138	-1.0004	0.3737	1.2327	2840.5	.0890	.712	0.3413	1.2525	2863.1	.0801	.723
3900	5.0661-1	-184.6	1.9713	28.856	.173	1.0176	-1.0005	0.3824	1.2282	2872.9	.0930	.709	0.3423	1.2517	2900.2	.0818	.722
4000	4.9370-1	-145.9	1.9811	28.841	.175	1.0221	-1.0007	0.3923	1.2235	2904.6	.0976	.706	0.3432	1.2510	2937.1	.0835	.721
4100	4.8136-1	-106.1	1.9909	28.824	.178	1.0274	-1.0009	0.4034	1.2186	2935.7	.1025	.702	0.3440	1.2504	2973.8	.0852	.720
4200	4.6956-1	-65.1	2.0008	28.803	.181	1.0336	-1.0011	0.4158	1.2136	2966.3	.1081	.697	0.3448	1.2500	3010.4	.0869	.719
4300	4.5824-1	-22.9	2.0107	28.777	.184	1.0407	-1.0014	0.4295	1.2086	2996.5	.1142	.692	0.3455	1.2496	3046.9	.0886	.717
4400	4.4736-1	20.8	2.0208	28.748	.187	1.0487	-1.0017	0.4445	1.2037	3026.5	.1209	.686	0.3462	1.2493	3083.3	.0902	.716
4500	4.3690-1	66.1	2.0309	28.714	.189	1.0578	-1.0021	0.4608	1.1988	3056.4	.1283	.680	0.3468	1.2491	3119.8	.0919	.715
4600	4.2681-1	113.0	2.0413	28.674	.192	1.0679	-1.0025	0.4782	1.1942	3086.3	.1365	.673	0.3474	1.2490	3156.3	.0935	.713
4700	4.1707-1	161.7	2.0517	28.629	.195	1.0789	-1.0030	0.4968	1.1898	3116.4	.1454	.665	0.3479	1.2490	3193.0	.0952	.712
4800	4.0766-1	212.4	2.0624	28.578	.197	1.0910	-1.0035	0.5164	1.1857	3146.7	.1551	.657	0.3484	1.2492	3229.8	.0968	.710
4900	3.9854-1	265.0	2.0733	28.521	.200	1.1039	-1.0041	0.5368	1.1819	3177.5	.1655	.648	0.3488	1.2494	3266.9	.0984	.709
5000	3.8969-1	319.8	2.0843	28.457	.203	1.1177	-1.0048	0.5579	1.1785	3208.7	.1768	.639	0.3492	1.2497	3304.2	.1000	.707
5100	3.8111-1	376.6	2.0956	28.387	.205	1.1323	-1.0055	0.5795	1.1754	3240.4	.1890	.629	0.3496	1.2502	3341.8	.1016	.705
5200	3.7277-1	435.7	2.1070	28.309	.208	1.1476	-1.0063	0.6015	1.1727	3272.7	.2020	.618	0.3499	1.2507	3379.7	.1032	.704
5300	3.6465-1	496.9	2.1187	28.226	.210	1.1634	-1.0071	0.6235	1.1704	3305.6	.2158	.607	0.3502	1.2514	3418.0	.1048	.702
5400	3.5675-1	560.4	2.1306	28.135	.212	1.1798	-1.0080	0.6455	1.1685	3339.2	.2306	.595	0.3505	1.2521	3456.7	.1064	.700

TABLE 10C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.067628; EQUIV.RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000;
 DRY AIR

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES				COND BTU/ FT HR R	PRAN	T R	
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLVLT	DLVLP	CP BTU/ LB R	(GAM)S				VS FT/S
PRESSURE = 0.01 ATM																
360	1.264-3	-1378.6	1.6488	28.906	0.2527	1.162-2	30.539	.0311	1.000	-1.000	0.2322	1.3889	902	.0098	.734	360
400	1.134-3	-1366.6	1.6803	28.906	0.4066	1.044-3	30.497	.0340	1.000	-1.000	0.2335	1.3866	951	.0109	.731	400
440	9.905-4	-1329.4	1.7678	28.906	2.0153	9.339-4	30.006	.0358	1.000	-1.000	0.2394	1.3821	1004	.0116	.740	440
PRESSURE = 0.10 ATM																
360	1.265-2	-1378.7	1.5110	28.906	0.2446	1.162-2	30.540	.0311	1.000	-1.000	0.2322	1.3889	902	.0098	.734	360
400	1.138-2	-1368.7	1.5374	28.906	0.2635	1.045-2	30.536	.0341	1.000	-1.000	0.2331	1.3868	950	.0109	.730	400
440	1.030-2	-1356.1	1.5673	28.906	0.4148	9.489-3	30.487	.0369	1.000	-1.000	0.2346	1.3844	997	.0119	.727	440
480	9.155-3	-1324.9	1.6344	28.906	1.4391	8.589-3	30.105	.0388	1.000	-1.000	0.2394	1.3803	1046	.0126	.735	480
520	7.612-3	-1239.4	1.8061	28.906	0.2531	7.612-3	28.906	.0389	1.000	-1.000	0.2531	1.3725	1108	.0129	.761	520
PRESSURE = 1.00 ATM																
360	1.264-1	-1378.7	1.3734	28.906	0.2438	1.162-1	30.541	.0311	1.000	-1.000	0.2322	1.3889	902	.0098	.734	360
400	1.138-1	-1368.9	1.3993	28.906	0.2493	1.046-1	30.540	.0341	1.000	-1.000	0.2331	1.3869	950	.0109	.730	400
440	1.034-1	-1358.6	1.4237	28.906	0.2680	9.504-2	30.535	.0370	1.000	-1.000	0.2341	1.3846	996	.0119	.726	440
480	9.451-2	-1346.4	1.4502	28.906	0.3671	8.701-2	30.497	.0397	1.000	-1.000	0.2355	1.3822	1040	.0129	.725	480
520	8.600-2	-1315.4	1.5126	28.906	0.6645	7.985-2	30.321	.0420	1.000	-1.000	0.2383	1.3790	1084	.0138	.728	520
537	8.219-2	-1302.4	1.5371	28.906	0.9132	7.694-2	30.151	.0427	1.000	-1.000	0.2405	1.3772	1104	.0140	.731	537
560	7.602-2	-1274.7	1.5876	28.906	1.5308	7.270-2	29.728	.0433	1.000	-1.000	0.2455	1.3739	1134	.0143	.741	560
600	6.597-2	-1219.1	1.6843	28.906	0.2555	6.597-2	28.906	.0440	1.000	-1.000	0.2555	1.3678	1188	.0148	.760	600
PRESSURE = 10.00 ATM																
360	1.262 0	-1378.7	1.2358	28.906	0.2437	1.162 0	30.541	.0311	1.000	-1.000	0.2322	1.3889	902	.0098	.734	360
400	1.136 0	-1368.9	1.2617	28.906	0.2479	1.046 0	30.541	.0341	1.000	-1.000	0.2331	1.3869	950	.0109	.730	400
440	1.033 0	-1358.9	1.2856	28.906	0.2534	9.505-1	30.540	.0370	1.000	-1.000	0.2341	1.3847	996	.0119	.726	440
480	9.469-1	-1348.5	1.3081	28.906	0.2671	8.712-1	30.536	.0398	1.000	-1.000	0.2351	1.3823	1039	.0129	.724	480
520	8.730-1	-1324.6	1.3563	28.906	0.3338	8.037-1	30.519	.0425	1.000	-1.000	0.2364	1.3799	1081	.0139	.723	520
537	8.448-1	-1318.9	1.3671	28.906	0.3567	7.783-1	30.502	.0435	1.000	-1.000	0.2370	1.3788	1098	.0143	.723	537
560	8.069-1	-1310.0	1.3833	28.906	0.4081	7.449-1	30.459	.0449	1.000	-1.000	0.2381	1.3771	1122	.0148	.724	560
600	7.432-1	-1290.7	1.4166	28.906	0.5825	6.914-1	30.294	.0471	1.000	-1.000	0.2409	1.3739	1163	.0156	.729	600
640	6.748-1	-1260.8	1.4646	28.906	0.9539	6.399-1	29.904	.0487	1.000	-1.000	0.2461	1.3696	1207	.0162	.739	640
680	5.922-1	-1209.0	1.5430	28.906	1.7416	5.860-1	29.096	.0494	1.000	-1.000	0.2560	1.3636	1259	.0167	.755	680
PRESSURE = 50.00 ATM																
360	6.267 0	-1378.7	1.1397	28.906	0.2437	5.809 0	30.541	.0311	1.000	-1.000	0.2322	1.3889	902	.0098	.734	360
400	5.645 0	-1368.9	1.1656	28.906	0.2477	5.228 0	30.541	.0341	1.000	-1.000	0.2331	1.3869	950	.0109	.730	400
440	5.136 0	-1358.9	1.1894	28.906	0.2521	4.753 0	30.541	.0370	1.000	-1.000	0.2341	1.3847	996	.0119	.726	440
480	4.710 0	-1348.7	1.2116	28.906	0.2583	4.356 0	30.540	.0398	1.000	-1.000	0.2351	1.3824	1039	.0129	.723	480
520	4.351 0	-1325.4	1.2585	28.906	0.3054	4.021 0	30.536	.0425	1.000	-1.000	0.2362	1.3800	1081	.0139	.722	520
537	4.216 0	-1320.3	1.2682	28.906	0.3102	3.896 0	30.533	.0436	1.000	-1.000	0.2367	1.3789	1098	.0143	.722	537
560	4.038 0	-1313.0	1.2816	28.906	0.3207	3.732 0	30.524	.0451	1.000	-1.000	0.2374	1.3774	1121	.0148	.723	560
600	3.761 0	-1299.5	1.3048	28.906	0.3549	3.480 0	30.491	.0475	1.000	-1.000	0.2389	1.3747	1160	.0157	.725	600
640	3.505 0	-1284.1	1.3296	28.906	0.4215	3.254 0	30.413	.0498	1.000	-1.000	0.2409	1.3718	1198	.0165	.727	640
680	3.258 0	-1265.1	1.3583	28.906	0.5386	3.046 0	30.252	.0519	1.000	-1.000	0.2438	1.3685	1237	.0173	.731	680
720	3.005 0	-1240.0	1.3941	28.906	0.7319	2.848 0	29.952	.0536	1.000	-1.000	0.2482	1.3645	1277	.0180	.737	720
760	2.729 0	-1205.0	1.4414	28.906	1.0449	2.653 0	29.444	.0548	1.000	-1.000	0.2550	1.3597	1321	.0187	.747	760

TABLE 11.1D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 0.14696 LB/IN² (0.01 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0990-3	-1276.5	1.8789	28.892	.028	1.0000	-1.0000	0.2495	1.3803	924.7	.0089	.777	0.2495	1.3803	924.7	.0089	.777
380	1.0412-3	-1271.5	1.8924	28.892	.029	1.0000	-1.0000	0.2500	1.3793	949.7	.0095	.772	0.2500	1.3793	949.7	.0095	.772
400	9.8913-4	-1266.5	1.9052	28.892	.031	1.0000	-1.0000	0.2505	1.3782	974.0	.0100	.768	0.2505	1.3782	974.0	.0100	.768
420	9.4203-4	-1261.5	1.9174	28.892	.032	1.0000	-1.0000	0.2511	1.3770	997.6	.0105	.765	0.2510	1.3770	997.6	.0105	.765
440	8.9921-4	-1256.5	1.9291	28.892	.034	1.0000	-1.0000	0.2516	1.3758	1020.7	.0111	.762	0.2516	1.3758	1020.7	.0111	.762
460	8.6011-4	-1251.5	1.9403	28.892	.035	1.0000	-1.0000	0.2523	1.3745	1043.1	.0116	.759	0.2522	1.3746	1043.1	.0116	.760
480	8.2428-4	-1246.4	1.9511	28.892	.036	1.0000	-1.0000	0.2529	1.3732	1065.0	.0121	.757	0.2528	1.3733	1065.1	.0121	.758
500	7.9130-4	-1241.3	1.9614	28.892	.038	1.0001	-1.0000	0.2536	1.3718	1086.4	.0126	.755	0.2535	1.3720	1086.5	.0126	.756
520	7.6086-4	-1236.3	1.9714	28.892	.039	1.0001	-1.0000	0.2544	1.3703	1107.3	.0132	.753	0.2542	1.3707	1107.5	.0131	.755
537	7.3723-4	-1232.0	1.9794	28.892	.040	1.0002	-1.0000	0.2552	1.3689	1124.4	.0136	.752	0.2547	1.3696	1124.7	.0135	.755
540	7.3268-4	-1231.2	1.9810	28.892	.040	1.0002	-1.0000	0.2553	1.3686	1127.7	.0137	.751	0.2548	1.3693	1128.1	.0136	.755
560	7.0651-4	-1226.0	1.9903	28.891	.042	1.0004	-1.0000	0.2563	1.3667	1147.7	.0142	.749	0.2555	1.3680	1148.2	.0141	.755
580	6.8213-4	-1220.9	1.9993	28.891	.043	1.0006	-1.0000	0.2576	1.3646	1167.1	.0148	.746	0.2563	1.3666	1167.9	.0145	.755
600	6.5938-4	-1215.7	2.0081	28.890	.044	1.0010	-1.0000	0.2591	1.3621	1185.9	.0154	.741	0.2570	1.3651	1187.3	.0150	.755
620	6.3808-4	-1210.5	2.0166	28.889	.045	1.0016	-1.0001	0.2610	1.3591	1204.3	.0161	.734	0.2578	1.3637	1206.3	.0155	.755
640	6.1810-4	-1205.3	2.0249	28.887	.047	1.0024	-1.0001	0.2633	1.3555	1222.0	.0169	.725	0.2585	1.3622	1225.0	.0160	.755
660	5.9931-4	-1200.0	2.0331	28.884	.048	1.0036	-1.0001	0.2663	1.3513	1239.0	.0179	.712	0.2593	1.3608	1243.4	.0164	.754
680	5.8161-4	-1194.6	2.0411	28.880	.049	1.0053	-1.0002	0.2700	1.3462	1255.4	.0190	.696	0.2602	1.3593	1261.4	.0169	.753
700	5.6489-4	-1189.2	2.0490	28.875	.050	1.0076	-1.0003	0.2747	1.3403	1271.0	.0204	.677	0.2610	1.3578	1279.3	.0174	.752
720	5.4906-4	-1183.6	2.0568	28.868	.051	1.0106	-1.0004	0.2805	1.3334	1285.9	.0220	.656	0.2619	1.3563	1296.9	.0179	.751
740	5.3404-4	-1178.0	2.0646	28.858	.053	1.0145	-1.0006	0.2878	1.3255	1300.0	.0239	.633	0.2628	1.3548	1314.3	.0184	.750
760	5.1975-4	-1172.1	2.0724	28.845	.054	1.0195	-1.0008	0.2966	1.3166	1313.3	.0262	.608	0.2637	1.3533	1331.5	.0189	.749
780	5.0612-4	-1166.1	2.0802	28.828	.055	1.0258	-1.0011	0.3072	1.3070	1326.0	.0288	.584	0.2647	1.3519	1348.6	.0194	.747
800	4.9310-4	-1159.8	2.0881	28.807	.056	1.0335	-1.0014	0.3198	1.2967	1338.1	.0319	.560	0.2657	1.3504	1365.5	.0199	.745
820	4.8063-4	-1153.3	2.0962	28.780	.057	1.0428	-1.0019	0.3345	1.2861	1349.8	.0354	.539	0.2667	1.3490	1382.4	.0205	.743
840	4.6864-4	-1146.4	2.1045	28.746	.058	1.0537	-1.0024	0.3513	1.2754	1361.2	.0392	.521	0.2678	1.3476	1399.2	.0210	.741
860	4.5710-4	-1139.2	2.1129	28.706	.059	1.0662	-1.0030	0.3703	1.2648	1372.6	.0433	.507	0.2690	1.3463	1416.1	.0216	.738
880	4.4596-4	-1131.6	2.1217	28.658	.060	1.0803	-1.0037	0.3912	1.2547	1384.1	.0475	.497	0.2702	1.3450	1433.0	.0222	.735
900	4.3519-4	-1123.6	2.1307	28.601	.061	1.0956	-1.0045	0.4137	1.2453	1395.8	.0517	.491	0.2714	1.3437	1449.9	.0228	.731
920	4.2476-4	-1115.0	2.1401	28.536	.062	1.1119	-1.0054	0.4374	1.2367	1408.0	.0558	.489	0.2727	1.3426	1467.0	.0234	.727
940	4.1465-4	-1106.1	2.1497	28.462	.063	1.1286	-1.0062	0.4615	1.2290	1420.6	.0595	.492	0.2741	1.3415	1484.2	.0241	.722
960	4.0484-4	-1096.6	2.1597	28.380	.065	1.1449	-1.0071	0.4852	1.2224	1433.8	.0627	.500	0.2755	1.3405	1501.5	.0248	.717
980	3.9533-4	-1086.7	2.1699	28.291	.066	1.1600	-1.0080	0.5074	1.2168	1447.6	.0651	.511	0.2769	1.3396	1518.9	.0255	.712
1000	3.8613-4	-1076.3	2.1804	28.196	.067	1.1725	-1.0087	0.5267	1.2124	1462.1	.0667	.526	0.2784	1.3387	1536.4	.0263	.706
1020	3.7723-4	-1065.6	2.1910	28.098	.068	1.1811	-1.0092	0.5411	1.2092	1477.3	.0671	.546	0.2798	1.3380	1554.0	.0270	.701
1040	3.6866-4	-1054.7	2.2016	27.998	.069	1.1839	-1.0094	0.5482	1.2076	1493.4	.0662	.568	0.2812	1.3373	1571.6	.0277	.696
1060	3.6045-4	-1043.8	2.2120	27.901	.070	1.1787	-1.0092	0.5449	1.2082	1510.7	.0638	.594	0.2826	1.3366	1589.0	.0285	.691
1080	3.5264-4	-1033.0	2.2221	27.811	.071	1.1636	-1.0084	0.5281	1.2116	1529.5	.0600	.622	0.2839	1.3360	1606.1	.0292	.687
1100	3.4527-4	-1022.7	2.2315	27.734	.072	1.1381	-1.0071	0.4968	1.2188	1550.3	.0549	.648	0.2851	1.3353	1622.7	.0299	.683
1120	3.3836-4	-1013.2	2.2401	27.673	.072	1.1055	-1.0055	0.4551	1.2304	1573.5	.0493	.669	0.2862	1.3346	1638.8	.0305	.681
1140	3.3190-4	-1004.5	2.2477	27.630	.073	1.0724	-1.0038	0.4121	1.2450	1598.1	.0444	.681	0.2872	1.3338	1654.1	.0310	.679

TABLE 11.1D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
 (ONLY GAS PHASE PERMITTED)

 FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 0.14696 LB/IN² (0.01 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.2585-4	-996.7	2.2546	27.602	.074	1.0452	-1.0024	0.3769	1.2597	1622.4	.0409	.686	0.2881	1.3328	1668.8	.0316	.679
1180	3.2013-4	-989.4	2.2608	27.585	.075	1.0264	-1.0014	0.3530	1.2715	1644.4	.0387	.686	0.2889	1.3318	1683.0	.0320	.679
1200	3.1469-4	-982.5	2.2666	27.576	.076	1.0149	-1.0008	0.3387	1.2791	1663.6	.0377	.684	0.2897	1.3308	1696.9	.0325	.679
1220	3.0947-4	-975.8	2.2721	27.571	.077	1.0083	-1.0004	0.3311	1.2833	1680.3	.0373	.683	0.2905	1.3297	1710.4	.0329	.679
1240	3.0445-4	-969.2	2.2775	27.568	.078	1.0046	-1.0002	0.3273	1.2852	1695.3	.0373	.683	0.2912	1.3286	1723.8	.0334	.680
1260	2.9960-4	-962.7	2.2827	27.566	.079	1.0025	-1.0001	0.3256	1.2858	1709.4	.0376	.682	0.2920	1.3276	1737.0	.0338	.681
1280	2.9491-4	-956.2	2.2878	27.565	.080	1.0014	-1.0001	0.3250	1.2857	1722.9	.0379	.682	0.2927	1.3265	1750.0	.0342	.681
1300	2.9037-4	-949.7	2.2929	27.565	.081	1.0008	-1.0000	0.3250	1.2853	1736.0	.0384	.682	0.2934	1.3254	1762.9	.0346	.682
1320	2.8597-4	-943.2	2.2978	27.565	.081	1.0005	-1.0000	0.3253	1.2847	1749.0	.0388	.683	0.2941	1.3244	1775.7	.0351	.683
1340	2.8170-4	-936.7	2.3027	27.565	.082	1.0003	-1.0000	0.3257	1.2842	1761.8	.0392	.683	0.2949	1.3233	1788.4	.0355	.684
1360	2.7755-4	-930.2	2.3076	27.564	.083	1.0002	-1.0000	0.3262	1.2836	1774.5	.0397	.683	0.2956	1.3223	1801.0	.0359	.684
1380	2.7353-4	-923.6	2.3123	27.564	.084	1.0001	-1.0000	0.3266	1.2831	1787.1	.0401	.683	0.2963	1.3213	1813.5	.0363	.685
1400	2.6962-4	-917.1	2.3170	27.564	.085	1.0001	-1.0000	0.3270	1.2826	1799.7	.0406	.684	0.2970	1.3202	1825.9	.0367	.686
1420	2.6582-4	-910.6	2.3217	27.564	.086	1.0000	-1.0000	0.3273	1.2822	1812.2	.0410	.684	0.2977	1.3192	1838.2	.0372	.686
1440	2.6213-4	-904.0	2.3262	27.564	.086	1.0000	-1.0000	0.3277	1.2818	1824.7	.0414	.684	0.2984	1.3182	1850.4	.0376	.687
1460	2.5854-4	-897.4	2.3308	27.564	.087	1.0000	-1.0000	0.3280	1.2815	1837.1	.0418	.684	0.2991	1.3173	1862.5	.0380	.688
1480	2.5505-4	-890.9	2.3352	27.564	.088	1.0000	-1.0000	0.3282	1.2812	1849.4	.0423	.685	0.2998	1.3163	1874.6	.0384	.688
1500	2.5165-4	-884.3	2.3396	27.564	.089	1.0000	-1.0000	0.3285	1.2810	1861.7	.0427	.685	0.3005	1.3153	1886.5	.0388	.689
1520	2.4834-4	-877.7	2.3440	27.564	.090	1.0000	-1.0000	0.3287	1.2807	1873.9	.0430	.686	0.3012	1.3144	1898.3	.0392	.690
1540	2.4511-4	-871.2	2.3483	27.564	.091	1.0000	-1.0000	0.3289	1.2805	1886.0	.0434	.686	0.3019	1.3134	1910.1	.0396	.691
1560	2.4197-4	-864.6	2.3525	27.564	.091	1.0000	-1.0000	0.3290	1.2803	1898.1	.0438	.686	0.3026	1.3125	1921.8	.0400	.691
1580	2.3891-4	-858.0	2.3567	27.564	.092	1.0000	-1.0000	0.3292	1.2802	1910.1	.0442	.687	0.3033	1.3116	1933.4	.0404	.692
1600	2.3592-4	-851.4	2.3609	27.564	.093	1.0000	-1.0000	0.3293	1.2800	1922.0	.0446	.687	0.3039	1.3107	1944.9	.0408	.693
1620	2.3301-4	-844.8	2.3650	27.564	.094	1.0000	-1.0000	0.3294	1.2799	1933.9	.0450	.687	0.3046	1.3098	1956.4	.0412	.693
1640	2.3017-4	-838.2	2.3690	27.564	.095	1.0000	-1.0000	0.3296	1.2798	1945.7	.0453	.688	0.3053	1.3089	1967.7	.0416	.694
1660	2.2739-4	-831.7	2.3730	27.564	.095	1.0000	-1.0000	0.3297	1.2797	1957.5	.0457	.688	0.3059	1.3081	1979.1	.0420	.694
1680	2.2469-4	-825.1	2.3769	27.564	.096	1.0000	-1.0000	0.3298	1.2795	1969.1	.0461	.689	0.3066	1.3072	1990.3	.0424	.695
1700	2.2204-4	-818.5	2.3808	27.564	.097	1.0000	-1.0000	0.3299	1.2794	1980.7	.0464	.689	0.3072	1.3064	2001.5	.0428	.696
1720	2.1946-4	-811.9	2.3847	27.564	.098	1.0000	-1.0000	0.3300	1.2793	1992.3	.0468	.689	0.3078	1.3055	2012.6	.0432	.696
1740	2.1694-4	-805.3	2.3885	27.564	.099	1.0000	-1.0000	0.3300	1.2792	2003.7	.0471	.690	0.3085	1.3047	2023.6	.0436	.697
1760	2.1447-4	-798.7	2.3923	27.564	.099	1.0000	-1.0000	0.3301	1.2791	2015.2	.0475	.690	0.3091	1.3039	2034.6	.0440	.697
1780	2.1206-4	-792.1	2.3960	27.564	.100	1.0000	-1.0000	0.3302	1.2791	2026.5	.0478	.691	0.3097	1.3032	2045.5	.0444	.698
1800	2.0971-4	-785.5	2.3997	27.564	.101	1.0000	-1.0000	0.3303	1.2790	2037.8	.0482	.691	0.3103	1.3024	2056.4	.0448	.698
1900	1.9867-4	-752.4	2.4176	27.564	.105	1.0000	-1.0000	0.3307	1.2785	2093.2	.0499	.693	0.3131	1.2988	2109.8	.0468	.700
2000	1.8874-4	-719.3	2.4346	27.564	.108	1.0000	-1.0000	0.3313	1.2779	2147.1	.0517	.695	0.3159	1.2954	2161.8	.0487	.702
2100	1.7975-4	-686.1	2.4507	27.564	.112	1.0000	-1.0000	0.3320	1.2771	2199.5	.0534	.696	0.3185	1.2923	2212.5	.0507	.704
2200	1.7158-4	-652.9	2.4662	27.564	.116	1.0000	-1.0000	0.3329	1.2762	2250.4	.0551	.698	0.3211	1.2893	2261.9	.0526	.705
2300	1.6412-4	-619.6	2.4810	27.564	.119	1.0000	-1.0000	0.3339	1.2752	2300.1	.0569	.699	0.3235	1.2865	2310.3	.0545	.706
2400	1.5728-4	-586.1	2.4953	27.564	.123	1.0000	-1.0000	0.3350	1.2741	2348.5	.0586	.700	0.3258	1.2840	2357.6	.0565	.707
2500	1.5099-4	-552.6	2.5090	27.564	.126	1.0001	-1.0000	0.3362	1.2728	2395.8	.0605	.700	0.3280	1.2815	2404.0	.0584	.708

TABLE 11.1D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 0.14696 LB/IN² (0.01 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4518-4	-518.9	2.5222	27.564	.129	1.0002	-1.0000	0.3375	1.2715	2441.9	.0624	.700	0.3300	1.2793	2449.4	.0603	.708
2700	1.3980-4	-485.1	2.5349	27.564	.133	1.0003	-1.0000	0.3391	1.2700	2487.0	.0645	.698	0.3320	1.2771	2494.0	.0622	.709
2800	1.3481-4	-451.1	2.5473	27.563	.136	1.0006	-1.0000	0.3410	1.2683	2531.0	.0668	.694	0.3339	1.2751	2537.8	.0641	.709
2900	1.3015-4	-416.8	2.5593	27.563	.139	1.0011	-1.0000	0.3433	1.2663	2573.7	.0695	.688	0.3357	1.2733	2580.9	.0660	.709
3000	1.2581-4	-382.4	2.5710	27.561	.143	1.0019	-1.0001	0.3465	1.2637	2615.2	.0727	.679	0.3374	1.2716	2623.3	.0678	.709
3100	1.2174-4	-347.5	2.5824	27.559	.146	1.0032	-1.0001	0.3508	1.2604	2655.0	.0768	.666	0.3390	1.2700	2665.1	.0697	.709
3200	1.1792-4	-312.1	2.5936	27.555	.149	1.0055	-1.0002	0.3572	1.2559	2692.9	.0820	.648	0.3405	1.2685	2706.3	.0716	.708
3300	1.1432-4	-276.0	2.6048	27.549	.152	1.0091	-1.0003	0.3669	1.2496	2728.1	.0891	.626	0.3419	1.2671	2747.1	.0735	.708
3400	1.1092-4	-238.6	2.6159	27.539	.155	1.0152	-1.0005	0.3821	1.2408	2759.8	.0989	.599	0.3433	1.2659	2787.6	.0753	.707
3500	1.0769-4	-199.2	2.6273	27.524	.158	1.0254	-1.0008	0.4064	1.2283	2786.8	.1127	.571	0.3446	1.2648	2827.9	.0772	.706
3600	1.0460-4	-156.8	2.6393	27.498	.161	1.0426	-1.0014	0.4458	1.2117	2808.5	.1325	.542	0.3458	1.2640	2868.4	.0792	.704
3700	1.0162-4	-109.3	2.6523	27.456	.164	1.0711	-1.0023	0.5091	1.1914	2825.4	.1617	.517	0.3469	1.2634	2909.5	.0811	.702
3800	9.8702-5	-53.8	2.6671	27.389	.167	1.1160	-1.0039	0.6056	1.1699	2840.8	.2044	.495	0.3480	1.2632	2951.9	.0831	.700
3900	9.5806-5	13.1	2.6845	27.285	.170	1.1806	-1.0062	0.7396	1.1507	2859.7	.2649	.474	0.3490	1.2635	2996.6	.0852	.696
4000	9.2890-5	95.2	2.7052	27.133	.173	1.2637	-1.0093	0.9060	1.1360	2885.6	.3454	.453	0.3499	1.2645	3044.5	.0874	.691
4100	8.9931-5	195.0	2.7299	26.925	.175	1.3610	-1.0132	1.0937	1.1258	2919.5	.4458	.430	0.3507	1.2663	3096.3	.0897	.685
4200	8.6919-5	314.3	2.7586	26.658	.178	1.4685	-1.0176	1.2941	1.1192	2961.0	.5643	.407	0.3515	1.2689	3152.8	.0923	.676
4300	8.3854-5	454.1	2.7915	26.330	.180	1.5837	-1.0227	1.5027	1.1151	3009.0	.6980	.387	0.3523	1.2724	3214.3	.0952	.666
4400	8.0745-5	615.1	2.8285	25.944	.182	1.7046	-1.0283	1.7170	1.1127	3063.1	.8419	.371	0.3531	1.2768	3281.2	.0984	.653
4500	7.7603-5	797.5	2.8695	25.501	.184	1.8275	-1.0342	1.9318	1.1116	3122.9	.9880	.360	0.3539	1.2821	3354.0	.1021	.639
4600	7.4450-5	1001.1	2.9142	25.009	.186	1.9456	-1.0404	2.1365	1.1115	3188.3	****	.354	0.3548	1.2883	3432.5	.1062	.623
4700	7.1318-5	1223.9	2.9621	24.477	.188	2.0485	-1.0461	2.3138	1.1124	3258.9	****	.353	0.3558	1.2954	3516.7	.1107	.606
4800	6.8250-5	1462.2	3.0123	23.923	.190	2.1228	-1.0508	2.4404	1.1142	3334.0	****	.356	0.3568	1.3032	3605.6	.1155	.588
4900	6.5300-5	1709.5	3.0633	23.365	.193	2.1554	-1.0537	2.4921	1.1170	3412.7	****	.364	0.3579	1.3114	3697.8	.1205	.572
5000	6.2524-5	1957.5	3.1134	22.828	.195	2.1372	-1.0543	2.4519	1.1208	3493.6	****	.374	0.3590	1.3198	3791.1	.1256	.556
5100	5.9969-5	2196.8	3.1608	22.334	.197	2.0685	-1.0523	2.3187	1.1258	3575.2	****	.387	0.3601	1.3279	3882.8	.1306	.543
5200	5.7666-5	2418.7	3.2039	21.897	.199	1.9592	-1.0482	2.1105	1.1322	3656.3	****	.401	0.3611	1.3354	3970.7	.1352	.532
5300	5.5622-5	2617.4	3.2417	21.527	.202	1.8264	-1.0425	1.8590	1.1403	3736.1	.9034	.415	0.3621	1.3419	4053.0	.1396	.523
5400	5.3825-5	2790.2	3.2741	21.225	.204	1.6879	-1.0362	1.5981	1.1502	3814.4	.7619	.428	0.3629	1.3474	4128.5	.1435	.516

TABLE 11.2D -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN² (0.10 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS				FROZEN COMPOSITIONS					
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0990-2	-1276.5	1.7206	28.892	.028	1.0000	-1.0000	0.2495	1.3803	924.7	.0089	.777	0.2495	1.3803	924.7	.0089	.777
380	1.0412-2	-1271.5	1.7341	28.892	.029	1.0000	-1.0000	0.2500	1.3793	949.7	.0095	.772	0.2500	1.3793	949.7	.0095	.772
400	9.8913-3	-1266.5	1.7469	28.892	.031	1.0000	-1.0000	0.2505	1.3782	974.0	.0100	.768	0.2505	1.3782	974.0	.0100	.768
420	9.4203-3	-1261.5	1.7592	28.892	.032	1.0000	-1.0000	0.2511	1.3770	997.6	.0105	.765	0.2510	1.3770	997.6	.0105	.765
440	8.9921-3	-1256.5	1.7709	28.892	.034	1.0000	-1.0000	0.2516	1.3758	1020.7	.0111	.762	0.2516	1.3758	1020.7	.0111	.762
460	8.6011-3	-1251.5	1.7821	28.892	.035	1.0000	-1.0000	0.2522	1.3746	1043.1	.0116	.759	0.2522	1.3746	1043.1	.0116	.760
480	8.2427-3	-1246.4	1.7928	28.892	.036	1.0000	-1.0000	0.2529	1.3733	1065.1	.0121	.758	0.2528	1.3733	1065.1	.0121	.758
500	7.9130-3	-1241.3	1.8032	28.892	.038	1.0000	-1.0000	0.2535	1.3719	1086.5	.0126	.756	0.2535	1.3720	1086.5	.0126	.756
520	7.6087-3	-1236.3	1.8131	28.892	.039	1.0000	-1.0000	0.2542	1.3706	1107.5	.0131	.755	0.2542	1.3707	1107.5	.0131	.755
537	7.3723-3	-1232.0	1.8211	28.892	.040	1.0001	-1.0000	0.2549	1.3693	1124.6	.0135	.754	0.2547	1.3696	1124.7	.0135	.755
540	7.3269-3	-1231.2	1.8227	28.892	.040	1.0001	-1.0000	0.2550	1.3691	1128.0	.0136	.754	0.2548	1.3693	1128.1	.0136	.755
560	7.0652-3	-1226.1	1.8320	28.892	.042	1.0001	-1.0000	0.2558	1.3676	1148.0	.0141	.753	0.2555	1.3680	1148.2	.0141	.755
580	6.8215-3	-1220.9	1.8410	28.892	.043	1.0002	-1.0000	0.2567	1.3659	1167.6	.0146	.752	0.2563	1.3666	1167.9	.0145	.755
600	6.5941-3	-1215.8	1.8497	28.891	.044	1.0003	-1.0000	0.2577	1.3641	1186.8	.0151	.751	0.2570	1.3651	1187.3	.0150	.755
620	6.3813-3	-1210.6	1.8582	28.891	.045	1.0005	-1.0000	0.2588	1.3622	1205.6	.0157	.748	0.2577	1.3637	1206.2	.0155	.755
640	6.1817-3	-1205.4	1.8664	28.890	.047	1.0008	-1.0000	0.2600	1.3600	1223.9	.0163	.745	0.2585	1.3622	1224.9	.0159	.755
660	5.9942-3	-1200.2	1.8744	28.890	.048	1.0012	-1.0000	0.2615	1.3576	1241.8	.0169	.740	0.2593	1.3607	1243.2	.0164	.754
680	5.8177-3	-1195.0	1.8823	28.888	.049	1.0017	-1.0001	0.2632	1.3549	1259.3	.0176	.734	0.2601	1.3592	1261.3	.0169	.754
700	5.6511-3	-1189.7	1.8899	28.887	.050	1.0024	-1.0001	0.2653	1.3519	1276.3	.0183	.726	0.2609	1.3577	1279.0	.0174	.753
720	5.4937-3	-1184.4	1.8974	28.884	.051	1.0034	-1.0001	0.2677	1.3484	1292.8	.0192	.717	0.2618	1.3562	1296.5	.0179	.752
740	5.3446-3	-1179.0	1.9048	28.881	.053	1.0047	-1.0002	0.2707	1.3445	1308.8	.0202	.705	0.2626	1.3547	1313.7	.0184	.752
760	5.2032-3	-1173.5	1.9121	28.877	.054	1.0063	-1.0003	0.2741	1.3401	1324.2	.0212	.692	0.2635	1.3532	1330.7	.0188	.751
780	5.0689-3	-1168.0	1.9192	28.871	.055	1.0084	-1.0004	0.2782	1.3352	1339.2	.0225	.678	0.2644	1.3517	1347.5	.0193	.750
800	4.9409-3	-1162.4	1.9264	28.864	.056	1.0111	-1.0005	0.2831	1.3297	1353.6	.0239	.662	0.2653	1.3502	1364.0	.0198	.750
820	4.8189-3	-1156.7	1.9334	28.855	.057	1.0143	-1.0006	0.2888	1.3236	1367.5	.0256	.644	0.2662	1.3486	1380.4	.0203	.749
840	4.7023-3	-1150.8	1.9405	28.844	.058	1.0183	-1.0008	0.2955	1.3171	1381.0	.0274	.626	0.2672	1.3472	1396.6	.0207	.748
860	4.5908-3	-1144.9	1.9475	28.830	.059	1.0230	-1.0010	0.3032	1.3101	1393.9	.0295	.608	0.2681	1.3457	1412.7	.0212	.747
880	4.4838-3	-1138.7	1.9546	28.813	.060	1.0287	-1.0013	0.3121	1.3027	1406.5	.0319	.590	0.2692	1.3442	1428.7	.0217	.746
900	4.3810-3	-1132.4	1.9617	28.792	.061	1.0353	-1.0017	0.3222	1.2949	1418.6	.0345	.573	0.2702	1.3428	1444.6	.0222	.745
920	4.2821-3	-1125.8	1.9689	28.768	.062	1.0429	-1.0021	0.3336	1.2870	1430.5	.0373	.558	0.2712	1.3414	1460.4	.0228	.743
940	4.1867-3	-1119.0	1.9762	28.739	.063	1.0516	-1.0025	0.3463	1.2790	1442.2	.0403	.544	0.2723	1.3400	1476.2	.0233	.741
960	4.0946-3	-1111.9	1.9836	28.705	.064	1.0613	-1.0030	0.3603	1.2710	1453.8	.0435	.533	0.2735	1.3387	1492.0	.0239	.738
980	4.0056-3	-1104.6	1.9912	28.665	.065	1.0720	-1.0036	0.3757	1.2631	1465.3	.0469	.525	0.2746	1.3374	1507.8	.0244	.735
1000	3.9193-3	-1096.9	1.9990	28.620	.066	1.0837	-1.0043	0.3923	1.2555	1476.8	.0503	.519	0.2758	1.3362	1523.6	.0250	.732
1020	3.8356-3	-1088.9	2.0069	28.569	.067	1.0962	-1.0050	0.4100	1.2481	1488.5	.0536	.516	0.2770	1.3350	1539.4	.0256	.729
1040	3.7544-3	-1080.5	2.0151	28.512	.068	1.1094	-1.0057	0.4288	1.2410	1500.2	.0569	.516	0.2782	1.3339	1555.4	.0263	.725
1060	3.6754-3	-1071.7	2.0234	28.449	.069	1.1229	-1.0065	0.4483	1.2344	1512.2	.0600	.519	0.2795	1.3329	1571.4	.0269	.722
1080	3.5986-3	-1062.6	2.0320	28.380	.070	1.1365	-1.0072	0.4681	1.2283	1524.4	.0628	.525	0.2807	1.3320	1587.5	.0276	.718
1100	3.5239-3	-1053.0	2.0407	28.306	.071	1.1497	-1.0080	0.4878	1.2227	1537.0	.0653	.534	0.2820	1.3311	1603.7	.0282	.713
1120	3.4513-3	-1043.1	2.0497	28.227	.072	1.1616	-1.0087	0.5065	1.2177	1549.9	.0672	.546	0.2833	1.3304	1620.0	.0289	.709
1140	3.3807-3	-1032.8	2.0588	28.143	.073	1.1715	-1.0092	0.5230	1.2135	1563.3	.0685	.560	0.2846	1.3297	1636.4	.0296	.705

TABLE 11.2D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN² (0.10 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS							FROZEN COMPOSITIONS				
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.3123-3	-1022.2	2.0680	28.058	.074	1.1780	-1.0096	0.5354	1.2104	1577.4	.0689	.577	0.2859	1.3291	1652.9	.0303	.701
1180	3.2462-3	-1011.4	2.0772	27.972	.075	1.1795	-1.0097	0.5415	1.2087	1592.2	.0682	.597	0.2871	1.3285	1669.3	.0310	.697
1200	3.1826-3	-1000.6	2.0863	27.889	.076	1.1742	-1.0094	0.5387	1.2089	1608.2	.0663	.618	0.2883	1.3280	1685.5	.0317	.693
1220	3.1217-3	-989.9	2.0951	27.811	.077	1.1608	-1.0087	0.5247	1.2116	1625.6	.0631	.641	0.2894	1.3275	1701.6	.0323	.690
1240	3.0639-3	-979.7	2.1035	27.743	.078	1.1391	-1.0076	0.4993	1.2172	1644.7	.0589	.661	0.2905	1.3270	1717.2	.0329	.688
1260	3.0092-3	-970.0	2.1112	27.688	.079	1.1115	-1.0061	0.4655	1.2259	1665.5	.0542	.677	0.2915	1.3264	1732.4	.0335	.686
1280	2.9577-3	-961.1	2.1183	27.645	.080	1.0826	-1.0045	0.4293	1.2370	1687.5	.0498	.687	0.2924	1.3257	1746.9	.0340	.685
1300	2.9090-3	-952.8	2.1247	27.616	.081	1.0570	-1.0031	0.3970	1.2488	1709.6	.0463	.691	0.2932	1.3249	1761.0	.0345	.684
1320	2.8629-3	-945.1	2.1305	27.596	.081	1.0371	-1.0021	0.3721	1.2594	1730.6	.0438	.691	0.2940	1.3240	1774.5	.0350	.684
1340	2.8189-3	-937.9	2.1360	27.584	.082	1.0233	-1.0013	0.3550	1.2676	1749.7	.0424	.689	0.2948	1.3231	1787.7	.0354	.684
1360	2.7767-3	-930.9	2.1411	27.576	.083	1.0144	-1.0008	0.3441	1.2732	1766.9	.0416	.688	0.2955	1.3222	1800.6	.0359	.685
1380	2.7360-3	-924.1	2.1461	27.571	.084	1.0088	-1.0005	0.3374	1.2767	1782.4	.0413	.686	0.2963	1.3212	1813.2	.0363	.685
1400	2.6966-3	-917.4	2.1509	27.569	.085	1.0054	-1.0003	0.3336	1.2787	1796.8	.0413	.685	0.2970	1.3202	1825.7	.0367	.686
1420	2.6585-3	-910.7	2.1557	27.567	.086	1.0033	-1.0002	0.3314	1.2798	1810.5	.0414	.685	0.2977	1.3192	1838.1	.0372	.686
1440	2.6215-3	-904.1	2.1603	27.566	.086	1.0020	-1.0001	0.3301	1.2804	1823.6	.0417	.685	0.2984	1.3182	1850.3	.0376	.687
1460	2.5855-3	-897.5	2.1648	27.565	.087	1.0013	-1.0001	0.3295	1.2806	1836.4	.0420	.685	0.2991	1.3172	1862.5	.0380	.688
1480	2.5505-3	-890.9	2.1693	27.565	.088	1.0008	-1.0000	0.3292	1.2807	1849.0	.0424	.685	0.2998	1.3163	1874.5	.0384	.689
1500	2.5165-3	-884.3	2.1737	27.565	.089	1.0005	-1.0000	0.3291	1.2806	1861.4	.0427	.685	0.3005	1.3153	1886.5	.0388	.689
1520	2.4834-3	-877.8	2.1781	27.565	.090	1.0003	-1.0000	0.3291	1.2805	1873.7	.0431	.686	0.3012	1.3144	1898.3	.0392	.690
1540	2.4511-3	-871.2	2.1824	27.565	.091	1.0002	-1.0000	0.3291	1.2804	1885.9	.0435	.686	0.3019	1.3134	1910.1	.0396	.691
1560	2.4197-3	-864.6	2.1866	27.564	.091	1.0001	-1.0000	0.3292	1.2803	1898.0	.0438	.686	0.3026	1.3125	1921.8	.0400	.691
1580	2.3891-3	-858.0	2.1908	27.564	.092	1.0001	-1.0000	0.3293	1.2801	1910.0	.0442	.687	0.3033	1.3116	1933.4	.0404	.692
1600	2.3592-3	-851.4	2.1950	27.564	.093	1.0001	-1.0000	0.3294	1.2800	1922.0	.0446	.687	0.3039	1.3107	1944.9	.0408	.693
1620	2.3301-3	-844.8	2.1991	27.564	.094	1.0000	-1.0000	0.3295	1.2799	1933.9	.0450	.687	0.3046	1.3098	1956.4	.0412	.693
1640	2.3017-3	-838.2	2.2031	27.564	.095	1.0000	-1.0000	0.3296	1.2798	1945.7	.0453	.688	0.3053	1.3089	1967.7	.0416	.694
1660	2.2739-3	-831.7	2.2071	27.564	.095	1.0000	-1.0000	0.3297	1.2796	1957.4	.0457	.688	0.3059	1.3081	1979.1	.0420	.694
1680	2.2469-3	-825.1	2.2111	27.564	.096	1.0000	-1.0000	0.3298	1.2795	1969.1	.0461	.689	0.3066	1.3072	1990.3	.0424	.695
1700	2.2204-3	-818.5	2.2150	27.564	.097	1.0000	-1.0000	0.3299	1.2794	1980.7	.0464	.689	0.3072	1.3064	2001.5	.0428	.696
1720	2.1946-3	-811.9	2.2188	27.564	.098	1.0000	-1.0000	0.3300	1.2793	1992.3	.0468	.689	0.3078	1.3055	2012.6	.0432	.696
1740	2.1694-3	-805.3	2.2226	27.564	.099	1.0000	-1.0000	0.3301	1.2792	2003.7	.0471	.690	0.3085	1.3047	2023.6	.0436	.697
1760	2.1447-3	-798.7	2.2264	27.564	.099	1.0000	-1.0000	0.3301	1.2791	2015.2	.0475	.690	0.3091	1.3039	2034.6	.0440	.697
1780	2.1206-3	-792.1	2.2301	27.564	.100	1.0000	-1.0000	0.3302	1.2791	2026.5	.0478	.691	0.3097	1.3032	2045.5	.0444	.698
1800	2.0971-3	-785.5	2.2338	27.564	.101	1.0000	-1.0000	0.3303	1.2790	2037.8	.0482	.691	0.3103	1.3024	2056.4	.0448	.698
1900	1.9867-3	-752.4	2.2517	27.564	.105	1.0000	-1.0000	0.3307	1.2785	2093.2	.0499	.693	0.3131	1.2988	2109.8	.0468	.700
2000	1.8874-3	-719.3	2.2687	27.564	.108	1.0000	-1.0000	0.3313	1.2779	2147.1	.0517	.695	0.3159	1.2954	2161.8	.0487	.702
2100	1.7975-3	-686.1	2.2849	27.564	.112	1.0000	-1.0000	0.3320	1.2771	2199.5	.0534	.696	0.3185	1.2923	2212.5	.0507	.704
2200	1.7158-3	-652.9	2.3003	27.564	.116	1.0000	-1.0000	0.3329	1.2762	2250.4	.0551	.698	0.3211	1.2893	2262.0	.0526	.705
2300	1.6412-3	-619.6	2.3151	27.564	.119	1.0000	-1.0000	0.3338	1.2752	2300.1	.0568	.699	0.3235	1.2865	2310.3	.0545	.706
2400	1.5728-3	-586.1	2.3294	27.564	.123	1.0000	-1.0000	0.3349	1.2741	2348.6	.0586	.700	0.3258	1.2840	2357.6	.0565	.707
2500	1.5099-3	-552.6	2.3431	27.564	.126	1.0000	-1.0000	0.3360	1.2729	2395.9	.0603	.701	0.3280	1.2815	2403.9	.0584	.708

TABLE 11.2D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN² (0.10 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4518-3	-518.9	2.3563	27.564	.129	1.0001	-1.0000	0.3372	1.2717	2442.1	.0621	.702	0.3300	1.2793	2449.4	.0603	.708
2700	1.3980-3	-485.1	2.3690	27.564	.133	1.0001	-1.0000	0.3385	1.2704	2487.4	.0640	.702	0.3320	1.2771	2494.0	.0622	.709
2800	1.3481-3	-451.2	2.3813	27.564	.136	1.0002	-1.0000	0.3399	1.2691	2531.7	.0659	.701	0.3339	1.2751	2537.8	.0641	.709
2900	1.3016-3	-417.1	2.3933	27.564	.139	1.0003	-1.0000	0.3415	1.2676	2575.1	.0680	.700	0.3357	1.2733	2580.8	.0659	.709
3000	1.2582-3	-382.9	2.4049	27.563	.143	1.0006	-1.0000	0.3432	1.2660	2617.5	.0702	.697	0.3374	1.2716	2623.2	.0678	.709
3100	1.2176-3	-348.5	2.4162	27.563	.146	1.0010	-1.0000	0.3454	1.2642	2658.9	.0727	.692	0.3390	1.2699	2664.9	.0697	.709
3200	1.1795-3	-313.8	2.4272	27.561	.149	1.0017	-1.0001	0.3481	1.2621	2699.2	.0756	.686	0.3405	1.2684	2706.0	.0715	.709
3300	1.1437-3	-278.8	2.4380	27.560	.152	1.0027	-1.0001	0.3516	1.2594	2738.2	.0790	.677	0.3419	1.2670	2746.5	.0734	.708
3400	1.1099-3	-243.5	2.4485	27.557	.155	1.0044	-1.0001	0.3565	1.2559	2775.7	.0832	.665	0.3433	1.2657	2786.5	.0753	.708
3500	1.0780-3	-207.5	2.4590	27.552	.158	1.0071	-1.0002	0.3635	1.2514	2811.3	.0884	.650	0.3445	1.2645	2826.1	.0771	.707
3600	1.0478-3	-170.7	2.4693	27.545	.161	1.0112	-1.0004	0.3736	1.2452	2844.6	.0952	.633	0.3457	1.2635	2865.3	.0789	.706
3700	1.0191-3	-132.6	2.4798	27.535	.164	1.0176	-1.0006	0.3887	1.2369	2874.7	.1042	.613	0.3469	1.2625	2904.3	.0808	.705
3800	9.9169-4	-92.7	2.4904	27.518	.167	1.0278	-1.0009	0.4115	1.2260	2901.3	.1163	.592	0.3480	1.2617	2943.2	.0826	.704
3900	9.6538-4	-49.9	2.5015	27.493	.170	1.0435	-1.0015	0.4454	1.2123	2924.0	.1329	.571	0.3490	1.2610	2982.2	.0845	.703
4000	9.3994-4	-3.0	2.5134	27.455	.173	1.0674	-1.0023	0.4952	1.1963	2943.7	.1558	.550	0.3499	1.2606	3021.8	.0864	.701
4100	9.1513-4	49.8	2.5264	27.399	.176	1.1017	-1.0036	0.5645	1.1796	2962.5	.1871	.531	0.3508	1.2604	3062.3	.0883	.699
4200	8.9068-4	110.5	2.5410	27.317	.179	1.1479	-1.0054	0.6544	1.1642	2983.2	.2287	.511	0.3516	1.2607	3104.3	.0902	.696
4300	8.6638-4	181.2	2.5577	27.204	.181	1.2051	-1.0077	0.7616	1.1515	3008.2	.2814	.491	0.3523	1.2613	3148.4	.0923	.692
4400	8.4208-4	263.2	2.5765	27.057	.184	1.2707	-1.0104	0.8802	1.1419	3038.5	.3452	.469	0.3530	1.2625	3195.0	.0944	.687
4500	8.1773-4	357.5	2.5977	26.871	.186	1.3422	-1.0135	1.0047	1.1350	3074.2	.4192	.447	0.3536	1.2642	3244.4	.0967	.682
4600	7.9331-4	464.3	2.6212	26.648	.189	1.4178	-1.0170	1.1319	1.1303	3114.7	.5024	.425	0.3542	1.2665	3296.9	.0991	.674
4700	7.6884-4	583.9	2.6469	26.387	.191	1.4964	-1.0208	1.2602	1.1272	3159.5	.5936	.406	0.3547	1.2693	3352.7	.1018	.666
4800	7.4436-4	716.3	2.6748	26.091	.193	1.5775	-1.0250	1.3891	1.1253	3208.4	.6906	.389	0.3553	1.2726	3411.8	.1046	.657
4900	7.1993-4	861.7	2.7047	25.760	.196	1.6599	-1.0294	1.5172	1.1244	3260.9	.7906	.375	0.3559	1.2765	3474.5	.1077	.646
5000	6.9562-4	1019.7	2.7366	25.398	.198	1.7414	-1.0340	1.6419	1.1242	3317.1	.8891	.365	0.3565	1.2809	3540.9	.1111	.634
5100	6.7152-4	1189.8	2.7703	25.009	.200	1.8190	-1.0386	1.7587	1.1246	3376.8	.9807	.358	0.3572	1.2859	3610.8	.1148	.622
5200	6.4777-4	1370.9	2.8055	24.597	.202	1.8882	-1.0430	1.8610	1.1257	3439.9	*****	.355	0.3579	1.2913	3684.2	.1187	.609
5300	6.2454-4	1561.3	2.8417	24.171	.204	1.9439	-1.0469	1.9409	1.1275	3506.0	*****	.355	0.3586	1.2972	3760.6	.1229	.595
5400	6.0202-4	1758.1	2.8785	23.740	.206	1.9805	-1.0500	1.9899	1.1298	3574.7	*****	.357	0.3594	1.3034	3839.4	.1273	.582

TABLE 11.3D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN2 (1.00 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS								FROZEN COMPOSITIONS			
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0990-1	-1276.5	1.5623	28.892	.028	1.0000	-1.0000	0.2495	1.3803	924.7	.0089	.777	0.2495	1.3803	924.7	.0089	.777
380	1.0412-1	-1271.5	1.5758	28.892	.029	1.0000	-1.0000	0.2500	1.3793	949.7	.0095	.772	0.2500	1.3793	949.7	.0095	.772
400	9.8913-2	-1266.5	1.5887	28.892	.031	1.0000	-1.0000	0.2505	1.3782	974.0	.0100	.768	0.2505	1.3782	974.0	.0100	.768
420	9.4203-2	-1261.5	1.6009	28.892	.032	1.0000	-1.0000	0.2510	1.3770	997.6	.0105	.765	0.2510	1.3770	997.6	.0105	.765
440	8.9921-2	-1256.5	1.6126	28.892	.034	1.0000	-1.0000	0.2516	1.3758	1020.7	.0111	.762	0.2516	1.3758	1020.7	.0111	.762
460	8.6011-2	-1251.5	1.6238	28.892	.035	1.0000	-1.0000	0.2522	1.3746	1043.1	.0116	.760	0.2522	1.3746	1043.1	.0116	.760
480	8.2428-2	-1246.4	1.6346	28.892	.036	1.0000	-1.0000	0.2529	1.3733	1065.1	.0121	.758	0.2528	1.3733	1065.1	.0121	.758
500	7.9130-2	-1241.3	1.6449	28.892	.038	1.0000	-1.0000	0.2535	1.3720	1086.5	.0126	.756	0.2535	1.3720	1086.5	.0126	.756
520	7.6087-2	-1236.3	1.6548	28.892	.039	1.0000	-1.0000	0.2542	1.3706	1107.5	.0131	.755	0.2542	1.3707	1107.5	.0131	.755
537	7.3724-2	-1232.0	1.6629	28.892	.040	1.0000	-1.0000	0.2548	1.3695	1124.6	.0135	.754	0.2547	1.3696	1124.7	.0135	.755
540	7.3269-2	-1231.2	1.6644	28.892	.040	1.0000	-1.0000	0.2549	1.3693	1128.0	.0136	.754	0.2548	1.3693	1128.0	.0136	.755
560	7.0652-2	-1226.1	1.6737	28.892	.042	1.0000	-1.0000	0.2556	1.3678	1148.1	.0141	.754	0.2555	1.3680	1148.2	.0141	.755
580	6.8216-2	-1220.9	1.6827	28.892	.043	1.0001	-1.0000	0.2564	1.3663	1167.8	.0146	.754	0.2563	1.3666	1167.9	.0145	.755
600	6.5942-2	-1215.8	1.6914	28.892	.044	1.0001	-1.0000	0.2572	1.3648	1187.1	.0151	.754	0.2570	1.3651	1187.2	.0150	.755
620	6.3814-2	-1210.7	1.6999	28.892	.045	1.0002	-1.0000	0.2581	1.3632	1206.0	.0155	.753	0.2577	1.3637	1206.2	.0155	.755
640	6.1820-2	-1205.5	1.7081	28.891	.047	1.0002	-1.0000	0.2590	1.3615	1224.6	.0160	.752	0.2585	1.3622	1224.9	.0159	.755
660	5.9946-2	-1200.3	1.7161	28.891	.048	1.0004	-1.0000	0.2600	1.3597	1242.7	.0166	.750	0.2593	1.3607	1243.2	.0164	.755
680	5.8182-2	-1195.1	1.7238	28.891	.049	1.0005	-1.0000	0.2611	1.3578	1260.6	.0171	.748	0.2601	1.3592	1261.2	.0169	.754
700	5.6519-2	-1189.9	1.7314	28.890	.050	1.0008	-1.0000	0.2623	1.3558	1278.0	.0177	.744	0.2609	1.3577	1278.9	.0174	.753
720	5.4947-2	-1184.6	1.7388	28.890	.051	1.0011	-1.0000	0.2636	1.3536	1295.1	.0183	.741	0.2617	1.3562	1296.4	.0179	.753
740	5.3460-2	-1179.3	1.7461	28.889	.053	1.0015	-1.0001	0.2651	1.3513	1311.9	.0189	.736	0.2626	1.3547	1313.5	.0183	.752
760	5.2051-2	-1174.0	1.7532	28.887	.054	1.0020	-1.0001	0.2668	1.3488	1328.3	.0196	.731	0.2634	1.3531	1330.4	.0188	.752
780	5.0713-2	-1168.6	1.7601	28.886	.055	1.0027	-1.0001	0.2687	1.3461	1344.3	.0203	.725	0.2643	1.3516	1347.1	.0193	.751
800	4.9442-2	-1163.2	1.7670	28.883	.056	1.0035	-1.0002	0.2709	1.3431	1360.0	.0211	.718	0.2652	1.3501	1363.5	.0197	.751
820	4.8231-2	-1157.8	1.7737	28.880	.057	1.0046	-1.0002	0.2733	1.3399	1375.3	.0219	.710	0.2660	1.3485	1379.8	.0202	.751
840	4.7077-2	-1152.3	1.7803	28.877	.058	1.0059	-1.0003	0.2761	1.3364	1390.3	.0229	.701	0.2670	1.3470	1395.8	.0206	.751
860	4.5975-2	-1146.7	1.7868	28.872	.059	1.0075	-1.0003	0.2793	1.3326	1404.8	.0239	.691	0.2679	1.3455	1411.6	.0211	.750
880	4.4921-2	-1141.1	1.7933	28.867	.060	1.0094	-1.0004	0.2829	1.3286	1419.1	.0250	.680	0.2688	1.3440	1427.2	.0216	.750
900	4.3912-2	-1135.4	1.7997	28.860	.061	1.0117	-1.0006	0.2870	1.3242	1432.9	.0263	.668	0.2698	1.3424	1442.7	.0220	.750
920	4.2946-2	-1129.6	1.8060	28.852	.062	1.0144	-1.0007	0.2916	1.3196	1446.4	.0277	.655	0.2707	1.3409	1458.1	.0225	.749
940	4.2017-2	-1123.8	1.8124	28.842	.063	1.0176	-1.0009	0.2968	1.3146	1459.6	.0293	.642	0.2717	1.3395	1473.3	.0230	.748
960	4.1125-2	-1117.8	1.8187	28.830	.064	1.0213	-1.0011	0.3027	1.3094	1472.4	.0310	.629	0.2727	1.3380	1488.3	.0235	.747
980	4.0267-2	-1111.6	1.8250	28.816	.065	1.0255	-1.0013	0.3092	1.3040	1484.9	.0328	.616	0.2737	1.3365	1503.3	.0240	.746
1000	3.9439-2	-1105.4	1.8313	28.800	.066	1.0303	-1.0016	0.3165	1.2983	1497.1	.0348	.604	0.2747	1.3351	1518.2	.0245	.744
1020	3.8641-2	-1099.0	1.8377	28.781	.067	1.0358	-1.0019	0.3246	1.2924	1509.1	.0370	.592	0.2757	1.3337	1533.0	.0250	.743
1040	3.7869-2	-1092.4	1.8440	28.759	.068	1.0420	-1.0022	0.3335	1.2863	1520.8	.0393	.581	0.2768	1.3324	1547.8	.0256	.741
1060	3.7122-2	-1085.6	1.8505	28.735	.069	1.0488	-1.0026	0.3434	1.2801	1532.3	.0417	.572	0.2779	1.3311	1562.5	.0261	.739
1080	3.6399-2	-1078.7	1.8570	28.706	.070	1.0564	-1.0030	0.3542	1.2738	1543.6	.0443	.563	0.2789	1.3298	1577.2	.0266	.737
1100	3.5698-2	-1071.5	1.8636	28.674	.071	1.0648	-1.0035	0.3660	1.2674	1554.8	.0469	.557	0.2800	1.3286	1591.9	.0272	.735
1120	3.5016-2	-1064.0	1.8703	28.639	.072	1.0739	-1.0040	0.3789	1.2611	1565.9	.0497	.552	0.2811	1.3274	1606.6	.0278	.732
1140	3.4354-2	-1056.3	1.8771	28.599	.073	1.0838	-1.0046	0.3928	1.2547	1576.9	.0525	.549	0.2823	1.3263	1621.3	.0283	.730

TABLE 11.3D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN² (1.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.3710-2	-1048.3	1.8841	28.555	.074	1.0943	-1.0052	0.4078	1.2484	1588.0	.0553	.547	0.2834	1.3252	1636.1	.0289	.727
1180	3.3082-2	-1040.0	1.8912	28.506	.075	1.1054	-1.0059	0.4237	1.2423	1599.0	.0582	.548	0.2845	1.3242	1650.9	.0295	.724
1200	3.2470-2	-1031.3	1.8985	28.453	.076	1.1171	-1.0065	0.4405	1.2364	1610.1	.0609	.550	0.2857	1.3233	1665.8	.0301	.721
1220	3.1873-2	-1022.4	1.9059	28.395	.077	1.1290	-1.0072	0.4578	1.2307	1621.4	.0636	.555	0.2868	1.3225	1680.8	.0308	.718
1240	3.1290-2	-1013.0	1.9135	28.333	.078	1.1408	-1.0079	0.4754	1.2254	1633.0	.0661	.561	0.2880	1.3217	1695.9	.0314	.715
1260	3.0721-2	-1003.3	1.9212	28.266	.079	1.1521	-1.0086	0.4925	1.2206	1644.8	.0682	.569	0.2891	1.3210	1711.1	.0320	.712
1280	3.0166-2	-993.3	1.9291	28.196	.080	1.1624	-1.0092	0.5084	1.2165	1657.0	.0700	.579	0.2902	1.3205	1726.4	.0326	.709
1300	2.9625-2	-983.0	1.9371	28.124	.081	1.1706	-1.0097	0.5219	1.2132	1669.8	.0712	.591	0.2913	1.3199	1741.7	.0333	.706
1320	2.9099-2	-972.5	1.9452	28.049	.081	1.1758	-1.0100	0.5316	1.2109	1683.2	.0716	.605	0.2924	1.3195	1757.1	.0339	.703
1340	2.8589-2	-961.8	1.9532	27.975	.082	1.1768	-1.0101	0.5358	1.2098	1697.4	.0712	.620	0.2935	1.3191	1772.4	.0345	.700
1360	2.8096-2	-951.1	1.9611	27.902	.083	1.1725	-1.0098	0.5330	1.2102	1712.6	.0697	.636	0.2945	1.3187	1787.7	.0351	.698
1380	2.7621-2	-940.5	1.9688	27.834	.084	1.1619	-1.0093	0.5220	1.2125	1728.8	.0672	.653	0.2955	1.3184	1802.7	.0357	.695
1400	2.7166-2	-930.3	1.9762	27.772	.085	1.1452	-1.0084	0.5028	1.2167	1746.3	.0638	.669	0.2964	1.3180	1817.5	.0363	.693
1420	2.6732-2	-920.5	1.9832	27.719	.086	1.1236	-1.0071	0.4772	1.2231	1765.0	.0600	.682	0.2973	1.3175	1831.9	.0368	.692
1440	2.6320-2	-911.2	1.9896	27.676	.087	1.0996	-1.0058	0.4483	1.2311	1784.6	.0562	.691	0.2981	1.3170	1845.8	.0373	.691
1460	2.5928-2	-902.5	1.9956	27.643	.087	1.0761	-1.0045	0.4198	1.2402	1804.7	.0527	.695	0.2989	1.3164	1859.2	.0378	.691
1480	2.5554-2	-894.4	2.0012	27.618	.088	1.0555	-1.0033	0.3950	1.2493	1824.5	.0500	.697	0.2997	1.3157	1872.3	.0383	.690
1500	2.5198-2	-886.7	2.0063	27.601	.089	1.0391	-1.0023	0.3752	1.2575	1843.3	.0480	.696	0.3004	1.3149	1884.9	.0387	.690
1520	2.4856-2	-879.3	2.0112	27.589	.090	1.0269	-1.0016	0.3605	1.2641	1860.8	.0467	.694	0.3012	1.3141	1897.3	.0392	.691
1540	2.4526-2	-872.2	2.0158	27.581	.091	1.0182	-1.0011	0.3502	1.2691	1877.0	.0459	.692	0.3019	1.3132	1909.4	.0396	.691
1560	2.4206-2	-865.3	2.0203	27.575	.091	1.0122	-1.0007	0.3433	1.2726	1892.0	.0454	.691	0.3026	1.3124	1921.3	.0400	.692
1580	2.3897-2	-858.5	2.0246	27.572	.092	1.0082	-1.0005	0.3386	1.2750	1906.0	.0453	.690	0.3032	1.3115	1933.1	.0404	.692
1600	2.3596-2	-851.8	2.0289	27.569	.093	1.0055	-1.0003	0.3356	1.2766	1919.3	.0453	.689	0.3039	1.3106	1944.7	.0408	.693
1620	2.3304-2	-845.1	2.0330	27.568	.094	1.0037	-1.0002	0.3337	1.2776	1932.0	.0454	.689	0.3046	1.3098	1956.2	.0412	.693
1640	2.3019-2	-838.4	2.0371	27.567	.095	1.0025	-1.0002	0.3324	1.2782	1944.5	.0457	.689	0.3053	1.3089	1967.6	.0416	.694
1660	2.2741-2	-831.8	2.0412	27.566	.095	1.0017	-1.0001	0.3316	1.2786	1956.6	.0459	.689	0.3059	1.3080	1979.0	.0420	.694
1680	2.2470-2	-825.1	2.0451	27.566	.096	1.0012	-1.0001	0.3311	1.2788	1968.5	.0462	.689	0.3066	1.3072	1990.2	.0424	.695
1700	2.2205-2	-818.5	2.0490	27.565	.097	1.0009	-1.0001	0.3308	1.2790	1980.3	.0465	.689	0.3072	1.3064	2001.4	.0428	.696
1720	2.1947-2	-811.9	2.0529	27.565	.098	1.0006	-1.0000	0.3306	1.2790	1992.0	.0469	.690	0.3078	1.3055	2012.5	.0432	.696
1740	2.1694-2	-805.3	2.0567	27.565	.099	1.0004	-1.0000	0.3305	1.2790	2003.5	.0472	.690	0.3085	1.3047	2023.6	.0436	.697
1760	2.1448-2	-798.7	2.0605	27.565	.099	1.0003	-1.0000	0.3304	1.2790	2015.0	.0475	.690	0.3091	1.3039	2034.6	.0440	.697
1780	2.1206-2	-792.1	2.0642	27.565	.100	1.0002	-1.0000	0.3304	1.2789	2026.4	.0479	.691	0.3097	1.3032	2045.5	.0444	.698
1800	2.0971-2	-785.5	2.0679	27.565	.101	1.0002	-1.0000	0.3305	1.2789	2037.7	.0482	.691	0.3103	1.3024	2056.4	.0448	.698
1900	1.9867-2	-752.4	2.0858	27.564	.105	1.0001	-1.0000	0.3308	1.2785	2093.2	.0499	.693	0.3131	1.2988	2109.8	.0468	.700
2000	1.8874-2	-719.3	2.1028	27.564	.108	1.0000	-1.0000	0.3313	1.2779	2147.1	.0517	.695	0.3159	1.2954	2161.8	.0487	.702
2100	1.7975-2	-686.1	2.1190	27.564	.112	1.0000	-1.0000	0.3320	1.2771	2199.5	.0534	.696	0.3185	1.2923	2212.5	.0507	.704
2200	1.7158-2	-652.9	2.1344	27.564	.116	1.0000	-1.0000	0.3329	1.2762	2250.4	.0551	.698	0.3211	1.2893	2261.9	.0526	.705
2300	1.6412-2	-619.6	2.1492	27.564	.119	1.0000	-1.0000	0.3338	1.2752	2300.1	.0568	.699	0.3235	1.2865	2310.3	.0545	.706
2400	1.5728-2	-586.1	2.1635	27.564	.123	1.0000	-1.0000	0.3349	1.2741	2348.6	.0586	.701	0.3258	1.2840	2357.6	.0565	.707
2500	1.5099-2	-552.6	2.1772	27.564	.126	1.0000	-1.0000	0.3360	1.2730	2395.9	.0603	.702	0.3280	1.2815	2403.9	.0584	.708

TABLE 11.3D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN² (1.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM VS FT/S	COND BTU/ FT HR R	PRAN		
2600	1.4518-2	-518.9	2.1904	27.564	.129	1.0000	-1.0000	0.3371	1.2718	2442.2	.0621	.703	0.3300	1.2793	2449.4	.0603	.708
2700	1.3980-2	-485.2	2.2031	27.564	.133	1.0000	-1.0000	0.3383	1.2706	2487.5	.0639	.703	0.3320	1.2771	2494.0	.0622	.709
2800	1.3481-2	-451.3	2.2154	27.564	.136	1.0001	-1.0000	0.3396	1.2693	2532.0	.0657	.703	0.3339	1.2751	2537.8	.0641	.709
2900	1.3016-2	-417.2	2.2274	27.564	.139	1.0001	-1.0000	0.3409	1.2681	2575.5	.0675	.703	0.3357	1.2733	2580.8	.0659	.709
3000	1.2582-2	-383.1	2.2390	27.564	.143	1.0002	-1.0000	0.3422	1.2668	2618.2	.0694	.702	0.3374	1.2715	2623.1	.0678	.709
3100	1.2176-2	-348.8	2.2502	27.564	.146	1.0003	-1.0000	0.3437	1.2654	2660.1	.0714	.701	0.3390	1.2699	2664.8	.0697	.709
3200	1.1796-2	-314.3	2.2611	27.563	.149	1.0005	-1.0000	0.3453	1.2640	2701.2	.0735	.699	0.3405	1.2684	2705.8	.0715	.709
3300	1.1438-2	-279.7	2.2718	27.563	.152	1.0009	-1.0000	0.3471	1.2625	2741.4	.0758	.696	0.3419	1.2670	2746.3	.0734	.708
3400	1.1101-2	-244.9	2.2822	27.562	.155	1.0014	-1.0000	0.3493	1.2607	2780.7	.0783	.692	0.3432	1.2657	2786.2	.0752	.708
3500	1.0783-2	-209.9	2.2923	27.561	.158	1.0021	-1.0001	0.3520	1.2586	2819.1	.0812	.686	0.3445	1.2644	2825.6	.0771	.707
3600	1.0483-2	-174.5	2.3023	27.559	.161	1.0033	-1.0001	0.3556	1.2561	2856.3	.0845	.679	0.3457	1.2633	2864.5	.0789	.707
3700	1.0199-2	-138.7	2.3121	27.555	.164	1.0050	-1.0002	0.3603	1.2529	2892.2	.0883	.670	0.3469	1.2623	2902.9	.0807	.706
3800	9.9286-3	-102.4	2.3218	27.551	.167	1.0076	-1.0003	0.3667	1.2489	2926.5	.0930	.660	0.3479	1.2613	2941.0	.0825	.706
3900	9.6717-3	-65.3	2.3314	27.544	.170	1.0114	-1.0004	0.3757	1.2437	2958.9	.0988	.647	0.3490	1.2604	2978.8	.0843	.705
4000	9.4265-3	-27.1	2.3411	27.534	.173	1.0170	-1.0006	0.3881	1.2370	2989.1	.1061	.634	0.3499	1.2596	3016.3	.0861	.704
4100	9.1919-3	12.5	2.3509	27.520	.176	1.0252	-1.0009	0.4056	1.2287	3016.8	.1154	.619	0.3508	1.2590	3053.8	.0879	.703
4200	8.9664-3	54.2	2.3609	27.500	.179	1.0370	-1.0013	0.4298	1.2186	3041.9	.1275	.603	0.3516	1.2584	3091.3	.0897	.701
4300	8.7486-3	98.8	2.3714	27.471	.182	1.0537	-1.0020	0.4628	1.2070	3064.8	.1433	.587	0.3524	1.2580	3129.0	.0915	.700
4400	8.5371-3	147.1	2.3825	27.430	.185	1.0764	-1.0028	0.5062	1.1946	3086.6	.1635	.571	0.3532	1.2579	3167.3	.0934	.698
4500	8.3305-3	200.4	2.3945	27.374	.187	1.1059	-1.0040	0.5606	1.1823	3108.6	.1892	.555	0.3538	1.2579	3206.4	.0952	.696
4600	8.1273-3	259.6	2.4075	27.300	.190	1.1419	-1.0055	0.6249	1.1713	3132.5	.2208	.537	0.3544	1.2582	3246.7	.0972	.693
4700	7.9267-3	325.6	2.4217	27.205	.193	1.1836	-1.0074	0.6965	1.1620	3159.4	.2583	.519	0.3550	1.2588	3288.3	.0991	.689
4800	7.7279-3	399.0	2.4372	27.087	.195	1.2293	-1.0094	0.7723	1.1547	3189.7	.3014	.500	0.3555	1.2598	3331.6	.1012	.685
4900	7.5308-3	480.1	2.4539	26.946	.198	1.2777	-1.0118	0.8496	1.1492	3223.4	.3496	.480	0.3560	1.2611	3376.6	.1033	.681
5000	7.3352-3	568.9	2.4718	26.782	.200	1.3277	-1.0143	0.9267	1.1452	3260.4	.4026	.460	0.3564	1.2627	3423.5	.1054	.676
5100	7.1413-3	665.4	2.4909	26.596	.202	1.3789	-1.0169	1.0027	1.1424	3300.3	.4597	.441	0.3568	1.2646	3472.4	.1077	.670
5200	6.9491-3	769.4	2.5111	26.387	.205	1.4308	-1.0198	1.0776	1.1405	3342.8	.5204	.424	0.3573	1.2669	3523.2	.1101	.664
5300	6.7589-3	880.9	2.5323	26.159	.207	1.4834	-1.0228	1.1511	1.1394	3387.9	.5840	.408	0.3577	1.2695	3576.0	.1126	.657
5400	6.5708-3	999.6	2.5545	25.911	.209	1.5362	-1.0260	1.2231	1.1388	3435.2	.6492	.394	0.3581	1.2723	3631.0	.1153	.649

TABLE 11.4D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN2 (10.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
360	1.0990	0	-1276.5	1.4041	28.892	.028	1.0000	-1.0000	0.2495	1.3803	924.7	.0089	.777	0.2495	1.3803	924.7	.0089	.777
380	1.0412	0	-1271.5	1.4176	28.892	.029	1.0000	-1.0000	0.2500	1.3793	949.7	.0095	.772	0.2500	1.3793	949.7	.0095	.772
400	9.8913	-1	-1266.5	1.4304	28.892	.031	1.0000	-1.0000	0.2505	1.3782	974.0	.0100	.768	0.2505	1.3782	974.0	.0100	.768
420	9.4203	-1	-1261.5	1.4426	28.892	.032	1.0000	-1.0000	0.2511	1.3770	997.6	.0105	.765	0.2510	1.3770	997.6	.0105	.765
440	8.9921	-1	-1256.5	1.4543	28.892	.034	1.0000	-1.0000	0.2516	1.3758	1020.7	.0111	.762	0.2516	1.3758	1020.7	.0111	.762
460	8.6011	-1	-1251.5	1.4655	28.892	.035	1.0000	-1.0000	0.2522	1.3746	1043.1	.0116	.760	0.2522	1.3746	1043.1	.0116	.760
480	8.2428	-1	-1246.4	1.4763	28.892	.036	1.0000	-1.0000	0.2529	1.3733	1065.1	.0121	.758	0.2528	1.3733	1065.1	.0121	.758
500	7.9130	-1	-1241.3	1.4866	28.892	.038	1.0000	-1.0000	0.2535	1.3720	1086.5	.0126	.756	0.2535	1.3720	1086.5	.0126	.756
520	7.6087	-1	-1236.3	1.4966	28.892	.039	1.0000	-1.0000	0.2542	1.3707	1107.5	.0131	.755	0.2542	1.3707	1107.5	.0131	.755
537	7.3724	-1	-1232.0	1.5046	28.892	.040	1.0000	-1.0000	0.2547	1.3695	1124.6	.0135	.755	0.2547	1.3696	1124.7	.0135	.755
540	7.3269	-1	-1231.2	1.5062	28.892	.040	1.0000	-1.0000	0.2549	1.3693	1128.0	.0136	.755	0.2548	1.3693	1128.0	.0136	.755
560	7.0652	-1	-1226.1	1.5155	28.892	.042	1.0000	-1.0000	0.2556	1.3679	1148.1	.0141	.754	0.2555	1.3680	1148.2	.0141	.755
580	6.8216	-1	-1220.9	1.5244	28.892	.043	1.0000	-1.0000	0.2563	1.3665	1167.8	.0146	.755	0.2563	1.3665	1167.9	.0146	.755
600	6.5942	-1	-1215.8	1.5331	28.892	.044	1.0000	-1.0000	0.2571	1.3650	1187.2	.0150	.755	0.2570	1.3651	1187.2	.0150	.755
620	6.3815	-1	-1210.7	1.5416	28.892	.045	1.0000	-1.0000	0.2579	1.3635	1206.1	.0155	.755	0.2577	1.3637	1206.2	.0155	.755
640	6.1820	-1	-1205.5	1.5498	28.892	.047	1.0001	-1.0000	0.2587	1.3619	1224.7	.0160	.754	0.2585	1.3622	1224.9	.0159	.755
660	5.9947	-1	-1200.3	1.5578	28.892	.048	1.0001	-1.0000	0.2595	1.3604	1243.0	.0165	.753	0.2593	1.3607	1243.2	.0164	.755
680	5.8184	-1	-1195.1	1.5655	28.892	.049	1.0001	-1.0000	0.2604	1.3587	1261.0	.0170	.752	0.2601	1.3592	1261.2	.0169	.754
700	5.6521	-1	-1189.9	1.5731	28.892	.050	1.0002	-1.0000	0.2613	1.3570	1278.6	.0175	.751	0.2609	1.3577	1278.9	.0174	.753
720	5.4950	-1	-1184.7	1.5805	28.891	.051	1.0003	-1.0000	0.2623	1.3553	1295.9	.0180	.749	0.2617	1.3562	1296.3	.0179	.753
740	5.3465	-1	-1179.4	1.5877	28.891	.053	1.0004	-1.0000	0.2634	1.3535	1312.9	.0185	.747	0.2625	1.3547	1313.5	.0183	.752
760	5.2057	-1	-1174.1	1.5947	28.891	.054	1.0006	-1.0000	0.2645	1.3517	1329.6	.0190	.745	0.2634	1.3531	1330.3	.0188	.752
780	5.0721	-1	-1168.8	1.6016	28.890	.055	1.0008	-1.0000	0.2657	1.3497	1346.0	.0196	.743	0.2642	1.3516	1347.0	.0192	.752
800	4.9452	-1	-1163.5	1.6083	28.889	.056	1.0011	-1.0000	0.2670	1.3477	1362.2	.0201	.741	0.2651	1.3500	1363.4	.0197	.752
820	4.8244	-1	-1158.1	1.6149	28.888	.057	1.0014	-1.0001	0.2683	1.3456	1378.1	.0207	.738	0.2660	1.3485	1379.5	.0202	.752
840	4.7094	-1	-1152.8	1.6214	28.887	.058	1.0018	-1.0001	0.2698	1.3434	1393.6	.0213	.734	0.2669	1.3470	1395.5	.0206	.751
860	4.5996	-1	-1147.4	1.6278	28.886	.059	1.0024	-1.0001	0.2715	1.3411	1409.0	.0220	.730	0.2678	1.3454	1411.2	.0211	.751
880	4.4948	-1	-1141.9	1.6341	28.884	.060	1.0030	-1.0001	0.2732	1.3386	1424.0	.0227	.726	0.2687	1.3439	1426.8	.0215	.751
900	4.3946	-1	-1136.4	1.6402	28.882	.061	1.0037	-1.0002	0.2752	1.3361	1438.8	.0234	.721	0.2696	1.3423	1442.1	.0220	.751
920	4.2987	-1	-1130.9	1.6463	28.879	.062	1.0046	-1.0002	0.2773	1.3334	1453.3	.0242	.715	0.2705	1.3408	1457.3	.0224	.751
940	4.2068	-1	-1125.3	1.6523	28.876	.063	1.0056	-1.0003	0.2796	1.3305	1467.5	.0250	.708	0.2715	1.3393	1472.3	.0229	.750
960	4.1186	-1	-1119.7	1.6582	28.872	.064	1.0069	-1.0003	0.2822	1.3276	1481.4	.0259	.701	0.2724	1.3377	1487.1	.0234	.750
980	4.0339	-1	-1114.0	1.6640	28.868	.065	1.0083	-1.0004	0.2850	1.3244	1495.1	.0269	.694	0.2734	1.3362	1501.8	.0239	.749
1000	3.9525	-1	-1108.3	1.6698	28.863	.066	1.0100	-1.0005	0.2881	1.3211	1508.6	.0279	.686	0.2743	1.3348	1516.3	.0243	.748
1020	3.8742	-1	-1102.5	1.6756	28.856	.067	1.0119	-1.0006	0.2915	1.3176	1521.8	.0290	.677	0.2753	1.3333	1530.7	.0248	.748
1040	3.7987	-1	-1096.6	1.6813	28.849	.068	1.0141	-1.0007	0.2953	1.3140	1534.7	.0302	.669	0.2763	1.3318	1545.0	.0253	.747
1060	3.7259	-1	-1090.7	1.6869	28.841	.069	1.0166	-1.0009	0.2994	1.3102	1547.3	.0315	.660	0.2773	1.3304	1559.2	.0258	.746
1080	3.6557	-1	-1084.7	1.6926	28.831	.070	1.0194	-1.0011	0.3040	1.3062	1559.7	.0329	.651	0.2783	1.3290	1573.3	.0263	.745
1100	3.5879	-1	-1078.5	1.6982	28.820	.071	1.0226	-1.0012	0.3090	1.3020	1571.9	.0343	.642	0.2793	1.3276	1587.2	.0268	.744
1120	3.5223	-1	-1072.3	1.7038	28.807	.072	1.0261	-1.0014	0.3145	1.2977	1583.8	.0359	.633	0.2803	1.3262	1601.1	.0273	.743
1140	3.4587	-1	-1066.0	1.7094	28.793	.073	1.0302	-1.0017	0.3205	1.2931	1595.5	.0376	.625	0.2813	1.3249	1614.9	.0278	.741

TABLE 11.4D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN² (10.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS				FROZEN COMPOSITIONS					
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.3972-1	-1059.5	1.7150	28.777	.074	1.0346	-1.0019	0.3271	1.2884	1607.0	.0393	.617	0.2823	1.3236	1628.7	.0283	.740
1180	3.3375-1	-1052.9	1.7207	28.759	.075	1.0396	-1.0022	0.3344	1.2836	1618.2	.0412	.610	0.2833	1.3223	1642.4	.0288	.739
1200	3.2796-1	-1046.1	1.7264	28.738	.076	1.0451	-1.0026	0.3423	1.2786	1629.3	.0432	.604	0.2843	1.3211	1656.1	.0294	.737
1220	3.2232-1	-1039.2	1.7321	28.715	.077	1.0511	-1.0029	0.3510	1.2735	1640.2	.0452	.598	0.2854	1.3199	1669.8	.0299	.735
1240	3.1684-1	-1032.1	1.7379	28.690	.078	1.0577	-1.0033	0.3604	1.2683	1650.9	.0474	.593	0.2864	1.3187	1683.4	.0304	.734
1260	3.1151-1	-1024.7	1.7437	28.662	.079	1.0649	-1.0037	0.3706	1.2631	1661.5	.0496	.589	0.2874	1.3176	1697.0	.0310	.732
1280	3.0631-1	-1017.2	1.7497	28.631	.080	1.0727	-1.0042	0.3815	1.2578	1672.1	.0519	.586	0.2885	1.3166	1710.7	.0315	.730
1300	3.0124-1	-1009.5	1.7557	28.597	.081	1.0811	-1.0047	0.3933	1.2525	1682.6	.0543	.584	0.2895	1.3156	1724.4	.0321	.728
1320	2.9629-1	-1001.5	1.7618	28.560	.082	1.0900	-1.0053	0.4058	1.2474	1693.1	.0568	.583	0.2905	1.3147	1738.1	.0326	.726
1340	2.9145-1	-993.2	1.7680	28.519	.082	1.0994	-1.0058	0.4190	1.2423	1703.6	.0592	.583	0.2915	1.3138	1751.9	.0332	.724
1360	2.8672-1	-984.7	1.7743	28.475	.083	1.1093	-1.0064	0.4328	1.2374	1714.2	.0617	.584	0.2925	1.3130	1765.8	.0337	.722
1380	2.8209-1	-975.9	1.7807	28.427	.084	1.1194	-1.0070	0.4469	1.2328	1725.0	.0641	.587	0.2936	1.3123	1779.7	.0343	.720
1400	2.7757-1	-966.8	1.7872	28.377	.085	1.1296	-1.0077	0.4611	1.2285	1735.9	.0664	.590	0.2946	1.3116	1793.7	.0349	.718
1420	2.7314-1	-957.5	1.7939	28.322	.086	1.1395	-1.0083	0.4750	1.2246	1747.2	.0686	.595	0.2955	1.3110	1807.8	.0354	.716
1440	2.6880-1	-947.9	1.8006	28.265	.087	1.1489	-1.0089	0.4882	1.2212	1758.8	.0705	.601	0.2965	1.3105	1822.0	.0360	.714
1460	2.6456-1	-938.0	1.8074	28.206	.088	1.1573	-1.0094	0.5000	1.2183	1770.7	.0720	.607	0.2975	1.3101	1836.2	.0366	.712
1480	2.6041-1	-927.9	1.8143	28.144	.088	1.1641	-1.0098	0.5099	1.2161	1783.2	.0732	.616	0.2984	1.3097	1850.5	.0372	.710
1500	2.5637-1	-917.6	1.8212	28.081	.089	1.1688	-1.0101	0.5170	1.2147	1796.1	.0738	.625	0.2993	1.3093	1864.8	.0377	.708
1520	2.5242-1	-907.2	1.8281	28.018	.090	1.1707	-1.0103	0.5205	1.2140	1809.6	.0738	.635	0.3002	1.3090	1879.1	.0383	.706
1540	2.4859-1	-896.8	1.8349	27.956	.091	1.1691	-1.0103	0.5198	1.2144	1823.7	.0730	.646	0.3011	1.3088	1893.3	.0388	.704
1560	2.4488-1	-886.5	1.8415	27.896	.092	1.1637	-1.0100	0.5143	1.2157	1838.6	.0716	.657	0.3020	1.3085	1907.4	.0394	.702
1580	2.4129-1	-876.3	1.8480	27.839	.092	1.1542	-1.0095	0.5038	1.2183	1854.1	.0696	.669	0.3028	1.3082	1921.3	.0399	.701
1600	2.3783-1	-866.3	1.8543	27.787	.093	1.1409	-1.0087	0.4886	1.2220	1870.4	.0670	.679	0.3036	1.3079	1935.0	.0404	.700
1620	2.3450-1	-856.7	1.8602	27.741	.094	1.1245	-1.0078	0.4699	1.2268	1887.3	.0641	.688	0.3043	1.3076	1948.5	.0409	.699
1640	2.3132-1	-847.6	1.8659	27.702	.095	1.1063	-1.0067	0.4489	1.2327	1904.8	.0612	.695	0.3051	1.3072	1961.5	.0414	.698
1660	2.2826-1	-838.8	1.8712	27.670	.095	1.0877	-1.0056	0.4276	1.2391	1922.6	.0584	.699	0.3058	1.3067	1974.3	.0418	.698
1680	2.2533-1	-830.4	1.8762	27.644	.096	1.0700	-1.0045	0.4075	1.2459	1940.3	.0559	.701	0.3065	1.3062	1986.7	.0423	.697
1700	2.2252-1	-822.5	1.8809	27.623	.097	1.0545	-1.0035	0.3899	1.2523	1957.5	.0539	.702	0.3071	1.3056	1998.7	.0427	.697
1720	2.1981-1	-814.8	1.8854	27.608	.098	1.0414	-1.0027	0.3753	1.2582	1974.2	.0524	.701	0.3078	1.3050	2010.5	.0432	.697
1740	2.1719-1	-807.4	1.8896	27.596	.099	1.0310	-1.0020	0.3637	1.2631	1989.9	.0513	.699	0.3084	1.3043	2022.1	.0436	.698
1760	2.1466-1	-800.3	1.8938	27.588	.099	1.0229	-1.0015	0.3548	1.2671	2004.8	.0505	.698	0.3091	1.3036	2033.5	.0440	.698
1780	2.1220-1	-793.2	1.8977	27.582	.100	1.0169	-1.0011	0.3482	1.2702	2018.8	.0500	.697	0.3097	1.3029	2044.7	.0444	.698
1800	2.0980-1	-786.3	1.9016	27.577	.101	1.0124	-1.0008	0.3433	1.2725	2032.1	.0498	.696	0.3103	1.3022	2055.7	.0448	.699
1900	1.9869-1	-752.6	1.9198	27.568	.105	1.0028	-1.0002	0.3334	1.2772	2092.0	.0503	.694	0.3131	1.2988	2109.6	.0468	.700
2000	1.8874-1	-719.4	1.9369	27.566	.108	1.0008	-1.0001	0.3320	1.2776	2146.8	.0517	.695	0.3159	1.2954	2161.7	.0487	.702
2100	1.7975-1	-686.2	1.9531	27.565	.112	1.0003	-1.0000	0.3322	1.2771	2199.4	.0534	.697	0.3185	1.2923	2212.4	.0507	.704
2200	1.7158-1	-652.9	1.9685	27.565	.116	1.0001	-1.0000	0.3329	1.2762	2250.4	.0551	.698	0.3211	1.2893	2261.9	.0526	.705
2300	1.6412-1	-619.6	1.9833	27.565	.119	1.0001	-1.0000	0.3338	1.2752	2300.1	.0568	.699	0.3235	1.2865	2310.3	.0545	.706
2400	1.5728-1	-586.1	1.9976	27.564	.123	1.0000	-1.0000	0.3349	1.2741	2348.6	.0586	.701	0.3258	1.2839	2357.6	.0565	.707
2500	1.5099-1	-552.6	2.0113	27.564	.126	1.0000	-1.0000	0.3360	1.2730	2395.9	.0603	.702	0.3280	1.2815	2403.9	.0584	.708

TABLE 11.4D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
 (ONLY GAS PHASE PERMITTED)

 FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN² (10.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS				FROZEN COMPOSITIONS					
								CP BTU/ LB R	(GAM)	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4518-1	-518.9	2.0245	27.564	.129	1.0000	-1.0000	0.3371	1.2718	2442.2	.0620	.703	0.3300	1.2793	2449.4	.0603	.708
2700	1.3980-1	-485.2	2.0372	27.564	.133	1.0000	-1.0000	0.3383	1.2706	2487.6	.0638	.703	0.3320	1.2771	2494.0	.0622	.709
2800	1.3481-1	-451.3	2.0495	27.564	.136	1.0000	-1.0000	0.3395	1.2694	2532.0	.0656	.704	0.3339	1.2751	2537.7	.0641	.709
2900	1.3016-1	-417.3	2.0615	27.564	.139	1.0000	-1.0000	0.3407	1.2682	2575.6	.0674	.704	0.3357	1.2733	2580.8	.0659	.709
3000	1.2582-1	-383.1	2.0730	27.564	.143	1.0001	-1.0000	0.3419	1.2670	2618.4	.0692	.704	0.3374	1.2715	2623.1	.0678	.709
3100	1.2176-1	-348.9	2.0843	27.564	.146	1.0001	-1.0000	0.3431	1.2658	2660.5	.0710	.704	0.3390	1.2699	2664.8	.0697	.709
3200	1.1796-1	-314.5	2.0952	27.564	.149	1.0002	-1.0000	0.3444	1.2646	2701.8	.0729	.703	0.3405	1.2684	2705.8	.0715	.709
3300	1.1438-1	-280.0	2.1058	27.564	.152	1.0003	-1.0000	0.3457	1.2634	2742.4	.0748	.702	0.3419	1.2670	2746.2	.0734	.708
3400	1.1102-1	-245.4	2.1161	27.564	.155	1.0004	-1.0000	0.3471	1.2622	2782.3	.0768	.701	0.3432	1.2657	2786.1	.0752	.708
3500	1.0784-1	-210.6	2.1262	27.563	.158	1.0007	-1.0000	0.3486	1.2609	2821.4	.0789	.699	0.3445	1.2644	2825.4	.0770	.708
3600	1.0485-1	-175.6	2.1361	27.563	.161	1.0010	-1.0000	0.3504	1.2595	2859.9	.0812	.696	0.3457	1.2633	2864.2	.0789	.707
3700	1.0201-1	-140.5	2.1457	27.562	.164	1.0015	-1.0001	0.3524	1.2579	2897.6	.0835	.693	0.3469	1.2622	2902.5	.0806	.707
3800	9.9320-2	-105.1	2.1551	27.560	.167	1.0023	-1.0001	0.3549	1.2561	2934.4	.0862	.689	0.3479	1.2612	2940.4	.0824	.706
3900	9.6766-2	-69.5	2.1644	27.558	.170	1.0033	-1.0001	0.3580	1.2539	2970.3	.0891	.684	0.3489	1.2603	2977.8	.0842	.705
4000	9.4337-2	-33.5	2.1735	27.555	.173	1.0049	-1.0002	0.3620	1.2513	3005.2	.0925	.678	0.3499	1.2594	3014.9	.0860	.705
4100	9.2023-2	2.9	2.1825	27.551	.176	1.0070	-1.0002	0.3672	1.2482	3038.9	.0964	.671	0.3508	1.2586	3051.6	.0878	.704
4200	8.9814-2	40.0	2.1914	27.546	.179	1.0100	-1.0004	0.3739	1.2443	3071.3	.1009	.663	0.3516	1.2579	3088.0	.0895	.703
4300	8.7700-2	77.8	2.2003	27.538	.182	1.0141	-1.0005	0.3828	1.2395	3102.1	.1064	.654	0.3524	1.2572	3124.2	.0913	.702
4400	8.5674-2	116.6	2.2093	27.527	.185	1.0198	-1.0007	0.3944	1.2338	3131.3	.1131	.644	0.3532	1.2567	3160.2	.0931	.701
4500	8.3726-2	156.8	2.2183	27.513	.187	1.0275	-1.0010	0.4096	1.2270	3158.8	.1212	.633	0.3539	1.2562	3196.2	.0949	.699
4600	8.1848-2	198.7	2.2275	27.493	.190	1.0378	-1.0014	0.4292	1.2192	3184.7	.1312	.622	0.3546	1.2558	3232.2	.0967	.698
4700	8.0030-2	242.8	2.2370	27.467	.193	1.0512	-1.0020	0.4539	1.2107	3209.4	.1435	.610	0.3552	1.2556	3268.3	.0985	.696
4800	7.8265-2	289.7	2.2468	27.433	.196	1.0683	-1.0027	0.4841	1.2018	3233.5	.1583	.598	0.3558	1.2554	3304.8	.1003	.694
4900	7.6544-2	339.8	2.2572	27.389	.198	1.0891	-1.0036	0.5198	1.1931	3257.7	.1760	.586	0.3563	1.2555	3341.8	.1021	.692
5000	7.4860-2	393.8	2.2681	27.333	.201	1.1135	-1.0047	0.5603	1.1849	3282.8	.1967	.572	0.3568	1.2557	3379.5	.1039	.690
5100	7.3208-2	452.0	2.2796	27.264	.204	1.1410	-1.0060	0.6044	1.1777	3309.5	.2204	.558	0.3573	1.2561	3417.9	.1057	.688
5200	7.1584-2	514.7	2.2918	27.182	.206	1.1708	-1.0074	0.6506	1.1716	3338.2	.2470	.543	0.3577	1.2567	3457.3	.1076	.685
5300	6.9984-2	582.2	2.3046	27.086	.209	1.2021	-1.0090	0.6975	1.1667	3369.1	.2761	.527	0.3581	1.2575	3497.7	.1095	.682
5400	6.8409-2	654.2	2.3181	26.975	.211	1.2343	-1.0107	0.7439	1.1629	3402.0	.3076	.510	0.3584	1.2585	3539.2	.1114	.679

TABLE 11.5D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN² (50.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
360	5.4952	0	-1276.5	1.2935	28.892	.028	1.0000	-1.0000	0.2495	1.3803	924.7	.0089	.777	0.2495	1.3803	924.7	.0089	.777
380	5.2059	0	-1271.5	1.3070	28.892	.029	1.0000	-1.0000	0.2500	1.3793	949.7	.0095	.772	0.2500	1.3793	949.7	.0095	.772
400	4.9456	0	-1266.5	1.3198	28.892	.031	1.0000	-1.0000	0.2505	1.3782	974.0	.0100	.768	0.2505	1.3782	974.0	.0100	.768
420	4.7101	0	-1261.5	1.3320	28.892	.032	1.0000	-1.0000	0.2511	1.3770	997.6	.0105	.765	0.2510	1.3770	997.6	.0105	.765
440	4.4960	0	-1256.5	1.3437	28.892	.034	1.0000	-1.0000	0.2516	1.3758	1020.7	.0111	.762	0.2516	1.3758	1020.7	.0111	.762
460	4.3006	0	-1251.5	1.3549	28.892	.035	1.0000	-1.0000	0.2522	1.3746	1043.1	.0116	.760	0.2522	1.3746	1043.1	.0116	.760
480	4.1214	0	-1246.4	1.3657	28.892	.036	1.0000	-1.0000	0.2529	1.3733	1065.1	.0121	.758	0.2528	1.3733	1065.1	.0121	.758
500	3.9565	0	-1241.3	1.3760	28.892	.038	1.0000	-1.0000	0.2535	1.3720	1086.5	.0126	.756	0.2535	1.3720	1086.5	.0126	.756
520	3.8044	0	-1236.3	1.3860	28.892	.039	1.0000	-1.0000	0.2542	1.3707	1107.5	.0131	.755	0.2542	1.3707	1107.5	.0131	.755
537	3.6862	0	-1232.0	1.3940	28.892	.040	1.0000	-1.0000	0.2547	1.3695	1124.6	.0135	.755	0.2547	1.3695	1124.6	.0135	.755
540	3.6635	0	-1231.2	1.3956	28.892	.040	1.0000	-1.0000	0.2549	1.3693	1128.0	.0136	.755	0.2548	1.3693	1128.0	.0136	.755
560	3.5326	0	-1226.1	1.4048	28.892	.042	1.0000	-1.0000	0.2556	1.3679	1148.1	.0141	.755	0.2555	1.3680	1148.2	.0141	.755
580	3.4108	0	-1220.9	1.4138	28.892	.043	1.0000	-1.0000	0.2563	1.3665	1167.9	.0145	.755	0.2562	1.3665	1167.9	.0145	.755
600	3.2971	0	-1215.8	1.4225	28.892	.044	1.0000	-1.0000	0.2570	1.3650	1187.2	.0150	.755	0.2570	1.3651	1187.2	.0150	.755
620	3.1908	0	-1210.7	1.4310	28.892	.045	1.0000	-1.0000	0.2578	1.3635	1206.2	.0155	.755	0.2577	1.3637	1206.2	.0155	.755
640	3.0910	0	-1205.5	1.4392	28.892	.047	1.0000	-1.0000	0.2586	1.3620	1224.8	.0160	.755	0.2585	1.3622	1224.9	.0159	.755
660	2.9974	0	-1200.3	1.4471	28.892	.048	1.0000	-1.0000	0.2594	1.3605	1243.1	.0164	.754	0.2593	1.3607	1243.2	.0164	.755
680	2.9092	0	-1195.1	1.4549	28.892	.049	1.0000	-1.0000	0.2603	1.3589	1261.0	.0169	.753	0.2601	1.3592	1261.2	.0169	.754
700	2.8261	0	-1189.9	1.4624	28.892	.050	1.0001	-1.0000	0.2611	1.3573	1278.7	.0174	.752	0.2609	1.3577	1278.9	.0174	.753
720	2.7476	0	-1184.7	1.4698	28.892	.051	1.0001	-1.0000	0.2620	1.3557	1296.1	.0179	.751	0.2617	1.3562	1296.3	.0179	.753
740	2.6733	0	-1179.4	1.4770	28.892	.053	1.0002	-1.0000	0.2629	1.3541	1313.1	.0184	.750	0.2625	1.3547	1313.4	.0183	.752
760	2.6029	0	-1174.2	1.4840	28.892	.054	1.0002	-1.0000	0.2639	1.3524	1329.9	.0189	.749	0.2634	1.3531	1330.3	.0188	.752
780	2.5362	0	-1168.9	1.4909	28.891	.055	1.0003	-1.0000	0.2649	1.3506	1346.5	.0194	.748	0.2642	1.3516	1346.9	.0192	.752
800	2.4727	0	-1163.6	1.4976	28.891	.056	1.0005	-1.0000	0.2660	1.3489	1362.7	.0199	.747	0.2651	1.3500	1363.3	.0197	.752
820	2.4124	0	-1158.2	1.5042	28.891	.057	1.0006	-1.0000	0.2671	1.3471	1378.8	.0204	.745	0.2660	1.3485	1379.5	.0202	.752
840	2.3549	0	-1152.9	1.5106	28.890	.058	1.0008	-1.0000	0.2682	1.3452	1394.5	.0209	.744	0.2669	1.3469	1395.4	.0206	.752
860	2.3001	0	-1147.5	1.5170	28.890	.059	1.0010	-1.0001	0.2695	1.3433	1410.0	.0215	.742	0.2678	1.3454	1411.1	.0211	.752
880	2.2478	0	-1142.1	1.5232	28.889	.060	1.0013	-1.0001	0.2708	1.3413	1425.3	.0220	.740	0.2687	1.3438	1426.6	.0215	.752
900	2.1978	0	-1136.7	1.5293	28.888	.061	1.0016	-1.0001	0.2721	1.3393	1440.4	.0226	.737	0.2696	1.3423	1442.0	.0220	.751
920	2.1499	0	-1131.2	1.5353	28.887	.062	1.0020	-1.0001	0.2736	1.3372	1455.2	.0232	.734	0.2705	1.3408	1457.1	.0224	.751
940	2.1040	0	-1125.7	1.5412	28.885	.063	1.0025	-1.0001	0.2752	1.3351	1469.7	.0238	.731	0.2714	1.3392	1472.0	.0229	.751
960	2.0601	0	-1120.2	1.5470	28.884	.064	1.0030	-1.0002	0.2768	1.3328	1484.1	.0245	.727	0.2724	1.3377	1486.8	.0234	.750
980	2.0179	0	-1114.7	1.5527	28.882	.065	1.0037	-1.0002	0.2786	1.3305	1498.2	.0252	.723	0.2733	1.3362	1501.4	.0238	.750
1000	1.9774	0	-1109.1	1.5584	28.879	.066	1.0044	-1.0002	0.2805	1.3281	1512.1	.0259	.718	0.2742	1.3347	1515.8	.0243	.749
1020	1.9384	0	-1103.4	1.5639	28.876	.067	1.0053	-1.0003	0.2826	1.3257	1525.8	.0267	.713	0.2752	1.3332	1530.1	.0248	.749
1040	1.9009	0	-1097.8	1.5695	28.873	.068	1.0063	-1.0003	0.2848	1.3231	1539.3	.0275	.708	0.2762	1.3317	1544.3	.0252	.748
1060	1.8648	0	-1092.0	1.5749	28.869	.069	1.0075	-1.0004	0.2872	1.3204	1552.6	.0284	.703	0.2771	1.3302	1558.3	.0257	.748
1080	1.8300	0	-1086.3	1.5803	28.865	.070	1.0088	-1.0005	0.2899	1.3176	1565.6	.0293	.697	0.2781	1.3287	1572.2	.0262	.747
1100	1.7964	0	-1080.4	1.5856	28.860	.071	1.0103	-1.0006	0.2927	1.3147	1578.4	.0302	.691	0.2790	1.3273	1586.0	.0267	.746
1120	1.7640	0	-1074.6	1.5909	28.854	.072	1.0120	-1.0007	0.2958	1.3117	1591.0	.0312	.684	0.2800	1.3259	1599.6	.0272	.745
1140	1.7327	0	-1068.6	1.5962	28.848	.073	1.0139	-1.0008	0.2991	1.3085	1603.4	.0323	.678	0.2810	1.3245	1613.2	.0276	.745

TABLE 11.5D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
 (ONLY GAS PHASE PERMITTED)

 FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN² (50.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1160	1.7023	0	-1062.6	1.6014	28.840	.074	1.0160	-1.0009	0.3028	1.3052	1615.6	.0335	.671	0.2820	1.3231	1626.6	.0281	.744
1180	1.6730	0	-1056.5	1.6066	28.832	.075	1.0184	-1.0011	0.3067	1.3018	1627.6	.0347	.665	0.2830	1.3217	1640.0	.0286	.743
1200	1.6446	0	-1050.3	1.6118	28.822	.076	1.0211	-1.0012	0.3110	1.2983	1639.4	.0359	.659	0.2839	1.3204	1653.3	.0291	.742
1220	1.6170	0	-1044.1	1.6170	28.811	.077	1.0241	-1.0014	0.3157	1.2946	1650.9	.0373	.652	0.2849	1.3191	1666.5	.0296	.741
1240	1.5903	0	-1037.7	1.6222	28.799	.078	1.0274	-1.0016	0.3208	1.2907	1662.3	.0387	.646	0.2859	1.3178	1679.6	.0301	.740
1260	1.5643	0	-1031.2	1.6274	28.786	.079	1.0311	-1.0018	0.3264	1.2868	1673.5	.0402	.640	0.2869	1.3166	1692.7	.0306	.738
1280	1.5390	0	-1024.6	1.6326	28.771	.080	1.0351	-1.0021	0.3324	1.2827	1684.5	.0418	.635	0.2879	1.3154	1705.8	.0311	.737
1300	1.5145	0	-1017.9	1.6378	28.754	.081	1.0396	-1.0023	0.3389	1.2785	1695.3	.0434	.630	0.2889	1.3142	1718.8	.0317	.736
1320	1.4906	0	-1011.1	1.6430	28.736	.082	1.0444	-1.0026	0.3460	1.2743	1706.0	.0451	.625	0.2898	1.3131	1731.7	.0322	.735
1340	1.4673	0	-1004.1	1.6482	28.716	.082	1.0498	-1.0030	0.3536	1.2699	1716.5	.0469	.621	0.2908	1.3120	1744.7	.0327	.734
1360	1.4446	0	-996.9	1.6535	28.693	.083	1.0556	-1.0033	0.3618	1.2655	1727.0	.0488	.617	0.2918	1.3109	1757.7	.0332	.732
1380	1.4224	0	-989.6	1.6589	28.669	.084	1.0618	-1.0037	0.3705	1.2611	1737.3	.0508	.614	0.2928	1.3099	1770.6	.0337	.731
1400	1.4008	0	-982.1	1.6643	28.642	.085	1.0685	-1.0041	0.3799	1.2567	1747.6	.0528	.612	0.2937	1.3090	1783.6	.0342	.729
1420	1.3797	0	-974.4	1.6697	28.613	.086	1.0757	-1.0046	0.3897	1.2524	1757.9	.0549	.610	0.2947	1.3081	1796.6	.0348	.728
1440	1.3590	0	-966.5	1.6753	28.581	.087	1.0833	-1.0050	0.4001	1.2481	1768.2	.0570	.609	0.2956	1.3072	1809.6	.0353	.727
1460	1.3388	0	-958.4	1.6809	28.546	.088	1.0913	-1.0055	0.4109	1.2440	1778.6	.0591	.609	0.2966	1.3064	1822.7	.0358	.725
1480	1.3190	0	-950.1	1.6865	28.509	.088	1.0996	-1.0061	0.4220	1.2400	1789.0	.0613	.609	0.2975	1.3057	1835.8	.0364	.724
1500	1.2996	0	-941.5	1.6923	28.470	.089	1.1081	-1.0066	0.4333	1.2362	1799.6	.0634	.610	0.2984	1.3050	1849.0	.0369	.722
1520	1.2806	0	-932.7	1.6981	28.427	.090	1.1168	-1.0071	0.4447	1.2327	1810.3	.0655	.611	0.2993	1.3044	1862.2	.0374	.721
1540	1.2619	0	-923.7	1.7040	28.382	.091	1.1253	-1.0077	0.4559	1.2295	1821.2	.0675	.614	0.3002	1.3039	1875.5	.0380	.719
1560	1.2437	0	-914.5	1.7099	28.335	.092	1.1337	-1.0083	0.4667	1.2266	1832.4	.0694	.617	0.3011	1.3034	1888.9	.0385	.718
1580	1.2258	0	-905.1	1.7159	28.285	.093	1.1415	-1.0088	0.4767	1.2242	1843.9	.0711	.620	0.3020	1.3029	1902.3	.0390	.716
1600	1.2082	0	-895.4	1.7220	28.234	.093	1.1485	-1.0093	0.4858	1.2221	1855.6	.0725	.625	0.3028	1.3025	1915.7	.0395	.715
1620	1.1911	0	-885.6	1.7281	28.181	.094	1.1545	-1.0097	0.4934	1.2205	1867.8	.0737	.630	0.3037	1.3022	1929.2	.0401	.713
1640	1.1743	0	-875.7	1.7342	28.126	.095	1.1590	-1.0100	0.4992	1.2195	1880.2	.0744	.636	0.3045	1.3019	1942.8	.0406	.712
1660	1.1579	0	-865.7	1.7402	28.072	.096	1.1618	-1.0103	0.5029	1.2189	1893.1	.0748	.643	0.3053	1.3017	1956.3	.0411	.710
1680	1.1419	0	-855.6	1.7463	28.017	.096	1.1624	-1.0104	0.5039	1.2190	1906.4	.0747	.650	0.3060	1.3014	1969.8	.0416	.709
1700	1.1263	0	-845.6	1.7522	27.964	.097	1.1606	-1.0103	0.5021	1.2198	1920.1	.0741	.658	0.3068	1.3012	1983.2	.0421	.708
1720	1.1111	0	-835.6	1.7581	27.912	.098	1.1562	-1.0101	0.4973	1.2212	1934.3	.0731	.666	0.3075	1.3010	1996.5	.0426	.707
1740	1.0964	0	-825.7	1.7638	27.863	.099	1.1491	-1.0097	0.4893	1.2233	1949.0	.0716	.675	0.3082	1.3008	2009.7	.0431	.705
1760	1.0822	0	-816.0	1.7693	27.817	.099	1.1393	-1.0092	0.4785	1.2262	1964.0	.0697	.683	0.3089	1.3006	2022.8	.0436	.705
1780	1.0684	0	-806.6	1.7746	27.775	.100	1.1273	-1.0085	0.4652	1.2298	1979.5	.0676	.690	0.3095	1.3004	2035.6	.0441	.704
1800	1.0551	0	-797.4	1.7798	27.737	.101	1.1137	-1.0076	0.4502	1.2340	1995.4	.0653	.695	0.3102	1.3001	2048.1	.0445	.703
1900	9.9534	-1	-756.2	1.8020	27.620	.105	1.0464	-1.0033	0.3778	1.2580	2074.3	.0561	.704	0.3131	1.2980	2107.1	.0467	.702
2000	9.4425	-1	-720.4	1.8204	27.581	.108	1.0138	-1.0010	0.3446	1.2718	2141.3	.0534	.699	0.3159	1.2952	2160.9	.0487	.702
2100	8.9893	-1	-686.5	1.8370	27.570	.112	1.0041	-1.0003	0.3357	1.2755	2197.8	.0539	.698	0.3185	1.2922	2212.2	.0507	.704
2200	8.5797	-1	-653.0	1.8525	27.567	.116	1.0014	-1.0001	0.3340	1.2758	2249.9	.0552	.698	0.3211	1.2893	2261.8	.0526	.705
2300	8.2063	-1	-619.6	1.8674	27.566	.119	1.0006	-1.0001	0.3342	1.2751	2299.9	.0569	.700	0.3235	1.2865	2310.2	.0545	.706
2400	7.8643	-1	-586.2	1.8816	27.565	.123	1.0003	-1.0000	0.3350	1.2741	2348.5	.0586	.701	0.3258	1.2839	2357.5	.0565	.707
2500	7.5496	-1	-552.6	1.8953	27.565	.126	1.0002	-1.0000	0.3361	1.2730	2395.9	.0603	.702	0.3280	1.2815	2403.9	.0584	.708

TABLE 11.5D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN2 (50.00 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS							FROZEN COMPOSITIONS				
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	7.2592-1	-519.0	1.9085	27.565	.129	1.0001	-1.0000	0.3372	1.2718	2442.2	.0620	.703	0.3300	1.2792	2449.3	.0603	.708
2700	6.9903-1	-485.2	1.9213	27.565	.133	1.0001	-1.0000	0.3383	1.2706	2487.6	.0638	.704	0.3320	1.2771	2493.9	.0622	.709
2800	6.7406-1	-451.3	1.9336	27.565	.136	1.0001	-1.0000	0.3395	1.2694	2532.0	.0656	.704	0.3339	1.2751	2537.7	.0641	.709
2900	6.5082-1	-417.3	1.9455	27.565	.139	1.0001	-1.0000	0.3407	1.2682	2575.6	.0673	.705	0.3357	1.2733	2580.8	.0659	.709
3000	6.2912-1	-383.2	1.9571	27.564	.143	1.0001	-1.0000	0.3418	1.2671	2618.5	.0691	.705	0.3374	1.2715	2623.1	.0678	.709
3100	6.0883-1	-348.9	1.9683	27.564	.146	1.0001	-1.0000	0.3430	1.2659	2660.6	.0709	.705	0.3390	1.2699	2664.8	.0697	.709
3200	5.8980-1	-314.6	1.9792	27.564	.149	1.0001	-1.0000	0.3442	1.2648	2701.9	.0727	.704	0.3405	1.2684	2705.8	.0715	.709
3300	5.7192-1	-280.1	1.9898	27.564	.152	1.0001	-1.0000	0.3454	1.2637	2742.6	.0746	.704	0.3419	1.2670	2746.2	.0734	.708
3400	5.5510-1	-245.5	2.0002	27.564	.155	1.0002	-1.0000	0.3466	1.2626	2782.7	.0764	.703	0.3432	1.2657	2786.1	.0752	.708
3500	5.3924-1	-210.8	2.0102	27.564	.158	1.0003	-1.0000	0.3478	1.2615	2822.1	.0784	.702	0.3445	1.2644	2825.4	.0770	.708
3600	5.2425-1	-175.9	2.0200	27.564	.161	1.0005	-1.0000	0.3491	1.2603	2860.8	.0803	.701	0.3457	1.2633	2864.1	.0789	.707
3700	5.1007-1	-140.9	2.0296	27.563	.164	1.0007	-1.0000	0.3505	1.2591	2898.9	.0823	.699	0.3469	1.2622	2902.4	.0806	.707
3800	4.9664-1	-105.8	2.0390	27.563	.167	1.0010	-1.0000	0.3521	1.2579	2936.4	.0845	.697	0.3479	1.2612	2940.2	.0824	.706
3900	4.8389-1	-70.5	2.0482	27.562	.170	1.0015	-1.0001	0.3539	1.2565	2973.2	.0867	.695	0.3489	1.2602	2977.6	.0842	.706
4000	4.7177-1	-35.0	2.0571	27.560	.173	1.0021	-1.0001	0.3561	1.2549	3009.3	.0892	.692	0.3499	1.2593	3014.6	.0860	.705
4100	4.6024-1	0.7	2.0660	27.559	.176	1.0030	-1.0001	0.3587	1.2531	3044.6	.0918	.688	0.3508	1.2585	3051.1	.0877	.704
4200	4.4924-1	36.7	2.0747	27.556	.179	1.0042	-1.0002	0.3619	1.2510	3079.0	.0948	.683	0.3516	1.2578	3087.3	.0895	.703
4300	4.3874-1	73.1	2.0832	27.553	.182	1.0059	-1.0002	0.3659	1.2486	3112.6	.0981	.678	0.3525	1.2571	3123.1	.0913	.702
4400	4.2870-1	110.0	2.0917	27.549	.185	1.0082	-1.0003	0.3710	1.2456	3145.1	.1019	.673	0.3532	1.2564	3158.7	.0930	.701
4500	4.1908-1	147.4	2.1001	27.543	.187	1.0112	-1.0004	0.3774	1.2421	3176.5	.1062	.666	0.3539	1.2558	3194.0	.0948	.700
4600	4.0985-1	185.5	2.1085	27.535	.190	1.0152	-1.0006	0.3856	1.2380	3206.7	.1113	.659	0.3546	1.2553	3229.1	.0965	.699
4700	4.0098-1	224.5	2.1169	27.524	.193	1.0205	-1.0008	0.3958	1.2331	3235.6	.1173	.651	0.3552	1.2549	3264.0	.0983	.698
4800	3.9243-1	264.7	2.1253	27.510	.196	1.0273	-1.0011	0.4085	1.2276	3263.4	.1243	.643	0.3558	1.2545	3298.9	.1001	.696
4900	3.8417-1	306.3	2.1339	27.493	.198	1.0360	-1.0014	0.4242	1.2215	3290.0	.1326	.635	0.3564	1.2542	3333.8	.1018	.695
5000	3.7618-1	349.7	2.1427	27.470	.201	1.0468	-1.0019	0.4431	1.2149	3315.8	.1424	.626	0.3569	1.2540	3368.7	.1036	.693
5100	3.6841-1	395.1	2.1517	27.441	.204	1.0600	-1.0025	0.4655	1.2080	3341.1	.1539	.617	0.3574	1.2539	3403.9	.1053	.692
5200	3.6085-1	442.9	2.1609	27.405	.206	1.0756	-1.0032	0.4911	1.2012	3366.4	.1671	.607	0.3579	1.2539	3439.4	.1071	.690
5300	3.5348-1	493.4	2.1706	27.361	.209	1.0936	-1.0040	0.5196	1.1948	3392.2	.1822	.596	0.3583	1.2540	3475.2	.1088	.688
5400	3.4626-1	546.9	2.1805	27.308	.212	1.1136	-1.0050	0.5503	1.1888	3418.8	.1991	.585	0.3587	1.2542	3511.6	.1105	.687

TABLE 11.1E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 0.14696 LB/IN2 (0.01 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS							GAS PHASE PROPERTIES FROZEN COMPOSITIONS						
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)	VS	COND	PRAN	CP	GAM	COND	PRAN	
R	L /FT3	BTU/LB	BTU/ LB R		BTU/ LB R	BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R		
360	1.309-3	-1404.3	1.5988	27.564	0.254	.245	1.152-3	30.281	.031	1.0000	-1.000	.234	1.390	906	.010	.735	.234	1.390	.010	.735
400	1.174-3	-1392.3	1.6303	27.564	0.403	.250	1.035-3	30.241	.034	1.0000	-1.000	.235	1.388	955	.011	.731	.235	1.388	.011	.731
440	1.025-3	-1355.8	1.7161	27.566	1.965	.255	9.262-4	29.759	.036	1.0000	-1.000	.241	1.384	1009	.012	.740	.241	1.384	.012	.740
480	8.243-4	-1251.8	1.9445	27.608	0.258	.255	8.083-4	28.334	.035	1.0000	-1.000	.257	1.374	1076	.012	.771	.257	1.375	.012	.771
520	7.609-4	-1241.4	1.9652	27.639	0.260	.256	7.465-4	28.347	.038	1.0001	-1.000	.258	1.372	1119	.013	.767	.258	1.373	.013	.768
537	7.372-4	-1237.1	1.9734	27.654	0.261	.257	7.235-4	28.354	.039	1.0001	-1.000	.259	1.371	1136	.013	.765	.259	1.372	.013	.767
560	7.065-4	-1231.0	1.9846	27.678	0.263	.258	6.936-4	28.365	.041	1.0002	-1.000	.260	1.369	1159	.014	.762	.259	1.370	.014	.766
600	6.594-4	-1220.4	2.0028	27.727	0.266	.259	6.479-4	28.386	.043	1.0007	-1.000	.262	1.366	1198	.016	.755	.260	1.368	.015	.766
640	6.181-4	-1209.7	2.0201	27.783	0.271	.260	6.079-4	28.410	.046	1.0019	-1.000	.265	1.360	1234	.016	.740	.261	1.365	.016	.765
680	5.817-4	-1198.7	2.0367	27.843	0.277	.262	5.726-4	28.434	.048	1.0043	-1.000	.271	1.352	1268	.018	.713	.262	1.363	.017	.762
720	5.491-4	-1187.4	2.0528	27.905	0.287	.263	5.412-4	28.455	.051	1.0090	-1.000	.280	1.340	1298	.021	.674	.264	1.360	.018	.759
760	5.198-4	-1175.7	2.0688	27.964	0.303	.265	5.130-4	28.470	.053	1.0170	-1.001	.294	1.324	1326	.025	.628	.265	1.357	.019	.756
800	4.932-4	-1163.1	2.0848	28.014	0.325	.267	4.874-4	28.472	.055	1.0296	-1.001	.315	1.304	1350	.030	.582	.267	1.354	.020	.752
840	4.688-4	-1149.5	2.1014	28.051	0.356	.269	4.639-4	28.455	.058	1.0479	-1.002	.344	1.283	1372	.036	.544	.269	1.351	.021	.747
880	4.462-4	-1134.5	2.1189	28.067	0.395	.271	4.422-4	28.414	.060	1.0717	-1.003	.379	1.263	1395	.044	.522	.271	1.348	.022	.741
920	4.251-4	-1117.9	2.1374	28.060	0.439	.273	4.219-4	28.345	.062	1.0995	-1.005	.420	1.245	1418	.051	.516	.273	1.345	.023	.732
960	4.052-4	-1099.3	2.1571	28.028	0.488	.276	4.029-4	28.246	.064	1.1279	-1.006	.460	1.231	1443	.056	.526	.276	1.342	.025	.721
1000	3.866-4	-1078.9	2.1780	27.976	0.536	.278	3.851-4	28.120	.066	1.1523	-1.008	.497	1.221	1469	.060	.549	.278	1.340	.026	.709
1040	3.690-4	-1056.4	2.2000	27.910	0.586	.281	3.683-4	27.974	.069	1.1684	-1.009	.525	1.214	1498	.062	.581	.281	1.338	.028	.697
1080	3.526-4	-1033.0	2.2221	27.811	0.528	.284	3.526-4	27.811	.071	1.1636	-1.008	.528	1.212	1529	.060	.622	.284	1.336	.029	.687
1120	3.384-4	-1013.2	2.2401	27.673	0.455	.286	3.384-4	27.673	.072	1.1055	-1.005	.455	1.230	1573	.049	.669	.286	1.335	.030	.681
1160	3.258-4	-996.7	2.2546	27.602	0.377	.288	3.258-4	27.602	.074	1.0452	-1.002	.377	1.260	1622	.041	.686	.288	1.333	.032	.679
1200	3.147-4	-982.5	2.2666	27.576	0.339	.290	3.147-4	27.576	.076	1.0149	-1.001	.339	1.279	1664	.038	.684	.290	1.331	.032	.679
1240	3.045-4	-969.2	2.2775	27.568	0.327	.291	3.045-4	27.568	.078	1.0046	-1.000	.327	1.285	1695	.037	.683	.291	1.329	.033	.680
1280	2.949-4	-956.2	2.2878	27.565	0.325	.293	2.949-4	27.565	.080	1.0014	-1.000	.325	1.286	1723	.038	.682	.293	1.326	.034	.681
1320	2.860-4	-943.2	2.2978	27.565	0.325	.294	2.860-4	27.565	.081	1.0005	-1.000	.325	1.285	1749	.039	.683	.294	1.324	.035	.683
1360	2.776-4	-930.2	2.3076	27.564	0.326	.296	2.776-4	27.564	.083	1.0002	-1.000	.326	1.284	1775	.040	.683	.296	1.322	.036	.684
1400	2.696-4	-917.1	2.3170	27.564	0.327	.297	2.696-4	27.564	.085	1.0001	-1.000	.327	1.283	1800	.041	.684	.297	1.320	.037	.686

TABLE 11.2E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN² (0.10 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS								
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		BTU/ LB R	BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R			BTU/ LB R	BTU/ FT S R		
360	1.309-2	-1404.4	1.4657	27.564	0.246	.245	1.152-2	30.283	.031	1.0000	-1.000	.234	1.390	906	.010	.735	.234	1.390	.010	.735
400	1.178-2	-1394.3	1.4923	27.564	0.265	.250	1.037-2	30.279	.034	1.0000	-1.000	.235	1.388	955	.011	.730	.235	1.388	.011	.730
440	1.067-2	-1381.6	1.5222	27.564	0.412	.255	9.409-3	30.231	.037	1.0000	-1.000	.236	1.386	1002	.012	.727	.236	1.386	.012	.727
480	9.477-3	-1351.0	1.5882	27.566	1.409	.259	8.518-3	29.857	.039	1.0000	-1.000	.241	1.382	1051	.013	.734	.241	1.382	.013	.734
520	7.609-3	-1241.4	1.8069	27.639	0.260	.256	7.465-3	28.347	.038	1.0000	-1.000	.258	1.372	1119	.013	.768	.258	1.373	.013	.768
537	7.372-3	-1237.1	1.8152	27.654	0.261	.257	7.235-3	28.354	.039	1.0000	-1.000	.259	1.371	1136	.013	.766	.259	1.372	.013	.767
560	7.065-3	-1231.0	1.8263	27.678	0.263	.258	6.936-3	28.365	.041	1.0001	-1.000	.259	1.370	1160	.014	.765	.259	1.370	.014	.765
600	6.594-3	-1220.4	1.8445	27.727	0.265	.259	6.479-3	28.387	.043	1.0002	-1.000	.261	1.367	1199	.015	.763	.260	1.368	.015	.766
640	6.182-3	-1209.8	1.8617	27.783	0.268	.260	6.079-3	28.412	.046	1.0006	-1.000	.262	1.364	1236	.016	.757	.261	1.365	.016	.765
680	5.818-3	-1199.0	1.8780	27.845	0.271	.262	5.727-3	28.439	.048	1.0014	-1.000	.265	1.359	1271	.017	.746	.262	1.363	.017	.763
720	5.494-3	-1188.1	1.8936	27.910	0.275	.263	5.414-3	28.466	.051	1.0029	-1.000	.269	1.353	1304	.019	.728	.264	1.360	.018	.760
760	5.204-3	-1177.0	1.9087	27.975	0.282	.265	5.134-3	28.491	.053	1.0056	-1.000	.274	1.345	1336	.021	.704	.265	1.357	.019	.758
800	4.941-3	-1165.5	1.9233	28.038	0.290	.266	4.881-3	28.512	.055	1.0099	-1.000	.283	1.335	1365	.023	.674	.267	1.354	.020	.756
840	4.703-3	-1153.7	1.9377	28.095	0.302	.268	4.650-3	28.526	.058	1.0167	-1.001	.294	1.322	1391	.027	.639	.268	1.351	.021	.754
880	4.485-3	-1141.3	1.9521	28.144	0.318	.270	4.440-3	28.530	.060	1.0265	-1.001	.310	1.308	1416	.031	.603	.270	1.348	.021	.751
920	4.283-3	-1128.2	1.9667	28.180	0.339	.272	4.245-3	28.521	.062	1.0399	-1.002	.330	1.292	1440	.036	.571	.272	1.345	.023	.748
960	4.096-3	-1114.1	1.9817	28.200	0.365	.274	4.065-3	28.495	.064	1.0571	-1.003	.355	1.277	1462	.042	.547	.274	1.342	.024	.742
1000	3.921-3	-1098.9	1.9972	28.202	0.396	.276	3.896-3	28.448	.066	1.0778	-1.004	.384	1.261	1485	.048	.533	.276	1.339	.025	.736
1040	3.756-3	-1082.4	2.0134	28.184	0.432	.279	3.737-3	28.381	.068	1.1015	-1.005	.417	1.247	1507	.054	.531	.278	1.336	.026	.728
1080	3.601-3	-1064.3	2.0304	28.148	0.473	.281	3.587-3	28.291	.070	1.1267	-1.007	.454	1.234	1530	.059	.538	.281	1.333	.027	.720
1120	3.453-3	-1044.5	2.0485	28.097	0.521	.283	3.446-3	28.180	.072	1.1518	-1.008	.492	1.222	1554	.064	.556	.283	1.331	.029	.711
1160	3.313-3	-1022.6	2.0677	28.035	0.577	.286	3.312-3	28.051	.074	1.1749	-1.009	.531	1.212	1578	.068	.580	.286	1.329	.030	.701
1200	3.183-3	-1000.6	2.0863	27.889	0.539	.288	3.183-3	27.889	.076	1.1742	-1.009	.539	1.209	1608	.066	.618	.288	1.328	.032	.693
1240	3.064-3	-979.7	2.1035	27.743	0.499	.290	3.064-3	27.743	.078	1.1391	-1.008	.499	1.217	1645	.059	.661	.290	1.327	.033	.688
1280	2.958-3	-961.1	2.1183	27.645	0.429	.292	2.958-3	27.645	.080	1.0826	-1.005	.429	1.237	1687	.050	.687	.292	1.326	.034	.685
1320	2.863-3	-945.1	2.1305	27.596	0.372	.294	2.863-3	27.596	.081	1.0371	-1.002	.372	1.259	1731	.044	.691	.294	1.324	.035	.684
1360	2.777-3	-930.9	2.1411	27.576	0.344	.296	2.777-3	27.576	.083	1.0144	-1.001	.344	1.273	1767	.042	.688	.296	1.322	.036	.685
1400	2.697-3	-917.4	2.1509	27.569	0.334	.297	2.697-3	27.569	.085	1.0054	-1.000	.334	1.279	1797	.041	.685	.297	1.320	.037	.686

TABLE 11.3E -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN² (1.00 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS							GAS PHASE PROPERTIES FROZEN COMPOSITIONS						
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)	VS	COND	PRAN	CP	GAM	COND	PRAN	
R	L /FT ³	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT ³		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R		
360	1.309-1	-1404.4	1.3328	27.564	0.245	.245	1.152-1	30.283	.031	1.0000	-1.000	.234	1.390	906	.010	.735	.234	1.390	.010	.735
400	1.178-1	-1394.5	1.3589	27.564	0.251	.250	1.037-1	30.283	.034	1.0000	-1.000	.235	1.388	955	.011	.730	.235	1.388	.011	.730
440	1.071-1	-1384.1	1.3836	27.564	0.271	.255	9.423-2	30.278	.037	1.0000	-1.000	.235	1.386	1001	.012	.726	.235	1.386	.012	.726
480	9.783-2	-1371.9	1.4102	27.564	0.367	.260	8.627-2	30.240	.040	1.0000	-1.000	.237	1.384	1045	.013	.724	.237	1.384	.013	.724
520	8.903-2	-1337.9	1.4784	27.565	0.668	.307	7.918-2	30.067	.042	1.0000	-1.000	.239	1.381	1090	.014	.727	.239	1.381	.014	.727
537	8.507-2	-1324.9	1.5030	27.567	0.913	.303	7.630-2	29.901	.043	1.0000	-1.000	.241	1.379	1109	.014	.731	.241	1.379	.014	.731
560	7.864-2	-1297.2	1.5535	27.580	1.540	.293	7.211-2	29.487	.043	1.0000	-1.000	.246	1.376	1140	.014	.741	.246	1.376	.014	.741
600	6.594-2	-1220.5	1.6862	27.727	0.265	.259	6.479-2	28.387	.043	1.0001	-1.000	.260	1.368	1199	.015	.765	.260	1.368	.015	.766
640	6.182-2	-1209.8	1.7033	27.784	0.267	.260	6.079-2	28.413	.046	1.0002	-1.000	.262	1.365	1236	.016	.763	.261	1.365	.016	.765
680	5.818-2	-1199.1	1.7196	27.846	0.269	.262	5.727-2	28.440	.048	1.0004	-1.000	.263	1.361	1272	.017	.757	.262	1.363	.017	.763
720	5.495-2	-1188.3	1.7350	27.911	0.272	.263	5.415-2	28.469	.051	1.0009	-1.000	.265	1.358	1307	.018	.750	.264	1.360	.018	.760
760	5.205-2	-1177.4	1.7498	27.979	0.275	.265	5.135-2	28.498	.053	1.0018	-1.000	.268	1.353	1339	.019	.740	.265	1.357	.019	.759
800	4.944-2	-1166.3	1.7640	28.046	0.278	.266	4.883-2	28.525	.055	1.0032	-1.000	.272	1.347	1371	.021	.727	.266	1.354	.019	.758
840	4.708-2	-1155.1	1.7777	28.111	0.283	.268	4.654-2	28.550	.058	1.0054	-1.000	.276	1.341	1400	.022	.709	.268	1.351	.020	.756
880	4.492-2	-1143.6	1.7910	28.171	0.290	.270	4.446-2	28.571	.060	1.0088	-1.000	.283	1.333	1429	.025	.688	.270	1.347	.021	.755
920	4.295-2	-1131.9	1.8040	28.226	0.298	.271	4.255-2	28.587	.062	1.0136	-1.001	.291	1.324	1455	.027	.663	.271	1.344	.022	.754
960	4.113-2	-1119.8	1.8169	28.274	0.308	.273	4.079-2	28.595	.064	1.0202	-1.001	.302	1.313	1481	.030	.636	.273	1.341	.023	.751
1000	3.944-2	-1107.2	1.8298	28.312	0.321	.275	3.916-2	28.595	.066	1.0289	-1.001	.315	1.302	1505	.034	.611	.275	1.338	.024	.748
1040	3.787-2	-1094.0	1.8427	28.339	0.338	.277	3.764-2	28.583	.068	1.0401	-1.002	.331	1.290	1528	.038	.588	.277	1.335	.025	.744
1080	3.641-2	-1080.1	1.8558	28.353	0.358	.279	3.621-2	28.559	.070	1.0539	-1.003	.351	1.278	1550	.043	.570	.279	1.332	.026	.740
1120	3.502-2	-1065.3	1.8692	28.354	0.382	.281	3.487-2	28.522	.072	1.0706	-1.004	.374	1.265	1572	.048	.558	.281	1.329	.028	.735
1160	3.372-2	-1049.5	1.8831	28.341	0.412	.284	3.361-2	28.468	.074	1.0902	-1.005	.402	1.252	1593	.054	.553	.283	1.327	.029	.729
1200	3.248-2	-1032.3	1.8977	28.314	0.448	.286	3.241-2	28.398	.076	1.1127	-1.006	.434	1.239	1614	.059	.555	.286	1.324	.030	.722
1240	3.130-2	-1013.6	1.9131	28.276	0.491	.288	3.127-2	28.311	.078	1.1378	-1.008	.471	1.227	1635	.065	.564	.288	1.322	.031	.716
1280	3.017-2	-993.3	1.9291	28.196	0.508	.290	3.017-2	28.196	.080	1.1624	-1.009	.508	1.217	1657	.070	.579	.290	1.320	.033	.709
1320	2.910-2	-972.5	1.9452	28.049	0.532	.292	2.910-2	28.049	.081	1.1758	-1.010	.532	1.211	1683	.072	.605	.292	1.319	.034	.703
1360	2.810-2	-951.1	1.9611	27.902	0.533	.294	2.810-2	27.902	.083	1.1725	-1.010	.533	1.210	1713	.070	.636	.294	1.319	.035	.698
1400	2.717-2	-930.3	1.9762	27.772	0.503	.296	2.717-2	27.772	.085	1.1452	-1.008	.503	1.217	1746	.064	.669	.296	1.318	.036	.693

TABLE 11.4E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN² (10.00 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS								
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)	S VS	COND	PRAN	CP	GAM	COND	PRAN	
R	L /FT ³	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT ³		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R		
360	1.306 0	-1404.4	1.1999	27.564	0.245	.245	1.152 0	30.283	.031	1.0000	-1.000	.234	1.390	906	.010	.735	.234	1.390	.010	.735
400	1.176 0	-1394.5	1.2260	27.564	0.250	.250	1.037 0	30.283	.034	1.0000	-1.000	.235	1.388	955	.011	.730	.235	1.388	.011	.730
440	1.069 0	-1384.4	1.2501	27.564	0.257	.255	9.425-1	30.283	.037	1.0000	-1.000	.235	1.386	1001	.012	.726	.235	1.386	.012	.726
480	9.798-1	-1373.9	1.2729	27.564	0.271	.260	8.638-1	30.279	.040	1.0000	-1.000	.236	1.384	1045	.013	.723	.236	1.384	.013	.723
520	9.034-1	-1346.9	1.3274	27.564	0.346	.312	7.969-1	30.261	.042	1.0000	-1.000	.237	1.382	1087	.014	.723	.237	1.382	.014	.723
537	8.742-1	-1340.9	1.3386	27.564	0.369	.312	7.718-1	30.245	.044	1.0000	-1.000	.238	1.381	1104	.014	.723	.238	1.381	.014	.723
560	8.350-1	-1331.8	1.3553	27.564	0.419	.311	7.386-1	30.203	.045	1.0000	-1.000	.239	1.380	1128	.015	.724	.239	1.380	.015	.724
600	7.691-1	-1312.1	1.3892	27.566	0.590	.308	6.857-1	30.042	.047	1.0000	-1.000	.242	1.376	1169	.016	.729	.242	1.376	.016	.729
640	6.977-1	-1281.8	1.4380	27.584	0.977	.300	6.346-1	29.659	.049	1.0000	-1.000	.247	1.372	1213	.016	.738	.247	1.372	.016	.738
680	6.087-1	-1226.6	1.5213	27.719	1.944	.277	5.813-1	28.866	.049	1.0001	-1.000	.257	1.365	1264	.017	.753	.257	1.365	.017	.754
720	5.495-1	-1188.4	1.5767	27.912	0.270	.263	5.415-1	28.470	.051	1.0003	-1.000	.264	1.359	1307	.018	.757	.264	1.360	.018	.760
760	5.205-1	-1177.5	1.5913	27.980	0.272	.265	5.135-1	28.500	.053	1.0005	-1.000	.266	1.356	1341	.019	.753	.265	1.357	.019	.759
800	4.945-1	-1166.6	1.6054	28.049	0.275	.266	4.884-1	28.529	.055	1.0010	-1.000	.268	1.352	1373	.020	.748	.266	1.354	.019	.758
840	4.709-1	-1155.5	1.6188	28.116	0.277	.268	4.656-1	28.558	.058	1.0017	-1.000	.271	1.347	1404	.021	.741	.268	1.351	.020	.757
880	4.495-1	-1144.4	1.6318	28.181	0.280	.270	4.448-1	28.585	.060	1.0028	-1.000	.274	1.342	1433	.022	.732	.269	1.347	.021	.757
920	4.299-1	-1133.1	1.6443	28.243	0.284	.271	4.258-1	28.609	.062	1.0044	-1.000	.278	1.337	1462	.024	.720	.271	1.344	.022	.756
960	4.119-1	-1121.7	1.6565	28.300	0.288	.273	4.084-1	28.630	.064	1.0066	-1.000	.282	1.331	1490	.026	.706	.273	1.341	.023	.754
1000	3.953-1	-1110.1	1.6683	28.353	0.294	.275	3.923-1	28.647	.066	1.0096	-1.000	.288	1.324	1516	.028	.690	.275	1.338	.024	.752
1040	3.799-1	-1098.2	1.6800	28.399	0.300	.277	3.774-1	28.659	.068	1.0136	-1.001	.295	1.317	1542	.030	.673	.276	1.335	.025	.750
1080	3.656-1	-1086.0	1.6915	28.439	0.308	.279	3.635-1	28.666	.070	1.0187	-1.001	.303	1.309	1566	.033	.654	.278	1.331	.026	.748
1120	3.522-1	-1073.5	1.7028	28.472	0.318	.281	3.505-1	28.667	.072	1.0253	-1.001	.313	1.301	1589	.036	.637	.280	1.328	.027	.745
1160	3.397-1	-1060.5	1.7142	28.496	0.331	.283	3.383-1	28.660	.074	1.0336	-1.002	.325	1.291	1612	.039	.620	.282	1.325	.028	.742
1200	3.280-1	-1047.0	1.7257	28.512	0.346	.285	3.269-1	28.645	.076	1.0438	-1.003	.340	1.281	1634	.043	.606	.284	1.323	.029	.738
1240	3.169-1	-1032.8	1.7373	28.520	0.364	.287	3.161-1	28.620	.078	1.0562	-1.003	.358	1.271	1654	.047	.595	.286	1.320	.030	.735
1280	3.063-1	-1017.8	1.7492	28.518	0.387	.289	3.058-1	28.585	.080	1.0711	-1.004	.379	1.260	1675	.051	.588	.288	1.317	.031	.731
1320	2.963-1	-1001.8	1.7615	28.507	0.414	.291	2.961-1	28.539	.082	1.0889	-1.005	.404	1.248	1694	.056	.584	.290	1.315	.033	.727
1360	2.867-1	-984.7	1.7743	28.475	0.433	.293	2.867-1	28.475	.083	1.1093	-1.006	.433	1.237	1714	.062	.584	.293	1.313	.034	.722
1400	2.776-1	-966.8	1.7872	28.377	0.461	.295	2.776-1	28.377	.085	1.1296	-1.008	.461	1.228	1736	.066	.590	.295	1.312	.035	.718

TABLE 11.5E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.084535; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN² (50.00 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS							GAS PHASE PROPERTIES FROZEN COMPOSITIONS							
T	DENSITY	H	ENTROPY	MW	CP REACT	CP FROZ	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)	S VS	COND	PRAN	CP	GAM	COND	PRAN		
R	L /FT3	BTU/LB	BTU/ LB R		BTU/ LB R	BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R			
360	6.466	0	-1404.4	1.1071	27.564	0.245	5.760	0	30.283	.031	1.0000	-1.000	.234	1.390	906	.010	.735	.234	1.390	.010	.735
400	5.827	0	-1394.5	1.1331	27.564	0.250	5.184	0	30.283	.034	1.0000	-1.000	.235	1.388	955	.011	.730	.235	1.388	.011	.730
440	5.302	0	-1384.4	1.1572	27.564	0.255	4.713	0	30.283	.037	1.0000	-1.000	.235	1.386	1001	.012	.726	.235	1.386	.012	.726
480	4.864	0	-1374.0	1.1797	27.564	0.262	4.320	0	30.282	.040	1.0000	-1.000	.236	1.384	1044	.013	.723	.236	1.384	.013	.723
520	4.495	0	-1347.6	1.2329	27.564	0.319	3.987	0	30.279	.043	1.0000	-1.000	.237	1.382	1086	.014	.722	.237	1.382	.014	.722
537	4.355	0	-1342.3	1.2431	27.564	0.324	3.863	0	30.275	.044	1.0000	-1.000	.238	1.381	1103	.014	.722	.238	1.381	.014	.722
560	4.172	0	-1334.6	1.2570	27.564	0.334	3.701	0	30.267	.045	1.0000	-1.000	.238	1.380	1127	.015	.722	.238	1.380	.015	.722
600	3.886	0	-1320.7	1.2811	27.564	0.367	3.450	0	30.235	.048	1.0000	-1.000	.240	1.377	1166	.016	.724	.240	1.377	.016	.724
640	3.622	0	-1304.8	1.3067	27.565	0.433	3.227	0	30.158	.050	1.0000	-1.000	.242	1.375	1204	.017	.727	.242	1.375	.017	.727
680	3.367	0	-1285.4	1.3361	27.569	0.552	3.021	0	30.000	.052	1.0000	-1.000	.244	1.371	1243	.017	.730	.244	1.371	.017	.731
720	3.102	0	-1259.5	1.3731	27.593	0.765	2.825	0	29.706	.054	1.0000	-1.000	.249	1.367	1284	.018	.736	.249	1.367	.018	.737
760	2.805	0	-1221.6	1.4241	27.699	1.176	2.631	0	29.207	.055	1.0001	-1.000	.256	1.361	1327	.019	.745	.256	1.362	.019	.746
800	2.472	0	-1166.6	1.4947	28.050	0.274	2.442	0	28.531	.055	1.0004	-1.000	.267	1.353	1373	.020	.753	.266	1.354	.019	.758
840	2.354	0	-1155.6	1.5081	28.118	0.275	2.328	0	28.560	.058	1.0007	-1.000	.269	1.349	1405	.021	.750	.268	1.351	.020	.757
880	2.247	0	-1144.6	1.5209	28.184	0.278	2.224	0	28.588	.060	1.0012	-1.000	.271	1.345	1435	.022	.745	.269	1.347	.021	.757
920	2.150	0	-1133.4	1.5333	28.247	0.280	2.130	0	28.615	.062	1.0019	-1.000	.274	1.341	1464	.023	.739	.271	1.344	.022	.756
960	2.060	0	-1122.2	1.5453	28.307	0.283	2.043	0	28.639	.064	1.0029	-1.000	.277	1.336	1492	.024	.732	.273	1.341	.023	.755
1000	1.977	0	-1110.8	1.5569	28.364	0.286	1.962	0	28.661	.066	1.0043	-1.000	.281	1.331	1520	.026	.722	.275	1.338	.024	.753
1040	1.901	0	-1099.3	1.5682	28.416	0.290	1.888	0	28.680	.068	1.0061	-1.000	.285	1.326	1546	.027	.712	.276	1.334	.025	.752
1080	1.830	0	-1087.6	1.5792	28.464	0.294	1.819	0	28.696	.070	1.0085	-1.000	.290	1.320	1572	.029	.700	.278	1.331	.026	.750
1120	1.764	0	-1075.7	1.5900	28.506	0.300	1.755	0	28.708	.072	1.0116	-1.001	.295	1.314	1597	.031	.687	.280	1.328	.027	.748
1160	1.702	0	-1063.6	1.6007	28.544	0.307	1.695	0	28.716	.074	1.0156	-1.001	.302	1.308	1621	.033	.674	.282	1.325	.028	.746
1200	1.645	0	-1051.2	1.6112	28.575	0.315	1.639	0	28.719	.076	1.0206	-1.001	.310	1.300	1644	.036	.660	.284	1.322	.029	.743
1240	1.590	0	-1038.4	1.6216	28.601	0.324	1.586	0	28.717	.078	1.0268	-1.002	.320	1.293	1666	.038	.648	.286	1.319	.030	.741
1280	1.539	0	-1025.2	1.6321	28.621	0.336	1.536	0	28.709	.080	1.0344	-1.002	.331	1.284	1687	.042	.636	.288	1.316	.031	.738
1320	1.491	0	-1011.5	1.6427	28.634	0.350	1.488	0	28.694	.082	1.0437	-1.003	.345	1.276	1708	.045	.626	.290	1.314	.032	.735
1360	1.445	0	-997.2	1.6534	28.641	0.367	1.444	0	28.672	.083	1.0550	-1.003	.361	1.266	1728	.049	.618	.292	1.311	.033	.733
1400	1.401	0	-982.1	1.6643	28.642	0.380	1.401	0	28.642	.085	1.0685	-1.004	.380	1.257	1748	.053	.612	.294	1.309	.034	.729

TABLE 12A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.016749; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.2511; MW = 28.9287;
 DRY AIR; GASEOUS COMPOSITION: CO2= .03405; H2O= .03542; N2= .76701; O2= .15432; AR= .00920

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
360	1.1004-1	5.5022 0	-369.3	1.8728	1.7147	1.5566	1.3986	1.2881	0.2432	1.3934	928.5	.0310	.0101	.7471	360
380	1.0425-1	5.2126 0	-364.5	1.8859	1.7278	1.5698	1.4117	1.3012	0.2431	1.3935	954.0	.0325	.0106	.7443	380
400	9.9039-2	4.9519 0	-359.6	1.8984	1.7403	1.5823	1.4242	1.3137	0.2430	1.3936	978.8	.0340	.0111	.7415	400
420	9.4323-2	4.7161 0	-354.8	1.9102	1.7522	1.5941	1.4360	1.3256	0.2430	1.3936	1003.0	.0355	.0117	.7390	420
440	9.0035-2	4.5018 0	-349.9	1.9215	1.7635	1.6054	1.4474	1.3369	0.2431	1.3935	1026.6	.0369	.0122	.7366	440
460	8.6121-2	4.3060 0	-345.0	1.9324	1.7743	1.6162	1.4582	1.3477	0.2432	1.3934	1049.6	.0383	.0127	.7346	460
480	8.2532-2	4.1266 0	-340.2	1.9427	1.7846	1.6266	1.4685	1.3580	0.2433	1.3931	1072.1	.0397	.0132	.7330	480
500	7.9231-2	3.9616 0	-335.3	1.9526	1.7946	1.6365	1.4784	1.3680	0.2434	1.3928	1094.0	.0410	.0137	.7316	500
520	7.6184-2	3.8092 0	-330.4	1.9622	1.8041	1.6461	1.4880	1.3775	0.2436	1.3924	1115.6	.0424	.0141	.7306	520
537	7.3817-2	3.6909 0	-326.4	1.9699	1.8118	1.6537	1.4957	1.3852	0.2437	1.3921	1133.1	.0435	.0145	.7299	537
540	7.3362-2	3.6681 0	-325.6	1.9714	1.8133	1.6553	1.4972	1.3867	0.2438	1.3920	1136.6	.0437	.0146	.7298	540
560	7.0742-2	3.5371 0	-320.7	1.9803	1.8222	1.6641	1.5061	1.3956	0.2440	1.3915	1157.3	.0450	.0150	.7297	560
580	6.8303-2	3.4151 0	-315.8	1.9888	1.8308	1.6727	1.5146	1.4041	0.2443	1.3909	1177.5	.0462	.0155	.7297	580
600	6.6026-2	3.3013 0	-310.9	1.9971	1.8390	1.6810	1.5229	1.4124	0.2445	1.3903	1197.4	.0475	.0159	.7298	600
620	6.3896-2	3.1948 0	-306.0	2.0051	1.8471	1.6890	1.5309	1.4205	0.2449	1.3896	1216.9	.0487	.0163	.7299	620
640	6.1899-2	3.0950 0	-301.1	2.0129	1.8548	1.6968	1.5387	1.4282	0.2452	1.3888	1236.0	.0499	.0168	.7299	640
660	6.0024-2	3.0012 0	-296.2	2.0205	1.8624	1.7043	1.5463	1.4358	0.2455	1.3881	1254.8	.0511	.0172	.7297	660
680	5.8258-2	2.9129 0	-291.3	2.0278	1.8697	1.7117	1.5536	1.4431	0.2459	1.3872	1273.3	.0523	.0176	.7295	680
700	5.6594-2	2.8297 0	-286.4	2.0349	1.8769	1.7188	1.5607	1.4503	0.2463	1.3863	1291.5	.0534	.0180	.7292	700
720	5.5022-2	2.7511 0	-281.4	2.0419	1.8838	1.7257	1.5677	1.4572	0.2468	1.3854	1309.3	.0546	.0185	.7289	720
740	5.3535-2	2.6767 0	-276.5	2.0486	1.8906	1.7325	1.5744	1.4640	0.2472	1.3844	1326.9	.0557	.0189	.7288	740
760	5.2126-2	2.6063 0	-271.6	2.0552	1.8972	1.7391	1.5810	1.4706	0.2477	1.3834	1344.3	.0568	.0193	.7286	760
780	5.0789-2	2.5395 0	-266.6	2.0617	1.9036	1.7455	1.5875	1.4770	0.2482	1.3824	1361.3	.0579	.0197	.7284	780
800	4.9519-2	2.4760 0	-261.6	2.0680	1.9099	1.7518	1.5938	1.4833	0.2487	1.3813	1378.1	.0590	.0201	.7283	800
820	4.8312-2	2.4156 0	-256.6	2.0741	1.9160	1.7580	1.5999	1.4894	0.2492	1.3802	1394.7	.0601	.0205	.7282	820
840	4.7161-2	2.3581 0	-251.7	2.0801	1.9221	1.7640	1.6059	1.4954	0.2497	1.3791	1411.0	.0611	.0210	.7281	840
860	4.6065-2	2.3032 0	-246.7	2.0860	1.9279	1.7699	1.6118	1.5013	0.2503	1.3780	1427.1	.0622	.0214	.7281	860
880	4.5018-2	2.2509 0	-241.6	2.0918	1.9337	1.7756	1.6176	1.5071	0.2508	1.3768	1443.0	.0632	.0218	.7280	880
900	4.4017-2	2.2009 0	-236.6	2.0974	1.9393	1.7813	1.6232	1.5127	0.2514	1.3756	1458.7	.0642	.0222	.7280	900
920	4.3060-2	2.1530 0	-231.6	2.1029	1.9449	1.7868	1.6287	1.5183	0.2520	1.3744	1474.2	.0652	.0226	.7280	920
940	4.2144-2	2.1072 0	-226.5	2.1084	1.9503	1.7922	1.6342	1.5237	0.2526	1.3732	1489.4	.0662	.0230	.7279	940
960	4.1266-2	2.0633 0	-221.5	2.1137	1.9556	1.7976	1.6395	1.5290	0.2532	1.3719	1504.5	.0672	.0234	.7279	960
980	4.0424-2	2.0212 0	-216.4	2.1189	1.9609	1.8028	1.6447	1.5342	0.2538	1.3707	1519.4	.0682	.0238	.7278	980
1000	3.9616-2	1.9808 0	-211.3	2.1241	1.9660	1.8079	1.6499	1.5394	0.2545	1.3694	1534.1	.0692	.0242	.7277	1000
1020	3.8839-2	1.9419 0	-206.2	2.1291	1.9710	1.8130	1.6549	1.5444	0.2551	1.3681	1548.7	.0702	.0246	.7277	1020
1040	3.8092-2	1.9046 0	-201.1	2.1341	1.9760	1.8179	1.6599	1.5494	0.2558	1.3669	1563.1	.0711	.0250	.7276	1040
1060	3.7373-2	1.8687 0	-196.0	2.1389	1.9809	1.8228	1.6647	1.5543	0.2564	1.3656	1577.3	.0721	.0254	.7274	1060
1080	3.6681-2	1.8341 0	-190.9	2.1437	1.9857	1.8276	1.6695	1.5591	0.2571	1.3643	1591.3	.0731	.0258	.7273	1080
1100	3.6014-2	1.8007 0	-185.7	2.1485	1.9904	1.8323	1.6743	1.5638	0.2578	1.3630	1605.3	.0740	.0262	.7271	1100
1120	3.5371-2	1.7686 0	-180.6	2.1531	1.9951	1.8370	1.6789	1.5684	0.2584	1.3617	1619.0	.0749	.0266	.7269	1120
1140	3.4750-2	1.7375 0	-175.4	2.1577	1.9996	1.8416	1.6835	1.5730	0.2591	1.3604	1632.6	.0759	.0271	.7266	1140

TABLE 12A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.016749; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.2511; MW = 28.9287;
 DRY AIR; GASEOUS COMPOSITION: CO2= .03405; H2O= .03542; N2= .76701; O2= .15432; AR= .00920

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT ³	LB/FT ³	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
1160	3.4151-2	1.7076 0	-170.2	2.1622	2.0041	1.8461	1.6880	1.5775	0.2598	1.3591	1646.1	.0768	.0275	.7264	1160
1180	3.3573-2	1.6786 0	-165.0	2.1667	2.0086	1.8505	1.6925	1.5820	0.2605	1.3579	1659.5	.0777	.0279	.7261	1180
1200	3.3013-2	1.6506 0	-159.8	2.1710	2.0130	1.8549	1.6968	1.5864	0.2612	1.3566	1672.7	.0786	.0283	.7259	1200
1220	3.2472-2	1.6236 0	-154.5	2.1754	2.0173	1.8592	1.7012	1.5907	0.2618	1.3553	1685.8	.0795	.0287	.7256	1220
1240	3.1948-2	1.5974 0	-149.3	2.1796	2.0216	1.8635	1.7054	1.5949	0.2625	1.3540	1698.7	.0804	.0291	.7254	1240
1260	3.1441-2	1.5720 0	-144.0	2.1838	2.0258	1.8677	1.7096	1.5992	0.2632	1.3528	1711.6	.0813	.0295	.7251	1260
1280	3.0950-2	1.5475 0	-138.8	2.1880	2.0299	1.8719	1.7138	1.6033	0.2639	1.3515	1724.3	.0822	.0299	.7249	1280
1300	3.0473-2	1.5237 0	-133.5	2.1921	2.0340	1.8759	1.7179	1.6074	0.2646	1.3503	1736.9	.0831	.0303	.7246	1300
1320	3.0012-2	1.5006 0	-128.2	2.1961	2.0381	1.8800	1.7219	1.6114	0.2653	1.3491	1749.5	.0840	.0307	.7244	1320
1340	2.9564-2	1.4782 0	-122.9	2.2001	2.0421	1.8840	1.7259	1.6154	0.2660	1.3479	1761.9	.0848	.0312	.7242	1340
1360	2.9129-2	1.4565 0	-117.6	2.2041	2.0460	1.8879	1.7299	1.6194	0.2667	1.3466	1774.2	.0857	.0316	.7239	1360
1380	2.8707-2	1.4353 0	-112.2	2.2080	2.0499	1.8918	1.7338	1.6233	0.2674	1.3455	1786.4	.0865	.0320	.7237	1380
1400	2.8297-2	1.4148 0	-106.9	2.2118	2.0537	1.8957	1.7376	1.6271	0.2680	1.3443	1798.5	.0874	.0324	.7235	1400
1420	2.7898-2	1.3949 0	-101.5	2.2156	2.0576	1.8995	1.7414	1.6309	0.2687	1.3431	1810.5	.0882	.0328	.7233	1420
1440	2.7511-2	1.3755 0	-96.1	2.2194	2.0613	1.9033	1.7452	1.6347	0.2694	1.3420	1822.4	.0891	.0332	.7231	1440
1460	2.7134-2	1.3567 0	-90.7	2.2231	2.0650	1.9070	1.7489	1.6384	0.2701	1.3408	1834.3	.0899	.0336	.7229	1460
1480	2.6767-2	1.3384 0	-85.3	2.2268	2.0687	1.9107	1.7526	1.6421	0.2707	1.3397	1846.0	.0908	.0340	.7228	1480
1500	2.6410-2	1.3205 0	-79.9	2.2304	2.0724	1.9143	1.7562	1.6457	0.2714	1.3386	1857.7	.0916	.0344	.7226	1500
1520	2.6063-2	1.3031 0	-74.5	2.2340	2.0760	1.9179	1.7598	1.6493	0.2720	1.3375	1869.3	.0924	.0348	.7224	1520
1540	2.5724-2	1.2862 0	-69.0	2.2376	2.0795	1.9215	1.7634	1.6529	0.2727	1.3364	1880.8	.0932	.0352	.7223	1540
1560	2.5395-2	1.2697 0	-63.5	2.2411	2.0830	1.9250	1.7669	1.6564	0.2733	1.3354	1892.2	.0940	.0356	.7221	1560
1580	2.5073-2	1.2537 0	-58.1	2.2446	2.0865	1.9285	1.7704	1.6599	0.2740	1.3343	1903.5	.0949	.0360	.7220	1580
1600	2.4760-2	1.2380 0	-52.6	2.2480	2.0900	1.9319	1.7738	1.6634	0.2746	1.3333	1914.8	.0957	.0364	.7219	1600
1620	2.4454-2	1.2227 0	-47.1	2.2515	2.0934	1.9353	1.7773	1.6668	0.2752	1.3323	1926.0	.0965	.0368	.7217	1620
1640	2.4156-2	1.2078 0	-41.6	2.2548	2.0968	1.9387	1.7806	1.6702	0.2758	1.3313	1937.2	.0973	.0372	.7216	1640
1660	2.3865-2	1.1932 0	-36.1	2.2582	2.1001	1.9421	1.7840	1.6735	0.2764	1.3304	1948.2	.0980	.0376	.7215	1660
1680	2.3581-2	1.1790 0	-30.5	2.2615	2.1034	1.9454	1.7873	1.6768	0.2770	1.3294	1959.2	.0988	.0380	.7214	1680
1700	2.3303-2	1.1652 0	-25.0	2.2648	2.1067	1.9486	1.7906	1.6801	0.2776	1.3285	1970.2	.0996	.0383	.7212	1700
1720	2.3032-2	1.1516 0	-19.4	2.2680	2.1100	1.9519	1.7938	1.6834	0.2782	1.3276	1981.1	.1004	.0387	.7211	1720
1740	2.2768-2	1.1384 0	-13.8	2.2712	2.1132	1.9551	1.7971	1.6866	0.2788	1.3267	1991.9	.1012	.0391	.7210	1740
1760	2.2509-2	1.1254 0	-8.3	2.2744	2.1164	1.9583	1.8002	1.6898	0.2793	1.3258	2002.6	.1019	.0395	.7209	1760
1780	2.2256-2	1.1128 0	-2.7	2.2776	2.1195	1.9615	1.8034	1.6929	0.2799	1.3250	2013.3	.1027	.0399	.7208	1780
1800	2.2009-2	1.1004 0	2.9	2.2807	2.1227	1.9646	1.8065	1.6960	0.2804	1.3242	2024.0	.1035	.0403	.7207	1800
1900	2.0850-2	1.0425 0	31.1	2.2960	2.1379	1.9798	1.8218	1.7113	0.2829	1.3204	2076.5	.1072	.0421	.7206	1900
2000	1.9808-2	9.9039-1	59.5	2.3105	2.1525	1.9944	1.8363	1.7259	0.2853	1.3169	2127.6	.1109	.0439	.7206	2000
2100	1.8865-2	9.4323-1	88.1	2.3245	2.1664	2.0084	1.8503	1.7398	0.2875	1.3136	2177.4	.1145	.0457	.7207	2100
2200	1.8007-2	9.0035-1	117.0	2.3379	2.1799	2.0218	1.8637	1.7532	0.2897	1.3106	2226.1	.1180	.0474	.7208	2200
2300	1.7224-2	8.6121-1	146.1	2.3508	2.1928	2.0347	1.8767	1.7662	0.2917	1.3078	2273.7	.1214	.0491	.7209	2300
2400	1.6506-2	8.2532-1	175.3	2.3633	2.2052	2.0472	1.8891	1.7786	0.2936	1.3052	2320.3	.1248	.0508	.7211	2400
2500	1.5846-2	7.9231-1	204.8	2.3753	2.2173	2.0592	1.9011	1.7906	0.2954	1.3027	2365.9	.1281	.0525	.7212	2500

TABLE 12A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.016749; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.2511; MW = 28.9287;
 DRY AIR; GASEOUS COMPOSITION: CO2= .03405; H2O= .03542; N2= .76701; O2= .15432; AR= .00920

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
2600	1.5237-2	7.6184-1	234.4	2.3869	2.2289	2.0708	1.9127	1.8023	0.2971	1.3005	2410.7	.1314	.0541	.7213	2600
2700	1.4672-2	7.3362-1	264.2	2.3982	2.2401	2.0821	1.9240	1.8135	0.2987	1.2984	2454.6	.1346	.0557	.7214	2700
2800	1.4148-2	7.0742-1	294.2	2.4091	2.2510	2.0929	1.9349	1.8244	0.3002	1.2964	2497.8	.1377	.0574	.7211	2800
2900	1.3661-2	6.8303-1	324.3	2.4196	2.2616	2.1035	1.9454	1.8350	0.3017	1.2946	2540.2	.1409	.0590	.7208	2900
3000	1.3205-2	6.6026-1	354.5	2.4299	2.2718	2.1138	1.9557	1.8452	0.3030	1.2929	2581.9	.1440	.0606	.7204	3000
3100	1.2779-2	6.3896-1	384.9	2.4398	2.2818	2.1237	1.9657	1.8552	0.3043	1.2913	2623.0	.1470	.0621	.7201	3100
3200	1.2380-2	6.1899-1	415.4	2.4495	2.2915	2.1334	1.9753	1.8649	0.3055	1.2898	2663.4	.1500	.0637	.7197	3200
3300	1.2005-2	6.0024-1	446.0	2.4589	2.3009	2.1428	1.9848	1.8743	0.3067	1.2884	2703.2	.1530	.0652	.7194	3300
3400	1.1652-2	5.8258-1	476.7	2.4681	2.3101	2.1520	1.9939	1.8834	0.3078	1.2871	2742.5	.1559	.0667	.7190	3400
3500	1.1319-2	5.6594-1	507.5	2.4771	2.3190	2.1609	2.0029	1.8924	0.3088	1.2859	2781.2	.1589	.0682	.7187	3500
3600	1.1004-2	5.5022-1	538.4	2.4858	2.3277	2.1696	2.0116	1.9011	0.3097	1.2847	2819.4	.1617	.0697	.7184	3600
3700	1.0707-2	5.3535-1	569.5	2.4943	2.3362	2.1781	2.0201	1.9096	0.3106	1.2837	2857.1	.1646	.0712	.7183	3700
3800	1.0425-2	5.2126-1	600.6	2.5026	2.3445	2.1864	2.0284	1.9179	0.3115	1.2827	2894.3	.1674	.0726	.7183	3800
3900	1.0158-2	5.0789-1	631.8	2.5107	2.3526	2.1945	2.0365	1.9260	0.3123	1.2817	2931.1	.1702	.0740	.7182	3900
4000	9.9039-3	4.9519-1	663.0	2.5186	2.3605	2.2024	2.0444	1.9339	0.3131	1.2809	2967.4	.1730	.0754	.7182	4000
4100	9.6623-3	4.8312-1	694.4	2.5263	2.3683	2.2102	2.0521	1.9416	0.3138	1.2800	3003.3	.1757	.0768	.7182	4100
4200	9.4323-3	4.7161-1	725.8	2.5339	2.3758	2.2178	2.0597	1.9492	0.3145	1.2793	3038.8	.1785	.0781	.7182	4200
4300	9.2129-3	4.6065-1	757.3	2.5413	2.3832	2.2252	2.0671	1.9566	0.3151	1.2785	3073.9	.1812	.0795	.7182	4300
4400	9.0035-3	4.5018-1	788.8	2.5485	2.3905	2.2324	2.0744	1.9639	0.3157	1.2778	3108.6	.1838	.0808	.7183	4400
4500	8.8034-3	4.4017-1	820.4	2.5556	2.3976	2.2395	2.0815	1.9710	0.3163	1.2772	3142.9	.1865	.0821	.7183	4500
4600	8.6121-3	4.3060-1	852.1	2.5626	2.4045	2.2465	2.0884	1.9779	0.3169	1.2766	3176.9	.1891	.0834	.7182	4600
4700	8.4288-3	4.2144-1	883.8	2.5694	2.4114	2.2533	2.0952	1.9847	0.3174	1.2760	3210.5	.1917	.0848	.7180	4700
4800	8.2532-3	4.1266-1	915.5	2.5761	2.4180	2.2600	2.1019	1.9914	0.3179	1.2754	3243.7	.1943	.0861	.7178	4800
4900	8.0848-3	4.0424-1	947.4	2.5827	2.4246	2.2665	2.1085	1.9980	0.3184	1.2749	3276.7	.1969	.0874	.7176	4900
5000	7.9231-3	3.9616-1	979.2	2.5891	2.4310	2.2730	2.1149	2.0044	0.3189	1.2744	3309.3	.1994	.0886	.7174	5000
5100	7.7678-3	3.8839-1	1011.1	2.5954	2.4374	2.2793	2.1212	2.0108	0.3193	1.2739	3341.5	.2020	.0899	.7171	5100
5200	7.6184-3	3.8092-1	1043.1	2.6016	2.4436	2.2855	2.1274	2.0170	0.3197	1.2734	3373.5	.2045	.0912	.7169	5200
5300	7.4746-3	3.7373-1	1075.1	2.6077	2.4497	2.2916	2.1335	2.0231	0.3202	1.2729	3405.2	.2070	.0925	.7166	5300
5400	7.3362-3	3.6681-1	1107.1	2.6137	2.4557	2.2976	2.1395	2.0290	0.3206	1.2725	3436.6	.2095	.0937	.7164	5400

TABLE 12.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016749; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 0.14696 LB/IN² (0.01 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4760-4	-52.6	2.2480	28.929	.096	1.0000	-1.0000	0.2747	1.3332	1914.7	.0364	.722	0.2746	1.3333	1914.8	.0364	.722
1700	2.3303-4	-25.0	2.2648	28.929	.100	1.0000	-1.0000	0.2778	1.3283	1970.0	.0384	.721	0.2776	1.3285	1970.2	.0383	.721
1800	2.2009-4	3.0	2.2808	28.929	.103	1.0000	-1.0000	0.2807	1.3238	2023.7	.0403	.721	0.2804	1.3242	2024.0	.0403	.721
1900	2.0850-4	31.2	2.2960	28.929	.107	1.0000	-1.0000	0.2833	1.3198	2076.0	.0422	.721	0.2829	1.3204	2076.5	.0421	.721
2000	1.9808-4	59.6	2.3106	28.929	.111	1.0000	-1.0000	0.2859	1.3160	2126.9	.0440	.721	0.2853	1.3169	2127.6	.0439	.721
2100	1.8865-4	88.3	2.3246	28.929	.114	1.0000	-1.0000	0.2884	1.3123	2176.4	.0458	.721	0.2875	1.3136	2177.4	.0457	.721
2200	1.8007-4	117.3	2.3381	28.929	.118	1.0000	-1.0000	0.2910	1.3088	2224.6	.0476	.721	0.2897	1.3106	2226.1	.0474	.721
2300	1.7224-4	146.5	2.3511	28.929	.121	1.0001	-1.0000	0.2935	1.3053	2271.6	.0494	.721	0.2917	1.3078	2273.7	.0491	.721
2400	1.6506-4	176.0	2.3636	28.928	.125	1.0001	-1.0000	0.2961	1.3019	2317.4	.0513	.721	0.2936	1.3052	2320.3	.0508	.721
2500	1.5846-4	205.8	2.3758	28.928	.128	1.0002	-1.0000	0.2988	1.2984	2362.0	.0531	.721	0.2954	1.3028	2365.9	.0525	.721
2600	1.5236-4	235.8	2.3875	28.928	.131	1.0004	-1.0000	0.3018	1.2948	2405.4	.0550	.721	0.2971	1.3005	2410.7	.0541	.721
2700	1.4672-4	266.1	2.3990	28.927	.135	1.0007	-1.0000	0.3050	1.2909	2447.6	.0570	.720	0.2987	1.2984	2454.7	.0557	.721
2800	1.4147-4	296.8	2.4101	28.926	.138	1.0012	-1.0000	0.3088	1.2867	2488.5	.0592	.718	0.3002	1.2964	2497.9	.0574	.721
2900	1.3659-4	327.9	2.4211	28.925	.141	1.0019	-1.0000	0.3133	1.2820	2527.9	.0616	.716	0.3017	1.2946	2540.4	.0590	.721
3000	1.3202-4	359.5	2.4318	28.922	.144	1.0032	-1.0001	0.3189	1.2765	2565.7	.0644	.713	0.3030	1.2930	2582.3	.0606	.720
3100	1.2775-4	391.8	2.4423	28.919	.147	1.0051	-1.0001	0.3262	1.2700	2601.7	.0678	.708	0.3043	1.2914	2623.5	.0621	.720
3200	1.2373-4	424.8	2.4528	28.913	.150	1.0081	-1.0002	0.3357	1.2622	2635.5	.0719	.700	0.3055	1.2900	2664.3	.0637	.720
3300	1.1994-4	459.0	2.4634	28.903	.153	1.0126	-1.0003	0.3484	1.2529	2666.9	.0774	.689	0.3067	1.2887	2704.7	.0652	.719
3400	1.1636-4	494.7	2.4740	28.890	.156	1.0193	-1.0006	0.3655	1.2420	2695.8	.0846	.674	0.3077	1.2876	2744.9	.0668	.719
3500	1.1296-4	532.3	2.4849	28.870	.159	1.0289	-1.0009	0.3885	1.2294	2722.2	.0945	.653	0.3088	1.2866	2784.9	.0683	.718
3600	1.0971-4	572.6	2.4963	28.841	.162	1.0426	-1.0013	0.4189	1.2156	2746.6	.1078	.628	0.3097	1.2859	2824.9	.0698	.718
3700	1.0659-4	616.4	2.5083	28.801	.165	1.0615	-1.0020	0.4588	1.2010	2769.7	.1260	.599	0.3106	1.2853	2865.3	.0713	.717
3800	1.0359-4	664.7	2.5211	28.744	.167	1.0870	-1.0029	0.5101	1.1864	2792.6	.1503	.568	0.3115	1.2851	2906.3	.0727	.716
3900	1.0066-4	718.9	2.5352	28.667	.170	1.1204	-1.0041	0.5746	1.1726	2816.3	.1820	.537	0.3122	1.2851	2948.3	.0742	.715
4000	9.7795-5	780.1	2.5507	28.565	.173	1.1629	-1.0058	0.6536	1.1602	2842.1	.2223	.508	0.3130	1.2855	2991.7	.0757	.714
4100	9.4968-5	850.1	2.5680	28.433	.175	1.2152	-1.0079	0.7474	1.1496	2870.9	.2714	.483	0.3137	1.2864	3036.9	.0773	.712
4200	9.2160-5	930.1	2.5873	28.265	.178	1.2773	-1.0105	0.8554	1.1410	2903.3	.3285	.463	0.3144	1.2878	3084.5	.0789	.709
4300	8.9358-5	1021.6	2.6088	28.059	.180	1.3484	-1.0135	0.9753	1.1343	2939.9	.3909	.450	0.3151	1.2897	3134.8	.0806	.705
4400	8.6554-5	1125.5	2.6326	27.810	.183	1.4265	-1.0171	1.1035	1.1294	2980.7	.4546	.444	0.3157	1.2923	3188.3	.0824	.701
4500	8.3747-5	1242.3	2.6589	27.520	.185	1.5081	-1.0209	1.2342	1.1262	3025.9	.5141	.445	0.3164	1.2954	3245.3	.0844	.695
4600	8.0945-5	1372.1	2.6874	27.190	.188	1.5881	-1.0249	1.3595	1.1243	3075.3	.5636	.453	0.3171	1.2993	3305.9	.0865	.689
4700	7.8165-5	1513.8	2.7179	26.827	.190	1.6603	-1.0287	1.4699	1.1237	3128.6	.5985	.467	0.3178	1.3037	3369.8	.0887	.682
4800	7.5432-5	1665.3	2.7498	26.440	.193	1.7180	-1.0321	1.5553	1.1242	3185.5	.6164	.487	0.3185	1.3086	3436.8	.0910	.675
4900	7.2776-5	1823.7	2.7824	26.040	.195	1.7556	-1.0346	1.6072	1.1257	3245.3	.6170	.509	0.3193	1.3138	3506.0	.0934	.668
5000	7.0227-5	1985.4	2.8151	25.641	.198	1.7695	-1.0360	1.6203	1.1282	3307.3	.6022	.533	0.3200	1.3193	3576.5	.0957	.662
5100	6.7814-5	2146.4	2.8470	25.255	.201	1.7586	-1.0363	1.5926	1.1317	3370.9	.5743	.556	0.3207	1.3249	3647.2	.0980	.657
5200	6.5556-5	2302.6	2.8773	24.893	.203	1.7240	-1.0354	1.5257	1.1363	3435.4	.5358	.579	0.3213	1.3302	3717.0	.1002	.652
5300	6.3470-5	2450.4	2.9055	24.565	.206	1.6687	-1.0334	1.4247	1.1423	3500.5	.4896	.600	0.3220	1.3353	3784.7	.1024	.648
5400	6.1560-5	2586.7	2.9310	24.275	.209	1.5979	-1.0306	1.2988	1.1497	3566.0	.4391	.618	0.3225	1.3398	3849.5	.1044	.645

TABLE 12.2B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016749; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 1.46959 LB/IN² (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4760-3	-52.6	2.0900	28.929	.096	1.0000	-1.0000	0.2747	1.3332	1914.7	.0364	.722	0.2746	1.3333	1914.8	.0364	.722
1700	2.3303-3	-25.0	2.1067	28.929	.100	1.0000	-1.0000	0.2778	1.3283	1970.0	.0384	.721	0.2776	1.3285	1970.2	.0383	.721
1800	2.2009-3	3.0	2.1227	28.929	.103	1.0000	-1.0000	0.2807	1.3238	2023.7	.0403	.721	0.2804	1.3242	2024.0	.0403	.721
1900	2.0850-3	31.2	2.1379	28.929	.107	1.0000	-1.0000	0.2833	1.3198	2076.0	.0422	.721	0.2829	1.3204	2076.5	.0421	.721
2000	1.9808-3	59.6	2.1525	28.929	.111	1.0000	-1.0000	0.2859	1.3160	2126.9	.0440	.721	0.2853	1.3169	2127.6	.0439	.721
2100	1.8865-3	88.3	2.1665	28.929	.114	1.0000	-1.0000	0.2884	1.3124	2176.4	.0458	.721	0.2875	1.3136	2177.4	.0457	.721
2200	1.8007-3	117.3	2.1800	28.929	.118	1.0000	-1.0000	0.2909	1.3089	2224.6	.0476	.721	0.2897	1.3106	2226.1	.0474	.721
2300	1.7224-3	146.5	2.1930	28.929	.121	1.0000	-1.0000	0.2934	1.3055	2271.7	.0494	.721	0.2917	1.3078	2273.7	.0491	.721
2400	1.6506-3	176.0	2.2055	28.929	.125	1.0001	-1.0000	0.2959	1.3021	2317.6	.0512	.721	0.2936	1.3052	2320.3	.0508	.721
2500	1.5846-3	205.7	2.2177	28.928	.128	1.0001	-1.0000	0.2985	1.2988	2362.3	.0530	.721	0.2954	1.3027	2365.9	.0525	.721
2600	1.5237-3	235.7	2.2294	28.928	.131	1.0002	-1.0000	0.3011	1.2955	2406.0	.0549	.721	0.2971	1.3005	2410.7	.0541	.721
2700	1.4672-3	265.9	2.2408	28.928	.135	1.0003	-1.0000	0.3039	1.2921	2448.7	.0567	.721	0.2987	1.2984	2454.6	.0557	.721
2800	1.4148-3	296.5	2.2519	28.928	.138	1.0005	-1.0000	0.3069	1.2886	2490.2	.0587	.720	0.3002	1.2964	2497.8	.0574	.721
2900	1.3660-3	327.3	2.2628	28.927	.141	1.0009	-1.0000	0.3101	1.2849	2530.7	.0608	.719	0.3017	1.2946	2540.3	.0590	.721
3000	1.3204-3	358.5	2.2733	28.926	.144	1.0014	-1.0000	0.3138	1.2809	2570.1	.0630	.718	0.3030	1.2929	2582.1	.0606	.720
3100	1.2777-3	390.1	2.2837	28.924	.147	1.0021	-1.0001	0.3181	1.2766	2608.2	.0654	.716	0.3043	1.2913	2623.2	.0621	.720
3200	1.2377-3	422.2	2.2939	28.922	.150	1.0032	-1.0001	0.3232	1.2718	2645.1	.0680	.713	0.3055	1.2899	2663.8	.0637	.720
3300	1.2000-3	454.8	2.3039	28.918	.153	1.0049	-1.0001	0.3294	1.2664	2680.6	.0711	.709	0.3067	1.2885	2703.9	.0652	.719
3400	1.1645-3	488.1	2.3139	28.913	.156	1.0073	-1.0002	0.3371	1.2603	2714.5	.0747	.704	0.3077	1.2873	2743.5	.0668	.719
3500	1.1310-3	522.2	2.3238	28.906	.159	1.0106	-1.0003	0.3466	1.2533	2746.9	.0791	.696	0.3088	1.2862	2782.7	.0683	.719
3600	1.0992-3	557.5	2.3337	28.895	.162	1.0153	-1.0005	0.3587	1.2454	2777.5	.0845	.687	0.3097	1.2852	2821.5	.0698	.718
3700	1.0689-3	594.1	2.3437	28.881	.165	1.0217	-1.0007	0.3739	1.2365	2806.5	.0913	.674	0.3106	1.2843	2860.2	.0712	.718
3800	1.0401-3	632.4	2.3539	28.861	.167	1.0304	-1.0010	0.3930	1.2268	2834.0	.0999	.658	0.3115	1.2836	2898.8	.0726	.718
3900	1.0125-3	672.9	2.3644	28.834	.170	1.0419	-1.0014	0.4169	1.2164	2860.2	.1109	.640	0.3122	1.2830	2937.4	.0741	.717
4000	9.8592-4	716.0	2.3754	28.798	.173	1.0568	-1.0020	0.4463	1.2057	2885.5	.1249	.618	0.3130	1.2826	2976.1	.0755	.717
4100	9.6031-4	762.3	2.3868	28.751	.176	1.0758	-1.0027	0.4821	1.1949	2910.7	.1424	.595	0.3137	1.2824	3015.3	.0769	.716
4200	9.3547-4	812.6	2.3989	28.691	.178	1.0996	-1.0036	0.5249	1.1845	2936.2	.1640	.571	0.3143	1.2824	3055.1	.0783	.716
4300	9.1128-4	867.6	2.4118	28.614	.181	1.1284	-1.0048	0.5751	1.1748	2962.8	.1904	.547	0.3150	1.2826	3095.7	.0797	.715
4400	8.8761-4	927.9	2.4257	28.519	.184	1.1627	-1.0063	0.6326	1.1642	2990.9	.2217	.524	0.3155	1.2832	3137.4	.0812	.713
4500	8.6434-4	994.3	2.4406	28.403	.186	1.2025	-1.0081	0.6970	1.1587	3021.2	.2577	.504	0.3161	1.2840	3180.4	.0827	.712
4600	8.4138-4	1067.5	2.4567	28.263	.189	1.2476	-1.0102	0.7676	1.1525	3053.9	.2979	.486	0.3166	1.2852	3225.0	.0842	.709
4700	8.1868-4	1148.0	2.4740	28.098	.191	1.2973	-1.0126	0.8431	1.1475	3089.2	.3411	.473	0.3171	1.2868	3271.4	.0858	.707
4800	7.9618-4	1236.2	2.4926	27.907	.194	1.3507	-1.0152	0.9219	1.1436	3127.3	.3854	.463	0.3176	1.2887	3319.8	.0875	.703
4900	7.7387-4	1332.4	2.5124	27.690	.196	1.4065	-1.0181	1.0020	1.1408	3168.2	.4288	.459	0.3181	1.2911	3370.3	.0893	.699
5000	7.5176-4	1436.6	2.5335	27.448	.199	1.4629	-1.0212	1.0808	1.1390	3211.8	.4686	.458	0.3186	1.2938	3423.1	.0911	.695
5100	7.2990-4	1548.4	2.5556	27.183	.201	1.5175	-1.0243	1.1551	1.1381	3258.3	.5026	.462	0.3191	1.2969	3478.2	.0931	.690
5200	7.0836-4	1667.3	2.5787	26.898	.204	1.5679	-1.0274	1.2214	1.1380	3307.3	.5288	.471	0.3197	1.3003	3535.4	.0952	.684
5300	6.8722-4	1792.3	2.6025	26.597	.206	1.6110	-1.0302	1.2760	1.1386	3358.7	.5459	.482	0.3202	1.3041	3594.5	.0973	.679
5400	6.6662-4	1922.0	2.6268	26.287	.209	1.6443	-1.0325	1.3154	1.1399	3412.2	.5534	.497	0.3207	1.3081	3655.3	.0995	.673

TABLE 12.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016749; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 14.6959 LB/IN2 (1.00 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4760-2	-52.6	1.9319	28.929	.096	1.0000	-1.0000	0.2747	1.3332	1914.7	.0364	.722	0.2746	1.3333	1914.8	.0364	.722
1700	2.3303-2	-25.0	1.9487	28.929	.100	1.0000	-1.0000	0.2778	1.3283	1970.0	.0384	.721	0.2776	1.3285	1970.2	.0383	.721
1800	2.2009-2	3.0	1.9646	28.929	.103	1.0000	-1.0000	0.2807	1.3238	2023.7	.0403	.721	0.2804	1.3242	2024.0	.0403	.721
1900	2.0850-2	31.2	1.9799	28.929	.107	1.0000	-1.0000	0.2833	1.3198	2076.0	.0422	.721	0.2829	1.3204	2076.5	.0421	.721
2000	1.9808-2	59.6	1.9945	28.929	.111	1.0000	-1.0000	0.2859	1.3160	2126.9	.0440	.721	0.2853	1.3169	2127.6	.0439	.721
2100	1.8865-2	88.3	2.0085	28.929	.114	1.0000	-1.0000	0.2884	1.3124	2176.4	.0458	.721	0.2875	1.3136	2177.4	.0457	.721
2200	1.8007-2	117.3	2.0219	28.929	.118	1.0000	-1.0000	0.2909	1.3089	2224.7	.0476	.721	0.2897	1.3106	2226.1	.0474	.721
2300	1.7224-2	146.5	2.0349	28.929	.121	1.0000	-1.0000	0.2933	1.3055	2271.7	.0494	.721	0.2917	1.3078	2273.7	.0491	.721
2400	1.6506-2	176.0	2.0475	28.929	.125	1.0000	-1.0000	0.2958	1.3022	2317.7	.0512	.721	0.2936	1.3052	2320.3	.0508	.721
2500	1.5846-2	205.7	2.0596	28.929	.128	1.0001	-1.0000	0.2983	1.2990	2362.5	.0530	.721	0.2954	1.3027	2365.9	.0525	.721
2600	1.5237-2	235.6	2.0713	28.929	.131	1.0001	-1.0000	0.3008	1.2958	2406.3	.0548	.721	0.2971	1.3005	2410.7	.0541	.721
2700	1.4672-2	265.8	2.0827	28.928	.135	1.0002	-1.0000	0.3033	1.2926	2449.2	.0566	.721	0.2987	1.2984	2454.6	.0557	.721
2800	1.4148-2	296.3	2.0938	28.928	.138	1.0003	-1.0000	0.3060	1.2894	2491.0	.0585	.721	0.3002	1.2964	2497.8	.0574	.721
2900	1.3660-2	327.0	2.1046	28.928	.141	1.0004	-1.0000	0.3088	1.2862	2532.0	.0604	.720	0.3017	1.2946	2540.2	.0590	.721
3000	1.3205-2	358.1	2.1151	28.927	.144	1.0006	-1.0000	0.3117	1.2829	2571.9	.0624	.719	0.3030	1.2929	2582.0	.0606	.720
3100	1.2778-2	389.4	2.1254	28.927	.147	1.0010	-1.0000	0.3149	1.2794	2611.0	.0645	.718	0.3043	1.2913	2623.1	.0621	.720
3200	1.2379-2	421.0	2.1354	28.926	.150	1.0014	-1.0000	0.3184	1.2759	2649.1	.0666	.717	0.3055	1.2898	2663.6	.0637	.720
3300	1.2003-2	453.1	2.1453	28.924	.153	1.0021	-1.0001	0.3223	1.2721	2686.3	.0689	.715	0.3067	1.2885	2703.5	.0652	.719
3400	1.1649-2	485.5	2.1550	28.922	.156	1.0030	-1.0001	0.3267	1.2680	2722.4	.0714	.713	0.3077	1.2872	2742.9	.0668	.719
3500	1.1315-2	518.4	2.1645	28.919	.159	1.0042	-1.0001	0.3317	1.2637	2757.6	.0742	.711	0.3088	1.2860	2781.8	.0683	.719
3600	1.0999-2	551.9	2.1739	28.915	.162	1.0060	-1.0002	0.3376	1.2589	2791.6	.0772	.707	0.3097	1.2849	2820.3	.0697	.718
3700	1.0700-2	586.0	2.1833	28.909	.165	1.0083	-1.0003	0.3446	1.2538	2824.6	.0807	.703	0.3106	1.2839	2858.4	.0712	.718
3800	1.0415-2	620.8	2.1926	28.902	.167	1.0114	-1.0004	0.3528	1.2482	2856.5	.0847	.697	0.3115	1.2831	2896.1	.0726	.718
3900	1.0145-2	656.6	2.2019	28.892	.170	1.0154	-1.0005	0.3627	1.2421	2887.2	.0895	.690	0.3123	1.2823	2933.6	.0740	.718
4000	9.8867-3	693.4	2.2112	28.879	.173	1.0206	-1.0007	0.3744	1.2355	2916.9	.0951	.681	0.3130	1.2816	2970.8	.0754	.718
4100	9.6399-3	731.6	2.2206	28.862	.176	1.0272	-1.0009	0.3884	1.2285	2945.7	.1018	.671	0.3137	1.2810	3007.9	.0768	.718
4200	9.4033-3	771.2	2.2302	28.840	.179	1.0356	-1.0013	0.4050	1.2211	2973.6	.1099	.658	0.3144	1.2805	3044.9	.0782	.718
4300	9.1759-3	812.7	2.2399	28.812	.181	1.0460	-1.0017	0.4244	1.2136	3000.8	.1195	.643	0.3150	1.2801	3082.0	.0796	.717
4400	8.9566-3	856.2	2.2499	28.778	.184	1.0587	-1.0022	0.4471	1.2059	3027.8	.1310	.627	0.3156	1.2799	3119.2	.0809	.717
4500	8.7446-3	902.2	2.2603	28.735	.186	1.0739	-1.0029	0.4731	1.1984	3054.7	.1447	.610	0.3161	1.2798	3156.7	.0823	.716
4600	8.5389-3	950.9	2.2710	28.683	.189	1.0919	-1.0037	0.5027	1.1912	3082.0	.1606	.592	0.3166	1.2798	3194.5	.0837	.716
4700	8.3389-3	1002.8	2.2821	28.620	.192	1.1128	-1.0046	0.5358	1.1845	3109.9	.1791	.573	0.3171	1.2801	3232.9	.0850	.715
4800	8.1438-3	1058.2	2.2938	28.545	.194	1.1366	-1.0058	0.5721	1.1783	3138.7	.2001	.555	0.3176	1.2805	3272.0	.0864	.714
4900	7.9531-3	1117.4	2.3060	28.457	.197	1.1632	-1.0071	0.6115	1.1728	3168.7	.2236	.538	0.3180	1.2811	3311.8	.0878	.712
5000	7.7661-3	1180.6	2.3188	28.355	.199	1.1926	-1.0085	0.6534	1.1681	3200.1	.2494	.522	0.3184	1.2820	3352.5	.0893	.711
5100	7.5825-3	1248.1	2.3321	28.239	.202	1.2243	-1.0102	0.6972	1.1641	3233.1	.2771	.508	0.3188	1.2830	3394.2	.0908	.709
5200	7.4020-3	1320.1	2.3461	28.107	.204	1.2581	-1.0120	0.7425	1.1609	3267.8	.3060	.496	0.3192	1.2843	3437.1	.0923	.707
5300	7.2243-3	1396.6	2.3607	27.960	.207	1.2936	-1.0140	0.7885	1.1583	3304.1	.3355	.486	0.3196	1.2858	3481.1	.0939	.704
5400	7.0493-3	1477.8	2.3758	27.797	.209	1.3301	-1.0162	0.8346	1.1564	3342.1	.3648	.479	0.3199	1.2875	3526.4	.0955	.701

TABLE 12.4B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016749; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 146.959 LB/IN2 (10.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	VS (GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4760-1	-52.6	1.7739	28.929	.096	1.0000	-1.0000	0.2747	1.3332	1914.7	.0364	.722	0.2746	1.3333	1914.8	.0364	.722
1700	2.3303-1	-24.9	1.7906	28.929	.100	1.0000	-1.0000	0.2778	1.3283	1970.0	.0384	.721	0.2776	1.3285	1970.2	.0383	.721
1800	2.2009-1	3.0	1.8066	28.929	.103	1.0000	-1.0000	0.2807	1.3238	2023.7	.0403	.721	0.2804	1.3242	2024.0	.0403	.721
1900	2.0850-1	31.2	1.8218	28.929	.107	1.0000	-1.0000	0.2833	1.3198	2076.0	.0422	.721	0.2829	1.3204	2076.5	.0421	.721
2000	1.9808-1	59.6	1.8364	28.929	.111	1.0000	-1.0000	0.2859	1.3160	2126.9	.0440	.721	0.2853	1.3169	2127.6	.0439	.721
2100	1.8865-1	88.3	1.8504	28.929	.114	1.0000	-1.0000	0.2884	1.3124	2176.4	.0458	.721	0.2875	1.3136	2177.4	.0457	.721
2200	1.8007-1	117.3	1.8639	28.929	.118	1.0000	-1.0000	0.2909	1.3089	2224.7	.0476	.721	0.2897	1.3106	2226.1	.0474	.721
2300	1.7224-1	146.5	1.8769	28.929	.121	1.0000	-1.0000	0.2933	1.3056	2271.7	.0494	.721	0.2917	1.3078	2273.7	.0491	.721
2400	1.6507-1	176.0	1.8894	28.929	.125	1.0000	-1.0000	0.2957	1.3023	2317.7	.0512	.721	0.2936	1.3052	2320.3	.0508	.721
2500	1.5846-1	205.7	1.9015	28.929	.128	1.0000	-1.0000	0.2982	1.2991	2362.6	.0529	.721	0.2954	1.3027	2365.9	.0525	.721
2600	1.5237-1	235.6	1.9133	28.929	.131	1.0000	-1.0000	0.3006	1.2960	2406.5	.0547	.721	0.2971	1.3005	2410.7	.0541	.721
2700	1.4672-1	265.8	1.9247	28.929	.135	1.0001	-1.0000	0.3031	1.2929	2449.4	.0565	.721	0.2987	1.2984	2454.6	.0557	.721
2800	1.4148-1	296.2	1.9357	28.929	.138	1.0001	-1.0000	0.3056	1.2898	2491.4	.0584	.721	0.3002	1.2964	2497.8	.0574	.721
2900	1.3660-1	326.9	1.9465	28.928	.141	1.0002	-1.0000	0.3081	1.2868	2532.5	.0602	.721	0.3017	1.2946	2540.2	.0590	.721
3000	1.3205-1	357.8	1.9570	28.928	.144	1.0003	-1.0000	0.3108	1.2837	2572.8	.0621	.720	0.3030	1.2929	2581.9	.0606	.720
3100	1.2779-1	389.1	1.9672	28.928	.147	1.0004	-1.0000	0.3135	1.2807	2612.2	.0641	.719	0.3043	1.2913	2623.0	.0621	.720
3200	1.2379-1	420.5	1.9772	28.927	.150	1.0006	-1.0000	0.3163	1.2776	2650.8	.0660	.719	0.3055	1.2898	2663.5	.0637	.720
3300	1.2004-1	452.3	1.9870	28.927	.153	1.0009	-1.0000	0.3193	1.2745	2688.7	.0681	.718	0.3067	1.2884	2703.3	.0652	.719
3400	1.1650-1	484.4	1.9966	28.926	.156	1.0013	-1.0000	0.3225	1.2713	2725.7	.0702	.717	0.3077	1.2871	2742.7	.0668	.719
3500	1.1317-1	516.8	2.0060	28.924	.159	1.0018	-1.0001	0.3259	1.2680	2762.0	.0724	.716	0.3088	1.2859	2781.5	.0683	.719
3600	1.1002-1	549.6	2.0152	28.923	.162	1.0025	-1.0001	0.3297	1.2646	2797.5	.0747	.714	0.3097	1.2848	2819.8	.0697	.718
3700	1.0704-1	582.8	2.0243	28.920	.165	1.0034	-1.0001	0.3337	1.2611	2832.3	.0771	.713	0.3106	1.2838	2857.7	.0712	.718
3800	1.0421-1	616.4	2.0332	28.917	.167	1.0046	-1.0001	0.3382	1.2575	2866.3	.0797	.711	0.3115	1.2829	2895.1	.0726	.718
3900	1.0152-1	650.5	2.0421	28.913	.170	1.0061	-1.0002	0.3433	1.2537	2899.6	.0826	.708	0.3123	1.2820	2932.2	.0740	.718
4000	9.8969-2	685.1	2.0509	28.908	.173	1.0080	-1.0003	0.3489	1.2496	2932.1	.0857	.705	0.3130	1.2812	2968.8	.0754	.718
4100	9.6533-2	720.3	2.0596	28.902	.176	1.0104	-1.0004	0.3553	1.2454	2963.9	.0891	.701	0.3137	1.2804	3005.2	.0768	.718
4200	9.4207-2	756.2	2.0682	28.893	.179	1.0134	-1.0005	0.3626	1.2410	2994.9	.0930	.696	0.3144	1.2798	3041.3	.0782	.718
4300	9.1983-2	792.8	2.0768	28.883	.181	1.0172	-1.0006	0.3708	1.2364	3025.2	.0973	.691	0.3150	1.2792	3077.1	.0795	.718
4400	8.9853-2	830.4	2.0855	28.870	.184	1.0217	-1.0008	0.3802	1.2316	3055.0	.1022	.684	0.3156	1.2787	3112.8	.0809	.718
4500	8.7808-2	868.9	2.0941	28.854	.187	1.0272	-1.0010	0.3908	1.2267	3084.1	.1078	.676	0.3162	1.2782	3148.3	.0822	.718
4600	8.5842-2	908.6	2.1028	28.835	.189	1.0338	-1.0013	0.4028	1.2216	3112.8	.1142	.667	0.3167	1.2779	3183.7	.0835	.717
4700	8.3948-2	949.5	2.1116	28.812	.192	1.0415	-1.0017	0.4162	1.2165	3141.1	.1215	.657	0.3172	1.2776	3219.1	.0849	.717
4800	8.2119-2	991.8	2.1206	28.784	.194	1.0506	-1.0021	0.4312	1.2114	3169.3	.1297	.646	0.3177	1.2774	3254.5	.0862	.717
4900	8.0351-2	1035.8	2.1296	28.751	.197	1.0611	-1.0026	0.4478	1.2064	3197.3	.1391	.634	0.3181	1.2774	3290.0	.0875	.716
5000	7.8638-2	1081.5	2.1388	28.712	.200	1.0730	-1.0032	0.4659	1.2016	3225.5	.1496	.622	0.3185	1.2774	3325.7	.0889	.715
5100	7.6974-2	1129.0	2.1483	28.667	.202	1.0864	-1.0038	0.4856	1.1970	3253.9	.1613	.609	0.3189	1.2775	3361.5	.0902	.715
5200	7.5357-2	1178.6	2.1579	28.615	.205	1.1013	-1.0046	0.5066	1.1927	3282.7	.1742	.595	0.3193	1.2777	3397.7	.0915	.714
5300	7.3781-2	1230.4	2.1677	28.555	.207	1.1177	-1.0055	0.5289	1.1888	3312.1	.1883	.582	0.3196	1.2781	3434.3	.0929	.713
5400	7.2244-2	1284.4	2.1778	28.488	.210	1.1354	-1.0064	0.5522	1.1852	3342.2	.2036	.568	0.3200	1.2785	3471.3	.0942	.712

TABLE 12.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016749; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511; P = 734.797 LB/IN2 (50.00 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2380 0	-52.6	1.6634	28.929	.096	1.0000	-1.0000	0.2747	1.3332	1914.7	.0364	.722	0.2746	1.3333	1914.8	.0364	.722
1700	1.1652 0	-24.9	1.6801	28.929	.100	1.0000	-1.0000	0.2778	1.3283	1970.0	.0384	.721	0.2776	1.3285	1970.2	.0383	.721
1800	1.1004 0	3.0	1.6961	28.929	.103	1.0000	-1.0000	0.2807	1.3238	2023.7	.0403	.721	0.2804	1.3242	2024.0	.0403	.721
1900	1.0425 0	31.2	1.7113	28.929	.107	1.0000	-1.0000	0.2833	1.3198	2076.0	.0422	.721	0.2829	1.3204	2076.5	.0421	.721
2000	9.9040-1	59.6	1.7259	28.929	.111	1.0000	-1.0000	0.2859	1.3160	2126.9	.0440	.721	0.2853	1.3169	2127.6	.0439	.721
2100	9.4324-1	88.3	1.7399	28.929	.114	1.0000	-1.0000	0.2884	1.3124	2176.4	.0458	.721	0.2875	1.3136	2177.4	.0457	.721
2200	9.0036-1	117.3	1.7534	28.929	.118	1.0000	-1.0000	0.2909	1.3089	2224.6	.0476	.721	0.2897	1.3106	2226.1	.0474	.721
2300	8.6122-1	146.5	1.7664	28.929	.121	1.0000	-1.0000	0.2933	1.3055	2271.7	.0494	.721	0.2917	1.3078	2273.7	.0491	.721
2400	8.2533-1	176.0	1.7789	28.929	.125	1.0000	-1.0000	0.2957	1.3023	2317.7	.0512	.721	0.2936	1.3052	2320.3	.0508	.721
2500	7.9232-1	205.7	1.7910	28.929	.128	1.0000	-1.0000	0.2981	1.2991	2362.6	.0529	.721	0.2954	1.3027	2365.9	.0525	.721
2600	7.6185-1	235.6	1.8028	28.929	.131	1.0000	-1.0000	0.3005	1.2960	2406.5	.0547	.721	0.2971	1.3005	2410.7	.0541	.721
2700	7.3363-1	265.8	1.8142	28.929	.135	1.0000	-1.0000	0.3030	1.2929	2449.4	.0565	.721	0.2987	1.2984	2454.6	.0557	.721
2800	7.0743-1	296.2	1.8252	28.929	.138	1.0000	-1.0000	0.3054	1.2899	2491.5	.0583	.721	0.3002	1.2964	2497.7	.0574	.721
2900	6.8303-1	326.9	1.8360	28.929	.141	1.0001	-1.0000	0.3079	1.2870	2532.7	.0602	.721	0.3017	1.2946	2540.2	.0590	.721
3000	6.6026-1	357.8	1.8465	28.929	.144	1.0001	-1.0000	0.3104	1.2840	2573.0	.0620	.720	0.3030	1.2929	2581.9	.0606	.720
3100	6.3896-1	388.9	1.8567	28.929	.147	1.0002	-1.0000	0.3130	1.2811	2612.6	.0639	.720	0.3043	1.2913	2623.0	.0621	.720
3200	6.1899-1	420.4	1.8667	28.928	.150	1.0004	-1.0000	0.3156	1.2782	2651.4	.0658	.719	0.3055	1.2898	2663.4	.0637	.720
3300	6.0022-1	452.1	1.8764	28.928	.153	1.0005	-1.0000	0.3183	1.2753	2689.4	.0678	.719	0.3067	1.2884	2703.3	.0652	.719
3400	5.8256-1	484.0	1.8860	28.928	.156	1.0007	-1.0000	0.3211	1.2723	2726.8	.0698	.718	0.3077	1.2871	2742.6	.0668	.719
3500	5.6590-1	516.3	1.8953	28.927	.159	1.0010	-1.0000	0.3241	1.2694	2763.5	.0718	.717	0.3088	1.2859	2781.3	.0683	.719
3600	5.5016-1	548.9	1.9045	28.926	.162	1.0014	-1.0001	0.3271	1.2665	2799.5	.0739	.716	0.3097	1.2848	2819.6	.0697	.718
3700	5.3527-1	581.7	1.9135	28.924	.165	1.0019	-1.0001	0.3303	1.2635	2834.8	.0760	.715	0.3106	1.2838	2857.4	.0712	.718
3800	5.2115-1	614.9	1.9223	28.923	.167	1.0025	-1.0001	0.3337	1.2605	2869.5	.0783	.714	0.3115	1.2828	2894.8	.0726	.718
3900	5.0775-1	648.5	1.9311	28.921	.170	1.0033	-1.0001	0.3374	1.2575	2903.6	.0806	.713	0.3123	1.2819	2931.7	.0740	.718
4000	4.9501-1	682.4	1.9397	28.918	.173	1.0043	-1.0002	0.3413	1.2543	2937.1	.0830	.711	0.3130	1.2810	2968.2	.0754	.718
4100	4.8288-1	716.8	1.9481	28.914	.176	1.0056	-1.0002	0.3456	1.2512	2970.0	.0856	.710	0.3137	1.2803	3004.4	.0768	.718
4200	4.7131-1	751.6	1.9565	28.910	.179	1.0071	-1.0003	0.3502	1.2479	3002.3	.0884	.707	0.3144	1.2796	3040.2	.0782	.718
4300	4.6026-1	786.8	1.9648	28.905	.181	1.0090	-1.0003	0.3553	1.2445	3034.0	.0914	.705	0.3150	1.2789	3075.6	.0795	.718
4400	4.4970-1	822.6	1.9731	28.898	.184	1.0112	-1.0004	0.3609	1.2411	3065.2	.0947	.701	0.3156	1.2783	3110.8	.0809	.718
4500	4.3958-1	859.0	1.9812	28.890	.187	1.0139	-1.0005	0.3671	1.2376	3095.9	.0982	.698	0.3162	1.2778	3145.8	.0822	.718
4600	4.2988-1	896.1	1.9894	28.880	.189	1.0172	-1.0007	0.3739	1.2340	3126.1	.1021	.693	0.3167	1.2773	3180.5	.0835	.718
4700	4.2056-1	933.8	1.9975	28.868	.192	1.0210	-1.0009	0.3813	1.2303	3155.8	.1064	.688	0.3172	1.2769	3215.0	.0849	.718
4800	4.1159-1	972.4	2.0056	28.854	.195	1.0255	-1.0011	0.3896	1.2266	3185.2	.1112	.682	0.3177	1.2765	3249.4	.0862	.717
4900	4.0296-1	1011.8	2.0137	28.837	.197	1.0308	-1.0013	0.3986	1.2229	3214.2	.1164	.675	0.3182	1.2762	3283.6	.0875	.717
5000	3.9463-1	1052.1	2.0219	28.818	.200	1.0368	-1.0016	0.4085	1.2191	3243.0	.1222	.667	0.3186	1.2760	3317.8	.0888	.716
5100	3.8659-1	1093.5	2.0301	28.795	.202	1.0436	-1.0019	0.4192	1.2154	3271.6	.1286	.659	0.3190	1.2758	3351.9	.0901	.716
5200	3.7881-1	1136.0	2.0383	28.768	.205	1.0514	-1.0023	0.4308	1.2118	3300.1	.1356	.651	0.3194	1.2757	3386.0	.0914	.715
5300	3.7126-1	1179.7	2.0466	28.738	.207	1.0600	-1.0028	0.4433	1.2083	3328.6	.1433	.641	0.3197	1.2757	3420.2	.0927	.715
5400	3.6395-1	1224.7	2.0551	28.703	.210	1.0695	-1.0033	0.4565	1.2050	3357.2	.1517	.631	0.3201	1.2758	3454.5	.0940	.714

TABLE 12C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016749; EQUIV.RATIO = 0.250; CHEM. EQUIV. RATIO = 0.2511;
 DRY AIR

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES				COND BTU/ FT HR R	PRAN R	T R	
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S				V S FT/S
PRESSURE = 0.01 ATM																
360	1.141-3	-396.1	1.8092	28.929	0.2516	1.116-3	29.328	.0319	1.000	-1.000	0.2387	1.3960	923	.0104	.734	360
400	1.023-3	-384.0	1.8409	28.929	0.4186	1.003-3	29.290	.0348	1.000	-1.000	0.2390	1.3960	974	.0114	.731	400
440	9.004-4	-349.9	1.9215	28.929	0.2431	9.004-4	28.929	.0369	1.000	-1.000	0.2431	1.3935	1027	.0122	.737	440
PRESSURE = 0.10 ATM																
360	1.141-2	-396.2	1.6564	28.929	0.2427	1.116-2	29.329	.0319	1.000	-1.000	0.2387	1.3960	923	.0104	.734	360
400	1.026-2	-386.3	1.6826	28.929	0.2599	1.004-2	29.326	.0349	1.000	-1.000	0.2386	1.3963	973	.0114	.730	400
440	9.294-3	-373.7	1.7125	28.929	0.4240	9.113-3	29.281	.0377	1.000	-1.000	0.2391	1.3959	1021	.0124	.727	440
480	8.259-3	-340.7	1.7836	28.929	1.5558	8.255-3	28.936	.0397	1.000	-1.000	0.2432	1.3932	1072	.0132	.733	480
520	7.618-3	-330.4	1.8041	28.929	0.2436	7.618-3	28.929	.0424	1.000	-1.000	0.2436	1.3924	1116	.0141	.731	520
PRESSURE = 1.00 ATM																
360	1.141-1	-396.2	1.5039	28.929	0.2418	1.116-1	29.329	.0319	1.000	-1.000	0.2387	1.3960	923	.0104	.734	360
400	1.027-1	-386.5	1.5295	28.929	0.2441	1.004-1	29.329	.0349	1.000	-1.000	0.2386	1.3963	973	.0114	.730	400
440	9.330-2	-376.5	1.5533	28.929	0.2612	9.127-2	29.325	.0378	1.000	-1.000	0.2386	1.3962	1021	.0124	.726	440
480	8.526-2	-364.5	1.5793	28.929	0.3674	8.356-2	29.290	.0405	1.000	-1.000	0.2392	1.3956	1066	.0134	.723	480
520	7.759-2	-342.4	1.6235	28.929	0.6617	7.672-2	29.131	.0428	1.000	-1.000	0.2413	1.3938	1112	.0142	.725	520
537	7.415-2	-329.3	1.6484	28.929	0.9372	7.394-2	28.977	.0436	1.000	-1.000	0.2432	1.3924	1132	.0145	.729	537
560	7.074-2	-320.7	1.6641	28.929	0.2440	7.074-2	28.929	.0450	1.000	-1.000	0.2440	1.3915	1157	.0150	.730	560
600	6.603-2	-310.9	1.6810	28.929	0.2445	6.603-2	28.929	.0475	1.000	-1.000	0.2445	1.3903	1197	.0159	.730	600
PRESSURE = 10.00 ATM																
360	1.140 0	-396.2	1.3515	28.929	0.2417	1.116 0	29.329	.0319	1.000	-1.000	0.2387	1.3960	923	.0104	.734	360
400	1.026 0	-386.5	1.3770	28.929	0.2426	1.004 0	29.329	.0349	1.000	-1.000	0.2386	1.3963	973	.0114	.730	400
440	9.330-1	-376.8	1.4002	28.929	0.2451	9.128-1	29.329	.0378	1.000	-1.000	0.2386	1.3962	1021	.0124	.726	440
480	8.551-1	-366.8	1.4219	28.929	0.2566	8.366-1	29.326	.0406	1.000	-1.000	0.2388	1.3958	1066	.0134	.723	480
520	7.882-1	-352.7	1.4502	28.929	0.2951	7.719-1	29.310	.0432	1.000	-1.000	0.2393	1.3951	1109	.0143	.721	520
537	7.627-1	-347.6	1.4599	28.929	0.3203	7.475-1	29.294	.0443	1.000	-1.000	0.2396	1.3946	1127	.0147	.721	537
560	7.285-1	-339.5	1.4746	28.929	0.3770	7.154-1	29.256	.0457	1.000	-1.000	0.2403	1.3938	1152	.0152	.722	560
600	6.710-1	-321.1	1.5063	28.929	0.5695	6.643-1	29.107	.0479	1.000	-1.000	0.2425	1.3915	1194	.0160	.725	600
640	6.190-1	-301.1	1.5387	28.929	0.2452	6.190-1	28.929	.0499	1.000	-1.000	0.2452	1.3888	1236	.0168	.730	640
680	5.826-1	-291.3	1.5536	28.929	0.2459	5.826-1	28.929	.0523	1.000	-1.000	0.2459	1.3872	1273	.0176	.729	680
PRESSURE = 50.00 ATM																
360	5.692 0	-396.2	1.2449	28.929	0.2417	5.578 0	29.329	.0319	1.000	-1.000	0.2387	1.3960	923	.0104	.734	360
400	5.124 0	-386.5	1.2704	28.929	0.2424	5.021 0	29.329	.0349	1.000	-1.000	0.2386	1.3963	973	.0114	.730	400
440	4.659 0	-376.8	1.2936	28.929	0.2437	4.564 0	29.329	.0378	1.000	-1.000	0.2386	1.3962	1021	.0124	.726	440
480	4.271 0	-367.0	1.3149	28.929	0.2468	4.184 0	29.329	.0406	1.000	-1.000	0.2388	1.3959	1066	.0134	.722	480
520	3.942 0	-353.6	1.3418	28.929	0.2637	3.861 0	29.325	.0433	1.000	-1.000	0.2391	1.3952	1109	.0144	.720	520
537	3.819 0	-349.1	1.3502	28.929	0.2687	3.741 0	29.322	.0443	1.000	-1.000	0.2393	1.3948	1127	.0147	.720	537
560	3.658 0	-342.8	1.3619	28.929	0.2801	3.584 0	29.315	.0458	1.000	-1.000	0.2396	1.3942	1151	.0152	.720	560
600	3.405 0	-330.9	1.3823	28.929	0.3173	3.342 0	29.285	.0482	1.000	-1.000	0.2405	1.3928	1191	.0161	.721	600
640	3.173 0	-316.9	1.4049	28.929	0.3902	3.126 0	29.214	.0505	1.000	-1.000	0.2419	1.3909	1231	.0169	.723	640
680	2.949 0	-298.9	1.4321	28.929	0.5190	2.927 0	29.068	.0525	1.000	-1.000	0.2443	1.3882	1271	.0177	.726	680
720	2.751 0	-281.4	1.4572	28.929	0.2468	2.751 0	28.929	.0546	1.000	-1.000	0.2468	1.3854	1309	.0185	.729	720
760	2.606 0	-271.6	1.4706	28.929	0.2477	2.606 0	28.929	.0568	1.000	-1.000	0.2477	1.3834	1344	.0193	.729	760

TABLE 13A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.033499; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5008; MW = 28.8936;
 DRY AIR; GASEOUS COMPOSITION: CO2= .06660; H2O= .06960; N2= .75366; O2= .10109; AR= .00904

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
360	1.0991-1	5.4955 0	-683.9	1.8791	1.7208	1.5626	1.4043	1.2937	0.2455	1.3888	927.5	.0298	.0096	.7601	360
380	1.0412-1	5.2062 0	-679.0	1.8924	1.7341	1.5759	1.4176	1.3070	0.2456	1.3886	952.9	.0313	.0102	.7566	380
400	9.8919-2	4.9459 0	-674.1	1.9050	1.7467	1.5885	1.4302	1.3196	0.2457	1.3883	977.5	.0328	.0107	.7533	400
420	9.4208-2	4.7104 0	-669.1	1.9170	1.7587	1.6004	1.4422	1.3316	0.2459	1.3880	1001.6	.0343	.0112	.7503	420
440	8.9926-2	4.4963 0	-664.2	1.9284	1.7701	1.6119	1.4536	1.3430	0.2461	1.3876	1025.0	.0357	.0118	.7477	440
460	8.6016-2	4.3008 0	-659.3	1.9393	1.7811	1.6228	1.4646	1.3540	0.2463	1.3871	1047.8	.0371	.0123	.7455	460
480	8.2432-2	4.1216 0	-654.4	1.9498	1.7916	1.6333	1.4751	1.3644	0.2465	1.3866	1070.2	.0385	.0128	.7437	480
500	7.9135-2	3.9567 0	-649.4	1.9599	1.8016	1.6434	1.4851	1.3745	0.2468	1.3860	1092.0	.0399	.0133	.7423	500
520	7.6091-2	3.8046 0	-644.5	1.9696	1.8113	1.6531	1.4948	1.3842	0.2471	1.3853	1113.4	.0412	.0137	.7412	520
537	7.3728-2	3.6864 0	-640.4	1.9774	1.8191	1.6609	1.5026	1.3920	0.2474	1.3848	1130.9	.0423	.0141	.7406	537
540	7.3273-2	3.6637 0	-639.6	1.9789	1.8207	1.6624	1.5041	1.3935	0.2474	1.3846	1134.3	.0425	.0142	.7405	540
560	7.0656-2	3.5328 0	-634.6	1.9879	1.8297	1.6714	1.5132	1.4025	0.2478	1.3839	1154.8	.0438	.0147	.7404	560
580	6.8220-2	3.4110 0	-629.6	1.9966	1.8384	1.6801	1.5219	1.4112	0.2481	1.3831	1174.9	.0451	.0151	.7404	580
600	6.5946-2	3.2973 0	-624.7	2.0050	1.8468	1.6885	1.5303	1.4197	0.2485	1.3823	1194.6	.0463	.0156	.7406	600
620	6.3818-2	3.1909 0	-619.7	2.0132	1.8549	1.6967	1.5384	1.4278	0.2490	1.3814	1214.0	.0476	.0160	.7407	620
640	6.1824-2	3.0912 0	-614.7	2.0211	1.8629	1.7046	1.5463	1.4357	0.2494	1.3804	1233.0	.0488	.0164	.7406	640
660	5.9951-2	2.9975 0	-609.7	2.0288	1.8705	1.7123	1.5540	1.4434	0.2499	1.3795	1251.7	.0500	.0169	.7403	660
680	5.8187-2	2.9094 0	-604.7	2.0363	1.8780	1.7197	1.5615	1.4509	0.2503	1.3785	1270.0	.0512	.0173	.7399	680
700	5.6525-2	2.8262 0	-599.7	2.0435	1.8853	1.7270	1.5687	1.4581	0.2508	1.3774	1288.1	.0524	.0178	.7394	700
720	5.4955-2	2.7477 0	-594.7	2.0506	1.8923	1.7341	1.5758	1.4652	0.2514	1.3763	1305.9	.0535	.0182	.7389	720
740	5.3470-2	2.6735 0	-589.7	2.0575	1.8992	1.7410	1.5827	1.4721	0.2519	1.3752	1323.3	.0547	.0186	.7387	740
760	5.2062-2	2.6031 0	-584.6	2.0642	1.9060	1.7477	1.5894	1.4788	0.2524	1.3741	1340.5	.0558	.0191	.7385	760
780	5.0727-2	2.5364 0	-579.6	2.0708	1.9125	1.7543	1.5960	1.4854	0.2530	1.3730	1357.5	.0569	.0195	.7383	780
800	4.9459-2	2.4730 0	-574.5	2.0772	1.9189	1.7607	1.6024	1.4918	0.2536	1.3718	1374.2	.0580	.0199	.7382	800
820	4.8253-2	2.4126 0	-569.4	2.0835	1.9252	1.7669	1.6087	1.4981	0.2542	1.3706	1390.7	.0591	.0204	.7381	820
840	4.7104-2	2.3552 0	-564.3	2.0896	1.9313	1.7731	1.6148	1.5042	0.2548	1.3694	1406.9	.0602	.0208	.7381	840
860	4.6009-2	2.3004 0	-559.2	2.0956	1.9373	1.7791	1.6208	1.5102	0.2554	1.3681	1422.9	.0612	.0212	.7380	860
880	4.4963-2	2.2482 0	-554.1	2.1015	1.9432	1.7850	1.6267	1.5161	0.2561	1.3669	1438.7	.0623	.0216	.7380	880
900	4.3964-2	2.1982 0	-549.0	2.1072	1.9490	1.7907	1.6325	1.5218	0.2567	1.3656	1454.3	.0633	.0220	.7381	900
920	4.3008-2	2.1504 0	-543.8	2.1129	1.9546	1.7964	1.6381	1.5275	0.2574	1.3643	1469.7	.0643	.0224	.7380	920
940	4.2093-2	2.1047 0	-538.7	2.1184	1.9602	1.8019	1.6437	1.5330	0.2580	1.3631	1484.9	.0654	.0229	.7378	940
960	4.1216-2	2.0608 0	-533.5	2.1239	1.9656	1.8074	1.6491	1.5385	0.2587	1.3618	1499.9	.0664	.0233	.7377	960
980	4.0375-2	2.0187 0	-528.3	2.1292	1.9710	1.8127	1.6544	1.5438	0.2594	1.3605	1514.7	.0674	.0237	.7375	980
1000	3.9567-2	1.9784 0	-523.1	2.1345	1.9762	1.8179	1.6597	1.5491	0.2601	1.3592	1529.3	.0684	.0241	.7373	1000
1020	3.8792-2	1.9396 0	-517.9	2.1396	1.9814	1.8231	1.6648	1.5542	0.2608	1.3578	1543.8	.0694	.0245	.7372	1020
1040	3.8046-2	1.9023 0	-512.7	2.1447	1.9864	1.8282	1.6699	1.5593	0.2615	1.3565	1558.1	.0704	.0250	.7369	1040
1060	3.7328-2	1.8664 0	-507.5	2.1497	1.9914	1.8332	1.6749	1.5643	0.2622	1.3552	1572.2	.0713	.0254	.7367	1060
1080	3.6636-2	1.8318 0	-502.2	2.1546	1.9963	1.8381	1.6798	1.5692	0.2629	1.3539	1586.2	.0723	.0258	.7365	1080
1100	3.5970-2	1.7985 0	-497.0	2.1594	2.0012	1.8429	1.6846	1.5740	0.2637	1.3526	1600.1	.0733	.0262	.7362	1100
1120	3.5328-2	1.7664 0	-491.7	2.1642	2.0059	1.8477	1.6894	1.5788	0.2644	1.3513	1613.8	.0742	.0267	.7358	1120
1140	3.4708-2	1.7354 0	-486.4	2.1689	2.0106	1.8523	1.6941	1.5835	0.2651	1.3500	1627.3	.0752	.0271	.7355	1140

TABLE 13A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.033499; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5008; MW = 28.8936;
 DRY AIR; GASEOUS COMPOSITION: CO2= .06660; H2O= .06960; N2= .75366; O2= .10109; AR= .00904

T R	DENSITY (P=1.0) (P=50.)		H BTU/LB	ENTROPY (P=.01) (P=.10) (P=1.0) (P=10.) (P=50.)					CP BTU/ LB R	GAM	VS FT/S	VIS LB/ FT HR	COND BTU/ FT HR R	PRAN	T R
	LB/FT3	LB/FT3		BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R							
1160	3.4110-2	1.7055 0	-481.1	2.1735	2.0152	1.8570	1.6987	1.5881	0.2659	1.3487	1640.8	.0761	.0275	.7351	1160
1180	3.3532-2	1.6766 0	-475.7	2.1780	2.0198	1.8615	1.7033	1.5926	0.2666	1.3474	1654.0	.0770	.0279	.7348	1180
1200	3.2973-2	1.6486 0	-470.4	2.1825	2.0243	1.8660	1.7077	1.5971	0.2673	1.3461	1667.2	.0779	.0284	.7344	1200
1220	3.2432-2	1.6216 0	-465.1	2.1869	2.0287	1.8704	1.7122	1.6015	0.2681	1.3448	1680.2	.0789	.0288	.7341	1220
1240	3.1909-2	1.5955 0	-459.7	2.1913	2.0330	1.8748	1.7165	1.6059	0.2688	1.3435	1693.1	.0798	.0292	.7337	1240
1260	3.1403-2	1.5701 0	-454.3	2.1956	2.0374	1.8791	1.7208	1.6102	0.2696	1.3422	1705.9	.0807	.0297	.7334	1260
1280	3.0912-2	1.5456 0	-448.9	2.1999	2.0416	1.8833	1.7251	1.6145	0.2703	1.3410	1718.6	.0816	.0301	.7330	1280
1300	3.0436-2	1.5218 0	-443.5	2.2041	2.0458	1.8875	1.7293	1.6187	0.2710	1.3397	1731.2	.0825	.0305	.7327	1300
1320	2.9975-2	1.4988 0	-438.1	2.2082	2.0499	1.8917	1.7334	1.6228	0.2718	1.3385	1743.6	.0834	.0309	.7324	1320
1340	2.9528-2	1.4764 0	-432.6	2.2123	2.0540	1.8958	1.7375	1.6269	0.2725	1.3373	1756.0	.0842	.0314	.7320	1340
1360	2.9094-2	1.4547 0	-427.2	2.2163	2.0581	1.8998	1.7416	1.6309	0.2733	1.3361	1768.3	.0851	.0318	.7317	1360
1380	2.8672-2	1.4336 0	-421.7	2.2203	2.0621	1.9038	1.7456	1.6349	0.2740	1.3349	1780.4	.0860	.0322	.7314	1380
1400	2.8262-2	1.4131 0	-416.2	2.2243	2.0660	1.9078	1.7495	1.6389	0.2747	1.3337	1792.5	.0869	.0326	.7311	1400
1420	2.7864-2	1.3932 0	-410.7	2.2282	2.0699	1.9117	1.7534	1.6428	0.2754	1.3325	1804.4	.0877	.0331	.7308	1420
1440	2.7477-2	1.3739 0	-405.2	2.2320	2.0738	1.9155	1.7573	1.6466	0.2762	1.3313	1816.3	.0886	.0335	.7305	1440
1460	2.7101-2	1.3550 0	-399.7	2.2359	2.0776	1.9193	1.7611	1.6505	0.2769	1.3302	1828.1	.0894	.0339	.7303	1460
1480	2.6735-2	1.3367 0	-394.1	2.2396	2.0814	1.9231	1.7649	1.6542	0.2776	1.3291	1839.8	.0903	.0343	.7300	1480
1500	2.6378-2	1.3189 0	-388.5	2.2434	2.0851	1.9268	1.7686	1.6580	0.2783	1.3280	1851.4	.0911	.0347	.7298	1500
1520	2.6031-2	1.3016 0	-383.0	2.2470	2.0888	1.9305	1.7723	1.6617	0.2790	1.3269	1862.9	.0920	.0352	.7296	1520
1540	2.5693-2	1.2847 0	-377.4	2.2507	2.0924	1.9342	1.7759	1.6653	0.2797	1.3258	1874.4	.0928	.0356	.7294	1540
1560	2.5364-2	1.2682 0	-371.8	2.2543	2.0961	1.9378	1.7795	1.6689	0.2804	1.3247	1885.8	.0936	.0360	.7292	1560
1580	2.5043-2	1.2521 0	-366.2	2.2579	2.0996	1.9414	1.7831	1.6725	0.2811	1.3237	1897.1	.0944	.0364	.7290	1580
1600	2.4730-2	1.2365 0	-360.5	2.2614	2.1032	1.9449	1.7867	1.6760	0.2817	1.3227	1908.3	.0952	.0368	.7288	1600
1620	2.4424-2	1.2212 0	-354.9	2.2649	2.1067	1.9484	1.7902	1.6795	0.2824	1.3216	1919.5	.0961	.0372	.7286	1620
1640	2.4126-2	1.2063 0	-349.2	2.2684	2.1101	1.9519	1.7936	1.6830	0.2831	1.3207	1930.5	.0969	.0376	.7284	1640
1660	2.3836-2	1.1918 0	-343.6	2.2718	2.1136	1.9553	1.7971	1.6864	0.2837	1.3197	1941.6	.0977	.0381	.7283	1660
1680	2.3552-2	1.1776 0	-337.9	2.2752	2.1170	1.9587	1.8005	1.6898	0.2844	1.3187	1952.5	.0985	.0385	.7281	1680
1700	2.3275-2	1.1637 0	-332.2	2.2786	2.1203	1.9621	1.8038	1.6932	0.2850	1.3178	1963.4	.0993	.0389	.7279	1700
1720	2.3004-2	1.1502 0	-326.5	2.2819	2.1237	1.9654	1.8072	1.6966	0.2856	1.3169	1974.2	.1001	.0393	.7278	1720
1740	2.2740-2	1.1370 0	-320.8	2.2852	2.1270	1.9687	1.8105	1.6999	0.2863	1.3160	1985.0	.1008	.0397	.7276	1740
1760	2.2481-2	1.1241 0	-315.0	2.2885	2.1303	1.9720	1.8138	1.7031	0.2869	1.3151	1995.7	.1016	.0401	.7275	1760
1780	2.2229-2	1.1114 0	-309.3	2.2918	2.1335	1.9753	1.8170	1.7064	0.2875	1.3142	2006.4	.1024	.0405	.7274	1780
1800	2.1982-2	1.0991 0	-303.5	2.2950	2.1367	1.9785	1.8202	1.7096	0.2880	1.3134	2017.0	.1032	.0409	.7272	1800
1900	2.0825-2	1.0412 0	-274.6	2.3106	2.1524	1.9941	1.8359	1.7252	0.2908	1.3095	2069.2	.1070	.0428	.7268	1900
2000	1.9784-2	9.8919-1	-245.4	2.3256	2.1674	2.0091	1.8508	1.7402	0.2934	1.3059	2120.0	.1107	.0447	.7264	2000
2100	1.8842-2	9.4208-1	-215.9	2.3400	2.1817	2.0235	1.8652	1.7546	0.2959	1.3026	2169.6	.1144	.0466	.7262	2100
2200	1.7985-2	8.9926-1	-186.2	2.3538	2.1955	2.0373	1.8790	1.7684	0.2982	1.2995	2218.0	.1179	.0484	.7260	2200
2300	1.7203-2	8.6016-1	-156.3	2.3671	2.2089	2.0506	1.8923	1.7817	0.3004	1.2967	2265.4	.1214	.0503	.7259	2300
2400	1.6486-2	8.2432-1	-126.1	2.3799	2.2217	2.0634	1.9052	1.7946	0.3025	1.2940	2311.7	.1249	.0520	.7257	2400
2500	1.5827-2	7.9135-1	-95.8	2.3923	2.2341	2.0758	1.9176	1.8069	0.3045	1.2915	2357.1	.1283	.0538	.7256	2500

TABLE 13A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.033499; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5008; MW = 28.8936;
 DRY AIR; GASEOUS COMPOSITION: CO2= .06660; H2O= .06960; N2= .75366; O2= .10109; AR= .00904

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
2600	1.5218-2	7.6091-1	-65.3	2.4043	2.2461	2.0878	1.9295	1.8189	0.3064	1.2892	2401.7	.1316	.0556	.7254	2600
2700	1.4655-2	7.3273-1	-34.5	2.4159	2.2576	2.0994	1.9411	1.8305	0.3081	1.2871	2445.4	.1349	.0573	.7252	2700
2800	1.4131-2	7.0656-1	-3.6	2.4271	2.2689	2.1106	1.9524	1.8418	0.3098	1.2851	2488.3	.1381	.0590	.7247	2800
2900	1.3644-2	6.8220-1	27.4	2.4380	2.2798	2.1215	1.9633	1.8527	0.3114	1.2832	2530.6	.1413	.0608	.7242	2900
3000	1.3189-2	6.5946-1	58.6	2.4486	2.2904	2.1321	1.9739	1.8632	0.3129	1.2815	2572.1	.1445	.0625	.7237	3000
3100	1.2764-2	6.3818-1	90.0	2.4589	2.3006	2.1424	1.9841	1.8735	0.3143	1.2799	2613.0	.1476	.0641	.7231	3100
3200	1.2365-2	6.1824-1	121.5	2.4689	2.3106	2.1524	1.9941	1.8835	0.3156	1.2784	2653.2	.1507	.0658	.7226	3200
3300	1.1990-2	5.9951-1	153.1	2.4786	2.3204	2.1621	2.0039	1.8932	0.3169	1.2770	2692.9	.1537	.0675	.7221	3300
3400	1.1637-2	5.8187-1	184.9	2.4881	2.3299	2.1716	2.0133	1.9027	0.3180	1.2757	2732.0	.1567	.0691	.7215	3400
3500	1.1305-2	5.6525-1	216.7	2.4973	2.3391	2.1808	2.0226	1.9120	0.3191	1.2745	2770.5	.1597	.0707	.7210	3500
3600	1.0991-2	5.4955-1	248.7	2.5064	2.3481	2.1898	2.0316	1.9210	0.3202	1.2733	2808.6	.1626	.0723	.7205	3600
3700	1.0694-2	5.3470-1	280.8	2.5151	2.3569	2.1986	2.0404	1.9298	0.3212	1.2723	2846.1	.1656	.0738	.7201	3700
3800	1.0412-2	5.2062-1	312.9	2.5237	2.3655	2.2072	2.0489	1.9383	0.3221	1.2713	2883.2	.1684	.0754	.7198	3800
3900	1.0145-2	5.0727-1	345.2	2.5321	2.3738	2.2156	2.0573	1.9467	0.3230	1.2703	2919.8	.1713	.0769	.7194	3900
4000	9.8919-3	4.9459-1	377.5	2.5403	2.3820	2.2238	2.0655	1.9549	0.3238	1.2695	2956.0	.1741	.0784	.7191	4000
4100	9.6506-3	4.8253-1	409.9	2.5483	2.3900	2.2318	2.0735	1.9629	0.3246	1.2686	2991.7	.1769	.0799	.7187	4100
4200	9.4208-3	4.7104-1	442.4	2.5561	2.3979	2.2396	2.0813	1.9707	0.3253	1.2679	3027.1	.1797	.0814	.7184	4200
4300	9.2017-3	4.6009-1	475.0	2.5638	2.4055	2.2473	2.0890	1.9784	0.3260	1.2671	3062.0	.1824	.0828	.7181	4300
4400	8.9926-3	4.4963-1	507.6	2.5713	2.4130	2.2548	2.0965	1.9859	0.3267	1.2664	3096.6	.1852	.0843	.7177	4400
4500	8.7928-3	4.3964-1	540.3	2.5786	2.4204	2.2621	2.1039	1.9932	0.3273	1.2658	3130.8	.1879	.0857	.7174	4500
4600	8.6016-3	4.3008-1	573.1	2.5858	2.4276	2.2693	2.1111	2.0004	0.3279	1.2652	3164.6	.1906	.0872	.7168	4600
4700	8.4186-3	4.2093-1	605.9	2.5929	2.4346	2.2764	2.1181	2.0075	0.3285	1.2646	3198.1	.1932	.0886	.7163	4700
4800	8.2432-3	4.1216-1	638.8	2.5998	2.4416	2.2833	2.1250	2.0144	0.3290	1.2641	3231.2	.1958	.0900	.7157	4800
4900	8.0750-3	4.0375-1	671.7	2.6066	2.4483	2.2901	2.1318	2.0212	0.3295	1.2635	3264.0	.1985	.0914	.7152	4900
5000	7.9135-3	3.9567-1	704.7	2.6133	2.4550	2.2968	2.1385	2.0279	0.3300	1.2630	3296.5	.2010	.0928	.7147	5000
5100	7.7583-3	3.8792-1	737.7	2.6198	2.4615	2.3033	2.1450	2.0344	0.3305	1.2626	3328.7	.2036	.0942	.7141	5100
5200	7.6091-3	3.8046-1	770.8	2.6262	2.4680	2.3097	2.1515	2.0408	0.3310	1.2621	3360.6	.2062	.0956	.7136	5200
5300	7.4655-3	3.7328-1	803.9	2.6325	2.4743	2.3160	2.1578	2.0471	0.3314	1.2617	3392.1	.2087	.0970	.7131	5300
5400	7.3273-3	3.6637-1	837.1	2.6387	2.4805	2.3222	2.1640	2.0533	0.3318	1.2612	3423.4	.2112	.0984	.7126	5400

TABLE 13.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.033499; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 0.14696 LB/IN2 (0.01 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4730-4	-360.5	2.2614	28.894	.095	1.0000	-1.0000	0.2818	1.3226	1908.2	.0368	.729	0.2817	1.3227	1908.3	.0368	.729
1700	2.3275-4	-332.2	2.2786	28.894	.099	1.0000	-1.0000	0.2851	1.3176	1963.3	.0389	.728	0.2850	1.3178	1963.4	.0389	.728
1800	2.1982-4	-303.5	2.2950	28.894	.103	1.0000	-1.0000	0.2882	1.3131	2016.7	.0409	.727	0.2880	1.3134	2017.0	.0409	.727
1900	2.0825-4	-274.5	2.3107	28.894	.107	1.0000	-1.0000	0.2911	1.3091	2068.8	.0429	.727	0.2908	1.3095	2069.2	.0428	.727
2000	1.9784-4	-245.3	2.3257	28.894	.111	1.0000	-1.0000	0.2939	1.3052	2119.5	.0448	.726	0.2934	1.3059	2120.0	.0447	.726
2100	1.8842-4	-215.8	2.3401	28.894	.114	1.0000	-1.0000	0.2966	1.3016	2168.8	.0467	.726	0.2959	1.3026	2169.6	.0466	.726
2200	1.7985-4	-186.0	2.3539	28.893	.118	1.0000	-1.0000	0.2993	1.2981	2216.8	.0486	.726	0.2982	1.2995	2218.0	.0484	.726
2300	1.7203-4	-155.9	2.3673	28.893	.121	1.0001	-1.0000	0.3020	1.2947	2263.7	.0505	.726	0.3004	1.2967	2265.4	.0503	.726
2400	1.6486-4	-125.6	2.3802	28.893	.125	1.0001	-1.0000	0.3048	1.2913	2309.3	.0525	.725	0.3025	1.2940	2311.7	.0520	.726
2500	1.5827-4	-95.0	2.3927	28.893	.128	1.0003	-1.0000	0.3076	1.2879	2353.8	.0544	.725	0.3045	1.2915	2357.2	.0538	.726
2600	1.5218-4	-64.0	2.4048	28.893	.132	1.0005	-1.0000	0.3108	1.2843	2397.2	.0565	.724	0.3064	1.2892	2401.7	.0556	.725
2700	1.4654-4	-32.8	2.4166	28.892	.135	1.0009	-1.0000	0.3143	1.2805	2439.2	.0586	.723	0.3081	1.2871	2445.5	.0573	.725
2800	1.4130-4	-1.2	2.4281	28.891	.138	1.0015	-1.0000	0.3184	1.2763	2479.9	.0610	.721	0.3098	1.2851	2488.5	.0590	.725
2900	1.3642-4	30.9	2.4394	28.889	.141	1.0025	-1.0001	0.3236	1.2714	2519.0	.0637	.718	0.3114	1.2833	2530.8	.0608	.724
3000	1.3185-4	63.6	2.4505	28.886	.144	1.0041	-1.0001	0.3302	1.2655	2565.3	.0669	.714	0.3129	1.2816	2572.5	.0625	.724
3100	1.2758-4	97.1	2.4614	28.880	.148	1.0067	-1.0002	0.3391	1.2584	2591.5	.0708	.707	0.3143	1.2801	2613.7	.0642	.723
3200	1.2356-4	131.5	2.4724	28.873	.151	1.0108	-1.0003	0.3512	1.2497	2624.2	.0760	.697	0.3156	1.2787	2654.5	.0658	.722
3300	1.1976-4	167.5	2.4834	28.860	.154	1.0170	-1.0005	0.3679	1.2391	2654.1	.0829	.682	0.3168	1.2774	2694.9	.0675	.722
3400	1.1617-4	205.3	2.4947	28.842	.157	1.0262	-1.0007	0.3908	1.2266	2681.3	.0925	.662	0.3180	1.2764	2735.1	.0691	.721
3500	1.1274-4	245.9	2.5065	28.815	.160	1.0396	-1.0012	0.4221	1.2125	2706.0	.1058	.637	0.3191	1.2755	2775.4	.0707	.720
3600	1.0946-4	290.1	2.5189	28.776	.163	1.0587	-1.0018	0.4642	1.1973	2729.1	.1242	.607	0.3201	1.2748	2816.0	.0723	.719
3700	1.0630-4	339.2	2.5324	28.720	.165	1.0849	-1.0027	0.5195	1.1820	2751.6	.1496	.574	0.3210	1.2745	2857.2	.0739	.718
3800	1.0322-4	394.5	2.5471	28.642	.168	1.1199	-1.0039	0.5902	1.1674	2775.0	.1836	.540	0.3219	1.2745	2899.5	.0755	.716
3900	1.0020-4	457.8	2.5636	28.537	.171	1.1650	-1.0056	0.6777	1.1544	2800.8	.2282	.507	0.3227	1.2749	2943.3	.0772	.714
4000	9.7224-5	530.7	2.5820	28.399	.173	1.2210	-1.0078	0.7826	1.1435	2829.8	.2845	.477	0.3235	1.2758	2989.1	.0788	.712
4100	9.4261-5	614.8	2.6028	28.221	.176	1.2880	-1.0104	0.9038	1.1347	2862.9	.3530	.451	0.3242	1.2773	3037.4	.0806	.708
4200	9.1297-5	711.9	2.6262	28.001	.178	1.3654	-1.0137	1.0396	1.1280	2900.5	.4326	.429	0.3248	1.2793	3088.9	.0824	.703
4300	8.8322-5	823.1	2.6523	27.733	.181	1.4520	-1.0175	1.1870	1.1232	2942.6	.5204	.413	0.3254	1.2821	3143.8	.0844	.698
4400	8.5332-5	949.6	2.6814	27.418	.183	1.5453	-1.0218	1.3421	1.1200	2989.4	.6114	.402	0.3261	1.2855	3202.7	.0866	.690
4500	8.2331-5	1091.6	2.7133	27.054	.186	1.6418	-1.0264	1.4988	1.1181	3040.8	.6983	.398	0.3268	1.2897	3265.9	.0890	.681
4600	7.9331-5	1249.1	2.7479	26.648	.188	1.7353	-1.0312	1.6480	1.1173	3096.7	.7725	.401	0.3275	1.2946	3333.4	.0917	.671
4700	7.6355-5	1420.6	2.7848	26.206	.190	1.8178	-1.0357	1.7767	1.1176	3156.9	.8248	.410	0.3282	1.3002	3405.0	.0946	.660
4800	7.3437-5	1603.2	2.8233	25.741	.193	1.8794	-1.0394	1.8697	1.1189	3220.9	.8485	.424	0.3290	1.3063	3480.2	.0977	.649
4900	7.0619-5	1792.8	2.8623	25.268	.195	1.9113	-1.0420	1.9128	1.1212	3287.9	.8409	.443	0.3298	1.3128	3557.7	.1008	.637
5000	6.7942-5	1983.9	2.9009	24.807	.197	1.9086	-1.0429	1.8978	1.1246	3357.0	.8042	.466	0.3307	1.3194	3636.3	.1040	.627
5100	6.5442-5	2170.5	2.9379	24.372	.200	1.8718	-1.0421	1.8255	1.1290	3427.3	.7450	.489	0.3315	1.3260	3714.2	.1071	.618
5200	6.3143-5	2347.4	2.9722	23.977	.202	1.8066	-1.0399	1.7054	1.1346	3497.7	.6721	.513	0.3322	1.3321	3790.0	.1100	.611
5300	6.1055-5	2510.4	3.0033	23.630	.205	1.7217	-1.0365	1.5523	1.1415	3567.9	.5937	.536	0.3329	1.3377	3862.3	.1128	.605
5400	5.9173-5	2657.3	3.0308	23.334	.207	1.6266	-1.0324	1.3827	1.1500	3637.6	.5165	.555	0.3336	1.3425	3930.4	.1153	.600

TABLE 13.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.033499; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 1.46959 LB/IN² (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS							FROZEN COMPOSITIONS				
						DLVLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4730-3	-360.5	2.1032	28.894	.095	1.0000	-1.0000	0.2818	1.3226	1908.2	.0368	.729	0.2817	1.3227	1908.3	.0368	.729
1700	2.3275-3	-332.2	2.1204	28.894	.099	1.0000	-1.0000	0.2851	1.3176	1963.3	.0389	.728	0.2850	1.3178	1963.4	.0389	.728
1800	2.1982-3	-303.5	2.1367	28.894	.103	1.0000	-1.0000	0.2882	1.3131	2016.7	.0409	.727	0.2880	1.3134	2017.0	.0409	.727
1900	2.0825-3	-274.5	2.1524	28.894	.107	1.0000	-1.0000	0.2911	1.3091	2068.8	.0429	.727	0.2908	1.3095	2069.2	.0428	.727
2000	1.9784-3	-245.3	2.1674	28.894	.111	1.0000	-1.0000	0.2939	1.3053	2119.5	.0448	.726	0.2934	1.3059	2120.0	.0447	.726
2100	1.8842-3	-215.8	2.1818	28.894	.114	1.0000	-1.0000	0.2966	1.3016	2168.8	.0467	.726	0.2959	1.3026	2169.6	.0466	.726
2200	1.7985-3	-186.0	2.1957	28.894	.118	1.0000	-1.0000	0.2992	1.2982	2216.9	.0486	.726	0.2982	1.2995	2218.0	.0484	.726
2300	1.7203-3	-155.9	2.2090	28.893	.121	1.0000	-1.0000	0.3019	1.2948	2263.8	.0505	.726	0.3004	1.2967	2265.4	.0503	.726
2400	1.6486-3	-125.6	2.2219	28.893	.125	1.0001	-1.0000	0.3045	1.2916	2309.6	.0524	.726	0.3025	1.2940	2311.7	.0520	.726
2500	1.5827-3	-95.0	2.2344	28.893	.128	1.0001	-1.0000	0.3071	1.2884	2354.3	.0543	.725	0.3045	1.2915	2357.2	.0538	.726
2600	1.5218-3	-64.2	2.2465	28.893	.132	1.0002	-1.0000	0.3099	1.2852	2397.9	.0563	.725	0.3064	1.2892	2401.7	.0556	.725
2700	1.4654-3	-33.0	2.2583	28.893	.135	1.0004	-1.0000	0.3128	1.2819	2440.5	.0582	.724	0.3081	1.2871	2445.4	.0573	.725
2800	1.4131-3	-1.6	2.2697	28.892	.138	1.0007	-1.0000	0.3159	1.2785	2482.0	.0603	.723	0.3098	1.2851	2488.4	.0590	.725
2900	1.3643-3	30.2	2.2808	28.891	.141	1.0011	-1.0000	0.3195	1.2749	2522.4	.0625	.722	0.3114	1.2833	2530.7	.0608	.724
3000	1.3187-3	62.3	2.2917	28.890	.144	1.0018	-1.0000	0.3235	1.2709	2561.6	.0649	.720	0.3129	1.2816	2572.3	.0625	.724
3100	1.2761-3	94.9	2.3024	28.888	.148	1.0028	-1.0001	0.3284	1.2665	2599.5	.0676	.717	0.3143	1.2800	2613.3	.0641	.723
3200	1.2361-3	128.0	2.3129	28.885	.151	1.0043	-1.0001	0.3343	1.2615	2636.0	.0706	.714	0.3156	1.2785	2653.7	.0658	.723
3300	1.1984-3	161.8	2.3233	28.880	.154	1.0065	-1.0002	0.3418	1.2557	2670.9	.0742	.708	0.3168	1.2772	2693.7	.0675	.722
3400	1.1629-3	196.4	2.3337	28.873	.157	1.0097	-1.0003	0.3514	1.2489	2704.1	.0785	.701	0.3180	1.2760	2733.2	.0691	.721
3500	1.1293-3	232.2	2.3440	28.863	.160	1.0144	-1.0004	0.3638	1.2410	2735.3	.0840	.692	0.3191	1.2749	2772.4	.0707	.721
3600	1.0974-3	269.3	2.3545	28.849	.163	1.0209	-1.0006	0.3798	1.2320	2764.7	.0909	.679	0.3201	1.2739	2811.4	.0723	.720
3700	1.0670-3	308.3	2.3652	28.829	.166	1.0299	-1.0009	0.4004	1.2218	2792.3	.0999	.663	0.3211	1.2731	2850.2	.0739	.719
3800	1.0379-3	349.6	2.3762	28.802	.168	1.0422	-1.0013	0.4268	1.2108	2818.3	.1116	.644	0.3220	1.2725	2889.2	.0754	.719
3900	1.0100-3	393.9	2.3877	28.764	.171	1.0584	-1.0019	0.4600	1.1993	2843.4	.1267	.621	0.3229	1.2720	2928.3	.0770	.718
4000	9.8305-4	441.9	2.3998	28.714	.174	1.0794	-1.0027	0.5010	1.1878	2868.2	.1460	.597	0.3236	1.2718	2967.9	.0785	.717
4100	9.5690-4	494.4	2.4128	28.649	.177	1.1058	-1.0037	0.5507	1.1767	2893.6	.1705	.570	0.3243	1.2718	3008.2	.0800	.716
4200	9.3139-4	552.3	2.4268	28.566	.179	1.1382	-1.0050	0.6092	1.1666	2920.3	.2008	.544	0.3250	1.2721	3049.5	.0816	.714
4300	9.0637-4	616.5	2.4419	28.460	.182	1.1767	-1.0066	0.6765	1.1577	2949.0	.2375	.518	0.3256	1.2728	3092.1	.0831	.712
4400	8.8174-4	687.9	2.4583	28.331	.184	1.2212	-1.0085	0.7516	1.1502	2980.2	.2808	.494	0.3262	1.2737	3136.2	.0847	.710
4500	8.5740-4	767.1	2.4761	28.175	.187	1.2715	-1.0107	0.8336	1.1441	3014.2	.3306	.471	0.3267	1.2751	3182.1	.0864	.707
4600	8.3327-4	854.8	2.4953	27.990	.189	1.3268	-1.0133	0.9209	1.1393	3051.2	.3861	.452	0.3272	1.2769	3230.1	.0881	.703
4700	8.0932-4	951.4	2.5161	27.777	.192	1.3863	-1.0162	1.0122	1.1358	3091.1	.4460	.435	0.3276	1.2791	3280.4	.0900	.698
4800	7.8553-4	1057.3	2.5384	27.534	.194	1.4492	-1.0194	1.1058	1.1332	3134.1	.5082	.423	0.3281	1.2818	3333.2	.0920	.693
4900	7.6190-4	1172.6	2.5622	27.262	.197	1.5140	-1.0228	1.1998	1.1316	3180.1	.5699	.414	0.3286	1.2849	3388.5	.0941	.687
5000	7.3846-4	1297.1	2.5873	26.963	.199	1.5789	-1.0264	1.2914	1.1309	3229.0	.6277	.409	0.3291	1.2884	3446.6	.0964	.679
5100	7.1529-4	1430.6	2.6138	26.639	.201	1.6411	-1.0301	1.3772	1.1308	3280.9	.6777	.409	0.3296	1.2923	3507.3	.0988	.671
5200	6.9247-4	1572.2	2.6413	26.295	.204	1.6973	-1.0336	1.4524	1.1315	3335.4	.7162	.413	0.3301	1.2967	3570.6	.1014	.663
5300	6.7013-4	1720.6	2.6695	25.936	.206	1.7436	-1.0368	1.5116	1.1328	3392.6	.7402	.421	0.3307	1.3013	3636.2	.1042	.654
5400	6.4843-4	1873.8	2.6982	25.569	.208	1.7761	-1.0393	1.5495	1.1348	3451.9	.7480	.432	0.3313	1.3062	3703.5	.1071	.645

TABLE 13.3B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.033499; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 14.6959 LB/IN² (1.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4730-2	-360.5	1.9449	28.894	.095	1.0000	-1.0000	0.2818	1.3226	1908.2	.0368	.729	0.2817	1.3227	1908.3	.0368	.729
1700	2.3275-2	-332.2	1.9621	28.894	.099	1.0000	-1.0000	0.2851	1.3176	1963.3	.0389	.728	0.2850	1.3178	1963.4	.0389	.728
1800	2.1982-2	-303.5	1.9785	28.894	.103	1.0000	-1.0000	0.2882	1.3131	2016.7	.0409	.727	0.2880	1.3134	2017.0	.0409	.727
1900	2.0825-2	-274.5	1.9941	28.894	.107	1.0000	-1.0000	0.2911	1.3091	2068.8	.0429	.727	0.2908	1.3095	2069.2	.0428	.727
2000	1.9784-2	-245.3	2.0092	28.894	.111	1.0000	-1.0000	0.2939	1.3053	2119.5	.0448	.726	0.2934	1.3059	2120.0	.0447	.726
2100	1.8842-2	-215.8	2.0236	28.894	.114	1.0000	-1.0000	0.2966	1.3017	2168.8	.0467	.726	0.2959	1.3026	2169.6	.0466	.726
2200	1.7985-2	-186.0	2.0374	28.894	.118	1.0000	-1.0000	0.2992	1.2982	2216.9	.0486	.726	0.2982	1.2995	2218.0	.0484	.726
2300	1.7203-2	-155.9	2.0508	28.894	.121	1.0000	-1.0000	0.3018	1.2949	2263.9	.0505	.726	0.3004	1.2967	2265.4	.0503	.726
2400	1.6486-2	-125.6	2.0637	28.894	.125	1.0000	-1.0000	0.3043	1.2917	2309.7	.0524	.726	0.3025	1.2940	2311.7	.0520	.726
2500	1.5827-2	-95.1	2.0761	28.893	.128	1.0001	-1.0000	0.3069	1.2886	2354.5	.0543	.726	0.3045	1.2915	2357.1	.0538	.726
2600	1.5218-2	-64.3	2.0882	28.893	.132	1.0001	-1.0000	0.3095	1.2856	2398.3	.0562	.725	0.3064	1.2892	2401.7	.0556	.725
2700	1.4654-2	-33.2	2.1000	28.893	.135	1.0002	-1.0000	0.3121	1.2825	2441.1	.0581	.725	0.3081	1.2871	2445.4	.0573	.725
2800	1.4131-2	-1.8	2.1114	28.893	.138	1.0003	-1.0000	0.3148	1.2795	2483.0	.0601	.724	0.3098	1.2851	2488.4	.0590	.725
2900	1.3643-2	29.8	2.1225	28.892	.141	1.0005	-1.0000	0.3177	1.2764	2523.9	.0621	.723	0.3114	1.2833	2530.6	.0608	.724
3000	1.3188-2	61.7	2.1333	28.892	.144	1.0008	-1.0000	0.3208	1.2732	2563.9	.0642	.722	0.3129	1.2815	2572.2	.0625	.724
3100	1.2762-2	94.0	2.1438	28.891	.148	1.0012	-1.0000	0.3241	1.2699	2602.9	.0664	.721	0.3143	1.2799	2613.1	.0641	.723
3200	1.2363-2	126.6	2.1542	28.889	.151	1.0018	-1.0000	0.3279	1.2664	2640.9	.0687	.719	0.3156	1.2785	2653.5	.0658	.723
3300	1.1988-2	159.6	2.1644	28.887	.154	1.0027	-1.0001	0.3322	1.2626	2677.9	.0712	.717	0.3169	1.2771	2693.2	.0675	.722
3400	1.1634-2	193.0	2.1743	28.885	.157	1.0039	-1.0001	0.3372	1.2585	2713.9	.0740	.714	0.3180	1.2758	2732.5	.0691	.721
3500	1.1300-2	227.0	2.1842	28.881	.160	1.0057	-1.0002	0.3432	1.2539	2748.7	.0771	.711	0.3191	1.2746	2771.3	.0707	.721
3600	1.0984-2	261.7	2.1940	28.875	.163	1.0080	-1.0002	0.3504	1.2488	2782.3	.0807	.706	0.3202	1.2736	2809.7	.0723	.720
3700	1.0684-2	297.2	2.2037	28.868	.166	1.0113	-1.0003	0.3591	1.2431	2814.6	.0849	.700	0.3211	1.2726	2847.8	.0739	.720
3800	1.0399-2	333.6	2.2134	28.857	.168	1.0156	-1.0005	0.3698	1.2368	2845.6	.0899	.693	0.3221	1.2717	2885.5	.0754	.719
3900	1.0128-2	371.2	2.2232	28.844	.171	1.0213	-1.0007	0.3829	1.2298	2875.3	.0959	.684	0.3229	1.2710	2923.1	.0769	.719
4000	9.8686-3	410.3	2.2331	28.826	.174	1.0287	-1.0010	0.3988	1.2223	2903.9	.1033	.672	0.3237	1.2704	2960.5	.0784	.718
4100	9.6200-3	451.1	2.2431	28.802	.177	1.0383	-1.0013	0.4181	1.2142	2931.6	.1123	.659	0.3245	1.2698	2997.9	.0799	.718
4200	9.3809-3	494.0	2.2535	28.771	.180	1.0503	-1.0018	0.4413	1.2059	2958.5	.1232	.643	0.3252	1.2695	3035.4	.0814	.717
4300	9.1504-3	539.5	2.2642	28.732	.182	1.0651	-1.0024	0.4686	1.1975	2985.1	.1365	.626	0.3258	1.2693	3073.2	.0829	.716
4400	8.9273-3	587.9	2.2753	28.684	.185	1.0831	-1.0031	0.5004	1.1893	3011.8	.1525	.607	0.3264	1.2692	3111.3	.0844	.716
4500	8.7106-3	639.7	2.2869	28.624	.188	1.1044	-1.0040	0.5367	1.1816	3039.0	.1714	.587	0.3270	1.2694	3149.9	.0859	.714
4600	8.4995-3	695.4	2.2992	28.550	.190	1.1290	-1.0051	0.5773	1.1744	3067.2	.1936	.567	0.3275	1.2697	3189.2	.0874	.713
4700	8.2931-3	755.3	2.3121	28.463	.193	1.1570	-1.0064	0.6217	1.1680	3096.7	.2192	.547	0.3279	1.2703	3229.4	.0889	.711
4800	8.0910-3	819.8	2.3256	28.360	.195	1.1881	-1.0078	0.6695	1.1625	3127.8	.2481	.527	0.3284	1.2711	3270.5	.0904	.709
4900	7.8925-3	889.3	2.3400	28.240	.198	1.2219	-1.0095	0.7198	1.1579	3160.6	.2804	.508	0.3287	1.2721	3312.7	.0920	.707
5000	7.6972-3	963.8	2.3550	28.104	.200	1.2582	-1.0113	0.7719	1.1542	3195.2	.3156	.490	0.3291	1.2734	3356.2	.0936	.704
5100	7.5050-3	1043.7	2.3708	27.950	.203	1.2964	-1.0133	0.8250	1.1513	3231.8	.3534	.473	0.3295	1.2749	3401.0	.0952	.701
5200	7.3157-3	1128.9	2.3874	27.779	.205	1.3361	-1.0155	0.8786	1.1491	3270.2	.3931	.458	0.3298	1.2767	3447.1	.0969	.697
5300	7.1290-3	1219.4	2.4046	27.591	.207	1.3771	-1.0179	0.9321	1.1475	3310.6	.4340	.445	0.3302	1.2788	3494.7	.0988	.693
5400	6.9452-3	1315.3	2.4225	27.387	.210	1.4188	-1.0204	0.9848	1.1466	3352.7	.4748	.435	0.3305	1.2811	3543.9	.1007	.689

TABLE 13.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.033499; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 146.959 LB/IN² (10.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4730-1	-360.5	1.7867	28.894	.095	1.0000	-1.0000	0.2818	1.3226	1908.2	.0368	.729	0.2817	1.3227	1908.3	.0368	.729
1700	2.3275-1	-332.2	1.8038	28.894	.099	1.0000	-1.0000	0.2851	1.3176	1963.3	.0389	.728	0.2850	1.3178	1963.4	.0389	.728
1800	2.1982-1	-303.5	1.8202	28.894	.103	1.0000	-1.0000	0.2882	1.3131	2016.7	.0409	.727	0.2880	1.3134	2017.0	.0409	.727
1900	2.0825-1	-274.5	1.8359	28.894	.107	1.0000	-1.0000	0.2911	1.3091	2068.8	.0429	.727	0.2908	1.3095	2069.2	.0428	.727
2000	1.9784-1	-245.3	1.8509	28.894	.111	1.0000	-1.0000	0.2939	1.3053	2119.5	.0448	.726	0.2934	1.3059	2120.0	.0447	.726
2100	1.8842-1	-215.8	1.8653	28.894	.114	1.0000	-1.0000	0.2966	1.3017	2168.8	.0467	.726	0.2959	1.3026	2169.6	.0466	.726
2200	1.7985-1	-186.0	1.8792	28.894	.118	1.0000	-1.0000	0.2992	1.2982	2216.9	.0486	.726	0.2982	1.2995	2218.0	.0484	.726
2300	1.7203-1	-155.9	1.8925	28.894	.121	1.0000	-1.0000	0.3017	1.2950	2263.9	.0505	.726	0.3004	1.2967	2265.4	.0503	.726
2400	1.6486-1	-125.6	1.9054	28.894	.125	1.0000	-1.0000	0.3043	1.2918	2309.8	.0523	.726	0.3025	1.2940	2311.7	.0520	.726
2500	1.5827-1	-95.1	1.9179	28.894	.128	1.0000	-1.0000	0.3068	1.2887	2354.6	.0542	.726	0.3045	1.2915	2357.1	.0538	.726
2600	1.5218-1	-64.3	1.9300	28.894	.132	1.0001	-1.0000	0.3093	1.2858	2398.5	.0561	.725	0.3064	1.2892	2401.7	.0556	.725
2700	1.4655-1	-33.2	1.9417	28.893	.135	1.0001	-1.0000	0.3118	1.2829	2441.4	.0580	.725	0.3081	1.2871	2445.4	.0573	.725
2800	1.4131-1	-1.9	1.9531	28.893	.138	1.0002	-1.0000	0.3143	1.2800	2483.4	.0599	.725	0.3098	1.2851	2488.4	.0590	.725
2900	1.3644-1	29.6	1.9641	28.893	.141	1.0003	-1.0000	0.3169	1.2771	2524.6	.0619	.724	0.3114	1.2832	2530.6	.0608	.724
3000	1.3189-1	61.4	1.9749	28.893	.144	1.0004	-1.0000	0.3195	1.2743	2564.9	.0638	.723	0.3129	1.2815	2572.1	.0625	.724
3100	1.2763-1	93.5	1.9854	28.892	.148	1.0006	-1.0000	0.3223	1.2714	2604.4	.0659	.722	0.3143	1.2799	2613.0	.0641	.723
3200	1.2364-1	125.9	1.9957	28.892	.151	1.0008	-1.0000	0.3252	1.2685	2643.0	.0679	.721	0.3156	1.2784	2653.3	.0658	.723
3300	1.1989-1	158.6	2.0058	28.891	.154	1.0012	-1.0000	0.3283	1.2656	2680.9	.0701	.720	0.3169	1.2770	2693.0	.0675	.722
3400	1.1636-1	191.6	2.0156	28.890	.157	1.0017	-1.0000	0.3317	1.2625	2718.0	.0723	.719	0.3180	1.2757	2732.2	.0691	.722
3500	1.1303-1	224.9	2.0253	28.888	.160	1.0024	-1.0001	0.3353	1.2593	2754.3	.0747	.717	0.3191	1.2745	2770.9	.0707	.721
3600	1.0988-1	258.7	2.0348	28.885	.163	1.0034	-1.0001	0.3394	1.2560	2789.7	.0772	.715	0.3202	1.2734	2809.1	.0723	.720
3700	1.0690-1	292.8	2.0442	28.882	.166	1.0046	-1.0001	0.3441	1.2524	2824.4	.0799	.713	0.3212	1.2724	2846.8	.0738	.720
3800	1.0407-1	327.5	2.0534	28.878	.168	1.0062	-1.0002	0.3493	1.2486	2858.1	.0829	.710	0.3221	1.2715	2884.2	.0754	.720
3900	1.0138-1	362.7	2.0626	28.873	.171	1.0083	-1.0003	0.3554	1.2445	2891.1	.0862	.707	0.3229	1.2706	2921.2	.0769	.719
4000	9.8824-2	398.6	2.0716	28.866	.174	1.0110	-1.0004	0.3624	1.2402	2923.1	.0899	.702	0.3238	1.2698	2957.9	.0784	.719
4100	9.6383-2	435.3	2.0807	28.857	.177	1.0145	-1.0005	0.3706	1.2355	2954.3	.0941	.697	0.3245	1.2691	2994.2	.0799	.718
4200	9.4051-2	472.8	2.0897	28.845	.180	1.0188	-1.0007	0.3801	1.2305	2984.6	.0989	.691	0.3252	1.2685	3030.4	.0814	.718
4300	9.1817-2	511.3	2.0988	28.831	.182	1.0242	-1.0009	0.3912	1.2252	3014.2	.1044	.684	0.3259	1.2680	3066.4	.0829	.718
4400	8.9674-2	551.1	2.1079	28.813	.185	1.0308	-1.0011	0.4041	1.2197	3043.1	.1108	.675	0.3265	1.2676	3102.3	.0843	.717
4500	8.7613-2	592.2	2.1172	28.790	.188	1.0388	-1.0015	0.4188	1.2140	3071.5	.1183	.665	0.3271	1.2672	3138.1	.0858	.716
4600	8.5627-2	634.9	2.1266	28.763	.191	1.0484	-1.0019	0.4357	1.2082	3099.5	.1269	.654	0.3277	1.2670	3174.0	.0872	.716
4700	8.3708-2	679.4	2.1361	28.729	.193	1.0597	-1.0024	0.4548	1.2024	3127.3	.1368	.642	0.3282	1.2668	3210.0	.0887	.715
4800	8.1850-2	725.9	2.1459	28.690	.196	1.0728	-1.0030	0.4760	1.1967	3155.2	.1482	.629	0.3286	1.2668	3246.2	.0901	.714
4900	8.0047-2	774.7	2.1560	28.642	.198	1.0877	-1.0036	0.4994	1.1913	3183.3	.1611	.615	0.3291	1.2669	3282.7	.0916	.713
5000	7.8295-2	825.9	2.1663	28.587	.201	1.1044	-1.0044	0.5248	1.1863	3211.9	.1756	.600	0.3295	1.2672	3319.6	.0930	.712
5100	7.6587-2	879.7	2.1770	28.523	.203	1.1229	-1.0054	0.5518	1.1816	3241.1	.1917	.585	0.3299	1.2675	3356.9	.0944	.710
5200	7.4921-2	936.3	2.1880	28.449	.206	1.1429	-1.0064	0.5803	1.1775	3271.3	.2095	.570	0.3302	1.2680	3394.7	.0959	.709
5300	7.3293-2	995.8	2.1993	28.366	.208	1.1644	-1.0075	0.6097	1.1739	3302.4	.2288	.555	0.3306	1.2687	3433.1	.0974	.707
5400	7.1700-2	1058.3	2.2110	28.273	.211	1.1870	-1.0087	0.6396	1.1709	3334.5	.2497	.540	0.3309	1.2695	3472.1	.0988	.706

TABLE 13.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.033499; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008; P = 734.797 LB/IN2 (50.00 ATM) DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2365 0	-360.5	1.6760	28.894	.095	1.0000	-1.0000	0.2818	1.3225	1908.2	.0368	.729	0.2817	1.3227	1908.3	.0368	.729
1700	1.1638 0	-332.2	1.6932	28.894	.099	1.0000	-1.0000	0.2851	1.3176	1963.3	.0389	.728	0.2850	1.3178	1963.4	.0389	.728
1800	1.0991 0	-303.5	1.7096	28.894	.103	1.0000	-1.0000	0.2883	1.3131	2016.7	.0409	.727	0.2880	1.3134	2016.9	.0409	.727
1900	1.0413 0	-274.5	1.7253	28.894	.107	1.0000	-1.0000	0.2911	1.3091	2068.8	.0429	.727	0.2908	1.3095	2069.2	.0428	.727
2000	9.8919-1	-245.3	1.7403	28.894	.111	1.0000	-1.0000	0.2939	1.3053	2119.5	.0448	.726	0.2934	1.3059	2120.0	.0447	.726
2100	9.4209-1	-215.8	1.7547	28.894	.114	1.0000	-1.0000	0.2966	1.3017	2168.8	.0467	.726	0.2959	1.3026	2169.6	.0466	.726
2200	8.9927-1	-186.0	1.7685	28.894	.118	1.0000	-1.0000	0.2992	1.2982	2216.9	.0486	.726	0.2982	1.2995	2218.0	.0484	.726
2300	8.6017-1	-155.9	1.7819	28.894	.121	1.0000	-1.0000	0.3017	1.2950	2263.9	.0505	.726	0.3004	1.2967	2265.4	.0503	.726
2400	8.2433-1	-125.6	1.7948	28.894	.125	1.0000	-1.0000	0.3042	1.2918	2309.8	.0523	.726	0.3025	1.2940	2311.7	.0520	.726
2500	7.9135-1	-95.1	1.8073	28.894	.128	1.0000	-1.0000	0.3067	1.2888	2354.6	.0542	.726	0.3045	1.2915	2357.1	.0538	.726
2600	7.6092-1	-64.3	1.8193	28.894	.132	1.0000	-1.0000	0.3092	1.2858	2398.5	.0561	.725	0.3064	1.2892	2401.7	.0556	.725
2700	7.3274-1	-33.3	1.8311	28.894	.135	1.0000	-1.0000	0.3116	1.2830	2441.5	.0580	.725	0.3081	1.2871	2445.4	.0573	.725
2800	7.0656-1	-2.0	1.8424	28.894	.138	1.0001	-1.0000	0.3141	1.2801	2483.5	.0599	.725	0.3098	1.2851	2488.3	.0590	.725
2900	6.8220-1	29.6	1.8535	28.894	.141	1.0001	-1.0000	0.3166	1.2774	2524.8	.0618	.724	0.3114	1.2832	2530.6	.0608	.724
3000	6.5945-1	61.3	1.8643	28.893	.144	1.0002	-1.0000	0.3191	1.2747	2565.2	.0637	.723	0.3129	1.2815	2572.1	.0625	.724
3100	6.3818-1	93.4	1.8748	28.893	.148	1.0003	-1.0000	0.3216	1.2720	2604.9	.0657	.723	0.3143	1.2799	2613.0	.0641	.723
3200	6.1822-1	125.7	1.8850	28.893	.151	1.0005	-1.0000	0.3243	1.2693	2643.8	.0677	.722	0.3156	1.2784	2653.3	.0658	.723
3300	5.9948-1	158.2	1.8950	28.892	.154	1.0007	-1.0000	0.3270	1.2666	2681.9	.0697	.721	0.3169	1.2770	2693.0	.0675	.722
3400	5.8183-1	191.1	1.9049	28.892	.157	1.0010	-1.0000	0.3298	1.2639	2719.4	.0718	.720	0.3180	1.2757	2732.1	.0691	.722
3500	5.6519-1	224.2	1.9145	28.891	.160	1.0014	-1.0000	0.3328	1.2611	2756.1	.0739	.719	0.3191	1.2745	2770.7	.0707	.721
3600	5.4946-1	257.7	1.9239	28.889	.163	1.0019	-1.0001	0.3360	1.2583	2792.2	.0762	.718	0.3202	1.2734	2808.9	.0723	.720
3700	5.3458-1	291.4	1.9331	28.887	.166	1.0026	-1.0001	0.3394	1.2555	2827.6	.0785	.716	0.3212	1.2724	2846.5	.0738	.720
3800	5.2047-1	325.5	1.9422	28.885	.168	1.0034	-1.0001	0.3431	1.2525	2862.3	.0809	.715	0.3221	1.2714	2883.8	.0754	.720
3900	5.0708-1	360.1	1.9512	28.882	.171	1.0045	-1.0002	0.3472	1.2495	2896.3	.0834	.713	0.3229	1.2705	2920.6	.0769	.719
4000	4.9433-1	395.0	1.9600	28.878	.174	1.0059	-1.0002	0.3517	1.2463	2929.7	.0862	.711	0.3238	1.2697	2957.0	.0784	.719
4100	4.8220-1	430.4	1.9688	28.874	.177	1.0076	-1.0003	0.3568	1.2430	2962.3	.0892	.708	0.3245	1.2689	2993.1	.0799	.719
4200	4.7062-1	466.4	1.9774	28.868	.180	1.0098	-1.0003	0.3624	1.2395	2994.3	.0924	.705	0.3253	1.2682	3028.9	.0814	.718
4300	4.5955-1	502.9	1.9860	28.860	.182	1.0125	-1.0005	0.3688	1.2358	3025.7	.0960	.701	0.3259	1.2676	3064.4	.0829	.718
4400	4.4896-1	540.2	1.9946	28.851	.185	1.0158	-1.0006	0.3760	1.2320	3056.4	.1000	.697	0.3266	1.2671	3099.6	.0843	.717
4500	4.3881-1	578.2	2.0031	28.839	.188	1.0197	-1.0007	0.3841	1.2280	3086.6	.1044	.692	0.3272	1.2666	3134.7	.0858	.717
4600	4.2907-1	617.0	2.0117	28.825	.191	1.0245	-1.0009	0.3933	1.2239	3116.2	.1093	.686	0.3277	1.2662	3169.6	.0872	.716
4700	4.1969-1	656.9	2.0203	28.808	.193	1.0302	-1.0012	0.4036	1.2196	3145.3	.1149	.679	0.3283	1.2658	3204.3	.0887	.716
4800	4.1066-1	697.8	2.0289	28.788	.196	1.0368	-1.0015	0.4151	1.2153	3174.1	.1212	.671	0.3288	1.2655	3239.0	.0901	.715
4900	4.0194-1	739.9	2.0376	28.764	.198	1.0446	-1.0018	0.4279	1.2109	3202.6	.1282	.663	0.3292	1.2653	3273.7	.0915	.714
5000	3.9351-1	783.4	2.0463	28.736	.201	1.0534	-1.0023	0.4420	1.2066	3230.9	.1360	.654	0.3297	1.2652	3308.4	.0929	.713
5100	3.8535-1	828.4	2.0552	28.703	.204	1.0635	-1.0027	0.4574	1.2024	3259.2	.1447	.644	0.3301	1.2652	3343.3	.0943	.712
5200	3.7743-1	874.9	2.0643	28.664	.206	1.0747	-1.0033	0.4741	1.1983	3287.6	.1543	.633	0.3305	1.2653	3378.2	.0957	.712
5300	3.6974-1	923.2	2.0735	28.620	.209	1.0871	-1.0039	0.4918	1.1945	3316.3	.1649	.622	0.3308	1.2654	3413.4	.0971	.711
5400	3.6226-1	973.3	2.0829	28.570	.211	1.1006	-1.0046	0.5104	1.1909	3345.4	.1764	.611	0.3312	1.2657	3448.8	.0985	.709

TABLE 13C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.033499; EQUIV.RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5008;
 DRY AIR

T R	HETEROGENEOUS PHASE PROPERTIES					GAS PHASE PROPERTIES										T R
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R	DENSITY LB/FT ³	MW	VIS LB/ FT S	DLV DLT	DLV DP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	
PRESSURE = 0.01 ATM																
360	1.181-3	-736.6	1.7570	28.894	0.2522	1.130-3	29.706	.0317	1.000	-1.000	0.2366	1.3938	916	.0102	.734	360
400	1.060-3	-724.6	1.7887	28.894	0.4146	1.016-3	29.667	.0346	1.000	-1.000	0.2373	1.3930	966	.0112	.731	400
440	9.252-4	-685.6	1.8803	28.894	2.1344	9.090-4	29.208	.0364	1.000	-1.000	0.2426	1.3895	1020	.0119	.739	440
PRESSURE = 0.10 ATM																
360	1.181-2	-736.7	1.6095	28.894	0.2435	1.130-2	29.707	.0317	1.000	-1.000	0.2366	1.3938	916	.0102	.734	360
400	1.063-2	-726.8	1.6357	28.894	0.2614	1.017-2	29.703	.0347	1.000	-1.000	0.2369	1.3932	966	.0113	.730	400
440	9.624-3	-714.2	1.6657	28.894	0.4210	9.230-3	29.657	.0374	1.000	-1.000	0.2377	1.3922	1013	.0122	.727	440
480	8.552-3	-681.8	1.7354	28.894	1.5152	8.359-3	29.301	.0394	1.000	-1.000	0.2420	1.3890	1064	.0130	.733	480
520	7.609-3	-644.5	1.8113	28.894	0.2471	7.609-3	28.894	.0412	1.000	-1.000	0.2471	1.3853	1113	.0137	.741	520
PRESSURE = 1.00 ATM																
360	1.181-1	-736.8	1.4622	28.894	0.2427	1.130-1	29.707	.0317	1.000	-1.000	0.2366	1.3938	916	.0102	.734	360
400	1.063-1	-727.0	1.4879	28.894	0.2461	1.017-1	29.707	.0347	1.000	-1.000	0.2368	1.3933	966	.0113	.730	400
440	9.661-2	-716.9	1.5120	28.894	0.2638	9.244-2	29.702	.0376	1.000	-1.000	0.2372	1.3925	1013	.0123	.726	440
480	8.829-2	-704.8	1.5381	28.894	0.3675	8.464-2	29.667	.0403	1.000	-1.000	0.2380	1.3913	1058	.0132	.724	480
520	8.034-2	-679.5	1.5889	28.894	0.6632	7.769-2	29.502	.0426	1.000	-1.000	0.2403	1.3890	1103	.0141	.726	520
537	7.678-2	-666.4	1.6137	28.894	0.9293	7.488-2	29.344	.0433	1.000	-1.000	0.2423	1.3875	1123	.0144	.730	537
560	7.101-2	-637.8	1.6656	28.894	1.5903	7.079-2	28.948	.0439	1.000	-1.000	0.2471	1.3842	1154	.0147	.739	560
600	6.595-2	-624.7	1.6885	28.894	0.2485	6.595-2	28.894	.0463	1.000	-1.000	0.2485	1.3823	1195	.0156	.741	600
PRESSURE = 10.00 ATM																
360	1.180 0	-736.8	1.3150	28.894	0.2426	1.130 0	29.707	.0317	1.000	-1.000	0.2366	1.3938	916	.0102	.734	360
400	1.062 0	-727.0	1.3406	28.894	0.2446	1.017 0	29.707	.0347	1.000	-1.000	0.2368	1.3933	966	.0113	.730	400
440	9.658-1	-717.2	1.3641	28.894	0.2482	9.246-1	29.707	.0376	1.000	-1.000	0.2372	1.3925	1013	.0123	.726	440
480	8.851-1	-707.1	1.3861	28.894	0.2605	8.474-1	29.703	.0403	1.000	-1.000	0.2376	1.3915	1057	.0133	.723	480
520	8.159-1	-689.4	1.4216	28.894	0.3092	7.818-1	29.687	.0430	1.000	-1.000	0.2383	1.3902	1100	.0142	.722	520
537	7.896-1	-684.1	1.4317	28.894	0.3335	7.571-1	29.671	.0440	1.000	-1.000	0.2388	1.3895	1118	.0146	.722	537
560	7.541-1	-675.7	1.4469	28.894	0.3884	7.246-1	29.632	.0455	1.000	-1.000	0.2396	1.3884	1142	.0151	.722	560
600	6.946-1	-656.9	1.4792	28.894	0.5745	6.728-1	29.477	.0476	1.000	-1.000	0.2420	1.3858	1184	.0159	.727	600
640	6.306-1	-627.0	1.5274	28.894	0.9716	6.229-1	29.113	.0493	1.000	-1.000	0.2469	1.3818	1229	.0165	.736	640
680	5.819-1	-604.7	1.5615	28.894	0.2503	5.819-1	28.894	.0512	1.000	-1.000	0.2503	1.3785	1270	.0173	.740	680
PRESSURE = 50.00 ATM																
360	5.880 0	-736.8	1.2120	28.894	0.2426	5.650 0	29.707	.0317	1.000	-1.000	0.2366	1.3938	916	.0102	.734	360
400	5.295 0	-727.0	1.2377	28.894	0.2445	5.085 0	29.707	.0347	1.000	-1.000	0.2368	1.3933	966	.0113	.730	400
440	4.815 0	-717.2	1.2611	28.894	0.2468	4.623 0	29.707	.0376	1.000	-1.000	0.2372	1.3925	1013	.0123	.726	440
480	4.415 0	-707.2	1.2827	28.894	0.2510	4.238 0	29.707	.0403	1.000	-1.000	0.2376	1.3915	1057	.0133	.723	480
520	4.076 0	-690.3	1.3169	28.894	0.2788	3.911 0	29.703	.0430	1.000	-1.000	0.2382	1.3903	1100	.0142	.721	520
537	3.949 0	-685.6	1.3258	28.894	0.2837	3.789 0	29.700	.0441	1.000	-1.000	0.2385	1.3897	1117	.0146	.721	537
560	3.782 0	-678.8	1.3380	28.894	0.2948	3.630 0	29.692	.0456	1.000	-1.000	0.2389	1.3887	1141	.0151	.721	560
600	3.522 0	-666.4	1.3595	28.894	0.3309	3.385 0	29.661	.0480	1.000	-1.000	0.2400	1.3869	1181	.0160	.722	600
640	3.282 0	-651.9	1.3828	28.894	0.4016	3.166 0	29.589	.0503	1.000	-1.000	0.2416	1.3847	1220	.0168	.724	640
680	3.050 0	-633.6	1.4106	28.894	0.5263	2.964 0	29.438	.0523	1.000	-1.000	0.2442	1.3818	1260	.0176	.728	680
720	2.813 0	-608.7	1.4461	28.894	0.7325	2.773 0	29.158	.0541	1.000	-1.000	0.2483	1.3780	1301	.0183	.734	720
760	2.603 0	-584.6	1.4788	28.894	0.2524	2.603 0	28.894	.0558	1.000	-1.000	0.2524	1.3741	1341	.0191	.738	760

TABLE 14A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.050248; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7504; MW = 28.8596;
 DRY AIR; GASEOUS COMPOSITION: CO2= .09804; H2O= .10262; N2= .74077; O2= .04968; AR= .00888

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
360	1.0978-1	5.4890 0	-988.4	1.8810	1.7226	1.5642	1.4057	1.2950	0.2478	1.3845	926.6	.0286	.0092	.7730	360
380	1.0400-1	5.2001 0	-983.4	1.8945	1.7360	1.5776	1.4191	1.3084	0.2480	1.3839	951.8	.0301	.0097	.7687	380
400	9.8802-2	4.9401 0	-978.5	1.9072	1.7487	1.5903	1.4319	1.3211	0.2483	1.3833	976.4	.0316	.0103	.7649	400
420	9.4098-2	4.7049 0	-973.5	1.9193	1.7609	1.6024	1.4440	1.3332	0.2486	1.3827	1000.2	.0331	.0108	.7615	420
440	8.9820-2	4.4910 0	-968.5	1.9309	1.7724	1.6140	1.4555	1.3448	0.2489	1.3820	1023.5	.0345	.0113	.7586	440
460	8.5915-2	4.2958 0	-963.5	1.9419	1.7835	1.6251	1.4666	1.3559	0.2493	1.3812	1046.2	.0359	.0118	.7562	460
480	8.2335-2	4.1168 0	-958.5	1.9526	1.7941	1.6357	1.4772	1.3665	0.2497	1.3805	1068.4	.0373	.0123	.7543	480
500	7.9042-2	3.9521 0	-953.6	1.9628	1.8043	1.6459	1.4874	1.3767	0.2501	1.3796	1090.1	.0386	.0128	.7528	500
520	7.6002-2	3.8001 0	-948.5	1.9726	1.8141	1.6557	1.4973	1.3865	0.2505	1.3787	1111.4	.0400	.0133	.7517	520
537	7.3641-2	3.6821 0	-944.4	1.9805	1.8221	1.6636	1.5052	1.3944	0.2509	1.3780	1128.7	.0411	.0137	.7510	537
540	7.3187-2	3.6594 0	-943.5	1.9820	1.8236	1.6652	1.5067	1.3960	0.2509	1.3778	1132.2	.0413	.0138	.7509	540
560	7.0573-2	3.5287 0	-938.5	1.9912	1.8327	1.6743	1.5159	1.4051	0.2514	1.3768	1152.5	.0426	.0143	.7508	560
580	6.8140-2	3.4070 0	-933.5	2.0000	1.8416	1.6831	1.5247	1.4139	0.2519	1.3758	1172.5	.0439	.0147	.7509	580
600	6.5868-2	3.2934 0	-928.4	2.0086	1.8501	1.6917	1.5332	1.4225	0.2524	1.3748	1192.1	.0452	.0152	.7511	600
620	6.3743-2	3.1872 0	-923.4	2.0168	1.8584	1.7000	1.5415	1.4308	0.2529	1.3737	1211.3	.0464	.0156	.7513	620
640	6.1752-2	3.0876 0	-918.3	2.0249	1.8664	1.7080	1.5496	1.4388	0.2535	1.3727	1230.2	.0476	.0161	.7511	640
660	5.9880-2	2.9940 0	-913.2	2.0327	1.8742	1.7158	1.5574	1.4466	0.2540	1.3715	1248.8	.0489	.0165	.7506	660
680	5.8119-2	2.9060 0	-908.2	2.0403	1.8818	1.7234	1.5650	1.4542	0.2546	1.3704	1267.0	.0501	.0170	.7500	680
700	5.6459-2	2.8229 0	-903.1	2.0477	1.8892	1.7308	1.5723	1.4616	0.2552	1.3692	1285.0	.0513	.0175	.7493	700
720	5.4890-2	2.7445 0	-897.9	2.0549	1.8964	1.7380	1.5795	1.4688	0.2558	1.3680	1302.7	.0524	.0179	.7487	720
740	5.3407-2	2.6703 0	-892.8	2.0619	1.9034	1.7450	1.5866	1.4758	0.2564	1.3668	1320.0	.0536	.0184	.7483	740
760	5.2001-2	2.6001 0	-887.7	2.0687	1.9103	1.7518	1.5934	1.4827	0.2571	1.3655	1337.1	.0547	.0188	.7481	760
780	5.0668-2	2.5334 0	-882.5	2.0754	1.9170	1.7585	1.6001	1.4893	0.2577	1.3643	1354.0	.0558	.0192	.7479	780
800	4.9401-2	2.4701 0	-877.4	2.0820	1.9235	1.7651	1.6066	1.4959	0.2584	1.3630	1370.6	.0569	.0197	.7478	800
820	4.8196-2	2.4098 0	-872.2	2.0883	1.9299	1.7715	1.6130	1.5023	0.2590	1.3617	1387.0	.0580	.0201	.7477	820
840	4.7049-2	2.3524 0	-867.0	2.0946	1.9361	1.7777	1.6193	1.5085	0.2597	1.3604	1403.1	.0591	.0205	.7477	840
860	4.5955-2	2.2977 0	-861.8	2.1007	1.9423	1.7838	1.6254	1.5146	0.2604	1.3591	1419.1	.0602	.0210	.7477	860
880	4.4910-2	2.2455 0	-856.6	2.1067	1.9483	1.7898	1.6314	1.5206	0.2611	1.3578	1434.8	.0613	.0214	.7477	880
900	4.3912-2	2.1956 0	-851.4	2.1126	1.9541	1.7957	1.6372	1.5265	0.2618	1.3565	1450.3	.0623	.0218	.7478	900
920	4.2958-2	2.1479 0	-846.1	2.1183	1.9599	1.8015	1.6430	1.5323	0.2626	1.3552	1465.6	.0634	.0223	.7476	920
940	4.2044-2	2.1022 0	-840.9	2.1240	1.9656	1.8071	1.6487	1.5379	0.2633	1.3538	1480.7	.0644	.0227	.7474	940
960	4.1168-2	2.0584 0	-835.6	2.1295	1.9711	1.8127	1.6542	1.5435	0.2640	1.3525	1495.6	.0654	.0231	.7472	960
980	4.0328-2	2.0164 0	-830.3	2.1350	1.9766	1.8181	1.6597	1.5489	0.2648	1.3511	1510.4	.0664	.0236	.7469	980
1000	3.9521-2	1.9760 0	-825.0	2.1404	1.9819	1.8235	1.6650	1.5543	0.2655	1.3498	1524.9	.0675	.0240	.7466	1000
1020	3.8746-2	1.9373 0	-819.7	2.1456	1.9872	1.8287	1.6703	1.5595	0.2663	1.3484	1539.3	.0685	.0244	.7463	1020
1040	3.8001-2	1.9000 0	-814.4	2.1508	1.9924	1.8339	1.6755	1.5647	0.2671	1.3471	1553.6	.0695	.0249	.7460	1040
1060	3.7284-2	1.8642 0	-809.0	2.1559	1.9975	1.8390	1.6806	1.5698	0.2678	1.3457	1567.7	.0704	.0253	.7457	1060
1080	3.6593-2	1.8297 0	-803.6	2.1609	2.0025	1.8440	1.6856	1.5748	0.2686	1.3444	1581.6	.0714	.0257	.7453	1080
1100	3.5928-2	1.7964 0	-798.3	2.1658	2.0074	1.8490	1.6905	1.5798	0.2694	1.3431	1595.4	.0724	.0262	.7449	1100
1120	3.5287-2	1.7643 0	-792.9	2.1707	2.0123	1.8538	1.6954	1.5846	0.2702	1.3417	1609.0	.0734	.0266	.7445	1120
1140	3.4668-2	1.7334 0	-787.5	2.1755	2.0171	1.8586	1.7002	1.5894	0.2709	1.3404	1622.5	.0743	.0271	.7440	1140

TABLE 14A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.050248; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7504; MW = 28.8596;
 DRY AIR; GASEOUS COMPOSITION: CO2= .09804; H2O= .10262; N2= .74077; O2= .04968; AR= .00888

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT ³	LB/FT ³	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
1160	3.4070-2	1.7035 0	-782.0	2.1802	2.0218	1.8633	1.7049	1.5941	0.2717	1.3391	1635.9	.0753	.0275	.7436	1160
1180	3.3492-2	1.6746 0	-776.6	2.1849	2.0264	1.8680	1.7095	1.5988	0.2725	1.3378	1649.1	.0762	.0279	.7431	1180
1200	3.2934-2	1.6467 0	-771.1	2.1895	2.0310	1.8726	1.7141	1.6034	0.2733	1.3365	1662.2	.0771	.0284	.7427	1200
1220	3.2394-2	1.6197 0	-765.7	2.1940	2.0355	1.8771	1.7186	1.6079	0.2741	1.3352	1675.2	.0781	.0288	.7422	1220
1240	3.1872-2	1.5936 0	-760.2	2.1984	2.0400	1.8816	1.7231	1.6124	0.2749	1.3339	1688.1	.0790	.0293	.7418	1240
1260	3.1366-2	1.5683 0	-754.7	2.2028	2.0444	1.8860	1.7275	1.6168	0.2757	1.3326	1700.8	.0799	.0297	.7413	1260
1280	3.0876-2	1.5438 0	-749.1	2.2072	2.0487	1.8903	1.7319	1.6211	0.2765	1.3314	1713.4	.0808	.0302	.7409	1280
1300	3.0401-2	1.5200 0	-743.6	2.2115	2.0530	1.8946	1.7362	1.6254	0.2773	1.3301	1726.0	.0817	.0306	.7404	1300
1320	2.9940-2	1.4970 0	-738.0	2.2157	2.0573	1.8988	1.7404	1.6296	0.2780	1.3289	1738.4	.0826	.0310	.7400	1320
1340	2.9493-2	1.4747 0	-732.5	2.2199	2.0615	1.9030	1.7446	1.6338	0.2788	1.3276	1750.7	.0835	.0315	.7396	1340
1360	2.9060-2	1.4530 0	-726.9	2.2240	2.0656	1.9072	1.7487	1.6380	0.2796	1.3264	1762.9	.0844	.0319	.7392	1360
1380	2.8638-2	1.4319 0	-721.3	2.2281	2.0697	1.9112	1.7528	1.6421	0.2804	1.3252	1775.0	.0853	.0324	.7388	1380
1400	2.8229-2	1.4115 0	-715.7	2.2322	2.0737	1.9153	1.7568	1.6461	0.2812	1.3240	1787.0	.0862	.0328	.7384	1400
1420	2.7832-2	1.3916 0	-710.0	2.2362	2.0777	1.9193	1.7608	1.6501	0.2819	1.3229	1798.9	.0871	.0333	.7380	1420
1440	2.7445-2	1.3723 0	-704.4	2.2401	2.0817	1.9232	1.7648	1.6540	0.2827	1.3217	1810.8	.0879	.0337	.7376	1440
1460	2.7069-2	1.3535 0	-698.7	2.2440	2.0856	1.9271	1.7687	1.6579	0.2835	1.3205	1822.5	.0888	.0341	.7373	1460
1480	2.6703-2	1.3352 0	-693.1	2.2479	2.0894	1.9310	1.7726	1.6618	0.2842	1.3194	1834.2	.0896	.0346	.7370	1480
1500	2.6347-2	1.3174 0	-687.4	2.2517	2.0933	1.9348	1.7764	1.6656	0.2850	1.3183	1845.7	.0905	.0350	.7367	1500
1520	2.6001-2	1.3000 0	-681.7	2.2555	2.0970	1.9386	1.7802	1.6694	0.2857	1.3172	1857.2	.0913	.0354	.7365	1520
1540	2.5663-2	1.2831 0	-675.9	2.2592	2.1008	1.9423	1.7839	1.6731	0.2865	1.3161	1868.6	.0922	.0359	.7362	1540
1560	2.5334-2	1.2667 0	-670.2	2.2629	2.1045	1.9460	1.7876	1.6769	0.2872	1.3151	1880.0	.0930	.0363	.7359	1560
1580	2.5013-2	1.2507 0	-664.4	2.2666	2.1081	1.9497	1.7913	1.6805	0.2879	1.3140	1891.2	.0938	.0367	.7357	1580
1600	2.4701-2	1.2350 0	-658.7	2.2702	2.1118	1.9533	1.7949	1.6841	0.2887	1.3130	1902.4	.0947	.0372	.7355	1600
1620	2.4396-2	1.2198 0	-652.9	2.2738	2.1154	1.9569	1.7985	1.6877	0.2894	1.3120	1913.5	.0955	.0376	.7352	1620
1640	2.4098-2	1.2049 0	-647.1	2.2774	2.1189	1.9605	1.8020	1.6913	0.2901	1.3110	1924.6	.0963	.0380	.7350	1640
1660	2.3808-2	1.1904 0	-641.3	2.2809	2.1224	1.9640	1.8056	1.6948	0.2908	1.3100	1935.6	.0971	.0384	.7348	1660
1680	2.3524-2	1.1762 0	-635.5	2.2844	2.1259	1.9675	1.8090	1.6983	0.2915	1.3090	1946.5	.0979	.0389	.7346	1680
1700	2.3248-2	1.1624 0	-629.6	2.2878	2.1294	1.9709	1.8125	1.7017	0.2922	1.3081	1957.3	.0988	.0393	.7344	1700
1720	2.2977-2	1.1489 0	-623.8	2.2912	2.1328	1.9744	1.8159	1.7052	0.2928	1.3071	1968.1	.0996	.0397	.7342	1720
1740	2.2713-2	1.1357 0	-617.9	2.2946	2.1362	1.9777	1.8193	1.7086	0.2935	1.3062	1978.8	.1004	.0401	.7340	1740
1760	2.2455-2	1.1228 0	-612.0	2.2980	2.1395	1.9811	1.8227	1.7119	0.2942	1.3054	1989.5	.1011	.0405	.7338	1760
1780	2.2203-2	1.1101 0	-606.2	2.3013	2.1429	1.9844	1.8260	1.7152	0.2948	1.3045	2000.1	.1019	.0410	.7336	1780
1800	2.1956-2	1.0978 0	-600.3	2.3046	2.1462	1.9877	1.8293	1.7185	0.2954	1.3036	2010.6	.1027	.0414	.7334	1800
1900	2.0801-2	1.0400 0	-570.6	2.3207	2.1622	2.0038	1.8453	1.7346	0.2984	1.2997	2062.6	.1066	.0434	.7326	1900
2000	1.9760-2	9.8802-1	-540.6	2.3361	2.1776	2.0192	1.8607	1.7500	0.3013	1.2960	2113.2	.1104	.0454	.7320	2000
2100	1.8820-2	9.4098-1	-510.3	2.3508	2.1924	2.0339	1.8755	1.7647	0.3039	1.2927	2162.6	.1141	.0474	.7315	2100
2200	1.7964-2	8.9820-1	-479.8	2.3650	2.2066	2.0481	1.8897	1.7789	0.3065	1.2895	2210.8	.1177	.0493	.7310	2200
2300	1.7183-2	8.5915-1	-449.0	2.3787	2.2202	2.0618	1.9034	1.7926	0.3089	1.2866	2257.9	.1213	.0513	.7306	2300
2400	1.6467-2	8.2335-1	-418.0	2.3919	2.2334	2.0750	1.9166	1.8058	0.3112	1.2839	2304.1	.1248	.0532	.7302	2400
2500	1.5808-2	7.9042-1	-386.8	2.4046	2.2462	2.0877	1.9293	1.8186	0.3133	1.2814	2349.3	.1282	.0550	.7298	2500

TABLE 14A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.050248; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7504; MW = 28.8596;
 DRY AIR; GASEOUS COMPOSITION: CO2= .09804; H2O= .10262; N2= .74077; O2= .04968; AR= .00888

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
2600	1.5200-2	7.6002-1	-355.4	2.4170	2.2585	2.1001	1.9416	1.8309	0.3153	1.2791	2393.7	.1316	.0569	.7293	2600
2700	1.4637-2	7.3187-1	-323.7	2.4289	2.2705	2.1120	1.9536	1.8428	0.3173	1.2770	2437.2	.1350	.0587	.7289	2700
2800	1.4115-2	7.0573-1	-291.9	2.4405	2.2820	2.1236	1.9651	1.8544	0.3191	1.2750	2480.0	.1383	.0606	.7282	2800
2900	1.3628-2	6.8140-1	-259.9	2.4517	2.2933	2.1348	1.9764	1.8656	0.3208	1.2731	2522.0	.1415	.0624	.7275	2900
3000	1.3174-2	6.5868-1	-227.8	2.4626	2.3042	2.1457	1.9873	1.8765	0.3224	1.2713	2563.4	.1448	.0642	.7269	3000
3100	1.2749-2	6.3744-1	-195.4	2.4732	2.3147	2.1563	1.9979	1.8871	0.3239	1.2697	2604.1	.1479	.0660	.7262	3100
3200	1.2350-2	6.1752-1	-163.0	2.4835	2.3251	2.1666	2.0082	1.8974	0.3254	1.2682	2644.2	.1511	.0678	.7255	3200
3300	1.1976-2	5.9880-1	-130.4	2.4935	2.3351	2.1766	2.0182	1.9075	0.3267	1.2668	2683.7	.1542	.0695	.7248	3300
3400	1.1624-2	5.8119-1	-97.6	2.5033	2.3449	2.1864	2.0280	1.9172	0.3280	1.2655	2722.6	.1573	.0712	.7240	3400
3500	1.1292-2	5.6459-1	-64.8	2.5128	2.3544	2.1959	2.0375	1.9268	0.3292	1.2643	2761.1	.1603	.0729	.7233	3500
3600	1.0978-2	5.4890-1	-31.8	2.5221	2.3637	2.2052	2.0468	1.9360	0.3303	1.2631	2799.0	.1633	.0746	.7226	3600
3700	1.0681-2	5.3407-1	1.3	2.5312	2.3727	2.2143	2.0559	1.9451	0.3314	1.2621	2836.4	.1663	.0763	.7220	3700
3800	1.0400-2	5.2001-1	34.5	2.5400	2.3816	2.2231	2.0647	1.9540	0.3324	1.2611	2873.3	.1692	.0780	.7214	3800
3900	1.0134-2	5.0668-1	67.8	2.5487	2.3902	2.2318	2.0734	1.9626	0.3333	1.2601	2909.8	.1721	.0796	.7208	3900
4000	9.8802-3	4.9401-1	101.1	2.5571	2.3987	2.2402	2.0818	1.9711	0.3342	1.2593	2945.8	.1750	.0812	.7202	4000
4100	9.6393-3	4.8196-1	134.6	2.5654	2.4069	2.2485	2.0901	1.9793	0.3350	1.2585	2981.5	.1778	.0828	.7195	4100
4200	9.4098-3	4.7049-1	168.1	2.5735	2.4150	2.2566	2.0981	1.9874	0.3358	1.2577	3016.7	.1807	.0844	.7189	4200
4300	9.1909-3	4.5955-1	201.8	2.5814	2.4229	2.2645	2.1061	1.9953	0.3366	1.2570	3051.5	.1834	.0860	.7182	4300
4400	8.9820-3	4.4910-1	235.5	2.5891	2.4307	2.2722	2.1138	2.0031	0.3373	1.2563	3086.0	.1862	.0875	.7175	4400
4500	8.7824-3	4.3912-1	269.2	2.5967	2.4383	2.2798	2.1214	2.0106	0.3380	1.2557	3120.1	.1890	.0891	.7168	4500
4600	8.5915-3	4.2958-1	303.0	2.6042	2.4457	2.2873	2.1288	2.0181	0.3386	1.2551	3153.8	.1917	.0906	.7160	4600
4700	8.4087-3	4.2044-1	336.9	2.6114	2.4530	2.2946	2.1361	2.0254	0.3392	1.2545	3187.2	.1944	.0922	.7151	4700
4800	8.2335-3	4.1168-1	370.9	2.6186	2.4601	2.3017	2.1433	2.0325	0.3398	1.2540	3220.2	.1970	.0937	.7143	4800
4900	8.0655-3	4.0328-1	404.9	2.6256	2.4672	2.3087	2.1503	2.0395	0.3403	1.2535	3252.9	.1997	.0953	.7134	4900
5000	7.9042-3	3.9521-1	438.9	2.6325	2.4740	2.3156	2.1572	2.0464	0.3408	1.2530	3285.3	.2023	.0968	.7126	5000
5100	7.7492-3	3.8746-1	473.0	2.6392	2.4808	2.3224	2.1639	2.0532	0.3413	1.2525	3317.4	.2049	.0983	.7119	5100
5200	7.6002-3	3.8001-1	507.2	2.6459	2.4874	2.3290	2.1705	2.0598	0.3418	1.2521	3349.1	.2075	.0998	.7111	5200
5300	7.4568-3	3.7284-1	541.4	2.6524	2.4939	2.3355	2.1771	2.0663	0.3423	1.2516	3380.6	.2101	.1012	.7104	5300
5400	7.3187-3	3.6594-1	575.7	2.6588	2.5003	2.3419	2.1835	2.0727	0.3427	1.2512	3411.8	.2126	.1027	.7096	5400

TABLE 14.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.050248; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 0.14696 LB/IN² (0.01 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4701-4	-658.7	2.2702	28.860	.095	1.0000	-1.0000	0.2887	1.3129	1902.4	.0372	.735	0.2887	1.3130	1902.4	.0372	.735
1700	2.3248-4	-629.6	2.2878	28.860	.099	1.0000	-1.0000	0.2923	1.3080	1957.2	.0393	.734	0.2922	1.3081	1957.3	.0393	.734
1800	2.1956-4	-600.2	2.3046	28.860	.103	1.0000	-1.0000	0.2956	1.3034	2010.5	.0414	.733	0.2954	1.3036	2010.6	.0414	.733
1900	2.0801-4	-570.5	2.3207	28.860	.107	1.0000	-1.0000	0.2987	1.2994	2062.4	.0434	.733	0.2984	1.2997	2062.6	.0434	.733
2000	1.9760-4	-540.5	2.3361	28.860	.110	1.0000	-1.0000	0.3016	1.2956	2112.8	.0455	.732	0.3013	1.2960	2113.2	.0454	.732
2100	1.8819-4	-510.2	2.3509	28.860	.114	1.0000	-1.0000	0.3045	1.2920	2162.0	.0475	.731	0.3039	1.2927	2162.6	.0474	.732
2200	1.7964-4	-479.6	2.3651	28.860	.118	1.0000	-1.0000	0.3073	1.2886	2210.0	.0495	.731	0.3065	1.2895	2210.8	.0493	.731
2300	1.7183-4	-448.7	2.3788	28.859	.121	1.0001	-1.0000	0.3101	1.2852	2256.7	.0515	.730	0.3089	1.2866	2257.9	.0513	.731
2400	1.6467-4	-417.6	2.3921	28.859	.125	1.0002	-1.0000	0.3129	1.2820	2302.3	.0535	.730	0.3112	1.2839	2304.1	.0532	.730
2500	1.5808-4	-386.1	2.4049	28.859	.128	1.0003	-1.0000	0.3159	1.2787	2346.8	.0556	.729	0.3133	1.2815	2349.3	.0550	.730
2600	1.5200-4	-354.4	2.4174	28.859	.132	1.0006	-1.0000	0.3191	1.2753	2390.1	.0577	.728	0.3153	1.2791	2393.7	.0569	.729
2700	1.4636-4	-322.3	2.4295	28.858	.135	1.0010	-1.0000	0.3229	1.2715	2432.1	.0600	.726	0.3173	1.2770	2437.3	.0587	.729
2800	1.4113-4	-289.8	2.4413	28.856	.138	1.0018	-1.0000	0.3274	1.2673	2472.6	.0626	.724	0.3191	1.2750	2480.1	.0606	.728
2900	1.3625-4	-256.8	2.4529	28.854	.142	1.0031	-1.0001	0.3333	1.2621	2511.4	.0656	.720	0.3208	1.2732	2522.3	.0624	.727
3000	1.3169-4	-223.1	2.4643	28.850	.145	1.0053	-1.0001	0.3414	1.2557	2548.0	.0693	.714	0.3224	1.2715	2563.9	.0642	.727
3100	1.2741-4	-188.4	2.4757	28.843	.148	1.0089	-1.0002	0.3527	1.2476	2582.1	.0741	.704	0.3239	1.2699	2605.0	.0660	.726
3200	1.2339-4	-152.4	2.4871	28.833	.151	1.0147	-1.0004	0.3688	1.2374	2613.1	.0806	.691	0.3253	1.2686	2645.8	.0678	.725
3300	1.1958-4	-114.4	2.4988	28.816	.154	1.0235	-1.0006	0.3918	1.2249	2641.0	.0898	.673	0.3267	1.2674	2686.3	.0695	.724
3400	1.1596-4	-73.7	2.5110	28.790	.157	1.0368	-1.0010	0.4240	1.2104	2665.9	.1027	.649	0.3279	1.2664	2726.9	.0713	.723
3500	1.1250-4	-29.2	2.5239	28.752	.160	1.0562	-1.0017	0.4683	1.1945	2688.8	.1209	.620	0.3291	1.2657	2767.7	.0730	.722
3600	1.0916-4	20.5	2.5378	28.697	.163	1.0831	-1.0025	0.5272	1.1784	2711.2	.1460	.589	0.3301	1.2652	2809.2	.0747	.720
3700	1.0592-4	76.8	2.5533	28.618	.166	1.1190	-1.0038	0.6028	1.1633	2734.6	.1799	.556	0.3311	1.2652	2851.8	.0764	.719
3800	1.0274-4	141.6	2.5705	28.510	.169	1.1650	-1.0054	0.6956	1.1501	2760.7	.2241	.523	0.3320	1.2655	2896.0	.0781	.716
3900	9.9611-5	216.5	2.5900	28.368	.171	1.2214	-1.0075	0.8053	1.1392	2790.5	.2801	.493	0.3327	1.2664	2942.2	.0799	.713
4000	9.6499-5	303.2	2.6119	28.187	.174	1.2879	-1.0100	0.9304	1.1307	2824.5	.3487	.464	0.3335	1.2679	2991.0	.0817	.709
4100	9.3392-5	403.0	2.6366	27.961	.176	1.3643	-1.0131	1.0691	1.1242	2862.9	.4304	.438	0.3341	1.2699	3042.8	.0837	.704
4200	9.0281-5	517.4	2.6641	27.689	.179	1.4500	-1.0168	1.2200	1.1196	2905.8	.5244	.416	0.3347	1.2727	3098.1	.0858	.698
4300	8.7157-5	647.4	2.6947	27.368	.181	1.5441	-1.0210	1.3813	1.1164	2953.2	.6285	.398	0.3354	1.2761	3157.4	.0880	.690
4400	8.4022-5	793.9	2.7284	26.996	.183	1.6450	-1.0257	1.5507	1.1144	3005.1	.7381	.385	0.3360	1.2803	3221.0	.0906	.680
4500	8.0878-5	957.6	2.7652	26.577	.186	1.7492	-1.0308	1.7229	1.1134	3061.6	.8454	.378	0.3367	1.2852	3289.4	.0935	.668
4600	7.7740-5	1138.3	2.8049	26.114	.188	1.8506	-1.0361	1.8882	1.1134	3122.7	.9405	.377	0.3374	1.2910	3362.5	.0967	.655
4700	7.4633-5	1334.5	2.8471	25.615	.190	1.9398	-1.0411	2.0317	1.1142	3188.2	****	.381	0.3382	1.2974	3440.3	.1002	.641
4800	7.1594-5	1543.3	2.8910	25.095	.192	2.0052	-1.0452	2.1342	1.1159	3257.7	****	.391	0.3391	1.3044	3522.1	.1040	.626
4900	6.8668-5	1759.4	2.9356	24.570	.194	2.0353	-1.0479	2.1765	1.1185	3330.3	****	.405	0.3400	1.3118	3606.6	.1079	.612
5000	6.5905-5	1976.1	2.9794	24.063	.196	2.0234	-1.0486	2.1462	1.1222	3404.9	.9963	.423	0.3409	1.3194	3691.9	.1118	.599
5100	6.3346-5	2186.2	3.0210	23.591	.199	1.9697	-1.0472	2.0435	1.1270	3480.4	.9167	.443	0.3419	1.3267	3776.2	.1156	.588
5200	6.1017-5	2382.9	3.0592	23.170	.201	1.8824	-1.0440	1.8822	1.1330	3555.7	.8165	.464	0.3427	1.3335	3857.5	.1193	.578
5300	5.8927-5	2561.4	3.0932	22.806	.204	1.7742	-1.0395	1.6848	1.1405	3630.2	.7092	.484	0.3435	1.3396	3934.2	.1226	.571
5400	5.7067-5	2719.4	3.1227	22.503	.206	1.6584	-1.0343	1.4750	1.1497	3703.7	.6057	.502	0.3442	1.3448	4005.6	.1257	.565

TABLE 14.2B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.050248; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 1.46959 LB/IN2 (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4701-3	-658.7	2.1118	28.860	.095	1.0000	-1.0000	0.2887	1.3129	1902.4	.0372	.735	0.2887	1.3130	1902.4	.0372	.735
1700	2.3248-3	-629.6	2.1294	28.860	.099	1.0000	-1.0000	0.2922	1.3080	1957.2	.0393	.734	0.2922	1.3081	1957.3	.0393	.734
1800	2.1956-3	-600.2	2.1462	28.860	.103	1.0000	-1.0000	0.2956	1.3034	2010.5	.0414	.733	0.2954	1.3036	2010.6	.0414	.733
1900	2.0800-3	-570.5	2.1623	28.860	.107	1.0000	-1.0000	0.2986	1.2994	2062.4	.0434	.733	0.2984	1.2997	2062.6	.0434	.733
2000	1.9760-3	-540.5	2.1776	28.860	.110	1.0000	-1.0000	0.3016	1.2956	2112.9	.0455	.732	0.3013	1.2960	2113.2	.0454	.732
2100	1.8819-3	-510.2	2.1924	28.860	.114	1.0000	-1.0000	0.3044	1.2920	2162.0	.0475	.732	0.3039	1.2927	2162.6	.0474	.732
2200	1.7964-3	-479.6	2.2067	28.860	.118	1.0000	-1.0000	0.3072	1.2886	2210.0	.0495	.731	0.3065	1.2895	2210.8	.0493	.731
2300	1.7183-3	-448.8	2.2204	28.860	.121	1.0000	-1.0000	0.3099	1.2854	2256.9	.0514	.731	0.3089	1.2866	2257.9	.0513	.731
2400	1.6467-3	-417.6	2.2336	28.859	.125	1.0001	-1.0000	0.3126	1.2823	2302.6	.0534	.730	0.3112	1.2839	2304.1	.0532	.730
2500	1.5808-3	-386.2	2.2464	28.859	.128	1.0001	-1.0000	0.3153	1.2792	2347.3	.0554	.729	0.3133	1.2814	2349.3	.0550	.730
2600	1.5200-3	-354.6	2.2589	28.859	.132	1.0003	-1.0000	0.3181	1.2762	2390.9	.0575	.729	0.3153	1.2791	2393.7	.0569	.729
2700	1.4637-3	-322.6	2.2709	28.859	.135	1.0005	-1.0000	0.3211	1.2731	2433.5	.0595	.728	0.3173	1.2770	2437.2	.0587	.729
2800	1.4114-3	-290.3	2.2827	28.858	.138	1.0008	-1.0000	0.3243	1.2698	2475.1	.0617	.726	0.3191	1.2750	2480.0	.0606	.728
2900	1.3627-3	-257.7	2.2941	28.857	.142	1.0013	-1.0000	0.3280	1.2663	2515.4	.0641	.725	0.3208	1.2731	2522.2	.0624	.728
3000	1.3172-3	-224.7	2.3053	28.855	.145	1.0021	-1.0001	0.3324	1.2624	2554.5	.0666	.722	0.3224	1.2714	2563.6	.0642	.727
3100	1.2746-3	-191.2	2.3163	28.853	.148	1.0035	-1.0001	0.3380	1.2578	2592.2	.0696	.719	0.3239	1.2698	2604.5	.0660	.726
3200	1.2346-3	-157.1	2.3271	28.849	.151	1.0055	-1.0001	0.3451	1.2524	2628.1	.0730	.714	0.3253	1.2684	2644.8	.0678	.725
3300	1.1969-3	-122.1	2.3379	28.843	.154	1.0086	-1.0002	0.3545	1.2459	2662.2	.0773	.707	0.3267	1.2670	2684.7	.0695	.725
3400	1.1613-3	-86.1	2.3486	28.833	.157	1.0132	-1.0004	0.3670	1.2380	2694.1	.0827	.698	0.3280	1.2658	2724.2	.0712	.724
3500	1.1276-3	-48.6	2.3595	28.820	.160	1.0199	-1.0006	0.3838	1.2287	2723.8	.0897	.685	0.3291	1.2648	2763.5	.0730	.723
3600	1.0955-3	-9.1	2.3706	28.800	.163	1.0294	-1.0009	0.4061	1.2181	2751.4	.0990	.670	0.3302	1.2639	2802.7	.0747	.722
3700	1.0649-3	32.9	2.3821	28.772	.166	1.0426	-1.0013	0.4353	1.2063	2777.2	.1111	.651	0.3313	1.2632	2842.0	.0763	.721
3800	1.0355-3	78.2	2.3942	28.733	.169	1.0603	-1.0019	0.4727	1.1940	2802.0	.1270	.629	0.3322	1.2627	2881.5	.0780	.720
3900	1.0070-3	127.7	2.4071	28.680	.172	1.0832	-1.0027	0.5191	1.1817	2826.6	.1474	.605	0.3331	1.2625	2921.6	.0796	.719
4000	9.7946-4	182.4	2.4209	28.609	.175	1.1120	-1.0038	0.5752	1.1702	2852.1	.1732	.580	0.3339	1.2625	2962.5	.0813	.717
4100	9.5253-4	243.1	2.4359	28.518	.177	1.1469	-1.0051	0.6406	1.1599	2879.4	.2050	.554	0.3346	1.2628	3004.5	.0829	.715
4200	9.2612-4	310.8	2.4522	28.404	.180	1.1877	-1.0068	0.7145	1.1511	2909.1	.2432	.529	0.3352	1.2635	3047.9	.0846	.713
4300	9.0012-4	386.2	2.4699	28.264	.182	1.2341	-1.0087	0.7956	1.1439	2941.6	.2882	.504	0.3358	1.2646	3092.9	.0863	.710
4400	8.7443-4	470.1	2.4892	28.096	.185	1.2855	-1.0109	0.8825	1.1382	2977.1	.3403	.480	0.3363	1.2661	3139.8	.0881	.706
4500	8.4901-4	562.9	2.5101	27.899	.187	1.3416	-1.0134	0.9740	1.1339	3015.5	.3992	.457	0.3368	1.2680	3188.9	.0899	.702
4600	8.2380-4	665.0	2.5325	27.672	.190	1.4017	-1.0163	1.0692	1.1307	3057.0	.4645	.437	0.3372	1.2703	3240.3	.0919	.697
4700	7.9879-4	776.8	2.5565	27.416	.192	1.4656	-1.0195	1.1674	1.1284	3101.4	.5352	.419	0.3377	1.2731	3294.2	.0940	.690
4800	7.7398-4	898.6	2.5822	27.129	.194	1.5327	-1.0229	1.2679	1.1270	3148.7	.6095	.404	0.3381	1.2763	3350.8	.0963	.683
4900	7.4937-4	1030.4	2.6094	26.814	.197	1.6019	-1.0267	1.3692	1.1263	3198.9	.6844	.393	0.3386	1.2800	3410.3	.0987	.674
5000	7.2500-4	1172.4	2.6380	26.471	.199	1.6713	-1.0306	1.4689	1.1261	3252.1	.7561	.386	0.3391	1.2841	3472.7	.1014	.665
5100	7.0093-4	1324.0	2.6681	26.104	.201	1.7381	-1.0346	1.5629	1.1266	3308.2	.8201	.383	0.3396	1.2887	3538.1	.1043	.655
5200	6.7727-4	1484.6	2.6992	25.717	.203	1.7984	-1.0385	1.6457	1.1277	3367.1	.8715	.384	0.3402	1.2936	3606.3	.1074	.644
5300	6.5414-4	1652.5	2.7312	25.317	.206	1.8474	-1.0420	1.7105	1.1294	3428.6	.9056	.388	0.3408	1.2990	3677.0	.1108	.633
5400	6.3172-4	1825.8	2.7636	24.911	.208	1.8805	-1.0447	1.7503	1.1317	3492.4	.9191	.396	0.3414	1.3046	3749.8	.1142	.621

TABLE 14.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.050248; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 14.6959 LB/IN² (1.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4701-2	-658.7	1.9533	28.860	.095	1.0000	-1.0000	0.2887	1.3129	1902.4	.0372	.735	0.2887	1.3130	1902.4	.0372	.735
1700	2.3248-2	-629.6	1.9709	28.860	.099	1.0000	-1.0000	0.2922	1.3080	1957.2	.0393	.734	0.2922	1.3081	1957.3	.0393	.734
1800	2.1956-2	-600.2	1.9877	28.860	.103	1.0000	-1.0000	0.2956	1.3034	2010.5	.0414	.733	0.2954	1.3036	2010.6	.0414	.733
1900	2.0801-2	-570.5	2.0038	28.860	.107	1.0000	-1.0000	0.2986	1.2994	2062.4	.0434	.733	0.2984	1.2997	2062.6	.0434	.733
2000	1.9760-2	-540.5	2.0192	28.860	.110	1.0000	-1.0000	0.3016	1.2956	2112.9	.0455	.732	0.3013	1.2960	2113.2	.0454	.732
2100	1.8820-2	-510.2	2.0340	28.860	.114	1.0000	-1.0000	0.3044	1.2920	2162.1	.0475	.732	0.3039	1.2927	2162.6	.0474	.732
2200	1.7964-2	-479.6	2.0482	28.860	.118	1.0000	-1.0000	0.3072	1.2887	2210.1	.0495	.731	0.3065	1.2895	2210.8	.0493	.731
2300	1.7183-2	-448.8	2.0619	28.860	.121	1.0000	-1.0000	0.3099	1.2855	2256.9	.0514	.731	0.3089	1.2866	2257.9	.0513	.731
2400	1.6467-2	-417.7	2.0752	28.860	.125	1.0000	-1.0000	0.3125	1.2824	2302.7	.0534	.730	0.3112	1.2839	2304.1	.0532	.730
2500	1.5808-2	-386.3	2.0880	28.859	.128	1.0001	-1.0000	0.3151	1.2795	2347.5	.0554	.730	0.3133	1.2814	2349.3	.0550	.730
2600	1.5200-2	-354.6	2.1004	28.859	.132	1.0001	-1.0000	0.3177	1.2766	2391.3	.0573	.729	0.3153	1.2791	2393.7	.0569	.729
2700	1.4637-2	-322.7	2.1124	28.859	.135	1.0002	-1.0000	0.3203	1.2738	2434.2	.0593	.728	0.3173	1.2770	2437.2	.0587	.728
2800	1.4114-2	-290.6	2.1241	28.859	.138	1.0004	-1.0000	0.3230	1.2709	2476.1	.0614	.728	0.3191	1.2750	2480.0	.0606	.728
2900	1.3627-2	-258.1	2.1355	28.858	.142	1.0006	-1.0000	0.3259	1.2681	2517.1	.0635	.726	0.3208	1.2731	2522.1	.0624	.728
3000	1.3173-2	-225.4	2.1466	28.858	.145	1.0009	-1.0000	0.3290	1.2651	2557.1	.0657	.725	0.3224	1.2714	2563.5	.0642	.727
3100	1.2747-2	-192.3	2.1574	28.857	.148	1.0015	-1.0000	0.3325	1.2619	2596.2	.0680	.723	0.3239	1.2698	2604.3	.0660	.726
3200	1.2348-2	-158.9	2.1681	28.855	.151	1.0022	-1.0001	0.3365	1.2585	2634.2	.0705	.721	0.3254	1.2683	2644.5	.0678	.725
3300	1.1973-2	-125.0	2.1785	28.852	.154	1.0034	-1.0001	0.3413	1.2546	2671.1	.0732	.718	0.3267	1.2669	2684.1	.0695	.725
3400	1.1619-2	-90.6	2.1888	28.849	.157	1.0050	-1.0001	0.3471	1.2503	2706.7	.0763	.715	0.3280	1.2656	2723.3	.0712	.724
3500	1.1285-2	-55.5	2.1989	28.844	.160	1.0074	-1.0002	0.3543	1.2453	2741.0	.0800	.710	0.3292	1.2645	2762.0	.0730	.723
3600	1.0969-2	-19.7	2.2090	28.836	.163	1.0108	-1.0003	0.3635	1.2396	2773.8	.0843	.704	0.3303	1.2634	2800.4	.0746	.722
3700	1.0669-2	17.2	2.2191	28.826	.166	1.0154	-1.0005	0.3750	1.2330	2805.1	.0895	.697	0.3313	1.2625	2838.5	.0763	.722
3800	1.0383-2	55.4	2.2293	28.812	.169	1.0218	-1.0007	0.3896	1.2255	2834.8	.0959	.687	0.3323	1.2617	2876.4	.0780	.721
3900	1.0110-2	95.3	2.2397	28.793	.172	1.0302	-1.0010	0.4078	1.2173	2863.2	.1039	.675	0.3332	1.2610	2914.2	.0796	.720
4000	9.8485-3	137.2	2.2503	28.767	.175	1.0411	-1.0014	0.4304	1.2084	2890.4	.1137	.662	0.3341	1.2605	2952.0	.0812	.719
4100	9.5970-3	181.5	2.2612	28.733	.178	1.0550	-1.0019	0.4578	1.1993	2916.9	.1259	.646	0.3348	1.2601	2990.0	.0828	.718
4200	9.3542-3	228.9	2.2726	28.689	.180	1.0723	-1.0025	0.4904	1.1901	2943.2	.1407	.629	0.3356	1.2599	3028.3	.0844	.717
4300	9.1190-3	279.8	2.2846	28.634	.183	1.0930	-1.0034	0.5283	1.1813	2969.9	.1584	.611	0.3362	1.2599	3067.1	.0860	.716
4400	8.8903-3	334.7	2.2972	28.565	.186	1.1174	-1.0044	0.5711	1.1732	2997.5	.1794	.591	0.3368	1.2601	3106.6	.0876	.714
4500	8.6672-3	394.2	2.3106	28.481	.188	1.1451	-1.0055	0.6182	1.1660	3026.5	.2037	.572	0.3373	1.2606	3146.8	.0892	.712
4600	8.4489-3	458.5	2.3247	28.381	.191	1.1759	-1.0069	0.6689	1.1598	3057.2	.2315	.552	0.3378	1.2612	3188.1	.0908	.710
4700	8.2350-3	528.0	2.3397	28.264	.193	1.2094	-1.0084	0.7222	1.1546	3089.7	.2628	.532	0.3382	1.2622	3230.4	.0925	.708
4800	8.0250-3	603.0	2.3555	28.129	.196	1.2452	-1.0101	0.7771	1.1504	3124.2	.2975	.512	0.3386	1.2634	3274.0	.0941	.705
4900	7.8186-3	683.5	2.3721	27.976	.198	1.2829	-1.0120	0.8331	1.1471	3160.6	.3357	.492	0.3390	1.2649	3318.9	.0959	.701
5000	7.6155-3	769.6	2.3895	27.806	.201	1.3222	-1.0140	0.8895	1.1446	3199.0	.3770	.474	0.3393	1.2666	3365.1	.0976	.698
5100	7.4158-3	861.4	2.4076	27.618	.203	1.3630	-1.0162	0.9460	1.1428	3239.2	.4214	.456	0.3396	1.2686	3412.8	.0995	.693
5200	7.2191-3	958.8	2.4265	27.413	.205	1.4050	-1.0186	1.0025	1.1416	3281.3	.4681	.440	0.3400	1.2708	3462.0	.1014	.689
5300	7.0256-3	1061.9	2.4462	27.191	.208	1.4480	-1.0211	1.0588	1.1409	3325.2	.5166	.426	0.3403	1.2733	3512.8	.1035	.683
5400	6.8352-3	1170.6	2.4665	26.953	.210	1.4919	-1.0238	1.1145	1.1406	3370.8	.5658	.414	0.3406	1.2760	3565.2	.1057	.677

TABLE 14.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.050248; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504; P = 146.959 LB/IN² (10.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM VS FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4701-1	-658.7	1.7949	28.860	.095	1.0000	-1.0000	0.2887	1.3129	1902.4	.0372	.735	0.2887	1.3130	1902.4	.0372	.735
1700	2.3248-1	-629.6	1.8125	28.860	.099	1.0000	-1.0000	0.2922	1.3080	1957.2	.0393	.734	0.2922	1.3081	1957.3	.0393	.734
1800	2.1956-1	-600.2	1.8293	28.860	.103	1.0000	-1.0000	0.2956	1.3034	2010.5	.0414	.733	0.2954	1.3036	2010.6	.0414	.733
1900	2.0801-1	-570.5	1.8454	28.860	.107	1.0000	-1.0000	0.2986	1.2994	2062.4	.0434	.733	0.2984	1.2997	2062.6	.0434	.733
2000	1.9760-1	-540.5	1.8608	28.860	.110	1.0000	-1.0000	0.3016	1.2956	2112.9	.0455	.732	0.3013	1.2960	2113.2	.0454	.732
2100	1.8820-1	-510.2	1.8755	28.860	.114	1.0000	-1.0000	0.3044	1.2921	2162.1	.0475	.732	0.3039	1.2927	2162.6	.0474	.732
2200	1.7964-1	-479.6	1.8898	28.860	.118	1.0000	-1.0000	0.3072	1.2887	2210.1	.0494	.731	0.3065	1.2895	2210.8	.0493	.731
2300	1.7183-1	-448.8	1.9035	28.860	.121	1.0000	-1.0000	0.3098	1.2855	2257.0	.0514	.731	0.3089	1.2866	2257.9	.0513	.731
2400	1.6467-1	-417.7	1.9167	28.860	.125	1.0000	-1.0000	0.3124	1.2825	2302.8	.0534	.730	0.3112	1.2839	2304.1	.0532	.730
2500	1.5808-1	-386.3	1.9295	28.860	.128	1.0000	-1.0000	0.3149	1.2796	2347.6	.0553	.730	0.3133	1.2814	2349.3	.0550	.730
2600	1.5200-1	-354.7	1.9419	28.860	.132	1.0001	-1.0000	0.3174	1.2768	2391.5	.0573	.729	0.3153	1.2791	2393.7	.0569	.729
2700	1.4637-1	-322.8	1.9540	28.859	.135	1.0001	-1.0000	0.3199	1.2741	2434.5	.0593	.729	0.3173	1.2770	2437.2	.0587	.729
2800	1.4114-1	-290.7	1.9656	28.859	.138	1.0002	-1.0000	0.3224	1.2715	2476.6	.0612	.728	0.3191	1.2750	2480.0	.0606	.728
2900	1.3628-1	-258.3	1.9770	28.859	.142	1.0003	-1.0000	0.3249	1.2689	2517.8	.0633	.727	0.3208	1.2731	2522.0	.0624	.728
3000	1.3173-1	-225.7	1.9880	28.859	.145	1.0004	-1.0000	0.3275	1.2663	2558.3	.0653	.726	0.3224	1.2714	2563.4	.0642	.727
3100	1.2748-1	-192.8	1.9988	28.858	.148	1.0007	-1.0000	0.3302	1.2636	2597.9	.0674	.725	0.3239	1.2697	2604.2	.0660	.726
3200	1.2349-1	-159.7	2.0094	28.857	.151	1.0010	-1.0000	0.3331	1.2610	2636.7	.0695	.724	0.3254	1.2682	2644.3	.0678	.725
3300	1.1975-1	-126.2	2.0197	28.856	.154	1.0014	-1.0000	0.3362	1.2582	2674.7	.0718	.722	0.3267	1.2669	2683.9	.0695	.725
3400	1.1622-1	-92.4	2.0297	28.855	.157	1.0021	-1.0001	0.3397	1.2553	2711.9	.0741	.721	0.3280	1.2656	2722.9	.0712	.724
3500	1.1289-1	-58.2	2.0397	28.853	.160	1.0030	-1.0001	0.3437	1.2522	2748.1	.0767	.718	0.3292	1.2644	2761.5	.0729	.723
3600	1.0974-1	-23.6	2.0494	28.850	.163	1.0042	-1.0001	0.3482	1.2488	2783.5	.0794	.716	0.3303	1.2633	2799.6	.0746	.723
3700	1.0676-1	11.4	2.0590	28.846	.166	1.0059	-1.0002	0.3536	1.2451	2817.9	.0825	.713	0.3314	1.2623	2837.2	.0763	.722
3800	1.0393-1	47.1	2.0685	28.840	.169	1.0082	-1.0003	0.3599	1.2410	2851.3	.0859	.709	0.3323	1.2613	2874.5	.0780	.721
3900	1.0124-1	83.5	2.0780	28.833	.172	1.0112	-1.0004	0.3676	1.2365	2883.6	.0898	.705	0.3333	1.2605	2911.5	.0796	.721
4000	9.8679-2	120.7	2.0874	28.824	.175	1.0152	-1.0005	0.3768	1.2315	2914.9	.0943	.699	0.3341	1.2597	2948.2	.0812	.720
4100	9.6231-2	158.9	2.0968	28.811	.178	1.0202	-1.0007	0.3878	1.2260	2945.2	.0996	.692	0.3350	1.2591	2984.7	.0828	.719
4200	9.3887-2	198.3	2.1063	28.795	.181	1.0267	-1.0009	0.4010	1.2200	2974.5	.1058	.684	0.3357	1.2585	3021.1	.0844	.718
4300	9.1637-2	239.2	2.1159	28.774	.183	1.0347	-1.0012	0.4166	1.2138	3003.1	.1131	.675	0.3364	1.2581	3057.4	.0860	.717
4400	8.9473-2	281.7	2.1257	28.748	.186	1.0445	-1.0016	0.4349	1.2072	3031.0	.1217	.665	0.3371	1.2578	3093.7	.0875	.717
4500	8.7387-2	326.2	2.1357	28.716	.189	1.0563	-1.0021	0.4560	1.2006	3058.6	.1317	.654	0.3377	1.2575	3130.2	.0891	.715
4600	8.5369-2	373.0	2.1460	28.676	.191	1.0701	-1.0027	0.4798	1.1941	3086.1	.1433	.641	0.3382	1.2575	3166.9	.0907	.714
4700	8.3412-2	422.3	2.1566	28.628	.194	1.0861	-1.0034	0.5064	1.1879	3114.0	.1565	.628	0.3387	1.2575	3203.9	.0922	.713
4800	8.1512-2	474.4	2.1676	28.571	.197	1.1040	-1.0042	0.5353	1.1821	3142.4	.1714	.614	0.3392	1.2577	3241.3	.0938	.711
4900	7.9661-2	529.4	2.1789	28.504	.199	1.1237	-1.0051	0.5661	1.1769	3171.6	.1881	.600	0.3396	1.2581	3279.2	.0953	.710
5000	7.7857-2	587.6	2.1907	28.427	.202	1.1451	-1.0061	0.5984	1.1723	3201.8	.2064	.585	0.3400	1.2586	3317.6	.0969	.708
5100	7.6094-2	649.1	2.2028	28.339	.204	1.1678	-1.0072	0.6316	1.1683	3233.2	.2263	.570	0.3404	1.2593	3356.7	.0984	.706
5200	7.4371-2	714.0	2.2154	28.240	.207	1.1915	-1.0085	0.6652	1.1650	3265.8	.2479	.555	0.3407	1.2601	3396.5	.1000	.704
5300	7.2685-2	782.2	2.2284	28.131	.209	1.2160	-1.0098	0.6987	1.1623	3299.6	.2710	.539	0.3410	1.2611	3437.0	.1016	.702
5400	7.1035-2	853.7	2.2418	28.011	.212	1.2410	-1.0112	0.7318	1.1602	3334.7	.2956	.524	0.3412	1.2622	3478.3	.1032	.699

TABLE 14.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.050248; EQUIV. RATIO $\bar{\alpha}$ 0.750; CHEM. EQUIV. RATIO $\bar{\alpha}$ 0.7504; P = 734.797 LB/IN² (50.00 ATM) DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2350 0	-658.7	1.6841	28.860	.095	1.0000	-1.0000	0.2887	1.3129	1902.4	.0372	.735	0.2887	1.3130	1902.4	.0372	.735
1700	1.1624 0	-629.6	1.7018	28.860	.099	1.0000	-1.0000	0.2923	1.3080	1957.2	.0393	.734	0.2922	1.3081	1957.3	.0393	.734
1800	1.0978 0	-600.2	1.7186	28.860	.103	1.0000	-1.0000	0.2956	1.3034	2010.5	.0414	.733	0.2954	1.3036	2010.6	.0414	.733
1900	1.0400 0	-570.5	1.7346	28.860	.107	1.0000	-1.0000	0.2986	1.2994	2062.4	.0434	.733	0.2984	1.2997	2062.6	.0434	.733
2000	9.8803-1	-540.5	1.7500	28.860	.110	1.0000	-1.0000	0.3016	1.2956	2112.9	.0455	.732	0.3013	1.2960	2113.2	.0454	.732
2100	9.4098-1	-510.2	1.7648	28.860	.114	1.0000	-1.0000	0.3044	1.2921	2162.1	.0475	.732	0.3039	1.2927	2162.6	.0474	.732
2200	8.9821-1	-479.6	1.7790	28.860	.118	1.0000	-1.0000	0.3071	1.2887	2210.1	.0494	.731	0.3065	1.2895	2210.8	.0493	.731
2300	8.5915-1	-448.8	1.7927	28.860	.121	1.0000	-1.0000	0.3098	1.2855	2257.0	.0514	.731	0.3089	1.2866	2257.9	.0513	.731
2400	8.2336-1	-417.7	1.8060	28.860	.125	1.0000	-1.0000	0.3124	1.2825	2302.8	.0534	.730	0.3112	1.2839	2304.1	.0532	.730
2500	7.9042-1	-386.3	1.8188	28.860	.128	1.0000	-1.0000	0.3149	1.2796	2347.6	.0553	.730	0.3133	1.2814	2349.3	.0550	.730
2600	7.6002-1	-354.7	1.8312	28.860	.132	1.0000	-1.0000	0.3174	1.2769	2391.6	.0573	.729	0.3153	1.2791	2393.7	.0569	.729
2700	7.3187-1	-322.8	1.8432	28.860	.135	1.0001	-1.0000	0.3198	1.2742	2434.6	.0592	.729	0.3173	1.2770	2437.2	.0587	.729
2800	7.0573-1	-290.7	1.8549	28.860	.138	1.0001	-1.0000	0.3222	1.2716	2476.7	.0612	.728	0.3191	1.2750	2480.0	.0606	.728
2900	6.8139-1	-258.4	1.8662	28.859	.142	1.0002	-1.0000	0.3246	1.2691	2518.1	.0632	.727	0.3208	1.2731	2522.0	.0624	.728
3000	6.5867-1	-225.8	1.8773	28.859	.145	1.0003	-1.0000	0.3270	1.2667	2558.7	.0652	.727	0.3224	1.2714	2563.4	.0642	.727
3100	6.3742-1	-193.0	1.8880	28.859	.148	1.0004	-1.0000	0.3295	1.2642	2598.5	.0672	.726	0.3239	1.2697	2604.1	.0660	.726
3200	6.1749-1	-159.9	1.8985	28.858	.151	1.0006	-1.0000	0.3320	1.2618	2637.6	.0692	.725	0.3254	1.2682	2644.2	.0678	.725
3300	5.9877-1	-126.6	1.9088	28.858	.154	1.0008	-1.0000	0.3346	1.2594	2675.9	.0713	.723	0.3267	1.2668	2683.8	.0695	.725
3400	5.8114-1	-93.0	1.9188	28.857	.157	1.0012	-1.0000	0.3374	1.2569	2713.5	.0735	.722	0.3280	1.2655	2722.8	.0712	.724
3500	5.6451-1	-59.1	1.9286	28.856	.160	1.0017	-1.0001	0.3404	1.2544	2750.4	.0757	.721	0.3292	1.2643	2761.3	.0729	.723
3600	5.4880-1	-24.9	1.9383	28.854	.163	1.0023	-1.0001	0.3436	1.2518	2786.6	.0780	.719	0.3303	1.2632	2799.3	.0746	.723
3700	5.3393-1	9.6	1.9477	28.852	.166	1.0032	-1.0001	0.3473	1.2490	2822.0	.0805	.717	0.3314	1.2622	2836.9	.0763	.722
3800	5.1982-1	44.6	1.9570	28.849	.169	1.0043	-1.0001	0.3513	1.2461	2856.7	.0831	.715	0.3324	1.2612	2874.0	.0780	.721
3900	5.0643-1	79.9	1.9662	28.845	.172	1.0058	-1.0002	0.3560	1.2430	2890.6	.0859	.713	0.3333	1.2603	2910.7	.0796	.721
4000	4.9368-1	115.8	1.9753	28.840	.175	1.0078	-1.0003	0.3613	1.2396	2923.7	.0891	.710	0.3342	1.2595	2947.1	.0812	.720
4100	4.8154-1	152.2	1.9843	28.834	.178	1.0103	-1.0003	0.3676	1.2360	2956.0	.0925	.706	0.3350	1.2588	2983.2	.0828	.719
4200	4.6994-1	189.3	1.9932	28.826	.181	1.0135	-1.0005	0.3748	1.2320	2987.5	.0964	.702	0.3358	1.2581	3019.0	.0844	.719
4300	4.5884-1	227.2	2.0022	28.815	.183	1.0174	-1.0006	0.3832	1.2278	3018.2	.1008	.697	0.3365	1.2576	3054.6	.0860	.718
4400	4.4821-1	266.0	2.0111	28.802	.186	1.0223	-1.0008	0.3931	1.2233	3048.2	.1059	.691	0.3372	1.2571	3090.0	.0875	.717
4500	4.3800-1	305.9	2.0200	28.786	.189	1.0283	-1.0011	0.4044	1.2185	3077.5	.1116	.685	0.3378	1.2566	3125.3	.0891	.716
4600	4.2818-1	347.0	2.0291	28.766	.192	1.0355	-1.0014	0.4174	1.2136	3106.2	.1181	.677	0.3384	1.2563	3160.5	.0907	.715
4700	4.1871-1	389.4	2.0382	28.741	.194	1.0440	-1.0017	0.4322	1.2085	3134.6	.1255	.669	0.3389	1.2561	3195.7	.0922	.714
4800	4.0957-1	433.4	2.0475	28.712	.197	1.0538	-1.0021	0.4487	1.2034	3162.7	.1338	.660	0.3394	1.2559	3231.0	.0937	.713
4900	4.0072-1	479.2	2.0569	28.677	.200	1.0651	-1.0027	0.4670	1.1984	3190.8	.1432	.651	0.3399	1.2559	3266.4	.0953	.712
5000	3.9214-1	526.9	2.0665	28.636	.202	1.0778	-1.0032	0.4869	1.1936	3219.1	.1536	.640	0.3403	1.2559	3302.0	.0968	.711
5100	3.8381-1	576.6	2.0764	28.588	.205	1.0918	-1.0039	0.5081	1.1891	3247.7	.1651	.630	0.3407	1.2561	3337.9	.0983	.709
5200	3.7570-1	628.6	2.0865	28.533	.207	1.1070	-1.0047	0.5305	1.1850	3276.8	.1776	.619	0.3411	1.2563	3374.0	.0998	.708
5300	3.6781-1	682.8	2.0968	28.470	.210	1.1232	-1.0055	0.5536	1.1813	3306.6	.1911	.607	0.3414	1.2567	3410.6	.1013	.707
5400	3.6011-1	739.3	2.1074	28.400	.212	1.1402	-1.0064	0.5772	1.1780	3337.2	.2055	.596	0.3418	1.2572	3447.5	.1028	.705

TABLE 14C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.050248; EQUIV.RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7504;
 DRY AIR

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES					T R		
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S		COND BTU/ FT HR R	PRAN R
PRESSURE = 0.01 ATM																
360	1.223-3	-1066.3	1.7035	28.860	0.2528	1.145-3	30.098	.0314	1.000	-1.000	0.2345	1.3914	910	.0100	.734	360
400	1.097-3	-1054.3	1.7351	28.860	0.4107	1.029-3	30.058	.0343	1.000	-1.000	0.2355	1.3899	959	.0110	.731	400
440	9.582-4	-1016.2	1.8247	28.860	2.0726	9.207-4	29.584	.0361	1.000	-1.000	0.2411	1.3859	1012	.0118	.740	440
PRESSURE = 0.10 ATM																
360	1.223-2	-1066.4	1.5611	28.860	0.2444	1.145-2	30.100	.0314	1.000	-1.000	0.2345	1.3914	910	.0100	.734	360
400	1.101-2	-1056.4	1.5874	28.860	0.2628	1.030-2	30.096	.0344	1.000	-1.000	0.2351	1.3902	958	.0111	.730	400
440	9.966-3	-1043.8	1.6174	28.860	0.4181	9.352-3	30.048	.0372	1.000	-1.000	0.2362	1.3884	1005	.0121	.727	440
480	8.856-3	-1012.1	1.6858	28.860	1.4758	8.467-3	29.680	.0391	1.000	-1.000	0.2408	1.3848	1055	.0128	.734	480
520	7.600-3	-948.5	1.8141	28.860	0.2505	7.600-3	28.860	.0400	1.000	-1.000	0.2505	1.3787	1111	.0133	.752	520
PRESSURE = 1.00 ATM																
360	1.223-1	-1066.4	1.4189	28.860	0.2435	1.145-1	30.100	.0314	1.000	-1.000	0.2345	1.3914	910	.0100	.734	360
400	1.101-1	-1056.6	1.4447	28.860	0.2481	1.030-1	30.099	.0344	1.000	-1.000	0.2351	1.3902	958	.0111	.730	400
440	1.000-1	-1046.4	1.4690	28.860	0.2663	9.366-2	30.095	.0373	1.000	-1.000	0.2357	1.3887	1005	.0121	.726	440
480	9.142-2	-1034.3	1.4953	28.860	0.3676	8.575-2	30.058	.0400	1.000	-1.000	0.2368	1.3869	1049	.0131	.724	480
520	8.320-2	-1005.8	1.5524	28.860	0.6646	7.871-2	29.887	.0423	1.000	-1.000	0.2394	1.3842	1094	.0139	.727	520
537	7.950-2	-992.8	1.5771	28.860	0.9216	7.585-2	29.724	.0430	1.000	-1.000	0.2415	1.3825	1114	.0142	.731	537
560	7.354-2	-964.6	1.6283	28.860	1.5600	7.169-2	29.315	.0436	1.000	-1.000	0.2464	1.3792	1145	.0145	.740	560
600	6.587-2	-928.4	1.6917	28.860	0.2524	6.587-2	28.860	.0452	1.000	-1.000	0.2524	1.3748	1192	.0152	.751	600
PRESSURE = 10.00 ATM																
360	1.222 0	-1066.4	1.2767	28.860	0.2435	1.145 0	30.100	.0314	1.000	-1.000	0.2345	1.3914	910	.0100	.734	360
400	1.100 0	-1056.6	1.3025	28.860	0.2466	1.030 0	30.100	.0344	1.000	-1.000	0.2351	1.3902	958	.0111	.730	400
440	9.998-1	-1046.7	1.3262	28.860	0.2512	9.368-1	30.099	.0373	1.000	-1.000	0.2357	1.3887	1005	.0121	.726	440
480	9.163-1	-1036.4	1.3485	28.860	0.2643	8.586-1	30.096	.0401	1.000	-1.000	0.2365	1.3871	1049	.0131	.723	480
520	8.447-1	-1015.4	1.3909	28.860	0.3228	7.921-1	30.078	.0427	1.000	-1.000	0.2374	1.3852	1091	.0140	.722	520
537	8.174-1	-1009.8	1.4014	28.860	0.3463	7.671-1	30.062	.0438	1.000	-1.000	0.2379	1.3843	1108	.0144	.722	537
560	7.807-1	-1001.2	1.4172	28.860	0.3994	7.341-1	30.021	.0452	1.000	-1.000	0.2389	1.3829	1133	.0149	.723	560
600	7.191-1	-982.1	1.4500	28.860	0.5794	6.816-1	29.862	.0474	1.000	-1.000	0.2415	1.3800	1174	.0157	.728	600
640	6.529-1	-952.1	1.4982	28.860	0.9631	6.309-1	29.485	.0490	1.000	-1.000	0.2465	1.3759	1219	.0164	.737	640
680	5.812-1	-908.2	1.5650	28.860	0.2546	5.812-1	28.860	.0501	1.000	-1.000	0.2546	1.3704	1267	.0170	.750	680
PRESSURE = 50.00 ATM																
360	6.075 0	-1066.4	1.1773	28.860	0.2435	5.725 0	30.100	.0314	1.000	-1.000	0.2345	1.3914	910	.0100	.734	360
400	5.471 0	-1056.6	1.2031	28.860	0.2465	5.152 0	30.100	.0344	1.000	-1.000	0.2351	1.3902	958	.0111	.730	400
440	4.977 0	-1046.7	1.2267	28.860	0.2499	4.684 0	30.100	.0373	1.000	-1.000	0.2357	1.3887	1005	.0121	.726	440
480	4.564 0	-1036.6	1.2487	28.860	0.2551	4.294 0	30.099	.0401	1.000	-1.000	0.2364	1.3871	1049	.0131	.723	480
520	4.215 0	-1016.2	1.2898	28.860	0.2934	3.963 0	30.096	.0428	1.000	-1.000	0.2373	1.3853	1091	.0141	.722	520
537	4.083 0	-1011.3	1.2991	28.860	0.2983	3.839 0	30.092	.0439	1.000	-1.000	0.2376	1.3845	1108	.0144	.722	537
560	3.911 0	-1004.2	1.3120	28.860	0.3090	3.678 0	30.084	.0453	1.000	-1.000	0.2382	1.3833	1131	.0150	.722	560
600	3.642 0	-991.2	1.3344	28.860	0.3442	3.430 0	30.052	.0478	1.000	-1.000	0.2395	1.3810	1171	.0158	.723	600
640	3.395 0	-976.2	1.3586	28.860	0.4127	3.207 0	29.977	.0501	1.000	-1.000	0.2413	1.3784	1210	.0166	.726	640
680	3.155 0	-957.5	1.3869	28.860	0.5334	3.003 0	29.821	.0521	1.000	-1.000	0.2440	1.3753	1249	.0174	.730	680
720	2.909 0	-932.5	1.4226	28.860	0.7329	2.808 0	29.532	.0538	1.000	-1.000	0.2483	1.3714	1289	.0182	.735	720
760	2.643 0	-897.3	1.4702	28.860	1.0560	2.617 0	29.042	.0551	1.000	-1.000	0.2550	1.3665	1333	.0189	.745	760

TABLE 15A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.066997; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.8269;
 DRY AIR; GASEOUS COMPOSITION: CO2= .12842; H2O= .13453; N2= .72832; O2= .00000; AR= .00874

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
360	1.0966-1	5.4828 0	-1283.3	1.8768	1.7181	1.5595	1.4009	1.2900	0.2500	1.3804	925.8	.0275	.0087	.7857	360
380	1.0388-1	5.1942 0	-1278.3	1.8903	1.7317	1.5730	1.4144	1.3035	0.2504	1.3795	950.9	.0290	.0093	.7806	380
400	9.8690-2	4.9345 0	-1273.3	1.9031	1.7445	1.5859	1.4273	1.3164	0.2508	1.3786	975.3	.0304	.0098	.7762	400
420	9.3991-2	4.6995 0	-1268.3	1.9154	1.7568	1.5981	1.4395	1.3286	0.2513	1.3777	999.0	.0319	.0104	.7724	420
440	8.9718-2	4.4859 0	-1263.3	1.9271	1.7685	1.6098	1.4512	1.3403	0.2517	1.3768	1022.2	.0333	.0109	.7693	440
460	8.5818-2	4.2909 0	-1258.2	1.9383	1.7797	1.6210	1.4624	1.3515	0.2522	1.3758	1044.8	.0347	.0114	.7666	460
480	8.2242-2	4.1121 0	-1253.2	1.9490	1.7904	1.6318	1.4732	1.3623	0.2527	1.3747	1066.8	.0361	.0119	.7646	480
500	7.8952-2	3.9476 0	-1248.1	1.9594	1.8007	1.6421	1.4835	1.3726	0.2533	1.3737	1088.4	.0374	.0124	.7630	500
520	7.5916-2	3.7958 0	-1243.0	1.9693	1.8107	1.6521	1.4934	1.3826	0.2538	1.3726	1109.5	.0388	.0129	.7618	520
537	7.3557-2	3.6779 0	-1238.8	1.9773	1.8187	1.6601	1.5015	1.3906	0.2543	1.3716	1126.8	.0399	.0133	.7611	537
540	7.3104-2	3.6552 0	-1238.0	1.9789	1.8203	1.6616	1.5030	1.3922	0.2544	1.3714	1130.2	.0401	.0134	.7610	540
560	7.0493-2	3.5247 0	-1232.9	1.9882	1.8295	1.6709	1.5123	1.4014	0.2549	1.3703	1150.4	.0414	.0139	.7610	560
580	6.8062-2	3.4031 0	-1227.8	1.9971	1.8385	1.6799	1.5212	1.4104	0.2555	1.3691	1170.3	.0427	.0143	.7611	580
600	6.5793-2	3.2897 0	-1222.6	2.0058	1.8472	1.6885	1.5299	1.4190	0.2561	1.3679	1189.8	.0439	.0148	.7613	600
620	6.3671-2	3.1836 0	-1217.5	2.0142	1.8556	1.6969	1.5383	1.4275	0.2568	1.3667	1208.9	.0452	.0152	.7615	620
640	6.1681-2	3.0841 0	-1212.4	2.0224	1.8637	1.7051	1.5465	1.4356	0.2574	1.3654	1227.7	.0464	.0157	.7613	640
660	5.9812-2	2.9906 0	-1207.2	2.0303	1.8717	1.7130	1.5544	1.4435	0.2581	1.3642	1246.2	.0477	.0162	.7606	660
680	5.8053-2	2.9027 0	-1202.1	2.0380	1.8794	1.7208	1.5621	1.4513	0.2587	1.3629	1264.3	.0489	.0166	.7598	680
700	5.6394-2	2.8197 0	-1196.9	2.0455	1.8869	1.7283	1.5696	1.4588	0.2594	1.3616	1282.1	.0501	.0171	.7589	700
720	5.4828-2	2.7414 0	-1191.7	2.0528	1.8942	1.7356	1.5770	1.4661	0.2601	1.3603	1299.7	.0513	.0176	.7580	720
740	5.3346-2	2.6673 0	-1186.5	2.0600	1.9013	1.7427	1.5841	1.4732	0.2608	1.3590	1317.0	.0524	.0180	.7576	740
760	5.1942-2	2.5971 0	-1181.2	2.0669	1.9083	1.7497	1.5911	1.4802	0.2615	1.3576	1334.0	.0536	.0185	.7573	760
780	5.0610-2	2.5305 0	-1176.0	2.0737	1.9151	1.7565	1.5979	1.4870	0.2622	1.3563	1350.8	.0547	.0189	.7571	780
800	4.9345-2	2.4673 0	-1170.8	2.0804	1.9218	1.7631	1.6045	1.4936	0.2630	1.3549	1367.3	.0558	.0194	.7570	800
820	4.8142-2	2.4071 0	-1165.5	2.0869	1.9283	1.7696	1.6110	1.5001	0.2637	1.3536	1383.6	.0569	.0198	.7569	820
840	4.6995-2	2.3498 0	-1160.2	2.0932	1.9346	1.7760	1.6174	1.5065	0.2645	1.3522	1399.7	.0580	.0203	.7569	840
860	4.5902-2	2.2951 0	-1154.9	2.0995	1.9409	1.7822	1.6236	1.5127	0.2653	1.3508	1415.5	.0591	.0207	.7570	860
880	4.4859-2	2.2430 0	-1149.6	2.1056	1.9470	1.7883	1.6297	1.5188	0.2660	1.3495	1431.2	.0602	.0211	.7570	880
900	4.3862-2	2.1931 0	-1144.3	2.1116	1.9530	1.7943	1.6357	1.5248	0.2668	1.3481	1446.6	.0612	.0216	.7571	900
920	4.2909-2	2.1454 0	-1138.9	2.1174	1.9588	1.8002	1.6416	1.5307	0.2676	1.3467	1461.8	.0623	.0220	.7569	920
940	4.1996-2	2.0998 0	-1133.6	2.1232	1.9646	1.8060	1.6473	1.5365	0.2684	1.3453	1476.9	.0633	.0225	.7566	940
960	4.1121-2	2.0560 0	-1128.2	2.1289	1.9702	1.8116	1.6530	1.5421	0.2692	1.3439	1491.7	.0644	.0229	.7563	960
980	4.0282-2	2.0141 0	-1122.8	2.1344	1.9758	1.8172	1.6586	1.5477	0.2700	1.3426	1506.4	.0654	.0234	.7559	980
1000	3.9476-2	1.9738 0	-1117.4	2.1399	1.9813	1.8226	1.6640	1.5531	0.2708	1.3412	1520.9	.0664	.0238	.7555	1000
1020	3.8702-2	1.9351 0	-1112.0	2.1453	1.9866	1.8280	1.6694	1.5585	0.2716	1.3398	1535.3	.0674	.0243	.7551	1020
1040	3.7958-2	1.8979 0	-1106.5	2.1505	1.9919	1.8333	1.6747	1.5638	0.2724	1.3384	1549.5	.0684	.0247	.7547	1040
1060	3.7242-2	1.8621 0	-1101.1	2.1557	1.9971	1.8385	1.6799	1.5690	0.2733	1.3371	1563.5	.0694	.0252	.7543	1060
1080	3.6552-2	1.8276 0	-1095.6	2.1609	2.0022	1.8436	1.6850	1.5741	0.2741	1.3357	1577.4	.0704	.0256	.7538	1080
1100	3.5887-2	1.7944 0	-1090.1	2.1659	2.0073	1.8486	1.6900	1.5792	0.2749	1.3344	1591.1	.0714	.0261	.7533	1100
1120	3.5246-2	1.7623 0	-1084.6	2.1709	2.0122	1.8536	1.6950	1.5841	0.2758	1.3330	1604.7	.0724	.0265	.7527	1120
1140	3.4628-2	1.7314 0	-1079.1	2.1757	2.0171	1.8585	1.6999	1.5890	0.2766	1.3317	1618.1	.0734	.0270	.7522	1140

TABLE 15A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.066997; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.8269;
 DRY AIR; GASEOUS COMPOSITION: CO2= .12842; H2O= .13453; N2= .72832; O2= .00000; AR= .00874

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	
1160	3.4031-2	1.7016 0	-1073.5	2.1806	2.0219	1.8633	1.7047	1.5938	0.2774	1.3303	1631.5	.0743	.0274	.7516	1160
1180	3.3454-2	1.6727 0	-1068.0	2.1853	2.0267	1.8681	1.7094	1.5986	0.2783	1.3290	1644.6	.0753	.0279	.7511	1180
1200	3.2897-2	1.6448 0	-1062.4	2.1900	2.0314	1.8727	1.7141	1.6033	0.2791	1.3277	1657.7	.0762	.0283	.7505	1200
1220	3.2357-2	1.6179 0	-1056.8	2.1946	2.0360	1.8774	1.7187	1.6079	0.2799	1.3264	1670.6	.0772	.0288	.7500	1220
1240	3.1836-2	1.5918 0	-1051.2	2.1992	2.0406	1.8819	1.7233	1.6124	0.2808	1.3251	1683.5	.0781	.0293	.7494	1240
1260	3.1330-2	1.5665 0	-1045.6	2.2037	2.0451	1.8864	1.7278	1.6169	0.2816	1.3238	1696.2	.0790	.0297	.7489	1260
1280	3.0841-2	1.5420 0	-1039.9	2.2081	2.0495	1.8909	1.7322	1.6214	0.2825	1.3226	1708.8	.0800	.0302	.7483	1280
1300	3.0366-2	1.5183 0	-1034.3	2.2125	2.0539	1.8953	1.7366	1.6258	0.2833	1.3213	1721.2	.0809	.0306	.7478	1300
1320	2.9906-2	1.4953 0	-1028.6	2.2168	2.0582	1.8996	1.7410	1.6301	0.2841	1.3201	1733.6	.0818	.0311	.7473	1320
1340	2.9460-2	1.4730 0	-1022.9	2.2211	2.0625	1.9039	1.7452	1.6344	0.2850	1.3188	1745.9	.0827	.0316	.7468	1340
1360	2.9027-2	1.4513 0	-1017.2	2.2253	2.0667	1.9081	1.7495	1.6386	0.2858	1.3176	1758.0	.0836	.0320	.7463	1360
1380	2.8606-2	1.4303 0	-1011.5	2.2295	2.0709	1.9123	1.7538	1.6428	0.2866	1.3164	1770.1	.0845	.0325	.7458	1380
1400	2.8197-2	1.4099 0	-1005.7	2.2336	2.0750	1.9164	1.7578	1.6469	0.2874	1.3152	1782.1	.0854	.0329	.7453	1400
1420	2.7800-2	1.3900 0	-1000.0	2.2377	2.0791	1.9205	1.7619	1.6510	0.2882	1.3140	1794.0	.0862	.0334	.7448	1420
1440	2.7414-2	1.3707 0	-994.2	2.2418	2.0831	1.9245	1.7659	1.6550	0.2891	1.3129	1805.8	.0871	.0338	.7444	1440
1460	2.7038-2	1.3519 0	-988.4	2.2458	2.0871	1.9285	1.7699	1.6590	0.2899	1.3117	1817.5	.0880	.0343	.7440	1460
1480	2.6673-2	1.3337 0	-982.6	2.2497	2.0911	1.9325	1.7738	1.6630	0.2907	1.3106	1829.1	.0889	.0347	.7436	1480
1500	2.6317-2	1.3159 0	-976.8	2.2536	2.0950	1.9364	1.7777	1.6669	0.2915	1.3095	1840.6	.0897	.0352	.7433	1500
1520	2.5971-2	1.2986 0	-971.0	2.2575	2.0989	1.9402	1.7816	1.6707	0.2923	1.3084	1852.1	.0906	.0356	.7430	1520
1540	2.5634-2	1.2817 0	-965.1	2.2613	2.1027	1.9441	1.7854	1.6746	0.2931	1.3073	1863.4	.0914	.0361	.7426	1540
1560	2.5305-2	1.2653 0	-959.2	2.2651	2.1065	1.9478	1.7892	1.6784	0.2938	1.3062	1874.7	.0923	.0365	.7423	1560
1580	2.4985-2	1.2492 0	-953.4	2.2688	2.1102	1.9516	1.7930	1.6821	0.2946	1.3052	1886.0	.0931	.0370	.7420	1580
1600	2.4673-2	1.2336 0	-947.5	2.2726	2.1139	1.9553	1.7967	1.6858	0.2954	1.3042	1897.1	.0940	.0374	.7418	1600
1620	2.4368-2	1.2184 0	-941.5	2.2762	2.1176	1.9590	1.8004	1.6895	0.2961	1.3031	1908.2	.0948	.0379	.7415	1620
1640	2.4071-2	1.2035 0	-935.6	2.2799	2.1212	1.9626	1.8040	1.6931	0.2969	1.3021	1919.2	.0956	.0383	.7412	1640
1660	2.3781-2	1.1890 0	-929.7	2.2835	2.1248	1.9662	1.8076	1.6967	0.2976	1.3012	1930.1	.0965	.0387	.7409	1660
1680	2.3498-2	1.1749 0	-923.7	2.2870	2.1284	1.9698	1.8112	1.7003	0.2984	1.3002	1941.0	.0973	.0392	.7407	1680
1700	2.3221-2	1.1611 0	-917.7	2.2906	2.1320	1.9733	1.8147	1.7038	0.2991	1.2992	1951.8	.0981	.0396	.7404	1700
1720	2.2951-2	1.1476 0	-911.7	2.2941	2.1355	1.9768	1.8182	1.7073	0.2998	1.2983	1962.5	.0989	.0401	.7402	1720
1740	2.2687-2	1.1344 0	-905.7	2.2975	2.1389	1.9803	1.8217	1.7108	0.3005	1.2974	1973.2	.0997	.0405	.7399	1740
1760	2.2430-2	1.1215 0	-899.7	2.3010	2.1424	1.9837	1.8251	1.7142	0.3012	1.2965	1983.8	.1005	.0409	.7397	1760
1780	2.2178-2	1.1089 0	-893.7	2.3044	2.1458	1.9871	1.8285	1.7177	0.3019	1.2956	1994.4	.1013	.0414	.7395	1780
1800	2.1931-2	1.0966 0	-887.6	2.3078	2.1491	1.9905	1.8319	1.7210	0.3026	1.2948	2004.9	.1021	.0418	.7393	1800
1900	2.0777-2	1.0388 0	-857.2	2.3242	2.1656	2.0070	1.8483	1.7375	0.3058	1.2908	2056.7	.1060	.0439	.7382	1900
2000	1.9738-2	9.8690-1	-826.5	2.3400	2.1814	2.0227	1.8641	1.7532	0.3089	1.2871	2107.1	.1099	.0460	.7373	2000
2100	1.8798-2	9.3991-1	-795.5	2.3551	2.1965	2.0379	1.8793	1.7684	0.3117	1.2837	2156.3	.1136	.0481	.7365	2100
2200	1.7944-2	8.9718-1	-764.1	2.3697	2.2111	2.0524	1.8938	1.7829	0.3145	1.2805	2204.3	.1173	.0501	.7357	2200
2300	1.7164-2	8.5818-1	-732.6	2.3837	2.2251	2.0665	1.9079	1.7970	0.3171	1.2776	2251.2	.1209	.0522	.7350	2300
2400	1.6448-2	8.2242-1	-700.7	2.3973	2.2386	2.0800	1.9214	1.8105	0.3195	1.2749	2297.2	.1245	.0542	.7344	2400
2500	1.5790-2	7.8952-1	-668.7	2.4104	2.2517	2.0931	1.9345	1.8236	0.3218	1.2723	2342.3	.1280	.0561	.7337	2500

TABLE 15A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.066997; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.8269;
 DRY AIR; GASEOUS COMPOSITION: CO2= .12842; H2O= .13453; N2= .72832; O2= .00000; AR= .00874

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
2600	1.5183-2	7.5916-1	-636.4	2.4230	2.2644	2.1058	1.9472	1.8363	0.3240	1.2700	2386.5	.1314	.0581	.7330	2600
2700	1.4621-2	7.3104-1	-603.9	2.4353	2.2767	2.1180	1.9594	1.8486	0.3261	1.2678	2429.8	.1348	.0600	.7323	2700
2800	1.4099-2	7.0493-1	-571.2	2.4472	2.2886	2.1299	1.9713	1.8604	0.3280	1.2658	2472.5	.1382	.0620	.7315	2800
2900	1.3612-2	6.8062-1	-538.3	2.4587	2.3001	2.1415	1.9829	1.8720	0.3299	1.2639	2514.4	.1415	.0639	.7307	2900
3000	1.3159-2	6.5793-1	-505.2	2.4699	2.3113	2.1527	1.9941	1.8832	0.3316	1.2622	2555.6	.1448	.0658	.7299	3000
3100	1.2734-2	6.3671-1	-471.9	2.4809	2.3222	2.1636	2.0050	1.8941	0.3333	1.2606	2596.2	.1481	.0677	.7291	3100
3200	1.2336-2	6.1681-1	-438.5	2.4915	2.3328	2.1742	2.0156	1.9047	0.3348	1.2591	2636.1	.1513	.0695	.7282	3200
3300	1.1962-2	5.9812-1	-405.0	2.5018	2.3432	2.1845	2.0259	1.9150	0.3363	1.2577	2675.5	.1544	.0714	.7274	3300
3400	1.1611-2	5.8053-1	-371.3	2.5118	2.3532	2.1946	2.0360	1.9251	0.3376	1.2563	2714.3	.1576	.0732	.7265	3400
3500	1.1279-2	5.6394-1	-337.5	2.5216	2.3630	2.2044	2.0458	1.9349	0.3389	1.2551	2752.6	.1606	.0750	.7256	3500
3600	1.0966-2	5.4828-1	-303.5	2.5312	2.3726	2.2140	2.0553	1.9445	0.3401	1.2540	2790.4	.1637	.0768	.7247	3600
3700	1.0669-2	5.3346-1	-269.4	2.5405	2.3819	2.2233	2.0647	1.9538	0.3413	1.2529	2827.7	.1667	.0786	.7239	3700
3800	1.0388-2	5.1942-1	-235.3	2.5497	2.3910	2.2324	2.0738	1.9629	0.3423	1.2519	2864.5	.1697	.0803	.7231	3800
3900	1.0122-2	5.0610-1	-201.0	2.5586	2.3999	2.2413	2.0827	1.9718	0.3433	1.2510	2900.9	.1727	.0821	.7222	3900
4000	9.8690-3	4.9345-1	-166.6	2.5673	2.4086	2.2500	2.0914	1.9805	0.3443	1.2501	2936.8	.1756	.0838	.7214	4000
4100	9.6283-3	4.8142-1	-132.1	2.5758	2.4172	2.2585	2.0999	1.9890	0.3452	1.2493	2972.3	.1785	.0855	.7205	4100
4200	9.3991-3	4.6995-1	-97.6	2.5841	2.4255	2.2669	2.1082	1.9974	0.3460	1.2486	3007.5	.1813	.0872	.7195	4200
4300	9.1805-3	4.5902-1	-62.9	2.5923	2.4336	2.2750	2.1164	2.0055	0.3468	1.2479	3042.2	.1842	.0889	.7186	4300
4400	8.9718-3	4.4859-1	-28.2	2.6002	2.4416	2.2830	2.1244	2.0135	0.3476	1.2472	3076.5	.1870	.0906	.7176	4400
4500	8.7725-3	4.3862-1	6.6	2.6081	2.4494	2.2908	2.1322	2.0213	0.3483	1.2466	3110.5	.1898	.0922	.7166	4500
4600	8.5817-3	4.2909-1	41.5	2.6157	2.4571	2.2985	2.1399	2.0290	0.3489	1.2460	3144.1	.1925	.0939	.7154	4600
4700	8.3992-3	4.1996-1	76.4	2.6232	2.4646	2.3060	2.1474	2.0365	0.3496	1.2454	3177.4	.1953	.0956	.7143	4700
4800	8.2242-3	4.1121-1	111.4	2.6306	2.4720	2.3134	2.1547	2.0439	0.3502	1.2449	3210.4	.1980	.0972	.7132	4800
4900	8.0563-3	4.0282-1	146.4	2.6378	2.4792	2.3206	2.1620	2.0511	0.3507	1.2444	3243.0	.2006	.0988	.7121	4900
5000	7.8952-3	3.9476-1	181.5	2.6449	2.4863	2.3277	2.1690	2.0582	0.3513	1.2439	3275.3	.2033	.1004	.7111	5000
5100	7.7404-3	3.8702-1	216.7	2.6519	2.4933	2.3346	2.1760	2.0651	0.3518	1.2435	3307.3	.2059	.1020	.7100	5100
5200	7.5915-3	3.7958-1	251.9	2.6587	2.5001	2.3415	2.1828	2.0720	0.3523	1.2431	3339.0	.2086	.1036	.7091	5200
5300	7.4483-3	3.7242-1	287.1	2.6654	2.5068	2.3482	2.1896	2.0787	0.3528	1.2426	3370.4	.2112	.1052	.7081	5300
5400	7.3104-3	3.6552-1	322.4	2.6720	2.5134	2.3548	2.1962	2.0853	0.3533	1.2423	3401.5	.2137	.1068	.7072	5400

TABLE 15.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.066997; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 0.14696 LB/IN² (0.01 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS VS COND PRAN											
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	FROZEN GAM	COMPOSITIONS VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4672-4	-947.5	2.2726	28.827	.094	1.0000	-1.0000	0.2954	1.3042	1897.1	.0374	.742	0.2954	1.3042	1897.1	.0374	.742
1700	2.3221-4	-917.7	2.2906	28.827	.098	1.0000	-1.0000	0.2991	1.2992	1951.8	.0396	.740	0.2991	1.2992	1951.8	.0396	.740
1800	2.1931-4	-887.6	2.3078	28.827	.102	1.0000	-1.0000	0.3026	1.2947	2004.9	.0418	.739	0.3026	1.2948	2004.9	.0418	.739
1900	2.0777-4	-857.2	2.3242	28.827	.106	1.0000	-1.0000	0.3059	1.2907	2056.6	.0439	.738	0.3058	1.2908	2056.7	.0439	.738
2000	1.9738-4	-826.5	2.3400	28.827	.110	1.0000	-1.0000	0.3090	1.2869	2107.0	.0461	.737	0.3089	1.2871	2107.1	.0460	.737
2100	1.8798-4	-795.4	2.3551	28.827	.114	1.0001	-1.0000	0.3121	1.2833	2156.0	.0482	.736	0.3117	1.2837	2156.3	.0481	.736
2200	1.7943-4	-764.1	2.3697	28.827	.117	1.0002	-1.0000	0.3152	1.2798	2203.7	.0503	.735	0.3145	1.2805	2204.3	.0501	.736
2300	1.7163-4	-732.4	2.3838	28.826	.121	1.0004	-1.0000	0.3185	1.2763	2250.1	.0525	.734	0.3171	1.2776	2251.3	.0522	.735
2400	1.6448-4	-700.3	2.3974	28.825	.124	1.0008	-1.0000	0.3222	1.2725	2295.1	.0548	.733	0.3195	1.2749	2297.3	.0542	.734
2500	1.5789-4	-667.9	2.4107	28.824	.128	1.0014	-1.0000	0.3267	1.2682	2338.6	.0572	.731	0.3218	1.2724	2342.4	.0561	.734
2600	1.5181-4	-635.0	2.4236	28.822	.131	1.0025	-1.0001	0.3322	1.2632	2380.3	.0600	.728	0.3240	1.2701	2386.7	.0581	.733
2700	1.4616-4	-601.4	2.4363	28.818	.135	1.0043	-1.0001	0.3396	1.2572	2420.0	.0632	.725	0.3261	1.2679	2430.3	.0600	.732
2800	1.4092-4	-567.0	2.4488	28.813	.138	1.0071	-1.0002	0.3493	1.2499	2457.5	.0670	.720	0.3280	1.2660	2473.3	.0620	.731
2900	1.3601-4	-531.4	2.4613	28.803	.142	1.0112	-1.0003	0.3623	1.2412	2492.6	.0718	.714	0.3299	1.2643	2515.7	.0639	.730
3000	1.3142-4	-494.4	2.4738	28.790	.145	1.0172	-1.0004	0.3797	1.2308	2525.2	.0779	.705	0.3316	1.2627	2557.7	.0658	.729
3100	1.2709-4	-455.3	2.4866	28.770	.148	1.0256	-1.0007	0.4026	1.2190	2555.5	.0858	.694	0.3332	1.2613	2599.5	.0677	.728
3200	1.2300-4	-413.6	2.4999	28.741	.151	1.0372	-1.0010	0.4323	1.2062	2584.0	.0960	.680	0.3347	1.2602	2641.2	.0696	.727
3300	1.1911-4	-368.6	2.5137	28.702	.154	1.0527	-1.0015	0.4702	1.1928	2611.2	.1094	.663	0.3360	1.2593	2683.0	.0714	.726
3400	1.1539-4	-319.3	2.5284	28.649	.157	1.0731	-1.0021	0.5177	1.1794	2638.0	.1268	.642	0.3373	1.2587	2725.2	.0733	.724
3500	1.1181-4	-264.7	2.5443	28.578	.160	1.0992	-1.0029	0.5761	1.1666	2665.3	.1494	.618	0.3385	1.2584	2768.1	.0751	.722
3600	1.0836-4	-203.6	2.5614	28.485	.163	1.1319	-1.0040	0.6464	1.1550	2693.9	.1786	.590	0.3395	1.2584	2812.0	.0769	.720
3700	1.0499-4	-135.0	2.5803	28.368	.166	1.1722	-1.0054	0.7297	1.1447	2724.6	.2159	.561	0.3405	1.2588	2857.2	.0788	.717
3800	1.0170-4	-57.3	2.6010	28.220	.169	1.2207	-1.0072	0.8264	1.1360	2757.8	.2632	.530	0.3413	1.2597	2904.1	.0806	.714
3900	9.8452-5	30.8	2.6238	28.038	.171	1.2781	-1.0094	0.9371	1.1288	2794.0	.3222	.498	0.3421	1.2611	2953.2	.0826	.709
4000	9.5239-5	130.6	2.6491	27.819	.174	1.3450	-1.0120	1.0621	1.1231	2833.5	.3948	.468	0.3428	1.2630	3004.9	.0846	.704
4100	9.2043-5	243.7	2.6770	27.557	.176	1.4219	-1.0152	1.2015	1.1186	2876.6	.4821	.439	0.3435	1.2655	3059.7	.0868	.698
4200	8.8851-5	371.4	2.7078	27.251	.179	1.5089	-1.0190	1.3554	1.1154	2923.5	.5845	.414	0.3441	1.2687	3118.0	.0891	.689
4300	8.5656-5	515.2	2.7416	26.896	.181	1.6059	-1.0234	1.5234	1.1131	2974.5	.7002	.393	0.3448	1.2725	3180.4	.0917	.680
4400	8.2453-5	676.5	2.7787	26.492	.183	1.7112	-1.0284	1.7031	1.1117	3029.9	.8248	.378	0.3454	1.2771	3247.5	.0947	.668
4500	7.9245-5	856.1	2.8190	26.040	.185	1.8212	-1.0339	1.8888	1.1112	3089.9	.9504	.368	0.3462	1.2825	3319.6	.0980	.654
4600	7.6045-5	1054.1	2.8626	25.544	.187	1.9290	-1.0395	2.0696	1.1114	3154.6	*****	.363	0.3470	1.2887	3396.9	.1017	.639
4700	7.2878-5	1269.3	2.9088	25.013	.189	2.0241	-1.0449	2.2282	1.1125	3223.9	*****	.364	0.3479	1.2957	3479.3	.1058	.622
4800	6.9783-5	1498.2	2.9570	24.460	.191	2.0934	-1.0493	2.3420	1.1143	3297.3	*****	.370	0.3488	1.3033	3566.0	.1101	.606
4900	6.6809-5	1735.4	3.0059	23.905	.193	2.1240	-1.0521	2.3881	1.1171	3374.1	*****	.381	0.3499	1.3114	3655.8	.1147	.590
5000	6.4008-5	1973.1	3.0539	23.370	.196	2.1074	-1.0527	2.3504	1.1209	3453.0	*****	.394	0.3509	1.3195	3746.5	.1193	.575
5100	6.1426-5	2202.6	3.0994	22.876	.198	2.0434	-1.0510	2.2280	1.1258	3532.5	*****	.410	0.3519	1.3274	3835.9	.1238	.562
5200	5.9092-5	2416.3	3.1409	22.439	.200	1.9414	-1.0471	2.0368	1.1321	3611.6	.9546	.427	0.3529	1.3348	3921.7	.1281	.552
5300	5.7013-5	2608.6	3.1775	22.065	.203	1.8166	-1.0419	1.8049	1.1399	3689.6	.8238	.444	0.3537	1.3412	4002.2	.1320	.543
5400	5.5177-5	2777.0	3.2090	21.758	.205	1.6855	-1.0360	1.5622	1.1494	3766.2	.6973	.459	0.3545	1.3467	4076.6	.1355	.536

TABLE 15.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.066997; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 1.46959 LB/IN² (0.10 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS (GAM)S FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS GAM FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4673-3	-947.5	2.1139	28.827	.094	1.0000	-1.0000	0.2954	1.3042	1897.1	.0374	.742	0.2954	1.3042	1897.1	.0374	.742
1700	2.3221-3	-917.7	2.1320	28.827	.098	1.0000	-1.0000	0.2991	1.2992	1951.8	.0396	.740	0.2991	1.2992	1951.8	.0396	.740
1800	2.1931-3	-887.6	2.1491	28.827	.102	1.0000	-1.0000	0.3026	1.2948	2004.9	.0418	.739	0.3026	1.2948	2004.9	.0418	.739
1900	2.0777-3	-857.2	2.1656	28.827	.106	1.0000	-1.0000	0.3058	1.2907	2056.7	.0439	.738	0.3058	1.2908	2056.7	.0439	.738
2000	1.9738-3	-826.5	2.1814	28.827	.110	1.0000	-1.0000	0.3089	1.2870	2107.0	.0460	.737	0.3089	1.2871	2107.1	.0460	.737
2100	1.8798-3	-795.4	2.1965	28.827	.114	1.0000	-1.0000	0.3119	1.2835	2156.1	.0481	.736	0.3117	1.2837	2156.3	.0481	.736
2200	1.7944-3	-764.1	2.2111	28.827	.117	1.0001	-1.0000	0.3148	1.2802	2204.0	.0502	.735	0.3145	1.2805	2204.3	.0501	.736
2300	1.7163-3	-732.5	2.2251	28.827	.121	1.0002	-1.0000	0.3177	1.2769	2250.7	.0523	.735	0.3171	1.2776	2251.3	.0522	.735
2400	1.6448-3	-700.5	2.2387	28.826	.124	1.0004	-1.0000	0.3208	1.2737	2296.2	.0544	.734	0.3195	1.2749	2297.3	.0542	.734
2500	1.5790-3	-668.3	2.2519	28.826	.128	1.0007	-1.0000	0.3241	1.2704	2340.5	.0566	.732	0.3218	1.2724	2342.3	.0561	.734
2600	1.5182-3	-635.7	2.2647	28.825	.131	1.0012	-1.0000	0.3279	1.2667	2383.5	.0590	.731	0.3240	1.2700	2386.6	.0581	.733
2700	1.4619-3	-602.7	2.2771	28.823	.135	1.0020	-1.0000	0.3325	1.2627	2425.1	.0615	.729	0.3261	1.2679	2430.1	.0600	.732
2800	1.4095-3	-569.2	2.2893	28.820	.138	1.0033	-1.0001	0.3381	1.2580	2465.1	.0643	.726	0.3280	1.2659	2472.8	.0620	.731
2900	1.3607-3	-535.0	2.3013	28.816	.142	1.0052	-1.0001	0.3452	1.2525	2503.5	.0676	.723	0.3299	1.2641	2515.0	.0639	.731
3000	1.3151-3	-500.1	2.3132	28.810	.145	1.0080	-1.0002	0.3543	1.2461	2540.0	.0713	.719	0.3316	1.2624	2556.6	.0658	.730
3100	1.2722-3	-464.1	2.3250	28.800	.148	1.0119	-1.0003	0.3659	1.2387	2574.7	.0759	.714	0.3332	1.2609	2597.7	.0677	.729
3200	1.2319-3	-426.8	2.3368	28.787	.151	1.0172	-1.0005	0.3806	1.2302	2607.5	.0814	.707	0.3347	1.2596	2638.5	.0696	.728
3300	1.1938-3	-387.8	2.3488	28.769	.154	1.0244	-1.0007	0.3991	1.2207	2638.6	.0881	.699	0.3361	1.2584	2679.0	.0714	.727
3400	1.1577-3	-346.8	2.3610	28.744	.157	1.0338	-1.0010	0.4221	1.2106	2668.3	.0964	.689	0.3375	1.2574	2719.4	.0732	.725
3500	1.1234-3	-303.3	2.3736	28.711	.160	1.0459	-1.0013	0.4503	1.2001	2697.0	.1067	.677	0.3387	1.2566	2759.8	.0750	.724
3600	1.0905-3	-256.6	2.3868	28.668	.163	1.0611	-1.0018	0.4841	1.1895	2725.2	.1194	.663	0.3398	1.2561	2800.4	.0768	.723
3700	1.0590-3	-206.2	2.4006	28.613	.166	1.0799	-1.0025	0.5243	1.1791	2753.4	.1350	.646	0.3408	1.2557	2841.4	.0786	.721
3800	1.0286-3	-151.5	2.4152	28.544	.169	1.1027	-1.0033	0.5711	1.1694	2782.2	.1542	.627	0.3418	1.2556	2882.9	.0804	.719
3900	9.9926-4	-91.8	2.4307	28.458	.172	1.1297	-1.0042	0.6247	1.1605	2812.0	.1775	.605	0.3426	1.2558	2925.1	.0821	.717
4000	9.7070-4	-26.3	2.4473	28.354	.175	1.1613	-1.0054	0.6852	1.1526	2843.4	.2057	.582	0.3434	1.2562	2968.4	.0839	.715
4100	9.4285-4	45.5	2.4650	28.229	.177	1.1977	-1.0069	0.7524	1.1458	2876.5	.2395	.557	0.3441	1.2570	3012.9	.0857	.712
4200	9.1558-4	124.4	2.4840	28.081	.180	1.2389	-1.0086	0.8261	1.1400	2911.7	.2797	.532	0.3447	1.2581	3058.8	.0875	.709
4300	8.8880-4	210.9	2.5043	27.909	.183	1.2850	-1.0105	0.9058	1.1353	2949.1	.3271	.505	0.3453	1.2596	3106.3	.0894	.705
4400	8.6244-4	305.7	2.5261	27.710	.185	1.3359	-1.0128	0.9912	1.1315	2988.8	.3823	.480	0.3458	1.2615	3155.8	.0913	.700
4500	8.3641-4	409.3	2.5494	27.485	.187	1.3918	-1.0154	1.0822	1.1286	3031.0	.4456	.455	0.3462	1.2637	3207.3	.0934	.695
4600	8.1068-4	522.3	2.5743	27.232	.190	1.4525	-1.0183	1.1785	1.1264	3075.8	.5169	.432	0.3467	1.2664	3261.3	.0956	.688
4700	7.8520-4	645.2	2.6007	26.949	.192	1.5180	-1.0216	1.2798	1.1249	3123.2	.5954	.413	0.3472	1.2695	3317.8	.0980	.680
4800	7.5996-4	778.4	2.6287	26.638	.194	1.5875	-1.0253	1.3853	1.1240	3173.4	.6793	.396	0.3476	1.2730	3377.2	.1006	.671
4900	7.3494-4	922.3	2.6584	26.297	.196	1.6600	-1.0293	1.4936	1.1236	3226.4	.7656	.383	0.3481	1.2770	3439.6	.1034	.661
5000	7.1017-4	1077.1	2.6897	25.930	.199	1.7334	-1.0335	1.6015	1.1238	3282.5	.8503	.374	0.3487	1.2815	3505.1	.1065	.650
5100	6.8573-4	1242.5	2.7224	25.538	.201	1.8043	-1.0378	1.7043	1.1245	3341.5	.9280	.369	0.3493	1.2864	3573.9	.1098	.638
5200	6.6170-4	1417.6	2.7564	25.126	.203	1.8684	-1.0419	1.7955	1.1258	3403.5	.9929	.367	0.3499	1.2918	3645.8	.1134	.626
5300	6.3823-4	1600.9	2.7913	24.701	.205	1.9203	-1.0456	1.8672	1.1276	3468.3	****	.368	0.3506	1.2976	3720.5	.1173	.613
5400	6.1551-4	1790.1	2.8267	24.271	.207	1.9549	-1.0486	1.9111	1.1300	3535.5	****	.373	0.3513	1.3036	3797.4	.1213	.600

TABLE 15.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.066997; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 14.6959 LB/IN2 (1.00 ATM)
 DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4673-2	-947.5	1.9553	28.827	.094	1.0000	-1.0000	0.2954	1.3042	1897.1	.0374	.742	0.2954	1.3042	1897.1	.0374	.742
1700	2.3221-2	-917.7	1.9733	28.827	.098	1.0000	-1.0000	0.2991	1.2992	1951.8	.0396	.740	0.2991	1.2992	1951.8	.0396	.740
1800	2.1931-2	-887.6	1.9905	28.827	.102	1.0000	-1.0000	0.3026	1.2948	2004.9	.0418	.739	0.3026	1.2948	2004.9	.0418	.739
1900	2.0777-2	-857.2	2.0070	28.827	.106	1.0000	-1.0000	0.3058	1.2908	2056.7	.0439	.738	0.3058	1.2908	2056.7	.0439	.738
2000	1.9738-2	-826.5	2.0227	28.827	.110	1.0000	-1.0000	0.3089	1.2870	2107.1	.0460	.737	0.3089	1.2871	2107.1	.0460	.737
2100	1.8798-2	-795.5	2.0379	28.827	.114	1.0000	-1.0000	0.3118	1.2836	2156.2	.0481	.736	0.3117	1.2837	2156.3	.0481	.736
2200	1.7944-2	-764.1	2.0525	28.827	.117	1.0000	-1.0000	0.3146	1.2803	2204.2	.0502	.736	0.3145	1.2805	2204.3	.0501	.736
2300	1.7163-2	-732.5	2.0665	28.827	.121	1.0001	-1.0000	0.3174	1.2773	2251.0	.0522	.735	0.3171	1.2776	2251.3	.0522	.735
2400	1.6448-2	-700.6	2.0801	28.827	.124	1.0002	-1.0000	0.3201	1.2743	2296.7	.0543	.734	0.3195	1.2749	2297.2	.0542	.734
2500	1.5790-2	-668.5	2.0932	28.826	.128	1.0003	-1.0000	0.3229	1.2714	2341.4	.0564	.733	0.3218	1.2724	2342.3	.0561	.734
2600	1.5183-2	-636.1	2.1059	28.826	.131	1.0006	-1.0000	0.3259	1.2684	2385.0	.0585	.732	0.3240	1.2700	2386.5	.0581	.733
2700	1.4620-2	-603.3	2.1183	28.825	.135	1.0010	-1.0000	0.3291	1.2653	2427.5	.0607	.731	0.3261	1.2679	2430.0	.0600	.732
2800	1.4097-2	-570.2	2.1303	28.824	.138	1.0016	-1.0000	0.3328	1.2620	2468.9	.0631	.729	0.3280	1.2659	2472.6	.0620	.731
2900	1.3610-2	-536.7	2.1421	28.822	.142	1.0025	-1.0001	0.3372	1.2583	2509.0	.0656	.727	0.3299	1.2640	2514.7	.0639	.731
3000	1.3155-2	-502.7	2.1536	28.819	.145	1.0038	-1.0001	0.3424	1.2542	2547.8	.0684	.725	0.3316	1.2623	2556.1	.0658	.730
3100	1.2729-2	-468.2	2.1649	28.814	.148	1.0056	-1.0001	0.3488	1.2495	2585.3	.0715	.722	0.3332	1.2607	2596.9	.0677	.729
3200	1.2328-2	-432.9	2.1761	28.808	.151	1.0081	-1.0002	0.3566	1.2441	2621.3	.0750	.719	0.3348	1.2593	2637.2	.0695	.728
3300	1.1951-2	-396.8	2.1872	28.800	.154	1.0114	-1.0003	0.3662	1.2381	2655.9	.0791	.715	0.3362	1.2580	2677.1	.0714	.727
3400	1.1595-2	-359.6	2.1983	28.788	.157	1.0159	-1.0004	0.3778	1.2315	2689.1	.0838	.710	0.3375	1.2569	2716.7	.0732	.726
3500	1.1258-2	-321.2	2.2095	28.772	.161	1.0215	-1.0006	0.3919	1.2242	2721.1	.0893	.704	0.3388	1.2558	2756.0	.0750	.725
3600	1.0937-2	-281.2	2.2207	28.752	.164	1.0287	-1.0008	0.4088	1.2165	2751.9	.0959	.697	0.3400	1.2550	2795.1	.0768	.724
3700	1.0632-2	-239.3	2.2322	28.726	.167	1.0376	-1.0011	0.4287	1.2084	2781.8	.1036	.689	0.3410	1.2542	2834.1	.0786	.723
3800	1.0340-2	-195.3	2.2439	28.693	.169	1.0484	-1.0015	0.4520	1.2002	2811.2	.1126	.680	0.3420	1.2537	2873.1	.0803	.722
3900	1.0061-2	-148.8	2.2560	28.653	.172	1.0614	-1.0020	0.4788	1.1921	2840.3	.1233	.669	0.3430	1.2533	2912.3	.0821	.720
4000	9.7923-3	-99.4	2.2685	28.603	.175	1.0768	-1.0025	0.5092	1.1842	2869.5	.1358	.657	0.3438	1.2530	2951.7	.0838	.719
4100	9.5333-3	-46.8	2.2815	28.543	.178	1.0946	-1.0032	0.5433	1.1768	2899.1	.1504	.643	0.3446	1.2530	2991.5	.0855	.717
4200	9.2829-3	9.4	2.2950	28.471	.181	1.1150	-1.0040	0.5810	1.1699	2929.3	.1673	.627	0.3453	1.2532	3031.7	.0872	.715
4300	9.0402-3	69.5	2.3092	28.386	.183	1.1380	-1.0049	0.6221	1.1637	2960.5	.1869	.610	0.3459	1.2535	3072.6	.0889	.713
4400	8.8042-3	133.9	2.3240	28.288	.186	1.1636	-1.0060	0.6663	1.1583	2992.9	.2093	.592	0.3465	1.2541	3114.2	.0906	.711
4500	8.5743-3	202.8	2.3395	28.176	.189	1.1917	-1.0072	0.7132	1.1535	3026.5	.2349	.573	0.3470	1.2549	3156.7	.0924	.709
4600	8.3499-3	276.6	2.3557	28.048	.191	1.2221	-1.0086	0.7625	1.1495	3061.6	.2640	.552	0.3474	1.2559	3200.2	.0941	.705
4700	8.1305-3	355.4	2.3726	27.905	.194	1.2549	-1.0102	0.8138	1.1462	3098.1	.2968	.531	0.3479	1.2572	3244.7	.0959	.702
4800	7.9156-3	439.4	2.3903	27.745	.196	1.2898	-1.0119	0.8668	1.1435	3136.2	.3336	.509	0.3482	1.2587	3290.4	.0978	.698
4900	7.7050-3	528.8	2.4087	27.570	.198	1.3268	-1.0138	0.9212	1.1414	3175.9	.3743	.488	0.3486	1.2605	3337.4	.0997	.694
5000	7.4983-3	623.7	2.4279	27.378	.201	1.3657	-1.0159	0.9768	1.1398	3217.1	.4191	.468	0.3489	1.2624	3385.8	.1017	.689
5100	7.2953-3	724.2	2.4478	27.169	.203	1.4066	-1.0181	1.0335	1.1387	3260.0	.4677	.449	0.3493	1.2647	3435.6	.1037	.684
5200	7.0958-3	830.4	2.4684	26.944	.205	1.4494	-1.0206	1.0913	1.1380	3304.5	.5198	.431	0.3496	1.2672	3487.0	.1059	.678
5300	6.8997-3	942.5	2.4898	26.703	.208	1.4939	-1.0233	1.1500	1.1377	3350.7	.5745	.416	0.3499	1.2699	3540.0	.1082	.671
5400	6.7068-3	1060.5	2.5118	26.447	.210	1.5396	-1.0261	1.2091	1.1378	3398.6	.6308	.402	0.3503	1.2729	3594.7	.1107	.664

TABLE 15.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.066997; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 146.959 LB/IN² (10.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4673-1	-947.5	1.7967	28.827	.094	1.0000	-1.0000	0.2954	1.3042	1897.1	.0374	.742	0.2954	1.3042	1897.1	.0374	.742
1700	2.3221-1	-917.7	1.8147	28.827	.098	1.0000	-1.0000	0.2991	1.2992	1951.8	.0396	.740	0.2991	1.2992	1951.8	.0396	.740
1800	2.1931-1	-887.6	1.8319	28.827	.102	1.0000	-1.0000	0.3026	1.2948	2004.9	.0418	.739	0.3026	1.2948	2004.9	.0418	.739
1900	2.0777-1	-857.2	1.8483	28.827	.106	1.0000	-1.0000	0.3058	1.2908	2056.7	.0439	.738	0.3058	1.2908	2056.7	.0439	.738
2000	1.9738-1	-826.5	1.8641	28.827	.110	1.0000	-1.0000	0.3089	1.2871	2107.1	.0460	.737	0.3089	1.2871	2107.1	.0460	.737
2100	1.8798-1	-795.5	1.8793	28.827	.114	1.0000	-1.0000	0.3118	1.2836	2156.2	.0481	.736	0.3117	1.2837	2156.3	.0481	.736
2200	1.7944-1	-764.1	1.8938	28.827	.117	1.0000	-1.0000	0.3146	1.2804	2204.2	.0502	.736	0.3145	1.2805	2204.3	.0501	.736
2300	1.7163-1	-732.6	1.9079	28.827	.121	1.0000	-1.0000	0.3172	1.2774	2251.1	.0522	.735	0.3171	1.2776	2251.2	.0522	.735
2400	1.6448-1	-700.7	1.9214	28.827	.124	1.0001	-1.0000	0.3198	1.2746	2297.0	.0542	.734	0.3195	1.2749	2297.2	.0542	.734
2500	1.5790-1	-668.6	1.9345	28.827	.128	1.0002	-1.0000	0.3224	1.2719	2341.9	.0563	.733	0.3218	1.2723	2342.3	.0561	.734
2600	1.5183-1	-636.2	1.9472	28.826	.131	1.0003	-1.0000	0.3249	1.2692	2385.8	.0583	.733	0.3240	1.2700	2386.5	.0581	.733
2700	1.4620-1	-603.6	1.9595	28.826	.135	1.0005	-1.0000	0.3276	1.2666	2428.7	.0604	.732	0.3261	1.2678	2429.9	.0600	.732
2800	1.4098-1	-570.7	1.9715	28.825	.138	1.0007	-1.0000	0.3304	1.2639	2470.7	.0625	.730	0.3280	1.2658	2472.6	.0620	.732
2900	1.3611-1	-537.5	1.9831	28.824	.142	1.0012	-1.0000	0.3334	1.2612	2511.7	.0647	.729	0.3299	1.2640	2514.5	.0639	.731
3000	1.3157-1	-504.0	1.9945	28.823	.145	1.0018	-1.0000	0.3368	1.2582	2551.7	.0670	.728	0.3316	1.2622	2555.8	.0658	.730
3100	1.2732-1	-470.1	2.0056	28.821	.148	1.0026	-1.0001	0.3408	1.2550	2590.7	.0695	.726	0.3333	1.2607	2596.5	.0677	.729
3200	1.2332-1	-435.8	2.0165	28.818	.151	1.0038	-1.0001	0.3453	1.2515	2628.6	.0721	.724	0.3348	1.2592	2636.6	.0695	.728
3300	1.1957-1	-401.0	2.0272	28.814	.154	1.0054	-1.0001	0.3507	1.2477	2665.5	.0750	.722	0.3362	1.2578	2676.3	.0714	.727
3400	1.1603-1	-365.7	2.0378	28.808	.158	1.0075	-1.0002	0.3570	1.2434	2701.2	.0782	.719	0.3376	1.2566	2715.4	.0732	.726
3500	1.1269-1	-329.6	2.0482	28.801	.161	1.0102	-1.0003	0.3645	1.2388	2735.9	.0817	.716	0.3389	1.2555	2754.2	.0750	.725
3600	1.0952-1	-292.7	2.0586	28.791	.164	1.0136	-1.0004	0.3733	1.2337	2769.5	.0857	.713	0.3400	1.2545	2792.6	.0768	.724
3700	1.0652-1	-254.9	2.0690	28.779	.167	1.0178	-1.0005	0.3835	1.2283	2802.1	.0902	.709	0.3412	1.2535	2830.7	.0786	.723
3800	1.0366-1	-216.0	2.0794	28.764	.170	1.0230	-1.0007	0.3954	1.2225	2833.8	.0952	.704	0.3422	1.2528	2868.6	.0803	.722
3900	1.0093-1	-175.7	2.0898	28.744	.173	1.0293	-1.0009	0.4091	1.2165	2864.7	.1010	.699	0.3432	1.2521	2906.3	.0821	.721
4000	9.8325-2	-134.1	2.1003	28.720	.175	1.0367	-1.0012	0.4246	1.2104	2895.1	.1075	.693	0.3440	1.2515	2943.9	.0838	.720
4100	9.5830-2	-90.7	2.1110	28.691	.178	1.0455	-1.0015	0.4422	1.2042	2925.1	.1148	.686	0.3449	1.2511	2981.4	.0855	.719
4200	9.3434-2	-45.6	2.1219	28.656	.181	1.0556	-1.0019	0.4616	1.1981	2954.8	.1232	.679	0.3456	1.2508	3019.0	.0872	.718
4300	9.1130-2	1.6	2.1330	28.615	.184	1.0671	-1.0023	0.4831	1.1922	2984.5	.1325	.670	0.3463	1.2506	3056.7	.0889	.716
4400	8.8909-2	51.1	2.1444	28.567	.187	1.0801	-1.0029	0.5065	1.1866	3014.4	.1430	.661	0.3470	1.2505	3094.6	.0905	.715
4500	8.6763-2	103.0	2.1561	28.511	.189	1.0946	-1.0035	0.5317	1.1813	3044.7	.1548	.650	0.3476	1.2506	3132.8	.0922	.713
4600	8.4686-2	157.5	2.1680	28.447	.192	1.1105	-1.0042	0.5586	1.1764	3075.4	.1678	.639	0.3481	1.2508	3171.2	.0939	.711
4700	8.2672-2	214.8	2.1804	28.374	.194	1.1278	-1.0049	0.5868	1.1720	3106.8	.1823	.626	0.3486	1.2512	3210.1	.0955	.710
4800	8.0717-2	274.9	2.1930	28.292	.197	1.1465	-1.0058	0.6163	1.1681	3139.0	.1982	.613	0.3490	1.2517	3249.4	.0972	.707
4900	7.8815-2	338.1	2.2060	28.201	.200	1.1663	-1.0068	0.6467	1.1646	3171.9	.2156	.598	0.3494	1.2524	3289.2	.0989	.705
5000	7.6964-2	404.3	2.2194	28.101	.202	1.1873	-1.0078	0.6777	1.1617	3205.8	.2347	.583	0.3498	1.2532	3329.6	.1006	.703
5100	7.5159-2	473.6	2.2331	27.991	.205	1.2092	-1.0089	0.7091	1.1592	3240.6	.2555	.568	0.3501	1.2541	3370.7	.1022	.700
5200	7.3399-2	546.1	2.2472	27.871	.207	1.2319	-1.0101	0.7406	1.1572	3276.4	.2780	.551	0.3504	1.2552	3412.3	.1039	.698
5300	7.1681-2	621.7	2.2616	27.742	.209	1.2553	-1.0114	0.7721	1.1556	3313.1	.3023	.535	0.3507	1.2565	3454.7	.1057	.695
5400	7.0003-2	700.5	2.2764	27.604	.212	1.2794	-1.0128	0.8034	1.1544	3350.8	.3285	.518	0.3510	1.2578	3497.7	.1074	.692

TABLE 15.5B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.066997; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 734.797 LB/IN2 (50.00 ATM)
 DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	1.2336	0	-947.5	1.6858	28.827	.094	1.0000	-1.0000	0.2954	1.3042	1897.1	.0374	.742	0.2954	1.3042	1897.1	.0374	.742
1700	1.1611	0	-917.7	1.7038	28.827	.098	1.0000	-1.0000	0.2991	1.2992	1951.8	.0396	.740	0.2991	1.2992	1951.8	.0396	.740
1800	1.0966	0	-887.6	1.7210	28.827	.102	1.0000	-1.0000	0.3026	1.2948	2004.9	.0418	.739	0.3026	1.2948	2004.9	.0418	.739
1900	1.0388	0	-857.2	1.7375	28.827	.106	1.0000	-1.0000	0.3058	1.2908	2056.7	.0439	.738	0.3058	1.2908	2056.7	.0439	.738
2000	9.8690	-1	-826.5	1.7532	28.827	.110	1.0000	-1.0000	0.3089	1.2871	2107.1	.0460	.737	0.3089	1.2871	2107.1	.0460	.737
2100	9.3991	-1	-795.5	1.7684	28.827	.114	1.0000	-1.0000	0.3118	1.2836	2156.2	.0481	.736	0.3117	1.2837	2156.3	.0481	.736
2200	8.9718	-1	-764.1	1.7829	28.827	.117	1.0000	-1.0000	0.3145	1.2805	2204.2	.0501	.736	0.3145	1.2805	2204.3	.0501	.736
2300	8.5817	-1	-732.6	1.7970	28.827	.121	1.0000	-1.0000	0.3172	1.2775	2251.2	.0522	.735	0.3171	1.2776	2251.2	.0522	.735
2400	8.2242	-1	-700.7	1.8105	28.827	.124	1.0000	-1.0000	0.3197	1.2747	2297.1	.0542	.734	0.3195	1.2749	2297.2	.0542	.734
2500	7.8952	-1	-668.6	1.8236	28.827	.128	1.0001	-1.0000	0.3222	1.2721	2342.0	.0562	.734	0.3218	1.2723	2342.3	.0561	.734
2600	7.5915	-1	-636.3	1.8363	28.827	.131	1.0002	-1.0000	0.3246	1.2695	2386.0	.0582	.733	0.3240	1.2700	2386.5	.0581	.733
2700	7.3102	-1	-603.7	1.8486	28.826	.135	1.0003	-1.0000	0.3270	1.2671	2429.2	.0602	.732	0.3261	1.2678	2429.9	.0600	.732
2800	7.0491	-1	-570.9	1.8606	28.826	.138	1.0004	-1.0000	0.3295	1.2647	2471.4	.0623	.731	0.3280	1.2658	2472.5	.0620	.732
2900	6.8059	-1	-537.8	1.8722	28.825	.142	1.0007	-1.0000	0.3320	1.2622	2512.7	.0644	.730	0.3299	1.2640	2514.5	.0639	.731
3000	6.5788	-1	-504.5	1.8835	28.825	.145	1.0011	-1.0000	0.3348	1.2598	2553.2	.0665	.729	0.3316	1.2622	2555.7	.0658	.730
3100	6.3663	-1	-470.8	1.8945	28.823	.148	1.0016	-1.0000	0.3378	1.2572	2592.8	.0688	.727	0.3333	1.2606	2596.4	.0677	.729
3200	6.1670	-1	-436.9	1.9053	28.822	.151	1.0023	-1.0001	0.3412	1.2544	2631.5	.0711	.726	0.3348	1.2591	2636.4	.0695	.728
3300	5.9796	-1	-402.6	1.9158	28.819	.154	1.0032	-1.0001	0.3450	1.2515	2669.3	.0736	.724	0.3362	1.2578	2676.0	.0714	.727
3400	5.8031	-1	-367.9	1.9262	28.816	.158	1.0045	-1.0001	0.3494	1.2483	2706.1	.0762	.722	0.3376	1.2565	2715.0	.0732	.726
3500	5.6364	-1	-332.7	1.9364	28.811	.161	1.0061	-1.0002	0.3544	1.2448	2742.0	.0791	.720	0.3389	1.2553	2753.6	.0750	.725
3600	5.4788	-1	-297.0	1.9464	28.806	.164	1.0081	-1.0002	0.3602	1.2411	2777.0	.0821	.718	0.3401	1.2543	2791.7	.0768	.724
3700	5.3293	-1	-260.6	1.9564	28.798	.167	1.0107	-1.0003	0.3669	1.2371	2811.2	.0855	.715	0.3412	1.2533	2829.5	.0786	.724
3800	5.1874	-1	-223.6	1.9663	28.789	.170	1.0138	-1.0004	0.3746	1.2328	2844.4	.0892	.712	0.3422	1.2524	2866.9	.0803	.723
3900	5.0523	-1	-185.7	1.9761	28.777	.173	1.0175	-1.0005	0.3833	1.2283	2876.9	.0933	.709	0.3432	1.2517	2904.1	.0821	.722
4000	4.9236	-1	-146.9	1.9860	28.763	.175	1.0220	-1.0007	0.3932	1.2236	2908.6	.0978	.705	0.3441	1.2510	2941.0	.0838	.721
4100	4.8006	-1	-107.0	1.9958	28.746	.178	1.0273	-1.0009	0.4043	1.2187	2939.8	.1028	.701	0.3450	1.2504	2977.8	.0855	.720
4200	4.6829	-1	-66.0	2.0057	28.725	.181	1.0334	-1.0011	0.4167	1.2137	2970.4	.1084	.696	0.3458	1.2499	3014.4	.0872	.719
4300	4.5700	-1	-23.6	2.0156	28.700	.184	1.0405	-1.0014	0.4303	1.2087	3000.7	.1145	.691	0.3465	1.2495	3050.9	.0889	.717
4400	4.4616	-1	20.2	2.0257	28.670	.187	1.0485	-1.0017	0.4453	1.2038	3030.7	.1213	.686	0.3472	1.2492	3087.4	.0905	.716
4500	4.3572	-1	65.5	2.0359	28.636	.189	1.0575	-1.0021	0.4615	1.1990	3060.7	.1287	.679	0.3478	1.2490	3123.9	.0922	.715
4600	4.2567	-1	112.5	2.0462	28.597	.192	1.0676	-1.0025	0.4790	1.1943	3090.6	.1369	.672	0.3484	1.2489	3160.5	.0939	.713
4700	4.1596	-1	161.3	2.0567	28.552	.195	1.0786	-1.0030	0.4976	1.1900	3120.8	.1459	.664	0.3489	1.2489	3197.2	.0955	.712
4800	4.0657	-1	212.1	2.0674	28.501	.197	1.0906	-1.0035	0.5171	1.1859	3151.1	.1556	.656	0.3494	1.2491	3234.0	.0971	.710
4900	3.9747	-1	264.8	2.0783	28.445	.200	1.1035	-1.0041	0.5376	1.1821	3181.9	.1661	.647	0.3499	1.2493	3271.1	.0988	.708
5000	3.8866	-1	319.6	2.0893	28.381	.203	1.1173	-1.0048	0.5587	1.1786	3213.1	.1775	.638	0.3503	1.2496	3308.4	.1004	.707
5100	3.8010	-1	376.5	2.1006	28.311	.205	1.1319	-1.0055	0.5804	1.1756	3244.8	.1897	.627	0.3507	1.2500	3346.1	.1020	.705
5200	3.7178	-1	435.7	2.1121	28.235	.208	1.1471	-1.0063	0.6023	1.1729	3277.2	.2028	.617	0.3510	1.2506	3384.0	.1036	.703
5300	3.6369	-1	497.0	2.1238	28.151	.210	1.1630	-1.0071	0.6245	1.1705	3310.1	.2169	.605	0.3513	1.2512	3422.3	.1053	.701
5400	3.5582	-1	560.6	2.1357	28.062	.213	1.1794	-1.0080	0.6466	1.1685	3343.7	.2318	.593	0.3516	1.2520	3461.0	.1069	.699

TABLE 15C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.066997; EQUIV.RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000;
 DRY AIR

T R	HETEROGENEOUS PHASE PROPERTIES					GAS PHASE PROPERTIES											T R
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R	DENSITY LB/FT ³	MW	VIS LB/ FT S	DLVLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN		
PRESSURE = 0.01 ATM																	
360	1.267-3	-1385.7	1.6463	28.827	0.2533	1.160-3	30.505	.0311	1.000	-1.000	0.2324	1.3891	903	.0098	.735	360	
400	1.136-3	-1373.6	1.6779	28.827	0.4070	1.043-3	30.464	.0340	1.000	-1.000	0.2337	1.3868	951	.0109	.731	400	
440	9.924-4	-1336.4	1.7654	28.827	2.0128	9.329-4	29.974	.0358	1.000	-1.000	0.2396	1.3823	1004	.0116	.740	440	
PRESSURE = 0.10 ATM																	
360	1.267-2	-1385.8	1.5088	28.827	0.2452	1.160-2	30.507	.0311	1.000	-1.000	0.2324	1.3891	903	.0098	.734	360	
400	1.140-2	-1375.7	1.5353	28.827	0.2641	1.044-2	30.503	.0341	1.000	-1.000	0.2333	1.3870	951	.0109	.730	400	
440	1.032-2	-1363.1	1.5653	28.827	0.4153	9.478-3	30.454	.0369	1.000	-1.000	0.2348	1.3846	997	.0119	.727	440	
480	9.172-3	-1331.9	1.6323	28.827	1.4377	8.580-3	30.073	.0388	1.000	-1.000	0.2396	1.3805	1047	.0127	.734	480	
520	7.592-3	-1243.0	1.8107	28.827	0.2538	7.592-3	28.827	.0388	1.000	-1.000	0.2538	1.3726	1110	.0129	.762	520	
PRESSURE = 1.00 ATM																	
360	1.267-1	-1385.8	1.3715	28.827	0.2444	1.160-1	30.507	.0311	1.000	-1.000	0.2324	1.3891	903	.0098	.734	360	
400	1.140-1	-1375.9	1.3975	28.827	0.2499	1.044-1	30.507	.0341	1.000	-1.000	0.2333	1.3870	951	.0109	.730	400	
440	1.036-1	-1365.6	1.4220	28.827	0.2687	9.493-2	30.502	.0370	1.000	-1.000	0.2343	1.3848	997	.0119	.726	440	
480	9.468-2	-1353.4	1.4485	28.827	0.3677	8.691-2	30.464	.0397	1.000	-1.000	0.2357	1.3824	1041	.0129	.725	480	
520	8.617-2	-1321.9	1.5118	28.827	0.6660	7.976-2	30.288	.0420	1.000	-1.000	0.2385	1.3792	1085	.0138	.728	520	
537	8.234-2	-1308.9	1.5364	28.827	0.9142	7.685-2	30.119	.0427	1.000	-1.000	0.2406	1.3775	1105	.0141	.731	537	
560	7.616-2	-1281.1	1.5869	28.827	1.5307	7.262-2	29.697	.0433	1.000	-1.000	0.2456	1.3741	1135	.0143	.741	560	
600	6.579-2	-1222.6	1.6885	28.827	0.2561	6.579-2	28.827	.0439	1.000	-1.000	0.2561	1.3679	1190	.0148	.761	600	
PRESSURE = 10.00 ATM																	
360	1.265 0	-1385.8	1.2342	28.827	0.2443	1.160 0	30.507	.0311	1.000	-1.000	0.2324	1.3891	903	.0098	.734	360	
400	1.138 0	-1375.9	1.2601	28.827	0.2485	1.044 0	30.507	.0341	1.000	-1.000	0.2333	1.3870	951	.0109	.730	400	
440	1.035 0	-1365.9	1.2841	28.827	0.2542	9.495-1	30.507	.0370	1.000	-1.000	0.2342	1.3849	997	.0119	.726	440	
480	9.486-1	-1355.5	1.3067	28.827	0.2679	8.702-1	30.503	.0398	1.000	-1.000	0.2353	1.3826	1040	.0129	.724	480	
520	8.746-1	-1331.1	1.3558	28.827	0.3360	8.028-1	30.485	.0425	1.000	-1.000	0.2365	1.3802	1082	.0139	.723	520	
537	8.463-1	-1325.3	1.3667	28.827	0.3587	7.775-1	30.469	.0435	1.000	-1.000	0.2371	1.3791	1099	.0143	.723	537	
560	8.084-1	-1316.4	1.3829	28.827	0.4101	7.440-1	30.426	.0449	1.000	-1.000	0.2382	1.3774	1123	.0148	.724	560	
600	7.446-1	-1297.0	1.4164	28.827	0.5841	6.907-1	30.262	.0471	1.000	-1.000	0.2410	1.3742	1164	.0156	.729	600	
640	6.760-1	-1267.1	1.4645	28.827	0.9549	6.392-1	29.872	.0487	1.000	-1.000	0.2462	1.3699	1208	.0162	.739	640	
680	5.933-1	-1215.2	1.5429	28.827	1.7411	5.854-1	29.067	.0494	1.000	-1.000	0.2561	1.3639	1260	.0167	.755	680	
PRESSURE = 50.00 ATM																	
360	6.277 0	-1385.8	1.1382	28.827	0.2443	5.802 0	30.507	.0311	1.000	-1.000	0.2324	1.3891	903	.0098	.734	360	
400	5.654 0	-1375.9	1.1642	28.827	0.2484	5.222 0	30.507	.0341	1.000	-1.000	0.2333	1.3870	951	.0109	.730	400	
440	5.144 0	-1365.9	1.1881	28.827	0.2529	4.747 0	30.507	.0370	1.000	-1.000	0.2342	1.3849	997	.0119	.726	440	
480	4.718 0	-1355.7	1.2103	28.827	0.2591	4.352 0	30.507	.0398	1.000	-1.000	0.2352	1.3826	1040	.0129	.723	480	
520	4.359 0	-1331.9	1.2582	28.827	0.3076	4.016 0	30.503	.0425	1.000	-1.000	0.2363	1.3802	1082	.0139	.722	520	
537	4.223 0	-1326.8	1.2679	28.827	0.3123	3.891 0	30.500	.0436	1.000	-1.000	0.2368	1.3792	1098	.0143	.722	537	
560	4.045 0	-1319.4	1.2814	28.827	0.3228	3.728 0	30.491	.0451	1.000	-1.000	0.2375	1.3777	1122	.0148	.723	560	
600	3.767 0	-1305.8	1.3047	28.827	0.3570	3.476 0	30.458	.0475	1.000	-1.000	0.2390	1.3751	1161	.0157	.724	600	
640	3.511 0	-1290.4	1.3297	28.827	0.4235	3.250 0	30.380	.0498	1.000	-1.000	0.2410	1.3722	1199	.0165	.727	640	
680	3.264 0	-1271.3	1.3585	28.827	0.5403	3.043 0	30.219	.0519	1.000	-1.000	0.2439	1.3688	1238	.0173	.731	680	
720	3.010 0	-1246.1	1.3944	28.827	0.7333	2.845 0	29.920	.0536	1.000	-1.000	0.2483	1.3649	1278	.0180	.737	720	
760	2.734 0	-1211.1	1.4418	28.827	1.0457	2.650 0	29.414	.0548	1.000	-1.000	0.2550	1.3601	1322	.0187	.747	760	

TABLE 16.1D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 0.14696 LB/IN² (0.01 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0954-3	-1281.1	1.8848	28.795	.028	1.0000	-1.0000	0.2504	1.3802	926.2	.0089	.779	0.2504	1.3802	926.2	.0089	.779
380	1.0377-3	-1276.1	1.8983	28.795	.029	1.0000	-1.0000	0.2509	1.3791	951.3	.0094	.774	0.2509	1.3791	951.3	.0094	.774
400	9.8582-4	-1271.1	1.9112	28.795	.031	1.0000	-1.0000	0.2514	1.3780	975.6	.0100	.770	0.2514	1.3780	975.6	.0100	.770
420	9.3888-4	-1266.0	1.9235	28.795	.032	1.0000	-1.0000	0.2519	1.3769	999.3	.0105	.766	0.2519	1.3769	999.3	.0105	.766
440	8.9620-4	-1261.0	1.9352	28.795	.033	1.0000	-1.0000	0.2525	1.3757	1022.3	.0110	.763	0.2525	1.3757	1022.3	.0110	.763
460	8.5723-4	-1255.9	1.9465	28.795	.035	1.0000	-1.0000	0.2531	1.3745	1044.8	.0116	.761	0.2531	1.3745	1044.9	.0116	.761
480	8.2151-4	-1250.9	1.9573	28.795	.036	1.0000	-1.0000	0.2538	1.3732	1066.8	.0121	.759	0.2537	1.3733	1066.9	.0121	.759
500	7.8865-4	-1245.8	1.9676	28.795	.037	1.0001	-1.0000	0.2545	1.3718	1088.3	.0126	.757	0.2543	1.3720	1088.4	.0126	.758
520	7.5831-4	-1240.7	1.9776	28.795	.039	1.0001	-1.0000	0.2553	1.3703	1109.2	.0131	.755	0.2550	1.3707	1109.4	.0131	.757
537	7.3476-4	-1236.4	1.9857	28.795	.040	1.0002	-1.0000	0.2560	1.3689	1126.3	.0136	.753	0.2556	1.3696	1126.6	.0135	.756
540	7.3023-4	-1235.6	1.9873	28.795	.040	1.0002	-1.0000	0.2562	1.3686	1129.7	.0137	.752	0.2557	1.3694	1130.0	.0136	.756
560	7.0414-4	-1230.4	1.9966	28.794	.041	1.0004	-1.0000	0.2572	1.3667	1149.6	.0142	.750	0.2564	1.3680	1150.1	.0141	.756
580	6.7985-4	-1225.3	2.0057	28.794	.043	1.0006	-1.0000	0.2584	1.3646	1169.0	.0148	.747	0.2571	1.3666	1169.9	.0145	.756
600	6.5717-4	-1220.1	2.0144	28.793	.044	1.0010	-1.0000	0.2600	1.3621	1187.9	.0154	.742	0.2578	1.3652	1189.3	.0150	.756
620	6.3594-4	-1214.9	2.0230	28.792	.045	1.0016	-1.0001	0.2619	1.3591	1206.3	.0161	.735	0.2586	1.3638	1208.4	.0155	.756
640	6.1603-4	-1209.6	2.0313	28.790	.046	1.0025	-1.0001	0.2642	1.3555	1224.0	.0169	.725	0.2593	1.3623	1227.1	.0159	.756
660	5.9730-4	-1204.3	2.0395	28.787	.048	1.0037	-1.0001	0.2673	1.3512	1241.1	.0179	.712	0.2601	1.3609	1245.5	.0164	.755
680	5.7966-4	-1198.9	2.0476	28.783	.049	1.0055	-1.0002	0.2711	1.3461	1257.4	.0190	.696	0.2609	1.3594	1263.6	.0169	.754
700	5.6299-4	-1193.5	2.0555	28.778	.050	1.0078	-1.0003	0.2759	1.3400	1273.0	.0204	.676	0.2618	1.3579	1281.5	.0174	.753
720	5.4721-4	-1187.9	2.0633	28.770	.051	1.0109	-1.0004	0.2819	1.3330	1287.9	.0221	.654	0.2627	1.3565	1299.2	.0179	.752
740	5.3223-4	-1182.2	2.0712	28.760	.052	1.0149	-1.0006	0.2893	1.3249	1301.9	.0240	.631	0.2636	1.3550	1316.6	.0184	.751
760	5.1798-4	-1176.3	2.0790	28.747	.054	1.0200	-1.0008	0.2983	1.3160	1315.2	.0264	.606	0.2645	1.3535	1333.9	.0189	.749
780	5.0440-4	-1170.2	2.0869	28.730	.055	1.0265	-1.0011	0.3092	1.3062	1327.8	.0291	.581	0.2655	1.3521	1351.0	.0194	.748
800	4.9141-4	-1163.9	2.0949	28.708	.056	1.0344	-1.0015	0.3221	1.2958	1339.9	.0322	.558	0.2665	1.3506	1368.0	.0199	.746
820	4.7897-4	-1157.3	2.1030	28.680	.057	1.0438	-1.0019	0.3372	1.2851	1351.6	.0358	.537	0.2675	1.3492	1384.9	.0205	.744
840	4.6701-4	-1150.4	2.1113	28.646	.058	1.0550	-1.0025	0.3544	1.2743	1363.0	.0396	.518	0.2686	1.3479	1401.8	.0210	.742
860	4.5549-4	-1143.1	2.1199	28.605	.059	1.0678	-1.0031	0.3738	1.2637	1374.4	.0438	.504	0.2698	1.3465	1418.7	.0216	.739
880	4.4437-4	-1135.5	2.1287	28.556	.060	1.0821	-1.0038	0.3951	1.2536	1385.9	.0481	.494	0.2710	1.3452	1435.7	.0222	.736
900	4.3362-4	-1127.3	2.1379	28.498	.061	1.0978	-1.0046	0.4180	1.2442	1397.7	.0524	.489	0.2722	1.3440	1452.7	.0228	.732
920	4.2321-4	-1118.7	2.1473	28.432	.062	1.1143	-1.0055	0.4420	1.2357	1410.0	.0565	.488	0.2735	1.3429	1469.9	.0234	.727
940	4.1311-4	-1109.6	2.1571	28.357	.063	1.1311	-1.0064	0.4662	1.2282	1422.7	.0602	.491	0.2749	1.3418	1487.1	.0241	.722
960	4.0332-4	-1100.1	2.1671	28.274	.064	1.1474	-1.0073	0.4899	1.2217	1436.1	.0633	.499	0.2763	1.3408	1504.5	.0248	.717
980	3.9383-4	-1090.1	2.1775	28.184	.065	1.1622	-1.0081	0.5116	1.2164	1450.2	.0656	.510	0.2778	1.3399	1522.0	.0255	.712
1000	3.8464-4	-1079.6	2.1880	28.088	.066	1.1742	-1.0088	0.5300	1.2123	1464.9	.0669	.526	0.2792	1.3391	1539.6	.0263	.706
1020	3.7577-4	-1068.9	2.1986	27.989	.068	1.1818	-1.0093	0.5429	1.2096	1480.4	.0671	.546	0.2807	1.3383	1557.2	.0270	.701
1040	3.6724-4	-1058.0	2.2092	27.890	.069	1.1832	-1.0094	0.5478	1.2086	1496.9	.0658	.570	0.2821	1.3376	1574.8	.0278	.695
1060	3.5907-4	-1047.1	2.2196	27.794	.069	1.1762	-1.0091	0.5416	1.2098	1514.6	.0631	.596	0.2835	1.3370	1592.2	.0285	.690
1080	3.5131-4	-1036.4	2.2296	27.707	.070	1.1590	-1.0082	0.5216	1.2141	1533.9	.0589	.624	0.2848	1.3363	1609.3	.0292	.686
1100	3.4400-4	-1026.3	2.2389	27.632	.071	1.1319	-1.0069	0.4879	1.2223	1555.4	.0536	.651	0.2860	1.3356	1625.9	.0299	.683
1120	3.3716-4	-1017.0	2.2473	27.575	.072	1.0989	-1.0052	0.4455	1.2346	1579.0	.0481	.671	0.2871	1.3349	1641.9	.0305	.681
1140	3.3076-4	-1008.5	2.2548	27.535	.073	1.0667	-1.0035	0.4038	1.2496	1603.8	.0434	.682	0.2881	1.3340	1657.1	.0311	.679

TABLE 16.1D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 0.14696 LB/IN² (0.01 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.2475-4	-1000.7	2.2615	27.509	.074	1.0412	-1.0022	0.3709	1.2639	1627.8	.0401	.686	0.2889	1.3330	1671.8	.0316	.679
1180	3.1908-4	-993.6	2.2677	27.494	.075	1.0239	-1.0013	0.3492	1.2749	1649.4	.0383	.686	0.2898	1.3320	1685.9	.0321	.679
1200	3.1366-4	-986.7	2.2734	27.486	.076	1.0135	-1.0007	0.3365	1.2817	1668.0	.0374	.684	0.2906	1.3310	1699.8	.0325	.679
1220	3.0847-4	-980.1	2.2789	27.481	.077	1.0075	-1.0004	0.3298	1.2853	1684.4	.0371	.683	0.2913	1.3299	1713.3	.0330	.679
1240	3.0346-4	-973.5	2.2842	27.478	.078	1.0041	-1.0002	0.3266	1.2869	1699.2	.0372	.683	0.2921	1.3288	1726.7	.0334	.680
1260	2.9863-4	-967.0	2.2895	27.477	.079	1.0023	-1.0001	0.3252	1.2872	1713.1	.0375	.683	0.2928	1.3277	1739.9	.0338	.681
1280	2.9396-4	-960.5	2.2946	27.476	.080	1.0013	-1.0001	0.3249	1.2870	1726.5	.0379	.683	0.2935	1.3266	1752.9	.0343	.681
1300	2.8943-4	-954.0	2.2996	27.476	.080	1.0007	-1.0000	0.3250	1.2864	1739.6	.0383	.683	0.2943	1.3256	1765.9	.0347	.682
1320	2.8504-4	-947.5	2.3046	27.476	.081	1.0004	-1.0000	0.3254	1.2858	1752.5	.0387	.683	0.2950	1.3245	1778.7	.0351	.683
1340	2.8079-4	-941.0	2.3095	27.475	.082	1.0003	-1.0000	0.3259	1.2851	1765.3	.0392	.683	0.2957	1.3235	1791.4	.0356	.683
1360	2.7666-4	-934.4	2.3143	27.475	.083	1.0002	-1.0000	0.3264	1.2845	1778.0	.0397	.683	0.2964	1.3224	1804.0	.0360	.684
1380	2.7265-4	-927.9	2.3191	27.475	.084	1.0001	-1.0000	0.3269	1.2839	1790.6	.0401	.684	0.2972	1.3214	1816.6	.0364	.685
1400	2.6875-4	-921.4	2.3238	27.475	.085	1.0001	-1.0000	0.3273	1.2834	1803.2	.0406	.684	0.2979	1.3204	1829.0	.0368	.685
1420	2.6497-4	-914.8	2.3284	27.475	.086	1.0000	-1.0000	0.3278	1.2829	1815.7	.0410	.684	0.2986	1.3194	1841.3	.0372	.686
1440	2.6129-4	-908.3	2.3330	27.475	.086	1.0000	-1.0000	0.3281	1.2825	1828.1	.0414	.684	0.2993	1.3184	1853.5	.0376	.687
1460	2.5771-4	-901.7	2.3375	27.475	.087	1.0000	-1.0000	0.3285	1.2821	1840.5	.0418	.685	0.3000	1.3174	1865.6	.0381	.688
1480	2.5422-4	-895.1	2.3420	27.475	.088	1.0000	-1.0000	0.3288	1.2818	1852.8	.0423	.685	0.3007	1.3164	1877.7	.0385	.688
1500	2.5083-4	-888.5	2.3464	27.475	.089	1.0000	-1.0000	0.3291	1.2815	1865.1	.0427	.685	0.3014	1.3154	1889.6	.0389	.689
1520	2.4753-4	-882.0	2.3508	27.475	.090	1.0000	-1.0000	0.3293	1.2812	1877.3	.0431	.686	0.3021	1.3145	1901.5	.0393	.690
1540	2.4432-4	-875.4	2.3551	27.475	.091	1.0000	-1.0000	0.3295	1.2810	1889.4	.0435	.686	0.3028	1.3135	1913.3	.0397	.690
1560	2.4119-4	-868.8	2.3593	27.475	.091	1.0000	-1.0000	0.3297	1.2808	1901.5	.0439	.687	0.3035	1.3126	1925.0	.0401	.691
1580	2.3813-4	-862.2	2.3635	27.475	.092	1.0000	-1.0000	0.3299	1.2806	1913.5	.0442	.687	0.3042	1.3117	1936.6	.0405	.692
1600	2.3516-4	-855.6	2.3677	27.475	.093	1.0000	-1.0000	0.3301	1.2804	1925.4	.0446	.687	0.3048	1.3108	1948.1	.0409	.692
1620	2.3225-4	-849.0	2.3718	27.475	.094	1.0000	-1.0000	0.3302	1.2802	1937.3	.0450	.688	0.3055	1.3099	1959.6	.0413	.693
1640	2.2942-4	-842.4	2.3759	27.475	.095	1.0000	-1.0000	0.3304	1.2801	1949.1	.0454	.688	0.3062	1.3090	1971.0	.0417	.694
1660	2.2666-4	-835.8	2.3799	27.475	.095	1.0000	-1.0000	0.3305	1.2799	1960.8	.0458	.688	0.3068	1.3082	1982.3	.0421	.694
1680	2.2396-4	-829.2	2.3838	27.475	.096	1.0000	-1.0000	0.3306	1.2798	1972.5	.0461	.689	0.3075	1.3073	1993.6	.0425	.695
1700	2.2132-4	-822.5	2.3877	27.475	.097	1.0000	-1.0000	0.3307	1.2797	1984.1	.0465	.689	0.3081	1.3065	2004.8	.0429	.695
1720	2.1875-4	-815.9	2.3916	27.475	.098	1.0000	-1.0000	0.3308	1.2795	1995.7	.0469	.690	0.3088	1.3056	2015.9	.0433	.696
1740	2.1624-4	-809.3	2.3954	27.475	.098	1.0000	-1.0000	0.3309	1.2794	2007.1	.0472	.690	0.3094	1.3048	2027.0	.0437	.696
1760	2.1378-4	-802.7	2.3992	27.475	.099	1.0000	-1.0000	0.3310	1.2793	2018.6	.0476	.690	0.3100	1.3040	2038.0	.0441	.697
1780	2.1138-4	-796.1	2.4029	27.475	.100	1.0000	-1.0000	0.3311	1.2792	2029.9	.0479	.691	0.3106	1.3033	2048.9	.0445	.697
1800	2.0903-4	-789.4	2.4066	27.475	.101	1.0000	-1.0000	0.3312	1.2791	2041.2	.0483	.691	0.3112	1.3025	2059.8	.0449	.698
1900	1.9803-4	-756.3	2.4246	27.475	.105	1.0000	-1.0000	0.3317	1.2786	2096.7	.0500	.693	0.3141	1.2989	2113.3	.0469	.700
2000	1.8813-4	-723.1	2.4416	27.475	.108	1.0000	-1.0000	0.3323	1.2779	2150.6	.0518	.695	0.3169	1.2955	2165.3	.0489	.702
2100	1.7917-4	-689.8	2.4578	27.475	.112	1.0000	-1.0000	0.3331	1.2771	2203.0	.0535	.696	0.3195	1.2923	2216.1	.0508	.703
2200	1.7102-4	-656.5	2.4733	27.475	.115	1.0000	-1.0000	0.3340	1.2762	2254.1	.0553	.698	0.3221	1.2894	2265.6	.0528	.705
2300	1.6359-4	-623.0	2.4882	27.475	.119	1.0000	-1.0000	0.3350	1.2751	2303.8	.0570	.699	0.3245	1.2866	2314.1	.0547	.706
2400	1.5677-4	-589.5	2.5025	27.475	.122	1.0000	-1.0000	0.3361	1.2740	2352.3	.0588	.700	0.3268	1.2840	2361.4	.0566	.707
2500	1.5050-4	-555.8	2.5162	27.475	.126	1.0001	-1.0000	0.3373	1.2727	2399.6	.0607	.700	0.3290	1.2815	2407.8	.0586	.707

TABLE 16.1D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 0.14696 LB/IN² (0.01 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS							FROZEN COMPOSITIONS				
						DLV DLT	DLV DLP	CP BTU/ LB R	VS (GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4471-4	-522.0	2.5295	27.475	.129	1.0002	-1.0000	0.3387	1.2714	2445.8	.0626	.700	0.3311	1.2792	2453.3	.0605	.708
2700	1.3935-4	-488.1	2.5423	27.475	.133	1.0003	-1.0000	0.3403	1.2699	2490.9	.0647	.698	0.3331	1.2771	2498.0	.0624	.708
2800	1.3437-4	-453.9	2.5547	27.474	.136	1.0006	-1.0000	0.3422	1.2682	2535.0	.0670	.694	0.3350	1.2751	2541.9	.0643	.708
2900	1.2973-4	-419.6	2.5668	27.474	.139	1.0011	-1.0000	0.3446	1.2661	2577.8	.0697	.688	0.3368	1.2733	2585.0	.0662	.709
3000	1.2540-4	-385.0	2.5785	27.472	.142	1.0019	-1.0001	0.3478	1.2636	2619.3	.0730	.679	0.3385	1.2715	2627.5	.0681	.708
3100	1.2135-4	-350.0	2.5900	27.470	.146	1.0033	-1.0001	0.3522	1.2602	2659.2	.0771	.665	0.3401	1.2699	2669.3	.0700	.708
3200	1.1754-4	-314.5	2.6012	27.466	.149	1.0055	-1.0002	0.3587	1.2557	2697.0	.0825	.647	0.3417	1.2684	2710.6	.0719	.708
3300	1.1395-4	-278.2	2.6124	27.460	.152	1.0093	-1.0003	0.3685	1.2494	2732.3	.0897	.625	0.3431	1.2671	2751.5	.0737	.707
3400	1.1056-4	-240.6	2.6236	27.450	.155	1.0154	-1.0005	0.3838	1.2405	2763.9	.0996	.598	0.3445	1.2658	2792.0	.0756	.706
3500	1.0734-4	-201.1	2.6351	27.434	.158	1.0257	-1.0008	0.4083	1.2280	2791.0	.1135	.569	0.3458	1.2648	2832.4	.0776	.705
3600	1.0426-4	-158.4	2.6471	27.408	.161	1.0429	-1.0014	0.4479	1.2115	2812.7	.1336	.540	0.3470	1.2639	2873.0	.0795	.704
3700	1.0129-4	-110.7	2.6602	27.366	.164	1.0715	-1.0023	0.5114	1.1912	2829.8	.1631	.515	0.3482	1.2633	2914.1	.0814	.702
3800	9.8379-5	-55.0	2.6750	27.299	.167	1.1163	-1.0039	0.6081	1.1698	2845.4	.2061	.493	0.3493	1.2631	2956.6	.0835	.699
3900	9.5491-5	12.2	2.6925	27.195	.170	1.1810	-1.0062	0.7426	1.1506	2864.3	.2671	.472	0.3503	1.2634	3001.4	.0855	.696
4000	9.2584-5	94.6	2.7133	27.043	.173	1.2643	-1.0094	0.9098	1.1359	2890.3	.3485	.451	0.3512	1.2644	3049.3	.0878	.691
4100	8.9633-5	194.9	2.7381	26.836	.175	1.3622	-1.0132	1.0992	1.1258	2924.3	.4501	.428	0.3520	1.2662	3101.3	.0902	.684
4200	8.6627-5	314.9	2.7670	26.568	.178	1.4707	-1.0177	1.3020	1.1191	2965.8	.5704	.405	0.3528	1.2688	3157.9	.0928	.675
4300	8.3567-5	455.6	2.8001	26.240	.180	1.5873	-1.0228	1.5140	1.1150	3014.0	.7065	.386	0.3536	1.2723	3219.6	.0957	.665
4400	8.0460-5	617.9	2.8374	25.852	.182	1.7100	-1.0285	1.7325	1.1125	3068.3	.8536	.370	0.3544	1.2767	3286.9	.0990	.652
4500	7.7319-5	802.2	2.8788	25.407	.184	1.8352	-1.0346	1.9525	1.1114	3128.4	*****	.359	0.3553	1.2820	3360.0	.1027	.637
4600	7.4163-5	1008.1	2.9240	24.912	.186	1.9560	-1.0408	2.1633	1.1113	3194.2	*****	.352	0.3562	1.2883	3439.1	.1069	.621
4700	7.1024-5	1233.9	2.9726	24.376	.188	2.0619	-1.0467	2.3473	1.1122	3265.2	*****	.351	0.3572	1.2954	3524.0	.1114	.604
4800	6.7947-5	1475.9	3.0235	23.816	.190	2.1393	-1.0516	2.4806	1.1139	3341.0	*****	.354	0.3583	1.3033	3613.8	.1164	.586
4900	6.4987-5	1727.5	3.0754	23.253	.192	2.1745	-1.0546	2.5382	1.1167	3420.4	*****	.362	0.3594	1.3117	3707.1	.1215	.569
5000	6.2198-5	1980.4	3.1265	22.710	.195	2.1582	-1.0553	2.5021	1.1204	3502.1	*****	.372	0.3606	1.3202	3801.6	.1267	.554
5100	5.9631-5	2224.7	3.1749	22.208	.197	2.0901	-1.0534	2.3701	1.1254	3584.6	*****	.385	0.3617	1.3285	3894.7	.1318	.540
5200	5.7317-5	2451.8	3.2190	21.765	.199	1.9802	-1.0492	2.1602	1.1317	3666.5	*****	.398	0.3627	1.3361	3983.9	.1365	.529
5300	5.5265-5	2655.2	3.2577	21.389	.201	1.8455	-1.0435	1.9042	1.1397	3747.1	.9317	.412	0.3637	1.3428	4067.4	.1410	.520
5400	5.3461-5	2832.3	3.2908	21.081	.204	1.7045	-1.0371	1.6373	1.1495	3826.1	.7861	.425	0.3645	1.3485	4144.2	.1450	.513

TABLE 16.2D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN2 (0.10 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0954-2	-1281.1	1.7260	28.795	.028	1.0000	-1.0000	0.2504	1.3802	926.2	.0089	.779	0.2504	1.3802	926.2	.0089	.779
380	1.0377-2	-1276.1	1.7395	28.795	.029	1.0000	-1.0000	0.2509	1.3791	951.3	.0094	.774	0.2509	1.3791	951.3	.0094	.774
400	9.8582-3	-1271.1	1.7524	28.795	.031	1.0000	-1.0000	0.2514	1.3780	975.6	.0100	.770	0.2514	1.3780	975.6	.0100	.770
420	9.3887-3	-1266.0	1.7647	28.795	.032	1.0000	-1.0000	0.2519	1.3769	999.3	.0105	.766	0.2519	1.3769	999.3	.0105	.766
440	8.9620-3	-1261.0	1.7764	28.795	.033	1.0000	-1.0000	0.2525	1.3757	1022.3	.0110	.763	0.2525	1.3757	1022.4	.0110	.763
460	8.5723-3	-1255.9	1.7877	28.795	.035	1.0000	-1.0000	0.2531	1.3745	1044.9	.0116	.761	0.2531	1.3745	1044.9	.0116	.761
480	8.2151-3	-1250.9	1.7985	28.795	.036	1.0000	-1.0000	0.2537	1.3733	1066.8	.0121	.759	0.2537	1.3733	1066.9	.0121	.759
500	7.8865-3	-1245.8	1.8088	28.795	.037	1.0000	-1.0000	0.2544	1.3719	1088.3	.0126	.757	0.2543	1.3720	1088.4	.0126	.758
520	7.5832-3	-1240.7	1.8188	28.795	.039	1.0000	-1.0000	0.2551	1.3706	1109.3	.0131	.756	0.2550	1.3707	1109.4	.0131	.757
537	7.3476-3	-1236.4	1.8269	28.795	.040	1.0001	-1.0000	0.2557	1.3694	1126.5	.0135	.755	0.2556	1.3696	1126.6	.0135	.756
540	7.3023-3	-1235.6	1.8285	28.795	.040	1.0001	-1.0000	0.2558	1.3691	1129.9	.0136	.755	0.2557	1.3694	1130.0	.0136	.756
560	7.0415-3	-1230.5	1.8378	28.795	.041	1.0001	-1.0000	0.2566	1.3676	1150.0	.0141	.754	0.2564	1.3680	1150.1	.0141	.756
580	6.7986-3	-1225.3	1.8468	28.795	.043	1.0002	-1.0000	0.2575	1.3660	1169.6	.0146	.753	0.2571	1.3666	1169.9	.0145	.756
600	6.5720-3	-1220.2	1.8555	28.795	.044	1.0003	-1.0000	0.2585	1.3642	1188.8	.0151	.752	0.2578	1.3652	1189.3	.0150	.756
620	6.3599-3	-1215.0	1.8640	28.794	.045	1.0005	-1.0000	0.2596	1.3623	1207.6	.0157	.749	0.2586	1.3638	1208.3	.0155	.756
640	6.1610-3	-1209.8	1.8723	28.794	.046	1.0008	-1.0000	0.2609	1.3601	1226.0	.0162	.746	0.2593	1.3623	1227.0	.0159	.756
660	5.9741-3	-1204.6	1.8803	28.793	.048	1.0012	-1.0000	0.2624	1.3577	1243.9	.0169	.741	0.2601	1.3609	1245.4	.0164	.756
680	5.7982-3	-1199.3	1.8882	28.791	.049	1.0017	-1.0001	0.2641	1.3550	1261.4	.0176	.734	0.2609	1.3594	1263.5	.0169	.755
700	5.6322-3	-1194.0	1.8959	28.790	.050	1.0025	-1.0001	0.2662	1.3519	1278.4	.0183	.726	0.2617	1.3579	1281.2	.0174	.754
720	5.4753-3	-1188.6	1.9034	28.787	.051	1.0035	-1.0001	0.2687	1.3484	1294.9	.0192	.716	0.2625	1.3564	1298.7	.0179	.753
740	5.3267-3	-1183.2	1.9108	28.784	.052	1.0048	-1.0002	0.2717	1.3444	1310.9	.0202	.705	0.2634	1.3549	1316.0	.0183	.753
760	5.1857-3	-1177.8	1.9181	28.780	.054	1.0065	-1.0003	0.2752	1.3400	1326.4	.0213	.692	0.2643	1.3534	1333.0	.0188	.752
780	5.0518-3	-1172.2	1.9253	28.774	.055	1.0086	-1.0004	0.2794	1.3349	1341.4	.0226	.677	0.2651	1.3519	1349.8	.0193	.751
800	4.9242-3	-1166.6	1.9325	28.767	.056	1.0113	-1.0005	0.2844	1.3294	1355.8	.0240	.660	0.2661	1.3504	1366.4	.0198	.751
820	4.8026-3	-1160.8	1.9395	28.758	.057	1.0147	-1.0006	0.2903	1.3233	1369.7	.0257	.642	0.2670	1.3489	1382.9	.0202	.750
840	4.6864-3	-1155.0	1.9466	28.746	.058	1.0187	-1.0008	0.2971	1.3166	1383.1	.0276	.624	0.2679	1.3474	1399.1	.0207	.749
860	4.5751-3	-1148.9	1.9537	28.732	.059	1.0236	-1.0011	0.3050	1.3095	1396.0	.0297	.606	0.2689	1.3459	1415.3	.0212	.748
880	4.4684-3	-1142.8	1.9608	28.714	.060	1.0294	-1.0014	0.3141	1.3020	1408.5	.0321	.588	0.2699	1.3445	1431.3	.0217	.747
900	4.3659-3	-1136.4	1.9680	28.693	.061	1.0361	-1.0017	0.3244	1.2942	1420.7	.0348	.571	0.2710	1.3430	1447.2	.0222	.745
920	4.2673-3	-1129.8	1.9752	28.668	.062	1.0439	-1.0021	0.3360	1.2863	1432.6	.0377	.555	0.2720	1.3416	1463.1	.0228	.744
940	4.1721-3	-1122.9	1.9826	28.639	.063	1.0528	-1.0026	0.3489	1.2782	1444.3	.0407	.542	0.2731	1.3403	1478.9	.0233	.741
960	4.0803-3	-1115.8	1.9901	28.604	.064	1.0627	-1.0031	0.3632	1.2702	1455.9	.0440	.531	0.2742	1.3390	1494.8	.0239	.739
980	3.9914-3	-1108.4	1.9977	28.564	.065	1.0736	-1.0037	0.3788	1.2624	1467.5	.0474	.522	0.2754	1.3377	1510.6	.0244	.736
1000	3.9053-3	-1100.6	2.0056	28.518	.066	1.0854	-1.0044	0.3956	1.2548	1479.1	.0508	.517	0.2766	1.3365	1526.5	.0250	.733
1020	3.8218-3	-1092.6	2.0136	28.466	.067	1.0981	-1.0051	0.4134	1.2475	1490.8	.0542	.514	0.2778	1.3353	1542.4	.0257	.729
1040	3.7407-3	-1084.1	2.0218	28.408	.068	1.1113	-1.0058	0.4322	1.2406	1502.7	.0575	.514	0.2790	1.3343	1558.4	.0263	.726
1060	3.6619-3	-1075.3	2.0302	28.345	.069	1.1248	-1.0066	0.4516	1.2341	1514.8	.0605	.518	0.2803	1.3332	1574.5	.0269	.722
1080	3.5852-3	-1066.0	2.0388	28.275	.070	1.1383	-1.0073	0.4712	1.2282	1527.2	.0633	.524	0.2816	1.3323	1590.7	.0276	.718
1100	3.5107-3	-1056.4	2.0476	28.200	.071	1.1511	-1.0081	0.4904	1.2228	1540.0	.0656	.533	0.2829	1.3315	1606.9	.0283	.713
1120	3.4383-3	-1046.4	2.0566	28.120	.072	1.1626	-1.0088	0.5083	1.2181	1553.1	.0674	.545	0.2842	1.3307	1623.3	.0290	.709
1140	3.3679-3	-1036.1	2.0658	28.037	.073	1.1718	-1.0093	0.5236	1.2143	1566.8	.0685	.560	0.2855	1.3300	1639.8	.0297	.705

TABLE 16.2D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN² (0.10 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS (GAM)S FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS GAM FT/S	COND BTU/ FT HR R	PRAN		
1160	3.2998-3	-1025.5	2.0750	27.952	.074	1.1774	-1.0096	0.5346	1.2115	1581.1	.0686	.578	0.2867	1.3294	1656.2	.0304	.700
1180	3.2340-3	-1014.8	2.0842	27.867	.075	1.1777	-1.0097	0.5390	1.2102	1596.2	.0677	.598	0.2880	1.3288	1672.6	.0311	.696
1200	3.1708-3	-1004.0	2.0932	27.785	.076	1.1711	-1.0093	0.5343	1.2109	1612.5	.0655	.620	0.2892	1.3283	1688.9	.0317	.693
1220	3.1103-3	-993.5	2.1019	27.710	.077	1.1564	-1.0085	0.5186	1.2140	1630.2	.0621	.642	0.2903	1.3278	1704.9	.0324	.690
1240	3.0529-3	-983.3	2.1102	27.644	.078	1.1339	-1.0073	0.4921	1.2200	1649.5	.0578	.663	0.2914	1.3273	1720.5	.0330	.687
1260	2.9987-3	-973.8	2.1178	27.591	.079	1.1063	-1.0058	0.4582	1.2291	1670.6	.0532	.678	0.2923	1.3266	1735.6	.0336	.686
1280	2.9476-3	-965.0	2.1247	27.551	.080	1.0780	-1.0043	0.4230	1.2403	1692.6	.0489	.688	0.2932	1.3259	1750.1	.0341	.684
1300	2.8993-3	-956.9	2.1310	27.523	.080	1.0534	-1.0030	0.3922	1.2518	1714.6	.0457	.691	0.2941	1.3251	1764.1	.0346	.684
1320	2.8535-3	-949.3	2.1368	27.505	.081	1.0347	-1.0019	0.3689	1.2619	1735.3	.0434	.691	0.2949	1.3242	1777.6	.0351	.684
1340	2.8097-3	-942.1	2.1422	27.493	.082	1.0218	-1.0012	0.3531	1.2696	1754.0	.0421	.689	0.2957	1.3233	1790.7	.0355	.684
1360	2.7677-3	-935.1	2.1474	27.486	.083	1.0134	-1.0008	0.3431	1.2748	1770.9	.0414	.688	0.2964	1.3223	1803.6	.0359	.685
1380	2.7271-3	-928.3	2.1524	27.482	.084	1.0082	-1.0005	0.3370	1.2779	1786.2	.0412	.686	0.2971	1.3213	1816.3	.0364	.685
1400	2.6879-3	-921.6	2.1572	27.479	.085	1.0050	-1.0003	0.3335	1.2797	1800.5	.0412	.686	0.2979	1.3203	1828.8	.0368	.686
1420	2.6499-3	-915.0	2.1619	27.478	.086	1.0031	-1.0002	0.3315	1.2807	1814.0	.0414	.685	0.2986	1.3193	1841.2	.0372	.686
1440	2.6130-3	-908.4	2.1665	27.477	.086	1.0019	-1.0001	0.3304	1.2811	1827.1	.0417	.685	0.2993	1.3184	1853.4	.0376	.687
1460	2.5772-3	-901.8	2.1711	27.476	.087	1.0012	-1.0001	0.3299	1.2813	1839.9	.0420	.685	0.3000	1.3174	1865.6	.0381	.688
1480	2.5423-3	-895.2	2.1756	27.476	.088	1.0008	-1.0000	0.3297	1.2813	1852.4	.0424	.685	0.3007	1.3164	1877.6	.0385	.688
1500	2.5084-3	-888.6	2.1800	27.476	.089	1.0005	-1.0000	0.3296	1.2812	1864.8	.0427	.686	0.3014	1.3154	1889.6	.0389	.689
1520	2.4754-3	-882.0	2.1843	27.476	.090	1.0003	-1.0000	0.3297	1.2810	1877.1	.0431	.686	0.3021	1.3145	1901.5	.0393	.690
1540	2.4432-3	-875.4	2.1887	27.475	.091	1.0002	-1.0000	0.3298	1.2808	1889.3	.0435	.686	0.3028	1.3135	1913.3	.0397	.690
1560	2.4119-3	-868.8	2.1929	27.475	.091	1.0001	-1.0000	0.3299	1.2807	1901.4	.0439	.687	0.3035	1.3126	1925.0	.0401	.691
1580	2.3813-3	-862.2	2.1971	27.475	.092	1.0001	-1.0000	0.3300	1.2805	1913.4	.0443	.687	0.3042	1.3117	1936.6	.0405	.692
1600	2.3516-3	-855.6	2.2013	27.475	.093	1.0001	-1.0000	0.3301	1.2803	1925.4	.0446	.687	0.3048	1.3108	1948.1	.0409	.692
1620	2.3225-3	-849.0	2.2054	27.475	.094	1.0000	-1.0000	0.3303	1.2802	1937.3	.0450	.688	0.3055	1.3099	1959.6	.0413	.693
1640	2.2942-3	-842.4	2.2094	27.475	.095	1.0000	-1.0000	0.3304	1.2801	1949.1	.0454	.688	0.3062	1.3090	1971.0	.0417	.694
1660	2.2666-3	-835.8	2.2134	27.475	.095	1.0000	-1.0000	0.3305	1.2799	1960.8	.0458	.688	0.3068	1.3082	1982.3	.0421	.694
1680	2.2396-3	-829.2	2.2174	27.475	.096	1.0000	-1.0000	0.3306	1.2798	1972.5	.0461	.689	0.3075	1.3073	1993.6	.0425	.695
1700	2.2132-3	-822.5	2.2213	27.475	.097	1.0000	-1.0000	0.3307	1.2797	1984.1	.0465	.689	0.3081	1.3065	2004.8	.0429	.695
1720	2.1875-3	-815.9	2.2252	27.475	.098	1.0000	-1.0000	0.3308	1.2795	1995.7	.0469	.690	0.3088	1.3056	2015.9	.0433	.696
1740	2.1624-3	-809.3	2.2290	27.475	.098	1.0000	-1.0000	0.3309	1.2794	2007.1	.0472	.690	0.3094	1.3048	2027.0	.0437	.696
1760	2.1378-3	-802.7	2.2328	27.475	.099	1.0000	-1.0000	0.3310	1.2793	2018.6	.0476	.690	0.3100	1.3040	2038.0	.0441	.697
1780	2.1138-3	-796.1	2.2365	27.475	.100	1.0000	-1.0000	0.3311	1.2792	2029.9	.0479	.691	0.3106	1.3033	2048.9	.0445	.697
1800	2.0903-3	-789.4	2.2402	27.475	.101	1.0000	-1.0000	0.3312	1.2791	2041.2	.0483	.691	0.3112	1.3025	2059.8	.0449	.698
1900	1.9803-3	-756.3	2.2581	27.475	.105	1.0000	-1.0000	0.3317	1.2786	2096.7	.0500	.693	0.3141	1.2989	2113.3	.0469	.700
2000	1.8813-3	-723.1	2.2752	27.475	.108	1.0000	-1.0000	0.3323	1.2779	2150.6	.0518	.695	0.3169	1.2955	2165.3	.0489	.702
2100	1.7917-3	-689.8	2.2914	27.475	.112	1.0000	-1.0000	0.3331	1.2771	2203.0	.0535	.696	0.3195	1.2923	2216.1	.0508	.703
2200	1.7102-3	-656.5	2.3069	27.475	.115	1.0000	-1.0000	0.3340	1.2762	2254.1	.0552	.698	0.3221	1.2893	2265.6	.0528	.705
2300	1.6359-3	-623.0	2.3218	27.475	.119	1.0000	-1.0000	0.3349	1.2752	2303.8	.0570	.699	0.3245	1.2866	2314.1	.0547	.706
2400	1.5677-3	-589.5	2.3361	27.475	.122	1.0000	-1.0000	0.3360	1.2741	2352.3	.0588	.700	0.3268	1.2840	2361.4	.0566	.707
2500	1.5050-3	-555.8	2.3498	27.475	.126	1.0000	-1.0000	0.3372	1.2729	2399.7	.0605	.701	0.3290	1.2815	2407.8	.0586	.707

TABLE 16.2D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN² (0.10 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
2600	1.4471-3	-522.0	2.3631	27.475	.129	1.0001	-1.0000	0.3384	1.2716	2446.0	.0624	.702	0.3311	1.2792	2453.3	.0605	.708
2700	1.3935-3	-488.1	2.3758	27.475	.133	1.0001	-1.0000	0.3397	1.2703	2491.4	.0642	.702	0.3331	1.2771	2498.0	.0624	.708
2800	1.3437-3	-454.1	2.3882	27.475	.136	1.0002	-1.0000	0.3411	1.2690	2535.7	.0662	.701	0.3350	1.2751	2541.8	.0643	.708
2900	1.2974-3	-419.9	2.4002	27.475	.139	1.0003	-1.0000	0.3427	1.2675	2579.1	.0682	.699	0.3368	1.2732	2585.0	.0662	.709
3000	1.2541-3	-385.6	2.4119	27.474	.142	1.0006	-1.0000	0.3445	1.2659	2621.6	.0705	.696	0.3385	1.2715	2627.4	.0681	.709
3100	1.2136-3	-351.0	2.4232	27.474	.146	1.0010	-1.0000	0.3466	1.2641	2663.0	.0730	.692	0.3401	1.2699	2669.1	.0699	.708
3200	1.1757-3	-316.2	2.4342	27.472	.149	1.0017	-1.0001	0.3494	1.2619	2703.4	.0759	.685	0.3416	1.2684	2710.3	.0718	.708
3300	1.1400-3	-281.1	2.4450	27.471	.152	1.0028	-1.0001	0.3530	1.2592	2742.5	.0794	.676	0.3431	1.2670	2750.9	.0737	.708
3400	1.1063-3	-245.6	2.4557	27.468	.155	1.0045	-1.0001	0.3579	1.2558	2780.0	.0836	.664	0.3445	1.2657	2790.9	.0755	.707
3500	1.0745-3	-209.4	2.4661	27.463	.158	1.0071	-1.0002	0.3650	1.2512	2815.7	.0889	.649	0.3457	1.2645	2830.6	.0774	.707
3600	1.0444-3	-172.5	2.4765	27.456	.161	1.0113	-1.0004	0.3752	1.2450	2848.9	.0958	.632	0.3470	1.2634	2869.9	.0793	.706
3700	1.0158-3	-134.2	2.4870	27.445	.164	1.0178	-1.0006	0.3904	1.2367	2879.1	.1049	.612	0.3481	1.2624	2908.9	.0811	.705
3800	9.8847-4	-94.1	2.4977	27.429	.167	1.0279	-1.0009	0.4133	1.2258	2905.7	.1171	.590	0.3492	1.2616	2947.8	.0830	.704
3900	9.6224-4	-51.2	2.5089	27.404	.170	1.0437	-1.0015	0.4474	1.2121	2928.6	.1338	.569	0.3502	1.2609	2987.0	.0848	.702
4000	9.3688-4	-4.1	2.5208	27.366	.173	1.0675	-1.0023	0.4972	1.1962	2948.4	.1570	.548	0.3512	1.2605	3026.6	.0867	.701
4100	9.1214-4	48.9	2.5339	27.309	.176	1.1019	-1.0036	0.5665	1.1796	2967.3	.1885	.529	0.3521	1.2603	3067.2	.0887	.698
4200	8.8777-4	109.9	2.5486	27.228	.179	1.1481	-1.0054	0.6566	1.1642	2988.1	.2304	.509	0.3529	1.2605	3109.3	.0907	.695
4300	8.6355-4	180.8	2.5652	27.116	.181	1.2053	-1.0077	0.7642	1.1515	3013.1	.2836	.489	0.3536	1.2612	3153.4	.0927	.691
4400	8.3933-4	263.1	2.5842	26.968	.184	1.2712	-1.0104	0.8837	1.1419	3043.5	.3481	.467	0.3543	1.2624	3200.1	.0949	.687
4500	8.1504-4	357.7	2.6054	26.783	.186	1.3432	-1.0136	1.0094	1.1350	3079.2	.4231	.445	0.3549	1.2641	3249.6	.0972	.681
4600	7.9067-4	465.1	2.6290	26.559	.189	1.4195	-1.0171	1.1382	1.1303	3119.8	.5076	.423	0.3555	1.2663	3302.2	.0997	.674
4700	7.6625-4	585.4	2.6549	26.299	.191	1.4991	-1.0210	1.2687	1.1271	3164.7	.6004	.404	0.3561	1.2691	3358.1	.1023	.665
4800	7.4181-4	718.9	2.6830	26.001	.193	1.5814	-1.0252	1.4002	1.1252	3213.7	.6995	.387	0.3567	1.2725	3417.5	.1052	.655
4900	7.1739-4	865.5	2.7132	25.669	.196	1.6653	-1.0296	1.5314	1.1242	3266.4	.8018	.374	0.3573	1.2764	3480.5	.1084	.645
5000	6.9307-4	1025.1	2.7454	25.305	.198	1.7486	-1.0343	1.6596	1.1239	3322.9	.9030	.363	0.3579	1.2808	3547.2	.1118	.633
5100	6.6895-4	1197.1	2.7795	24.913	.200	1.8281	-1.0390	1.7802	1.1244	3382.9	.9975	.357	0.3586	1.2858	3617.6	.1156	.620
5200	6.4517-4	1380.6	2.8151	24.498	.202	1.8993	-1.0435	1.8865	1.1255	3446.4	*****	.353	0.3593	1.2913	3691.6	.1196	.607
5300	6.2189-4	1573.7	2.8519	24.069	.204	1.9570	-1.0476	1.9704	1.1272	3512.9	*****	.353	0.3601	1.2972	3768.7	.1239	.593
5400	5.9931-4	1773.7	2.8893	23.633	.206	1.9956	-1.0508	2.0232	1.1295	3582.2	*****	.355	0.3609	1.3035	3848.3	.1284	.580

TABLE 16.3D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN² (1.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0954-1	-1281.1	1.5672	28.795	.028	1.0000	-1.0000	0.2504	1.3802	926.2	.0089	.779	0.2504	1.3802	926.2	.0089	.779
380	1.0377-1	-1276.1	1.5807	28.795	.029	1.0000	-1.0000	0.2509	1.3791	951.3	.0094	.774	0.2509	1.3791	951.3	.0094	.774
400	9.8582-2	-1271.1	1.5936	28.795	.031	1.0000	-1.0000	0.2514	1.3780	975.6	.0100	.770	0.2514	1.3780	975.6	.0100	.770
420	9.3887-2	-1266.0	1.6059	28.795	.032	1.0000	-1.0000	0.2519	1.3769	999.3	.0105	.766	0.2519	1.3769	999.3	.0105	.766
440	8.9620-2	-1261.0	1.6176	28.795	.033	1.0000	-1.0000	0.2525	1.3757	1022.3	.0110	.763	0.2525	1.3757	1022.4	.0110	.763
460	8.5723-2	-1255.9	1.6289	28.795	.035	1.0000	-1.0000	0.2531	1.3745	1044.9	.0116	.761	0.2531	1.3745	1044.9	.0116	.761
480	8.2151-2	-1250.9	1.6397	28.795	.036	1.0000	-1.0000	0.2537	1.3733	1066.9	.0121	.759	0.2537	1.3733	1066.9	.0121	.759
500	7.8865-2	-1245.8	1.6500	28.795	.037	1.0000	-1.0000	0.2544	1.3720	1088.3	.0126	.758	0.2543	1.3720	1088.4	.0126	.758
520	7.5832-2	-1240.7	1.6600	28.795	.039	1.0000	-1.0000	0.2550	1.3707	1109.4	.0131	.756	0.2550	1.3707	1109.4	.0131	.757
537	7.3477-2	-1236.4	1.6681	28.795	.040	1.0000	-1.0000	0.2556	1.3695	1126.5	.0135	.756	0.2556	1.3696	1126.6	.0135	.756
540	7.3024-2	-1235.6	1.6697	28.795	.040	1.0000	-1.0000	0.2557	1.3693	1129.9	.0136	.756	0.2557	1.3694	1130.0	.0136	.756
560	7.0415-2	-1230.5	1.6790	28.795	.041	1.0000	-1.0000	0.2565	1.3679	1150.1	.0141	.755	0.2564	1.3680	1150.1	.0141	.756
580	6.7987-2	-1225.3	1.6880	28.795	.043	1.0001	-1.0000	0.2572	1.3664	1169.8	.0145	.755	0.2571	1.3666	1169.9	.0145	.756
600	6.5721-2	-1220.2	1.6967	28.795	.044	1.0001	-1.0000	0.2580	1.3649	1189.1	.0150	.755	0.2578	1.3652	1189.3	.0150	.756
620	6.3600-2	-1215.0	1.7052	28.795	.045	1.0002	-1.0000	0.2589	1.3633	1208.1	.0155	.754	0.2585	1.3638	1208.3	.0155	.757
640	6.1613-2	-1209.8	1.7134	28.795	.046	1.0002	-1.0000	0.2598	1.3616	1226.7	.0160	.753	0.2593	1.3623	1227.0	.0159	.756
660	5.9745-2	-1204.6	1.7214	28.794	.048	1.0004	-1.0000	0.2608	1.3598	1244.9	.0166	.751	0.2601	1.3609	1245.3	.0164	.756
680	5.7987-2	-1199.4	1.7292	28.794	.049	1.0005	-1.0000	0.2619	1.3579	1262.7	.0171	.748	0.2609	1.3594	1263.4	.0169	.755
700	5.6329-2	-1194.1	1.7368	28.793	.050	1.0008	-1.0000	0.2631	1.3559	1280.2	.0177	.745	0.2617	1.3579	1281.1	.0174	.754
720	5.4763-2	-1188.9	1.7443	28.793	.051	1.0011	-1.0000	0.2645	1.3538	1297.4	.0183	.741	0.2625	1.3564	1298.6	.0178	.754
740	5.3281-2	-1183.6	1.7515	28.792	.052	1.0015	-1.0001	0.2660	1.3514	1314.1	.0189	.737	0.2633	1.3549	1315.8	.0183	.753
760	5.1876-2	-1178.2	1.7587	28.790	.054	1.0021	-1.0001	0.2677	1.3489	1330.6	.0196	.732	0.2642	1.3533	1332.8	.0188	.753
780	5.0543-2	-1172.9	1.7656	28.789	.055	1.0027	-1.0001	0.2696	1.3461	1346.6	.0203	.725	0.2650	1.3518	1349.5	.0192	.752
800	4.9276-2	-1167.4	1.7725	28.786	.056	1.0036	-1.0002	0.2718	1.3431	1362.3	.0211	.718	0.2659	1.3503	1365.9	.0197	.752
820	4.8069-2	-1162.0	1.7792	28.783	.057	1.0047	-1.0002	0.2743	1.3399	1377.6	.0220	.710	0.2668	1.3488	1382.2	.0202	.752
840	4.6918-2	-1156.5	1.7859	28.780	.058	1.0061	-1.0003	0.2772	1.3364	1392.6	.0229	.701	0.2677	1.3472	1398.2	.0206	.752
860	4.5820-2	-1150.9	1.7924	28.775	.059	1.0077	-1.0004	0.2804	1.3325	1407.2	.0240	.690	0.2686	1.3457	1414.1	.0211	.751
880	4.4770-2	-1145.2	1.7989	28.769	.060	1.0097	-1.0005	0.2841	1.3284	1421.4	.0251	.679	0.2696	1.3442	1429.8	.0216	.751
900	4.3764-2	-1139.5	1.8053	28.762	.061	1.0120	-1.0006	0.2883	1.3240	1435.2	.0264	.667	0.2705	1.3427	1445.3	.0220	.750
920	4.2800-2	-1133.7	1.8117	28.754	.062	1.0148	-1.0007	0.2930	1.3193	1448.7	.0279	.654	0.2715	1.3412	1460.7	.0225	.750
940	4.1875-2	-1127.8	1.8181	28.744	.063	1.0180	-1.0009	0.2983	1.3144	1461.9	.0294	.641	0.2725	1.3397	1475.9	.0230	.749
960	4.0985-2	-1121.8	1.8244	28.732	.064	1.0218	-1.0011	0.3042	1.3091	1474.7	.0312	.627	0.2734	1.3383	1491.0	.0235	.748
980	4.0129-2	-1115.6	1.8308	28.718	.065	1.0261	-1.0013	0.3108	1.3036	1487.2	.0330	.614	0.2745	1.3368	1506.1	.0240	.746
1000	3.9304-2	-1109.3	1.8371	28.701	.066	1.0310	-1.0016	0.3182	1.2979	1499.5	.0351	.601	0.2755	1.3354	1521.0	.0245	.745
1020	3.8507-2	-1102.9	1.8435	28.682	.067	1.0366	-1.0019	0.3265	1.2920	1511.4	.0373	.590	0.2765	1.3340	1535.8	.0250	.743
1040	3.7738-2	-1096.3	1.8499	28.660	.068	1.0429	-1.0023	0.3355	1.2859	1523.2	.0396	.579	0.2776	1.3327	1550.6	.0256	.742
1060	3.6993-2	-1089.5	1.8564	28.635	.069	1.0498	-1.0027	0.3455	1.2797	1534.7	.0421	.569	0.2786	1.3314	1565.4	.0261	.740
1080	3.6272-2	-1082.5	1.8630	28.606	.070	1.0575	-1.0031	0.3564	1.2735	1546.1	.0446	.561	0.2797	1.3301	1580.1	.0266	.738
1100	3.5572-2	-1075.2	1.8696	28.574	.071	1.0660	-1.0036	0.3683	1.2672	1557.4	.0473	.554	0.2808	1.3289	1594.9	.0272	.735
1120	3.4892-2	-1067.7	1.8764	28.537	.072	1.0751	-1.0041	0.3812	1.2609	1568.6	.0501	.549	0.2819	1.3277	1609.6	.0278	.733
1140	3.4232-2	-1060.0	1.8832	28.497	.073	1.0850	-1.0047	0.3951	1.2546	1579.7	.0529	.546	0.2831	1.3266	1624.4	.0284	.730

TABLE 16.3D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN² (1.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.3589-2	-1051.9	1.8902	28.452	.074	1.0956	-1.0053	0.4100	1.2485	1590.8	.0557	.545	0.2842	1.3255	1639.2	.0290	.727
1180	3.2963-2	-1043.5	1.8974	28.403	.075	1.1067	-1.0060	0.4258	1.2424	1602.0	.0586	.546	0.2853	1.3246	1654.1	.0296	.725
1200	3.2352-2	-1034.9	1.9047	28.350	.076	1.1182	-1.0066	0.4423	1.2367	1613.3	.0613	.548	0.2865	1.3236	1669.0	.0302	.722
1220	3.1756-2	-1025.8	1.9121	28.291	.077	1.1299	-1.0073	0.4593	1.2312	1624.7	.0639	.553	0.2876	1.3228	1684.1	.0308	.718
1240	3.1175-2	-1016.5	1.9197	28.229	.078	1.1415	-1.0080	0.4764	1.2261	1636.4	.0663	.560	0.2888	1.3221	1699.2	.0314	.715
1260	3.0608-2	-1006.8	1.9275	28.163	.079	1.1524	-1.0087	0.4930	1.2215	1648.4	.0683	.568	0.2899	1.3214	1714.5	.0321	.712
1280	3.0056-2	-996.8	1.9354	28.093	.080	1.1622	-1.0092	0.5082	1.2175	1660.8	.0700	.578	0.2911	1.3208	1729.8	.0327	.709
1300	2.9517-2	-986.5	1.9434	28.021	.081	1.1699	-1.0097	0.5209	1.2144	1673.7	.0710	.591	0.2922	1.3203	1745.1	.0333	.706
1320	2.8993-2	-976.0	1.9514	27.947	.081	1.1744	-1.0100	0.5297	1.2122	1687.2	.0713	.605	0.2933	1.3198	1760.5	.0340	.703
1340	2.8486-2	-965.3	1.9594	27.874	.082	1.1747	-1.0100	0.5330	1.2113	1701.6	.0707	.620	0.2943	1.3194	1775.8	.0346	.700
1360	2.7995-2	-954.7	1.9673	27.802	.083	1.1697	-1.0098	0.5293	1.2119	1716.9	.0690	.637	0.2953	1.3190	1791.1	.0352	.697
1380	2.7523-2	-944.2	1.9749	27.736	.084	1.1585	-1.0091	0.5176	1.2144	1733.2	.0665	.654	0.2963	1.3186	1806.1	.0358	.695
1400	2.7071-2	-934.0	1.9822	27.676	.085	1.1415	-1.0082	0.4981	1.2188	1750.8	.0631	.669	0.2973	1.3182	1820.8	.0364	.693
1420	2.6640-2	-924.3	1.9891	27.624	.086	1.1199	-1.0070	0.4726	1.2252	1769.6	.0593	.682	0.2982	1.3177	1835.2	.0369	.692
1440	2.6231-2	-915.2	1.9955	27.583	.086	1.0962	-1.0056	0.4442	1.2332	1789.2	.0556	.691	0.2990	1.3172	1849.0	.0374	.691
1460	2.5841-2	-906.6	2.0015	27.550	.087	1.0733	-1.0043	0.4166	1.2422	1809.2	.0523	.695	0.2998	1.3165	1862.5	.0379	.690
1480	2.5470-2	-898.5	2.0070	27.527	.088	1.0534	-1.0032	0.3926	1.2511	1828.8	.0497	.696	0.3006	1.3158	1875.5	.0384	.690
1500	2.5115-2	-890.8	2.0121	27.510	.089	1.0375	-1.0023	0.3737	1.2590	1847.4	.0478	.696	0.3013	1.3150	1888.1	.0388	.690
1520	2.4775-2	-883.5	2.0170	27.499	.090	1.0258	-1.0016	0.3598	1.2653	1864.8	.0465	.694	0.3021	1.3142	1900.5	.0392	.690
1540	2.4446-2	-876.4	2.0216	27.491	.091	1.0175	-1.0011	0.3500	1.2700	1880.8	.0458	.692	0.3028	1.3134	1912.6	.0397	.691
1560	2.4128-2	-869.5	2.0261	27.486	.091	1.0118	-1.0007	0.3434	1.2733	1895.6	.0454	.691	0.3035	1.3125	1924.5	.0401	.691
1580	2.3820-2	-862.7	2.0304	27.482	.092	1.0079	-1.0005	0.3390	1.2756	1909.5	.0453	.690	0.3041	1.3116	1936.3	.0405	.692
1600	2.3520-2	-855.9	2.0347	27.480	.093	1.0053	-1.0003	0.3361	1.2771	1922.7	.0453	.689	0.3048	1.3107	1947.9	.0409	.692
1620	2.3228-2	-849.2	2.0388	27.479	.094	1.0036	-1.0002	0.3343	1.2780	1935.5	.0455	.689	0.3055	1.3099	1959.5	.0413	.693
1640	2.2944-2	-842.5	2.0429	27.478	.095	1.0025	-1.0002	0.3331	1.2786	1947.9	.0457	.689	0.3062	1.3090	1970.9	.0417	.694
1660	2.2667-2	-835.9	2.0469	27.477	.095	1.0017	-1.0001	0.3323	1.2789	1960.0	.0460	.689	0.3068	1.3081	1982.3	.0421	.694
1680	2.2397-2	-829.2	2.0509	27.477	.096	1.0012	-1.0001	0.3319	1.2791	1971.9	.0463	.689	0.3075	1.3073	1993.5	.0425	.695
1700	2.2133-2	-822.6	2.0548	27.476	.097	1.0008	-1.0001	0.3316	1.2792	1983.7	.0466	.690	0.3081	1.3065	2004.7	.0429	.695
1720	2.1876-2	-816.0	2.0587	27.476	.098	1.0006	-1.0000	0.3314	1.2792	1995.4	.0469	.690	0.3088	1.3056	2015.9	.0433	.696
1740	2.1624-2	-809.3	2.0626	27.476	.098	1.0004	-1.0000	0.3314	1.2792	2006.9	.0473	.690	0.3094	1.3048	2026.9	.0437	.696
1760	2.1378-2	-802.7	2.0663	27.476	.099	1.0003	-1.0000	0.3314	1.2792	2018.4	.0476	.691	0.3100	1.3040	2037.9	.0441	.697
1780	2.1138-2	-796.1	2.0701	27.476	.100	1.0002	-1.0000	0.3314	1.2791	2029.8	.0480	.691	0.3106	1.3033	2048.9	.0445	.697
1800	2.0903-2	-789.5	2.0738	27.476	.101	1.0002	-1.0000	0.3314	1.2790	2041.1	.0483	.691	0.3112	1.3025	2059.8	.0449	.698
1900	1.9803-2	-756.3	2.0917	27.475	.105	1.0001	-1.0000	0.3318	1.2786	2096.7	.0500	.693	0.3141	1.2989	2113.3	.0469	.700
2000	1.8813-2	-723.1	2.1087	27.475	.108	1.0000	-1.0000	0.3324	1.2779	2150.6	.0518	.695	0.3169	1.2955	2165.3	.0489	.702
2100	1.7917-2	-689.8	2.1250	27.475	.112	1.0000	-1.0000	0.3331	1.2771	2203.0	.0535	.696	0.3195	1.2923	2216.1	.0508	.703
2200	1.7102-2	-656.5	2.1405	27.475	.115	1.0000	-1.0000	0.3340	1.2762	2254.1	.0552	.698	0.3221	1.2893	2265.6	.0528	.705
2300	1.6359-2	-623.0	2.1554	27.475	.119	1.0000	-1.0000	0.3349	1.2752	2303.8	.0570	.699	0.3245	1.2866	2314.1	.0547	.706
2400	1.5677-2	-589.5	2.1696	27.475	.122	1.0000	-1.0000	0.3360	1.2741	2352.3	.0587	.701	0.3268	1.2840	2361.4	.0566	.707
2500	1.5050-2	-555.8	2.1834	27.475	.126	1.0000	-1.0000	0.3371	1.2729	2399.7	.0605	.702	0.3290	1.2815	2407.8	.0586	.707

TABLE 16.3D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN2 (1.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4471-2	-522.1	2.1966	27.475	.129	1.0000	-1.0000	0.3383	1.2717	2446.1	.0623	.702	0.3311	1.2792	2453.3	.0605	.708
2700	1.3935-2	-488.2	2.2094	27.475	.133	1.0000	-1.0000	0.3395	1.2705	2491.5	.0641	.703	0.3331	1.2771	2498.0	.0624	.708
2800	1.3438-2	-454.1	2.2218	27.475	.136	1.0001	-1.0000	0.3408	1.2692	2536.0	.0659	.703	0.3350	1.2751	2541.8	.0643	.709
2900	1.2974-2	-420.0	2.2338	27.475	.139	1.0001	-1.0000	0.3421	1.2680	2579.6	.0678	.703	0.3368	1.2732	2584.9	.0662	.709
3000	1.2542-2	-385.7	2.2454	27.475	.142	1.0002	-1.0000	0.3434	1.2667	2622.3	.0697	.702	0.3385	1.2715	2627.3	.0681	.709
3100	1.2137-2	-351.3	2.2567	27.475	.146	1.0003	-1.0000	0.3449	1.2653	2664.3	.0717	.701	0.3401	1.2699	2669.1	.0699	.708
3200	1.1757-2	-316.7	2.2676	27.474	.149	1.0005	-1.0000	0.3465	1.2639	2705.4	.0738	.699	0.3416	1.2683	2710.2	.0718	.708
3300	1.1401-2	-282.0	2.2783	27.474	.152	1.0009	-1.0000	0.3484	1.2623	2745.7	.0761	.696	0.3431	1.2669	2750.7	.0737	.708
3400	1.1065-2	-247.1	2.2888	27.473	.155	1.0014	-1.0000	0.3506	1.2606	2785.1	.0787	.691	0.3444	1.2656	2790.6	.0755	.708
3500	1.0749-2	-211.9	2.2990	27.471	.158	1.0022	-1.0001	0.3534	1.2585	2823.4	.0815	.686	0.3457	1.2644	2830.0	.0774	.707
3600	1.0449-2	-176.4	2.3090	27.469	.161	1.0033	-1.0001	0.3569	1.2559	2860.7	.0849	.678	0.3469	1.2632	2869.0	.0792	.706
3700	1.0166-2	-140.4	2.3188	27.466	.164	1.0051	-1.0002	0.3617	1.2527	2896.7	.0888	.669	0.3481	1.2622	2907.5	.0810	.706
3800	9.8965-3	-104.0	2.3285	27.462	.167	1.0077	-1.0003	0.3682	1.2487	2931.0	.0935	.659	0.3492	1.2612	2945.7	.0828	.705
3900	9.6404-3	-66.7	2.3382	27.455	.170	1.0115	-1.0004	0.3772	1.2435	2963.5	.0993	.646	0.3502	1.2603	2983.5	.0846	.704
4000	9.3960-3	-28.4	2.3479	27.445	.173	1.0171	-1.0006	0.3897	1.2368	2993.8	.1067	.632	0.3512	1.2595	3021.1	.0864	.703
4100	9.1621-3	11.4	2.3577	27.431	.176	1.0253	-1.0009	0.4072	1.2285	3021.5	.1162	.617	0.3521	1.2588	3058.6	.0883	.702
4200	8.9373-3	53.3	2.3678	27.411	.179	1.0371	-1.0013	0.4315	1.2184	3046.7	.1284	.601	0.3529	1.2583	3096.2	.0901	.701
4300	8.7202-3	98.0	2.3783	27.382	.182	1.0538	-1.0020	0.4645	1.2069	3069.7	.1442	.585	0.3537	1.2579	3134.0	.0919	.699
4400	8.5094-3	146.5	2.3895	27.341	.185	1.0765	-1.0028	0.5079	1.1945	3091.6	.1646	.569	0.3545	1.2577	3172.3	.0938	.697
4500	8.3034-3	199.9	2.4015	27.285	.187	1.1059	-1.0040	0.5623	1.1824	3113.7	.1905	.553	0.3552	1.2577	3211.5	.0957	.695
4600	8.1009-3	259.3	2.4146	27.212	.190	1.1419	-1.0056	0.6267	1.1713	3137.7	.2223	.535	0.3558	1.2581	3251.7	.0976	.692
4700	7.9009-3	325.5	2.4288	27.117	.193	1.1836	-1.0074	0.6986	1.1621	3164.6	.2601	.517	0.3564	1.2587	3293.4	.0996	.689
4800	7.7028-3	399.2	2.4443	26.999	.195	1.2295	-1.0095	0.7749	1.1548	3194.9	.3037	.498	0.3569	1.2596	3336.8	.1017	.685
4900	7.5063-3	480.6	2.4611	26.859	.198	1.2781	-1.0118	0.8529	1.1492	3228.6	.3525	.478	0.3574	1.2609	3381.9	.1038	.680
5000	7.3112-3	569.8	2.4791	26.695	.200	1.3286	-1.0143	0.9309	1.1452	3265.7	.4063	.458	0.3578	1.2625	3428.9	.1060	.675
5100	7.1177-3	666.7	2.4983	26.508	.202	1.3803	-1.0170	1.0081	1.1423	3305.6	.4644	.439	0.3582	1.2644	3477.8	.1083	.669
5200	6.9260-3	771.4	2.5186	26.300	.205	1.4330	-1.0199	1.0844	1.1404	3348.2	.5262	.422	0.3587	1.2667	3528.8	.1107	.663
5300	6.7361-3	883.6	2.5400	26.070	.207	1.4864	-1.0230	1.1595	1.1392	3393.3	.5910	.406	0.3591	1.2693	3581.8	.1133	.656
5400	6.5482-3	1003.2	2.5623	25.821	.209	1.5402	-1.0262	1.2333	1.1386	3440.8	.6577	.392	0.3595	1.2721	3637.0	.1161	.648

TABLE 16.4D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN² (10.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
360	1.0954	0	-1281.1	1.4084	28.795	.028	1.0000	-1.0000	0.2504	1.3802	926.2	.0089	.779	0.2504	1.3802	926.2	.0089	.779
380	1.0377	0	-1276.1	1.4219	28.795	.029	1.0000	-1.0000	0.2509	1.3791	951.3	.0094	.774	0.2509	1.3791	951.3	.0094	.774
400	9.8582	-1	-1271.1	1.4348	28.795	.031	1.0000	-1.0000	0.2514	1.3780	975.6	.0100	.770	0.2514	1.3780	975.6	.0100	.770
420	9.3887	-1	-1266.0	1.4471	28.795	.032	1.0000	-1.0000	0.2519	1.3769	999.3	.0105	.766	0.2519	1.3769	999.3	.0105	.766
440	8.9620	-1	-1261.0	1.4588	28.795	.033	1.0000	-1.0000	0.2525	1.3757	1022.3	.0110	.763	0.2525	1.3757	1022.4	.0110	.763
460	8.5723	-1	-1255.9	1.4701	28.795	.035	1.0000	-1.0000	0.2531	1.3745	1044.9	.0116	.761	0.2531	1.3745	1044.9	.0116	.761
480	8.2151	-1	-1250.9	1.4809	28.795	.036	1.0000	-1.0000	0.2537	1.3733	1066.9	.0121	.759	0.2537	1.3733	1066.9	.0121	.759
500	7.8865	-1	-1245.8	1.4912	28.795	.037	1.0000	-1.0000	0.2544	1.3720	1088.3	.0126	.758	0.2543	1.3720	1088.4	.0126	.758
520	7.5832	-1	-1240.7	1.5012	28.795	.039	1.0000	-1.0000	0.2550	1.3707	1109.4	.0131	.757	0.2550	1.3707	1109.4	.0131	.757
537	7.3477	-1	-1236.4	1.5093	28.795	.040	1.0000	-1.0000	0.2556	1.3696	1126.5	.0135	.756	0.2556	1.3696	1126.6	.0135	.756
540	7.3024	-1	-1235.6	1.5109	28.795	.040	1.0000	-1.0000	0.2557	1.3693	1129.9	.0136	.756	0.2557	1.3694	1130.0	.0136	.756
560	7.0416	-1	-1230.5	1.5202	28.795	.041	1.0000	-1.0000	0.2564	1.3679	1150.1	.0141	.756	0.2564	1.3680	1150.1	.0141	.756
580	6.7987	-1	-1225.3	1.5292	28.795	.043	1.0000	-1.0000	0.2571	1.3665	1169.8	.0145	.756	0.2571	1.3666	1169.9	.0145	.756
600	6.5721	-1	-1220.2	1.5379	28.795	.044	1.0000	-1.0000	0.2579	1.3651	1189.2	.0150	.756	0.2578	1.3652	1189.3	.0150	.756
620	6.3601	-1	-1215.0	1.5464	28.795	.045	1.0000	-1.0000	0.2587	1.3636	1208.2	.0155	.756	0.2585	1.3638	1208.3	.0155	.757
640	6.1613	-1	-1209.8	1.5546	28.795	.046	1.0001	-1.0000	0.2595	1.3620	1226.9	.0160	.755	0.2593	1.3623	1227.0	.0159	.756
660	5.9746	-1	-1204.6	1.5626	28.795	.048	1.0001	-1.0000	0.2603	1.3605	1245.2	.0164	.754	0.2601	1.3609	1245.3	.0164	.756
680	5.7989	-1	-1199.4	1.5704	28.795	.049	1.0002	-1.0000	0.2612	1.3589	1263.1	.0170	.753	0.2609	1.3594	1263.4	.0169	.755
700	5.6332	-1	-1194.2	1.5780	28.795	.050	1.0002	-1.0000	0.2622	1.3572	1280.8	.0175	.751	0.2617	1.3579	1281.1	.0174	.754
720	5.4766	-1	-1188.9	1.5854	28.794	.051	1.0003	-1.0000	0.2631	1.3555	1298.1	.0180	.750	0.2625	1.3564	1298.6	.0178	.754
740	5.3286	-1	-1183.7	1.5926	28.794	.052	1.0005	-1.0000	0.2642	1.3537	1315.2	.0185	.748	0.2633	1.3549	1315.8	.0183	.753
760	5.1883	-1	-1178.4	1.5996	28.794	.054	1.0006	-1.0000	0.2653	1.3518	1331.9	.0190	.746	0.2642	1.3533	1332.7	.0188	.753
780	5.0551	-1	-1173.1	1.6066	28.793	.055	1.0008	-1.0000	0.2665	1.3499	1348.4	.0196	.744	0.2650	1.3518	1349.3	.0192	.753
800	4.9286	-1	-1167.7	1.6133	28.793	.056	1.0011	-1.0001	0.2678	1.3479	1364.6	.0201	.741	0.2659	1.3503	1365.8	.0197	.753
820	4.8083	-1	-1162.3	1.6199	28.792	.057	1.0015	-1.0001	0.2692	1.3457	1380.4	.0207	.738	0.2668	1.3487	1382.0	.0202	.752
840	4.6936	-1	-1156.9	1.6265	28.790	.058	1.0019	-1.0001	0.2707	1.3435	1396.1	.0213	.735	0.2676	1.3472	1398.0	.0206	.752
860	4.5842	-1	-1151.5	1.6328	28.789	.059	1.0024	-1.0001	0.2723	1.3412	1411.4	.0220	.731	0.2685	1.3456	1413.7	.0211	.752
880	4.4797	-1	-1146.1	1.6391	28.787	.060	1.0031	-1.0001	0.2741	1.3387	1426.4	.0227	.726	0.2695	1.3441	1429.3	.0215	.752
900	4.3799	-1	-1140.6	1.6453	28.785	.061	1.0038	-1.0002	0.2761	1.3362	1441.2	.0234	.721	0.2704	1.3426	1444.7	.0220	.752
920	4.2842	-1	-1135.0	1.6514	28.782	.062	1.0047	-1.0002	0.2783	1.3335	1455.7	.0242	.715	0.2713	1.3410	1459.9	.0224	.752
940	4.1926	-1	-1129.4	1.6574	28.779	.063	1.0058	-1.0003	0.2806	1.3306	1470.0	.0250	.708	0.2722	1.3395	1474.9	.0229	.751
960	4.1047	-1	-1123.8	1.6633	28.775	.064	1.0070	-1.0004	0.2832	1.3276	1484.0	.0260	.701	0.2732	1.3380	1489.8	.0234	.751
980	4.0203	-1	-1118.1	1.6692	28.771	.065	1.0085	-1.0004	0.2861	1.3244	1497.7	.0269	.693	0.2741	1.3365	1504.5	.0239	.750
1000	3.9392	-1	-1112.3	1.6750	28.765	.066	1.0102	-1.0005	0.2892	1.3211	1511.1	.0280	.685	0.2751	1.3350	1519.1	.0243	.749
1020	3.8611	-1	-1106.5	1.6808	28.759	.067	1.0121	-1.0006	0.2927	1.3176	1524.3	.0291	.676	0.2761	1.3336	1533.5	.0248	.748
1040	3.7858	-1	-1100.6	1.6865	28.751	.068	1.0144	-1.0008	0.2965	1.3140	1537.2	.0303	.667	0.2770	1.3321	1547.8	.0253	.748
1060	3.7133	-1	-1094.7	1.6922	28.743	.069	1.0169	-1.0009	0.3007	1.3101	1549.9	.0316	.658	0.2780	1.3307	1562.0	.0258	.747
1080	3.6433	-1	-1088.6	1.6979	28.733	.070	1.0198	-1.0011	0.3053	1.3061	1562.3	.0330	.649	0.2790	1.3293	1576.1	.0263	.746
1100	3.5757	-1	-1082.4	1.7035	28.722	.071	1.0230	-1.0013	0.3103	1.3019	1574.5	.0345	.640	0.2800	1.3279	1590.1	.0268	.745
1120	3.5102	-1	-1076.2	1.7091	28.709	.072	1.0267	-1.0015	0.3159	1.2976	1586.5	.0361	.632	0.2810	1.3265	1604.1	.0273	.743
1140	3.4469	-1	-1069.8	1.7148	28.694	.073	1.0307	-1.0017	0.3219	1.2931	1598.2	.0378	.623	0.2820	1.3252	1617.9	.0278	.742

TABLE 16.4D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN² (10.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN		
1160	3.3855-1	-1063.3	1.7204	28.678	.074	1.0352	-1.0020	0.3286	1.2884	1609.7	.0396	.615	0.2831	1.3239	1631.7	.0283	.741
1180	3.3260-1	-1056.7	1.7261	28.659	.075	1.0402	-1.0023	0.3359	1.2836	1621.0	.0414	.608	0.2841	1.3226	1645.4	.0288	.739
1200	3.2682-1	-1049.9	1.7318	28.639	.076	1.0457	-1.0026	0.3438	1.2787	1632.2	.0434	.601	0.2851	1.3214	1659.2	.0294	.738
1220	3.2120-1	-1042.9	1.7376	28.616	.077	1.0518	-1.0030	0.3524	1.2737	1643.1	.0455	.596	0.2861	1.3202	1672.9	.0299	.736
1240	3.1574-1	-1035.8	1.7434	28.590	.078	1.0584	-1.0034	0.3618	1.2685	1653.9	.0477	.591	0.2872	1.3190	1686.5	.0304	.734
1260	3.1042-1	-1028.4	1.7493	28.562	.079	1.0656	-1.0038	0.3719	1.2634	1664.6	.0499	.587	0.2882	1.3179	1700.2	.0310	.732
1280	3.0524-1	-1020.9	1.7552	28.531	.080	1.0734	-1.0043	0.3828	1.2582	1675.3	.0522	.584	0.2892	1.3169	1713.9	.0315	.730
1300	3.0018-1	-1013.1	1.7612	28.496	.081	1.0817	-1.0048	0.3945	1.2530	1685.8	.0546	.582	0.2903	1.3159	1727.6	.0321	.728
1320	2.9524-1	-1005.1	1.7673	28.459	.081	1.0905	-1.0053	0.4068	1.2479	1696.4	.0570	.581	0.2913	1.3150	1741.4	.0326	.726
1340	2.9042-1	-996.8	1.7736	28.418	.082	1.0999	-1.0059	0.4199	1.2429	1707.0	.0595	.581	0.2923	1.3141	1755.2	.0332	.724
1360	2.8571-1	-988.3	1.7799	28.374	.083	1.1096	-1.0065	0.4334	1.2382	1717.8	.0619	.582	0.2934	1.3133	1769.1	.0338	.722
1380	2.8110-1	-979.5	1.7863	28.327	.084	1.1195	-1.0071	0.4472	1.2336	1728.6	.0643	.585	0.2944	1.3126	1783.1	.0344	.720
1400	2.7658-1	-970.4	1.7928	28.276	.085	1.1295	-1.0077	0.4611	1.2294	1739.7	.0665	.589	0.2954	1.3119	1797.1	.0349	.718
1420	2.7217-1	-961.0	1.7995	28.222	.086	1.1392	-1.0083	0.4747	1.2256	1751.0	.0686	.593	0.2964	1.3113	1811.2	.0355	.716
1440	2.6785-1	-951.4	1.8062	28.166	.087	1.1484	-1.0089	0.4875	1.2223	1762.7	.0704	.599	0.2974	1.3108	1825.4	.0361	.714
1460	2.6363-1	-941.6	1.8130	28.106	.087	1.1565	-1.0094	0.4990	1.2195	1774.7	.0719	.606	0.2983	1.3103	1839.6	.0367	.711
1480	2.5950-1	-931.5	1.8199	28.045	.088	1.1630	-1.0098	0.5085	1.2173	1787.2	.0730	.615	0.2993	1.3099	1853.9	.0372	.709
1500	2.5547-1	-921.2	1.8267	27.983	.089	1.1674	-1.0101	0.5153	1.2159	1800.2	.0735	.624	0.3002	1.3096	1868.2	.0378	.707
1520	2.5155-1	-910.9	1.8336	27.921	.090	1.1690	-1.0103	0.5185	1.2153	1813.7	.0734	.634	0.3011	1.3093	1882.5	.0384	.706
1540	2.4773-1	-900.5	1.8404	27.859	.091	1.1672	-1.0102	0.5176	1.2157	1827.9	.0727	.646	0.3020	1.3090	1896.7	.0389	.704
1560	2.4404-1	-890.2	1.8470	27.800	.091	1.1616	-1.0099	0.5119	1.2171	1842.7	.0712	.657	0.3028	1.3087	1910.8	.0394	.702
1580	2.4047-1	-880.1	1.8535	27.745	.092	1.1520	-1.0094	0.5014	1.2196	1858.3	.0692	.669	0.3037	1.3084	1924.8	.0400	.701
1600	2.3703-1	-870.2	1.8597	27.694	.093	1.1387	-1.0086	0.4863	1.2233	1874.5	.0666	.679	0.3045	1.3081	1938.4	.0405	.700
1620	2.3372-1	-860.6	1.8656	27.649	.094	1.1224	-1.0077	0.4678	1.2281	1891.5	.0638	.688	0.3052	1.3077	1951.8	.0410	.699
1640	2.3055-1	-851.5	1.8712	27.610	.095	1.1044	-1.0066	0.4472	1.2339	1908.9	.0609	.695	0.3060	1.3073	1964.9	.0415	.698
1660	2.2751-1	-842.8	1.8765	27.579	.095	1.0860	-1.0055	0.4263	1.2403	1926.6	.0581	.699	0.3067	1.3068	1977.6	.0419	.697
1680	2.2459-1	-834.4	1.8815	27.553	.096	1.0687	-1.0044	0.4067	1.2469	1944.2	.0558	.701	0.3074	1.3063	1990.0	.0424	.697
1700	2.2179-1	-826.5	1.8862	27.533	.097	1.0534	-1.0035	0.3895	1.2532	1961.4	.0538	.701	0.3081	1.3057	2002.1	.0428	.697
1720	2.1909-1	-818.8	1.8907	27.518	.098	1.0407	-1.0027	0.3752	1.2589	1977.9	.0523	.701	0.3087	1.3051	2013.9	.0433	.697
1740	2.1649-1	-811.4	1.8950	27.507	.098	1.0305	-1.0020	0.3639	1.2637	1993.6	.0512	.699	0.3094	1.3044	2025.5	.0437	.697
1760	2.1396-1	-804.3	1.8991	27.499	.099	1.0226	-1.0015	0.3552	1.2675	2008.4	.0505	.698	0.3100	1.3037	2036.9	.0441	.698
1780	2.1151-1	-797.2	1.9030	27.493	.100	1.0166	-1.0011	0.3488	1.2705	2022.4	.0501	.697	0.3106	1.3030	2048.1	.0445	.698
1800	2.0913-1	-790.3	1.9069	27.488	.101	1.0122	-1.0008	0.3441	1.2727	2035.6	.0498	.696	0.3112	1.3023	2059.1	.0449	.698
1900	1.9805-1	-756.5	1.9252	27.479	.105	1.0028	-1.0002	0.3344	1.2773	2095.5	.0504	.694	0.3141	1.2988	2113.1	.0469	.700
2000	1.8813-1	-723.2	1.9423	27.477	.108	1.0008	-1.0001	0.3330	1.2776	2150.3	.0519	.695	0.3169	1.2955	2165.3	.0489	.702
2100	1.7917-1	-689.9	1.9585	27.476	.112	1.0003	-1.0000	0.3333	1.2771	2202.9	.0535	.696	0.3195	1.2923	2216.1	.0508	.703
2200	1.7103-1	-656.5	1.9741	27.476	.115	1.0001	-1.0000	0.3340	1.2762	2254.0	.0553	.698	0.3221	1.2893	2265.6	.0528	.705
2300	1.6359-1	-623.0	1.9889	27.476	.119	1.0001	-1.0000	0.3350	1.2752	2303.8	.0570	.699	0.3245	1.2866	2314.0	.0547	.706
2400	1.5677-1	-589.5	2.0032	27.475	.122	1.0000	-1.0000	0.3360	1.2741	2352.3	.0587	.701	0.3268	1.2840	2361.4	.0566	.707
2500	1.5050-1	-555.8	2.0169	27.475	.126	1.0000	-1.0000	0.3371	1.2729	2399.7	.0605	.702	0.3290	1.2815	2407.8	.0586	.707

TABLE 16.4D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN2 (10.00 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS				PRAN	FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R		CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	
2600	1.4471-1	-522.1	2.0302	27.475	.129	1.0000	-1.0000	0.3383	1.2717	2446.1	.0623	.703	0.3311	1.2792	2453.3	.0605	.708
2700	1.3935-1	-488.2	2.0430	27.475	.133	1.0000	-1.0000	0.3395	1.2705	2491.5	.0640	.703	0.3331	1.2771	2498.0	.0624	.708
2800	1.3438-1	-454.2	2.0553	27.475	.136	1.0000	-1.0000	0.3407	1.2693	2536.0	.0658	.704	0.3350	1.2751	2541.8	.0643	.709
2900	1.2974-1	-420.0	2.0673	27.475	.139	1.0000	-1.0000	0.3419	1.2681	2579.7	.0676	.704	0.3368	1.2732	2584.9	.0662	.709
3000	1.2542-1	-385.8	2.0789	27.475	.142	1.0001	-1.0000	0.3431	1.2669	2622.6	.0694	.704	0.3385	1.2715	2627.3	.0681	.709
3100	1.2137-1	-351.4	2.0902	27.475	.146	1.0001	-1.0000	0.3444	1.2657	2664.7	.0713	.704	0.3401	1.2699	2669.0	.0699	.709
3200	1.1758-1	-316.9	2.1012	27.475	.149	1.0002	-1.0000	0.3456	1.2645	2706.0	.0732	.703	0.3416	1.2683	2710.1	.0718	.708
3300	1.1401-1	-282.3	2.1118	27.475	.152	1.0003	-1.0000	0.3470	1.2633	2746.7	.0751	.702	0.3431	1.2669	2750.6	.0737	.708
3400	1.1066-1	-247.5	2.1222	27.475	.155	1.0004	-1.0000	0.3484	1.2621	2786.6	.0771	.700	0.3444	1.2656	2790.5	.0755	.708
3500	1.0750-1	-212.6	2.1323	27.474	.158	1.0007	-1.0000	0.3499	1.2608	2825.9	.0793	.698	0.3457	1.2643	2829.9	.0773	.707
3600	1.0451-1	-177.5	2.1422	27.473	.161	1.0010	-1.0000	0.3517	1.2593	2864.4	.0815	.696	0.3469	1.2632	2868.7	.0792	.707
3700	1.0168-1	-142.3	2.1519	27.472	.164	1.0016	-1.0001	0.3537	1.2577	2902.1	.0839	.692	0.3481	1.2621	2907.1	.0810	.706
3800	9.8999-2	-106.8	2.1613	27.471	.167	1.0023	-1.0001	0.3563	1.2559	2939.0	.0866	.688	0.3492	1.2611	2945.0	.0828	.706
3900	9.6453-2	-71.0	2.1706	27.469	.170	1.0034	-1.0001	0.3594	1.2538	2975.0	.0895	.683	0.3502	1.2601	2982.5	.0846	.705
4000	9.4032-2	-34.9	2.1798	27.466	.173	1.0049	-1.0002	0.3634	1.2512	3009.9	.0929	.677	0.3512	1.2593	3019.6	.0864	.704
4100	9.1725-2	1.7	2.1888	27.462	.176	1.0070	-1.0002	0.3686	1.2480	3043.6	.0969	.670	0.3521	1.2585	3056.4	.0881	.703
4200	8.9523-2	38.9	2.1978	27.457	.179	1.0100	-1.0004	0.3754	1.2441	3076.0	.1015	.662	0.3529	1.2578	3092.9	.0899	.702
4300	8.7416-2	76.9	2.2067	27.449	.182	1.0142	-1.0005	0.3843	1.2394	3107.0	.1070	.653	0.3537	1.2571	3129.1	.0917	.701
4400	8.5397-2	115.9	2.2157	27.438	.185	1.0199	-1.0007	0.3960	1.2336	3136.2	.1138	.643	0.3545	1.2565	3165.2	.0935	.700
4500	8.3455-2	156.2	2.2247	27.424	.187	1.0276	-1.0010	0.4112	1.2269	3163.8	.1220	.632	0.3552	1.2561	3201.2	.0953	.699
4600	8.1582-2	198.3	2.2340	27.404	.190	1.0378	-1.0014	0.4308	1.2192	3189.8	.1320	.621	0.3559	1.2557	3237.2	.0971	.697
4700	7.9771-2	242.5	2.2435	27.378	.193	1.0512	-1.0020	0.4554	1.2107	3214.6	.1443	.609	0.3565	1.2554	3273.4	.0989	.695
4800	7.8011-2	289.5	2.2534	27.344	.196	1.0682	-1.0027	0.4856	1.2018	3238.8	.1592	.597	0.3571	1.2553	3310.0	.1008	.693
4900	7.6296-2	339.8	2.2637	27.300	.198	1.0890	-1.0036	0.5213	1.1931	3263.0	.1770	.584	0.3577	1.2553	3347.0	.1026	.691
5000	7.4618-2	394.0	2.2747	27.244	.201	1.1133	-1.0047	0.5619	1.1849	3288.2	.1979	.571	0.3582	1.2555	3384.7	.1044	.689
5100	7.2971-2	452.3	2.2862	27.176	.204	1.1408	-1.0060	0.6061	1.1777	3315.0	.2218	.556	0.3586	1.2559	3423.2	.1063	.687
5200	7.1352-2	515.2	2.2985	27.094	.206	1.1707	-1.0074	0.6525	1.1716	3343.7	.2486	.541	0.3591	1.2565	3462.6	.1081	.684
5300	6.9758-2	582.8	2.3113	26.998	.209	1.2021	-1.0090	0.6996	1.1667	3374.6	.2781	.525	0.3595	1.2573	3503.1	.1100	.681
5400	6.8187-2	655.2	2.3248	26.888	.211	1.2345	-1.0108	0.7464	1.1628	3407.5	.3099	.508	0.3598	1.2583	3544.6	.1120	.678

TABLE 16.5D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN2 (50.00 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
360	5.4767	0	-1281.1	1.2974	28.795	.028	1.0000	-1.0000	0.2504	1.3801	926.2	.0089	.779	0.2504	1.3802	926.2	.0089	.779
380	5.1885	0	-1276.1	1.3109	28.795	.029	1.0000	-1.0000	0.2509	1.3791	951.3	.0094	.774	0.2509	1.3791	951.3	.0094	.774
400	4.9291	0	-1271.1	1.3238	28.795	.031	1.0000	-1.0000	0.2514	1.3780	975.6	.0100	.770	0.2514	1.3780	975.6	.0100	.770
420	4.6943	0	-1266.0	1.3361	28.795	.032	1.0000	-1.0000	0.2519	1.3769	999.3	.0105	.766	0.2519	1.3769	999.3	.0105	.766
440	4.4810	0	-1261.0	1.3478	28.795	.033	1.0000	-1.0000	0.2525	1.3757	1022.3	.0110	.763	0.2525	1.3757	1022.4	.0110	.763
460	4.2862	0	-1255.9	1.3591	28.795	.035	1.0000	-1.0000	0.2531	1.3745	1044.9	.0116	.761	0.2531	1.3745	1044.9	.0116	.761
480	4.1076	0	-1250.9	1.3699	28.795	.036	1.0000	-1.0000	0.2537	1.3733	1066.8	.0121	.759	0.2537	1.3733	1066.9	.0121	.759
500	3.9433	0	-1245.8	1.3802	28.795	.037	1.0000	-1.0000	0.2544	1.3720	1088.3	.0126	.758	0.2543	1.3720	1088.4	.0126	.758
520	3.7916	0	-1240.7	1.3902	28.795	.039	1.0000	-1.0000	0.2550	1.3707	1109.4	.0131	.757	0.2550	1.3707	1109.4	.0131	.757
537	3.6738	0	-1236.4	1.3983	28.795	.040	1.0000	-1.0000	0.2556	1.3695	1126.5	.0135	.756	0.2556	1.3696	1126.6	.0135	.756
540	3.6512	0	-1235.6	1.3999	28.795	.040	1.0000	-1.0000	0.2557	1.3693	1129.9	.0136	.756	0.2557	1.3694	1130.0	.0136	.756
560	3.5208	0	-1230.5	1.4092	28.795	.041	1.0000	-1.0000	0.2564	1.3679	1150.1	.0141	.756	0.2564	1.3680	1150.1	.0141	.756
580	3.3994	0	-1225.3	1.4182	28.795	.043	1.0000	-1.0000	0.2571	1.3665	1169.8	.0145	.756	0.2571	1.3666	1169.9	.0145	.756
600	3.2861	0	-1220.2	1.4269	28.795	.044	1.0000	-1.0000	0.2579	1.3651	1189.2	.0150	.756	0.2578	1.3652	1189.3	.0150	.756
620	3.1801	0	-1215.0	1.4354	28.795	.045	1.0000	-1.0000	0.2586	1.3636	1208.2	.0155	.756	0.2585	1.3638	1208.3	.0155	.757
640	3.0807	0	-1209.8	1.4436	28.795	.046	1.0000	-1.0000	0.2594	1.3621	1226.9	.0159	.756	0.2593	1.3623	1227.0	.0159	.756
660	2.9873	0	-1204.7	1.4516	28.795	.048	1.0000	-1.0000	0.2602	1.3606	1245.2	.0164	.755	0.2601	1.3609	1245.3	.0164	.756
680	2.8995	0	-1199.4	1.4594	28.795	.049	1.0000	-1.0000	0.2611	1.3591	1263.2	.0169	.754	0.2609	1.3594	1263.4	.0169	.755
700	2.8166	0	-1194.2	1.4670	28.795	.050	1.0001	-1.0000	0.2619	1.3575	1280.9	.0174	.753	0.2617	1.3579	1281.1	.0174	.754
720	2.7384	0	-1189.0	1.4743	28.795	.051	1.0001	-1.0000	0.2628	1.3559	1298.3	.0179	.752	0.2625	1.3564	1298.6	.0178	.754
740	2.6643	0	-1183.7	1.4816	28.795	.052	1.0002	-1.0000	0.2637	1.3542	1315.4	.0184	.751	0.2633	1.3549	1315.7	.0183	.753
760	2.5942	0	-1178.4	1.4886	28.795	.054	1.0002	-1.0000	0.2647	1.3525	1332.3	.0189	.750	0.2642	1.3533	1332.6	.0188	.753
780	2.5277	0	-1173.1	1.4955	28.795	.055	1.0003	-1.0000	0.2657	1.3508	1348.8	.0194	.749	0.2650	1.3518	1349.3	.0192	.753
800	2.4645	0	-1167.8	1.5022	28.794	.056	1.0005	-1.0000	0.2668	1.3491	1365.1	.0199	.748	0.2659	1.3503	1365.7	.0197	.753
820	2.4043	0	-1162.4	1.5088	28.794	.057	1.0006	-1.0000	0.2679	1.3472	1381.2	.0204	.746	0.2667	1.3487	1381.9	.0201	.753
840	2.3470	0	-1157.1	1.5153	28.793	.058	1.0008	-1.0000	0.2690	1.3454	1397.0	.0209	.744	0.2676	1.3472	1397.9	.0206	.753
860	2.2924	0	-1151.7	1.5216	28.793	.059	1.0010	-1.0001	0.2703	1.3435	1412.5	.0215	.743	0.2685	1.3456	1413.6	.0211	.753
880	2.2402	0	-1146.3	1.5279	28.792	.060	1.0013	-1.0001	0.2716	1.3415	1427.8	.0220	.740	0.2694	1.3441	1429.2	.0215	.752
900	2.1904	0	-1140.8	1.5340	28.791	.061	1.0017	-1.0001	0.2730	1.3395	1442.9	.0226	.738	0.2703	1.3425	1444.5	.0220	.752
920	2.1427	0	-1135.3	1.5400	28.790	.062	1.0021	-1.0001	0.2744	1.3374	1457.7	.0232	.735	0.2713	1.3410	1459.7	.0224	.752
940	2.0970	0	-1129.8	1.5459	28.788	.063	1.0025	-1.0001	0.2760	1.3352	1472.3	.0239	.731	0.2722	1.3395	1474.6	.0229	.752
960	2.0532	0	-1124.3	1.5518	28.787	.064	1.0031	-1.0002	0.2777	1.3330	1486.7	.0245	.727	0.2731	1.3380	1489.4	.0233	.751
980	2.0111	0	-1118.7	1.5575	28.785	.065	1.0038	-1.0002	0.2795	1.3307	1500.8	.0252	.723	0.2741	1.3364	1504.1	.0238	.751
1000	1.9707	0	-1113.1	1.5632	28.782	.066	1.0045	-1.0002	0.2814	1.3283	1514.8	.0260	.718	0.2750	1.3349	1518.6	.0243	.750
1020	1.9319	0	-1107.5	1.5688	28.779	.067	1.0054	-1.0003	0.2835	1.3258	1528.5	.0267	.713	0.2760	1.3334	1532.9	.0248	.750
1040	1.8945	0	-1101.8	1.5743	28.776	.068	1.0065	-1.0004	0.2858	1.3232	1542.0	.0276	.708	0.2769	1.3319	1547.1	.0252	.749
1060	1.8586	0	-1096.0	1.5798	28.772	.069	1.0076	-1.0004	0.2882	1.3205	1555.2	.0284	.702	0.2779	1.3305	1561.1	.0257	.749
1080	1.8238	0	-1090.2	1.5852	28.768	.070	1.0090	-1.0005	0.2909	1.3177	1568.3	.0293	.696	0.2788	1.3290	1575.0	.0262	.748
1100	1.7904	0	-1084.4	1.5905	28.763	.071	1.0105	-1.0006	0.2937	1.3148	1581.2	.0303	.690	0.2798	1.3276	1588.8	.0267	.747
1120	1.7580	0	-1078.5	1.5959	28.757	.072	1.0122	-1.0007	0.2968	1.3118	1593.8	.0313	.684	0.2808	1.3262	1602.5	.0272	.746
1140	1.7268	0	-1072.5	1.6011	28.750	.073	1.0141	-1.0008	0.3002	1.3086	1606.2	.0324	.677	0.2818	1.3248	1616.1	.0276	.745

TABLE 16.5D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN² (50.00 ATM)
DRY AIR

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1160	1.6966	0	-1066.5	1.6064	28.743	.074	1.0163	-1.0009	0.3039	1.3053	1618.4	.0336	.670	0.2827	1.3234	1629.6	.0281	.744
1180	1.6673	0	-1060.4	1.6116	28.734	.075	1.0187	-1.0011	0.3078	1.3019	1630.4	.0348	.664	0.2837	1.3220	1643.0	.0286	.743
1200	1.6390	0	-1054.2	1.6168	28.724	.076	1.0214	-1.0012	0.3122	1.2984	1642.2	.0361	.657	0.2847	1.3207	1656.3	.0291	.742
1220	1.6115	0	-1047.9	1.6220	28.713	.077	1.0244	-1.0014	0.3169	1.2947	1653.8	.0374	.651	0.2857	1.3194	1669.5	.0296	.741
1240	1.5848	0	-1041.5	1.6272	28.701	.078	1.0278	-1.0016	0.3220	1.2909	1665.2	.0389	.645	0.2867	1.3181	1682.7	.0301	.740
1260	1.5589	0	-1035.0	1.6324	28.688	.079	1.0315	-1.0019	0.3275	1.2870	1676.5	.0404	.639	0.2877	1.3169	1695.8	.0306	.739
1280	1.5338	0	-1028.4	1.6376	28.673	.080	1.0355	-1.0021	0.3335	1.2830	1687.5	.0419	.633	0.2887	1.3157	1708.9	.0312	.738
1300	1.5093	0	-1021.6	1.6428	28.656	.081	1.0400	-1.0024	0.3400	1.2789	1698.4	.0436	.628	0.2896	1.3145	1721.9	.0317	.737
1320	1.4855	0	-1014.8	1.6481	28.637	.081	1.0448	-1.0027	0.3470	1.2746	1709.1	.0453	.623	0.2906	1.3134	1734.9	.0322	.735
1340	1.4623	0	-1007.8	1.6534	28.617	.082	1.0501	-1.0030	0.3546	1.2704	1719.8	.0471	.619	0.2916	1.3123	1747.9	.0327	.734
1360	1.4396	0	-1000.6	1.6587	28.594	.083	1.0559	-1.0034	0.3627	1.2660	1730.3	.0490	.615	0.2926	1.3112	1760.9	.0332	.733
1380	1.4175	0	-993.3	1.6640	28.570	.084	1.0621	-1.0037	0.3714	1.2617	1740.7	.0510	.612	0.2936	1.3102	1773.9	.0338	.731
1400	1.3960	0	-985.7	1.6694	28.543	.085	1.0688	-1.0042	0.3806	1.2573	1751.1	.0530	.610	0.2945	1.3093	1786.9	.0343	.730
1420	1.3749	0	-978.0	1.6749	28.514	.086	1.0759	-1.0046	0.3903	1.2531	1761.4	.0551	.608	0.2955	1.3084	1799.9	.0348	.728
1440	1.3543	0	-970.1	1.6804	28.482	.087	1.0834	-1.0051	0.4005	1.2489	1771.8	.0572	.607	0.2965	1.3075	1812.9	.0353	.727
1460	1.3341	0	-962.0	1.6860	28.448	.088	1.0913	-1.0056	0.4111	1.2448	1782.2	.0593	.607	0.2974	1.3067	1826.0	.0359	.725
1480	1.3144	0	-953.7	1.6917	28.411	.088	1.0995	-1.0061	0.4221	1.2409	1792.7	.0614	.607	0.2983	1.3060	1839.2	.0364	.724
1500	1.2951	0	-945.1	1.6974	28.371	.089	1.1079	-1.0066	0.4332	1.2371	1803.4	.0635	.608	0.2993	1.3053	1852.4	.0369	.722
1520	1.2761	0	-936.3	1.7032	28.329	.090	1.1164	-1.0072	0.4444	1.2337	1814.1	.0656	.610	0.3002	1.3047	1865.6	.0375	.721
1540	1.2576	0	-927.3	1.7091	28.285	.091	1.1248	-1.0077	0.4554	1.2305	1825.1	.0676	.612	0.3011	1.3041	1878.9	.0380	.719
1560	1.2394	0	-918.1	1.7151	28.238	.092	1.1330	-1.0083	0.4660	1.2277	1836.4	.0694	.615	0.3020	1.3036	1892.3	.0385	.718
1580	1.2216	0	-908.7	1.7211	28.188	.092	1.1406	-1.0088	0.4759	1.2252	1847.8	.0710	.619	0.3028	1.3032	1905.7	.0391	.716
1600	1.2041	0	-899.1	1.7271	28.137	.093	1.1475	-1.0093	0.4848	1.2232	1859.6	.0724	.624	0.3037	1.3028	1919.2	.0396	.715
1620	1.1870	0	-889.3	1.7332	28.085	.094	1.1534	-1.0097	0.4922	1.2216	1871.8	.0735	.629	0.3045	1.3024	1932.7	.0401	.713
1640	1.1703	0	-879.4	1.7393	28.031	.095	1.1578	-1.0100	0.4980	1.2205	1884.3	.0743	.635	0.3053	1.3021	1946.2	.0407	.712
1660	1.1540	0	-869.4	1.7453	27.977	.096	1.1604	-1.0103	0.5015	1.2200	1897.1	.0746	.642	0.3061	1.3019	1959.7	.0412	.710
1680	1.1381	0	-859.4	1.7513	27.923	.096	1.1610	-1.0104	0.5026	1.2201	1910.4	.0745	.650	0.3069	1.3016	1973.2	.0417	.709
1700	1.1225	0	-849.3	1.7573	27.870	.097	1.1591	-1.0103	0.5008	1.2208	1924.2	.0739	.658	0.3077	1.3014	1986.7	.0422	.708
1720	1.1074	0	-839.4	1.7631	27.819	.098	1.1547	-1.0101	0.4960	1.2222	1938.3	.0729	.666	0.3084	1.3012	2000.0	.0427	.706
1740	1.0928	0	-829.5	1.7688	27.770	.099	1.1476	-1.0097	0.4882	1.2243	1953.0	.0714	.674	0.3091	1.3010	2013.2	.0432	.705
1760	1.0786	0	-819.9	1.7743	27.725	.099	1.1379	-1.0092	0.4775	1.2271	1968.0	.0695	.682	0.3098	1.3007	2026.2	.0437	.704
1780	1.0649	0	-810.4	1.7796	27.684	.100	1.1261	-1.0084	0.4645	1.2306	1983.5	.0675	.689	0.3105	1.3005	2039.0	.0442	.703
1800	1.0517	0	-801.3	1.7848	27.647	.101	1.1126	-1.0076	0.4497	1.2348	1999.3	.0652	.695	0.3111	1.3002	2051.6	.0446	.703
1900	9.9213	-1	-760.1	1.8070	27.531	.105	1.0461	-1.0033	0.3384	1.2583	2077.9	.0562	.704	0.3141	1.2981	2110.5	.0468	.701
2000	9.4121	-1	-724.2	1.8255	27.492	.108	1.0138	-1.0011	0.3456	1.2719	2144.9	.0535	.699	0.3169	1.2953	2164.5	.0489	.702
2100	8.9603	-1	-690.2	1.8421	27.481	.112	1.0042	-1.0003	0.3368	1.2755	2201.4	.0540	.698	0.3195	1.2922	2215.8	.0508	.703
2200	8.5520	-1	-656.6	1.8577	27.478	.115	1.0015	-1.0001	0.3351	1.2757	2253.5	.0554	.698	0.3221	1.2893	2265.5	.0528	.705
2300	8.1799	-1	-623.1	1.8726	27.477	.119	1.0006	-1.0001	0.3354	1.2750	2303.6	.0570	.700	0.3245	1.2865	2314.0	.0547	.706
2400	7.8389	-1	-589.5	1.8869	27.476	.122	1.0003	-1.0000	0.3362	1.2740	2352.2	.0588	.701	0.3268	1.2839	2361.4	.0566	.707
2500	7.5252	-1	-555.9	1.9006	27.476	.126	1.0002	-1.0000	0.3372	1.2729	2399.7	.0605	.702	0.3290	1.2815	2407.8	.0586	.707

TABLE 16.5D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN2 (50.00 ATM)
DRY AIR

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	7.2358-1	-522.1	1.9139	27.476	.129	1.0001	-1.0000	0.3383	1.2717	2446.1	.0623	.703	0.3311	1.2792	2453.3	.0605	.708
2700	6.9677-1	-488.2	1.9266	27.476	.133	1.0001	-1.0000	0.3395	1.2705	2491.5	.0640	.703	0.3331	1.2771	2498.0	.0624	.708
2800	6.7189-1	-454.2	1.9390	27.476	.136	1.0001	-1.0000	0.3407	1.2693	2536.0	.0658	.704	0.3350	1.2751	2541.8	.0643	.709
2900	6.4872-1	-420.1	1.9510	27.476	.139	1.0001	-1.0000	0.3419	1.2681	2579.7	.0676	.704	0.3368	1.2732	2584.9	.0662	.709
3000	6.2709-1	-385.8	1.9626	27.475	.142	1.0001	-1.0000	0.3431	1.2670	2622.6	.0694	.704	0.3385	1.2715	2627.3	.0681	.709
3100	6.0686-1	-351.4	1.9739	27.475	.146	1.0001	-1.0000	0.3442	1.2658	2664.8	.0712	.704	0.3401	1.2699	2669.0	.0699	.709
3200	5.8789-1	-317.0	1.9848	27.475	.149	1.0001	-1.0000	0.3454	1.2647	2706.2	.0730	.704	0.3416	1.2683	2710.1	.0718	.708
3300	5.7008-1	-282.4	1.9955	27.475	.152	1.0001	-1.0000	0.3466	1.2636	2746.9	.0749	.704	0.3431	1.2669	2750.6	.0737	.708
3400	5.5331-1	-247.6	2.0058	27.475	.155	1.0002	-1.0000	0.3478	1.2624	2787.0	.0768	.703	0.3444	1.2656	2790.5	.0755	.708
3500	5.3749-1	-212.8	2.0159	27.475	.158	1.0003	-1.0000	0.3491	1.2613	2826.5	.0787	.702	0.3457	1.2643	2829.8	.0773	.707
3600	5.2256-1	-177.8	2.0258	27.475	.161	1.0005	-1.0000	0.3504	1.2602	2865.3	.0807	.700	0.3469	1.2632	2868.7	.0792	.707
3700	5.0843-1	-142.7	2.0354	27.474	.164	1.0007	-1.0000	0.3518	1.2590	2903.5	.0827	.699	0.3481	1.2621	2907.0	.0810	.706
3800	4.9504-1	-107.5	2.0448	27.473	.167	1.0010	-1.0000	0.3534	1.2577	2941.0	.0848	.697	0.3492	1.2611	2944.9	.0828	.706
3900	4.8233-1	-72.0	2.0540	27.473	.170	1.0015	-1.0001	0.3552	1.2563	2977.8	.0871	.694	0.3502	1.2601	2982.3	.0845	.705
4000	4.7025-1	-36.4	2.0630	27.471	.173	1.0021	-1.0001	0.3574	1.2548	3014.0	.0896	.691	0.3512	1.2592	3019.3	.0863	.704
4100	4.5875-1	-0.5	2.0719	27.470	.176	1.0030	-1.0001	0.3601	1.2530	3049.3	.0923	.687	0.3521	1.2584	3055.9	.0881	.704
4200	4.4779-1	35.6	2.0806	27.467	.179	1.0043	-1.0002	0.3633	1.2509	3083.8	.0952	.683	0.3529	1.2576	3092.1	.0899	.703
4300	4.3732-1	72.2	2.0892	27.464	.182	1.0060	-1.0002	0.3674	1.2484	3117.4	.0986	.678	0.3537	1.2569	3128.0	.0917	.702
4400	4.2731-1	109.1	2.0977	27.459	.185	1.0082	-1.0003	0.3725	1.2454	3150.0	.1024	.672	0.3545	1.2563	3163.6	.0934	.701
4500	4.1773-1	146.7	2.1061	27.454	.187	1.0113	-1.0004	0.3789	1.2419	3181.4	.1068	.665	0.3552	1.2557	3199.0	.0952	.700
4600	4.0853-1	185.0	2.1145	27.446	.190	1.0153	-1.0006	0.3870	1.2378	3211.7	.1119	.658	0.3559	1.2552	3234.1	.0970	.698
4700	3.9968-1	224.2	2.1230	27.435	.193	1.0205	-1.0008	0.3973	1.2330	3240.7	.1180	.650	0.3566	1.2547	3269.1	.0988	.697
4800	3.9116-1	264.5	2.1315	27.421	.196	1.0273	-1.0011	0.4100	1.2275	3268.5	.1250	.642	0.3572	1.2543	3304.0	.1006	.695
4900	3.8293-1	306.3	2.1401	27.404	.198	1.0360	-1.0014	0.4257	1.2214	3295.3	.1334	.633	0.3578	1.2540	3338.9	.1023	.694
5000	3.7496-1	349.8	2.1489	27.381	.201	1.0468	-1.0019	0.4446	1.2148	3321.1	.1432	.624	0.3583	1.2538	3374.0	.1041	.693
5100	3.6722-1	395.3	2.1579	27.352	.204	1.0599	-1.0025	0.4669	1.2080	3346.5	.1547	.615	0.3588	1.2537	3409.2	.1058	.691
5200	3.5969-1	443.3	2.1672	27.316	.206	1.0755	-1.0032	0.4925	1.2013	3371.9	.1680	.605	0.3593	1.2537	3444.7	.1076	.689
5300	3.5233-1	493.9	2.1768	27.272	.209	1.0934	-1.0040	0.5210	1.1948	3397.7	.1832	.594	0.3597	1.2538	3480.6	.1094	.688
5400	3.4514-1	547.5	2.1869	27.220	.212	1.1134	-1.0050	0.5518	1.1889	3424.5	.2002	.583	0.3601	1.2540	3517.0	.1111	.686

TABLE 16.1E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 0.14696 LB/IN² (0.01 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS								
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLVDLT	DLVDLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R			BTU/ LB R		BTU/ FT S R	
360	1.312-3	-1413.0	1.5958	27.475	0.254	.246	1.150-3	30.238	.031	1.0000	-1.000	.234	1.390	907	.010	.735	.234	1.390	.010	.735
400	1.177-3	-1400.9	1.6273	27.475	0.404	.251	1.034-3	30.198	.034	1.0000	-1.000	.235	1.388	956	.011	.731	.235	1.388	.011	.731
440	1.028-3	-1364.5	1.7130	27.477	1.962	.256	9.249-4	29.718	.036	1.0000	-1.000	.241	1.384	1009	.012	.740	.241	1.384	.012	.740
480	8.215-4	-1256.3	1.9505	27.523	0.259	.256	8.057-4	28.240	.035	1.0000	-1.000	.258	1.374	1078	.012	.772	.258	1.374	.012	.773
520	7.583-4	-1245.9	1.9713	27.556	0.261	.257	7.441-4	28.255	.038	1.0001	-1.000	.259	1.372	1121	.013	.768	.259	1.373	.013	.769
537	7.348-4	-1241.5	1.9796	27.572	0.263	.258	7.212-4	28.262	.039	1.0001	-1.000	.260	1.371	1138	.013	.766	.259	1.372	.013	.768
560	7.041-4	-1235.3	1.9908	27.598	0.264	.258	6.914-4	28.274	.041	1.0003	-1.000	.260	1.369	1161	.014	.763	.260	1.370	.014	.768
600	6.572-4	-1224.7	2.0091	27.651	0.267	.260	6.458-4	28.297	.043	1.0008	-1.000	.263	1.366	1200	.015	.756	.261	1.368	.015	.767
640	6.160-4	-1213.9	2.0265	27.710	0.272	.261	6.060-4	28.323	.046	1.0020	-1.000	.266	1.360	1236	.016	.740	.262	1.365	.016	.766
680	5.797-4	-1202.9	2.0432	27.775	0.279	.263	5.709-4	28.348	.048	1.0045	-1.000	.272	1.351	1270	.018	.712	.263	1.363	.017	.763
720	5.473-4	-1191.6	2.0594	27.840	0.289	.264	5.396-4	28.371	.051	1.0093	-1.000	.281	1.339	1300	.021	.672	.264	1.360	.018	.759
760	5.181-4	-1179.7	2.0755	27.903	0.305	.266	5.115-4	28.387	.053	1.0176	-1.001	.296	1.323	1327	.025	.625	.266	1.357	.019	.756
800	4.915-4	-1167.1	2.0917	27.956	0.328	.267	4.860-4	28.389	.055	1.0307	-1.001	.318	1.303	1351	.030	.578	.268	1.354	.020	.752
840	4.672-4	-1153.3	2.1084	27.994	0.360	.269	4.625-4	28.373	.058	1.0496	-1.002	.347	1.282	1374	.037	.540	.269	1.351	.021	.747
880	4.446-4	-1138.2	2.1260	28.010	0.399	.272	4.409-4	28.331	.060	1.0742	-1.003	.384	1.261	1396	.044	.517	.272	1.348	.022	.741
920	4.235-4	-1121.3	2.1448	28.002	0.445	.274	4.206-4	28.259	.062	1.1030	-1.005	.426	1.243	1419	.052	.511	.274	1.345	.023	.732
960	4.037-4	-1102.5	2.1648	27.967	0.495	.277	4.016-4	28.156	.064	1.1324	-1.007	.468	1.230	1444	.058	.522	.276	1.343	.025	.721
1000	3.850-4	-1081.7	2.1860	27.911	0.545	.279	3.838-4	28.027	.066	1.1577	-1.008	.506	1.219	1471	.062	.545	.279	1.340	.026	.709
1040	3.674-4	-1058.9	2.2083	27.842	0.595	.282	3.671-4	27.877	.068	1.1746	-1.009	.535	1.212	1499	.063	.577	.282	1.338	.028	.696
1080	3.513-4	-1036.4	2.2296	27.707	0.522	.285	3.513-4	27.707	.070	1.1590	-1.008	.522	1.214	1534	.059	.624	.285	1.336	.029	.686
1120	3.372-4	-1017.0	2.2473	27.575	0.446	.287	3.372-4	27.575	.072	1.0989	-1.005	.446	1.235	1579	.048	.671	.287	1.335	.031	.681
1160	3.248-4	-1000.7	2.2615	27.509	0.371	.289	3.248-4	27.509	.074	1.0412	-1.002	.371	1.264	1628	.040	.686	.289	1.333	.032	.679
1200	3.137-4	-986.7	2.2734	27.486	0.337	.291	3.137-4	27.486	.076	1.0135	-1.001	.337	1.282	1668	.037	.684	.291	1.331	.033	.679
1240	3.035-4	-973.5	2.2842	27.478	0.327	.292	3.035-4	27.478	.078	1.0041	-1.000	.327	1.287	1699	.037	.683	.292	1.329	.033	.680
1280	2.940-4	-960.5	2.2946	27.476	0.325	.294	2.940-4	27.476	.080	1.0013	-1.000	.325	1.287	1727	.038	.683	.294	1.327	.034	.681
1320	2.850-4	-947.5	2.3046	27.476	0.325	.295	2.850-4	27.476	.081	1.0004	-1.000	.325	1.286	1753	.039	.683	.295	1.325	.035	.683
1360	2.767-4	-934.4	2.3143	27.475	0.326	.296	2.767-4	27.475	.083	1.0002	-1.000	.326	1.285	1778	.040	.683	.296	1.322	.036	.684
1400	2.688-4	-921.4	2.3238	27.475	0.327	.298	2.688-4	27.475	.085	1.0001	-1.000	.327	1.283	1803	.041	.684	.298	1.320	.037	.685

TABLE 16.2E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 1.46959 LB/IN2 (0.10 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS										GAS PHASE PROPERTIES FROZEN COMPOSITIONS			
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		BTU/ LB R	BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R	
360	1.312-2	-1413.1	1.4630	27.475	0.247	.246	1.150-2	30.240	.031	1.0000	-1.000	.234	1.390	907	.010	.735	.234	1.390	.010	.735
400	1.181-2	-1402.9	1.4896	27.475	0.266	.251	1.035-2	30.236	.034	1.0000	-1.000	.235	1.388	956	.011	.730	.235	1.388	.011	.730
440	1.069-2	-1390.3	1.5197	27.475	0.413	.256	9.395-3	30.188	.037	1.0000	-1.000	.236	1.386	1002	.012	.727	.236	1.386	.012	.727
480	9.500-3	-1359.7	1.5856	27.477	1.408	.260	8.506-3	29.815	.039	1.0000	-1.000	.241	1.382	1052	.013	.734	.241	1.382	.013	.734
520	7.583-3	-1245.9	1.8125	27.556	0.261	.257	7.441-3	28.255	.038	1.0000	-1.000	.259	1.372	1121	.013	.769	.259	1.373	.013	.769
537	7.348-3	-1241.5	1.8208	27.572	0.262	.258	7.212-3	28.262	.039	1.0000	-1.000	.259	1.371	1138	.013	.768	.259	1.372	.013	.768
560	7.042-3	-1235.4	1.8320	27.599	0.264	.258	6.914-3	28.274	.041	1.0001	-1.000	.260	1.370	1162	.014	.766	.260	1.370	.014	.766
600	6.572-3	-1224.8	1.8503	27.651	0.266	.260	6.459-3	28.298	.043	1.0002	-1.000	.261	1.367	1201	.015	.764	.261	1.368	.015	.767
640	6.161-3	-1214.1	1.8675	27.711	0.269	.261	6.061-3	28.325	.046	1.0006	-1.000	.263	1.364	1238	.016	.758	.262	1.365	.016	.766
680	5.798-3	-1203.2	1.8839	27.777	0.272	.262	5.710-3	28.353	.048	1.0014	-1.000	.266	1.359	1273	.017	.746	.263	1.363	.017	.764
720	5.475-3	-1192.3	1.8996	27.846	0.277	.264	5.398-3	28.382	.051	1.0030	-1.000	.270	1.353	1306	.019	.728	.264	1.360	.018	.761
760	5.186-3	-1181.1	1.9147	27.915	0.283	.266	5.119-3	28.409	.053	1.0058	-1.000	.276	1.345	1337	.021	.703	.266	1.357	.019	.759
800	4.925-3	-1169.6	1.9295	27.981	0.292	.267	4.867-3	28.431	.055	1.0103	-1.000	.284	1.334	1366	.023	.672	.267	1.354	.020	.757
840	4.687-3	-1157.7	1.9440	28.041	0.304	.269	4.637-3	28.446	.058	1.0173	-1.001	.296	1.322	1393	.027	.636	.269	1.351	.021	.755
880	4.469-3	-1145.2	1.9585	28.092	0.321	.271	4.427-3	28.451	.060	1.0274	-1.001	.312	1.307	1418	.031	.599	.271	1.348	.022	.752
920	4.268-3	-1132.0	1.9732	28.129	0.342	.273	4.234-3	28.442	.062	1.0412	-1.002	.333	1.291	1441	.036	.567	.272	1.345	.023	.748
960	4.081-3	-1117.8	1.9883	28.150	0.368	.275	4.053-3	28.415	.064	1.0589	-1.003	.358	1.275	1464	.042	.543	.275	1.342	.024	.742
1000	3.907-3	-1102.4	2.0039	28.151	0.400	.277	3.885-3	28.367	.066	1.0803	-1.004	.388	1.260	1486	.049	.529	.277	1.339	.025	.736
1040	3.742-3	-1085.7	2.0203	28.132	0.437	.279	3.726-3	28.297	.068	1.1046	-1.005	.423	1.245	1509	.055	.526	.279	1.336	.026	.728
1080	3.587-3	-1067.4	2.0376	28.094	0.479	.282	3.576-3	28.205	.070	1.1306	-1.007	.460	1.233	1532	.060	.534	.282	1.333	.028	.719
1120	3.439-3	-1047.3	2.0559	28.039	0.527	.284	3.435-3	28.091	.072	1.1564	-1.008	.499	1.221	1556	.065	.551	.284	1.331	.029	.710
1160	3.300-3	-1025.5	2.0750	27.952	0.535	.287	3.300-3	27.952	.074	1.1774	-1.010	.535	1.212	1581	.069	.578	.287	1.329	.030	.700
1200	3.171-3	-1004.0	2.0932	27.785	0.534	.289	3.171-3	27.785	.076	1.1711	-1.009	.534	1.211	1612	.066	.620	.289	1.328	.032	.693
1240	3.053-3	-983.3	2.1102	27.644	0.492	.291	3.053-3	27.644	.078	1.1339	-1.007	.492	1.220	1650	.058	.663	.291	1.327	.033	.687
1280	2.948-3	-965.0	2.1247	27.551	0.423	.293	2.948-3	27.551	.080	1.0780	-1.004	.423	1.240	1693	.049	.688	.293	1.326	.034	.684
1320	2.853-3	-949.3	2.1368	27.505	0.369	.295	2.853-3	27.505	.081	1.0347	-1.002	.369	1.262	1735	.043	.691	.295	1.324	.035	.684
1360	2.768-3	-935.1	2.1474	27.486	0.343	.296	2.768-3	27.486	.083	1.0134	-1.001	.343	1.275	1771	.041	.688	.296	1.322	.036	.685
1400	2.688-3	-921.6	2.1572	27.479	0.333	.298	2.688-3	27.479	.085	1.0050	-1.000	.333	1.280	1800	.041	.686	.298	1.320	.037	.686

TABLE 16.3E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 14.6959 LB/IN² (1.00 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS								
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R	
360	1.312-1	-1413.1	1.3304	27.475	0.246	.246	1.150-1	30.240	.031	1.0000	-1.000	.234	1.390	907	.010	.735	.234	1.390	.010	.735
400	1.181-1	-1403.1	1.3566	27.475	0.252	.251	1.035-1	30.239	.034	1.0000	-1.000	.235	1.388	956	.011	.730	.235	1.388	.011	.730
440	1.073-1	-1392.7	1.3813	27.475	0.271	.256	9.410-2	30.235	.037	1.0000	-1.000	.236	1.387	1002	.012	.726	.236	1.387	.012	.726
480	9.807-2	-1380.4	1.4080	27.475	0.368	.261	8.615-2	30.197	.040	1.0000	-1.000	.237	1.384	1046	.013	.724	.237	1.384	.013	.724
520	8.925-2	-1345.9	1.4774	27.476	0.669	.310	7.907-2	30.025	.042	1.0000	-1.000	.240	1.381	1091	.014	.727	.240	1.381	.014	.727
537	8.527-2	-1332.9	1.5020	27.478	0.914	.306	7.619-2	29.859	.043	1.0000	-1.000	.242	1.380	1110	.014	.731	.242	1.380	.014	.731
560	7.883-2	-1305.1	1.5526	27.492	1.541	.295	7.201-2	29.446	.043	1.0000	-1.000	.247	1.376	1141	.014	.741	.247	1.376	.014	.741
600	6.572-2	-1224.8	1.6914	27.651	0.266	.260	6.459-2	28.298	.043	1.0001	-1.000	.261	1.368	1201	.015	.766	.261	1.368	.015	.766
640	6.161-2	-1214.1	1.7087	27.711	0.268	.261	6.061-2	28.325	.046	1.0002	-1.000	.262	1.365	1238	.016	.764	.262	1.365	.016	.764
680	5.799-2	-1203.3	1.7250	27.778	0.270	.262	5.710-2	28.355	.048	1.0004	-1.000	.264	1.362	1274	.017	.758	.263	1.363	.017	.764
720	5.476-2	-1192.5	1.7405	27.848	0.273	.264	5.399-2	28.385	.051	1.0009	-1.000	.266	1.358	1308	.018	.750	.264	1.360	.018	.761
760	5.188-2	-1181.5	1.7553	27.919	0.276	.265	5.120-2	28.416	.053	1.0018	-1.000	.269	1.353	1341	.019	.740	.266	1.357	.019	.760
800	4.928-2	-1170.4	1.7696	27.990	0.280	.267	4.869-2	28.445	.055	1.0033	-1.000	.273	1.347	1373	.021	.726	.267	1.354	.019	.758
840	4.692-2	-1159.1	1.7833	28.058	0.285	.269	4.642-2	28.471	.058	1.0056	-1.000	.278	1.340	1402	.023	.708	.269	1.351	.020	.757
880	4.477-2	-1147.6	1.7967	28.122	0.291	.270	4.434-2	28.494	.060	1.0091	-1.000	.284	1.332	1430	.025	.686	.270	1.347	.021	.756
920	4.280-2	-1135.8	1.8098	28.180	0.299	.272	4.244-2	28.510	.062	1.0140	-1.001	.292	1.323	1457	.027	.661	.272	1.344	.022	.754
960	4.099-2	-1123.6	1.8228	28.229	0.310	.274	4.068-2	28.519	.064	1.0208	-1.001	.303	1.313	1482	.031	.634	.274	1.341	.023	.751
1000	3.931-2	-1111.0	1.8357	28.268	0.324	.276	3.905-2	28.519	.066	1.0298	-1.002	.317	1.301	1506	.034	.608	.276	1.338	.024	.748
1040	3.774-2	-1097.7	1.8487	28.296	0.340	.278	3.754-2	28.507	.068	1.0412	-1.002	.333	1.289	1529	.039	.585	.278	1.335	.025	.744
1080	3.628-2	-1083.7	1.8619	28.310	0.361	.280	3.612-2	28.483	.070	1.0555	-1.003	.353	1.277	1551	.044	.567	.280	1.332	.027	.740
1120	3.490-2	-1068.8	1.8755	28.311	0.386	.282	3.478-2	28.444	.072	1.0726	-1.004	.377	1.264	1573	.049	.555	.282	1.329	.028	.735
1160	3.360-2	-1052.8	1.8895	28.296	0.416	.284	3.351-2	28.389	.074	1.0926	-1.005	.406	1.251	1594	.055	.550	.284	1.327	.029	.729
1200	3.236-2	-1035.4	1.9042	28.268	0.452	.287	3.232-2	28.317	.076	1.1156	-1.007	.439	1.238	1615	.060	.551	.286	1.324	.030	.722
1240	3.118-2	-1016.5	1.9197	28.227	0.496	.289	3.117-2	28.228	.078	1.1413	-1.008	.476	1.226	1636	.066	.560	.289	1.322	.031	.715
1280	3.006-2	-996.8	1.9354	28.093	0.508	.291	3.006-2	28.093	.080	1.1622	-1.009	.508	1.218	1661	.070	.578	.291	1.321	.033	.709
1320	2.899-2	-976.0	1.9514	27.947	0.530	.293	2.899-2	27.947	.081	1.1744	-1.010	.530	1.212	1687	.071	.605	.293	1.320	.034	.703
1360	2.799-2	-954.7	1.9673	27.802	0.529	.295	2.799-2	27.802	.083	1.1697	-1.010	.529	1.212	1717	.069	.637	.295	1.319	.035	.697
1400	2.707-2	-934.0	1.9822	27.676	0.498	.297	2.707-2	27.676	.085	1.1415	-1.008	.498	1.219	1751	.063	.669	.297	1.318	.036	.693

TABLE 16.4E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 146.959 LB/IN2 (10.00 ATM) DRY AIR

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS								
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L / FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R			BTU/ LB R	BTU/ FT S R		
360	1.309 0	-1413.1	1.1979	27.475	0.246	.246	1.150 0	30.240	.031	1.0000	-1.000	.234	1.390	907	.010	.735	.234	1.390	.010	.735
400	1.178 0	-1403.1	1.2240	27.475	0.251	.251	1.035 0	30.240	.034	1.0000	-1.000	.235	1.388	956	.011	.730	.235	1.388	.011	.730
440	1.071 0	-1393.0	1.2482	27.475	0.257	.256	9.411-1	30.239	.037	1.0000	-1.000	.236	1.387	1002	.012	.726	.236	1.387	.012	.726
480	9.821-1	-1382.4	1.2711	27.475	0.272	.261	8.626-1	30.236	.040	1.0000	-1.000	.236	1.385	1045	.013	.723	.236	1.385	.013	.723
520	9.055-1	-1354.9	1.3267	27.475	0.349	.314	7.958-1	30.218	.042	1.0000	-1.000	.238	1.382	1088	.014	.722	.238	1.382	.014	.722
537	8.763-1	-1348.9	1.3381	27.475	0.371	.314	7.707-1	30.202	.044	1.0000	-1.000	.238	1.381	1105	.014	.723	.238	1.381	.014	.723
560	8.370-1	-1339.7	1.3548	27.475	0.421	.314	7.375-1	30.160	.045	1.0000	-1.000	.239	1.380	1129	.015	.724	.239	1.380	.015	.724
600	7.709-1	-1319.9	1.3889	27.477	0.592	.311	6.847-1	29.999	.047	1.0000	-1.000	.242	1.377	1170	.016	.728	.242	1.377	.016	.728
640	6.994-1	-1289.5	1.4378	27.495	0.979	.303	6.337-1	29.618	.049	1.0000	-1.000	.247	1.373	1214	.016	.738	.247	1.373	.016	.738
680	6.101-1	-1234.2	1.5213	27.632	1.947	.280	5.806-1	28.828	.049	1.0001	-1.000	.257	1.365	1265	.017	.753	.257	1.366	.017	.754
720	5.476-1	-1192.5	1.5816	27.848	0.272	.264	5.399-1	28.386	.051	1.0003	-1.000	.265	1.359	1309	.018	.758	.264	1.360	.018	.761
760	5.188-1	-1181.6	1.5963	27.920	0.274	.265	5.121-1	28.418	.053	1.0006	-1.000	.267	1.356	1343	.019	.753	.266	1.357	.019	.760
800	4.928-1	-1170.7	1.6104	27.993	0.276	.267	4.870-1	28.449	.055	1.0010	-1.000	.269	1.352	1375	.020	.748	.267	1.354	.019	.759
840	4.693-1	-1159.6	1.6239	28.064	0.278	.269	4.643-1	28.480	.058	1.0018	-1.000	.271	1.347	1406	.021	.741	.269	1.351	.020	.758
880	4.480-1	-1148.4	1.6369	28.132	0.281	.270	4.436-1	28.508	.060	1.0029	-1.000	.275	1.342	1435	.022	.732	.270	1.347	.021	.757
920	4.284-1	-1137.1	1.6495	28.197	0.285	.272	4.247-1	28.533	.062	1.0045	-1.000	.278	1.337	1464	.024	.720	.272	1.344	.022	.756
960	4.105-1	-1125.6	1.6617	28.257	0.289	.274	4.073-1	28.555	.064	1.0068	-1.000	.283	1.331	1491	.026	.705	.274	1.341	.023	.754
1000	3.939-1	-1113.9	1.6737	28.312	0.295	.276	3.913-1	28.573	.066	1.0099	-1.001	.289	1.324	1518	.028	.689	.275	1.338	.024	.753
1040	3.786-1	-1102.0	1.6854	28.360	0.302	.277	3.764-1	28.586	.068	1.0140	-1.001	.296	1.317	1543	.030	.671	.277	1.334	.025	.750
1080	3.643-1	-1089.8	1.6969	28.402	0.310	.279	3.626-1	28.594	.070	1.0193	-1.001	.305	1.309	1568	.033	.652	.279	1.331	.026	.748
1120	3.510-1	-1077.2	1.7083	28.436	0.320	.281	3.496-1	28.594	.072	1.0260	-1.001	.315	1.300	1591	.036	.634	.281	1.328	.027	.745
1160	3.386-1	-1064.1	1.7198	28.461	0.333	.283	3.375-1	28.587	.074	1.0344	-1.002	.327	1.291	1614	.039	.618	.283	1.325	.028	.742
1200	3.268-1	-1050.5	1.7313	28.477	0.348	.285	3.261-1	28.572	.076	1.0448	-1.003	.342	1.281	1635	.043	.603	.285	1.322	.029	.739
1240	3.158-1	-1036.2	1.7430	28.484	0.367	.287	3.153-1	28.547	.078	1.0575	-1.003	.360	1.270	1656	.047	.592	.287	1.320	.030	.735
1280	3.053-1	-1021.1	1.7550	28.482	0.389	.289	3.050-1	28.511	.080	1.0727	-1.004	.382	1.259	1676	.052	.584	.289	1.317	.032	.731
1320	2.952-1	-1005.1	1.7673	28.459	0.407	.291	2.952-1	28.459	.081	1.0905	-1.005	.407	1.248	1696	.057	.581	.291	1.315	.033	.726
1360	2.857-1	-988.3	1.7799	28.374	0.433	.293	2.857-1	28.374	.083	1.1096	-1.006	.433	1.238	1718	.062	.582	.293	1.313	.034	.722
1400	2.766-1	-970.4	1.7928	28.276	0.461	.295	2.766-1	28.276	.085	1.1295	-1.008	.461	1.229	1740	.067	.589	.295	1.312	.035	.718

TABLE 16.5E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.083747; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2496; P = 734.797 LB/IN² (50.00 ATM)
 DRY AIR

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS								GAS PHASE PROPERTIES FROZEN COMPOSITIONS							
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)	VS	COND	PRAN	CP	GAM	COND	PRAN		
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R		BTU/ LB R	BTU/ FT S R				
360	6.479	0	-1413.1	1.1052	27.475	0.246	5.752	0	30.240	.031	1.0000	-1.000	.234	1.390	907	.010	.735	.234	1.390	.010	.735
400	5.839	0	-1403.1	1.1314	27.475	0.251	5.176	0	30.240	.034	1.0000	-1.000	.235	1.388	956	.011	.730	.235	1.388	.011	.730
440	5.313	0	-1393.0	1.1555	27.475	0.256	4.706	0	30.240	.037	1.0000	-1.000	.236	1.387	1002	.012	.726	.236	1.387	.012	.726
480	4.874	0	-1382.6	1.1781	27.475	0.263	4.314	0	30.239	.040	1.0000	-1.000	.236	1.385	1045	.013	.723	.236	1.385	.013	.723
520	4.505	0	-1355.7	1.2325	27.475	0.322	3.981	0	30.236	.043	1.0000	-1.000	.237	1.383	1087	.014	.722	.237	1.383	.014	.722
537	4.365	0	-1350.3	1.2427	27.475	0.326	3.857	0	30.232	.044	1.0000	-1.000	.238	1.382	1104	.014	.722	.238	1.382	.014	.722
560	4.181	0	-1342.5	1.2568	27.475	0.336	3.695	0	30.224	.045	1.0000	-1.000	.238	1.380	1128	.015	.722	.238	1.380	.015	.722
600	3.894	0	-1328.5	1.2810	27.475	0.370	3.445	0	30.192	.048	1.0000	-1.000	.240	1.378	1167	.016	.724	.240	1.378	.016	.724
640	3.630	0	-1312.5	1.3067	27.476	0.435	3.222	0	30.116	.050	1.0000	-1.000	.242	1.375	1205	.017	.727	.242	1.375	.017	.727
680	3.374	0	-1293.0	1.3363	27.480	0.554	3.017	0	29.958	.052	1.0000	-1.000	.245	1.372	1244	.017	.730	.245	1.372	.017	.730
720	3.108	0	-1267.0	1.3734	27.504	0.767	2.821	0	29.665	.053	1.0000	-1.000	.249	1.368	1285	.018	.736	.249	1.368	.018	.736
760	2.811	0	-1229.0	1.4246	27.612	1.180	2.628	0	29.168	.055	1.0001	-1.000	.256	1.362	1328	.019	.744	.256	1.362	.019	.744
800	2.464	0	-1170.7	1.4993	27.994	0.275	2.435	0	28.451	.055	1.0004	-1.000	.268	1.353	1375	.020	.754	.267	1.354	.019	.759
840	2.347	0	-1159.7	1.5128	28.065	0.277	2.322	0	28.482	.058	1.0008	-1.000	.270	1.349	1406	.021	.750	.269	1.351	.020	.758
880	2.240	0	-1148.6	1.5257	28.135	0.279	2.218	0	28.512	.060	1.0012	-1.000	.272	1.345	1437	.022	.746	.270	1.347	.021	.757
920	2.142	0	-1137.4	1.5381	28.202	0.281	2.124	0	28.539	.062	1.0020	-1.000	.275	1.341	1466	.023	.739	.272	1.344	.022	.757
960	2.053	0	-1126.1	1.5502	28.265	0.284	2.037	0	28.565	.064	1.0030	-1.000	.278	1.336	1494	.024	.731	.273	1.341	.023	.755
1000	1.971	0	-1114.7	1.5618	28.324	0.287	1.957	0	28.588	.066	1.0044	-1.000	.281	1.331	1521	.026	.722	.275	1.338	.024	.754
1040	1.894	0	-1103.1	1.5732	28.378	0.291	1.883	0	28.608	.068	1.0063	-1.000	.286	1.326	1548	.027	.711	.277	1.334	.025	.752
1080	1.824	0	-1091.4	1.5842	28.428	0.296	1.815	0	28.624	.070	1.0088	-1.000	.291	1.320	1574	.029	.699	.279	1.331	.026	.750
1120	1.758	0	-1079.4	1.5951	28.472	0.301	1.751	0	28.637	.072	1.0119	-1.001	.296	1.314	1598	.031	.686	.281	1.328	.027	.748
1160	1.697	0	-1067.3	1.6058	28.511	0.308	1.691	0	28.645	.074	1.0160	-1.001	.303	1.307	1622	.033	.672	.283	1.325	.028	.746
1200	1.639	0	-1054.8	1.6163	28.543	0.316	1.635	0	28.649	.076	1.0211	-1.001	.312	1.300	1645	.036	.658	.285	1.322	.029	.744
1240	1.585	0	-1042.0	1.6269	28.570	0.326	1.582	0	28.646	.078	1.0274	-1.002	.321	1.292	1668	.039	.646	.287	1.319	.030	.741
1280	1.534	0	-1028.7	1.6374	28.590	0.338	1.532	0	28.638	.080	1.0351	-1.002	.333	1.284	1689	.042	.634	.289	1.316	.031	.738
1320	1.485	0	-1014.9	1.6480	28.604	0.352	1.485	0	28.623	.081	1.0446	-1.003	.347	1.275	1710	.045	.624	.291	1.314	.032	.736
1360	1.440	0	-1000.6	1.6587	28.594	0.363	1.440	0	28.594	.083	1.0559	-1.003	.363	1.266	1730	.049	.615	.293	1.311	.033	.733
1400	1.396	0	-985.7	1.6694	28.543	0.381	1.396	0	28.543	.085	1.0688	-1.004	.381	1.257	1751	.053	.610	.295	1.309	.034	.730

TABLE 17A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

WET AIR ONLY (W/A= 0.03); F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO= 0.1045; MW= 28.4612;
 GASEOUS COMPOSITION: CO2= .00030; H2O= .04601; N2= .74491; O2= .19984; AR= .00893

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	FT/S	LB/FT HR	BTU/FT HR R		R	
360	1.0827-1	5.4133 0	-213.3	1.8999	1.7392	1.5785	1.4179	1.3056	0.2466	1.3946	936.5	.0310	.0102	.7505	360
380	1.0257-1	5.1283 0	-208.4	1.9132	1.7525	1.5919	1.4312	1.3189	0.2463	1.3952	962.4	.0326	.0107	.7476	380
400	9.7438-2	4.8719 0	-203.5	1.9258	1.7652	1.6045	1.4438	1.3315	0.2462	1.3956	987.5	.0340	.0113	.7447	400
420	9.2799-2	4.6399 0	-198.6	1.9378	1.7772	1.6165	1.4558	1.3435	0.2460	1.3959	1012.0	.0355	.0118	.7419	420
440	8.8580-2	4.4290 0	-193.6	1.9493	1.7886	1.6279	1.4673	1.3550	0.2459	1.3961	1035.9	.0369	.0123	.7395	440
460	8.4729-2	4.2365 0	-188.7	1.9602	1.7995	1.6389	1.4782	1.3659	0.2458	1.3963	1059.3	.0383	.0128	.7373	460
480	8.1199-2	4.0599 0	-183.8	1.9707	1.8100	1.6493	1.4887	1.3764	0.2458	1.3963	1082.1	.0397	.0133	.7354	480
500	7.7951-2	3.8975 0	-178.9	1.9807	1.8200	1.6594	1.4987	1.3864	0.2458	1.3963	1104.4	.0411	.0138	.7339	500
520	7.4953-2	3.7476 0	-174.0	1.9903	1.8297	1.6690	1.5083	1.3961	0.2459	1.3962	1126.2	.0424	.0142	.7327	520
537	7.2625-2	3.6312 0	-169.9	1.9981	1.8374	1.6768	1.5161	1.4038	0.2460	1.3960	1144.0	.0435	.0146	.7319	537
540	7.2177-2	3.6088 0	-169.1	1.9996	1.8390	1.6783	1.5176	1.4053	0.2460	1.3960	1147.6	.0437	.0147	.7318	540
560	6.9599-2	3.4799 0	-164.1	2.0086	1.8479	1.6872	1.5266	1.4143	0.2461	1.3957	1168.5	.0450	.0151	.7315	560
580	6.7199-2	3.3600 0	-159.2	2.0172	1.8565	1.6959	1.5352	1.4229	0.2463	1.3953	1189.0	.0462	.0156	.7314	580
600	6.4959-2	3.2480 0	-154.3	2.0256	1.8649	1.7042	1.5436	1.4313	0.2465	1.3949	1209.2	.0475	.0160	.7314	600
620	6.2863-2	3.1432 0	-149.4	2.0336	1.8730	1.7123	1.5517	1.4394	0.2467	1.3944	1228.9	.0487	.0164	.7314	620
640	6.0899-2	3.0450 0	-144.4	2.0415	1.8808	1.7202	1.5595	1.4472	0.2469	1.3939	1248.4	.0499	.0168	.7312	640
660	5.9054-2	2.9527 0	-139.5	2.0491	1.8884	1.7278	1.5671	1.4548	0.2472	1.3932	1267.4	.0511	.0173	.7308	660
680	5.7317-2	2.8658 0	-134.5	2.0565	1.8958	1.7351	1.5745	1.4622	0.2475	1.3926	1286.2	.0522	.0177	.7304	680
700	5.5679-2	2.7840 0	-129.6	2.0636	1.9030	1.7423	1.5817	1.4694	0.2479	1.3918	1304.6	.0534	.0181	.7300	700
720	5.4132-2	2.7066 0	-124.6	2.0706	1.9100	1.7493	1.5886	1.4763	0.2482	1.3910	1322.7	.0545	.0185	.7295	720
740	5.2669-2	2.6335 0	-119.7	2.0774	1.9168	1.7561	1.5955	1.4832	0.2486	1.3902	1340.6	.0556	.0190	.7292	740
760	5.1283-2	2.5642 0	-114.7	2.0841	1.9234	1.7627	1.6021	1.4898	0.2490	1.3893	1358.1	.0567	.0194	.7290	760
780	4.9968-2	2.4984 0	-109.7	2.0905	1.9299	1.7692	1.6086	1.4963	0.2494	1.3884	1375.4	.0578	.0198	.7287	780
800	4.8719-2	2.4360 0	-104.7	2.0969	1.9362	1.7755	1.6149	1.5026	0.2499	1.3874	1392.5	.0589	.0202	.7285	800
820	4.7531-2	2.3765 0	-99.7	2.1030	1.9424	1.7817	1.6211	1.5088	0.2503	1.3864	1409.3	.0600	.0206	.7284	820
840	4.6399-2	2.3200 0	-94.7	2.1091	1.9484	1.7878	1.6271	1.5148	0.2508	1.3854	1425.8	.0610	.0210	.7282	840
860	4.5320-2	2.2660 0	-89.7	2.1150	1.9543	1.7937	1.6330	1.5207	0.2513	1.3843	1442.1	.0621	.0214	.7282	860
880	4.4290-2	2.2145 0	-84.6	2.1208	1.9601	1.7994	1.6388	1.5265	0.2518	1.3832	1458.2	.0631	.0218	.7281	880
900	4.3306-2	2.1653 0	-79.6	2.1264	1.9658	1.8051	1.6445	1.5322	0.2524	1.3821	1474.1	.0641	.0222	.7281	900
920	4.2365-2	2.1182 0	-74.5	2.1320	1.9713	1.8107	1.6500	1.5377	0.2529	1.3810	1489.8	.0651	.0226	.7280	920
940	4.1463-2	2.0732 0	-69.5	2.1374	1.9768	1.8161	1.6554	1.5432	0.2535	1.3798	1505.2	.0661	.0230	.7279	940
960	4.0599-2	2.0300 0	-64.4	2.1428	1.9821	1.8215	1.6608	1.5485	0.2541	1.3786	1520.5	.0671	.0234	.7278	960
980	3.9771-2	1.9885 0	-59.3	2.1480	1.9874	1.8267	1.6660	1.5537	0.2547	1.3774	1535.6	.0681	.0238	.7277	980
1000	3.8975-2	1.9488 0	-54.2	2.1532	1.9925	1.8318	1.6712	1.5589	0.2553	1.3762	1550.5	.0691	.0242	.7276	1000
1020	3.8211-2	1.9106 0	-49.1	2.1582	1.9976	1.8369	1.6762	1.5640	0.2559	1.3749	1565.2	.0701	.0246	.7275	1020
1040	3.7476-2	1.8738 0	-44.0	2.1632	2.0025	1.8419	1.6812	1.5689	0.2565	1.3737	1579.8	.0710	.0250	.7274	1040
1060	3.6769-2	1.8385 0	-38.8	2.1681	2.0074	1.8468	1.6861	1.5738	0.2571	1.3724	1594.2	.0720	.0254	.7273	1060
1080	3.6088-2	1.8044 0	-33.7	2.1729	2.0122	1.8516	1.6909	1.5786	0.2578	1.3712	1608.4	.0729	.0259	.7271	1080
1100	3.5432-2	1.7716 0	-28.5	2.1776	2.0170	1.8563	1.6957	1.5834	0.2584	1.3699	1622.5	.0739	.0263	.7269	1100
1120	3.4799-2	1.7400 0	-23.4	2.1823	2.0216	1.8610	1.7003	1.5880	0.2590	1.3687	1636.4	.0748	.0267	.7267	1120
1140	3.4189-2	1.7094 0	-18.2	2.1869	2.0262	1.8656	1.7049	1.5926	0.2597	1.3674	1650.2	.0757	.0271	.7264	1140

TABLE 17A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

WET AIR ONLY (W/A= 0.03); F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO= 0.1045; MW= 28.4612;
GASEOUS COMPOSITION: CO2= .00030; H2O= .04601; N2= .74491; O2= .19984; AR= .00893

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
1160	3.3599-2	1.6800 0	-13.0	2.1914	2.0308	1.8701	1.7094	1.5971	0.2604	1.3661	1663.8	.0767	.0275	.7262	1160
1180	3.3030-2	1.6515 0	-7.8	2.1959	2.0352	1.8746	1.7139	1.6016	0.2610	1.3648	1677.3	.0776	.0279	.7259	1180
1200	3.2479-2	1.6240 0	-2.5	2.2003	2.0396	1.8789	1.7183	1.6060	0.2617	1.3636	1690.7	.0785	.0283	.7257	1200
1220	3.1947-2	1.5974 0	2.7	2.2046	2.0439	1.8833	1.7226	1.6103	0.2624	1.3623	1703.9	.0794	.0287	.7254	1220
1240	3.1432-2	1.5716 0	8.0	2.2089	2.0482	1.8875	1.7269	1.6146	0.2630	1.3611	1717.1	.0803	.0291	.7252	1240
1260	3.0933-2	1.5466 0	13.2	2.2131	2.0524	1.8918	1.7311	1.6188	0.2637	1.3598	1730.1	.0812	.0295	.7249	1260
1280	3.0450-2	1.5225 0	18.5	2.2172	2.0566	1.8959	1.7353	1.6230	0.2644	1.3586	1742.9	.0821	.0299	.7247	1280
1300	2.9981-2	1.4991 0	23.8	2.2213	2.0607	1.9000	1.7394	1.6271	0.2650	1.3573	1755.7	.0829	.0303	.7244	1300
1320	2.9527-2	1.4763 0	29.1	2.2254	2.0647	1.9041	1.7434	1.6311	0.2657	1.3561	1768.4	.0838	.0308	.7242	1320
1340	2.9086-2	1.4543 0	34.4	2.2294	2.0687	1.9081	1.7474	1.6351	0.2664	1.3549	1780.9	.0847	.0312	.7240	1340
1360	2.8658-2	1.4329 0	39.8	2.2334	2.0727	1.9120	1.7514	1.6391	0.2671	1.3537	1793.3	.0856	.0316	.7237	1360
1380	2.8243-2	1.4122 0	45.1	2.2373	2.0766	1.9159	1.7553	1.6430	0.2677	1.3525	1805.7	.0864	.0320	.7235	1380
1400	2.7840-2	1.3920 0	50.5	2.2411	2.0805	1.9198	1.7591	1.6468	0.2684	1.3513	1817.9	.0873	.0324	.7233	1400
1420	2.7447-2	1.3724 0	55.9	2.2449	2.0843	1.9236	1.7629	1.6506	0.2691	1.3501	1830.1	.0881	.0328	.7230	1420
1440	2.7066-2	1.3533 0	61.2	2.2487	2.0880	1.9274	1.7667	1.6544	0.2697	1.3490	1842.1	.0890	.0332	.7228	1440
1460	2.6695-2	1.3348 0	66.6	2.2524	2.0918	1.9311	1.7704	1.6581	0.2704	1.3478	1854.1	.0898	.0336	.7226	1460
1480	2.6335-2	1.3167 0	72.1	2.2561	2.0954	1.9348	1.7741	1.6618	0.2710	1.3467	1866.0	.0906	.0340	.7225	1480
1500	2.5984-2	1.2992 0	77.5	2.2597	2.0991	1.9384	1.7778	1.6655	0.2717	1.3456	1877.8	.0915	.0344	.7223	1500
1520	2.5642-2	1.2821 0	82.9	2.2633	2.1027	1.9420	1.7814	1.6691	0.2723	1.3445	1889.5	.0923	.0348	.7221	1520
1540	2.5309-2	1.2654 0	88.4	2.2669	2.1062	1.9456	1.7849	1.6726	0.2729	1.3434	1901.1	.0931	.0352	.7219	1540
1560	2.4984-2	1.2492 0	93.8	2.2704	2.1098	1.9491	1.7884	1.6762	0.2736	1.3424	1912.7	.0939	.0356	.7217	1560
1580	2.4668-2	1.2334 0	99.3	2.2739	2.1133	1.9526	1.7919	1.6796	0.2742	1.3413	1924.1	.0947	.0360	.7216	1580
1600	2.4360-2	1.2180 0	104.8	2.2774	2.1167	1.9561	1.7954	1.6831	0.2748	1.3403	1935.5	.0955	.0364	.7214	1600
1620	2.4059-2	1.2029 0	110.3	2.2808	2.1201	1.9595	1.7988	1.6865	0.2754	1.3393	1946.9	.0963	.0368	.7213	1620
1640	2.3765-2	1.1883 0	115.8	2.2842	2.1235	1.9629	1.8022	1.6899	0.2760	1.3383	1958.1	.0971	.0372	.7211	1640
1660	2.3479-2	1.1740 0	121.4	2.2875	2.1269	1.9662	1.8055	1.6932	0.2766	1.3374	1969.3	.0979	.0376	.7210	1660
1680	2.3200-2	1.1600 0	126.9	2.2908	2.1302	1.9695	1.8089	1.6966	0.2772	1.3364	1980.4	.0987	.0380	.7208	1680
1700	2.2927-2	1.1463 0	132.4	2.2941	2.1335	1.9728	1.8121	1.6998	0.2778	1.3355	1991.5	.0995	.0383	.7207	1700
1720	2.2660-2	1.1330 0	138.0	2.2974	2.1367	1.9761	1.8154	1.7031	0.2783	1.3346	2002.5	.1003	.0387	.7205	1720
1740	2.2400-2	1.1200 0	143.6	2.3006	2.1399	1.9793	1.8186	1.7063	0.2789	1.3337	2013.4	.1010	.0391	.7204	1740
1760	2.2145-2	1.1073 0	149.2	2.3038	2.1431	1.9825	1.8218	1.7095	0.2794	1.3328	2024.3	.1018	.0395	.7203	1760
1780	2.1896-2	1.0948 0	154.8	2.3069	2.1463	1.9856	1.8250	1.7127	0.2800	1.3319	2035.1	.1026	.0399	.7202	1780
1800	2.1653-2	1.0826 0	160.4	2.3101	2.1494	1.9888	1.8281	1.7158	0.2805	1.3311	2045.9	.1033	.0403	.7201	1800
1900	2.0513-2	1.0257 0	188.5	2.3253	2.1647	2.0040	1.8433	1.7310	0.2830	1.3272	2098.9	.1071	.0421	.7199	1900
2000	1.9488-2	9.7439-1	216.9	2.3399	2.1792	2.0186	1.8579	1.7456	0.2853	1.3237	2150.5	.1107	.0439	.7199	2000
2100	1.8560-2	9.2799-1	245.6	2.3539	2.1932	2.0325	1.8719	1.7596	0.2876	1.3204	2200.9	.1143	.0456	.7200	2100
2200	1.7716-2	8.8580-1	274.5	2.3673	2.2066	2.0460	1.8853	1.7730	0.2897	1.3173	2250.0	.1178	.0474	.7202	2200
2300	1.6946-2	8.4729-1	303.5	2.3802	2.2196	2.0589	1.8982	1.7859	0.2917	1.3144	2298.1	.1212	.0491	.7203	2300
2400	1.6240-2	8.1199-1	332.8	2.3927	2.2320	2.0713	1.9107	1.7984	0.2936	1.3117	2345.1	.1246	.0508	.7204	2400
2500	1.5590-2	7.7951-1	362.2	2.4047	2.2440	2.0834	1.9227	1.8104	0.2954	1.3092	2391.2	.1279	.0524	.7206	2500

TABLE 17A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

WET AIR ONLY (W/A= 0.03); F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO= 0.1045; MW= 28.4612;
 GASEOUS COMPOSITION: CO2= .00030; H2O= .04601; N2= .74491; O2= .19984; AR= .00893

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
2600	1.4991-2	7.4953-1	391.9	2.4163	2.2556	2.0950	1.9343	1.8220	0.2971	1.3069	2436.4	.1311	.0541	.7206	2600
2700	1.4435-2	7.2177-1	421.7	2.4276	2.2669	2.1062	1.9456	1.8333	0.2987	1.3047	2480.7	.1343	.0557	.7207	2700
2800	1.3920-2	6.9599-1	451.6	2.4384	2.2778	2.1171	1.9565	1.8442	0.3003	1.3027	2524.3	.1375	.0573	.7203	2800
2900	1.3440-2	6.7199-1	481.7	2.4490	2.2884	2.1277	1.9670	1.8547	0.3017	1.3008	2567.1	.1406	.0589	.7200	2900
3000	1.2992-2	6.4959-1	512.0	2.4593	2.2986	2.1379	1.9773	1.8650	0.3031	1.2990	2609.2	.1437	.0605	.7196	3000
3100	1.2573-2	6.2864-1	542.3	2.4692	2.3086	2.1479	1.9872	1.8749	0.3044	1.2974	2650.6	.1467	.0621	.7192	3100
3200	1.2180-2	6.0899-1	572.9	2.4789	2.3182	2.1576	1.9969	1.8846	0.3057	1.2958	2691.4	.1497	.0637	.7188	3200
3300	1.1811-2	5.9054-1	603.5	2.4883	2.3277	2.1670	2.0064	1.8941	0.3068	1.2943	2731.6	.1527	.0652	.7184	3300
3400	1.1463-2	5.7317-1	634.2	2.4975	2.3368	2.1762	2.0155	1.9032	0.3079	1.2930	2771.2	.1556	.0667	.7180	3400
3500	1.1136-2	5.5679-1	665.1	2.5065	2.3458	2.1851	2.0245	1.9122	0.3090	1.2917	2810.3	.1585	.0682	.7177	3500
3600	1.0826-2	5.4133-1	696.0	2.5152	2.3545	2.1938	2.0332	1.9209	0.3100	1.2905	2848.8	.1614	.0697	.7173	3600
3700	1.0534-2	5.2669-1	727.1	2.5237	2.3630	2.2024	2.0417	1.9294	0.3109	1.2894	2886.9	.1642	.0712	.7173	3700
3800	1.0257-2	5.1283-1	758.2	2.5320	2.3713	2.2107	2.0500	1.9377	0.3118	1.2883	2924.4	.1670	.0726	.7172	3800
3900	9.9937-3	4.9968-1	789.4	2.5401	2.3794	2.2188	2.0581	1.9458	0.3126	1.2873	2961.5	.1698	.0740	.7172	3900
4000	9.7438-3	4.8719-1	820.7	2.5480	2.3874	2.2267	2.0660	1.9537	0.3134	1.2864	2998.1	.1726	.0754	.7173	4000
4100	9.5062-3	4.7531-1	852.1	2.5558	2.3951	2.2344	2.0738	1.9615	0.3142	1.2855	3034.3	.1753	.0768	.7173	4100
4200	9.2799-3	4.6399-1	883.5	2.5633	2.4027	2.2420	2.0814	1.9691	0.3149	1.2846	3070.1	.1780	.0781	.7174	4200
4300	9.0640-3	4.5320-1	915.1	2.5708	2.4101	2.2494	2.0888	1.9765	0.3156	1.2838	3105.5	.1807	.0795	.7175	4300
4400	8.8580-3	4.4290-1	946.7	2.5780	2.4174	2.2567	2.0960	1.9837	0.3162	1.2831	3140.5	.1834	.0808	.7176	4400
4500	8.6612-3	4.3306-1	978.3	2.5851	2.4245	2.2638	2.1032	1.9909	0.3169	1.2824	3175.1	.1860	.0821	.7178	4500
4600	8.4729-3	4.2365-1	1010.0	2.5921	2.4314	2.2708	2.1101	1.9978	0.3175	1.2817	3209.3	.1886	.0834	.7176	4600
4700	8.2926-3	4.1463-1	1041.8	2.5989	2.4383	2.2776	2.1170	2.0047	0.3180	1.2811	3243.2	.1912	.0848	.7175	4700
4800	8.1199-3	4.0599-1	1073.6	2.6056	2.4450	2.2843	2.1237	2.0114	0.3186	1.2804	3276.7	.1938	.0861	.7174	4800
4900	7.9542-3	3.9771-1	1105.5	2.6122	2.4516	2.2909	2.1302	2.0179	0.3191	1.2798	3309.9	.1964	.0874	.7172	4900
5000	7.7951-3	3.8975-1	1137.5	2.6187	2.4580	2.2973	2.1367	2.0244	0.3196	1.2793	3342.8	.1989	.0887	.7171	5000
5100	7.6422-3	3.8211-1	1169.5	2.6250	2.4643	2.3037	2.1430	2.0307	0.3201	1.2787	3375.3	.2014	.0899	.7169	5100
5200	7.4953-3	3.7476-1	1201.5	2.6312	2.4706	2.3099	2.1492	2.0369	0.3206	1.2782	3407.5	.2040	.0912	.7167	5200
5300	7.3538-3	3.6769-1	1233.6	2.6373	2.4767	2.3160	2.1554	2.0431	0.3210	1.2777	3439.5	.2065	.0925	.7165	5300
5400	7.2177-3	3.6088-1	1265.7	2.6433	2.4827	2.3220	2.1614	2.0491	0.3215	1.2772	3471.1	.2089	.0938	.7163	5400

TABLE 17.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

WET AIR ONLY (W/A= 0.03); F/A = 0; EQUIV. RATIO =0; CHEM. EQUIV. RATIO = 0.1045;

P = 0.14696 LB/IN2 (0.01 ATM)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4360-4	104.8	2.2774	28.461	.096	1.0000	-1.0000	0.2749	1.3402	1935.4	.0364	.721	0.2748	1.3403	1935.5	.0364	.721
1700	2.2927-4	132.5	2.2941	28.461	.099	1.0000	-1.0000	0.2779	1.3352	1991.3	.0384	.721	0.2778	1.3355	1991.5	.0383	.721
1800	2.1653-4	160.4	2.3101	28.461	.103	1.0000	-1.0000	0.2808	1.3306	2045.5	.0403	.720	0.2805	1.3311	2045.9	.0403	.720
1900	2.0513-4	188.6	2.3254	28.461	.107	1.0000	-1.0000	0.2834	1.3266	2098.3	.0422	.720	0.2830	1.3272	2098.9	.0421	.720
2000	1.9488-4	217.1	2.3400	28.461	.111	1.0000	-1.0000	0.2860	1.3226	2149.7	.0440	.720	0.2853	1.3237	2150.5	.0439	.720
2100	1.8560-4	245.8	2.3540	28.461	.114	1.0000	-1.0000	0.2886	1.3189	2199.6	.0458	.720	0.2876	1.3204	2200.9	.0456	.720
2200	1.7716-4	274.8	2.3675	28.461	.118	1.0000	-1.0000	0.2912	1.3152	2248.2	.0476	.720	0.2897	1.3173	2250.0	.0474	.720
2300	1.6946-4	304.1	2.3805	28.461	.121	1.0001	-1.0000	0.2938	1.3115	2295.6	.0494	.720	0.2917	1.3144	2298.1	.0491	.720
2400	1.6240-4	333.6	2.3930	28.461	.125	1.0001	-1.0000	0.2965	1.3078	2341.6	.0513	.720	0.2936	1.3117	2345.1	.0508	.720
2500	1.5590-4	363.4	2.4052	28.461	.128	1.0003	-1.0000	0.2994	1.3041	2386.5	.0532	.720	0.2954	1.3092	2391.2	.0524	.721
2600	1.4990-4	393.5	2.4170	28.460	.131	1.0004	-1.0000	0.3025	1.3002	2430.1	.0551	.720	0.2971	1.3069	2436.4	.0541	.721
2700	1.4435-4	423.9	2.4285	28.460	.134	1.0008	-1.0000	0.3059	1.2960	2472.5	.0572	.719	0.2988	1.3047	2480.8	.0557	.721
2800	1.3919-4	454.7	2.4397	28.459	.138	1.0013	-1.0000	0.3099	1.2915	2513.5	.0594	.717	0.3003	1.3027	2524.4	.0573	.720
2900	1.3438-4	485.9	2.4506	28.457	.141	1.0021	-1.0000	0.3147	1.2864	2553.0	.0619	.715	0.3017	1.3008	2567.3	.0589	.720
3000	1.2989-4	517.6	2.4614	28.455	.144	1.0033	-1.0001	0.3205	1.2806	2590.9	.0648	.711	0.3031	1.2991	2609.6	.0605	.720
3100	1.2568-4	550.0	2.4720	28.451	.147	1.0052	-1.0001	0.3278	1.2739	2627.1	.0683	.705	0.3044	1.2975	2651.3	.0621	.719
3200	1.2173-4	583.3	2.4826	28.445	.150	1.0080	-1.0002	0.3372	1.2661	2661.2	.0725	.696	0.3057	1.2960	2692.4	.0637	.719
3300	1.1800-4	617.6	2.4931	28.436	.153	1.0121	-1.0003	0.3493	1.2570	2693.1	.0780	.683	0.3068	1.2947	2733.2	.0652	.718
3400	1.1448-4	653.3	2.5038	28.424	.156	1.0181	-1.0005	0.3652	1.2465	2722.8	.0853	.666	0.3079	1.2935	2773.6	.0668	.718
3500	1.1114-4	690.8	2.5146	28.405	.159	1.0267	-1.0008	0.3861	1.2346	2750.2	.0952	.643	0.3090	1.2924	2813.8	.0683	.717
3600	1.0795-4	730.7	2.5259	28.379	.161	1.0387	-1.0012	0.4135	1.2216	2775.7	.1085	.615	0.3100	1.2915	2854.1	.0698	.716
3700	1.0490-4	773.7	2.5377	28.343	.164	1.0553	-1.0018	0.4491	1.2077	2799.7	.1267	.582	0.3110	1.2909	2894.5	.0713	.716
3800	1.0196-4	820.9	2.5502	28.293	.167	1.0779	-1.0026	0.4949	1.1935	2823.1	.1511	.547	0.3119	1.2904	2935.5	.0728	.715
3900	9.9110-5	873.1	2.5638	28.226	.170	1.1079	-1.0037	0.5533	1.1797	2846.8	.1836	.512	0.3128	1.2902	2977.2	.0744	.714
4000	9.6324-5	932.0	2.5787	28.136	.172	1.1470	-1.0053	0.6265	1.1668	2871.9	.2256	.479	0.3136	1.2904	3020.2	.0759	.712
4100	9.3578-5	999.0	2.5953	28.017	.175	1.1969	-1.0073	0.7167	1.1553	2899.3	.2783	.451	0.3145	1.2910	3064.8	.0776	.710
4200	9.0853-5	1075.9	2.6138	27.864	.178	1.2588	-1.0099	0.8253	1.1454	2929.9	.3417	.430	0.3153	1.2921	3111.8	.0793	.707
4300	8.8126-5	1164.7	2.6347	27.672	.180	1.3333	-1.0131	0.9526	1.1374	2964.4	.4139	.415	0.3161	1.2937	3161.5	.0811	.703
4400	8.5383-5	1267.0	2.6582	27.434	.183	1.4194	-1.0170	1.0967	1.1312	3003.5	.4910	.409	0.3170	1.2960	3214.7	.0831	.698
4500	8.2616-5	1384.4	2.6846	27.148	.186	1.5143	-1.0214	1.2527	1.1268	3047.3	.5670	.410	0.3178	1.2990	3271.9	.0853	.692
4600	7.9825-5	1517.7	2.7138	26.814	.188	1.6128	-1.0262	1.4122	1.1239	3096.1	.6348	.419	0.3187	1.3027	3333.4	.0876	.685
4700	7.7025-5	1666.6	2.7459	26.436	.191	1.7072	-1.0310	1.5631	1.1224	3149.9	.6874	.434	0.3196	1.3073	3399.4	.0901	.677
4800	7.4240-5	1829.6	2.7802	26.022	.193	1.7884	-1.0354	1.6915	1.1222	3208.1	.7199	.455	0.3205	1.3125	3469.5	.0928	.668
4900	7.1505-5	2003.7	2.8161	25.586	.196	1.8479	-1.0390	1.7837	1.1231	3270.2	.7304	.479	0.3214	1.3184	3543.1	.0955	.660
5000	6.8860-5	2184.8	2.8527	25.142	.199	1.8796	-1.0414	1.8299	1.1250	3335.3	.7201	.505	0.3223	1.3246	3619.0	.0982	.652
5100	6.6340-5	2367.9	2.8889	24.706	.201	1.8808	-1.0423	1.8253	1.1280	3402.5	.6917	.532	0.3232	1.3310	3696.1	.1008	.646
5200	6.3975-5	2548.1	2.9239	24.293	.204	1.8522	-1.0418	1.7703	1.1320	3470.9	.6488	.557	0.3240	1.3374	3772.8	.1034	.640
5300	6.1788-5	2720.5	2.9568	23.913	.207	1.7970	-1.0400	1.6701	1.1371	3539.9	.5953	.581	0.3248	1.3435	3847.7	.1058	.635
5400	5.9787-5	2881.0	2.9868	23.576	.210	1.7212	-1.0369	1.5346	1.1437	3609.0	.5353	.601	0.3255	1.3491	3919.7	.1081	.631

TABLE 17.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

WET AIR ONLY (W/A = 0.03); F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO = 0.1045;

P = 1.46959 LB/IN2 (0.10 ATM)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4360-3	104.8	2.1167	28.461	.096	1.0000	-1.0000	0.2749	1.3402	1935.4	.0364	.721	0.2748	1.3403	1935.5	.0364	.721
1700	2.2927-3	132.5	2.1335	28.461	.099	1.0000	-1.0000	0.2779	1.3352	1991.3	.0384	.721	0.2778	1.3355	1991.5	.0383	.721
1800	2.1653-3	160.4	2.1494	28.461	.103	1.0000	-1.0000	0.2808	1.3306	2045.5	.0403	.720	0.2805	1.3311	2045.9	.0403	.720
1900	2.0513-3	188.6	2.1647	28.461	.107	1.0000	-1.0000	0.2834	1.3266	2098.4	.0422	.720	0.2830	1.3272	2098.9	.0421	.720
2000	1.9488-3	217.1	2.1793	28.461	.111	1.0000	-1.0000	0.2860	1.3227	2149.7	.0440	.720	0.2853	1.3237	2150.5	.0439	.720
2100	1.8560-3	245.8	2.1933	28.461	.114	1.0000	-1.0000	0.2886	1.3189	2199.6	.0458	.720	0.2876	1.3204	2200.9	.0456	.720
2200	1.7716-3	274.8	2.2068	28.461	.118	1.0000	-1.0000	0.2911	1.3152	2248.3	.0476	.720	0.2897	1.3173	2250.0	.0474	.720
2300	1.6946-3	304.0	2.2198	28.461	.121	1.0000	-1.0000	0.2937	1.3117	2295.7	.0494	.720	0.2917	1.3144	2298.1	.0491	.720
2400	1.6240-3	333.5	2.2324	28.461	.125	1.0001	-1.0000	0.2963	1.3081	2341.9	.0512	.720	0.2936	1.3117	2345.1	.0508	.720
2500	1.5590-3	363.3	2.2445	28.461	.128	1.0001	-1.0000	0.2989	1.3046	2387.0	.0531	.720	0.2954	1.3092	2391.2	.0524	.721
2600	1.4990-3	393.3	2.2563	28.461	.131	1.0002	-1.0000	0.3017	1.3010	2430.9	.0549	.720	0.2971	1.3069	2436.4	.0541	.721
2700	1.4435-3	423.6	2.2677	28.460	.134	1.0004	-1.0000	0.3047	1.2973	2473.7	.0569	.720	0.2988	1.3047	2480.8	.0557	.721
2800	1.3919-3	454.3	2.2789	28.460	.138	1.0006	-1.0000	0.3079	1.2935	2515.4	.0589	.719	0.3003	1.3027	2524.3	.0573	.720
2900	1.3439-3	485.2	2.2897	28.459	.141	1.0010	-1.0000	0.3114	1.2895	2556.0	.0610	.718	0.3017	1.3008	2567.2	.0589	.720
3000	1.2990-3	516.6	2.3003	28.458	.144	1.0015	-1.0000	0.3153	1.2852	2595.5	.0633	.716	0.3031	1.2991	2609.4	.0605	.720
3100	1.2571-3	548.3	2.3108	28.456	.147	1.0022	-1.0001	0.3198	1.2806	2633.7	.0657	.714	0.3044	1.2974	2650.9	.0621	.719
3200	1.2177-3	580.5	2.3210	28.454	.150	1.0033	-1.0001	0.3251	1.2756	2670.7	.0685	.711	0.3057	1.2959	2691.9	.0637	.719
3300	1.1806-3	613.4	2.3311	28.450	.153	1.0049	-1.0001	0.3314	1.2700	2706.3	.0717	.706	0.3068	1.2945	2732.3	.0652	.718
3400	1.1457-3	646.9	2.3411	28.445	.156	1.0071	-1.0002	0.3390	1.2638	2740.5	.0754	.700	0.3079	1.2932	2772.2	.0668	.718
3500	1.1127-3	681.2	2.3510	28.438	.159	1.0102	-1.0003	0.3482	1.2569	2773.3	.0798	.692	0.3090	1.2920	2811.8	.0683	.718
3600	1.0814-3	716.6	2.3610	28.428	.161	1.0144	-1.0004	0.3595	1.2492	2804.5	.0853	.681	0.3100	1.2909	2851.0	.0698	.717
3700	1.0517-3	753.2	2.3710	28.415	.164	1.0200	-1.0006	0.3735	1.2408	2834.3	.0920	.667	0.3109	1.2900	2889.9	.0712	.717
3800	1.0234-3	791.4	2.3812	28.397	.167	1.0276	-1.0009	0.3907	1.2317	2862.7	.1006	.649	0.3118	1.2891	2928.7	.0727	.717
3900	9.9628-4	831.5	2.3916	28.373	.170	1.0375	-1.0013	0.4118	1.2220	2889.9	.1115	.628	0.3126	1.2884	2967.4	.0741	.716
4000	9.7030-4	873.9	2.4024	28.342	.173	1.0504	-1.0017	0.4377	1.2119	2916.2	.1252	.603	0.3134	1.2879	3006.2	.0756	.716
4100	9.4528-4	919.2	2.4136	28.301	.175	1.0669	-1.0024	0.4691	1.2017	2942.0	.1427	.577	0.3142	1.2875	3045.3	.0770	.715
4200	9.2106-4	967.9	2.4253	28.249	.178	1.0877	-1.0032	0.5071	1.1915	2967.9	.1645	.549	0.3149	1.2874	3084.9	.0785	.715
4300	8.9753-4	1020.9	2.4377	28.183	.181	1.1135	-1.0043	0.5524	1.1818	2994.2	.1915	.521	0.3157	1.2874	3125.1	.0799	.714
4400	8.7454-4	1078.7	2.4510	28.099	.183	1.1452	-1.0057	0.6060	1.1727	3021.6	.2242	.496	0.3163	1.2877	3166.3	.0815	.712
4500	8.5196-4	1142.3	2.4653	27.996	.186	1.1834	-1.0074	0.6683	1.1644	3050.6	.2630	.473	0.3170	1.2883	3208.7	.0830	.711
4600	8.2969-4	1212.7	2.4808	27.870	.189	1.2283	-1.0095	0.7397	1.1572	3081.6	.3076	.454	0.3177	1.2892	3252.6	.0846	.708
4700	8.0762-4	1290.6	2.4975	27.718	.191	1.2803	-1.0120	0.8200	1.1510	3115.1	.3572	.439	0.3183	1.2905	3298.4	.0864	.705
4800	7.8567-4	1376.9	2.5157	27.539	.194	1.3388	-1.0149	0.9083	1.1460	3151.4	.4101	.429	0.3189	1.2921	3346.3	.0882	.701
4900	7.6378-4	1472.4	2.5354	27.329	.197	1.4028	-1.0182	1.0028	1.1421	3190.8	.4640	.425	0.3196	1.2943	3396.7	.0901	.697
5000	7.4194-4	1577.6	2.5567	27.089	.199	1.4705	-1.0218	1.1008	1.1393	3233.4	.5159	.425	0.3202	1.2969	3449.8	.0922	.692
5100	7.2015-4	1692.6	2.5794	26.820	.202	1.5391	-1.0255	1.1985	1.1374	3279.3	.5627	.430	0.3209	1.2999	3505.8	.0943	.686
5200	6.9850-4	1817.1	2.6036	26.523	.204	1.6054	-1.0294	1.2909	1.1365	3328.4	.6014	.439	0.3216	1.3035	3564.6	.0966	.680
5300	6.7707-4	1950.4	2.6290	26.204	.207	1.6653	-1.0330	1.3729	1.1364	3380.6	.6298	.451	0.3222	1.3075	3626.1	.0990	.673
5400	6.5600-4	2091.2	2.6553	25.868	.210	1.7151	-1.0363	1.4390	1.1372	3435.6	.6464	.467	0.3229	1.3119	3690.0	.1015	.667

TABLE 17.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

WET AIR ONLY (W/A = 0.03); F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO = 0.1045;

P = 14.6959 LB/IN2 (1.00 ATM)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS				PRAN	FROZEN COMPOSITIONS				
								CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN		CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4360-2	104.8	1.9561	28.461	.096	1.0000	-1.0000	0.2749	1.3402	1935.4	.0364	.721	0.2748	1.3403	1935.5	.0364	.721
1700	2.2927-2	132.5	1.9728	28.461	.099	1.0000	-1.0000	0.2779	1.3352	1991.3	.0384	.721	0.2778	1.3355	1991.5	.0383	.721
1800	2.1653-2	160.4	1.9888	28.461	.103	1.0000	-1.0000	0.2808	1.3306	2045.5	.0403	.720	0.2805	1.3311	2045.9	.0403	.720
1900	2.0513-2	188.6	2.0040	28.461	.107	1.0000	-1.0000	0.2834	1.3266	2098.4	.0422	.720	0.2830	1.3272	2098.9	.0421	.720
2000	1.9488-2	217.1	2.0186	28.461	.111	1.0000	-1.0000	0.2860	1.3227	2149.7	.0440	.720	0.2853	1.3237	2150.5	.0439	.720
2100	1.8560-2	245.8	2.0327	28.461	.114	1.0000	-1.0000	0.2886	1.3189	2199.7	.0458	.720	0.2876	1.3204	2200.9	.0456	.720
2200	1.7716-2	274.8	2.0461	28.461	.118	1.0000	-1.0000	0.2911	1.3153	2248.3	.0476	.720	0.2897	1.3173	2250.0	.0474	.720
2300	1.6946-2	304.0	2.0591	28.461	.121	1.0000	-1.0000	0.2936	1.3118	2295.8	.0494	.720	0.2917	1.3144	2298.1	.0491	.720
2400	1.6240-2	333.5	2.0717	28.461	.125	1.0000	-1.0000	0.2961	1.3083	2342.0	.0512	.720	0.2936	1.3117	2345.1	.0508	.720
2500	1.5590-2	363.3	2.0838	28.461	.128	1.0001	-1.0000	0.2987	1.3048	2387.2	.0530	.721	0.2954	1.3092	2391.2	.0524	.721
2600	1.4990-2	393.3	2.0956	28.461	.131	1.0001	-1.0000	0.3013	1.3014	2431.3	.0548	.721	0.2971	1.3069	2436.4	.0541	.721
2700	1.4435-2	423.5	2.1070	28.461	.134	1.0002	-1.0000	0.3040	1.2980	2474.3	.0567	.720	0.2988	1.3047	2480.7	.0557	.721
2800	1.3919-2	454.1	2.1181	28.461	.138	1.0003	-1.0000	0.3069	1.2945	2516.4	.0586	.720	0.3003	1.3027	2524.3	.0573	.720
2900	1.3439-2	484.9	2.1289	28.460	.141	1.0005	-1.0000	0.3099	1.2910	2557.4	.0606	.719	0.3017	1.3008	2567.1	.0589	.720
3000	1.2991-2	516.1	2.1395	28.460	.144	1.0007	-1.0000	0.3130	1.2873	2597.5	.0626	.718	0.3031	1.2990	2609.3	.0605	.720
3100	1.2572-2	547.5	2.1498	28.459	.147	1.0011	-1.0000	0.3165	1.2836	2636.6	.0648	.717	0.3044	1.2974	2650.8	.0621	.719
3200	1.2178-2	579.4	2.1599	28.458	.150	1.0015	-1.0000	0.3202	1.2797	2674.8	.0670	.716	0.3057	1.2958	2691.6	.0637	.719
3300	1.1809-2	611.6	2.1698	28.456	.153	1.0022	-1.0001	0.3243	1.2756	2712.0	.0694	.714	0.3068	1.2944	2731.9	.0652	.718
3400	1.1460-2	644.2	2.1796	28.454	.156	1.0031	-1.0001	0.3290	1.2713	2748.2	.0720	.711	0.3079	1.2931	2771.7	.0668	.718
3500	1.1132-2	677.4	2.1892	28.451	.159	1.0043	-1.0001	0.3342	1.2667	2783.5	.0748	.708	0.3090	1.2918	2811.0	.0683	.718
3600	1.0821-2	711.1	2.1987	28.447	.161	1.0059	-1.0002	0.3401	1.2619	2817.8	.0780	.704	0.3100	1.2907	2849.8	.0698	.717
3700	1.0527-2	745.4	2.2081	28.441	.164	1.0080	-1.0002	0.3470	1.2567	2851.0	.0815	.699	0.3109	1.2896	2888.2	.0712	.717
3800	1.0247-2	780.5	2.2175	28.434	.167	1.0108	-1.0003	0.3549	1.2512	2883.3	.0856	.693	0.3118	1.2887	2926.2	.0727	.717
3900	9.9810-3	816.5	2.2268	28.425	.170	1.0143	-1.0005	0.3641	1.2453	2914.6	.0903	.685	0.3126	1.2878	2964.0	.0741	.717
4000	9.7274-3	853.4	2.2361	28.413	.173	1.0189	-1.0006	0.3748	1.2391	2945.0	.0959	.675	0.3134	1.2870	3001.4	.0755	.717
4100	9.4851-3	891.5	2.2455	28.398	.175	1.0246	-1.0009	0.3873	1.2326	2974.5	.1025	.663	0.3141	1.2863	3038.7	.0769	.717
4200	9.2530-3	930.9	2.2550	28.379	.178	1.0317	-1.0011	0.4019	1.2258	3003.3	.1104	.648	0.3149	1.2858	3075.9	.0783	.717
4300	9.0302-3	971.9	2.2647	28.355	.181	1.0404	-1.0015	0.4188	1.2188	3031.5	.1199	.632	0.3155	1.2853	3113.0	.0797	.716
4400	8.8157-3	1014.8	2.2745	28.325	.184	1.0511	-1.0019	0.4384	1.2117	3059.2	.1312	.613	0.3162	1.2849	3150.2	.0810	.716
4500	8.6087-3	1059.7	2.2846	28.289	.186	1.0641	-1.0025	0.4610	1.2047	3086.7	.1447	.593	0.3168	1.2847	3187.6	.0824	.716
4600	8.4083-3	1107.1	2.2951	28.244	.189	1.0797	-1.0032	0.4869	1.1978	3114.3	.1606	.572	0.3174	1.2846	3225.2	.0838	.715
4700	8.2138-3	1157.2	2.3058	28.191	.191	1.0981	-1.0041	0.5164	1.1911	3142.2	.1794	.551	0.3180	1.2846	3263.2	.0853	.714
4800	8.0243-3	1210.5	2.3171	28.126	.194	1.1196	-1.0051	0.5496	1.1847	3170.6	.2011	.530	0.3185	1.2848	3301.8	.0867	.713
4900	7.8392-3	1267.3	2.3288	28.050	.197	1.1445	-1.0063	0.5868	1.1788	3199.8	.2260	.511	0.3190	1.2852	3341.0	.0882	.711
5000	7.6579-3	1328.0	2.3410	27.960	.199	1.1730	-1.0078	0.6281	1.1735	3230.1	.2539	.493	0.3196	1.2858	3381.1	.0897	.710
5100	7.4797-3	1393.0	2.3539	27.856	.202	1.2051	-1.0095	0.6732	1.1687	3261.7	.2848	.477	0.3201	1.2866	3422.2	.0913	.708
5200	7.3042-3	1462.7	2.3674	27.736	.204	1.2408	-1.0114	0.7220	1.1645	3294.7	.3181	.464	0.3206	1.2876	3464.5	.0929	.705
5300	7.1310-3	1537.5	2.3813	27.599	.207	1.2797	-1.0135	0.7740	1.1610	3329.5	.3531	.454	0.3210	1.2889	3508.0	.0946	.702
5400	6.9598-3	1617.6	2.3967	27.444	.210	1.3215	-1.0159	0.8286	1.1582	3366.1	.3890	.446	0.3215	1.2904	3553.0	.0964	.699

TABLE 17.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

WET AIR ONLY (W/A= 0.03); F/A = 0; EQUIV. RATIO =0; CHEM. EQUIV. RATIO = 0.1045;

P = 146.959 LB/IN2 (10.00 ATM)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4360-1	104.8	1.7954	28.461	.096	1.0000	-1.0000	0.2749	1.3402	1935.4	.0364	.721	0.2748	1.3403	1935.5	.0364	.721
1700	2.2927-1	132.5	1.8122	28.461	.099	1.0000	-1.0000	0.2779	1.3352	1991.3	.0384	.721	0.2778	1.3355	1991.5	.0383	.721
1800	2.1653-1	160.4	1.8281	28.461	.103	1.0000	-1.0000	0.2808	1.3306	2045.5	.0403	.720	0.2805	1.3311	2045.9	.0403	.720
1900	2.0513-1	188.6	1.8434	28.461	.107	1.0000	-1.0000	0.2834	1.3265	2098.3	.0422	.720	0.2830	1.3272	2098.9	.0421	.720
2000	1.9488-1	217.1	1.8580	28.461	.111	1.0000	-1.0000	0.2860	1.3227	2149.7	.0440	.720	0.2853	1.3237	2150.5	.0439	.720
2100	1.8560-1	245.8	1.8720	28.461	.114	1.0000	-1.0000	0.2886	1.3189	2199.7	.0458	.720	0.2876	1.3204	2200.9	.0456	.720
2200	1.7716-1	274.8	1.8855	28.461	.118	1.0000	-1.0000	0.2911	1.3153	2248.3	.0476	.720	0.2897	1.3173	2250.0	.0474	.720
2300	1.6946-1	304.0	1.8985	28.461	.121	1.0000	-1.0000	0.2936	1.3118	2295.8	.0494	.720	0.2917	1.3144	2298.1	.0491	.720
2400	1.6240-1	333.5	1.9110	28.461	.125	1.0000	-1.0000	0.2961	1.3083	2342.1	.0512	.721	0.2936	1.3117	2345.1	.0508	.720
2500	1.5590-1	363.2	1.9232	28.461	.128	1.0000	-1.0000	0.2986	1.3049	2387.3	.0530	.721	0.2954	1.3092	2391.2	.0524	.721
2600	1.4991-1	393.2	1.9349	28.461	.131	1.0000	-1.0000	0.3011	1.3016	2431.4	.0548	.721	0.2971	1.3069	2436.4	.0541	.721
2700	1.4435-1	423.5	1.9463	28.461	.134	1.0001	-1.0000	0.3037	1.2983	2474.6	.0566	.721	0.2988	1.3047	2480.7	.0557	.721
2800	1.3920-1	454.0	1.9574	28.461	.138	1.0001	-1.0000	0.3064	1.2950	2516.8	.0585	.720	0.3003	1.3027	2524.3	.0573	.720
2900	1.3440-1	484.8	1.9682	28.461	.141	1.0002	-1.0000	0.3091	1.2916	2558.1	.0604	.720	0.3017	1.3008	2567.1	.0589	.720
3000	1.2992-1	515.8	1.9788	28.461	.144	1.0003	-1.0000	0.3120	1.2883	2598.4	.0623	.719	0.3031	1.2990	2609.2	.0605	.720
3100	1.2572-1	547.2	1.9890	28.460	.147	1.0005	-1.0000	0.3149	1.2850	2638.0	.0643	.718	0.3044	1.2974	2650.7	.0621	.719
3200	1.2179-1	578.8	1.9991	28.460	.150	1.0007	-1.0000	0.3180	1.2816	2676.7	.0664	.718	0.3057	1.2958	2691.5	.0637	.719
3300	1.1810-1	610.8	2.0089	28.459	.153	1.0010	-1.0000	0.3213	1.2781	2714.6	.0685	.717	0.3068	1.2944	2731.8	.0652	.718
3400	1.1462-1	643.1	2.0186	28.458	.156	1.0014	-1.0000	0.3247	1.2746	2751.7	.0707	.715	0.3079	1.2930	2771.4	.0667	.718
3500	1.1134-1	675.7	2.0280	28.457	.159	1.0020	-1.0001	0.3284	1.2711	2788.0	.0729	.714	0.3090	1.2918	2810.6	.0683	.718
3600	1.0824-1	708.8	2.0373	28.455	.161	1.0026	-1.0001	0.3324	1.2674	2823.6	.0753	.712	0.3100	1.2906	2849.3	.0698	.717
3700	1.0531-1	742.2	2.0465	28.452	.164	1.0035	-1.0001	0.3367	1.2637	2858.4	.0778	.710	0.3109	1.2895	2887.5	.0712	.717
3800	1.0252-1	776.1	2.0555	28.449	.167	1.0046	-1.0002	0.3413	1.2599	2892.6	.0805	.708	0.3118	1.2885	2925.2	.0726	.717
3900	9.9881-2	810.5	2.0645	28.445	.170	1.0060	-1.0002	0.3464	1.2559	2926.0	.0835	.705	0.3126	1.2875	2962.6	.0741	.717
4000	9.7367-2	845.4	2.0733	28.440	.173	1.0078	-1.0003	0.3520	1.2519	2958.7	.0866	.702	0.3134	1.2867	2999.6	.0755	.717
4100	9.4972-2	880.9	2.0821	28.434	.175	1.0099	-1.0003	0.3582	1.2477	2990.8	.0901	.697	0.3141	1.2859	3036.2	.0768	.717
4200	9.2685-2	917.1	2.0908	28.427	.178	1.0126	-1.0004	0.3650	1.2434	3022.3	.0940	.692	0.3148	1.2852	3072.6	.0782	.717
4300	9.0500-2	953.9	2.0995	28.417	.181	1.0158	-1.0006	0.3726	1.2390	3053.2	.0983	.686	0.3155	1.2845	3108.7	.0796	.717
4400	8.8407-2	991.6	2.1081	28.406	.184	1.0196	-1.0007	0.3811	1.2345	3083.5	.1031	.678	0.3162	1.2839	3144.5	.0809	.717
4500	8.6400-2	1030.2	2.1168	28.392	.186	1.0242	-1.0009	0.3905	1.2300	3113.3	.1086	.670	0.3168	1.2834	3180.2	.0823	.717
4600	8.4472-2	1069.7	2.1255	28.375	.189	1.0297	-1.0012	0.4009	1.2254	3142.7	.1149	.659	0.3173	1.2829	3215.7	.0836	.717
4700	8.2617-2	1110.4	2.1342	28.355	.192	1.0361	-1.0015	0.4125	1.2207	3171.8	.1219	.648	0.3179	1.2826	3251.2	.0850	.716
4800	8.0828-2	1152.3	2.1430	28.331	.194	1.0436	-1.0018	0.4252	1.2161	3200.7	.1300	.635	0.3184	1.2823	3286.6	.0863	.716
4900	7.9100-2	1195.5	2.1519	28.303	.197	1.0523	-1.0022	0.4394	1.2115	3229.3	.1391	.621	0.3189	1.2821	3322.0	.0877	.715
5000	7.7429-2	1240.2	2.1610	28.271	.199	1.0623	-1.0027	0.4549	1.2071	3258.0	.1494	.607	0.3194	1.2819	3357.5	.0891	.715
5100	7.5809-2	1286.5	2.1702	28.233	.202	1.0737	-1.0033	0.4719	1.2027	3286.7	.1611	.592	0.3199	1.2819	3393.1	.0904	.714
5200	7.4235-2	1334.6	2.1795	28.189	.205	1.0867	-1.0040	0.4904	1.1986	3315.6	.1741	.576	0.3203	1.2820	3429.0	.0918	.713
5300	7.2705-2	1384.7	2.1890	28.139	.207	1.1012	-1.0048	0.5105	1.1946	3344.7	.1886	.561	0.3207	1.2821	3465.1	.0932	.712
5400	7.1213-2	1436.8	2.1988	28.081	.210	1.1175	-1.0057	0.5321	1.1909	3374.3	.2046	.545	0.3212	1.2824	3501.6	.0946	.711

TABLE 17.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

WET AIR ONLY (W/A = 0.03); F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO = 0.1045;

P = 734.797 LB/IN² (50.00 ATM)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2180 0	104.8	1.6831	28.461	.096	1.0000	-1.0000	0.2749	1.3401	1935.4	.0364	.721	0.2748	1.3403	1935.5	.0364	.721
1700	1.1463 0	132.5	1.6999	28.461	.099	1.0000	-1.0000	0.2779	1.3352	1991.3	.0384	.721	0.2778	1.3355	1991.5	.0383	.721
1800	1.0827 0	160.4	1.7158	28.461	.103	1.0000	-1.0000	0.2808	1.3306	2045.5	.0403	.720	0.2805	1.3311	2045.9	.0403	.720
1900	1.0257 0	188.6	1.7311	28.461	.107	1.0000	-1.0000	0.2834	1.3265	2098.3	.0422	.720	0.2830	1.3272	2098.9	.0421	.720
2000	9.7439-1	217.1	1.7457	28.461	.111	1.0000	-1.0000	0.2860	1.3226	2149.7	.0440	.720	0.2853	1.3237	2150.5	.0439	.720
2100	9.2799-1	245.8	1.7597	28.462	.114	1.0000	-1.0000	0.2886	1.3189	2199.6	.0458	.720	0.2876	1.3204	2200.9	.0456	.720
2200	8.8581-1	274.8	1.7732	28.462	.118	1.0000	-1.0000	0.2911	1.3153	2248.3	.0476	.720	0.2897	1.3173	2250.0	.0474	.720
2300	8.4730-1	304.0	1.7862	28.462	.121	1.0000	-1.0000	0.2936	1.3118	2295.8	.0494	.720	0.2917	1.3144	2298.1	.0491	.720
2400	8.1200-1	333.5	1.7987	28.462	.125	1.0000	-1.0000	0.2960	1.3083	2342.1	.0512	.721	0.2936	1.3117	2345.1	.0508	.720
2500	7.7952-1	363.2	1.8109	28.462	.128	1.0000	-1.0000	0.2985	1.3050	2387.3	.0530	.721	0.2954	1.3092	2391.2	.0524	.721
2600	7.4954-1	393.2	1.8226	28.462	.131	1.0000	-1.0000	0.3011	1.3016	2431.4	.0548	.721	0.2971	1.3069	2436.4	.0541	.721
2700	7.2178-1	423.5	1.8340	28.462	.134	1.0000	-1.0000	0.3036	1.2984	2474.6	.0566	.721	0.2988	1.3047	2480.7	.0557	.721
2800	6.9600-1	454.0	1.8451	28.462	.138	1.0000	-1.0000	0.3062	1.2951	2516.9	.0585	.720	0.3003	1.3027	2524.3	.0573	.720
2900	6.7200-1	484.7	1.8559	28.462	.141	1.0001	-1.0000	0.3089	1.2919	2558.2	.0603	.720	0.3017	1.3008	2567.1	.0589	.720
3000	6.4960-1	515.7	1.8664	28.462	.144	1.0002	-1.0000	0.3116	1.2886	2598.7	.0622	.719	0.3031	1.2990	2609.2	.0605	.720
3100	6.2864-1	547.0	1.8767	28.461	.147	1.0003	-1.0000	0.3144	1.2854	2638.4	.0642	.719	0.3044	1.2974	2650.6	.0621	.719
3200	6.0899-1	578.6	1.8867	28.461	.150	1.0004	-1.0000	0.3172	1.2822	2677.3	.0661	.718	0.3057	1.2958	2691.4	.0637	.719
3300	5.9052-1	610.5	1.8965	28.461	.153	1.0006	-1.0000	0.3202	1.2790	2715.4	.0681	.718	0.3068	1.2944	2731.7	.0652	.718
3400	5.7314-1	642.6	1.9061	28.460	.156	1.0008	-1.0000	0.3232	1.2758	2752.8	.0702	.717	0.3079	1.2930	2771.3	.0667	.718
3500	5.5675-1	675.1	1.9155	28.459	.159	1.0011	-1.0001	0.3264	1.2726	2789.5	.0723	.716	0.3090	1.2917	2810.4	.0683	.718
3600	5.4127-1	707.9	1.9248	28.458	.161	1.0015	-1.0001	0.3298	1.2694	2825.6	.0745	.715	0.3100	1.2906	2849.1	.0697	.717
3700	5.2661-1	741.1	1.9339	28.457	.164	1.0020	-1.0001	0.3332	1.2661	2860.9	.0767	.714	0.3109	1.2894	2887.2	.0712	.717
3800	5.1272-1	774.6	1.9428	28.455	.167	1.0026	-1.0001	0.3369	1.2629	2895.7	.0790	.713	0.3118	1.2884	2924.9	.0726	.717
3900	4.9954-1	808.5	1.9516	28.453	.170	1.0034	-1.0001	0.3408	1.2596	2929.9	.0814	.711	0.3126	1.2875	2962.1	.0741	.717
4000	4.8700-1	842.7	1.9603	28.450	.173	1.0044	-1.0002	0.3449	1.2563	2963.4	.0840	.709	0.3134	1.2866	2998.9	.0755	.717
4100	4.7506-1	877.4	1.9688	28.447	.175	1.0055	-1.0002	0.3492	1.2530	2996.5	.0866	.707	0.3141	1.2857	3035.4	.0768	.717
4200	4.6368-1	912.6	1.9773	28.442	.178	1.0069	-1.0003	0.3539	1.2496	3029.0	.0895	.705	0.3148	1.2850	3071.5	.0782	.717
4300	4.5282-1	948.2	1.9857	28.437	.181	1.0086	-1.0003	0.3589	1.2462	3061.0	.0925	.702	0.3155	1.2842	3107.3	.0796	.717
4400	4.4243-1	984.4	1.9940	28.431	.184	1.0106	-1.0004	0.3643	1.2429	3092.5	.0958	.698	0.3161	1.2836	3142.7	.0809	.717
4500	4.3248-1	1021.1	2.0023	28.423	.186	1.0129	-1.0005	0.3701	1.2394	3123.5	.0994	.694	0.3168	1.2830	3177.9	.0822	.717
4600	4.2295-1	1058.4	2.0105	28.415	.189	1.0157	-1.0006	0.3763	1.2360	3154.2	.1033	.688	0.3173	1.2824	3212.9	.0836	.717
4700	4.1380-1	1096.4	2.0186	28.404	.192	1.0189	-1.0008	0.3830	1.2326	3184.5	.1075	.683	0.3179	1.2820	3247.6	.0849	.717
4800	4.0500-1	1135.1	2.0268	28.392	.194	1.0226	-1.0009	0.3903	1.2292	3214.4	.1122	.676	0.3184	1.2815	3282.1	.0863	.717
4900	3.9653-1	1174.5	2.0349	28.377	.197	1.0269	-1.0011	0.3981	1.2258	3244.1	.1173	.668	0.3189	1.2811	3316.5	.0876	.716
5000	3.8837-1	1214.7	2.0430	28.360	.199	1.0318	-1.0014	0.4065	1.2225	3273.5	.1229	.660	0.3194	1.2808	3350.7	.0889	.716
5100	3.8050-1	1255.8	2.0512	28.341	.202	1.0373	-1.0017	0.4156	1.2192	3302.7	.1290	.650	0.3198	1.2806	3384.9	.0903	.716
5200	3.7289-1	1297.8	2.0593	28.319	.205	1.0436	-1.0020	0.4254	1.2159	3331.8	.1358	.640	0.3203	1.2803	3418.9	.0916	.715
5300	3.6552-1	1340.9	2.0675	28.293	.207	1.0507	-1.0024	0.4358	1.2128	3360.8	.1433	.630	0.3207	1.2802	3453.0	.0929	.715
5400	3.5839-1	1385.0	2.0758	28.265	.210	1.0586	-1.0028	0.4470	1.2097	3389.9	.1515	.618	0.3211	1.2801	3487.1	.0943	.714

TABLE 17C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

WET AIR ONLY (W/A= 0.03); F/A = 0; EQUIV. RATIO = 0; CHEM. EQUIV. RATIO = 0.1045

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES					T R		
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLVDT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S		COND BTU/ FT HR R	PRAN
PRESSURE = 0.01 ATM																
360	1.135-3	-248.7	1.8167	28.461	0.2546	1.102-3	28.963	.0322	1.000	-1.000	0.2407	1.3982	930	.0106	.734	360
400	1.018-3	-236.5	1.8487	28.461	0.4224	9.903-4	28.927	.0351	1.000	-1.000	0.2407	1.3990	981	.0116	.731	400
440	8.889-4	-196.3	1.9432	28.461	2.2114	8.869-4	28.497	.0370	1.000	-1.000	0.2455	1.3964	1035	.0123	.738	440
PRESSURE = 0.10 ATM																
360	1.135-2	-248.8	1.6631	28.461	0.2456	1.102-2	28.965	.0322	1.000	-1.000	0.2407	1.3982	930	.0106	.734	360
400	1.021-2	-238.8	1.6895	28.461	0.2629	9.915-3	28.961	.0352	1.000	-1.000	0.2403	1.3992	980	.0116	.730	400
440	9.246-3	-226.0	1.7198	28.461	0.4278	9.000-3	28.918	.0380	1.000	-1.000	0.2405	1.3995	1029	.0126	.727	440
480	8.216-3	-192.8	1.7914	28.461	1.5656	8.155-3	28.584	.0400	1.000	-1.000	0.2444	1.3973	1080	.0133	.732	480
520	7.495-3	-174.0	1.8297	28.461	0.2459	7.495-3	28.461	.0424	1.000	-1.000	0.2459	1.3962	1126	.0142	.733	520
PRESSURE = 1.00 ATM																
360	1.135-1	-248.8	1.5098	28.461	0.2447	1.102-1	28.965	.0322	1.000	-1.000	0.2407	1.3982	930	.0106	.734	360
400	1.021-1	-239.0	1.5357	28.461	0.2471	9.916-2	28.965	.0352	1.000	-1.000	0.2403	1.3993	980	.0116	.730	400
440	9.281-2	-228.9	1.5598	28.461	0.2642	9.013-2	28.960	.0381	1.000	-1.000	0.2401	1.3999	1028	.0126	.726	440
480	8.482-2	-216.8	1.5861	28.461	0.3710	8.253-2	28.927	.0407	1.000	-1.000	0.2403	1.3999	1075	.0135	.723	480
520	7.719-2	-193.4	1.6328	28.461	0.6701	7.577-2	28.773	.0431	1.000	-1.000	0.2422	1.3986	1121	.0144	.725	520
537	7.376-2	-180.1	1.6579	28.461	0.9469	7.304-2	28.624	.0438	1.000	-1.000	0.2440	1.3973	1141	.0147	.728	537
560	6.960-2	-164.1	1.6872	28.461	0.2461	6.960-2	28.461	.0450	1.000	-1.000	0.2461	1.3957	1168	.0151	.732	560
600	6.496-2	-154.3	1.7042	28.461	0.2465	6.496-2	28.461	.0475	1.000	-1.000	0.2465	1.3949	1209	.0160	.731	600
PRESSURE = 10.00 ATM																
360	1.134 0	-248.8	1.3565	28.461	0.2446	1.102 0	28.965	.0322	1.000	-1.000	0.2407	1.3982	930	.0106	.734	360
400	1.021 0	-239.0	1.3823	28.461	0.2455	9.916-1	28.965	.0352	1.000	-1.000	0.2403	1.3993	980	.0116	.730	400
440	9.281-1	-229.2	1.4058	28.461	0.2480	9.015-1	28.965	.0381	1.000	-1.000	0.2400	1.3999	1028	.0126	.725	440
480	8.505-1	-219.1	1.4278	28.461	0.2596	8.263-1	28.961	.0408	1.000	-1.000	0.2399	1.4001	1074	.0136	.722	480
520	7.840-1	-203.7	1.4586	28.461	0.3016	7.623-1	28.946	.0434	1.000	-1.000	0.2402	1.3999	1118	.0145	.720	520
537	7.587-1	-198.5	1.4685	28.461	0.3268	7.382-1	28.931	.0445	1.000	-1.000	0.2404	1.3997	1136	.0149	.720	537
560	7.246-1	-190.3	1.4835	28.461	0.3836	7.066-1	28.894	.0459	1.000	-1.000	0.2409	1.3991	1161	.0153	.721	560
600	6.674-1	-171.6	1.5157	28.461	0.5770	6.562-1	28.750	.0481	1.000	-1.000	0.2430	1.3972	1204	.0161	.724	600
640	6.090-1	-144.4	1.5595	28.461	0.2469	6.090-1	28.461	.0499	1.000	-1.000	0.2469	1.3939	1248	.0168	.731	640
680	5.732-1	-134.5	1.5745	28.461	0.2475	5.732-1	28.461	.0522	1.000	-1.000	0.2475	1.3926	1286	.0177	.730	680
PRESSURE = 50.00 ATM																
360	5.658 0	-248.8	1.2494	28.461	0.2446	5.509 0	28.965	.0322	1.000	-1.000	0.2407	1.3982	930	.0106	.734	360
400	5.094 0	-239.0	1.2752	28.461	0.2453	4.958 0	28.965	.0352	1.000	-1.000	0.2403	1.3993	980	.0116	.730	400
440	4.632 0	-229.2	1.2986	28.461	0.2466	4.507 0	28.965	.0381	1.000	-1.000	0.2400	1.3999	1028	.0126	.725	440
480	4.246 0	-219.3	1.3202	28.461	0.2497	4.132 0	28.964	.0408	1.000	-1.000	0.2399	1.4002	1074	.0136	.722	480
520	3.920 0	-204.6	1.3497	28.461	0.2700	3.813 0	28.961	.0435	1.000	-1.000	0.2400	1.4000	1118	.0145	.720	520
537	3.797 0	-200.1	1.3583	28.461	0.2750	3.695 0	28.958	.0446	1.000	-1.000	0.2401	1.3999	1136	.0149	.719	537
560	3.637 0	-193.5	1.3702	28.461	0.2862	3.540 0	28.951	.0460	1.000	-1.000	0.2403	1.3995	1160	.0154	.719	560
600	3.386 0	-181.4	1.3910	28.461	0.3234	3.301 0	28.922	.0484	1.000	-1.000	0.2409	1.3986	1201	.0162	.720	600
640	3.156 0	-167.2	1.4140	28.461	0.3965	3.087 0	28.854	.0507	1.000	-1.000	0.2422	1.3970	1241	.0170	.722	640
680	2.933 0	-149.0	1.4416	28.461	0.5258	2.891 0	28.713	.0527	1.000	-1.000	0.2444	1.3946	1281	.0178	.725	680
720	2.707 0	-124.6	1.4763	28.461	0.2482	2.707 0	28.461	.0545	1.000	-1.000	0.2482	1.3910	1323	.0185	.730	720
760	2.564 0	-114.7	1.4898	28.461	0.2490	2.564 0	28.461	.0567	1.000	-1.000	0.2490	1.3893	1358	.0194	.729	760

TABLE 18A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.016906; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.3284; MW = 28.5175;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .03484; H2O= .07470; N2= .73397; O2= .14768; AR= .00880

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
360	1.0848-1	5.4240 0	-522.9	1.9043	1.7440	1.5836	1.4233	1.3112	0.2480	1.3903	934.2	.0300	.0098	.7612	360
380	1.0277-1	5.1385 0	-517.9	1.9177	1.7574	1.5970	1.4367	1.3246	0.2480	1.3905	959.8	.0315	.0103	.7577	380
400	9.7631-2	4.8816 0	-513.0	1.9304	1.7701	1.6098	1.4494	1.3373	0.2480	1.3905	984.7	.0330	.0109	.7544	400
420	9.2982-2	4.6491 0	-508.0	1.9425	1.7822	1.6219	1.4615	1.3494	0.2480	1.3905	1009.1	.0345	.0114	.7514	420
440	8.8756-2	4.4378 0	-503.0	1.9541	1.7937	1.6334	1.4730	1.3610	0.2480	1.3903	1032.8	.0359	.0119	.7487	440
460	8.4897-2	4.2448 0	-498.1	1.9651	1.8048	1.6444	1.4841	1.3720	0.2481	1.3901	1055.9	.0373	.0124	.7464	460
480	8.1359-2	4.0680 0	-493.1	1.9757	1.8153	1.6550	1.4946	1.3826	0.2483	1.3899	1078.5	.0387	.0129	.7445	480
500	7.8105-2	3.9052 0	-488.1	1.9858	1.8255	1.6651	1.5048	1.3927	0.2484	1.3895	1100.6	.0401	.0134	.7429	500
520	7.5101-2	3.7550 0	-483.2	1.9956	1.8352	1.6749	1.5145	1.4024	0.2486	1.3891	1122.2	.0414	.0139	.7417	520
537	7.2768-2	3.6384 0	-479.0	2.0034	1.8431	1.6827	1.5224	1.4103	0.2488	1.3887	1139.9	.0425	.0143	.7410	537
540	7.2319-2	3.6160 0	-478.2	2.0049	1.8446	1.6842	1.5239	1.4118	0.2488	1.3886	1143.4	.0427	.0143	.7409	540
560	6.9736-2	3.4868 0	-473.2	2.0140	1.8536	1.6933	1.5330	1.4209	0.2491	1.3881	1164.2	.0440	.0148	.7407	560
580	6.7332-2	3.3666 0	-468.2	2.0227	1.8624	1.7020	1.5417	1.4296	0.2494	1.3875	1184.5	.0453	.0152	.7406	580
600	6.5087-2	3.2544 0	-463.2	2.0312	1.8708	1.7105	1.5502	1.4381	0.2497	1.3868	1204.5	.0465	.0157	.7407	600
620	6.2988-2	3.1494 0	-458.3	2.0394	1.8790	1.7187	1.5584	1.4463	0.2500	1.3861	1224.1	.0477	.0161	.7407	620
640	6.1019-2	3.0510 0	-453.2	2.0473	1.8870	1.7266	1.5663	1.4542	0.2504	1.3853	1243.3	.0490	.0166	.7405	640
660	5.9170-2	2.9585 0	-448.2	2.0550	1.8947	1.7343	1.5740	1.4619	0.2507	1.3845	1262.2	.0502	.0170	.7400	660
680	5.7430-2	2.8715 0	-443.2	2.0625	1.9022	1.7418	1.5815	1.4694	0.2512	1.3836	1280.8	.0514	.0174	.7395	680
700	5.5789-2	2.7895 0	-438.2	2.0698	1.9095	1.7491	1.5888	1.4767	0.2516	1.3827	1299.0	.0525	.0179	.7389	700
720	5.4240-2	2.7120 0	-433.2	2.0769	1.9166	1.7562	1.5959	1.4838	0.2520	1.3818	1317.0	.0537	.0183	.7383	720
740	5.2774-2	2.6387 0	-428.1	2.0838	1.9235	1.7631	1.6028	1.4907	0.2525	1.3808	1334.7	.0548	.0188	.7380	740
760	5.1385-2	2.5692 0	-423.1	2.0906	1.9302	1.7699	1.6095	1.4975	0.2530	1.3798	1352.1	.0559	.0192	.7377	760
780	5.0067-2	2.5034 0	-418.0	2.0971	1.9368	1.7765	1.6161	1.5040	0.2535	1.3787	1369.3	.0570	.0196	.7375	780
800	4.8816-2	2.4408 0	-412.9	2.1036	1.9432	1.7829	1.6225	1.5105	0.2541	1.3776	1386.2	.0581	.0200	.7373	800
820	4.7625-2	2.3812 0	-407.8	2.1098	1.9495	1.7892	1.6288	1.5167	0.2546	1.3765	1402.8	.0592	.0205	.7371	820
840	4.6491-2	2.3245 0	-402.7	2.1160	1.9556	1.7953	1.6350	1.5229	0.2552	1.3753	1419.2	.0603	.0209	.7371	840
860	4.5410-2	2.2705 0	-397.6	2.1220	1.9617	1.8013	1.6410	1.5289	0.2557	1.3742	1435.4	.0613	.0213	.7370	860
880	4.4378-2	2.2189 0	-392.5	2.1279	1.9675	1.8072	1.6469	1.5348	0.2563	1.3730	1451.4	.0624	.0217	.7370	880
900	4.3392-2	2.1696 0	-387.4	2.1337	1.9733	1.8130	1.6526	1.5405	0.2569	1.3718	1467.1	.0634	.0221	.7370	900
920	4.2448-2	2.1224 0	-382.2	2.1393	1.9790	1.8186	1.6583	1.5462	0.2576	1.3706	1482.7	.0644	.0225	.7369	920
940	4.1545-2	2.0773 0	-377.1	2.1449	1.9845	1.8242	1.6638	1.5517	0.2582	1.3693	1498.0	.0655	.0229	.7368	940
960	4.0680-2	2.0340 0	-371.9	2.1503	1.9900	1.8296	1.6693	1.5572	0.2588	1.3681	1513.2	.0665	.0234	.7366	960
980	3.9849-2	1.9925 0	-366.7	2.1556	1.9953	1.8349	1.6746	1.5625	0.2595	1.3668	1528.2	.0675	.0238	.7364	980
1000	3.9052-2	1.9526 0	-361.5	2.1609	2.0005	1.8402	1.6799	1.5678	0.2601	1.3655	1543.0	.0685	.0242	.7362	1000
1020	3.8287-2	1.9143 0	-356.3	2.1660	2.0057	1.8454	1.6850	1.5729	0.2608	1.3642	1557.6	.0695	.0246	.7360	1020
1040	3.7550-2	1.8775 0	-351.1	2.1711	2.0108	1.8504	1.6901	1.5780	0.2615	1.3630	1572.1	.0704	.0250	.7358	1040
1060	3.6842-2	1.8421 0	-345.8	2.1761	2.0158	1.8554	1.6951	1.5830	0.2622	1.3617	1586.3	.0714	.0255	.7356	1060
1080	3.6160-2	1.8080 0	-340.6	2.1810	2.0207	1.8603	1.7000	1.5879	0.2629	1.3604	1600.5	.0724	.0259	.7354	1080
1100	3.5502-2	1.7751 0	-335.3	2.1858	2.0255	1.8652	1.7048	1.5927	0.2636	1.3591	1614.5	.0733	.0263	.7350	1100
1120	3.4868-2	1.7434 0	-330.1	2.1906	2.0303	1.8699	1.7096	1.5975	0.2643	1.3578	1628.3	.0743	.0267	.7347	1120
1140	3.4257-2	1.7128 0	-324.8	2.1953	2.0349	1.8746	1.7142	1.6022	0.2650	1.3565	1642.0	.0752	.0271	.7344	1140

TABLE 18A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.016906; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.3284; MW = 28.5175;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .03484; H2O= .07470; N2= .73397; O2= .14768; AR= .00880

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	FT/S	LB/FT HR	BTU/FT HR R	R	
1160	3.3666-2	1.6833 0	-319.5	2.1999	2.0396	1.8792	1.7189	1.6068	0.2657	1.3552	1655.5	.0762	.0276	.7341	1160
1180	3.3095-2	1.6548 0	-314.1	2.2044	2.0441	1.8838	1.7234	1.6113	0.2664	1.3539	1668.9	.0771	.0280	.7337	1180
1200	3.2544-2	1.6272 0	-308.8	2.2089	2.0486	1.8882	1.7279	1.6158	0.2671	1.3526	1682.2	.0780	.0284	.7334	1200
1220	3.2010-2	1.6005 0	-303.4	2.2133	2.0530	1.8927	1.7323	1.6202	0.2678	1.3513	1695.4	.0789	.0288	.7331	1220
1240	3.1494-2	1.5747 0	-298.1	2.2177	2.0574	1.8970	1.7367	1.6246	0.2686	1.3501	1708.4	.0798	.0293	.7327	1240
1260	3.0994-2	1.5497 0	-292.7	2.2220	2.0617	1.9013	1.7410	1.6289	0.2693	1.3488	1721.3	.0807	.0297	.7324	1260
1280	3.0510-2	1.5255 0	-287.3	2.2263	2.0659	1.9056	1.7452	1.6332	0.2700	1.3475	1734.1	.0816	.0301	.7321	1280
1300	3.0040-2	1.5020 0	-281.9	2.2304	2.0701	1.9098	1.7494	1.6373	0.2707	1.3463	1746.8	.0825	.0305	.7317	1300
1320	2.9585-2	1.4793 0	-276.5	2.2346	2.0742	1.9139	1.7536	1.6415	0.2714	1.3451	1759.4	.0834	.0310	.7314	1320
1340	2.9144-2	1.4572 0	-271.0	2.2387	2.0783	1.9180	1.7576	1.6456	0.2722	1.3438	1771.9	.0843	.0314	.7311	1340
1360	2.8715-2	1.4358 0	-265.6	2.2427	2.0824	1.9220	1.7617	1.6496	0.2729	1.3426	1784.2	.0852	.0318	.7308	1360
1380	2.8299-2	1.4149 0	-260.1	2.2467	2.0864	1.9260	1.7657	1.6536	0.2736	1.3414	1796.5	.0861	.0322	.7305	1380
1400	2.7895-2	1.3947 0	-254.7	2.2506	2.0903	1.9300	1.7696	1.6575	0.2743	1.3402	1808.7	.0869	.0327	.7301	1400
1420	2.7502-2	1.3751 0	-249.2	2.2545	2.0942	1.9339	1.7735	1.6614	0.2750	1.3391	1820.8	.0878	.0331	.7299	1420
1440	2.7120-2	1.3560 0	-243.6	2.2584	2.0980	1.9377	1.7774	1.6653	0.2757	1.3379	1832.7	.0886	.0335	.7296	1440
1460	2.6748-2	1.3374 0	-238.1	2.2622	2.1019	1.9415	1.7812	1.6691	0.2764	1.3368	1844.6	.0895	.0339	.7293	1460
1480	2.6387-2	1.3193 0	-232.6	2.2660	2.1056	1.9453	1.7849	1.6729	0.2771	1.3356	1856.4	.0903	.0343	.7291	1480
1500	2.6035-2	1.3017 0	-227.0	2.2697	2.1093	1.9490	1.7887	1.6766	0.2778	1.3345	1868.2	.0912	.0347	.7288	1500
1520	2.5692-2	1.2846 0	-221.5	2.2734	2.1130	1.9527	1.7923	1.6803	0.2785	1.3334	1879.8	.0920	.0352	.7286	1520
1540	2.5359-2	1.2679 0	-215.9	2.2770	2.1167	1.9563	1.7960	1.6839	0.2792	1.3323	1891.4	.0928	.0356	.7284	1540
1560	2.5034-2	1.2517 0	-210.3	2.2806	2.1203	1.9599	1.7996	1.6875	0.2798	1.3313	1902.9	.0937	.0360	.7282	1560
1580	2.4717-2	1.2358 0	-204.7	2.2842	2.1238	1.9635	1.8032	1.6911	0.2805	1.3302	1914.3	.0945	.0364	.7280	1580
1600	2.4408-2	1.2204 0	-199.1	2.2877	2.1274	1.9670	1.8067	1.6946	0.2812	1.3292	1925.6	.0953	.0368	.7278	1600
1620	2.4106-2	1.2053 0	-193.5	2.2912	2.1309	1.9705	1.8102	1.6981	0.2818	1.3282	1936.8	.0961	.0372	.7276	1620
1640	2.3812-2	1.1906 0	-187.8	2.2947	2.1343	1.9740	1.8137	1.7016	0.2825	1.3272	1948.0	.0969	.0376	.7274	1640
1660	2.3526-2	1.1763 0	-182.2	2.2981	2.1378	1.9774	1.8171	1.7050	0.2831	1.3262	1959.2	.0977	.0380	.7272	1660
1680	2.3245-2	1.1623 0	-176.5	2.3015	2.1412	1.9808	1.8205	1.7084	0.2837	1.3253	1970.2	.0985	.0384	.7270	1680
1700	2.2972-2	1.1486 0	-170.8	2.3049	2.1445	1.9842	1.8238	1.7118	0.2844	1.3243	1981.2	.0993	.0389	.7268	1700
1720	2.2705-2	1.1352 0	-165.1	2.3082	2.1479	1.9875	1.8272	1.7151	0.2850	1.3234	1992.1	.1001	.0393	.7267	1720
1740	2.2444-2	1.1222 0	-159.4	2.3115	2.1512	1.9908	1.8305	1.7184	0.2856	1.3225	2003.0	.1009	.0397	.7265	1740
1760	2.2189-2	1.1094 0	-153.7	2.3148	2.1544	1.9941	1.8337	1.7217	0.2862	1.3216	2013.8	.1017	.0401	.7263	1760
1780	2.1940-2	1.0970 0	-148.0	2.3180	2.1577	1.9973	1.8370	1.7249	0.2868	1.3207	2024.5	.1024	.0405	.7262	1780
1800	2.1696-2	1.0848 0	-142.2	2.3212	2.1609	2.0005	1.8402	1.7281	0.2873	1.3199	2035.2	.1032	.0409	.7260	1800
1900	2.0554-2	1.0277 0	-113.4	2.3368	2.1765	2.0161	1.8558	1.7437	0.2900	1.3160	2087.9	.1070	.0428	.7256	1900
2000	1.9526-2	9.7631-1	-84.2	2.3518	2.1914	2.0311	1.8707	1.7587	0.2926	1.3123	2139.2	.1107	.0447	.7253	2000
2100	1.8596-2	9.2982-1	-54.8	2.3661	2.2057	2.0454	1.8851	1.7730	0.2950	1.3090	2189.2	.1144	.0465	.7252	2100
2200	1.7751-2	8.8756-1	-25.2	2.3799	2.2195	2.0592	1.8988	1.7868	0.2973	1.3058	2238.0	.1179	.0484	.7250	2200
2300	1.6979-2	8.4897-1	4.6	2.3931	2.2328	2.0724	1.9121	1.8000	0.2995	1.3029	2285.8	.1214	.0502	.7249	2300
2400	1.6272-2	8.1359-1	34.7	2.4059	2.2456	2.0852	1.9249	1.8128	0.3016	1.3002	2332.5	.1248	.0519	.7248	2400
2500	1.5621-2	7.8105-1	64.9	2.4183	2.2579	2.0976	1.9372	1.8252	0.3036	1.2977	2378.3	.1282	.0537	.7246	2500

TABLE 18A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.016906; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.3284; MW = 28.5175;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .03484; H2O= .07470; N2= .73397; O2= .14768; AR= .00880

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
2600	1.5020-2	7.5101-1	95.4	2.4302	2.2699	2.1095	1.9492	1.8371	0.3054	1.2953	2423.2	.1315	.0555	.7245	2600
2700	1.4464-2	7.2319-1	126.0	2.4418	2.2814	2.1211	1.9607	1.8487	0.3072	1.2932	2467.3	.1348	.0572	.7242	2700
2800	1.3947-2	6.9737-1	156.8	2.4530	2.2926	2.1323	1.9720	1.8599	0.3088	1.2911	2510.6	.1380	.0589	.7237	2800
2900	1.3466-2	6.7332-1	187.8	2.4638	2.3035	2.1432	1.9828	1.8707	0.3104	1.2892	2553.1	.1412	.0606	.7232	2900
3000	1.3017-2	6.5087-1	218.9	2.4744	2.3141	2.1537	1.9934	1.8813	0.3119	1.2874	2595.0	.1444	.0623	.7227	3000
3100	1.2598-2	6.2988-1	250.2	2.4846	2.3243	2.1640	2.0036	1.8915	0.3133	1.2858	2636.2	.1475	.0640	.7221	3100
3200	1.2204-2	6.1019-1	281.6	2.4946	2.3343	2.1739	2.0136	1.9015	0.3147	1.2842	2676.7	.1505	.0656	.7216	3200
3300	1.1834-2	5.9170-1	313.1	2.5043	2.3440	2.1836	2.0233	1.9112	0.3159	1.2828	2716.7	.1535	.0673	.7210	3300
3400	1.1486-2	5.7430-1	344.7	2.5138	2.3534	2.1931	2.0327	1.9207	0.3171	1.2814	2756.1	.1565	.0689	.7205	3400
3500	1.1158-2	5.5789-1	376.5	2.5230	2.3626	2.2023	2.0419	1.9299	0.3182	1.2801	2794.9	.1595	.0705	.7199	3500
3600	1.0848-2	5.4240-1	408.4	2.5320	2.3716	2.2113	2.0509	1.9388	0.3193	1.2789	2833.2	.1624	.0721	.7194	3600
3700	1.0555-2	5.2774-1	440.4	2.5407	2.3804	2.2200	2.0597	1.9476	0.3203	1.2778	2871.1	.1653	.0736	.7191	3700
3800	1.0277-2	5.1385-1	472.4	2.5493	2.3889	2.2286	2.0682	1.9562	0.3212	1.2768	2908.4	.1682	.0752	.7188	3800
3900	1.0013-2	5.0067-1	504.6	2.5576	2.3973	2.2369	2.0766	1.9645	0.3221	1.2758	2945.3	.1710	.0767	.7185	3900
4000	9.7631-3	4.8816-1	536.9	2.5658	2.4055	2.2451	2.0848	1.9727	0.3230	1.2749	2981.7	.1738	.0782	.7183	4000
4100	9.5250-3	4.7625-1	569.2	2.5738	2.4134	2.2531	2.0927	1.9807	0.3238	1.2740	3017.7	.1766	.0796	.7180	4100
4200	9.2982-3	4.6491-1	601.6	2.5816	2.4213	2.2609	2.1006	1.9885	0.3246	1.2732	3053.3	.1794	.0811	.7178	4200
4300	9.0820-3	4.5410-1	634.1	2.5892	2.4289	2.2686	2.1082	1.9961	0.3253	1.2724	3088.5	.1821	.0826	.7175	4300
4400	8.8755-3	4.4378-1	666.7	2.5967	2.4364	2.2760	2.1157	2.0036	0.3260	1.2717	3123.3	.1848	.0840	.7173	4400
4500	8.6783-3	4.3392-1	699.3	2.6041	2.4437	2.2834	2.1230	2.0110	0.3266	1.2710	3157.8	.1875	.0854	.7171	4500
4600	8.4897-3	4.2448-1	732.0	2.6112	2.4509	2.2906	2.1302	2.0181	0.3273	1.2703	3191.8	.1902	.0869	.7166	4600
4700	8.3090-3	4.1545-1	764.8	2.6183	2.4579	2.2976	2.1373	2.0252	0.3279	1.2697	3225.6	.1928	.0883	.7162	4700
4800	8.1359-3	4.0680-1	797.6	2.6252	2.4649	2.3045	2.1442	2.0321	0.3284	1.2691	3258.9	.1955	.0897	.7157	4800
4900	7.9699-3	3.9849-1	830.4	2.6320	2.4716	2.3113	2.1509	2.0389	0.3290	1.2685	3292.0	.1981	.0911	.7152	4900
5000	7.8105-3	3.9052-1	863.4	2.6386	2.4783	2.3179	2.1576	2.0455	0.3295	1.2680	3324.7	.2006	.0925	.7148	5000
5100	7.6573-3	3.8287-1	896.3	2.6452	2.4848	2.3245	2.1641	2.0520	0.3300	1.2675	3357.1	.2032	.0939	.7143	5100
5200	7.5101-3	3.7550-1	929.4	2.6516	2.4912	2.3309	2.1705	2.0585	0.3305	1.2670	3389.1	.2058	.0953	.7139	5200
5300	7.3684-3	3.6842-1	962.4	2.6579	2.4975	2.3372	2.1768	2.0648	0.3310	1.2665	3420.9	.2083	.0966	.7135	5300
5400	7.2319-3	3.6160-1	995.6	2.6641	2.5037	2.3434	2.1830	2.0710	0.3314	1.2660	3452.4	.2108	.0980	.7130	5400

TABLE 18.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.016906; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 0.14696 LB/IN2 (0.01 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4408-4	-199.1	2.2877	28.517	.095	1.0000	-1.0000	0.2812	1.3291	1925.5	.0368	.728	0.2812	1.3292	1925.6	.0368	.728
1700	2.2972-4	-170.8	2.3049	28.517	.099	1.0000	-1.0000	0.2845	1.3241	1981.0	.0389	.727	0.2844	1.3243	1981.2	.0389	.727
1800	2.1696-4	-142.2	2.3212	28.517	.103	1.0000	-1.0000	0.2876	1.3195	2034.9	.0409	.726	0.2873	1.3199	2035.2	.0409	.726
1900	2.0554-4	-113.3	2.3369	28.517	.107	1.0000	-1.0000	0.2904	1.3154	2087.4	.0428	.726	0.2900	1.3160	2087.9	.0428	.726
2000	1.9526-4	-84.1	2.3518	28.517	.111	1.0000	-1.0000	0.2932	1.3115	2138.5	.0448	.725	0.2926	1.3123	2139.2	.0447	.725
2100	1.8596-4	-54.6	2.3662	28.517	.114	1.0000	-1.0000	0.2959	1.3077	2188.2	.0467	.725	0.2950	1.3090	2189.2	.0465	.725
2200	1.7751-4	-24.9	2.3800	28.517	.118	1.0000	-1.0000	0.2987	1.3041	2236.5	.0486	.725	0.2973	1.3058	2238.0	.0484	.725
2300	1.6979-4	5.1	2.3934	28.517	.121	1.0001	-1.0000	0.3014	1.3005	2283.7	.0505	.725	0.2995	1.3029	2285.8	.0502	.725
2400	1.6272-4	35.4	2.4063	28.517	.125	1.0002	-1.0000	0.3042	1.2969	2329.6	.0524	.724	0.3016	1.3002	2332.5	.0519	.725
2500	1.5621-4	65.9	2.4187	28.517	.128	1.0003	-1.0000	0.3072	1.2933	2374.3	.0544	.724	0.3036	1.2977	2378.3	.0537	.725
2600	1.5020-4	96.8	2.4308	28.516	.132	1.0005	-1.0000	0.3105	1.2895	2417.8	.0565	.723	0.3054	1.2954	2423.3	.0555	.724
2700	1.4463-4	128.1	2.4426	28.516	.135	1.0009	-1.0000	0.3142	1.2854	2459.9	.0587	.722	0.3072	1.2932	2467.4	.0572	.724
2800	1.3946-4	159.7	2.4541	28.514	.138	1.0015	-1.0000	0.3185	1.2809	2500.7	.0611	.720	0.3088	1.2912	2510.7	.0589	.724
2900	1.3464-4	191.8	2.4654	28.513	.141	1.0025	-1.0001	0.3237	1.2758	2540.0	.0638	.717	0.3104	1.2893	2553.4	.0606	.723
3000	1.3014-4	224.5	2.4765	28.509	.144	1.0040	-1.0001	0.3303	1.2698	2577.5	.0670	.712	0.3119	1.2875	2595.4	.0623	.723
3100	1.2592-4	257.9	2.4874	28.505	.147	1.0064	-1.0002	0.3388	1.2628	2613.1	.0709	.705	0.3133	1.2859	2636.9	.0640	.722
3200	1.2195-4	292.3	2.4984	28.497	.151	1.0099	-1.0003	0.3500	1.2544	2646.4	.0758	.695	0.3147	1.2845	2677.9	.0656	.721
3300	1.1821-4	328.0	2.5093	28.487	.154	1.0153	-1.0004	0.3650	1.2445	2677.3	.0824	.680	0.3159	1.2832	2718.6	.0673	.721
3400	1.1467-4	365.5	2.5205	28.470	.157	1.0231	-1.0007	0.3852	1.2329	2705.6	.0914	.659	0.3171	1.2820	2759.0	.0689	.720
3500	1.1130-4	405.3	2.5321	28.447	.159	1.0345	-1.0010	0.4123	1.2198	2731.6	.1038	.633	0.3182	1.2810	2799.4	.0706	.719
3600	1.0808-4	448.2	2.5442	28.413	.162	1.0505	-1.0016	0.4483	1.2055	2755.8	.1209	.602	0.3193	1.2803	2839.9	.0722	.718
3700	1.0499-4	495.3	2.5571	28.366	.165	1.0727	-1.0023	0.4957	1.1908	2778.9	.1444	.567	0.3203	1.2797	2880.9	.0738	.717
3800	1.0199-4	547.8	2.5711	28.300	.168	1.1028	-1.0034	0.5569	1.1762	2802.2	.1764	.530	0.3212	1.2795	2922.7	.0754	.716
3900	9.9058-5	607.3	2.5865	28.211	.171	1.1425	-1.0049	0.6346	1.1627	2826.9	.2190	.495	0.3221	1.2797	2965.8	.0770	.714
4000	9.6174-5	675.4	2.6037	28.092	.173	1.1934	-1.0069	0.7306	1.1507	2854.2	.2742	.462	0.3230	1.2802	3010.6	.0787	.711
4100	9.3311-5	754.0	2.6232	27.937	.176	1.2569	-1.0094	0.8464	1.1406	2884.9	.3430	.434	0.3238	1.2813	3057.7	.0805	.708
4200	9.0447-5	845.3	2.6451	27.740	.179	1.3336	-1.0126	0.9822	1.1325	2919.9	.4255	.412	0.3246	1.2830	3107.8	.0824	.703
4300	8.7563-5	951.1	2.6700	27.495	.181	1.4232	-1.0165	1.1369	1.1264	2959.5	.5194	.396	0.3253	1.2854	3161.4	.0844	.698
4400	8.4648-5	1073.2	2.6981	27.198	.184	1.5241	-1.0211	1.3073	1.1219	3004.1	.6198	.387	0.3261	1.2885	3219.3	.0867	.690
4500	8.1699-5	1212.9	2.7295	26.847	.186	1.6326	-1.0262	1.4876	1.1190	3053.8	.7191	.385	0.3269	1.2924	3281.9	.0892	.682
4600	7.8724-5	1370.7	2.7642	26.444	.188	1.7426	-1.0316	1.6680	1.1174	3108.8	.8080	.389	0.3278	1.2972	3349.5	.0920	.671
4700	7.5744-5	1546.0	2.8019	25.996	.191	1.8449	-1.0370	1.8341	1.1170	3168.8	.8761	.399	0.3287	1.3028	3422.1	.0950	.660
4800	7.2791-5	1736.5	2.8419	25.514	.193	1.9286	-1.0418	1.9683	1.1177	3233.4	.9153	.415	0.3296	1.3091	3499.3	.0982	.648
4900	6.9910-5	1938.0	2.8835	25.015	.196	1.9827	-1.0453	2.0529	1.1194	3301.9	.9209	.436	0.3306	1.3161	3580.1	.1016	.636
5000	6.7149-5	2145.0	2.9253	24.517	.198	1.9998	-1.0472	2.0750	1.1222	3373.2	.8939	.460	0.3315	1.3233	3663.1	.1049	.626
5100	6.4552-5	2350.8	2.9661	24.040	.201	1.9780	-1.0473	2.0312	1.1259	3446.1	.8399	.485	0.3325	1.3306	3746.3	.1082	.616
5200	6.2150-5	2549.2	3.0046	23.600	.203	1.9217	-1.0456	1.9279	1.1307	3519.6	.7673	.510	0.3333	1.3377	3828.1	.1114	.608
5300	5.9961-5	2734.9	3.0400	23.206	.206	1.8391	-1.0424	1.7788	1.1368	3592.8	.6850	.534	0.3342	1.3442	3906.9	.1143	.602
5400	5.7987-5	2904.1	3.0716	22.866	.208	1.7402	-1.0382	1.6011	1.1442	3665.4	.6005	.556	0.3349	1.3501	3981.6	.1170	.596

TABLE 18.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.016906; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 1.46959 LB/IN² (0.10 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS (GAM)S FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4408-3	-199.1	2.1274	28.517	.095	1.0000	-1.0000	0.2812	1.3291	1925.5	.0368	.728	0.2812	1.3292	1925.6	.0368	.728
1700	2.2972-3	-170.8	2.1445	28.517	.099	1.0000	-1.0000	0.2845	1.3241	1981.0	.0389	.727	0.2844	1.3243	1981.2	.0389	.727
1800	2.1696-3	-142.2	2.1609	28.517	.103	1.0000	-1.0000	0.2876	1.3195	2034.9	.0409	.726	0.2873	1.3199	2035.2	.0409	.726
1900	2.0554-3	-113.3	2.1765	28.517	.107	1.0000	-1.0000	0.2904	1.3154	2087.5	.0428	.726	0.2900	1.3160	2087.9	.0428	.726
2000	1.9526-3	-84.1	2.1915	28.517	.111	1.0000	-1.0000	0.2932	1.3115	2138.5	.0448	.725	0.2926	1.3123	2139.2	.0447	.725
2100	1.8596-3	-54.7	2.2058	28.517	.114	1.0000	-1.0000	0.2959	1.3078	2188.2	.0467	.725	0.2950	1.3090	2189.2	.0465	.725
2200	1.7751-3	-24.9	2.2197	28.517	.118	1.0000	-1.0000	0.2986	1.3042	2236.6	.0486	.725	0.2973	1.3058	2238.0	.0484	.725
2300	1.6979-3	5.1	2.2330	28.517	.121	1.0000	-1.0000	0.3012	1.3007	2283.8	.0505	.725	0.2995	1.3029	2285.8	.0502	.725
2400	1.6272-3	35.3	2.2459	28.517	.125	1.0001	-1.0000	0.3039	1.2973	2329.9	.0524	.725	0.3016	1.3002	2332.5	.0519	.725
2500	1.5621-3	65.9	2.2583	28.517	.128	1.0002	-1.0000	0.3067	1.2938	2374.8	.0543	.724	0.3036	1.2977	2378.3	.0537	.725
2600	1.5020-3	96.7	2.2704	28.517	.132	1.0003	-1.0000	0.3096	1.2904	2418.6	.0562	.724	0.3054	1.2954	2423.2	.0555	.724
2700	1.4463-3	127.8	2.2822	28.517	.135	1.0004	-1.0000	0.3127	1.2869	2461.3	.0583	.723	0.3072	1.2932	2467.3	.0572	.724
2800	1.3947-3	159.2	2.2936	28.516	.138	1.0007	-1.0000	0.3160	1.2832	2502.9	.0604	.722	0.3088	1.2911	2510.6	.0589	.724
2900	1.3465-3	191.0	2.3048	28.515	.141	1.0011	-1.0000	0.3197	1.2793	2543.4	.0626	.721	0.3104	1.2892	2553.2	.0606	.723
3000	1.3016-3	223.2	2.3157	28.514	.144	1.0018	-1.0000	0.3239	1.2751	2582.7	.0651	.719	0.3119	1.2875	2595.2	.0623	.723
3100	1.2595-3	255.8	2.3264	28.512	.147	1.0027	-1.0001	0.3288	1.2705	2620.7	.0677	.716	0.3133	1.2858	2636.5	.0640	.722
3200	1.2200-3	289.0	2.3369	28.509	.151	1.0041	-1.0001	0.3347	1.2654	2657.4	.0708	.712	0.3147	1.2843	2677.3	.0656	.722
3300	1.1829-3	322.8	2.3473	28.504	.154	1.0061	-1.0002	0.3420	1.2595	2692.6	.0743	.707	0.3159	1.2829	2717.5	.0673	.721
3400	1.1478-3	357.4	2.3576	28.498	.157	1.0090	-1.0002	0.3510	1.2530	2726.2	.0785	.699	0.3171	1.2817	2757.3	.0689	.720
3500	1.1147-3	393.0	2.3680	28.489	.159	1.0130	-1.0004	0.3622	1.2455	2758.2	.0838	.690	0.3182	1.2805	2796.7	.0705	.720
3600	1.0832-3	429.9	2.3784	28.476	.162	1.0185	-1.0006	0.3764	1.2371	2788.5	.0904	.677	0.3193	1.2795	2835.9	.0721	.719
3700	1.0533-3	468.4	2.3889	28.459	.165	1.0261	-1.0008	0.3943	1.2277	2817.1	.0987	.660	0.3203	1.2786	2874.9	.0737	.719
3800	1.0247-3	509.0	2.3997	28.436	.168	1.0362	-1.0012	0.4169	1.2176	2844.3	.1095	.640	0.3212	1.2778	2913.8	.0752	.718
3900	9.9737-4	552.0	2.4109	28.404	.171	1.0497	-1.0016	0.4451	1.2069	2870.4	.1234	.616	0.3221	1.2772	2952.9	.0768	.717
4000	9.7100-4	598.2	2.4226	28.362	.174	1.0672	-1.0023	0.4799	1.1960	2895.9	.1413	.590	0.3229	1.2769	2992.2	.0783	.716
4100	9.4550-4	648.3	2.4349	28.308	.176	1.0896	-1.0032	0.5225	1.1852	2921.4	.1641	.562	0.3237	1.2767	3032.1	.0799	.715
4200	9.2070-4	703.0	2.4481	28.238	.179	1.1176	-1.0043	0.5736	1.1749	2947.6	.1928	.533	0.3244	1.2768	3072.8	.0814	.714
4300	8.9645-4	763.3	2.4623	28.149	.182	1.1519	-1.0057	0.6340	1.1654	2975.1	.2282	.505	0.3251	1.2771	3114.5	.0830	.712
4400	8.7262-4	830.1	2.4777	28.038	.184	1.1930	-1.0075	0.7040	1.1570	3004.6	.2710	.479	0.3258	1.2778	3157.5	.0846	.710
4500	8.4909-4	904.4	2.4944	27.902	.187	1.2413	-1.0096	0.7835	1.1499	3036.5	.3214	.456	0.3264	1.2788	3202.3	.0863	.707
4600	8.2575-4	987.1	2.5125	27.738	.190	1.2966	-1.0122	0.8720	1.1439	3071.2	.3792	.436	0.3270	1.2803	3249.1	.0881	.703
4700	8.0252-4	1079.1	2.5323	27.543	.192	1.3586	-1.0152	0.9687	1.1392	3108.9	.4431	.420	0.3276	1.2822	3298.2	.0900	.699
4800	7.7934-4	1181.1	2.5538	27.317	.195	1.4267	-1.0186	1.0722	1.1356	3149.8	.5113	.408	0.3282	1.2845	3350.0	.0921	.693
4900	7.5619-4	1293.7	2.5770	27.058	.197	1.4993	-1.0223	1.1802	1.1331	3194.1	.5807	.400	0.3288	1.2874	3404.6	.0942	.687
5000	7.3307-4	1417.2	2.6019	26.766	.199	1.5744	-1.0264	1.2899	1.1315	3241.7	.6476	.397	0.3294	1.2907	3462.4	.0966	.680
5100	7.1004-4	1551.6	2.6286	26.444	.202	1.6491	-1.0306	1.3969	1.1307	3292.8	.7079	.398	0.3300	1.2946	3523.3	.0991	.672
5200	6.8719-4	1696.3	2.6567	26.094	.204	1.7194	-1.0348	1.4960	1.1307	3347.1	.7573	.404	0.3307	1.2989	3587.5	.1018	.663
5300	6.6465-4	1850.3	2.6860	25.724	.207	1.7809	-1.0387	1.5806	1.1315	3404.5	.7921	.413	0.3314	1.3038	3654.6	.1047	.654
5400	6.4259-4	2011.7	2.7162	25.339	.209	1.8290	-1.0421	1.6444	1.1329	3464.7	.8099	.425	0.3320	1.3090	3724.2	.1077	.645

TABLE 18.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.016906; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 14.6959 LB/IN2 (1.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4408-2	-199.1	1.9670	28.517	.095	1.0000	-1.0000	0.2812	1.3291	1925.5	.0368	.728	0.2812	1.3292	1925.6	.0368	.728
1700	2.2972-2	-170.8	1.9842	28.517	.099	1.0000	-1.0000	0.2845	1.3241	1981.0	.0389	.727	0.2844	1.3243	1981.2	.0389	.727
1800	2.1696-2	-142.2	2.0005	28.518	.103	1.0000	-1.0000	0.2876	1.3195	2034.9	.0409	.726	0.2873	1.3199	2035.2	.0409	.726
1900	2.0554-2	-113.3	2.0162	28.518	.107	1.0000	-1.0000	0.2904	1.3154	2087.5	.0428	.726	0.2900	1.3160	2087.9	.0428	.726
2000	1.9526-2	-84.1	2.0311	28.518	.111	1.0000	-1.0000	0.2932	1.3115	2138.5	.0448	.725	0.2926	1.3123	2139.2	.0447	.725
2100	1.8596-2	-54.7	2.0455	28.518	.114	1.0000	-1.0000	0.2959	1.3078	2188.2	.0467	.725	0.2950	1.3090	2189.2	.0465	.725
2200	1.7751-2	-24.9	2.0593	28.517	.118	1.0000	-1.0000	0.2985	1.3042	2236.7	.0486	.725	0.2973	1.3058	2238.0	.0484	.725
2300	1.6979-2	5.0	2.0727	28.517	.121	1.0000	-1.0000	0.3012	1.3008	2283.9	.0504	.725	0.2995	1.3029	2285.8	.0502	.725
2400	1.6272-2	35.3	2.0855	28.517	.125	1.0000	-1.0000	0.3038	1.2974	2330.0	.0523	.725	0.3016	1.3002	2332.5	.0519	.725
2500	1.5621-2	65.8	2.0980	28.517	.128	1.0001	-1.0000	0.3064	1.2941	2375.0	.0542	.725	0.3036	1.2977	2378.3	.0537	.725
2600	1.5020-2	96.6	2.1101	28.517	.132	1.0001	-1.0000	0.3091	1.2909	2419.0	.0561	.724	0.3054	1.2954	2423.2	.0555	.724
2700	1.4464-2	127.6	2.1218	28.517	.135	1.0002	-1.0000	0.3119	1.2876	2462.0	.0581	.724	0.3072	1.2932	2467.3	.0572	.724
2800	1.3947-2	159.0	2.1332	28.517	.138	1.0004	-1.0000	0.3148	1.2843	2503.9	.0601	.723	0.3088	1.2911	2510.6	.0589	.724
2900	1.3466-2	190.6	2.1443	28.516	.141	1.0006	-1.0000	0.3179	1.2809	2545.0	.0621	.722	0.3104	1.2892	2553.2	.0606	.723
3000	1.3017-2	222.6	2.1551	28.516	.144	1.0009	-1.0000	0.3211	1.2775	2585.0	.0643	.721	0.3119	1.2875	2595.1	.0623	.723
3100	1.2596-2	254.8	2.1657	28.515	.147	1.0013	-1.0000	0.3247	1.2739	2624.1	.0665	.720	0.3133	1.2858	2636.3	.0640	.722
3200	1.2202-2	287.5	2.1761	28.513	.151	1.0019	-1.0000	0.3286	1.2701	2662.2	.0689	.718	0.3147	1.2843	2677.0	.0656	.722
3300	1.1831-2	320.6	2.1862	28.511	.154	1.0027	-1.0001	0.3331	1.2661	2699.3	.0715	.716	0.3159	1.2828	2717.1	.0673	.721
3400	1.1482-2	354.1	2.1963	28.509	.157	1.0038	-1.0001	0.3381	1.2618	2735.3	.0743	.713	0.3171	1.2815	2756.6	.0689	.720
3500	1.1153-2	388.2	2.2061	28.505	.160	1.0054	-1.0002	0.3440	1.2571	2770.3	.0774	.709	0.3182	1.2803	2795.7	.0705	.720
3600	1.0841-2	423.0	2.2159	28.500	.162	1.0075	-1.0002	0.3509	1.2521	2804.2	.0809	.704	0.3193	1.2792	2834.4	.0721	.719
3700	1.0546-2	458.5	2.2256	28.493	.165	1.0103	-1.0003	0.3590	1.2466	2837.0	.0850	.698	0.3203	1.2781	2872.7	.0737	.719
3800	1.0265-2	494.8	2.2353	28.484	.168	1.0139	-1.0004	0.3687	1.2406	2868.7	.0898	.691	0.3212	1.2772	2910.7	.0752	.719
3900	9.9974-3	532.3	2.2451	28.472	.171	1.0187	-1.0006	0.3803	1.2342	2899.2	.0955	.681	0.3221	1.2764	2948.4	.0767	.718
4000	9.7421-3	571.0	2.2549	28.456	.174	1.0249	-1.0008	0.3941	1.2273	2928.7	.1023	.669	0.3229	1.2757	2985.9	.0782	.718
4100	9.4978-3	611.2	2.2648	28.436	.177	1.0327	-1.0011	0.4105	1.2199	2957.3	.1106	.655	0.3237	1.2751	3023.4	.0797	.717
4200	9.2633-3	653.2	2.2749	28.410	.179	1.0425	-1.0015	0.4300	1.2123	2985.1	.1207	.639	0.3245	1.2746	3060.8	.0812	.717
4300	9.0376-3	697.3	2.2853	28.378	.182	1.0547	-1.0020	0.4530	1.2046	3012.5	.1329	.621	0.3252	1.2742	3098.4	.0827	.716
4400	8.8196-3	743.9	2.2960	28.338	.185	1.0696	-1.0026	0.4798	1.1968	3039.7	.1476	.601	0.3258	1.2740	3136.1	.0842	.715
4500	8.6085-3	793.4	2.3071	28.288	.187	1.0875	-1.0034	0.5108	1.1893	3067.0	.1652	.580	0.3264	1.2740	3174.3	.0857	.714
4600	8.4033-3	846.2	2.3187	28.227	.190	1.1087	-1.0043	0.5461	1.1821	3094.8	.1862	.558	0.3270	1.2741	3213.0	.0872	.713
4700	8.2031-3	902.8	2.3309	28.154	.193	1.1334	-1.0055	0.5858	1.1754	3123.5	.2108	.536	0.3276	1.2744	3252.4	.0887	.711
4800	8.0074-3	963.5	2.3437	28.067	.195	1.1618	-1.0068	0.6298	1.1694	3153.3	.2392	.514	0.3281	1.2750	3292.6	.0903	.709
4900	7.8153-3	1028.9	2.3572	27.964	.198	1.1938	-1.0084	0.6780	1.1640	3184.5	.2715	.494	0.3286	1.2757	3333.8	.0919	.707
5000	7.6264-3	1099.2	2.3714	27.845	.200	1.2294	-1.0102	0.7299	1.1594	3217.4	.3077	.475	0.3290	1.2767	3376.1	.0935	.705
5100	7.4402-3	1175.0	2.3864	27.709	.203	1.2684	-1.0122	0.7851	1.1556	3252.0	.3473	.458	0.3295	1.2780	3419.8	.0952	.702
5200	7.2562-3	1256.4	2.4022	27.554	.205	1.3105	-1.0145	0.8431	1.1525	3288.5	.3899	.444	0.3299	1.2795	3464.9	.0970	.698
5300	7.0744-3	1343.7	2.4188	27.380	.208	1.3552	-1.0170	0.9032	1.1501	3327.0	.4346	.432	0.3304	1.2813	3511.7	.0989	.694
5400	6.8944-3	1437.0	2.4363	27.187	.210	1.4022	-1.0197	0.9647	1.1483	3367.6	.4803	.422	0.3308	1.2834	3560.1	.1008	.690

TABLE 18.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.016906; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 146.959 LB/IN² (10.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4408-1	-199.1	1.8067	28.518	.095	1.0000	-1.0000	0.2812	1.3291	1925.5	.0368	.728	0.2812	1.3292	1925.6	.0368	.728
1700	2.2972-1	-170.8	1.8238	28.518	.099	1.0000	-1.0000	0.2845	1.3241	1981.0	.0389	.727	0.2844	1.3243	1981.2	.0389	.727
1800	2.1696-1	-142.2	1.8402	28.518	.103	1.0000	-1.0000	0.2876	1.3195	2034.9	.0409	.726	0.2873	1.3199	2035.2	.0409	.726
1900	2.0554-1	-113.3	1.8558	28.518	.107	1.0000	-1.0000	0.2904	1.3154	2087.4	.0428	.726	0.2900	1.3160	2087.9	.0428	.726
2000	1.9526-1	-84.1	1.8708	28.518	.111	1.0000	-1.0000	0.2932	1.3115	2138.5	.0448	.725	0.2926	1.3123	2139.2	.0447	.725
2100	1.8596-1	-54.7	1.8852	28.518	.114	1.0000	-1.0000	0.2959	1.3078	2188.2	.0467	.725	0.2950	1.3090	2189.2	.0465	.725
2200	1.7751-1	-24.9	1.8990	28.518	.118	1.0000	-1.0000	0.2985	1.3043	2236.7	.0485	.725	0.2973	1.3058	2238.0	.0484	.725
2300	1.6979-1	5.0	1.9123	28.518	.121	1.0000	-1.0000	0.3011	1.3008	2283.9	.0504	.725	0.2995	1.3029	2285.8	.0502	.725
2400	1.6272-1	35.3	1.9252	28.518	.125	1.0000	-1.0000	0.3037	1.2975	2330.1	.0523	.725	0.3016	1.3002	2332.5	.0519	.725
2500	1.5621-1	65.8	1.9376	28.518	.128	1.0000	-1.0000	0.3063	1.2943	2375.1	.0542	.725	0.3036	1.2977	2378.3	.0537	.725
2600	1.5020-1	96.5	1.9497	28.518	.132	1.0001	-1.0000	0.3089	1.2911	2419.2	.0561	.724	0.3054	1.2953	2423.2	.0555	.724
2700	1.4464-1	127.6	1.9614	28.517	.135	1.0001	-1.0000	0.3115	1.2879	2462.3	.0580	.724	0.3072	1.2932	2467.3	.0572	.724
2800	1.3947-1	158.9	1.9728	28.517	.138	1.0002	-1.0000	0.3142	1.2848	2504.4	.0599	.724	0.3088	1.2911	2510.6	.0589	.724
2900	1.3466-1	190.4	1.9839	28.517	.141	1.0003	-1.0000	0.3170	1.2817	2545.7	.0619	.723	0.3104	1.2892	2553.1	.0606	.723
3000	1.3017-1	222.3	1.9947	28.517	.144	1.0004	-1.0000	0.3198	1.2786	2586.1	.0639	.722	0.3119	1.2874	2595.0	.0623	.723
3100	1.2597-1	254.4	2.0052	28.516	.147	1.0006	-1.0000	0.3228	1.2755	2625.6	.0660	.721	0.3133	1.2858	2636.2	.0640	.722
3200	1.2203-1	286.8	2.0155	28.516	.151	1.0009	-1.0000	0.3260	1.2723	2664.3	.0681	.720	0.3147	1.2842	2676.8	.0656	.722
3300	1.1833-1	319.6	2.0256	28.515	.154	1.0013	-1.0000	0.3293	1.2690	2702.2	.0703	.719	0.3159	1.2828	2716.9	.0673	.721
3400	1.1484-1	352.7	2.0354	28.513	.157	1.0018	-1.0001	0.3329	1.2657	2739.3	.0726	.717	0.3171	1.2815	2756.3	.0689	.720
3500	1.1156-1	386.2	2.0452	28.512	.160	1.0024	-1.0001	0.3367	1.2623	2775.7	.0750	.716	0.3182	1.2802	2795.3	.0705	.720
3600	1.0845-1	420.0	2.0547	28.509	.162	1.0033	-1.0001	0.3409	1.2587	2811.2	.0776	.714	0.3193	1.2790	2833.8	.0721	.719
3700	1.0551-1	454.4	2.0641	28.506	.165	1.0044	-1.0001	0.3456	1.2550	2845.9	.0803	.711	0.3203	1.2780	2871.8	.0736	.719
3800	1.0272-1	489.2	2.0734	28.503	.168	1.0059	-1.0002	0.3508	1.2512	2879.9	.0833	.708	0.3212	1.2770	2909.4	.0752	.719
3900	1.0006-1	524.6	2.0826	28.498	.171	1.0077	-1.0002	0.3567	1.2471	2913.0	.0866	.705	0.3221	1.2761	2946.7	.0767	.718
4000	9.7541-2	560.5	2.0917	28.491	.174	1.0100	-1.0003	0.3633	1.2429	2945.5	.0902	.701	0.3229	1.2752	2983.6	.0782	.718
4100	9.5135-2	597.2	2.1007	28.483	.177	1.0129	-1.0004	0.3707	1.2384	2977.1	.0942	.695	0.3237	1.2745	3020.1	.0797	.718
4200	9.2837-2	634.7	2.1098	28.473	.179	1.0165	-1.0006	0.3792	1.2338	3008.1	.0988	.689	0.3245	1.2738	3056.5	.0812	.717
4300	9.0638-2	673.1	2.1188	28.461	.182	1.0209	-1.0007	0.3889	1.2289	3038.3	.1040	.681	0.3252	1.2732	3092.6	.0826	.717
4400	8.8531-2	712.6	2.1279	28.445	.185	1.0263	-1.0010	0.3999	1.2239	3068.0	.1099	.673	0.3259	1.2727	3128.5	.0841	.717
4500	8.6506-2	753.2	2.1370	28.426	.188	1.0328	-1.0012	0.4124	1.2187	3097.1	.1168	.663	0.3265	1.2722	3164.4	.0855	.716
4600	8.4557-2	795.1	2.1462	28.404	.190	1.0405	-1.0016	0.4265	1.2135	3125.9	.1247	.651	0.3271	1.2719	3200.2	.0870	.715
4700	8.2678-2	838.5	2.1556	28.376	.193	1.0496	-1.0020	0.4423	1.2082	3154.3	.1338	.638	0.3276	1.2716	3236.0	.0884	.715
4800	8.0863-2	883.6	2.1650	28.343	.196	1.0603	-1.0025	0.4601	1.2030	3182.7	.1442	.624	0.3282	1.2715	3272.0	.0899	.714
4900	7.9104-2	930.6	2.1747	28.305	.198	1.0726	-1.0030	0.4797	1.1979	3211.1	.1561	.609	0.3287	1.2714	3308.1	.0913	.713
5000	7.7398-2	979.6	2.1846	28.259	.201	1.0866	-1.0037	0.5013	1.1930	3239.6	.1696	.593	0.3291	1.2715	3344.4	.0928	.712
5100	7.5738-2	1030.9	2.1948	28.207	.203	1.1025	-1.0045	0.5248	1.1884	3268.6	.1848	.577	0.3296	1.2716	3381.1	.0943	.711
5200	7.4122-2	1084.6	2.2052	28.146	.206	1.1201	-1.0054	0.5501	1.1841	3298.1	.2019	.561	0.3300	1.2719	3418.2	.0957	.709
5300	7.2544-2	1141.0	2.2160	28.076	.208	1.1396	-1.0064	0.5771	1.1803	3328.3	.2208	.544	0.3304	1.2724	3455.7	.0972	.708
5400	7.1001-2	1200.1	2.2270	27.998	.211	1.1608	-1.0076	0.6056	1.1768	3359.3	.2416	.528	0.3308	1.2729	3493.9	.0987	.706

TABLE 18.5B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.016906; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 734.797 LB/IN² (50.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	1.2204 0	-199.1	1.6946	28.518	.095	1.0000	-1.0000	0.2813	1.3291	1925.5	.0368	.728	0.2812	1.3292	1925.6	.0368	.728
1700	1.1486 0	-170.8	1.7118	28.518	.099	1.0000	-1.0000	0.2845	1.3241	1981.0	.0389	.727	0.2844	1.3243	1981.2	.0389	.727
1800	1.0848 0	-142.2	1.7281	28.518	.103	1.0000	-1.0000	0.2876	1.3195	2034.9	.0409	.726	0.2873	1.3199	2035.2	.0409	.726
1900	1.0277 0	-113.3	1.7438	28.518	.107	1.0000	-1.0000	0.2904	1.3154	2087.4	.0428	.726	0.2900	1.3160	2087.9	.0428	.726
2000	9.7632-1	-84.1	1.7587	28.518	.111	1.0000	-1.0000	0.2932	1.3115	2138.5	.0448	.725	0.2926	1.3123	2139.2	.0447	.725
2100	9.2983-1	-54.7	1.7731	28.518	.114	1.0000	-1.0000	0.2959	1.3078	2188.2	.0467	.725	0.2950	1.3090	2189.2	.0465	.725
2200	8.8756-1	-24.9	1.7869	28.518	.118	1.0000	-1.0000	0.2985	1.3042	2236.6	.0485	.725	0.2973	1.3058	2238.0	.0484	.725
2300	8.4897-1	5.0	1.8002	28.518	.121	1.0000	-1.0000	0.3011	1.3008	2283.9	.0504	.725	0.2995	1.3029	2285.8	.0502	.725
2400	8.1360-1	35.3	1.8131	28.518	.125	1.0000	-1.0000	0.3037	1.2975	2330.1	.0523	.725	0.3016	1.3002	2332.5	.0519	.725
2500	7.8106-1	65.8	1.8256	28.518	.128	1.0000	-1.0000	0.3062	1.2943	2375.2	.0542	.725	0.3036	1.2977	2378.3	.0537	.725
2600	7.5102-1	96.5	1.8376	28.518	.132	1.0000	-1.0000	0.3088	1.2911	2419.2	.0561	.725	0.3054	1.2953	2423.2	.0555	.724
2700	7.2320-1	127.5	1.8493	28.518	.135	1.0000	-1.0000	0.3114	1.2880	2462.4	.0580	.724	0.3072	1.2932	2467.3	.0572	.724
2800	6.9737-1	158.8	1.8607	28.518	.138	1.0001	-1.0000	0.3140	1.2850	2504.6	.0599	.724	0.3088	1.2911	2510.5	.0589	.724
2900	6.7332-1	190.4	1.8718	28.518	.141	1.0001	-1.0000	0.3167	1.2820	2545.9	.0618	.723	0.3104	1.2892	2553.1	.0606	.723
3000	6.5087-1	222.2	1.8825	28.517	.144	1.0002	-1.0000	0.3194	1.2790	2586.4	.0638	.722	0.3119	1.2874	2595.0	.0623	.723
3100	6.2987-1	254.2	1.8931	28.517	.147	1.0003	-1.0000	0.3221	1.2760	2626.1	.0658	.722	0.3133	1.2858	2636.2	.0640	.722
3200	6.1018-1	286.6	1.9033	28.517	.151	1.0005	-1.0000	0.3250	1.2730	2665.1	.0679	.721	0.3147	1.2842	2676.8	.0656	.722
3300	5.9168-1	319.2	1.9134	28.516	.154	1.0007	-1.0000	0.3279	1.2701	2703.3	.0699	.720	0.3159	1.2828	2716.8	.0673	.721
3400	5.7426-1	352.2	1.9232	28.516	.157	1.0010	-1.0000	0.3310	1.2671	2740.7	.0721	.719	0.3171	1.2814	2756.2	.0689	.721
3500	5.5783-1	385.4	1.9328	28.514	.160	1.0014	-1.0001	0.3342	1.2641	2777.5	.0743	.718	0.3182	1.2802	2795.1	.0705	.720
3600	5.4231-1	419.0	1.9423	28.513	.162	1.0019	-1.0001	0.3376	1.2610	2813.5	.0766	.716	0.3193	1.2790	2833.5	.0721	.719
3700	5.2762-1	453.0	1.9516	28.511	.165	1.0025	-1.0001	0.3413	1.2579	2848.9	.0789	.715	0.3203	1.2779	2871.5	.0736	.719
3800	5.1370-1	487.3	1.9608	28.509	.168	1.0033	-1.0001	0.3451	1.2548	2883.7	.0814	.713	0.3212	1.2769	2909.0	.0752	.719
3900	5.0048-1	522.0	1.9698	28.506	.171	1.0043	-1.0002	0.3493	1.2516	2917.8	.0840	.712	0.3221	1.2760	2946.1	.0767	.719
4000	4.8791-1	557.2	1.9787	28.503	.174	1.0056	-1.0002	0.3538	1.2483	2951.3	.0867	.709	0.3230	1.2751	2982.8	.0782	.718
4100	4.7593-1	592.8	1.9875	28.498	.177	1.0071	-1.0003	0.3587	1.2449	2984.1	.0897	.707	0.3237	1.2743	3019.1	.0797	.718
4200	4.6451-1	628.9	1.9962	28.493	.179	1.0089	-1.0003	0.3641	1.2415	3016.4	.0929	.703	0.3245	1.2735	3055.1	.0812	.718
4300	4.5360-1	665.6	2.0048	28.486	.182	1.0112	-1.0004	0.3701	1.2380	3048.1	.0964	.700	0.3252	1.2729	3090.8	.0826	.717
4400	4.4316-1	703.0	2.0134	28.478	.185	1.0139	-1.0005	0.3766	1.2343	3079.3	.1002	.695	0.3259	1.2722	3126.2	.0841	.717
4500	4.3316-1	741.0	2.0219	28.468	.188	1.0172	-1.0007	0.3838	1.2306	3110.0	.1044	.690	0.3265	1.2717	3161.4	.0855	.717
4600	4.2357-1	779.7	2.0305	28.456	.190	1.0211	-1.0008	0.3918	1.2269	3140.2	.1090	.684	0.3271	1.2712	3196.4	.0869	.716
4700	4.1435-1	819.3	2.0390	28.442	.193	1.0256	-1.0010	0.4005	1.2230	3169.9	.1142	.677	0.3277	1.2708	3231.2	.0884	.715
4800	4.0548-1	859.9	2.0475	28.425	.196	1.0310	-1.0013	0.4102	1.2191	3199.3	.1200	.669	0.3282	1.2704	3265.9	.0898	.715
4900	3.9692-1	901.4	2.0561	28.405	.198	1.0371	-1.0015	0.4209	1.2153	3228.5	.1264	.660	0.3287	1.2701	3300.6	.0913	.714
5000	3.8867-1	944.1	2.0647	28.382	.201	1.0442	-1.0019	0.4325	1.2114	3257.4	.1335	.651	0.3292	1.2699	3335.1	.0927	.713
5100	3.8068-1	988.0	2.0734	28.355	.203	1.0523	-1.0023	0.4452	1.2076	3286.2	.1415	.640	0.3297	1.2698	3369.7	.0941	.713
5200	3.7295-1	1033.2	2.0822	28.324	.206	1.0614	-1.0027	0.4590	1.2039	3315.0	.1503	.629	0.3301	1.2697	3404.4	.0955	.712
5300	3.6545-1	1079.8	2.0911	28.288	.209	1.0715	-1.0033	0.4738	1.2003	3343.8	.1600	.617	0.3305	1.2697	3439.1	.0969	.711
5400	3.5817-1	1128.0	2.1001	28.247	.211	1.0828	-1.0039	0.4896	1.1969	3372.9	.1708	.605	0.3309	1.2698	3474.1	.0984	.710

TABLE 18C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.016906; EQUIV.RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284;
WET AIR (W/A= 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES					T R		
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLVDT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S		COND BTU/ FT HR R	PRAN R
PRESSURE = 0.01 ATM																
360	1.172-3	-580.3	1.7719	28.517	0.2545	1.117-3	29.364	.0319	1.000	-1.000	0.2385	1.3959	922	.0104	.734	360
400	1.051-3	-568.1	1.8039	28.517	0.4180	1.004-3	29.326	.0348	1.000	-1.000	0.2388	1.3958	973	.0114	.731	400
440	9.182-4	-528.8	1.8962	28.517	2.1508	8.989-4	28.881	.0367	1.000	-1.000	0.2438	1.3927	1027	.0121	.739	440
PRESSURE = 0.10 ATM																
360	1.172-2	-580.4	1.6232	28.517	0.2458	1.117-2	29.365	.0319	1.000	-1.000	0.2385	1.3959	922	.0104	.734	360
400	1.055-2	-570.3	1.6497	28.517	0.2636	1.005-2	29.361	.0349	1.000	-1.000	0.2384	1.3961	972	.0114	.730	400
440	9.551-3	-557.6	1.6799	28.517	0.4243	9.124-3	29.317	.0377	1.000	-1.000	0.2389	1.3957	1021	.0124	.727	440
480	8.487-3	-525.0	1.7502	28.517	1.5268	8.265-3	28.971	.0397	1.000	-1.000	0.2430	1.3929	1071	.0132	.733	480
520	7.510-3	-483.2	1.8352	28.517	0.2486	7.510-3	28.517	.0414	1.000	-1.000	0.2486	1.3891	1122	.0139	.742	520
PRESSURE = 1.00 ATM																
360	1.172-1	-580.4	1.4749	28.517	0.2449	1.117-1	29.365	.0319	1.000	-1.000	0.2385	1.3959	922	.0104	.734	360
400	1.055-1	-570.5	1.5008	28.517	0.2483	1.005-1	29.365	.0349	1.000	-1.000	0.2384	1.3961	972	.0114	.730	400
440	9.587-2	-560.3	1.5250	28.517	0.2659	9.138-2	29.360	.0378	1.000	-1.000	0.2385	1.3960	1020	.0124	.726	440
480	8.762-2	-548.2	1.5514	28.517	0.3703	8.367-2	29.326	.0405	1.000	-1.000	0.2390	1.3953	1066	.0134	.723	480
520	7.973-2	-522.1	1.6037	28.517	0.6698	7.681-2	29.166	.0428	1.000	-1.000	0.2411	1.3935	1111	.0142	.726	520
537	7.619-2	-508.9	1.6287	28.517	0.9378	7.403-2	29.012	.0436	1.000	-1.000	0.2430	1.3921	1132	.0145	.729	537
560	7.047-2	-480.1	1.6811	28.517	1.6037	7.001-2	28.629	.0442	1.000	-1.000	0.2478	1.3888	1162	.0149	.738	560
600	6.509-2	-463.2	1.7105	28.517	0.2497	6.509-2	28.517	.0465	1.000	-1.000	0.2497	1.3868	1204	.0157	.741	600
PRESSURE = 10.00 ATM																
360	1.171 0	-580.4	1.3265	28.517	0.2449	1.117 0	29.365	.0319	1.000	-1.000	0.2385	1.3959	922	.0104	.734	360
400	1.054 0	-570.5	1.3524	28.517	0.2467	1.005 0	29.365	.0349	1.000	-1.000	0.2384	1.3961	972	.0114	.730	400
440	9.584-1	-560.6	1.3760	28.517	0.2502	9.139-1	29.365	.0378	1.000	-1.000	0.2384	1.3960	1020	.0124	.726	440
480	8.783-1	-550.4	1.3982	28.517	0.2625	8.377-1	29.361	.0406	1.000	-1.000	0.2386	1.3955	1065	.0134	.723	480
520	8.097-1	-532.1	1.4351	28.517	0.3131	7.728-1	29.345	.0432	1.000	-1.000	0.2391	1.3947	1109	.0143	.721	520
537	7.835-1	-526.7	1.4453	28.517	0.3375	7.484-1	29.330	.0443	1.000	-1.000	0.2394	1.3942	1126	.0147	.721	537
560	7.484-1	-518.2	1.4607	28.517	0.3927	7.163-1	29.292	.0457	1.000	-1.000	0.2401	1.3934	1151	.0152	.722	560
600	6.893-1	-499.3	1.4934	28.517	0.5801	6.651-1	29.142	.0479	1.000	-1.000	0.2424	1.3911	1193	.0160	.725	600
640	6.258-1	-469.0	1.5420	28.517	0.9800	6.160-1	28.788	.0495	1.000	-1.000	0.2471	1.3872	1238	.0167	.734	640
680	5.743-1	-443.2	1.5815	28.517	0.2512	5.743-1	28.517	.0514	1.000	-1.000	0.2512	1.3836	1281	.0174	.739	680
PRESSURE = 50.00 ATM																
360	5.834 0	-580.4	1.2228	28.517	0.2448	5.585 0	29.365	.0319	1.000	-1.000	0.2385	1.3959	922	.0104	.734	360
400	5.253 0	-570.5	1.2487	28.517	0.2466	5.027 0	29.365	.0349	1.000	-1.000	0.2384	1.3961	972	.0114	.730	400
440	4.777 0	-560.6	1.2723	28.517	0.2488	4.570 0	29.365	.0378	1.000	-1.000	0.2384	1.3960	1020	.0124	.726	440
480	4.380 0	-550.6	1.2941	28.517	0.2530	4.189 0	29.365	.0406	1.000	-1.000	0.2386	1.3956	1065	.0134	.722	480
520	4.044 0	-533.0	1.3296	28.517	0.2825	3.866 0	29.361	.0433	1.000	-1.000	0.2389	1.3948	1108	.0143	.721	520
537	3.918 0	-528.2	1.3386	28.517	0.2874	3.746 0	29.358	.0443	1.000	-1.000	0.2391	1.3944	1126	.0147	.720	537
560	3.753 0	-521.4	1.3510	28.517	0.2984	3.589 0	29.351	.0458	1.000	-1.000	0.2395	1.3938	1150	.0152	.720	560
600	3.494 0	-508.8	1.3727	28.517	0.3346	3.346 0	29.321	.0482	1.000	-1.000	0.2403	1.3924	1190	.0161	.721	600
640	3.257 0	-494.2	1.3963	28.517	0.4057	3.129 0	29.250	.0505	1.000	-1.000	0.2418	1.3904	1230	.0169	.723	640
680	3.027 0	-475.6	1.4243	28.517	0.5312	2.931 0	29.104	.0526	1.000	-1.000	0.2442	1.3877	1270	.0177	.726	680
720	2.791 0	-450.6	1.4601	28.517	0.7388	2.742 0	28.832	.0543	1.000	-1.000	0.2483	1.3840	1311	.0184	.732	720
760	2.569 0	-423.1	1.4975	28.517	0.2530	2.569 0	28.517	.0559	1.000	-1.000	0.2530	1.3798	1352	.0192	.738	760

TABLE 19A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.033812; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5522; MW = 28.5721;
 WET AIR (W/A = 0.03); GASEOUS COMPOSITION: CO2= .06838; H2O= .10256; N2= .72335; O2= .09703; AR= .00868

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	
360	1.0869-1	5.4343 0	-822.3	1.9035	1.7435	1.5834	1.4234	1.3115	0.2495	1.3862	931.9	.0290	.0094	.7719	360
380	1.0297-1	5.1483 0	-817.3	1.9170	1.7570	1.5969	1.4369	1.3250	0.2496	1.3860	957.3	.0305	.0099	.7678	380
400	9.7818-2	4.8909 0	-812.3	1.9298	1.7698	1.6097	1.4497	1.3378	0.2497	1.3857	982.1	.0320	.0104	.7640	400
420	9.3160-2	4.6580 0	-807.3	1.9420	1.7819	1.6219	1.4619	1.3500	0.2499	1.3853	1006.2	.0334	.0110	.7607	420
440	8.8926-2	4.4463 0	-802.3	1.9536	1.7936	1.6335	1.4735	1.3616	0.2501	1.3849	1029.7	.0349	.0115	.7578	440
460	8.5059-2	4.2530 0	-797.3	1.9647	1.8047	1.6447	1.4846	1.3728	0.2503	1.3844	1052.7	.0363	.0120	.7554	460
480	8.1515-2	4.0758 0	-792.3	1.9754	1.8154	1.6553	1.4953	1.3834	0.2506	1.3838	1075.1	.0376	.0125	.7534	480
500	7.8254-2	3.9127 0	-787.3	1.9856	1.8256	1.6656	1.5055	1.3937	0.2509	1.3832	1097.0	.0390	.0130	.7519	500
520	7.5245-2	3.7622 0	-782.3	1.9955	1.8354	1.6754	1.5154	1.4035	0.2512	1.3825	1118.5	.0403	.0135	.7507	520
537	7.2907-2	3.6454 0	-778.1	2.0034	1.8434	1.6833	1.5233	1.4114	0.2515	1.3819	1136.0	.0415	.0139	.7500	537
540	7.2458-2	3.6229 0	-777.2	2.0050	1.8449	1.6849	1.5249	1.4130	0.2516	1.3818	1139.5	.0417	.0140	.7498	540
560	6.9870-2	3.4935 0	-772.2	2.0141	1.8541	1.6940	1.5340	1.4221	0.2519	1.3810	1160.1	.0430	.0144	.7497	560
580	6.7461-2	3.3730 0	-767.2	2.0230	1.8629	1.7029	1.5429	1.4310	0.2523	1.3801	1180.2	.0442	.0149	.7497	580
600	6.5212-2	3.2606 0	-762.1	2.0315	1.8715	1.7115	1.5514	1.4396	0.2528	1.3793	1200.0	.0455	.0153	.7498	600
620	6.3108-2	3.1554 0	-757.0	2.0398	1.8798	1.7197	1.5597	1.4479	0.2532	1.3783	1219.5	.0468	.0158	.7499	620
640	6.1136-2	3.0568 0	-752.0	2.0479	1.8878	1.7278	1.5678	1.4559	0.2537	1.3774	1238.5	.0480	.0162	.7497	640
660	5.9284-2	2.9642 0	-746.9	2.0557	1.8956	1.7356	1.5756	1.4637	0.2542	1.3764	1257.3	.0492	.0167	.7491	660
680	5.7540-2	2.8770 0	-741.8	2.0633	1.9032	1.7432	1.5832	1.4713	0.2547	1.3754	1275.7	.0504	.0172	.7484	680
700	5.5896-2	2.7948 0	-736.7	2.0707	1.9106	1.7506	1.5906	1.4787	0.2552	1.3743	1293.8	.0516	.0176	.7477	700
720	5.4343-2	2.7172 0	-731.6	2.0779	1.9178	1.7578	1.5978	1.4859	0.2557	1.3732	1311.7	.0528	.0181	.7469	720
740	5.2875-2	2.6437 0	-726.5	2.0849	1.9248	1.7648	1.6048	1.4929	0.2563	1.3721	1329.2	.0539	.0185	.7465	740
760	5.1483-2	2.5742 0	-721.3	2.0917	1.9317	1.7716	1.6116	1.4997	0.2569	1.3709	1346.5	.0550	.0189	.7462	760
780	5.0163-2	2.5082 0	-716.2	2.0984	1.9384	1.7783	1.6183	1.5064	0.2575	1.3697	1363.5	.0562	.0194	.7460	780
800	4.8909-2	2.4455 0	-711.0	2.1049	1.9449	1.7849	1.6248	1.5130	0.2581	1.3685	1380.3	.0573	.0198	.7458	800
820	4.7716-2	2.3858 0	-705.9	2.1113	1.9513	1.7912	1.6312	1.5193	0.2587	1.3673	1396.8	.0584	.0202	.7457	820
840	4.6580-2	2.3290 0	-700.7	2.1176	1.9575	1.7975	1.6374	1.5256	0.2594	1.3661	1413.1	.0594	.0207	.7457	840
860	4.5497-2	2.2748 0	-695.5	2.1237	1.9636	1.8036	1.6436	1.5317	0.2600	1.3648	1429.2	.0605	.0211	.7457	860
880	4.4463-2	2.2231 0	-690.3	2.1296	1.9696	1.8096	1.6495	1.5377	0.2607	1.3636	1445.0	.0616	.0215	.7457	880
900	4.3475-2	2.1737 0	-685.1	2.1355	1.9755	1.8154	1.6554	1.5435	0.2614	1.3623	1460.7	.0626	.0219	.7457	900
920	4.2530-2	2.1265 0	-679.8	2.1413	1.9812	1.8212	1.6612	1.5493	0.2620	1.3610	1476.1	.0636	.0224	.7455	920
940	4.1625-2	2.0812 0	-674.6	2.1469	1.9869	1.8268	1.6668	1.5549	0.2627	1.3597	1491.3	.0647	.0228	.7453	940
960	4.0758-2	2.0379 0	-669.3	2.1524	1.9924	1.8324	1.6723	1.5605	0.2634	1.3584	1506.4	.0657	.0232	.7451	960
980	3.9926-2	1.9963 0	-664.1	2.1579	1.9979	1.8378	1.6778	1.5659	0.2642	1.3571	1521.3	.0667	.0237	.7449	980
1000	3.9127-2	1.9564 0	-658.8	2.1632	2.0032	1.8432	1.6831	1.5713	0.2649	1.3558	1536.0	.0677	.0241	.7446	1000
1020	3.8360-2	1.9180 0	-653.5	2.1685	2.0084	1.8484	1.6884	1.5765	0.2656	1.3544	1550.5	.0687	.0245	.7443	1020
1040	3.7622-2	1.8811 0	-648.1	2.1736	2.0136	1.8536	1.6935	1.5817	0.2663	1.3531	1564.9	.0697	.0250	.7440	1040
1060	3.6912-2	1.8456 0	-642.8	2.1787	2.0187	1.8587	1.6986	1.5868	0.2671	1.3518	1579.1	.0707	.0254	.7437	1060
1080	3.6229-2	1.8114 0	-637.5	2.1837	2.0237	1.8637	1.7036	1.5918	0.2678	1.3505	1593.1	.0717	.0258	.7433	1080
1100	3.5570-2	1.7785 0	-632.1	2.1886	2.0286	1.8686	1.7085	1.5967	0.2686	1.3491	1607.0	.0727	.0263	.7429	1100
1120	3.4935-2	1.7468 0	-626.7	2.1935	2.0335	1.8734	1.7134	1.6015	0.2693	1.3478	1620.8	.0736	.0267	.7425	1120
1140	3.4322-2	1.7161 0	-621.3	2.1983	2.0382	1.8782	1.7182	1.6063	0.2701	1.3465	1634.4	.0746	.0271	.7421	1140

TABLE 19A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.033812; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5522; MW = 28.5721;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .06838; H2O= .10256; N2= .72335; O2= .09703; AR= .00868

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
1160	3.3730-2	1.6865 0	-615.9	2.2030	2.0429	1.8829	1.7229	1.6110	0.2709	1.3452	1647.8	.0755	.0276	.7417	1160
1180	3.3159-2	1.6579 0	-610.5	2.2076	2.0476	1.8875	1.7275	1.6156	0.2716	1.3439	1661.2	.0765	.0280	.7413	1180
1200	3.2606-2	1.6303 0	-605.0	2.2122	2.0521	1.8921	1.7321	1.6202	0.2724	1.3426	1674.4	.0774	.0285	.7409	1200
1220	3.2072-2	1.6036 0	-599.6	2.2167	2.0567	1.8966	1.7366	1.6247	0.2732	1.3413	1687.5	.0783	.0289	.7404	1220
1240	3.1554-2	1.5777 0	-594.1	2.2211	2.0611	1.9011	1.7410	1.6292	0.2739	1.3400	1700.4	.0793	.0293	.7400	1240
1260	3.1053-2	1.5527 0	-588.6	2.2255	2.0655	1.9055	1.7454	1.6336	0.2747	1.3387	1713.3	.0802	.0298	.7396	1260
1280	3.0568-2	1.5284 0	-583.1	2.2299	2.0698	1.9098	1.7497	1.6379	0.2755	1.3375	1726.0	.0811	.0302	.7392	1280
1300	3.0098-2	1.5049 0	-577.6	2.2341	2.0741	1.9141	1.7540	1.6422	0.2762	1.3362	1738.6	.0820	.0307	.7388	1300
1320	2.9642-2	1.4821 0	-572.1	2.2384	2.0783	1.9183	1.7582	1.6464	0.2770	1.3350	1751.1	.0829	.0311	.7383	1320
1340	2.9199-2	1.4600 0	-566.5	2.2425	2.0825	1.9225	1.7624	1.6506	0.2778	1.3337	1763.5	.0838	.0315	.7379	1340
1360	2.8770-2	1.4385 0	-561.0	2.2466	2.0866	1.9266	1.7665	1.6547	0.2785	1.3325	1775.8	.0847	.0320	.7375	1360
1380	2.8353-2	1.4177 0	-555.4	2.2507	2.0907	1.9306	1.7706	1.6587	0.2793	1.3313	1788.0	.0855	.0324	.7372	1380
1400	2.7948-2	1.3974 0	-549.8	2.2547	2.0947	1.9347	1.7746	1.6628	0.2800	1.3301	1800.1	.0864	.0328	.7368	1400
1420	2.7554-2	1.3777 0	-544.2	2.2587	2.0987	1.9386	1.7786	1.6667	0.2808	1.3290	1812.1	.0873	.0333	.7364	1420
1440	2.7172-2	1.3586 0	-538.6	2.2627	2.1026	1.9426	1.7825	1.6707	0.2815	1.3278	1824.1	.0882	.0337	.7360	1440
1460	2.6799-2	1.3400 0	-532.9	2.2665	2.1065	1.9465	1.7864	1.6746	0.2823	1.3267	1835.9	.0890	.0342	.7357	1460
1480	2.6437-2	1.3219 0	-527.3	2.2704	2.1104	1.9503	1.7903	1.6784	0.2830	1.3255	1847.6	.0899	.0346	.7355	1480
1500	2.6085-2	1.3042 0	-521.6	2.2742	2.1142	1.9541	1.7941	1.6822	0.2838	1.3244	1859.3	.0907	.0350	.7352	1500
1520	2.5742-2	1.2871 0	-515.9	2.2780	2.1179	1.9579	1.7978	1.6860	0.2845	1.3233	1870.9	.0916	.0354	.7349	1520
1540	2.5407-2	1.2704 0	-510.2	2.2817	2.1216	1.9616	1.8016	1.6897	0.2852	1.3222	1882.4	.0924	.0359	.7346	1540
1560	2.5082-2	1.2541 0	-504.5	2.2854	2.1253	1.9653	1.8053	1.6934	0.2859	1.3212	1893.8	.0933	.0363	.7344	1560
1580	2.4764-2	1.2382 0	-498.8	2.2890	2.1290	1.9689	1.8089	1.6970	0.2866	1.3201	1905.1	.0941	.0367	.7341	1580
1600	2.4455-2	1.2227 0	-493.1	2.2926	2.1326	1.9725	1.8125	1.7006	0.2873	1.3191	1916.4	.0949	.0372	.7339	1600
1620	2.4153-2	1.2076 0	-487.3	2.2962	2.1362	1.9761	1.8161	1.7042	0.2880	1.3181	1927.6	.0957	.0376	.7336	1620
1640	2.3858-2	1.1929 0	-481.5	2.2997	2.1397	1.9797	1.8196	1.7078	0.2887	1.3171	1938.7	.0966	.0380	.7334	1640
1660	2.3571-2	1.1785 0	-475.8	2.3032	2.1432	1.9832	1.8231	1.7113	0.2894	1.3161	1949.8	.0974	.0384	.7332	1660
1680	2.3290-2	1.1645 0	-470.0	2.3067	2.1467	1.9866	1.8266	1.7147	0.2901	1.3151	1960.8	.0982	.0389	.7330	1680
1700	2.3016-2	1.1508 0	-464.2	2.3101	2.1501	1.9901	1.8300	1.7182	0.2907	1.3142	1971.7	.0990	.0393	.7327	1700
1720	2.2748-2	1.1374 0	-458.3	2.3135	2.1535	1.9935	1.8334	1.7216	0.2914	1.3132	1982.6	.0998	.0397	.7325	1720
1740	2.2487-2	1.1243 0	-452.5	2.3169	2.1569	1.9968	1.8368	1.7249	0.2920	1.3123	1993.4	.1006	.0401	.7323	1740
1760	2.2231-2	1.1116 0	-446.7	2.3203	2.1602	2.0002	1.8401	1.7283	0.2927	1.3114	2004.1	.1014	.0405	.7321	1760
1780	2.1982-2	1.0991 0	-440.8	2.3236	2.1635	2.0035	1.8435	1.7316	0.2933	1.3105	2014.8	.1022	.0409	.7319	1780
1800	2.1737-2	1.0869 0	-434.9	2.3269	2.1668	2.0068	1.8467	1.7349	0.2939	1.3097	2025.4	.1029	.0414	.7318	1800
1900	2.0593-2	1.0297 0	-405.4	2.3428	2.1828	2.0227	1.8627	1.7508	0.2968	1.3057	2077.8	.1068	.0434	.7311	1900
2000	1.9564-2	9.7818-1	-375.6	2.3581	2.1981	2.0380	1.8780	1.7661	0.2996	1.3021	2128.7	.1106	.0453	.7305	2000
2100	1.8632-2	9.3160-1	-345.5	2.3728	2.2128	2.0527	1.8927	1.7808	0.3022	1.2986	2178.5	.1142	.0473	.7301	2100
2200	1.7785-2	8.8926-1	-315.1	2.3869	2.2269	2.0668	1.9068	1.7949	0.3047	1.2955	2227.0	.1179	.0492	.7297	2200
2300	1.7012-2	8.5059-1	-284.5	2.4005	2.2405	2.0804	1.9204	1.8085	0.3071	1.2926	2274.5	.1214	.0511	.7293	2300
2400	1.6303-2	8.1515-1	-253.7	2.4136	2.2536	2.0936	1.9335	1.8217	0.3093	1.2898	2320.9	.1249	.0530	.7289	2400
2500	1.5651-2	7.8255-1	-222.7	2.4263	2.2663	2.1062	1.9462	1.8343	0.3114	1.2873	2366.5	.1283	.0549	.7285	2500

TABLE 19A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.033812; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5522; MW = 28.5721;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .06838; H2O= .10256; N2= .72335; O2= .09703; AR= .00868

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
2600	1.5049-2	7.5245-1	-191.4	2.4386	2.2785	2.1185	1.9584	1.8466	0.3134	1.2849	2411.1	.1317	.0567	.7282	2600
2700	1.4492-2	7.2458-1	-160.0	2.4504	2.2904	2.1303	1.9703	1.8584	0.3153	1.2827	2455.0	.1350	.0585	.7277	2700
2800	1.3974-2	6.9870-1	-128.4	2.4619	2.3019	2.1418	1.9818	1.8700	0.3171	1.2807	2498.0	.1383	.0603	.7271	2800
2900	1.3492-2	6.7461-1	-96.6	2.4731	2.3130	2.1530	1.9930	1.8811	0.3188	1.2788	2540.3	.1416	.0621	.7264	2900
3000	1.3042-2	6.5212-1	-64.6	2.4839	2.3239	2.1638	2.0038	1.8919	0.3204	1.2770	2582.0	.1448	.0639	.7257	3000
3100	1.2622-2	6.3108-1	-32.5	2.4944	2.3344	2.1744	2.0143	1.9025	0.3219	1.2753	2622.9	.1479	.0657	.7250	3100
3200	1.2227-2	6.1136-1	-0.2	2.5047	2.3447	2.1846	2.0246	1.9127	0.3234	1.2738	2663.3	.1511	.0674	.7243	3200
3300	1.1857-2	5.9284-1	32.2	2.5147	2.3546	2.1946	2.0346	1.9227	0.3247	1.2724	2703.0	.1541	.0692	.7236	3300
3400	1.1508-2	5.7540-1	64.7	2.5244	2.3643	2.2043	2.0443	1.9324	0.3260	1.2710	2742.2	.1572	.0709	.7229	3400
3500	1.1179-2	5.5896-1	97.4	2.5338	2.3738	2.2138	2.0537	1.9419	0.3272	1.2697	2780.9	.1602	.0726	.7222	3500
3600	1.0869-2	5.4343-1	130.2	2.5431	2.3830	2.2230	2.0630	1.9511	0.3283	1.2686	2819.0	.1632	.0743	.7215	3600
3700	1.0575-2	5.2875-1	163.0	2.5521	2.3920	2.2320	2.0720	1.9601	0.3294	1.2674	2856.7	.1661	.0759	.7210	3700
3800	1.0297-2	5.1483-1	196.0	2.5609	2.4008	2.2408	2.0808	1.9689	0.3304	1.2664	2893.8	.1690	.0775	.7205	3800
3900	1.0033-2	5.0163-1	229.1	2.5695	2.4094	2.2494	2.0894	1.9775	0.3313	1.2654	2930.5	.1719	.0791	.7200	3900
4000	9.7818-3	4.8909-1	262.3	2.5779	2.4178	2.2578	2.0978	1.9859	0.3322	1.2645	2966.8	.1748	.0807	.7194	4000
4100	9.5432-3	4.7716-1	295.6	2.5861	2.4261	2.2660	2.1060	1.9941	0.3331	1.2637	3002.6	.1776	.0823	.7189	4100
4200	9.3160-3	4.6580-1	328.9	2.5941	2.4341	2.2741	2.1140	2.0022	0.3339	1.2629	3038.1	.1804	.0839	.7184	4200
4300	9.0994-3	4.5497-1	362.3	2.6020	2.4420	2.2819	2.1219	2.0100	0.3347	1.2621	3073.1	.1832	.0854	.7178	4300
4400	8.8926-3	4.4463-1	395.8	2.6097	2.4497	2.2896	2.1296	2.0177	0.3354	1.2614	3107.7	.1860	.0870	.7173	4400
4500	8.6949-3	4.3475-1	429.4	2.6172	2.4572	2.2972	2.1371	2.0253	0.3361	1.2607	3142.0	.1887	.0885	.7168	4500
4600	8.5059-3	4.2530-1	463.1	2.6246	2.4646	2.3046	2.1445	2.0327	0.3367	1.2601	3175.9	.1914	.0900	.7160	4600
4700	8.3249-3	4.1625-1	496.8	2.6319	2.4718	2.3118	2.1518	2.0399	0.3374	1.2595	3209.5	.1941	.0916	.7152	4700
4800	8.1515-3	4.0758-1	530.5	2.6390	2.4790	2.3189	2.1589	2.0470	0.3380	1.2589	3242.7	.1968	.0931	.7145	4800
4900	7.9851-3	3.9926-1	564.4	2.6460	2.4859	2.3259	2.1659	2.0540	0.3385	1.2584	3275.6	.1994	.0946	.7138	4900
5000	7.8254-3	3.9127-1	598.2	2.6528	2.4928	2.3327	2.1727	2.0608	0.3391	1.2578	3308.2	.2020	.0961	.7131	5000
5100	7.6720-3	3.8360-1	632.2	2.6595	2.4995	2.3395	2.1794	2.0676	0.3396	1.2573	3340.4	.2046	.0975	.7124	5100
5200	7.5245-3	3.7622-1	666.2	2.6661	2.5061	2.3461	2.1860	2.0742	0.3401	1.2569	3372.4	.2072	.0990	.7117	5200
5300	7.3825-3	3.6912-1	700.2	2.6726	2.5126	2.3525	2.1925	2.0806	0.3406	1.2564	3404.0	.2098	.1005	.7111	5300
5400	7.2458-3	3.6229-1	734.3	2.6790	2.5189	2.3589	2.1989	2.0870	0.3410	1.2560	3435.4	.2123	.1019	.7104	5400

TABLE 19.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.033812; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 0.14696 LB/IN2 (0.01 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4454-4	-493.1	2.2926	28.572	.095	1.0000	-1.0000	0.2874	1.3190	1916.3	.0372	.734	0.2873	1.3191	1916.4	.0372	.734
1700	2.3016-4	-464.1	2.3102	28.572	.099	1.0000	-1.0000	0.2909	1.3140	1971.6	.0393	.733	0.2907	1.3142	1971.7	.0393	.733
1800	2.1737-4	-434.9	2.3269	28.572	.103	1.0000	-1.0000	0.2941	1.3094	2025.2	.0414	.732	0.2939	1.3097	2025.4	.0414	.732
1900	2.0593-4	-405.3	2.3429	28.572	.107	1.0000	-1.0000	0.2972	1.3053	2077.4	.0434	.731	0.2968	1.3057	2077.8	.0434	.731
2000	1.9564-4	-375.5	2.3582	28.572	.111	1.0000	-1.0000	0.3001	1.3014	2128.2	.0454	.731	0.2996	1.3021	2128.7	.0453	.731
2100	1.8632-4	-345.3	2.3729	28.572	.114	1.0000	-1.0000	0.3030	1.2977	2177.7	.0474	.730	0.3022	1.2986	2178.5	.0473	.730
2200	1.7785-4	-314.9	2.3870	28.572	.118	1.0000	-1.0000	0.3058	1.2941	2225.8	.0494	.730	0.3047	1.2955	2227.0	.0492	.730
2300	1.7012-4	-284.1	2.4007	28.572	.121	1.0001	-1.0000	0.3087	1.2906	2272.8	.0514	.729	0.3071	1.2926	2274.5	.0511	.729
2400	1.6303-4	-253.1	2.4139	28.572	.125	1.0002	-1.0000	0.3116	1.2872	2318.6	.0534	.729	0.3093	1.2898	2321.0	.0530	.729
2500	1.5651-4	-221.8	2.4267	28.571	.128	1.0003	-1.0000	0.3147	1.2837	2363.2	.0555	.728	0.3114	1.2873	2366.5	.0549	.729
2600	1.5048-4	-190.2	2.4391	28.571	.132	1.0006	-1.0000	0.3181	1.2800	2406.6	.0576	.727	0.3134	1.2849	2411.2	.0567	.728
2700	1.4491-4	-158.2	2.4512	28.570	.135	1.0010	-1.0000	0.3219	1.2761	2448.7	.0599	.725	0.3153	1.2828	2455.1	.0585	.728
2800	1.3972-4	-125.8	2.4630	28.569	.138	1.0017	-1.0000	0.3264	1.2717	2489.3	.0625	.723	0.3171	1.2807	2498.2	.0603	.727
2900	1.3490-4	-92.8	2.4745	28.567	.142	1.0029	-1.0001	0.3321	1.2665	2528.4	.0654	.719	0.3188	1.2789	2540.7	.0621	.726
3000	1.3038-4	-59.3	2.4859	28.563	.145	1.0047	-1.0001	0.3395	1.2604	2565.6	.0689	.713	0.3204	1.2771	2582.5	.0639	.726
3100	1.2615-4	-24.9	2.4972	28.557	.148	1.0076	-1.0002	0.3494	1.2530	2600.5	.0733	.705	0.3219	1.2755	2623.8	.0657	.725
3200	1.2217-4	10.7	2.5085	28.548	.151	1.0122	-1.0003	0.3629	1.2439	2632.9	.0791	.693	0.3233	1.2741	2664.7	.0674	.724
3300	1.1841-4	47.9	2.5199	28.535	.154	1.0190	-1.0005	0.3814	1.2330	2662.6	.0870	.675	0.3247	1.2728	2705.3	.0692	.723
3400	1.1485-4	87.2	2.5316	28.515	.157	1.0293	-1.0008	0.4070	1.2201	2689.5	.0981	.652	0.3259	1.2717	2745.8	.0709	.722
3500	1.1145-4	129.6	2.5439	28.485	.160	1.0442	-1.0013	0.4420	1.2058	2714.1	.1135	.624	0.3271	1.2708	2786.4	.0726	.721
3600	1.0819-4	176.0	2.5570	28.441	.163	1.0653	-1.0020	0.4890	1.1905	2737.2	.1351	.590	0.3282	1.2702	2827.3	.0743	.720
3700	1.0504-4	227.9	2.5712	28.380	.166	1.0945	-1.0030	0.5509	1.1753	2760.1	.1648	.554	0.3293	1.2699	2869.1	.0760	.718
3800	1.0197-4	286.8	2.5869	28.294	.169	1.1334	-1.0044	0.6303	1.1610	2784.3	.2051	.518	0.3302	1.2699	2912.0	.0778	.716
3900	9.8946-5	354.6	2.6045	28.179	.171	1.1837	-1.0062	0.7290	1.1484	2811.1	.2580	.484	0.3311	1.2704	2956.7	.0795	.714
4000	9.5951-5	433.3	2.6244	28.027	.174	1.2465	-1.0087	0.8479	1.1379	2841.6	.3254	.453	0.3319	1.2714	3003.7	.0813	.710
4100	9.2959-5	524.8	2.6470	27.832	.177	1.3221	-1.0117	0.9867	1.1296	2876.4	.4082	.427	0.3327	1.2730	3053.6	.0833	.706
4200	8.9951-5	631.2	2.6727	27.588	.179	1.4105	-1.0154	1.1442	1.1233	2915.9	.5059	.405	0.3334	1.2753	3107.0	.0853	.700
4300	8.6914-5	754.2	2.7016	27.291	.181	1.5107	-1.0198	1.3185	1.1188	2960.5	.6159	.388	0.3341	1.2784	3164.6	.0876	.692
4400	8.3843-5	895.4	2.7340	26.939	.184	1.6209	-1.0248	1.5063	1.1157	3010.1	.7334	.377	0.3349	1.2822	3226.9	.0901	.683
4500	8.0739-5	1055.8	2.7701	26.531	.186	1.7373	-1.0304	1.7020	1.1140	3065.0	.8503	.372	0.3357	1.2870	3294.4	.0930	.672
4600	7.7615-5	1235.7	2.8096	26.071	.188	1.8536	-1.0363	1.8956	1.1133	3125.1	.9562	.373	0.3365	1.2926	3367.4	.0961	.659
4700	7.4494-5	1434.3	2.8523	25.567	.190	1.9602	-1.0420	2.0718	1.1136	3190.4	****	.380	0.3374	1.2990	3445.8	.0997	.645
4800	7.1416-5	1648.8	2.8975	25.032	.193	2.0447	-1.0470	2.2105	1.1149	3260.2	****	.392	0.3384	1.3063	3529.0	.1034	.630
4900	6.8428-5	1874.4	2.9440	24.484	.195	2.0945	-1.0506	2.2902	1.1171	3333.9	****	.408	0.3394	1.3141	3616.0	.1074	.616
5000	6.5583-5	2104.4	2.9904	23.946	.197	2.1007	-1.0522	2.2950	1.1202	3410.2	****	.428	0.3404	1.3221	3704.9	.1114	.603
5100	6.2931-5	2330.8	3.0353	23.437	.200	2.0617	-1.0515	2.2208	1.1244	3487.9	.9850	.450	0.3414	1.3302	3793.6	.1153	.591
5200	6.0504-5	2546.2	3.0771	22.975	.202	1.9836	-1.0489	2.0776	1.1297	3565.5	.8882	.473	0.3423	1.3378	3880.0	.1190	.582
5300	5.8316-5	2744.7	3.1149	22.570	.205	1.8785	-1.0447	1.8860	1.1363	3642.4	.7802	.495	0.3432	1.3448	3962.4	.1224	.574
5400	5.6366-5	2922.6	3.1482	22.227	.207	1.7599	-1.0395	1.6700	1.1444	3718.1	.6724	.514	0.3440	1.3509	4039.5	.1255	.568

TABLE 19.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.033812; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 1.46959 LB/IN² (0.10 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4454-3	-493.1	2.1326	28.572	.095	1.0000	-1.0000	0.2874	1.3190	1916.3	.0372	.734	0.2873	1.3191	1916.4	.0372	.734
1700	2.3016-3	-464.1	2.1501	28.572	.099	1.0000	-1.0000	0.2909	1.3140	1971.6	.0393	.733	0.2907	1.3142	1971.7	.0393	.733
1800	2.1737-3	-434.9	2.1668	28.572	.103	1.0000	-1.0000	0.2941	1.3094	2025.2	.0414	.732	0.2939	1.3097	2025.4	.0414	.732
1900	2.0593-3	-405.3	2.1828	28.572	.107	1.0000	-1.0000	0.2972	1.3053	2077.4	.0434	.731	0.2968	1.3057	2077.8	.0434	.731
2000	1.9564-3	-375.5	2.1981	28.572	.111	1.0000	-1.0000	0.3001	1.3014	2128.2	.0454	.731	0.2996	1.3021	2128.7	.0453	.731
2100	1.8632-3	-345.3	2.2128	28.572	.114	1.0000	-1.0000	0.3029	1.2977	2177.7	.0474	.730	0.3022	1.2986	2178.5	.0473	.730
2200	1.7785-3	-314.9	2.2270	28.572	.118	1.0000	-1.0000	0.3057	1.2942	2225.9	.0494	.730	0.3047	1.2955	2227.0	.0492	.730
2300	1.7012-3	-284.2	2.2407	28.572	.121	1.0000	-1.0000	0.3085	1.2908	2273.0	.0514	.729	0.3071	1.2926	2274.5	.0511	.729
2400	1.6303-3	-253.2	2.2538	28.572	.125	1.0001	-1.0000	0.3113	1.2875	2318.9	.0534	.729	0.3093	1.2898	2321.0	.0530	.729
2500	1.5651-3	-221.9	2.2666	28.572	.128	1.0002	-1.0000	0.3141	1.2842	2363.7	.0554	.728	0.3114	1.2873	2366.5	.0549	.729
2600	1.5049-3	-190.3	2.2790	28.572	.132	1.0003	-1.0000	0.3171	1.2810	2407.4	.0574	.728	0.3134	1.2849	2411.2	.0567	.728
2700	1.4491-3	-158.5	2.2910	28.571	.135	1.0005	-1.0000	0.3202	1.2776	2450.1	.0595	.727	0.3153	1.2828	2455.0	.0585	.728
2800	1.3973-3	-126.3	2.3027	28.570	.138	1.0008	-1.0000	0.3236	1.2741	2491.7	.0617	.725	0.3171	1.2807	2498.1	.0603	.727
2900	1.3491-3	-93.8	2.3141	28.569	.142	1.0013	-1.0000	0.3274	1.2704	2532.1	.0641	.724	0.3188	1.2788	2540.5	.0621	.726
3000	1.3040-3	-60.8	2.3253	28.568	.145	1.0020	-1.0000	0.3318	1.2663	2571.3	.0666	.721	0.3204	1.2771	2582.2	.0639	.726
3100	1.2619-3	-27.4	2.3363	28.565	.148	1.0032	-1.0001	0.3371	1.2617	2609.2	.0695	.718	0.3219	1.2754	2623.3	.0657	.725
3200	1.2223-3	6.7	2.3471	28.562	.151	1.0049	-1.0001	0.3437	1.2565	2645.6	.0728	.713	0.3233	1.2739	2663.9	.0674	.724
3300	1.1850-3	41.4	2.3578	28.557	.154	1.0074	-1.0002	0.3520	1.2504	2680.4	.0767	.707	0.3247	1.2725	2704.0	.0692	.723
3400	1.1499-3	77.1	2.3684	28.549	.157	1.0110	-1.0003	0.3627	1.2434	2713.4	.0816	.698	0.3260	1.2713	2743.7	.0709	.723
3500	1.1166-3	114.1	2.3791	28.538	.160	1.0161	-1.0005	0.3764	1.2352	2744.5	.0878	.687	0.3272	1.2702	2783.0	.0726	.722
3600	1.0850-3	152.6	2.3900	28.522	.163	1.0234	-1.0007	0.3942	1.2259	2773.7	.0957	.672	0.3283	1.2692	2822.2	.0743	.721
3700	1.0548-3	193.1	2.4011	28.500	.166	1.0334	-1.0010	0.4172	1.2156	2801.1	.1060	.653	0.3293	1.2684	2861.3	.0759	.720
3800	1.0260-3	236.2	2.4126	28.470	.169	1.0470	-1.0015	0.4466	1.2044	2827.2	.1195	.631	0.3303	1.2677	2900.5	.0776	.719
3900	9.9823-4	282.7	2.4246	28.429	.172	1.0650	-1.0021	0.4836	1.1928	2852.4	.1371	.606	0.3312	1.2673	2940.0	.0792	.718
4000	9.7140-4	333.2	2.4374	28.374	.175	1.0882	-1.0030	0.5295	1.1814	2877.6	.1597	.579	0.3321	1.2671	2980.1	.0809	.717
4100	9.4532-4	388.9	2.4512	28.303	.177	1.1175	-1.0041	0.5851	1.1705	2903.5	.1884	.550	0.3328	1.2671	3021.0	.0825	.715
4200	9.1982-4	450.6	2.4660	28.211	.180	1.1535	-1.0056	0.6508	1.1606	2931.0	.2242	.522	0.3336	1.2675	3063.0	.0842	.713
4300	8.9475-4	519.4	2.4822	28.095	.183	1.1964	-1.0073	0.7267	1.1519	2960.7	.2678	.495	0.3342	1.2682	3106.5	.0859	.711
4400	8.6999-4	596.3	2.4999	27.953	.185	1.2464	-1.0095	0.8121	1.1447	2993.1	.3197	.470	0.3349	1.2693	3151.8	.0876	.708
4500	8.4543-4	682.1	2.5192	27.781	.188	1.3031	-1.0120	0.9061	1.1389	3028.6	.3800	.447	0.3354	1.2708	3199.1	.0894	.704
4600	8.2100-4	777.7	2.5402	27.578	.190	1.3662	-1.0149	1.0075	1.1344	3067.2	.4481	.427	0.3360	1.2728	3248.9	.0914	.699
4700	7.9665-4	883.8	2.5630	27.342	.192	1.4350	-1.0183	1.1154	1.1310	3109.1	.5229	.411	0.3365	1.2752	3301.4	.0935	.693
4800	7.7235-4	1001.0	2.5877	27.072	.195	1.5088	-1.0220	1.2282	1.1286	3154.3	.6022	.397	0.3371	1.2782	3356.8	.0957	.686
4900	7.4810-4	1129.6	2.6142	26.768	.197	1.5862	-1.0261	1.3442	1.1271	3202.8	.6831	.388	0.3376	1.2816	3415.3	.0982	.678
5000	7.2393-4	1269.8	2.6425	26.432	.199	1.6653	-1.0304	1.4607	1.1264	3254.8	.7617	.383	0.3382	1.2856	3477.3	.1009	.669
5100	6.9991-4	1421.6	2.6726	26.066	.202	1.7430	-1.0349	1.5734	1.1263	3310.1	.8331	.381	0.3388	1.2901	3542.6	.1037	.659
5200	6.7613-4	1584.2	2.7041	25.674	.204	1.8153	-1.0394	1.6766	1.1270	3368.8	.8923	.383	0.3394	1.2951	3611.4	.1069	.648
5300	6.5275-4	1756.3	2.7369	25.263	.206	1.8773	-1.0435	1.7632	1.1282	3430.5	.9346	.389	0.3401	1.3006	3683.2	.1102	.637
5400	6.2995-4	1936.0	2.7705	24.841	.209	1.9237	-1.0469	1.8256	1.1301	3495.0	.9562	.398	0.3408	1.3064	3757.7	.1136	.626

TABLE 19.3B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.033812; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 14.6959 LB/IN² (1.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4455-2	-493.1	1.9726	28.572	.095	1.0000	-1.0000	0.2874	1.3190	1916.3	.0372	.734	0.2873	1.3191	1916.4	.0372	.734
1700	2.3016-2	-464.1	1.9901	28.572	.099	1.0000	-1.0000	0.2909	1.3140	1971.6	.0393	.733	0.2907	1.3142	1971.7	.0393	.733
1800	2.1737-2	-434.9	2.0068	28.572	.103	1.0000	-1.0000	0.2941	1.3094	2025.2	.0414	.732	0.2939	1.3097	2025.4	.0414	.732
1900	2.0593-2	-405.3	2.0228	28.572	.107	1.0000	-1.0000	0.2972	1.3053	2077.4	.0434	.731	0.2968	1.3057	2077.8	.0434	.731
2000	1.9564-2	-375.5	2.0381	28.572	.111	1.0000	-1.0000	0.3001	1.3014	2128.2	.0454	.731	0.2996	1.3021	2128.7	.0453	.731
2100	1.8632-2	-345.3	2.0528	28.572	.114	1.0000	-1.0000	0.3029	1.2978	2177.7	.0474	.730	0.3022	1.2986	2178.5	.0473	.730
2200	1.7785-2	-314.9	2.0670	28.572	.118	1.0000	-1.0000	0.3057	1.2943	2226.0	.0494	.730	0.3047	1.2955	2227.0	.0492	.730
2300	1.7012-2	-284.2	2.0806	28.572	.121	1.0000	-1.0000	0.3084	1.2909	2273.0	.0513	.729	0.3071	1.2926	2274.5	.0511	.729
2400	1.6303-2	-253.2	2.0938	28.572	.125	1.0000	-1.0000	0.3111	1.2877	2319.0	.0533	.729	0.3093	1.2898	2321.0	.0530	.729
2500	1.5651-2	-221.9	2.1066	28.572	.128	1.0001	-1.0000	0.3138	1.2845	2363.9	.0553	.728	0.3114	1.2873	2366.5	.0549	.729
2600	1.5049-2	-190.4	2.1189	28.572	.132	1.0001	-1.0000	0.3166	1.2814	2407.9	.0573	.728	0.3134	1.2849	2411.1	.0567	.728
2700	1.4491-2	-158.6	2.1309	28.572	.135	1.0002	-1.0000	0.3194	1.2784	2450.8	.0593	.727	0.3153	1.2827	2455.0	.0585	.728
2800	1.3974-2	-126.6	2.1426	28.571	.138	1.0004	-1.0000	0.3223	1.2753	2492.7	.0614	.726	0.3171	1.2807	2498.1	.0603	.727
2900	1.3492-2	-94.2	2.1539	28.571	.142	1.0006	-1.0000	0.3253	1.2721	2533.8	.0635	.725	0.3188	1.2788	2540.4	.0621	.726
3000	1.3041-2	-61.5	2.1650	28.570	.145	1.0009	-1.0000	0.3286	1.2689	2573.8	.0657	.724	0.3204	1.2770	2582.1	.0639	.726
3100	1.2620-2	-28.4	2.1759	28.569	.148	1.0014	-1.0000	0.3323	1.2655	2612.9	.0681	.722	0.3219	1.2754	2623.1	.0657	.725
3200	1.2225-2	5.0	2.1865	28.567	.151	1.0021	-1.0001	0.3363	1.2618	2651.0	.0706	.720	0.3234	1.2739	2663.6	.0674	.724
3300	1.1854-2	38.8	2.1969	28.565	.154	1.0031	-1.0001	0.3410	1.2579	2688.0	.0733	.718	0.3247	1.2724	2703.5	.0692	.724
3400	1.1504-2	73.2	2.2071	28.562	.157	1.0045	-1.0001	0.3466	1.2536	2723.9	.0763	.714	0.3260	1.2711	2742.9	.0709	.723
3500	1.1173-2	108.2	2.2173	28.557	.160	1.0064	-1.0002	0.3531	1.2489	2758.7	.0797	.710	0.3272	1.2699	2781.8	.0726	.722
3600	1.0861-2	143.9	2.2273	28.551	.163	1.0091	-1.0003	0.3611	1.2436	2792.2	.0837	.704	0.3283	1.2688	2820.4	.0743	.721
3700	1.0564-2	180.5	2.2374	28.543	.166	1.0127	-1.0004	0.3708	1.2377	2824.4	.0884	.697	0.3293	1.2678	2858.6	.0759	.721
3800	1.0282-2	218.1	2.2474	28.531	.169	1.0175	-1.0005	0.3827	1.2312	2855.3	.0940	.688	0.3303	1.2669	2896.5	.0775	.720
3900	1.0013-2	257.1	2.2575	28.516	.172	1.0239	-1.0008	0.3972	1.2240	2885.0	.1008	.677	0.3313	1.2662	2934.3	.0792	.719
4000	9.7558-3	297.7	2.2678	28.496	.175	1.0321	-1.0011	0.4149	1.2163	2913.6	.1092	.664	0.3322	1.2655	2971.9	.0808	.719
4100	9.5091-3	340.2	2.2783	28.470	.178	1.0427	-1.0015	0.4364	1.2082	2941.2	.1195	.648	0.3330	1.2650	3009.6	.0824	.718
4200	9.2717-3	385.1	2.2891	28.436	.180	1.0560	-1.0020	0.4621	1.1998	2968.3	.1322	.630	0.3337	1.2646	3047.4	.0839	.717
4300	9.0425-3	432.8	2.3003	28.394	.183	1.0724	-1.0026	0.4926	1.1914	2995.1	.1476	.611	0.3344	1.2644	3085.6	.0855	.716
4400	8.8204-3	483.8	2.3121	28.340	.186	1.0922	-1.0034	0.5281	1.1832	3022.2	.1662	.590	0.3351	1.2644	3124.1	.0871	.715
4500	8.6043-3	538.6	2.3244	28.274	.188	1.1158	-1.0044	0.5687	1.1755	3050.0	.1884	.569	0.3357	1.2646	3163.3	.0887	.713
4600	8.3934-3	597.7	2.3374	28.194	.191	1.1432	-1.0056	0.6142	1.1685	3078.8	.2145	.547	0.3363	1.2650	3203.3	.0903	.711
4700	8.1869-3	661.6	2.3511	28.098	.194	1.1743	-1.0071	0.6643	1.1623	3109.1	.2448	.525	0.3368	1.2656	3244.3	.0920	.709
4800	7.9841-3	730.7	2.3656	27.985	.196	1.2091	-1.0087	0.7184	1.1570	3141.1	.2794	.504	0.3373	1.2665	3286.4	.0936	.706
4900	7.7845-3	805.4	2.3810	27.854	.199	1.2471	-1.0106	0.7759	1.1526	3175.0	.3182	.484	0.3377	1.2676	3329.7	.0953	.703
5000	7.5877-3	885.9	2.3973	27.704	.201	1.2882	-1.0126	0.8360	1.1490	3210.9	.3610	.465	0.3381	1.2690	3374.5	.0971	.700
5100	7.3934-3	972.6	2.4145	27.535	.203	1.3319	-1.0149	0.8981	1.1462	3248.9	.4075	.448	0.3385	1.2707	3420.8	.0989	.696
5200	7.2015-3	1065.6	2.4325	27.346	.206	1.3780	-1.0175	0.9617	1.1440	3288.8	.4571	.433	0.3389	1.2727	3468.8	.1009	.691
5300	7.0117-3	1165.0	2.4515	27.137	.208	1.4260	-1.0202	1.0264	1.1426	3330.9	.5089	.420	0.3393	1.2750	3518.6	.1029	.686
5400	6.8242-3	1270.9	2.4713	26.910	.211	1.4756	-1.0231	1.0915	1.1417	3375.0	.5619	.409	0.3397	1.2775	3570.2	.1051	.681

TABLE 19.4B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.033812; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 146.959 LB/IN² (10.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4454-1	-493.0	1.8125	28.572	.095	1.0000	-1.0000	0.2874	1.3190	1916.3	.0372	.734	0.2873	1.3191	1916.4	.0372	.734
1700	2.3016-1	-464.1	1.8300	28.572	.099	1.0000	-1.0000	0.2909	1.3140	1971.6	.0393	.733	0.2907	1.3142	1971.7	.0393	.733
1800	2.1737-1	-434.9	1.8468	28.572	.103	1.0000	-1.0000	0.2941	1.3094	2025.2	.0414	.732	0.2939	1.3097	2025.4	.0414	.732
1900	2.0593-1	-405.3	1.8627	28.572	.107	1.0000	-1.0000	0.2972	1.3053	2077.4	.0434	.731	0.2968	1.3057	2077.8	.0434	.731
2000	1.9564-1	-375.5	1.8781	28.572	.111	1.0000	-1.0000	0.3001	1.3014	2128.2	.0454	.731	0.2996	1.3021	2128.7	.0453	.731
2100	1.8632-1	-345.3	1.8928	28.572	.114	1.0000	-1.0000	0.3029	1.2978	2177.7	.0474	.730	0.3022	1.2986	2178.5	.0473	.730
2200	1.7785-1	-314.9	1.9069	28.572	.118	1.0000	-1.0000	0.3057	1.2943	2226.0	.0494	.730	0.3047	1.2955	2227.0	.0492	.730
2300	1.7012-1	-284.2	1.9206	28.572	.121	1.0000	-1.0000	0.3084	1.2910	2273.1	.0513	.729	0.3071	1.2926	2274.5	.0511	.729
2400	1.6303-1	-253.2	1.9338	28.572	.125	1.0000	-1.0000	0.3110	1.2878	2319.1	.0533	.729	0.3093	1.2898	2320.9	.0530	.729
2500	1.5651-1	-222.0	1.9465	28.572	.128	1.0000	-1.0000	0.3137	1.2847	2364.1	.0553	.729	0.3114	1.2873	2366.5	.0549	.729
2600	1.5049-1	-190.5	1.9589	28.572	.132	1.0001	-1.0000	0.3163	1.2817	2408.1	.0572	.728	0.3134	1.2849	2411.1	.0567	.728
2700	1.4491-1	-158.7	1.9708	28.572	.135	1.0001	-1.0000	0.3189	1.2787	2451.1	.0592	.728	0.3153	1.2827	2455.0	.0585	.728
2800	1.3974-1	-126.7	1.9825	28.572	.138	1.0002	-1.0000	0.3216	1.2758	2493.3	.0612	.727	0.3171	1.2807	2498.0	.0603	.727
2900	1.3492-1	-94.4	1.9938	28.572	.142	1.0003	-1.0000	0.3244	1.2729	2534.5	.0633	.726	0.3188	1.2788	2540.4	.0621	.726
3000	1.3042-1	-61.8	2.0049	28.571	.145	1.0005	-1.0000	0.3272	1.2700	2575.0	.0653	.725	0.3204	1.2770	2582.0	.0639	.726
3100	1.2621-1	-28.9	2.0156	28.571	.148	1.0007	-1.0000	0.3301	1.2671	2614.6	.0675	.724	0.3219	1.2754	2623.0	.0657	.725
3200	1.2226-1	4.2	2.0262	28.570	.151	1.0010	-1.0000	0.3332	1.2642	2653.3	.0697	.723	0.3234	1.2738	2663.4	.0674	.724
3300	1.1855-1	37.7	2.0365	28.569	.154	1.0014	-1.0000	0.3366	1.2612	2691.3	.0719	.721	0.3247	1.2724	2703.2	.0692	.724
3400	1.1506-1	71.5	2.0466	28.567	.157	1.0020	-1.0001	0.3402	1.2580	2728.5	.0743	.720	0.3260	1.2711	2742.5	.0709	.723
3500	1.1177-1	105.8	2.0565	28.565	.160	1.0028	-1.0001	0.3442	1.2548	2764.8	.0769	.717	0.3272	1.2698	2781.3	.0726	.722
3600	1.0865-1	140.4	2.0663	28.563	.163	1.0039	-1.0001	0.3487	1.2513	2800.3	.0796	.715	0.3283	1.2687	2819.6	.0743	.721
3700	1.0570-1	175.5	2.0759	28.559	.166	1.0053	-1.0002	0.3537	1.2477	2834.9	.0825	.712	0.3294	1.2676	2857.5	.0759	.721
3800	1.0290-1	211.2	2.0854	28.555	.169	1.0071	-1.0002	0.3595	1.2437	2868.7	.0858	.709	0.3304	1.2666	2895.0	.0775	.720
3900	1.0024-1	247.4	2.0948	28.548	.172	1.0094	-1.0003	0.3662	1.2395	2901.6	.0894	.705	0.3313	1.2658	2932.1	.0791	.720
4000	9.7710-2	284.4	2.1042	28.541	.175	1.0125	-1.0004	0.3740	1.2350	2933.6	.0935	.699	0.3322	1.2650	2968.9	.0807	.719
4100	9.5293-2	322.3	2.1135	28.531	.178	1.0163	-1.0005	0.3830	1.2302	2964.8	.0982	.693	0.3330	1.2642	3005.5	.0823	.719
4200	9.2983-2	361.1	2.1229	28.518	.180	1.0211	-1.0007	0.3936	1.2251	2995.2	.1036	.686	0.3338	1.2636	3041.8	.0839	.718
4300	9.0769-2	401.1	2.1323	28.502	.183	1.0271	-1.0010	0.4059	1.2197	3024.8	.1098	.677	0.3345	1.2631	3078.0	.0855	.717
4400	8.8644-2	442.3	2.1418	28.482	.186	1.0344	-1.0013	0.4201	1.2141	3053.7	.1171	.667	0.3352	1.2626	3114.2	.0870	.716
4500	8.6599-2	485.2	2.1514	28.457	.189	1.0433	-1.0016	0.4366	1.2083	3082.2	.1256	.656	0.3359	1.2622	3150.3	.0886	.716
4600	8.4626-2	529.7	2.1612	28.427	.191	1.0539	-1.0021	0.4553	1.2024	3110.3	.1355	.643	0.3365	1.2620	3186.5	.0901	.715
4700	8.2719-2	576.3	2.1712	28.390	.194	1.0663	-1.0026	0.4766	1.1966	3138.4	.1470	.629	0.3371	1.2619	3222.9	.0917	.713
4800	8.0870-2	625.1	2.1815	28.346	.197	1.0808	-1.0033	0.5003	1.1909	3166.5	.1602	.614	0.3376	1.2619	3259.5	.0932	.712
4900	7.9075-2	676.4	2.1921	28.294	.199	1.0973	-1.0040	0.5264	1.1855	3195.0	.1752	.599	0.3381	1.2620	3296.4	.0948	.711
5000	7.7327-2	730.5	2.2030	28.234	.202	1.1158	-1.0049	0.5548	1.1805	3224.1	.1921	.583	0.3385	1.2623	3333.8	.0963	.709
5100	7.5622-2	787.5	2.2143	28.163	.204	1.1363	-1.0059	0.5852	1.1760	3254.0	.2111	.566	0.3389	1.2627	3371.8	.0979	.708
5200	7.3956-2	847.6	2.2259	28.083	.207	1.1586	-1.0071	0.6172	1.1720	3284.8	.2321	.550	0.3393	1.2633	3410.3	.0994	.706
5300	7.2325-2	910.9	2.2380	27.992	.209	1.1826	-1.0083	0.6505	1.1685	3316.6	.2551	.534	0.3397	1.2640	3449.5	.1010	.704
5400	7.0727-2	977.7	2.2505	27.890	.212	1.2080	-1.0097	0.6848	1.1655	3349.6	.2801	.518	0.3400	1.2649	3489.5	.1026	.702

TABLE 19.5B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.033812; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 734.797 LB/IN² (50.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2227 0	-493.0	1.7007	28.572	.095	1.0000	-1.0000	0.2874	1.3190	1916.3	.0372	.734	0.2873	1.3191	1916.4	.0372	.734
1700	1.1508 0	-464.1	1.7182	28.572	.099	1.0000	-1.0000	0.2909	1.3140	1971.6	.0393	.733	0.2907	1.3142	1971.7	.0393	.733
1800	1.0869 0	-434.9	1.7349	28.572	.103	1.0000	-1.0000	0.2941	1.3094	2025.2	.0414	.732	0.2939	1.3097	2025.4	.0414	.732
1900	1.0297 0	-405.3	1.7509	28.572	.107	1.0000	-1.0000	0.2972	1.3053	2077.4	.0434	.731	0.2968	1.3057	2077.8	.0434	.731
2000	9.7818-1	-375.5	1.7662	28.572	.111	1.0000	-1.0000	0.3001	1.3014	2128.2	.0454	.731	0.2996	1.3021	2128.7	.0453	.731
2100	9.3161-1	-345.3	1.7809	28.572	.114	1.0000	-1.0000	0.3029	1.2978	2177.7	.0474	.730	0.3022	1.2986	2178.4	.0473	.730
2200	8.8926-1	-314.9	1.7951	28.572	.118	1.0000	-1.0000	0.3057	1.2943	2226.0	.0494	.730	0.3047	1.2955	2227.0	.0492	.730
2300	8.5060-1	-284.2	1.8087	28.572	.121	1.0000	-1.0000	0.3084	1.2910	2273.1	.0513	.729	0.3071	1.2926	2274.5	.0511	.729
2400	8.1516-1	-253.2	1.8219	28.572	.125	1.0000	-1.0000	0.3110	1.2878	2319.1	.0533	.729	0.3093	1.2898	2320.9	.0530	.729
2500	7.8255-1	-222.0	1.8346	28.572	.128	1.0000	-1.0000	0.3136	1.2847	2364.1	.0552	.729	0.3114	1.2873	2366.5	.0549	.729
2600	7.5245-1	-190.5	1.8470	28.572	.132	1.0000	-1.0000	0.3162	1.2817	2408.1	.0572	.728	0.3134	1.2849	2411.1	.0567	.728
2700	7.2458-1	-158.7	1.8590	28.572	.135	1.0001	-1.0000	0.3188	1.2788	2451.2	.0592	.728	0.3153	1.2827	2455.0	.0585	.728
2800	6.9870-1	-126.7	1.8706	28.572	.138	1.0001	-1.0000	0.3214	1.2760	2493.4	.0612	.727	0.3171	1.2807	2498.0	.0603	.727
2900	6.7460-1	-94.5	1.8819	28.572	.142	1.0002	-1.0000	0.3240	1.2732	2534.8	.0632	.726	0.3188	1.2788	2540.3	.0621	.726
3000	6.5211-1	-61.9	1.8930	28.572	.145	1.0003	-1.0000	0.3266	1.2705	2575.4	.0652	.725	0.3204	1.2770	2582.0	.0639	.726
3100	6.3107-1	-29.1	1.9037	28.572	.148	1.0004	-1.0000	0.3293	1.2677	2615.1	.0672	.725	0.3219	1.2754	2623.0	.0657	.725
3200	6.1134-1	3.9	1.9142	28.571	.151	1.0006	-1.0000	0.3321	1.2650	2654.2	.0693	.724	0.3234	1.2738	2663.4	.0674	.724
3300	5.9280-1	37.3	1.9245	28.570	.154	1.0008	-1.0000	0.3350	1.2623	2692.4	.0715	.722	0.3247	1.2724	2703.2	.0692	.724
3400	5.7535-1	71.0	1.9345	28.570	.157	1.0012	-1.0000	0.3380	1.2596	2730.0	.0737	.721	0.3260	1.2710	2742.4	.0709	.723
3500	5.5889-1	104.9	1.9444	28.568	.160	1.0016	-1.0001	0.3412	1.2568	2766.8	.0760	.720	0.3272	1.2698	2781.1	.0726	.722
3600	5.4333-1	139.2	1.9540	28.567	.163	1.0022	-1.0001	0.3447	1.2539	2803.0	.0783	.718	0.3283	1.2686	2819.4	.0743	.722
3700	5.2861-1	173.9	1.9635	28.565	.166	1.0030	-1.0001	0.3484	1.2510	2838.4	.0808	.717	0.3294	1.2676	2857.1	.0759	.721
3800	5.1466-1	208.9	1.9729	28.562	.169	1.0039	-1.0001	0.3524	1.2480	2873.2	.0834	.715	0.3304	1.2666	2894.5	.0775	.720
3900	5.0140-1	244.4	1.9821	28.559	.172	1.0052	-1.0002	0.3569	1.2448	2907.3	.0862	.712	0.3313	1.2656	2931.4	.0791	.720
4000	4.8879-1	280.3	1.9912	28.555	.175	1.0067	-1.0002	0.3618	1.2416	2940.6	.0892	.709	0.3322	1.2648	2968.0	.0807	.719
4100	4.7678-1	316.7	2.0002	28.549	.178	1.0087	-1.0003	0.3674	1.2382	2973.4	.0924	.706	0.3330	1.2640	3004.2	.0823	.719
4200	4.6532-1	353.8	2.0091	28.542	.180	1.0111	-1.0004	0.3736	1.2346	3005.4	.0960	.702	0.3338	1.2633	3040.1	.0839	.718
4300	4.5436-1	391.5	2.0180	28.534	.183	1.0141	-1.0005	0.3807	1.2308	3036.8	.1000	.698	0.3346	1.2626	3075.8	.0854	.718
4400	4.4387-1	429.9	2.0268	28.524	.186	1.0178	-1.0007	0.3886	1.2269	3067.5	.1044	.692	0.3353	1.2621	3111.2	.0870	.717
4500	4.3382-1	469.2	2.0356	28.511	.189	1.0222	-1.0008	0.3976	1.2228	3097.7	.1094	.686	0.3359	1.2616	3146.4	.0885	.716
4600	4.2415-1	509.5	2.0445	28.495	.191	1.0275	-1.0011	0.4078	1.2186	3127.4	.1150	.679	0.3366	1.2611	3181.5	.0901	.715
4700	4.1486-1	550.8	2.0534	28.477	.194	1.0338	-1.0013	0.4192	1.2142	3156.6	.1213	.671	0.3371	1.2608	3216.5	.0916	.714
4800	4.0589-1	593.4	2.0623	28.454	.197	1.0411	-1.0017	0.4321	1.2098	3185.5	.1284	.662	0.3377	1.2605	3251.5	.0931	.713
4900	3.9724-1	637.3	2.0714	28.428	.199	1.0497	-1.0020	0.4463	1.2054	3214.1	.1364	.653	0.3382	1.2603	3286.5	.0947	.712
5000	3.8887-1	682.7	2.0806	28.396	.202	1.0595	-1.0025	0.4620	1.2011	3242.7	.1453	.642	0.3387	1.2602	3321.5	.0962	.711
5100	3.8075-1	729.8	2.0899	28.360	.205	1.0706	-1.0030	0.4792	1.1968	3271.2	.1554	.631	0.3392	1.2602	3356.7	.0977	.710
5200	3.7288-1	778.6	2.0994	28.318	.207	1.0830	-1.0036	0.4977	1.1928	3300.0	.1665	.619	0.3396	1.2603	3392.1	.0992	.709
5300	3.6522-1	829.3	2.1090	28.269	.210	1.0967	-1.0043	0.5175	1.1889	3329.1	.1788	.607	0.3400	1.2604	3427.7	.1007	.708
5400	3.5776-1	882.1	2.1189	28.215	.212	1.1116	-1.0051	0.5385	1.1854	3358.6	.1923	.594	0.3403	1.2607	3463.6	.1022	.707

TABLE 19C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.033812; EQUIV.RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522;
WET AIR (W/A= 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					GAS PHASE PROPERTIES										T R
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R	DENSITY LB/FT ³	MW	VIS LB/ FT S	DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN R	
PRESSURE = 0.01 ATM																
360	1.211-3	-901.0	1.7243	28.572	0.2545	1.133-3	29.777	.0317	1.000	-1.000	0.2362	1.3935	915	.0102	.734	360
400	1.086-3	-888.8	1.7561	28.572	0.4138	1.018-3	29.738	.0346	1.000	-1.000	0.2369	1.3926	965	.0112	.731	400
440	9.486-4	-850.4	1.8465	28.572	2.0922	9.112-4	29.276	.0364	1.000	-1.000	0.2422	1.3890	1019	.0119	.739	440
PRESSURE = 0.10 ATM																
360	1.211-2	-901.1	1.5804	28.572	0.2460	1.133-2	29.778	.0317	1.000	-1.000	0.2362	1.3935	915	.0102	.734	360
400	1.090-2	-891.0	1.6069	28.572	0.2643	1.019-2	29.774	.0347	1.000	-1.000	0.2365	1.3929	965	.0112	.730	400
440	9.866-3	-878.3	1.6371	28.572	0.4209	9.252-3	29.728	.0374	1.000	-1.000	0.2373	1.3917	1012	.0122	.727	440
480	8.767-3	-846.3	1.7060	28.572	1.4892	8.379-3	29.370	.0394	1.000	-1.000	0.2417	1.3885	1062	.0130	.733	480
520	7.524-3	-782.3	1.8354	28.572	0.2512	7.524-3	28.572	.0403	1.000	-1.000	0.2512	1.3825	1118	.0135	.751	520
PRESSURE = 1.00 ATM																
360	1.211-1	-901.1	1.4367	28.572	0.2452	1.133-1	29.779	.0317	1.000	-1.000	0.2362	1.3935	915	.0102	.734	360
400	1.090-1	-891.2	1.4628	28.572	0.2495	1.019-1	29.778	.0347	1.000	-1.000	0.2364	1.3929	965	.0112	.730	400
440	9.903-2	-880.9	1.4872	28.572	0.2676	9.266-2	29.774	.0375	1.000	-1.000	0.2368	1.3920	1011	.0123	.726	440
480	9.051-2	-868.7	1.5136	28.572	0.3697	8.484-2	29.738	.0403	1.000	-1.000	0.2377	1.3907	1056	.0132	.724	480
520	8.236-2	-840.1	1.5712	28.572	0.6695	7.788-2	29.572	.0426	1.000	-1.000	0.2401	1.3884	1102	.0141	.726	520
537	7.871-2	-826.9	1.5961	28.572	0.9291	7.505-2	29.412	.0433	1.000	-1.000	0.2421	1.3868	1122	.0144	.730	537
560	7.280-2	-798.5	1.6477	28.572	1.5738	7.095-2	29.015	.0439	1.000	-1.000	0.2469	1.3836	1152	.0147	.739	560
600	6.521-2	-762.1	1.7115	28.572	0.2528	6.521-2	28.572	.0455	1.000	-1.000	0.2528	1.3793	1200	.0153	.750	600
PRESSURE = 10.00 ATM																
360	1.209 0	-901.1	1.2931	28.572	0.2451	1.133 0	29.779	.0317	1.000	-1.000	0.2362	1.3935	915	.0102	.734	360
400	1.089 0	-891.2	1.3191	28.572	0.2480	1.019 0	29.779	.0347	1.000	-1.000	0.2364	1.3929	965	.0112	.730	400
440	9.897-1	-881.2	1.3429	28.572	0.2524	9.268-1	29.778	.0376	1.000	-1.000	0.2368	1.3920	1011	.0123	.726	440
480	9.071-1	-870.9	1.3653	28.572	0.2653	8.495-1	29.774	.0403	1.000	-1.000	0.2373	1.3909	1056	.0132	.723	480
520	8.362-1	-849.7	1.4080	28.572	0.3242	7.837-1	29.758	.0430	1.000	-1.000	0.2381	1.3895	1099	.0142	.722	520
537	8.092-1	-844.1	1.4186	28.572	0.3479	7.589-1	29.742	.0440	1.000	-1.000	0.2385	1.3888	1116	.0146	.722	537
560	7.729-1	-835.4	1.4344	28.572	0.4014	7.263-1	29.702	.0455	1.000	-1.000	0.2393	1.3877	1141	.0151	.723	560
600	7.119-1	-816.2	1.4675	28.572	0.5831	6.744-1	29.547	.0476	1.000	-1.000	0.2418	1.3850	1183	.0158	.727	600
640	6.464-1	-786.1	1.5159	28.572	0.9705	6.244-1	29.181	.0493	1.000	-1.000	0.2467	1.3810	1227	.0165	.736	640
680	5.754-1	-741.8	1.5832	28.572	0.2547	5.754-1	28.572	.0504	1.000	-1.000	0.2547	1.3754	1276	.0172	.748	680
PRESSURE = 50.00 ATM																
360	6.014 0	-901.1	1.1927	28.572	0.2451	5.664 0	29.778	.0317	1.000	-1.000	0.2362	1.3935	915	.0102	.734	360
400	5.416 0	-891.2	1.2187	28.572	0.2478	5.097 0	29.779	.0347	1.000	-1.000	0.2364	1.3929	964	.0112	.730	400
440	4.927 0	-881.2	1.2425	28.572	0.2511	4.634 0	29.778	.0376	1.000	-1.000	0.2368	1.3920	1011	.0123	.726	440
480	4.518 0	-871.1	1.2645	28.572	0.2561	4.248 0	29.778	.0403	1.000	-1.000	0.2373	1.3909	1056	.0132	.723	480
520	4.173 0	-850.6	1.3059	28.572	0.2946	3.921 0	29.774	.0430	1.000	-1.000	0.2379	1.3896	1098	.0142	.721	520
537	4.042 0	-845.6	1.3152	28.572	0.2994	3.798 0	29.771	.0441	1.000	-1.000	0.2382	1.3890	1116	.0146	.721	537
560	3.872 0	-838.5	1.3282	28.572	0.3101	3.639 0	29.763	.0456	1.000	-1.000	0.2387	1.3880	1140	.0151	.721	560
600	3.606 0	-825.5	1.3506	28.572	0.3454	3.393 0	29.732	.0480	1.000	-1.000	0.2398	1.3861	1179	.0159	.722	600
640	3.361 0	-810.4	1.3749	28.572	0.4145	3.173 0	29.659	.0503	1.000	-1.000	0.2414	1.3838	1218	.0168	.725	640
680	3.123 0	-791.6	1.4034	28.572	0.5363	2.971 0	29.507	.0524	1.000	-1.000	0.2440	1.3809	1258	.0175	.728	680
720	2.880 0	-766.5	1.4393	28.572	0.7377	2.779 0	29.226	.0541	1.000	-1.000	0.2482	1.3770	1299	.0183	.734	720
760	2.616 0	-731.0	1.4872	28.572	1.0639	2.590 0	28.749	.0554	1.000	-1.000	0.2548	1.3720	1343	.0190	.743	760

TABLE 20A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.050718; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7761; MW = 28.6252;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .10097; H2O= .12962; N2= .71304; O2= .04782; AR= .00855

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
360	1.0889-1	5.4444 0	-1112.1	1.8992	1.7395	1.5797	1.4200	1.3083	0.2508	1.3823	929.7	.0279	.0090	.7826	360
380	1.0316-1	5.1579 0	-1107.0	1.9128	1.7530	1.5933	1.4336	1.3219	0.2511	1.3818	955.0	.0294	.0095	.7778	380
400	9.8000-2	4.9000 0	-1102.0	1.9257	1.7659	1.6062	1.4464	1.3348	0.2514	1.3811	979.6	.0309	.0100	.7736	400
420	9.3333-2	4.6667 0	-1097.0	1.9379	1.7782	1.6185	1.4587	1.3471	0.2517	1.3804	1003.5	.0324	.0106	.7699	420
440	8.9091-2	4.4545 0	-1091.9	1.9497	1.7899	1.6302	1.4704	1.3588	0.2521	1.3797	1026.9	.0338	.0111	.7669	440
460	8.5217-2	4.2609 0	-1086.9	1.9609	1.8011	1.6414	1.4817	1.3700	0.2525	1.3789	1049.6	.0352	.0116	.7643	460
480	8.1666-2	4.0833 0	-1081.8	1.9716	1.8119	1.6521	1.4924	1.3808	0.2529	1.3781	1071.9	.0366	.0121	.7622	480
500	7.8400-2	3.9200 0	-1076.8	1.9820	1.8222	1.6625	1.5027	1.3911	0.2533	1.3772	1093.6	.0379	.0126	.7606	500
520	7.5384-2	3.7692 0	-1071.7	1.9919	1.8322	1.6724	1.5127	1.4010	0.2538	1.3763	1114.9	.0393	.0131	.7594	520
537	7.3043-2	3.6521 0	-1067.5	1.9999	1.8402	1.6804	1.5207	1.4090	0.2541	1.3755	1132.3	.0404	.0135	.7587	537
540	7.2592-2	3.6296 0	-1066.6	2.0015	1.8418	1.6820	1.5223	1.4106	0.2542	1.3753	1135.8	.0406	.0136	.7586	540
560	7.0000-2	3.5000 0	-1061.5	2.0107	1.8510	1.6913	1.5315	1.4199	0.2547	1.3743	1156.2	.0419	.0141	.7585	560
580	6.7586-2	3.3793 0	-1056.4	2.0197	1.8600	1.7002	1.5405	1.4288	0.2552	1.3733	1176.2	.0432	.0145	.7585	580
600	6.5333-2	3.2667 0	-1051.3	2.0284	1.8686	1.7089	1.5491	1.4375	0.2558	1.3722	1195.8	.0445	.0150	.7587	600
620	6.3226-2	3.1613 0	-1046.2	2.0367	1.8770	1.7173	1.5575	1.4459	0.2563	1.3711	1215.1	.0457	.0154	.7589	620
640	6.1250-2	3.0625 0	-1041.1	2.0449	1.8852	1.7254	1.5657	1.4540	0.2569	1.3700	1234.1	.0469	.0159	.7586	640
660	5.9394-2	2.9697 0	-1035.9	2.0528	1.8931	1.7333	1.5736	1.4619	0.2575	1.3688	1252.7	.0482	.0164	.7579	660
680	5.7647-2	2.8823 0	-1030.8	2.0605	1.9008	1.7410	1.5813	1.4696	0.2581	1.3676	1271.0	.0494	.0168	.7570	680
700	5.6000-2	2.8000 0	-1025.6	2.0680	1.9083	1.7485	1.5888	1.4771	0.2587	1.3664	1288.9	.0506	.0173	.7561	700
720	5.4444-2	2.7222 0	-1020.4	2.0753	1.9156	1.7558	1.5961	1.4844	0.2593	1.3652	1306.6	.0518	.0178	.7553	720
740	5.2973-2	2.6486 0	-1015.2	2.0824	1.9227	1.7629	1.6032	1.4915	0.2600	1.3640	1324.1	.0529	.0182	.7548	740
760	5.1579-2	2.5789 0	-1010.0	2.0893	1.9296	1.7699	1.6101	1.4985	0.2606	1.3627	1341.2	.0541	.0187	.7545	760
780	5.0256-2	2.5128 0	-1004.8	2.0961	1.9364	1.7766	1.6169	1.5052	0.2613	1.3614	1358.1	.0552	.0191	.7543	780
800	4.9000-2	2.4500 0	-999.6	2.1028	1.9430	1.7833	1.6235	1.5119	0.2620	1.3601	1374.8	.0563	.0196	.7541	800
820	4.7805-2	2.3902 0	-994.3	2.1092	1.9495	1.7897	1.6300	1.5184	0.2627	1.3588	1391.2	.0574	.0200	.7540	820
840	4.6667-2	2.3333 0	-989.1	2.1156	1.9558	1.7961	1.6363	1.5247	0.2634	1.3575	1407.3	.0585	.0204	.7540	840
860	4.5581-2	2.2791 0	-983.8	2.1218	1.9620	1.8023	1.6426	1.5309	0.2641	1.3562	1423.3	.0596	.0209	.7540	860
880	4.4545-2	2.2273 0	-978.5	2.1279	1.9681	1.8084	1.6486	1.5370	0.2649	1.3549	1439.1	.0606	.0213	.7541	880
900	4.3555-2	2.1778 0	-973.2	2.1338	1.9741	1.8143	1.6546	1.5429	0.2656	1.3535	1454.6	.0617	.0217	.7541	900
920	4.2609-2	2.1304 0	-967.9	2.1397	1.9799	1.8202	1.6604	1.5488	0.2664	1.3522	1469.9	.0628	.0222	.7539	920
940	4.1702-2	2.0851 0	-962.6	2.1454	1.9857	1.8259	1.6662	1.5545	0.2671	1.3508	1485.1	.0638	.0226	.7536	940
960	4.0833-2	2.0417 0	-957.2	2.1510	1.9913	1.8316	1.6718	1.5602	0.2679	1.3495	1500.0	.0648	.0231	.7533	960
980	4.0000-2	2.0000 0	-951.8	2.1566	1.9968	1.8371	1.6773	1.5657	0.2687	1.3481	1514.8	.0659	.0235	.7530	980
1000	3.9200-2	1.9600 0	-946.5	2.1620	2.0023	1.8425	1.6828	1.5711	0.2694	1.3467	1529.4	.0669	.0239	.7526	1000
1020	3.8431-2	1.9216 0	-941.1	2.1673	2.0076	1.8479	1.6881	1.5765	0.2702	1.3454	1543.9	.0679	.0244	.7523	1020
1040	3.7692-2	1.8846 0	-935.6	2.1726	2.0129	1.8531	1.6934	1.5817	0.2710	1.3440	1558.2	.0689	.0248	.7519	1040
1060	3.6981-2	1.8491 0	-930.2	2.1778	2.0180	1.8583	1.6985	1.5869	0.2718	1.3427	1572.3	.0699	.0253	.7514	1060
1080	3.6296-2	1.8148 0	-924.8	2.1829	2.0231	1.8634	1.7036	1.5920	0.2726	1.3413	1586.2	.0709	.0257	.7510	1080
1100	3.5636-2	1.7818 0	-919.3	2.1879	2.0281	1.8684	1.7086	1.5970	0.2734	1.3400	1600.1	.0719	.0262	.7505	1100
1120	3.5000-2	1.7500 0	-913.8	2.1928	2.0331	1.8733	1.7136	1.6019	0.2742	1.3387	1613.7	.0728	.0266	.7500	1120
1140	3.4386-2	1.7193 0	-908.3	2.1977	2.0379	1.8782	1.7184	1.6068	0.2750	1.3373	1627.3	.0738	.0271	.7495	1140

TABLE 20A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.050718; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7761; MW = 28.6252;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .10097; H2O= .12962; N2= .71304; O2= .04782; AR= .00855

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
1160	3.3793-2	1.6897 0	-902.8	2.2025	2.0427	1.8830	1.7232	1.6116	0.2759	1.3360	1640.7	.0748	.0275	.7490	1160
1180	3.3220-2	1.6610 0	-897.3	2.2072	2.0474	1.8877	1.7280	1.6163	0.2767	1.3347	1653.9	.0757	.0280	.7485	1180
1200	3.2667-2	1.6333 0	-891.8	2.2118	2.0521	1.8924	1.7326	1.6210	0.2775	1.3334	1667.1	.0767	.0284	.7480	1200
1220	3.2131-2	1.6066 0	-886.2	2.2164	2.0567	1.8969	1.7372	1.6255	0.2783	1.3321	1680.1	.0776	.0289	.7475	1220
1240	3.1613-2	1.5806 0	-880.6	2.2210	2.0612	1.9015	1.7417	1.6301	0.2791	1.3308	1693.0	.0785	.0293	.7470	1240
1260	3.1111-2	1.5556 0	-875.0	2.2254	2.0657	1.9059	1.7462	1.6346	0.2799	1.3295	1705.8	.0795	.0298	.7465	1260
1280	3.0625-2	1.5312 0	-869.4	2.2298	2.0701	1.9104	1.7506	1.6390	0.2807	1.3282	1718.4	.0804	.0303	.7460	1280
1300	3.0154-2	1.5077 0	-863.8	2.2342	2.0745	1.9147	1.7550	1.6433	0.2815	1.3270	1731.0	.0813	.0307	.7455	1300
1320	2.9697-2	1.4848 0	-858.2	2.2385	2.0788	1.9190	1.7593	1.6476	0.2824	1.3257	1743.4	.0822	.0312	.7450	1320
1340	2.9254-2	1.4627 0	-852.5	2.2428	2.0830	1.9233	1.7635	1.6519	0.2832	1.3245	1755.8	.0831	.0316	.7445	1340
1360	2.8823-2	1.4412 0	-846.9	2.2470	2.0872	1.9275	1.7677	1.6561	0.2840	1.3233	1768.0	.0840	.0321	.7440	1360
1380	2.8406-2	1.4203 0	-841.2	2.2511	2.0914	1.9316	1.7719	1.6602	0.2848	1.3221	1780.2	.0849	.0325	.7436	1380
1400	2.8000-2	1.4000 0	-835.5	2.2552	2.0955	1.9357	1.7760	1.6643	0.2856	1.3209	1792.2	.0858	.0330	.7431	1400
1420	2.7606-2	1.3803 0	-829.7	2.2593	2.0995	1.9398	1.7800	1.6684	0.2864	1.3197	1804.2	.0867	.0334	.7427	1420
1440	2.7222-2	1.3611 0	-824.0	2.2633	2.1035	1.9438	1.7841	1.6724	0.2872	1.3185	1816.0	.0876	.0339	.7422	1440
1460	2.6849-2	1.3425 0	-818.3	2.2672	2.1075	1.9478	1.7880	1.6764	0.2879	1.3174	1827.8	.0884	.0343	.7419	1460
1480	2.6486-2	1.3243 0	-812.5	2.2712	2.1114	1.9517	1.7919	1.6803	0.2887	1.3163	1839.5	.0893	.0348	.7415	1480
1500	2.6133-2	1.3067 0	-806.7	2.2751	2.1153	1.9556	1.7958	1.6842	0.2895	1.3152	1851.1	.0902	.0352	.7412	1500
1520	2.5789-2	1.2895 0	-800.9	2.2789	2.1192	1.9594	1.7997	1.6880	0.2903	1.3141	1862.6	.0910	.0357	.7409	1520
1540	2.5454-2	1.2727 0	-795.1	2.2827	2.1230	1.9632	1.8035	1.6918	0.2910	1.3130	1874.0	.0919	.0361	.7405	1540
1560	2.5128-2	1.2564 0	-789.3	2.2865	2.1267	1.9670	1.8072	1.6956	0.2918	1.3119	1885.4	.0927	.0365	.7402	1560
1580	2.4810-2	1.2405 0	-783.4	2.2902	2.1304	1.9707	1.8110	1.6993	0.2926	1.3108	1896.7	.0935	.0370	.7399	1580
1600	2.4500-2	1.2250 0	-777.6	2.2939	2.1341	1.9744	1.8146	1.7030	0.2933	1.3098	1907.9	.0944	.0374	.7397	1600
1620	2.4197-2	1.2099 0	-771.7	2.2975	2.1378	1.9780	1.8183	1.7066	0.2940	1.3088	1919.0	.0952	.0379	.7394	1620
1640	2.3902-2	1.1951 0	-765.8	2.3011	2.1414	1.9816	1.8219	1.7102	0.2948	1.3078	1930.1	.0960	.0383	.7391	1640
1660	2.3614-2	1.1807 0	-759.9	2.3047	2.1450	1.9852	1.8255	1.7138	0.2955	1.3068	1941.1	.0969	.0387	.7388	1660
1680	2.3333-2	1.1667 0	-754.0	2.3082	2.1485	1.9888	1.8290	1.7174	0.2962	1.3058	1952.0	.0977	.0392	.7386	1680
1700	2.3059-2	1.1529 0	-748.1	2.3117	2.1520	1.9923	1.8325	1.7209	0.2969	1.3049	1962.9	.0985	.0396	.7383	1700
1720	2.2791-2	1.1395 0	-742.1	2.3152	2.1555	1.9957	1.8360	1.7243	0.2976	1.3040	1973.7	.0993	.0400	.7381	1720
1740	2.2529-2	1.1264 0	-736.1	2.3187	2.1589	1.9992	1.8394	1.7278	0.2983	1.3030	1984.5	.1001	.0405	.7379	1740
1760	2.2273-2	1.1136 0	-730.2	2.3221	2.1623	2.0026	1.8429	1.7312	0.2990	1.3021	1995.1	.1009	.0409	.7376	1760
1780	2.2022-2	1.1011 0	-724.2	2.3255	2.1657	2.0060	1.8462	1.7346	0.2997	1.3013	2005.8	.1017	.0413	.7374	1780
1800	2.1778-2	1.0889 0	-718.2	2.3288	2.1691	2.0093	1.8496	1.7379	0.3003	1.3004	2016.3	.1025	.0418	.7372	1800
1900	2.0632-2	1.0316 0	-688.0	2.3451	2.1854	2.0257	1.8659	1.7543	0.3034	1.2964	2068.4	.1064	.0439	.7362	1900
2000	1.9600-2	9.8000-1	-657.5	2.3608	2.2010	2.0413	1.8816	1.7699	0.3064	1.2927	2119.1	.1102	.0459	.7354	2000
2100	1.8667-2	9.3333-1	-626.7	2.3758	2.2161	2.0563	1.8966	1.7849	0.3092	1.2893	2168.6	.1140	.0480	.7347	2100
2200	1.7818-2	8.9091-1	-595.7	2.3902	2.2305	2.0708	1.9110	1.7994	0.3119	1.2861	2216.9	.1176	.0500	.7341	2200
2300	1.7043-2	8.5217-1	-564.4	2.4042	2.2444	2.0847	1.9249	1.8133	0.3144	1.2831	2264.1	.1212	.0520	.7334	2300
2400	1.6333-2	8.1666-1	-532.8	2.4176	2.2579	2.0981	1.9384	1.8267	0.3168	1.2804	2310.3	.1248	.0539	.7328	2400
2500	1.5680-2	7.8400-1	-501.0	2.4306	2.2708	2.1111	1.9513	1.8397	0.3190	1.2779	2355.6	.1283	.0559	.7322	2500

TABLE 20A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO \square 1.700; F/A=0.050718; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7761; MW \square 28.6252;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .10097; H2O= .12962; N2= .71304; O2= .04782; AR= .00855

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	R	
2600	1.5077-2	7.5384-1	-469.0	2.4431	2.2834	2.1236	1.9639	1.8523	0.3212	1.2755	2400.0	.1317	.0578	.7316	2600
2700	1.4518-2	7.2592-1	-436.8	2.4553	2.2955	2.1358	1.9761	1.8644	0.3232	1.2733	2443.6	.1351	.0597	.7310	2700
2800	1.4000-2	7.0000-1	-404.4	2.4671	2.3073	2.1476	1.9879	1.8762	0.3251	1.2713	2486.5	.1384	.0616	.7302	2800
2900	1.3517-2	6.7586-1	-371.7	2.4785	2.3188	2.1590	1.9993	1.8876	0.3269	1.2694	2528.6	.1417	.0635	.7294	2900
3000	1.3067-2	6.5333-1	-339.0	2.4896	2.3299	2.1701	2.0104	1.8988	0.3286	1.2676	2570.0	.1450	.0654	.7286	3000
3100	1.2645-2	6.3226-1	-306.0	2.5004	2.3407	2.1810	2.0212	1.9096	0.3303	1.2659	2610.8	.1482	.0672	.7278	3100
3200	1.2250-2	6.1250-1	-272.9	2.5109	2.3512	2.1915	2.0317	1.9201	0.3318	1.2644	2651.0	.1514	.0691	.7270	3200
3300	1.1879-2	5.9394-1	-239.7	2.5212	2.3614	2.2017	2.0420	1.9303	0.3332	1.2629	2690.5	.1545	.0709	.7261	3300
3400	1.1529-2	5.7647-1	-206.3	2.5311	2.3714	2.2117	2.0519	1.9403	0.3346	1.2616	2729.6	.1576	.0727	.7253	3400
3500	1.1200-2	5.6000-1	-172.8	2.5409	2.3811	2.2214	2.0616	1.9500	0.3358	1.2604	2768.0	.1607	.0745	.7244	3500
3600	1.0889-2	5.4444-1	-139.1	2.5503	2.3906	2.2309	2.0711	1.9595	0.3370	1.2592	2806.0	.1637	.0763	.7236	3600
3700	1.0595-2	5.2973-1	-105.4	2.5596	2.3998	2.2401	2.0804	1.9687	0.3382	1.2581	2843.5	.1667	.0780	.7229	3700
3800	1.0316-2	5.1579-1	-71.5	2.5686	2.4089	2.2491	2.0894	1.9777	0.3392	1.2571	2880.5	.1697	.0797	.7222	3800
3900	1.0051-2	5.0256-1	-37.5	2.5774	2.4177	2.2580	2.0982	1.9866	0.3403	1.2561	2917.0	.1726	.0814	.7214	3900
4000	9.8000-3	4.9000-1	-3.4	2.5861	2.4263	2.2666	2.1068	1.9952	0.3412	1.2552	2953.1	.1755	.0831	.7207	4000
4100	9.5609-3	4.7805-1	30.7	2.5945	2.4348	2.2750	2.1153	2.0036	0.3421	1.2544	2988.8	.1784	.0848	.7199	4100
4200	9.3333-3	4.6667-1	65.0	2.6028	2.4430	2.2833	2.1235	2.0119	0.3429	1.2536	3024.1	.1812	.0864	.7191	4200
4300	9.1162-3	4.5581-1	99.3	2.6108	2.4511	2.2914	2.1316	2.0200	0.3438	1.2528	3059.0	.1841	.0881	.7183	4300
4400	8.9091-3	4.4545-1	133.7	2.6188	2.4590	2.2993	2.1395	2.0279	0.3445	1.2521	3093.5	.1869	.0897	.7175	4400
4500	8.7111-3	4.3555-1	168.2	2.6265	2.4668	2.3070	2.1473	2.0356	0.3452	1.2515	3127.6	.1896	.0914	.7166	4500
4600	8.5217-3	4.2609-1	202.8	2.6341	2.4744	2.3146	2.1549	2.0432	0.3459	1.2509	3161.4	.1924	.0930	.7156	4600
4700	8.3404-3	4.1702-1	237.4	2.6415	2.4818	2.3221	2.1623	2.0507	0.3466	1.2503	3194.8	.1951	.0946	.7146	4700
4800	8.1666-3	4.0833-1	272.1	2.6488	2.4891	2.3294	2.1696	2.0580	0.3472	1.2497	3227.9	.1978	.0962	.7136	4800
4900	8.0000-3	4.0000-1	306.8	2.6560	2.4963	2.3365	2.1768	2.0651	0.3478	1.2492	3260.7	.2005	.0978	.7126	4900
5000	7.8400-3	3.9200-1	341.6	2.6630	2.5033	2.3436	2.1838	2.0722	0.3483	1.2487	3293.1	.2031	.0994	.7117	5000
5100	7.6862-3	3.8431-1	376.5	2.6699	2.5102	2.3505	2.1907	2.0791	0.3489	1.2482	3325.2	.2057	.1010	.7108	5100
5200	7.5384-3	3.7692-1	411.4	2.6767	2.5170	2.3572	2.1975	2.0858	0.3494	1.2478	3357.1	.2084	.1025	.7100	5200
5300	7.3962-3	3.6981-1	446.4	2.6834	2.5236	2.3639	2.2042	2.0925	0.3499	1.2473	3388.6	.2109	.1041	.7091	5300
5400	7.2592-3	3.6296-1	481.4	2.6899	2.5302	2.3704	2.2107	2.0991	0.3504	1.2469	3419.8	.2135	.1056	.7083	5400

TABLE 20.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.050718; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 0.14696 LB/IN² (0.01 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4500-4	-777.6	2.2939	28.625	.094	1.0000	-1.0000	0.2933	1.3098	1907.9	.0374	.740	0.2933	1.3098	1907.9	.0374	.740
1700	2.3059-4	-748.0	2.3118	28.625	.099	1.0000	-1.0000	0.2970	1.3048	1962.8	.0396	.738	0.2969	1.3049	1962.9	.0396	.738
1800	2.1778-4	-718.2	2.3288	28.625	.103	1.0000	-1.0000	0.3005	1.3002	2016.2	.0418	.737	0.3003	1.3004	2016.3	.0418	.737
1900	2.0632-4	-688.0	2.3452	28.625	.106	1.0000	-1.0000	0.3037	1.2961	2068.2	.0439	.736	0.3034	1.2964	2068.4	.0439	.736
2000	1.9600-4	-657.4	2.3608	28.625	.110	1.0000	-1.0000	0.3068	1.2923	2118.7	.0460	.735	0.3064	1.2927	2119.1	.0459	.735
2100	1.8667-4	-626.6	2.3759	28.625	.114	1.0000	-1.0000	0.3098	1.2886	2168.0	.0480	.735	0.3092	1.2893	2168.6	.0480	.735
2200	1.7818-4	-595.5	2.3903	28.625	.118	1.0000	-1.0000	0.3127	1.2851	2216.0	.0501	.734	0.3119	1.2861	2216.9	.0500	.734
2300	1.7043-4	-564.1	2.4043	28.625	.121	1.0001	-1.0000	0.3156	1.2818	2262.9	.0522	.733	0.3144	1.2831	2264.1	.0520	.733
2400	1.6333-4	-532.4	2.4178	28.625	.125	1.0002	-1.0000	0.3186	1.2785	2308.6	.0543	.732	0.3168	1.2804	2310.3	.0539	.733
2500	1.5680-4	-500.3	2.4309	28.625	.128	1.0003	-1.0000	0.3217	1.2751	2353.1	.0564	.731	0.3190	1.2779	2355.6	.0559	.732
2600	1.5076-4	-468.0	2.4435	28.624	.132	1.0006	-1.0000	0.3252	1.2717	2396.5	.0587	.730	0.3212	1.2755	2400.1	.0578	.732
2700	1.4517-4	-435.3	2.4559	28.623	.135	1.0011	-1.0000	0.3291	1.2678	2438.5	.0611	.728	0.3232	1.2733	2443.8	.0597	.731
2800	1.3998-4	-402.1	2.4679	28.622	.138	1.0020	-1.0000	0.3340	1.2634	2479.0	.0638	.725	0.3251	1.2713	2486.7	.0616	.730
2900	1.3514-4	-368.4	2.4798	28.619	.142	1.0034	-1.0001	0.3404	1.2581	2517.7	.0670	.720	0.3269	1.2694	2529.0	.0635	.729
3000	1.3062-4	-334.0	2.4915	28.615	.145	1.0058	-1.0001	0.3491	1.2515	2554.2	.0710	.713	0.3286	1.2677	2570.6	.0654	.729
3100	1.2637-4	-298.5	2.5031	28.607	.148	1.0097	-1.0002	0.3614	1.2432	2588.1	.0762	.703	0.3302	1.2661	2611.8	.0673	.728
3200	1.2237-4	-261.5	2.5148	28.596	.151	1.0160	-1.0004	0.3789	1.2327	2618.9	.0834	.687	0.3318	1.2647	2652.7	.0691	.727
3300	1.1859-4	-222.5	2.5268	28.578	.154	1.0256	-1.0007	0.4038	1.2200	2646.5	.0935	.667	0.3332	1.2635	2693.4	.0709	.726
3400	1.1499-4	-180.5	2.5394	28.550	.158	1.0400	-1.0011	0.4388	1.2052	2671.4	.1079	.641	0.3345	1.2625	2734.1	.0727	.724
3500	1.1155-4	-134.3	2.5528	28.509	.161	1.0608	-1.0018	0.4869	1.1893	2694.4	.1281	.610	0.3357	1.2618	2775.3	.0745	.723
3600	1.0822-4	-82.5	2.5673	28.450	.163	1.0899	-1.0028	0.5508	1.1734	2717.1	.1560	.577	0.3368	1.2614	2817.1	.0764	.721
3700	1.0498-4	-23.5	2.5835	28.365	.166	1.1285	-1.0041	0.6326	1.1586	2741.2	.1936	.543	0.3379	1.2614	2860.2	.0782	.719
3800	1.0181-4	44.6	2.6017	28.250	.169	1.1780	-1.0058	0.7332	1.1458	2768.2	.2427	.511	0.3388	1.2618	2904.9	.0800	.716
3900	9.8664-5	123.7	2.6222	28.099	.172	1.2386	-1.0081	0.8521	1.1353	2799.0	.3049	.480	0.3397	1.2627	2952.0	.0819	.713
4000	9.5534-5	215.6	2.6455	27.905	.174	1.3104	-1.0109	0.9884	1.1271	2834.3	.3814	.452	0.3404	1.2643	3001.8	.0838	.708
4100	9.2400-5	321.9	2.6717	27.664	.177	1.3934	-1.0142	1.1409	1.1210	2874.1	.4731	.426	0.3412	1.2665	3054.9	.0859	.702
4200	8.9250-5	444.3	2.7012	27.373	.179	1.4874	-1.0182	1.3088	1.1166	2918.6	.5798	.405	0.3419	1.2694	3111.9	.0882	.695
4300	8.6077-5	584.2	2.7341	27.028	.182	1.5918	-1.0229	1.4912	1.1136	2967.9	.6997	.387	0.3425	1.2731	3173.3	.0907	.686
4400	8.2877-5	743.0	2.7706	26.629	.184	1.7053	-1.0281	1.6862	1.1117	3022.1	.8284	.374	0.3433	1.2776	3239.7	.0935	.674
4500	7.9655-5	921.7	2.8107	26.175	.186	1.8246	-1.0340	1.8891	1.1108	3081.3	.9581	.366	0.3440	1.2829	3311.5	.0967	.661
4600	7.6424-5	1120.7	2.8545	25.671	.188	1.9434	-1.0401	2.0901	1.1107	3145.7	*****	.364	0.3449	1.2892	3389.0	.1003	.646
4700	7.3209-5	1339.1	2.9014	25.126	.190	2.0513	-1.0460	2.2725	1.1115	3215.2	*****	.368	0.3458	1.2963	3472.2	.1043	.630
4800	7.0049-5	1573.9	2.9509	24.553	.192	2.1352	-1.0511	2.4140	1.1131	3289.3	*****	.376	0.3468	1.3042	3560.4	.1085	.614
4900	6.6995-5	1819.7	3.0016	23.972	.194	2.1811	-1.0547	2.4900	1.1156	3367.2	*****	.389	0.3479	1.3126	3652.4	.1130	.598
5000	6.4103-5	2069.1	3.0519	23.405	.196	2.1791	-1.0560	2.4816	1.1190	3447.5	*****	.405	0.3489	1.3213	3746.2	.1176	.583
5100	6.1422-5	2313.0	3.1002	22.875	.199	2.1270	-1.0549	2.3838	1.1234	3528.9	*****	.423	0.3500	1.3299	3839.5	.1221	.570
5200	5.8987-5	2543.2	3.1449	22.399	.201	2.0324	-1.0515	2.2086	1.1291	3610.1	*****	.443	0.3510	1.3379	3929.8	.1263	.559
5300	5.6812-5	2753.0	3.1849	21.988	.203	1.9099	-1.0465	1.9818	1.1361	3689.9	.8738	.462	0.3519	1.3452	4015.2	.1301	.550
5400	5.4888-5	2938.9	3.2197	21.644	.206	1.7757	-1.0405	1.7334	1.1447	3768.2	.7452	.479	0.3528	1.3515	4094.5	.1337	.543

TABLE 20.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.050718; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 1.46959 LB/IN2 (0.10 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS					FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4500-3	-777.6	2.1341	28.625	.094	1.0000	-1.0000	0.2933	1.3098	1907.9	.0374	.740	0.2933	1.3098	1907.9	.0374	.740
1700	2.3059-3	-748.0	2.1520	28.625	.099	1.0000	-1.0000	0.2970	1.3048	1962.8	.0396	.738	0.2969	1.3049	1962.9	.0396	.738
1800	2.1778-3	-718.2	2.1691	28.625	.103	1.0000	-1.0000	0.3005	1.3002	2016.2	.0418	.737	0.3003	1.3004	2016.3	.0418	.737
1900	2.0632-3	-688.0	2.1854	28.625	.106	1.0000	-1.0000	0.3037	1.2961	2068.2	.0439	.736	0.3034	1.2964	2068.4	.0439	.736
2000	1.9600-3	-657.4	2.2011	28.625	.110	1.0000	-1.0000	0.3067	1.2923	2118.8	.0460	.735	0.3064	1.2927	2119.1	.0459	.735
2100	1.8667-3	-626.6	2.2161	28.625	.114	1.0000	-1.0000	0.3097	1.2887	2168.0	.0480	.735	0.3092	1.2893	2168.6	.0480	.735
2200	1.7818-3	-595.5	2.2306	28.625	.118	1.0000	-1.0000	0.3126	1.2852	2216.1	.0501	.734	0.3119	1.2861	2216.9	.0500	.734
2300	1.7043-3	-564.1	2.2445	28.625	.121	1.0000	-1.0000	0.3155	1.2820	2263.0	.0521	.733	0.3144	1.2831	2264.1	.0520	.733
2400	1.6333-3	-532.4	2.2580	28.625	.125	1.0001	-1.0000	0.3183	1.2788	2308.9	.0542	.733	0.3168	1.2804	2310.3	.0539	.733
2500	1.5680-3	-500.4	2.2711	28.625	.128	1.0002	-1.0000	0.3211	1.2757	2353.6	.0563	.732	0.3190	1.2779	2355.6	.0559	.732
2600	1.5077-3	-468.2	2.2837	28.625	.132	1.0003	-1.0000	0.3240	1.2726	2397.3	.0584	.731	0.3212	1.2755	2400.1	.0578	.732
2700	1.4518-3	-435.6	2.2960	28.624	.135	1.0005	-1.0000	0.3271	1.2695	2440.0	.0606	.730	0.3232	1.2733	2443.7	.0597	.731
2800	1.3999-3	-402.7	2.3080	28.623	.138	1.0009	-1.0000	0.3306	1.2662	2481.6	.0628	.728	0.3251	1.2713	2486.6	.0616	.730
2900	1.3516-3	-369.5	2.3196	28.622	.142	1.0014	-1.0000	0.3345	1.2626	2522.0	.0653	.726	0.3269	1.2694	2528.8	.0635	.729
3000	1.3065-3	-335.8	2.3311	28.621	.145	1.0023	-1.0001	0.3393	1.2585	2561.1	.0680	.723	0.3286	1.2676	2570.3	.0654	.729
3100	1.2642-3	-301.6	2.3423	28.618	.148	1.0038	-1.0001	0.3452	1.2539	2598.7	.0711	.719	0.3302	1.2660	2611.2	.0673	.728
3200	1.2245-3	-266.7	2.3534	28.613	.151	1.0060	-1.0002	0.3529	1.2483	2634.6	.0749	.713	0.3318	1.2645	2651.7	.0691	.727
3300	1.1871-3	-230.9	2.3644	28.607	.154	1.0093	-1.0002	0.3630	1.2416	2668.5	.0795	.706	0.3332	1.2632	2691.7	.0709	.726
3400	1.1518-3	-194.0	2.3754	28.597	.158	1.0143	-1.0004	0.3766	1.2335	2700.3	.0854	.695	0.3345	1.2620	2731.3	.0727	.725
3500	1.1183-3	-155.5	2.3866	28.582	.161	1.0216	-1.0006	0.3948	1.2240	2729.9	.0931	.681	0.3358	1.2609	2770.7	.0745	.724
3600	1.0864-3	-114.8	2.3980	28.561	.164	1.0319	-1.0010	0.4190	1.2132	2757.4	.1033	.664	0.3370	1.2600	2810.1	.0763	.723
3700	1.0560-3	-71.4	2.4099	28.531	.167	1.0461	-1.0014	0.4507	1.2013	2783.2	.1167	.643	0.3381	1.2593	2849.5	.0780	.722
3800	1.0267-3	-24.4	2.4224	28.489	.169	1.0652	-1.0021	0.4911	1.1890	2808.1	.1343	.620	0.3391	1.2588	2889.3	.0798	.720
3900	9.9833-4	27.1	2.4358	28.432	.172	1.0899	-1.0030	0.5414	1.1769	2833.1	.1570	.594	0.3400	1.2586	2929.8	.0815	.719
4000	9.7080-4	84.2	2.4503	28.357	.175	1.1208	-1.0041	0.6020	1.1655	2859.1	.1855	.568	0.3408	1.2586	2971.1	.0832	.717
4100	9.4388-4	147.9	2.4660	28.259	.178	1.1582	-1.0055	0.6727	1.1555	2887.1	.2207	.542	0.3416	1.2590	3013.6	.0850	.715
4200	9.1743-4	219.1	2.4831	28.137	.180	1.2020	-1.0073	0.7527	1.1470	2917.7	.2631	.516	0.3423	1.2597	3057.7	.0868	.712
4300	8.9133-4	298.7	2.5019	27.988	.183	1.2519	-1.0094	0.8408	1.1401	2951.2	.3132	.491	0.3429	1.2609	3103.5	.0886	.709
4400	8.6550-4	387.5	2.5223	27.809	.186	1.3076	-1.0118	0.9358	1.1347	2987.7	.3713	.468	0.3435	1.2625	3151.4	.0905	.704
4500	8.3987-4	486.0	2.5444	27.599	.188	1.3686	-1.0145	1.0367	1.1305	3027.4	.4376	.445	0.3440	1.2645	3201.7	.0924	.699
4600	8.1441-4	595.0	2.5684	27.357	.190	1.4347	-1.0177	1.1431	1.1275	3070.2	.5119	.425	0.3445	1.2670	3254.6	.0946	.693
4700	7.8907-4	714.8	2.5941	27.082	.193	1.5056	-1.0212	1.2544	1.1253	3116.1	.5932	.407	0.3450	1.2699	3310.3	.0969	.686
4800	7.6385-4	846.0	2.6217	26.774	.195	1.5810	-1.0251	1.3701	1.1239	3165.2	.6797	.393	0.3455	1.2733	3369.0	.0994	.678
4900	7.3876-4	988.9	2.6512	26.434	.197	1.6597	-1.0293	1.4889	1.1232	3217.5	.7688	.382	0.3460	1.2773	3431.1	.1021	.668
5000	7.1382-4	1143.8	2.6825	26.063	.199	1.7400	-1.0338	1.6083	1.1231	3273.0	.8562	.374	0.3466	1.2818	3496.6	.1051	.658
5100	6.8910-4	1310.5	2.7155	25.664	.202	1.8187	-1.0385	1.7241	1.1236	3331.9	.9370	.371	0.3472	1.2868	3565.7	.1083	.646
5200	6.6471-4	1488.3	2.7500	25.241	.204	1.8915	-1.0430	1.8298	1.1246	3394.0	*****	.371	0.3479	1.2923	3638.2	.1118	.634
5300	6.4080-4	1675.9	2.7857	24.801	.206	1.9530	-1.0472	1.9177	1.1262	3459.2	*****	.374	0.3486	1.2982	3714.0	.1155	.621
5400	6.1755-4	1870.9	2.8222	24.352	.208	1.9977	-1.0507	1.9790	1.1284	3527.1	*****	.380	0.3493	1.3045	3792.5	.1195	.608

TABLE 20.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.050718; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 14.6959 LB/IN2 (1.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4500-2	-777.6	1.9744	28.625	.094	1.0000	-1.0000	0.2933	1.3098	1907.9	.0374	.740	0.2933	1.3098	1907.9	.0374	.740
1700	2.3059-2	-748.0	1.9923	28.625	.099	1.0000	-1.0000	0.2970	1.3048	1962.8	.0396	.738	0.2969	1.3049	1962.9	.0396	.738
1800	2.1778-2	-718.2	2.0093	28.625	.103	1.0000	-1.0000	0.3005	1.3002	2016.2	.0418	.737	0.3003	1.3004	2016.3	.0418	.737
1900	2.0632-2	-688.0	2.0257	28.625	.106	1.0000	-1.0000	0.3037	1.2961	2068.2	.0439	.736	0.3034	1.2964	2068.4	.0439	.736
2000	1.9600-2	-657.4	2.0413	28.625	.110	1.0000	-1.0000	0.3067	1.2923	2118.8	.0460	.735	0.3064	1.2927	2119.1	.0459	.735
2100	1.8667-2	-626.6	2.0564	28.625	.114	1.0000	-1.0000	0.3097	1.2887	2168.1	.0480	.735	0.3092	1.2893	2168.6	.0480	.735
2200	1.7818-2	-595.5	2.0708	28.625	.118	1.0000	-1.0000	0.3126	1.2853	2216.2	.0501	.734	0.3119	1.2861	2216.9	.0500	.734
2300	1.7043-2	-564.1	2.0848	28.625	.121	1.0000	-1.0000	0.3154	1.2820	2263.1	.0521	.733	0.3144	1.2831	2264.1	.0520	.733
2400	1.6333-2	-532.4	2.0983	28.625	.125	1.0000	-1.0000	0.3181	1.2790	2309.0	.0542	.733	0.3168	1.2804	2310.3	.0539	.733
2500	1.5680-2	-500.5	2.1113	28.625	.128	1.0001	-1.0000	0.3208	1.2760	2353.9	.0562	.732	0.3190	1.2779	2355.6	.0559	.732
2600	1.5077-2	-468.3	2.1240	28.625	.132	1.0001	-1.0000	0.3235	1.2731	2397.8	.0583	.731	0.3212	1.2755	2400.0	.0578	.732
2700	1.4518-2	-435.8	2.1362	28.625	.135	1.0002	-1.0000	0.3263	1.2702	2440.7	.0603	.731	0.3232	1.2733	2443.7	.0597	.731
2800	1.4000-2	-403.0	2.1481	28.624	.138	1.0004	-1.0000	0.3291	1.2674	2482.7	.0625	.729	0.3251	1.2713	2486.5	.0616	.730
2900	1.3517-2	-370.0	2.1597	28.624	.142	1.0007	-1.0000	0.3321	1.2644	2523.8	.0647	.728	0.3269	1.2694	2528.7	.0635	.729
3000	1.3066-2	-336.6	2.1711	28.623	.145	1.0010	-1.0000	0.3354	1.2614	2563.9	.0669	.727	0.3286	1.2676	2570.2	.0654	.729
3100	1.2644-2	-302.9	2.1821	28.622	.148	1.0016	-1.0000	0.3391	1.2582	2603.0	.0694	.725	0.3303	1.2660	2611.0	.0672	.728
3200	1.2248-2	-268.7	2.1929	28.620	.151	1.0025	-1.0001	0.3434	1.2547	2641.0	.0720	.722	0.3318	1.2644	2651.3	.0691	.727
3300	1.1875-2	-234.1	2.2036	28.617	.155	1.0037	-1.0001	0.3485	1.2507	2677.9	.0749	.719	0.3332	1.2630	2691.0	.0709	.726
3400	1.1525-2	-199.0	2.2141	28.613	.158	1.0055	-1.0001	0.3548	1.2463	2713.5	.0782	.715	0.3345	1.2618	2730.3	.0727	.725
3500	1.1193-2	-163.1	2.2245	28.608	.161	1.0081	-1.0002	0.3626	1.2412	2747.7	.0821	.709	0.3358	1.2606	2769.1	.0745	.724
3600	1.0879-2	-126.4	2.2348	28.600	.164	1.0117	-1.0003	0.3725	1.2353	2780.5	.0868	.702	0.3370	1.2595	2807.6	.0763	.723
3700	1.0581-2	-88.5	2.2452	28.589	.167	1.0168	-1.0005	0.3850	1.2285	2811.7	.0925	.694	0.3381	1.2586	2845.8	.0780	.723
3800	1.0297-2	-49.3	2.2557	28.574	.170	1.0236	-1.0007	0.4008	1.2210	2841.3	.0995	.683	0.3392	1.2577	2883.8	.0797	.722
3900	1.0026-2	-8.3	2.2663	28.553	.173	1.0327	-1.0011	0.4205	1.2126	2869.7	.1083	.670	0.3401	1.2570	2921.8	.0814	.721
4000	9.7658-3	35.0	2.2773	28.525	.175	1.0445	-1.0015	0.4450	1.2037	2896.9	.1192	.655	0.3410	1.2565	2959.8	.0831	.720
4100	9.5154-3	80.9	2.2886	28.489	.178	1.0595	-1.0020	0.4746	1.1945	2923.5	.1326	.638	0.3419	1.2561	2998.0	.0848	.718
4200	9.2736-3	130.1	2.3004	28.442	.181	1.0780	-1.0027	0.5098	1.1854	2950.1	.1489	.620	0.3427	1.2559	3036.6	.0865	.717
4300	9.0390-3	183.1	2.3129	28.383	.184	1.1002	-1.0036	0.5507	1.1767	2977.2	.1685	.600	0.3434	1.2559	3075.8	.0882	.715
4400	8.8107-3	240.4	2.3261	28.309	.186	1.1263	-1.0047	0.5969	1.1688	3005.3	.1917	.580	0.3440	1.2562	3115.7	.0898	.714
4500	8.5877-3	302.6	2.3401	28.220	.189	1.1560	-1.0060	0.6478	1.1617	3034.9	.2186	.560	0.3446	1.2566	3156.5	.0915	.711
4600	8.3692-3	370.1	2.3549	28.113	.192	1.1891	-1.0074	0.7026	1.1557	3066.3	.2494	.540	0.3451	1.2574	3198.3	.0933	.709
4700	8.1548-3	443.2	2.3706	27.988	.194	1.2251	-1.0091	0.7605	1.1507	3099.6	.2841	.520	0.3456	1.2584	3241.4	.0950	.706
4800	7.9440-3	522.3	2.3873	27.845	.197	1.2638	-1.0109	0.8205	1.1467	3135.0	.3229	.500	0.3460	1.2596	3285.8	.0968	.703
4900	7.7364-3	607.4	2.4048	27.682	.199	1.3047	-1.0129	0.8821	1.1435	3172.4	.3657	.480	0.3464	1.2612	3331.6	.0987	.699
5000	7.5319-3	698.7	2.4233	27.500	.201	1.3478	-1.0152	0.9449	1.1411	3211.8	.4125	.461	0.3468	1.2630	3378.9	.1006	.694
5100	7.3303-3	796.4	2.4426	27.300	.204	1.3928	-1.0176	1.0086	1.1394	3253.1	.4630	.444	0.3471	1.2651	3427.9	.1026	.690
5200	7.1315-3	900.5	2.4628	27.080	.206	1.4396	-1.0202	1.0731	1.1382	3296.5	.5168	.428	0.3475	1.2675	3478.7	.1047	.684
5300	6.9354-3	1011.0	2.4839	26.842	.208	1.4881	-1.0230	1.1383	1.1375	3341.8	.5733	.414	0.3479	1.2701	3531.2	.1069	.678
5400	6.7421-3	1128.2	2.5058	26.586	.211	1.5381	-1.0261	1.2039	1.1373	3389.0	.6313	.402	0.3482	1.2731	3585.6	.1093	.671

TABLE 20.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.050718; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 146.959 LB/IN² (10.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4500-1	-777.6	1.8146	28.625	.094	1.0000	-1.0000	0.2933	1.3098	1907.9	.0374	.740	0.2933	1.3098	1907.9	.0374	.740
1700	2.3059-1	-748.0	1.8325	28.625	.099	1.0000	-1.0000	0.2970	1.3048	1962.8	.0396	.738	0.2969	1.3049	1962.9	.0396	.738
1800	2.1778-1	-718.2	1.8496	28.625	.103	1.0000	-1.0000	0.3005	1.3002	2016.2	.0418	.737	0.3003	1.3004	2016.3	.0418	.737
1900	2.0632-1	-688.0	1.8659	28.625	.106	1.0000	-1.0000	0.3037	1.2961	2068.2	.0439	.736	0.3034	1.2964	2068.4	.0439	.736
2000	1.9600-1	-657.4	1.8816	28.625	.110	1.0000	-1.0000	0.3067	1.2923	2118.8	.0460	.735	0.3064	1.2927	2119.1	.0459	.735
2100	1.8667-1	-626.6	1.8966	28.625	.114	1.0000	-1.0000	0.3097	1.2887	2168.1	.0480	.735	0.3092	1.2893	2168.6	.0480	.735
2200	1.7818-1	-595.5	1.9111	28.625	.118	1.0000	-1.0000	0.3125	1.2853	2216.2	.0501	.734	0.3119	1.2861	2216.9	.0500	.734
2300	1.7043-1	-564.1	1.9251	28.625	.121	1.0000	-1.0000	0.3153	1.2821	2263.1	.0521	.733	0.3144	1.2831	2264.1	.0520	.733
2400	1.6333-1	-532.4	1.9385	28.625	.125	1.0000	-1.0000	0.3180	1.2790	2309.1	.0541	.733	0.3168	1.2804	2310.3	.0539	.733
2500	1.5680-1	-500.5	1.9516	28.625	.128	1.0000	-1.0000	0.3207	1.2761	2354.0	.0562	.732	0.3190	1.2779	2355.6	.0559	.732
2600	1.5077-1	-468.3	1.9642	28.625	.132	1.0001	-1.0000	0.3233	1.2733	2398.0	.0582	.732	0.3212	1.2755	2400.0	.0578	.732
2700	1.4518-1	-435.9	1.9764	28.625	.135	1.0001	-1.0000	0.3259	1.2706	2441.0	.0602	.731	0.3232	1.2733	2443.7	.0597	.731
2800	1.4000-1	-403.1	1.9883	28.625	.138	1.0002	-1.0000	0.3285	1.2679	2483.2	.0623	.730	0.3251	1.2713	2486.5	.0616	.730
2900	1.3517-1	-370.2	1.9999	28.625	.142	1.0003	-1.0000	0.3311	1.2653	2524.6	.0644	.729	0.3269	1.2694	2528.6	.0635	.729
3000	1.3066-1	-336.9	2.0112	28.624	.145	1.0005	-1.0000	0.3338	1.2627	2565.1	.0665	.728	0.3286	1.2676	2570.1	.0654	.729
3100	1.2644-1	-303.4	2.0222	28.624	.148	1.0007	-1.0000	0.3367	1.2600	2604.8	.0687	.727	0.3303	1.2659	2610.9	.0672	.728
3200	1.2249-1	-269.6	2.0329	28.623	.151	1.0011	-1.0000	0.3397	1.2573	2643.7	.0709	.725	0.3318	1.2644	2651.1	.0691	.727
3300	1.1877-1	-235.4	2.0434	28.622	.155	1.0016	-1.0000	0.3430	1.2545	2681.7	.0733	.723	0.3332	1.2630	2690.8	.0709	.726
3400	1.1527-1	-201.0	2.0537	28.620	.158	1.0023	-1.0001	0.3467	1.2516	2718.9	.0758	.721	0.3346	1.2617	2729.9	.0727	.725
3500	1.1197-1	-166.1	2.0638	28.618	.161	1.0033	-1.0001	0.3509	1.2484	2755.2	.0784	.719	0.3358	1.2605	2768.5	.0745	.724
3600	1.0885-1	-130.8	2.0738	28.615	.164	1.0046	-1.0001	0.3558	1.2449	2790.6	.0814	.716	0.3370	1.2593	2806.7	.0763	.724
3700	1.0589-1	-94.9	2.0836	28.610	.167	1.0065	-1.0002	0.3615	1.2411	2825.0	.0846	.712	0.3381	1.2583	2844.4	.0780	.723
3800	1.0308-1	-58.4	2.0933	28.604	.170	1.0089	-1.0003	0.3684	1.2369	2858.4	.0883	.708	0.3392	1.2573	2881.8	.0797	.722
3900	1.0041-1	-21.2	2.1030	28.597	.173	1.0122	-1.0004	0.3766	1.2323	2890.7	.0925	.703	0.3402	1.2565	2918.9	.0814	.721
4000	9.7866-2	17.0	2.1127	28.586	.175	1.0165	-1.0005	0.3866	1.2272	2922.0	.0974	.697	0.3411	1.2557	2955.7	.0831	.720
4100	9.5434-2	56.2	2.1223	28.573	.178	1.0220	-1.0007	0.3985	1.2216	2952.2	.1032	.689	0.3420	1.2550	2992.3	.0848	.719
4200	9.3105-2	96.7	2.1321	28.555	.181	1.0289	-1.0010	0.4128	1.2156	2981.5	.1100	.680	0.3428	1.2545	3028.9	.0864	.718
4300	9.0869-2	138.8	2.1420	28.533	.184	1.0375	-1.0013	0.4297	1.2093	3010.1	.1180	.670	0.3436	1.2540	3065.3	.0881	.717
4400	8.8717-2	182.8	2.1521	28.505	.187	1.0481	-1.0018	0.4494	1.2027	3038.1	.1274	.659	0.3443	1.2537	3101.9	.0897	.716
4500	8.6640-2	228.8	2.1625	28.470	.189	1.0608	-1.0023	0.4722	1.1961	3065.9	.1384	.646	0.3449	1.2535	3138.6	.0914	.715
4600	8.4630-2	277.3	2.1731	28.428	.192	1.0756	-1.0029	0.4979	1.1896	3093.7	.1512	.633	0.3455	1.2534	3175.5	.0930	.714
4700	8.2680-2	328.5	2.1841	28.377	.195	1.0927	-1.0036	0.5266	1.1835	3121.9	.1658	.619	0.3461	1.2535	3212.8	.0947	.712
4800	8.0784-2	382.7	2.1955	28.316	.197	1.1118	-1.0045	0.5577	1.1778	3150.7	.1822	.604	0.3466	1.2537	3250.6	.0963	.710
4900	7.8936-2	440.1	2.2074	28.245	.200	1.1330	-1.0055	0.5910	1.1726	3180.4	.2006	.589	0.3471	1.2541	3288.9	.0980	.708
5000	7.7132-2	501.0	2.2197	28.162	.202	1.1559	-1.0066	0.6259	1.1681	3211.2	.2208	.574	0.3475	1.2546	3327.9	.0996	.706
5100	7.5369-2	565.3	2.2324	28.069	.205	1.1802	-1.0078	0.6618	1.1643	3243.2	.2429	.558	0.3479	1.2553	3367.5	.1012	.704
5200	7.3643-2	633.4	2.2456	27.964	.207	1.2057	-1.0091	0.6984	1.1611	3276.4	.2669	.543	0.3482	1.2562	3408.0	.1029	.702
5300	7.1953-2	705.0	2.2593	27.848	.210	1.2322	-1.0105	0.7350	1.1585	3310.9	.2926	.527	0.3485	1.2572	3449.2	.1046	.699
5400	7.0297-2	780.3	2.2733	27.720	.212	1.2593	-1.0120	0.7715	1.1564	3346.7	.3202	.511	0.3488	1.2584	3491.3	.1063	.697

TABLE 20.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.050718; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 734.797 LB/IN2 (50.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2250 0	-777.6	1.7030	28.625	.094	1.0000	-1.0000	0.2933	1.3097	1907.9	.0374	.740	0.2933	1.3098	1907.9	.0374	.740
1700	1.1529 0	-748.0	1.7209	28.625	.099	1.0000	-1.0000	0.2970	1.3048	1962.8	.0396	.738	0.2969	1.3049	1962.9	.0396	.738
1800	1.0889 0	-718.2	1.7380	28.625	.103	1.0000	-1.0000	0.3005	1.3002	2016.2	.0418	.737	0.3003	1.3004	2016.3	.0418	.737
1900	1.0316 0	-688.0	1.7543	28.625	.106	1.0000	-1.0000	0.3037	1.2961	2068.2	.0439	.736	0.3034	1.2964	2068.4	.0439	.736
2000	9.8000-1	-657.4	1.7699	28.625	.110	1.0000	-1.0000	0.3067	1.2923	2118.8	.0460	.735	0.3064	1.2927	2119.1	.0459	.735
2100	9.3333-1	-626.6	1.7850	28.625	.114	1.0000	-1.0000	0.3097	1.2887	2168.1	.0480	.735	0.3092	1.2893	2168.6	.0480	.735
2200	8.9091-1	-595.5	1.7994	28.625	.118	1.0000	-1.0000	0.3125	1.2853	2216.2	.0501	.734	0.3119	1.2861	2216.8	.0500	.734
2300	8.5217-1	-564.1	1.8134	28.625	.121	1.0000	-1.0000	0.3153	1.2821	2263.2	.0521	.733	0.3144	1.2831	2264.1	.0520	.733
2400	8.1667-1	-532.4	1.8269	28.625	.125	1.0000	-1.0000	0.3180	1.2791	2309.1	.0541	.733	0.3168	1.2804	2310.3	.0539	.733
2500	7.8400-1	-500.5	1.8399	28.625	.128	1.0000	-1.0000	0.3206	1.2762	2354.0	.0562	.732	0.3190	1.2779	2355.6	.0559	.732
2600	7.5384-1	-468.3	1.8525	28.625	.132	1.0000	-1.0000	0.3232	1.2734	2398.0	.0582	.732	0.3212	1.2755	2400.0	.0578	.732
2700	7.2592-1	-435.9	1.8648	28.625	.135	1.0001	-1.0000	0.3257	1.2707	2441.1	.0602	.731	0.3232	1.2733	2443.6	.0597	.731
2800	7.0000-1	-403.2	1.8767	28.625	.138	1.0001	-1.0000	0.3282	1.2681	2483.4	.0622	.730	0.3251	1.2713	2486.5	.0616	.730
2900	6.7585-1	-370.2	1.8882	28.625	.142	1.0002	-1.0000	0.3307	1.2656	2524.8	.0643	.729	0.3269	1.2694	2528.6	.0635	.729
3000	6.5332-1	-337.0	1.8995	28.625	.145	1.0003	-1.0000	0.3332	1.2631	2565.5	.0663	.728	0.3286	1.2676	2570.1	.0654	.729
3100	6.3224-1	-303.6	1.9105	28.624	.148	1.0004	-1.0000	0.3358	1.2606	2605.4	.0684	.727	0.3303	1.2659	2610.9	.0672	.728
3200	6.1247-1	-269.9	1.9212	28.624	.151	1.0006	-1.0000	0.3385	1.2582	2644.6	.0706	.726	0.3318	1.2644	2651.0	.0691	.727
3300	5.9390-1	-235.9	1.9316	28.623	.155	1.0009	-1.0000	0.3412	1.2558	2683.0	.0728	.725	0.3332	1.2630	2690.7	.0709	.726
3400	5.7641-1	-201.6	1.9418	28.622	.158	1.0013	-1.0000	0.3441	1.2533	2720.7	.0750	.723	0.3346	1.2616	2729.7	.0727	.725
3500	5.5992-1	-167.1	1.9519	28.621	.161	1.0018	-1.0001	0.3473	1.2507	2757.6	.0773	.722	0.3358	1.2604	2768.3	.0745	.724
3600	5.4433-1	-132.2	1.9617	28.619	.164	1.0025	-1.0001	0.3508	1.2481	2793.8	.0798	.720	0.3370	1.2593	2806.4	.0763	.724
3700	5.2957-1	-96.9	1.9714	28.617	.167	1.0035	-1.0001	0.3546	1.2452	2829.3	.0824	.718	0.3382	1.2582	2844.0	.0780	.723
3800	5.1558-1	-61.2	1.9809	28.614	.170	1.0047	-1.0001	0.3590	1.2423	2864.0	.0852	.715	0.3392	1.2572	2881.2	.0797	.722
3900	5.0229-1	-25.1	1.9903	28.610	.173	1.0064	-1.0002	0.3640	1.2391	2897.9	.0882	.712	0.3402	1.2563	2918.0	.0814	.721
4000	4.8964-1	11.6	1.9995	28.604	.176	1.0085	-1.0003	0.3697	1.2356	2931.1	.0915	.709	0.3412	1.2555	2954.5	.0831	.721
4100	4.7758-1	48.9	2.0088	28.597	.178	1.0112	-1.0004	0.3764	1.2319	2963.4	.0953	.705	0.3420	1.2547	2990.7	.0848	.720
4200	4.6607-1	86.9	2.0179	28.589	.181	1.0146	-1.0005	0.3842	1.2279	2994.9	.0995	.700	0.3429	1.2541	3026.6	.0864	.719
4300	4.5505-1	125.8	2.0271	28.577	.184	1.0189	-1.0007	0.3933	1.2236	3025.6	.1043	.694	0.3436	1.2535	3062.3	.0881	.718
4400	4.4449-1	165.6	2.0362	28.563	.187	1.0242	-1.0009	0.4039	1.2190	3055.6	.1097	.688	0.3444	1.2530	3097.8	.0897	.717
4500	4.3435-1	206.6	2.0454	28.546	.190	1.0306	-1.0011	0.4162	1.2142	3084.9	.1160	.680	0.3451	1.2525	3133.2	.0914	.716
4600	4.2458-1	248.9	2.0547	28.524	.192	1.0384	-1.0015	0.4303	1.2092	3113.7	.1231	.672	0.3457	1.2522	3168.6	.0930	.715
4700	4.1517-1	292.7	2.0642	28.498	.195	1.0475	-1.0018	0.4462	1.2041	3142.2	.1312	.663	0.3463	1.2519	3204.0	.0946	.713
4800	4.0607-1	338.2	2.0737	28.466	.198	1.0581	-1.0023	0.4641	1.1990	3170.5	.1404	.653	0.3468	1.2518	3239.5	.0963	.712
4900	3.9726-1	385.6	2.0835	28.429	.200	1.0702	-1.0029	0.4838	1.1940	3198.8	.1507	.643	0.3473	1.2517	3275.2	.0979	.711
5000	3.8871-1	435.1	2.0935	28.385	.203	1.0837	-1.0035	0.5052	1.1893	3227.4	.1621	.632	0.3478	1.2518	3311.1	.0995	.709
5100	3.8040-1	486.7	2.1037	28.334	.205	1.0987	-1.0042	0.5281	1.1848	3256.3	.1747	.621	0.3483	1.2520	3347.3	.1010	.708
5200	3.7231-1	540.7	2.1142	28.275	.208	1.1150	-1.0050	0.5523	1.1808	3285.9	.1885	.609	0.3487	1.2523	3383.9	.1026	.706
5300	3.6443-1	597.2	2.1250	28.209	.210	1.1323	-1.0059	0.5772	1.1771	3316.1	.2034	.597	0.3490	1.2527	3420.8	.1042	.705
5400	3.5673-1	656.2	2.1360	28.134	.213	1.1506	-1.0068	0.6027	1.1740	3347.2	.2193	.585	0.3494	1.2532	3458.2	.1058	.703

TABLE 20C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.050718; EQUIV.RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761;
WET AIR (W/A= 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					GAS PHASE PROPERTIES					(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	T R	
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R	DENSITY LB/FT ³	MW	VIS LB/ FT S	DLV DLT	DLV DLP						CP BTU/ LB R
PRESSURE = 0.01 ATM																
360	1.251-3	-1211.3	1.6753	28.625	0.2544	1.149-3	30.203	.0314	1.000	-1.000	0.2339	1.3910	908	.0100	.734	360
400	1.122-3	-1199.3	1.7070	28.625	0.4097	1.033-3	30.163	.0343	1.000	-1.000	0.2349	1.3894	957	.0110	.731	400
440	9.799-4	-1161.7	1.7954	28.625	2.0356	9.239-4	29.685	.0361	1.000	-1.000	0.2405	1.3853	1010	.0117	.740	440
PRESSURE = 0.10 ATM																
360	1.251-2	-1211.4	1.5360	28.625	0.2462	1.149-2	30.205	.0314	1.000	-1.000	0.2339	1.3910	908	.0100	.734	360
400	1.126-2	-1201.3	1.5626	28.625	0.2650	1.034-2	30.201	.0344	1.000	-1.000	0.2345	1.3896	957	.0110	.730	400
440	1.019-2	-1188.7	1.5927	28.625	0.4177	9.385-3	30.153	.0372	1.000	-1.000	0.2357	1.3878	1003	.0120	.727	440
480	9.057-3	-1157.3	1.6603	28.625	1.4528	8.497-3	29.781	.0391	1.000	-1.000	0.2403	1.3840	1053	.0128	.734	480
520	7.538-3	-1071.7	1.8322	28.625	0.2538	7.538-3	28.625	.0393	1.000	-1.000	0.2538	1.3763	1115	.0131	.759	520
PRESSURE = 1.00 ATM																
360	1.251-1	-1211.5	1.3969	28.625	0.2454	1.149-1	30.205	.0314	1.000	-1.000	0.2339	1.3910	908	.0100	.734	360
400	1.126-1	-1201.5	1.4230	28.625	0.2506	1.034-1	30.205	.0344	1.000	-1.000	0.2345	1.3896	957	.0110	.730	400
440	1.023-1	-1191.2	1.4475	28.625	0.2692	9.399-2	30.200	.0373	1.000	-1.000	0.2352	1.3880	1003	.0121	.726	440
480	9.349-2	-1179.0	1.4741	28.625	0.3691	8.605-2	30.163	.0400	1.000	-1.000	0.2364	1.3861	1047	.0130	.724	480
520	8.508-2	-1147.8	1.5368	28.625	0.6693	7.898-2	29.991	.0423	1.000	-1.000	0.2390	1.3833	1092	.0139	.727	520
537	8.130-2	-1134.7	1.5616	28.625	0.9205	7.611-2	29.826	.0430	1.000	-1.000	0.2411	1.3816	1112	.0142	.731	537
560	7.520-2	-1106.7	1.6125	28.625	1.5448	7.193-2	29.414	.0436	1.000	-1.000	0.2460	1.3783	1142	.0145	.740	560
600	6.533-2	-1051.3	1.7089	28.625	0.2558	6.533-2	28.625	.0445	1.000	-1.000	0.2558	1.3722	1196	.0150	.759	600
PRESSURE = 10.00 ATM																
360	1.249 0	-1211.5	1.2579	28.625	0.2453	1.149 0	30.205	.0314	1.000	-1.000	0.2339	1.3910	908	.0100	.734	360
400	1.124 0	-1201.6	1.2839	28.625	0.2492	1.034 0	30.205	.0344	1.000	-1.000	0.2345	1.3896	957	.0110	.730	400
440	1.022 0	-1191.5	1.3079	28.625	0.2545	9.401-1	30.205	.0373	1.000	-1.000	0.2352	1.3880	1003	.0121	.726	440
480	9.367-1	-1181.1	1.3305	28.625	0.2681	8.616-1	30.201	.0401	1.000	-1.000	0.2360	1.3863	1047	.0131	.723	480
520	8.636-1	-1157.1	1.3788	28.625	0.3350	7.949-1	30.184	.0427	1.000	-1.000	0.2370	1.3843	1089	.0140	.722	520
537	8.357-1	-1151.4	1.3897	28.625	0.3580	7.698-1	30.167	.0438	1.000	-1.000	0.2376	1.3833	1106	.0144	.722	537
560	7.982-1	-1142.5	1.4060	28.625	0.4099	7.367-1	30.126	.0452	1.000	-1.000	0.2385	1.3819	1130	.0149	.724	560
600	7.352-1	-1123.0	1.4394	28.625	0.5860	6.839-1	29.965	.0474	1.000	-1.000	0.2412	1.3789	1172	.0157	.728	600
640	6.676-1	-1093.0	1.4878	28.625	0.9613	6.330-1	29.586	.0490	1.000	-1.000	0.2462	1.3747	1216	.0164	.737	640
680	5.859-1	-1040.7	1.5668	28.625	1.7574	5.800-1	28.799	.0498	1.000	-1.000	0.2561	1.3685	1268	.0169	.753	680
PRESSURE = 50.00 ATM																
360	6.200 0	-1211.5	1.1607	28.625	0.2453	5.745 0	30.205	.0314	1.000	-1.000	0.2339	1.3910	908	.0100	.734	360
400	5.585 0	-1201.6	1.1867	28.625	0.2490	5.170 0	30.205	.0344	1.000	-1.000	0.2345	1.3896	957	.0110	.730	400
440	5.081 0	-1191.5	1.2107	28.625	0.2532	4.700 0	30.205	.0373	1.000	-1.000	0.2352	1.3880	1003	.0121	.726	440
480	4.660 0	-1181.3	1.2329	28.625	0.2592	4.309 0	30.204	.0401	1.000	-1.000	0.2360	1.3863	1047	.0131	.723	480
520	4.305 0	-1158.0	1.2800	28.625	0.3063	3.977 0	30.201	.0428	1.000	-1.000	0.2368	1.3843	1089	.0140	.722	520
537	4.171 0	-1152.8	1.2897	28.625	0.3110	3.853 0	30.198	.0439	1.000	-1.000	0.2372	1.3835	1106	.0144	.722	537
560	3.995 0	-1145.4	1.3032	28.625	0.3215	3.691 0	30.189	.0454	1.000	-1.000	0.2379	1.3822	1129	.0149	.722	560
600	3.720 0	-1132.0	1.3264	28.625	0.3559	3.442 0	30.157	.0478	1.000	-1.000	0.2392	1.3799	1168	.0158	.724	600
640	3.468 0	-1116.5	1.3513	28.625	0.4231	3.218 0	30.081	.0501	1.000	-1.000	0.2410	1.3772	1207	.0166	.726	640
680	3.223 0	-1097.5	1.3801	28.625	0.5413	3.013 0	29.924	.0521	1.000	-1.000	0.2438	1.3741	1246	.0174	.730	680
720	2.972 0	-1072.2	1.4162	28.625	0.7366	2.818 0	29.632	.0538	1.000	-1.000	0.2481	1.3701	1287	.0182	.736	720
760	2.700 0	-1036.9	1.4638	28.625	1.0527	2.625 0	29.138	.0551	1.000	-1.000	0.2548	1.3652	1331	.0188	.745	760

TABLE 21A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.067624; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.6768;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .13264; H2O= .15592; N2= .70301; O2= .00000; AR= .00843

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=50.)								
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
360	1.0908-1	5.4542 0	-1392.7	1.8893	1.7299	1.5704	1.4110	1.2995	0.2522	1.3786	927.6	.0269	.0086	.7932	360
380	1.0334-1	5.1672 0	-1387.6	1.9030	1.7435	1.5841	1.4246	1.3132	0.2526	1.3777	952.7	.0284	.0091	.7877	380
400	9.8176-2	4.9088 0	-1382.6	1.9160	1.7565	1.5970	1.4376	1.3261	0.2530	1.3768	977.2	.0299	.0096	.7830	400
420	9.3501-2	4.6751 0	-1377.5	1.9283	1.7689	1.6094	1.4500	1.3385	0.2535	1.3758	1000.9	.0313	.0102	.7790	420
440	8.9251-2	4.4626 0	-1372.4	1.9401	1.7807	1.6212	1.4618	1.3503	0.2540	1.3748	1024.1	.0327	.0107	.7757	440
460	8.5371-2	4.2685 0	-1367.3	1.9514	1.7920	1.6325	1.4731	1.3616	0.2545	1.3737	1046.7	.0341	.0112	.7729	460
480	8.1814-2	4.0907 0	-1362.2	1.9623	1.8028	1.6434	1.4839	1.3725	0.2551	1.3727	1068.8	.0355	.0117	.7708	480
500	7.8541-2	3.9271 0	-1357.1	1.9727	1.8132	1.6538	1.4943	1.3829	0.2556	1.3716	1090.4	.0368	.0122	.7691	500
520	7.5520-2	3.7760 0	-1352.0	1.9827	1.8233	1.6638	1.5044	1.3929	0.2562	1.3704	1111.5	.0382	.0127	.7679	520
537	7.3174-2	3.6587 0	-1347.7	1.9908	1.8314	1.6719	1.5125	1.4010	0.2567	1.3694	1128.8	.0393	.0131	.7672	537
540	7.2723-2	3.6362 0	-1346.9	1.9924	1.8330	1.6735	1.5140	1.4026	0.2568	1.3692	1132.2	.0395	.0132	.7671	540
560	7.0126-2	3.5063 0	-1341.7	2.0018	1.8423	1.6829	1.5234	1.4119	0.2574	1.3681	1152.5	.0408	.0137	.7670	560
580	6.7708-2	3.3854 0	-1336.6	2.0108	1.8513	1.6919	1.5324	1.4210	0.2580	1.3668	1172.4	.0421	.0142	.7671	580
600	6.5451-2	3.2725 0	-1331.4	2.0196	1.8601	1.7007	1.5412	1.4297	0.2587	1.3656	1191.9	.0434	.0146	.7673	600
620	6.3340-2	3.1670 0	-1326.2	2.0281	1.8686	1.7091	1.5497	1.4382	0.2593	1.3643	1211.0	.0446	.0151	.7675	620
640	6.1360-2	3.0680 0	-1321.0	2.0363	1.8768	1.7174	1.5579	1.4465	0.2600	1.3631	1229.8	.0459	.0155	.7672	640
660	5.9501-2	2.9750 0	-1315.8	2.0443	1.8849	1.7254	1.5659	1.4545	0.2607	1.3618	1248.3	.0471	.0160	.7664	660
680	5.7751-2	2.8875 0	-1310.6	2.0521	1.8926	1.7332	1.5737	1.4623	0.2614	1.3604	1266.5	.0483	.0165	.7654	680
700	5.6101-2	2.8050 0	-1305.4	2.0597	1.9002	1.7408	1.5813	1.4699	0.2621	1.3591	1284.3	.0495	.0170	.7643	700
720	5.4542-2	2.7271 0	-1300.1	2.0671	1.9076	1.7482	1.5887	1.4773	0.2628	1.3578	1301.9	.0507	.0175	.7633	720
740	5.3068-2	2.6534 0	-1294.9	2.0743	1.9148	1.7554	1.5959	1.4845	0.2635	1.3564	1319.2	.0519	.0179	.7628	740
760	5.1672-2	2.5836 0	-1289.6	2.0813	1.9219	1.7624	1.6030	1.4915	0.2643	1.3551	1336.2	.0530	.0184	.7625	760
780	5.0347-2	2.5173 0	-1284.3	2.0882	1.9287	1.7693	1.6098	1.4984	0.2650	1.3537	1353.0	.0542	.0188	.7622	780
800	4.9088-2	2.4544 0	-1279.0	2.0949	1.9355	1.7760	1.6166	1.5051	0.2658	1.3523	1369.6	.0553	.0193	.7621	800
820	4.7891-2	2.3945 0	-1273.7	2.1015	1.9420	1.7826	1.6231	1.5117	0.2666	1.3509	1385.9	.0564	.0197	.7620	820
840	4.6751-2	2.3375 0	-1268.3	2.1079	1.9485	1.7890	1.6296	1.5181	0.2674	1.3496	1402.0	.0575	.0202	.7620	840
860	4.5663-2	2.2832 0	-1263.0	2.1142	1.9548	1.7953	1.6359	1.5244	0.2681	1.3482	1417.8	.0586	.0206	.7620	860
880	4.4626-2	2.2313 0	-1257.6	2.1204	1.9609	1.8015	1.6420	1.5306	0.2689	1.3468	1433.5	.0597	.0211	.7621	880
900	4.3634-2	2.1817 0	-1252.2	2.1265	1.9670	1.8075	1.6481	1.5366	0.2698	1.3454	1448.9	.0607	.0215	.7622	900
920	4.2685-2	2.1343 0	-1246.8	2.1324	1.9729	1.8135	1.6540	1.5426	0.2706	1.3440	1464.2	.0618	.0219	.7619	920
940	4.1777-2	2.0889 0	-1241.4	2.1382	1.9788	1.8193	1.6599	1.5484	0.2714	1.3426	1479.2	.0628	.0224	.7616	940
960	4.0907-2	2.0453 0	-1236.0	2.1439	1.9845	1.8250	1.6656	1.5541	0.2722	1.3412	1494.1	.0639	.0228	.7612	960
980	4.0072-2	2.0036 0	-1230.5	2.1496	1.9901	1.8307	1.6712	1.5597	0.2730	1.3398	1508.8	.0649	.0233	.7608	980
1000	3.9271-2	1.9635 0	-1225.0	2.1551	1.9956	1.8362	1.6767	1.5653	0.2739	1.3384	1523.3	.0660	.0238	.7603	1000
1020	3.8501-2	1.9250 0	-1219.5	2.1605	2.0011	1.8416	1.6822	1.5707	0.2747	1.3370	1537.7	.0670	.0242	.7599	1020
1040	3.7760-2	1.8880 0	-1214.0	2.1659	2.0064	1.8470	1.6875	1.5760	0.2756	1.3357	1551.9	.0680	.0247	.7594	1040
1060	3.7048-2	1.8524 0	-1208.5	2.1711	2.0117	1.8522	1.6928	1.5813	0.2764	1.3343	1565.9	.0690	.0251	.7589	1060
1080	3.6362-2	1.8181 0	-1203.0	2.1763	2.0168	1.8574	1.6979	1.5865	0.2773	1.3329	1579.8	.0700	.0256	.7583	1080
1100	3.5700-2	1.7850 0	-1197.4	2.1814	2.0219	1.8625	1.7030	1.5916	0.2781	1.3315	1593.6	.0710	.0261	.7578	1100
1120	3.5063-2	1.7531 0	-1191.9	2.1864	2.0270	1.8675	1.7080	1.5966	0.2790	1.3302	1607.2	.0720	.0265	.7572	1120
1140	3.4448-2	1.7224 0	-1186.3	2.1914	2.0319	1.8724	1.7130	1.6015	0.2798	1.3289	1620.7	.0730	.0270	.7566	1140

TABLE 21A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO \square 1.700; F/A=0.067624; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.6768;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO₂= .13264; H₂O= .15592; N₂= .70301; O₂= .00000; AR= .00843

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT ³	LB/FT ³	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	
1160	3.3854-2	1.6927 0	-1180.7	2.1962	2.0368	1.8773	1.7179	1.6064	0.2807	1.3275	1634.0	.0739	.0274	.7560	1160
1180	3.3280-2	1.6640 0	-1175.0	2.2010	2.0416	1.8821	1.7227	1.6112	0.2815	1.3262	1647.2	.0749	.0279	.7554	1180
1200	3.2725-2	1.6363 0	-1169.4	2.2058	2.0463	1.8869	1.7274	1.6160	0.2824	1.3249	1660.3	.0758	.0284	.7548	1200
1220	3.2189-2	1.6094 0	-1163.7	2.2104	2.0510	1.8915	1.7321	1.6206	0.2833	1.3236	1673.2	.0768	.0288	.7542	1220
1240	3.1670-2	1.5835 0	-1158.1	2.2151	2.0556	1.8962	1.7367	1.6252	0.2841	1.3223	1686.1	.0777	.0293	.7536	1240
1260	3.1167-2	1.5584 0	-1152.4	2.2196	2.0602	1.9007	1.7413	1.6298	0.2850	1.3210	1698.8	.0787	.0298	.7530	1260
1280	3.0680-2	1.5340 0	-1146.7	2.2241	2.0647	1.9052	1.7457	1.6343	0.2858	1.3197	1711.4	.0796	.0302	.7524	1280
1300	3.0208-2	1.5104 0	-1140.9	2.2285	2.0691	1.9096	1.7502	1.6387	0.2867	1.3185	1723.9	.0805	.0307	.7518	1300
1320	2.9750-2	1.4875 0	-1135.2	2.2329	2.0735	1.9140	1.7546	1.6431	0.2875	1.3172	1736.3	.0814	.0312	.7513	1320
1340	2.9306-2	1.4653 0	-1129.4	2.2373	2.0778	1.9184	1.7589	1.6474	0.2884	1.3160	1748.6	.0824	.0316	.7507	1340
1360	2.8875-2	1.4438 0	-1123.7	2.2415	2.0821	1.9226	1.7632	1.6517	0.2892	1.3148	1760.7	.0833	.0321	.7501	1360
1380	2.8457-2	1.4228 0	-1117.9	2.2458	2.0863	1.9269	1.7674	1.6560	0.2901	1.3136	1772.8	.0842	.0326	.7496	1380
1400	2.8050-2	1.4025 0	-1112.1	2.2499	2.0905	1.9310	1.7716	1.6601	0.2909	1.3124	1784.8	.0851	.0330	.7491	1400
1420	2.7655-2	1.3828 0	-1106.2	2.2541	2.0946	1.9352	1.7757	1.6643	0.2918	1.3112	1796.7	.0859	.0335	.7486	1420
1440	2.7271-2	1.3636 0	-1100.4	2.2582	2.0987	1.9393	1.7798	1.6684	0.2926	1.3100	1808.5	.0868	.0340	.7481	1440
1460	2.6898-2	1.3449 0	-1094.5	2.2622	2.1028	1.9433	1.7838	1.6724	0.2934	1.3089	1820.2	.0877	.0344	.7476	1460
1480	2.6534-2	1.3267 0	-1088.7	2.2662	2.1068	1.9473	1.7878	1.6764	0.2943	1.3078	1831.9	.0886	.0349	.7472	1480
1500	2.6180-2	1.3090 0	-1082.8	2.2702	2.1107	1.9513	1.7918	1.6803	0.2951	1.3067	1843.4	.0895	.0353	.7469	1500
1520	2.5836-2	1.2918 0	-1076.9	2.2741	2.1146	1.9552	1.7957	1.6843	0.2959	1.3056	1854.9	.0903	.0358	.7465	1520
1540	2.5500-2	1.2750 0	-1070.9	2.2780	2.1185	1.9590	1.7996	1.6881	0.2967	1.3045	1866.3	.0912	.0363	.7461	1540
1560	2.5173-2	1.2587 0	-1065.0	2.2818	2.1223	1.9629	1.8034	1.6920	0.2975	1.3034	1877.6	.0920	.0367	.7458	1560
1580	2.4855-2	1.2427 0	-1059.0	2.2856	2.1261	1.9667	1.8072	1.6958	0.2983	1.3023	1888.8	.0929	.0372	.7454	1580
1600	2.4544-2	1.2272 0	-1053.1	2.2893	2.1299	1.9704	1.8110	1.6995	0.2991	1.3013	1900.0	.0937	.0376	.7451	1600
1620	2.4241-2	1.2121 0	-1047.1	2.2931	2.1336	1.9741	1.8147	1.7032	0.2999	1.3003	1911.1	.0946	.0381	.7448	1620
1640	2.3945-2	1.1973 0	-1041.1	2.2967	2.1373	1.9778	1.8184	1.7069	0.3006	1.2993	1922.1	.0954	.0385	.7445	1640
1660	2.3657-2	1.1828 0	-1035.0	2.3004	2.1409	1.9815	1.8220	1.7106	0.3014	1.2983	1933.0	.0962	.0390	.7442	1660
1680	2.3375-2	1.1688 0	-1029.0	2.3040	2.1445	1.9851	1.8256	1.7142	0.3021	1.2973	1943.9	.0971	.0394	.7439	1680
1700	2.3100-2	1.1550 0	-1023.0	2.3076	2.1481	1.9887	1.8292	1.7178	0.3029	1.2964	1954.7	.0979	.0399	.7436	1700
1720	2.2832-2	1.1416 0	-1016.9	2.3111	2.1517	1.9922	1.8328	1.7213	0.3036	1.2955	1965.5	.0987	.0403	.7433	1720
1740	2.2569-2	1.1285 0	-1010.8	2.3146	2.1552	1.9957	1.8363	1.7248	0.3044	1.2945	1976.2	.0995	.0408	.7431	1740
1760	2.2313-2	1.1156 0	-1004.7	2.3181	2.1587	1.9992	1.8398	1.7283	0.3051	1.2936	1986.8	.1003	.0412	.7428	1760
1780	2.2062-2	1.1031 0	-998.6	2.3216	2.1621	2.0027	1.8432	1.7318	0.3058	1.2927	1997.4	.1012	.0417	.7425	1780
1800	2.1817-2	1.0908 0	-992.5	2.3250	2.1655	2.0061	1.8466	1.7352	0.3065	1.2919	2007.9	.1020	.0421	.7423	1800
1900	2.0669-2	1.0334 0	-961.7	2.3417	2.1822	2.0228	1.8633	1.7518	0.3098	1.2879	2059.7	.1059	.0443	.7410	1900
2000	1.9635-2	9.8176-1	-930.5	2.3576	2.1982	2.0387	1.8793	1.7678	0.3130	1.2841	2110.2	.1098	.0464	.7400	2000
2100	1.8700-2	9.3501-1	-899.1	2.3730	2.2135	2.0541	1.8946	1.7832	0.3160	1.2807	2159.4	.1135	.0485	.7390	2100
2200	1.7850-2	8.9251-1	-867.3	2.3877	2.2283	2.0688	1.9094	1.7979	0.3188	1.2775	2207.5	.1172	.0506	.7381	2200
2300	1.7074-2	8.5371-1	-835.3	2.4020	2.2425	2.0831	1.9236	1.8122	0.3215	1.2746	2254.5	.1209	.0527	.7373	2300
2400	1.6363-2	8.1814-1	-803.0	2.4157	2.2563	2.0968	1.9373	1.8259	0.3240	1.2718	2300.5	.1245	.0548	.7365	2400
2500	1.5708-2	7.8541-1	-770.5	2.4290	2.2695	2.1101	1.9506	1.8392	0.3264	1.2693	2345.6	.1280	.0568	.7357	2500

TABLE 21A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A=0.067624; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.6768;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .13264; H2O= .15592; N2= .70301; O2= .00000; AR= .00843

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
2600	1.5104-2	7.5520-1	-737.8	2.4418	2.2824	2.1229	1.9635	1.8520	0.3287	1.2669	2389.8	.1315	.0588	.7349	2600
2700	1.4545-2	7.2723-1	-704.8	2.4543	2.2948	2.1354	1.9759	1.8645	0.3309	1.2647	2433.2	.1349	.0608	.7341	2700
2800	1.4025-2	7.0126-1	-671.6	2.4663	2.3069	2.1474	1.9880	1.8765	0.3329	1.2627	2475.8	.1383	.0628	.7332	2800
2900	1.3542-2	6.7708-1	-638.2	2.4781	2.3186	2.1592	1.9997	1.8882	0.3348	1.2608	2517.8	.1417	.0648	.7323	2900
3000	1.3090-2	6.5451-1	-604.6	2.4894	2.3300	2.1705	2.0111	1.8996	0.3366	1.2590	2559.0	.1450	.0667	.7313	3000
3100	1.2668-2	6.3340-1	-570.9	2.5005	2.3411	2.1816	2.0221	1.9107	0.3383	1.2574	2599.6	.1483	.0687	.7304	3100
3200	1.2272-2	6.1360-1	-537.0	2.5113	2.3518	2.1924	2.0329	1.9215	0.3399	1.2558	2639.6	.1515	.0706	.7295	3200
3300	1.1900-2	5.9501-1	-502.9	2.5218	2.3623	2.2029	2.0434	1.9319	0.3414	1.2544	2679.0	.1547	.0725	.7285	3300
3400	1.1550-2	5.7751-1	-468.7	2.5320	2.3725	2.2131	2.0536	1.9422	0.3429	1.2531	2717.9	.1578	.0744	.7275	3400
3500	1.1220-2	5.6101-1	-434.3	2.5419	2.3825	2.2230	2.0636	1.9521	0.3442	1.2518	2756.2	.1609	.0763	.7265	3500
3600	1.0908-2	5.4542-1	-399.9	2.5516	2.3922	2.2327	2.0733	1.9618	0.3455	1.2507	2794.0	.1640	.0781	.7256	3600
3700	1.0614-2	5.3068-1	-365.2	2.5611	2.4017	2.2422	2.0828	1.9713	0.3467	1.2496	2831.3	.1671	.0799	.7247	3700
3800	1.0334-2	5.1672-1	-330.5	2.5704	2.4109	2.2515	2.0920	1.9806	0.3478	1.2486	2868.2	.1701	.0817	.7238	3800
3900	1.0069-2	5.0347-1	-295.7	2.5794	2.4200	2.2605	2.1011	1.9896	0.3489	1.2477	2904.5	.1730	.0835	.7228	3900
4000	9.8176-3	4.9088-1	-260.7	2.5883	2.4288	2.2694	2.1099	1.9985	0.3499	1.2468	2940.5	.1760	.0853	.7219	4000
4100	9.5782-3	4.7891-1	-225.7	2.5969	2.4375	2.2780	2.1186	2.0071	0.3508	1.2459	2976.1	.1789	.0871	.7209	4100
4200	9.3501-3	4.6751-1	-190.6	2.6054	2.4459	2.2865	2.1270	2.0156	0.3517	1.2452	3011.2	.1818	.0888	.7198	4200
4300	9.1327-3	4.5663-1	-155.4	2.6137	2.4542	2.2948	2.1353	2.0239	0.3525	1.2444	3045.9	.1847	.0906	.7188	4300
4400	8.9251-3	4.4626-1	-120.1	2.6218	2.4623	2.3029	2.1434	2.0320	0.3533	1.2438	3080.3	.1875	.0923	.7177	4400
4500	8.7268-3	4.3634-1	-84.7	2.6297	2.4703	2.3108	2.1514	2.0399	0.3541	1.2431	3114.3	.1903	.0940	.7166	4500
4600	8.5371-3	4.2685-1	-49.3	2.6375	2.4781	2.3186	2.1592	2.0477	0.3548	1.2425	3148.0	.1931	.0958	.7153	4600
4700	8.3554-3	4.1777-1	-13.8	2.6452	2.4857	2.3263	2.1668	2.0554	0.3555	1.2420	3181.3	.1958	.0975	.7141	4700
4800	8.1814-3	4.0907-1	21.8	2.6527	2.4932	2.3338	2.1743	2.0629	0.3561	1.2414	3214.2	.1985	.0992	.7129	4800
4900	8.0144-3	4.0072-1	57.5	2.6600	2.5006	2.3411	2.1817	2.0702	0.3567	1.2409	3246.9	.2012	.1009	.7117	4900
5000	7.8541-3	3.9271-1	93.2	2.6672	2.5078	2.3483	2.1889	2.0774	0.3573	1.2404	3279.2	.2039	.1025	.7106	5000
5100	7.7001-3	3.8501-1	128.9	2.6743	2.5149	2.3554	2.1959	2.0845	0.3578	1.2400	3311.2	.2066	.1042	.7095	5100
5200	7.5520-3	3.7760-1	164.7	2.6813	2.5218	2.3624	2.2029	2.0914	0.3584	1.2395	3342.9	.2092	.1058	.7084	5200
5300	7.4095-3	3.7048-1	200.6	2.6881	2.5286	2.3692	2.2097	2.0983	0.3589	1.2391	3374.3	.2118	.1075	.7074	5300
5400	7.2723-3	3.6362-1	236.5	2.6948	2.5354	2.3759	2.2164	2.1050	0.3594	1.2387	3405.5	.2144	.1091	.7065	5400

TABLE 21.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.067624; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 0.14696 LB/IN² (0.01 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4544-4	-1053.1	2.2893	28.677	.094	1.0000	-1.0000	0.2991	1.3013	1900.0	.0376	.745	0.2991	1.3013	1900.0	.0376	.745
1700	2.3100-4	-1023.0	2.3076	28.677	.098	1.0000	-1.0000	0.3029	1.2964	1954.7	.0399	.744	0.3029	1.2964	1954.7	.0399	.744
1800	2.1817-4	-992.5	2.3250	28.677	.102	1.0000	-1.0000	0.3065	1.2919	2007.9	.0421	.742	0.3065	1.2919	2007.9	.0421	.742
1900	2.0669-4	-961.7	2.3417	28.677	.106	1.0000	-1.0000	0.3099	1.2878	2059.7	.0443	.741	0.3098	1.2879	2059.7	.0443	.741
2000	1.9635-4	-930.5	2.3576	28.677	.110	1.0000	-1.0000	0.3131	1.2840	2110.1	.0465	.740	0.3130	1.2841	2110.2	.0464	.740
2100	1.8700-4	-899.0	2.3730	28.677	.114	1.0001	-1.0000	0.3163	1.2804	2159.1	.0486	.739	0.3160	1.2807	2159.4	.0485	.739
2200	1.7850-4	-867.2	2.3878	28.676	.117	1.0002	-1.0000	0.3196	1.2768	2206.9	.0508	.737	0.3188	1.2775	2207.5	.0506	.738
2300	1.7074-4	-835.1	2.4021	28.676	.121	1.0004	-1.0000	0.3230	1.2732	2253.3	.0530	.736	0.3215	1.2746	2254.5	.0527	.737
2400	1.6362-4	-802.6	2.4159	28.675	.124	1.0008	-1.0000	0.3269	1.2694	2298.3	.0554	.734	0.3240	1.2718	2300.5	.0548	.736
2500	1.5707-4	-769.7	2.4293	28.674	.128	1.0015	-1.0000	0.3315	1.2651	2341.8	.0580	.732	0.3264	1.2693	2345.7	.0568	.736
2600	1.5101-4	-736.3	2.4424	28.672	.132	1.0027	-1.0001	0.3373	1.2600	2383.5	.0608	.729	0.3287	1.2670	2390.1	.0588	.735
2700	1.4540-4	-702.2	2.4553	28.668	.135	1.0045	-1.0001	0.3450	1.2540	2423.2	.0642	.726	0.3308	1.2648	2433.7	.0608	.734
2800	1.4018-4	-667.2	2.4680	28.662	.138	1.0074	-1.0002	0.3551	1.2466	2460.7	.0682	.720	0.3329	1.2629	2476.7	.0628	.733
2900	1.3530-4	-631.1	2.4807	28.652	.142	1.0117	-1.0003	0.3688	1.2378	2495.7	.0732	.713	0.3348	1.2611	2519.2	.0648	.732
3000	1.3073-4	-593.3	2.4935	28.638	.145	1.0179	-1.0004	0.3869	1.2274	2528.4	.0796	.704	0.3366	1.2595	2561.3	.0668	.731
3100	1.2642-4	-553.5	2.5066	28.618	.148	1.0267	-1.0007	0.4109	1.2156	2558.7	.0879	.693	0.3382	1.2581	2603.1	.0687	.729
3200	1.2234-4	-510.9	2.5201	28.588	.151	1.0388	-1.0010	0.4420	1.2027	2587.2	.0987	.678	0.3398	1.2570	2644.9	.0706	.728
3300	1.1846-4	-464.8	2.5343	28.547	.154	1.0550	-1.0015	0.4817	1.1893	2614.5	.1128	.660	0.3412	1.2561	2686.9	.0726	.727
3400	1.1476-4	-414.2	2.5494	28.492	.158	1.0763	-1.0022	0.5316	1.1761	2641.6	.1313	.638	0.3426	1.2554	2729.2	.0745	.725
3500	1.1119-4	-358.1	2.5656	28.418	.161	1.1036	-1.0031	0.5930	1.1634	2669.1	.1553	.613	0.3438	1.2551	2772.3	.0764	.723
3600	1.0774-4	-295.2	2.5833	28.322	.163	1.1380	-1.0042	0.6672	1.1519	2698.2	.1863	.585	0.3449	1.2552	2816.5	.0783	.720
3700	1.0437-4	-224.2	2.6028	28.199	.166	1.1804	-1.0057	0.7553	1.1418	2729.3	.2261	.555	0.3459	1.2556	2862.1	.0802	.717
3800	1.0107-4	-143.6	2.6243	28.046	.169	1.2316	-1.0075	0.8581	1.1333	2763.1	.2766	.524	0.3468	1.2566	2909.5	.0821	.714
3900	9.7812-5	-52.1	2.6480	27.856	.172	1.2924	-1.0099	0.9763	1.1263	2800.0	.3399	.493	0.3476	1.2580	2959.2	.0842	.709
4000	9.4581-5	52.2	2.6744	27.627	.174	1.3636	-1.0127	1.1106	1.1207	2840.3	.4181	.463	0.3484	1.2600	3011.7	.0863	.703
4100	9.1359-5	170.6	2.7037	27.353	.177	1.4459	-1.0161	1.2614	1.1164	2884.4	.5127	.434	0.3491	1.2626	3067.5	.0886	.696
4200	8.8133-5	305.0	2.7360	27.030	.179	1.5396	-1.0202	1.4294	1.1132	2932.6	.6243	.410	0.3498	1.2659	3127.2	.0910	.687
4300	8.4895-5	457.1	2.7718	26.657	.181	1.6447	-1.0249	1.6144	1.1110	2985.0	.7516	.389	0.3505	1.2699	3191.4	.0938	.677
4400	8.1638-5	628.4	2.8112	26.231	.183	1.7598	-1.0303	1.8147	1.1097	3042.2	.8905	.374	0.3512	1.2748	3260.7	.0969	.664
4500	7.8367-5	820.3	2.8543	25.752	.185	1.8814	-1.0363	2.0250	1.1092	3104.4	*****	.363	0.3520	1.2805	3335.5	.1005	.650
4600	7.5092-5	1033.4	2.9011	25.224	.187	2.0025	-1.0426	2.2342	1.1095	3171.7	*****	.359	0.3529	1.2872	3416.3	.1045	.633
4700	7.1840-5	1266.6	2.9513	24.656	.189	2.1122	-1.0488	2.4243	1.1105	3244.1	*****	.359	0.3539	1.2947	3502.9	.1089	.616
4800	6.8650-5	1516.8	3.0039	24.063	.191	2.1964	-1.0540	2.5706	1.1122	3321.3	*****	.364	0.3549	1.3030	3594.8	.1136	.598
4900	6.5576-5	1778.3	3.0579	23.464	.193	2.2402	-1.0575	2.6459	1.1148	3402.3	*****	.374	0.3561	1.3118	3690.6	.1186	.581
5000	6.2673-5	2042.9	3.1113	22.883	.196	2.2327	-1.0587	2.6291	1.1184	3485.7	*****	.387	0.3572	1.3209	3788.2	.1237	.565
5100	5.9994-5	2300.8	3.1624	22.343	.198	2.1718	-1.0572	2.5142	1.1230	3570.0	*****	.402	0.3583	1.3298	3884.9	.1287	.551
5200	5.7572-5	2542.9	3.2094	21.861	.200	2.0658	-1.0533	2.3148	1.1288	3653.8	*****	.418	0.3594	1.3382	3978.2	.1333	.539
5300	5.5419-5	2762.0	3.2512	21.449	.202	1.9309	-1.0477	2.0607	1.1361	3736.0	.9619	.434	0.3604	1.3457	4066.1	.1377	.530
5400	5.3527-5	2954.4	3.2871	21.107	.205	1.7855	-1.0412	1.7866	1.1451	3816.4	.8157	.449	0.3613	1.3521	4147.2	.1416	.523

TABLE 21.2B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.067624; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 1.46959 LB/IN2 (0.10 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	FROZEN GAM VS FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4544-3	-1053.1	2.1299	28.677	.094	1.0000	-1.0000	0.2991	1.3013	1900.0	.0376	.745	0.2991	1.3013	1900.0	.0376	.745
1700	2.3100-3	-1023.0	2.1481	28.677	.098	1.0000	-1.0000	0.3029	1.2964	1954.7	.0399	.744	0.3029	1.2964	1954.7	.0399	.744
1800	2.1817-3	-992.5	2.1655	28.677	.102	1.0000	-1.0000	0.3065	1.2919	2007.9	.0421	.742	0.3065	1.2919	2007.9	.0421	.742
1900	2.0669-3	-961.7	2.1822	28.677	.106	1.0000	-1.0000	0.3099	1.2878	2059.7	.0443	.741	0.3098	1.2879	2059.7	.0443	.741
2000	1.9635-3	-930.5	2.1982	28.677	.110	1.0000	-1.0000	0.3130	1.2841	2110.1	.0464	.740	0.3130	1.2841	2110.2	.0464	.740
2100	1.8700-3	-899.1	2.2135	28.677	.114	1.0000	-1.0000	0.3161	1.2805	2159.3	.0486	.739	0.3160	1.2807	2159.4	.0485	.739
2200	1.7850-3	-867.3	2.2283	28.677	.117	1.0001	-1.0000	0.3192	1.2772	2207.2	.0507	.738	0.3188	1.2775	2207.5	.0506	.738
2300	1.7074-3	-835.2	2.2426	28.676	.121	1.0002	-1.0000	0.3222	1.2739	2253.9	.0529	.737	0.3215	1.2746	2254.5	.0527	.737
2400	1.6362-3	-802.9	2.2563	28.676	.124	1.0004	-1.0000	0.3254	1.2706	2299.4	.0551	.736	0.3240	1.2718	2300.5	.0548	.736
2500	1.5707-3	-770.1	2.2697	28.675	.128	1.0007	-1.0000	0.3288	1.2673	2343.8	.0573	.734	0.3264	1.2693	2345.6	.0568	.736
2600	1.5103-3	-737.1	2.2827	28.674	.132	1.0012	-1.0000	0.3328	1.2636	2386.8	.0598	.732	0.3287	1.2669	2389.9	.0588	.735
2700	1.4543-3	-703.6	2.2953	28.673	.135	1.0021	-1.0000	0.3375	1.2595	2428.3	.0624	.730	0.3308	1.2648	2433.4	.0608	.734
2800	1.4022-3	-669.5	2.3077	28.670	.138	1.0034	-1.0001	0.3434	1.2548	2468.4	.0653	.727	0.3329	1.2628	2476.2	.0628	.733
2900	1.3536-3	-634.8	2.3199	28.665	.142	1.0054	-1.0001	0.3508	1.2492	2506.7	.0687	.724	0.3348	1.2609	2518.4	.0648	.732
3000	1.3082-3	-599.3	2.3319	28.659	.145	1.0083	-1.0002	0.3603	1.2428	2543.3	.0726	.719	0.3366	1.2592	2560.1	.0668	.731
3100	1.2656-3	-562.7	2.3439	28.649	.148	1.0124	-1.0003	0.3724	1.2353	2577.9	.0774	.714	0.3383	1.2577	2601.3	.0687	.730
3200	1.2254-3	-524.7	2.3560	28.635	.151	1.0180	-1.0005	0.3878	1.2268	2610.8	.0831	.706	0.3399	1.2564	2642.1	.0706	.729
3300	1.1875-3	-485.0	2.3682	28.617	.155	1.0254	-1.0007	0.4071	1.2173	2641.9	.0902	.698	0.3413	1.2552	2682.7	.0725	.728
3400	1.1516-3	-443.1	2.3807	28.591	.158	1.0352	-1.0010	0.4312	1.2072	2671.7	.0990	.687	0.3427	1.2542	2723.1	.0744	.726
3500	1.1173-3	-398.6	2.3936	28.557	.161	1.0479	-1.0014	0.4607	1.1967	2700.4	.1098	.674	0.3440	1.2534	2763.7	.0763	.725
3600	1.0846-3	-350.8	2.4070	28.512	.164	1.0637	-1.0019	0.4962	1.1861	2728.8	.1233	.659	0.3452	1.2528	2804.4	.0781	.723
3700	1.0532-3	-299.1	2.4212	28.455	.167	1.0834	-1.0026	0.5383	1.1759	2757.2	.1398	.642	0.3463	1.2524	2845.5	.0800	.722
3800	1.0229-3	-242.9	2.4362	28.383	.170	1.1072	-1.0034	0.5876	1.1663	2786.3	.1601	.622	0.3473	1.2523	2887.3	.0818	.720
3900	9.9350-4	-181.4	2.4522	28.294	.172	1.1356	-1.0044	0.6442	1.1575	2816.5	.1849	.601	0.3482	1.2525	2929.8	.0836	.718
4000	9.6495-4	-113.8	2.4693	28.186	.175	1.1689	-1.0057	0.7082	1.1497	2848.2	.2149	.577	0.3490	1.2530	2973.4	.0855	.715
4100	9.3706-4	-39.5	2.4876	28.055	.178	1.2073	-1.0072	0.7796	1.1430	2881.9	.2511	.552	0.3497	1.2538	3018.3	.0873	.712
4200	9.0973-4	42.4	2.5073	27.901	.180	1.2509	-1.0090	0.8583	1.1374	2917.6	.2942	.526	0.3504	1.2549	3064.7	.0893	.708
4300	8.8284-4	132.4	2.5285	27.721	.183	1.2999	-1.0111	0.9438	1.1327	2955.6	.3452	.500	0.3510	1.2565	3112.9	.0912	.704
4400	8.5632-4	231.3	2.5513	27.514	.185	1.3544	-1.0135	1.0361	1.1290	2996.1	.4048	.475	0.3515	1.2584	3163.2	.0933	.699
4500	8.3010-4	339.8	2.5756	27.278	.188	1.4144	-1.0163	1.1351	1.1261	3039.2	.4735	.450	0.3520	1.2607	3215.7	.0954	.693
4600	8.0413-4	458.6	2.6017	27.011	.190	1.4799	-1.0195	1.2406	1.1240	3085.0	.5513	.428	0.3525	1.2635	3270.8	.0978	.685
4700	7.7835-4	588.2	2.6296	26.714	.192	1.5510	-1.0230	1.3526	1.1225	3133.6	.6376	.408	0.3530	1.2667	3328.8	.1003	.677
4800	7.5275-4	729.3	2.6593	26.385	.195	1.6270	-1.0270	1.4704	1.1217	3185.2	.7306	.392	0.3535	1.2705	3389.9	.1031	.668
4900	7.2732-4	882.4	2.6909	26.025	.197	1.7069	-1.0314	1.5927	1.1213	3240.0	.8276	.379	0.3541	1.2747	3454.4	.1061	.657
5000	7.0209-4	1047.9	2.7243	25.635	.199	1.7886	-1.0360	1.7163	1.1215	3297.9	.9242	.369	0.3547	1.2795	3522.5	.1094	.645
5100	6.7712-4	1225.6	2.7595	25.217	.201	1.8686	-1.0408	1.8364	1.1222	3359.2	****	.364	0.3553	1.2847	3594.2	.1129	.632
5200	6.5252-4	1414.8	2.7962	24.778	.203	1.9424	-1.0455	1.9461	1.1234	3423.8	****	.362	0.3560	1.2905	3669.6	.1168	.619
5300	6.2843-4	1614.2	2.8342	24.322	.205	2.0042	-1.0498	2.0367	1.1252	3491.5	****	.363	0.3567	1.2968	3748.3	.1209	.605
5400	6.0506-4	1821.2	2.8729	23.859	.207	2.0481	-1.0533	2.0988	1.1275	3562.0	****	.367	0.3575	1.3034	3829.8	.1253	.592

TABLE 21.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.067624; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 14.6959 LB/IN² (1.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4544-2	-1053.1	1.9704	28.677	.094	1.0000	-1.0000	0.2991	1.3013	1900.0	.0376	.745	0.2991	1.3013	1900.0	.0376	.745
1700	2.3100-2	-1023.0	1.9887	28.677	.098	1.0000	-1.0000	0.3029	1.2964	1954.8	.0399	.744	0.3029	1.2964	1954.7	.0399	.744
1800	2.1817-2	-992.5	2.0061	28.677	.102	1.0000	-1.0000	0.3065	1.2919	2007.9	.0421	.742	0.3065	1.2919	2007.9	.0421	.742
1900	2.0669-2	-961.7	2.0228	28.677	.106	1.0000	-1.0000	0.3098	1.2878	2059.7	.0443	.741	0.3098	1.2879	2059.7	.0443	.741
2000	1.9635-2	-930.5	2.0387	28.677	.110	1.0000	-1.0000	0.3130	1.2841	2110.2	.0464	.740	0.3130	1.2841	2110.2	.0464	.740
2100	1.8700-2	-899.1	2.0541	28.677	.114	1.0000	-1.0000	0.3160	1.2806	2159.3	.0486	.739	0.3160	1.2807	2159.4	.0485	.739
2200	1.7850-2	-867.3	2.0688	28.677	.117	1.0000	-1.0000	0.3190	1.2773	2207.3	.0507	.738	0.3188	1.2775	2207.5	.0506	.738
2300	1.7074-2	-835.3	2.0831	28.677	.121	1.0001	-1.0000	0.3218	1.2742	2254.2	.0528	.737	0.3215	1.2746	2254.5	.0527	.737
2400	1.6363-2	-803.0	2.0968	28.676	.124	1.0002	-1.0000	0.3247	1.2713	2300.0	.0549	.736	0.3240	1.2718	2300.5	.0548	.736
2500	1.5708-2	-770.3	2.1102	28.676	.128	1.0003	-1.0000	0.3276	1.2683	2344.7	.0571	.735	0.3264	1.2693	2345.6	.0568	.736
2600	1.5103-2	-737.4	2.1231	28.676	.132	1.0006	-1.0000	0.3306	1.2653	2388.3	.0593	.734	0.3287	1.2669	2389.8	.0588	.735
2700	1.4544-2	-704.2	2.1356	28.675	.135	1.0010	-1.0000	0.3340	1.2622	2430.8	.0616	.732	0.3308	1.2647	2433.3	.0608	.734
2800	1.4024-2	-670.6	2.1478	28.673	.138	1.0016	-1.0000	0.3379	1.2588	2472.2	.0640	.730	0.3329	1.2627	2476.0	.0628	.733
2900	1.3539-2	-636.6	2.1597	28.671	.142	1.0026	-1.0001	0.3424	1.2551	2512.3	.0666	.728	0.3348	1.2608	2518.1	.0648	.732
3000	1.3086-2	-602.1	2.1714	28.668	.145	1.0039	-1.0001	0.3479	1.2509	2551.2	.0695	.726	0.3366	1.2591	2559.5	.0667	.731
3100	1.2662-2	-567.0	2.1830	28.664	.148	1.0058	-1.0001	0.3545	1.2462	2588.6	.0727	.723	0.3383	1.2575	2600.4	.0687	.730
3200	1.2264-2	-531.1	2.1943	28.657	.151	1.0084	-1.0002	0.3627	1.2408	2624.7	.0764	.719	0.3399	1.2561	2640.8	.0706	.729
3300	1.1888-2	-494.4	2.2056	28.648	.155	1.0119	-1.0003	0.3727	1.2348	2659.3	.0806	.715	0.3414	1.2548	2680.7	.0725	.728
3400	1.1534-2	-456.5	2.2169	28.636	.158	1.0165	-1.0005	0.3848	1.2281	2692.5	.0856	.709	0.3428	1.2536	2720.3	.0744	.727
3500	1.1198-2	-417.3	2.2283	28.620	.161	1.0224	-1.0006	0.3996	1.2208	2724.5	.0914	.703	0.3441	1.2526	2759.7	.0763	.726
3600	1.0879-2	-376.5	2.2398	28.599	.164	1.0299	-1.0009	0.4172	1.2131	2755.4	.0983	.696	0.3453	1.2517	2798.9	.0781	.725
3700	1.0575-2	-333.8	2.2515	28.573	.167	1.0391	-1.0012	0.4380	1.2050	2785.4	.1063	.687	0.3465	1.2509	2838.0	.0799	.723
3800	1.0285-2	-288.8	2.2635	28.539	.170	1.0504	-1.0016	0.4623	1.1969	2814.9	.1159	.677	0.3475	1.2504	2877.1	.0817	.722
3900	1.0006-2	-241.2	2.2759	28.496	.173	1.0640	-1.0021	0.4904	1.1888	2844.2	.1272	.666	0.3485	1.2499	2916.4	.0835	.721
4000	9.7382-3	-190.6	2.2887	28.445	.176	1.0800	-1.0026	0.5224	1.1810	2873.5	.1404	.653	0.3494	1.2497	2956.0	.0853	.719
4100	9.4798-3	-136.6	2.3020	28.382	.178	1.0987	-1.0034	0.5582	1.1736	2903.3	.1559	.639	0.3502	1.2497	2995.9	.0871	.717
4200	9.2298-3	-78.8	2.3159	28.308	.181	1.1201	-1.0042	0.5980	1.1668	2933.9	.1739	.623	0.3510	1.2498	3036.4	.0889	.715
4300	8.9872-3	-16.9	2.3305	28.220	.184	1.1442	-1.0052	0.6414	1.1607	2965.4	.1947	.606	0.3516	1.2502	3077.6	.0907	.713
4400	8.7512-3	49.6	2.3458	28.118	.186	1.1712	-1.0063	0.6883	1.1553	2998.1	.2186	.587	0.3522	1.2508	3119.5	.0924	.711
4500	8.5211-3	120.9	2.3618	28.001	.189	1.2009	-1.0076	0.7383	1.1507	3032.2	.2460	.567	0.3528	1.2516	3162.4	.0942	.708
4600	8.2962-3	197.3	2.3786	27.868	.192	1.2332	-1.0091	0.7911	1.1467	3067.7	.2773	.547	0.3533	1.2527	3206.4	.0961	.704
4700	8.0761-3	279.2	2.3962	27.718	.194	1.2681	-1.0107	0.8463	1.1434	3104.8	.3126	.526	0.3537	1.2540	3251.5	.0980	.701
4800	7.8603-3	366.7	2.4146	27.551	.197	1.3055	-1.0126	0.9036	1.1408	3143.5	.3522	.504	0.3541	1.2556	3297.8	.0999	.697
4900	7.6484-3	460.0	2.4339	27.367	.199	1.3452	-1.0146	0.9628	1.1387	3183.8	.3964	.483	0.3545	1.2574	3345.6	.1019	.692
5000	7.4403-3	559.3	2.4539	27.166	.201	1.3873	-1.0168	1.0238	1.1371	3225.9	.4451	.463	0.3549	1.2594	3394.9	.1040	.687
5100	7.2355-3	664.8	2.4748	26.946	.204	1.4317	-1.0193	1.0866	1.1361	3269.6	.4983	.444	0.3552	1.2618	3445.8	.1062	.681
5200	7.0340-3	776.6	2.4965	26.710	.206	1.4783	-1.0219	1.1510	1.1354	3315.2	.5555	.427	0.3556	1.2644	3498.4	.1085	.675
5300	6.8355-3	895.0	2.5191	26.455	.208	1.5271	-1.0248	1.2169	1.1351	3362.5	.6161	.411	0.3560	1.2672	3552.9	.1110	.668
5400	6.6400-3	1020.0	2.5424	26.184	.210	1.5775	-1.0279	1.2839	1.1352	3411.8	.6790	.398	0.3563	1.2704	3609.3	.1136	.660

TABLE 21.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.067624; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 146.959 LB/IN2 (10.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4544-1	-1053.1	1.8110	28.677	.094	1.0000	-1.0000	0.2991	1.3013	1900.0	.0376	.745	0.2991	1.3013	1900.0	.0376	.745
1700	2.3100-1	-1023.0	1.8292	28.677	.098	1.0000	-1.0000	0.3029	1.2964	1954.8	.0399	.744	0.3029	1.2964	1954.7	.0399	.744
1800	2.1817-1	-992.5	1.8466	28.677	.102	1.0000	-1.0000	0.3065	1.2919	2007.9	.0421	.742	0.3065	1.2919	2007.9	.0421	.742
1900	2.0669-1	-961.7	1.8633	28.677	.106	1.0000	-1.0000	0.3098	1.2879	2059.7	.0443	.741	0.3098	1.2879	2059.7	.0443	.741
2000	1.9635-1	-930.5	1.8793	28.677	.110	1.0000	-1.0000	0.3130	1.2841	2110.2	.0464	.740	0.3130	1.2841	2110.2	.0464	.740
2100	1.8700-1	-899.1	1.8946	28.677	.114	1.0000	-1.0000	0.3160	1.2807	2159.4	.0485	.739	0.3160	1.2807	2159.4	.0485	.739
2200	1.7850-1	-867.3	1.9094	28.677	.117	1.0000	-1.0000	0.3189	1.2774	2207.4	.0507	.738	0.3188	1.2775	2207.5	.0506	.738
2300	1.7074-1	-835.3	1.9236	28.677	.121	1.0000	-1.0000	0.3216	1.2744	2254.3	.0527	.737	0.3215	1.2746	2254.5	.0527	.737
2400	1.6363-1	-803.0	1.9374	28.677	.124	1.0001	-1.0000	0.3243	1.2715	2300.2	.0548	.736	0.3240	1.2718	2300.5	.0548	.736
2500	1.5708-1	-770.4	1.9507	28.676	.128	1.0002	-1.0000	0.3270	1.2688	2345.1	.0569	.735	0.3264	1.2693	2345.6	.0568	.736
2600	1.5104-1	-737.6	1.9635	28.676	.132	1.0003	-1.0000	0.3296	1.2661	2389.1	.0590	.734	0.3287	1.2669	2389.8	.0588	.735
2700	1.4544-1	-704.5	1.9760	28.676	.135	1.0005	-1.0000	0.3324	1.2635	2432.0	.0612	.733	0.3309	1.2647	2433.3	.0608	.734
2800	1.4024-1	-671.1	1.9882	28.675	.138	1.0008	-1.0000	0.3353	1.2608	2474.1	.0634	.732	0.3329	1.2627	2475.9	.0628	.733
2900	1.3540-1	-637.4	2.0000	28.674	.142	1.0012	-1.0000	0.3385	1.2580	2515.1	.0657	.730	0.3348	1.2608	2517.9	.0648	.732
3000	1.3088-1	-603.4	2.0115	28.673	.145	1.0019	-1.0000	0.3420	1.2550	2555.1	.0681	.729	0.3366	1.2591	2559.3	.0667	.731
3100	1.2665-1	-569.0	2.0228	28.671	.148	1.0028	-1.0001	0.3461	1.2518	2594.1	.0706	.727	0.3383	1.2574	2600.0	.0687	.730
3200	1.2268-1	-534.2	2.0339	28.668	.151	1.0040	-1.0001	0.3509	1.2483	2632.1	.0733	.725	0.3399	1.2560	2640.2	.0706	.729
3300	1.1895-1	-498.8	2.0447	28.663	.155	1.0056	-1.0001	0.3565	1.2444	2668.9	.0763	.722	0.3414	1.2546	2679.8	.0725	.728
3400	1.1542-1	-462.8	2.0555	28.658	.158	1.0078	-1.0002	0.3631	1.2401	2704.7	.0796	.719	0.3428	1.2533	2719.0	.0744	.727
3500	1.1210-1	-426.2	2.0661	28.650	.161	1.0106	-1.0003	0.3709	1.2355	2739.4	.0833	.716	0.3442	1.2522	2757.8	.0763	.726
3600	1.0895-1	-388.6	2.0767	28.640	.164	1.0141	-1.0004	0.3800	1.2304	2773.0	.0875	.712	0.3454	1.2512	2796.3	.0781	.725
3700	1.0595-1	-350.1	2.0872	28.627	.167	1.0185	-1.0006	0.3907	1.2249	2805.6	.0922	.708	0.3466	1.2502	2834.5	.0799	.724
3800	1.0311-1	-310.4	2.0978	28.611	.170	1.0239	-1.0007	0.4031	1.2192	2837.4	.0975	.703	0.3477	1.2494	2872.4	.0817	.723
3900	1.0039-1	-269.4	2.1085	28.591	.173	1.0304	-1.0010	0.4174	1.2132	2868.4	.1035	.697	0.3487	1.2487	2910.2	.0835	.722
4000	9.7799-2	-226.9	2.1192	28.566	.176	1.0382	-1.0012	0.4337	1.2071	2898.9	.1103	.691	0.3496	1.2482	2947.8	.0853	.721
4100	9.5313-2	-182.6	2.1302	28.536	.179	1.0473	-1.0016	0.4520	1.2009	2929.0	.1181	.684	0.3505	1.2477	2985.5	.0871	.719
4200	9.2926-2	-136.4	2.1413	28.500	.181	1.0578	-1.0020	0.4724	1.1948	2958.8	.1268	.676	0.3513	1.2474	3023.2	.0888	.718
4300	9.0629-2	-88.1	2.1527	28.458	.184	1.0698	-1.0025	0.4949	1.1890	2988.7	.1367	.667	0.3521	1.2472	3061.0	.0906	.716
4400	8.8414-2	-37.4	2.1643	28.408	.187	1.0834	-1.0030	0.5195	1.1834	3018.8	.1478	.657	0.3527	1.2472	3099.1	.0923	.715
4500	8.6273-2	15.9	2.1763	28.350	.190	1.0986	-1.0036	0.5460	1.1781	3049.3	.1602	.646	0.3534	1.2472	3137.4	.0940	.713
4600	8.4199-2	71.9	2.1886	28.283	.192	1.1153	-1.0044	0.5743	1.1733	3080.3	.1741	.635	0.3539	1.2475	3176.1	.0958	.711
4700	8.2188-2	130.8	2.2013	28.208	.195	1.1335	-1.0052	0.6042	1.1690	3111.9	.1895	.622	0.3545	1.2478	3215.2	.0975	.709
4800	8.0233-2	192.8	2.2143	28.123	.198	1.1532	-1.0061	0.6355	1.1651	3144.4	.2065	.608	0.3549	1.2484	3254.8	.0993	.707
4900	7.8331-2	257.9	2.2278	28.028	.200	1.1742	-1.0071	0.6678	1.1617	3177.7	.2251	.594	0.3554	1.2490	3295.0	.1010	.704
5000	7.6478-2	326.4	2.2416	27.924	.203	1.1964	-1.0082	0.7010	1.1588	3211.9	.2456	.578	0.3558	1.2499	3335.8	.1027	.702
5100	7.4671-2	398.2	2.2558	27.809	.205	1.2197	-1.0094	0.7347	1.1563	3247.1	.2679	.563	0.3561	1.2508	3377.2	.1045	.699
5200	7.2906-2	473.3	2.2704	27.684	.208	1.2439	-1.0107	0.7688	1.1543	3283.4	.2922	.546	0.3564	1.2520	3419.4	.1063	.696
5300	7.1182-2	551.9	2.2854	27.549	.210	1.2691	-1.0121	0.8030	1.1528	3320.6	.3184	.530	0.3567	1.2532	3462.3	.1081	.693
5400	6.9496-2	633.9	2.3007	27.404	.212	1.2951	-1.0136	0.8373	1.1515	3358.9	.3468	.513	0.3570	1.2547	3506.0	.1100	.690

TABLE 21.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.067624; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 734.797 LB/IN² (50.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	1.2272	0	-1053.1	1.6995	28.677	.094	1.0000	-1.0000	0.2991	1.3013	1900.0	.0376	.745	0.2991	1.3013	1900.0	.0376	.745
1700	1.1550	0	-1023.0	1.7178	28.677	.098	1.0000	-1.0000	0.3029	1.2964	1954.8	.0399	.744	0.3029	1.2964	1954.7	.0399	.744
1800	1.0908	0	-992.5	1.7352	28.677	.102	1.0000	-1.0000	0.3065	1.2919	2007.9	.0421	.742	0.3065	1.2919	2007.9	.0421	.742
1900	1.0334	0	-961.7	1.7518	28.677	.106	1.0000	-1.0000	0.3098	1.2879	2059.7	.0443	.741	0.3098	1.2879	2059.7	.0443	.741
2000	9.8176	-1	-930.5	1.7678	28.677	.110	1.0000	-1.0000	0.3130	1.2841	2110.2	.0464	.740	0.3130	1.2841	2110.2	.0464	.740
2100	9.3501	-1	-899.1	1.7832	28.677	.114	1.0000	-1.0000	0.3160	1.2807	2159.4	.0485	.739	0.3160	1.2807	2159.4	.0485	.739
2200	8.9251	-1	-867.3	1.7979	28.677	.117	1.0000	-1.0000	0.3188	1.2775	2207.4	.0506	.738	0.3188	1.2775	2207.5	.0506	.738
2300	8.5371	-1	-835.3	1.8122	28.677	.121	1.0000	-1.0000	0.3216	1.2745	2254.4	.0527	.737	0.3215	1.2746	2254.5	.0527	.737
2400	8.1813	-1	-803.0	1.8259	28.677	.124	1.0001	-1.0000	0.3242	1.2716	2300.3	.0548	.736	0.3240	1.2718	2300.5	.0548	.736
2500	7.8541	-1	-770.5	1.8392	28.677	.128	1.0001	-1.0000	0.3268	1.2690	2345.3	.0569	.735	0.3264	1.2693	2345.6	.0568	.736
2600	7.5519	-1	-737.7	1.8521	28.676	.132	1.0002	-1.0000	0.3293	1.2664	2389.4	.0590	.735	0.3287	1.2669	2389.8	.0588	.735
2700	7.2722	-1	-704.6	1.8645	28.676	.135	1.0003	-1.0000	0.3318	1.2640	2432.5	.0610	.734	0.3309	1.2647	2433.2	.0608	.734
2800	7.0124	-1	-671.3	1.8766	28.676	.138	1.0005	-1.0000	0.3343	1.2615	2474.8	.0632	.732	0.3329	1.2627	2475.9	.0628	.733
2900	6.7704	-1	-637.7	1.8884	28.675	.142	1.0007	-1.0000	0.3370	1.2591	2516.1	.0653	.731	0.3348	1.2608	2517.9	.0648	.732
3000	6.5445	-1	-603.9	1.8999	28.674	.145	1.0011	-1.0000	0.3399	1.2566	2556.6	.0675	.730	0.3366	1.2590	2559.2	.0667	.731
3100	6.3331	-1	-569.8	1.9111	28.673	.148	1.0016	-1.0000	0.3431	1.2539	2596.3	.0698	.728	0.3383	1.2574	2599.8	.0687	.730
3200	6.1348	-1	-535.3	1.9220	28.671	.151	1.0024	-1.0001	0.3466	1.2512	2635.0	.0722	.727	0.3399	1.2559	2639.9	.0706	.729
3300	5.9484	-1	-500.4	1.9328	28.669	.155	1.0034	-1.0001	0.3505	1.2482	2672.8	.0748	.725	0.3414	1.2545	2679.5	.0725	.728
3400	5.7728	-1	-465.1	1.9433	28.665	.158	1.0047	-1.0001	0.3551	1.2450	2709.6	.0775	.723	0.3429	1.2532	2718.6	.0744	.727
3500	5.6070	-1	-429.4	1.9537	28.661	.161	1.0063	-1.0002	0.3604	1.2415	2745.6	.0805	.720	0.3442	1.2520	2757.2	.0763	.726
3600	5.4501	-1	-393.1	1.9639	28.655	.164	1.0084	-1.0002	0.3664	1.2378	2780.6	.0837	.718	0.3454	1.2510	2795.4	.0781	.725
3700	5.3014	-1	-356.1	1.9740	28.647	.167	1.0111	-1.0003	0.3734	1.2338	2814.7	.0872	.715	0.3466	1.2500	2833.2	.0799	.724
3800	5.1601	-1	-318.3	1.9841	28.638	.170	1.0143	-1.0004	0.3813	1.2295	2848.0	.0911	.712	0.3477	1.2491	2870.7	.0817	.723
3900	5.0257	-1	-279.8	1.9941	28.626	.173	1.0182	-1.0006	0.3904	1.2249	2880.6	.0953	.708	0.3488	1.2483	2907.9	.0835	.722
4000	4.8975	-1	-240.2	2.0041	28.611	.176	1.0229	-1.0007	0.4007	1.2202	2912.4	.1001	.704	0.3497	1.2476	2944.9	.0853	.721
4100	4.7751	-1	-199.6	2.0142	28.593	.179	1.0283	-1.0009	0.4123	1.2153	2943.6	.1053	.700	0.3506	1.2470	2981.7	.0871	.720
4200	4.6578	-1	-157.7	2.0242	28.571	.182	1.0347	-1.0012	0.4253	1.2104	2974.3	.1112	.695	0.3515	1.2465	3018.4	.0888	.719
4300	4.5454	-1	-114.5	2.0344	28.545	.184	1.0421	-1.0015	0.4395	1.2054	3004.7	.1176	.689	0.3522	1.2461	3055.0	.0906	.717
4400	4.4374	-1	-69.7	2.0447	28.515	.187	1.0504	-1.0018	0.4552	1.2005	3034.8	.1247	.683	0.3530	1.2458	3091.6	.0923	.716
4500	4.3334	-1	-23.4	2.0551	28.480	.190	1.0598	-1.0022	0.4722	1.1957	3064.9	.1326	.677	0.3536	1.2456	3128.2	.0940	.715
4600	4.2332	-1	24.7	2.0657	28.439	.193	1.0703	-1.0026	0.4905	1.1911	3095.0	.1412	.669	0.3543	1.2455	3164.9	.0957	.713
4700	4.1364	-1	74.8	2.0764	28.393	.195	1.0818	-1.0031	0.5100	1.1868	3125.3	.1507	.661	0.3548	1.2455	3201.7	.0975	.711
4800	4.0427	-1	126.8	2.0874	28.340	.198	1.0944	-1.0037	0.5306	1.1827	3155.9	.1610	.653	0.3553	1.2456	3238.8	.0992	.709
4900	3.9519	-1	180.9	2.0986	28.281	.201	1.1079	-1.0043	0.5521	1.1790	3186.9	.1721	.643	0.3558	1.2459	3276.0	.1009	.708
5000	3.8639	-1	237.2	2.1099	28.216	.203	1.1224	-1.0050	0.5745	1.1756	3218.3	.1842	.634	0.3563	1.2462	3313.6	.1025	.706
5100	3.7784	-1	295.8	2.1215	28.143	.206	1.1378	-1.0058	0.5975	1.1725	3250.3	.1972	.623	0.3567	1.2466	3351.5	.1042	.704
5200	3.6953	-1	356.7	2.1334	28.063	.208	1.1539	-1.0066	0.6209	1.1698	3282.9	.2112	.612	0.3570	1.2472	3389.7	.1059	.702
5300	3.6143	-1	420.0	2.1454	27.977	.211	1.1707	-1.0075	0.6445	1.1675	3316.2	.2262	.600	0.3574	1.2478	3428.3	.1076	.700
5400	3.5355	-1	485.6	2.1577	27.883	.213	1.1881	-1.0084	0.6682	1.1656	3350.1	.2423	.588	0.3577	1.2486	3467.4	.1093	.698

TABLE 21C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.067624; EQUIV.RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000;
WET AIR (W/A = 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					GAS PHASE PROPERTIES					(GAM)	VS FT/S	COND BTU/ FT HR R	PRAN R	T R	
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R	DENSITY LB/FT ³	MW	VIS LB/ FT S	DLVDLT DLVDLP	CP BTU/ LB R						
PRESSURE = 0.01 ATM																
360	1.292-3	-1511.9	1.6226	28.677	0.2543	1.166-3	30.644	.0311	1.000	-1.000	0.2316	1.3885	901	.0098	.734	360
400	1.159-3	-1499.8	1.6542	28.677	0.4057	1.048-3	30.603	.0340	1.000	-1.000	0.2330	1.3861	949	.0108	.731	400
440	1.012-3	-1463.1	1.7406	28.677	1.9807	9.370-4	30.107	.0358	1.000	-1.000	0.2389	1.3814	1002	.0115	.740	440
PRESSURE = 0.10 ATM																
360	1.292-2	-1512.0	1.4877	28.677	0.2464	1.166-2	30.646	.0311	1.000	-1.000	0.2316	1.3885	901	.0098	.734	360
400	1.163-2	-1501.9	1.5144	28.677	0.2656	1.049-2	30.642	.0341	1.000	-1.000	0.2326	1.3863	949	.0109	.730	400
440	1.053-2	-1489.2	1.5444	28.677	0.4145	9.521-3	30.592	.0369	1.000	-1.000	0.2341	1.3837	995	.0119	.727	440
480	9.356-3	-1458.4	1.6108	28.677	1.4176	8.618-3	30.207	.0388	1.000	-1.000	0.2389	1.3796	1044	.0126	.735	480
520	7.552-3	-1352.0	1.8233	28.677	0.2562	7.552-3	28.677	.0382	1.000	-1.000	0.2562	1.3704	1112	.0127	.768	520
PRESSURE = 1.00 ATM																
360	1.292-1	-1512.0	1.3531	28.677	0.2456	1.166-1	30.646	.0311	1.000	-1.000	0.2316	1.3885	901	.0098	.734	360
400	1.163-1	-1502.1	1.3792	28.677	0.2517	1.049-1	30.646	.0341	1.000	-1.000	0.2325	1.3863	949	.0109	.730	400
440	1.057-1	-1491.7	1.4039	28.677	0.2708	9.536-2	30.641	.0370	1.000	-1.000	0.2336	1.3840	994	.0119	.726	440
480	9.657-2	-1479.4	1.4306	28.677	0.3685	8.731-2	30.602	.0397	1.000	-1.000	0.2350	1.3814	1038	.0129	.725	480
520	8.789-2	-1445.7	1.4982	28.677	0.6690	8.012-2	30.424	.0420	1.000	-1.000	0.2379	1.3781	1082	.0137	.728	520
537	8.398-2	-1432.7	1.5229	28.677	0.9123	7.720-2	30.253	.0427	1.000	-1.000	0.2401	1.3763	1102	.0140	.732	537
560	7.768-2	-1405.2	1.5731	28.677	1.5167	7.294-2	29.826	.0433	1.000	-1.000	0.2451	1.3729	1132	.0143	.742	560
600	6.545-2	-1331.4	1.7007	28.677	0.2587	6.545-2	28.677	.0434	1.000	-1.000	0.2587	1.3656	1192	.0146	.767	600
PRESSURE = 10.00 ATM																
360	1.290 0	-1512.0	1.2185	28.677	0.2455	1.166 0	30.646	.0311	1.000	-1.000	0.2316	1.3885	901	.0098	.734	360
400	1.161 0	-1502.1	1.2446	28.677	0.2503	1.049 0	30.646	.0341	1.000	-1.000	0.2325	1.3863	949	.0109	.730	400
440	1.055 0	-1492.0	1.2687	28.677	0.2566	9.538-1	30.646	.0370	1.000	-1.000	0.2336	1.3840	994	.0119	.726	440
480	9.673-1	-1481.5	1.2915	28.677	0.2707	8.742-1	30.642	.0398	1.000	-1.000	0.2347	1.3816	1037	.0129	.724	480
520	8.919-1	-1454.8	1.3453	28.677	0.3454	8.065-1	30.624	.0424	1.000	-1.000	0.2360	1.3790	1079	.0139	.723	520
537	8.631-1	-1448.9	1.3565	28.677	0.3677	7.810-1	30.607	.0435	1.000	-1.000	0.2366	1.3778	1096	.0142	.723	537
560	8.244-1	-1439.8	1.3731	28.677	0.4181	7.474-1	30.564	.0449	1.000	-1.000	0.2377	1.3762	1120	.0147	.725	560
600	7.593-1	-1420.1	1.4070	28.677	0.5888	6.938-1	30.398	.0471	1.000	-1.000	0.2406	1.3728	1161	.0155	.729	600
640	6.894-1	-1390.1	1.4552	28.677	0.9523	6.420-1	30.004	.0487	1.000	-1.000	0.2458	1.3685	1205	.0162	.739	640
680	6.051-1	-1338.6	1.5331	28.677	1.7233	5.878-1	29.189	.0494	1.000	-1.000	0.2557	1.3625	1256	.0167	.755	680
PRESSURE = 50.00 ATM																
360	6.391 0	-1512.0	1.1244	28.677	0.2455	5.829 0	30.646	.0311	1.000	-1.000	0.2316	1.3885	901	.0098	.734	360
400	5.758 0	-1502.1	1.1505	28.677	0.2502	5.246 0	30.646	.0341	1.000	-1.000	0.2325	1.3863	949	.0109	.730	400
440	5.239 0	-1492.0	1.1746	28.677	0.2553	4.769 0	30.646	.0370	1.000	-1.000	0.2335	1.3840	994	.0119	.726	440
480	4.806 0	-1481.6	1.1971	28.677	0.2621	4.371 0	30.645	.0398	1.000	-1.000	0.2346	1.3816	1037	.0129	.724	480
520	4.441 0	-1455.6	1.2496	28.677	0.3176	4.035 0	30.642	.0425	1.000	-1.000	0.2358	1.3791	1079	.0139	.722	520
537	4.303 0	-1450.3	1.2597	28.677	0.3222	3.909 0	30.638	.0436	1.000	-1.000	0.2363	1.3780	1095	.0143	.722	537
560	4.122 0	-1442.6	1.2736	28.677	0.3325	3.745 0	30.630	.0451	1.000	-1.000	0.2371	1.3764	1119	.0148	.723	560
600	3.839 0	-1428.7	1.2976	28.677	0.3661	3.492 0	30.597	.0475	1.000	-1.000	0.2386	1.3737	1157	.0157	.725	600
640	3.578 0	-1412.9	1.3231	28.677	0.4314	3.265 0	30.518	.0498	1.000	-1.000	0.2406	1.3706	1195	.0165	.728	640
680	3.326 0	-1393.6	1.3524	28.677	0.5461	3.057 0	30.355	.0519	1.000	-1.000	0.2436	1.3672	1234	.0173	.732	680
720	3.067 0	-1368.3	1.3885	28.677	0.7355	2.858 0	30.053	.0536	1.000	-1.000	0.2480	1.3633	1274	.0180	.738	720
760	2.787 0	-1333.2	1.4358	28.677	1.0419	2.661 0	29.541	.0548	1.000	-1.000	0.2548	1.3585	1318	.0187	.747	760

TABLE 22.1D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN² (0.01 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0928-3	-1385.1	1.8924	28.727	.027	1.0000	-1.0000	0.2517	1.3786	926.8	.0087	.785	0.2517	1.3786	926.8	.0087	.785
380	1.0352-3	-1380.0	1.9060	28.727	.029	1.0000	-1.0000	0.2523	1.3775	951.8	.0093	.780	0.2523	1.3775	951.8	.0093	.780
400	9.8348-4	-1375.0	1.9189	28.727	.030	1.0000	-1.0000	0.2528	1.3763	976.1	.0098	.775	0.2528	1.3763	976.1	.0098	.775
420	9.3665-4	-1369.9	1.9313	28.727	.032	1.0000	-1.0000	0.2534	1.3751	999.8	.0103	.772	0.2534	1.3751	999.8	.0103	.772
440	8.9407-4	-1364.8	1.9431	28.727	.033	1.0000	-1.0000	0.2540	1.3739	1022.9	.0109	.769	0.2540	1.3739	1022.9	.0109	.769
460	8.5520-4	-1359.7	1.9544	28.727	.034	1.0000	-1.0000	0.2547	1.3726	1045.4	.0114	.766	0.2546	1.3727	1045.4	.0114	.766
480	8.1957-4	-1354.6	1.9652	28.727	.036	1.0000	-1.0000	0.2554	1.3712	1067.3	.0119	.764	0.2553	1.3714	1067.4	.0119	.764
500	7.8678-4	-1349.5	1.9757	28.727	.037	1.0001	-1.0000	0.2561	1.3698	1088.8	.0125	.762	0.2560	1.3700	1088.9	.0124	.763
520	7.5652-4	-1344.4	1.9857	28.727	.038	1.0001	-1.0000	0.2569	1.3682	1109.7	.0130	.759	0.2566	1.3687	1109.9	.0129	.762
537	7.3301-4	-1340.1	1.9939	28.727	.039	1.0002	-1.0000	0.2577	1.3668	1126.7	.0134	.758	0.2572	1.3675	1127.1	.0133	.761
540	7.2849-4	-1339.2	1.9955	28.727	.040	1.0002	-1.0000	0.2579	1.3665	1130.1	.0135	.757	0.2573	1.3673	1130.4	.0134	.761
560	7.0247-4	-1334.1	2.0049	28.726	.041	1.0004	-1.0000	0.2590	1.3646	1150.0	.0141	.755	0.2581	1.3659	1150.6	.0139	.761
580	6.7823-4	-1328.9	2.0140	28.726	.042	1.0007	-1.0000	0.2603	1.3623	1169.5	.0146	.751	0.2588	1.3645	1170.4	.0144	.761
600	6.5561-4	-1323.7	2.0228	28.725	.044	1.0011	-1.0000	0.2619	1.3597	1188.3	.0153	.746	0.2596	1.3630	1189.8	.0148	.761
620	6.3443-4	-1318.4	2.0314	28.724	.045	1.0017	-1.0001	0.2638	1.3566	1206.6	.0160	.738	0.2604	1.3615	1208.8	.0153	.761
640	6.1456-4	-1313.1	2.0398	28.722	.046	1.0026	-1.0001	0.2663	1.3529	1224.3	.0168	.727	0.2612	1.3601	1227.5	.0158	.761
660	5.9588-4	-1307.8	2.0481	28.719	.047	1.0039	-1.0001	0.2695	1.3485	1241.3	.0178	.713	0.2620	1.3586	1245.9	.0163	.760
680	5.7827-4	-1302.3	2.0562	28.715	.048	1.0057	-1.0002	0.2735	1.3432	1257.6	.0190	.696	0.2628	1.3571	1264.1	.0168	.759
700	5.6164-4	-1296.8	2.0642	28.709	.050	1.0082	-1.0003	0.2786	1.3370	1273.1	.0205	.676	0.2637	1.3556	1281.9	.0173	.758
720	5.4589-4	-1291.2	2.0721	28.701	.051	1.0114	-1.0004	0.2849	1.3298	1287.9	.0222	.652	0.2646	1.3541	1299.6	.0178	.756
740	5.3094-4	-1285.4	2.0800	28.690	.052	1.0157	-1.0006	0.2927	1.3216	1301.9	.0242	.628	0.2655	1.3526	1317.0	.0183	.755
760	5.1671-4	-1279.5	2.0880	28.676	.053	1.0211	-1.0009	0.3022	1.3125	1315.1	.0267	.602	0.2665	1.3511	1334.3	.0188	.753
780	5.0315-4	-1273.3	2.0960	28.658	.054	1.0278	-1.0012	0.3136	1.3025	1327.6	.0295	.576	0.2675	1.3496	1351.4	.0193	.752
800	4.9017-4	-1266.9	2.1041	28.635	.055	1.0361	-1.0015	0.3271	1.2920	1339.7	.0328	.552	0.2686	1.3481	1368.4	.0198	.750
820	4.7773-4	-1260.2	2.1123	28.606	.056	1.0460	-1.0020	0.3429	1.2812	1351.3	.0365	.531	0.2696	1.3467	1385.4	.0204	.748
840	4.6578-4	-1253.2	2.1208	28.571	.058	1.0577	-1.0026	0.3610	1.2704	1362.7	.0406	.512	0.2708	1.3453	1402.4	.0209	.745
860	4.5426-4	-1245.7	2.1295	28.528	.059	1.0710	-1.0032	0.3812	1.2598	1374.2	.0449	.498	0.2720	1.3440	1419.3	.0215	.742
880	4.4314-4	-1237.9	2.1385	28.476	.060	1.0859	-1.0040	0.4033	1.2499	1385.8	.0493	.489	0.2732	1.3427	1436.3	.0221	.739
900	4.3238-4	-1229.6	2.1479	28.416	.061	1.1021	-1.0048	0.4270	1.2407	1397.8	.0537	.484	0.2745	1.3415	1453.4	.0227	.735
920	4.2195-4	-1220.8	2.1575	28.347	.062	1.1190	-1.0057	0.4514	1.2325	1410.2	.0579	.483	0.2759	1.3404	1470.7	.0234	.730
940	4.1184-4	-1211.5	2.1675	28.270	.063	1.1360	-1.0066	0.4758	1.2253	1423.3	.0615	.488	0.2773	1.3393	1488.0	.0241	.725
960	4.0204-4	-1201.8	2.1777	28.184	.064	1.1519	-1.0075	0.4988	1.2194	1437.1	.0643	.497	0.2787	1.3383	1505.5	.0248	.719
980	3.9255-4	-1191.6	2.1882	28.092	.065	1.1657	-1.0083	0.5189	1.2148	1451.6	.0662	.510	0.2802	1.3374	1523.1	.0256	.713
1000	3.8337-4	-1181.1	2.1989	27.995	.066	1.1758	-1.0089	0.5341	1.2117	1467.0	.0669	.529	0.2817	1.3366	1540.7	.0263	.707
1020	3.7453-4	-1170.3	2.2096	27.896	.067	1.1801	-1.0092	0.5419	1.2102	1483.3	.0661	.551	0.2832	1.3358	1558.3	.0271	.702
1040	3.6605-4	-1159.5	2.2201	27.799	.068	1.1765	-1.0091	0.5394	1.2110	1500.8	.0637	.578	0.2846	1.3351	1575.9	.0279	.696
1060	3.5798-4	-1148.8	2.2302	27.709	.069	1.1632	-1.0085	0.5238	1.2145	1519.9	.0597	.607	0.2860	1.3344	1593.1	.0286	.692
1080	3.5035-4	-1138.6	2.2398	27.630	.070	1.1397	-1.0073	0.4944	1.2217	1540.9	.0545	.637	0.2873	1.3336	1609.9	.0293	.688
1100	3.4319-4	-1129.1	2.2485	27.567	.071	1.1085	-1.0057	0.4547	1.2330	1564.0	.0489	.662	0.2885	1.3328	1626.1	.0300	.685
1120	3.3650-4	-1120.4	2.2563	27.522	.072	1.0759	-1.0040	0.4127	1.2474	1588.7	.0439	.678	0.2895	1.3320	1641.7	.0306	.683
1140	3.3024-4	-1112.6	2.2633	27.492	.073	1.0482	-1.0026	0.3774	1.2622	1613.2	.0402	.686	0.2905	1.3310	1656.6	.0311	.682

TABLE 22.1D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN2 (0.01 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS				FROZEN COMPOSITIONS					
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.2433-4	-1105.3	2.2696	27.474	.074	1.0286	-1.0015	0.3529	1.2742	1635.5	.0380	.688	0.2913	1.3300	1670.9	.0316	.682
1180	3.1872-4	-1098.4	2.2755	27.463	.075	1.0163	-1.0009	0.3381	1.2820	1654.9	.0368	.687	0.2922	1.3289	1684.9	.0321	.682
1200	3.1334-4	-1091.7	2.2811	27.458	.076	1.0091	-1.0005	0.3302	1.2863	1671.8	.0365	.686	0.2930	1.3278	1698.6	.0326	.682
1220	3.0817-4	-1085.1	2.2865	27.454	.077	1.0050	-1.0003	0.3263	1.2880	1686.9	.0365	.686	0.2938	1.3267	1712.1	.0330	.683
1240	3.0318-4	-1078.6	2.2918	27.453	.078	1.0028	-1.0002	0.3248	1.2884	1701.0	.0368	.685	0.2945	1.3256	1725.4	.0335	.683
1260	2.9836-4	-1072.1	2.2970	27.452	.078	1.0016	-1.0001	0.3244	1.2880	1714.4	.0372	.685	0.2953	1.3244	1738.5	.0339	.684
1280	2.9369-4	-1065.6	2.3021	27.451	.079	1.0009	-1.0001	0.3247	1.2872	1727.5	.0376	.685	0.2961	1.3234	1751.6	.0343	.684
1300	2.8917-4	-1059.1	2.3072	27.451	.080	1.0005	-1.0000	0.3253	1.2863	1740.3	.0381	.686	0.2968	1.3223	1764.5	.0348	.685
1320	2.8479-4	-1052.6	2.3121	27.451	.081	1.0003	-1.0000	0.3260	1.2854	1753.0	.0386	.686	0.2976	1.3212	1777.3	.0352	.686
1340	2.8053-4	-1046.1	2.3170	27.451	.082	1.0002	-1.0000	0.3267	1.2845	1765.7	.0391	.686	0.2983	1.3201	1790.0	.0356	.686
1360	2.7641-4	-1039.6	2.3219	27.451	.083	1.0001	-1.0000	0.3274	1.2837	1778.2	.0395	.686	0.2991	1.3191	1802.6	.0361	.687
1380	2.7240-4	-1033.0	2.3267	27.451	.084	1.0001	-1.0000	0.3281	1.2829	1790.7	.0400	.686	0.2998	1.3180	1815.1	.0365	.688
1400	2.6851-4	-1026.4	2.3314	27.451	.085	1.0000	-1.0000	0.3287	1.2822	1803.2	.0405	.687	0.3005	1.3170	1827.5	.0369	.688
1420	2.6473-4	-1019.9	2.3361	27.451	.085	1.0000	-1.0000	0.3293	1.2816	1815.5	.0409	.687	0.3013	1.3160	1839.8	.0374	.689
1440	2.6105-4	-1013.3	2.3407	27.451	.086	1.0000	-1.0000	0.3298	1.2810	1827.9	.0414	.687	0.3020	1.3150	1852.0	.0378	.689
1460	2.5748-4	-1006.7	2.3452	27.451	.087	1.0000	-1.0000	0.3303	1.2805	1840.2	.0418	.687	0.3027	1.3140	1864.1	.0382	.690
1480	2.5400-4	-1000.1	2.3497	27.451	.088	1.0000	-1.0000	0.3307	1.2800	1852.4	.0423	.688	0.3035	1.3130	1876.1	.0386	.691
1500	2.5061-4	-993.4	2.3542	27.451	.089	1.0000	-1.0000	0.3311	1.2796	1864.5	.0427	.688	0.3042	1.3121	1888.0	.0391	.691
1520	2.4731-4	-986.8	2.3586	27.451	.090	1.0000	-1.0000	0.3314	1.2792	1876.7	.0431	.688	0.3049	1.3111	1899.9	.0395	.692
1540	2.4410-4	-980.2	2.3629	27.451	.090	1.0000	-1.0000	0.3317	1.2789	1888.7	.0436	.689	0.3056	1.3102	1911.7	.0399	.693
1560	2.4097-4	-973.6	2.3672	27.451	.091	1.0000	-1.0000	0.3320	1.2786	1900.7	.0440	.689	0.3063	1.3092	1923.3	.0403	.693
1580	2.3792-4	-966.9	2.3714	27.451	.092	1.0000	-1.0000	0.3323	1.2783	1912.6	.0444	.689	0.3070	1.3083	1935.0	.0407	.694
1600	2.3495-4	-960.3	2.3756	27.451	.093	1.0000	-1.0000	0.3325	1.2780	1924.5	.0448	.690	0.3077	1.3074	1946.5	.0411	.695
1620	2.3205-4	-953.6	2.3797	27.451	.094	1.0000	-1.0000	0.3328	1.2778	1936.3	.0452	.690	0.3084	1.3065	1957.9	.0415	.695
1640	2.2922-4	-946.9	2.3838	27.451	.094	1.0000	-1.0000	0.3330	1.2776	1948.1	.0456	.690	0.3091	1.3056	1969.3	.0420	.696
1660	2.2645-4	-940.3	2.3878	27.451	.095	1.0000	-1.0000	0.3332	1.2774	1959.8	.0459	.691	0.3097	1.3047	1980.6	.0424	.696
1680	2.2376-4	-933.6	2.3918	27.451	.096	1.0000	-1.0000	0.3333	1.2772	1971.4	.0463	.691	0.3104	1.3039	1991.9	.0428	.697
1700	2.2113-4	-927.0	2.3958	27.451	.097	1.0000	-1.0000	0.3335	1.2770	1982.9	.0467	.692	0.3111	1.3031	2003.1	.0432	.698
1720	2.1855-4	-920.3	2.3997	27.451	.098	1.0000	-1.0000	0.3337	1.2768	1994.4	.0471	.692	0.3117	1.3022	2014.2	.0436	.698
1740	2.1604-4	-913.6	2.4035	27.451	.098	1.0000	-1.0000	0.3338	1.2767	2005.9	.0475	.692	0.3124	1.3014	2025.2	.0440	.699
1760	2.1359-4	-906.9	2.4074	27.451	.099	1.0000	-1.0000	0.3340	1.2765	2017.2	.0478	.693	0.3130	1.3006	2036.2	.0444	.699
1780	2.1119-4	-900.2	2.4111	27.451	.100	1.0000	-1.0000	0.3341	1.2764	2028.5	.0482	.693	0.3136	1.2998	2047.1	.0448	.700
1800	2.0884-4	-893.6	2.4149	27.451	.101	1.0000	-1.0000	0.3343	1.2762	2039.8	.0486	.693	0.3142	1.2991	2058.0	.0452	.700
1900	1.9785-4	-860.1	2.4330	27.451	.105	1.0000	-1.0000	0.3349	1.2755	2095.1	.0504	.695	0.3172	1.2954	2111.4	.0473	.702
2000	1.8796-4	-826.6	2.4501	27.451	.108	1.0000	-1.0000	0.3356	1.2748	2148.9	.0522	.697	0.3201	1.2920	2163.4	.0493	.704
2100	1.7901-4	-793.0	2.4665	27.451	.112	1.0000	-1.0000	0.3365	1.2739	2201.2	.0540	.698	0.3228	1.2888	2214.1	.0513	.705
2200	1.7087-4	-759.3	2.4822	27.451	.116	1.0000	-1.0000	0.3374	1.2729	2252.1	.0558	.700	0.3254	1.2859	2263.6	.0532	.706
2300	1.6344-4	-725.5	2.4972	27.451	.119	1.0000	-1.0000	0.3385	1.2718	2301.8	.0576	.701	0.3279	1.2831	2311.9	.0552	.708
2400	1.5663-4	-691.6	2.5117	27.451	.123	1.0000	-1.0000	0.3397	1.2706	2350.2	.0594	.701	0.3303	1.2804	2359.3	.0572	.708
2500	1.5036-4	-657.5	2.5256	27.450	.126	1.0001	-1.0000	0.3410	1.2693	2397.4	.0613	.702	0.3326	1.2780	2405.6	.0592	.709

TABLE 22.1D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN² (0.01 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4458-4	-623.4	2.5390	27.450	.130	1.0002	-1.0000	0.3424	1.2680	2443.6	.0633	.701	0.3347	1.2757	2451.0	.0611	.710
2700	1.3922-4	-589.0	2.5519	27.450	.133	1.0003	-1.0000	0.3441	1.2664	2488.7	.0654	.699	0.3368	1.2736	2495.7	.0631	.710
2800	1.3425-4	-554.5	2.5645	27.450	.136	1.0006	-1.0000	0.3460	1.2647	2532.6	.0678	.696	0.3388	1.2716	2539.5	.0650	.710
2900	1.2962-4	-519.8	2.5767	27.449	.140	1.0011	-1.0000	0.3485	1.2626	2575.4	.0705	.690	0.3406	1.2697	2582.6	.0669	.710
3000	1.2529-4	-484.8	2.5885	27.447	.143	1.0020	-1.0001	0.3519	1.2600	2616.8	.0739	.680	0.3424	1.2679	2625.0	.0689	.710
3100	1.2124-4	-449.4	2.6001	27.445	.146	1.0034	-1.0001	0.3566	1.2566	2656.5	.0781	.667	0.3440	1.2663	2666.8	.0708	.710
3200	1.1743-4	-413.4	2.6116	27.441	.149	1.0058	-1.0002	0.3635	1.2519	2694.2	.0835	.649	0.3456	1.2648	2708.0	.0727	.709
3300	1.1385-4	-376.6	2.6229	27.435	.152	1.0098	-1.0003	0.3741	1.2453	2729.1	.0909	.627	0.3471	1.2635	2748.9	.0747	.709
3400	1.1046-4	-338.4	2.6343	27.424	.156	1.0165	-1.0005	0.3909	1.2359	2760.2	.1012	.601	0.3486	1.2622	2789.4	.0766	.708
3500	1.0723-4	-298.1	2.6460	27.407	.159	1.0279	-1.0009	0.4182	1.2227	2786.3	.1159	.573	0.3499	1.2612	2829.8	.0786	.706
3600	1.0415-4	-254.2	2.6583	27.379	.162	1.0473	-1.0015	0.4631	1.2052	2807.0	.1373	.545	0.3512	1.2603	2870.4	.0805	.705
3700	1.0116-4	-204.5	2.6719	27.332	.165	1.0795	-1.0026	0.5350	1.1844	2823.4	.1692	.521	0.3524	1.2598	2911.9	.0825	.703
3800	9.8228-5	-146.0	2.6876	27.257	.168	1.1296	-1.0043	0.6432	1.1631	2839.3	.2160	.499	0.3535	1.2596	2954.8	.0846	.700
3900	9.5306-5	-74.6	2.7061	27.142	.170	1.2000	-1.0069	0.7901	1.1448	2859.8	.2819	.477	0.3545	1.2601	3000.3	.0867	.696
4000	9.2353-5	13.1	2.7283	26.976	.173	1.2886	-1.0102	0.9681	1.1313	2888.0	.3688	.454	0.3554	1.2612	3049.3	.0890	.691
4100	8.9351-5	119.7	2.7546	26.751	.176	1.3910	-1.0142	1.1665	1.1222	2924.3	.4764	.430	0.3563	1.2632	3102.5	.0915	.684
4200	8.6290-5	246.8	2.7852	26.465	.178	1.5038	-1.0189	1.3782	1.1163	2967.9	.6034	.407	0.3571	1.2660	3160.6	.0942	.675
4300	8.3173-5	395.7	2.8202	26.116	.180	1.6256	-1.0243	1.6010	1.1126	3018.0	.7476	.386	0.3579	1.2697	3224.0	.0972	.664
4400	8.0004-5	567.4	2.8597	25.706	.182	1.7547	-1.0303	1.8333	1.1105	3074.2	.9046	.370	0.3588	1.2744	3293.3	.1006	.651
4500	7.6797-5	762.5	2.9035	25.236	.185	1.8878	-1.0367	2.0705	1.1095	3136.4	*****	.358	0.3597	1.2801	3368.8	.1045	.635
4600	7.3569-5	981.3	2.9516	24.713	.187	2.0181	-1.0434	2.3022	1.1095	3204.5	*****	.352	0.3606	1.2867	3450.9	.1088	.618
4700	7.0354-5	1222.2	3.0034	24.146	.189	2.1347	-1.0499	2.5101	1.1104	3278.2	*****	.350	0.3617	1.2943	3539.2	.1136	.600
4800	6.7195-5	1481.7	3.0580	23.553	.191	2.2233	-1.0553	2.6689	1.1122	3357.0	*****	.353	0.3628	1.3027	3633.2	.1188	.582
4900	6.4149-5	1753.4	3.1141	22.953	.193	2.2689	-1.0590	2.7504	1.1148	3439.8	*****	.360	0.3640	1.3118	3731.4	.1242	.564
5000	6.1274-5	2028.4	3.1696	22.372	.195	2.2602	-1.0601	2.7321	1.1184	3525.2	*****	.370	0.3652	1.3211	3831.4	.1298	.548
5100	5.8625-5	2296.2	3.2227	21.833	.197	2.1951	-1.0585	2.6077	1.1230	3611.5	*****	.383	0.3664	1.3302	3930.5	.1351	.534
5200	5.6236-5	2546.9	3.2713	21.354	.199	2.0827	-1.0543	2.3925	1.1290	3697.2	*****	.396	0.3676	1.3387	4025.9	.1402	.522
5300	5.4120-5	2772.8	3.3144	20.946	.201	1.9404	-1.0483	2.1194	1.1365	3781.2	*****	.409	0.3686	1.3463	4115.5	.1450	.512
5400	5.2266-5	2970.1	3.3513	20.610	.204	1.7881	-1.0415	1.8270	1.1457	3863.3	.8820	.422	0.3695	1.3527	4197.8	.1492	.505

TABLE 22.2D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 1.46959 LB/IN2 (0.10 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0928-2	-1385.1	1.7332	28.727	.027	1.0000	-1.0000	0.2517	1.3786	926.8	.0087	.785	0.2517	1.3786	926.8	.0087	.785
380	1.0352-2	-1380.0	1.7468	28.727	.029	1.0000	-1.0000	0.2523	1.3775	951.8	.0093	.780	0.2523	1.3775	951.8	.0093	.780
400	9.8348-3	-1375.0	1.7598	28.727	.030	1.0000	-1.0000	0.2528	1.3763	976.1	.0098	.775	0.2528	1.3763	976.1	.0098	.775
420	9.3665-3	-1369.9	1.7721	28.727	.032	1.0000	-1.0000	0.2534	1.3751	999.8	.0103	.772	0.2534	1.3751	999.8	.0103	.772
440	8.9407-3	-1364.8	1.7839	28.727	.033	1.0000	-1.0000	0.2540	1.3739	1022.9	.0109	.769	0.2540	1.3739	1022.9	.0109	.769
460	8.5520-3	-1359.7	1.7952	28.727	.034	1.0000	-1.0000	0.2546	1.3726	1045.4	.0114	.766	0.2546	1.3727	1045.4	.0114	.766
480	8.1957-3	-1354.6	1.8061	28.727	.036	1.0000	-1.0000	0.2553	1.3713	1067.4	.0119	.764	0.2553	1.3714	1067.4	.0119	.764
500	7.8678-3	-1349.5	1.8165	28.727	.037	1.0000	-1.0000	0.2560	1.3699	1088.8	.0124	.762	0.2559	1.3700	1088.9	.0124	.763
520	7.5652-3	-1344.4	1.8266	28.727	.038	1.0000	-1.0000	0.2567	1.3685	1109.8	.0129	.761	0.2566	1.3687	1109.9	.0129	.762
537	7.3302-3	-1340.1	1.8347	28.727	.039	1.0001	-1.0000	0.2574	1.3673	1126.9	.0134	.760	0.2572	1.3675	1127.0	.0133	.761
540	7.2850-3	-1339.3	1.8363	28.727	.040	1.0001	-1.0000	0.2575	1.3670	1130.3	.0134	.760	0.2573	1.3673	1130.4	.0134	.761
560	7.0248-3	-1334.1	1.8456	28.727	.041	1.0001	-1.0000	0.2584	1.3654	1150.4	.0139	.759	0.2581	1.3659	1150.6	.0139	.761
580	6.7825-3	-1328.9	1.8547	28.727	.042	1.0002	-1.0000	0.2593	1.3638	1170.1	.0145	.758	0.2588	1.3644	1170.3	.0144	.761
600	6.5564-3	-1323.7	1.8635	28.726	.044	1.0003	-1.0000	0.2603	1.3619	1189.3	.0150	.756	0.2596	1.3630	1189.7	.0148	.761
620	6.3448-3	-1318.5	1.8721	28.726	.045	1.0005	-1.0000	0.2615	1.3599	1208.0	.0155	.754	0.2604	1.3615	1208.8	.0153	.761
640	6.1464-3	-1313.3	1.8804	28.725	.046	1.0008	-1.0000	0.2628	1.3577	1226.4	.0161	.750	0.2611	1.3600	1227.4	.0158	.761
660	5.9599-3	-1308.0	1.8885	28.724	.047	1.0012	-1.0000	0.2644	1.3553	1244.3	.0168	.745	0.2620	1.3585	1245.8	.0163	.760
680	5.7844-3	-1302.7	1.8964	28.723	.048	1.0018	-1.0001	0.2662	1.3525	1261.7	.0175	.738	0.2628	1.3570	1263.9	.0168	.760
700	5.6188-3	-1297.3	1.9042	28.721	.050	1.0026	-1.0001	0.2684	1.3493	1278.7	.0183	.729	0.2636	1.3555	1281.6	.0172	.759
720	5.4622-3	-1292.0	1.9118	28.719	.051	1.0037	-1.0001	0.2710	1.3457	1295.2	.0192	.718	0.2645	1.3540	1299.1	.0177	.757
740	5.3140-3	-1286.5	1.9192	28.715	.052	1.0050	-1.0002	0.2741	1.3416	1311.1	.0202	.706	0.2654	1.3525	1316.4	.0182	.757
760	5.1733-3	-1281.0	1.9266	28.711	.053	1.0068	-1.0003	0.2778	1.3371	1326.6	.0213	.692	0.2663	1.3509	1333.4	.0187	.756
780	5.0396-3	-1275.4	1.9339	28.705	.054	1.0091	-1.0004	0.2822	1.3319	1341.5	.0226	.676	0.2672	1.3494	1350.2	.0192	.755
800	4.9123-3	-1269.7	1.9411	28.697	.055	1.0119	-1.0005	0.2875	1.3262	1355.8	.0242	.658	0.2681	1.3479	1366.8	.0197	.755
820	4.7909-3	-1263.9	1.9483	28.688	.056	1.0154	-1.0007	0.2936	1.3200	1369.7	.0259	.640	0.2691	1.3464	1383.3	.0201	.754
840	4.6749-3	-1257.9	1.9554	28.676	.058	1.0197	-1.0009	0.3008	1.3133	1383.0	.0279	.621	0.2701	1.3449	1399.5	.0206	.753
860	4.5638-3	-1251.8	1.9626	28.661	.059	1.0248	-1.0011	0.3090	1.3061	1395.9	.0301	.602	0.2711	1.3434	1415.7	.0211	.752
880	4.4572-3	-1245.6	1.9698	28.642	.060	1.0309	-1.0014	0.3185	1.2985	1408.4	.0326	.583	0.2721	1.3419	1431.7	.0216	.751
900	4.3548-3	-1239.1	1.9771	28.620	.061	1.0379	-1.0018	0.3293	1.2907	1420.5	.0354	.566	0.2732	1.3405	1447.7	.0222	.749
920	4.2562-3	-1232.4	1.9844	28.594	.062	1.0460	-1.0022	0.3414	1.2827	1432.5	.0384	.550	0.2743	1.3391	1463.6	.0227	.747
940	4.1611-3	-1225.4	1.9919	28.563	.063	1.0552	-1.0027	0.3548	1.2747	1444.2	.0416	.536	0.2754	1.3377	1479.5	.0233	.745
960	4.0693-3	-1218.2	1.9995	28.527	.064	1.0655	-1.0033	0.3696	1.2668	1455.9	.0450	.525	0.2766	1.3364	1495.3	.0238	.742
980	3.9804-3	-1210.6	2.0073	28.485	.065	1.0768	-1.0039	0.3856	1.2590	1467.5	.0485	.517	0.2777	1.3351	1511.2	.0244	.739
1000	3.8943-3	-1202.8	2.0153	28.437	.066	1.0890	-1.0045	0.4028	1.2516	1479.3	.0520	.512	0.2790	1.3339	1527.2	.0250	.736
1020	3.8107-3	-1194.5	2.0234	28.384	.067	1.1019	-1.0053	0.4209	1.2446	1491.3	.0554	.510	0.2802	1.3328	1543.2	.0257	.732
1040	3.7296-3	-1185.9	2.0318	28.324	.068	1.1152	-1.0060	0.4397	1.2381	1503.4	.0586	.511	0.2815	1.3317	1559.2	.0263	.728
1060	3.6507-3	-1176.9	2.0404	28.258	.069	1.1286	-1.0068	0.4587	1.2321	1515.9	.0615	.515	0.2828	1.3307	1575.4	.0270	.724
1080	3.5740-3	-1167.6	2.0491	28.187	.070	1.1416	-1.0076	0.4774	1.2267	1528.7	.0641	.522	0.2841	1.3298	1591.6	.0277	.719
1100	3.4996-3	-1157.8	2.0580	28.111	.071	1.1535	-1.0083	0.4950	1.2219	1541.9	.0660	.533	0.2854	1.3289	1608.0	.0284	.715
1120	3.4273-3	-1147.8	2.0671	28.030	.072	1.1634	-1.0089	0.5104	1.2180	1555.6	.0673	.546	0.2867	1.3282	1624.4	.0291	.710
1140	3.3572-3	-1137.5	2.0762	27.948	.073	1.1702	-1.0093	0.5222	1.2151	1569.8	.0677	.563	0.2880	1.3275	1640.8	.0298	.706

TABLE 22.2D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 1.46959 LB/IN² (0.10 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.2895-3	-1126.9	2.0854	27.864	.074	1.1724	-1.0094	0.5284	1.2135	1584.9	.0670	.583	0.2893	1.3268	1657.2	.0305	.702
1180	3.2243-3	-1116.4	2.0944	27.783	.075	1.1685	-1.0093	0.5268	1.2136	1600.9	.0651	.605	0.2906	1.3262	1673.5	.0312	.698
1200	3.1618-3	-1105.9	2.1032	27.707	.076	1.1572	-1.0087	0.5155	1.2158	1618.1	.0621	.629	0.2918	1.3256	1689.6	.0319	.694
1220	3.1024-3	-1095.8	2.1115	27.639	.077	1.1382	-1.0077	0.4939	1.2207	1636.8	.0581	.652	0.2929	1.3250	1705.3	.0325	.691
1240	3.0461-3	-1086.2	2.1193	27.582	.078	1.1131	-1.0063	0.4640	1.2284	1657.0	.0536	.671	0.2940	1.3244	1720.5	.0331	.689
1260	2.9930-3	-1077.3	2.1265	27.538	.078	1.0857	-1.0048	0.4307	1.2385	1678.5	.0494	.684	0.2949	1.3236	1735.3	.0337	.688
1280	2.9429-3	-1069.0	2.1330	27.507	.079	1.0604	-1.0034	0.3997	1.2495	1700.3	.0459	.691	0.2958	1.3228	1749.4	.0342	.687
1300	2.8953-3	-1061.2	2.1390	27.486	.080	1.0401	-1.0023	0.3750	1.2597	1721.1	.0434	.693	0.2967	1.3219	1763.1	.0347	.686
1320	2.8501-3	-1053.9	2.1446	27.472	.081	1.0255	-1.0015	0.3575	1.2677	1740.3	.0419	.692	0.2975	1.3210	1776.5	.0352	.686
1340	2.8067-3	-1046.9	2.1499	27.464	.082	1.0159	-1.0009	0.3462	1.2733	1757.5	.0411	.691	0.2983	1.3200	1789.5	.0356	.687
1360	2.7649-3	-1040.1	2.1550	27.459	.083	1.0098	-1.0006	0.3393	1.2767	1773.1	.0408	.689	0.2990	1.3190	1802.3	.0361	.687
1380	2.7245-3	-1033.3	2.1599	27.456	.084	1.0060	-1.0003	0.3353	1.2787	1787.6	.0408	.688	0.2998	1.3180	1814.9	.0365	.688
1400	2.6854-3	-1026.6	2.1647	27.454	.085	1.0037	-1.0002	0.3331	1.2796	1801.2	.0410	.688	0.3005	1.3170	1827.3	.0369	.688
1420	2.6475-3	-1020.0	2.1694	27.453	.085	1.0023	-1.0001	0.3320	1.2800	1814.4	.0412	.688	0.3013	1.3160	1839.7	.0374	.689
1440	2.6106-3	-1013.3	2.1741	27.452	.086	1.0014	-1.0001	0.3315	1.2800	1827.1	.0416	.688	0.3020	1.3150	1851.9	.0378	.689
1460	2.5748-3	-1006.7	2.1786	27.451	.087	1.0009	-1.0001	0.3313	1.2799	1839.7	.0420	.688	0.3027	1.3140	1864.0	.0382	.690
1480	2.5400-3	-1000.1	2.1831	27.451	.088	1.0006	-1.0000	0.3314	1.2797	1852.1	.0424	.688	0.3035	1.3130	1876.1	.0386	.691
1500	2.5061-3	-993.5	2.1876	27.451	.089	1.0004	-1.0000	0.3315	1.2794	1864.4	.0428	.688	0.3042	1.3121	1888.0	.0391	.691
1520	2.4731-3	-986.8	2.1920	27.451	.090	1.0002	-1.0000	0.3317	1.2791	1876.5	.0432	.689	0.3049	1.3111	1899.9	.0395	.692
1540	2.4410-3	-980.2	2.1963	27.451	.090	1.0002	-1.0000	0.3319	1.2788	1888.6	.0436	.689	0.3056	1.3102	1911.7	.0399	.693
1560	2.4097-3	-973.6	2.2006	27.451	.091	1.0001	-1.0000	0.3322	1.2785	1900.7	.0440	.689	0.3063	1.3092	1923.3	.0403	.693
1580	2.3792-3	-966.9	2.2048	27.451	.092	1.0001	-1.0000	0.3324	1.2783	1912.6	.0444	.689	0.3070	1.3083	1935.0	.0407	.694
1600	2.3495-3	-960.3	2.2090	27.451	.093	1.0001	-1.0000	0.3326	1.2780	1924.5	.0448	.690	0.3077	1.3074	1946.5	.0411	.695
1620	2.3205-3	-953.6	2.2131	27.451	.094	1.0000	-1.0000	0.3328	1.2778	1936.3	.0452	.690	0.3084	1.3065	1957.9	.0415	.695
1640	2.2922-3	-947.0	2.2172	27.451	.094	1.0000	-1.0000	0.3330	1.2776	1948.1	.0456	.690	0.3091	1.3056	1969.3	.0420	.696
1660	2.2645-3	-940.3	2.2213	27.451	.095	1.0000	-1.0000	0.3332	1.2774	1959.7	.0460	.691	0.3097	1.3047	1980.6	.0424	.696
1680	2.2376-3	-933.6	2.2253	27.451	.096	1.0000	-1.0000	0.3334	1.2772	1971.4	.0463	.691	0.3104	1.3039	1991.9	.0428	.697
1700	2.2113-3	-927.0	2.2292	27.451	.097	1.0000	-1.0000	0.3335	1.2770	1982.9	.0467	.692	0.3111	1.3031	2003.1	.0432	.698
1720	2.1855-3	-920.3	2.2331	27.451	.098	1.0000	-1.0000	0.3337	1.2768	1994.4	.0471	.692	0.3117	1.3022	2014.2	.0436	.698
1740	2.1604-3	-913.6	2.2370	27.451	.098	1.0000	-1.0000	0.3338	1.2767	2005.9	.0475	.692	0.3124	1.3014	2025.2	.0440	.699
1760	2.1359-3	-906.9	2.2408	27.451	.099	1.0000	-1.0000	0.3340	1.2765	2017.2	.0478	.693	0.3130	1.3006	2036.2	.0444	.699
1780	2.1119-3	-900.2	2.2446	27.451	.100	1.0000	-1.0000	0.3341	1.2764	2028.5	.0482	.693	0.3136	1.2998	2047.1	.0448	.700
1800	2.0884-3	-893.6	2.2483	27.451	.101	1.0000	-1.0000	0.3343	1.2762	2039.8	.0486	.693	0.3142	1.2991	2058.0	.0452	.700
1900	1.9785-3	-860.1	2.2664	27.451	.105	1.0000	-1.0000	0.3349	1.2755	2095.1	.0504	.695	0.3172	1.2954	2111.4	.0473	.702
2000	1.8796-3	-826.6	2.2836	27.451	.108	1.0000	-1.0000	0.3356	1.2748	2148.9	.0522	.697	0.3201	1.2920	2163.4	.0493	.704
2100	1.7901-3	-793.0	2.3000	27.451	.112	1.0000	-1.0000	0.3365	1.2739	2201.2	.0540	.698	0.3228	1.2888	2214.1	.0513	.705
2200	1.7087-3	-759.3	2.3156	27.451	.116	1.0000	-1.0000	0.3374	1.2729	2252.2	.0557	.700	0.3254	1.2859	2263.6	.0532	.706
2300	1.6344-3	-725.5	2.3307	27.451	.119	1.0000	-1.0000	0.3385	1.2718	2301.8	.0575	.701	0.3279	1.2831	2311.9	.0552	.708
2400	1.5663-3	-691.6	2.3451	27.451	.123	1.0000	-1.0000	0.3396	1.2707	2350.2	.0593	.702	0.3303	1.2804	2359.3	.0572	.708
2500	1.5037-3	-657.6	2.3590	27.451	.126	1.0000	-1.0000	0.3408	1.2695	2397.6	.0612	.703	0.3326	1.2780	2405.6	.0592	.709

TABLE 22.2D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 1.46959 LB/IN2 (0.10 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4458-3	-623.4	2.3724	27.450	.130	1.0001	-1.0000	0.3421	1.2682	2443.8	.0630	.703	0.3347	1.2757	2451.0	.0611	.710
2700	1.3923-3	-589.1	2.3853	27.450	.133	1.0001	-1.0000	0.3435	1.2669	2489.1	.0649	.703	0.3368	1.2736	2495.6	.0631	.710
2800	1.3425-3	-554.7	2.3978	27.450	.136	1.0002	-1.0000	0.3450	1.2655	2533.4	.0669	.702	0.3388	1.2715	2539.4	.0650	.710
2900	1.2962-3	-520.1	2.4100	27.450	.140	1.0003	-1.0000	0.3466	1.2640	2576.7	.0690	.701	0.3406	1.2697	2582.5	.0669	.710
3000	1.2530-3	-485.4	2.4217	27.450	.143	1.0006	-1.0000	0.3484	1.2624	2619.1	.0713	.698	0.3424	1.2679	2624.8	.0689	.710
3100	1.2125-3	-450.4	2.4332	27.449	.146	1.0011	-1.0000	0.3507	1.2606	2660.5	.0739	.693	0.3440	1.2663	2666.6	.0708	.710
3200	1.1746-3	-415.2	2.4444	27.448	.149	1.0018	-1.0001	0.3536	1.2583	2700.8	.0769	.687	0.3456	1.2648	2707.6	.0727	.710
3300	1.1389-3	-379.7	2.4553	27.446	.152	1.0029	-1.0001	0.3574	1.2556	2739.7	.0804	.678	0.3471	1.2633	2748.2	.0746	.709
3400	1.1053-3	-343.7	2.4661	27.443	.156	1.0047	-1.0001	0.3627	1.2519	2777.1	.0847	.666	0.3485	1.2620	2788.2	.0765	.708
3500	1.0735-3	-307.1	2.4767	27.438	.159	1.0076	-1.0002	0.3704	1.2471	2812.4	.0902	.651	0.3499	1.2608	2827.8	.0784	.708
3600	1.0434-3	-269.5	2.4873	27.430	.162	1.0122	-1.0004	0.3817	1.2406	2845.2	.0974	.634	0.3511	1.2597	2867.1	.0803	.707
3700	1.0148-3	-230.5	2.4979	27.419	.165	1.0194	-1.0006	0.3986	1.2318	2874.8	.1069	.614	0.3523	1.2588	2906.1	.0822	.706
3800	9.8745-4	-189.5	2.5089	27.401	.168	1.0308	-1.0010	0.4243	1.2202	2900.6	.1199	.593	0.3534	1.2579	2945.1	.0841	.705
3900	9.6116-4	-145.2	2.5204	27.373	.171	1.0486	-1.0016	0.4630	1.2058	2922.6	.1380	.573	0.3545	1.2573	2984.4	.0860	.703
4000	9.3568-4	-96.3	2.5328	27.331	.174	1.0754	-1.0026	0.5193	1.1894	2941.9	.1631	.553	0.3555	1.2569	3024.3	.0880	.701
4100	9.1075-4	-40.7	2.5465	27.268	.176	1.1138	-1.0040	0.5968	1.1728	2961.1	.1974	.533	0.3564	1.2568	3065.3	.0899	.699
4200	8.8612-4	23.8	2.5620	27.177	.179	1.1643	-1.0060	0.6954	1.1581	2983.0	.2427	.513	0.3572	1.2571	3108.0	.0920	.696
4300	8.6157-4	99.0	2.5797	27.053	.182	1.2255	-1.0084	0.8106	1.1463	3009.7	.2996	.492	0.3580	1.2579	3152.9	.0941	.692
4400	8.3698-4	186.2	2.5998	26.893	.184	1.2947	-1.0113	0.9362	1.1375	3042.0	.3679	.469	0.3587	1.2592	3200.6	.0963	.687
4500	8.1230-4	286.4	2.6223	26.693	.187	1.3697	-1.0146	1.0674	1.1314	3079.5	.4470	.446	0.3593	1.2611	3251.2	.0987	.680
4600	7.8754-4	399.8	2.6472	26.454	.189	1.4490	-1.0183	1.2019	1.1272	3121.8	.5362	.424	0.3599	1.2635	3305.1	.1013	.673
4700	7.6270-4	526.8	2.6745	26.177	.192	1.5322	-1.0223	1.3390	1.1244	3168.3	.6343	.404	0.3605	1.2665	3362.5	.1040	.664
4800	7.3782-4	667.7	2.7042	25.862	.194	1.6187	-1.0267	1.4784	1.1228	3218.9	.7397	.387	0.3611	1.2700	3423.5	.1070	.654
4900	7.1295-4	822.6	2.7361	25.511	.196	1.7074	-1.0315	1.6191	1.1219	3273.3	.8493	.374	0.3618	1.2742	3488.3	.1103	.643
5000	6.8816-4	991.5	2.7702	25.126	.198	1.7964	-1.0365	1.7583	1.1218	3331.6	.9590	.363	0.3624	1.2789	3557.2	.1139	.630
5100	6.6354-4	1174.0	2.8063	24.712	.200	1.8824	-1.0415	1.8916	1.1223	3393.6	*****	.356	0.3631	1.2842	3630.1	.1178	.617
5200	6.3923-4	1369.4	2.8443	24.273	.202	1.9607	-1.0465	2.0119	1.1234	3459.2	*****	.353	0.3639	1.2901	3706.9	.1220	.603
5300	6.1540-4	1575.7	2.8836	23.818	.204	2.0258	-1.0509	2.1104	1.1251	3528.2	*****	.352	0.3647	1.2964	3787.3	.1264	.589
5400	5.9226-4	1790.4	2.9237	23.355	.206	2.0715	-1.0546	2.1775	1.1274	3600.1	*****	.354	0.3655	1.3032	3870.6	.1312	.575

TABLE 22.3D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN² (1.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0928-1	-1385.1	1.5740	28.727	.027	1.0000	-1.0000	0.2517	1.3786	926.8	.0087	.785	0.2517	1.3786	926.8	.0087	.785
380	1.0352-1	-1380.0	1.5876	28.727	.029	1.0000	-1.0000	0.2523	1.3775	951.8	.0093	.780	0.2523	1.3775	951.8	.0093	.780
400	9.8348-2	-1375.0	1.6006	28.727	.030	1.0000	-1.0000	0.2528	1.3763	976.1	.0098	.775	0.2528	1.3763	976.1	.0098	.775
420	9.3665-2	-1369.9	1.6129	28.727	.032	1.0000	-1.0000	0.2534	1.3751	999.8	.0103	.772	0.2534	1.3751	999.8	.0103	.772
440	8.9407-2	-1364.8	1.6247	28.727	.033	1.0000	-1.0000	0.2540	1.3739	1022.9	.0109	.769	0.2540	1.3739	1022.9	.0109	.769
460	8.5520-2	-1359.7	1.6360	28.727	.034	1.0000	-1.0000	0.2546	1.3726	1045.4	.0114	.766	0.2546	1.3727	1045.4	.0114	.766
480	8.1957-2	-1354.6	1.6469	28.727	.036	1.0000	-1.0000	0.2553	1.3713	1067.4	.0119	.764	0.2553	1.3714	1067.4	.0119	.764
500	7.8679-2	-1349.5	1.6573	28.727	.037	1.0000	-1.0000	0.2560	1.3700	1088.8	.0124	.763	0.2559	1.3700	1088.9	.0124	.763
520	7.5652-2	-1344.4	1.6674	28.727	.038	1.0000	-1.0000	0.2567	1.3686	1109.8	.0129	.761	0.2566	1.3687	1109.9	.0129	.762
537	7.3303-2	-1340.1	1.6755	28.727	.039	1.0000	-1.0000	0.2573	1.3674	1127.0	.0133	.761	0.2572	1.3675	1127.0	.0133	.761
540	7.2850-2	-1339.3	1.6771	28.727	.040	1.0000	-1.0000	0.2574	1.3672	1130.4	.0134	.761	0.2573	1.3673	1130.4	.0134	.761
560	7.0248-2	-1334.1	1.6865	28.727	.041	1.0000	-1.0000	0.2582	1.3657	1150.5	.0139	.760	0.2581	1.3659	1150.6	.0139	.761
580	6.7826-2	-1328.9	1.6955	28.727	.042	1.0001	-1.0000	0.2590	1.3642	1170.2	.0144	.760	0.2588	1.3644	1170.3	.0144	.761
600	6.5565-2	-1323.7	1.7043	28.727	.044	1.0001	-1.0000	0.2598	1.3626	1189.6	.0149	.760	0.2596	1.3630	1189.7	.0148	.761
620	6.3450-2	-1318.5	1.7129	28.727	.045	1.0002	-1.0000	0.2607	1.3610	1208.5	.0154	.759	0.2603	1.3615	1208.7	.0153	.762
640	6.1466-2	-1313.3	1.7211	28.726	.046	1.0003	-1.0000	0.2617	1.3593	1227.1	.0159	.758	0.2611	1.3600	1227.4	.0158	.761
660	5.9603-2	-1308.1	1.7292	28.726	.047	1.0004	-1.0000	0.2627	1.3575	1245.3	.0164	.755	0.2619	1.3585	1245.8	.0163	.761
680	5.7849-2	-1302.8	1.7371	28.726	.048	1.0006	-1.0000	0.2639	1.3555	1263.1	.0170	.753	0.2628	1.3570	1263.8	.0168	.760
700	5.6195-2	-1297.5	1.7447	28.725	.050	1.0008	-1.0000	0.2651	1.3535	1280.6	.0176	.749	0.2636	1.3555	1281.5	.0172	.759
720	5.4633-2	-1292.2	1.7522	28.724	.051	1.0011	-1.0000	0.2665	1.3512	1297.7	.0182	.745	0.2645	1.3540	1299.0	.0177	.758
740	5.3154-2	-1286.9	1.7596	28.723	.052	1.0016	-1.0001	0.2681	1.3488	1314.5	.0188	.740	0.2653	1.3524	1316.2	.0182	.757
760	5.1753-2	-1281.5	1.7667	28.722	.053	1.0022	-1.0001	0.2699	1.3463	1330.8	.0195	.734	0.2662	1.3509	1333.1	.0187	.757
780	5.0423-2	-1276.1	1.7738	28.720	.054	1.0029	-1.0001	0.2719	1.3434	1346.9	.0203	.728	0.2671	1.3493	1349.8	.0191	.757
800	4.9158-2	-1270.6	1.7807	28.718	.055	1.0038	-1.0002	0.2742	1.3404	1362.5	.0211	.720	0.2680	1.3478	1366.3	.0196	.756
820	4.7954-2	-1265.1	1.7875	28.714	.056	1.0050	-1.0002	0.2768	1.3371	1377.8	.0220	.711	0.2689	1.3462	1382.6	.0201	.756
840	4.6806-2	-1259.5	1.7942	28.711	.058	1.0064	-1.0003	0.2798	1.3335	1392.8	.0230	.701	0.2698	1.3447	1398.6	.0205	.756
860	4.5710-2	-1253.9	1.8008	28.706	.059	1.0081	-1.0004	0.2832	1.3296	1407.3	.0240	.690	0.2708	1.3432	1414.5	.0210	.755
880	4.4661-2	-1248.2	1.8074	28.700	.060	1.0101	-1.0005	0.2870	1.3254	1421.5	.0253	.678	0.2717	1.3416	1430.2	.0215	.755
900	4.3658-2	-1242.4	1.8139	28.692	.061	1.0126	-1.0006	0.2913	1.3210	1435.3	.0266	.666	0.2727	1.3401	1445.7	.0220	.754
920	4.2696-2	-1236.5	1.8203	28.684	.062	1.0155	-1.0007	0.2963	1.3162	1448.8	.0281	.652	0.2737	1.3386	1461.1	.0224	.754
940	4.1772-2	-1230.6	1.8267	28.673	.063	1.0189	-1.0009	0.3018	1.3112	1461.9	.0297	.638	0.2747	1.3371	1476.3	.0229	.753
960	4.0884-2	-1224.5	1.8332	28.661	.064	1.0228	-1.0011	0.3080	1.3059	1474.7	.0315	.624	0.2757	1.3357	1491.4	.0234	.751
980	4.0029-2	-1218.2	1.8396	28.646	.065	1.0273	-1.0014	0.3149	1.3004	1487.2	.0335	.611	0.2768	1.3342	1506.5	.0240	.750
1000	3.9204-2	-1211.9	1.8460	28.628	.066	1.0325	-1.0017	0.3225	1.2947	1499.5	.0356	.598	0.2778	1.3328	1521.4	.0245	.748
1020	3.8409-2	-1205.3	1.8525	28.608	.067	1.0383	-1.0020	0.3310	1.2888	1511.5	.0379	.585	0.2789	1.3314	1536.3	.0250	.747
1040	3.7640-2	-1198.6	1.8590	28.585	.068	1.0447	-1.0024	0.3403	1.2828	1523.3	.0403	.574	0.2799	1.3301	1551.1	.0255	.745
1060	3.6896-2	-1191.7	1.8656	28.559	.069	1.0519	-1.0028	0.3506	1.2767	1534.9	.0428	.565	0.2810	1.3288	1565.9	.0261	.743
1080	3.6175-2	-1184.6	1.8722	28.529	.070	1.0599	-1.0032	0.3617	1.2705	1546.4	.0455	.556	0.2822	1.3275	1580.7	.0267	.741
1100	3.5475-2	-1177.2	1.8790	28.496	.071	1.0685	-1.0037	0.3738	1.2644	1557.8	.0482	.550	0.2833	1.3263	1595.5	.0272	.738
1120	3.4796-2	-1169.6	1.8858	28.458	.072	1.0779	-1.0043	0.3868	1.2583	1569.2	.0510	.545	0.2844	1.3251	1610.3	.0278	.736
1140	3.4135-2	-1161.8	1.8928	28.417	.073	1.0878	-1.0049	0.4007	1.2523	1580.5	.0539	.542	0.2856	1.3240	1625.1	.0284	.733

TABLE 22.3D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN² (1.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.3493-2	-1153.6	1.8999	28.371	.074	1.0984	-1.0055	0.4155	1.2465	1591.9	.0567	.541	0.2867	1.3230	1640.0	.0290	.730
1180	3.2867-2	-1145.1	1.9071	28.320	.075	1.1093	-1.0062	0.4309	1.2409	1603.3	.0594	.543	0.2879	1.3220	1654.9	.0296	.727
1200	3.2256-2	-1136.4	1.9145	28.266	.076	1.1205	-1.0068	0.4468	1.2355	1614.9	.0620	.546	0.2891	1.3211	1669.9	.0303	.723
1220	3.1662-2	-1127.3	1.9220	28.207	.077	1.1317	-1.0075	0.4629	1.2304	1626.7	.0644	.551	0.2902	1.3202	1685.0	.0309	.720
1240	3.1082-2	-1117.8	1.9297	28.144	.078	1.1425	-1.0081	0.4788	1.2258	1638.7	.0665	.559	0.2914	1.3195	1700.1	.0315	.717
1260	3.0516-2	-1108.1	1.9375	28.078	.078	1.1522	-1.0087	0.4936	1.2218	1651.1	.0682	.568	0.2926	1.3188	1715.4	.0322	.713
1280	2.9965-2	-1098.1	1.9453	28.009	.079	1.1604	-1.0092	0.5065	1.2184	1663.9	.0694	.580	0.2937	1.3182	1730.7	.0328	.710
1300	2.9430-2	-1087.9	1.9533	27.938	.080	1.1660	-1.0096	0.5164	1.2159	1677.2	.0699	.594	0.2949	1.3176	1746.0	.0335	.707
1320	2.8910-2	-1077.5	1.9612	27.867	.081	1.1680	-1.0097	0.5218	1.2144	1691.2	.0695	.609	0.2960	1.3171	1761.3	.0341	.704
1340	2.8407-2	-1067.0	1.9691	27.797	.082	1.1653	-1.0096	0.5213	1.2143	1706.0	.0683	.626	0.2970	1.3167	1776.5	.0348	.701
1360	2.7922-2	-1056.7	1.9767	27.730	.083	1.1572	-1.0092	0.5138	1.2158	1721.8	.0661	.644	0.2981	1.3162	1791.5	.0354	.699
1380	2.7457-2	-1046.5	1.9841	27.669	.084	1.1433	-1.0084	0.4988	1.2191	1738.7	.0632	.661	0.2991	1.3158	1806.3	.0360	.697
1400	2.7013-2	-1036.8	1.9912	27.616	.085	1.1244	-1.0073	0.4772	1.2243	1756.7	.0597	.676	0.3000	1.3153	1820.8	.0365	.695
1420	2.6589-2	-1027.5	1.9977	27.571	.085	1.1024	-1.0060	0.4515	1.2313	1775.6	.0561	.688	0.3009	1.3147	1834.8	.0371	.694
1440	2.6187-2	-1018.7	2.0039	27.536	.086	1.0798	-1.0047	0.4249	1.2394	1795.1	.0528	.695	0.3018	1.3141	1848.4	.0376	.693
1460	2.5803-2	-1010.5	2.0096	27.510	.087	1.0594	-1.0036	0.4007	1.2478	1814.6	.0500	.698	0.3026	1.3133	1861.6	.0381	.692
1480	2.5437-2	-1002.7	2.0149	27.491	.088	1.0424	-1.0026	0.3808	1.2556	1833.3	.0480	.698	0.3033	1.3126	1874.4	.0385	.692
1500	2.5086-2	-995.2	2.0199	27.478	.089	1.0295	-1.0018	0.3657	1.2621	1850.8	.0466	.696	0.3041	1.3117	1886.9	.0390	.692
1520	2.4748-2	-988.0	2.0247	27.469	.090	1.0201	-1.0012	0.3548	1.2671	1867.1	.0458	.695	0.3048	1.3109	1899.1	.0394	.693
1540	2.4421-2	-981.0	2.0292	27.463	.090	1.0136	-1.0008	0.3474	1.2706	1882.2	.0453	.693	0.3056	1.3100	1911.1	.0399	.693
1560	2.4104-2	-974.1	2.0337	27.459	.091	1.0091	-1.0006	0.3425	1.2730	1896.3	.0451	.692	0.3063	1.3091	1923.0	.0403	.694
1580	2.3797-2	-967.3	2.0380	27.456	.092	1.0062	-1.0004	0.3393	1.2746	1909.7	.0452	.692	0.3070	1.3082	1934.7	.0407	.694
1600	2.3498-2	-960.5	2.0423	27.455	.093	1.0042	-1.0003	0.3372	1.2756	1922.5	.0453	.691	0.3077	1.3073	1946.3	.0411	.695
1620	2.3207-2	-953.8	2.0465	27.453	.094	1.0028	-1.0002	0.3359	1.2761	1935.0	.0455	.691	0.3084	1.3065	1957.8	.0415	.695
1640	2.2923-2	-947.1	2.0506	27.453	.094	1.0019	-1.0001	0.3351	1.2765	1947.1	.0458	.691	0.3091	1.3056	1969.2	.0420	.696
1660	2.2647-2	-940.4	2.0546	27.452	.095	1.0014	-1.0001	0.3346	1.2766	1959.1	.0461	.691	0.3097	1.3047	1980.6	.0424	.696
1680	2.2377-2	-933.7	2.0586	27.452	.096	1.0009	-1.0001	0.3343	1.2767	1970.9	.0464	.692	0.3104	1.3039	1991.8	.0428	.697
1700	2.2113-2	-927.0	2.0626	27.451	.097	1.0007	-1.0000	0.3342	1.2766	1982.6	.0468	.692	0.3111	1.3030	2003.0	.0432	.698
1720	2.1856-2	-920.3	2.0665	27.451	.098	1.0005	-1.0000	0.3342	1.2766	1994.2	.0471	.692	0.3117	1.3022	2014.1	.0436	.698
1740	2.1605-2	-913.6	2.0704	27.451	.098	1.0004	-1.0000	0.3342	1.2765	2005.7	.0475	.692	0.3124	1.3014	2025.2	.0440	.699
1760	2.1359-2	-906.9	2.0742	27.451	.099	1.0003	-1.0000	0.3342	1.2764	2017.1	.0479	.693	0.3130	1.3006	2036.2	.0444	.699
1780	2.1119-2	-900.3	2.0780	27.451	.100	1.0002	-1.0000	0.3343	1.2763	2028.5	.0482	.693	0.3136	1.2998	2047.1	.0448	.700
1800	2.0884-2	-893.6	2.0817	27.451	.101	1.0001	-1.0000	0.3344	1.2761	2039.7	.0486	.693	0.3142	1.2991	2058.0	.0452	.700
1900	1.9785-2	-860.1	2.0998	27.451	.105	1.0001	-1.0000	0.3349	1.2755	2095.1	.0504	.695	0.3172	1.2954	2111.4	.0473	.702
2000	1.8796-2	-826.6	2.1170	27.451	.108	1.0000	-1.0000	0.3357	1.2748	2148.9	.0522	.697	0.3201	1.2920	2163.4	.0493	.704
2100	1.7901-2	-793.0	2.1334	27.451	.112	1.0000	-1.0000	0.3365	1.2739	2201.2	.0540	.698	0.3228	1.2888	2214.1	.0513	.705
2200	1.7087-2	-759.3	2.1491	27.451	.116	1.0000	-1.0000	0.3374	1.2729	2252.2	.0557	.700	0.3254	1.2859	2263.6	.0532	.706
2300	1.6344-2	-725.5	2.1641	27.451	.119	1.0000	-1.0000	0.3385	1.2718	2301.8	.0575	.701	0.3279	1.2831	2311.9	.0552	.708
2400	1.5663-2	-691.6	2.1785	27.451	.123	1.0000	-1.0000	0.3396	1.2707	2350.3	.0593	.702	0.3303	1.2804	2359.2	.0572	.708
2500	1.5037-2	-657.6	2.1924	27.451	.126	1.0000	-1.0000	0.3408	1.2695	2397.6	.0611	.703	0.3326	1.2780	2405.6	.0592	.709

TABLE 22.3D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN² (1.00 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4458-2	-623.4	2.2058	27.451	.130	1.0000	-1.0000	0.3420	1.2683	2443.9	.0629	.704	0.3347	1.2757	2451.0	.0611	.710
2700	1.3923-2	-589.2	2.2187	27.451	.133	1.0000	-1.0000	0.3433	1.2670	2489.2	.0648	.704	0.3368	1.2736	2495.6	.0631	.710
2800	1.3425-2	-554.8	2.2312	27.450	.136	1.0001	-1.0000	0.3446	1.2657	2533.6	.0666	.704	0.3388	1.2715	2539.4	.0650	.710
2900	1.2962-2	-520.2	2.2434	27.450	.140	1.0001	-1.0000	0.3460	1.2645	2577.2	.0686	.704	0.3406	1.2697	2582.5	.0669	.710
3000	1.2530-2	-485.6	2.2551	27.450	.143	1.0002	-1.0000	0.3474	1.2632	2619.9	.0705	.703	0.3424	1.2679	2624.8	.0689	.710
3100	1.2126-2	-450.8	2.2665	27.450	.146	1.0003	-1.0000	0.3489	1.2618	2661.8	.0726	.702	0.3440	1.2663	2666.5	.0708	.710
3200	1.1747-2	-415.8	2.2776	27.450	.149	1.0006	-1.0000	0.3506	1.2603	2702.8	.0748	.700	0.3456	1.2647	2707.5	.0727	.710
3300	1.1391-2	-380.6	2.2884	27.449	.152	1.0009	-1.0000	0.3525	1.2587	2743.0	.0771	.697	0.3471	1.2633	2748.0	.0746	.709
3400	1.1055-2	-345.3	2.2990	27.448	.156	1.0014	-1.0000	0.3549	1.2569	2782.3	.0797	.693	0.3485	1.2620	2787.9	.0765	.709
3500	1.0739-2	-309.6	2.3093	27.447	.159	1.0023	-1.0001	0.3579	1.2548	2820.6	.0826	.687	0.3498	1.2607	2827.3	.0784	.708
3600	1.0440-2	-273.7	2.3195	27.444	.162	1.0035	-1.0001	0.3617	1.2521	2857.7	.0861	.680	0.3511	1.2596	2866.2	.0802	.708
3700	1.0156-2	-237.2	2.3294	27.441	.165	1.0054	-1.0002	0.3669	1.2488	2893.4	.0901	.671	0.3523	1.2585	2904.7	.0821	.707
3800	9.8873-3	-200.2	2.3393	27.436	.168	1.0083	-1.0003	0.3740	1.2445	2927.5	.0950	.660	0.3534	1.2575	2942.8	.0840	.706
3900	9.6312-3	-162.3	2.3491	27.429	.171	1.0125	-1.0004	0.3840	1.2390	2959.5	.1012	.648	0.3545	1.2567	2980.6	.0858	.705
4000	9.3867-3	-123.3	2.3590	27.418	.174	1.0188	-1.0006	0.3980	1.2319	2989.2	.1090	.634	0.3555	1.2559	3018.2	.0877	.704
4100	9.1526-3	-82.5	2.3691	27.402	.177	1.0280	-1.0010	0.4178	1.2230	3016.3	.1191	.620	0.3564	1.2552	3055.8	.0895	.703
4200	8.9273-3	-39.5	2.3795	27.380	.179	1.0414	-1.0015	0.4453	1.2124	3040.9	.1322	.604	0.3573	1.2547	3093.4	.0914	.702
4300	8.7094-3	6.8	2.3904	27.348	.182	1.0602	-1.0022	0.4826	1.2004	3063.4	.1494	.589	0.3581	1.2543	3131.4	.0933	.700
4400	8.4973-3	57.4	2.4020	27.302	.185	1.0856	-1.0032	0.5312	1.1879	3085.2	.1716	.573	0.3589	1.2542	3170.1	.0952	.698
4500	8.2896-3	113.5	2.4146	27.240	.188	1.1180	-1.0045	0.5913	1.1760	3107.9	.1996	.556	0.3596	1.2543	3209.7	.0971	.695
4600	8.0850-3	176.0	2.4283	27.158	.190	1.1572	-1.0061	0.6612	1.1654	3132.8	.2339	.539	0.3603	1.2547	3250.5	.0991	.692
4700	7.8826-3	245.9	2.4434	27.054	.193	1.2016	-1.0081	0.7378	1.1568	3161.1	.2742	.520	0.3608	1.2554	3293.0	.1012	.689
4800	7.6818-3	323.7	2.4597	26.926	.196	1.2499	-1.0103	0.8181	1.1502	3192.8	.3203	.500	0.3614	1.2564	3337.1	.1033	.684
4900	7.4825-3	409.6	2.4774	26.774	.198	1.3007	-1.0127	0.8995	1.1452	3228.1	.3719	.479	0.3619	1.2578	3383.1	.1055	.680
5000	7.2846-3	503.6	2.4964	26.597	.201	1.3532	-1.0154	0.9808	1.1416	3266.5	.4284	.459	0.3623	1.2596	3431.1	.1077	.674
5100	7.0883-3	605.7	2.5166	26.398	.203	1.4070	-1.0182	1.0615	1.1391	3307.8	.4896	.440	0.3628	1.2616	3481.2	.1101	.668
5200	6.8935-3	715.9	2.5380	26.176	.205	1.4621	-1.0212	1.1417	1.1374	3351.7	.5550	.422	0.3632	1.2640	3533.4	.1126	.662
5300	6.7007-3	834.0	2.5605	25.933	.207	1.5182	-1.0244	1.2214	1.1364	3398.2	.6238	.406	0.3636	1.2668	3587.8	.1153	.654
5400	6.5097-3	960.1	2.5841	25.670	.210	1.5750	-1.0279	1.3003	1.1360	3447.0	.6950	.392	0.3641	1.2698	3644.4	.1181	.646

TABLE 22.4D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN2 (10.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS				FROZEN COMPOSITIONS							
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM VS FT/S	COND BTU/ FT HR R	PRAN		
360	1.0928 0	-1385.1	1.4148	28.727	.027	1.0000	-1.0000	0.2517	1.3786	926.8	.0087	.785	0.2517	1.3786	926.8	.0087	.785
380	1.0352 0	-1380.0	1.4285	28.727	.029	1.0000	-1.0000	0.2523	1.3775	951.8	.0093	.780	0.2523	1.3775	951.8	.0093	.780
400	9.8348-1	-1375.0	1.4414	28.727	.030	1.0000	-1.0000	0.2528	1.3763	976.1	.0098	.775	0.2528	1.3763	976.1	.0098	.775
420	9.3665-1	-1369.9	1.4538	28.727	.032	1.0000	-1.0000	0.2534	1.3751	999.8	.0103	.772	0.2534	1.3751	999.8	.0103	.772
440	8.9407-1	-1364.8	1.4656	28.727	.033	1.0000	-1.0000	0.2540	1.3739	1022.9	.0109	.769	0.2540	1.3739	1022.9	.0109	.769
460	8.5520-1	-1359.7	1.4769	28.727	.034	1.0000	-1.0000	0.2546	1.3726	1045.4	.0114	.766	0.2546	1.3727	1045.4	.0114	.766
480	8.1957-1	-1354.6	1.4877	28.727	.036	1.0000	-1.0000	0.2553	1.3713	1067.4	.0119	.764	0.2553	1.3714	1067.4	.0119	.764
500	7.8678-1	-1349.5	1.4981	28.727	.037	1.0000	-1.0000	0.2560	1.3700	1088.8	.0124	.763	0.2559	1.3700	1088.9	.0124	.763
520	7.5652-1	-1344.4	1.5082	28.727	.038	1.0000	-1.0000	0.2567	1.3686	1109.9	.0129	.762	0.2566	1.3687	1109.9	.0129	.762
537	7.3303-1	-1340.1	1.5163	28.727	.039	1.0000	-1.0000	0.2573	1.3675	1127.0	.0133	.761	0.2572	1.3675	1127.0	.0133	.761
540	7.2851-1	-1339.3	1.5179	28.727	.040	1.0000	-1.0000	0.2574	1.3672	1130.4	.0134	.761	0.2573	1.3673	1130.4	.0134	.761
560	7.0249-1	-1334.1	1.5273	28.727	.041	1.0000	-1.0000	0.2581	1.3658	1150.6	.0139	.761	0.2581	1.3659	1150.6	.0139	.761
580	6.7826-1	-1328.9	1.5363	28.727	.042	1.0000	-1.0000	0.2589	1.3643	1170.3	.0144	.761	0.2588	1.3644	1170.3	.0144	.761
600	6.5565-1	-1323.8	1.5451	28.727	.044	1.0000	-1.0000	0.2597	1.3628	1189.6	.0149	.761	0.2596	1.3630	1189.7	.0148	.761
620	6.3450-1	-1318.6	1.5537	28.727	.045	1.0000	-1.0000	0.2605	1.3613	1208.6	.0153	.761	0.2603	1.3615	1208.7	.0153	.762
640	6.1467-1	-1313.3	1.5619	28.727	.046	1.0001	-1.0000	0.2613	1.3597	1227.3	.0158	.760	0.2611	1.3600	1227.4	.0158	.761
660	5.9604-1	-1308.1	1.5700	28.727	.047	1.0001	-1.0000	0.2622	1.3581	1245.6	.0163	.759	0.2619	1.3585	1245.7	.0163	.761
680	5.7851-1	-1302.8	1.5778	28.727	.048	1.0002	-1.0000	0.2631	1.3565	1263.5	.0168	.758	0.2628	1.3570	1263.8	.0167	.760
700	5.6198-1	-1297.6	1.5855	28.726	.050	1.0002	-1.0000	0.2641	1.3548	1281.2	.0173	.756	0.2636	1.3555	1281.5	.0172	.759
720	5.4636-1	-1292.3	1.5929	28.726	.051	1.0003	-1.0000	0.2651	1.3530	1298.5	.0179	.754	0.2644	1.3540	1299.0	.0177	.758
740	5.3159-1	-1287.0	1.6002	28.726	.052	1.0005	-1.0000	0.2662	1.3512	1315.5	.0184	.752	0.2653	1.3524	1316.1	.0182	.758
760	5.1760-1	-1281.6	1.6073	28.725	.053	1.0007	-1.0000	0.2674	1.3493	1332.3	.0189	.750	0.2662	1.3509	1333.0	.0187	.757
780	5.0431-1	-1276.3	1.6143	28.725	.054	1.0009	-1.0000	0.2686	1.3473	1348.7	.0195	.747	0.2670	1.3493	1349.7	.0191	.757
800	4.9169-1	-1270.9	1.6211	28.724	.055	1.0012	-1.0001	0.2700	1.3453	1364.9	.0201	.745	0.2679	1.3478	1366.1	.0196	.757
820	4.7968-1	-1265.5	1.6278	28.723	.056	1.0015	-1.0001	0.2714	1.3431	1380.7	.0207	.741	0.2688	1.3462	1382.3	.0201	.757
840	4.6824-1	-1260.0	1.6344	28.722	.058	1.0020	-1.0001	0.2730	1.3409	1396.3	.0213	.738	0.2698	1.3446	1398.3	.0205	.757
860	4.5733-1	-1254.6	1.6408	28.720	.059	1.0025	-1.0001	0.2747	1.3385	1411.6	.0220	.733	0.2707	1.3431	1414.1	.0210	.756
880	4.4691-1	-1249.0	1.6471	28.719	.060	1.0032	-1.0002	0.2765	1.3360	1426.7	.0227	.728	0.2716	1.3415	1429.6	.0214	.756
900	4.3694-1	-1243.5	1.6534	28.716	.061	1.0040	-1.0002	0.2786	1.3334	1441.5	.0234	.723	0.2726	1.3400	1445.0	.0219	.756
920	4.2740-1	-1237.9	1.6595	28.713	.062	1.0050	-1.0002	0.2808	1.3306	1455.9	.0242	.716	0.2735	1.3384	1460.2	.0224	.756
940	4.1826-1	-1232.3	1.6656	28.710	.063	1.0061	-1.0003	0.2833	1.3278	1470.2	.0251	.709	0.2745	1.3369	1475.2	.0228	.755
960	4.0948-1	-1226.6	1.6716	28.706	.064	1.0074	-1.0004	0.2860	1.3247	1484.1	.0260	.702	0.2754	1.3354	1490.1	.0233	.755
980	4.0106-1	-1220.8	1.6775	28.701	.065	1.0089	-1.0005	0.2889	1.3215	1497.8	.0270	.693	0.2764	1.3339	1504.8	.0238	.754
1000	3.9296-1	-1215.0	1.6834	28.695	.066	1.0107	-1.0006	0.2922	1.3182	1511.3	.0281	.685	0.2774	1.3324	1519.4	.0243	.753
1020	3.8517-1	-1209.1	1.6892	28.689	.067	1.0127	-1.0007	0.2958	1.3147	1524.5	.0293	.676	0.2784	1.3309	1533.9	.0248	.752
1040	3.7766-1	-1203.2	1.6950	28.681	.068	1.0150	-1.0008	0.2997	1.3110	1537.4	.0306	.666	0.2794	1.3295	1548.2	.0253	.751
1060	3.7042-1	-1197.1	1.7007	28.672	.069	1.0177	-1.0010	0.3040	1.3072	1550.1	.0319	.657	0.2804	1.3280	1562.4	.0258	.750
1080	3.6343-1	-1191.0	1.7064	28.662	.070	1.0206	-1.0011	0.3087	1.3032	1562.5	.0333	.647	0.2814	1.3266	1576.5	.0263	.749
1100	3.5667-1	-1184.8	1.7122	28.650	.071	1.0240	-1.0013	0.3139	1.2990	1574.7	.0349	.638	0.2824	1.3252	1590.5	.0268	.748
1120	3.5014-1	-1178.4	1.7179	28.637	.072	1.0278	-1.0015	0.3196	1.2947	1586.7	.0365	.629	0.2835	1.3239	1604.5	.0273	.747
1140	3.4382-1	-1172.0	1.7236	28.622	.073	1.0319	-1.0018	0.3258	1.2903	1598.5	.0383	.620	0.2845	1.3225	1618.3	.0278	.745

TABLE 22.4D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN2 (10.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.3769-1	-1165.4	1.7293	28.605	.074	1.0366	-1.0021	0.3326	1.2857	1610.1	.0401	.612	0.2855	1.3212	1632.2	.0283	.744
1180	3.3174-1	-1158.7	1.7350	28.586	.075	1.0417	-1.0024	0.3399	1.2810	1621.5	.0420	.605	0.2866	1.3200	1645.9	.0289	.742
1200	3.2597-1	-1151.8	1.7408	28.564	.076	1.0473	-1.0027	0.3479	1.2762	1632.7	.0441	.598	0.2876	1.3187	1659.7	.0294	.740
1220	3.2036-1	-1144.8	1.7466	28.541	.077	1.0534	-1.0031	0.3566	1.2713	1643.8	.0462	.592	0.2887	1.3176	1673.4	.0299	.739
1240	3.1490-1	-1137.5	1.7525	28.514	.078	1.0601	-1.0035	0.3660	1.2664	1654.7	.0484	.587	0.2897	1.3164	1687.1	.0305	.737
1260	3.0959-1	-1130.1	1.7585	28.485	.078	1.0673	-1.0039	0.3761	1.2614	1665.6	.0506	.583	0.2908	1.3153	1700.8	.0311	.735
1280	3.0441-1	-1122.5	1.7645	28.453	.079	1.0751	-1.0044	0.3868	1.2565	1676.4	.0529	.580	0.2919	1.3143	1714.6	.0316	.733
1300	2.9936-1	-1114.6	1.7705	28.418	.080	1.0834	-1.0049	0.3983	1.2515	1687.2	.0553	.578	0.2929	1.3133	1728.3	.0322	.731
1320	2.9443-1	-1106.6	1.7767	28.380	.081	1.0921	-1.0055	0.4104	1.2467	1697.9	.0577	.578	0.2940	1.3124	1742.1	.0328	.729
1340	2.8961-1	-1098.2	1.7830	28.339	.082	1.1012	-1.0060	0.4230	1.2420	1708.8	.0600	.578	0.2950	1.3115	1755.9	.0333	.727
1360	2.8491-1	-1089.6	1.7893	28.295	.083	1.1106	-1.0066	0.4360	1.2375	1719.7	.0624	.580	0.2961	1.3107	1769.9	.0339	.724
1380	2.8031-1	-1080.8	1.7958	28.247	.084	1.1201	-1.0072	0.4492	1.2333	1730.8	.0648	.583	0.2971	1.3100	1783.8	.0345	.722
1400	2.7581-1	-1071.7	1.8024	28.197	.085	1.1295	-1.0078	0.4623	1.2294	1742.1	.0667	.587	0.2981	1.3093	1797.9	.0351	.720
1420	2.7141-1	-1062.3	1.8090	28.143	.086	1.1385	-1.0084	0.4749	1.2258	1753.6	.0685	.593	0.2991	1.3087	1812.0	.0357	.717
1440	2.6710-1	-1052.7	1.8157	28.087	.086	1.1467	-1.0089	0.4866	1.2228	1765.5	.0701	.600	0.3001	1.3082	1826.1	.0363	.715
1460	2.6290-1	-1042.8	1.8225	28.029	.087	1.1537	-1.0093	0.4967	1.2203	1777.8	.0713	.608	0.3011	1.3077	1840.3	.0369	.713
1480	2.5879-1	-1032.8	1.8293	27.969	.088	1.1589	-1.0097	0.5046	1.2185	1790.4	.0720	.617	0.3021	1.3073	1854.5	.0374	.711
1500	2.5479-1	-1022.7	1.8361	27.909	.089	1.1618	-1.0099	0.5096	1.2174	1803.6	.0722	.627	0.3030	1.3069	1868.8	.0380	.709
1520	2.5090-1	-1012.5	1.8429	27.849	.090	1.1617	-1.0100	0.5109	1.2171	1817.4	.0718	.639	0.3039	1.3065	1883.0	.0386	.707
1540	2.4712-1	-1002.3	1.8496	27.791	.091	1.1581	-1.0098	0.5080	1.2178	1831.8	.0707	.651	0.3048	1.3062	1897.0	.0391	.705
1560	2.4347-1	-992.2	1.8561	27.735	.091	1.1507	-1.0094	0.5004	1.2196	1846.8	.0690	.663	0.3057	1.3059	1911.0	.0397	.704
1580	2.3994-1	-982.3	1.8624	27.684	.092	1.1396	-1.0087	0.4884	1.2225	1862.5	.0667	.675	0.3065	1.3055	1924.7	.0402	.702
1600	2.3655-1	-972.7	1.8684	27.638	.093	1.1252	-1.0079	0.4724	1.2265	1878.9	.0641	.685	0.3073	1.3051	1938.2	.0407	.701
1620	2.3329-1	-963.4	1.8742	27.598	.094	1.1086	-1.0069	0.4537	1.2316	1895.9	.0614	.693	0.3081	1.3047	1951.4	.0412	.700
1640	2.3016-1	-954.5	1.8796	27.564	.095	1.0909	-1.0058	0.4338	1.2374	1913.2	.0587	.699	0.3089	1.3042	1964.2	.0417	.700
1660	2.2716-1	-946.1	1.8848	27.536	.095	1.0736	-1.0048	0.4144	1.2435	1930.6	.0563	.702	0.3096	1.3037	1976.7	.0422	.699
1680	2.2428-1	-937.9	1.8896	27.515	.096	1.0579	-1.0038	0.3969	1.2496	1947.7	.0542	.703	0.3103	1.3031	1988.9	.0427	.699
1700	2.2151-1	-930.2	1.8942	27.498	.097	1.0445	-1.0029	0.3820	1.2552	1964.3	.0527	.703	0.3110	1.3024	2000.9	.0431	.699
1720	2.1883-1	-922.6	1.8986	27.486	.098	1.0335	-1.0022	0.3699	1.2601	1980.1	.0515	.702	0.3117	1.3018	2012.5	.0435	.699
1740	2.1625-1	-915.3	1.9028	27.476	.098	1.0250	-1.0017	0.3606	1.2641	1995.0	.0507	.700	0.3123	1.3011	2024.0	.0440	.699
1760	2.1374-1	-908.2	1.9069	27.470	.099	1.0184	-1.0013	0.3535	1.2672	2009.1	.0502	.699	0.3130	1.3004	2035.3	.0444	.700
1780	2.1130-1	-901.2	1.9109	27.465	.100	1.0136	-1.0009	0.3484	1.2695	2022.6	.0499	.698	0.3136	1.2996	2046.4	.0448	.700
1800	2.0892-1	-894.3	1.9148	27.461	.101	1.0100	-1.0007	0.3446	1.2712	2035.4	.0498	.697	0.3142	1.2989	2057.5	.0452	.700
1900	1.9787-1	-860.3	1.9331	27.454	.105	1.0023	-1.0002	0.3371	1.2745	2094.2	.0507	.696	0.3172	1.2954	2111.3	.0472	.702
2000	1.8796-1	-826.6	1.9504	27.452	.108	1.0007	-1.0001	0.3362	1.2745	2148.7	.0522	.697	0.3201	1.2920	2163.4	.0493	.704
2100	1.7901-1	-793.0	1.9668	27.451	.112	1.0002	-1.0000	0.3367	1.2738	2201.1	.0540	.698	0.3228	1.2888	2214.1	.0513	.705
2200	1.7087-1	-759.3	1.9825	27.451	.116	1.0001	-1.0000	0.3375	1.2729	2252.1	.0557	.700	0.3254	1.2858	2263.6	.0532	.706
2300	1.6344-1	-725.5	1.9975	27.451	.119	1.0001	-1.0000	0.3385	1.2718	2301.8	.0575	.701	0.3279	1.2831	2311.9	.0552	.708
2400	1.5663-1	-691.6	2.0119	27.451	.123	1.0000	-1.0000	0.3396	1.2707	2350.2	.0593	.702	0.3303	1.2804	2359.2	.0572	.708
2500	1.5037-1	-657.6	2.0258	27.451	.126	1.0000	-1.0000	0.3408	1.2695	2397.6	.0611	.703	0.3326	1.2780	2405.6	.0592	.709

TABLE 22.4D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN² (10.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4458-1	-623.4	2.0392	27.451	.130	1.0000	-1.0000	0.3420	1.2683	2443.9	.0629	.704	0.3347	1.2757	2451.0	.0611	.710
2700	1.3923-1	-589.2	2.0521	27.451	.133	1.0000	-1.0000	0.3432	1.2671	2489.3	.0647	.705	0.3368	1.2736	2495.6	.0631	.710
2800	1.3425-1	-554.8	2.0647	27.451	.136	1.0000	-1.0000	0.3445	1.2658	2533.7	.0666	.705	0.3388	1.2715	2539.4	.0650	.710
2900	1.2963-1	-520.3	2.0768	27.451	.140	1.0000	-1.0000	0.3458	1.2646	2577.3	.0684	.705	0.3406	1.2697	2582.5	.0669	.710
3000	1.2530-1	-485.6	2.0885	27.451	.143	1.0001	-1.0000	0.3470	1.2634	2620.1	.0703	.705	0.3424	1.2679	2624.8	.0689	.710
3100	1.2126-1	-450.9	2.0999	27.450	.146	1.0001	-1.0000	0.3483	1.2622	2662.1	.0722	.705	0.3440	1.2663	2666.5	.0708	.710
3200	1.1747-1	-416.0	2.1110	27.450	.149	1.0002	-1.0000	0.3497	1.2610	2703.5	.0741	.704	0.3456	1.2647	2707.5	.0727	.710
3300	1.1391-1	-380.9	2.1218	27.450	.152	1.0003	-1.0000	0.3511	1.2597	2744.0	.0761	.703	0.3471	1.2633	2747.9	.0746	.709
3400	1.1056-1	-345.7	2.1323	27.450	.156	1.0005	-1.0000	0.3525	1.2585	2783.9	.0781	.702	0.3485	1.2620	2787.8	.0765	.709
3500	1.0740-1	-310.4	2.1425	27.449	.159	1.0007	-1.0000	0.3542	1.2571	2823.1	.0803	.700	0.3498	1.2607	2827.1	.0784	.708
3600	1.0441-1	-274.9	2.1525	27.449	.162	1.0011	-1.0000	0.3560	1.2557	2861.5	.0826	.697	0.3511	1.2595	2865.9	.0802	.708
3700	1.0159-1	-239.2	2.1623	27.448	.165	1.0017	-1.0001	0.3582	1.2540	2899.1	.0851	.694	0.3523	1.2584	2904.2	.0821	.707
3800	9.8909-2	-203.2	2.1719	27.446	.168	1.0025	-1.0001	0.3610	1.2521	2935.9	.0878	.690	0.3534	1.2574	2942.1	.0839	.707
3900	9.6365-2	-167.0	2.1813	27.444	.171	1.0036	-1.0001	0.3644	1.2499	2971.7	.0909	.684	0.3545	1.2565	2979.6	.0857	.706
4000	9.3945-2	-130.3	2.1906	27.441	.174	1.0053	-1.0002	0.3687	1.2471	3006.4	.0944	.678	0.3555	1.2556	3016.6	.0876	.705
4100	9.1639-2	-93.2	2.1998	27.437	.177	1.0077	-1.0003	0.3745	1.2438	3039.9	.0985	.671	0.3564	1.2548	3053.4	.0894	.704
4200	8.9438-2	-55.4	2.2089	27.430	.180	1.0110	-1.0004	0.3820	1.2396	3072.0	.1034	.663	0.3573	1.2541	3089.8	.0912	.703
4300	8.7331-2	-16.7	2.2180	27.422	.182	1.0156	-1.0006	0.3920	1.2346	3102.5	.1093	.654	0.3582	1.2534	3126.1	.0931	.702
4400	8.5309-2	23.1	2.2271	27.410	.185	1.0220	-1.0008	0.4051	1.2285	3131.3	.1165	.644	0.3590	1.2529	3162.2	.0949	.701
4500	8.3364-2	64.5	2.2364	27.394	.188	1.0307	-1.0011	0.4223	1.2213	3158.4	.1253	.634	0.3597	1.2524	3198.3	.0967	.699
4600	8.1487-2	107.7	2.2459	27.372	.191	1.0423	-1.0016	0.4444	1.2132	3183.9	.1362	.623	0.3604	1.2520	3234.4	.0986	.698
4700	7.9669-2	153.5	2.2558	27.343	.194	1.0574	-1.0022	0.4721	1.2045	3208.4	.1495	.611	0.3611	1.2518	3270.8	.1005	.696
4800	7.7900-2	202.4	2.2660	27.305	.196	1.0764	-1.0030	0.5059	1.1955	3232.6	.1657	.599	0.3617	1.2517	3307.6	.1023	.694
4900	7.6172-2	254.9	2.2769	27.256	.199	1.0993	-1.0040	0.5453	1.1869	3257.1	.1850	.586	0.3622	1.2518	3345.0	.1042	.692
5000	7.4480-2	311.6	2.2883	27.194	.202	1.1258	-1.0052	0.5894	1.1790	3283.0	.2075	.573	0.3628	1.2520	3383.2	.1061	.689
5100	7.2817-2	372.9	2.3005	27.118	.204	1.1553	-1.0066	0.6368	1.1722	3310.6	.2330	.558	0.3632	1.2525	3422.2	.1080	.687
5200	7.1180-2	439.0	2.3133	27.029	.207	1.1870	-1.0082	0.6859	1.1665	3340.4	.2615	.542	0.3637	1.2532	3462.3	.1099	.684
5300	6.9567-2	510.1	2.3268	26.924	.209	1.2201	-1.0098	0.7354	1.1621	3372.4	.2926	.526	0.3641	1.2541	3503.4	.1119	.681
5400	6.7977-2	586.1	2.3410	26.805	.212	1.2539	-1.0116	0.7843	1.1586	3406.6	.3261	.509	0.3644	1.2551	3545.7	.1139	.677

TABLE 22.5D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN² (50.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS				FROZEN COMPOSITIONS						
								CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN			
360	5.4638	0	-1385.1	1.3036	28.727	.027	1.0000	-1.0000	0.2517	1.3786	926.8	.0087	.785	0.2517	1.3786	926.8	.0087	.785
380	5.1762	0	-1380.0	1.3172	28.727	.029	1.0000	-1.0000	0.2523	1.3775	951.8	.0093	.780	0.2523	1.3775	951.8	.0093	.780
400	4.9174	0	-1375.0	1.3301	28.727	.030	1.0000	-1.0000	0.2528	1.3763	976.1	.0098	.775	0.2528	1.3763	976.1	.0098	.775
420	4.6832	0	-1369.9	1.3425	28.727	.032	1.0000	-1.0000	0.2534	1.3751	999.8	.0103	.772	0.2534	1.3751	999.8	.0103	.772
440	4.4704	0	-1364.8	1.3543	28.727	.033	1.0000	-1.0000	0.2540	1.3739	1022.9	.0109	.769	0.2540	1.3739	1022.9	.0109	.769
460	4.2760	0	-1359.7	1.3656	28.727	.034	1.0000	-1.0000	0.2546	1.3726	1045.4	.0114	.766	0.2546	1.3727	1045.4	.0114	.766
480	4.0978	0	-1354.6	1.3765	28.727	.036	1.0000	-1.0000	0.2553	1.3713	1067.4	.0119	.764	0.2553	1.3714	1067.4	.0119	.764
500	3.9339	0	-1349.5	1.3869	28.727	.037	1.0000	-1.0000	0.2560	1.3700	1088.8	.0124	.763	0.2559	1.3700	1088.9	.0124	.763
520	3.7826	0	-1344.4	1.3969	28.727	.038	1.0000	-1.0000	0.2567	1.3686	1109.8	.0129	.762	0.2566	1.3687	1109.9	.0129	.762
537	3.6651	0	-1340.1	1.4051	28.727	.039	1.0000	-1.0000	0.2572	1.3675	1127.0	.0133	.761	0.2572	1.3675	1127.0	.0133	.761
540	3.6425	0	-1339.3	1.4066	28.727	.040	1.0000	-1.0000	0.2574	1.3672	1130.4	.0134	.761	0.2573	1.3673	1130.4	.0134	.761
560	3.5124	0	-1334.1	1.4160	28.727	.041	1.0000	-1.0000	0.2581	1.3658	1150.6	.0139	.761	0.2581	1.3659	1150.6	.0139	.761
580	3.3913	0	-1328.9	1.4251	28.727	.042	1.0000	-1.0000	0.2589	1.3644	1170.3	.0144	.761	0.2588	1.3644	1170.3	.0144	.761
600	3.2783	0	-1323.8	1.4339	28.727	.044	1.0000	-1.0000	0.2596	1.3629	1189.7	.0148	.761	0.2596	1.3630	1189.7	.0148	.761
620	3.1725	0	-1318.6	1.4424	28.727	.045	1.0000	-1.0000	0.2604	1.3614	1208.7	.0153	.761	0.2603	1.3615	1208.7	.0153	.761
640	3.0734	0	-1313.3	1.4507	28.727	.046	1.0000	-1.0000	0.2612	1.3598	1227.3	.0158	.761	0.2611	1.3600	1227.4	.0158	.761
660	2.9802	0	-1308.1	1.4587	28.727	.047	1.0000	-1.0000	0.2621	1.3583	1245.6	.0163	.760	0.2619	1.3585	1245.7	.0163	.761
680	2.8926	0	-1302.9	1.4666	28.727	.048	1.0000	-1.0000	0.2630	1.3567	1263.6	.0168	.759	0.2628	1.3570	1263.8	.0167	.760
700	2.8099	0	-1297.6	1.4742	28.727	.050	1.0001	-1.0000	0.2639	1.3551	1281.3	.0173	.758	0.2636	1.3555	1281.5	.0172	.759
720	2.7319	0	-1292.3	1.4817	28.727	.051	1.0001	-1.0000	0.2648	1.3534	1298.7	.0178	.756	0.2644	1.3540	1298.9	.0177	.758
740	2.6580	0	-1287.0	1.4889	28.727	.052	1.0002	-1.0000	0.2657	1.3518	1315.8	.0183	.755	0.2653	1.3524	1316.1	.0182	.758
760	2.5881	0	-1281.7	1.4960	28.726	.053	1.0003	-1.0000	0.2667	1.3500	1332.6	.0188	.754	0.2662	1.3509	1333.0	.0187	.757
780	2.5217	0	-1276.3	1.5030	28.726	.054	1.0004	-1.0000	0.2678	1.3483	1349.2	.0193	.753	0.2670	1.3493	1349.7	.0191	.757
800	2.4586	0	-1271.0	1.5098	28.726	.055	1.0005	-1.0000	0.2689	1.3465	1365.5	.0198	.751	0.2679	1.3477	1366.1	.0196	.757
820	2.3986	0	-1265.6	1.5164	28.726	.056	1.0006	-1.0000	0.2700	1.3447	1381.5	.0203	.750	0.2688	1.3462	1382.3	.0200	.757
840	2.3415	0	-1260.2	1.5229	28.725	.058	1.0008	-1.0000	0.2712	1.3428	1397.3	.0209	.748	0.2697	1.3446	1398.2	.0205	.757
860	2.2870	0	-1254.7	1.5293	28.724	.059	1.0011	-1.0001	0.2725	1.3408	1412.8	.0214	.746	0.2707	1.3431	1414.0	.0210	.757
880	2.2349	0	-1249.3	1.5356	28.724	.060	1.0014	-1.0001	0.2739	1.3389	1428.1	.0220	.744	0.2716	1.3415	1429.5	.0214	.757
900	2.1852	0	-1243.8	1.5418	28.723	.061	1.0017	-1.0001	0.2753	1.3368	1443.1	.0226	.741	0.2725	1.3400	1444.8	.0219	.757
920	2.1376	0	-1238.2	1.5478	28.721	.062	1.0022	-1.0001	0.2768	1.3347	1458.0	.0232	.738	0.2735	1.3384	1460.0	.0223	.756
940	2.0920	0	-1232.7	1.5538	28.720	.063	1.0027	-1.0001	0.2784	1.3325	1472.5	.0238	.734	0.2744	1.3369	1475.0	.0228	.756
960	2.0483	0	-1227.1	1.5597	28.718	.064	1.0033	-1.0002	0.2802	1.3302	1486.9	.0245	.730	0.2754	1.3353	1489.8	.0233	.755
980	2.0063	0	-1221.5	1.5655	28.716	.065	1.0040	-1.0002	0.2820	1.3279	1501.1	.0252	.725	0.2763	1.3338	1504.4	.0238	.755
1000	1.9660	0	-1215.8	1.5712	28.713	.066	1.0048	-1.0003	0.2840	1.3255	1515.0	.0260	.720	0.2773	1.3323	1518.9	.0242	.754
1020	1.9273	0	-1210.1	1.5769	28.710	.067	1.0057	-1.0003	0.2862	1.3230	1528.7	.0268	.715	0.2783	1.3308	1533.2	.0247	.754
1040	1.8900	0	-1204.4	1.5824	28.707	.068	1.0068	-1.0004	0.2885	1.3204	1542.2	.0276	.709	0.2792	1.3293	1547.4	.0252	.753
1060	1.8541	0	-1198.6	1.5880	28.703	.069	1.0080	-1.0004	0.2910	1.3177	1555.5	.0285	.703	0.2802	1.3278	1561.4	.0257	.752
1080	1.8194	0	-1192.7	1.5934	28.698	.070	1.0094	-1.0005	0.2938	1.3149	1568.5	.0295	.697	0.2812	1.3264	1575.4	.0262	.752
1100	1.7860	0	-1186.8	1.5988	28.693	.071	1.0109	-1.0006	0.2967	1.3120	1581.4	.0305	.690	0.2822	1.3249	1589.2	.0267	.751
1120	1.7538	0	-1180.9	1.6042	28.687	.072	1.0127	-1.0007	0.2999	1.3090	1594.0	.0315	.683	0.2832	1.3235	1602.9	.0271	.750
1140	1.7226	0	-1174.8	1.6095	28.680	.073	1.0147	-1.0008	0.3033	1.3058	1606.5	.0327	.676	0.2842	1.3221	1616.5	.0276	.749

TABLE 22.5D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN2 (50.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	FROZEN GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1160	1.6924	0	-1168.7	1.6149	28.672	.074	1.0169	-1.0010	0.3071	1.3026	1618.7	.0339	.669	0.2852	1.3207	1629.9	.0281	.748
1180	1.6632	0	-1162.5	1.6201	28.663	.075	1.0194	-1.0011	0.3111	1.2992	1630.7	.0351	.662	0.2862	1.3194	1643.4	.0286	.747
1200	1.6349	0	-1156.3	1.6254	28.653	.076	1.0222	-1.0013	0.3155	1.2957	1642.6	.0364	.656	0.2872	1.3181	1656.7	.0292	.746
1220	1.6075	0	-1149.9	1.6307	28.642	.077	1.0253	-1.0015	0.3203	1.2921	1654.2	.0378	.649	0.2882	1.3168	1669.9	.0297	.745
1240	1.5809	0	-1143.5	1.6359	28.629	.078	1.0287	-1.0017	0.3254	1.2884	1665.7	.0393	.642	0.2892	1.3155	1683.1	.0302	.743
1260	1.5550	0	-1136.9	1.6412	28.615	.078	1.0324	-1.0019	0.3310	1.2846	1677.0	.0408	.636	0.2902	1.3143	1696.3	.0307	.742
1280	1.5299	0	-1130.2	1.6464	28.600	.079	1.0366	-1.0022	0.3370	1.2807	1688.1	.0424	.631	0.2912	1.3131	1709.3	.0312	.741
1300	1.5054	0	-1123.4	1.6517	28.583	.080	1.0411	-1.0025	0.3435	1.2767	1699.1	.0441	.625	0.2922	1.3119	1722.4	.0317	.740
1320	1.4817	0	-1116.5	1.6570	28.564	.081	1.0460	-1.0028	0.3505	1.2726	1710.0	.0459	.621	0.2932	1.3108	1735.4	.0323	.738
1340	1.4585	0	-1109.4	1.6623	28.543	.082	1.0513	-1.0031	0.3580	1.2685	1720.7	.0477	.616	0.2942	1.3097	1748.4	.0328	.737
1360	1.4359	0	-1102.2	1.6677	28.520	.083	1.0570	-1.0035	0.3661	1.2643	1731.4	.0496	.613	0.2952	1.3086	1761.4	.0333	.735
1380	1.4138	0	-1094.7	1.6731	28.495	.084	1.0632	-1.0039	0.3746	1.2601	1741.9	.0515	.610	0.2962	1.3076	1774.4	.0339	.734
1400	1.3923	0	-1087.2	1.6785	28.468	.085	1.0698	-1.0043	0.3837	1.2560	1752.4	.0536	.607	0.2972	1.3067	1787.5	.0344	.732
1420	1.3713	0	-1079.4	1.6840	28.438	.086	1.0768	-1.0047	0.3932	1.2519	1763.0	.0556	.605	0.2982	1.3058	1800.5	.0349	.731
1440	1.3507	0	-1071.4	1.6896	28.406	.086	1.0842	-1.0052	0.4032	1.2479	1773.5	.0577	.605	0.2992	1.3049	1813.6	.0355	.729
1460	1.3306	0	-1063.3	1.6952	28.372	.087	1.0919	-1.0057	0.4135	1.2440	1784.0	.0598	.604	0.3001	1.3041	1826.7	.0360	.728
1480	1.3109	0	-1054.9	1.7009	28.335	.088	1.0998	-1.0062	0.4241	1.2403	1794.7	.0618	.605	0.3011	1.3034	1839.8	.0366	.726
1500	1.2916	0	-1046.3	1.7067	28.295	.089	1.1079	-1.0067	0.4348	1.2367	1805.5	.0639	.606	0.3020	1.3027	1853.0	.0371	.724
1520	1.2727	0	-1037.5	1.7125	28.253	.090	1.1161	-1.0072	0.4455	1.2335	1816.4	.0658	.608	0.3030	1.3021	1866.2	.0377	.723
1540	1.2542	0	-1028.5	1.7184	28.209	.091	1.1240	-1.0078	0.4560	1.2305	1827.5	.0676	.611	0.3039	1.3015	1879.5	.0382	.721
1560	1.2361	0	-1019.3	1.7244	28.162	.091	1.1317	-1.0083	0.4659	1.2278	1838.9	.0693	.615	0.3048	1.3010	1892.9	.0388	.719
1580	1.2183	0	-1009.8	1.7304	28.114	.092	1.1387	-1.0088	0.4751	1.2255	1850.5	.0708	.619	0.3057	1.3005	1906.3	.0393	.718
1600	1.2010	0	-1000.3	1.7364	28.064	.093	1.1449	-1.0092	0.4832	1.2236	1862.4	.0720	.625	0.3066	1.3001	1919.7	.0399	.716
1620	1.1840	0	-990.5	1.7425	28.012	.094	1.1499	-1.0096	0.4898	1.2222	1874.6	.0729	.631	0.3074	1.2997	1933.2	.0404	.715
1640	1.1674	0	-980.7	1.7485	27.960	.095	1.1534	-1.0098	0.4946	1.2213	1887.2	.0734	.638	0.3082	1.2994	1946.6	.0409	.713
1660	1.1511	0	-970.8	1.7545	27.908	.095	1.1550	-1.0100	0.4971	1.2209	1900.2	.0735	.646	0.3091	1.2991	1960.1	.0415	.712
1680	1.1353	0	-960.8	1.7605	27.856	.096	1.1545	-1.0100	0.4970	1.2212	1913.6	.0732	.654	0.3098	1.2988	1973.5	.0420	.710
1700	1.1199	0	-950.9	1.7663	27.806	.097	1.1515	-1.0099	0.4941	1.2221	1927.4	.0724	.662	0.3106	1.2986	1986.8	.0425	.709
1720	1.1050	0	-941.1	1.7721	27.758	.098	1.1459	-1.0096	0.4882	1.2237	1941.7	.0711	.671	0.3114	1.2983	2000.0	.0430	.708
1740	1.0905	0	-931.4	1.7777	27.712	.099	1.1377	-1.0091	0.4794	1.2260	1956.4	.0695	.680	0.3121	1.2981	2013.0	.0435	.707
1760	1.0765	0	-921.9	1.7831	27.670	.099	1.1272	-1.0085	0.4681	1.2290	1971.5	.0676	.687	0.3128	1.2978	2025.9	.0440	.706
1780	1.0629	0	-912.7	1.7883	27.632	.100	1.1148	-1.0078	0.4546	1.2326	1986.9	.0656	.694	0.3135	1.2975	2038.5	.0445	.705
1800	1.0498	0	-903.7	1.7933	27.599	.101	1.1012	-1.0069	0.4399	1.2368	2002.6	.0634	.700	0.3141	1.2971	2050.9	.0450	.705
1900	9.9093	-1	-863.3	1.8152	27.497	.105	1.0392	-1.0028	0.3743	1.2587	2079.5	.0555	.705	0.3172	1.2948	2109.1	.0472	.703
2000	9.4028	-1	-827.5	1.8335	27.465	.108	1.0116	-1.0009	0.3466	1.2699	2144.3	.0536	.701	0.3201	1.2918	2162.7	.0492	.704
2100	8.9521	-1	-793.3	1.8502	27.456	.112	1.0035	-1.0003	0.3396	1.2726	2199.9	.0544	.699	0.3228	1.2888	2213.8	.0512	.705
2200	8.5443	-1	-759.4	1.8660	27.453	.116	1.0013	-1.0001	0.3384	1.2725	2251.7	.0559	.700	0.3254	1.2858	2263.4	.0532	.707
2300	8.1725	-1	-725.6	1.8811	27.452	.119	1.0006	-1.0001	0.3389	1.2717	2301.6	.0576	.701	0.3279	1.2830	2311.9	.0552	.708
2400	7.8318	-1	-691.6	1.8955	27.452	.123	1.0003	-1.0000	0.3398	1.2706	2350.2	.0593	.702	0.3303	1.2804	2359.2	.0572	.708
2500	7.5185	-1	-657.6	1.9094	27.451	.126	1.0002	-1.0000	0.3409	1.2695	2397.5	.0611	.703	0.3326	1.2780	2405.6	.0592	.709

TABLE 22.5D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN² (50.00 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	7.2292-1	-623.5	1.9228	27.451	.130	1.0001	-1.0000	0.3420	1.2683	2443.9	.0629	.704	0.3347	1.2757	2451.0	.0611	.710
2700	6.9615-1	-589.2	1.9357	27.451	.133	1.0001	-1.0000	0.3433	1.2671	2489.2	.0647	.705	0.3368	1.2735	2495.6	.0631	.710
2800	6.7128-1	-554.8	1.9482	27.451	.136	1.0001	-1.0000	0.3445	1.2658	2533.7	.0665	.705	0.3388	1.2715	2539.4	.0650	.710
2900	6.4813-1	-520.3	1.9603	27.451	.140	1.0001	-1.0000	0.3457	1.2646	2577.3	.0684	.706	0.3406	1.2697	2582.4	.0669	.710
3000	6.2653-1	-485.7	1.9721	27.451	.143	1.0001	-1.0000	0.3470	1.2634	2620.2	.0702	.706	0.3424	1.2679	2624.8	.0689	.710
3100	6.0631-1	-450.9	1.9835	27.451	.146	1.0001	-1.0000	0.3482	1.2623	2662.2	.0721	.706	0.3440	1.2663	2666.4	.0708	.710
3200	5.8737-1	-416.0	1.9945	27.451	.149	1.0001	-1.0000	0.3494	1.2611	2703.6	.0739	.705	0.3456	1.2647	2707.5	.0727	.710
3300	5.6956-1	-381.0	2.0053	27.450	.152	1.0001	-1.0000	0.3507	1.2600	2744.3	.0758	.705	0.3471	1.2633	2747.9	.0746	.709
3400	5.5281-1	-345.9	2.0158	27.450	.156	1.0002	-1.0000	0.3519	1.2589	2784.3	.0777	.704	0.3485	1.2620	2787.7	.0765	.709
3500	5.3701-1	-310.6	2.0260	27.450	.159	1.0003	-1.0000	0.3532	1.2577	2823.7	.0797	.703	0.3498	1.2607	2827.0	.0783	.708
3600	5.2209-1	-275.2	2.0360	27.450	.162	1.0005	-1.0000	0.3546	1.2566	2862.5	.0817	.702	0.3511	1.2595	2865.8	.0802	.708
3700	5.0797-1	-239.7	2.0457	27.449	.165	1.0007	-1.0000	0.3561	1.2554	2900.6	.0838	.700	0.3523	1.2584	2904.1	.0821	.707
3800	4.9459-1	-204.0	2.0552	27.449	.168	1.0011	-1.0000	0.3578	1.2540	2938.0	.0860	.698	0.3534	1.2574	2941.9	.0839	.707
3900	4.8189-1	-168.1	2.0646	27.448	.171	1.0016	-1.0001	0.3598	1.2526	2974.8	.0884	.695	0.3545	1.2564	2979.3	.0857	.706
4000	4.6982-1	-132.0	2.0737	27.446	.174	1.0023	-1.0001	0.3622	1.2510	3010.8	.0909	.692	0.3555	1.2556	3016.3	.0876	.705
4100	4.5833-1	-95.7	2.0827	27.445	.177	1.0033	-1.0001	0.3650	1.2491	3046.0	.0937	.688	0.3564	1.2547	3052.8	.0894	.704
4200	4.4737-1	-59.0	2.0915	27.442	.180	1.0047	-1.0002	0.3686	1.2469	3080.3	.0968	.684	0.3573	1.2540	3089.0	.0912	.704
4300	4.3691-1	-21.9	2.1002	27.438	.182	1.0065	-1.0002	0.3731	1.2443	3113.7	.1003	.679	0.3582	1.2532	3124.9	.0930	.703
4400	4.2691-1	15.7	2.1089	27.433	.185	1.0090	-1.0003	0.3787	1.2411	3146.0	.1043	.673	0.3590	1.2526	3160.5	.0948	.701
4500	4.1732-1	53.9	2.1175	27.427	.188	1.0124	-1.0005	0.3859	1.2374	3177.1	.1089	.666	0.3597	1.2520	3195.8	.0966	.700
4600	4.0812-1	92.9	2.1260	27.418	.191	1.0169	-1.0006	0.3951	1.2330	3207.0	.1144	.659	0.3604	1.2515	3231.0	.0985	.699
4700	3.9927-1	133.0	2.1347	27.406	.194	1.0228	-1.0009	0.4066	1.2279	3235.7	.1209	.652	0.3611	1.2510	3266.0	.1003	.697
4800	3.9073-1	174.3	2.1434	27.391	.196	1.0305	-1.0012	0.4209	1.2221	3263.1	.1285	.643	0.3618	1.2506	3301.0	.1021	.696
4900	3.8248-1	217.3	2.1522	27.371	.199	1.0403	-1.0016	0.4386	1.2157	3289.5	.1375	.635	0.3623	1.2504	3336.0	.1039	.694
5000	3.7448-1	262.2	2.1613	27.346	.202	1.0524	-1.0021	0.4598	1.2089	3315.1	.1482	.626	0.3629	1.2502	3371.2	.1057	.693
5100	3.6670-1	309.4	2.1706	27.314	.205	1.0671	-1.0028	0.4846	1.2020	3340.5	.1607	.617	0.3634	1.2501	3406.7	.1075	.691
5200	3.5913-1	359.2	2.1803	27.274	.207	1.0843	-1.0036	0.5129	1.1952	3366.0	.1751	.607	0.3639	1.2501	3442.5	.1093	.689
5300	3.5172-1	412.0	2.1904	27.225	.210	1.1039	-1.0045	0.5440	1.1889	3392.3	.1914	.596	0.3644	1.2503	3478.8	.1111	.688
5400	3.4447-1	468.1	2.2009	27.167	.212	1.1255	-1.0056	0.5772	1.1832	3419.6	.2096	.585	0.3648	1.2506	3515.6	.1129	.686

TABLE 22.1E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN² (0.01 ATM)
 WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS								
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)	VS	COND	PRAN	CP	GAM	COND	PRAN	
R	L /FT ³	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT ³		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R		
360	1.335-3	-1529.3	1.5764	27.451	0.255	.246	1.157-3	30.418	.031	1.0000	-1.000	.233	1.389	904	.010	.735	.233	1.389	.010	.735
400	1.197-3	-1517.3	1.6079	27.451	0.402	.252	1.040-3	30.377	.034	1.0000	-1.000	.234	1.387	953	.011	.731	.234	1.387	.011	.731
440	1.046-3	-1481.3	1.6927	27.452	1.934	.257	9.303-4	29.890	.036	1.0000	-1.000	.240	1.383	1006	.012	.740	.240	1.383	.012	.740
480	8.196-4	-1359.8	1.9584	27.505	0.261	.257	8.043-4	28.193	.035	1.0000	-1.000	.260	1.372	1078	.012	.777	.260	1.372	.012	.777
520	7.565-4	-1349.3	1.9794	27.541	0.264	.259	7.429-4	28.210	.038	1.0001	-1.000	.261	1.370	1121	.013	.772	.260	1.370	.013	.774
537	7.330-4	-1344.9	1.9878	27.560	0.265	.259	7.200-4	28.218	.039	1.0001	-1.000	.261	1.369	1138	.013	.770	.261	1.369	.013	.773
560	7.025-4	-1338.7	1.9991	27.590	0.266	.260	6.904-4	28.232	.040	1.0003	-1.000	.262	1.367	1161	.014	.767	.261	1.368	.014	.772
600	6.556-4	-1328.0	2.0176	27.648	0.270	.261	6.449-4	28.257	.043	1.0008	-1.000	.264	1.363	1200	.015	.759	.263	1.366	.015	.772
640	6.146-4	-1317.1	2.0351	27.716	0.275	.263	6.052-4	28.286	.045	1.0021	-1.000	.268	1.357	1236	.016	.742	.264	1.363	.016	.770
680	5.783-4	-1306.0	2.0520	27.788	0.282	.264	5.702-4	28.315	.048	1.0048	-1.000	.274	1.348	1269	.018	.712	.265	1.360	.017	.767
720	5.459-4	-1294.5	2.0684	27.862	0.293	.266	5.390-4	28.341	.050	1.0099	-1.000	.284	1.336	1299	.021	.669	.266	1.357	.018	.763
760	5.168-4	-1282.5	2.0847	27.931	0.310	.268	5.110-4	28.359	.053	1.0187	-1.001	.300	1.319	1326	.026	.619	.268	1.354	.019	.760
800	4.903-4	-1269.6	2.1011	27.991	0.334	.269	4.855-4	28.363	.055	1.0326	-1.001	.323	1.298	1349	.031	.570	.270	1.351	.020	.755
840	4.659-4	-1255.6	2.1182	28.035	0.368	.271	4.621-4	28.347	.057	1.0527	-1.002	.354	1.277	1371	.038	.531	.271	1.348	.021	.750
880	4.433-4	-1240.1	2.1363	28.055	0.410	.274	4.404-4	28.304	.060	1.0791	-1.004	.394	1.256	1393	.046	.507	.274	1.345	.022	.743
920	4.222-4	-1222.7	2.1556	28.047	0.460	.276	4.202-4	28.228	.062	1.1103	-1.005	.439	1.238	1416	.054	.501	.276	1.342	.023	.733
960	4.023-4	-1203.3	2.1763	28.010	0.513	.279	4.011-4	28.119	.064	1.1426	-1.007	.485	1.224	1441	.061	.511	.279	1.339	.025	.721
1000	3.835-4	-1181.7	2.1983	27.949	0.567	.282	3.832-4	27.979	.066	1.1710	-1.009	.527	1.214	1468	.065	.534	.282	1.337	.026	.708
1040	3.660-4	-1159.5	2.2201	27.799	0.539	.285	3.660-4	27.799	.068	1.1765	-1.009	.539	1.211	1501	.064	.578	.285	1.335	.028	.696
1080	3.503-4	-1138.6	2.2398	27.630	0.494	.287	3.503-4	27.630	.070	1.1397	-1.007	.494	1.222	1541	.054	.637	.287	1.334	.029	.688
1120	3.365-4	-1120.4	2.2563	27.522	0.413	.290	3.365-4	27.522	.072	1.0759	-1.004	.413	1.247	1589	.044	.678	.290	1.332	.031	.683
1160	3.243-4	-1105.3	2.2696	27.474	0.353	.291	3.243-4	27.474	.074	1.0286	-1.002	.353	1.274	1636	.038	.688	.291	1.330	.032	.682
1200	3.133-4	-1091.7	2.2811	27.458	0.330	.293	3.133-4	27.458	.076	1.0091	-1.000	.330	1.286	1672	.036	.686	.293	1.328	.033	.682
1240	3.032-4	-1078.6	2.2918	27.453	0.325	.295	3.032-4	27.453	.078	1.0028	-1.000	.325	1.288	1701	.037	.685	.295	1.326	.033	.683
1280	2.937-4	-1065.6	2.3021	27.451	0.325	.296	2.937-4	27.451	.079	1.0009	-1.000	.325	1.287	1727	.038	.685	.296	1.323	.034	.684
1320	2.848-4	-1052.6	2.3121	27.451	0.326	.298	2.848-4	27.451	.081	1.0003	-1.000	.326	1.285	1753	.039	.686	.298	1.321	.035	.686
1360	2.764-4	-1039.6	2.3219	27.451	0.327	.299	2.764-4	27.451	.083	1.0001	-1.000	.327	1.284	1778	.040	.686	.299	1.319	.036	.687
1400	2.685-4	-1026.4	2.3314	27.451	0.329	.301	2.685-4	27.451	.085	1.0000	-1.000	.329	1.282	1803	.040	.687	.301	1.317	.037	.688

TABLE 22.2E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 1.46959 LB/IN² (0.10 ATM)
WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS								GAS PHASE PROPERTIES FROZEN COMPOSITIONS						
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R	
360	1.335-2	-1529.4	1.4458	27.451	0.247	.246	1.157-2	30.420	.031	1.0000	-1.000	.233	1.389	904	.010	.735	.233	1.389	.010	.735
400	1.201-2	-1519.3	1.4726	27.451	0.267	.252	1.041-2	30.416	.034	1.0000	-1.000	.234	1.387	952	.011	.730	.234	1.387	.011	.730
440	1.088-2	-1506.6	1.5026	27.451	0.412	.257	9.451-3	30.367	.037	1.0000	-1.000	.235	1.385	999	.012	.727	.235	1.385	.012	.727
480	9.664-3	-1476.3	1.5680	27.452	1.390	.262	8.556-3	29.989	.039	1.0000	-1.000	.240	1.381	1048	.013	.734	.240	1.381	.013	.734
520	7.588-3	-1351.3	1.8164	27.538	5.581	.260	7.437-3	28.239	.038	1.0000	-1.000	.260	1.370	1120	.013	.773	.260	1.371	.013	.773
537	7.330-3	-1345.0	1.8286	27.560	0.264	.259	7.200-3	28.218	.039	1.0000	-1.000	.261	1.369	1138	.013	.772	.261	1.369	.013	.773
560	7.025-3	-1338.8	1.8399	27.590	0.266	.260	6.904-3	28.232	.040	1.0001	-1.000	.262	1.368	1161	.014	.771	.261	1.368	.014	.772
600	6.556-3	-1328.1	1.8583	27.649	0.269	.261	6.450-3	28.258	.043	1.0003	-1.000	.263	1.365	1200	.015	.768	.263	1.366	.015	.772
640	6.146-3	-1317.3	1.8757	27.716	0.272	.263	6.053-3	28.288	.045	1.0007	-1.000	.265	1.361	1237	.016	.761	.264	1.363	.016	.771
680	5.785-3	-1306.3	1.8923	27.790	0.275	.264	5.703-3	28.320	.048	1.0015	-1.000	.268	1.356	1272	.017	.748	.265	1.360	.017	.748
720	5.462-3	-1295.2	1.9082	27.867	0.280	.266	5.393-3	28.352	.050	1.0032	-1.000	.272	1.350	1305	.019	.729	.266	1.357	.018	.764
760	5.174-3	-1283.9	1.9235	27.945	0.286	.267	5.114-3	28.383	.053	1.0061	-1.000	.278	1.341	1336	.021	.703	.268	1.354	.018	.762
800	4.913-3	-1272.3	1.9384	28.019	0.296	.269	4.863-3	28.408	.055	1.0109	-1.000	.287	1.331	1365	.024	.669	.269	1.351	.019	.760
840	4.675-3	-1260.2	1.9531	28.087	0.309	.271	4.634-3	28.426	.057	1.0183	-1.001	.300	1.318	1391	.027	.631	.271	1.348	.020	.758
880	4.458-3	-1247.6	1.9678	28.144	0.326	.273	4.424-3	28.432	.059	1.0290	-1.001	.317	1.303	1416	.032	.593	.273	1.344	.021	.755
920	4.257-3	-1234.1	1.9828	28.187	0.348	.275	4.231-3	28.423	.062	1.0437	-1.002	.339	1.286	1439	.037	.560	.275	1.341	.023	.750
960	4.070-3	-1219.6	1.9982	28.211	0.376	.277	4.051-3	28.396	.064	1.0626	-1.003	.366	1.270	1461	.044	.535	.277	1.338	.024	.745
1000	3.895-3	-1203.9	2.0142	28.214	0.410	.279	3.882-3	28.346	.066	1.0855	-1.004	.398	1.255	1483	.050	.520	.279	1.335	.025	.737
1040	3.730-3	-1186.7	2.0310	28.194	0.450	.282	3.723-3	28.272	.068	1.1118	-1.006	.435	1.240	1506	.057	.517	.282	1.332	.026	.729
1080	3.574-3	-1167.8	2.0488	28.153	0.495	.284	3.572-3	28.174	.070	1.1400	-1.007	.475	1.227	1530	.063	.524	.284	1.330	.028	.720
1120	3.427-3	-1147.8	2.0671	28.030	0.510	.287	3.427-3	28.030	.072	1.1634	-1.009	.510	1.218	1556	.067	.546	.287	1.328	.029	.710
1160	3.289-3	-1126.9	2.0854	27.864	0.528	.289	3.289-3	27.864	.074	1.1724	-1.009	.528	1.214	1585	.067	.583	.289	1.327	.030	.702
1200	3.162-3	-1105.9	2.1032	27.707	0.516	.292	3.162-3	27.707	.076	1.1572	-1.009	.516	1.216	1618	.062	.629	.292	1.326	.032	.694
1240	3.046-3	-1086.2	2.1193	27.582	0.464	.294	3.046-3	27.582	.078	1.1131	-1.006	.464	1.228	1657	.054	.671	.294	1.324	.033	.689
1280	2.943-3	-1069.0	2.1330	27.507	0.400	.296	2.943-3	27.507	.079	1.0604	-1.003	.400	1.250	1700	.046	.691	.296	1.323	.034	.687
1320	2.850-3	-1053.9	2.1446	27.472	0.358	.297	2.850-3	27.472	.081	1.0255	-1.001	.358	1.268	1740	.042	.692	.297	1.321	.035	.686
1360	2.765-3	-1040.1	2.1550	27.459	0.339	.299	2.765-3	27.459	.083	1.0098	-1.001	.339	1.277	1773	.041	.689	.299	1.319	.036	.687
1400	2.685-3	-1026.6	2.1647	27.454	0.333	.301	2.685-3	27.454	.085	1.0037	-1.000	.333	1.280	1801	.041	.688	.301	1.317	.037	.688

TABLE 22.3E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN² (1.00 ATM)
 WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS								GAS PHASE PROPERTIES FROZEN COMPOSITIONS						
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R	
360	1.335-1	-1529.4	1.3155	27.451	0.246	.246	1.157-1	30.420	.031	1.0000	-1.000	.233	1.389	904	.010	.735	.233	1.389	.010	.735
400	1.201-1	-1519.5	1.3418	27.451	0.253	.252	1.041-1	30.419	.034	1.0000	-1.000	.234	1.387	952	.011	.730	.234	1.387	.011	.730
440	1.092-1	-1509.0	1.3666	27.451	0.273	.257	9.466-2	30.415	.037	1.0000	-1.000	.235	1.385	998	.012	.726	.235	1.385	.012	.726
480	9.976-2	-1496.7	1.3934	27.451	0.368	.263	8.666-2	30.377	.040	1.0000	-1.000	.236	1.383	1042	.013	.725	.236	1.383	.013	.725
520	9.079-2	-1460.6	1.4660	27.451	0.671	.317	7.954-2	30.202	.042	1.0000	-1.000	.239	1.380	1087	.014	.728	.239	1.380	.014	.728
537	8.675-2	-1447.6	1.4906	27.453	0.911	.313	7.664-2	30.034	.043	1.0000	-1.000	.241	1.378	1107	.014	.731	.241	1.378	.014	.731
560	8.019-2	-1420.0	1.5408	27.465	1.524	.303	7.242-2	29.614	.043	1.0000	-1.000	.246	1.375	1137	.014	.741	.246	1.375	.014	.741
600	6.556-2	-1328.1	1.6991	27.649	0.268	.261	6.450-2	28.258	.043	1.0001	-1.000	.263	1.365	1201	.015	.770	.263	1.366	.015	.772
640	6.147-2	-1317.3	1.7165	27.717	0.271	.263	6.053-2	28.289	.045	1.0002	-1.000	.264	1.362	1238	.016	.768	.264	1.363	.016	.771
680	5.785-2	-1306.4	1.7330	27.791	0.273	.264	5.704-2	28.322	.048	1.0005	-1.000	.266	1.359	1274	.017	.762	.265	1.360	.017	.768
720	5.463-2	-1295.5	1.7486	27.869	0.276	.266	5.393-2	28.356	.050	1.0010	-1.000	.268	1.355	1308	.018	.753	.266	1.357	.018	.765
760	5.175-2	-1284.4	1.7636	27.949	0.279	.267	5.116-2	28.390	.053	1.0019	-1.000	.271	1.350	1340	.019	.742	.268	1.354	.018	.763
800	4.916-2	-1273.2	1.7780	28.029	0.283	.269	4.865-2	28.423	.055	1.0035	-1.000	.275	1.344	1371	.021	.727	.269	1.351	.019	.762
840	4.681-2	-1261.8	1.7919	28.105	0.288	.271	4.638-2	28.452	.057	1.0059	-1.000	.280	1.337	1401	.023	.708	.271	1.348	.020	.760
880	4.466-2	-1250.1	1.8055	28.176	0.295	.272	4.432-2	28.477	.059	1.0096	-1.000	.287	1.329	1429	.025	.685	.272	1.344	.021	.759
920	4.270-2	-1238.2	1.8187	28.241	0.303	.274	4.242-2	28.496	.062	1.0148	-1.001	.296	1.319	1455	.028	.658	.274	1.341	.022	.757
960	4.089-2	-1225.8	1.8319	28.297	0.315	.276	4.066-2	28.507	.064	1.0220	-1.001	.307	1.309	1480	.031	.629	.276	1.338	.023	.754
1000	3.921-2	-1213.0	1.8450	28.341	0.329	.278	3.904-2	28.508	.066	1.0315	-1.002	.321	1.297	1504	.035	.602	.278	1.334	.024	.751
1040	3.764-2	-1199.5	1.8582	28.373	0.346	.280	3.752-2	28.497	.068	1.0437	-1.002	.339	1.285	1527	.040	.578	.280	1.331	.025	.746
1080	3.618-2	-1185.2	1.8717	28.390	0.368	.282	3.610-2	28.472	.070	1.0588	-1.003	.360	1.272	1549	.045	.559	.282	1.328	.027	.742
1120	3.480-2	-1169.9	1.8855	28.392	0.394	.284	3.476-2	28.431	.072	1.0770	-1.004	.386	1.259	1570	.051	.547	.284	1.326	.028	.736
1160	3.349-2	-1153.6	1.8999	28.371	0.415	.287	3.349-2	28.371	.074	1.0984	-1.005	.415	1.247	1592	.057	.541	.287	1.323	.029	.730
1200	3.226-2	-1136.4	1.9145	28.266	0.447	.289	3.226-2	28.266	.076	1.1205	-1.007	.447	1.235	1615	.062	.546	.289	1.321	.030	.723
1240	3.108-2	-1117.8	1.9297	28.144	0.479	.291	3.108-2	28.144	.078	1.1425	-1.008	.479	1.226	1639	.067	.559	.291	1.319	.032	.717
1280	2.997-2	-1098.1	1.9453	28.009	0.507	.294	2.997-2	28.009	.079	1.1604	-1.009	.507	1.218	1664	.069	.580	.294	1.318	.033	.710
1320	2.891-2	-1077.5	1.9612	27.867	0.522	.296	2.891-2	27.867	.081	1.1680	-1.010	.522	1.214	1691	.070	.609	.296	1.317	.034	.704
1360	2.792-2	-1056.7	1.9767	27.730	0.514	.298	2.792-2	27.730	.083	1.1572	-1.009	.514	1.216	1722	.066	.644	.298	1.316	.035	.699
1400	2.701-2	-1036.8	1.9912	27.616	0.477	.300	2.701-2	27.616	.085	1.1244	-1.007	.477	1.224	1757	.060	.676	.300	1.315	.037	.695

TABLE 22.4E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN² (10.00 ATM)
WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS								GAS PHASE PROPERTIES FROZEN COMPOSITIONS						
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT ³	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT ³		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R	
360	1.331 0	-1529.4	1.1852	27.451	0.246	.246	1.157 0	30.420	.031	1.0000	-1.000	.233	1.389	904	.010	.735	.233	1.389	.010	.735
400	1.198 0	-1519.5	1.2115	27.451	0.252	.252	1.041 0	30.420	.034	1.0000	-1.000	.234	1.387	952	.011	.730	.234	1.387	.011	.730
440	1.090 0	-1509.3	1.2358	27.451	0.259	.257	9.467-1	30.419	.037	1.0000	-1.000	.235	1.385	998	.012	.726	.235	1.385	.012	.726
480	9.988-1	-1498.7	1.2588	27.451	0.274	.263	8.677-1	30.415	.040	1.0000	-1.000	.236	1.383	1042	.013	.724	.236	1.383	.013	.724
520	9.210-1	-1469.4	1.3179	27.451	0.356	.322	8.005-1	30.398	.042	1.0000	-1.000	.237	1.381	1084	.014	.723	.237	1.381	.014	.723
537	8.912-1	-1463.3	1.3294	27.451	0.377	.322	7.752-1	30.381	.044	1.0000	-1.000	.237	1.380	1101	.014	.723	.237	1.380	.014	.723
560	8.513-1	-1454.0	1.3464	27.451	0.427	.321	7.419-1	30.339	.045	1.0000	-1.000	.238	1.378	1125	.015	.724	.238	1.378	.015	.724
600	7.841-1	-1434.0	1.3808	27.452	0.595	.319	6.887-1	30.176	.047	1.0000	-1.000	.241	1.375	1166	.016	.729	.241	1.375	.016	.729
640	7.114-1	-1403.7	1.4296	27.469	0.973	.311	6.374-1	29.789	.049	1.0000	-1.000	.247	1.371	1210	.016	.738	.246	1.371	.016	.738
680	6.209-1	-1349.1	1.5120	27.592	1.909	.289	5.837-1	28.987	.049	1.0001	-1.000	.257	1.364	1261	.017	.754	.257	1.364	.017	.755
720	5.463-1	-1295.5	1.5894	27.870	0.274	.266	5.393-1	28.357	.050	1.0003	-1.000	.267	1.356	1308	.018	.761	.266	1.357	.018	.765
760	5.176-1	-1284.5	1.6042	27.951	0.276	.267	5.116-1	28.393	.053	1.0006	-1.000	.269	1.353	1342	.019	.756	.268	1.354	.018	.763
800	4.917-1	-1273.4	1.6185	28.032	0.279	.269	4.866-1	28.428	.055	1.0011	-1.000	.271	1.348	1374	.020	.751	.269	1.351	.019	.762
840	4.682-1	-1262.2	1.6321	28.111	0.281	.271	4.640-1	28.461	.057	1.0019	-1.000	.274	1.344	1404	.021	.743	.271	1.347	.020	.761
880	4.469-1	-1250.9	1.6453	28.187	0.284	.272	4.434-1	28.492	.059	1.0030	-1.000	.277	1.339	1434	.022	.733	.272	1.344	.021	.760
920	4.274-1	-1239.5	1.6580	28.260	0.288	.274	4.245-1	28.521	.062	1.0048	-1.000	.281	1.333	1462	.024	.721	.274	1.341	.022	.759
960	4.095-1	-1227.9	1.6703	28.327	0.293	.276	4.072-1	28.546	.064	1.0072	-1.000	.286	1.327	1490	.026	.705	.276	1.337	.023	.757
1000	3.930-1	-1216.1	1.6824	28.388	0.298	.278	3.912-1	28.566	.066	1.0104	-1.001	.292	1.320	1516	.028	.688	.278	1.334	.024	.755
1040	3.777-1	-1204.0	1.6942	28.443	0.305	.280	3.763-1	28.581	.068	1.0147	-1.001	.299	1.313	1541	.030	.669	.279	1.331	.025	.753
1080	3.634-1	-1191.6	1.7059	28.489	0.314	.282	3.625-1	28.590	.070	1.0203	-1.001	.308	1.304	1565	.033	.649	.281	1.328	.026	.750
1120	3.501-1	-1178.8	1.7175	28.527	0.325	.284	3.496-1	28.591	.072	1.0275	-1.002	.319	1.296	1589	.036	.630	.283	1.325	.027	.747
1160	3.377-1	-1165.6	1.7291	28.556	0.338	.286	3.375-1	28.585	.074	1.0364	-1.002	.332	1.286	1611	.040	.613	.286	1.322	.028	.744
1200	3.260-1	-1151.8	1.7408	28.564	0.348	.288	3.260-1	28.564	.076	1.0473	-1.003	.348	1.276	1633	.044	.598	.288	1.319	.029	.740
1240	3.149-1	-1137.5	1.7525	28.514	0.366	.290	3.149-1	28.514	.078	1.0601	-1.004	.366	1.266	1655	.048	.587	.290	1.316	.030	.737
1280	3.044-1	-1122.5	1.7645	28.453	0.387	.292	3.044-1	28.453	.079	1.0751	-1.004	.387	1.256	1676	.053	.580	.292	1.314	.032	.733
1320	2.944-1	-1106.6	1.7767	28.380	0.410	.294	2.944-1	28.380	.081	1.0921	-1.005	.410	1.247	1698	.058	.578	.294	1.312	.033	.729
1360	2.849-1	-1089.6	1.7893	28.295	0.436	.296	2.849-1	28.295	.083	1.1106	-1.007	.436	1.238	1720	.062	.580	.296	1.311	.034	.724
1400	2.758-1	-1071.7	1.8024	28.197	0.462	.298	2.758-1	28.197	.085	1.1295	-1.008	.462	1.229	1742	.067	.587	.298	1.309	.035	.720

TABLE 22.5E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 1.700; F/A = 0.084530; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN2 (50.00 ATM)
 WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS									
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)	S VS	COND	PRAN	CP	GAM	COND	PRAN		
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R			
360	6.582	0	-1529.4	1.0941	27.451	0.246	5.786	0	30.420	.031	1.0000	-1.000	.233	1.389	904	.010	.735	.233	1.389	.010	.735
400	5.932	0	-1519.5	1.1204	27.451	0.252	5.207	0	30.420	.034	1.0000	-1.000	.234	1.387	952	.011	.730	.234	1.387	.011	.730
440	5.399	0	-1509.3	1.1447	27.451	0.258	4.734	0	30.420	.037	1.0000	-1.000	.235	1.385	998	.012	.726	.235	1.385	.012	.726
480	4.953	0	-1498.8	1.1674	27.451	0.265	4.339	0	30.419	.040	1.0000	-1.000	.236	1.383	1042	.013	.723	.236	1.383	.013	.723
520	4.578	0	-1470.2	1.2253	27.451	0.329	4.005	0	30.415	.043	1.0000	-1.000	.237	1.381	1083	.014	.722	.237	1.381	.014	.722
537	4.436	0	-1464.6	1.2357	27.451	0.333	3.880	0	30.412	.044	1.0000	-1.000	.237	1.380	1100	.014	.722	.237	1.380	.014	.722
560	4.250	0	-1456.8	1.2501	27.451	0.343	3.717	0	30.404	.045	1.0000	-1.000	.238	1.379	1124	.015	.723	.238	1.379	.015	.723
600	3.958	0	-1442.4	1.2748	27.451	0.376	3.466	0	30.371	.048	1.0000	-1.000	.239	1.376	1163	.016	.724	.239	1.376	.016	.724
640	3.690	0	-1426.2	1.3009	27.451	0.441	3.241	0	30.294	.050	1.0000	-1.000	.241	1.373	1201	.017	.727	.241	1.373	.017	.727
680	3.430	0	-1406.5	1.3308	27.455	0.557	3.034	0	30.134	.052	1.0000	-1.000	.244	1.370	1240	.017	.731	.244	1.370	.017	.731
720	3.160	0	-1380.5	1.3679	27.477	0.765	2.837	0	29.836	.054	1.0000	-1.000	.249	1.366	1280	.018	.737	.249	1.366	.018	.737
760	2.859	0	-1342.9	1.4186	27.574	1.163	2.643	0	29.332	.055	1.0001	-1.000	.256	1.360	1324	.019	.745	.256	1.360	.019	.745
800	2.490	0	-1281.2	1.4975	27.962	2.048	2.442	0	28.536	.055	1.0004	-1.000	.268	1.351	1372	.020	.755	.268	1.352	.019	.760
840	2.341	0	-1262.4	1.5207	28.113	0.279	2.320	0	28.464	.057	1.0008	-1.000	.272	1.346	1405	.021	.753	.271	1.347	.020	.761
880	2.235	0	-1251.1	1.5338	28.190	0.281	2.217	0	28.496	.059	1.0013	-1.000	.274	1.342	1435	.022	.748	.272	1.344	.021	.761
920	2.137	0	-1239.8	1.5463	28.265	0.284	2.123	0	28.527	.062	1.0021	-1.000	.277	1.337	1464	.023	.741	.274	1.341	.022	.760
960	2.048	0	-1228.4	1.5585	28.335	0.287	2.037	0	28.556	.064	1.0032	-1.000	.280	1.332	1492	.024	.733	.276	1.337	.023	.758
1000	1.966	0	-1216.9	1.5702	28.401	0.290	1.957	0	28.581	.066	1.0046	-1.000	.284	1.327	1520	.026	.723	.277	1.334	.024	.757
1040	1.890	0	-1205.2	1.5817	28.462	0.294	1.883	0	28.604	.068	1.0066	-1.000	.288	1.322	1546	.028	.711	.279	1.331	.025	.755
1080	1.819	0	-1193.3	1.5929	28.517	0.299	1.815	0	28.622	.070	1.0092	-1.001	.294	1.316	1571	.029	.698	.281	1.327	.026	.753
1120	1.754	0	-1181.3	1.6039	28.567	0.305	1.751	0	28.637	.072	1.0126	-1.001	.300	1.310	1596	.031	.684	.283	1.324	.027	.751
1160	1.692	0	-1168.9	1.6147	28.610	0.312	1.691	0	28.646	.074	1.0168	-1.001	.307	1.303	1620	.034	.670	.285	1.321	.028	.748
1200	1.635	0	-1156.3	1.6254	28.647	0.320	1.635	0	28.651	.076	1.0222	-1.001	.315	1.296	1643	.036	.656	.287	1.318	.029	.746
1240	1.581	0	-1143.5	1.6359	28.629	0.325	1.581	0	28.629	.078	1.0287	-1.002	.325	1.288	1666	.039	.642	.289	1.315	.030	.743
1280	1.530	0	-1130.2	1.6464	28.600	0.337	1.530	0	28.600	.079	1.0366	-1.002	.337	1.281	1688	.042	.631	.291	1.313	.031	.741
1320	1.482	0	-1116.5	1.6570	28.564	0.351	1.482	0	28.564	.081	1.0460	-1.003	.351	1.273	1710	.046	.621	.293	1.311	.032	.738
1360	1.436	0	-1102.2	1.6677	28.520	0.366	1.436	0	28.520	.083	1.0570	-1.003	.366	1.264	1731	.050	.613	.295	1.309	.033	.735
1400	1.392	0	-1087.2	1.6785	28.468	0.384	1.392	0	28.468	.085	1.0698	-1.004	.384	1.256	1752	.054	.607	.297	1.307	.034	.732

TABLE 23A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.016415; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.3284; MW = 28.4546;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .03306; H2O= .07802; N2= .73271; O2= .14742; AR= .00879

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	FT/S	LB/FT HR	BTU/FT HR R	R		
360	1.0824-1	5.4120 0	-525.6	1.9082	1.7475	1.5868	1.4261	1.3138	0.2487	1.3902	935.1	.0299	.0098	.7624	360
380	1.0254-1	5.1271 0	-520.6	1.9216	1.7609	1.6002	1.4395	1.3272	0.2486	1.3903	960.8	.0314	.0103	.7588	380
400	9.7416-2	4.8708 0	-515.6	1.9344	1.7737	1.6130	1.4523	1.3400	0.2486	1.3904	985.8	.0329	.0108	.7555	400
420	9.2777-2	4.6388 0	-510.6	1.9465	1.7858	1.6251	1.4644	1.3521	0.2486	1.3904	1010.1	.0344	.0114	.7524	420
440	8.8560-2	4.4280 0	-505.7	1.9581	1.7974	1.6367	1.4760	1.3636	0.2486	1.3903	1033.9	.0358	.0119	.7497	440
460	8.4709-2	4.2355 0	-500.7	1.9691	1.8084	1.6477	1.4870	1.3747	0.2487	1.3901	1057.0	.0372	.0124	.7474	460
480	8.1180-2	4.0590 0	-495.7	1.9797	1.8190	1.6583	1.4976	1.3853	0.2488	1.3898	1079.7	.0386	.0129	.7454	480
500	7.7932-2	3.8966 0	-490.7	1.9899	1.8292	1.6685	1.5078	1.3954	0.2490	1.3895	1101.8	.0400	.0134	.7439	500
520	7.4935-2	3.7468 0	-485.8	1.9996	1.8389	1.6782	1.5175	1.4052	0.2492	1.3891	1123.5	.0413	.0139	.7426	520
537	7.2607-2	3.6304 0	-481.6	2.0075	1.8468	1.6861	1.5254	1.4131	0.2493	1.3887	1141.2	.0424	.0143	.7419	537
540	7.2160-2	3.6080 0	-480.8	2.0090	1.8483	1.6876	1.5269	1.4146	0.2494	1.3886	1144.7	.0426	.0143	.7418	540
560	6.9583-2	3.4791 0	-475.8	2.0181	1.8574	1.6967	1.5360	1.4237	0.2496	1.3881	1165.4	.0439	.0148	.7415	560
580	6.7183-2	3.3592 0	-470.8	2.0269	1.8662	1.7055	1.5448	1.4325	0.2499	1.3875	1185.8	.0452	.0152	.7415	580
600	6.4944-2	3.2472 0	-465.8	2.0354	1.8747	1.7140	1.5533	1.4409	0.2502	1.3868	1205.8	.0464	.0157	.7415	600
620	6.2849-2	3.1424 0	-460.8	2.0436	1.8829	1.7222	1.5615	1.4491	0.2505	1.3861	1225.4	.0477	.0161	.7416	620
640	6.0885-2	3.0442 0	-455.8	2.0515	1.8908	1.7301	1.5694	1.4571	0.2509	1.3854	1244.7	.0489	.0165	.7413	640
660	5.9040-2	2.9520 0	-450.7	2.0593	1.8986	1.7379	1.5772	1.4648	0.2513	1.3846	1263.6	.0501	.0170	.7408	660
680	5.7303-2	2.8652 0	-445.7	2.0668	1.9061	1.7454	1.5847	1.4723	0.2517	1.3837	1282.2	.0513	.0174	.7402	680
700	5.5666-2	2.7833 0	-440.7	2.0741	1.9134	1.7527	1.5920	1.4796	0.2521	1.3828	1300.5	.0524	.0179	.7396	700
720	5.4120-2	2.7060 0	-435.6	2.0812	1.9205	1.7598	1.5991	1.4868	0.2526	1.3819	1318.5	.0536	.0183	.7390	720
740	5.2657-2	2.6329 0	-430.6	2.0881	1.9274	1.7667	1.6060	1.4937	0.2530	1.3809	1336.2	.0547	.0187	.7386	740
760	5.1271-2	2.5636 0	-425.5	2.0949	1.9342	1.7735	1.6128	1.5004	0.2535	1.3799	1353.7	.0559	.0192	.7383	760
780	4.9957-2	2.4978 0	-420.4	2.1014	1.9407	1.7800	1.6193	1.5070	0.2540	1.3788	1370.8	.0570	.0196	.7381	780
800	4.8708-2	2.4354 0	-415.4	2.1079	1.9472	1.7865	1.6258	1.5135	0.2546	1.3777	1387.8	.0581	.0200	.7379	800
820	4.7520-2	2.3760 0	-410.3	2.1142	1.9535	1.7928	1.6321	1.5198	0.2551	1.3766	1404.4	.0591	.0204	.7378	820
840	4.6388-2	2.3194 0	-405.1	2.1203	1.9596	1.7989	1.6382	1.5259	0.2557	1.3755	1420.9	.0602	.0209	.7377	840
860	4.5310-2	2.2655 0	-400.0	2.1264	1.9657	1.8050	1.6443	1.5319	0.2562	1.3743	1437.1	.0613	.0213	.7377	860
880	4.4280-2	2.2140 0	-394.9	2.1322	1.9715	1.8109	1.6502	1.5378	0.2568	1.3731	1453.1	.0623	.0217	.7377	880
900	4.3296-2	2.1648 0	-389.8	2.1380	1.9773	1.8166	1.6559	1.5436	0.2574	1.3719	1468.8	.0633	.0221	.7377	900
920	4.2355-2	2.1177 0	-384.6	2.1437	1.9830	1.8223	1.6616	1.5493	0.2581	1.3707	1484.4	.0644	.0225	.7375	920
940	4.1453-2	2.0727 0	-379.4	2.1492	1.9886	1.8279	1.6672	1.5548	0.2587	1.3695	1499.8	.0654	.0229	.7374	940
960	4.0590-2	2.0295 0	-374.3	2.1547	1.9940	1.8333	1.6726	1.5603	0.2593	1.3682	1515.0	.0664	.0234	.7372	960
980	3.9761-2	1.9881 0	-369.1	2.1601	1.9994	1.8387	1.6780	1.5656	0.2600	1.3670	1530.0	.0674	.0238	.7370	980
1000	3.8966-2	1.9483 0	-363.9	2.1653	2.0046	1.8439	1.6832	1.5709	0.2606	1.3657	1544.8	.0684	.0242	.7368	1000
1020	3.8202-2	1.9101 0	-358.6	2.1705	2.0098	1.8491	1.6884	1.5761	0.2613	1.3644	1559.4	.0694	.0246	.7366	1020
1040	3.7468-2	1.8734 0	-353.4	2.1756	2.0149	1.8542	1.6935	1.5811	0.2620	1.3631	1573.9	.0704	.0250	.7364	1040
1060	3.6761-2	1.8380 0	-348.2	2.1806	2.0199	1.8592	1.6985	1.5861	0.2627	1.3618	1588.2	.0713	.0255	.7362	1060
1080	3.6080-2	1.8040 0	-342.9	2.1855	2.0248	1.8641	1.7034	1.5911	0.2634	1.3605	1602.3	.0723	.0259	.7359	1080
1100	3.5424-2	1.7712 0	-337.6	2.1903	2.0296	1.8689	1.7082	1.5959	0.2641	1.3592	1616.3	.0732	.0263	.7356	1100
1120	3.4791-2	1.7396 0	-332.3	2.1951	2.0344	1.8737	1.7130	1.6007	0.2648	1.3579	1630.2	.0742	.0267	.7353	1120
1140	3.4181-2	1.7090 0	-327.0	2.1998	2.0391	1.8784	1.7177	1.6054	0.2655	1.3566	1643.9	.0751	.0271	.7349	1140

TABLE 23A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.016415; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.3284; MW = 28.4546;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .03306; H2O= .07802; N2= .73271; O2= .14742; AR= .00879

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	FT/S	LB/FT HR	BTU/FT HR R	R		
1160	3.3592-2	1.6796 0	-321.7	2.2044	2.0437	1.8830	1.7223	1.6100	0.2662	1.3554	1657.5	.0761	.0276	.7346	1160
1180	3.3022-2	1.6511 0	-316.4	2.2090	2.0483	1.8876	1.7269	1.6145	0.2669	1.3541	1670.9	.0770	.0280	.7343	1180
1200	3.2472-2	1.6236 0	-311.0	2.2134	2.0527	1.8920	1.7313	1.6190	0.2676	1.3528	1684.2	.0779	.0284	.7339	1200
1220	3.1940-2	1.5970 0	-305.7	2.2179	2.0572	1.8965	1.7358	1.6235	0.2683	1.3515	1697.4	.0789	.0288	.7336	1220
1240	3.1424-2	1.5712 0	-300.3	2.2222	2.0615	1.9008	1.7401	1.6278	0.2691	1.3502	1710.4	.0798	.0293	.7332	1240
1260	3.0926-2	1.5463 0	-294.9	2.2266	2.0659	1.9052	1.7445	1.6321	0.2698	1.3490	1723.4	.0807	.0297	.7329	1260
1280	3.0442-2	1.5221 0	-289.5	2.2308	2.0701	1.9094	1.7487	1.6364	0.2705	1.3477	1736.2	.0816	.0301	.7325	1280
1300	2.9974-2	1.4987 0	-284.1	2.2350	2.0743	1.9136	1.7529	1.6406	0.2712	1.3465	1748.9	.0825	.0305	.7322	1300
1320	2.9520-2	1.4760 0	-278.7	2.2392	2.0785	1.9178	1.7571	1.6447	0.2719	1.3452	1761.5	.0834	.0310	.7319	1320
1340	2.9079-2	1.4540 0	-273.2	2.2432	2.0825	1.9219	1.7612	1.6488	0.2727	1.3440	1773.9	.0842	.0314	.7315	1340
1360	2.8652-2	1.4326 0	-267.8	2.2473	2.0866	1.9259	1.7652	1.6529	0.2734	1.3428	1786.3	.0851	.0318	.7312	1360
1380	2.8236-2	1.4118 0	-262.3	2.2513	2.0906	1.9299	1.7692	1.6569	0.2741	1.3416	1798.6	.0860	.0322	.7309	1380
1400	2.7833-2	1.3917 0	-256.8	2.2552	2.0945	1.9338	1.7731	1.6608	0.2748	1.3404	1810.8	.0868	.0327	.7306	1400
1420	2.7441-2	1.3721 0	-251.3	2.2591	2.0984	1.9377	1.7770	1.6647	0.2755	1.3392	1822.9	.0877	.0331	.7303	1420
1440	2.7060-2	1.3530 0	-245.8	2.2630	2.1023	1.9416	1.7809	1.6686	0.2762	1.3381	1834.9	.0886	.0335	.7300	1440
1460	2.6689-2	1.3345 0	-240.2	2.2668	2.1061	1.9454	1.7847	1.6724	0.2769	1.3369	1846.8	.0894	.0339	.7297	1460
1480	2.6329-2	1.3164 0	-234.7	2.2706	2.1099	1.9492	1.7885	1.6762	0.2776	1.3358	1858.6	.0903	.0344	.7295	1480
1500	2.5978-2	1.2989 0	-229.1	2.2743	2.1136	1.9529	1.7922	1.6799	0.2783	1.3347	1870.3	.0911	.0348	.7293	1500
1520	2.5636-2	1.2818 0	-223.6	2.2780	2.1173	1.9566	1.7959	1.6836	0.2790	1.3336	1882.0	.0919	.0352	.7290	1520
1540	2.5303-2	1.2651 0	-218.0	2.2817	2.1210	1.9603	1.7996	1.6872	0.2797	1.3325	1893.6	.0928	.0356	.7288	1540
1560	2.4978-2	1.2489 0	-212.4	2.2853	2.1246	1.9639	1.8032	1.6909	0.2804	1.3314	1905.1	.0936	.0360	.7286	1560
1580	2.4662-2	1.2331 0	-206.8	2.2889	2.1282	1.9675	1.8068	1.6944	0.2810	1.3304	1916.5	.0944	.0364	.7284	1580
1600	2.4354-2	1.2177 0	-201.1	2.2924	2.1317	1.9710	1.8103	1.6980	0.2817	1.3293	1927.8	.0952	.0368	.7282	1600
1620	2.4053-2	1.2027 0	-195.5	2.2959	2.1352	1.9745	1.8138	1.7015	0.2823	1.3283	1939.1	.0960	.0373	.7280	1620
1640	2.3760-2	1.1880 0	-189.8	2.2994	2.1387	1.9780	1.8173	1.7049	0.2830	1.3273	1950.3	.0969	.0377	.7278	1640
1660	2.3474-2	1.1737 0	-184.2	2.3028	2.1421	1.9814	1.8207	1.7084	0.2836	1.3264	1961.4	.0977	.0381	.7276	1660
1680	2.3194-2	1.1597 0	-178.5	2.3062	2.1455	1.9848	1.8241	1.7118	0.2843	1.3254	1972.5	.0985	.0385	.7274	1680
1700	2.2921-2	1.1461 0	-172.8	2.3096	2.1489	1.9882	1.8275	1.7151	0.2849	1.3245	1983.5	.0993	.0389	.7272	1700
1720	2.2655-2	1.1327 0	-167.1	2.3129	2.1522	1.9915	1.8308	1.7185	0.2855	1.3235	1994.4	.1000	.0393	.7270	1720
1740	2.2394-2	1.1197 0	-161.4	2.3162	2.1555	1.9948	1.8341	1.7218	0.2861	1.3226	2005.3	.1008	.0397	.7269	1740
1760	2.2140-2	1.1070 0	-155.7	2.3195	2.1588	1.9981	1.8374	1.7251	0.2867	1.3217	2016.1	.1016	.0401	.7267	1760
1780	2.1891-2	1.0946 0	-149.9	2.3227	2.1620	2.0013	1.8406	1.7283	0.2873	1.3209	2026.9	.1024	.0405	.7265	1780
1800	2.1648-2	1.0824 0	-144.2	2.3259	2.1652	2.0045	1.8438	1.7315	0.2879	1.3200	2037.6	.1032	.0409	.7264	1800
1900	2.0509-2	1.0254 0	-115.2	2.3416	2.1809	2.0202	1.8595	1.7472	0.2906	1.3161	2090.3	.1070	.0428	.7260	1900
2000	1.9483-2	9.7416-1	-86.0	2.3565	2.1958	2.0351	1.8744	1.7621	0.2932	1.3124	2141.6	.1107	.0447	.7257	2000
2100	1.8555-2	9.2777-1	-56.6	2.3709	2.2102	2.0495	1.8888	1.7765	0.2956	1.3091	2191.7	.1143	.0466	.7255	2100
2200	1.7712-2	8.8560-1	-26.9	2.3847	2.2240	2.0633	1.9026	1.7903	0.2979	1.3059	2240.6	.1179	.0484	.7253	2200
2300	1.6942-2	8.4709-1	3.0	2.3980	2.2373	2.0766	1.9159	1.8036	0.3001	1.3030	2288.3	.1214	.0502	.7252	2300
2400	1.6236-2	8.1180-1	33.1	2.4108	2.2501	2.0894	1.9287	1.8164	0.3022	1.3003	2335.1	.1248	.0520	.7250	2400
2500	1.5587-2	7.7933-1	63.4	2.4232	2.2625	2.1018	1.9411	1.8288	0.3042	1.2977	2381.0	.1282	.0538	.7249	2500

TABLE 23A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.016415; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.3284; MW = 28.4546;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .03306; H2O= .07802; N2= .73271; O2= .14742; AR= .00879

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
2600	1.4987-2	7.4935-1	93.9	2.4352	2.2745	2.1138	1.9531	1.8407	0.3061	1.2954	2425.9	.1315	.0555	.7247	2600
2700	1.4432-2	7.2160-1	124.6	2.4468	2.2861	2.1254	1.9647	1.8523	0.3078	1.2932	2470.0	.1348	.0573	.7244	2700
2800	1.3917-2	6.9583-1	155.5	2.4580	2.2973	2.1366	1.9759	1.8636	0.3095	1.2911	2513.3	.1380	.0590	.7239	2800
2900	1.3437-2	6.7183-1	186.5	2.4689	2.3082	2.1475	1.9868	1.8745	0.3111	1.2892	2555.9	.1412	.0607	.7234	2900
3000	1.2989-2	6.4944-1	217.7	2.4794	2.3187	2.1580	1.9973	1.8850	0.3126	1.2874	2597.8	.1443	.0624	.7228	3000
3100	1.2570-2	6.2849-1	249.0	2.4897	2.3290	2.1683	2.0076	1.8953	0.3140	1.2857	2639.0	.1474	.0641	.7223	3100
3200	1.2177-2	6.0885-1	280.5	2.4997	2.3390	2.1783	2.0176	1.9053	0.3154	1.2842	2679.6	.1505	.0658	.7217	3200
3300	1.1808-2	5.9040-1	312.1	2.5094	2.3487	2.1880	2.0273	1.9150	0.3166	1.2827	2719.6	.1535	.0674	.7211	3300
3400	1.1461-2	5.7303-1	343.8	2.5189	2.3582	2.1975	2.0368	1.9245	0.3178	1.2814	2759.1	.1565	.0690	.7205	3400
3500	1.1133-2	5.5666-1	375.7	2.5281	2.3674	2.2067	2.0460	1.9337	0.3190	1.2801	2797.9	.1595	.0707	.7200	3500
3600	1.0824-2	5.4120-1	407.6	2.5371	2.3764	2.2157	2.0550	1.9427	0.3201	1.2789	2836.3	.1624	.0722	.7194	3600
3700	1.0531-2	5.2657-1	439.7	2.5459	2.3852	2.2245	2.0638	1.9515	0.3211	1.2777	2874.2	.1653	.0738	.7191	3700
3800	1.0254-2	5.1271-1	471.9	2.5545	2.3938	2.2331	2.0724	1.9601	0.3220	1.2767	2911.5	.1682	.0753	.7188	3800
3900	9.9913-3	4.9957-1	504.1	2.5629	2.4022	2.2415	2.0808	1.9684	0.3229	1.2757	2948.5	.1710	.0769	.7185	3900
4000	9.7416-3	4.8708-1	536.4	2.5711	2.4104	2.2497	2.0890	1.9766	0.3238	1.2748	2984.9	.1738	.0784	.7182	4000
4100	9.5040-3	4.7520-1	568.9	2.5791	2.4184	2.2577	2.0970	1.9846	0.3246	1.2739	3021.0	.1766	.0799	.7179	4100
4200	9.2777-3	4.6388-1	601.4	2.5869	2.4262	2.2655	2.1048	1.9925	0.3254	1.2731	3056.6	.1794	.0813	.7177	4200
4300	9.0619-3	4.5310-1	633.9	2.5946	2.4339	2.2732	2.1125	2.0001	0.3261	1.2723	3091.8	.1821	.0828	.7174	4300
4400	8.8560-3	4.4280-1	666.6	2.6021	2.4414	2.2807	2.1200	2.0076	0.3268	1.2715	3126.7	.1848	.0842	.7172	4400
4500	8.6592-3	4.3296-1	699.3	2.6094	2.4487	2.2880	2.1273	2.0150	0.3275	1.2708	3161.1	.1875	.0857	.7169	4500
4600	8.4709-3	4.2355-1	732.1	2.6166	2.4559	2.2952	2.1345	2.0222	0.3281	1.2702	3195.2	.1902	.0871	.7165	4600
4700	8.2907-3	4.1453-1	764.9	2.6237	2.4630	2.3023	2.1416	2.0293	0.3287	1.2696	3229.0	.1928	.0885	.7160	4700
4800	8.1180-3	4.0590-1	797.8	2.6306	2.4699	2.3092	2.1485	2.0362	0.3293	1.2690	3262.4	.1955	.0900	.7155	4800
4900	7.9523-3	3.9761-1	830.8	2.6374	2.4767	2.3160	2.1553	2.0430	0.3298	1.2684	3295.4	.1981	.0914	.7150	4900
5000	7.7932-3	3.8966-1	863.8	2.6441	2.4834	2.3227	2.1620	2.0497	0.3304	1.2678	3328.2	.2007	.0928	.7145	5000
5100	7.6404-3	3.8202-1	896.8	2.6506	2.4899	2.3292	2.1685	2.0562	0.3309	1.2673	3360.6	.2032	.0942	.7141	5100
5200	7.4935-3	3.7468-1	929.9	2.6570	2.4963	2.3357	2.1750	2.0626	0.3314	1.2668	3392.7	.2058	.0956	.7136	5200
5300	7.3521-3	3.6761-1	963.1	2.6634	2.5027	2.3420	2.1813	2.0689	0.3318	1.2663	3424.5	.2083	.0969	.7132	5300
5400	7.2160-3	3.6080-1	996.3	2.6696	2.5089	2.3482	2.1875	2.0752	0.3323	1.2659	3456.0	.2108	.0983	.7127	5400

TABLE 23.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016415; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 0.14696 LB/IN² (0.01 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4354-4	-201.1	2.2924	28.455	.095	1.0000	-1.0000	0.2818	1.3292	1927.7	.0369	.728	0.2817	1.3294	1927.8	.0368	.728
1700	2.2921-4	-172.8	2.3096	28.455	.099	1.0000	-1.0000	0.2850	1.3242	1983.3	.0389	.727	0.2849	1.3245	1983.5	.0389	.727
1800	2.1648-4	-144.1	2.3260	28.455	.103	1.0000	-1.0000	0.2881	1.3196	2037.3	.0409	.726	0.2879	1.3200	2037.6	.0409	.726
1900	2.0509-4	-115.2	2.3416	28.455	.107	1.0000	-1.0000	0.2910	1.3155	2089.8	.0429	.726	0.2906	1.3161	2090.3	.0428	.726
2000	1.9483-4	-85.9	2.3566	28.455	.111	1.0000	-1.0000	0.2938	1.3116	2140.9	.0448	.726	0.2932	1.3124	2141.6	.0447	.726
2100	1.8555-4	-56.4	2.3710	28.455	.114	1.0000	-1.0000	0.2965	1.3078	2190.6	.0467	.725	0.2956	1.3091	2191.7	.0466	.725
2200	1.7712-4	-26.6	2.3849	28.454	.118	1.0000	-1.0000	0.2993	1.3042	2239.1	.0486	.725	0.2979	1.3059	2240.6	.0484	.725
2300	1.6942-4	3.4	2.3982	28.454	.121	1.0001	-1.0000	0.3020	1.3006	2286.2	.0506	.725	0.3001	1.3030	2288.4	.0502	.725
2400	1.6236-4	33.8	2.4111	28.454	.125	1.0002	-1.0000	0.3049	1.2970	2332.2	.0525	.725	0.3022	1.3003	2335.1	.0520	.725
2500	1.5586-4	64.4	2.4237	28.454	.128	1.0003	-1.0000	0.3079	1.2933	2376.9	.0545	.724	0.3042	1.2977	2381.0	.0538	.725
2600	1.4986-4	95.4	2.4358	28.454	.132	1.0005	-1.0000	0.3112	1.2895	2420.4	.0566	.723	0.3061	1.2954	2426.0	.0555	.725
2700	1.4431-4	126.7	2.4476	28.453	.135	1.0009	-1.0000	0.3149	1.2854	2462.6	.0588	.722	0.3078	1.2932	2470.1	.0573	.724
2800	1.3915-4	158.4	2.4591	28.452	.138	1.0015	-1.0000	0.3192	1.2809	2503.5	.0612	.720	0.3095	1.2912	2513.5	.0590	.724
2900	1.3434-4	190.6	2.4704	28.450	.141	1.0025	-1.0001	0.3245	1.2757	2542.7	.0639	.717	0.3111	1.2893	2556.2	.0607	.723
3000	1.2985-4	223.3	2.4815	28.446	.144	1.0040	-1.0001	0.3311	1.2697	2580.3	.0671	.712	0.3126	1.2875	2598.3	.0624	.723
3100	1.2564-4	256.9	2.4925	28.442	.147	1.0064	-1.0002	0.3397	1.2627	2615.9	.0711	.705	0.3140	1.2859	2639.8	.0641	.722
3200	1.2168-4	291.4	2.5035	28.434	.150	1.0100	-1.0003	0.3510	1.2543	2649.2	.0761	.694	0.3154	1.2844	2680.9	.0658	.721
3300	1.1795-4	327.2	2.5145	28.423	.154	1.0153	-1.0004	0.3661	1.2443	2680.1	.0828	.679	0.3166	1.2831	2721.6	.0674	.721
3400	1.1442-4	364.7	2.5257	28.407	.156	1.0232	-1.0007	0.3863	1.2327	2708.5	.0918	.658	0.3178	1.2820	2762.0	.0691	.720
3500	1.1106-4	404.7	2.5373	28.384	.159	1.0345	-1.0010	0.4135	1.2196	2734.5	.1043	.632	0.3190	1.2810	2802.4	.0707	.719
3600	1.0784-4	447.7	2.5494	28.350	.162	1.0506	-1.0016	0.4496	1.2054	2758.7	.1216	.600	0.3200	1.2802	2843.0	.0723	.718
3700	1.0475-4	495.0	2.5624	28.303	.165	1.0728	-1.0023	0.4971	1.1907	2781.9	.1455	.564	0.3210	1.2797	2884.0	.0740	.717
3800	1.0176-4	547.6	2.5764	28.237	.168	1.1029	-1.0034	0.5585	1.1762	2805.3	.1779	.527	0.3220	1.2794	2925.9	.0756	.716
3900	9.8837-5	607.2	2.5919	28.148	.171	1.1427	-1.0049	0.6364	1.1626	2830.0	.2212	.491	0.3229	1.2796	2969.0	.0772	.714
4000	9.5959-5	675.5	2.6092	28.029	.173	1.1939	-1.0069	0.7330	1.1506	2857.3	.2773	.458	0.3238	1.2801	3013.8	.0790	.711
4100	9.3101-5	754.5	2.6286	27.874	.176	1.2578	-1.0094	0.8497	1.1405	2888.1	.3475	.430	0.3246	1.2812	3061.0	.0808	.708
4200	9.0240-5	846.1	2.6507	27.677	.179	1.3351	-1.0127	0.9870	1.1324	2923.0	.4318	.408	0.3254	1.2829	3111.2	.0827	.703
4300	8.7358-5	952.5	2.6758	27.431	.181	1.4258	-1.0166	1.1439	1.1262	2962.7	.5279	.392	0.3262	1.2853	3165.0	.0848	.697
4400	8.4444-5	1075.5	2.7040	27.132	.184	1.5282	-1.0212	1.3173	1.1217	3007.4	.6311	.383	0.3270	1.2884	3223.1	.0870	.690
4500	8.1493-5	1216.4	2.7357	26.779	.186	1.6387	-1.0265	1.5016	1.1188	3057.3	.7336	.381	0.3278	1.2923	3286.0	.0896	.681
4600	7.8513-5	1375.8	2.7707	26.373	.188	1.7511	-1.0320	1.6866	1.1172	3112.6	.8258	.385	0.3287	1.2972	3354.0	.0924	.670
4700	7.5525-5	1553.2	2.8088	25.921	.191	1.8560	-1.0375	1.8578	1.1167	3173.0	.8971	.395	0.3296	1.3028	3427.1	.0955	.658
4800	7.2562-5	1746.3	2.8495	25.434	.193	1.9422	-1.0424	1.9969	1.1174	3238.1	.9387	.411	0.3306	1.3093	3505.0	.0988	.646
4900	6.9669-5	1950.9	2.8917	24.929	.196	1.9982	-1.0461	2.0854	1.1191	3307.2	.9456	.431	0.3315	1.3163	3586.6	.1022	.634
5000	6.6896-5	2161.2	2.9342	24.425	.198	2.0162	-1.0481	2.1096	1.1218	3379.1	.9184	.455	0.3325	1.3237	3670.5	.1057	.623
5100	6.4287-5	2370.5	2.9756	23.942	.201	1.9942	-1.0481	2.0656	1.1256	3452.7	.8628	.480	0.3335	1.3311	3754.7	.1091	.613
5200	6.1877-5	2572.3	3.0148	23.496	.203	1.9366	-1.0464	1.9601	1.1304	3526.8	.7876	.505	0.3344	1.3383	3837.4	.1123	.605
5300	5.9682-5	2761.0	3.0507	23.098	.206	1.8520	-1.0431	1.8073	1.1364	3600.7	.7023	.529	0.3352	1.3449	3917.1	.1153	.598
5400	5.7704-5	2932.8	3.0829	22.754	.208	1.7509	-1.0388	1.6254	1.1439	3673.8	.6148	.551	0.3360	1.3509	3992.5	.1180	.593

TABLE 23.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016415; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 1.46959 LB/IN² (0.10 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4354-3	-201.1	2.1317	28.455	.095	1.0000	-1.0000	0.2818	1.3292	1927.7	.0369	.728	0.2817	1.3293	1927.8	.0368	.728
1700	2.2921-3	-172.8	2.1489	28.455	.099	1.0000	-1.0000	0.2850	1.3242	1983.3	.0389	.727	0.2849	1.3245	1983.5	.0389	.727
1800	2.1648-3	-144.1	2.1653	28.455	.103	1.0000	-1.0000	0.2881	1.3197	2037.3	.0409	.726	0.2879	1.3200	2037.6	.0409	.726
1900	2.0509-3	-115.2	2.1809	28.455	.107	1.0000	-1.0000	0.2910	1.3155	2089.8	.0429	.726	0.2906	1.3161	2090.3	.0428	.726
2000	1.9483-3	-85.9	2.1959	28.455	.111	1.0000	-1.0000	0.2938	1.3116	2140.9	.0448	.726	0.2932	1.3124	2141.6	.0447	.726
2100	1.8555-3	-56.4	2.2103	28.455	.114	1.0000	-1.0000	0.2965	1.3079	2190.7	.0467	.725	0.2956	1.3091	2191.7	.0466	.725
2200	1.7712-3	-26.6	2.2242	28.455	.118	1.0000	-1.0000	0.2992	1.3043	2239.1	.0486	.725	0.2979	1.3059	2240.6	.0484	.725
2300	1.6942-3	3.4	2.2375	28.454	.121	1.0000	-1.0000	0.3019	1.3008	2286.4	.0505	.725	0.3001	1.3030	2288.4	.0502	.725
2400	1.6236-3	33.7	2.2504	28.454	.125	1.0001	-1.0000	0.3046	1.2973	2332.5	.0524	.725	0.3022	1.3003	2335.1	.0520	.725
2500	1.5586-3	64.3	2.2629	28.454	.128	1.0002	-1.0000	0.3074	1.2939	2377.4	.0544	.725	0.3042	1.2977	2381.0	.0538	.725
2600	1.4987-3	95.2	2.2750	28.454	.132	1.0003	-1.0000	0.3103	1.2904	2421.3	.0563	.724	0.3061	1.2954	2425.9	.0555	.725
2700	1.4431-3	126.4	2.2868	28.454	.135	1.0005	-1.0000	0.3134	1.2869	2464.0	.0584	.724	0.3078	1.2932	2470.1	.0573	.724
2800	1.3916-3	157.9	2.2983	28.453	.138	1.0007	-1.0000	0.3167	1.2832	2505.7	.0605	.722	0.3095	1.2911	2513.4	.0590	.724
2900	1.3435-3	189.8	2.3094	28.452	.141	1.0012	-1.0000	0.3204	1.2793	2546.2	.0628	.721	0.3111	1.2892	2556.1	.0607	.723
3000	1.2987-3	222.0	2.3204	28.451	.144	1.0018	-1.0000	0.3247	1.2751	2585.5	.0652	.719	0.3126	1.2875	2598.0	.0624	.723
3100	1.2567-3	254.7	2.3311	28.449	.147	1.0028	-1.0001	0.3297	1.2704	2623.5	.0679	.716	0.3140	1.2858	2639.4	.0641	.722
3200	1.2173-3	288.0	2.3416	28.446	.151	1.0042	-1.0001	0.3356	1.2652	2660.2	.0709	.712	0.3154	1.2843	2680.2	.0658	.722
3300	1.1802-3	321.9	2.3521	28.441	.154	1.0062	-1.0002	0.3429	1.2594	2695.5	.0745	.707	0.3166	1.2829	2720.5	.0674	.721
3400	1.1453-3	356.6	2.3624	28.435	.157	1.0090	-1.0002	0.3519	1.2528	2729.1	.0788	.699	0.3178	1.2816	2760.3	.0691	.720
3500	1.1122-3	392.3	2.3728	28.426	.159	1.0130	-1.0004	0.3632	1.2453	2761.1	.0841	.689	0.3190	1.2804	2799.8	.0707	.720
3600	1.0808-3	429.3	2.3832	28.413	.162	1.0186	-1.0006	0.3775	1.2369	2791.4	.0907	.676	0.3200	1.2794	2839.0	.0723	.719
3700	1.0510-3	468.0	2.3938	28.396	.165	1.0261	-1.0008	0.3955	1.2276	2820.1	.0992	.659	0.3210	1.2785	2878.0	.0739	.719
3800	1.0225-3	508.6	2.4046	28.373	.168	1.0363	-1.0012	0.4180	1.2175	2847.4	.1101	.639	0.3220	1.2778	2917.0	.0754	.718
3900	9.9515-4	551.8	2.4158	28.341	.171	1.0498	-1.0016	0.4463	1.2068	2873.5	.1241	.615	0.3229	1.2772	2956.1	.0770	.717
4000	9.6884-4	598.1	2.4276	28.299	.174	1.0673	-1.0023	0.4812	1.1959	2899.1	.1422	.588	0.3237	1.2768	2995.5	.0785	.716
4100	9.4339-4	648.3	2.4400	28.245	.176	1.0897	-1.0032	0.5238	1.1851	2924.6	.1653	.559	0.3245	1.2766	3035.4	.0801	.715
4200	9.1865-4	703.1	2.4532	28.175	.179	1.1177	-1.0043	0.5751	1.1748	2950.8	.1944	.530	0.3253	1.2767	3076.1	.0817	.714
4300	8.9445-4	763.6	2.4674	28.086	.182	1.1521	-1.0057	0.6357	1.1654	2978.4	.2304	.502	0.3260	1.2770	3117.8	.0833	.712
4400	8.7067-4	830.6	2.4828	27.975	.184	1.1934	-1.0075	0.7061	1.1570	3007.9	.2739	.476	0.3266	1.2777	3160.9	.0849	.710
4500	8.4718-4	905.1	2.4996	27.839	.187	1.2419	-1.0097	0.7863	1.1498	3039.8	.3253	.452	0.3273	1.2787	3205.8	.0866	.707
4600	8.2388-4	988.2	2.5178	27.675	.190	1.2977	-1.0123	0.8758	1.1438	3074.5	.3843	.432	0.3279	1.2802	3252.6	.0884	.703
4700	8.0067-4	1080.6	2.5377	27.480	.192	1.3605	-1.0153	0.9738	1.1391	3112.3	.4498	.416	0.3285	1.2820	3301.8	.0904	.698
4800	7.7751-4	1183.2	2.5593	27.253	.195	1.4294	-1.0187	1.0790	1.1354	3153.3	.5197	.404	0.3291	1.2844	3353.7	.0924	.693
4900	7.5436-4	1296.5	2.5826	26.992	.197	1.5033	-1.0225	1.1892	1.1329	3197.6	.5912	.396	0.3297	1.2872	3408.6	.0946	.686
5000	7.3123-4	1421.1	2.6078	26.699	.199	1.5799	-1.0267	1.3015	1.1312	3245.5	.6604	.393	0.3303	1.2906	3466.6	.0970	.679
5100	7.0817-4	1556.8	2.6347	26.374	.202	1.6562	-1.0310	1.4115	1.1304	3296.7	.7229	.394	0.3310	1.2945	3527.9	.0996	.671
5200	6.8528-4	1703.1	2.6631	26.022	.204	1.7283	-1.0353	1.5136	1.1304	3351.3	.7744	.399	0.3316	1.2989	3592.5	.1024	.662
5300	6.6267-4	1859.0	2.6928	25.647	.207	1.7916	-1.0393	1.6013	1.1311	3409.1	.8111	.408	0.3323	1.3038	3660.1	.1053	.652
5400	6.4054-4	2022.7	2.7234	25.258	.209	1.8412	-1.0427	1.6678	1.1326	3469.8	.8303	.420	0.3330	1.3091	3730.3	.1084	.643

TABLE 23.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016415; EQUIV. RATIO ϕ 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 14.6959 LB/IN2 (1.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4354-2	-201.1	1.9710	28.455	.095	1.0000	-1.0000	0.2818	1.3292	1927.7	.0369	.728	0.2817	1.3293	1927.8	.0368	.728
1700	2.2921-2	-172.8	1.9882	28.455	.099	1.0000	-1.0000	0.2850	1.3242	1983.3	.0389	.727	0.2849	1.3245	1983.5	.0389	.727
1800	2.1648-2	-144.1	2.0046	28.455	.103	1.0000	-1.0000	0.2881	1.3196	2037.3	.0409	.726	0.2879	1.3200	2037.6	.0409	.726
1900	2.0509-2	-115.2	2.0202	28.455	.107	1.0000	-1.0000	0.2910	1.3155	2089.9	.0429	.726	0.2906	1.3161	2090.3	.0428	.726
2000	1.9483-2	-85.9	2.0352	28.455	.111	1.0000	-1.0000	0.2937	1.3116	2141.0	.0448	.726	0.2932	1.3124	2141.6	.0447	.726
2100	1.8555-2	-56.4	2.0496	28.455	.114	1.0000	-1.0000	0.2965	1.3079	2190.7	.0467	.725	0.2956	1.3091	2191.7	.0466	.725
2200	1.7712-2	-26.6	2.0635	28.455	.118	1.0000	-1.0000	0.2991	1.3043	2239.2	.0486	.725	0.2979	1.3059	2240.6	.0484	.725
2300	1.6942-2	3.4	2.0768	28.455	.121	1.0000	-1.0000	0.3018	1.3008	2286.5	.0505	.725	0.3001	1.3030	2288.3	.0502	.725
2400	1.6236-2	33.7	2.0897	28.454	.125	1.0000	-1.0000	0.3044	1.2975	2332.6	.0524	.725	0.3022	1.3003	2335.1	.0520	.725
2500	1.5586-2	64.3	2.1022	28.454	.128	1.0001	-1.0000	0.3071	1.2942	2377.7	.0543	.725	0.3042	1.2977	2381.0	.0538	.725
2600	1.4987-2	95.1	2.1143	28.454	.132	1.0001	-1.0000	0.3098	1.2909	2421.7	.0562	.725	0.3061	1.2954	2425.9	.0555	.725
2700	1.4432-2	126.3	2.1260	28.454	.135	1.0002	-1.0000	0.3126	1.2876	2464.7	.0582	.724	0.3078	1.2932	2470.0	.0573	.724
2800	1.3916-2	157.7	2.1375	28.454	.138	1.0004	-1.0000	0.3155	1.2843	2506.7	.0602	.723	0.3095	1.2911	2513.4	.0590	.724
2900	1.3436-2	189.4	2.1486	28.453	.141	1.0006	-1.0000	0.3186	1.2809	2547.7	.0623	.722	0.3111	1.2892	2556.0	.0607	.723
3000	1.2988-2	221.4	2.1594	28.453	.144	1.0009	-1.0000	0.3219	1.2774	2587.8	.0644	.721	0.3126	1.2874	2597.9	.0624	.723
3100	1.2568-2	253.8	2.1701	28.452	.147	1.0013	-1.0000	0.3255	1.2738	2626.9	.0667	.720	0.3140	1.2858	2639.2	.0641	.722
3200	1.2175-2	286.5	2.1804	28.450	.151	1.0019	-1.0000	0.3295	1.2700	2665.0	.0691	.718	0.3154	1.2842	2679.9	.0658	.722
3300	1.1805-2	319.7	2.1907	28.448	.154	1.0027	-1.0001	0.3339	1.2660	2702.2	.0716	.716	0.3166	1.2828	2720.0	.0674	.721
3400	1.1457-2	353.3	2.2007	28.445	.157	1.0039	-1.0001	0.3390	1.2617	2738.3	.0745	.713	0.3178	1.2815	2759.6	.0691	.721
3500	1.1128-2	387.5	2.2106	28.442	.159	1.0054	-1.0002	0.3449	1.2570	2773.3	.0776	.709	0.3190	1.2802	2798.8	.0707	.720
3600	1.0817-2	422.3	2.2204	28.437	.162	1.0075	-1.0002	0.3519	1.2520	2807.2	.0812	.704	0.3200	1.2791	2837.5	.0723	.719
3700	1.0522-2	457.9	2.2302	28.430	.165	1.0103	-1.0003	0.3600	1.2465	2840.0	.0853	.698	0.3210	1.2781	2875.8	.0738	.719
3800	1.0242-2	494.4	2.2399	28.421	.168	1.0140	-1.0004	0.3698	1.2405	2871.7	.0901	.690	0.3220	1.2772	2913.8	.0754	.719
3900	9.9752-3	531.9	2.2496	28.409	.171	1.0188	-1.0006	0.3814	1.2340	2902.3	.0959	.680	0.3229	1.2763	2951.6	.0769	.718
4000	9.7204-3	570.7	2.2595	28.393	.174	1.0249	-1.0008	0.3952	1.2271	2931.8	.1028	.668	0.3237	1.2756	2989.1	.0784	.718
4100	9.4767-3	611.0	2.2694	28.373	.177	1.0327	-1.0011	0.4117	1.2198	2960.4	.1112	.654	0.3245	1.2750	3026.6	.0799	.717
4200	9.2427-3	653.2	2.2796	28.347	.179	1.0426	-1.0015	0.4312	1.2122	2988.3	.1213	.638	0.3253	1.2745	3064.1	.0814	.717
4300	9.0175-3	697.4	2.2900	28.315	.182	1.0547	-1.0020	0.4542	1.2045	3015.8	.1336	.619	0.3260	1.2741	3101.7	.0829	.716
4400	8.8000-3	744.1	2.3007	28.275	.185	1.0696	-1.0026	0.4810	1.1968	3043.0	.1485	.599	0.3266	1.2739	3139.5	.0844	.715
4500	8.5893-3	793.7	2.3119	28.225	.187	1.0875	-1.0034	0.5120	1.1892	3070.3	.1664	.577	0.3273	1.2739	3177.7	.0859	.714
4600	8.3846-3	846.7	2.3235	28.164	.190	1.1087	-1.0043	0.5474	1.1820	3098.2	.1876	.555	0.3279	1.2740	3216.4	.0875	.713
4700	8.1849-3	903.4	2.3357	28.091	.193	1.1335	-1.0055	0.5872	1.1754	3126.9	.2125	.532	0.3284	1.2743	3255.8	.0890	.711
4800	7.9895-3	964.3	2.3485	28.004	.195	1.1619	-1.0068	0.6315	1.1693	3156.7	.2414	.511	0.3289	1.2748	3296.1	.0906	.709
4900	7.7979-3	1029.8	2.3620	27.902	.198	1.1941	-1.0084	0.6799	1.1640	3188.0	.2743	.490	0.3294	1.2756	3337.3	.0922	.707
5000	7.6093-3	1100.4	2.3763	27.783	.200	1.2299	-1.0102	0.7323	1.1594	3220.9	.3112	.471	0.3299	1.2766	3379.7	.0939	.704
5100	7.4234-3	1176.4	2.3913	27.646	.203	1.2692	-1.0122	0.7882	1.1555	3255.5	.3517	.454	0.3304	1.2778	3423.5	.0956	.701
5200	7.2397-3	1258.1	2.4072	27.491	.205	1.3118	-1.0145	0.8470	1.1524	3292.1	.3953	.440	0.3308	1.2793	3468.7	.0974	.698
5300	7.0580-3	1345.9	2.4239	27.316	.208	1.3572	-1.0171	0.9081	1.1499	3330.6	.4412	.428	0.3313	1.2811	3515.5	.0993	.693
5400	6.8782-3	1439.8	2.4415	27.123	.210	1.4050	-1.0199	0.9709	1.1481	3371.2	.4882	.418	0.3317	1.2832	3564.1	.1012	.689

TABLE 23.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016415; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 146.959 LB/IN² (10.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4354-1	-201.1	1.8103	28.455	.095	1.0000	-1.0000	0.2818	1.3292	1927.7	.0369	.728	0.2817	1.3293	1927.8	.0368	.728
1700	2.2921-1	-172.8	1.8275	28.455	.099	1.0000	-1.0000	0.2850	1.3242	1983.3	.0389	.727	0.2849	1.3245	1983.5	.0389	.727
1800	2.1648-1	-144.1	1.8439	28.455	.103	1.0000	-1.0000	0.2881	1.3196	2037.3	.0409	.726	0.2879	1.3200	2037.6	.0409	.726
1900	2.0509-1	-115.2	1.8595	28.455	.107	1.0000	-1.0000	0.2910	1.3155	2089.8	.0429	.726	0.2906	1.3161	2090.3	.0428	.726
2000	1.9483-1	-85.9	1.8745	28.455	.111	1.0000	-1.0000	0.2937	1.3116	2140.9	.0448	.726	0.2932	1.3124	2141.6	.0447	.726
2100	1.8555-1	-56.4	1.8889	28.455	.114	1.0000	-1.0000	0.2965	1.3079	2190.7	.0467	.726	0.2956	1.3090	2191.7	.0466	.725
2200	1.7712-1	-26.6	1.9028	28.455	.118	1.0000	-1.0000	0.2991	1.3043	2239.2	.0486	.725	0.2979	1.3059	2240.6	.0484	.725
2300	1.6942-1	3.4	1.9161	28.455	.121	1.0000	-1.0000	0.3017	1.3009	2286.5	.0505	.725	0.3001	1.3030	2288.3	.0502	.725
2400	1.6236-1	33.7	1.9290	28.455	.125	1.0000	-1.0000	0.3043	1.2976	2332.7	.0524	.725	0.3022	1.3003	2335.1	.0520	.725
2500	1.5587-1	64.3	1.9415	28.455	.128	1.0000	-1.0000	0.3069	1.2943	2377.8	.0543	.725	0.3042	1.2977	2381.0	.0538	.725
2600	1.4987-1	95.1	1.9536	28.455	.132	1.0001	-1.0000	0.3096	1.2911	2421.9	.0562	.725	0.3061	1.2954	2425.9	.0555	.725
2700	1.4432-1	126.2	1.9653	28.454	.135	1.0001	-1.0000	0.3122	1.2879	2465.0	.0581	.724	0.3078	1.2932	2470.0	.0573	.724
2800	1.3916-1	157.5	1.9767	28.454	.138	1.0002	-1.0000	0.3149	1.2848	2507.2	.0601	.724	0.3095	1.2911	2513.3	.0590	.724
2900	1.3436-1	189.2	1.9878	28.454	.141	1.0003	-1.0000	0.3177	1.2817	2548.5	.0620	.723	0.3111	1.2892	2556.0	.0607	.723
3000	1.2988-1	221.1	1.9986	28.454	.144	1.0004	-1.0000	0.3206	1.2786	2588.9	.0641	.722	0.3126	1.2874	2597.9	.0624	.723
3100	1.2569-1	253.3	2.0092	28.453	.147	1.0006	-1.0000	0.3236	1.2754	2628.5	.0661	.721	0.3140	1.2858	2639.1	.0641	.722
3200	1.2176-1	285.8	2.0195	28.453	.151	1.0009	-1.0000	0.3267	1.2722	2667.2	.0683	.720	0.3154	1.2842	2679.8	.0658	.722
3300	1.1807-1	318.7	2.0296	28.452	.154	1.0013	-1.0000	0.3301	1.2690	2705.2	.0705	.719	0.3166	1.2828	2719.8	.0674	.721
3400	1.1459-1	351.8	2.0395	28.450	.157	1.0018	-1.0001	0.3337	1.2656	2742.3	.0728	.717	0.3178	1.2814	2759.3	.0690	.721
3500	1.1131-1	385.4	2.0493	28.449	.160	1.0025	-1.0001	0.3376	1.2622	2778.6	.0752	.716	0.3190	1.2802	2798.3	.0707	.720
3600	1.0821-1	419.4	2.0588	28.446	.162	1.0033	-1.0001	0.3418	1.2586	2814.2	.0778	.714	0.3200	1.2790	2836.9	.0723	.719
3700	1.0527-1	453.8	2.0683	28.443	.165	1.0045	-1.0001	0.3465	1.2549	2848.9	.0806	.711	0.3210	1.2779	2874.9	.0738	.719
3800	1.0249-1	488.7	2.0776	28.439	.168	1.0059	-1.0002	0.3518	1.2510	2882.9	.0836	.708	0.3220	1.2769	2912.6	.0754	.719
3900	9.9843-2	524.2	2.0868	28.434	.171	1.0078	-1.0002	0.3577	1.2470	2916.1	.0868	.705	0.3229	1.2760	2949.8	.0769	.718
4000	9.7325-2	560.2	2.0959	28.428	.174	1.0101	-1.0003	0.3643	1.2427	2948.6	.0905	.700	0.3237	1.2751	2986.8	.0784	.718
4100	9.4924-2	597.0	2.1050	28.420	.177	1.0130	-1.0004	0.3718	1.2383	2980.2	.0945	.695	0.3245	1.2744	3023.4	.0799	.718
4200	9.2631-2	634.6	2.1141	28.410	.179	1.0166	-1.0006	0.3803	1.2336	3011.2	.0991	.688	0.3253	1.2737	3059.8	.0814	.717
4300	9.0437-2	673.1	2.1231	28.397	.182	1.0210	-1.0008	0.3900	1.2288	3041.5	.1044	.681	0.3260	1.2731	3095.9	.0829	.717
4400	8.8334-2	712.7	2.1322	28.382	.185	1.0264	-1.0010	0.4010	1.2238	3071.3	.1104	.672	0.3267	1.2726	3131.9	.0843	.717
4500	8.6313-2	753.4	2.1414	28.363	.188	1.0328	-1.0012	0.4135	1.2186	3100.5	.1173	.661	0.3273	1.2721	3167.8	.0858	.716
4600	8.4369-2	795.4	2.1506	28.340	.190	1.0406	-1.0016	0.4276	1.2134	3129.3	.1253	.650	0.3279	1.2718	3203.6	.0872	.715
4700	8.2494-2	839.0	2.1600	28.313	.193	1.0497	-1.0020	0.4435	1.2081	3157.8	.1344	.636	0.3285	1.2715	3239.5	.0887	.714
4800	8.0683-2	884.2	2.1695	28.280	.196	1.0603	-1.0025	0.4612	1.2030	3186.2	.1450	.622	0.3290	1.2713	3275.5	.0902	.714
4900	7.8928-2	931.3	2.1792	28.242	.198	1.0726	-1.0030	0.4808	1.1979	3214.6	.1570	.607	0.3295	1.2713	3311.6	.0916	.713
5000	7.7225-2	980.4	2.1891	28.196	.201	1.0866	-1.0037	0.5025	1.1930	3243.2	.1707	.591	0.3300	1.2713	3348.0	.0931	.712
5100	7.5570-2	1031.8	2.1993	28.144	.203	1.1024	-1.0045	0.5260	1.1884	3272.2	.1861	.575	0.3305	1.2715	3384.7	.0946	.710
5200	7.3957-2	1085.7	2.2098	28.083	.206	1.1201	-1.0054	0.5514	1.1841	3301.7	.2034	.558	0.3309	1.2718	3421.8	.0961	.709
5300	7.2383-2	1142.2	2.2205	28.014	.208	1.1396	-1.0064	0.5785	1.1802	3331.9	.2226	.541	0.3313	1.2722	3459.4	.0976	.707
5400	7.0843-2	1201.4	2.2316	27.935	.211	1.1609	-1.0076	0.6071	1.1767	3363.0	.2438	.525	0.3317	1.2728	3497.5	.0991	.706

TABLE 23.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016415; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 734.797 LB/IN2 (50.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS					FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2177 0	-201.1	1.6980	28.455	.095	1.0000	-1.0000	0.2818	1.3292	1927.7	.0369	.728	0.2817	1.3293	1927.8	.0368	.728
1700	1.1461 0	-172.8	1.7152	28.455	.099	1.0000	-1.0000	0.2850	1.3242	1983.3	.0389	.727	0.2849	1.3245	1983.5	.0389	.727
1800	1.0824 0	-144.1	1.7315	28.455	.103	1.0000	-1.0000	0.2881	1.3196	2037.3	.0409	.726	0.2879	1.3200	2037.6	.0409	.726
1900	1.0254 0	-115.2	1.7472	28.455	.107	1.0000	-1.0000	0.2910	1.3155	2089.8	.0429	.726	0.2906	1.3161	2090.3	.0428	.726
2000	9.7416-1	-85.9	1.7622	28.455	.111	1.0000	-1.0000	0.2938	1.3116	2140.9	.0448	.726	0.2932	1.3124	2141.6	.0447	.726
2100	9.2778-1	-56.4	1.7766	28.455	.114	1.0000	-1.0000	0.2965	1.3079	2190.7	.0467	.726	0.2956	1.3090	2191.7	.0466	.725
2200	8.8560-1	-26.6	1.7904	28.455	.118	1.0000	-1.0000	0.2991	1.3043	2239.2	.0486	.725	0.2979	1.3059	2240.5	.0484	.725
2300	8.4710-1	3.4	1.8038	28.455	.121	1.0000	-1.0000	0.3017	1.3009	2286.5	.0505	.725	0.3001	1.3030	2288.3	.0502	.725
2400	8.1181-1	33.7	1.8167	28.455	.125	1.0000	-1.0000	0.3043	1.2976	2332.7	.0524	.725	0.3022	1.3003	2335.1	.0520	.725
2500	7.7933-1	64.3	1.8292	28.455	.128	1.0000	-1.0000	0.3069	1.2943	2377.8	.0543	.725	0.3042	1.2977	2380.9	.0538	.725
2600	7.4936-1	95.1	1.8413	28.455	.132	1.0000	-1.0000	0.3095	1.2912	2421.9	.0562	.725	0.3061	1.2954	2425.9	.0555	.725
2700	7.2160-1	126.2	1.8530	28.455	.135	1.0000	-1.0000	0.3121	1.2881	2465.1	.0581	.724	0.3078	1.2932	2470.0	.0573	.724
2800	6.9583-1	157.5	1.8644	28.455	.138	1.0001	-1.0000	0.3147	1.2850	2507.4	.0600	.724	0.3095	1.2911	2513.3	.0590	.724
2900	6.7183-1	189.1	1.8755	28.455	.141	1.0001	-1.0000	0.3174	1.2820	2548.7	.0620	.723	0.3111	1.2892	2555.9	.0607	.723
3000	6.4944-1	221.0	1.8863	28.454	.144	1.0002	-1.0000	0.3201	1.2790	2589.3	.0639	.723	0.3126	1.2874	2597.8	.0624	.723
3100	6.2848-1	253.1	1.8968	28.454	.147	1.0004	-1.0000	0.3229	1.2760	2629.0	.0660	.722	0.3140	1.2857	2639.1	.0641	.722
3200	6.0883-1	285.6	1.9071	28.454	.151	1.0005	-1.0000	0.3257	1.2730	2668.0	.0680	.721	0.3154	1.2842	2679.7	.0658	.722
3300	5.9037-1	318.3	1.9172	28.453	.154	1.0007	-1.0000	0.3287	1.2700	2706.2	.0701	.720	0.3166	1.2827	2719.7	.0674	.721
3400	5.7299-1	351.3	1.9270	28.453	.157	1.0010	-1.0000	0.3318	1.2670	2743.7	.0722	.719	0.3178	1.2814	2759.2	.0690	.721
3500	5.5660-1	384.7	1.9367	28.452	.160	1.0014	-1.0001	0.3351	1.2640	2780.5	.0745	.718	0.3190	1.2801	2798.2	.0707	.720
3600	5.4111-1	418.3	1.9462	28.450	.162	1.0019	-1.0001	0.3385	1.2609	2816.6	.0768	.716	0.3200	1.2789	2836.6	.0723	.719
3700	5.2646-1	452.4	1.9555	28.448	.165	1.0026	-1.0001	0.3421	1.2578	2852.0	.0791	.715	0.3210	1.2778	2874.6	.0738	.719
3800	5.1256-1	486.8	1.9647	28.446	.168	1.0034	-1.0001	0.3460	1.2547	2886.8	.0816	.713	0.3220	1.2768	2912.1	.0754	.719
3900	4.9937-1	521.6	1.9737	28.443	.171	1.0044	-1.0002	0.3502	1.2515	2920.9	.0842	.711	0.3229	1.2759	2949.2	.0769	.719
4000	4.8683-1	556.8	1.9827	28.440	.174	1.0056	-1.0002	0.3548	1.2482	2954.4	.0870	.709	0.3237	1.2750	2986.0	.0784	.718
4100	4.7488-1	592.5	1.9915	28.435	.177	1.0071	-1.0003	0.3597	1.2448	2987.3	.0900	.706	0.3245	1.2742	3022.3	.0799	.718
4200	4.6348-1	628.8	2.0002	28.430	.179	1.0090	-1.0003	0.3652	1.2414	3019.6	.0932	.703	0.3253	1.2734	3058.4	.0814	.718
4300	4.5259-1	665.6	2.0089	28.423	.182	1.0113	-1.0004	0.3711	1.2378	3051.4	.0967	.699	0.3260	1.2728	3094.1	.0828	.717
4400	4.4218-1	703.0	2.0175	28.415	.185	1.0140	-1.0005	0.3777	1.2342	3082.6	.1006	.695	0.3267	1.2721	3129.6	.0843	.717
4500	4.3220-1	741.2	2.0260	28.405	.188	1.0173	-1.0007	0.3849	1.2305	3113.3	.1048	.689	0.3273	1.2716	3164.8	.0857	.717
4600	4.2263-1	780.0	2.0346	28.393	.190	1.0211	-1.0008	0.3929	1.2267	3143.5	.1095	.683	0.3279	1.2711	3199.8	.0872	.716
4700	4.1343-1	819.8	2.0431	28.379	.193	1.0257	-1.0010	0.4017	1.2229	3173.3	.1147	.676	0.3285	1.2707	3234.7	.0886	.715
4800	4.0457-1	860.4	2.0517	28.362	.196	1.0310	-1.0013	0.4113	1.2190	3202.8	.1205	.668	0.3291	1.2703	3269.4	.0901	.715
4900	3.9604-1	902.1	2.0603	28.342	.198	1.0372	-1.0015	0.4220	1.2152	3231.9	.1270	.659	0.3296	1.2700	3304.1	.0915	.714
5000	3.8780-1	944.8	2.0689	28.319	.201	1.0442	-1.0019	0.4336	1.2113	3260.9	.1342	.649	0.3301	1.2698	3338.7	.0930	.713
5100	3.7984-1	988.8	2.0776	28.292	.203	1.0523	-1.0023	0.4463	1.2075	3289.8	.1422	.639	0.3305	1.2696	3373.3	.0944	.712
5200	3.7212-1	1034.1	2.0864	28.261	.206	1.0613	-1.0027	0.4601	1.2038	3318.6	.1511	.627	0.3310	1.2695	3408.0	.0958	.712
5300	3.6464-1	1080.9	2.0953	28.225	.209	1.0715	-1.0033	0.4749	1.2003	3347.5	.1609	.615	0.3314	1.2695	3442.8	.0973	.711
5400	3.5737-1	1129.1	2.1044	28.184	.211	1.0827	-1.0038	0.4907	1.1969	3376.6	.1718	.603	0.3318	1.2696	3477.7	.0987	.710

TABLE 23C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.016415; EQUIV.RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284;
WET AIR (W/A= 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES				T R			
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S		VS FT/S	COND BTU/ FT HR R	PRAN
PRESSURE = 0.01 ATM																
360	1.174-3	-585.6	1.7698	28.455	0.2550	1.116-3	29.336	.0319	1.000	-1.000	0.2386	1.3960	923	.0104	.734	360
400	1.053-3	-573.4	1.8018	28.455	0.4183	1.003-3	29.299	.0348	1.000	-1.000	0.2389	1.3960	973	.0114	.731	400
440	9.195-4	-534.2	1.8942	28.455	2.1488	8.980-4	28.854	.0367	1.000	-1.000	0.2440	1.3929	1028	.0121	.739	440
PRESSURE = 0.10 ATM																
360	1.174-2	-585.7	1.6214	28.455	0.2463	1.116-2	29.338	.0319	1.000	-1.000	0.2386	1.3960	923	.0104	.734	360
400	1.056-2	-575.6	1.6479	28.455	0.2641	1.004-2	29.334	.0349	1.000	-1.000	0.2386	1.3962	973	.0114	.730	400
440	9.564-3	-562.9	1.6781	28.455	0.4247	9.116-3	29.290	.0377	1.000	-1.000	0.2391	1.3959	1021	.0124	.727	440
480	8.499-3	-530.3	1.7484	28.455	1.5257	8.258-3	28.944	.0397	1.000	-1.000	0.2431	1.3931	1072	.0132	.733	480
520	7.494-3	-485.8	1.8389	28.455	0.2492	7.494-3	28.455	.0413	1.000	-1.000	0.2492	1.3891	1123	.0139	.743	520
PRESSURE = 1.00 ATM																
360	1.174-1	-585.7	1.4732	28.455	0.2454	1.116-1	29.338	.0319	1.000	-1.000	0.2386	1.3960	923	.0104	.734	360
400	1.056-1	-575.9	1.4992	28.455	0.2488	1.004-1	29.338	.0349	1.000	-1.000	0.2385	1.3962	973	.0114	.730	400
440	9.600-2	-565.7	1.5235	28.455	0.2665	9.129-2	29.333	.0378	1.000	-1.000	0.2386	1.3961	1020	.0124	.726	440
480	8.774-2	-553.5	1.5499	28.455	0.3708	8.359-2	29.299	.0405	1.000	-1.000	0.2391	1.3955	1066	.0134	.723	480
520	7.984-2	-527.0	1.6029	28.455	0.6711	7.674-2	29.139	.0428	1.000	-1.000	0.2412	1.3938	1112	.0142	.725	520
537	7.630-2	-513.8	1.6279	28.455	0.9387	7.396-2	28.986	.0436	1.000	-1.000	0.2431	1.3923	1132	.0145	.729	537
560	7.057-2	-485.0	1.6804	28.455	1.6037	6.995-2	28.603	.0442	1.000	-1.000	0.2479	1.3891	1163	.0149	.738	560
600	6.494-2	-465.8	1.7140	28.455	0.2502	6.494-2	28.455	.0464	1.000	-1.000	0.2502	1.3868	1206	.0157	.742	600
PRESSURE = 10.00 ATM																
360	1.173 0	-585.7	1.3250	28.455	0.2453	1.116 0	29.338	.0319	1.000	-1.000	0.2386	1.3960	923	.0104	.734	360
400	1.056 0	-575.9	1.3510	28.455	0.2473	1.004 0	29.338	.0349	1.000	-1.000	0.2385	1.3962	973	.0114	.730	400
440	9.597-1	-565.9	1.3747	28.455	0.2508	9.131-1	29.337	.0378	1.000	-1.000	0.2385	1.3962	1020	.0124	.726	440
480	8.795-1	-555.7	1.3969	28.455	0.2632	8.369-1	29.334	.0406	1.000	-1.000	0.2388	1.3958	1066	.0134	.723	480
520	8.108-1	-537.0	1.4345	28.455	0.3148	7.721-1	29.318	.0432	1.000	-1.000	0.2392	1.3950	1109	.0143	.721	520
537	7.846-1	-531.6	1.4448	28.455	0.3392	7.477-1	29.303	.0443	1.000	-1.000	0.2396	1.3945	1127	.0147	.721	537
560	7.494-1	-523.1	1.4603	28.455	0.3943	7.156-1	29.264	.0457	1.000	-1.000	0.2402	1.3937	1152	.0152	.722	560
600	6.902-1	-504.1	1.4930	28.455	0.5814	6.645-1	29.115	.0479	1.000	-1.000	0.2425	1.3914	1194	.0160	.725	600
640	6.267-1	-473.8	1.5417	28.455	0.9807	6.154-1	28.762	.0495	1.000	-1.000	0.2472	1.3875	1239	.0167	.734	640
680	5.730-1	-445.7	1.5847	28.455	0.2517	5.730-1	28.455	.0513	1.000	-1.000	0.2517	1.3837	1282	.0174	.740	680
PRESSURE = 50.00 ATM																
360	5.840 0	-585.7	1.2215	28.455	0.2453	5.580 0	29.338	.0319	1.000	-1.000	0.2386	1.3960	923	.0104	.734	360
400	5.259 0	-575.9	1.2474	28.455	0.2471	5.022 0	29.338	.0349	1.000	-1.000	0.2385	1.3963	973	.0114	.730	400
440	4.783 0	-566.0	1.2710	28.455	0.2494	4.565 0	29.338	.0378	1.000	-1.000	0.2385	1.3962	1020	.0124	.726	440
480	4.386 0	-555.9	1.2929	28.455	0.2536	4.185 0	29.337	.0406	1.000	-1.000	0.2387	1.3958	1066	.0134	.722	480
520	4.049 0	-537.9	1.3292	28.455	0.2843	3.863 0	29.334	.0433	1.000	-1.000	0.2390	1.3951	1109	.0144	.721	520
537	3.923 0	-533.1	1.3382	28.455	0.2891	3.742 0	29.331	.0443	1.000	-1.000	0.2392	1.3947	1126	.0147	.720	537
560	3.758 0	-526.2	1.3508	28.455	0.3001	3.585 0	29.323	.0458	1.000	-1.000	0.2396	1.3941	1151	.0152	.720	560
600	3.499 0	-513.6	1.3725	28.455	0.3363	3.343 0	29.293	.0482	1.000	-1.000	0.2404	1.3927	1191	.0161	.721	600
640	3.261 0	-498.9	1.3963	28.455	0.4073	3.126 0	29.223	.0505	1.000	-1.000	0.2419	1.3908	1231	.0169	.723	640
680	3.030 0	-480.3	1.4244	28.455	0.5326	2.928 0	29.077	.0526	1.000	-1.000	0.2443	1.3881	1270	.0177	.726	680
720	2.794 0	-455.2	1.4602	28.455	0.7399	2.739 0	28.806	.0543	1.000	-1.000	0.2483	1.3843	1312	.0184	.732	720
760	2.564 0	-425.5	1.5004	28.455	0.2535	2.564 0	28.455	.0559	1.000	-1.000	0.2535	1.3799	1354	.0192	.738	760

TABLE 24A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.032829; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5522; MW = 28.4481;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .06476; H2O= .10900; N2= .72090; O2= .09670; AR= .00865

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	R	
360	1.0822-1	5.4108 0	-827.9	1.9111	1.7504	1.5897	1.4289	1.3166	0.2507	1.3860	933.8	.0288	.0093	.7743	360
380	1.0252-1	5.1260 0	-822.8	1.9247	1.7639	1.6032	1.4425	1.3301	0.2508	1.3858	959.3	.0303	.0099	.7700	380
400	9.7394-2	4.8697 0	-817.8	1.9375	1.7768	1.6161	1.4553	1.3430	0.2509	1.3855	984.2	.0318	.0104	.7662	400
420	9.2756-2	4.6378 0	-812.8	1.9498	1.7891	1.6283	1.4676	1.3552	0.2511	1.3851	1008.3	.0333	.0109	.7628	420
440	8.8540-2	4.4270 0	-807.8	1.9615	1.8007	1.6400	1.4793	1.3669	0.2512	1.3847	1031.9	.0347	.0115	.7598	440
460	8.4690-2	4.2345 0	-802.8	1.9726	1.8119	1.6512	1.4904	1.3781	0.2515	1.3843	1054.9	.0361	.0120	.7573	460
480	8.1161-2	4.0581 0	-797.7	1.9834	1.8226	1.6619	1.5011	1.3888	0.2517	1.3837	1077.4	.0375	.0125	.7553	480
500	7.7915-2	3.8957 0	-792.7	1.9936	1.8329	1.6722	1.5114	1.3991	0.2520	1.3831	1099.4	.0388	.0130	.7536	500
520	7.4918-2	3.7459 0	-787.6	2.0035	1.8428	1.6821	1.5213	1.4090	0.2523	1.3825	1120.9	.0402	.0135	.7524	520
537	7.2591-2	3.6296 0	-783.4	2.0115	1.8508	1.6900	1.5293	1.4169	0.2526	1.3819	1138.5	.0413	.0139	.7517	537
540	7.2143-2	3.6072 0	-782.6	2.0131	1.8523	1.6916	1.5308	1.4185	0.2527	1.3818	1142.0	.0415	.0140	.7515	540
560	6.9567-2	3.4783 0	-777.5	2.0223	1.8615	1.7008	1.5400	1.4277	0.2530	1.3810	1162.6	.0428	.0144	.7513	560
580	6.7168-2	3.3584 0	-772.5	2.0311	1.8704	1.7097	1.5489	1.4366	0.2534	1.3802	1182.8	.0441	.0149	.7514	580
600	6.4929-2	3.2465 0	-767.4	2.0397	1.8790	1.7183	1.5575	1.4452	0.2538	1.3793	1202.7	.0453	.0153	.7515	600
620	6.2834-2	3.1417 0	-762.3	2.0481	1.8873	1.7266	1.5659	1.4535	0.2543	1.3784	1222.2	.0466	.0158	.7515	620
640	6.0871-2	3.0435 0	-757.2	2.0561	1.8954	1.7347	1.5739	1.4616	0.2547	1.3775	1241.3	.0478	.0162	.7513	640
660	5.9026-2	2.9513 0	-752.1	2.0640	1.9033	1.7425	1.5818	1.4694	0.2552	1.3765	1260.1	.0490	.0167	.7506	660
680	5.7290-2	2.8645 0	-747.0	2.0716	1.9109	1.7501	1.5894	1.4771	0.2557	1.3755	1278.6	.0502	.0171	.7499	680
700	5.5653-2	2.7827 0	-741.9	2.0790	1.9183	1.7576	1.5968	1.4845	0.2562	1.3745	1296.7	.0514	.0176	.7491	700
720	5.4108-2	2.7054 0	-736.8	2.0863	1.9255	1.7648	1.6041	1.4917	0.2568	1.3734	1314.6	.0526	.0180	.7483	720
740	5.2645-2	2.6323 0	-731.6	2.0933	1.9326	1.7718	1.6111	1.4987	0.2573	1.3723	1332.2	.0537	.0185	.7478	740
760	5.1260-2	2.5630 0	-726.5	2.1002	1.9394	1.7787	1.6180	1.5056	0.2579	1.3711	1349.5	.0549	.0189	.7475	760
780	4.9945-2	2.4973 0	-721.3	2.1069	1.9461	1.7854	1.6247	1.5123	0.2585	1.3700	1366.6	.0560	.0194	.7473	780
800	4.8697-2	2.4348 0	-716.1	2.1134	1.9527	1.7920	1.6312	1.5189	0.2591	1.3688	1383.4	.0571	.0198	.7471	800
820	4.7509-2	2.3755 0	-710.9	2.1198	1.9591	1.7984	1.6376	1.5253	0.2597	1.3676	1400.0	.0582	.0202	.7470	820
840	4.6378-2	2.3189 0	-705.7	2.1261	1.9654	1.8046	1.6439	1.5315	0.2604	1.3664	1416.3	.0593	.0207	.7469	840
860	4.5299-2	2.2650 0	-700.5	2.1322	1.9715	1.8108	1.6500	1.5377	0.2610	1.3651	1432.4	.0603	.0211	.7469	860
880	4.4270-2	2.2135 0	-695.3	2.1382	1.9775	1.8168	1.6560	1.5437	0.2617	1.3638	1448.3	.0614	.0215	.7469	880
900	4.3286-2	2.1643 0	-690.1	2.1441	1.9834	1.8227	1.6619	1.5496	0.2623	1.3626	1464.0	.0624	.0219	.7470	900
920	4.2345-2	2.1173 0	-684.8	2.1499	1.9892	1.8284	1.6677	1.5554	0.2630	1.3613	1479.5	.0635	.0224	.7468	920
940	4.1444-2	2.0722 0	-679.5	2.1556	1.9948	1.8341	1.6734	1.5610	0.2637	1.3600	1494.8	.0645	.0228	.7466	940
960	4.0581-2	2.0290 0	-674.3	2.1611	2.0004	1.8397	1.6789	1.5666	0.2644	1.3587	1509.9	.0655	.0232	.7463	960
980	3.9752-2	1.9876 0	-669.0	2.1666	2.0059	1.8451	1.6844	1.5720	0.2651	1.3574	1524.8	.0666	.0237	.7461	980
1000	3.8957-2	1.9479 0	-663.7	2.1720	2.0112	1.8505	1.6897	1.5774	0.2659	1.3561	1539.5	.0676	.0241	.7458	1000
1020	3.8194-2	1.9097 0	-658.3	2.1772	2.0165	1.8558	1.6950	1.5827	0.2666	1.3548	1554.1	.0686	.0245	.7455	1020
1040	3.7459-2	1.8730 0	-653.0	2.1824	2.0217	1.8609	1.7002	1.5879	0.2673	1.3534	1568.5	.0696	.0250	.7451	1040
1060	3.6752-2	1.8376 0	-647.6	2.1875	2.0268	1.8660	1.7053	1.5930	0.2681	1.3521	1582.7	.0705	.0254	.7448	1060
1080	3.6072-2	1.8036 0	-642.3	2.1925	2.0318	1.8711	1.7103	1.5980	0.2688	1.3508	1596.8	.0715	.0258	.7444	1080
1100	3.5416-2	1.7708 0	-636.9	2.1975	2.0367	1.8760	1.7153	1.6029	0.2696	1.3495	1610.7	.0725	.0263	.7440	1100
1120	3.4783-2	1.7392 0	-631.5	2.2023	2.0416	1.8809	1.7201	1.6078	0.2703	1.3482	1624.5	.0735	.0267	.7436	1120
1140	3.4173-2	1.7087 0	-626.1	2.2071	2.0464	1.8856	1.7249	1.6126	0.2711	1.3468	1638.1	.0744	.0271	.7432	1140

TABLE 24A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.032829; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5522; MW = 28.4481;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .06476; H2O= .10900; N2= .72090; O2= .09670; AR= .00865

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	FT/S	LB/FT HR	BTU/FT HR R	R	R	
1160	3.3584-2	1.6792 0	-620.6	2.2118	2.0511	1.8904	1.7296	1.6173	0.2718	1.3455	1651.6	.0754	.0276	.7428	1160
1180	3.3015-2	1.6507 0	-615.2	2.2165	2.0558	1.8950	1.7343	1.6219	0.2726	1.3442	1665.0	.0763	.0280	.7423	1180
1200	3.2465-2	1.6232 0	-609.7	2.2211	2.0603	1.8996	1.7389	1.6265	0.2734	1.3429	1678.2	.0772	.0285	.7419	1200
1220	3.1932-2	1.5966 0	-604.3	2.2256	2.0649	1.9041	1.7434	1.6311	0.2741	1.3416	1691.4	.0782	.0289	.7414	1220
1240	3.1417-2	1.5709 0	-598.8	2.2301	2.0693	1.9086	1.7479	1.6355	0.2749	1.3404	1704.4	.0791	.0293	.7410	1240
1260	3.0919-2	1.5459 0	-593.3	2.2345	2.0737	1.9130	1.7523	1.6399	0.2757	1.3391	1717.2	.0800	.0298	.7406	1260
1280	3.0435-2	1.5218 0	-587.8	2.2388	2.0781	1.9174	1.7566	1.6443	0.2764	1.3378	1730.0	.0809	.0302	.7401	1280
1300	2.9967-2	1.4984 0	-582.2	2.2431	2.0824	1.9216	1.7609	1.6486	0.2772	1.3366	1742.6	.0818	.0307	.7397	1300
1320	2.9513-2	1.4757 0	-576.7	2.2474	2.0866	1.9259	1.7651	1.6528	0.2780	1.3353	1755.2	.0827	.0311	.7393	1320
1340	2.9073-2	1.4536 0	-571.1	2.2515	2.0908	1.9301	1.7693	1.6570	0.2787	1.3341	1767.6	.0836	.0316	.7389	1340
1360	2.8645-2	1.4323 0	-565.5	2.2557	2.0949	1.9342	1.7735	1.6611	0.2795	1.3329	1779.9	.0845	.0320	.7385	1360
1380	2.8230-2	1.4115 0	-559.9	2.2598	2.0990	1.9383	1.7776	1.6652	0.2803	1.3317	1792.2	.0854	.0324	.7381	1380
1400	2.7827-2	1.3913 0	-554.3	2.2638	2.1031	1.9423	1.7816	1.6692	0.2810	1.3305	1804.3	.0863	.0329	.7377	1400
1420	2.7435-2	1.3717 0	-548.7	2.2678	2.1071	1.9463	1.7856	1.6732	0.2818	1.3293	1816.3	.0872	.0333	.7373	1420
1440	2.7054-2	1.3527 0	-543.0	2.2717	2.1110	1.9503	1.7895	1.6772	0.2825	1.3281	1828.3	.0880	.0337	.7369	1440
1460	2.6683-2	1.3342 0	-537.4	2.2756	2.1149	1.9542	1.7934	1.6811	0.2833	1.3270	1840.1	.0889	.0342	.7366	1460
1480	2.6323-2	1.3161 0	-531.7	2.2795	2.1188	1.9580	1.7973	1.6849	0.2840	1.3259	1851.9	.0897	.0346	.7363	1480
1500	2.5972-2	1.2986 0	-526.0	2.2833	2.1226	1.9618	1.8011	1.6888	0.2848	1.3247	1863.6	.0906	.0351	.7360	1500
1520	2.5630-2	1.2815 0	-520.3	2.2871	2.1264	1.9656	1.8049	1.6925	0.2855	1.3236	1875.2	.0914	.0355	.7357	1520
1540	2.5297-2	1.2649 0	-514.6	2.2908	2.1301	1.9694	1.8086	1.6963	0.2862	1.3225	1886.7	.0923	.0359	.7354	1540
1560	2.4973-2	1.2486 0	-508.9	2.2945	2.1338	1.9731	1.8123	1.7000	0.2870	1.3215	1898.1	.0931	.0363	.7352	1560
1580	2.4657-2	1.2328 0	-503.1	2.2982	2.1375	1.9767	1.8160	1.7036	0.2877	1.3204	1909.5	.0940	.0368	.7349	1580
1600	2.4348-2	1.2174 0	-497.4	2.3018	2.1411	1.9803	1.8196	1.7073	0.2884	1.3194	1920.8	.0948	.0372	.7346	1600
1620	2.4048-2	1.2024 0	-491.6	2.3054	2.1447	1.9839	1.8232	1.7108	0.2891	1.3184	1932.0	.0956	.0376	.7344	1620
1640	2.3755-2	1.1877 0	-485.8	2.3089	2.1482	1.9875	1.8267	1.7144	0.2898	1.3174	1943.2	.0964	.0381	.7341	1640
1660	2.3468-2	1.1734 0	-480.0	2.3125	2.1517	1.9910	1.8303	1.7179	0.2905	1.3164	1954.3	.0972	.0385	.7339	1660
1680	2.3189-2	1.1594 0	-474.2	2.3159	2.1552	1.9945	1.8337	1.7214	0.2911	1.3154	1965.3	.0981	.0389	.7337	1680
1700	2.2916-2	1.1458 0	-468.3	2.3194	2.1587	1.9979	1.8372	1.7248	0.2918	1.3145	1976.2	.0989	.0393	.7335	1700
1720	2.2650-2	1.1325 0	-462.5	2.3228	2.1621	2.0013	1.8406	1.7283	0.2925	1.3135	1987.1	.0997	.0397	.7333	1720
1740	2.2389-2	1.1195 0	-456.6	2.3262	2.1655	2.0047	1.8440	1.7316	0.2931	1.3126	1997.9	.1005	.0402	.7330	1740
1760	2.2135-2	1.1067 0	-450.8	2.3296	2.1688	2.0081	1.8473	1.7350	0.2938	1.3117	2008.7	.1013	.0406	.7328	1760
1780	2.1886-2	1.0943 0	-444.9	2.3329	2.1721	2.0114	1.8507	1.7383	0.2944	1.3108	2019.4	.1020	.0410	.7326	1780
1800	2.1643-2	1.0821 0	-439.0	2.3362	2.1754	2.0147	1.8540	1.7416	0.2950	1.3100	2030.0	.1028	.0414	.7325	1800
1900	2.0504-2	1.0252 0	-409.3	2.3522	2.1915	2.0307	1.8700	1.7576	0.2980	1.3060	2082.5	.1067	.0434	.7317	1900
2000	1.9479-2	9.7394-1	-379.4	2.3676	2.2068	2.0461	1.8853	1.7730	0.3008	1.3023	2133.5	.1105	.0454	.7311	2000
2100	1.8551-2	9.2756-1	-349.2	2.3823	2.2216	2.0608	1.9001	1.7877	0.3034	1.2988	2183.4	.1141	.0474	.7307	2100
2200	1.7708-2	8.8540-1	-318.7	2.3965	2.2357	2.0750	1.9143	1.8019	0.3059	1.2957	2232.0	.1178	.0493	.7302	2200
2300	1.6938-2	8.4690-1	-288.0	2.4101	2.2494	2.0886	1.9279	1.8156	0.3083	1.2927	2279.6	.1213	.0513	.7298	2300
2400	1.6232-2	8.1161-1	-257.1	2.4233	2.2625	2.1018	1.9411	1.8287	0.3106	1.2899	2326.1	.1248	.0531	.7294	2400
2500	1.5583-2	7.7915-1	-225.9	2.4360	2.2753	2.1145	1.9538	1.8414	0.3127	1.2874	2371.7	.1283	.0550	.7290	2500

TABLE 24A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.032829; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5522; MW = 28.4481;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .06476; H2O= .10900; N2= .72090; O2= .09670; AR= .00865

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
2600	1.4984-2	7.4918-1	-194.5	2.4483	2.2876	2.1268	1.9661	1.8538	0.3147	1.2850	2416.5	.1316	.0569	.7286	2600
2700	1.4429-2	7.2143-1	-163.0	2.4602	2.2995	2.1388	1.9780	1.8657	0.3166	1.2828	2460.4	.1350	.0587	.7281	2700
2800	1.3913-2	6.9567-1	-131.2	2.4718	2.3110	2.1503	1.9896	1.8772	0.3185	1.2807	2503.5	.1383	.0605	.7274	2800
2900	1.3434-2	6.7168-1	-99.3	2.4830	2.3222	2.1615	2.0008	1.8884	0.3202	1.2788	2545.9	.1415	.0624	.7267	2900
3000	1.2986-2	6.4929-1	-67.2	2.4939	2.3331	2.1724	2.0117	1.8993	0.3218	1.2770	2587.6	.1447	.0642	.7260	3000
3100	1.2567-2	6.2835-1	-34.9	2.5044	2.3437	2.1830	2.0222	1.9099	0.3233	1.2753	2628.6	.1479	.0659	.7253	3100
3200	1.2174-2	6.0871-1	-2.5	2.5147	2.3540	2.1933	2.0325	1.9202	0.3248	1.2738	2669.1	.1510	.0677	.7246	3200
3300	1.1805-2	5.9026-1	30.0	2.5247	2.3640	2.2033	2.0425	1.9302	0.3262	1.2723	2708.9	.1541	.0694	.7238	3300
3400	1.1458-2	5.7290-1	62.7	2.5345	2.3738	2.2130	2.0523	1.9399	0.3274	1.2709	2748.2	.1572	.0712	.7231	3400
3500	1.1131-2	5.5653-1	95.5	2.5440	2.3833	2.2225	2.0618	1.9495	0.3287	1.2697	2786.9	.1602	.0729	.7224	3500
3600	1.0821-2	5.4108-1	128.4	2.5533	2.3925	2.2318	2.0711	1.9587	0.3298	1.2685	2825.1	.1632	.0746	.7216	3600
3700	1.0529-2	5.2645-1	161.5	2.5623	2.4016	2.2409	2.0801	1.9678	0.3309	1.2674	2862.8	.1661	.0762	.7211	3700
3800	1.0252-2	5.1260-1	194.6	2.5712	2.4104	2.2497	2.0890	1.9766	0.3319	1.2663	2900.0	.1691	.0779	.7205	3800
3900	9.9891-3	4.9945-1	227.9	2.5798	2.4191	2.2583	2.0976	1.9853	0.3329	1.2653	2936.8	.1719	.0795	.7200	3900
4000	9.7393-3	4.8697-1	261.2	2.5882	2.4275	2.2668	2.1060	1.9937	0.3338	1.2644	2973.1	.1748	.0811	.7194	4000
4100	9.5018-3	4.7509-1	294.6	2.5965	2.4358	2.2750	2.1143	2.0019	0.3347	1.2635	3009.0	.1777	.0827	.7189	4100
4200	9.2756-3	4.6378-1	328.1	2.6046	2.4438	2.2831	2.1224	2.0100	0.3355	1.2627	3044.5	.1805	.0843	.7183	4200
4300	9.0599-3	4.5299-1	361.7	2.6125	2.4517	2.2910	2.1303	2.0179	0.3363	1.2620	3079.6	.1833	.0859	.7177	4300
4400	8.8539-3	4.4270-1	395.4	2.6202	2.4595	2.2987	2.1380	2.0257	0.3370	1.2612	3114.3	.1860	.0874	.7171	4400
4500	8.6572-3	4.3286-1	429.1	2.6278	2.4671	2.3063	2.1456	2.0332	0.3377	1.2606	3148.7	.1888	.0890	.7166	4500
4600	8.4690-3	4.2345-1	462.9	2.6352	2.4745	2.3138	2.1530	2.0407	0.3384	1.2599	3182.6	.1915	.0905	.7157	4600
4700	8.2888-3	4.1444-1	496.8	2.6425	2.4818	2.3210	2.1603	2.0480	0.3390	1.2593	3216.3	.1942	.0921	.7149	4700
4800	8.1161-3	4.0581-1	530.7	2.6497	2.4889	2.3282	2.1675	2.0551	0.3396	1.2587	3249.5	.1968	.0936	.7142	4800
4900	7.9505-3	3.9752-1	564.7	2.6567	2.4959	2.3352	2.1745	2.0621	0.3402	1.2582	3282.5	.1995	.0951	.7134	4900
5000	7.7915-3	3.8957-1	598.8	2.6635	2.5028	2.3421	2.1813	2.0690	0.3408	1.2576	3315.1	.2021	.0966	.7127	5000
5100	7.6387-3	3.8194-1	632.9	2.6703	2.5096	2.3488	2.1881	2.0757	0.3413	1.2571	3347.4	.2047	.0981	.7120	5100
5200	7.4918-3	3.7459-1	667.0	2.6769	2.5162	2.3555	2.1947	2.0824	0.3418	1.2566	3379.4	.2073	.0996	.7113	5200
5300	7.3504-3	3.6752-1	701.2	2.6834	2.5227	2.3620	2.2012	2.0889	0.3423	1.2562	3411.2	.2099	.1011	.7106	5300
5400	7.2143-3	3.6072-1	735.5	2.6898	2.5291	2.3684	2.2076	2.0953	0.3428	1.2557	3442.6	.2124	.1026	.7099	5400

TABLE 24.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.032829; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 0.14696 LB/IN² (0.01 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4348-4	-497.3	2.3018	28.448	.095	1.0000	-1.0000	0.2884	1.3193	1920.7	.0372	.735	0.2884	1.3194	1920.8	.0372	.735
1700	2.2916-4	-468.3	2.3194	28.448	.099	1.0000	-1.0000	0.2919	1.3143	1976.1	.0393	.733	0.2918	1.3145	1976.2	.0393	.733
1800	2.1643-4	-439.0	2.3362	28.448	.103	1.0000	-1.0000	0.2952	1.3097	2029.8	.0414	.732	0.2950	1.3100	2030.0	.0414	.732
1900	2.0504-4	-409.3	2.3522	28.448	.107	1.0000	-1.0000	0.2983	1.3055	2082.1	.0435	.732	0.2980	1.3060	2082.5	.0434	.732
2000	1.9479-4	-379.3	2.3676	28.448	.110	1.0000	-1.0000	0.3013	1.3016	2133.0	.0455	.731	0.3008	1.3023	2133.6	.0454	.731
2100	1.8551-4	-349.0	2.3824	28.448	.114	1.0000	-1.0000	0.3042	1.2979	2182.6	.0475	.731	0.3034	1.2988	2183.4	.0474	.731
2200	1.7708-4	-318.5	2.3966	28.448	.118	1.0000	-1.0000	0.3070	1.2943	2230.8	.0495	.730	0.3059	1.2957	2232.0	.0493	.730
2300	1.6938-4	-287.6	2.4103	28.448	.121	1.0001	-1.0000	0.3099	1.2908	2277.9	.0515	.730	0.3083	1.2927	2279.6	.0513	.730
2400	1.6232-4	-256.5	2.4236	28.448	.125	1.0002	-1.0000	0.3129	1.2873	2323.7	.0536	.729	0.3106	1.2900	2326.1	.0531	.729
2500	1.5583-4	-225.0	2.4364	28.447	.128	1.0003	-1.0000	0.3160	1.2838	2368.4	.0557	.728	0.3127	1.2874	2371.8	.0550	.729
2600	1.4983-4	-193.3	2.4489	28.447	.132	1.0006	-1.0000	0.3194	1.2801	2411.8	.0578	.727	0.3147	1.2850	2416.5	.0569	.729
2700	1.4428-4	-161.1	2.4610	28.446	.135	1.0010	-1.0000	0.3233	1.2761	2454.0	.0602	.725	0.3167	1.2828	2460.5	.0587	.728
2800	1.3912-4	-128.6	2.4728	28.445	.138	1.0017	-1.0000	0.3279	1.2716	2494.7	.0627	.723	0.3185	1.2808	2503.7	.0605	.727
2900	1.3431-4	-95.5	2.4844	28.442	.142	1.0029	-1.0001	0.3337	1.2665	2533.8	.0657	.719	0.3202	1.2789	2546.2	.0624	.727
3000	1.2982-4	-61.8	2.4958	28.439	.145	1.0048	-1.0001	0.3411	1.2603	2571.1	.0692	.713	0.3218	1.2771	2588.1	.0642	.726
3100	1.2560-4	-27.2	2.5072	28.433	.148	1.0077	-1.0002	0.3511	1.2529	2606.1	.0737	.704	0.3233	1.2755	2629.5	.0659	.725
3200	1.2164-4	8.5	2.5185	28.424	.151	1.0122	-1.0003	0.3646	1.2438	2638.6	.0796	.692	0.3248	1.2741	2670.5	.0677	.724
3300	1.1790-4	45.9	2.5300	28.411	.154	1.0191	-1.0005	0.3833	1.2329	2668.3	.0876	.674	0.3261	1.2728	2711.2	.0695	.723
3400	1.1435-4	85.4	2.5418	28.391	.157	1.0293	-1.0008	0.4089	1.2201	2695.3	.0988	.650	0.3274	1.2717	2751.7	.0712	.722
3500	1.1097-4	128.0	2.5542	28.361	.160	1.0441	-1.0013	0.4439	1.2058	2720.0	.1145	.621	0.3286	1.2708	2792.4	.0729	.721
3600	1.0772-4	174.6	2.5673	28.318	.163	1.0652	-1.0020	0.4910	1.1906	2743.3	.1364	.587	0.3297	1.2701	2833.4	.0747	.720
3700	1.0458-4	226.6	2.5816	28.257	.166	1.0943	-1.0030	0.5530	1.1754	2766.3	.1668	.550	0.3308	1.2698	2875.2	.0764	.718
3800	1.0152-4	285.8	2.5973	28.172	.169	1.1333	-1.0044	0.6326	1.1611	2790.5	.2078	.513	0.3318	1.2698	2918.2	.0781	.716
3900	9.8516-5	353.8	2.6150	28.057	.171	1.1837	-1.0063	0.7318	1.1485	2817.3	.2620	.479	0.3327	1.2703	2963.0	.0799	.713
4000	9.5534-5	432.8	2.6350	27.905	.174	1.2468	-1.0087	0.8517	1.1379	2847.8	.3311	.448	0.3335	1.2713	3010.0	.0818	.710
4100	9.2554-5	524.9	2.6577	27.710	.177	1.3231	-1.0118	0.9924	1.1295	2882.6	.4162	.421	0.3343	1.2729	3060.0	.0837	.705
4200	8.9555-5	632.0	2.6835	27.467	.179	1.4128	-1.0155	1.1529	1.1232	2922.2	.5171	.399	0.3351	1.2751	3113.6	.0859	.699
4300	8.6525-5	756.0	2.7127	27.169	.181	1.5150	-1.0200	1.3315	1.1186	2966.9	.6311	.383	0.3358	1.2782	3171.5	.0882	.691
4400	8.3457-5	898.8	2.7455	26.815	.184	1.6280	-1.0252	1.5252	1.1155	3016.7	.7535	.372	0.3366	1.2821	3234.1	.0908	.681
4500	8.0351-5	1061.4	2.7820	26.404	.186	1.7481	-1.0309	1.7283	1.1137	3072.0	.8760	.367	0.3374	1.2868	3302.1	.0937	.670
4600	7.7220-5	1244.4	2.8222	25.939	.188	1.8688	-1.0370	1.9308	1.1130	3132.6	.9880	.368	0.3383	1.2925	3375.9	.0970	.657
4700	7.4088-5	1447.0	2.8658	25.428	.190	1.9800	-1.0429	2.1167	1.1132	3198.5	*****	.374	0.3392	1.2991	3455.2	.1006	.642
4800	7.0993-5	1666.5	2.9120	24.884	.193	2.0691	-1.0482	2.2650	1.1144	3269.3	*****	.386	0.3402	1.3064	3539.7	.1046	.627
4900	6.7985-5	1898.0	2.9597	24.326	.195	2.1228	-1.0519	2.3528	1.1166	3344.0	*****	.402	0.3413	1.3144	3628.2	.1087	.612
5000	6.5120-5	2134.5	3.0075	23.777	.197	2.1314	-1.0537	2.3628	1.1197	3421.6	*****	.422	0.3423	1.3227	3718.8	.1128	.598
5100	6.2448-5	2367.8	3.0537	23.257	.200	2.0926	-1.0531	2.2896	1.1238	3500.5	*****	.443	0.3434	1.3310	3809.4	.1169	.586
5200	6.0004-5	2589.9	3.0969	22.785	.202	2.0127	-1.0504	2.1432	1.1291	3579.4	.9299	.466	0.3444	1.3388	3897.7	.1207	.576
5300	5.7805-5	2794.7	3.1359	22.372	.204	1.9043	-1.0460	1.9449	1.1357	3657.5	.8164	.487	0.3453	1.3460	3981.8	.1243	.568
5400	5.5847-5	2978.0	3.1702	22.022	.207	1.7816	-1.0407	1.7206	1.1438	3734.2	.7027	.507	0.3461	1.3524	4060.5	.1275	.562

TABLE 24.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.032829; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 1.46959 LB/IN2 (0.10 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS (GAM)S FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4348-3	-497.3	2.1411	28.448	.095	1.0000	-1.0000	0.2884	1.3193	1920.7	.0372	.735	0.2884	1.3194	1920.8	.0372	.735
1700	2.2916-3	-468.3	2.1587	28.448	.099	1.0000	-1.0000	0.2919	1.3143	1976.1	.0393	.733	0.2918	1.3145	1976.2	.0393	.733
1800	2.1643-3	-439.0	2.1754	28.448	.103	1.0000	-1.0000	0.2952	1.3097	2029.8	.0414	.732	0.2950	1.3100	2030.0	.0414	.732
1900	2.0504-3	-409.3	2.1915	28.448	.107	1.0000	-1.0000	0.2983	1.3055	2082.1	.0435	.732	0.2980	1.3060	2082.5	.0434	.732
2000	1.9479-3	-379.3	2.2069	28.448	.110	1.0000	-1.0000	0.3012	1.3016	2133.0	.0455	.731	0.3008	1.3023	2133.6	.0454	.731
2100	1.8551-3	-349.0	2.2216	28.448	.114	1.0000	-1.0000	0.3041	1.2979	2182.6	.0475	.731	0.3034	1.2988	2183.4	.0474	.731
2200	1.7708-3	-318.5	2.2358	28.448	.118	1.0000	-1.0000	0.3069	1.2944	2230.9	.0495	.730	0.3059	1.2957	2232.0	.0493	.730
2300	1.6938-3	-287.7	2.2496	28.448	.121	1.0001	-1.0000	0.3098	1.2910	2278.0	.0515	.730	0.3083	1.2927	2279.6	.0513	.730
2400	1.6232-3	-256.5	2.2628	28.448	.125	1.0001	-1.0000	0.3126	1.2876	2324.0	.0535	.729	0.3106	1.2899	2326.1	.0531	.729
2500	1.5583-3	-225.1	2.2756	28.448	.128	1.0002	-1.0000	0.3154	1.2843	2368.9	.0555	.729	0.3127	1.2874	2371.7	.0550	.729
2600	1.4983-3	-193.5	2.2880	28.448	.132	1.0003	-1.0000	0.3184	1.2810	2412.7	.0576	.728	0.3147	1.2850	2416.5	.0569	.729
2700	1.4428-3	-161.5	2.3001	28.447	.135	1.0005	-1.0000	0.3215	1.2777	2455.5	.0597	.727	0.3167	1.2828	2460.4	.0587	.728
2800	1.3913-3	-129.1	2.3119	28.446	.138	1.0008	-1.0000	0.3250	1.2741	2497.1	.0619	.726	0.3185	1.2808	2503.6	.0605	.727
2900	1.3432-3	-96.5	2.3233	28.445	.142	1.0013	-1.0000	0.3288	1.2704	2537.6	.0643	.724	0.3202	1.2788	2546.0	.0624	.727
3000	1.2984-3	-63.4	2.3346	28.444	.145	1.0021	-1.0000	0.3333	1.2663	2576.9	.0669	.721	0.3218	1.2771	2587.8	.0642	.726
3100	1.2564-3	-29.8	2.3456	28.441	.148	1.0032	-1.0001	0.3387	1.2616	2614.8	.0698	.718	0.3233	1.2754	2629.0	.0659	.725
3200	1.2170-3	4.4	2.3564	28.438	.151	1.0049	-1.0001	0.3454	1.2564	2651.3	.0731	.713	0.3248	1.2739	2669.7	.0677	.724
3300	1.1799-3	39.4	2.3672	28.432	.154	1.0074	-1.0002	0.3537	1.2503	2686.1	.0771	.707	0.3261	1.2725	2709.9	.0695	.724
3400	1.1449-3	75.3	2.3779	28.425	.157	1.0110	-1.0003	0.3644	1.2433	2719.2	.0821	.698	0.3274	1.2712	2749.6	.0712	.723
3500	1.1117-3	112.4	2.3886	28.414	.160	1.0162	-1.0005	0.3782	1.2351	2750.3	.0883	.686	0.3286	1.2701	2789.0	.0729	.722
3600	1.0802-3	151.0	2.3995	28.398	.163	1.0234	-1.0007	0.3961	1.2258	2779.6	.0964	.670	0.3298	1.2691	2828.3	.0746	.721
3700	1.0502-3	191.7	2.4107	28.376	.166	1.0334	-1.0010	0.4191	1.2155	2807.2	.1068	.651	0.3308	1.2683	2867.5	.0763	.720
3800	1.0215-3	235.1	2.4222	28.346	.169	1.0469	-1.0015	0.4484	1.2044	2833.4	.1205	.629	0.3318	1.2676	2906.7	.0779	.719
3900	9.9389-4	281.7	2.4344	28.305	.172	1.0648	-1.0021	0.4855	1.1929	2858.7	.1383	.603	0.3328	1.2672	2946.3	.0796	.718
4000	9.6718-4	332.4	2.4472	28.251	.175	1.0880	-1.0030	0.5313	1.1815	2884.0	.1614	.575	0.3336	1.2669	2986.4	.0813	.717
4100	9.4122-4	388.3	2.4610	28.180	.177	1.1172	-1.0041	0.5870	1.1706	2910.0	.1906	.546	0.3344	1.2670	3027.4	.0829	.715
4200	9.1584-4	450.2	2.4759	28.089	.180	1.1532	-1.0056	0.6529	1.1607	2937.5	.2272	.517	0.3352	1.2673	3069.5	.0846	.713
4300	8.9088-4	519.2	2.4921	27.974	.183	1.1962	-1.0073	0.7293	1.1520	2967.2	.2718	.490	0.3359	1.2680	3113.0	.0864	.710
4400	8.6623-4	596.4	2.5099	27.832	.185	1.2465	-1.0095	0.8155	1.1448	2999.7	.3251	.465	0.3365	1.2691	3158.4	.0881	.707
4500	8.4177-4	682.6	2.5293	27.661	.188	1.3038	-1.0121	0.9108	1.1389	3035.1	.3871	.442	0.3371	1.2706	3205.8	.0900	.703
4600	8.1743-4	778.8	2.5504	27.458	.190	1.3678	-1.0150	1.0143	1.1343	3073.7	.4574	.422	0.3377	1.2725	3255.7	.0920	.698
4700	7.9314-4	885.7	2.5734	27.222	.193	1.4380	-1.0184	1.1248	1.1308	3115.7	.5349	.405	0.3383	1.2750	3308.3	.0941	.692
4800	7.6889-4	1004.0	2.5983	26.951	.195	1.5136	-1.0222	1.2411	1.1284	3161.0	.6174	.392	0.3388	1.2779	3364.0	.0965	.685
4900	7.4465-4	1134.1	2.6251	26.645	.197	1.5933	-1.0264	1.3614	1.1268	3209.8	.7020	.382	0.3394	1.2814	3422.9	.0990	.676
5000	7.2047-4	1276.3	2.6538	26.306	.200	1.6751	-1.0309	1.4829	1.1260	3262.1	.7845	.377	0.3400	1.2854	3485.3	.1017	.667
5100	6.9641-4	1430.5	2.6844	25.936	.202	1.7559	-1.0356	1.6012	1.1259	3317.9	.8600	.376	0.3406	1.2900	3551.3	.1047	.657
5200	6.7256-4	1596.2	2.7165	25.539	.204	1.8315	-1.0402	1.7103	1.1265	3377.0	.9234	.378	0.3413	1.2950	3620.8	.1079	.646
5300	6.4909-4	1772.0	2.7500	25.121	.206	1.8967	-1.0445	1.8029	1.1277	3439.4	.9694	.384	0.3420	1.3006	3693.6	.1113	.634
5400	6.2617-4	1956.0	2.7844	24.692	.209	1.9460	-1.0481	1.8707	1.1296	3504.7	.9941	.393	0.3428	1.3066	3769.2	.1149	.622

TABLE 24.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.032829; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 14.6959 LB/IN2 (1.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4348-2	-497.3	1.9803	28.448	.095	1.0000	-1.0000	0.2884	1.3193	1920.7	.0372	.735	0.2884	1.3194	1920.8	.0372	.735
1700	2.2916-2	-468.3	1.9979	28.448	.099	1.0000	-1.0000	0.2919	1.3143	1976.1	.0393	.733	0.2918	1.3145	1976.2	.0393	.733
1800	2.1643-2	-439.0	2.0147	28.448	.103	1.0000	-1.0000	0.2952	1.3097	2029.8	.0414	.732	0.2950	1.3100	2030.0	.0414	.732
1900	2.0504-2	-409.3	2.0308	28.448	.107	1.0000	-1.0000	0.2983	1.3056	2082.1	.0435	.732	0.2980	1.3060	2082.5	.0434	.732
2000	1.9479-2	-379.3	2.0461	28.448	.110	1.0000	-1.0000	0.3012	1.3017	2133.0	.0455	.731	0.3008	1.3023	2133.5	.0454	.731
2100	1.8551-2	-349.1	2.0609	28.448	.114	1.0000	-1.0000	0.3041	1.2980	2182.6	.0475	.731	0.3034	1.2988	2183.4	.0474	.731
2200	1.7708-2	-318.5	2.0751	28.448	.118	1.0000	-1.0000	0.3069	1.2944	2231.0	.0495	.730	0.3059	1.2957	2232.0	.0493	.730
2300	1.6938-2	-287.7	2.0888	28.448	.121	1.0000	-1.0000	0.3097	1.2911	2278.1	.0515	.730	0.3083	1.2927	2279.6	.0513	.730
2400	1.6232-2	-256.6	2.1020	28.448	.125	1.0000	-1.0000	0.3124	1.2878	2324.2	.0535	.729	0.3106	1.2899	2326.1	.0531	.729
2500	1.5583-2	-225.2	2.1149	28.448	.128	1.0001	-1.0000	0.3151	1.2846	2369.2	.0554	.729	0.3127	1.2874	2371.7	.0550	.729
2600	1.4983-2	-193.5	2.1273	28.448	.132	1.0002	-1.0000	0.3179	1.2815	2413.2	.0575	.728	0.3147	1.2850	2416.5	.0569	.729
2700	1.4428-2	-161.6	2.1393	28.448	.135	1.0002	-1.0000	0.3207	1.2784	2456.2	.0595	.728	0.3167	1.2828	2460.4	.0587	.728
2800	1.3913-2	-129.4	2.1510	28.447	.138	1.0004	-1.0000	0.3236	1.2753	2498.2	.0616	.727	0.3185	1.2807	2503.5	.0605	.727
2900	1.3433-2	-96.9	2.1624	28.447	.142	1.0006	-1.0000	0.3267	1.2721	2539.3	.0637	.726	0.3202	1.2788	2546.0	.0624	.727
3000	1.2985-2	-64.0	2.1736	28.446	.145	1.0010	-1.0000	0.3301	1.2688	2579.4	.0660	.724	0.3218	1.2770	2587.7	.0642	.726
3100	1.2565-2	-30.9	2.1845	28.445	.148	1.0015	-1.0000	0.3338	1.2654	2618.5	.0683	.722	0.3233	1.2754	2628.8	.0659	.725
3200	1.2172-2	2.7	2.1951	28.443	.151	1.0022	-1.0001	0.3379	1.2618	2656.7	.0709	.720	0.3248	1.2738	2669.4	.0677	.725
3300	1.1802-2	36.7	2.2056	28.441	.154	1.0032	-1.0001	0.3427	1.2578	2693.8	.0736	.718	0.3261	1.2724	2709.3	.0694	.724
3400	1.1454-2	71.3	2.2159	28.438	.157	1.0046	-1.0001	0.3482	1.2535	2729.7	.0767	.714	0.3274	1.2711	2748.8	.0712	.723
3500	1.1125-2	106.4	2.2261	28.433	.160	1.0065	-1.0002	0.3549	1.2488	2764.5	.0801	.709	0.3286	1.2699	2787.8	.0729	.722
3600	1.0813-2	142.3	2.2362	28.427	.163	1.0092	-1.0003	0.3629	1.2435	2798.1	.0841	.704	0.3298	1.2688	2826.4	.0746	.721
3700	1.0518-2	179.1	2.2463	28.419	.166	1.0127	-1.0004	0.3726	1.2376	2830.4	.0889	.696	0.3309	1.2677	2864.7	.0763	.721
3800	1.0237-2	216.9	2.2564	28.407	.169	1.0175	-1.0005	0.3845	1.2311	2861.4	.0946	.687	0.3319	1.2668	2902.7	.0779	.720
3900	9.9694-3	256.0	2.2665	28.392	.172	1.0239	-1.0008	0.3990	1.2240	2891.2	.1015	.676	0.3328	1.2661	2940.5	.0795	.719
4000	9.7133-3	296.8	2.2768	28.372	.175	1.0321	-1.0011	0.4167	1.2163	2919.9	.1100	.662	0.3337	1.2654	2978.3	.0812	.719
4100	9.4677-3	339.5	2.2874	28.346	.178	1.0426	-1.0015	0.4382	1.2082	2947.7	.1205	.646	0.3346	1.2649	3016.0	.0828	.718
4200	9.2314-3	384.6	2.2982	28.313	.180	1.0558	-1.0020	0.4639	1.1999	2974.8	.1333	.628	0.3353	1.2645	3053.9	.0844	.717
4300	9.0033-3	432.5	2.3095	28.270	.183	1.0721	-1.0026	0.4943	1.1915	3001.8	.1489	.608	0.3361	1.2643	3092.1	.0860	.716
4400	8.7821-3	483.6	2.3213	28.217	.186	1.0919	-1.0034	0.5298	1.1834	3028.9	.1678	.586	0.3367	1.2642	3130.7	.0876	.714
4500	8.5671-3	538.6	2.3336	28.152	.188	1.1154	-1.0044	0.5704	1.1757	3056.8	.1904	.564	0.3374	1.2644	3170.0	.0892	.713
4600	8.3572-3	597.9	2.3466	28.072	.191	1.1427	-1.0056	0.6160	1.1687	3085.7	.2171	.542	0.3379	1.2647	3210.0	.0908	.711
4700	8.1516-3	661.9	2.3604	27.977	.194	1.1739	-1.0071	0.6664	1.1624	3116.0	.2481	.520	0.3385	1.2654	3251.0	.0925	.708
4800	7.9498-3	731.3	2.3750	27.865	.196	1.2088	-1.0087	0.7209	1.1571	3148.0	.2835	.499	0.3390	1.2662	3293.1	.0942	.706
4900	7.7511-3	806.3	2.3905	27.734	.199	1.2472	-1.0106	0.7791	1.1526	3181.9	.3233	.479	0.3394	1.2673	3336.6	.0960	.703
5000	7.5551-3	887.2	2.4068	27.585	.201	1.2887	-1.0127	0.8402	1.1489	3217.8	.3675	.460	0.3399	1.2687	3381.4	.0978	.699
5100	7.3615-3	974.4	2.4241	27.416	.203	1.3332	-1.0150	0.9037	1.1461	3255.8	.4156	.442	0.3403	1.2704	3427.9	.0996	.695
5200	7.1701-3	1068.0	2.4423	27.227	.206	1.3802	-1.0176	0.9690	1.1439	3295.8	.4670	.427	0.3407	1.2724	3476.0	.1016	.690
5300	6.9808-3	1168.2	2.4614	27.018	.208	1.4295	-1.0204	1.0358	1.1424	3337.9	.5209	.414	0.3411	1.2747	3525.9	.1037	.685
5400	6.7936-3	1275.2	2.4813	26.789	.211	1.4806	-1.0234	1.1034	1.1414	3382.2	.5761	.403	0.3415	1.2772	3577.8	.1059	.679

TABLE 24.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.032829; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 146.959 LB/IN2 (10.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4348-1	-497.3	1.8196	28.448	.095	1.0000	-1.0000	0.2884	1.3193	1920.7	.0372	.735	0.2884	1.3194	1920.8	.0372	.735
1700	2.2916-1	-468.3	1.8372	28.448	.099	1.0000	-1.0000	0.2919	1.3143	1976.1	.0393	.733	0.2918	1.3145	1976.2	.0393	.733
1800	2.1643-1	-439.0	1.8540	28.448	.103	1.0000	-1.0000	0.2952	1.3097	2029.8	.0414	.732	0.2950	1.3100	2030.0	.0414	.732
1900	2.0504-1	-409.3	1.8700	28.448	.107	1.0000	-1.0000	0.2983	1.3055	2082.1	.0435	.732	0.2980	1.3060	2082.5	.0434	.732
2000	1.9479-1	-379.3	1.8854	28.448	.110	1.0000	-1.0000	0.3012	1.3017	2133.0	.0455	.731	0.3008	1.3023	2133.5	.0454	.731
2100	1.8551-1	-349.1	1.9002	28.448	.114	1.0000	-1.0000	0.3041	1.2980	2182.6	.0475	.731	0.3034	1.2988	2183.4	.0474	.731
2200	1.7708-1	-318.5	1.9144	28.448	.118	1.0000	-1.0000	0.3069	1.2945	2231.0	.0495	.730	0.3059	1.2957	2232.0	.0493	.730
2300	1.6938-1	-287.7	1.9281	28.448	.121	1.0000	-1.0000	0.3096	1.2911	2278.2	.0515	.730	0.3083	1.2927	2279.6	.0513	.730
2400	1.6232-1	-256.6	1.9413	28.448	.125	1.0000	-1.0000	0.3123	1.2879	2324.2	.0534	.729	0.3106	1.2899	2326.1	.0531	.729
2500	1.5583-1	-225.2	1.9541	28.448	.128	1.0000	-1.0000	0.3150	1.2848	2369.3	.0554	.729	0.3127	1.2874	2371.7	.0550	.729
2600	1.4984-1	-193.6	1.9665	28.448	.132	1.0001	-1.0000	0.3176	1.2817	2413.4	.0574	.729	0.3147	1.2850	2416.5	.0569	.729
2700	1.4429-1	-161.7	1.9786	28.448	.135	1.0001	-1.0000	0.3203	1.2788	2456.5	.0594	.728	0.3167	1.2828	2460.4	.0587	.728
2800	1.3913-1	-129.5	1.9902	28.448	.138	1.0002	-1.0000	0.3230	1.2758	2498.7	.0614	.727	0.3185	1.2807	2503.5	.0605	.727
2900	1.3433-1	-97.1	2.0016	28.448	.142	1.0003	-1.0000	0.3258	1.2729	2540.1	.0635	.726	0.3202	1.2788	2545.9	.0624	.727
3000	1.2985-1	-64.4	2.0127	28.447	.145	1.0005	-1.0000	0.3286	1.2700	2580.6	.0656	.725	0.3218	1.2770	2587.6	.0642	.726
3100	1.2566-1	-31.4	2.0235	28.447	.148	1.0007	-1.0000	0.3316	1.2671	2620.2	.0677	.724	0.3233	1.2754	2628.7	.0659	.725
3200	1.2173-1	1.9	2.0341	28.446	.151	1.0010	-1.0000	0.3347	1.2641	2659.1	.0699	.723	0.3248	1.2738	2669.2	.0677	.725
3300	1.1804-1	35.6	2.0445	28.445	.154	1.0015	-1.0000	0.3381	1.2611	2697.1	.0722	.721	0.3261	1.2724	2709.1	.0694	.724
3400	1.1456-1	69.6	2.0546	28.443	.157	1.0020	-1.0001	0.3418	1.2580	2734.3	.0747	.720	0.3274	1.2710	2748.5	.0712	.723
3500	1.1128-1	104.0	2.0646	28.441	.160	1.0028	-1.0001	0.3458	1.2547	2770.7	.0772	.717	0.3287	1.2698	2787.3	.0729	.722
3600	1.0818-1	138.8	2.0744	28.439	.163	1.0039	-1.0001	0.3503	1.2512	2806.2	.0800	.715	0.3298	1.2686	2825.7	.0746	.722
3700	1.0524-1	174.0	2.0841	28.435	.166	1.0053	-1.0002	0.3554	1.2475	2840.9	.0829	.712	0.3309	1.2675	2863.6	.0762	.721
3800	1.0246-1	209.9	2.0936	28.430	.169	1.0071	-1.0002	0.3613	1.2436	2874.8	.0862	.708	0.3319	1.2666	2901.2	.0779	.720
3900	9.9807-2	246.3	2.1031	28.424	.172	1.0095	-1.0003	0.3680	1.2394	2907.8	.0899	.704	0.3329	1.2657	2938.4	.0795	.720
4000	9.7285-2	283.5	2.1125	28.416	.175	1.0125	-1.0004	0.3758	1.2349	2939.9	.0940	.699	0.3338	1.2648	2975.3	.0811	.719
4100	9.4879-2	321.5	2.1219	28.406	.178	1.0163	-1.0005	0.3849	1.2301	2971.1	.0988	.692	0.3346	1.2641	3011.9	.0827	.719
4200	9.2578-2	360.5	2.1313	28.394	.180	1.0211	-1.0007	0.3955	1.2250	3001.6	.1042	.685	0.3354	1.2635	3048.3	.0843	.718
4300	9.0374-2	400.7	2.1407	28.378	.183	1.0271	-1.0010	0.4077	1.2196	3031.3	.1106	.676	0.3362	1.2629	3084.6	.0859	.717
4400	8.8258-2	442.2	2.1503	28.358	.186	1.0343	-1.0013	0.4220	1.2140	3060.3	.1180	.665	0.3369	1.2624	3120.8	.0875	.716
4500	8.6222-2	485.1	2.1599	28.333	.189	1.0431	-1.0016	0.4384	1.2083	3088.9	.1266	.654	0.3375	1.2621	3156.9	.0890	.715
4600	8.4258-2	529.9	2.1698	28.303	.191	1.0537	-1.0021	0.4571	1.2024	3117.2	.1366	.640	0.3381	1.2618	3193.2	.0906	.714
4700	8.2360-2	576.6	2.1798	28.267	.194	1.0660	-1.0026	0.4782	1.1967	3145.3	.1482	.626	0.3387	1.2617	3229.6	.0922	.713
4800	8.0520-2	625.6	2.1901	28.223	.197	1.0804	-1.0033	0.5019	1.1910	3173.5	.1616	.611	0.3393	1.2617	3266.3	.0938	.712
4900	7.8733-2	677.1	2.2007	28.172	.199	1.0968	-1.0040	0.5280	1.1857	3202.1	.1768	.595	0.3398	1.2618	3303.3	.0953	.710
5000	7.6993-2	731.3	2.2117	28.112	.202	1.1153	-1.0049	0.5564	1.1807	3231.3	.1941	.579	0.3402	1.2620	3340.7	.0969	.709
5100	7.5297-2	788.5	2.2230	28.042	.204	1.1358	-1.0059	0.5868	1.1761	3261.2	.2134	.562	0.3407	1.2624	3378.7	.0985	.707
5200	7.3639-2	848.7	2.2347	27.962	.207	1.1581	-1.0071	0.6190	1.1721	3292.0	.2349	.545	0.3411	1.2630	3417.3	.1001	.705
5300	7.2016-2	912.3	2.2468	27.872	.209	1.1821	-1.0083	0.6526	1.1686	3323.9	.2585	.529	0.3414	1.2637	3456.5	.1017	.703
5400	7.0425-2	979.3	2.2593	27.771	.212	1.2077	-1.0097	0.6872	1.1656	3356.9	.2841	.512	0.3418	1.2646	3496.5	.1033	.701

TABLE 24.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.032829; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 734.797 LB/IN² (50.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	VS (GAM)S FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS GAM FT/S	COND BTU/ FT HR R	PRAN			
1600	1.2174	0	-497.3	1.7073	28.448	.095	1.0000	-1.0000	0.2884	1.3193	1920.7	.0372	.735	0.2884	1.3194	1920.8	.0372	.735
1700	1.1458	0	-468.3	1.7249	28.448	.099	1.0000	-1.0000	0.2919	1.3143	1976.1	.0393	.733	0.2918	1.3145	1976.2	.0393	.733
1800	1.0822	0	-439.0	1.7416	28.448	.103	1.0000	-1.0000	0.2952	1.3097	2029.8	.0414	.732	0.2950	1.3100	2030.0	.0414	.732
1900	1.0252	0	-409.3	1.7577	28.448	.107	1.0000	-1.0000	0.2983	1.3055	2082.1	.0435	.732	0.2980	1.3060	2082.5	.0434	.732
2000	9.7394	-1	-379.3	1.7730	28.448	.110	1.0000	-1.0000	0.3012	1.3016	2133.0	.0455	.731	0.3008	1.3023	2133.5	.0454	.731
2100	9.2756	-1	-349.1	1.7878	28.448	.114	1.0000	-1.0000	0.3041	1.2980	2182.6	.0475	.731	0.3034	1.2988	2183.3	.0474	.731
2200	8.8540	-1	-318.5	1.8020	28.448	.118	1.0000	-1.0000	0.3069	1.2945	2231.0	.0495	.730	0.3059	1.2957	2232.0	.0493	.730
2300	8.4691	-1	-287.7	1.8157	28.448	.121	1.0000	-1.0000	0.3096	1.2911	2278.2	.0515	.730	0.3083	1.2927	2279.5	.0513	.730
2400	8.1162	-1	-256.6	1.8290	28.448	.125	1.0000	-1.0000	0.3123	1.2879	2324.3	.0534	.729	0.3106	1.2899	2326.1	.0531	.729
2500	7.7915	-1	-225.2	1.8418	28.448	.128	1.0000	-1.0000	0.3149	1.2848	2369.3	.0554	.729	0.3127	1.2874	2371.7	.0550	.729
2600	7.4919	-1	-193.6	1.8542	28.448	.132	1.0000	-1.0000	0.3175	1.2818	2413.4	.0574	.729	0.3147	1.2850	2416.4	.0569	.729
2700	7.2144	-1	-161.7	1.8662	28.448	.135	1.0001	-1.0000	0.3201	1.2789	2456.6	.0593	.728	0.3167	1.2828	2460.4	.0587	.728
2800	6.9567	-1	-129.6	1.8779	28.448	.138	1.0001	-1.0000	0.3227	1.2760	2498.9	.0614	.727	0.3185	1.2807	2503.5	.0605	.727
2900	6.7168	-1	-97.2	1.8893	28.448	.142	1.0002	-1.0000	0.3254	1.2732	2540.3	.0634	.727	0.3202	1.2788	2545.9	.0624	.727
3000	6.4928	-1	-64.5	1.9003	28.448	.145	1.0003	-1.0000	0.3281	1.2705	2581.0	.0654	.726	0.3218	1.2770	2587.6	.0642	.726
3100	6.2833	-1	-31.6	1.9111	28.447	.148	1.0004	-1.0000	0.3308	1.2677	2620.8	.0675	.725	0.3233	1.2753	2628.7	.0659	.725
3200	6.0869	-1	1.7	1.9217	28.447	.151	1.0006	-1.0000	0.3336	1.2650	2659.9	.0696	.724	0.3248	1.2738	2669.1	.0677	.725
3300	5.9023	-1	35.2	1.9320	28.446	.154	1.0009	-1.0000	0.3365	1.2623	2698.2	.0718	.723	0.3261	1.2723	2709.0	.0694	.724
3400	5.7285	-1	69.0	1.9421	28.445	.157	1.0012	-1.0000	0.3396	1.2595	2735.9	.0740	.721	0.3274	1.2710	2748.3	.0712	.723
3500	5.5646	-1	103.1	1.9520	28.444	.160	1.0016	-1.0001	0.3428	1.2567	2772.8	.0763	.720	0.3287	1.2697	2787.1	.0729	.722
3600	5.4097	-1	137.5	1.9617	28.443	.163	1.0022	-1.0001	0.3463	1.2538	2809.0	.0787	.718	0.3298	1.2686	2825.4	.0746	.722
3700	5.2632	-1	172.4	1.9712	28.441	.166	1.0030	-1.0001	0.3501	1.2509	2844.5	.0812	.716	0.3309	1.2675	2863.3	.0762	.721
3800	5.1242	-1	207.6	1.9806	28.438	.169	1.0040	-1.0001	0.3541	1.2479	2879.3	.0838	.714	0.3319	1.2665	2900.7	.0779	.721
3900	4.9922	-1	243.2	1.9899	28.435	.172	1.0052	-1.0002	0.3586	1.2447	2913.4	.0866	.712	0.3329	1.2655	2937.7	.0795	.720
4000	4.8667	-1	279.3	1.9990	28.430	.175	1.0068	-1.0002	0.3636	1.2414	2946.9	.0897	.709	0.3338	1.2647	2974.3	.0811	.719
4100	4.7471	-1	316.0	2.0080	28.425	.178	1.0087	-1.0003	0.3692	1.2380	2979.7	.0930	.706	0.3346	1.2639	3010.6	.0827	.719
4200	4.6329	-1	353.2	2.0170	28.418	.181	1.0112	-1.0004	0.3755	1.2344	3011.8	.0966	.702	0.3354	1.2631	3046.6	.0843	.718
4300	4.5238	-1	391.1	2.0259	28.410	.183	1.0142	-1.0005	0.3825	1.2307	3043.2	.1006	.697	0.3362	1.2625	3082.3	.0859	.717
4400	4.4194	-1	429.7	2.0348	28.399	.186	1.0178	-1.0007	0.3905	1.2268	3074.1	.1051	.692	0.3369	1.2619	3117.8	.0875	.717
4500	4.3193	-1	469.2	2.0437	28.387	.189	1.0222	-1.0008	0.3995	1.2227	3104.4	.1101	.685	0.3376	1.2614	3153.1	.0890	.716
4600	4.2231	-1	509.7	2.0526	28.371	.191	1.0274	-1.0011	0.4097	1.2185	3134.1	.1157	.678	0.3382	1.2610	3188.3	.0906	.715
4700	4.1305	-1	551.2	2.0615	28.353	.194	1.0337	-1.0013	0.4211	1.2142	3163.4	.1221	.670	0.3388	1.2606	3223.3	.0921	.714
4800	4.0413	-1	593.9	2.0705	28.331	.197	1.0410	-1.0016	0.4339	1.2098	3192.4	.1293	.660	0.3394	1.2603	3258.3	.0937	.713
4900	3.9551	-1	638.0	2.0796	28.304	.199	1.0495	-1.0020	0.4481	1.2054	3221.2	.1374	.650	0.3399	1.2601	3293.4	.0952	.712
5000	3.8718	-1	683.6	2.0888	28.273	.202	1.0592	-1.0025	0.4637	1.2011	3249.8	.1465	.640	0.3404	1.2600	3328.5	.0968	.711
5100	3.7910	-1	730.8	2.0982	28.237	.205	1.0702	-1.0030	0.4808	1.1969	3278.5	.1566	.628	0.3409	1.2600	3363.7	.0983	.710
5200	3.7126	-1	779.8	2.1077	28.195	.207	1.0825	-1.0036	0.4993	1.1929	3307.3	.1679	.616	0.3413	1.2600	3399.1	.0998	.709
5300	3.6364	-1	830.7	2.1174	28.147	.210	1.0962	-1.0043	0.5191	1.1890	3336.4	.1804	.603	0.3417	1.2602	3434.8	.1013	.707
5400	3.5621	-1	883.6	2.1273	28.093	.212	1.1110	-1.0051	0.5400	1.1855	3366.0	.1941	.590	0.3421	1.2605	3470.8	.1028	.706

TABLE 24C. - LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.032829; EQUIV.RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522;
WET AIR (W/A= 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES				T R			
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S		VS FT/S	COND BTU/ FT HR R	PRAN
PRESSURE = 0.01 ATM																
360	1.214-3	-911.8	1.7203	28.448	0.2554	1.131-3	29.722	.0317	1.000	-1.000	0.2365	1.3937	916	.0102	.734	360
400	1.089-3	-899.7	1.7522	28.448	0.4144	1.016-3	29.684	.0346	1.000	-1.000	0.2372	1.3929	966	.0112	.731	400
440	9.513-4	-861.3	1.8425	28.448	2.0882	9.095-4	29.224	.0364	1.000	-1.000	0.2425	1.3894	1020	.0119	.739	440
PRESSURE = 0.10 ATM																
360	1.214-2	-911.9	1.5768	28.448	0.2469	1.131-2	29.724	.0317	1.000	-1.000	0.2365	1.3937	916	.0102	.734	360
400	1.093-2	-901.8	1.6035	28.448	0.2653	1.017-2	29.720	.0347	1.000	-1.000	0.2368	1.3932	966	.0112	.730	400
440	9.894-3	-889.1	1.6337	28.448	0.4216	9.236-3	29.674	.0374	1.000	-1.000	0.2376	1.3921	1013	.0122	.727	440
480	8.792-3	-857.1	1.7026	28.448	1.4870	8.364-3	29.317	.0394	1.000	-1.000	0.2419	1.3889	1063	.0130	.733	480
520	7.492-3	-787.6	1.8428	28.448	0.2523	7.492-3	28.448	.0402	1.000	-1.000	0.2523	1.3825	1121	.0135	.752	520
PRESSURE = 1.00 ATM																
360	1.214-1	-911.9	1.4336	28.448	0.2461	1.131-1	29.724	.0317	1.000	-1.000	0.2365	1.3937	916	.0102	.734	360
400	1.093-1	-902.0	1.4597	28.448	0.2505	1.018-1	29.724	.0347	1.000	-1.000	0.2367	1.3932	965	.0112	.730	400
440	9.932-2	-891.7	1.4842	28.448	0.2688	9.250-2	29.719	.0375	1.000	-1.000	0.2371	1.3924	1012	.0123	.726	440
480	9.076-2	-879.5	1.5108	28.448	0.3707	8.469-2	29.684	.0403	1.000	-1.000	0.2379	1.3911	1058	.0132	.724	480
520	8.260-2	-850.1	1.5698	28.448	0.6720	7.774-2	29.519	.0426	1.000	-1.000	0.2403	1.3889	1103	.0141	.726	520
537	7.893-2	-836.9	1.5947	28.448	0.9307	7.492-2	29.360	.0433	1.000	-1.000	0.2423	1.3873	1123	.0144	.730	537
560	7.301-2	-808.5	1.6464	28.448	1.5736	7.083-2	28.964	.0439	1.000	-1.000	0.2471	1.3841	1153	.0147	.739	560
600	6.493-2	-767.4	1.7183	28.448	0.2538	6.493-2	28.448	.0453	1.000	-1.000	0.2538	1.3793	1203	.0153	.751	600
PRESSURE = 10.00 ATM																
360	1.213 0	-911.9	1.2904	28.448	0.2460	1.131 0	29.724	.0317	1.000	-1.000	0.2365	1.3937	916	.0102	.734	360
400	1.092 0	-902.0	1.3164	28.448	0.2490	1.018 0	29.724	.0347	1.000	-1.000	0.2367	1.3932	965	.0112	.730	400
440	9.925-1	-892.0	1.3404	28.448	0.2536	9.251-1	29.724	.0376	1.000	-1.000	0.2371	1.3924	1012	.0123	.726	440
480	9.096-1	-881.7	1.3629	28.448	0.2666	8.479-1	29.720	.0403	1.000	-1.000	0.2376	1.3914	1057	.0133	.723	480
520	8.386-1	-859.7	1.4070	28.448	0.3276	7.822-1	29.704	.0430	1.000	-1.000	0.2383	1.3900	1100	.0142	.722	520
537	8.115-1	-854.1	1.4177	28.448	0.3512	7.575-1	29.688	.0440	1.000	-1.000	0.2387	1.3893	1117	.0146	.722	537
560	7.751-1	-845.3	1.4337	28.448	0.4046	7.250-1	29.648	.0455	1.000	-1.000	0.2395	1.3882	1142	.0151	.723	560
600	7.139-1	-826.0	1.4670	28.448	0.5857	6.732-1	29.494	.0476	1.000	-1.000	0.2419	1.3856	1184	.0159	.727	600
640	6.482-1	-795.8	1.5156	28.448	0.9720	6.233-1	29.129	.0493	1.000	-1.000	0.2468	1.3816	1229	.0165	.736	640
680	5.729-1	-747.0	1.5894	28.448	0.2557	5.729-1	28.448	.0502	1.000	-1.000	0.2557	1.3755	1279	.0171	.750	680
PRESSURE = 50.00 ATM																
360	6.029 0	-911.9	1.1903	28.448	0.2460	5.653 0	29.724	.0317	1.000	-1.000	0.2365	1.3937	916	.0102	.734	360
400	5.430 0	-902.1	1.2163	28.448	0.2489	5.088 0	29.724	.0347	1.000	-1.000	0.2367	1.3932	965	.0112	.730	400
440	4.939 0	-892.0	1.2402	28.448	0.2523	4.626 0	29.724	.0376	1.000	-1.000	0.2371	1.3924	1012	.0123	.726	440
480	4.529 0	-881.8	1.2623	28.448	0.2574	4.240 0	29.723	.0403	1.000	-1.000	0.2375	1.3914	1057	.0133	.723	480
520	4.183 0	-860.6	1.3052	28.448	0.2981	3.913 0	29.720	.0430	1.000	-1.000	0.2381	1.3901	1100	.0142	.721	520
537	4.053 0	-855.6	1.3147	28.448	0.3028	3.791 0	29.717	.0441	1.000	-1.000	0.2384	1.3895	1117	.0146	.721	537
560	3.882 0	-848.4	1.3278	28.448	0.3135	3.633 0	29.709	.0456	1.000	-1.000	0.2389	1.3886	1141	.0151	.721	560
600	3.615 0	-835.2	1.3505	28.448	0.3487	3.387 0	29.678	.0480	1.000	-1.000	0.2399	1.3867	1181	.0160	.722	600
640	3.369 0	-820.0	1.3750	28.448	0.4176	3.167 0	29.605	.0503	1.000	-1.000	0.2416	1.3845	1220	.0168	.724	640
680	3.132 0	-801.1	1.4036	28.448	0.5391	2.966 0	29.454	.0523	1.000	-1.000	0.2441	1.3816	1259	.0176	.728	680
720	2.888 0	-775.9	1.4396	28.448	0.7399	2.774 0	29.174	.0541	1.000	-1.000	0.2483	1.3777	1300	.0183	.734	720
760	2.623 0	-740.3	1.4876	28.448	1.0652	2.586 0	28.700	.0554	1.000	-1.000	0.2549	1.3726	1344	.0190	.743	760

TABLE 25A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.049244; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7761; MW = 28.4418;
 WET AIR (W/A = 0.03); GASEOUS COMPOSITION: CO2= .09545; H2O= .13899; N2= .70947; O2= .04758; AR= .00851

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	R	
360	1.0819-1	5.4096 0	-1120.7	1.9104	1.7497	1.5889	1.4281	1.3158	0.2526	1.3820	932.6	.0277	.0089	.7860	360
380	1.0250-1	5.1249 0	-1115.6	1.9241	1.7633	1.6026	1.4418	1.3294	0.2529	1.3814	958.0	.0292	.0095	.7810	380
400	9.7372-2	4.8686 0	-1110.6	1.9371	1.7763	1.6155	1.4548	1.3424	0.2531	1.3809	982.6	.0307	.0100	.7766	400
420	9.2735-2	4.6368 0	-1105.5	1.9494	1.7887	1.6279	1.4671	1.3548	0.2535	1.3802	1006.7	.0321	.0105	.7729	420
440	8.8520-2	4.4260 0	-1100.4	1.9612	1.8005	1.6397	1.4789	1.3665	0.2538	1.3795	1030.1	.0336	.0111	.7697	440
460	8.4671-2	4.2336 0	-1095.4	1.9725	1.8118	1.6510	1.4902	1.3778	0.2542	1.3788	1053.0	.0350	.0116	.7670	460
480	8.1143-2	4.0572 0	-1090.3	1.9833	1.8226	1.6618	1.5010	1.3887	0.2545	1.3780	1075.3	.0363	.0121	.7649	480
500	7.7898-2	3.8949 0	-1085.2	1.9937	1.8330	1.6722	1.5114	1.3991	0.2549	1.3772	1097.1	.0377	.0126	.7632	500
520	7.4902-2	3.7451 0	-1080.1	2.0038	1.8430	1.6822	1.5214	1.4091	0.2554	1.3763	1118.5	.0390	.0131	.7619	520
537	7.2575-2	3.6288 0	-1075.8	2.0118	1.8510	1.6903	1.5295	1.4171	0.2558	1.3755	1136.0	.0401	.0135	.7612	537
540	7.2127-2	3.6064 0	-1075.0	2.0134	1.8526	1.6919	1.5311	1.4187	0.2558	1.3754	1139.4	.0404	.0136	.7610	540
560	6.9551-2	3.4776 0	-1069.8	2.0227	1.8619	1.7012	1.5404	1.4280	0.2563	1.3744	1159.9	.0417	.0140	.7609	560
580	6.7153-2	3.3577 0	-1064.7	2.0317	1.8709	1.7102	1.5494	1.4370	0.2568	1.3734	1180.0	.0429	.0145	.7609	580
600	6.4915-2	3.2457 0	-1059.6	2.0404	1.8797	1.7189	1.5581	1.4457	0.2573	1.3724	1199.8	.0442	.0149	.7611	600
620	6.2821-2	3.1410 0	-1054.4	2.0489	1.8881	1.7273	1.5666	1.4542	0.2579	1.3713	1219.1	.0455	.0154	.7612	620
640	6.0858-2	3.0429 0	-1049.2	2.0571	1.8963	1.7355	1.5748	1.4624	0.2584	1.3702	1238.1	.0467	.0159	.7609	640
660	5.9013-2	2.9507 0	-1044.1	2.0650	1.9043	1.7435	1.5827	1.4704	0.2590	1.3691	1256.8	.0479	.0163	.7601	660
680	5.7278-2	2.8639 0	-1038.9	2.0728	1.9120	1.7512	1.5905	1.4781	0.2596	1.3679	1275.2	.0491	.0168	.7592	680
700	5.5641-2	2.7821 0	-1033.7	2.0803	1.9195	1.7588	1.5980	1.4856	0.2602	1.3667	1293.2	.0503	.0173	.7582	700
720	5.4096-2	2.7048 0	-1028.5	2.0877	1.9269	1.7661	1.6053	1.4930	0.2608	1.3655	1311.0	.0515	.0177	.7572	720
740	5.2634-2	2.6317 0	-1023.3	2.0948	1.9340	1.7733	1.6125	1.5001	0.2615	1.3643	1328.5	.0527	.0182	.7567	740
760	5.1248-2	2.5624 0	-1018.0	2.1018	1.9410	1.7802	1.6195	1.5071	0.2621	1.3631	1345.7	.0538	.0187	.7564	760
780	4.9934-2	2.4967 0	-1012.8	2.1086	1.9478	1.7871	1.6263	1.5139	0.2628	1.3618	1362.7	.0550	.0191	.7561	780
800	4.8686-2	2.4343 0	-1007.5	2.1153	1.9545	1.7937	1.6330	1.5206	0.2635	1.3605	1379.4	.0561	.0195	.7559	800
820	4.7499-2	2.3749 0	-1002.2	2.1218	1.9610	1.8002	1.6395	1.5271	0.2642	1.3592	1395.9	.0572	.0200	.7558	820
840	4.6368-2	2.3184 0	-996.9	2.1282	1.9674	1.8066	1.6458	1.5335	0.2649	1.3579	1412.1	.0583	.0204	.7558	840
860	4.5289-2	2.2645 0	-991.6	2.1344	1.9736	1.8129	1.6521	1.5397	0.2656	1.3566	1428.1	.0593	.0209	.7558	860
880	4.4260-2	2.2130 0	-986.3	2.1405	1.9797	1.8190	1.6582	1.5458	0.2663	1.3553	1443.9	.0604	.0213	.7559	880
900	4.3276-2	2.1638 0	-981.0	2.1465	1.9857	1.8250	1.6642	1.5518	0.2671	1.3540	1459.5	.0615	.0217	.7560	900
920	4.2336-2	2.1168 0	-975.6	2.1524	1.9916	1.8308	1.6701	1.5577	0.2678	1.3526	1474.9	.0625	.0222	.7557	920
940	4.1435-2	2.0717 0	-970.3	2.1582	1.9974	1.8366	1.6758	1.5635	0.2686	1.3513	1490.1	.0636	.0226	.7554	940
960	4.0572-2	2.0286 0	-964.9	2.1638	2.0030	1.8423	1.6815	1.5691	0.2693	1.3499	1505.1	.0646	.0230	.7551	960
980	3.9744-2	1.9872 0	-959.5	2.1694	2.0086	1.8478	1.6871	1.5747	0.2701	1.3486	1520.0	.0656	.0235	.7547	980
1000	3.8949-2	1.9474 0	-954.1	2.1748	2.0141	1.8533	1.6925	1.5802	0.2709	1.3472	1534.6	.0666	.0239	.7544	1000
1020	3.8185-2	1.9093 0	-948.7	2.1802	2.0194	1.8587	1.6979	1.5855	0.2717	1.3459	1549.1	.0677	.0244	.7540	1020
1040	3.7451-2	1.8725 0	-943.2	2.1855	2.0247	1.8640	1.7032	1.5908	0.2725	1.3445	1563.5	.0687	.0248	.7535	1040
1060	3.6744-2	1.8372 0	-937.8	2.1907	2.0299	1.8692	1.7084	1.5960	0.2733	1.3432	1577.6	.0697	.0253	.7531	1060
1080	3.6064-2	1.8032 0	-932.3	2.1958	2.0350	1.8743	1.7135	1.6011	0.2741	1.3419	1591.7	.0707	.0257	.7526	1080
1100	3.5408-2	1.7704 0	-926.8	2.2008	2.0401	1.8793	1.7185	1.6062	0.2749	1.3405	1605.5	.0716	.0262	.7521	1100
1120	3.4776-2	1.7388 0	-921.3	2.2058	2.0450	1.8843	1.7235	1.6111	0.2757	1.3392	1619.2	.0726	.0266	.7516	1120
1140	3.4166-2	1.7083 0	-915.8	2.2107	2.0499	1.8892	1.7284	1.6160	0.2765	1.3378	1632.8	.0736	.0271	.7511	1140

TABLE 25A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.049244; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7761; MW = 28.4418;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .09545; H2O= .13899; N2= .70947; O2= .04758; AR= .00851

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
1160	3.3577-2	1.6788 0	-910.2	2.2155	2.0547	1.8940	1.7332	1.6208	0.2773	1.3365	1646.3	.0745	.0275	.7506	1160
1180	3.3007-2	1.6504 0	-904.7	2.2203	2.0595	1.8987	1.7379	1.6256	0.2781	1.3352	1659.6	.0755	.0280	.7500	1180
1200	3.2457-2	1.6229 0	-899.1	2.2249	2.0642	1.9034	1.7426	1.6303	0.2789	1.3339	1672.8	.0764	.0284	.7495	1200
1220	3.1925-2	1.5963 0	-893.5	2.2296	2.0688	1.9080	1.7472	1.6349	0.2797	1.3326	1685.8	.0774	.0289	.7490	1220
1240	3.1410-2	1.5705 0	-887.9	2.2341	2.0733	1.9126	1.7518	1.6394	0.2806	1.3313	1698.8	.0783	.0294	.7484	1240
1260	3.0912-2	1.5456 0	-882.3	2.2386	2.0778	1.9171	1.7563	1.6439	0.2814	1.3300	1711.6	.0792	.0298	.7479	1260
1280	3.0429-2	1.5214 0	-876.7	2.2430	2.0823	1.9215	1.7607	1.6484	0.2822	1.3288	1724.3	.0802	.0303	.7474	1280
1300	2.9961-2	1.4980 0	-871.0	2.2474	2.0867	1.9259	1.7651	1.6527	0.2830	1.3275	1736.9	.0811	.0307	.7469	1300
1320	2.9507-2	1.4753 0	-865.3	2.2518	2.0910	1.9302	1.7694	1.6571	0.2838	1.3263	1749.4	.0820	.0312	.7464	1320
1340	2.9066-2	1.4533 0	-859.7	2.2560	2.0953	1.9345	1.7737	1.6613	0.2846	1.3250	1761.8	.0829	.0316	.7459	1340
1360	2.8639-2	1.4319 0	-854.0	2.2603	2.0995	1.9387	1.7779	1.6656	0.2854	1.3238	1774.1	.0838	.0321	.7454	1360
1380	2.8224-2	1.4112 0	-848.2	2.2644	2.1037	1.9429	1.7821	1.6697	0.2863	1.3226	1786.2	.0847	.0325	.7449	1380
1400	2.7821-2	1.3910 0	-842.5	2.2685	2.1078	1.9470	1.7862	1.6739	0.2871	1.3214	1798.3	.0856	.0330	.7444	1400
1420	2.7429-2	1.3714 0	-836.8	2.2726	2.1119	1.9511	1.7903	1.6779	0.2879	1.3202	1810.3	.0865	.0335	.7439	1420
1440	2.7048-2	1.3524 0	-831.0	2.2767	2.1159	1.9551	1.7943	1.6820	0.2887	1.3191	1822.2	.0873	.0339	.7435	1440
1460	2.6677-2	1.3339 0	-825.2	2.2806	2.1199	1.9591	1.7983	1.6860	0.2894	1.3179	1834.0	.0882	.0344	.7431	1460
1480	2.6317-2	1.3158 0	-819.4	2.2846	2.1238	1.9630	1.8023	1.6899	0.2902	1.3168	1845.7	.0891	.0348	.7427	1480
1500	2.5966-2	1.2983 0	-813.6	2.2885	2.1277	1.9669	1.8062	1.6938	0.2910	1.3157	1857.4	.0900	.0353	.7424	1500
1520	2.5624-2	1.2812 0	-807.8	2.2923	2.1316	1.9708	1.8100	1.6977	0.2918	1.3146	1868.9	.0908	.0357	.7421	1520
1540	2.5291-2	1.2646 0	-801.9	2.2962	2.1354	1.9746	1.8139	1.7015	0.2926	1.3135	1880.4	.0917	.0362	.7417	1540
1560	2.4967-2	1.2484 0	-796.1	2.2999	2.1392	1.9784	1.8176	1.7053	0.2933	1.3124	1891.8	.0925	.0366	.7414	1560
1580	2.4651-2	1.2326 0	-790.2	2.3037	2.1429	1.9822	1.8214	1.7090	0.2941	1.3113	1903.1	.0934	.0370	.7411	1580
1600	2.4343-2	1.2172 0	-784.3	2.3074	2.1466	1.9859	1.8251	1.7127	0.2948	1.3103	1914.4	.0942	.0375	.7408	1600
1620	2.4042-2	1.2021 0	-778.4	2.3111	2.1503	1.9895	1.8288	1.7164	0.2956	1.3093	1925.6	.0950	.0379	.7405	1620
1640	2.3749-2	1.1875 0	-772.5	2.3147	2.1539	1.9932	1.8324	1.7200	0.2963	1.3083	1936.7	.0959	.0384	.7402	1640
1660	2.3463-2	1.1732 0	-766.5	2.3183	2.1575	1.9967	1.8360	1.7236	0.2971	1.3073	1947.7	.0967	.0388	.7399	1660
1680	2.3184-2	1.1592 0	-760.6	2.3219	2.1611	2.0003	1.8395	1.7272	0.2978	1.3063	1958.7	.0975	.0393	.7397	1680
1700	2.2911-2	1.1456 0	-754.6	2.3254	2.1646	2.0038	1.8431	1.7307	0.2985	1.3053	1969.6	.0983	.0397	.7394	1700
1720	2.2645-2	1.1322 0	-748.7	2.3289	2.1681	2.0073	1.8466	1.7342	0.2992	1.3044	1980.4	.0991	.0401	.7392	1720
1740	2.2384-2	1.1192 0	-742.7	2.3323	2.1716	2.0108	1.8500	1.7377	0.2999	1.3035	1991.2	.0999	.0406	.7389	1740
1760	2.2130-2	1.1065 0	-736.7	2.3358	2.1750	2.0142	1.8535	1.7411	0.3006	1.3026	2001.9	.1007	.0410	.7387	1760
1780	2.1881-2	1.0941 0	-730.6	2.3392	2.1784	2.0176	1.8569	1.7445	0.3013	1.3017	2012.6	.1015	.0414	.7384	1780
1800	2.1638-2	1.0819 0	-724.6	2.3425	2.1818	2.0210	1.8602	1.7479	0.3019	1.3008	2023.2	.1023	.0419	.7382	1800
1900	2.0499-2	1.0250 0	-694.3	2.3589	2.1982	2.0374	1.8766	1.7643	0.3051	1.2968	2075.4	.1062	.0440	.7372	1900
2000	1.9474-2	9.7372-1	-663.6	2.3747	2.2139	2.0531	1.8924	1.7800	0.3081	1.2930	2126.2	.1101	.0461	.7363	2000
2100	1.8547-2	9.2735-1	-632.6	2.3898	2.2290	2.0682	1.9075	1.7951	0.3109	1.2896	2175.8	.1138	.0481	.7356	2100
2200	1.7704-2	8.8520-1	-601.4	2.4043	2.2435	2.0828	1.9220	1.8096	0.3136	1.2864	2224.2	.1175	.0501	.7349	2200
2300	1.6934-2	8.4671-1	-569.9	2.4183	2.2575	2.0968	1.9360	1.8236	0.3162	1.2834	2271.6	.1211	.0522	.7342	2300
2400	1.6229-2	8.1143-1	-538.2	2.4318	2.2710	2.1103	1.9495	1.8371	0.3186	1.2806	2317.9	.1247	.0541	.7336	2400
2500	1.5580-2	7.7898-1	-506.2	2.4449	2.2841	2.1233	1.9626	1.8502	0.3209	1.2780	2363.3	.1282	.0561	.7330	2500

TABLE 25A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.049244; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7761; MW = 28.4418;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .09545; H2O= .13899; N2= .70947; O2= .04758; AR= .00851

T R	DENSITY (P=1.0) (P=50.)		H BTU/LB	ENTROPY (P=.01) (P=.10) (P=1.0) (P=10.) (P=50.)					CP BTU/ LB R	GAM	VS FT/S	VIS LB/ FT HR	COND BTU/ FT HR R	PRAN	T R
	LB/FT3	LB/FT3		BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R							
2600	1.4980-2	7.4902-1	-474.0	2.4575	2.2967	2.1360	1.9752	1.8628	0.3231	1.2757	2407.9	.1316	.0581	.7323	2600
2700	1.4425-2	7.2128-1	-441.6	2.4697	2.3090	2.1482	1.9874	1.8750	0.3252	1.2734	2451.6	.1350	.0600	.7316	2700
2800	1.3910-2	6.9552-1	-409.0	2.4816	2.3208	2.1601	1.9993	1.8869	0.3271	1.2714	2494.6	.1383	.0619	.7308	2800
2900	1.3431-2	6.7153-1	-376.2	2.4931	2.3323	2.1716	2.0108	1.8984	0.3290	1.2694	2536.8	.1417	.0638	.7300	2900
3000	1.2983-2	6.4915-1	-343.2	2.5043	2.3435	2.1827	2.0220	1.9096	0.3307	1.2676	2578.4	.1449	.0657	.7291	3000
3100	1.2564-2	6.2821-1	-310.0	2.5152	2.3544	2.1936	2.0328	1.9205	0.3323	1.2660	2619.2	.1481	.0676	.7283	3100
3200	1.2171-2	6.0858-1	-276.7	2.5257	2.3650	2.2042	2.0434	1.9311	0.3339	1.2644	2659.5	.1513	.0695	.7274	3200
3300	1.1803-2	5.9013-1	-243.2	2.5360	2.3753	2.2145	2.0537	1.9413	0.3354	1.2629	2699.2	.1545	.0713	.7265	3300
3400	1.1456-2	5.7278-1	-209.6	2.5461	2.3853	2.2245	2.0638	1.9514	0.3367	1.2616	2738.3	.1576	.0731	.7256	3400
3500	1.1128-2	5.5641-1	-175.9	2.5558	2.3951	2.2343	2.0735	1.9612	0.3380	1.2603	2776.9	.1607	.0749	.7247	3500
3600	1.0819-2	5.4096-1	-142.0	2.5654	2.4046	2.2438	2.0831	1.9707	0.3393	1.2591	2815.0	.1637	.0767	.7238	3600
3700	1.0527-2	5.2634-1	-108.0	2.5747	2.4139	2.2532	2.0924	1.9800	0.3404	1.2580	2852.5	.1667	.0785	.7231	3700
3800	1.0250-2	5.1248-1	-73.9	2.5838	2.4230	2.2622	2.1015	1.9891	0.3415	1.2570	2889.6	.1697	.0802	.7223	3800
3900	9.9869-3	4.9934-1	-39.7	2.5927	2.4319	2.2711	2.1104	1.9980	0.3426	1.2560	2926.3	.1726	.0820	.7215	3900
4000	9.7372-3	4.8686-1	-5.4	2.6014	2.4406	2.2798	2.1190	2.0067	0.3435	1.2551	2962.5	.1755	.0837	.7207	4000
4100	9.4997-3	4.7499-1	29.0	2.6099	2.4491	2.2883	2.1275	2.0152	0.3444	1.2542	2998.3	.1784	.0854	.7199	4100
4200	9.2735-3	4.6368-1	63.5	2.6182	2.4574	2.2966	2.1359	2.0235	0.3453	1.2534	3033.6	.1813	.0871	.7190	4200
4300	9.0579-3	4.5289-1	98.0	2.6263	2.4655	2.3048	2.1440	2.0316	0.3461	1.2527	3068.6	.1841	.0887	.7182	4300
4400	8.8520-3	4.4260-1	132.7	2.6343	2.4735	2.3127	2.1520	2.0396	0.3469	1.2520	3103.2	.1869	.0904	.7173	4400
4500	8.6553-3	4.3276-1	167.4	2.6421	2.4813	2.3205	2.1598	2.0474	0.3477	1.2513	3137.4	.1897	.0921	.7164	4500
4600	8.4671-3	4.2336-1	202.2	2.6497	2.4890	2.3282	2.1674	2.0550	0.3484	1.2507	3171.3	.1924	.0937	.7153	4600
4700	8.2870-3	4.1435-1	237.1	2.6572	2.4965	2.3357	2.1749	2.0625	0.3490	1.2501	3204.8	.1952	.0954	.7143	4700
4800	8.1143-3	4.0572-1	272.0	2.6646	2.5038	2.3430	2.1823	2.0699	0.3497	1.2495	3238.0	.1979	.0970	.7132	4800
4900	7.9487-3	3.9744-1	307.0	2.6718	2.5110	2.3503	2.1895	2.0771	0.3503	1.2490	3270.8	.2006	.0986	.7122	4900
5000	7.7898-3	3.8949-1	342.1	2.6789	2.5181	2.3573	2.1966	2.0842	0.3508	1.2485	3303.4	.2032	.1002	.7112	5000
5100	7.6370-3	3.8185-1	377.2	2.6858	2.5251	2.3643	2.2035	2.0911	0.3514	1.2480	3335.6	.2058	.1018	.7103	5100
5200	7.4902-3	3.7451-1	412.3	2.6927	2.5319	2.3711	2.2103	2.0980	0.3519	1.2475	3367.5	.2085	.1034	.7094	5200
5300	7.3488-3	3.6744-1	447.6	2.6994	2.5386	2.3778	2.2171	2.1047	0.3524	1.2471	3399.1	.2111	.1050	.7085	5300
5400	7.2127-3	3.6064-1	482.8	2.7060	2.5452	2.3844	2.2236	2.1113	0.3529	1.2466	3430.5	.2137	.1065	.7077	5400

TABLE 25.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.049244; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 0.14696 LB/IN2 (0.01 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4343-4	-784.3	2.3074	28.442	.094	1.0000	-1.0000	0.2949	1.3102	1914.3	.0375	.741	0.2948	1.3103	1914.4	.0375	.741
1700	2.2911-4	-754.6	2.3254	28.442	.098	1.0000	-1.0000	0.2986	1.3052	1969.5	.0397	.739	0.2985	1.3053	1969.6	.0397	.739
1800	2.1638-4	-724.6	2.3426	28.442	.102	1.0000	-1.0000	0.3021	1.3006	2023.0	.0419	.738	0.3019	1.3008	2023.2	.0419	.738
1900	2.0499-4	-694.2	2.3590	28.442	.106	1.0000	-1.0000	0.3053	1.2965	2075.1	.0440	.737	0.3051	1.2968	2075.4	.0440	.737
2000	1.9474-4	-663.5	2.3747	28.442	.110	1.0000	-1.0000	0.3085	1.2926	2125.8	.0461	.736	0.3081	1.2930	2126.2	.0461	.736
2100	1.8547-4	-632.5	2.3898	28.442	.114	1.0000	-1.0000	0.3115	1.2889	2175.2	.0482	.736	0.3109	1.2896	2175.8	.0481	.736
2200	1.7704-4	-601.2	2.4044	28.442	.117	1.0000	-1.0000	0.3145	1.2854	2223.4	.0503	.735	0.3136	1.2864	2224.2	.0501	.735
2300	1.6934-4	-569.6	2.4184	28.442	.121	1.0001	-1.0000	0.3175	1.2820	2270.4	.0524	.734	0.3162	1.2834	2271.6	.0522	.734
2400	1.6228-4	-537.7	2.4320	28.441	.125	1.0002	-1.0000	0.3205	1.2787	2316.2	.0545	.733	0.3186	1.2806	2317.9	.0541	.734
2500	1.5579-4	-505.5	2.4452	28.441	.128	1.0003	-1.0000	0.3237	1.2753	2360.8	.0567	.732	0.3209	1.2780	2363.4	.0561	.733
2600	1.4980-4	-473.0	2.4579	28.441	.132	1.0006	-1.0000	0.3271	1.2718	2404.3	.0589	.731	0.3231	1.2757	2408.0	.0581	.732
2700	1.4424-4	-440.1	2.4703	28.440	.135	1.0011	-1.0000	0.3312	1.2679	2446.4	.0614	.728	0.3252	1.2735	2451.7	.0600	.732
2800	1.3909-4	-406.7	2.4825	28.438	.138	1.0020	-1.0000	0.3361	1.2635	2487.0	.0641	.725	0.3271	1.2714	2494.8	.0619	.731
2900	1.3428-4	-372.8	2.4944	28.436	.142	1.0034	-1.0001	0.3426	1.2582	2525.8	.0674	.720	0.3290	1.2695	2537.2	.0638	.730
3000	1.2978-4	-338.1	2.5061	28.431	.145	1.0058	-1.0001	0.3514	1.2515	2562.4	.0714	.713	0.3307	1.2678	2579.0	.0657	.729
3100	1.2556-4	-302.4	2.5178	28.424	.148	1.0098	-1.0002	0.3637	1.2432	2596.4	.0768	.702	0.3323	1.2662	2620.3	.0676	.728
3200	1.2159-4	-265.2	2.5296	28.413	.151	1.0159	-1.0004	0.3812	1.2328	2627.4	.0841	.686	0.3339	1.2648	2661.3	.0695	.727
3300	1.1783-4	-225.9	2.5417	28.395	.154	1.0255	-1.0007	0.4061	1.2201	2655.2	.0944	.665	0.3353	1.2635	2702.1	.0713	.726
3400	1.1426-4	-183.7	2.5544	28.368	.157	1.0398	-1.0011	0.4411	1.2055	2680.2	.1090	.637	0.3367	1.2625	2742.9	.0732	.725
3500	1.1083-4	-137.3	2.5678	28.327	.160	1.0605	-1.0018	0.4891	1.1897	2703.4	.1295	.606	0.3379	1.2618	2784.1	.0750	.723
3600	1.0753-4	-85.3	2.5824	28.268	.163	1.0893	-1.0027	0.5529	1.1737	2726.2	.1580	.572	0.3391	1.2613	2826.1	.0769	.721
3700	1.0432-4	-26.1	2.5986	28.185	.166	1.1278	-1.0041	0.6348	1.1589	2750.3	.1964	.537	0.3402	1.2613	2869.2	.0787	.719
3800	1.0116-4	42.3	2.6169	28.071	.169	1.1772	-1.0058	0.7358	1.1461	2777.3	.2467	.504	0.3411	1.2616	2914.0	.0806	.716
3900	9.8040-5	121.7	2.6375	27.921	.172	1.2381	-1.0081	0.8558	1.1355	2808.2	.3106	.473	0.3420	1.2626	2961.1	.0825	.712
4000	9.4930-5	214.0	2.6609	27.728	.174	1.3106	-1.0109	0.9940	1.1272	2843.4	.3895	.445	0.3428	1.2641	3011.0	.0845	.708
4100	9.1814-5	321.1	2.6873	27.489	.177	1.3948	-1.0143	1.1496	1.1210	2883.3	.4844	.420	0.3436	1.2662	3064.3	.0866	.701
4200	8.8679-5	444.5	2.7170	27.198	.179	1.4907	-1.0184	1.3221	1.1165	2927.9	.5952	.398	0.3443	1.2691	3121.6	.0890	.694
4300	8.5517-5	586.0	2.7503	26.852	.182	1.5980	-1.0231	1.5109	1.1134	2977.4	.7202	.381	0.3451	1.2728	3183.4	.0916	.684
4400	8.2323-5	747.2	2.7874	26.451	.184	1.7154	-1.0286	1.7144	1.1114	3031.9	.8553	.368	0.3458	1.2773	3250.3	.0945	.672
4500	7.9100-5	929.2	2.8283	25.993	.186	1.8396	-1.0347	1.9279	1.1104	3091.7	.9926	.361	0.3466	1.2827	3322.8	.0978	.659
4600	7.5862-5	1132.8	2.8730	25.483	.188	1.9642	-1.0410	2.1413	1.1103	3156.8	*****	.359	0.3475	1.2890	3401.4	.1015	.643
4700	7.2633-5	1356.9	2.9212	24.928	.190	2.0785	-1.0473	2.3374	1.1111	3227.3	*****	.362	0.3485	1.2963	3485.9	.1057	.627
4800	6.9453-5	1598.9	2.9721	24.344	.192	2.1687	-1.0527	2.4927	1.1126	3302.6	*****	.371	0.3496	1.3044	3575.9	.1102	.610
4900	6.6376-5	1853.2	3.0246	23.750	.194	2.2201	-1.0565	2.5807	1.1150	3382.0	*****	.383	0.3507	1.3131	3670.0	.1149	.593
5000	6.3458-5	2112.1	3.0769	23.170	.196	2.2216	-1.0581	2.5806	1.1184	3464.0	*****	.398	0.3518	1.3221	3766.3	.1197	.577
5100	6.0752-5	2366.2	3.1272	22.625	.199	2.1705	-1.0571	2.4853	1.1227	3547.2	*****	.416	0.3530	1.3310	3862.2	.1244	.564
5200	5.8296-5	2606.3	3.1738	22.136	.201	2.0741	-1.0536	2.3065	1.1283	3630.1	*****	.435	0.3541	1.3394	3955.2	.1288	.552
5300	5.6103-5	2825.5	3.2156	21.713	.203	1.9475	-1.0484	2.0708	1.1352	3711.7	.9287	.453	0.3550	1.3470	4043.2	.1328	.543
5400	5.4167-5	3019.7	3.2519	21.360	.206	1.8079	-1.0423	1.8104	1.1436	3791.5	.7918	.470	0.3559	1.3536	4124.8	.1366	.536

TABLE 25.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.049244; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 1.46959 Lb/IN² (U.10 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4343-3	-784.3	2.1466	28.442	.094	1.0000	-1.0000	0.2949	1.3102	1914.3	.0375	.741	0.2948	1.3103	1914.4	.0375	.741
1700	2.2911-3	-754.6	2.1646	28.442	.098	1.0000	-1.0000	0.2986	1.3052	1969.5	.0397	.739	0.2985	1.3053	1969.6	.0397	.739
1800	2.1638-3	-724.6	2.1818	28.442	.102	1.0000	-1.0000	0.3021	1.3006	2023.0	.0419	.738	0.3019	1.3008	2023.2	.0419	.738
1900	2.0499-3	-694.2	2.1982	28.442	.106	1.0000	-1.0000	0.3053	1.2965	2075.1	.0440	.737	0.3051	1.2968	2075.4	.0440	.737
2000	1.9474-3	-663.5	2.2139	28.442	.110	1.0000	-1.0000	0.3084	1.2926	2125.9	.0461	.736	0.3081	1.2930	2126.2	.0461	.736
2100	1.8547-3	-632.5	2.2291	28.442	.114	1.0000	-1.0000	0.3115	1.2890	2175.3	.0482	.736	0.3109	1.2896	2175.8	.0481	.736
2200	1.7704-3	-601.2	2.2436	28.442	.117	1.0000	-1.0000	0.3144	1.2855	2223.5	.0503	.735	0.3136	1.2864	2224.2	.0501	.735
2300	1.6934-3	-569.7	2.2577	28.442	.121	1.0000	-1.0000	0.3173	1.2822	2270.5	.0523	.734	0.3162	1.2834	2271.6	.0522	.734
2400	1.6229-3	-537.8	2.2712	28.442	.125	1.0001	-1.0000	0.3201	1.2790	2316.5	.0544	.733	0.3186	1.2806	2317.9	.0541	.734
2500	1.5579-3	-505.6	2.2844	28.442	.128	1.0002	-1.0000	0.3230	1.2759	2361.4	.0565	.733	0.3209	1.2780	2363.4	.0561	.733
2600	1.4980-3	-473.2	2.2971	28.441	.132	1.0003	-1.0000	0.3260	1.2728	2405.2	.0586	.732	0.3231	1.2757	2407.9	.0581	.732
2700	1.4425-3	-440.4	2.3094	28.441	.135	1.0005	-1.0000	0.3292	1.2696	2448.0	.0608	.730	0.3252	1.2734	2451.7	.0600	.732
2800	1.3909-3	-407.3	2.3215	28.440	.138	1.0009	-1.0000	0.3326	1.2662	2489.6	.0632	.729	0.3271	1.2714	2494.7	.0619	.731
2900	1.3429-3	-373.9	2.3332	28.439	.142	1.0015	-1.0000	0.3366	1.2626	2530.1	.0656	.726	0.3290	1.2695	2537.0	.0638	.730
3000	1.2981-3	-340.0	2.3447	28.437	.145	1.0024	-1.0001	0.3414	1.2586	2569.3	.0684	.723	0.3307	1.2677	2578.6	.0657	.729
3100	1.2561-3	-305.5	2.3560	28.434	.148	1.0038	-1.0001	0.3474	1.2538	2607.0	.0716	.719	0.3323	1.2661	2619.7	.0676	.728
3200	1.2166-3	-270.4	2.3671	28.430	.151	1.0060	-1.0002	0.3552	1.2483	2643.0	.0754	.713	0.3339	1.2645	2660.2	.0695	.727
3300	1.1795-3	-234.4	2.3782	28.423	.154	1.0093	-1.0002	0.3654	1.2416	2677.1	.0800	.705	0.3353	1.2632	2700.3	.0713	.726
3400	1.1444-3	-197.2	2.3893	28.413	.158	1.0143	-1.0004	0.3790	1.2336	2709.1	.0860	.694	0.3367	1.2619	2740.1	.0731	.725
3500	1.1111-3	-158.5	2.4006	28.399	.161	1.0215	-1.0006	0.3972	1.2241	2738.8	.0939	.679	0.3380	1.2609	2779.6	.0750	.724
3600	1.0795-3	-117.6	2.4121	28.378	.164	1.0317	-1.0009	0.4213	1.2134	2766.5	.1042	.661	0.3392	1.2599	2819.0	.0768	.723
3700	1.0492-3	-74.0	2.4240	28.348	.167	1.0458	-1.0014	0.4528	1.2016	2792.4	.1179	.640	0.3403	1.2592	2858.6	.0785	.722
3800	1.0201-3	-26.8	2.4366	28.307	.169	1.0646	-1.0021	0.4931	1.1893	2817.5	.1358	.616	0.3414	1.2587	2898.5	.0803	.720
3900	9.9198-4	25.0	2.4500	28.251	.172	1.0892	-1.0029	0.5433	1.1772	2842.6	.1588	.589	0.3423	1.2584	2939.0	.0821	.719
4000	9.6463-4	82.2	2.4645	28.176	.175	1.1199	-1.0041	0.6039	1.1659	2868.7	.1880	.563	0.3432	1.2584	2980.4	.0838	.717
4100	9.3791-4	146.1	2.4803	28.081	.178	1.1572	-1.0055	0.6748	1.1559	2896.7	.2239	.536	0.3440	1.2588	3023.0	.0856	.714
4200	9.1165-4	217.5	2.4975	27.960	.180	1.2011	-1.0073	0.7552	1.1473	2927.3	.2674	.510	0.3447	1.2595	3067.1	.0874	.712
4300	8.8573-4	297.4	2.5163	27.812	.183	1.2513	-1.0093	0.8443	1.1403	2960.7	.3190	.485	0.3454	1.2606	3113.0	.0893	.708
4400	8.6007-4	386.6	2.5368	27.634	.186	1.3075	-1.0118	0.9408	1.1348	2997.3	.3790	.461	0.3460	1.2622	3161.0	.0912	.704
4500	8.3460-4	485.8	2.5591	27.425	.188	1.3695	-1.0146	1.0441	1.1306	3037.0	.4476	.439	0.3465	1.2642	3211.4	.0933	.698
4600	8.0926-4	595.6	2.5832	27.184	.190	1.4370	-1.0178	1.1536	1.1274	3079.8	.5248	.418	0.3471	1.2666	3264.5	.0955	.692
4700	7.8403-4	716.7	2.6093	26.909	.193	1.5100	-1.0214	1.2690	1.1251	3125.9	.6096	.401	0.3476	1.2695	3320.4	.0979	.684
4800	7.5888-4	849.6	2.6372	26.600	.195	1.5880	-1.0254	1.3898	1.1237	3175.2	.7003	.387	0.3481	1.2730	3379.6	.1004	.676
4900	7.3382-4	994.8	2.6672	26.257	.197	1.6699	-1.0298	1.5147	1.1229	3227.8	.7942	.376	0.3487	1.2770	3442.1	.1033	.666
5000	7.0888-4	1152.6	2.6991	25.882	.199	1.7538	-1.0345	1.6413	1.1227	3283.8	.8869	.369	0.3493	1.2815	3508.4	.1063	.655
5100	6.8412-4	1323.0	2.7328	25.478	.202	1.8366	-1.0394	1.7649	1.1231	3343.3	.9734	.365	0.3500	1.2866	3578.3	.1097	.643
5200	6.5965-4	1505.3	2.7682	25.048	.204	1.9138	-1.0441	1.8789	1.1241	3406.3	*****	.365	0.3506	1.2922	3652.0	.1134	.630
5300	6.3562-4	1698.2	2.8049	24.600	.206	1.9797	-1.0486	1.9752	1.1256	3472.4	*****	.369	0.3514	1.2982	3729.2	.1173	.617
5400	6.1223-4	1899.4	2.8425	24.142	.208	2.0284	-1.0523	2.0443	1.1277	3541.4	*****	.375	0.3522	1.3047	3809.2	.1214	.604

TABLE 25.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.049244; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 14.6959 LB/IN² (1.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	FROZEN GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4343-2	-784.3	1.9859	28.442	.094	1.0000	-1.0000	0.2949	1.3102	1914.3	.0375	.741	0.2948	1.3103	1914.4	.0375	.741
1700	2.2911-2	-754.6	2.0038	28.442	.098	1.0000	-1.0000	0.2986	1.3052	1969.5	.0397	.739	0.2985	1.3053	1969.6	.0397	.739
1800	2.1638-2	-724.6	2.0210	28.442	.102	1.0000	-1.0000	0.3021	1.3006	2023.0	.0419	.738	0.3019	1.3008	2023.2	.0419	.738
1900	2.0499-2	-694.2	2.0374	28.442	.106	1.0000	-1.0000	0.3053	1.2965	2075.1	.0440	.737	0.3051	1.2968	2075.4	.0440	.737
2000	1.9474-2	-663.5	2.0532	28.442	.110	1.0000	-1.0000	0.3084	1.2926	2125.9	.0461	.736	0.3081	1.2930	2126.2	.0461	.736
2100	1.8547-2	-632.5	2.0683	28.442	.114	1.0000	-1.0000	0.3114	1.2890	2175.3	.0482	.736	0.3109	1.2896	2175.8	.0481	.736
2200	1.7704-2	-601.2	2.0828	28.442	.117	1.0000	-1.0000	0.3143	1.2855	2223.5	.0503	.735	0.3136	1.2864	2224.2	.0501	.735
2300	1.6934-2	-569.7	2.0969	28.442	.121	1.0000	-1.0000	0.3172	1.2823	2270.6	.0523	.734	0.3162	1.2834	2271.6	.0522	.734
2400	1.6229-2	-537.8	2.1104	28.442	.125	1.0000	-1.0000	0.3200	1.2792	2316.6	.0544	.734	0.3186	1.2806	2317.9	.0541	.734
2500	1.5579-2	-505.7	2.1236	28.442	.128	1.0001	-1.0000	0.3227	1.2761	2361.6	.0564	.733	0.3209	1.2780	2363.4	.0561	.733
2600	1.4980-2	-473.3	2.1363	28.442	.132	1.0002	-1.0000	0.3255	1.2732	2405.6	.0585	.732	0.3231	1.2757	2407.9	.0581	.732
2700	1.4425-2	-440.6	2.1486	28.441	.135	1.0003	-1.0000	0.3283	1.2703	2448.7	.0606	.731	0.3252	1.2734	2451.7	.0600	.732
2800	1.3910-2	-407.6	2.1606	28.441	.138	1.0004	-1.0000	0.3312	1.2674	2490.8	.0628	.730	0.3271	1.2714	2494.6	.0619	.731
2900	1.3430-2	-374.3	2.1723	28.440	.142	1.0007	-1.0000	0.3342	1.2645	2531.9	.0650	.729	0.3290	1.2694	2536.9	.0638	.730
3000	1.2982-2	-340.8	2.1837	28.440	.145	1.0010	-1.0000	0.3376	1.2614	2572.2	.0673	.727	0.3307	1.2677	2578.5	.0657	.729
3100	1.2563-2	-306.8	2.1948	28.438	.148	1.0016	-1.0000	0.3413	1.2582	2611.4	.0698	.725	0.3323	1.2660	2619.4	.0676	.728
3200	1.2169-2	-272.5	2.2057	28.437	.151	1.0025	-1.0001	0.3457	1.2546	2649.5	.0724	.722	0.3339	1.2645	2659.8	.0695	.727
3300	1.1799-2	-237.7	2.2164	28.434	.154	1.0037	-1.0001	0.3508	1.2507	2686.5	.0754	.719	0.3354	1.2630	2699.7	.0713	.726
3400	1.1451-2	-202.3	2.2270	28.430	.158	1.0055	-1.0001	0.3572	1.2462	2722.2	.0788	.715	0.3367	1.2617	2739.0	.0731	.725
3500	1.1121-2	-166.2	2.2374	28.424	.161	1.0081	-1.0002	0.3650	1.2411	2756.5	.0827	.709	0.3380	1.2605	2778.0	.0749	.725
3600	1.0810-2	-129.2	2.2478	28.417	.164	1.0117	-1.0003	0.3749	1.2353	2789.4	.0875	.702	0.3392	1.2594	2816.6	.0767	.724
3700	1.0513-2	-91.1	2.2583	28.406	.167	1.0167	-1.0005	0.3874	1.2286	2820.8	.0932	.693	0.3404	1.2585	2854.9	.0785	.723
3800	1.0231-2	-51.6	2.2688	28.391	.170	1.0235	-1.0007	0.4031	1.2210	2850.6	.1004	.681	0.3415	1.2576	2893.0	.0802	.722
3900	9.9617-3	-10.4	2.2795	28.370	.173	1.0324	-1.0010	0.4228	1.2128	2879.1	.1092	.668	0.3425	1.2569	2931.0	.0820	.721
4000	9.7033-3	33.1	2.2905	28.343	.175	1.0441	-1.0015	0.4471	1.2039	2906.5	.1202	.652	0.3434	1.2564	2969.1	.0837	.720
4100	9.4547-3	79.2	2.3019	28.307	.178	1.0589	-1.0020	0.4766	1.1948	2933.3	.1339	.635	0.3442	1.2560	3007.4	.0854	.718
4200	9.2145-3	128.6	2.3138	28.261	.181	1.0772	-1.0027	0.5117	1.1857	2960.0	.1505	.616	0.3450	1.2557	3046.1	.0871	.717
4300	8.9816-3	181.8	2.3263	28.202	.184	1.0993	-1.0036	0.5525	1.1771	2987.2	.1704	.596	0.3458	1.2557	3085.3	.0888	.715
4400	8.7550-3	239.3	2.3395	28.130	.186	1.1252	-1.0047	0.5986	1.1691	3015.3	.1941	.575	0.3464	1.2559	3125.3	.0906	.713
4500	8.5336-3	301.7	2.3536	28.042	.189	1.1549	-1.0059	0.6497	1.1621	3045.0	.2216	.554	0.3470	1.2564	3166.1	.0923	.711
4600	8.3167-3	369.3	2.3684	27.937	.192	1.1879	-1.0074	0.7048	1.1560	3076.4	.2531	.534	0.3476	1.2571	3208.0	.0940	.708
4700	8.1038-3	442.7	2.3842	27.813	.194	1.2241	-1.0090	0.7633	1.1509	3109.7	.2889	.513	0.3481	1.2580	3251.1	.0958	.705
4800	7.8945-3	522.1	2.4009	27.671	.197	1.2631	-1.0109	0.8242	1.1468	3145.0	.3289	.493	0.3485	1.2593	3295.6	.0977	.702
4900	7.6883-3	607.6	2.4186	27.510	.199	1.3047	-1.0129	0.8871	1.1436	3182.4	.3732	.473	0.3490	1.2608	3341.5	.0996	.698
5000	7.4850-3	699.6	2.4371	27.329	.201	1.3486	-1.0152	0.9516	1.1411	3221.8	.4217	.455	0.3494	1.2626	3389.0	.1015	.693
5100	7.2844-3	798.0	2.4566	27.129	.204	1.3947	-1.0177	1.0174	1.1393	3263.3	.4743	.437	0.3498	1.2647	3438.2	.1036	.688
5200	7.0865-3	903.1	2.4770	26.909	.206	1.4430	-1.0204	1.0845	1.1380	3306.7	.5305	.421	0.3501	1.2671	3489.1	.1058	.682
5300	6.8911-3	1014.9	2.4983	26.670	.208	1.4933	-1.0233	1.1529	1.1373	3352.1	.5897	.407	0.3505	1.2697	3541.9	.1081	.676
5400	6.6982-3	1133.7	2.5205	26.413	.211	1.5453	-1.0265	1.2221	1.1369	3399.5	.6507	.396	0.3509	1.2727	3596.7	.1105	.669

TABLE 25.4B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.049244; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 146.959 LB/IN² (10.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4343-1	-784.3	1.8251	28.442	.094	1.0000	-1.0000	0.2949	1.3102	1914.3	.0375	.741	0.2948	1.3103	1914.4	.0375	.741
1700	2.2911-1	-754.6	1.8431	28.442	.098	1.0000	-1.0000	0.2986	1.3052	1969.5	.0397	.739	0.2985	1.3053	1969.6	.0397	.739
1800	2.1638-1	-724.6	1.8602	28.442	.102	1.0000	-1.0000	0.3021	1.3006	2023.0	.0419	.738	0.3019	1.3008	2023.2	.0419	.738
1900	2.0499-1	-694.2	1.8767	28.442	.106	1.0000	-1.0000	0.3053	1.2965	2075.1	.0440	.737	0.3051	1.2968	2075.4	.0440	.737
2000	1.9474-1	-663.5	1.8924	28.442	.110	1.0000	-1.0000	0.3084	1.2926	2125.9	.0461	.736	0.3081	1.2930	2126.2	.0461	.736
2100	1.8547-1	-632.5	1.9075	28.442	.114	1.0000	-1.0000	0.3114	1.2890	2175.3	.0482	.736	0.3109	1.2896	2175.8	.0481	.736
2200	1.7704-1	-601.3	1.9221	28.442	.117	1.0000	-1.0000	0.3143	1.2856	2223.5	.0502	.735	0.3136	1.2864	2224.2	.0501	.735
2300	1.6934-1	-569.7	1.9361	28.442	.121	1.0000	-1.0000	0.3171	1.2823	2270.6	.0523	.734	0.3162	1.2834	2271.6	.0522	.734
2400	1.6229-1	-537.8	1.9497	28.442	.125	1.0000	-1.0000	0.3199	1.2792	2316.7	.0544	.734	0.3186	1.2806	2317.9	.0541	.734
2500	1.5579-1	-505.7	1.9628	28.442	.128	1.0000	-1.0000	0.3226	1.2763	2361.7	.0564	.733	0.3209	1.2780	2363.4	.0561	.733
2600	1.4980-1	-473.3	1.9755	28.442	.132	1.0001	-1.0000	0.3252	1.2734	2405.8	.0585	.732	0.3231	1.2757	2407.9	.0581	.732
2700	1.4425-1	-440.7	1.9878	28.442	.135	1.0001	-1.0000	0.3278	1.2707	2449.0	.0605	.731	0.3252	1.2734	2451.6	.0600	.732
2800	1.3910-1	-407.7	1.9998	28.441	.138	1.0002	-1.0000	0.3305	1.2680	2491.3	.0626	.730	0.3271	1.2714	2494.6	.0619	.731
2900	1.3430-1	-374.6	2.0114	28.441	.142	1.0003	-1.0000	0.3332	1.2653	2532.8	.0647	.729	0.3290	1.2694	2536.9	.0638	.730
3000	1.2982-1	-341.1	2.0228	28.441	.145	1.0005	-1.0000	0.3359	1.2627	2573.4	.0668	.728	0.3307	1.2676	2578.4	.0657	.729
3100	1.2563-1	-307.4	2.0338	28.440	.148	1.0007	-1.0000	0.3388	1.2600	2613.2	.0691	.727	0.3323	1.2660	2619.3	.0676	.728
3200	1.2170-1	-273.3	2.0446	28.439	.151	1.0011	-1.0000	0.3419	1.2573	2652.2	.0713	.725	0.3339	1.2644	2659.7	.0695	.727
3300	1.1801-1	-239.0	2.0552	28.438	.154	1.0016	-1.0000	0.3453	1.2545	2690.3	.0737	.724	0.3354	1.2630	2699.4	.0713	.726
3400	1.1453-1	-204.3	2.0656	28.437	.158	1.0023	-1.0001	0.3490	1.2515	2727.6	.0762	.721	0.3367	1.2617	2738.6	.0731	.726
3500	1.1125-1	-169.2	2.0757	28.434	.161	1.0033	-1.0001	0.3533	1.2483	2764.0	.0789	.719	0.3380	1.2604	2777.4	.0749	.725
3600	1.0815-1	-133.6	2.0858	28.431	.164	1.0047	-1.0001	0.3582	1.2449	2799.5	.0819	.716	0.3393	1.2593	2815.6	.0767	.724
3700	1.0521-1	-97.5	2.0956	28.427	.167	1.0065	-1.0002	0.3640	1.2411	2834.0	.0852	.712	0.3404	1.2582	2853.5	.0785	.723
3800	1.0242-1	-60.8	2.1054	28.421	.170	1.0089	-1.0003	0.3708	1.2369	2867.5	.0889	.708	0.3415	1.2572	2891.0	.0802	.722
3900	9.9768-2	-23.3	2.1152	28.413	.173	1.0122	-1.0004	0.3791	1.2323	2900.0	.0932	.702	0.3425	1.2564	2928.2	.0820	.721
4000	9.7239-2	15.1	2.1249	28.403	.176	1.0164	-1.0005	0.3890	1.2272	2931.4	.0982	.696	0.3435	1.2556	2965.1	.0837	.720
4100	9.4823-2	54.6	2.1346	28.390	.178	1.0218	-1.0007	0.4009	1.2217	2961.8	.1040	.688	0.3444	1.2549	3001.8	.0854	.719
4200	9.2509-2	95.4	2.1445	28.373	.181	1.0287	-1.0010	0.4151	1.2157	2991.3	.1109	.678	0.3452	1.2543	3038.4	.0871	.718
4300	9.0288-2	137.7	2.1544	28.351	.184	1.0372	-1.0013	0.4319	1.2094	3020.0	.1190	.668	0.3460	1.2539	3075.0	.0888	.717
4400	8.8151-2	181.8	2.1646	28.323	.187	1.0476	-1.0017	0.4515	1.2029	3048.2	.1286	.656	0.3467	1.2535	3111.6	.0904	.716
4500	8.6088-2	228.1	2.1750	28.289	.189	1.0601	-1.0022	0.4742	1.1964	3076.1	.1397	.643	0.3474	1.2533	3148.4	.0921	.715
4600	8.4092-2	276.8	2.1857	28.247	.192	1.0748	-1.0029	0.4998	1.1899	3104.0	.1527	.629	0.3480	1.2532	3185.4	.0938	.713
4700	8.2156-2	328.1	2.1967	28.197	.195	1.0917	-1.0036	0.5283	1.1838	3132.2	.1675	.615	0.3486	1.2532	3222.7	.0955	.711
4800	8.0274-2	382.5	2.2082	28.137	.197	1.1107	-1.0045	0.5594	1.1781	3161.1	.1842	.599	0.3491	1.2534	3260.6	.0971	.710
4900	7.8439-2	440.1	2.2200	28.067	.200	1.1318	-1.0054	0.5927	1.1730	3190.9	.2030	.584	0.3496	1.2538	3298.9	.0988	.708
5000	7.6649-2	501.1	2.2324	27.986	.203	1.1546	-1.0065	0.6277	1.1685	3221.7	.2237	.568	0.3500	1.2543	3337.9	.1005	.706
5100	7.4898-2	565.7	2.2451	27.894	.205	1.1790	-1.0077	0.6639	1.1646	3253.7	.2464	.553	0.3504	1.2550	3377.6	.1022	.703
5200	7.3185-2	633.9	2.2584	27.790	.208	1.2046	-1.0091	0.7008	1.1613	3287.0	.2710	.537	0.3508	1.2558	3418.1	.1039	.701
5300	7.1507-2	705.9	2.2721	27.675	.210	1.2313	-1.0105	0.7380	1.1586	3321.5	.2976	.521	0.3511	1.2568	3459.4	.1056	.698
5400	6.9862-2	781.5	2.2862	27.549	.212	1.2588	-1.0120	0.7752	1.1565	3357.3	.3261	.505	0.3515	1.2580	3501.5	.1073	.695

TABLE 25.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.049244; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 734.797 LB/IN2 (50.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2172 0	-784.3	1.7127	28.442	.094	1.0000	-1.0000	0.2949	1.3102	1914.3	.0375	.741	0.2948	1.3103	1914.4	.0375	.741
1700	1.1456 0	-754.6	1.7307	28.442	.098	1.0000	-1.0000	0.2986	1.3052	1969.5	.0397	.739	0.2985	1.3053	1969.6	.0397	.739
1800	1.0819 0	-724.6	1.7479	28.442	.102	1.0000	-1.0000	0.3021	1.3006	2023.0	.0419	.738	0.3019	1.3008	2023.2	.0419	.738
1900	1.0250 0	-694.2	1.7643	28.442	.106	1.0000	-1.0000	0.3053	1.2965	2075.1	.0440	.737	0.3051	1.2968	2075.4	.0440	.737
2000	9.7372-1	-663.5	1.7800	28.442	.110	1.0000	-1.0000	0.3084	1.2926	2125.9	.0461	.736	0.3081	1.2930	2126.2	.0461	.736
2100	9.2736-1	-632.5	1.7951	28.442	.114	1.0000	-1.0000	0.3114	1.2890	2175.3	.0482	.736	0.3109	1.2896	2175.8	.0481	.736
2200	8.8520-1	-601.3	1.8097	28.442	.117	1.0000	-1.0000	0.3143	1.2856	2223.5	.0502	.735	0.3136	1.2864	2224.2	.0501	.735
2300	8.4672-1	-569.7	1.8237	28.442	.121	1.0000	-1.0000	0.3171	1.2823	2270.7	.0523	.734	0.3162	1.2834	2271.6	.0522	.734
2400	8.1144-1	-537.8	1.8373	28.442	.125	1.0000	-1.0000	0.3198	1.2793	2316.7	.0543	.734	0.3186	1.2806	2317.9	.0541	.734
2500	7.7898-1	-505.7	1.8504	28.442	.128	1.0000	-1.0000	0.3225	1.2763	2361.8	.0564	.733	0.3209	1.2780	2363.3	.0561	.733
2600	7.4902-1	-473.3	1.8631	28.442	.132	1.0000	-1.0000	0.3251	1.2735	2405.9	.0584	.732	0.3231	1.2757	2407.9	.0581	.732
2700	7.2127-1	-440.7	1.8754	28.442	.135	1.0001	-1.0000	0.3277	1.2708	2449.1	.0605	.732	0.3252	1.2734	2451.6	.0600	.732
2800	6.9551-1	-407.8	1.8874	28.442	.138	1.0001	-1.0000	0.3302	1.2682	2491.5	.0625	.731	0.3271	1.2714	2494.6	.0619	.731
2900	6.7152-1	-374.6	1.8990	28.442	.142	1.0002	-1.0000	0.3328	1.2656	2533.0	.0646	.730	0.3290	1.2694	2536.8	.0638	.730
3000	6.4914-1	-341.2	1.9103	28.441	.145	1.0003	-1.0000	0.3353	1.2631	2573.8	.0667	.729	0.3307	1.2676	2578.4	.0657	.729
3100	6.2819-1	-307.6	1.9214	28.441	.148	1.0004	-1.0000	0.3380	1.2607	2613.8	.0688	.728	0.3323	1.2660	2619.3	.0676	.728
3200	6.0855-1	-273.6	1.9321	28.440	.151	1.0006	-1.0000	0.3406	1.2582	2653.1	.0710	.726	0.3339	1.2644	2659.6	.0695	.727
3300	5.9009-1	-239.4	1.9427	28.440	.154	1.0009	-1.0000	0.3435	1.2557	2691.6	.0732	.725	0.3354	1.2630	2699.3	.0713	.726
3400	5.7272-1	-205.0	1.9530	28.439	.158	1.0013	-1.0000	0.3464	1.2532	2729.4	.0755	.723	0.3367	1.2616	2738.5	.0731	.726
3500	5.5633-1	-170.2	1.9631	28.438	.161	1.0019	-1.0001	0.3496	1.2507	2766.4	.0778	.722	0.3380	1.2604	2777.2	.0749	.725
3600	5.4084-1	-135.0	1.9730	28.436	.164	1.0026	-1.0001	0.3531	1.2480	2802.8	.0803	.720	0.3393	1.2592	2815.3	.0767	.724
3700	5.2618-1	-99.5	1.9827	28.433	.167	1.0035	-1.0001	0.3570	1.2452	2838.3	.0829	.718	0.3404	1.2581	2853.1	.0785	.723
3800	5.1228-1	-63.6	1.9923	28.430	.170	1.0048	-1.0001	0.3614	1.2422	2873.1	.0858	.715	0.3415	1.2571	2890.4	.0802	.722
3900	4.9907-1	-27.2	2.0017	28.426	.173	1.0064	-1.0002	0.3664	1.2390	2907.2	.0888	.712	0.3425	1.2562	2927.3	.0820	.721
4000	4.8650-1	9.7	2.0111	28.421	.176	1.0085	-1.0003	0.3722	1.2356	2940.4	.0922	.708	0.3435	1.2554	2963.9	.0837	.721
4100	4.7452-1	47.3	2.0203	28.414	.178	1.0112	-1.0004	0.3789	1.2319	2972.8	.0960	.704	0.3444	1.2546	3000.2	.0854	.720
4200	4.6308-1	85.5	2.0296	28.405	.181	1.0146	-1.0005	0.3867	1.2279	3004.5	.1003	.699	0.3452	1.2539	3036.2	.0871	.719
4300	4.5214-1	124.6	2.0388	28.394	.184	1.0188	-1.0007	0.3958	1.2236	3035.3	.1051	.693	0.3460	1.2533	3071.9	.0887	.718
4400	4.4164-1	164.7	2.0480	28.380	.187	1.0240	-1.0009	0.4063	1.2191	3065.5	.1106	.686	0.3468	1.2528	3107.6	.0904	.717
4500	4.3157-1	206.0	2.0572	28.363	.190	1.0304	-1.0011	0.4185	1.2143	3095.0	.1169	.679	0.3475	1.2523	3143.1	.0921	.716
4600	4.2187-1	248.5	2.0666	28.342	.192	1.0380	-1.0014	0.4325	1.2093	3123.9	.1242	.670	0.3481	1.2520	3178.5	.0937	.714
4700	4.1252-1	292.5	2.0761	28.316	.195	1.0470	-1.0018	0.4483	1.2043	3152.6	.1324	.661	0.3488	1.2517	3214.0	.0954	.713
4800	4.0348-1	338.2	2.0857	28.285	.198	1.0574	-1.0023	0.4661	1.1992	3181.0	.1417	.650	0.3493	1.2515	3249.6	.0970	.712
4900	3.9473-1	385.8	2.0955	28.248	.200	1.0694	-1.0028	0.4857	1.1943	3209.4	.1521	.640	0.3499	1.2515	3285.3	.0987	.710
5000	3.8624-1	435.4	2.1055	28.205	.203	1.0828	-1.0035	0.5070	1.1896	3238.1	.1637	.628	0.3503	1.2515	3321.3	.1003	.709
5100	3.7799-1	487.3	2.1158	28.155	.206	1.0977	-1.0042	0.5299	1.1852	3267.1	.1766	.617	0.3508	1.2517	3357.5	.1019	.707
5200	3.6997-1	541.4	2.1263	28.097	.208	1.1138	-1.0050	0.5540	1.1811	3296.7	.1906	.605	0.3512	1.2519	3394.1	.1036	.706
5300	3.6214-1	598.1	2.1371	28.032	.211	1.1311	-1.0058	0.5790	1.1775	3327.0	.2057	.593	0.3516	1.2523	3431.1	.1052	.704
5400	3.5451-1	657.3	2.1481	27.958	.213	1.1493	-1.0068	0.6045	1.1743	3358.1	.2221	.580	0.3520	1.2528	3468.6	.1068	.702

TABLE 25C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.049244; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761;
WET AIR (W/A = 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES				COND BTU/ FT HR R	PRAN	T R	
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLV DLT	DLV DP	CP BTU/ LB R	(GAM)S				VS FT/S
PRESSURE = 0.01 ATM																
360	1.256-3	-1227.8	1.6695	28.442	0.2557	1.146-3	30.123	.0314	1.000	-1.000	0.2344	1.3913	909	.0100	.734	360
400	1.127-3	-1215.7	1.7013	28.442	0.4105	1.030-3	30.083	.0343	1.000	-1.000	0.2354	1.3898	959	.0110	.731	400
440	9.842-4	-1178.2	1.7896	28.442	2.0295	9.215-4	29.608	.0361	1.000	-1.000	0.2410	1.3857	1012	.0118	.740	440
PRESSURE = 0.10 ATM																
360	1.257-2	-1227.9	1.5308	28.442	0.2476	1.146-2	30.125	.0314	1.000	-1.000	0.2344	1.3913	909	.0100	.734	360
400	1.130-2	-1217.8	1.5575	28.442	0.2665	1.031-2	30.121	.0344	1.000	-1.000	0.2350	1.3900	958	.0111	.730	400
440	1.024-2	-1205.0	1.5878	28.442	0.4187	9.360-3	30.073	.0372	1.000	-1.000	0.2361	1.3883	1005	.0121	.727	440
480	9.096-3	-1173.7	1.6554	28.442	1.4496	8.474-3	29.704	.0391	1.000	-1.000	0.2407	1.3846	1055	.0128	.734	480
520	7.490-3	-1080.1	1.8430	28.442	0.2554	7.490-3	28.442	.0390	1.000	-1.000	0.2554	1.3763	1119	.0131	.762	520
PRESSURE = 1.00 ATM																
360	1.256-1	-1227.9	1.3923	28.442	0.2467	1.146-1	30.125	.0314	1.000	-1.000	0.2344	1.3913	909	.0100	.734	360
400	1.131-1	-1218.0	1.4186	28.442	0.2521	1.031-1	30.125	.0344	1.000	-1.000	0.2349	1.3901	958	.0111	.730	400
440	1.027-1	-1207.6	1.4433	28.442	0.2709	9.374-2	30.120	.0373	1.000	-1.000	0.2356	1.3885	1004	.0121	.726	440
480	9.390-2	-1195.3	1.4700	28.442	0.3706	8.583-2	30.083	.0400	1.000	-1.000	0.2367	1.3867	1049	.0131	.724	480
520	8.546-2	-1163.0	1.5348	28.442	0.6729	7.877-2	29.912	.0423	1.000	-1.000	0.2393	1.3839	1094	.0139	.727	520
537	8.166-2	-1149.9	1.5597	28.442	0.9230	7.591-2	29.748	.0430	1.000	-1.000	0.2414	1.3823	1113	.0142	.731	537
560	7.553-2	-1121.9	1.6106	28.442	1.5445	7.175-2	29.339	.0436	1.000	-1.000	0.2463	1.3790	1144	.0145	.740	560
600	6.491-2	-1059.6	1.7189	28.442	0.2573	6.491-2	28.442	.0442	1.000	-1.000	0.2573	1.3724	1200	.0149	.761	600
PRESSURE = 10.00 ATM																
360	1.254 0	-1227.9	1.2539	28.442	0.2467	1.146 0	30.125	.0314	1.000	-1.000	0.2344	1.3913	909	.0100	.734	360
400	1.129 0	-1218.0	1.2801	28.442	0.2507	1.031 0	30.125	.0344	1.000	-1.000	0.2349	1.3901	958	.0111	.730	400
440	1.026 0	-1207.9	1.3042	28.442	0.2563	9.376-1	30.124	.0373	1.000	-1.000	0.2356	1.3886	1004	.0121	.726	440
480	9.407-1	-1197.4	1.3270	28.442	0.2700	8.593-1	30.121	.0401	1.000	-1.000	0.2363	1.3869	1048	.0131	.723	480
520	8.673-1	-1172.3	1.3775	28.442	0.3400	7.928-1	30.104	.0427	1.000	-1.000	0.2373	1.3850	1091	.0140	.722	520
537	8.393-1	-1166.5	1.3886	28.442	0.3629	7.677-1	30.087	.0438	1.000	-1.000	0.2379	1.3841	1108	.0144	.722	537
560	8.017-1	-1157.5	1.4050	28.442	0.4145	7.348-1	30.046	.0452	1.000	-1.000	0.2388	1.3827	1132	.0149	.723	560
600	7.384-1	-1137.8	1.4388	28.442	0.5898	6.821-1	29.887	.0474	1.000	-1.000	0.2414	1.3798	1174	.0157	.728	600
640	6.704-1	-1107.7	1.4874	28.442	0.9635	6.314-1	29.509	.0490	1.000	-1.000	0.2465	1.3756	1218	.0164	.737	640
680	5.884-1	-1055.3	1.5665	28.442	1.7561	5.785-1	28.728	.0497	1.000	-1.000	0.2563	1.3693	1269	.0169	.753	680
PRESSURE = 50.00 ATM																
360	6.223 0	-1227.9	1.1572	28.442	0.2467	5.730 0	30.125	.0314	1.000	-1.000	0.2344	1.3913	909	.0100	.734	360
400	5.606 0	-1218.0	1.1833	28.442	0.2506	5.157 0	30.125	.0344	1.000	-1.000	0.2349	1.3901	958	.0111	.730	400
440	5.100 0	-1207.9	1.2074	28.442	0.2550	4.688 0	30.125	.0373	1.000	-1.000	0.2356	1.3886	1004	.0121	.726	440
480	4.678 0	-1197.6	1.2299	28.442	0.2611	4.297 0	30.124	.0401	1.000	-1.000	0.2363	1.3869	1048	.0131	.723	480
520	4.322 0	-1173.1	1.2791	28.442	0.3115	3.966 0	30.121	.0428	1.000	-1.000	0.2372	1.3851	1090	.0141	.722	520
537	4.187 0	-1167.9	1.2890	28.442	0.3161	3.843 0	30.117	.0439	1.000	-1.000	0.2375	1.3842	1107	.0144	.722	537
560	4.011 0	-1160.4	1.3027	28.442	0.3266	3.681 0	30.109	.0453	1.000	-1.000	0.2382	1.3830	1131	.0150	.722	560
600	3.735 0	-1146.8	1.3262	28.442	0.3608	3.432 0	30.077	.0478	1.000	-1.000	0.2394	1.3808	1170	.0158	.723	600
640	3.482 0	-1131.1	1.3514	28.442	0.4277	3.210 0	30.002	.0501	1.000	-1.000	0.2412	1.3781	1209	.0166	.726	640
680	3.236 0	-1111.9	1.3806	28.442	0.5454	3.005 0	29.846	.0521	1.000	-1.000	0.2440	1.3750	1248	.0174	.730	680
720	2.984 0	-1086.5	1.4168	28.442	0.7398	2.811 0	29.556	.0538	1.000	-1.000	0.2482	1.3711	1289	.0182	.736	720
760	2.711 0	-1051.1	1.4646	28.442	1.0547	2.619 0	29.065	.0551	1.000	-1.000	0.2549	1.3662	1333	.0189	.745	760

TABLE 26A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.065658; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.4358;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .12519; H2O= .16805; N2= .69839; O2= .00000; AR= .00838

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	
360	1.0817-1	5.4084 0	-1404.5	1.9040	1.7432	1.5824	1.4216	1.3092	0.2545	1.3782	931.4	.0266	.0085	.7975	360
380	1.0248-1	5.1238 0	-1399.4	1.9178	1.7570	1.5962	1.4354	1.3230	0.2549	1.3773	956.6	.0281	.0091	.7918	380
400	9.7351-2	4.8676 0	-1394.3	1.9309	1.7701	1.6093	1.4485	1.3361	0.2553	1.3765	981.2	.0296	.0096	.7869	400
420	9.2716-2	4.6358 0	-1389.2	1.9433	1.7825	1.6217	1.4609	1.3485	0.2558	1.3756	1005.1	.0310	.0101	.7827	420
440	8.8501-2	4.4251 0	-1384.1	1.9552	1.7944	1.6336	1.4728	1.3604	0.2563	1.3746	1028.4	.0324	.0107	.7793	440
460	8.4653-2	4.2327 0	-1378.9	1.9666	1.8058	1.6450	1.4842	1.3718	0.2568	1.3736	1051.1	.0338	.0112	.7764	460
480	8.1126-2	4.0563 0	-1373.8	1.9776	1.8168	1.6560	1.4952	1.3828	0.2573	1.3726	1073.3	.0352	.0117	.7741	480
500	7.7881-2	3.8941 0	-1368.6	1.9881	1.8273	1.6665	1.5057	1.3933	0.2578	1.3715	1095.0	.0365	.0122	.7724	500
520	7.4886-2	3.7443 0	-1363.5	1.9982	1.8374	1.6766	1.5158	1.4034	0.2584	1.3705	1116.3	.0379	.0127	.7711	520
537	7.2560-2	3.6280 0	-1359.2	2.0064	1.8456	1.6848	1.5240	1.4116	0.2588	1.3695	1133.6	.0390	.0131	.7703	537
540	7.2112-2	3.6056 0	-1358.3	2.0080	1.8472	1.6864	1.5256	1.4132	0.2589	1.3693	1137.1	.0392	.0132	.7702	540
560	6.9537-2	3.4768 0	-1353.1	2.0174	1.8566	1.6958	1.5350	1.4226	0.2595	1.3682	1157.4	.0405	.0136	.7701	560
580	6.7139-2	3.3569 0	-1347.9	2.0265	1.8657	1.7049	1.5441	1.4317	0.2601	1.3670	1177.4	.0418	.0141	.7702	580
600	6.4901-2	3.2450 0	-1342.7	2.0354	1.8745	1.7137	1.5529	1.4405	0.2607	1.3658	1197.0	.0431	.0146	.7704	600
620	6.2807-2	3.1404 0	-1337.5	2.0439	1.8831	1.7223	1.5615	1.4491	0.2614	1.3646	1216.3	.0443	.0150	.7705	620
640	6.0845-2	3.0422 0	-1332.3	2.0522	1.8914	1.7306	1.5698	1.4574	0.2620	1.3634	1235.2	.0456	.0155	.7701	640
660	5.9001-2	2.9500 0	-1327.0	2.0603	1.8995	1.7387	1.5779	1.4655	0.2627	1.3621	1253.7	.0468	.0160	.7692	660
680	5.7266-2	2.8633 0	-1321.8	2.0681	1.9073	1.7465	1.5857	1.4733	0.2634	1.3608	1272.0	.0480	.0165	.7681	680
700	5.5629-2	2.7815 0	-1316.5	2.0758	1.9150	1.7542	1.5934	1.4810	0.2641	1.3595	1290.0	.0492	.0169	.7670	700
720	5.4084-2	2.7042 0	-1311.2	2.0832	1.9224	1.7616	1.6008	1.4884	0.2648	1.3582	1307.6	.0504	.0174	.7658	720
740	5.2622-2	2.6311 0	-1305.9	2.0905	1.9297	1.7689	1.6081	1.4957	0.2655	1.3569	1325.0	.0516	.0179	.7653	740
760	5.1238-2	2.5619 0	-1300.6	2.0976	1.9368	1.7760	1.6152	1.5028	0.2662	1.3556	1342.1	.0527	.0184	.7649	760
780	4.9924-2	2.4962 0	-1295.2	2.1045	1.9437	1.7829	1.6221	1.5097	0.2670	1.3542	1359.0	.0539	.0188	.7646	780
800	4.8676-2	2.4338 0	-1289.9	2.1113	1.9505	1.7897	1.6289	1.5165	0.2678	1.3529	1375.6	.0550	.0193	.7644	800
820	4.7488-2	2.3744 0	-1284.5	2.1179	1.9571	1.7963	1.6355	1.5231	0.2685	1.3515	1392.0	.0561	.0197	.7643	820
840	4.6358-2	2.3179 0	-1279.2	2.1244	1.9636	1.8028	1.6420	1.5296	0.2693	1.3501	1408.2	.0572	.0201	.7643	840
860	4.5280-2	2.2640 0	-1273.8	2.1307	1.9699	1.8091	1.6483	1.5359	0.2701	1.3488	1424.1	.0583	.0206	.7644	860
880	4.4251-2	2.2125 0	-1268.4	2.1370	1.9762	1.8153	1.6545	1.5421	0.2709	1.3474	1439.9	.0593	.0210	.7645	880
900	4.3267-2	2.1634 0	-1262.9	2.1431	1.9823	1.8214	1.6606	1.5482	0.2717	1.3460	1455.4	.0604	.0215	.7646	900
920	4.2327-2	2.1163 0	-1257.5	2.1490	1.9882	1.8274	1.6666	1.5542	0.2725	1.3446	1470.7	.0615	.0219	.7642	920
940	4.1426-2	2.0713 0	-1252.0	2.1549	1.9941	1.8333	1.6725	1.5601	0.2733	1.3432	1485.8	.0625	.0224	.7639	940
960	4.0563-2	2.0282 0	-1246.6	2.1607	1.9999	1.8391	1.6783	1.5659	0.2741	1.3419	1500.8	.0636	.0228	.7635	960
980	3.9735-2	1.9868 0	-1241.1	2.1663	2.0055	1.8447	1.6839	1.5715	0.2750	1.3405	1515.6	.0646	.0233	.7630	980
1000	3.8941-2	1.9470 0	-1235.6	2.1719	2.0111	1.8503	1.6895	1.5771	0.2758	1.3391	1530.2	.0656	.0237	.7626	1000
1020	3.8177-2	1.9089 0	-1230.0	2.1774	2.0166	1.8558	1.6949	1.5825	0.2766	1.3377	1544.6	.0667	.0242	.7621	1020
1040	3.7443-2	1.8721 0	-1224.5	2.1827	2.0219	1.8611	1.7003	1.5879	0.2775	1.3363	1558.9	.0677	.0247	.7615	1040
1060	3.6736-2	1.8368 0	-1218.9	2.1880	2.0272	1.8664	1.7056	1.5932	0.2783	1.3350	1573.0	.0687	.0251	.7610	1060
1080	3.6056-2	1.8028 0	-1213.4	2.1932	2.0324	1.8716	1.7108	1.5984	0.2792	1.3336	1586.9	.0697	.0256	.7604	1080
1100	3.5400-2	1.7700 0	-1207.8	2.1984	2.0376	1.8768	1.7160	1.6036	0.2800	1.3323	1600.7	.0707	.0260	.7598	1100
1120	3.4768-2	1.7384 0	-1202.2	2.2034	2.0426	1.8818	1.7210	1.6086	0.2809	1.3309	1614.4	.0717	.0265	.7592	1120
1140	3.4158-2	1.7079 0	-1196.5	2.2084	2.0476	1.8868	1.7260	1.6136	0.2817	1.3296	1627.9	.0726	.0270	.7586	1140

TABLE 26A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.065658; EQUIV. RATIO=1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.4358;
 WET AIR (W/A= 0.03); - GASEOUS COMPOSITION: CO2= .12519; H2O= .16805; N2= .69839; O2= .00000; AR= .00838

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
1160	3.3569-2	1.6785 0	-1190.9	2.2133	2.0525	1.8917	1.7309	1.6185	0.2826	1.3282	1641.3	.0736	.0274	.7580	1160
1180	3.3000-2	1.6500 0	-1185.2	2.2182	2.0573	1.8965	1.7357	1.6233	0.2835	1.3269	1654.6	.0746	.0279	.7574	1180
1200	3.2450-2	1.6225 0	-1179.5	2.2229	2.0621	1.9013	1.7405	1.6281	0.2843	1.3256	1667.7	.0755	.0284	.7567	1200
1220	3.1918-2	1.5959 0	-1173.9	2.2276	2.0668	1.9060	1.7452	1.6328	0.2852	1.3243	1680.8	.0765	.0288	.7561	1220
1240	3.1404-2	1.5702 0	-1168.1	2.2323	2.0715	1.9107	1.7499	1.6375	0.2861	1.3230	1693.6	.0774	.0293	.7555	1240
1260	3.0905-2	1.5453 0	-1162.4	2.2369	2.0761	1.9152	1.7544	1.6420	0.2869	1.3217	1706.4	.0784	.0298	.7549	1260
1280	3.0422-2	1.5211 0	-1156.7	2.2414	2.0806	1.9198	1.7590	1.6466	0.2878	1.3204	1719.1	.0793	.0303	.7543	1280
1300	2.9954-2	1.4977 0	-1150.9	2.2459	2.0850	1.9242	1.7634	1.6510	0.2886	1.3192	1731.6	.0802	.0307	.7537	1300
1320	2.9500-2	1.4750 0	-1145.1	2.2503	2.0895	1.9287	1.7679	1.6555	0.2895	1.3179	1744.1	.0812	.0312	.7531	1320
1340	2.9060-2	1.4530 0	-1139.3	2.2546	2.0938	1.9330	1.7722	1.6598	0.2903	1.3167	1756.4	.0821	.0317	.7525	1340
1360	2.8633-2	1.4316 0	-1133.5	2.2589	2.0981	1.9373	1.7765	1.6641	0.2912	1.3155	1768.7	.0830	.0321	.7519	1360
1380	2.8218-2	1.4109 0	-1127.7	2.2632	2.1024	1.9416	1.7808	1.6684	0.2921	1.3143	1780.8	.0839	.0326	.7513	1380
1400	2.7815-2	1.3907 0	-1121.8	2.2674	2.1066	1.9458	1.7850	1.6726	0.2929	1.3131	1792.8	.0848	.0331	.7508	1400
1420	2.7423-2	1.3711 0	-1116.0	2.2716	2.1108	1.9500	1.7891	1.6767	0.2937	1.3119	1804.8	.0857	.0335	.7502	1420
1440	2.7042-2	1.3521 0	-1110.1	2.2757	2.1149	1.9541	1.7933	1.6809	0.2946	1.3107	1816.6	.0866	.0340	.7497	1440
1460	2.6672-2	1.3336 0	-1104.2	2.2797	2.1189	1.9581	1.7973	1.6849	0.2954	1.3096	1828.4	.0874	.0345	.7493	1460
1480	2.6311-2	1.3156 0	-1098.3	2.2838	2.1230	1.9622	1.8014	1.6890	0.2962	1.3085	1840.1	.0883	.0349	.7488	1480
1500	2.5960-2	1.2980 0	-1092.3	2.2878	2.1269	1.9661	1.8053	1.6929	0.2971	1.3073	1851.7	.0892	.0354	.7484	1500
1520	2.5619-2	1.2809 0	-1086.4	2.2917	2.1309	1.9701	1.8093	1.6969	0.2979	1.3062	1863.2	.0901	.0359	.7481	1520
1540	2.5286-2	1.2643 0	-1080.4	2.2956	2.1348	1.9740	1.8132	1.7008	0.2987	1.3051	1874.6	.0909	.0363	.7477	1540
1560	2.4962-2	1.2481 0	-1074.4	2.2994	2.1386	1.9778	1.8170	1.7046	0.2995	1.3041	1886.0	.0918	.0368	.7473	1560
1580	2.4646-2	1.2323 0	-1068.4	2.3033	2.1425	1.9817	1.8209	1.7085	0.3003	1.3030	1897.3	.0926	.0372	.7469	1580
1600	2.4338-2	1.2169 0	-1062.4	2.3071	2.1462	1.9854	1.8246	1.7122	0.3011	1.3020	1908.5	.0935	.0377	.7466	1600
1620	2.4037-2	1.2019 0	-1056.4	2.3108	2.1500	1.9892	1.8284	1.7160	0.3019	1.3009	1919.6	.0943	.0382	.7463	1620
1640	2.3744-2	1.1872 0	-1050.3	2.3145	2.1537	1.9929	1.8321	1.7197	0.3027	1.2999	1930.7	.0952	.0386	.7459	1640
1660	2.3458-2	1.1729 0	-1044.3	2.3182	2.1574	1.9966	1.8358	1.7234	0.3035	1.2989	1941.7	.0960	.0391	.7456	1660
1680	2.3179-2	1.1589 0	-1038.2	2.3218	2.1610	2.0002	1.8394	1.7270	0.3042	1.2980	1952.6	.0968	.0395	.7453	1680
1700	2.2906-2	1.1453 0	-1032.1	2.3254	2.1646	2.0038	1.8430	1.7306	0.3050	1.2970	1963.5	.0977	.0400	.7450	1700
1720	2.2640-2	1.1320 0	-1026.0	2.3290	2.1682	2.0074	1.8466	1.7342	0.3057	1.2961	1974.3	.0985	.0404	.7447	1720
1740	2.2380-2	1.1190 0	-1019.9	2.3325	2.1717	2.0109	1.8501	1.7377	0.3065	1.2951	1985.0	.0993	.0409	.7444	1740
1760	2.2125-2	1.1063 0	-1013.7	2.3360	2.1752	2.0144	1.8536	1.7412	0.3072	1.2942	1995.7	.1001	.0413	.7441	1760
1780	2.1877-2	1.0938 0	-1007.6	2.3395	2.1787	2.0179	1.8571	1.7447	0.3079	1.2933	2006.3	.1009	.0418	.7439	1780
1800	2.1634-2	1.0817 0	-1001.4	2.3430	2.1822	2.0214	1.8605	1.7481	0.3086	1.2925	2016.9	.1017	.0422	.7436	1800
1900	2.0495-2	1.0248 0	-970.4	2.3597	2.1989	2.0381	1.8773	1.7649	0.3120	1.2884	2068.9	.1057	.0444	.7423	1900
2000	1.9470-2	9.7351-1	-939.0	2.3758	2.2150	2.0542	1.8934	1.7810	0.3152	1.2846	2119.5	.1095	.0466	.7412	2000
2100	1.8543-2	9.2716-1	-907.4	2.3913	2.2305	2.0697	1.9089	1.7965	0.3183	1.2811	2168.9	.1133	.0487	.7402	2100
2200	1.7700-2	8.8501-1	-875.4	2.4062	2.2453	2.0845	1.9237	1.8113	0.3211	1.2779	2217.1	.1171	.0509	.7393	2200
2300	1.6931-2	8.4653-1	-843.1	2.4205	2.2597	2.0989	1.9381	1.8257	0.3239	1.2749	2264.3	.1207	.0530	.7384	2300
2400	1.6225-2	8.1126-1	-810.6	2.4343	2.2735	2.1127	1.9519	1.8395	0.3265	1.2721	2310.5	.1243	.0550	.7375	2400
2500	1.5576-2	7.7881-1	-777.8	2.4477	2.2869	2.1261	1.9653	1.8529	0.3289	1.2695	2355.7	.1279	.0571	.7366	2500

TABLE 26A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A=0.065658; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.4358;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .12519; H2O= .16805; N2= .69839; O2= .00000; AR= .00838

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
2600	1.4977-2	7.4886-1	-744.8	2.4607	2.2998	2.1390	1.9782	1.8658	0.3313	1.2671	2400.1	.1314	.0591	.7358	2600
2700	1.4422-2	7.2112-1	-711.6	2.4732	2.3124	2.1516	1.9908	1.8784	0.3334	1.2649	2443.7	.1348	.0612	.7349	2700
2800	1.3907-2	6.9537-1	-678.1	2.4854	2.3246	2.1637	2.0029	1.8905	0.3355	1.2629	2486.5	.1382	.0632	.7339	2800
2900	1.3428-2	6.7139-1	-644.5	2.4972	2.3364	2.1756	2.0148	1.9024	0.3375	1.2609	2528.6	.1416	.0652	.7330	2900
3000	1.2980-2	6.4901-1	-610.7	2.5086	2.3478	2.1870	2.0262	1.9138	0.3393	1.2591	2570.0	.1449	.0672	.7320	3000
3100	1.2561-2	6.2807-1	-576.6	2.5198	2.3590	2.1982	2.0374	1.9250	0.3411	1.2575	2610.7	.1482	.0692	.7310	3100
3200	1.2169-2	6.0845-1	-542.4	2.5307	2.3698	2.2090	2.0482	1.9358	0.3427	1.2559	2650.9	.1514	.0711	.7300	3200
3300	1.1800-2	5.9001-1	-508.1	2.5412	2.3804	2.2196	2.0588	1.9464	0.3443	1.2545	2690.4	.1546	.0730	.7290	3300
3400	1.1453-2	5.7266-1	-473.6	2.5515	2.3907	2.2299	2.0691	1.9567	0.3458	1.2531	2729.4	.1578	.0749	.7280	3400
3500	1.1126-2	5.5629-1	-438.9	2.5616	2.4008	2.2400	2.0791	1.9668	0.3471	1.2518	2767.8	.1609	.0768	.7269	3500
3600	1.0817-2	5.4084-1	-404.2	2.5714	2.4106	2.2498	2.0889	1.9765	0.3484	1.2507	2805.8	.1640	.0787	.7259	3600
3700	1.0524-2	5.2622-1	-369.3	2.5809	2.4201	2.2593	2.0985	1.9861	0.3497	1.2496	2843.2	.1671	.0806	.7250	3700
3800	1.0248-2	5.1238-1	-334.2	2.5903	2.4295	2.2687	2.1079	1.9955	0.3508	1.2485	2880.2	.1701	.0824	.7240	3800
3900	9.9847-3	4.9924-1	-299.1	2.5994	2.4386	2.2778	2.1170	2.0046	0.3519	1.2476	2916.7	.1731	.0842	.7230	3900
4000	9.7351-3	4.8676-1	-263.8	2.6083	2.4475	2.2867	2.1259	2.0135	0.3529	1.2467	2952.8	.1760	.0861	.7220	4000
4100	9.4977-3	4.7488-1	-228.5	2.6170	2.4562	2.2954	2.1346	2.0222	0.3539	1.2458	2988.5	.1790	.0879	.7209	4100
4200	9.2716-3	4.6358-1	-193.1	2.6256	2.4648	2.3040	2.1432	2.0308	0.3548	1.2450	3023.8	.1819	.0896	.7198	4200
4300	9.0559-3	4.5280-1	-157.5	2.6339	2.4731	2.3123	2.1515	2.0391	0.3557	1.2443	3058.6	.1847	.0914	.7187	4300
4400	8.8501-3	4.4251-1	-121.9	2.6421	2.4813	2.3205	2.1597	2.0473	0.3565	1.2436	3093.1	.1876	.0932	.7176	4400
4500	8.6534-3	4.3267-1	-86.2	2.6501	2.4893	2.3285	2.1677	2.0553	0.3573	1.2430	3127.3	.1904	.0949	.7164	4500
4600	8.4653-3	4.2327-1	-50.5	2.6580	2.4972	2.3364	2.1756	2.0632	0.3580	1.2423	3161.0	.1932	.0967	.7151	4600
4700	8.2852-3	4.1426-1	-14.6	2.6657	2.5049	2.3441	2.1833	2.0709	0.3587	1.2418	3194.5	.1959	.0985	.7138	4700
4800	8.1126-3	4.0563-1	21.3	2.6733	2.5125	2.3517	2.1909	2.0785	0.3594	1.2412	3227.6	.1987	.1002	.7125	4800
4900	7.9470-3	3.9735-1	57.2	2.6807	2.5199	2.3591	2.1983	2.0859	0.3600	1.2407	3260.3	.2014	.1019	.7113	4900
5000	7.7881-3	3.8941-1	93.3	2.6880	2.5272	2.3664	2.2056	2.0932	0.3606	1.2402	3292.8	.2041	.1036	.7101	5000
5100	7.6354-3	3.8177-1	129.4	2.6951	2.5343	2.3735	2.2127	2.1003	0.3612	1.2397	3324.9	.2067	.1053	.7090	5100
5200	7.4886-3	3.7443-1	165.5	2.7021	2.5413	2.3805	2.2197	2.1073	0.3617	1.2393	3356.7	.2094	.1070	.7079	5200
5300	7.3473-3	3.6736-1	201.7	2.7090	2.5482	2.3874	2.2266	2.1142	0.3622	1.2388	3388.3	.2120	.1086	.7068	5300
5400	7.2112-3	3.6056-1	238.0	2.7158	2.5550	2.3942	2.2334	2.1210	0.3628	1.2384	3419.5	.2146	.1103	.7058	5400

TABLE 26.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.065658; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 0.14696 LB/IN² (0.01 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS							FROZEN COMPOSITIONS				
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4338-4	-1062.4	2.3071	28.436	.093	1.0000	-1.0000	0.3011	1.3020	1908.5	.0377	.747	0.3011	1.3020	1908.5	.0377	.747
1700	2.2906-4	-1032.1	2.3254	28.436	.098	1.0000	-1.0000	0.3050	1.2970	1963.5	.0400	.745	0.3050	1.2970	1963.5	.0400	.745
1800	2.1634-4	-1001.4	2.3430	28.436	.102	1.0000	-1.0000	0.3086	1.2924	2016.8	.0422	.744	0.3086	1.2925	2016.9	.0422	.744
1900	2.0495-4	-970.4	2.3597	28.436	.106	1.0000	-1.0000	0.3121	1.2883	2068.8	.0444	.742	0.3120	1.2884	2068.9	.0444	.742
2000	1.9470-4	-939.0	2.3758	28.436	.110	1.0000	-1.0000	0.3154	1.2845	2119.4	.0466	.741	0.3152	1.2846	2119.5	.0466	.741
2100	1.8543-4	-907.3	2.3913	28.436	.113	1.0001	-1.0000	0.3186	1.2808	2168.6	.0488	.740	0.3183	1.2811	2168.9	.0487	.740
2200	1.7700-4	-875.3	2.4062	28.435	.117	1.0002	-1.0000	0.3219	1.2772	2216.5	.0510	.739	0.3211	1.2779	2217.1	.0509	.739
2300	1.6930-4	-842.9	2.4206	28.435	.121	1.0004	-1.0000	0.3254	1.2736	2263.1	.0533	.737	0.3239	1.2749	2264.3	.0530	.738
2400	1.6224-4	-810.2	2.4345	28.434	.124	1.0008	-1.0000	0.3293	1.2697	2308.3	.0557	.735	0.3265	1.2721	2310.6	.0550	.737
2500	1.5575-4	-777.0	2.4480	28.433	.128	1.0015	-1.0000	0.3340	1.2654	2352.0	.0583	.733	0.3289	1.2696	2355.9	.0571	.737
2600	1.4974-4	-743.4	2.4613	28.431	.131	1.0026	-1.0001	0.3399	1.2603	2393.9	.0612	.730	0.3312	1.2672	2400.4	.0592	.736
2700	1.4418-4	-709.0	2.4742	28.427	.135	1.0045	-1.0001	0.3475	1.2543	2433.8	.0645	.726	0.3334	1.2650	2444.2	.0612	.735
2800	1.3900-4	-673.8	2.4870	28.421	.138	1.0073	-1.0002	0.3577	1.2469	2471.4	.0686	.720	0.3355	1.2630	2487.3	.0632	.734
2900	1.3416-4	-637.4	2.4998	28.412	.142	1.0116	-1.0003	0.3713	1.2381	2506.7	.0737	.713	0.3375	1.2612	2530.0	.0652	.733
3000	1.2963-4	-599.4	2.5127	28.398	.145	1.0177	-1.0004	0.3894	1.2278	2539.5	.0802	.703	0.3393	1.2596	2572.2	.0672	.731
3100	1.2536-4	-559.3	2.5258	28.378	.148	1.0264	-1.0007	0.4133	1.2161	2570.0	.0886	.691	0.3410	1.2582	2614.2	.0692	.730
3200	1.2132-4	-516.5	2.5394	28.349	.151	1.0384	-1.0010	0.4444	1.2033	2598.7	.0995	.676	0.3426	1.2570	2656.1	.0711	.729
3300	1.1747-4	-470.1	2.5537	28.309	.154	1.0544	-1.0015	0.4841	1.1899	2626.2	.1138	.657	0.3441	1.2561	2698.2	.0731	.727
3400	1.1380-4	-419.3	2.5688	28.254	.157	1.0756	-1.0022	0.5339	1.1767	2653.3	.1325	.634	0.3455	1.2554	2740.7	.0750	.725
3500	1.1026-4	-362.9	2.5852	28.182	.160	1.1027	-1.0030	0.5953	1.1640	2681.0	.1570	.609	0.3467	1.2551	2783.9	.0770	.723
3600	1.0684-4	-299.8	2.6030	28.087	.163	1.1370	-1.0042	0.6698	1.1524	2710.0	.1886	.580	0.3479	1.2551	2828.1	.0789	.720
3700	1.0351-4	-228.5	2.6225	27.967	.166	1.1793	-1.0057	0.7584	1.1423	2741.1	.2294	.550	0.3489	1.2555	2873.8	.0809	.717
3800	1.0024-4	-147.6	2.6441	27.815	.169	1.2307	-1.0075	0.8623	1.1336	2774.9	.2812	.518	0.3499	1.2564	2921.3	.0829	.713
3900	9.7009-5	-55.5	2.6680	27.627	.172	1.2920	-1.0099	0.9823	1.1265	2811.8	.3464	.487	0.3508	1.2578	2971.2	.0850	.708
4000	9.3804-5	49.4	2.6945	27.400	.174	1.3642	-1.0127	1.1194	1.1208	2852.2	.4273	.456	0.3516	1.2597	3023.8	.0872	.702
4100	9.0605-5	169.0	2.7240	27.127	.177	1.4480	-1.0162	1.2744	1.1164	2896.4	.5255	.428	0.3523	1.2623	3079.9	.0895	.695
4200	8.7400-5	304.9	2.7568	26.805	.179	1.5443	-1.0204	1.4484	1.1131	2944.7	.6418	.404	0.3531	1.2656	3139.9	.0921	.686
4300	8.4175-5	459.3	2.7931	26.431	.181	1.6529	-1.0253	1.6417	1.1108	2997.5	.7753	.384	0.3538	1.2696	3204.6	.0950	.675
4400	8.0927-5	633.9	2.8332	26.002	.183	1.7727	-1.0309	1.8526	1.1094	3055.2	.9218	.368	0.3546	1.2745	3274.5	.0983	.662
4500	7.7657-5	830.2	2.8774	25.518	.185	1.9001	-1.0372	2.0760	1.1088	3118.0	****	.359	0.3555	1.2803	3350.4	.1020	.646
4600	7.4375-5	1049.1	2.9255	24.983	.187	2.0281	-1.0438	2.3007	1.1090	3186.3	****	.354	0.3564	1.2870	3432.5	.1062	.629
4700	7.1109-5	1289.8	2.9772	24.406	.189	2.1454	-1.0503	2.5079	1.1100	3260.0	****	.354	0.3575	1.2947	3520.9	.1108	.611
4800	6.7899-5	1549.3	3.0318	23.800	.191	2.2372	-1.0559	2.6715	1.1117	3338.8	****	.359	0.3586	1.3032	3615.0	.1158	.593
4900	6.4799-5	1821.7	3.0880	23.186	.193	2.2878	-1.0598	2.7625	1.1142	3421.6	****	.368	0.3598	1.3124	3713.5	.1211	.575
5000	6.1868-5	2098.5	3.1439	22.589	.195	2.2852	-1.0612	2.7569	1.1177	3507.1	****	.380	0.3611	1.3218	3814.1	.1264	.558
5100	5.9160-5	2369.5	3.1976	22.032	.198	2.2260	-1.0599	2.6463	1.1221	3593.7	****	.395	0.3623	1.3312	3914.2	.1316	.544
5200	5.6713-5	2624.7	3.2471	21.535	.200	2.1184	-1.0560	2.4433	1.1278	3679.7	****	.410	0.3634	1.3400	4010.9	.1366	.532
5300	5.4540-5	2856.1	3.2912	21.108	.202	1.9789	-1.0502	2.1785	1.1349	3764.1	****	.426	0.3645	1.3479	4102.1	.1411	.522
5400	5.2634-5	3059.6	3.3293	20.755	.205	1.8271	-1.0434	1.8893	1.1437	3846.4	.8780	.440	0.3654	1.3547	4186.3	.1453	.515

TABLE 26.2B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.065658; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 1.46959 LB/IN² (0.10 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM VS FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4338-3	-1062.4	2.1462	28.436	.093	1.0000	-1.0000	0.3011	1.3020	1908.5	.0377	.747	0.3011	1.3020	1908.5	.0377	.747
1700	2.2906-3	-1032.1	2.1646	28.436	.098	1.0000	-1.0000	0.3050	1.2970	1963.5	.0400	.745	0.3050	1.2970	1963.5	.0400	.745
1800	2.1634-3	-1001.4	2.1822	28.436	.102	1.0000	-1.0000	0.3086	1.2925	2016.9	.0422	.744	0.3086	1.2925	2016.9	.0422	.744
1900	2.0495-3	-970.4	2.1989	28.436	.106	1.0000	-1.0000	0.3120	1.2884	2068.8	.0444	.742	0.3120	1.2884	2068.9	.0444	.742
2000	1.9470-3	-939.0	2.2150	28.436	.110	1.0000	-1.0000	0.3153	1.2845	2119.4	.0466	.741	0.3152	1.2846	2119.5	.0466	.741
2100	1.8543-3	-907.4	2.2305	28.436	.113	1.0000	-1.0000	0.3184	1.2810	2168.8	.0488	.740	0.3183	1.2811	2168.9	.0487	.740
2200	1.7700-3	-875.3	2.2454	28.436	.117	1.0001	-1.0000	0.3215	1.2776	2216.8	.0509	.739	0.3211	1.2779	2217.1	.0509	.739
2300	1.6930-3	-843.0	2.2597	28.435	.121	1.0002	-1.0000	0.3246	1.2743	2263.7	.0531	.738	0.3239	1.2749	2264.3	.0530	.738
2400	1.6225-3	-810.4	2.2736	28.435	.124	1.0004	-1.0000	0.3278	1.2710	2309.5	.0553	.736	0.3265	1.2721	2310.5	.0550	.737
2500	1.5575-3	-777.5	2.2871	28.434	.128	1.0007	-1.0000	0.3313	1.2675	2353.9	.0576	.735	0.3289	1.2696	2355.8	.0571	.737
2600	1.4976-3	-744.1	2.3001	28.433	.131	1.0012	-1.0000	0.3353	1.2639	2397.1	.0601	.733	0.3312	1.2672	2400.2	.0592	.736
2700	1.4420-3	-710.4	2.3129	28.432	.135	1.0021	-1.0000	0.3401	1.2598	2438.9	.0627	.731	0.3334	1.2650	2443.9	.0612	.735
2800	1.3904-3	-676.1	2.3253	28.429	.138	1.0034	-1.0001	0.3460	1.2550	2479.1	.0657	.728	0.3355	1.2629	2486.9	.0632	.734
2900	1.3422-3	-641.1	2.3376	28.425	.142	1.0054	-1.0001	0.3534	1.2495	2517.6	.0691	.724	0.3375	1.2611	2529.2	.0652	.733
3000	1.2972-3	-605.3	2.3497	28.418	.145	1.0082	-1.0002	0.3629	1.2431	2554.3	.0731	.719	0.3393	1.2594	2571.0	.0672	.732
3100	1.2549-3	-568.5	2.3618	28.409	.148	1.0122	-1.0003	0.3750	1.2356	2589.2	.0779	.713	0.3410	1.2578	2612.3	.0692	.731
3200	1.2152-3	-530.2	2.3740	28.395	.151	1.0177	-1.0005	0.3903	1.2272	2622.2	.0837	.706	0.3427	1.2564	2653.3	.0711	.729
3300	1.1776-3	-490.3	2.3863	28.377	.155	1.0251	-1.0007	0.4096	1.2178	2653.5	.0909	.697	0.3442	1.2552	2694.0	.0731	.728
3400	1.1419-3	-448.1	2.3988	28.352	.158	1.0348	-1.0010	0.4336	1.2077	2683.5	.0997	.685	0.3456	1.2542	2734.6	.0750	.727
3500	1.1080-3	-403.4	2.4118	28.318	.161	1.0473	-1.0014	0.4630	1.1972	2712.4	.1107	.672	0.3469	1.2534	2775.3	.0769	.725
3600	1.0755-3	-355.3	2.4253	28.274	.164	1.0630	-1.0019	0.4984	1.1867	2740.9	.1243	.656	0.3481	1.2527	2816.1	.0788	.723
3700	1.0444-3	-303.4	2.4396	28.218	.167	1.0825	-1.0026	0.5406	1.1765	2769.4	.1411	.638	0.3493	1.2523	2857.3	.0807	.722
3800	1.0144-3	-247.0	2.4546	28.148	.170	1.1061	-1.0034	0.5898	1.1668	2798.6	.1618	.618	0.3503	1.2522	2899.1	.0825	.720
3900	9.8529-4	-185.2	2.4706	28.060	.172	1.1344	-1.0044	0.6466	1.1580	2828.8	.1871	.596	0.3512	1.2523	2941.8	.0844	.717
4000	9.5701-4	-117.4	2.4878	27.954	.175	1.1676	-1.0057	0.7109	1.1502	2860.6	.2178	.572	0.3521	1.2528	2985.5	.0863	.715
4100	9.2938-4	-42.8	2.5062	27.825	.178	1.2060	-1.0072	0.7830	1.1434	2894.2	.2548	.546	0.3529	1.2535	3030.4	.0882	.711
4200	9.0229-4	39.4	2.5260	27.673	.180	1.2499	-1.0090	0.8626	1.1376	2930.0	.2992	.520	0.3536	1.2546	3076.9	.0902	.708
4300	8.7564-4	130.0	2.5473	27.495	.183	1.2994	-1.0111	0.9497	1.1329	2968.0	.3519	.494	0.3542	1.2561	3125.3	.0922	.703
4400	8.4934-4	229.6	2.5702	27.290	.185	1.3547	-1.0136	1.0442	1.1291	3008.6	.4136	.468	0.3548	1.2580	3175.7	.0943	.698
4500	8.2332-4	339.1	2.5948	27.055	.188	1.4160	-1.0164	1.1462	1.1261	3051.7	.4850	.444	0.3554	1.2603	3228.4	.0966	.691
4600	7.9751-4	459.1	2.6212	26.789	.190	1.4835	-1.0196	1.2559	1.1239	3097.6	.5662	.422	0.3559	1.2631	3283.8	.0990	.684
4700	7.7187-4	590.5	2.6495	26.491	.192	1.5570	-1.0233	1.3731	1.1223	3146.5	.6567	.402	0.3565	1.2663	3342.2	.1016	.675
4800	7.4636-4	734.0	2.6797	26.161	.195	1.6362	-1.0275	1.4974	1.1214	3198.4	.7547	.386	0.3570	1.2700	3403.8	.1045	.665
4900	7.2099-4	890.2	2.7119	25.798	.197	1.7199	-1.0320	1.6273	1.1210	3253.6	.8574	.374	0.3576	1.2743	3469.0	.1077	.654
5000	6.9576-4	1059.5	2.7461	25.404	.199	1.8060	-1.0369	1.7598	1.1211	3312.2	.9606	.364	0.3583	1.2791	3538.0	.1111	.642
5100	6.7075-4	1242.0	2.7822	24.980	.201	1.8909	-1.0419	1.8896	1.1217	3374.4	*****	.359	0.3589	1.2845	3610.9	.1148	.628
5200	6.4607-4	1437.1	2.8201	24.533	.203	1.9698	-1.0469	2.0097	1.1228	3440.0	*****	.357	0.3597	1.2904	3687.7	.1189	.614
5300	6.2187-4	1643.3	2.8594	24.068	.205	2.0368	-1.0514	2.1108	1.1245	3508.9	*****	.358	0.3605	1.2968	3768.1	.1232	.600
5400	5.9834-4	1858.3	2.8996	23.594	.207	2.0857	-1.0552	2.1827	1.1267	3580.7	*****	.361	0.3613	1.3037	3851.6	.1278	.586

TABLE 26.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.065658; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 14.6959 LB/IN² (1.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4338-2	-1062.4	1.9854	28.436	.093	1.0000	-1.0000	0.3011	1.3020	1908.5	.0377	.747	0.3011	1.3020	1908.5	.0377	.747
1700	2.2906-2	-1032.1	2.0038	28.436	.098	1.0000	-1.0000	0.3050	1.2970	1963.5	.0400	.745	0.3050	1.2970	1963.5	.0400	.745
1800	2.1634-2	-1001.4	2.0213	28.436	.102	1.0000	-1.0000	0.3086	1.2925	2016.9	.0422	.744	0.3086	1.2925	2016.9	.0422	.744
1900	2.0495-2	-970.4	2.0381	28.436	.106	1.0000	-1.0000	0.3120	1.2884	2068.9	.0444	.742	0.3120	1.2884	2068.9	.0444	.742
2000	1.9470-2	-939.0	2.0542	28.436	.110	1.0000	-1.0000	0.3152	1.2846	2119.5	.0466	.741	0.3152	1.2846	2119.5	.0466	.741
2100	1.8543-2	-907.3	2.0697	28.436	.113	1.0000	-1.0000	0.3183	1.2810	2168.8	.0487	.740	0.3183	1.2811	2168.9	.0487	.740
2200	1.7700-2	-875.4	2.0846	28.436	.117	1.0000	-1.0000	0.3213	1.2777	2217.0	.0509	.739	0.3211	1.2779	2217.1	.0509	.739
2300	1.6931-2	-843.1	2.0989	28.436	.121	1.0001	-1.0000	0.3242	1.2746	2264.0	.0530	.738	0.3239	1.2749	2264.3	.0530	.738
2400	1.6225-2	-810.5	2.1128	28.435	.124	1.0002	-1.0000	0.3271	1.2716	2310.0	.0552	.737	0.3265	1.2721	2310.5	.0550	.737
2500	1.5576-2	-777.7	2.1262	28.435	.128	1.0003	-1.0000	0.3301	1.2686	2354.9	.0574	.736	0.3289	1.2696	2355.8	.0571	.737
2600	1.4977-2	-744.5	2.1392	28.435	.131	1.0006	-1.0000	0.3332	1.2656	2398.7	.0596	.735	0.3312	1.2672	2400.2	.0592	.736
2700	1.4421-2	-711.0	2.1518	28.434	.135	1.0010	-1.0000	0.3366	1.2624	2441.4	.0619	.733	0.3334	1.2649	2443.8	.0612	.735
2800	1.3906-2	-677.2	2.1641	28.433	.138	1.0016	-1.0000	0.3405	1.2590	2482.9	.0644	.731	0.3355	1.2629	2486.7	.0632	.734
2900	1.3425-2	-642.9	2.1761	28.430	.142	1.0025	-1.0001	0.3451	1.2553	2523.2	.0670	.729	0.3375	1.2610	2528.9	.0652	.733
3000	1.2976-2	-608.1	2.1879	28.427	.145	1.0039	-1.0001	0.3505	1.2511	2562.2	.0700	.726	0.3393	1.2592	2570.5	.0672	.732
3100	1.2556-2	-572.7	2.1995	28.423	.148	1.0057	-1.0001	0.3572	1.2464	2599.8	.0732	.723	0.3411	1.2576	2611.5	.0692	.731
3200	1.2161-2	-536.6	2.2110	28.417	.151	1.0083	-1.0002	0.3653	1.2411	2636.0	.0769	.719	0.3427	1.2562	2652.0	.0711	.730
3300	1.1789-2	-499.6	2.2224	28.408	.155	1.0118	-1.0003	0.3753	1.2351	2670.9	.0812	.714	0.3442	1.2548	2692.1	.0730	.729
3400	1.1437-2	-461.5	2.2338	28.396	.158	1.0163	-1.0005	0.3875	1.2285	2704.3	.0862	.709	0.3457	1.2536	2731.8	.0750	.727
3500	1.1104-2	-422.0	2.2452	28.381	.161	1.0221	-1.0006	0.4021	1.2212	2736.4	.0921	.702	0.3470	1.2526	2771.3	.0769	.726
3600	1.0788-2	-381.0	2.2568	28.360	.164	1.0295	-1.0009	0.4197	1.2135	2767.5	.0990	.695	0.3483	1.2516	2810.6	.0787	.725
3700	1.0487-2	-338.0	2.2685	28.334	.167	1.0386	-1.0012	0.4404	1.2055	2797.7	.1072	.686	0.3495	1.2509	2849.8	.0806	.724
3800	1.0199-2	-292.8	2.2806	28.301	.170	1.0498	-1.0016	0.4647	1.1974	2827.3	.1169	.675	0.3506	1.2503	2889.1	.0824	.722
3900	9.9228-3	-244.9	2.2930	28.259	.173	1.0632	-1.0020	0.4927	1.1893	2856.7	.1283	.664	0.3516	1.2498	2928.5	.0843	.721
4000	9.6573-3	-194.1	2.3059	28.209	.176	1.0791	-1.0026	0.5246	1.1815	2886.2	.1417	.650	0.3525	1.2496	2968.1	.0861	.719
4100	9.4013-3	-139.9	2.3193	28.147	.178	1.0976	-1.0033	0.5604	1.1742	2916.1	.1574	.635	0.3533	1.2495	3008.2	.0879	.717
4200	9.1537-3	-81.9	2.3333	28.074	.181	1.1188	-1.0042	0.6002	1.1674	2946.7	.1757	.619	0.3541	1.2496	3048.8	.0897	.715
4300	8.9134-3	-19.7	2.3479	27.988	.184	1.1429	-1.0051	0.6438	1.1612	2978.3	.1969	.601	0.3548	1.2500	3090.0	.0916	.713
4400	8.6796-3	47.0	2.3632	27.888	.187	1.1698	-1.0063	0.6909	1.1557	3011.0	.2215	.582	0.3555	1.2505	3132.0	.0934	.710
4500	8.4516-3	118.6	2.3793	27.773	.189	1.1995	-1.0076	0.7414	1.1510	3045.1	.2496	.562	0.3560	1.2513	3175.0	.0953	.707
4600	8.2288-3	195.4	2.3962	27.641	.192	1.2320	-1.0090	0.7949	1.1470	3080.7	.2817	.541	0.3566	1.2523	3219.0	.0972	.704
4700	8.0107-3	277.7	2.4139	27.494	.194	1.2672	-1.0107	0.8510	1.1436	3117.8	.3182	.519	0.3571	1.2536	3264.2	.0991	.700
4800	7.7967-3	365.7	2.4324	27.329	.197	1.3051	-1.0126	0.9097	1.1409	3156.5	.3592	.498	0.3575	1.2551	3310.7	.1011	.695
4900	7.5866-3	459.7	2.4518	27.146	.199	1.3457	-1.0146	0.9707	1.1387	3196.9	.4051	.477	0.3579	1.2569	3358.6	.1032	.690
5000	7.3799-3	559.9	2.4720	26.945	.201	1.3889	-1.0169	1.0340	1.1371	3239.0	.4559	.457	0.3583	1.2589	3408.1	.1053	.685
5100	7.1765-3	666.5	2.4931	26.727	.204	1.4347	-1.0194	1.0995	1.1359	3282.9	.5115	.438	0.3587	1.2612	3459.2	.1076	.679
5200	6.9761-3	779.9	2.5151	26.490	.206	1.4832	-1.0222	1.1673	1.1352	3328.6	.5716	.421	0.3591	1.2638	3512.1	.1100	.672
5300	6.7785-3	900.1	2.5380	26.235	.208	1.5340	-1.0252	1.2372	1.1348	3376.2	.6355	.405	0.3595	1.2667	3567.0	.1126	.665
5400	6.5837-3	1027.4	2.5618	25.961	.210	1.5870	-1.0284	1.3087	1.1348	3425.7	.7019	.392	0.3599	1.2699	3623.9	.1153	.657

TABLE 26.4B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.065658; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 146.959 LB/IN2 (10.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4338-1	-1062.4	1.8246	28.436	.093	1.0000	-1.0000	0.3011	1.3020	1908.5	.0377	.747	0.3011	1.3020	1908.5	.0377	.747
1700	2.2906-1	-1032.1	1.8430	28.436	.098	1.0000	-1.0000	0.3050	1.2970	1963.5	.0400	.745	0.3050	1.2970	1963.5	.0400	.745
1800	2.1634-1	-1001.4	1.8605	28.436	.102	1.0000	-1.0000	0.3086	1.2925	2016.9	.0422	.744	0.3086	1.2925	2016.9	.0422	.744
1900	2.0495-1	-970.4	1.8773	28.436	.106	1.0000	-1.0000	0.3120	1.2884	2068.9	.0444	.742	0.3120	1.2884	2068.9	.0444	.742
2000	1.9470-1	-939.0	1.8934	28.436	.110	1.0000	-1.0000	0.3152	1.2846	2119.5	.0466	.741	0.3152	1.2846	2119.5	.0466	.741
2100	1.8543-1	-907.4	1.9089	28.436	.113	1.0000	-1.0000	0.3183	1.2811	2168.9	.0487	.740	0.3183	1.2811	2168.9	.0487	.740
2200	1.7700-1	-875.4	1.9237	28.436	.117	1.0000	-1.0000	0.3212	1.2778	2217.1	.0509	.739	0.3211	1.2779	2217.1	.0509	.739
2300	1.6931-1	-843.1	1.9381	28.436	.121	1.0000	-1.0000	0.3240	1.2748	2264.2	.0530	.738	0.3239	1.2749	2264.3	.0530	.738
2400	1.6225-1	-810.6	1.9519	28.436	.124	1.0001	-1.0000	0.3268	1.2719	2310.2	.0551	.737	0.3265	1.2721	2310.5	.0550	.737
2500	1.5576-1	-777.8	1.9653	28.435	.128	1.0002	-1.0000	0.3295	1.2691	2355.3	.0572	.736	0.3289	1.2695	2355.7	.0571	.737
2600	1.4977-1	-744.7	1.9783	28.435	.131	1.0003	-1.0000	0.3322	1.2664	2399.4	.0594	.735	0.3313	1.2672	2400.1	.0591	.736
2700	1.4422-1	-711.3	1.9909	28.435	.135	1.0005	-1.0000	0.3350	1.2637	2442.5	.0615	.734	0.3334	1.2649	2443.7	.0612	.735
2800	1.3907-1	-677.7	2.0031	28.434	.138	1.0008	-1.0000	0.3379	1.2610	2484.7	.0638	.733	0.3355	1.2629	2486.6	.0632	.734
2900	1.3427-1	-643.7	2.0150	28.433	.142	1.0012	-1.0000	0.3411	1.2582	2525.9	.0661	.731	0.3375	1.2610	2528.7	.0652	.733
3000	1.2978-1	-609.4	2.0267	28.432	.145	1.0018	-1.0000	0.3447	1.2552	2566.1	.0685	.729	0.3393	1.2592	2570.2	.0672	.732
3100	1.2559-1	-574.8	2.0380	28.430	.148	1.0027	-1.0001	0.3488	1.2520	2605.3	.0711	.727	0.3411	1.2575	2611.1	.0692	.731
3200	1.2165-1	-539.6	2.0492	28.427	.151	1.0039	-1.0001	0.3536	1.2484	2643.4	.0739	.725	0.3427	1.2560	2651.4	.0711	.730
3300	1.1795-1	-504.0	2.0601	28.423	.155	1.0056	-1.0001	0.3592	1.2446	2680.4	.0769	.722	0.3443	1.2546	2691.2	.0730	.729
3400	1.1446-1	-467.8	2.0710	28.417	.158	1.0077	-1.0002	0.3658	1.2403	2716.3	.0802	.719	0.3457	1.2533	2730.6	.0750	.728
3500	1.1116-1	-430.8	2.0817	28.410	.161	1.0105	-1.0003	0.3736	1.2357	2751.2	.0840	.716	0.3471	1.2522	2769.5	.0769	.727
3600	1.0803-1	-393.0	2.0923	28.400	.164	1.0139	-1.0004	0.3827	1.2306	2785.0	.0882	.712	0.3484	1.2511	2808.1	.0787	.725
3700	1.0507-1	-354.2	2.1030	28.387	.167	1.0183	-1.0005	0.3934	1.2252	2817.8	.0929	.707	0.3496	1.2502	2846.4	.0806	.724
3800	1.0224-1	-314.3	2.1136	28.372	.170	1.0236	-1.0007	0.4058	1.2195	2849.8	.0982	.702	0.3507	1.2494	2884.4	.0824	.723
3900	9.9553-2	-273.0	2.1243	28.352	.173	1.0300	-1.0010	0.4200	1.2136	2881.0	.1043	.696	0.3517	1.2486	2922.3	.0842	.722
4000	9.6982-2	-230.2	2.1352	28.328	.176	1.0376	-1.0012	0.4362	1.2075	2911.6	.1112	.690	0.3527	1.2481	2960.1	.0861	.721
4100	9.4518-2	-185.7	2.1462	28.298	.179	1.0466	-1.0016	0.4544	1.2014	2941.8	.1190	.682	0.3536	1.2476	2997.8	.0879	.719
4200	9.2153-2	-139.2	2.1573	28.263	.182	1.0570	-1.0020	0.4748	1.1953	2971.8	.1279	.674	0.3545	1.2472	3035.7	.0897	.718
4300	8.9877-2	-90.7	2.1688	28.222	.184	1.0689	-1.0024	0.4972	1.1895	3001.8	.1379	.665	0.3552	1.2470	3073.6	.0914	.716
4400	8.7682-2	-39.7	2.1805	28.173	.187	1.0824	-1.0030	0.5217	1.1839	3032.0	.1492	.654	0.3560	1.2469	3111.7	.0932	.714
4500	8.5561-2	13.8	2.1925	28.116	.190	1.0974	-1.0036	0.5482	1.1786	3062.5	.1618	.643	0.3566	1.2470	3150.1	.0950	.713
4600	8.3507-2	70.0	2.2049	28.051	.192	1.1140	-1.0043	0.5766	1.1738	3093.6	.1759	.631	0.3572	1.2472	3188.9	.0968	.710
4700	8.1514-2	129.1	2.2176	27.977	.195	1.1321	-1.0051	0.6066	1.1694	3125.3	.1916	.618	0.3578	1.2475	3228.0	.0986	.708
4800	7.9578-2	191.3	2.2307	27.893	.198	1.1517	-1.0060	0.6380	1.1655	3157.8	.2090	.604	0.3583	1.2480	3267.7	.1003	.706
4900	7.7694-2	256.8	2.2442	27.800	.200	1.1727	-1.0070	0.6705	1.1621	3191.2	.2281	.589	0.3587	1.2487	3308.0	.1021	.703
5000	7.5858-2	325.5	2.2580	27.697	.203	1.1949	-1.0081	0.7041	1.1591	3225.5	.2491	.573	0.3591	1.2494	3348.8	.1039	.701
5100	7.4067-2	397.6	2.2723	27.584	.205	1.2183	-1.0093	0.7383	1.1566	3260.7	.2721	.557	0.3595	1.2504	3390.3	.1058	.698
5200	7.2319-2	473.2	2.2870	27.461	.208	1.2429	-1.0106	0.7730	1.1546	3297.0	.2972	.540	0.3599	1.2515	3432.6	.1076	.695
5300	7.0610-2	552.2	2.3020	27.328	.210	1.2684	-1.0121	0.8081	1.1529	3334.2	.3244	.523	0.3602	1.2527	3475.6	.1095	.691
5400	6.8938-2	634.8	2.3175	27.184	.212	1.2949	-1.0136	0.8434	1.1516	3372.5	.3539	.506	0.3605	1.2541	3519.4	.1114	.688

TABLE 26.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.065658; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 734.797 LB/IN2 (50.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2169 0	-1062.4	1.7122	28.436	.093	1.0000	-1.0000	0.3011	1.3020	1908.5	.0377	.747	0.3011	1.3020	1908.5	.0377	.747
1700	1.1453 0	-1032.1	1.7306	28.436	.098	1.0000	-1.0000	0.3050	1.2970	1963.5	.0400	.745	0.3050	1.2970	1963.5	.0400	.745
1800	1.0817 0	-1001.4	1.7481	28.436	.102	1.0000	-1.0000	0.3086	1.2925	2016.9	.0422	.744	0.3086	1.2925	2016.9	.0422	.744
1900	1.0248 0	-970.4	1.7649	28.436	.106	1.0000	-1.0000	0.3120	1.2884	2068.9	.0444	.742	0.3120	1.2884	2068.9	.0444	.742
2000	9.7352-1	-939.0	1.7810	28.436	.110	1.0000	-1.0000	0.3152	1.2846	2119.5	.0466	.741	0.3152	1.2846	2119.5	.0466	.741
2100	9.2716-1	-907.4	1.7965	28.436	.113	1.0000	-1.0000	0.3183	1.2811	2168.9	.0487	.740	0.3183	1.2811	2168.9	.0487	.740
2200	8.8501-1	-875.4	1.8113	28.436	.117	1.0000	-1.0000	0.3212	1.2779	2217.1	.0509	.739	0.3211	1.2779	2217.1	.0509	.739
2300	8.4653-1	-843.1	1.8257	28.436	.121	1.0000	-1.0000	0.3240	1.2748	2264.2	.0530	.738	0.3239	1.2749	2264.3	.0530	.738
2400	8.1126-1	-810.6	1.8395	28.436	.124	1.0001	-1.0000	0.3267	1.2720	2310.3	.0551	.737	0.3265	1.2721	2310.5	.0550	.737
2500	7.7881-1	-777.8	1.8529	28.436	.128	1.0001	-1.0000	0.3293	1.2693	2355.5	.0572	.736	0.3289	1.2695	2355.7	.0571	.737
2600	7.4885-1	-744.7	1.8659	28.435	.131	1.0002	-1.0000	0.3318	1.2667	2399.7	.0593	.735	0.3313	1.2672	2400.1	.0591	.736
2700	7.2111-1	-711.4	1.8784	28.435	.135	1.0003	-1.0000	0.3344	1.2642	2443.0	.0614	.734	0.3334	1.2649	2443.7	.0612	.735
2800	6.9534-1	-677.9	1.8907	28.435	.138	1.0005	-1.0000	0.3370	1.2617	2485.4	.0635	.733	0.3355	1.2629	2486.5	.0632	.734
2900	6.7135-1	-644.0	1.9025	28.434	.142	1.0007	-1.0000	0.3397	1.2592	2527.0	.0657	.732	0.3375	1.2609	2528.7	.0652	.733
3000	6.4895-1	-609.9	1.9141	28.433	.145	1.0011	-1.0000	0.3426	1.2567	2567.6	.0680	.730	0.3393	1.2592	2570.1	.0672	.732
3100	6.2799-1	-575.5	1.9254	28.432	.148	1.0016	-1.0000	0.3458	1.2541	2607.4	.0703	.729	0.3411	1.2575	2610.9	.0692	.731
3200	6.0833-1	-540.7	1.9364	28.430	.151	1.0023	-1.0001	0.3493	1.2513	2646.2	.0728	.727	0.3427	1.2560	2651.2	.0711	.730
3300	5.8984-1	-505.6	1.9472	28.428	.155	1.0033	-1.0001	0.3533	1.2483	2684.2	.0753	.725	0.3443	1.2546	2690.9	.0730	.729
3400	5.7243-1	-470.1	1.9578	28.425	.158	1.0046	-1.0001	0.3579	1.2451	2721.2	.0781	.723	0.3457	1.2533	2730.1	.0750	.728
3500	5.5599-1	-434.0	1.9683	28.420	.161	1.0062	-1.0002	0.3632	1.2417	2757.3	.0811	.720	0.3471	1.2520	2768.8	.0769	.727
3600	5.4043-1	-397.4	1.9786	28.414	.164	1.0083	-1.0002	0.3692	1.2380	2792.5	.0844	.718	0.3484	1.2509	2807.1	.0787	.726
3700	5.2569-1	-360.1	1.9888	28.407	.167	1.0109	-1.0003	0.3761	1.2340	2826.9	.0879	.715	0.3496	1.2499	2845.1	.0806	.725
3800	5.1169-1	-322.1	1.9989	28.398	.170	1.0141	-1.0004	0.3841	1.2297	2860.3	.0918	.711	0.3507	1.2490	2882.7	.0824	.724
3900	4.9836-1	-283.3	2.0090	28.386	.173	1.0179	-1.0006	0.3932	1.2252	2893.0	.0961	.708	0.3518	1.2482	2920.1	.0842	.722
4000	4.8565-1	-243.5	2.0191	28.371	.176	1.0225	-1.0007	0.4034	1.2205	2925.0	.1009	.703	0.3528	1.2475	2957.2	.0861	.721
4100	4.7351-1	-202.6	2.0292	28.354	.179	1.0279	-1.0009	0.4150	1.2157	2956.4	.1062	.699	0.3537	1.2469	2994.1	.0879	.720
4200	4.6189-1	-160.4	2.0394	28.333	.182	1.0342	-1.0012	0.4279	1.2107	2987.3	.1121	.694	0.3546	1.2464	3030.9	.0896	.719
4300	4.5075-1	-116.9	2.0496	28.307	.184	1.0415	-1.0014	0.4421	1.2058	3017.8	.1186	.688	0.3554	1.2459	3067.6	.0914	.717
4400	4.4005-1	-72.0	2.0599	28.278	.187	1.0497	-1.0018	0.4577	1.2009	3048.1	.1258	.681	0.3562	1.2456	3104.3	.0932	.716
4500	4.2974-1	-25.3	2.0704	28.243	.190	1.0590	-1.0021	0.4747	1.1962	3078.3	.1337	.674	0.3569	1.2454	3141.0	.0949	.714
4600	4.1981-1	23.0	2.0810	28.204	.193	1.0694	-1.0026	0.4929	1.1916	3108.5	.1425	.667	0.3575	1.2453	3177.8	.0967	.713
4700	4.1022-1	73.3	2.0918	28.158	.195	1.0808	-1.0031	0.5124	1.1872	3138.9	.1521	.658	0.3581	1.2452	3214.7	.0985	.711
4800	4.0094-1	125.5	2.1028	28.107	.198	1.0932	-1.0036	0.5329	1.1832	3169.6	.1625	.650	0.3586	1.2453	3251.8	.1002	.709
4900	3.9195-1	179.9	2.1141	28.049	.201	1.1066	-1.0043	0.5545	1.1794	3200.6	.1739	.640	0.3592	1.2455	3289.1	.1020	.707
5000	3.8323-1	236.5	2.1255	27.985	.203	1.1210	-1.0049	0.5769	1.1760	3232.1	.1862	.630	0.3596	1.2458	3326.8	.1037	.705
5100	3.7476-1	295.3	2.1371	27.913	.206	1.1363	-1.0057	0.5999	1.1729	3264.2	.1995	.619	0.3600	1.2463	3364.7	.1054	.703
5200	3.6652-1	356.5	2.1490	27.835	.208	1.1524	-1.0065	0.6234	1.1702	3296.9	.2138	.608	0.3604	1.2468	3403.0	.1071	.701
5300	3.5851-1	420.0	2.1611	27.750	.211	1.1692	-1.0074	0.6473	1.1679	3330.2	.2292	.596	0.3608	1.2474	3441.7	.1089	.699
5400	3.5070-1	485.9	2.1734	27.658	.213	1.1866	-1.0083	0.6713	1.1659	3364.1	.2457	.583	0.3612	1.2481	3480.8	.1106	.697

TABLE 26C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.065658; EQUIV.RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000;
WET AIR (W/A= 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES					T R		
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S		COND BTU/ FT HR R	PRAN
PRESSURE = 0.01 ATM																
360	1.300-3	-1534.1	1.6150	28.436	0.2560	1.162-3	30.539	.0311	1.000	-1.000	0.2322	1.3889	902	.0098	.734	360
400	1.166-3	-1522.0	1.6468	28.436	0.4068	1.044-3	30.497	.0340	1.000	-1.000	0.2335	1.3866	951	.0109	.731	400
440	1.018-3	-1485.3	1.7331	28.436	1.9726	9.339-4	30.006	.0358	1.000	-1.000	0.2394	1.3821	1004	.0116	.740	440
PRESSURE = 0.10 ATM																
360	1.300-2	-1534.2	1.4809	28.436	0.2482	1.162-2	30.540	.0311	1.000	-1.000	0.2322	1.3889	902	.0098	.734	360
400	1.170-2	-1524.0	1.5078	28.436	0.2676	1.045-2	30.536	.0341	1.000	-1.000	0.2331	1.3868	950	.0109	.730	400
440	1.059-2	-1511.3	1.5380	28.436	0.4158	9.489-3	30.487	.0369	1.000	-1.000	0.2346	1.3844	997	.0119	.727	440
480	9.412-3	-1480.5	1.6044	28.436	1.4133	8.589-3	30.105	.0388	1.000	-1.000	0.2394	1.3803	1046	.0126	.735	480
520	7.489-3	-1363.5	1.8374	28.436	0.2584	7.489-3	28.436	.0379	1.000	-1.000	0.2584	1.3705	1116	.0127	.771	520
PRESSURE = 1.00 ATM																
360	1.300-1	-1534.2	1.3471	28.436	0.2474	1.162-1	30.541	.0311	1.000	-1.000	0.2322	1.3889	902	.0098	.734	360
400	1.170-1	-1524.2	1.3735	28.436	0.2537	1.046-1	30.540	.0341	1.000	-1.000	0.2331	1.3869	950	.0109	.730	400
440	1.063-1	-1513.8	1.3984	28.436	0.2730	9.504-2	30.535	.0370	1.000	-1.000	0.2341	1.3846	996	.0119	.726	440
480	9.716-2	-1501.4	1.4252	28.436	0.3705	8.701-2	30.497	.0397	1.000	-1.000	0.2355	1.3822	1040	.0129	.725	480
520	8.842-2	-1466.3	1.4957	28.436	0.6737	7.985-2	30.321	.0420	1.000	-1.000	0.2383	1.3790	1084	.0138	.728	520
537	8.449-2	-1453.2	1.5205	28.436	0.9155	7.694-2	30.151	.0427	1.000	-1.000	0.2405	1.3772	1104	.0140	.731	537
560	7.815-2	-1425.6	1.5707	28.436	1.5163	7.270-2	29.728	.0433	1.000	-1.000	0.2455	1.3739	1134	.0143	.741	560
600	6.490-2	-1342.7	1.7137	28.436	0.2607	6.490-2	28.436	.0431	1.000	-1.000	0.2607	1.3658	1197	.0146	.770	600
PRESSURE = 10.00 ATM																
360	1.297 0	-1534.2	1.2133	28.436	0.2473	1.162 0	30.541	.0311	1.000	-1.000	0.2322	1.3889	902	.0098	.734	360
400	1.168 0	-1524.2	1.2396	28.436	0.2524	1.046 0	30.541	.0341	1.000	-1.000	0.2331	1.3869	950	.0109	.730	400
440	1.062 0	-1514.0	1.2640	28.436	0.2589	9.505-1	30.540	.0370	1.000	-1.000	0.2341	1.3847	996	.0119	.726	440
480	9.730-1	-1503.4	1.2870	28.436	0.2733	8.712-1	30.536	.0398	1.000	-1.000	0.2351	1.3823	1039	.0129	.724	480
520	8.972-1	-1475.3	1.3437	28.436	0.3521	8.037-1	30.519	.0425	1.000	-1.000	0.2364	1.3799	1081	.0139	.723	520
537	8.682-1	-1469.3	1.3551	28.436	0.3742	7.783-1	30.502	.0435	1.000	-1.000	0.2370	1.3788	1098	.0143	.723	537
560	8.293-1	-1460.0	1.3720	28.436	0.4242	7.448-1	30.459	.0449	1.000	-1.000	0.2381	1.3771	1122	.0148	.724	560
600	7.638-1	-1440.1	1.4063	28.436	0.5939	6.914-1	30.294	.0471	1.000	-1.000	0.2409	1.3739	1163	.0156	.729	600
640	6.935-1	-1410.0	1.4548	28.436	0.9552	6.399-1	29.904	.0487	1.000	-1.000	0.2461	1.3696	1207	.0162	.739	640
680	6.087-1	-1358.4	1.5327	28.436	1.7216	5.860-1	29.096	.0494	1.000	-1.000	0.2560	1.3636	1259	.0167	.755	680
PRESSURE = 50.00 ATM																
360	6.423 0	-1534.2	1.1198	28.436	0.2473	5.809 0	30.541	.0311	1.000	-1.000	0.2322	1.3889	902	.0098	.734	360
400	5.788 0	-1524.2	1.1461	28.436	0.2522	5.228 0	30.541	.0341	1.000	-1.000	0.2331	1.3869	950	.0109	.730	400
440	5.267 0	-1514.0	1.1704	28.436	0.2576	4.753 0	30.540	.0370	1.000	-1.000	0.2341	1.3847	996	.0119	.726	440
480	4.832 0	-1503.6	1.1931	28.436	0.2647	4.356 0	30.540	.0398	1.000	-1.000	0.2351	1.3824	1039	.0129	.723	480
520	4.465 0	-1476.1	1.2486	28.436	0.3245	4.021 0	30.536	.0425	1.000	-1.000	0.2362	1.3800	1081	.0139	.722	520
537	4.326 0	-1470.7	1.2589	28.436	0.3290	3.896 0	30.533	.0436	1.000	-1.000	0.2367	1.3789	1098	.0143	.722	537
560	4.144 0	-1462.9	1.2731	28.436	0.3392	3.732 0	30.524	.0451	1.000	-1.000	0.2374	1.3774	1121	.0148	.723	560
600	3.860 0	-1448.7	1.2975	28.436	0.3725	3.480 0	30.491	.0475	1.000	-1.000	0.2389	1.3747	1160	.0157	.725	600
640	3.598 0	-1432.6	1.3234	28.436	0.4574	3.254 0	30.413	.0498	1.000	-1.000	0.2409	1.3718	1198	.0165	.727	640
680	3.344 0	-1413.1	1.3530	28.436	0.5515	3.046 0	30.252	.0519	1.000	-1.000	0.2438	1.3685	1237	.0173	.731	680
720	3.084 0	-1387.5	1.3894	28.436	0.7397	2.848 0	29.952	.0536	1.000	-1.000	0.2482	1.3645	1277	.0180	.737	720
760	2.802 0	-1352.4	1.4369	28.436	1.0444	2.653 0	29.444	.0548	1.000	-1.000	0.2550	1.3597	1321	.0187	.747	760

TABLE 27.1D -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN² (0.01 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0815-3	-1399.6	1.9106	28.430	.027	1.0000	-1.0000	0.2546	1.3780	931.4	.0086	.790	0.2546	1.3780	931.4	.0086	.790
380	1.0245-3	-1394.5	1.9244	28.430	.028	1.0000	-1.0000	0.2551	1.3770	956.6	.0092	.785	0.2551	1.3770	956.6	.0092	.785
400	9.7331-4	-1389.4	1.9375	28.430	.030	1.0000	-1.0000	0.2556	1.3760	981.1	.0097	.780	0.2556	1.3760	981.1	.0097	.780
420	9.2696-4	-1384.3	1.9500	28.430	.031	1.0000	-1.0000	0.2562	1.3748	1004.9	.0103	.776	0.2562	1.3749	1004.9	.0103	.776
440	8.8483-4	-1379.2	1.9619	28.430	.033	1.0000	-1.0000	0.2568	1.3737	1028.1	.0108	.773	0.2568	1.3737	1028.1	.0108	.773
460	8.4636-4	-1374.0	1.9733	28.430	.034	1.0000	-1.0000	0.2574	1.3724	1050.8	.0113	.770	0.2574	1.3725	1050.8	.0113	.771
480	8.1109-4	-1368.9	1.9843	28.430	.035	1.0000	-1.0000	0.2581	1.3712	1072.9	.0119	.768	0.2580	1.3713	1072.9	.0119	.768
500	7.7865-4	-1363.7	1.9948	28.430	.037	1.0001	-1.0000	0.2588	1.3698	1094.4	.0124	.766	0.2586	1.3700	1094.5	.0124	.767
520	7.4870-4	-1358.5	2.0050	28.430	.038	1.0001	-1.0000	0.2596	1.3682	1115.5	.0129	.763	0.2593	1.3687	1115.7	.0129	.766
537	7.2544-4	-1354.2	2.0132	28.430	.039	1.0002	-1.0000	0.2604	1.3669	1132.6	.0134	.761	0.2599	1.3676	1133.0	.0133	.765
540	7.2096-4	-1353.3	2.0148	28.429	.039	1.0002	-1.0000	0.2605	1.3666	1136.0	.0135	.761	0.2600	1.3674	1136.4	.0134	.765
560	6.9520-4	-1348.1	2.0243	28.429	.041	1.0004	-1.0000	0.2616	1.3646	1156.1	.0140	.758	0.2607	1.3661	1156.7	.0138	.765
580	6.7122-4	-1342.8	2.0335	28.429	.042	1.0007	-1.0000	0.2629	1.3624	1175.6	.0146	.754	0.2614	1.3647	1176.6	.0143	.765
600	6.4882-4	-1337.6	2.0424	28.428	.043	1.0012	-1.0000	0.2646	1.3598	1194.6	.0153	.748	0.2621	1.3633	1196.1	.0148	.765
620	6.2786-4	-1332.3	2.0512	28.426	.044	1.0018	-1.0001	0.2667	1.3566	1212.9	.0160	.740	0.2629	1.3619	1215.3	.0152	.765
640	6.0820-4	-1326.9	2.0597	28.424	.046	1.0028	-1.0001	0.2693	1.3528	1230.6	.0169	.728	0.2637	1.3605	1234.1	.0157	.765
660	5.8971-4	-1321.5	2.0680	28.421	.047	1.0042	-1.0002	0.2726	1.3482	1247.7	.0179	.713	0.2645	1.3590	1252.6	.0162	.763
680	5.7227-4	-1316.0	2.0762	28.417	.048	1.0061	-1.0002	0.2769	1.3428	1264.0	.0192	.695	0.2653	1.3575	1270.9	.0167	.762
700	5.5580-4	-1310.4	2.0843	28.411	.049	1.0087	-1.0003	0.2823	1.3363	1279.4	.0207	.673	0.2662	1.3561	1288.9	.0172	.761
720	5.4021-4	-1304.7	2.0923	28.402	.050	1.0122	-1.0005	0.2890	1.3288	1294.1	.0225	.648	0.2671	1.3546	1306.7	.0177	.759
740	5.2540-4	-1298.8	2.1004	28.391	.052	1.0167	-1.0007	0.2973	1.3202	1308.0	.0246	.622	0.2680	1.3532	1324.2	.0182	.758
760	5.1131-4	-1292.8	2.1084	28.377	.053	1.0225	-1.0009	0.3074	1.3107	1321.1	.0272	.596	0.2690	1.3517	1341.6	.0188	.756
780	4.9786-4	-1286.5	2.1166	28.357	.054	1.0297	-1.0012	0.3197	1.3004	1333.6	.0302	.569	0.2700	1.3503	1358.9	.0193	.754
800	4.8500-4	-1280.0	2.1248	28.333	.055	1.0385	-1.0016	0.3341	1.2896	1345.5	.0337	.545	0.2710	1.3488	1376.1	.0198	.752
820	4.7266-4	-1273.1	2.1333	28.303	.056	1.0490	-1.0021	0.3509	1.2786	1357.1	.0376	.524	0.2721	1.3475	1393.2	.0204	.750
840	4.6080-4	-1265.9	2.1420	28.265	.057	1.0613	-1.0027	0.3701	1.2676	1368.6	.0419	.506	0.2733	1.3461	1410.3	.0209	.747
860	4.4936-4	-1258.3	2.1509	28.220	.058	1.0754	-1.0034	0.3915	1.2570	1380.1	.0464	.492	0.2745	1.3448	1427.5	.0215	.744
880	4.3831-4	-1250.3	2.1602	28.166	.059	1.0910	-1.0042	0.4147	1.2471	1391.8	.0509	.484	0.2757	1.3436	1444.7	.0221	.740
900	4.2761-4	-1241.7	2.1698	28.103	.060	1.1078	-1.0051	0.4393	1.2381	1404.0	.0554	.480	0.2770	1.3424	1462.0	.0228	.736
920	4.1725-4	-1232.7	2.1797	28.031	.062	1.1251	-1.0060	0.4644	1.2301	1416.8	.0595	.480	0.2784	1.3413	1479.4	.0235	.731
940	4.0720-4	-1223.1	2.1900	27.951	.063	1.1421	-1.0069	0.4888	1.2234	1430.3	.0630	.486	0.2799	1.3403	1497.0	.0242	.725
960	3.9746-4	-1213.1	2.2005	27.863	.064	1.1576	-1.0078	0.5111	1.2181	1444.5	.0655	.497	0.2813	1.3393	1514.7	.0249	.719
980	3.8803-4	-1202.7	2.2112	27.769	.065	1.1702	-1.0086	0.5293	1.2143	1459.7	.0669	.512	0.2828	1.3384	1532.5	.0257	.713
1000	3.7893-4	-1192.0	2.2221	27.671	.066	1.1780	-1.0091	0.5611	1.2121	1475.8	.0669	.533	0.2843	1.3376	1550.3	.0265	.707
1020	3.7018-4	-1181.1	2.2328	27.573	.067	1.1790	-1.0092	0.5437	1.2120	1493.1	.0652	.558	0.2858	1.3369	1568.1	.0272	.701
1040	3.6183-4	-1170.3	2.2433	27.479	.068	1.1709	-1.0089	0.5342	1.2145	1511.7	.0618	.587	0.2873	1.3361	1585.6	.0280	.696
1060	3.5390-4	-1159.9	2.2533	27.394	.069	1.1524	-1.0080	0.5107	1.2202	1532.2	.0569	.618	0.2886	1.3354	1602.9	.0287	.691
1080	3.4645-4	-1150.0	2.2625	27.323	.070	1.1246	-1.0066	0.4747	1.2300	1554.8	.0512	.647	0.2899	1.3346	1619.5	.0294	.688
1100	3.3947-4	-1140.9	2.2708	27.269	.071	1.0919	-1.0049	0.4323	1.2437	1579.4	.0457	.669	0.2910	1.3337	1635.6	.0301	.685
1120	3.3295-4	-1132.7	2.2783	27.231	.072	1.0613	-1.0033	0.3927	1.2592	1604.7	.0413	.682	0.2921	1.3328	1650.9	.0306	.684
1140	3.2683-4	-1125.2	2.2849	27.208	.073	1.0376	-1.0020	0.3626	1.2733	1628.7	.0384	.687	0.2930	1.3318	1665.7	.0312	.683

TABLE 27.1D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN² (0.01 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLVLT	DLVDLP	REACTING COMPOSITIONS (GAM)S				FROZEN COMPOSITIONS					
								CP BTU/ LB R	VS FT/S	COND BTU/ FT HR	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR	PRAN	
1160	3.2103-4	-1118.1	2.2910	27.194	.074	1.0218	-1.0012	0.3433	1.2835	1649.9	.0367	.688	0.2939	1.3307	1679.9	.0317	.683
1180	3.1550-4	-1111.4	2.2968	27.186	.075	1.0123	-1.0007	0.3324	1.2895	1668.2	.0360	.687	0.2947	1.3296	1693.9	.0322	.683
1200	3.1019-4	-1104.8	2.3023	27.182	.075	1.0069	-1.0004	0.3269	1.2923	1684.2	.0359	.687	0.2955	1.3284	1707.6	.0326	.683
1220	3.0508-4	-1098.3	2.3077	27.180	.076	1.0038	-1.0002	0.3244	1.2932	1698.9	.0361	.687	0.2963	1.3273	1721.1	.0331	.683
1240	3.0015-4	-1091.8	2.3130	27.178	.077	1.0022	-1.0001	0.3237	1.2929	1712.6	.0364	.686	0.2971	1.3262	1734.5	.0336	.684
1260	2.9538-4	-1085.3	2.3182	27.178	.078	1.0012	-1.0001	0.3239	1.2921	1725.8	.0369	.686	0.2979	1.3251	1747.7	.0340	.684
1280	2.9076-4	-1078.8	2.3233	27.177	.079	1.0007	-1.0000	0.3245	1.2911	1738.8	.0374	.687	0.2986	1.3240	1760.8	.0345	.685
1300	2.8628-4	-1072.3	2.3283	27.177	.080	1.0004	-1.0000	0.3253	1.2900	1751.6	.0379	.687	0.2994	1.3229	1773.8	.0349	.685
1320	2.8194-4	-1065.8	2.3333	27.177	.081	1.0002	-1.0000	0.3262	1.2889	1764.2	.0384	.687	0.3002	1.3218	1786.6	.0354	.686
1340	2.7773-4	-1059.3	2.3382	27.177	.082	1.0001	-1.0000	0.3271	1.2878	1776.8	.0389	.687	0.3009	1.3207	1799.4	.0358	.687
1360	2.7365-4	-1052.7	2.3431	27.177	.083	1.0001	-1.0000	0.3279	1.2868	1789.3	.0394	.687	0.3017	1.3196	1812.0	.0362	.687
1380	2.6968-4	-1046.2	2.3478	27.177	.083	1.0001	-1.0000	0.3287	1.2858	1801.8	.0399	.688	0.3024	1.3186	1824.6	.0367	.688
1400	2.6583-4	-1039.6	2.3526	27.177	.084	1.0000	-1.0000	0.3295	1.2850	1814.2	.0404	.688	0.3032	1.3175	1837.0	.0371	.688
1420	2.6209-4	-1033.0	2.3573	27.177	.085	1.0000	-1.0000	0.3302	1.2842	1826.5	.0409	.688	0.3039	1.3165	1849.4	.0376	.689
1440	2.5845-4	-1026.4	2.3619	27.177	.086	1.0000	-1.0000	0.3309	1.2835	1838.8	.0413	.688	0.3047	1.3155	1861.6	.0380	.689
1460	2.5490-4	-1019.8	2.3665	27.177	.087	1.0000	-1.0000	0.3314	1.2828	1851.1	.0418	.689	0.3054	1.3145	1873.8	.0384	.690
1480	2.5146-4	-1013.1	2.3710	27.177	.088	1.0000	-1.0000	0.3320	1.2822	1863.3	.0422	.689	0.3062	1.3135	1885.9	.0389	.691
1500	2.4811-4	-1006.5	2.3754	27.177	.088	1.0000	-1.0000	0.3325	1.2817	1875.4	.0427	.689	0.3069	1.3125	1897.9	.0393	.691
1520	2.4484-4	-999.8	2.3798	27.177	.089	1.0000	-1.0000	0.3330	1.2812	1887.5	.0431	.690	0.3076	1.3116	1909.8	.0397	.692
1540	2.4166-4	-993.2	2.3842	27.177	.090	1.0000	-1.0000	0.3334	1.2807	1899.6	.0436	.690	0.3083	1.3106	1921.6	.0401	.693
1560	2.3856-4	-986.5	2.3885	27.177	.091	1.0000	-1.0000	0.3338	1.2803	1911.5	.0440	.690	0.3090	1.3097	1933.3	.0406	.693
1580	2.3554-4	-979.8	2.3927	27.177	.092	1.0000	-1.0000	0.3341	1.2799	1923.5	.0444	.690	0.3098	1.3087	1945.0	.0410	.694
1600	2.3260-4	-973.1	2.3970	27.177	.093	1.0000	-1.0000	0.3345	1.2795	1935.3	.0448	.691	0.3105	1.3078	1956.6	.0414	.694
1620	2.2973-4	-966.4	2.4011	27.177	.093	1.0000	-1.0000	0.3348	1.2792	1947.1	.0452	.691	0.3112	1.3069	1968.1	.0418	.695
1640	2.2693-4	-959.7	2.4052	27.177	.094	1.0000	-1.0000	0.3351	1.2789	1958.9	.0457	.691	0.3119	1.3060	1979.5	.0422	.695
1660	2.2419-4	-953.0	2.4093	27.177	.095	1.0000	-1.0000	0.3353	1.2786	1970.6	.0461	.692	0.3125	1.3051	1990.9	.0427	.696
1680	2.2152-4	-946.3	2.4133	27.177	.096	1.0000	-1.0000	0.3356	1.2783	1982.2	.0465	.692	0.3132	1.3043	2002.2	.0431	.697
1700	2.1892-4	-939.6	2.4173	27.177	.097	1.0000	-1.0000	0.3358	1.2781	1993.8	.0469	.692	0.3139	1.3034	2013.4	.0435	.697
1720	2.1637-4	-932.9	2.4212	27.177	.097	1.0000	-1.0000	0.3361	1.2778	2005.3	.0472	.693	0.3146	1.3026	2024.6	.0439	.698
1740	2.1389-4	-926.2	2.4251	27.177	.098	1.0000	-1.0000	0.3363	1.2776	2016.7	.0476	.693	0.3152	1.3018	2035.7	.0443	.698
1760	2.1146-4	-919.4	2.4289	27.177	.099	1.0000	-1.0000	0.3365	1.2774	2028.1	.0480	.693	0.3159	1.3010	2046.7	.0447	.699
1780	2.0908-4	-912.7	2.4327	27.177	.100	1.0000	-1.0000	0.3367	1.2772	2039.4	.0484	.694	0.3165	1.3002	2057.7	.0452	.699
1800	2.0676-4	-906.0	2.4365	27.177	.101	1.0000	-1.0000	0.3369	1.2770	2050.7	.0488	.694	0.3171	1.2994	2068.6	.0456	.699
1900	1.9587-4	-872.2	2.4547	27.177	.104	1.0000	-1.0000	0.3378	1.2761	2106.1	.0507	.696	0.3202	1.2957	2122.3	.0476	.701
2000	1.8608-4	-838.4	2.4721	27.177	.108	1.0000	-1.0000	0.3387	1.2751	2160.0	.0525	.697	0.3231	1.2923	2174.5	.0497	.703
2100	1.7722-4	-804.5	2.4886	27.177	.112	1.0000	-1.0000	0.3397	1.2741	2212.5	.0543	.698	0.3259	1.2890	2225.4	.0517	.704
2200	1.6916-4	-770.5	2.5045	27.177	.115	1.0000	-1.0000	0.3407	1.2730	2263.6	.0562	.700	0.3286	1.2860	2275.1	.0537	.706
2300	1.6181-4	-736.3	2.5196	27.177	.119	1.0000	-1.0000	0.3419	1.2718	2313.4	.0580	.701	0.3311	1.2832	2323.7	.0557	.707
2400	1.5507-4	-702.1	2.5342	27.176	.122	1.0000	-1.0000	0.3431	1.2706	2362.0	.0599	.701	0.3336	1.2805	2371.2	.0577	.708
2500	1.4886-4	-667.7	2.5482	27.176	.126	1.0001	-1.0000	0.3445	1.2693	2409.4	.0619	.701	0.3359	1.2780	2417.7	.0597	.708

TABLE 27.1D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN² (0.01 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4314-4	-633.2	2.5618	27.176	.129	1.0002	-1.0000	0.3460	1.2678	2455.8	.0639	.701	0.3381	1.2757	2463.4	.0617	.709
2700	1.3783-4	-598.5	2.5749	27.176	.133	1.0003	-1.0000	0.3477	1.2663	2501.0	.0661	.699	0.3402	1.2735	2508.2	.0637	.709
2800	1.3291-4	-563.6	2.5876	27.176	.136	1.0006	-1.0000	0.3498	1.2645	2545.1	.0685	.695	0.3422	1.2715	2552.2	.0657	.709
2900	1.2832-4	-528.5	2.5999	27.175	.139	1.0012	-1.0000	0.3524	1.2624	2588.1	.0714	.689	0.3441	1.2696	2595.5	.0677	.709
3000	1.2404-4	-493.1	2.6119	27.173	.143	1.0020	-1.0001	0.3558	1.2597	2629.6	.0748	.679	0.3459	1.2678	2638.1	.0696	.709
3100	1.2003-4	-457.3	2.6236	27.171	.146	1.0035	-1.0001	0.3607	1.2562	2669.5	.0791	.665	0.3476	1.2662	2680.1	.0716	.709
3200	1.1626-4	-420.9	2.6352	27.167	.149	1.0060	-1.0002	0.3679	1.2514	2707.2	.0848	.647	0.3493	1.2647	2721.5	.0736	.708
3300	1.1271-4	-383.6	2.6466	27.160	.152	1.0101	-1.0003	0.3789	1.2447	2742.1	.0925	.624	0.3508	1.2633	2762.5	.0755	.707
3400	1.0935-4	-344.9	2.6582	27.150	.155	1.0170	-1.0005	0.3961	1.2352	2773.3	.1032	.597	0.3523	1.2620	2803.2	.0775	.706
3500	1.0616-4	-304.0	2.6700	27.132	.159	1.0285	-1.0009	0.4240	1.2221	2799.6	.1184	.568	0.3537	1.2610	2843.8	.0795	.705
3600	1.0310-4	-259.6	2.6826	27.104	.162	1.0480	-1.0015	0.4693	1.2047	2820.6	.1405	.540	0.3550	1.2601	2884.7	.0815	.704
3700	1.0014-4	-209.3	2.6963	27.057	.165	1.0801	-1.0026	0.5417	1.1841	2837.4	.1731	.515	0.3562	1.2595	2926.3	.0836	.701
3800	9.7238-5	-150.0	2.7121	26.983	.168	1.1301	-1.0044	0.6504	1.1630	2853.7	.2209	.493	0.3574	1.2594	2969.5	.0857	.699
3900	9.4343-5	-77.9	2.7309	26.868	.170	1.2006	-1.0069	0.7985	1.1449	2874.5	.2882	.472	0.3584	1.2598	3015.2	.0879	.694
4000	9.1419-5	10.8	2.7533	26.703	.173	1.2899	-1.0103	0.9793	1.1313	2902.8	.3775	.449	0.3594	1.2609	3064.5	.0903	.689
4100	8.8442-5	118.7	2.7800	26.479	.176	1.3939	-1.0144	1.1826	1.1221	2939.2	.4888	.425	0.3604	1.2628	3118.0	.0928	.682
4200	8.5404-5	247.8	2.8111	26.193	.178	1.5094	-1.0192	1.4016	1.1161	2983.0	.6211	.402	0.3612	1.2656	3176.5	.0956	.672
4300	8.2304-5	399.5	2.8467	25.844	.180	1.6352	-1.0247	1.6344	1.1123	3033.5	.7723	.382	0.3621	1.2694	3240.5	.0988	.661
4400	7.9147-5	575.1	2.8871	25.430	.182	1.7696	-1.0309	1.8794	1.1101	3090.3	.9383	.366	0.3630	1.2741	3310.6	.1024	.647
4500	7.5943-5	775.7	2.9322	24.955	.185	1.9093	-1.0377	2.1322	1.1091	3153.4	*****	.354	0.3640	1.2798	3387.3	.1064	.631
4600	7.2711-5	1001.5	2.9818	24.424	.187	2.0474	-1.0448	2.3822	1.1090	3222.6	*****	.348	0.3650	1.2866	3471.0	.1110	.614
4700	6.9483-5	1251.4	3.0355	23.847	.189	2.1727	-1.0516	2.6105	1.1099	3297.8	*****	.346	0.3662	1.2944	3561.4	.1160	.595
4800	6.6304-5	1522.0	3.0925	23.240	.190	2.2701	-1.0575	2.7902	1.1115	3378.5	*****	.349	0.3674	1.3031	3658.0	.1215	.576
4900	6.3232-5	1806.8	3.1512	22.625	.192	2.3237	-1.0616	2.8907	1.1140	3463.5	*****	.355	0.3687	1.3124	3759.3	.1272	.558
5000	6.0327-5	2096.6	3.2097	22.027	.194	2.3210	-1.0631	2.8865	1.1175	3551.4	*****	.365	0.3700	1.3222	3862.9	.1330	.541
5100	5.7647-5	2380.3	3.2659	21.469	.197	2.2585	-1.0617	2.7682	1.1220	3640.4	*****	.377	0.3713	1.3318	3966.0	.1387	.526
5200	5.5231-5	2646.9	3.3177	20.972	.199	2.1448	-1.0575	2.5496	1.1278	3728.7	*****	.389	0.3725	1.3408	4065.6	.1441	.514
5300	5.3092-5	2888.0	3.3636	20.548	.201	1.9977	-1.0513	2.2644	1.1351	3815.3	*****	.402	0.3737	1.3489	4159.2	.1491	.504
5400	5.1222-5	3098.9	3.4031	20.198	.203	1.8383	-1.0442	1.9541	1.1440	3899.6	.9593	.414	0.3746	1.3558	4245.3	.1537	.496

TABLE 27.2D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 1.46959 LB/IN2 (0.10 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0815-2	-1399.6	1.7497	28.430	.027	1.0000	-1.0000	0.2546	1.3780	931.4	.0086	.790	0.2546	1.3780	931.4	.0086	.790
380	1.0245-2	-1394.5	1.7635	28.430	.028	1.0000	-1.0000	0.2551	1.3770	956.6	.0092	.785	0.2551	1.3770	956.6	.0092	.785
400	9.7331-3	-1389.4	1.7766	28.430	.030	1.0000	-1.0000	0.2556	1.3760	981.1	.0097	.780	0.2556	1.3760	981.1	.0097	.780
420	9.2696-3	-1384.3	1.7891	28.430	.031	1.0000	-1.0000	0.2562	1.3748	1004.9	.0103	.776	0.2562	1.3749	1004.9	.0103	.776
440	8.8483-3	-1379.2	1.8010	28.430	.033	1.0000	-1.0000	0.2568	1.3737	1028.1	.0108	.773	0.2568	1.3737	1028.1	.0108	.773
460	8.4636-3	-1374.0	1.8125	28.430	.034	1.0000	-1.0000	0.2574	1.3725	1050.8	.0113	.770	0.2574	1.3725	1050.8	.0113	.771
480	8.1109-3	-1368.9	1.8234	28.430	.035	1.0000	-1.0000	0.2580	1.3712	1072.9	.0119	.768	0.2580	1.3713	1072.9	.0119	.768
500	7.7865-3	-1363.7	1.8340	28.430	.037	1.0000	-1.0000	0.2587	1.3699	1094.5	.0124	.766	0.2586	1.3700	1094.5	.0124	.767
520	7.4870-3	-1358.5	1.8441	28.430	.038	1.0000	-1.0000	0.2594	1.3686	1115.6	.0129	.765	0.2593	1.3687	1115.7	.0129	.766
537	7.2544-3	-1354.2	1.8523	28.430	.039	1.0001	-1.0000	0.2600	1.3674	1132.9	.0133	.764	0.2598	1.3676	1133.0	.0133	.765
540	7.2097-3	-1353.3	1.8539	28.430	.039	1.0001	-1.0000	0.2601	1.3671	1136.3	.0134	.764	0.2600	1.3674	1136.4	.0134	.765
560	6.9522-3	-1348.1	1.8634	28.430	.041	1.0001	-1.0000	0.2610	1.3656	1156.5	.0139	.763	0.2607	1.3661	1156.7	.0138	.765
580	6.7124-3	-1342.9	1.8726	28.429	.042	1.0002	-1.0000	0.2619	1.3640	1176.2	.0144	.761	0.2614	1.3647	1176.6	.0143	.765
600	6.4886-3	-1337.6	1.8815	28.429	.043	1.0004	-1.0000	0.2629	1.3622	1195.6	.0149	.760	0.2621	1.3633	1196.1	.0148	.765
620	6.2792-3	-1332.4	1.8901	28.429	.044	1.0006	-1.0000	0.2641	1.3602	1214.4	.0155	.757	0.2629	1.3619	1215.2	.0152	.765
640	6.0828-3	-1327.1	1.8985	28.428	.046	1.0009	-1.0000	0.2654	1.3580	1232.9	.0161	.753	0.2637	1.3604	1234.0	.0157	.765
660	5.8983-3	-1321.7	1.9067	28.427	.047	1.0013	-1.0000	0.2670	1.3555	1250.9	.0167	.747	0.2645	1.3590	1252.5	.0162	.764
680	5.7245-3	-1316.4	1.9147	28.426	.048	1.0019	-1.0001	0.2690	1.3526	1268.4	.0175	.739	0.2653	1.3575	1270.7	.0167	.763
700	5.5606-3	-1311.0	1.9226	28.424	.049	1.0028	-1.0001	0.2712	1.3494	1285.4	.0183	.730	0.2661	1.3560	1288.6	.0172	.762
720	5.4056-3	-1305.5	1.9302	28.421	.050	1.0039	-1.0002	0.2740	1.3457	1301.9	.0192	.718	0.2670	1.3545	1306.2	.0177	.761
740	5.2589-3	-1300.0	1.9378	28.418	.052	1.0054	-1.0002	0.2773	1.3415	1317.9	.0203	.705	0.2678	1.3530	1323.6	.0182	.760
760	5.1196-3	-1294.4	1.9452	28.413	.053	1.0073	-1.0003	0.2812	1.3367	1333.3	.0215	.690	0.2687	1.3515	1340.7	.0187	.759
780	4.9873-3	-1288.8	1.9526	28.407	.054	1.0097	-1.0004	0.2859	1.3314	1348.2	.0229	.673	0.2696	1.3501	1357.6	.0191	.758
800	4.8612-3	-1283.0	1.9599	28.399	.055	1.0127	-1.0005	0.2914	1.3255	1362.5	.0245	.655	0.2706	1.3486	1374.3	.0196	.757
820	4.7409-3	-1277.1	1.9672	28.388	.056	1.0165	-1.0007	0.2979	1.3190	1376.3	.0263	.635	0.2715	1.3471	1390.9	.0201	.757
840	4.6260-3	-1271.1	1.9744	28.376	.057	1.0210	-1.0009	0.3056	1.3120	1389.6	.0284	.615	0.2725	1.3456	1407.3	.0206	.756
860	4.5159-3	-1264.9	1.9817	28.360	.058	1.0265	-1.0012	0.3144	1.3046	1402.5	.0307	.596	0.2735	1.3441	1423.6	.0211	.754
880	4.4102-3	-1258.5	1.9891	28.341	.059	1.0329	-1.0015	0.3244	1.2968	1415.0	.0334	.577	0.2745	1.3427	1439.8	.0216	.753
900	4.3087-3	-1251.9	1.9965	28.317	.060	1.0404	-1.0019	0.3358	1.2888	1427.1	.0363	.559	0.2756	1.3413	1455.9	.0221	.751
920	4.2109-3	-1245.0	2.0040	28.290	.061	1.0489	-1.0024	0.3486	1.2807	1439.0	.0394	.543	0.2767	1.3399	1471.9	.0227	.749
940	4.1166-3	-1237.9	2.0117	28.257	.063	1.0586	-1.0029	0.3627	1.2727	1450.8	.0428	.530	0.2778	1.3386	1487.9	.0233	.747
960	4.0254-3	-1230.5	2.0194	28.219	.064	1.0693	-1.0035	0.3782	1.2648	1462.6	.0463	.519	0.2790	1.3373	1504.0	.0238	.744
980	3.9371-3	-1222.8	2.0274	28.175	.065	1.0811	-1.0041	0.3948	1.2571	1474.5	.0498	.512	0.2802	1.3361	1520.0	.0244	.740
1000	3.8516-3	-1214.7	2.0356	28.126	.066	1.0936	-1.0048	0.4125	1.2499	1486.5	.0534	.507	0.2815	1.3349	1536.1	.0251	.737
1020	3.7686-3	-1206.3	2.0439	28.070	.067	1.1068	-1.0055	0.4308	1.2432	1498.7	.0568	.506	0.2827	1.3338	1552.3	.0257	.733
1040	3.6880-3	-1197.5	2.0525	28.008	.068	1.1202	-1.0063	0.4496	1.2370	1511.2	.0599	.508	0.2840	1.3327	1568.6	.0264	.729
1060	3.6097-3	-1188.3	2.0612	27.941	.069	1.1334	-1.0071	0.4682	1.2314	1524.1	.0627	.513	0.2853	1.3317	1584.9	.0271	.724
1080	3.5336-3	-1178.8	2.0701	27.868	.070	1.1458	-1.0078	0.4859	1.2265	1537.3	.0650	.521	0.2867	1.3308	1601.3	.0278	.720
1100	3.4597-3	-1168.9	2.0792	27.791	.071	1.1566	-1.0085	0.5018	1.2225	1551.1	.0666	.533	0.2880	1.3300	1617.8	.0285	.715
1120	3.3881-3	-1158.7	2.0884	27.710	.072	1.1649	-1.0090	0.5148	1.2194	1565.4	.0673	.548	0.2893	1.3292	1634.4	.0292	.710
1140	3.3188-3	-1148.3	2.0975	27.628	.073	1.1694	-1.0093	0.5231	1.2174	1580.4	.0671	.566	0.2907	1.3285	1650.9	.0299	.706

TABLE 27.2D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 1.46959 LB/IN² (0.10 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1160	3.2520-3	-1137.8	2.1067	27.547	.074	1.1687	-1.0093	0.5250	1.2169	1596.2	.0657	.588	0.2920	1.3279	1667.4	.0306	.701
1180	3.1878-3	-1127.4	2.1156	27.469	.075	1.1613	-1.0090	0.5184	1.2182	1613.0	.0632	.611	0.2932	1.3272	1683.7	.0313	.697
1200	3.1266-3	-1117.2	2.1242	27.398	.075	1.1466	-1.0082	0.5021	1.2218	1631.2	.0596	.636	0.2944	1.3266	1699.7	.0320	.694
1220	3.0684-3	-1107.4	2.1323	27.336	.076	1.1250	-1.0070	0.4768	1.2282	1650.9	.0553	.658	0.2955	1.3259	1715.3	.0327	.691
1240	3.0134-3	-1098.1	2.1398	27.286	.077	1.0990	-1.0056	0.4457	1.2371	1671.9	.0509	.676	0.2966	1.3252	1730.4	.0333	.689
1260	2.9615-3	-1089.5	2.1467	27.249	.078	1.0729	-1.0041	0.4139	1.2477	1693.7	.0471	.687	0.2975	1.3244	1745.0	.0338	.688
1280	2.9124-3	-1081.5	2.1530	27.222	.079	1.0501	-1.0029	0.3864	1.2584	1715.2	.0442	.692	0.2984	1.3235	1759.0	.0343	.687
1300	2.8658-3	-1074.0	2.1588	27.205	.080	1.0328	-1.0019	0.3657	1.2675	1735.3	.0422	.693	0.2993	1.3226	1772.7	.0348	.687
1320	2.8212-3	-1066.9	2.1643	27.194	.081	1.0208	-1.0012	0.3516	1.2742	1753.6	.0411	.692	0.3001	1.3216	1785.9	.0353	.687
1340	2.7784-3	-1059.9	2.1695	27.187	.082	1.0129	-1.0008	0.3428	1.2786	1770.1	.0405	.691	0.3009	1.3206	1798.9	.0358	.687
1360	2.7371-3	-1053.1	2.1745	27.183	.083	1.0080	-1.0005	0.3376	1.2811	1785.1	.0404	.690	0.3017	1.3196	1811.8	.0362	.687
1380	2.6972-3	-1046.4	2.1794	27.181	.083	1.0049	-1.0003	0.3346	1.2824	1799.2	.0405	.689	0.3024	1.3185	1824.4	.0367	.688
1400	2.6585-3	-1039.7	2.1842	27.179	.084	1.0030	-1.0002	0.3331	1.2829	1812.6	.0408	.689	0.3032	1.3175	1836.9	.0371	.688
1420	2.6210-3	-1033.1	2.1889	27.178	.085	1.0019	-1.0001	0.3324	1.2829	1825.5	.0411	.689	0.3039	1.3165	1849.3	.0376	.689
1440	2.5846-3	-1026.4	2.1936	27.178	.086	1.0012	-1.0001	0.3323	1.2827	1838.2	.0415	.689	0.3047	1.3155	1861.6	.0380	.689
1460	2.5491-3	-1019.8	2.1982	27.177	.087	1.0008	-1.0000	0.3323	1.2823	1850.7	.0419	.689	0.3054	1.3145	1873.8	.0384	.690
1480	2.5146-3	-1013.2	2.2027	27.177	.088	1.0005	-1.0000	0.3326	1.2819	1863.0	.0423	.689	0.3062	1.3135	1885.9	.0389	.691
1500	2.4811-3	-1006.5	2.2072	27.177	.088	1.0003	-1.0000	0.3329	1.2815	1875.3	.0427	.689	0.3069	1.3125	1897.9	.0393	.691
1520	2.4484-3	-999.8	2.2116	27.177	.089	1.0002	-1.0000	0.3332	1.2810	1887.4	.0432	.690	0.3076	1.3116	1909.8	.0397	.692
1540	2.4166-3	-993.2	2.2159	27.177	.090	1.0001	-1.0000	0.3335	1.2806	1899.5	.0436	.690	0.3083	1.3106	1921.6	.0401	.693
1560	2.3857-3	-986.5	2.2202	27.177	.091	1.0001	-1.0000	0.3339	1.2802	1911.5	.0440	.690	0.3090	1.3097	1933.3	.0406	.693
1580	2.3555-3	-979.8	2.2245	27.177	.092	1.0001	-1.0000	0.3342	1.2799	1923.4	.0444	.690	0.3098	1.3087	1945.0	.0410	.694
1600	2.3260-3	-973.1	2.2287	27.177	.093	1.0001	-1.0000	0.3345	1.2795	1935.3	.0448	.691	0.3105	1.3078	1956.6	.0414	.694
1620	2.2973-3	-966.4	2.2329	27.177	.093	1.0000	-1.0000	0.3348	1.2792	1947.1	.0453	.691	0.3112	1.3069	1968.1	.0418	.695
1640	2.2693-3	-959.7	2.2370	27.177	.094	1.0000	-1.0000	0.3351	1.2789	1958.9	.0457	.691	0.3119	1.3060	1979.5	.0422	.695
1660	2.2419-3	-953.0	2.2410	27.177	.095	1.0000	-1.0000	0.3354	1.2786	1970.6	.0461	.692	0.3125	1.3051	1990.9	.0427	.696
1680	2.2152-3	-946.3	2.2450	27.177	.096	1.0000	-1.0000	0.3356	1.2783	1982.2	.0465	.692	0.3132	1.3043	2002.2	.0431	.697
1700	2.1892-3	-939.6	2.2490	27.177	.097	1.0000	-1.0000	0.3358	1.2781	1993.8	.0469	.692	0.3139	1.3034	2013.4	.0435	.697
1720	2.1637-3	-932.9	2.2529	27.177	.097	1.0000	-1.0000	0.3361	1.2778	2005.3	.0472	.693	0.3146	1.3026	2024.6	.0439	.698
1740	2.1389-3	-926.2	2.2568	27.177	.098	1.0000	-1.0000	0.3363	1.2776	2016.7	.0476	.693	0.3152	1.3018	2035.7	.0443	.698
1760	2.1146-3	-919.4	2.2607	27.177	.099	1.0000	-1.0000	0.3365	1.2774	2028.1	.0480	.693	0.3159	1.3010	2046.7	.0447	.699
1780	2.0908-3	-912.7	2.2645	27.177	.100	1.0000	-1.0000	0.3367	1.2772	2039.4	.0484	.694	0.3165	1.3002	2057.7	.0452	.699
1800	2.0676-3	-906.0	2.2682	27.177	.101	1.0000	-1.0000	0.3369	1.2770	2050.7	.0488	.694	0.3171	1.2994	2068.6	.0456	.699
1900	1.9587-3	-872.2	2.2865	27.177	.104	1.0000	-1.0000	0.3378	1.2761	2106.1	.0507	.696	0.3202	1.2957	2122.3	.0476	.701
2000	1.8608-3	-838.4	2.3038	27.177	.108	1.0000	-1.0000	0.3387	1.2751	2160.0	.0525	.697	0.3231	1.2923	2174.5	.0497	.703
2100	1.7722-3	-804.5	2.3204	27.177	.112	1.0000	-1.0000	0.3397	1.2741	2212.5	.0543	.698	0.3259	1.2890	2225.4	.0517	.704
2200	1.6916-3	-770.5	2.3362	27.177	.115	1.0000	-1.0000	0.3407	1.2730	2263.6	.0562	.700	0.3286	1.2860	2275.1	.0537	.706
2300	1.6181-3	-736.4	2.3514	27.177	.119	1.0000	-1.0000	0.3419	1.2719	2313.4	.0580	.701	0.3311	1.2832	2323.7	.0557	.707
2400	1.5507-3	-702.1	2.3659	27.177	.122	1.0000	-1.0000	0.3431	1.2707	2362.0	.0599	.702	0.3336	1.2805	2371.2	.0577	.708
2500	1.4886-3	-667.7	2.3800	27.176	.126	1.0000	-1.0000	0.3443	1.2694	2409.5	.0617	.703	0.3359	1.2780	2417.7	.0597	.708

TABLE 27.2D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 1.46959 LB/IN2 (0.10 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS					FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4314-3	-633.2	2.3935	27.176	.129	1.0001	-1.0000	0.3457	1.2681	2456.0	.0636	.703	0.3381	1.2757	2463.4	.0617	.709
2700	1.3784-3	-598.6	2.4066	27.176	.133	1.0001	-1.0000	0.3471	1.2667	2501.5	.0656	.703	0.3402	1.2735	2508.2	.0637	.709
2800	1.3291-3	-563.8	2.4192	27.176	.136	1.0002	-1.0000	0.3486	1.2653	2545.9	.0676	.702	0.3422	1.2715	2552.2	.0657	.709
2900	1.2833-3	-528.9	2.4315	27.176	.139	1.0004	-1.0000	0.3503	1.2638	2589.5	.0698	.700	0.3441	1.2696	2595.4	.0677	.709
3000	1.2405-3	-493.7	2.4434	27.176	.143	1.0006	-1.0000	0.3522	1.2621	2632.0	.0721	.697	0.3459	1.2678	2637.9	.0696	.709
3100	1.2004-3	-458.4	2.4550	27.175	.146	1.0011	-1.0000	0.3546	1.2603	2673.6	.0748	.692	0.3476	1.2662	2679.8	.0716	.709
3200	1.1629-3	-422.8	2.4663	27.174	.149	1.0018	-1.0001	0.3576	1.2580	2714.0	.0778	.685	0.3493	1.2646	2721.1	.0735	.708
3300	1.1276-3	-386.9	2.4774	27.172	.152	1.0030	-1.0001	0.3615	1.2551	2753.0	.0815	.676	0.3508	1.2632	2761.8	.0755	.708
3400	1.0943-3	-350.4	2.4882	27.168	.155	1.0049	-1.0002	0.3670	1.2515	2790.5	.0860	.664	0.3522	1.2618	2802.0	.0774	.707
3500	1.0628-3	-313.4	2.4990	27.163	.159	1.0078	-1.0002	0.3749	1.2466	2826.0	.0917	.649	0.3536	1.2606	2841.8	.0794	.707
3600	1.0330-3	-275.3	2.5097	27.156	.162	1.0125	-1.0004	0.3865	1.2400	2858.9	.0991	.631	0.3549	1.2595	2881.3	.0813	.706
3700	1.0046-3	-235.9	2.5205	27.144	.165	1.0197	-1.0006	0.4037	1.2312	2888.6	.1089	.610	0.3562	1.2585	2920.5	.0832	.705
3800	9.7755-4	-194.3	2.5316	27.126	.168	1.0312	-1.0010	0.4297	1.2197	2914.7	.1223	.589	0.3573	1.2577	2959.7	.0852	.704
3900	9.5151-4	-149.5	2.5432	27.098	.171	1.0490	-1.0017	0.4686	1.2054	2937.0	.1408	.568	0.3584	1.2570	2999.1	.0871	.702
4000	9.2628-4	-100.0	2.5557	27.056	.174	1.0757	-1.0026	0.5250	1.1893	2956.7	.1664	.548	0.3594	1.2566	3039.2	.0891	.700
4100	9.0160-4	-43.8	2.5696	26.994	.176	1.1138	-1.0040	0.6026	1.1729	2976.2	.2013	.528	0.3604	1.2565	3080.4	.0912	.697
4200	8.7721-4	21.2	2.5853	26.904	.179	1.1642	-1.0060	0.7017	1.1582	2998.3	.2475	.508	0.3613	1.2568	3123.3	.0933	.694
4300	8.5291-4	97.1	2.6031	26.782	.182	1.2256	-1.0084	0.8182	1.1464	3025.1	.3058	.486	0.3621	1.2575	3168.4	.0954	.690
4400	8.2856-4	185.3	2.6234	26.622	.184	1.2956	-1.0114	0.9463	1.1376	3057.5	.3762	.464	0.3628	1.2588	3216.2	.0977	.685
4500	8.0411-4	286.6	2.6462	26.423	.187	1.3719	-1.0147	1.0812	1.1313	3095.1	.4582	.441	0.3635	1.2606	3267.2	.1002	.678
4600	7.7953-4	401.7	2.6714	26.185	.189	1.4534	-1.0185	1.2208	1.1270	3137.5	.5512	.419	0.3642	1.2630	3321.4	.1029	.670
4700	7.5485-4	530.9	2.6992	25.907	.192	1.5394	-1.0227	1.3643	1.1242	3184.3	.6542	.400	0.3648	1.2660	3379.2	.1058	.661
4800	7.3010-4	674.6	2.7295	25.591	.194	1.6294	-1.0273	1.5115	1.1224	3235.3	.7653	.383	0.3655	1.2696	3440.9	.1089	.651
4900	7.0530-4	833.3	2.7622	25.237	.196	1.7225	-1.0322	1.6613	1.1215	3290.3	.8818	.369	0.3662	1.2737	3506.6	.1123	.639
5000	6.8054-4	1006.9	2.7973	24.848	.198	1.8164	-1.0374	1.8110	1.1213	3349.4	.9993	.359	0.3669	1.2785	3576.5	.1161	.626
5100	6.5590-4	1195.3	2.8346	24.427	.200	1.9079	-1.0428	1.9558	1.1217	3412.4	*****	.352	0.3676	1.2839	3650.8	.1201	.612
5200	6.3152-4	1397.7	2.8739	23.980	.202	1.9921	-1.0480	2.0884	1.1227	3479.2	*****	.348	0.3684	1.2899	3729.3	.1245	.598
5300	6.0758-4	1612.3	2.9147	23.515	.204	2.0631	-1.0528	2.1994	1.1244	3549.7	*****	.348	0.3693	1.2965	3811.7	.1292	.584
5400	5.8429-4	1836.5	2.9566	23.040	.206	2.1146	-1.0568	2.2785	1.1266	3623.3	*****	.349	0.3702	1.3035	3897.4	.1342	.569

TABLE 27.3D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN² (1.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0815-1	-1399.6	1.5889	28.430	.027	1.0000	-1.0000	0.2546	1.3780	931.4	.0086	.790	0.2546	1.3780	931.4	.0086	.790
380	1.0245-1	-1394.5	1.6027	28.430	.028	1.0000	-1.0000	0.2551	1.3770	956.6	.0092	.785	0.2551	1.3770	956.6	.0092	.785
400	9.7331-2	-1389.4	1.6158	28.430	.030	1.0000	-1.0000	0.2556	1.3760	981.1	.0097	.780	0.2556	1.3760	981.1	.0097	.780
420	9.2697-2	-1384.3	1.6283	28.430	.031	1.0000	-1.0000	0.2562	1.3749	1004.9	.0103	.776	0.2562	1.3749	1004.9	.0103	.776
440	8.8483-2	-1379.2	1.6402	28.430	.033	1.0000	-1.0000	0.2568	1.3737	1028.1	.0108	.773	0.2568	1.3737	1028.1	.0108	.773
460	8.4636-2	-1374.0	1.6516	28.430	.034	1.0000	-1.0000	0.2574	1.3725	1050.8	.0113	.770	0.2574	1.3725	1050.8	.0113	.771
480	8.1109-2	-1368.9	1.6626	28.430	.035	1.0000	-1.0000	0.2580	1.3713	1072.9	.0119	.768	0.2580	1.3713	1072.9	.0119	.768
500	7.7865-2	-1363.7	1.6731	28.430	.037	1.0000	-1.0000	0.2586	1.3700	1094.5	.0124	.767	0.2586	1.3700	1094.5	.0124	.767
520	7.4870-2	-1358.5	1.6833	28.430	.038	1.0000	-1.0000	0.2593	1.3687	1115.7	.0129	.765	0.2593	1.3687	1115.7	.0129	.766
537	7.2545-2	-1354.2	1.6915	28.430	.039	1.0000	-1.0000	0.2599	1.3675	1132.9	.0133	.765	0.2598	1.3676	1133.0	.0133	.765
540	7.2097-2	-1353.3	1.6931	28.430	.039	1.0000	-1.0000	0.2600	1.3673	1136.3	.0134	.764	0.2600	1.3674	1136.4	.0134	.765
560	6.9522-2	-1348.1	1.7026	28.430	.041	1.0000	-1.0000	0.2608	1.3659	1156.6	.0138	.764	0.2607	1.3661	1156.7	.0138	.765
580	6.7125-2	-1342.9	1.7117	28.430	.042	1.0001	-1.0000	0.2616	1.3644	1176.4	.0143	.764	0.2614	1.3647	1176.5	.0143	.765
600	6.4887-2	-1337.7	1.7206	28.430	.043	1.0001	-1.0000	0.2624	1.3629	1195.9	.0148	.763	0.2621	1.3633	1196.0	.0148	.765
620	6.2794-2	-1332.4	1.7292	28.430	.044	1.0002	-1.0000	0.2633	1.3613	1214.9	.0153	.763	0.2629	1.3619	1215.2	.0152	.765
640	6.0831-2	-1327.1	1.7376	28.429	.046	1.0003	-1.0000	0.2642	1.3596	1233.6	.0158	.761	0.2637	1.3604	1234.0	.0157	.765
660	5.8987-2	-1321.8	1.7458	28.429	.047	1.0004	-1.0000	0.2653	1.3578	1251.9	.0164	.759	0.2644	1.3590	1252.5	.0162	.764
680	5.7251-2	-1316.5	1.7537	28.429	.048	1.0006	-1.0000	0.2664	1.3559	1269.9	.0169	.755	0.2652	1.3575	1270.6	.0167	.763
700	5.5614-2	-1311.2	1.7614	28.428	.049	1.0009	-1.0000	0.2677	1.3538	1287.4	.0175	.751	0.2661	1.3560	1288.5	.0172	.762
720	5.4068-2	-1305.8	1.7690	28.427	.050	1.0012	-1.0000	0.2692	1.3516	1304.6	.0182	.747	0.2669	1.3545	1306.0	.0177	.761
740	5.2604-2	-1300.4	1.7764	28.426	.052	1.0017	-1.0001	0.2708	1.3492	1321.5	.0188	.741	0.2678	1.3530	1323.3	.0182	.760
760	5.1217-2	-1295.0	1.7836	28.425	.053	1.0023	-1.0001	0.2726	1.3465	1337.9	.0195	.735	0.2686	1.3515	1340.4	.0186	.760
780	4.9901-2	-1289.5	1.7907	28.423	.054	1.0031	-1.0001	0.2747	1.3437	1354.0	.0203	.728	0.2695	1.3500	1357.2	.0191	.760
800	4.8649-2	-1284.0	1.7977	28.420	.055	1.0041	-1.0002	0.2771	1.3405	1369.7	.0211	.720	0.2704	1.3485	1373.8	.0196	.759
820	4.7457-2	-1278.4	1.8046	28.417	.056	1.0053	-1.0002	0.2798	1.3371	1385.1	.0221	.711	0.2713	1.3469	1390.1	.0200	.759
840	4.6320-2	-1272.8	1.8114	28.413	.057	1.0068	-1.0003	0.2830	1.3334	1400.0	.0231	.700	0.2722	1.3454	1406.3	.0205	.759
860	4.5235-2	-1267.1	1.8181	28.408	.058	1.0086	-1.0004	0.2865	1.3294	1414.6	.0242	.688	0.2732	1.3439	1422.3	.0210	.758
880	4.4197-2	-1261.3	1.8247	28.401	.059	1.0108	-1.0005	0.2906	1.3251	1428.8	.0255	.676	0.2741	1.3424	1438.1	.0214	.758
900	4.3203-2	-1255.5	1.8313	28.393	.060	1.0134	-1.0006	0.2952	1.3205	1442.6	.0269	.662	0.2751	1.3409	1453.7	.0219	.757
920	4.2250-2	-1249.5	1.8378	28.384	.061	1.0165	-1.0008	0.3003	1.3156	1456.1	.0285	.648	0.2761	1.3394	1469.2	.0224	.756
940	4.1335-2	-1243.4	1.8444	28.373	.062	1.0201	-1.0010	0.3061	1.3105	1469.2	.0302	.634	0.2771	1.3380	1484.6	.0229	.755
960	4.0455-2	-1237.3	1.8509	28.360	.063	1.0243	-1.0012	0.3126	1.3051	1482.1	.0321	.619	0.2781	1.3365	1499.8	.0234	.754
980	3.9607-2	-1230.9	1.8574	28.344	.065	1.0290	-1.0015	0.3199	1.2995	1494.6	.0341	.605	0.2792	1.3351	1515.0	.0239	.752
1000	3.8790-2	-1224.5	1.8639	28.326	.066	1.0344	-1.0018	0.3279	1.2937	1506.9	.0363	.592	0.2802	1.3337	1530.0	.0245	.751
1020	3.8002-2	-1217.8	1.8705	28.305	.067	1.0405	-1.0021	0.3367	1.2877	1519.0	.0387	.579	0.2813	1.3323	1545.0	.0250	.749
1040	3.7239-2	-1211.0	1.8771	28.281	.068	1.0473	-1.0025	0.3464	1.2817	1530.8	.0412	.568	0.2824	1.3310	1560.0	.0256	.747
1060	3.6501-2	-1203.9	1.8838	28.254	.069	1.0548	-1.0029	0.3570	1.2757	1542.6	.0438	.559	0.2835	1.3297	1574.9	.0261	.745
1080	3.5786-2	-1196.7	1.8906	28.223	.070	1.0629	-1.0034	0.3684	1.2696	1554.2	.0466	.551	0.2846	1.3284	1589.8	.0267	.742
1100	3.5092-2	-1189.2	1.8975	28.188	.071	1.0718	-1.0039	0.3807	1.2637	1565.8	.0494	.544	0.2857	1.3272	1604.7	.0273	.740
1120	3.4418-2	-1181.5	1.9045	28.149	.072	1.0813	-1.0045	0.3938	1.2578	1577.4	.0522	.540	0.2869	1.3261	1619.7	.0279	.737
1140	3.3762-2	-1173.4	1.9116	28.106	.073	1.0914	-1.0051	0.4077	1.2520	1589.0	.0550	.538	0.2881	1.3250	1634.7	.0285	.734

TABLE 27.3D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN² (1.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM VS FT/S	COND BTU/ FT HR R	PRAN		
1160	3.3124-2	-1165.1	1.9188	28.059	.073	1.1019	-1.0057	0.4223	1.2465	1600.7	.0578	.537	0.2892	1.3240	1649.7	.0291	.731
1180	3.2503-2	-1156.6	1.9261	28.007	.074	1.1127	-1.0064	0.4373	1.2412	1612.5	.0604	.539	0.2904	1.3230	1664.7	.0297	.727
1200	3.1898-2	-1147.7	1.9336	27.952	.075	1.1235	-1.0071	0.4526	1.2362	1624.4	.0629	.543	0.2916	1.3221	1679.9	.0304	.724
1220	3.1309-2	-1138.5	1.9412	27.892	.076	1.1341	-1.0077	0.4677	1.2316	1636.6	.0650	.549	0.2928	1.3213	1695.1	.0310	.720
1240	3.0734-2	-1129.0	1.9489	27.829	.077	1.1440	-1.0083	0.4822	1.2275	1649.1	.0669	.557	0.2940	1.3205	1710.4	.0317	.717
1260	3.0174-2	-1119.2	1.9568	27.763	.078	1.1527	-1.0089	0.4954	1.2240	1661.9	.0682	.567	0.2952	1.3198	1725.7	.0323	.713
1280	2.9630-2	-1109.2	1.9646	27.695	.079	1.1594	-1.0093	0.5062	1.2211	1675.1	.0690	.580	0.2963	1.3192	1741.1	.0330	.710
1300	2.9101-2	-1098.9	1.9726	27.626	.080	1.1632	-1.0096	0.5137	1.2192	1688.9	.0691	.595	0.2975	1.3186	1756.5	.0337	.707
1320	2.8589-2	-1088.6	1.9804	27.557	.081	1.1633	-1.0096	0.5165	1.2183	1703.4	.0683	.611	0.2986	1.3181	1771.8	.0343	.704
1340	2.8094-2	-1078.3	1.9882	27.490	.082	1.1586	-1.0094	0.5133	1.2188	1718.7	.0667	.629	0.2997	1.3176	1787.0	.0349	.701
1360	2.7618-2	-1068.1	1.9957	27.428	.083	1.1486	-1.0088	0.5033	1.2209	1735.0	.0642	.647	0.3007	1.3171	1802.0	.0356	.698
1380	2.7161-2	-1058.2	2.0029	27.371	.083	1.1333	-1.0079	0.4866	1.2248	1752.2	.0611	.664	0.3017	1.3166	1816.7	.0362	.696
1400	2.6725-2	-1048.7	2.0098	27.322	.084	1.1138	-1.0068	0.4645	1.2305	1770.6	.0577	.679	0.3027	1.3160	1831.0	.0367	.694
1420	2.6311-2	-1039.7	2.0162	27.282	.085	1.0922	-1.0055	0.4395	1.2377	1789.7	.0543	.689	0.3036	1.3154	1845.0	.0373	.693
1440	2.5916-2	-1031.1	2.0222	27.251	.086	1.0710	-1.0043	0.4148	1.2457	1809.1	.0513	.695	0.3044	1.3147	1858.5	.0378	.692
1460	2.5539-2	-1023.1	2.0278	27.228	.087	1.0523	-1.0032	0.3930	1.2536	1828.2	.0489	.698	0.3053	1.3139	1871.6	.0383	.692
1480	2.5179-2	-1015.4	2.0330	27.212	.088	1.0372	-1.0023	0.3755	1.2607	1846.4	.0472	.698	0.3061	1.3131	1884.4	.0388	.692
1500	2.4833-2	-1008.0	2.0379	27.200	.089	1.0258	-1.0016	0.3625	1.2663	1863.4	.0461	.696	0.3068	1.3123	1896.8	.0392	.692
1520	2.4499-2	-1000.9	2.0427	27.193	.089	1.0176	-1.0011	0.3533	1.2706	1879.1	.0454	.695	0.3076	1.3114	1909.1	.0397	.693
1540	2.4176-2	-993.9	2.0472	27.187	.090	1.0119	-1.0008	0.3471	1.2735	1893.8	.0451	.694	0.3083	1.3105	1921.1	.0401	.693
1560	2.3863-2	-987.0	2.0517	27.184	.091	1.0081	-1.0005	0.3429	1.2754	1907.7	.0450	.693	0.3090	1.3096	1933.0	.0405	.693
1580	2.3559-2	-980.1	2.0560	27.182	.092	1.0055	-1.0004	0.3403	1.2766	1920.8	.0451	.692	0.3097	1.3087	1944.8	.0410	.694
1600	2.3263-2	-973.4	2.0603	27.180	.093	1.0037	-1.0002	0.3386	1.2774	1933.6	.0453	.692	0.3105	1.3078	1956.4	.0414	.694
1620	2.2975-2	-966.6	2.0645	27.179	.093	1.0026	-1.0002	0.3376	1.2777	1945.9	.0456	.692	0.3112	1.3069	1968.0	.0418	.695
1640	2.2694-2	-959.8	2.0686	27.178	.094	1.0018	-1.0001	0.3370	1.2779	1958.1	.0459	.692	0.3118	1.3060	1979.5	.0422	.696
1660	2.2420-2	-953.1	2.0727	27.178	.095	1.0012	-1.0001	0.3367	1.2779	1970.0	.0462	.692	0.3125	1.3051	1990.8	.0427	.696
1680	2.2153-2	-946.4	2.0768	27.178	.096	1.0009	-1.0001	0.3365	1.2779	1981.8	.0466	.692	0.3132	1.3043	2002.2	.0431	.697
1700	2.1892-2	-939.6	2.0807	27.177	.097	1.0006	-1.0000	0.3365	1.2778	1993.5	.0469	.693	0.3139	1.3034	2013.4	.0435	.697
1720	2.1638-2	-932.9	2.0847	27.177	.097	1.0005	-1.0000	0.3365	1.2776	2005.1	.0473	.693	0.3146	1.3026	2024.6	.0439	.698
1740	2.1389-2	-926.2	2.0886	27.177	.098	1.0003	-1.0000	0.3366	1.2775	2016.6	.0477	.693	0.3152	1.3018	2035.7	.0443	.698
1760	2.1146-2	-919.5	2.0924	27.177	.099	1.0003	-1.0000	0.3367	1.2773	2028.0	.0481	.694	0.3159	1.3010	2046.7	.0447	.699
1780	2.0908-2	-912.7	2.0962	27.177	.100	1.0002	-1.0000	0.3369	1.2771	2039.3	.0484	.694	0.3165	1.3002	2057.7	.0452	.699
1800	2.0676-2	-906.0	2.1000	27.177	.101	1.0001	-1.0000	0.3370	1.2769	2050.6	.0488	.694	0.3171	1.2994	2068.6	.0456	.699
1900	1.9588-2	-872.2	2.1182	27.177	.104	1.0001	-1.0000	0.3378	1.2761	2106.1	.0507	.696	0.3202	1.2957	2122.3	.0476	.701
2000	1.8608-2	-838.4	2.1356	27.177	.108	1.0000	-1.0000	0.3387	1.2751	2160.0	.0525	.697	0.3231	1.2923	2174.5	.0497	.703
2100	1.7722-2	-804.5	2.1521	27.177	.112	1.0000	-1.0000	0.3397	1.2741	2212.5	.0543	.699	0.3259	1.2890	2225.4	.0517	.704
2200	1.6916-2	-770.5	2.1679	27.177	.115	1.0000	-1.0000	0.3407	1.2730	2263.6	.0562	.700	0.3286	1.2860	2275.1	.0537	.706
2300	1.6181-2	-736.4	2.1831	27.177	.119	1.0000	-1.0000	0.3418	1.2719	2313.4	.0580	.701	0.3311	1.2832	2323.7	.0557	.707
2400	1.5507-2	-702.1	2.1977	27.177	.122	1.0000	-1.0000	0.3430	1.2707	2362.1	.0598	.702	0.3336	1.2805	2371.2	.0577	.708
2500	1.4886-2	-667.7	2.2117	27.177	.126	1.0000	-1.0000	0.3443	1.2694	2409.6	.0617	.703	0.3359	1.2780	2417.7	.0597	.708

TABLE 27.3D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN² (1.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4314-2	-633.3	2.2252	27.177	.129	1.0000	-1.0000	0.3456	1.2682	2456.1	.0635	.704	0.3381	1.2757	2463.4	.0617	.709
2700	1.3784-2	-598.6	2.2383	27.176	.133	1.0000	-1.0000	0.3469	1.2669	2501.6	.0654	.704	0.3402	1.2735	2508.2	.0637	.709
2800	1.3291-2	-563.9	2.2510	27.176	.136	1.0001	-1.0000	0.3483	1.2656	2546.2	.0673	.704	0.3422	1.2715	2552.1	.0657	.709
2900	1.2833-2	-529.0	2.2632	27.176	.139	1.0001	-1.0000	0.3497	1.2643	2589.9	.0693	.704	0.3441	1.2696	2595.4	.0677	.709
3000	1.2405-2	-493.9	2.2751	27.176	.143	1.0002	-1.0000	0.3511	1.2629	2632.8	.0713	.703	0.3459	1.2678	2637.9	.0696	.709
3100	1.2005-2	-458.7	2.2866	27.176	.146	1.0003	-1.0000	0.3527	1.2615	2674.9	.0734	.701	0.3476	1.2662	2679.8	.0716	.709
3200	1.1630-2	-423.4	2.2978	27.176	.149	1.0006	-1.0000	0.3545	1.2601	2716.1	.0756	.699	0.3493	1.2646	2721.0	.0735	.709
3300	1.1277-2	-387.8	2.3088	27.175	.152	1.0009	-1.0000	0.3565	1.2584	2756.5	.0781	.696	0.3508	1.2631	2761.6	.0755	.708
3400	1.0945-2	-352.1	2.3195	27.174	.155	1.0015	-1.0000	0.3589	1.2566	2795.9	.0807	.691	0.3522	1.2618	2801.7	.0774	.708
3500	1.0632-2	-316.0	2.3299	27.173	.159	1.0024	-1.0001	0.3620	1.2544	2834.3	.0838	.685	0.3536	1.2605	2841.2	.0793	.707
3600	1.0335-2	-279.7	2.3401	27.170	.162	1.0036	-1.0001	0.3659	1.2517	2871.6	.0873	.678	0.3549	1.2593	2880.3	.0812	.706
3700	1.0055-2	-242.8	2.3502	27.167	.165	1.0056	-1.0002	0.3713	1.2483	2907.4	.0914	.669	0.3561	1.2583	2919.0	.0831	.706
3800	9.7884-3	-205.3	2.3602	27.162	.168	1.0085	-1.0003	0.3786	1.2440	2941.6	.0965	.658	0.3573	1.2573	2957.3	.0850	.705
3900	9.5348-3	-167.0	2.3702	27.154	.171	1.0128	-1.0004	0.3887	1.2385	2973.8	.1029	.645	0.3584	1.2564	2995.3	.0869	.704
4000	9.2928-3	-127.5	2.3802	27.144	.174	1.0191	-1.0007	0.4029	1.2314	3003.7	.1109	.631	0.3594	1.2556	3033.0	.0888	.703
4100	9.0609-3	-86.2	2.3904	27.128	.177	1.0283	-1.0010	0.4228	1.2226	3031.1	.1212	.616	0.3604	1.2549	3070.8	.0907	.702
4200	8.8378-3	-42.7	2.4009	27.105	.179	1.0416	-1.0015	0.4503	1.2122	3055.9	.1347	.600	0.3613	1.2543	3108.6	.0926	.700
4300	8.6220-3	4.1	2.4119	27.073	.182	1.0602	-1.0022	0.4876	1.2004	3078.8	.1522	.584	0.3622	1.2540	3146.8	.0946	.698
4400	8.4121-3	55.2	2.4236	27.028	.185	1.0854	-1.0032	0.5361	1.1880	3100.9	.1747	.568	0.3630	1.2538	3185.6	.0965	.696
4500	8.2065-3	111.8	2.4363	26.967	.188	1.1176	-1.0045	0.5963	1.1762	3123.8	.2032	.551	0.3637	1.2539	3225.3	.0985	.694
4600	8.0041-3	174.8	2.4502	26.886	.191	1.1566	-1.0061	0.6665	1.1657	3148.9	.2381	.533	0.3644	1.2542	3266.4	.1006	.690
4700	7.8038-3	245.3	2.4654	26.783	.193	1.2012	-1.0081	0.7440	1.1570	3177.2	.2794	.514	0.3650	1.2549	3308.9	.1027	.686
4800	7.6051-3	323.8	2.4819	26.657	.196	1.2499	-1.0103	0.8257	1.1503	3209.1	.3269	.494	0.3656	1.2559	3353.2	.1049	.682
4900	7.4077-3	410.5	2.4997	26.506	.198	1.3015	-1.0128	0.9092	1.1452	3244.4	.3802	.474	0.3661	1.2573	3399.4	.1071	.677
5000	7.2116-3	505.6	2.5190	26.331	.201	1.3552	-1.0155	0.9934	1.1415	3282.9	.4391	.454	0.3666	1.2590	3447.7	.1095	.672
5100	7.0168-3	609.2	2.5395	26.132	.203	1.4107	-1.0184	1.0777	1.1389	3324.3	.5031	.435	0.3671	1.2610	3498.1	.1120	.665
5200	6.8234-3	721.2	2.5612	25.910	.205	1.4679	-1.0215	1.1620	1.1371	3368.5	.5717	.417	0.3676	1.2634	3550.7	.1146	.658
5300	6.6316-3	841.6	2.5841	25.666	.207	1.5264	-1.0249	1.2465	1.1360	3415.2	.6444	.401	0.3681	1.2662	3605.5	.1173	.651
5400	6.4415-3	970.5	2.6082	25.401	.210	1.5861	-1.0284	1.3308	1.1355	3464.5	.7199	.388	0.3686	1.2692	3662.8	.1203	.642

TABLE 27.4D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN2 (10.00 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS (GAM) FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
360	1.0815 0	-1399.6	1.4281	28.430	.027	1.0000	-1.0000	0.2546	1.3780	931.4	.0086	.790	0.2546	1.3780	931.4	.0086	.790
380	1.0245 0	-1394.5	1.4419	28.430	.028	1.0000	-1.0000	0.2551	1.3770	956.6	.0092	.785	0.2551	1.3770	956.6	.0092	.785
400	9.7331-1	-1389.4	1.4550	28.430	.030	1.0000	-1.0000	0.2556	1.3760	981.1	.0097	.780	0.2556	1.3760	981.1	.0097	.780
420	9.2696-1	-1384.3	1.4674	28.430	.031	1.0000	-1.0000	0.2562	1.3748	1004.9	.0103	.776	0.2562	1.3749	1004.9	.0103	.776
440	8.8483-1	-1379.2	1.4794	28.430	.033	1.0000	-1.0000	0.2568	1.3737	1028.1	.0108	.773	0.2568	1.3737	1028.1	.0108	.773
460	8.4636-1	-1374.0	1.4908	28.430	.034	1.0000	-1.0000	0.2574	1.3725	1050.8	.0113	.771	0.2574	1.3725	1050.8	.0113	.771
480	8.1109-1	-1368.9	1.5018	28.430	.035	1.0000	-1.0000	0.2580	1.3713	1072.9	.0119	.768	0.2580	1.3713	1072.9	.0119	.768
500	7.7865-1	-1363.7	1.5123	28.430	.037	1.0000	-1.0000	0.2586	1.3700	1094.5	.0124	.767	0.2586	1.3700	1094.5	.0124	.767
520	7.4870-1	-1358.5	1.5225	28.430	.038	1.0000	-1.0000	0.2593	1.3687	1115.7	.0129	.766	0.2593	1.3687	1115.7	.0129	.766
537	7.2545-1	-1354.2	1.5307	28.430	.039	1.0000	-1.0000	0.2599	1.3676	1132.9	.0133	.765	0.2598	1.3676	1133.0	.0133	.765
540	7.2097-1	-1353.3	1.5323	28.430	.039	1.0000	-1.0000	0.2600	1.3674	1136.4	.0134	.765	0.2600	1.3674	1136.4	.0134	.765
560	6.9522-1	-1348.1	1.5417	28.430	.041	1.0000	-1.0000	0.2607	1.3660	1156.6	.0138	.765	0.2607	1.3661	1156.7	.0138	.765
580	6.7125-1	-1342.9	1.5509	28.430	.042	1.0000	-1.0000	0.2615	1.3646	1176.5	.0143	.765	0.2614	1.3647	1176.5	.0143	.765
600	6.4887-1	-1337.7	1.5598	28.430	.043	1.0000	-1.0000	0.2622	1.3631	1196.0	.0148	.765	0.2621	1.3633	1196.0	.0148	.765
620	6.2794-1	-1332.4	1.5684	28.430	.044	1.0000	-1.0000	0.2630	1.3616	1215.1	.0153	.764	0.2629	1.3619	1215.2	.0152	.765
640	6.0832-1	-1327.1	1.5767	28.430	.046	1.0001	-1.0000	0.2639	1.3601	1233.8	.0158	.764	0.2637	1.3604	1234.0	.0157	.765
660	5.8988-1	-1321.9	1.5849	28.430	.047	1.0001	-1.0000	0.2647	1.3585	1252.2	.0163	.762	0.2644	1.3590	1252.4	.0162	.764
680	5.7253-1	-1316.6	1.5928	28.430	.048	1.0002	-1.0000	0.2656	1.3569	1270.3	.0168	.761	0.2652	1.3575	1270.6	.0167	.763
700	5.5617-1	-1311.2	1.6005	28.429	.049	1.0003	-1.0000	0.2666	1.3552	1288.1	.0173	.759	0.2661	1.3560	1288.4	.0172	.762
720	5.4072-1	-1305.9	1.6080	28.429	.050	1.0004	-1.0000	0.2676	1.3535	1305.5	.0178	.757	0.2669	1.3545	1306.0	.0177	.761
740	5.2610-1	-1300.5	1.6154	28.429	.052	1.0005	-1.0000	0.2687	1.3517	1322.6	.0184	.755	0.2677	1.3530	1323.3	.0182	.761
760	5.1224-1	-1295.1	1.6226	28.428	.053	1.0007	-1.0000	0.2699	1.3498	1339.5	.0189	.752	0.2686	1.3515	1340.3	.0186	.760
780	4.9910-1	-1289.7	1.6296	28.428	.054	1.0009	-1.0000	0.2712	1.3478	1356.0	.0195	.750	0.2695	1.3500	1357.1	.0191	.760
800	4.8661-1	-1284.3	1.6365	28.427	.055	1.0013	-1.0001	0.2725	1.3458	1372.2	.0201	.746	0.2704	1.3484	1373.6	.0196	.760
820	4.7472-1	-1278.8	1.6432	28.426	.056	1.0016	-1.0001	0.2740	1.3436	1388.2	.0207	.743	0.2712	1.3469	1389.9	.0200	.760
840	4.6340-1	-1273.3	1.6498	28.425	.057	1.0021	-1.0001	0.2756	1.3413	1403.8	.0213	.739	0.2722	1.3454	1406.0	.0205	.759
860	4.5259-1	-1267.8	1.6563	28.423	.058	1.0027	-1.0001	0.2774	1.3389	1419.2	.0220	.734	0.2731	1.3438	1421.8	.0209	.759
880	4.4228-1	-1262.2	1.6627	28.421	.059	1.0034	-1.0002	0.2793	1.3364	1434.3	.0227	.729	0.2740	1.3423	1437.5	.0214	.759
900	4.3241-1	-1256.6	1.6690	28.419	.060	1.0043	-1.0002	0.2814	1.3337	1449.2	.0235	.723	0.2749	1.3408	1453.0	.0219	.759
920	4.2297-1	-1251.0	1.6753	28.416	.061	1.0053	-1.0003	0.2838	1.3309	1463.7	.0243	.716	0.2759	1.3393	1468.3	.0223	.759
940	4.1392-1	-1245.3	1.6814	28.412	.062	1.0065	-1.0003	0.2863	1.3280	1478.0	.0252	.708	0.2768	1.3377	1483.4	.0228	.758
960	4.0523-1	-1239.5	1.6874	28.408	.063	1.0079	-1.0004	0.2891	1.3249	1492.0	.0262	.700	0.2778	1.3362	1498.4	.0233	.757
980	3.9689-1	-1233.7	1.6934	28.403	.065	1.0095	-1.0005	0.2922	1.3216	1505.7	.0273	.692	0.2788	1.3347	1513.2	.0238	.757
1000	3.8887-1	-1227.8	1.6994	28.397	.066	1.0114	-1.0006	0.2956	1.3182	1519.2	.0284	.682	0.2798	1.3333	1527.9	.0243	.756
1020	3.8115-1	-1221.9	1.7053	28.390	.067	1.0135	-1.0007	0.2993	1.3146	1532.5	.0296	.673	0.2808	1.3318	1542.4	.0248	.755
1040	3.7372-1	-1215.9	1.7111	28.382	.068	1.0159	-1.0009	0.3034	1.3109	1545.4	.0309	.663	0.2818	1.3304	1556.8	.0253	.754
1060	3.6654-1	-1209.7	1.7169	28.372	.069	1.0187	-1.0010	0.3079	1.3071	1558.2	.0323	.653	0.2828	1.3289	1571.2	.0258	.753
1080	3.5962-1	-1203.5	1.7227	28.362	.070	1.0218	-1.0012	0.3127	1.3030	1570.7	.0338	.643	0.2838	1.3275	1585.4	.0263	.751
1100	3.5293-1	-1197.2	1.7285	28.349	.071	1.0253	-1.0014	0.3181	1.2989	1583.0	.0354	.634	0.2848	1.3261	1599.5	.0268	.750
1120	3.4646-1	-1190.8	1.7343	28.335	.072	1.0292	-1.0016	0.3239	1.2946	1595.1	.0371	.624	0.2859	1.3248	1613.5	.0273	.749
1140	3.4019-1	-1184.3	1.7401	28.320	.072	1.0335	-1.0019	0.3302	1.2902	1606.9	.0389	.615	0.2869	1.3235	1627.5	.0278	.747

TABLE 27.4D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN² (10.00 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.3412-1	-1177.6	1.7459	28.302	.073	1.0383	-1.0022	0.3371	1.2857	1618.6	.0408	.607	0.2880	1.3222	1641.5	.0284	.746
1180	3.2822-1	-1170.8	1.7517	28.282	.074	1.0435	-1.0025	0.3446	1.2810	1630.2	.0428	.599	0.2890	1.3209	1655.3	.0289	.744
1200	3.2250-1	-1163.8	1.7576	28.260	.075	1.0493	-1.0029	0.3526	1.2764	1641.5	.0448	.592	0.2901	1.3197	1669.2	.0294	.742
1220	3.1694-1	-1156.7	1.7635	28.236	.076	1.0555	-1.0032	0.3613	1.2716	1652.8	.0470	.587	0.2911	1.3185	1683.0	.0300	.740
1240	3.1153-1	-1149.4	1.7694	28.209	.077	1.0622	-1.0037	0.3706	1.2668	1664.0	.0492	.582	0.2922	1.3174	1696.8	.0306	.738
1260	3.0626-1	-1141.8	1.7754	28.179	.078	1.0694	-1.0041	0.3806	1.2621	1675.0	.0515	.578	0.2933	1.3163	1710.7	.0311	.736
1280	3.0113-1	-1134.1	1.7815	28.147	.079	1.0771	-1.0046	0.3912	1.2573	1686.1	.0538	.575	0.2943	1.3153	1724.5	.0317	.734
1300	2.9613-1	-1126.2	1.7877	28.111	.080	1.0853	-1.0051	0.4024	1.2526	1697.1	.0561	.573	0.2954	1.3143	1738.4	.0323	.732
1320	2.9124-1	-1118.0	1.7939	28.073	.081	1.0938	-1.0057	0.4141	1.2481	1708.1	.0584	.573	0.2965	1.3134	1752.3	.0329	.730
1340	2.8647-1	-1109.6	1.8002	28.032	.082	1.1027	-1.0062	0.4262	1.2436	1719.2	.0607	.574	0.2975	1.3125	1766.2	.0334	.727
1360	2.8181-1	-1101.0	1.8066	27.987	.083	1.1117	-1.0068	0.4386	1.2394	1730.4	.0629	.576	0.2986	1.3117	1780.2	.0340	.725
1380	2.7725-1	-1092.1	1.8131	27.940	.084	1.1207	-1.0074	0.4511	1.2354	1741.8	.0650	.579	0.2997	1.3109	1794.3	.0346	.722
1400	2.7280-1	-1082.9	1.8197	27.889	.084	1.1295	-1.0079	0.4633	1.2318	1753.4	.0669	.584	0.3007	1.3103	1808.4	.0352	.720
1420	2.6845-1	-1073.6	1.8263	27.837	.085	1.1379	-1.0085	0.4750	1.2285	1765.2	.0686	.590	0.3017	1.3096	1822.5	.0358	.718
1440	2.6420-1	-1063.9	1.8331	27.781	.086	1.1453	-1.0090	0.4856	1.2257	1777.3	.0700	.597	0.3028	1.3091	1836.8	.0364	.715
1460	2.6005-1	-1054.1	1.8398	27.725	.087	1.1514	-1.0094	0.4947	1.2234	1789.8	.0710	.606	0.3038	1.3086	1851.0	.0370	.713
1480	2.5599-1	-1044.2	1.8466	27.667	.088	1.1557	-1.0097	0.5015	1.2218	1802.7	.0715	.616	0.3047	1.3081	1865.3	.0376	.711
1500	2.5205-1	-1034.1	1.8534	27.608	.089	1.1577	-1.0098	0.5053	1.2209	1816.0	.0714	.627	0.3057	1.3077	1879.5	.0382	.709
1520	2.4822-1	-1024.0	1.8601	27.551	.089	1.1566	-1.0098	0.5057	1.2208	1830.0	.0708	.639	0.3066	1.3073	1893.7	.0388	.707
1540	2.4450-1	-1013.9	1.8667	27.495	.090	1.1523	-1.0096	0.5019	1.2217	1844.5	.0695	.651	0.3075	1.3069	1907.8	.0394	.705
1560	2.4090-1	-1003.9	1.8731	27.443	.091	1.1443	-1.0091	0.4938	1.2236	1859.7	.0677	.664	0.3084	1.3065	1921.7	.0399	.703
1580	2.3743-1	-994.2	1.8793	27.394	.092	1.1328	-1.0085	0.4815	1.2266	1875.5	.0655	.675	0.3093	1.3062	1935.4	.0405	.702
1600	2.3409-1	-984.7	1.8853	27.351	.093	1.1184	-1.0076	0.4657	1.2306	1891.9	.0629	.686	0.3101	1.3057	1948.8	.0410	.701
1620	2.3088-1	-975.6	1.8909	27.313	.093	1.1021	-1.0066	0.4476	1.2356	1908.9	.0603	.694	0.3109	1.3052	1961.9	.0415	.700
1640	2.2781-1	-966.8	1.8963	27.282	.094	1.0851	-1.0055	0.4288	1.2412	1926.1	.0578	.699	0.3117	1.3047	1974.7	.0420	.699
1660	2.2485-1	-958.4	1.9014	27.256	.095	1.0688	-1.0045	0.4107	1.2471	1943.3	.0556	.702	0.3124	1.3042	1987.2	.0425	.699
1680	2.2201-1	-950.4	1.9062	27.236	.096	1.0540	-1.0036	0.3944	1.2528	1960.1	.0538	.703	0.3131	1.3035	1999.4	.0430	.699
1700	2.1928-1	-942.6	1.9108	27.221	.097	1.0415	-1.0028	0.3807	1.2580	1976.4	.0524	.703	0.3138	1.3029	2011.3	.0434	.699
1720	2.1664-1	-935.1	1.9152	27.210	.097	1.0314	-1.0021	0.3697	1.2624	1991.9	.0513	.702	0.3145	1.3022	2023.0	.0439	.699
1740	2.1408-1	-927.8	1.9194	27.201	.098	1.0234	-1.0016	0.3612	1.2660	2006.6	.0506	.700	0.3152	1.3015	2034.5	.0443	.699
1760	2.1160-1	-920.7	1.9235	27.195	.099	1.0173	-1.0012	0.3547	1.2688	2020.6	.0502	.699	0.3158	1.3007	2045.8	.0447	.699
1780	2.0918-1	-913.6	1.9275	27.190	.100	1.0128	-1.0009	0.3500	1.2709	2033.8	.0500	.698	0.3165	1.3000	2057.0	.0451	.699
1800	2.0683-1	-906.6	1.9314	27.187	.101	1.0095	-1.0007	0.3466	1.2724	2046.6	.0500	.697	0.3171	1.2993	2068.1	.0456	.700
1900	1.9590-1	-872.4	1.9499	27.179	.104	1.0022	-1.0002	0.3399	1.2751	2105.2	.0509	.696	0.3202	1.2957	2122.1	.0476	.701
2000	1.8609-1	-838.5	1.9673	27.178	.108	1.0007	-1.0001	0.3392	1.2749	2159.8	.0526	.697	0.3231	1.2922	2174.4	.0497	.703
2100	1.7722-1	-804.5	1.9839	27.177	.112	1.0003	-1.0000	0.3398	1.2740	2212.4	.0544	.699	0.3259	1.2890	2225.4	.0517	.704
2200	1.6917-1	-770.5	1.9997	27.177	.115	1.0001	-1.0000	0.3408	1.2730	2263.6	.0562	.700	0.3286	1.2860	2275.1	.0537	.706
2300	1.6181-1	-736.4	2.0149	27.177	.119	1.0001	-1.0000	0.3419	1.2719	2313.4	.0580	.701	0.3311	1.2832	2323.6	.0557	.707
2400	1.5507-1	-702.1	2.0294	27.177	.122	1.0001	-1.0000	0.3431	1.2707	2362.0	.0598	.702	0.3336	1.2805	2371.2	.0577	.708
2500	1.4887-1	-667.8	2.0435	27.177	.126	1.0000	-1.0000	0.3443	1.2694	2409.6	.0617	.703	0.3359	1.2780	2417.7	.0597	.708

TABLE 27.4D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN2 (10.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4314-1	-633.3	2.0570	27.177	.129	1.0000	-1.0000	0.3456	1.2682	2456.1	.0635	.704	0.3381	1.2757	2463.4	.0617	.709
2700	1.3784-1	-598.6	2.0701	27.177	.133	1.0000	-1.0000	0.3468	1.2669	2501.6	.0654	.704	0.3402	1.2735	2508.2	.0637	.709
2800	1.3291-1	-563.9	2.0827	27.177	.136	1.0000	-1.0000	0.3482	1.2657	2546.3	.0672	.705	0.3422	1.2715	2552.1	.0657	.709
2900	1.2833-1	-529.0	2.0949	27.177	.139	1.0000	-1.0000	0.3495	1.2644	2590.1	.0691	.705	0.3441	1.2696	2595.4	.0677	.709
3000	1.2405-1	-494.0	2.1068	27.176	.143	1.0001	-1.0000	0.3508	1.2632	2633.1	.0710	.705	0.3459	1.2678	2637.9	.0696	.709
3100	1.2005-1	-458.9	2.1183	27.176	.146	1.0001	-1.0000	0.3521	1.2619	2675.3	.0730	.704	0.3476	1.2661	2679.7	.0716	.709
3200	1.1630-1	-423.6	2.1295	27.176	.149	1.0002	-1.0000	0.3535	1.2607	2716.8	.0749	.704	0.3493	1.2646	2720.9	.0735	.709
3300	1.1277-1	-388.2	2.1404	27.176	.152	1.0003	-1.0000	0.3549	1.2595	2757.5	.0770	.702	0.3508	1.2631	2761.5	.0754	.708
3400	1.0946-1	-352.6	2.1510	27.176	.155	1.0005	-1.0000	0.3564	1.2582	2797.6	.0791	.701	0.3522	1.2618	2801.6	.0774	.708
3500	1.0633-1	-316.9	2.1614	27.175	.159	1.0007	-1.0000	0.3581	1.2568	2836.9	.0813	.699	0.3536	1.2605	2841.1	.0793	.707
3600	1.0337-1	-281.0	2.1715	27.175	.162	1.0011	-1.0000	0.3601	1.2553	2875.5	.0837	.696	0.3549	1.2593	2880.0	.0812	.707
3700	1.0057-1	-244.8	2.1814	27.174	.165	1.0017	-1.0001	0.3623	1.2536	2913.3	.0862	.692	0.3561	1.2582	2918.5	.0831	.706
3800	9.7921-2	-208.5	2.1911	27.172	.168	1.0025	-1.0001	0.3651	1.2517	2950.2	.0890	.688	0.3573	1.2572	2956.6	.0850	.705
3900	9.5402-2	-171.8	2.2006	27.170	.171	1.0037	-1.0001	0.3686	1.2494	2986.1	.0922	.683	0.3584	1.2562	2994.2	.0868	.705
4000	9.3007-2	-134.7	2.2100	27.167	.174	1.0054	-1.0002	0.3731	1.2467	3021.0	.0958	.676	0.3594	1.2553	3031.4	.0887	.704
4100	9.0724-2	-97.1	2.2193	27.162	.177	1.0078	-1.0003	0.3789	1.2433	3054.7	.1000	.669	0.3604	1.2545	3068.3	.0906	.703
4200	8.8543-2	-58.9	2.2285	27.156	.180	1.0112	-1.0004	0.3866	1.2392	3086.9	.1050	.661	0.3613	1.2537	3105.0	.0924	.702
4300	8.6457-2	-19.7	2.2377	27.148	.182	1.0158	-1.0006	0.3966	1.2342	3117.6	.1111	.651	0.3622	1.2531	3141.4	.0943	.701
4400	8.4456-2	20.6	2.2470	27.136	.185	1.0222	-1.0008	0.4098	1.2282	3146.6	.1184	.641	0.3630	1.2525	3177.6	.0962	.699
4500	8.2530-2	62.4	2.2564	27.120	.188	1.0308	-1.0011	0.4270	1.2211	3174.0	.1274	.630	0.3638	1.2520	3213.9	.0981	.698
4600	8.0672-2	106.1	2.2660	27.098	.191	1.0423	-1.0016	0.4491	1.2131	3199.8	.1385	.619	0.3645	1.2516	3250.2	.1000	.696
4700	7.8871-2	152.4	2.2759	27.069	.194	1.0572	-1.0022	0.4767	1.2045	3224.6	.1520	.607	0.3652	1.2514	3286.7	.1019	.694
4800	7.7120-2	201.7	2.2863	27.032	.196	1.0760	-1.0030	0.5103	1.1957	3249.0	.1684	.595	0.3659	1.2512	3323.7	.1038	.692
4900	7.5411-2	254.6	2.2972	26.983	.199	1.0987	-1.0040	0.5496	1.1871	3273.9	.1880	.582	0.3665	1.2513	3361.2	.1058	.690
5000	7.3737-2	311.7	2.3088	26.923	.202	1.1250	-1.0052	0.5938	1.1793	3299.9	.2108	.568	0.3670	1.2515	3399.5	.1077	.687
5100	7.2092-2	373.5	2.3210	26.848	.204	1.1545	-1.0066	0.6415	1.1724	3327.6	.2369	.553	0.3675	1.2520	3438.7	.1096	.685
5200	7.0472-2	440.1	2.3339	26.760	.207	1.1863	-1.0081	0.6913	1.1667	3357.5	.2661	.537	0.3680	1.2526	3478.8	.1116	.682
5300	6.8876-2	511.8	2.3476	26.657	.209	1.2196	-1.0098	0.7417	1.1622	3389.5	.2981	.521	0.3684	1.2535	3520.1	.1137	.678
5400	6.7302-2	588.5	2.3619	26.539	.212	1.2540	-1.0117	0.7919	1.1586	3423.7	.3329	.504	0.3688	1.2545	3562.5	.1157	.675

TABLE 27.5D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)FUEL H/C ATOM RATIO \square 2.000; F/A \square 0.082073; EQUIV. RATIO \square 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN² (50.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN		
360	5.4073	0	-1399.6	1.3157	28.430	.027	1.0000	-1.0000	0.2546	1.3780	931.4	.0086	.790	0.2546	1.3780	931.4	.0086	.790
380	5.1227	0	-1394.5	1.3294	28.430	.028	1.0000	-1.0000	0.2551	1.3770	956.6	.0092	.785	0.2551	1.3770	956.6	.0092	.785
400	4.8665	0	-1389.4	1.3425	28.430	.030	1.0000	-1.0000	0.2556	1.3759	981.1	.0097	.780	0.2556	1.3760	981.1	.0097	.780
420	4.6348	0	-1384.3	1.3550	28.430	.031	1.0000	-1.0000	0.2562	1.3748	1004.9	.0103	.776	0.2562	1.3749	1004.9	.0103	.776
440	4.4241	0	-1379.2	1.3670	28.430	.033	1.0000	-1.0000	0.2568	1.3737	1028.1	.0108	.773	0.2568	1.3737	1028.1	.0108	.773
460	4.2318	0	-1374.0	1.3784	28.430	.034	1.0000	-1.0000	0.2574	1.3725	1050.8	.0113	.771	0.2574	1.3725	1050.8	.0113	.771
480	4.0555	0	-1368.9	1.3893	28.430	.035	1.0000	-1.0000	0.2580	1.3713	1072.9	.0119	.768	0.2580	1.3713	1072.9	.0119	.768
500	3.8933	0	-1363.7	1.3999	28.430	.037	1.0000	-1.0000	0.2586	1.3700	1094.5	.0124	.767	0.2586	1.3700	1094.5	.0124	.767
520	3.7435	0	-1358.5	1.4100	28.430	.038	1.0000	-1.0000	0.2593	1.3687	1115.7	.0129	.766	0.2593	1.3687	1115.7	.0129	.766
537	3.6272	0	-1354.2	1.4182	28.430	.039	1.0000	-1.0000	0.2599	1.3676	1132.9	.0133	.765	0.2598	1.3676	1133.0	.0133	.765
540	3.6049	0	-1353.3	1.4198	28.430	.039	1.0000	-1.0000	0.2600	1.3674	1136.4	.0134	.765	0.2600	1.3674	1136.4	.0134	.765
560	3.4761	0	-1348.1	1.4293	28.430	.041	1.0000	-1.0000	0.2607	1.3660	1156.6	.0138	.765	0.2607	1.3661	1156.7	.0138	.765
580	3.3563	0	-1342.9	1.4385	28.430	.042	1.0000	-1.0000	0.2614	1.3646	1176.5	.0143	.765	0.2614	1.3647	1176.5	.0143	.765
600	3.2444	0	-1337.7	1.4473	28.430	.043	1.0000	-1.0000	0.2622	1.3632	1196.0	.0148	.765	0.2621	1.3633	1196.0	.0148	.765
620	3.1397	0	-1332.4	1.4560	28.430	.044	1.0000	-1.0000	0.2630	1.3617	1215.1	.0153	.765	0.2629	1.3619	1215.2	.0152	.765
640	3.0416	0	-1327.1	1.4643	28.430	.046	1.0000	-1.0000	0.2638	1.3602	1233.9	.0157	.764	0.2637	1.3604	1234.0	.0157	.765
660	2.9494	0	-1321.9	1.4724	28.430	.047	1.0000	-1.0000	0.2646	1.3587	1252.3	.0162	.763	0.2644	1.3590	1252.4	.0162	.764
680	2.8627	0	-1316.6	1.4804	28.430	.048	1.0001	-1.0000	0.2655	1.3572	1270.4	.0167	.762	0.2652	1.3575	1270.6	.0167	.763
700	2.7809	0	-1311.2	1.4881	28.430	.049	1.0001	-1.0000	0.2663	1.3556	1288.2	.0172	.761	0.2661	1.3560	1288.4	.0172	.762
720	2.7036	0	-1305.9	1.4956	28.430	.050	1.0001	-1.0000	0.2673	1.3540	1305.7	.0177	.759	0.2669	1.3545	1306.0	.0177	.761
740	2.6305	0	-1300.6	1.5029	28.430	.052	1.0002	-1.0000	0.2682	1.3523	1322.9	.0182	.758	0.2677	1.3530	1323.3	.0181	.761
760	2.5613	0	-1295.2	1.5101	28.429	.053	1.0003	-1.0000	0.2692	1.3506	1339.8	.0188	.757	0.2686	1.3515	1340.3	.0186	.760
780	2.4956	0	-1289.8	1.5171	28.429	.054	1.0004	-1.0000	0.2703	1.3489	1356.5	.0193	.755	0.2695	1.3500	1357.0	.0191	.760
800	2.4332	0	-1284.4	1.5239	28.429	.055	1.0005	-1.0000	0.2714	1.3471	1372.9	.0198	.754	0.2703	1.3484	1373.5	.0195	.760
820	2.3738	0	-1278.9	1.5307	28.428	.056	1.0007	-1.0000	0.2725	1.3453	1389.0	.0203	.752	0.2712	1.3469	1389.8	.0200	.760
840	2.3172	0	-1273.5	1.5372	28.428	.057	1.0009	-1.0000	0.2737	1.3434	1404.8	.0208	.750	0.2721	1.3453	1405.9	.0205	.760
860	2.2633	0	-1268.0	1.5437	28.427	.058	1.0012	-1.0001	0.2750	1.3414	1420.5	.0214	.748	0.2730	1.3438	1421.7	.0209	.760
880	2.2118	0	-1262.5	1.5500	28.426	.059	1.0015	-1.0001	0.2764	1.3394	1435.8	.0220	.745	0.2740	1.3423	1437.4	.0214	.760
900	2.1626	0	-1256.9	1.5563	28.425	.060	1.0019	-1.0001	0.2779	1.3374	1451.0	.0226	.743	0.2749	1.3407	1452.8	.0218	.760
920	2.1155	0	-1251.3	1.5624	28.424	.061	1.0023	-1.0001	0.2794	1.3352	1465.9	.0232	.739	0.2758	1.3392	1468.0	.0223	.759
940	2.0703	0	-1245.7	1.5684	28.422	.062	1.0028	-1.0002	0.2811	1.3330	1480.5	.0239	.735	0.2768	1.3377	1483.1	.0228	.759
960	2.0271	0	-1240.1	1.5744	28.421	.063	1.0035	-1.0002	0.2829	1.3307	1495.0	.0246	.730	0.2777	1.3362	1498.0	.0232	.758
980	1.9855	0	-1234.4	1.5802	28.418	.064	1.0042	-1.0002	0.2848	1.3284	1509.2	.0253	.725	0.2787	1.3347	1512.7	.0237	.758
1000	1.9456	0	-1228.7	1.5860	28.416	.066	1.0051	-1.0003	0.2869	1.3259	1523.1	.0261	.720	0.2797	1.3332	1527.3	.0242	.757
1020	1.9073	0	-1222.9	1.5917	28.413	.067	1.0060	-1.0003	0.2891	1.3234	1536.9	.0269	.714	0.2806	1.3317	1541.7	.0247	.756
1040	1.8704	0	-1217.1	1.5973	28.409	.068	1.0072	-1.0004	0.2915	1.3207	1550.5	.0278	.708	0.2816	1.3302	1556.0	.0252	.756
1060	1.8348	0	-1211.3	1.6029	28.405	.069	1.0084	-1.0005	0.2941	1.3180	1563.8	.0287	.702	0.2826	1.3287	1570.1	.0257	.755
1080	1.8005	0	-1205.4	1.6084	28.400	.070	1.0099	-1.0006	0.2969	1.3152	1576.9	.0297	.695	0.2836	1.3273	1584.2	.0262	.754
1100	1.7674	0	-1199.4	1.6139	28.394	.071	1.0115	-1.0007	0.2999	1.3123	1589.9	.0307	.688	0.2846	1.3258	1598.1	.0266	.753
1120	1.7355	0	-1193.4	1.6193	28.388	.071	1.0134	-1.0008	0.3032	1.3092	1602.6	.0318	.681	0.2856	1.3244	1611.8	.0271	.752
1140	1.7046	0	-1187.3	1.6247	28.381	.072	1.0155	-1.0009	0.3067	1.3061	1615.1	.0330	.674	0.2866	1.3230	1625.5	.0276	.751

TABLE 27.5D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN2 (50.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN		
1160	1.6747	0	-1181.1	1.6301	28.372	.073	1.0178	-1.0010	0.3105	1.3029	1627.4	.0342	.666	0.2876	1.3217	1639.1	.0282	.750
1180	1.6458	0	-1174.9	1.6354	28.363	.074	1.0204	-1.0012	0.3146	1.2995	1639.5	.0355	.659	0.2886	1.3203	1652.6	.0287	.749
1200	1.6178	0	-1168.5	1.6408	28.353	.075	1.0232	-1.0014	0.3191	1.2961	1651.5	.0369	.652	0.2896	1.3190	1666.0	.0292	.748
1220	1.5906	0	-1162.1	1.6461	28.341	.076	1.0264	-1.0016	0.3239	1.2925	1663.2	.0383	.645	0.2906	1.3177	1679.4	.0297	.747
1240	1.5642	0	-1155.6	1.6514	28.328	.077	1.0298	-1.0018	0.3291	1.2889	1674.8	.0398	.638	0.2916	1.3164	1692.6	.0302	.745
1260	1.5386	0	-1148.9	1.6567	28.314	.078	1.0336	-1.0020	0.3347	1.2851	1686.3	.0414	.632	0.2927	1.3152	1705.9	.0307	.744
1280	1.5137	0	-1142.2	1.6620	28.298	.079	1.0378	-1.0023	0.3407	1.2813	1697.5	.0430	.626	0.2937	1.3140	1719.0	.0313	.743
1300	1.4895	0	-1135.3	1.6673	28.281	.080	1.0423	-1.0026	0.3471	1.2774	1708.7	.0447	.621	0.2947	1.3128	1732.2	.0318	.741
1320	1.4660	0	-1128.3	1.6727	28.261	.081	1.0472	-1.0029	0.3541	1.2735	1719.7	.0465	.616	0.2957	1.3117	1745.3	.0323	.740
1340	1.4430	0	-1121.1	1.6781	28.240	.082	1.0525	-1.0032	0.3614	1.2695	1730.6	.0483	.611	0.2967	1.3106	1758.4	.0329	.738
1360	1.4206	0	-1113.8	1.6835	28.217	.083	1.0582	-1.0036	0.3693	1.2655	1741.5	.0502	.608	0.2977	1.3096	1771.5	.0334	.737
1380	1.3988	0	-1106.4	1.6889	28.192	.084	1.0643	-1.0040	0.3776	1.2615	1752.2	.0522	.605	0.2987	1.3086	1784.6	.0340	.735
1400	1.3775	0	-1098.7	1.6944	28.164	.084	1.0707	-1.0044	0.3864	1.2575	1762.9	.0542	.602	0.2997	1.3076	1797.7	.0345	.733
1420	1.3566	0	-1090.9	1.7000	28.135	.085	1.0776	-1.0048	0.3956	1.2536	1773.7	.0562	.601	0.3007	1.3067	1810.8	.0351	.732
1440	1.3363	0	-1082.9	1.7056	28.103	.086	1.0847	-1.0053	0.4053	1.2498	1784.4	.0582	.600	0.3017	1.3058	1824.0	.0356	.730
1460	1.3164	0	-1074.7	1.7112	28.069	.087	1.0922	-1.0058	0.4152	1.2461	1795.2	.0602	.600	0.3027	1.3050	1837.1	.0362	.728
1480	1.2969	0	-1066.3	1.7170	28.032	.088	1.0998	-1.0063	0.4253	1.2425	1806.0	.0622	.601	0.3037	1.3043	1850.3	.0367	.727
1500	1.2778	0	-1057.7	1.7227	27.993	.089	1.1076	-1.0068	0.4355	1.2391	1817.0	.0642	.602	0.3046	1.3036	1863.6	.0373	.725
1520	1.2591	0	-1048.9	1.7286	27.952	.090	1.1153	-1.0073	0.4457	1.2360	1828.1	.0660	.604	0.3056	1.3029	1876.9	.0378	.723
1540	1.2408	0	-1039.8	1.7345	27.908	.090	1.1229	-1.0079	0.4556	1.2331	1839.4	.0678	.608	0.3065	1.3023	1890.3	.0384	.721
1560	1.2229	0	-1030.6	1.7404	27.863	.091	1.1300	-1.0083	0.4650	1.2306	1850.9	.0693	.612	0.3074	1.3018	1903.6	.0390	.720
1580	1.2054	0	-1021.2	1.7464	27.815	.092	1.1366	-1.0088	0.4736	1.2284	1862.6	.0707	.617	0.3083	1.3013	1917.1	.0395	.718
1600	1.1883	0	-1011.7	1.7524	27.767	.093	1.1423	-1.0092	0.4812	1.2266	1874.6	.0718	.622	0.3092	1.3009	1930.5	.0401	.716
1620	1.1715	0	-1002.0	1.7584	27.717	.094	1.1468	-1.0096	0.4873	1.2252	1887.0	.0725	.629	0.3101	1.3005	1944.0	.0406	.715
1640	1.1551	0	-992.2	1.7644	27.666	.094	1.1499	-1.0098	0.4916	1.2244	1899.6	.0730	.636	0.3110	1.3001	1957.5	.0412	.713
1660	1.1391	0	-982.4	1.7704	27.616	.095	1.1511	-1.0099	0.4937	1.2241	1912.7	.0730	.644	0.3118	1.2998	1970.9	.0417	.712
1680	1.1235	0	-972.5	1.7763	27.566	.096	1.1502	-1.0099	0.4934	1.2243	1926.1	.0726	.653	0.3126	1.2995	1984.3	.0423	.710
1700	1.1083	0	-962.6	1.7821	27.518	.097	1.1470	-1.0098	0.4903	1.2252	1939.9	.0717	.662	0.3134	1.2992	1997.6	.0428	.709
1720	1.0936	0	-952.9	1.7878	27.471	.098	1.1413	-1.0095	0.4845	1.2268	1954.2	.0705	.671	0.3142	1.2989	2010.8	.0433	.707
1740	1.0793	0	-943.3	1.7934	27.428	.098	1.1331	-1.0090	0.4759	1.2290	1968.9	.0689	.679	0.3149	1.2986	2023.8	.0438	.706
1760	1.0655	0	-933.9	1.7988	27.387	.099	1.1228	-1.0084	0.4649	1.2319	1984.0	.0670	.687	0.3156	1.2982	2036.7	.0443	.705
1780	1.0521	0	-924.7	1.8039	27.351	.100	1.1107	-1.0076	0.4520	1.2354	1999.4	.0650	.694	0.3163	1.2979	2049.3	.0448	.705
1800	1.0392	0	-915.8	1.8089	27.319	.101	1.0975	-1.0068	0.4380	1.2394	2015.0	.0630	.699	0.3170	1.2975	2061.7	.0453	.704
1900	9.8102	-1	-875.4	1.8308	27.222	.104	1.0380	-1.0028	0.3758	1.2601	2091.1	.0556	.705	0.3202	1.2951	2120.0	.0475	.703
2000	9.3090	-1	-839.4	1.8493	27.191	.108	1.0115	-1.0009	0.3495	1.2705	2155.5	.0539	.701	0.3231	1.2921	2173.7	.0496	.703
2100	8.8628	-1	-804.8	1.8661	27.182	.112	1.0036	-1.0003	0.3428	1.2729	2211.2	.0547	.700	0.3259	1.2889	2225.1	.0517	.705
2200	8.4590	-1	-770.6	1.8820	27.179	.115	1.0013	-1.0001	0.3417	1.2727	2263.1	.0563	.700	0.3286	1.2860	2274.9	.0537	.706
2300	8.0909	-1	-736.4	1.8972	27.178	.119	1.0006	-1.0001	0.3422	1.2718	2313.2	.0581	.701	0.3311	1.2831	2323.6	.0557	.707
2400	7.7537	-1	-702.2	1.9118	27.178	.122	1.0003	-1.0000	0.3432	1.2706	2362.0	.0599	.702	0.3336	1.2805	2371.1	.0577	.708
2500	7.4434	-1	-667.8	1.9258	27.177	.126	1.0002	-1.0000	0.3444	1.2694	2409.5	.0617	.703	0.3359	1.2780	2417.7	.0597	.708

TABLE 27.5D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN² (50.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS					FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	7.1571-1	-633.3	1.9394	27.177	.129	1.0001	-1.0000	0.3456	1.2682	2456.1	.0635	.704	0.3381	1.2757	2463.3	.0617	.709
2700	6.8920-1	-598.7	1.9524	27.177	.133	1.0001	-1.0000	0.3469	1.2669	2501.6	.0654	.704	0.3402	1.2735	2508.1	.0637	.709
2800	6.6458-1	-563.9	1.9651	27.177	.136	1.0001	-1.0000	0.3482	1.2657	2546.3	.0672	.705	0.3422	1.2715	2552.1	.0657	.709
2900	6.4166-1	-529.0	1.9773	27.177	.139	1.0001	-1.0000	0.3494	1.2644	2590.1	.0691	.705	0.3441	1.2696	2595.4	.0677	.709
3000	6.2027-1	-494.0	1.9892	27.177	.143	1.0001	-1.0000	0.3507	1.2632	2633.1	.0710	.705	0.3459	1.2678	2637.9	.0696	.709
3100	6.0026-1	-458.9	2.0007	27.177	.146	1.0001	-1.0000	0.3520	1.2620	2675.4	.0729	.705	0.3476	1.2661	2679.7	.0716	.709
3200	5.8150-1	-423.6	2.0119	27.177	.149	1.0001	-1.0000	0.3532	1.2609	2716.9	.0748	.705	0.3493	1.2646	2720.9	.0735	.709
3300	5.6388-1	-388.2	2.0228	27.176	.152	1.0002	-1.0000	0.3545	1.2597	2757.8	.0767	.704	0.3508	1.2631	2761.5	.0754	.708
3400	5.4729-1	-352.7	2.0334	27.176	.155	1.0002	-1.0000	0.3558	1.2586	2798.0	.0787	.703	0.3522	1.2618	2801.5	.0774	.708
3500	5.3165-1	-317.1	2.0437	27.176	.159	1.0003	-1.0000	0.3572	1.2574	2837.6	.0807	.702	0.3536	1.2605	2841.0	.0793	.707
3600	5.1688-1	-281.3	2.0538	27.176	.162	1.0005	-1.0000	0.3586	1.2562	2876.5	.0828	.700	0.3549	1.2593	2880.0	.0812	.707
3700	5.0290-1	-245.3	2.0637	27.175	.165	1.0008	-1.0000	0.3602	1.2550	2914.7	.0849	.699	0.3561	1.2582	2918.4	.0831	.706
3800	4.8965-1	-209.2	2.0733	27.175	.168	1.0011	-1.0000	0.3619	1.2537	2952.3	.0872	.697	0.3573	1.2571	2956.4	.0849	.705
3900	4.7708-1	-173.0	2.0827	27.174	.171	1.0016	-1.0001	0.3639	1.2522	2989.2	.0896	.694	0.3584	1.2561	2993.9	.0868	.705
4000	4.6513-1	-136.4	2.0920	27.172	.174	1.0024	-1.0001	0.3663	1.2506	3025.4	.0922	.690	0.3594	1.2552	3031.1	.0887	.704
4100	4.5375-1	-99.7	2.1010	27.170	.177	1.0034	-1.0001	0.3693	1.2487	3060.8	.0950	.686	0.3604	1.2544	3067.8	.0905	.703
4200	4.4291-1	-62.6	2.1100	27.168	.180	1.0047	-1.0002	0.3729	1.2464	3095.3	.0982	.682	0.3613	1.2536	3104.1	.0924	.702
4300	4.3255-1	-25.1	2.1188	27.164	.182	1.0066	-1.0002	0.3775	1.2438	3128.8	.1018	.676	0.3622	1.2529	3140.2	.0943	.701
4400	4.2264-1	13.0	2.1275	27.159	.185	1.0091	-1.0003	0.3832	1.2407	3161.3	.1059	.670	0.3630	1.2522	3175.9	.0961	.700
4500	4.1315-1	51.6	2.1362	27.153	.188	1.0125	-1.0005	0.3904	1.2370	3192.6	.1107	.664	0.3638	1.2516	3211.4	.0980	.699
4600	4.0404-1	91.1	2.1449	27.144	.191	1.0170	-1.0006	0.3996	1.2326	3222.7	.1163	.656	0.3646	1.2511	3246.7	.0999	.697
4700	3.9527-1	131.6	2.1536	27.132	.194	1.0229	-1.0009	0.4111	1.2276	3251.6	.1228	.648	0.3653	1.2506	3281.9	.1017	.696
4800	3.8682-1	173.4	2.1624	27.117	.196	1.0305	-1.0012	0.4255	1.2219	3279.3	.1306	.640	0.3659	1.2502	3317.1	.1036	.694
4900	3.7865-1	216.8	2.1714	27.098	.199	1.0401	-1.0016	0.4430	1.2156	3305.9	.1398	.632	0.3666	1.2499	3352.2	.1055	.692
5000	3.7074-1	262.2	2.1805	27.072	.202	1.0521	-1.0021	0.4641	1.2089	3331.9	.1506	.622	0.3671	1.2497	3387.5	.1073	.691
5100	3.6304-1	309.8	2.1900	27.041	.205	1.0666	-1.0028	0.4889	1.2021	3357.5	.1632	.613	0.3677	1.2496	3423.1	.1092	.689
5200	3.5554-1	360.0	2.1997	27.002	.207	1.0836	-1.0035	0.5170	1.1954	3383.3	.1778	.603	0.3682	1.2496	3459.0	.1110	.687
5300	3.4822-1	413.3	2.2099	26.954	.210	1.1031	-1.0045	0.5481	1.1892	3409.7	.1943	.592	0.3687	1.2497	3495.5	.1129	.685
5400	3.4104-1	469.7	2.2204	26.896	.212	1.1246	-1.0055	0.5814	1.1835	3437.2	.2129	.580	0.3691	1.2500	3532.4	.1147	.683

TABLE 27.1E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN² (0.01 ATM)
 WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS							GAS PHASE PROPERTIES FROZEN COMPOSITIONS						
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN	
R	L /FT3	BTU/LB	BTU/ LB R		BTU/ LB R	BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R		
360	1.345-3	-1556.7	1.5669	27.177	0.257	.249	1.152-3	30.281	.031	1.0000	-1.000	.234	1.390	906	.010	.735	.234	1.390	.010	.735
400	1.207-3	-1544.6	1.5986	27.177	0.404	.254	1.035-3	30.241	.034	1.0000	-1.000	.235	1.388	955	.011	.731	.235	1.388	.011	.731
440	1.054-3	-1508.7	1.6832	27.178	1.924	.260	9.262-4	29.759	.036	1.0000	-1.000	.241	1.384	1009	.012	.740	.241	1.384	.012	.740
480	8.111-4	-1374.0	1.9772	27.244	0.265	.260	7.962-4	27.907	.035	1.0000	-1.000	.262	1.372	1083	.012	.781	.262	1.372	.012	.781
520	7.487-4	-1363.4	1.9985	27.289	0.267	.261	7.355-4	27.928	.037	1.0001	-1.000	.263	1.370	1126	.013	.776	.263	1.370	.013	.776
537	7.254-4	-1358.9	2.0069	27.312	0.269	.262	7.129-4	27.938	.038	1.0001	-1.000	.264	1.369	1143	.013	.773	.263	1.369	.013	.776
560	6.952-4	-1352.6	2.0184	27.348	0.270	.263	6.836-4	27.955	.040	1.0003	-1.000	.265	1.367	1167	.014	.770	.264	1.368	.014	.775
600	6.488-4	-1341.7	2.0372	27.419	0.274	.264	6.388-4	27.986	.042	1.0009	-1.000	.267	1.363	1205	.015	.761	.265	1.366	.015	.775
640	6.082-4	-1330.7	2.0550	27.500	0.279	.265	5.996-4	28.021	.045	1.0023	-1.000	.271	1.357	1241	.016	.742	.266	1.363	.015	.773
680	5.723-4	-1319.4	2.0722	27.586	0.287	.267	5.650-4	28.056	.048	1.0053	-1.000	.277	1.347	1274	.019	.709	.267	1.360	.017	.770
720	5.403-4	-1307.7	2.0889	27.672	0.299	.268	5.342-4	28.087	.050	1.0109	-1.000	.288	1.334	1304	.022	.663	.269	1.357	.018	.765
760	5.114-4	-1295.4	2.1055	27.752	0.317	.270	5.065-4	28.109	.052	1.0205	-1.001	.306	1.316	1330	.026	.610	.270	1.354	.019	.761
800	4.851-4	-1282.2	2.1224	27.820	0.343	.272	4.813-4	28.115	.055	1.0357	-1.002	.331	1.295	1353	.032	.559	.272	1.351	.020	.757
840	4.609-4	-1267.8	2.1400	27.868	0.379	.274	4.581-4	28.098	.057	1.0577	-1.003	.365	1.272	1375	.040	.519	.274	1.348	.021	.751
880	4.384-4	-1251.7	2.1586	27.889	0.425	.276	4.365-4	28.052	.059	1.0865	-1.004	.409	1.251	1397	.049	.495	.276	1.345	.022	.743
920	4.174-4	-1233.7	2.1787	27.876	0.478	.279	4.163-4	27.969	.061	1.1205	-1.006	.458	1.233	1420	.058	.489	.279	1.342	.023	.732
960	3.975-4	-1213.4	2.2002	27.831	0.535	.281	3.973-4	27.851	.064	1.1559	-1.008	.509	1.219	1445	.065	.499	.281	1.339	.025	.720
1000	3.789-4	-1192.0	2.2221	27.671	0.541	.284	3.789-4	27.671	.066	1.1780	-1.009	.541	1.212	1476	.067	.533	.284	1.338	.026	.707
1040	3.618-4	-1170.3	2.2433	27.479	0.534	.287	3.618-4	27.479	.068	1.1709	-1.009	.534	1.214	1512	.062	.587	.287	1.336	.028	.696
1080	3.464-4	-1150.0	2.2625	27.323	0.475	.290	3.464-4	27.323	.070	1.1246	-1.007	.475	1.230	1555	.051	.647	.290	1.335	.029	.688
1120	3.330-4	-1132.7	2.2783	27.231	0.393	.292	3.330-4	27.231	.072	1.0613	-1.003	.393	1.259	1605	.041	.682	.292	1.333	.031	.684
1160	3.210-4	-1118.1	2.2910	27.194	0.343	.294	3.210-4	27.194	.074	1.0218	-1.001	.343	1.284	1650	.037	.688	.294	1.331	.032	.683
1200	3.102-4	-1104.8	2.3023	27.182	0.327	.296	3.102-4	27.182	.075	1.0069	-1.000	.327	1.292	1684	.036	.687	.296	1.328	.033	.683
1240	3.001-4	-1091.8	2.3130	27.178	0.324	.297	3.001-4	27.178	.077	1.0022	-1.000	.324	1.293	1713	.036	.686	.297	1.326	.034	.684
1280	2.908-4	-1078.8	2.3233	27.177	0.324	.299	2.908-4	27.177	.079	1.0007	-1.000	.324	1.291	1739	.037	.687	.299	1.324	.034	.685
1320	2.819-4	-1065.8	2.3333	27.177	0.326	.300	2.819-4	27.177	.081	1.0002	-1.000	.326	1.289	1764	.038	.687	.300	1.322	.035	.686
1360	2.736-4	-1052.7	2.3431	27.177	0.328	.302	2.736-4	27.177	.083	1.0001	-1.000	.328	1.287	1789	.039	.687	.302	1.320	.036	.687
1400	2.658-4	-1039.6	2.3526	27.177	0.329	.303	2.658-4	27.177	.084	1.0000	-1.000	.329	1.285	1814	.040	.688	.303	1.318	.037	.688

TABLE 27.2E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 1.46959 LB/IN2 (0.10 ATM)
WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS								
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		BTU/ LB R	BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R	
360	1.345-2	-1556.8	1.4373	27.177	0.249	.249	1.152-2	30.283	.031	1.0000	-1.000	.234	1.390	906	.010	.735	.234	1.390	.010	.735
400	1.210-2	-1546.5	1.4643	27.177	0.269	.254	1.037-2	30.279	.034	1.0000	-1.000	.235	1.388	955	.011	.730	.235	1.388	.011	.730
440	1.096-2	-1533.8	1.4946	27.177	0.414	.260	9.409-3	30.231	.037	1.0000	-1.000	.236	1.386	1002	.012	.727	.236	1.386	.012	.727
480	9.739-3	-1503.5	1.5599	27.178	1.385	.266	8.518-3	29.857	.039	1.0000	-1.000	.241	1.382	1051	.013	.734	.241	1.382	.013	.734
520	7.645-3	-1377.3	1.8108	27.267	5.569	.269	7.407-3	28.127	.038	1.0000	-1.000	.261	1.371	1123	.013	.772	.261	1.371	.013	.773
537	7.254-3	-1358.9	1.8461	27.312	0.268	.262	7.129-3	27.938	.038	1.0000	-1.000	.264	1.369	1144	.013	.775	.263	1.369	.013	.776
560	6.952-3	-1352.6	1.8575	27.348	0.270	.263	6.836-3	27.955	.040	1.0001	-1.000	.264	1.368	1167	.014	.774	.264	1.368	.014	.775
600	6.489-3	-1341.8	1.8763	27.420	0.273	.264	6.388-3	27.987	.042	1.0003	-1.000	.266	1.365	1206	.015	.770	.265	1.366	.015	.775
640	6.083-3	-1330.8	1.8939	27.501	0.276	.265	5.996-3	28.023	.045	1.0007	-1.000	.268	1.361	1243	.016	.763	.266	1.363	.015	.774
680	5.725-3	-1319.7	1.9108	27.588	0.279	.267	5.651-3	28.062	.048	1.0017	-1.000	.270	1.356	1278	.017	.749	.267	1.360	.016	.770
720	5.406-3	-1308.4	1.9269	27.679	0.284	.268	5.344-3	28.100	.050	1.0035	-1.000	.275	1.349	1311	.019	.727	.268	1.357	.018	.767
760	5.120-3	-1296.9	1.9424	27.769	0.291	.270	5.070-3	28.135	.052	1.0067	-1.000	.281	1.340	1342	.021	.699	.270	1.354	.018	.764
800	4.862-3	-1285.1	1.9576	27.854	0.301	.271	4.821-3	28.165	.055	1.0119	-1.001	.291	1.329	1370	.024	.663	.271	1.351	.019	.762
840	4.626-3	-1272.8	1.9726	27.931	0.315	.273	4.595-3	28.186	.057	1.0200	-1.001	.305	1.315	1396	.028	.623	.273	1.348	.020	.759
880	4.411-3	-1259.9	1.9876	27.995	0.333	.275	4.387-3	28.194	.059	1.0316	-1.001	.323	1.300	1420	.033	.583	.275	1.344	.022	.756
920	4.211-3	-1246.1	2.0029	28.042	0.357	.277	4.195-3	28.185	.061	1.0475	-1.002	.347	1.283	1443	.039	.549	.277	1.341	.023	.751
960	4.026-3	-1231.2	2.0188	28.067	0.387	.279	4.016-3	28.156	.063	1.0680	-1.003	.376	1.266	1465	.046	.524	.279	1.338	.024	.745
1000	3.852-3	-1215.0	2.0353	28.068	0.423	.282	3.848-3	28.102	.066	1.0927	-1.005	.411	1.251	1488	.053	.509	.281	1.335	.025	.737
1040	3.688-3	-1197.5	2.0525	28.008	0.450	.284	3.688-3	28.008	.068	1.1202	-1.006	.450	1.237	1511	.060	.508	.284	1.333	.026	.729
1080	3.534-3	-1178.8	2.0701	27.868	0.486	.287	3.534-3	27.868	.070	1.1458	-1.008	.486	1.227	1537	.065	.521	.287	1.331	.028	.720
1120	3.388-3	-1158.7	2.0884	27.710	0.515	.289	3.388-3	27.710	.072	1.1649	-1.009	.515	1.219	1565	.067	.548	.289	1.329	.029	.710
1160	3.252-3	-1137.8	2.1067	27.547	0.525	.292	3.252-3	27.547	.074	1.1687	-1.009	.525	1.217	1596	.066	.588	.292	1.328	.031	.701
1200	3.127-3	-1117.2	2.1242	27.398	0.502	.294	3.127-3	27.397	.075	1.1466	-1.008	.502	1.222	1631	.060	.636	.294	1.327	.032	.694
1240	3.013-3	-1098.1	2.1398	27.286	0.446	.297	3.013-3	27.286	.077	1.0990	-1.006	.446	1.237	1672	.051	.676	.297	1.325	.033	.689
1280	2.912-3	-1081.5	2.1530	27.222	0.386	.298	2.912-3	27.222	.079	1.0501	-1.003	.386	1.258	1715	.044	.692	.298	1.324	.034	.687
1320	2.821-3	-1066.9	2.1643	27.194	0.352	.300	2.821-3	27.194	.081	1.0208	-1.001	.352	1.274	1754	.041	.692	.300	1.322	.035	.687
1360	2.737-3	-1053.1	2.1745	27.183	0.338	.302	2.737-3	27.183	.083	1.0080	-1.000	.338	1.281	1785	.040	.690	.302	1.320	.036	.687
1400	2.659-3	-1039.7	2.1842	27.179	0.333	.303	2.659-3	27.179	.084	1.0030	-1.000	.333	1.283	1813	.041	.689	.303	1.318	.037	.688

TABLE 27.3E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN² (1.00 ATM)
 WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS							GAS PHASE PROPERTIES FROZEN COMPOSITIONS						
T	DENSITY	H	ENTROPY	MW	CP REACT	CP FROZ	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)	S VS	COND	PRAN	CP	GAM	COND	PRAN	
R	L /FT3	BTU/LB	BTU/ LB R		BTU/ LB R	BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R		
360	1.345-1	-1556.8	1.3080	27.177	0.249	.249	1.152-1	30.283	.031	1.0000	-1.000	.234	1.390	906	.010	.735	.234	1.390	.010	.735
400	1.211-1	-1546.7	1.3346	27.177	0.256	.254	1.037-1	30.283	.034	1.0000	-1.000	.235	1.388	955	.011	.730	.235	1.388	.011	.730
440	1.100-1	-1536.2	1.3596	27.177	0.275	.260	9.423-2	30.278	.037	1.0000	-1.000	.235	1.386	1001	.012	.726	.235	1.386	.012	.726
480	1.005-1	-1523.8	1.3866	27.177	0.371	.266	8.627-2	30.240	.040	1.0000	-1.000	.237	1.384	1045	.013	.724	.237	1.384	.013	.724
520	9.149-2	-1485.9	1.4627	27.177	0.677	.326	7.918-2	30.067	.042	1.0000	-1.000	.239	1.381	1090	.014	.727	.239	1.381	.014	.727
537	8.742-2	-1472.8	1.4875	27.179	0.915	.322	7.630-2	29.901	.043	1.0000	-1.000	.241	1.379	1109	.014	.731	.241	1.379	.014	.731
560	8.081-2	-1445.2	1.5378	27.192	1.526	.312	7.211-2	29.486	.043	1.0000	-1.000	.246	1.376	1140	.014	.741	.246	1.376	.014	.741
600	6.489-2	-1341.8	1.7154	27.420	0.272	.264	6.388-2	27.987	.042	1.0001	-1.000	.265	1.365	1206	.015	.773	.265	1.366	.015	.775
640	6.083-2	-1330.9	1.7330	27.501	0.275	.265	5.996-2	28.024	.045	1.0002	-1.000	.267	1.362	1244	.016	.770	.266	1.363	.015	.774
680	5.725-2	-1319.8	1.7497	27.589	0.277	.267	5.652-2	28.063	.048	1.0005	-1.000	.268	1.359	1279	.017	.763	.267	1.360	.016	.771
720	5.407-2	-1308.7	1.7657	27.681	0.280	.268	5.345-2	28.104	.050	1.0011	-1.000	.270	1.355	1314	.018	.754	.268	1.357	.017	.767
760	5.122-2	-1297.5	1.7808	27.774	0.283	.270	5.071-2	28.144	.052	1.0021	-1.000	.274	1.349	1346	.019	.742	.270	1.354	.018	.765
800	4.865-2	-1286.1	1.7954	27.866	0.287	.271	4.824-2	28.181	.055	1.0038	-1.000	.278	1.343	1377	.021	.726	.271	1.351	.019	.763
840	4.632-2	-1274.5	1.8096	27.953	0.292	.273	4.600-2	28.215	.057	1.0065	-1.000	.283	1.336	1406	.023	.705	.273	1.348	.020	.762
880	4.420-2	-1262.7	1.8233	28.034	0.299	.275	4.395-2	28.244	.059	1.0105	-1.000	.291	1.327	1434	.025	.680	.275	1.344	.021	.761
920	4.225-2	-1250.5	1.8368	28.106	0.308	.276	4.207-2	28.266	.061	1.0161	-1.001	.300	1.317	1460	.028	.651	.276	1.341	.022	.758
960	4.046-2	-1238.0	1.8502	28.168	0.320	.278	4.034-2	28.279	.063	1.0239	-1.001	.312	1.306	1485	.032	.622	.278	1.338	.023	.755
1000	3.879-2	-1224.9	1.8635	28.217	0.335	.280	3.873-2	28.280	.066	1.0341	-1.002	.328	1.295	1509	.036	.593	.280	1.334	.024	.751
1040	3.724-2	-1211.1	1.8770	28.252	0.354	.282	3.722-2	28.269	.068	1.0471	-1.002	.346	1.282	1531	.041	.569	.282	1.331	.026	.747
1080	3.579-2	-1196.7	1.8906	28.223	0.368	.285	3.579-2	28.223	.070	1.0629	-1.003	.368	1.270	1554	.047	.551	.285	1.328	.027	.742
1120	3.442-2	-1181.5	1.9045	28.149	0.394	.287	3.442-2	28.149	.072	1.0813	-1.005	.394	1.258	1577	.052	.540	.287	1.326	.028	.737
1160	3.312-2	-1165.1	1.9188	28.059	0.422	.289	3.312-2	28.059	.073	1.1019	-1.006	.422	1.247	1601	.058	.537	.289	1.324	.029	.731
1200	3.190-2	-1147.7	1.9336	27.952	0.453	.292	3.190-2	27.952	.075	1.1235	-1.007	.453	1.236	1624	.063	.543	.292	1.322	.030	.724
1240	3.073-2	-1129.0	1.9489	27.829	0.482	.294	3.073-2	27.829	.077	1.1440	-1.008	.482	1.228	1649	.067	.557	.294	1.321	.032	.717
1280	2.963-2	-1109.2	1.9646	27.695	0.506	.296	2.963-2	27.695	.079	1.1594	-1.009	.506	1.221	1675	.069	.580	.296	1.319	.033	.710
1320	2.859-2	-1088.6	1.9804	27.557	0.516	.299	2.859-2	27.557	.081	1.1633	-1.010	.516	1.218	1703	.068	.611	.299	1.318	.034	.704
1360	2.762-2	-1068.1	1.9957	27.428	0.503	.301	2.762-2	27.428	.083	1.1486	-1.009	.503	1.221	1735	.064	.647	.301	1.317	.036	.698
1400	2.673-2	-1048.7	2.0098	27.322	0.464	.303	2.673-2	27.322	.084	1.1138	-1.007	.464	1.231	1771	.058	.679	.303	1.316	.037	.694

TABLE 27.4E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN² (10.00 ATM)
WET AIR (W/A = 0.03)

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS							GAS PHASE PROPERTIES FROZEN COMPOSITIONS						
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		BTU/ LB R	BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R	
360	1.341 0	-1556.8	1.1787	27.177	0.249	.249	1.152 0	30.283	.031	1.0000	-1.000	.234	1.390	906	.010	.735	.234	1.390	.010	.735
400	1.208 0	-1546.8	1.2052	27.177	0.254	.254	1.037 0	30.283	.034	1.0000	-1.000	.235	1.388	955	.011	.730	.235	1.388	.011	.730
440	1.098 0	-1536.4	1.2298	27.177	0.262	.260	9.425-1	30.282	.037	1.0000	-1.000	.235	1.386	1001	.012	.726	.235	1.386	.012	.726
480	1.006 0	-1525.7	1.2531	27.177	0.277	.266	8.638-1	30.279	.040	1.0000	-1.000	.236	1.384	1045	.013	.723	.236	1.384	.013	.723
520	9.280-1	-1494.7	1.3158	27.177	0.364	.330	7.969-1	30.261	.042	1.0000	-1.000	.237	1.382	1087	.014	.723	.237	1.382	.014	.723
537	8.980-1	-1488.4	1.3276	27.177	0.385	.330	7.718-1	30.245	.044	1.0000	-1.000	.238	1.381	1104	.014	.723	.238	1.381	.014	.723
560	8.578-1	-1478.9	1.3449	27.177	0.434	.330	7.386-1	30.203	.045	1.0000	-1.000	.239	1.380	1128	.015	.724	.239	1.380	.015	.724
600	7.901-1	-1458.7	1.3798	27.178	0.601	.327	6.857-1	30.042	.047	1.0000	-1.000	.242	1.376	1169	.016	.729	.242	1.376	.016	.729
640	7.168-1	-1428.1	1.4290	27.195	0.978	.319	6.346-1	29.659	.049	1.0000	-1.000	.247	1.372	1213	.016	.738	.247	1.372	.016	.738
680	6.254-1	-1373.3	1.5117	27.323	1.918	.297	5.813-1	28.866	.049	1.0001	-1.000	.257	1.365	1264	.017	.753	.257	1.365	.017	.754
720	5.407-1	-1308.8	1.6047	27.682	0.278	.268	5.346-1	28.105	.050	1.0003	-1.000	.269	1.356	1314	.018	.763	.268	1.357	.017	.767
760	5.122-1	-1297.6	1.6198	27.776	0.280	.270	5.072-1	28.146	.052	1.0006	-1.000	.271	1.353	1348	.019	.758	.270	1.354	.018	.765
800	4.866-1	-1286.4	1.6342	27.869	0.282	.271	4.825-1	28.187	.055	1.0012	-1.000	.273	1.348	1379	.020	.751	.271	1.351	.019	.764
840	4.634-1	-1275.0	1.6480	27.960	0.285	.273	4.601-1	28.225	.057	1.0020	-1.000	.276	1.344	1410	.021	.743	.273	1.348	.020	.763
880	4.423-1	-1263.6	1.6613	28.047	0.288	.274	4.398-1	28.261	.059	1.0033	-1.000	.280	1.338	1439	.023	.732	.274	1.344	.021	.762
920	4.230-1	-1252.0	1.6742	28.128	0.292	.276	4.211-1	28.293	.061	1.0052	-1.000	.284	1.333	1468	.024	.719	.276	1.341	.022	.761
960	4.052-1	-1240.2	1.6867	28.204	0.296	.278	4.040-1	28.321	.063	1.0078	-1.000	.289	1.326	1495	.026	.702	.278	1.337	.023	.759
1000	3.889-1	-1228.3	1.6989	28.272	0.302	.280	3.881-1	28.344	.065	1.0113	-1.001	.296	1.319	1521	.028	.683	.280	1.334	.024	.757
1040	3.737-1	-1216.0	1.7109	28.333	0.310	.282	3.734-1	28.361	.068	1.0159	-1.001	.303	1.311	1546	.031	.663	.282	1.331	.025	.754
1080	3.596-1	-1203.5	1.7227	28.362	0.313	.284	3.596-1	28.362	.070	1.0218	-1.001	.313	1.303	1571	.034	.643	.284	1.328	.026	.751
1120	3.465-1	-1190.8	1.7343	28.335	0.324	.286	3.465-1	28.335	.072	1.0292	-1.002	.324	1.295	1595	.037	.624	.286	1.325	.027	.749
1160	3.341-1	-1177.6	1.7459	28.302	0.337	.288	3.341-1	28.302	.073	1.0383	-1.002	.337	1.286	1619	.041	.607	.288	1.322	.028	.746
1200	3.225-1	-1163.8	1.7576	28.260	0.353	.290	3.225-1	28.260	.075	1.0493	-1.003	.353	1.276	1642	.045	.592	.290	1.320	.029	.742
1240	3.115-1	-1149.4	1.7694	28.209	0.371	.292	3.115-1	28.209	.077	1.0622	-1.004	.371	1.267	1664	.049	.582	.292	1.317	.031	.738
1280	3.011-1	-1134.1	1.7815	28.147	0.391	.294	3.011-1	28.147	.079	1.0771	-1.005	.391	1.257	1686	.054	.575	.294	1.315	.032	.734
1320	2.912-1	-1118.0	1.7939	28.073	0.414	.296	2.912-1	28.073	.081	1.0938	-1.006	.414	1.248	1708	.058	.573	.296	1.313	.033	.730
1360	2.818-1	-1101.0	1.8066	27.987	0.439	.299	2.818-1	27.987	.083	1.1117	-1.007	.439	1.239	1730	.063	.576	.299	1.312	.034	.725
1400	2.728-1	-1082.9	1.8197	27.889	0.463	.301	2.728-1	27.889	.084	1.1295	-1.008	.463	1.232	1753	.067	.584	.301	1.310	.035	.720

TABLE 27.5E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.000; F/A = 0.082073; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN2 (50.00 ATM)
 WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS							GAS PHASE PROPERTIES FROZEN COMPOSITIONS						
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		FT S			BTU/ LB R	FT/S	BTU/ FT S R			BTU/ LB R		BTU/ FT S R	
360	6.624	0	-1556.8	1.0884	27.177	0.249	5.760	30.283	.031	1.0000	-1.000	.234	1.390	906	.010	.735	.234	1.390	.010	.735
400	5.971	0	-1546.8	1.1149	27.177	0.254	5.184	30.283	.034	1.0000	-1.000	.235	1.388	955	.011	.730	.235	1.388	.011	.730
440	5.435	0	-1536.5	1.1394	27.177	0.261	4.713	30.283	.037	1.0000	-1.000	.235	1.386	1001	.012	.726	.235	1.386	.012	.726
480	4.987	0	-1525.9	1.1624	27.177	0.268	4.320	30.282	.040	1.0000	-1.000	.236	1.384	1044	.013	.723	.236	1.384	.013	.723
520	4.610	0	-1495.4	1.2239	27.177	0.337	3.987	30.279	.043	1.0000	-1.000	.237	1.382	1086	.014	.722	.237	1.382	.014	.722
537	4.467	0	-1489.8	1.2346	27.177	0.342	3.863	30.275	.044	1.0000	-1.000	.238	1.381	1103	.014	.722	.238	1.381	.014	.722
560	4.280	0	-1481.7	1.2493	27.177	0.352	3.701	30.267	.045	1.0000	-1.000	.238	1.380	1127	.015	.722	.238	1.380	.015	.722
600	3.986	0	-1467.1	1.2746	27.177	0.384	3.450	30.235	.048	1.0000	-1.000	.240	1.377	1166	.016	.724	.240	1.377	.016	.724
640	3.716	0	-1450.5	1.3012	27.177	0.448	3.227	30.158	.050	1.0000	-1.000	.242	1.375	1204	.017	.727	.242	1.375	.017	.727
680	3.454	0	-1430.5	1.3315	27.181	0.564	3.021	30.000	.052	1.0000	-1.000	.244	1.371	1243	.017	.730	.244	1.371	.017	.731
720	3.183	0	-1404.2	1.3690	27.204	0.772	2.825	29.706	.054	1.0000	-1.000	.249	1.367	1284	.018	.736	.249	1.367	.018	.737
760	2.878	0	-1366.3	1.4202	27.304	1.172	2.631	29.207	.055	1.0001	-1.000	.256	1.361	1327	.019	.745	.256	1.362	.019	.746
800	2.505	0	-1304.1	1.4998	27.703	2.070	2.433	28.423	.055	1.0004	-1.000	.269	1.352	1375	.020	.755	.268	1.353	.019	.760
840	2.317	0	-1275.2	1.5354	27.962	0.283	2.301	28.228	.057	1.0009	-1.000	.274	1.346	1411	.021	.754	.273	1.348	.020	.763
880	2.212	0	-1263.8	1.5486	28.051	0.285	2.199	28.265	.059	1.0014	-1.000	.277	1.341	1441	.022	.749	.274	1.344	.021	.763
920	2.115	0	-1252.4	1.5614	28.135	0.287	2.106	28.301	.061	1.0023	-1.000	.280	1.337	1470	.023	.741	.276	1.341	.022	.761
960	2.027	0	-1240.8	1.5736	28.214	0.290	2.021	28.333	.063	1.0034	-1.000	.283	1.332	1498	.024	.732	.278	1.337	.023	.760
1000	1.946	0	-1229.2	1.5856	28.287	0.294	1.942	28.361	.065	1.0050	-1.000	.287	1.327	1525	.026	.721	.280	1.334	.024	.758
1040	1.870	0	-1217.3	1.5971	28.355	0.298	1.869	28.386	.068	1.0071	-1.000	.291	1.321	1551	.028	.709	.282	1.331	.025	.756
1080	1.801	0	-1205.4	1.6084	28.400	0.297	1.801	28.400	.070	1.0099	-1.001	.297	1.315	1577	.030	.695	.284	1.327	.026	.754
1120	1.735	0	-1193.4	1.6193	28.388	0.303	1.735	28.388	.071	1.0134	-1.001	.303	1.309	1603	.032	.681	.286	1.324	.027	.752
1160	1.675	0	-1181.1	1.6301	28.372	0.311	1.675	28.372	.073	1.0178	-1.001	.311	1.303	1627	.034	.666	.288	1.322	.028	.750
1200	1.618	0	-1168.5	1.6408	28.353	0.319	1.618	28.353	.075	1.0232	-1.001	.319	1.296	1651	.037	.652	.290	1.319	.029	.748
1240	1.564	0	-1155.6	1.6514	28.328	0.329	1.564	28.328	.077	1.0298	-1.002	.329	1.289	1675	.040	.638	.292	1.316	.030	.745
1280	1.514	0	-1142.2	1.6620	28.298	0.341	1.514	28.298	.079	1.0378	-1.002	.341	1.281	1698	.043	.626	.294	1.314	.031	.743
1320	1.466	0	-1128.3	1.6727	28.261	0.354	1.466	28.261	.081	1.0472	-1.003	.354	1.273	1720	.046	.616	.296	1.312	.032	.740
1360	1.421	0	-1113.8	1.6835	28.217	0.369	1.421	28.217	.083	1.0582	-1.004	.369	1.266	1741	.050	.608	.298	1.310	.033	.737
1400	1.377	0	-1098.7	1.6944	28.164	0.386	1.377	28.164	.084	1.0707	-1.004	.386	1.258	1763	.054	.602	.300	1.308	.035	.733

TABLE 28A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.016261; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.3284; MW = 28.4350;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .03251; H2O= .07905; N2= .73231; O2= .14734; AR= .00878

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
360	1.0817-1	5.4083 0	-526.4	1.9094	1.7486	1.5878	1.4270	1.3146	0.2488	1.3901	935.4	.0299	.0098	.7628	360
380	1.0247-1	5.1236 0	-521.4	1.9228	1.7620	1.6012	1.4404	1.3280	0.2488	1.3903	961.1	.0314	.0103	.7592	380
400	9.7349-2	4.8674 0	-516.4	1.9356	1.7748	1.6140	1.4532	1.3408	0.2487	1.3904	986.1	.0329	.0108	.7558	400
420	9.2713-2	4.6357 0	-511.5	1.9477	1.7869	1.6261	1.4653	1.3529	0.2488	1.3903	1010.5	.0344	.0114	.7527	420
440	8.8499-2	4.4249 0	-506.5	1.9593	1.7985	1.6377	1.4769	1.3645	0.2488	1.3902	1034.2	.0358	.0119	.7500	440
460	8.4651-2	4.2326 0	-501.5	1.9704	1.8096	1.6488	1.4879	1.3755	0.2489	1.3901	1057.4	.0372	.0124	.7477	460
480	8.1124-2	4.0562 0	-496.5	1.9810	1.8202	1.6593	1.4985	1.3861	0.2490	1.3898	1080.0	.0386	.0129	.7457	480
500	7.7879-2	3.8939 0	-491.6	1.9911	1.8303	1.6695	1.5087	1.3963	0.2492	1.3895	1102.2	.0399	.0134	.7441	500
520	7.4884-2	3.7442 0	-486.6	2.0009	1.8401	1.6793	1.5185	1.4061	0.2493	1.3891	1123.8	.0413	.0139	.7429	520
537	7.2558-2	3.6279 0	-482.4	2.0088	1.8480	1.6872	1.5264	1.4139	0.2495	1.3887	1141.6	.0424	.0142	.7422	537
540	7.2110-2	3.6055 0	-481.6	2.0103	1.8495	1.6887	1.5279	1.4155	0.2495	1.3886	1145.1	.0426	.0143	.7420	540
560	6.9535-2	3.4767 0	-476.6	2.0194	1.8586	1.6978	1.5370	1.4246	0.2498	1.3881	1165.8	.0439	.0148	.7418	560
580	6.7137-2	3.3569 0	-471.6	2.0282	1.8674	1.7066	1.5457	1.4333	0.2501	1.3875	1186.2	.0452	.0152	.7417	580
600	6.4899-2	3.2450 0	-466.6	2.0367	1.8758	1.7150	1.5542	1.4418	0.2504	1.3869	1206.2	.0464	.0157	.7418	600
620	6.2806-2	3.1403 0	-461.6	2.0449	1.8841	1.7233	1.5624	1.4500	0.2507	1.3861	1225.9	.0476	.0161	.7418	620
640	6.0843-2	3.0421 0	-456.6	2.0528	1.8920	1.7312	1.5704	1.4580	0.2511	1.3854	1245.1	.0489	.0165	.7416	640
660	5.8999-2	2.9500 0	-451.5	2.0606	1.8998	1.7389	1.5781	1.4657	0.2514	1.3846	1264.1	.0501	.0170	.7411	660
680	5.7264-2	2.8632 0	-446.5	2.0681	1.9073	1.7465	1.5856	1.4732	0.2518	1.3837	1282.7	.0512	.0174	.7405	680
700	5.5628-2	2.7814 0	-441.5	2.0754	1.9146	1.7538	1.5930	1.4806	0.2523	1.3828	1301.0	.0524	.0179	.7399	700
720	5.4083-2	2.7041 0	-436.4	2.0825	1.9217	1.7609	1.6001	1.4877	0.2527	1.3819	1319.0	.0536	.0183	.7392	720
740	5.2621-2	2.6310 0	-431.4	2.0894	1.9286	1.7678	1.6070	1.4946	0.2532	1.3809	1336.7	.0547	.0187	.7389	740
760	5.1236-2	2.5618 0	-426.3	2.0962	1.9354	1.7746	1.6138	1.5014	0.2537	1.3799	1354.2	.0558	.0192	.7385	760
780	4.9922-2	2.4961 0	-421.2	2.1028	1.9420	1.7812	1.6204	1.5080	0.2542	1.3788	1371.3	.0569	.0196	.7383	780
800	4.8674-2	2.4337 0	-416.1	2.1092	1.9484	1.7876	1.6268	1.5144	0.2547	1.3778	1388.3	.0580	.0200	.7381	800
820	4.7487-2	2.3744 0	-411.0	2.1155	1.9547	1.7939	1.6331	1.5207	0.2553	1.3766	1404.9	.0591	.0204	.7380	820
840	4.6357-2	2.3178 0	-405.9	2.1217	1.9609	1.8001	1.6392	1.5268	0.2558	1.3755	1421.4	.0602	.0209	.7379	840
860	4.5278-2	2.2639 0	-400.8	2.1277	1.9669	1.8061	1.6453	1.5329	0.2564	1.3744	1437.6	.0612	.0213	.7379	860
880	4.4249-2	2.2125 0	-395.6	2.1336	1.9728	1.8120	1.6512	1.5388	0.2570	1.3732	1453.6	.0623	.0217	.7379	880
900	4.3266-2	2.1633 0	-390.5	2.1394	1.9786	1.8178	1.6570	1.5446	0.2576	1.3720	1469.4	.0633	.0221	.7379	900
920	4.2326-2	2.1163 0	-385.3	2.1451	1.9842	1.8234	1.6626	1.5502	0.2582	1.3707	1484.9	.0643	.0225	.7377	920
940	4.1425-2	2.0712 0	-380.2	2.1506	1.9898	1.8290	1.6682	1.5558	0.2588	1.3695	1500.3	.0654	.0229	.7376	940
960	4.0562-2	2.0281 0	-375.0	2.1561	1.9953	1.8345	1.6736	1.5612	0.2595	1.3683	1515.5	.0664	.0234	.7374	960
980	3.9734-2	1.9867 0	-369.8	2.1614	2.0006	1.8398	1.6790	1.5666	0.2601	1.3670	1530.5	.0674	.0238	.7372	980
1000	3.8939-2	1.9470 0	-364.6	2.1667	2.0059	1.8451	1.6843	1.5719	0.2608	1.3657	1545.3	.0684	.0242	.7370	1000
1020	3.8176-2	1.9088 0	-359.4	2.1719	2.0111	1.8502	1.6894	1.5770	0.2615	1.3645	1560.0	.0694	.0246	.7368	1020
1040	3.7442-2	1.8721 0	-354.1	2.1769	2.0161	1.8553	1.6945	1.5821	0.2621	1.3632	1574.5	.0703	.0250	.7366	1040
1060	3.6735-2	1.8368 0	-348.9	2.1819	2.0211	1.8603	1.6995	1.5871	0.2628	1.3619	1588.8	.0713	.0255	.7363	1060
1080	3.6055-2	1.8028 0	-343.6	2.1869	2.0261	1.8652	1.7044	1.5920	0.2635	1.3606	1602.9	.0723	.0259	.7361	1080
1100	3.5400-2	1.7700 0	-338.3	2.1917	2.0309	1.8701	1.7093	1.5969	0.2642	1.3593	1616.9	.0732	.0263	.7358	1100
1120	3.4767-2	1.7384 0	-333.0	2.1965	2.0357	1.8749	1.7140	1.6016	0.2649	1.3580	1630.8	.0742	.0267	.7354	1120
1140	3.4157-2	1.7079 0	-327.7	2.2012	2.0404	1.8795	1.7187	1.6063	0.2656	1.3567	1644.5	.0751	.0271	.7351	1140

TABLE 28A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.016261; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.3284; MW = 28.4350;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .03251; H2O= .07905; N2= .73231; O2= .14734; AR= .00878

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	R	
1160	3.3569-2	1.6784 0	-322.4	2.2058	2.0450	1.8842	1.7234	1.6110	0.2663	1.3554	1658.1	.0761	.0276	.7348	1160
1180	3.3000-2	1.6500 0	-317.1	2.2104	2.0495	1.8887	1.7279	1.6155	0.2671	1.3541	1671.5	.0770	.0280	.7344	1180
1200	3.2450-2	1.6225 0	-311.7	2.2148	2.0540	1.8932	1.7324	1.6200	0.2678	1.3528	1684.8	.0779	.0284	.7341	1200
1220	3.1918-2	1.5959 0	-306.4	2.2193	2.0585	1.8977	1.7369	1.6245	0.2685	1.3516	1698.0	.0788	.0288	.7337	1220
1240	3.1403-2	1.5701 0	-301.0	2.2237	2.0628	1.9020	1.7412	1.6288	0.2692	1.3503	1711.0	.0797	.0293	.7334	1240
1260	3.0904-2	1.5452 0	-295.6	2.2280	2.0672	1.9063	1.7455	1.6331	0.2699	1.3490	1724.0	.0806	.0297	.7330	1260
1280	3.0421-2	1.5211 0	-290.2	2.2322	2.0714	1.9106	1.7498	1.6374	0.2707	1.3478	1736.8	.0815	.0301	.7327	1280
1300	2.9953-2	1.4977 0	-284.8	2.2364	2.0756	1.9148	1.7540	1.6416	0.2714	1.3465	1749.5	.0824	.0305	.7324	1300
1320	2.9500-2	1.4750 0	-279.3	2.2406	2.0798	1.9190	1.7581	1.6457	0.2721	1.3453	1762.1	.0833	.0310	.7320	1320
1340	2.9059-2	1.4530 0	-273.9	2.2447	2.0839	1.9231	1.7622	1.6498	0.2728	1.3441	1774.6	.0842	.0314	.7317	1340
1360	2.8632-2	1.4316 0	-268.4	2.2487	2.0879	1.9271	1.7663	1.6539	0.2735	1.3428	1787.0	.0851	.0318	.7314	1360
1380	2.8217-2	1.4109 0	-263.0	2.2527	2.0919	1.9311	1.7703	1.6579	0.2743	1.3416	1799.3	.0860	.0322	.7310	1380
1400	2.7814-2	1.3907 0	-257.5	2.2567	2.0959	1.9350	1.7742	1.6618	0.2750	1.3405	1811.5	.0868	.0327	.7307	1400
1420	2.7422-2	1.3711 0	-252.0	2.2606	2.0998	1.9390	1.7781	1.6657	0.2757	1.3393	1823.5	.0877	.0331	.7304	1420
1440	2.7041-2	1.3521 0	-246.4	2.2644	2.1036	1.9428	1.7820	1.6696	0.2764	1.3381	1835.6	.0885	.0335	.7301	1440
1460	2.6671-2	1.3335 0	-240.9	2.2683	2.1074	1.9466	1.7858	1.6734	0.2771	1.3370	1847.5	.0894	.0339	.7299	1460
1480	2.6310-2	1.3155 0	-235.3	2.2720	2.1112	1.9504	1.7896	1.6772	0.2778	1.3358	1859.3	.0902	.0344	.7296	1480
1500	2.5960-2	1.2980 0	-229.8	2.2758	2.1149	1.9541	1.7933	1.6809	0.2785	1.3347	1871.0	.0911	.0348	.7294	1500
1520	2.5618-2	1.2809 0	-224.2	2.2795	2.1186	1.9578	1.7970	1.6846	0.2792	1.3336	1882.7	.0919	.0352	.7292	1520
1540	2.5285-2	1.2643 0	-218.6	2.2831	2.1223	1.9615	1.8007	1.6883	0.2799	1.3325	1894.3	.0927	.0356	.7289	1540
1560	2.4961-2	1.2481 0	-213.0	2.2867	2.1259	1.9651	1.8043	1.6919	0.2805	1.3315	1905.8	.0936	.0360	.7287	1560
1580	2.4645-2	1.2323 0	-207.4	2.2903	2.1295	1.9687	1.8079	1.6955	0.2812	1.3304	1917.2	.0944	.0364	.7285	1580
1600	2.4337-2	1.2169 0	-201.8	2.2938	2.1330	1.9722	1.8114	1.6990	0.2819	1.3294	1928.5	.0952	.0368	.7283	1600
1620	2.4037-2	1.2018 0	-196.1	2.2973	2.1365	1.9757	1.8149	1.7025	0.2825	1.3284	1939.8	.0960	.0373	.7281	1620
1640	2.3744-2	1.1872 0	-190.5	2.3008	2.1400	1.9792	1.8184	1.7060	0.2832	1.3274	1951.0	.0968	.0377	.7279	1640
1660	2.3458-2	1.1729 0	-184.8	2.3043	2.1434	1.9826	1.8218	1.7094	0.2838	1.3264	1962.1	.0976	.0381	.7277	1660
1680	2.3178-2	1.1589 0	-179.1	2.3077	2.1468	1.9860	1.8252	1.7128	0.2844	1.3254	1973.2	.0984	.0385	.7275	1680
1700	2.2906-2	1.1453 0	-173.4	2.3110	2.1502	1.9894	1.8286	1.7162	0.2851	1.3245	1984.2	.0992	.0389	.7273	1700
1720	2.2639-2	1.1320 0	-167.7	2.3144	2.1536	1.9927	1.8319	1.7195	0.2857	1.3236	1995.1	.1000	.0393	.7271	1720
1740	2.2379-2	1.1189 0	-162.0	2.3177	2.1569	1.9960	1.8352	1.7228	0.2863	1.3227	2006.0	.1008	.0397	.7270	1740
1760	2.2125-2	1.1062 0	-156.3	2.3209	2.1601	1.9993	1.8385	1.7261	0.2869	1.3218	2016.8	.1016	.0401	.7268	1760
1780	2.1876-2	1.0938 0	-150.5	2.3242	2.1634	2.0026	1.8418	1.7294	0.2875	1.3209	2027.6	.1024	.0405	.7266	1780
1800	2.1633-2	1.0817 0	-144.8	2.3274	2.1666	2.0058	1.8450	1.7326	0.2881	1.3200	2038.3	.1031	.0409	.7265	1800
1900	2.0494-2	1.0247 0	-115.8	2.3431	2.1822	2.0214	1.8606	1.7482	0.2908	1.3161	2091.0	.1070	.0428	.7261	1900
2000	1.9470-2	9.7349-1	-86.6	2.3580	2.1972	2.0364	1.8756	1.7632	0.2933	1.3125	2142.4	.1107	.0447	.7258	2000
2100	1.8543-2	9.2713-1	-57.2	2.3724	2.2116	2.0508	1.8900	1.7776	0.2958	1.3091	2192.5	.1143	.0466	.7255	2100
2200	1.7700-2	8.8499-1	-27.5	2.3862	2.2254	2.0646	1.9038	1.7914	0.2981	1.3059	2241.3	.1179	.0484	.7254	2200
2300	1.6930-2	8.4651-1	2.5	2.3995	2.2387	2.0779	1.9171	1.8047	0.3003	1.3030	2289.2	.1214	.0503	.7252	2300
2400	1.6225-2	8.1124-1	32.6	2.4123	2.2515	2.0907	1.9299	1.8175	0.3024	1.3003	2335.9	.1248	.0520	.7251	2400
2500	1.5576-2	7.7879-1	62.9	2.4247	2.2639	2.1031	1.9423	1.8299	0.3044	1.2977	2381.8	.1282	.0538	.7249	2500

TABLE 28A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.016261; EQUIV. RATIO= 0.250; CHEM. EQUIV. RATIO= 0.3284; MW = 28.4350;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .03251; H2O= .07905; N2= .73231; O2= .14734; AR= .00878

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT ³	LB/FT ³	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	R	
2600	1.4977-2	7.4884-1	93.5	2.4367	2.2759	2.1151	1.9543	1.8419	0.3063	1.2954	2426.7	.1315	.0556	.7247	2600
2700	1.4422-2	7.2110-1	124.2	2.4483	2.2875	2.1267	1.9659	1.8535	0.3081	1.2932	2470.9	.1348	.0573	.7245	2700
2800	1.3907-2	6.9535-1	155.1	2.4595	2.2987	2.1379	1.9771	1.8647	0.3097	1.2911	2514.2	.1380	.0590	.7240	2800
2900	1.3427-2	6.7137-1	186.1	2.4704	2.3096	2.1488	1.9880	1.8756	0.3113	1.2892	2556.8	.1412	.0608	.7234	2900
3000	1.2980-2	6.4899-1	217.3	2.4810	2.3202	2.1594	1.9986	1.8862	0.3128	1.2874	2598.7	.1443	.0625	.7229	3000
3100	1.2561-2	6.2806-1	248.7	2.4913	2.3305	2.1697	2.0089	1.8965	0.3143	1.2857	2639.9	.1474	.0641	.7223	3100
3200	1.2169-2	6.0843-1	280.2	2.5013	2.3405	2.1797	2.0189	1.9065	0.3156	1.2842	2680.6	.1505	.0658	.7217	3200
3300	1.1800-2	5.8999-1	311.8	2.5110	2.3502	2.1894	2.0286	1.9162	0.3169	1.2827	2720.6	.1535	.0675	.7211	3300
3400	1.1453-2	5.7264-1	343.6	2.5205	2.3597	2.1989	2.0381	1.9257	0.3181	1.2813	2760.0	.1565	.0691	.7206	3400
3500	1.1126-2	5.5628-1	375.4	2.5297	2.3689	2.2081	2.0473	1.9349	0.3192	1.2801	2798.9	.1595	.0707	.7200	3500
3600	1.0817-2	5.4083-1	407.4	2.5387	2.3779	2.2171	2.0563	1.9439	0.3203	1.2789	2837.3	.1624	.0723	.7194	3600
3700	1.0524-2	5.2621-1	439.5	2.5475	2.3867	2.2259	2.0651	1.9527	0.3213	1.2777	2875.1	.1653	.0739	.7191	3700
3800	1.0247-2	5.1236-1	471.7	2.5561	2.3953	2.2345	2.0737	1.9613	0.3223	1.2767	2912.5	.1682	.0754	.7188	3800
3900	9.9845-3	4.9922-1	503.9	2.5645	2.4037	2.2429	2.0821	1.9697	0.3232	1.2757	2949.4	.1710	.0769	.7185	3900
4000	9.7349-3	4.8674-1	536.3	2.5727	2.4119	2.2511	2.0903	1.9779	0.3240	1.2747	2985.9	.1738	.0784	.7182	4000
4100	9.4974-3	4.7487-1	568.7	2.5807	2.4199	2.2591	2.0983	1.9859	0.3249	1.2739	3022.0	.1766	.0799	.7179	4100
4200	9.2713-3	4.6357-1	601.3	2.5885	2.4277	2.2669	2.1061	1.9937	0.3256	1.2730	3057.6	.1794	.0814	.7177	4200
4300	9.0557-3	4.5278-1	633.9	2.5962	2.4354	2.2746	2.1138	2.0014	0.3264	1.2723	3092.8	.1821	.0829	.7174	4300
4400	8.8499-3	4.4249-1	666.5	2.6037	2.4429	2.2821	2.1213	2.0089	0.3271	1.2715	3127.7	.1848	.0843	.7171	4400
4500	8.6532-3	4.3266-1	699.3	2.6111	2.4503	2.2895	2.1287	2.0163	0.3277	1.2708	3162.2	.1875	.0857	.7169	4500
4600	8.4651-3	4.2326-1	732.1	2.6183	2.4575	2.2967	2.1359	2.0235	0.3284	1.2702	3196.3	.1902	.0872	.7164	4600
4700	8.2850-3	4.1425-1	765.0	2.6254	2.4645	2.3037	2.1429	2.0305	0.3290	1.2695	3230.0	.1929	.0886	.7159	4700
4800	8.1124-3	4.0562-1	797.9	2.6323	2.4715	2.3107	2.1499	2.0375	0.3295	1.2689	3263.4	.1955	.0900	.7154	4800
4900	7.9468-3	3.9734-1	830.9	2.6391	2.4783	2.3175	2.1567	2.0443	0.3301	1.2683	3296.5	.1981	.0915	.7149	4900
5000	7.7879-3	3.8939-1	863.9	2.6458	2.4850	2.3241	2.1633	2.0509	0.3306	1.2678	3329.3	.2007	.0929	.7145	5000
5100	7.6352-3	3.8176-1	897.0	2.6523	2.4915	2.3307	2.1699	2.0575	0.3311	1.2673	3361.7	.2033	.0943	.7140	5100
5200	7.4884-3	3.7442-1	930.1	2.6588	2.4979	2.3371	2.1763	2.0639	0.3316	1.2668	3393.8	.2058	.0957	.7135	5200
5300	7.3471-3	3.6735-1	963.3	2.6651	2.5043	2.3435	2.1826	2.0702	0.3321	1.2663	3425.6	.2083	.0970	.7131	5300
5400	7.2110-3	3.6055-1	996.5	2.6713	2.5105	2.3497	2.1889	2.0765	0.3326	1.2658	3457.2	.2109	.0984	.7126	5400

TABLE 28.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016261; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 0.14696 LB/IN2 (0.01 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4337-4	-201.8	2.2938	28.435	.095	1.0000	-1.0000	0.2819	1.3293	1928.4	.0369	.728	0.2819	1.3294	1928.5	.0368	.728
1700	2.2906-4	-173.4	2.3110	28.435	.099	1.0000	-1.0000	0.2852	1.3243	1984.1	.0389	.727	0.2851	1.3245	1984.2	.0389	.727
1800	2.1633-4	-144.7	2.3274	28.435	.103	1.0000	-1.0000	0.2883	1.3197	2038.0	.0409	.727	0.2881	1.3200	2038.3	.0409	.726
1900	2.0494-4	-115.8	2.3431	28.435	.107	1.0000	-1.0000	0.2912	1.3155	2090.6	.0429	.726	0.2908	1.3161	2091.0	.0428	.726
2000	1.9470-4	-86.5	2.3581	28.435	.111	1.0000	-1.0000	0.2940	1.3116	2141.7	.0448	.726	0.2933	1.3125	2142.4	.0447	.726
2100	1.8543-4	-57.0	2.3725	28.435	.114	1.0000	-1.0000	0.2967	1.3078	2191.4	.0467	.726	0.2958	1.3091	2192.5	.0466	.726
2200	1.7700-4	-27.2	2.3864	28.435	.118	1.0000	-1.0000	0.2995	1.3042	2239.9	.0487	.725	0.2981	1.3059	2241.4	.0484	.725
2300	1.6930-4	2.9	2.3997	28.435	.121	1.0001	-1.0000	0.3022	1.3006	2287.0	.0506	.725	0.3003	1.3030	2289.2	.0503	.725
2400	1.6225-4	33.3	2.4127	28.435	.125	1.0002	-1.0000	0.3051	1.2970	2333.0	.0525	.725	0.3024	1.3003	2336.0	.0520	.725
2500	1.5575-4	64.0	2.4252	28.434	.128	1.0003	-1.0000	0.3081	1.2933	2377.7	.0545	.724	0.3044	1.2977	2381.8	.0538	.725
2600	1.4976-4	94.9	2.4373	28.434	.131	1.0005	-1.0000	0.3114	1.2895	2421.3	.0566	.723	0.3063	1.2954	2426.8	.0556	.725
2700	1.4421-4	126.3	2.4492	28.433	.135	1.0009	-1.0000	0.3151	1.2854	2463.5	.0588	.722	0.3081	1.2932	2471.0	.0573	.724
2800	1.3905-4	158.0	2.4607	28.432	.138	1.0015	-1.0000	0.3195	1.2808	2504.3	.0612	.720	0.3097	1.2912	2514.4	.0590	.724
2900	1.3425-4	190.2	2.4720	28.430	.141	1.0025	-1.0001	0.3248	1.2757	2543.6	.0640	.717	0.3113	1.2893	2557.1	.0608	.723
3000	1.2976-4	223.0	2.4831	28.427	.144	1.0041	-1.0001	0.3314	1.2697	2581.1	.0672	.712	0.3128	1.2875	2599.2	.0625	.723
3100	1.2555-4	256.5	2.4941	28.422	.147	1.0064	-1.0002	0.3400	1.2626	2616.7	.0711	.705	0.3143	1.2859	2640.7	.0642	.722
3200	1.2160-4	291.1	2.5051	28.415	.150	1.0100	-1.0003	0.3513	1.2542	2650.1	.0762	.694	0.3156	1.2844	2681.8	.0658	.722
3300	1.1787-4	326.9	2.5161	28.404	.154	1.0154	-1.0004	0.3664	1.2443	2680.9	.0829	.679	0.3169	1.2831	2722.5	.0675	.721
3400	1.1434-4	364.5	2.5273	28.388	.156	1.0232	-1.0007	0.3867	1.2327	2709.3	.0920	.658	0.3181	1.2819	2763.0	.0691	.720
3500	1.1098-4	404.5	2.5389	28.364	.159	1.0346	-1.0010	0.4138	1.2196	2735.4	.1045	.631	0.3192	1.2810	2803.4	.0708	.719
3600	1.0777-4	447.6	2.5510	28.331	.162	1.0506	-1.0016	0.4500	1.2054	2759.6	.1219	.599	0.3203	1.2802	2844.0	.0724	.718
3700	1.0468-4	494.8	2.5640	28.283	.165	1.0729	-1.0023	0.4975	1.1906	2782.9	.1458	.564	0.3213	1.2797	2885.0	.0740	.717
3800	1.0169-4	547.5	2.5780	28.218	.168	1.1030	-1.0034	0.5590	1.1761	2806.2	.1784	.526	0.3222	1.2794	2926.9	.0756	.716
3900	9.8768-5	607.2	2.5935	28.128	.171	1.1428	-1.0049	0.6370	1.1626	2831.0	.2219	.490	0.3231	1.2796	2970.0	.0773	.714
4000	9.5892-5	675.6	2.6108	28.010	.173	1.1940	-1.0069	0.7337	1.1506	2858.3	.2782	.457	0.3240	1.2801	3014.9	.0790	.711
4100	9.3035-5	754.6	2.6304	27.854	.176	1.2580	-1.0094	0.8507	1.1405	2889.0	.3489	.429	0.3248	1.2812	3062.1	.0808	.708
4200	9.0176-5	846.4	2.6525	27.657	.179	1.3356	-1.0127	0.9884	1.1324	2924.0	.4337	.407	0.3256	1.2829	3112.3	.0828	.703
4300	8.7295-5	953.0	2.6775	27.411	.181	1.4266	-1.0166	1.1460	1.1261	2963.7	.5305	.391	0.3264	1.2852	3166.1	.0848	.697
4400	8.4381-5	1076.2	2.7058	27.112	.184	1.5294	-1.0213	1.3204	1.1217	3008.4	.6346	.382	0.3273	1.2884	3224.3	.0871	.689
4500	8.1429-5	1217.4	2.7376	26.758	.186	1.6406	-1.0265	1.5059	1.1187	3058.4	.7381	.379	0.3281	1.2923	3287.2	.0897	.680
4600	7.8448-5	1377.4	2.7727	26.351	.188	1.7537	-1.0321	1.6923	1.1171	3113.8	.8313	.383	0.3290	1.2972	3355.3	.0926	.670
4700	7.5457-5	1555.4	2.8110	25.898	.191	1.8595	-1.0377	1.8651	1.1167	3174.3	.9036	.394	0.3299	1.3028	3428.7	.0957	.658
4800	7.2491-5	1749.3	2.8518	25.409	.193	1.9464	-1.0426	2.0058	1.1173	3239.5	.9460	.410	0.3309	1.3093	3506.8	.0990	.645
4900	6.9594-5	1954.9	2.8942	24.902	.196	2.0030	-1.0463	2.0955	1.1190	3308.8	.9533	.430	0.3318	1.3163	3588.6	.1025	.633
5000	6.6817-5	2166.3	2.9369	24.396	.198	2.0213	-1.0483	2.1204	1.1218	3380.9	.9260	.453	0.3328	1.3238	3672.8	.1059	.622
5100	6.4206-5	2376.7	2.9786	23.911	.200	1.9993	-1.0484	2.0764	1.1255	3454.8	.8699	.479	0.3338	1.3312	3757.3	.1093	.612
5200	6.1792-5	2579.4	3.0180	23.464	.203	1.9412	-1.0466	1.9702	1.1303	3529.1	.7940	.504	0.3347	1.3384	3840.3	.1126	.604
5300	5.9595-5	2769.1	3.0541	23.065	.206	1.8560	-1.0433	1.8163	1.1364	3603.2	.7077	.528	0.3355	1.3452	3920.3	.1156	.597
5400	5.7617-5	2941.7	3.0864	22.720	.208	1.7542	-1.0390	1.6330	1.1438	3676.5	.6193	.549	0.3363	1.3512	3995.9	.1184	.592

TABLE 28.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016261; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 1.46959 LB/IN² (0.10 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLVDLT	DLVDLP	REACTING COMPOSITIONS					FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4337-3	-201.8	2.1330	28.435	.095	1.0000	-1.0000	0.2819	1.3293	1928.4	.0369	.728	0.2819	1.3294	1928.5	.0368	.728
1700	2.2906-3	-173.4	2.1502	28.435	.099	1.0000	-1.0000	0.2852	1.3243	1984.1	.0389	.727	0.2851	1.3245	1984.2	.0389	.727
1800	2.1633-3	-144.7	2.1666	28.435	.103	1.0000	-1.0000	0.2883	1.3197	2038.0	.0409	.727	0.2881	1.3200	2038.3	.0409	.726
1900	2.0494-3	-115.8	2.1823	28.435	.107	1.0000	-1.0000	0.2912	1.3156	2090.6	.0429	.726	0.2908	1.3161	2091.0	.0428	.726
2000	1.9470-3	-86.5	2.1973	28.435	.111	1.0000	-1.0000	0.2939	1.3116	2141.7	.0448	.726	0.2933	1.3125	2142.4	.0447	.726
2100	1.8543-3	-57.0	2.2117	28.435	.114	1.0000	-1.0000	0.2967	1.3079	2191.5	.0467	.726	0.2958	1.3091	2192.5	.0466	.726
2200	1.7700-3	-27.2	2.2256	28.435	.118	1.0000	-1.0000	0.2994	1.3043	2239.9	.0486	.725	0.2981	1.3059	2241.3	.0484	.725
2300	1.6930-3	2.9	2.2389	28.435	.121	1.0000	-1.0000	0.3021	1.3008	2287.2	.0505	.725	0.3003	1.3030	2289.2	.0503	.725
2400	1.6225-3	33.3	2.2518	28.435	.125	1.0001	-1.0000	0.3048	1.2973	2333.3	.0525	.725	0.3024	1.3003	2335.9	.0520	.725
2500	1.5576-3	63.9	2.2643	28.435	.128	1.0002	-1.0000	0.3076	1.2939	2378.3	.0544	.725	0.3044	1.2977	2381.8	.0538	.725
2600	1.4976-3	94.8	2.2765	28.434	.131	1.0003	-1.0000	0.3105	1.2904	2422.1	.0564	.724	0.3063	1.2954	2426.8	.0556	.725
2700	1.4422-3	126.0	2.2882	28.434	.135	1.0005	-1.0000	0.3136	1.2869	2464.9	.0584	.724	0.3081	1.2932	2470.9	.0573	.724
2800	1.3906-3	157.5	2.2997	28.433	.138	1.0007	-1.0000	0.3169	1.2832	2506.5	.0605	.722	0.3097	1.2911	2514.3	.0590	.724
2900	1.3426-3	189.4	2.3109	28.433	.141	1.0012	-1.0000	0.3207	1.2793	2547.0	.0628	.721	0.3113	1.2892	2556.9	.0608	.723
3000	1.2978-3	221.6	2.3218	28.431	.144	1.0018	-1.0000	0.3249	1.2750	2586.4	.0652	.719	0.3128	1.2875	2598.9	.0625	.723
3100	1.2558-3	254.4	2.3326	28.429	.147	1.0028	-1.0001	0.3299	1.2704	2624.4	.0679	.716	0.3143	1.2858	2640.3	.0641	.722
3200	1.2165-3	287.7	2.3431	28.426	.150	1.0042	-1.0001	0.3359	1.2652	2661.1	.0710	.712	0.3156	1.2843	2681.1	.0658	.722
3300	1.1794-3	321.6	2.3536	28.421	.154	1.0062	-1.0002	0.3432	1.2594	2696.4	.0746	.706	0.3169	1.2829	2721.4	.0675	.721
3400	1.1445-3	356.4	2.3639	28.415	.157	1.0090	-1.0002	0.3522	1.2528	2730.0	.0789	.699	0.3181	1.2816	2761.2	.0691	.720
3500	1.1114-3	392.1	2.3743	28.406	.159	1.0130	-1.0004	0.3636	1.2453	2762.0	.0842	.689	0.3192	1.2804	2800.7	.0707	.720
3600	1.0801-3	429.2	2.3847	28.394	.162	1.0186	-1.0006	0.3778	1.2369	2792.3	.0908	.676	0.3203	1.2794	2839.9	.0723	.719
3700	1.0502-3	467.8	2.3953	28.376	.165	1.0262	-1.0008	0.3958	1.2276	2821.0	.0993	.659	0.3213	1.2785	2879.0	.0739	.719
3800	1.0218-3	508.5	2.4062	28.353	.168	1.0363	-1.0012	0.4184	1.2175	2848.3	.1102	.638	0.3222	1.2777	2918.0	.0755	.718
3900	9.9446-4	551.7	2.4174	28.321	.171	1.0498	-1.0017	0.4466	1.2068	2874.5	.1244	.614	0.3231	1.2771	2957.1	.0770	.717
4000	9.6817-4	598.0	2.4291	28.280	.174	1.0673	-1.0023	0.4816	1.1959	2900.0	.1425	.587	0.3240	1.2767	2996.5	.0786	.716
4100	9.4274-4	648.2	2.4415	28.225	.176	1.0897	-1.0032	0.5242	1.1851	2925.6	.1657	.558	0.3248	1.2766	3036.4	.0801	.715
4200	9.1801-4	703.2	2.4548	28.155	.179	1.1177	-1.0043	0.5755	1.1748	2951.9	.1949	.529	0.3255	1.2766	3077.1	.0817	.714
4300	8.9383-4	763.7	2.4690	28.066	.182	1.1521	-1.0057	0.6362	1.1653	2979.4	.2311	.501	0.3262	1.2770	3118.9	.0833	.712
4400	8.7007-4	830.7	2.4844	27.956	.184	1.1935	-1.0075	0.7068	1.1569	3008.9	.2748	.474	0.3269	1.2776	3162.0	.0850	.710
4500	8.4659-4	905.3	2.5012	27.820	.187	1.2421	-1.0097	0.7871	1.1497	3040.9	.3265	.451	0.3275	1.2787	3206.8	.0867	.707
4600	8.2330-4	988.5	2.5194	27.655	.190	1.2980	-1.0123	0.8769	1.1438	3075.6	.3859	.431	0.3282	1.2801	3253.7	.0885	.703
4700	8.0010-4	1081.0	2.5393	27.460	.192	1.3610	-1.0153	0.9753	1.1390	3113.3	.4518	.415	0.3288	1.2820	3303.0	.0905	.698
4800	7.7694-4	1183.8	2.5610	27.233	.195	1.4303	-1.0187	1.0811	1.1354	3154.4	.5223	.403	0.3294	1.2844	3354.9	.0925	.692
4900	7.5380-4	1297.4	2.5844	26.972	.197	1.5045	-1.0226	1.1920	1.1328	3198.8	.5944	.395	0.3300	1.2872	3409.8	.0948	.686
5000	7.3066-4	1422.3	2.6096	26.678	.199	1.5816	-1.0267	1.3051	1.1311	3246.6	.6643	.392	0.3306	1.2906	3467.9	.0972	.678
5100	7.0760-4	1558.4	2.6366	26.352	.202	1.6584	-1.0311	1.4160	1.1303	3297.9	.7276	.393	0.3312	1.2945	3529.3	.0998	.670
5200	6.8468-4	1705.2	2.6651	25.999	.204	1.7311	-1.0354	1.5191	1.1303	3352.6	.7798	.398	0.3319	1.2989	3594.0	.1026	.661
5300	6.6206-4	1861.7	2.6949	25.623	.207	1.7949	-1.0394	1.6077	1.1311	3410.6	.8170	.407	0.3326	1.3038	3661.8	.1055	.652
5400	6.3990-4	2026.0	2.7256	25.233	.209	1.8450	-1.0429	1.6750	1.1325	3471.3	.8366	.419	0.3333	1.3091	3732.2	.1086	.642

TABLE 28.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016261; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 14.6959 LB/IN2 (1.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4337-2	-201.8	1.9722	28.435	.095	1.0000	-1.0000	0.2819	1.3293	1928.4	.0369	.728	0.2819	1.3294	1928.5	.0368	.728
1700	2.2906-2	-173.4	1.9894	28.435	.099	1.0000	-1.0000	0.2852	1.3243	1984.0	.0389	.727	0.2851	1.3245	1984.2	.0389	.727
1800	2.1633-2	-144.7	2.0058	28.435	.103	1.0000	-1.0000	0.2883	1.3197	2038.0	.0409	.727	0.2881	1.3200	2038.3	.0409	.726
1900	2.0494-2	-115.8	2.0215	28.435	.107	1.0000	-1.0000	0.2912	1.3156	2090.6	.0429	.726	0.2908	1.3161	2091.0	.0428	.726
2000	1.9470-2	-86.5	2.0365	28.435	.111	1.0000	-1.0000	0.2939	1.3117	2141.7	.0448	.726	0.2933	1.3125	2142.4	.0447	.726
2100	1.8543-2	-57.0	2.0509	28.435	.114	1.0000	-1.0000	0.2966	1.3079	2191.5	.0467	.726	0.2958	1.3091	2192.5	.0466	.726
2200	1.7700-2	-27.2	2.0647	28.435	.118	1.0000	-1.0000	0.2993	1.3043	2240.0	.0486	.725	0.2981	1.3059	2241.3	.0484	.725
2300	1.6930-2	2.9	2.0781	28.435	.121	1.0000	-1.0000	0.3020	1.3009	2287.3	.0505	.725	0.3003	1.3030	2289.2	.0503	.725
2400	1.6225-2	33.2	2.0910	28.435	.125	1.0000	-1.0000	0.3046	1.2975	2333.4	.0524	.725	0.3024	1.3003	2335.9	.0520	.725
2500	1.5576-2	63.8	2.1035	28.435	.128	1.0001	-1.0000	0.3073	1.2942	2378.5	.0543	.725	0.3044	1.2977	2381.8	.0538	.725
2600	1.4977-2	94.7	2.1156	28.435	.131	1.0001	-1.0000	0.3100	1.2909	2422.5	.0563	.725	0.3063	1.2954	2426.8	.0556	.725
2700	1.4422-2	125.8	2.1274	28.435	.135	1.0002	-1.0000	0.3128	1.2876	2465.5	.0582	.724	0.3081	1.2932	2470.9	.0573	.725
2800	1.3907-2	157.3	2.1388	28.434	.138	1.0004	-1.0000	0.3157	1.2843	2507.6	.0602	.723	0.3097	1.2911	2514.2	.0590	.724
2900	1.3427-2	189.0	2.1499	28.434	.141	1.0006	-1.0000	0.3188	1.2809	2548.6	.0623	.722	0.3113	1.2892	2556.9	.0608	.723
3000	1.2979-2	221.0	2.1608	28.433	.144	1.0009	-1.0000	0.3221	1.2774	2588.7	.0645	.721	0.3128	1.2874	2598.8	.0625	.723
3100	1.2560-2	253.4	2.1714	28.432	.147	1.0013	-1.0000	0.3257	1.2738	2627.8	.0667	.720	0.3143	1.2858	2640.1	.0641	.722
3200	1.2167-2	286.2	2.1818	28.431	.151	1.0019	-1.0000	0.3297	1.2700	2665.9	.0691	.718	0.3156	1.2842	2680.8	.0658	.722
3300	1.1797-2	319.4	2.1920	28.429	.154	1.0027	-1.0001	0.3342	1.2660	2703.1	.0717	.716	0.3169	1.2828	2721.0	.0675	.721
3400	1.1449-2	353.0	2.2021	28.426	.157	1.0039	-1.0001	0.3393	1.2617	2739.2	.0745	.713	0.3181	1.2815	2760.6	.0691	.721
3500	1.1121-2	387.3	2.2120	28.422	.159	1.0054	-1.0002	0.3452	1.2570	2774.2	.0777	.709	0.3192	1.2802	2799.7	.0707	.720
3600	1.0810-2	422.1	2.2218	28.417	.162	1.0075	-1.0002	0.3522	1.2519	2808.1	.0813	.704	0.3203	1.2791	2838.4	.0723	.719
3700	1.0515-2	457.7	2.2316	28.410	.165	1.0103	-1.0003	0.3604	1.2464	2840.9	.0854	.698	0.3213	1.2781	2876.8	.0739	.719
3800	1.0235-2	494.2	2.2413	28.401	.168	1.0140	-1.0004	0.3701	1.2404	2872.6	.0902	.690	0.3222	1.2771	2914.8	.0754	.719
3900	9.9683-3	531.8	2.2511	28.389	.171	1.0188	-1.0006	0.3817	1.2340	2903.2	.0960	.680	0.3231	1.2763	2952.6	.0770	.718
4000	9.7137-3	570.7	2.2609	28.373	.174	1.0249	-1.0008	0.3955	1.2271	2932.8	.1029	.668	0.3240	1.2756	2990.1	.0785	.718
4100	9.4701-3	611.0	2.2709	28.353	.177	1.0328	-1.0011	0.4120	1.2198	2961.4	.1113	.654	0.3248	1.2750	3027.6	.0800	.717
4200	9.2363-3	653.2	2.2810	28.328	.179	1.0426	-1.0015	0.4315	1.2122	2989.3	.1215	.637	0.3255	1.2745	3065.1	.0815	.717
4300	9.0112-3	697.4	2.2914	28.295	.182	1.0547	-1.0020	0.4545	1.2045	3016.8	.1339	.618	0.3262	1.2741	3102.7	.0830	.716
4400	8.7939-3	744.2	2.3022	28.255	.185	1.0696	-1.0026	0.4814	1.1968	3044.0	.1488	.598	0.3269	1.2739	3140.6	.0845	.715
4500	8.5834-3	793.9	2.3133	28.205	.187	1.0875	-1.0034	0.5124	1.1892	3071.4	.1667	.576	0.3275	1.2738	3178.8	.0860	.714
4600	8.3787-3	846.8	2.3250	28.145	.190	1.1087	-1.0043	0.5478	1.1820	3099.3	.1880	.554	0.3281	1.2739	3217.5	.0875	.713
4700	8.1792-3	903.6	2.3372	28.072	.193	1.1335	-1.0055	0.5877	1.1754	3128.0	.2131	.531	0.3287	1.2743	3256.9	.0891	.711
4800	7.9840-3	964.5	2.3500	27.985	.195	1.1619	-1.0068	0.6320	1.1693	3157.8	.2421	.510	0.3292	1.2748	3297.2	.0907	.709
4900	7.7925-3	1030.1	2.3635	27.883	.198	1.1941	-1.0084	0.6805	1.1640	3189.1	.2752	.489	0.3297	1.2755	3338.4	.0923	.707
5000	7.6040-3	1100.7	2.3778	27.764	.200	1.2301	-1.0102	0.7330	1.1593	3221.9	.3123	.470	0.3302	1.2765	3380.8	.0940	.704
5100	7.4182-3	1176.8	2.3929	27.627	.203	1.2695	-1.0123	0.7891	1.1555	3256.6	.3531	.453	0.3307	1.2778	3424.6	.0957	.701
5200	7.2346-3	1258.7	2.4088	27.471	.205	1.3122	-1.0146	0.8482	1.1523	3293.2	.3970	.439	0.3311	1.2793	3469.8	.0975	.697
5300	7.0530-3	1346.5	2.4255	27.297	.208	1.3578	-1.0171	0.9096	1.1499	3331.7	.4432	.426	0.3316	1.2811	3516.7	.0994	.693
5400	6.8732-3	1440.6	2.4431	27.103	.210	1.4058	-1.0199	0.9728	1.1480	3372.4	.4906	.417	0.3320	1.2832	3565.3	.1014	.689

TABLE 28.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016261; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 146.959 LB/IN² (10.00 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4337-1	-201.8	1.8114	28.435	.095	1.0000	-1.0000	0.2819	1.3293	1928.4	.0369	.728	0.2819	1.3294	1928.5	.0368	.728
1700	2.2906-1	-173.4	1.8286	28.435	.099	1.0000	-1.0000	0.2852	1.3243	1984.0	.0389	.727	0.2851	1.3245	1984.2	.0389	.727
1800	2.1633-1	-144.7	1.8450	28.435	.103	1.0000	-1.0000	0.2883	1.3197	2038.0	.0409	.727	0.2881	1.3200	2038.3	.0409	.726
1900	2.0494-1	-115.7	1.8607	28.435	.107	1.0000	-1.0000	0.2912	1.3156	2090.6	.0429	.726	0.2908	1.3161	2091.0	.0428	.726
2000	1.9470-1	-86.5	1.8757	28.435	.111	1.0000	-1.0000	0.2939	1.3116	2141.7	.0448	.726	0.2933	1.3125	2142.4	.0447	.726
2100	1.8543-1	-57.0	1.8901	28.435	.114	1.0000	-1.0000	0.2966	1.3079	2191.5	.0467	.726	0.2958	1.3091	2192.4	.0466	.726
2200	1.7700-1	-27.2	1.9039	28.435	.118	1.0000	-1.0000	0.2993	1.3043	2240.0	.0486	.725	0.2981	1.3059	2241.3	.0484	.725
2300	1.6930-1	2.9	1.9173	28.435	.121	1.0000	-1.0000	0.3019	1.3009	2287.3	.0505	.725	0.3003	1.3030	2289.1	.0503	.725
2400	1.6225-1	33.2	1.9302	28.435	.125	1.0000	-1.0000	0.3045	1.2976	2333.5	.0524	.725	0.3024	1.3003	2335.9	.0520	.725
2500	1.5576-1	63.8	1.9427	28.435	.128	1.0000	-1.0000	0.3072	1.2943	2378.6	.0543	.725	0.3044	1.2977	2381.8	.0538	.725
2600	1.4977-1	94.6	1.9548	28.435	.131	1.0001	-1.0000	0.3098	1.2911	2422.7	.0562	.725	0.3063	1.2954	2426.7	.0556	.725
2700	1.4422-1	125.8	1.9665	28.435	.135	1.0001	-1.0000	0.3124	1.2879	2465.9	.0581	.724	0.3081	1.2932	2470.9	.0573	.725
2800	1.3907-1	157.1	1.9779	28.435	.138	1.0002	-1.0000	0.3151	1.2848	2508.1	.0601	.724	0.3097	1.2911	2514.2	.0590	.724
2900	1.3427-1	188.8	1.9890	28.435	.141	1.0003	-1.0000	0.3179	1.2817	2549.4	.0621	.723	0.3113	1.2892	2556.8	.0608	.723
3000	1.2979-1	220.7	1.9999	28.434	.144	1.0004	-1.0000	0.3208	1.2786	2589.8	.0641	.722	0.3128	1.2874	2598.7	.0625	.723
3100	1.2561-1	253.0	2.0104	28.434	.147	1.0006	-1.0000	0.3238	1.2754	2629.4	.0662	.721	0.3143	1.2858	2640.0	.0641	.722
3200	1.2168-1	285.5	2.0208	28.433	.151	1.0009	-1.0000	0.3270	1.2722	2668.1	.0683	.720	0.3156	1.2842	2680.7	.0658	.722
3300	1.1799-1	318.4	2.0309	28.432	.154	1.0013	-1.0000	0.3303	1.2689	2706.1	.0705	.719	0.3169	1.2827	2720.7	.0675	.721
3400	1.1451-1	351.6	2.0408	28.431	.157	1.0018	-1.0001	0.3339	1.2656	2743.2	.0729	.717	0.3181	1.2814	2760.3	.0691	.721
3500	1.1123-1	385.2	2.0505	28.429	.160	1.0025	-1.0001	0.3378	1.2622	2779.5	.0753	.716	0.3192	1.2801	2799.3	.0707	.720
3600	1.0813-1	419.2	2.0601	28.427	.162	1.0033	-1.0001	0.3421	1.2586	2815.1	.0779	.714	0.3203	1.2790	2837.8	.0723	.719
3700	1.0520-1	453.6	2.0695	28.424	.165	1.0045	-1.0001	0.3468	1.2549	2849.9	.0806	.711	0.3213	1.2779	2875.9	.0739	.719
3800	1.0242-1	488.5	2.0789	28.420	.168	1.0059	-1.0002	0.3521	1.2510	2883.9	.0836	.708	0.3222	1.2769	2913.5	.0754	.719
3900	9.9774-2	524.0	2.0881	28.415	.171	1.0078	-1.0002	0.3580	1.2469	2917.1	.0869	.705	0.3231	1.2760	2950.8	.0769	.718
4000	9.7258-2	560.2	2.0972	28.408	.174	1.0101	-1.0003	0.3646	1.2427	2949.5	.0906	.700	0.3240	1.2751	2987.8	.0785	.718
4100	9.4858-2	597.0	2.1063	28.400	.177	1.0130	-1.0004	0.3721	1.2382	2981.2	.0946	.695	0.3248	1.2744	3024.4	.0800	.718
4200	9.2567-2	634.6	2.1154	28.390	.179	1.0166	-1.0006	0.3806	1.2336	3012.2	.0993	.688	0.3255	1.2737	3060.8	.0814	.717
4300	9.0374-2	673.1	2.1245	28.378	.182	1.0210	-1.0008	0.3903	1.2287	3042.5	.1045	.681	0.3263	1.2731	3096.9	.0829	.717
4400	8.8273-2	712.7	2.1336	28.362	.185	1.0264	-1.0010	0.4013	1.2237	3072.3	.1105	.671	0.3269	1.2725	3132.9	.0844	.716
4500	8.6254-2	753.5	2.1427	28.344	.188	1.0329	-1.0012	0.4138	1.2186	3101.5	.1175	.661	0.3276	1.2721	3168.8	.0858	.716
4600	8.4311-2	795.5	2.1520	28.321	.190	1.0406	-1.0016	0.4280	1.2134	3130.3	.1255	.649	0.3282	1.2717	3204.7	.0873	.715
4700	8.2437-2	839.1	2.1613	28.293	.193	1.0497	-1.0020	0.4438	1.2081	3158.8	.1347	.636	0.3287	1.2715	3240.6	.0888	.714
4800	8.0627-2	884.4	2.1709	28.261	.196	1.0603	-1.0025	0.4615	1.2029	3187.2	.1452	.622	0.3293	1.2713	3276.6	.0903	.714
4900	7.8873-2	931.5	2.1806	28.222	.198	1.0726	-1.0030	0.4812	1.1979	3215.7	.1573	.606	0.3298	1.2712	3312.7	.0917	.713
5000	7.7172-2	980.7	2.1905	28.177	.201	1.0866	-1.0037	0.5028	1.1930	3244.3	.1710	.590	0.3303	1.2713	3349.1	.0932	.711
5100	7.5518-2	1032.1	2.2007	28.124	.203	1.1024	-1.0045	0.5263	1.1884	3273.3	.1865	.574	0.3307	1.2715	3385.8	.0947	.710
5200	7.3906-2	1086.0	2.2112	28.064	.206	1.1201	-1.0054	0.5517	1.1841	3302.9	.2039	.557	0.3312	1.2718	3422.9	.0962	.709
5300	7.2332-2	1142.5	2.2219	27.994	.208	1.1396	-1.0064	0.5789	1.1802	3333.1	.2232	.540	0.3316	1.2722	3460.5	.0977	.707
5400	7.0794-2	1201.8	2.2330	27.916	.211	1.1609	-1.0076	0.6076	1.1767	3364.1	.2444	.524	0.3320	1.2727	3498.7	.0992	.706

TABLE 28.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016261; EQUIV. RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284; P = 734.797 LB/IN2 (50.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS							FROZEN COMPOSITIONS				
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2169 0	-201.8	1.6990	28.435	.095	1.0000	-1.0000	0.2819	1.3293	1928.4	.0369	.728	0.2819	1.3294	1928.5	.0368	.728
1700	1.1453 0	-173.4	1.7162	28.435	.099	1.0000	-1.0000	0.2852	1.3243	1984.0	.0389	.727	0.2851	1.3245	1984.2	.0389	.727
1800	1.0817 0	-144.7	1.7326	28.435	.103	1.0000	-1.0000	0.2883	1.3197	2038.0	.0409	.727	0.2881	1.3200	2038.3	.0409	.726
1900	1.0247 0	-115.7	1.7483	28.435	.107	1.0000	-1.0000	0.2912	1.3155	2090.6	.0429	.726	0.2908	1.3161	2091.0	.0428	.726
2000	9.7349-1	-86.5	1.7633	28.435	.111	1.0000	-1.0000	0.2939	1.3116	2141.7	.0448	.726	0.2933	1.3125	2142.4	.0447	.726
2100	9.2714-1	-57.0	1.7777	28.435	.114	1.0000	-1.0000	0.2966	1.3079	2191.5	.0467	.726	0.2958	1.3091	2192.4	.0466	.726
2200	8.8500-1	-27.2	1.7915	28.435	.118	1.0000	-1.0000	0.2993	1.3043	2240.0	.0486	.725	0.2981	1.3059	2241.3	.0484	.725
2300	8.4652-1	2.9	1.8049	28.435	.121	1.0000	-1.0000	0.3019	1.3009	2287.3	.0505	.725	0.3003	1.3030	2289.1	.0503	.725
2400	8.1125-1	33.2	1.8178	28.435	.125	1.0000	-1.0000	0.3045	1.2976	2333.5	.0524	.725	0.3024	1.3003	2335.9	.0520	.725
2500	7.7880-1	63.8	1.8303	28.435	.128	1.0000	-1.0000	0.3071	1.2943	2378.6	.0543	.725	0.3044	1.2977	2381.8	.0538	.725
2600	7.4884-1	94.6	1.8424	28.435	.131	1.0000	-1.0000	0.3097	1.2912	2422.8	.0562	.725	0.3063	1.2954	2426.7	.0556	.725
2700	7.2111-1	125.7	1.8541	28.435	.135	1.0000	-1.0000	0.3123	1.2881	2466.0	.0581	.725	0.3081	1.2932	2470.8	.0573	.725
2800	6.9535-1	157.1	1.8655	28.435	.138	1.0001	-1.0000	0.3149	1.2850	2508.2	.0600	.724	0.3097	1.2911	2514.2	.0590	.724
2900	6.7137-1	188.7	1.8766	28.435	.141	1.0001	-1.0000	0.3176	1.2820	2549.6	.0620	.723	0.3113	1.2892	2556.8	.0608	.723
3000	6.4899-1	220.6	1.8874	28.435	.144	1.0002	-1.0000	0.3203	1.2790	2590.2	.0640	.723	0.3128	1.2874	2598.7	.0625	.723
3100	6.2805-1	252.8	1.8980	28.435	.147	1.0004	-1.0000	0.3231	1.2760	2629.9	.0660	.722	0.3143	1.2857	2640.0	.0641	.722
3200	6.0841-1	285.2	1.9083	28.434	.151	1.0005	-1.0000	0.3260	1.2730	2668.9	.0680	.721	0.3156	1.2842	2680.6	.0658	.722
3300	5.8997-1	318.0	1.9184	28.434	.154	1.0008	-1.0000	0.3290	1.2700	2707.1	.0701	.720	0.3169	1.2827	2720.6	.0675	.721
3400	5.7260-1	351.0	1.9282	28.433	.157	1.0011	-1.0000	0.3321	1.2670	2744.6	.0723	.719	0.3181	1.2814	2760.1	.0691	.721
3500	5.5622-1	384.4	1.9379	28.432	.160	1.0014	-1.0001	0.3353	1.2640	2781.4	.0745	.718	0.3192	1.2801	2799.1	.0707	.720
3600	5.4074-1	418.1	1.9474	28.431	.162	1.0019	-1.0001	0.3388	1.2609	2817.5	.0768	.716	0.3203	1.2789	2837.6	.0723	.719
3700	5.2610-1	452.2	1.9567	28.429	.165	1.0026	-1.0001	0.3424	1.2578	2852.9	.0792	.715	0.3213	1.2778	2875.6	.0739	.719
3800	5.1221-1	486.6	1.9659	28.427	.168	1.0034	-1.0001	0.3463	1.2546	2887.7	.0817	.713	0.3222	1.2768	2913.1	.0754	.719
3900	4.9903-1	521.4	1.9750	28.424	.171	1.0044	-1.0002	0.3505	1.2514	2921.9	.0843	.711	0.3231	1.2759	2950.2	.0769	.718
4000	4.8649-1	556.7	1.9839	28.420	.174	1.0056	-1.0002	0.3551	1.2481	2955.4	.0871	.709	0.3240	1.2750	2987.0	.0785	.718
4100	4.7455-1	592.5	1.9927	28.416	.177	1.0072	-1.0003	0.3601	1.2448	2988.3	.0901	.706	0.3248	1.2742	3023.4	.0800	.718
4200	4.6316-1	628.7	2.0015	28.410	.179	1.0090	-1.0003	0.3655	1.2413	3020.6	.0933	.703	0.3256	1.2734	3059.4	.0814	.718
4300	4.5228-1	665.6	2.0101	28.403	.182	1.0113	-1.0004	0.3714	1.2378	3052.4	.0968	.699	0.3263	1.2727	3095.1	.0829	.717
4400	4.4187-1	703.1	2.0187	28.395	.185	1.0140	-1.0005	0.3780	1.2342	3083.6	.1007	.695	0.3270	1.2721	3130.6	.0844	.717
4500	4.3190-1	741.2	2.0273	28.385	.188	1.0173	-1.0007	0.3852	1.2305	3114.3	.1049	.689	0.3276	1.2716	3165.9	.0858	.716
4600	4.2234-1	780.1	2.0359	28.373	.190	1.0212	-1.0008	0.3932	1.2267	3144.5	.1096	.683	0.3282	1.2711	3200.9	.0873	.716
4700	4.1314-1	819.9	2.0444	28.359	.193	1.0257	-1.0010	0.4020	1.2229	3174.4	.1148	.676	0.3288	1.2706	3235.8	.0887	.715
4800	4.0429-1	860.6	2.0530	28.342	.196	1.0310	-1.0013	0.4117	1.2190	3203.8	.1207	.668	0.3293	1.2703	3270.5	.0902	.715
4900	3.9577-1	902.2	2.0616	28.322	.198	1.0372	-1.0015	0.4223	1.2151	3233.0	.1271	.659	0.3298	1.2700	3305.2	.0916	.714
5000	3.8753-1	945.1	2.0702	28.299	.201	1.0442	-1.0019	0.4340	1.2113	3262.0	.1344	.649	0.3303	1.2697	3339.8	.0931	.713
5100	3.7957-1	989.1	2.0789	28.272	.203	1.0522	-1.0023	0.4467	1.2075	3290.9	.1424	.638	0.3308	1.2696	3374.4	.0945	.712
5200	3.7186-1	1034.4	2.0877	28.241	.206	1.0613	-1.0027	0.4604	1.2038	3319.7	.1513	.627	0.3312	1.2695	3409.1	.0959	.711
5300	3.6439-1	1081.2	2.0967	28.205	.209	1.0715	-1.0033	0.4752	1.2002	3348.7	.1612	.615	0.3317	1.2695	3443.9	.0974	.711
5400	3.5712-1	1129.5	2.1057	28.165	.211	1.0827	-1.0038	0.4910	1.1968	3377.8	.1721	.602	0.3321	1.2696	3478.9	.0988	.710

TABLE 28C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.016261; EQUIV.RATIO = 0.250; CHEM. EQUIV. RATIO = 0.3284;
WET AIR (W/A= 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES					T R		
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S		COND BTU/ FT HR R	PRAN
PRESSURE = 0.01 ATM																
360	1.174-3	-587.3	1.7692	28.435	0.2551	1.116-3	29.328	.0319	1.000	-1.000	0.2387	1.3960	923	.0104	.734	360
400	1.053-3	-575.1	1.8012	28.435	0.4184	1.003-3	29.290	.0348	1.000	-1.000	0.2390	1.3960	974	.0114	.731	400
440	9.199-4	-535.8	1.8935	28.435	2.1482	8.978-4	28.846	.0367	1.000	-1.000	0.2440	1.3930	1028	.0121	.739	440
PRESSURE = 0.10 ATM																
360	1.174-2	-587.4	1.6208	28.435	0.2464	1.116-2	29.329	.0319	1.000	-1.000	0.2387	1.3960	923	.0104	.734	360
400	1.057-2	-577.3	1.6473	28.435	0.2643	1.004-2	29.326	.0349	1.000	-1.000	0.2386	1.3963	973	.0114	.730	400
440	9.568-3	-564.6	1.6776	28.435	0.4248	9.113-3	29.281	.0377	1.000	-1.000	0.2391	1.3959	1021	.0124	.727	440
480	8.502-3	-532.0	1.7478	28.435	1.5253	8.255-3	28.936	.0397	1.000	-1.000	0.2432	1.3932	1072	.0132	.733	480
520	7.488-3	-486.6	1.8401	28.435	0.2493	7.488-3	28.435	.0413	1.000	-1.000	0.2493	1.3891	1124	.0139	.743	520
PRESSURE = 1.00 ATM																
360	1.174-1	-587.4	1.4727	28.435	0.2456	1.116-1	29.329	.0319	1.000	-1.000	0.2387	1.3960	923	.0104	.734	360
400	1.057-1	-577.5	1.4987	28.435	0.2490	1.004-1	29.329	.0349	1.000	-1.000	0.2386	1.3963	973	.0114	.730	400
440	9.605-2	-567.3	1.5230	28.435	0.2667	9.127-2	29.324	.0378	1.000	-1.000	0.2386	1.3962	1021	.0124	.726	440
480	8.777-2	-555.1	1.5494	28.435	0.3710	8.356-2	29.290	.0405	1.000	-1.000	0.2392	1.3956	1066	.0134	.723	480
520	7.988-2	-528.6	1.6026	28.435	0.6714	7.672-2	29.131	.0428	1.000	-1.000	0.2413	1.3938	1112	.0142	.725	520
537	7.633-2	-515.3	1.6277	28.435	0.9390	7.394-2	28.977	.0436	1.000	-1.000	0.2432	1.3924	1132	.0145	.729	537
560	7.060-2	-486.5	1.6801	28.435	1.6037	6.993-2	28.595	.0442	1.000	-1.000	0.2479	1.3892	1163	.0149	.738	560
600	6.490-2	-466.6	1.7150	28.435	0.2504	6.490-2	28.435	.0464	1.000	-1.000	0.2504	1.3869	1206	.0157	.742	600
PRESSURE = 10.00 ATM																
360	1.173 0	-587.4	1.3246	28.435	0.2455	1.116 0	29.329	.0319	1.000	-1.000	0.2387	1.3960	923	.0104	.734	360
400	1.056 0	-577.6	1.3505	28.435	0.2474	1.004 0	29.329	.0349	1.000	-1.000	0.2386	1.3963	973	.0114	.730	400
440	9.601-1	-567.6	1.3742	28.435	0.2510	9.128-1	29.329	.0378	1.000	-1.000	0.2386	1.3962	1021	.0124	.726	440
480	8.799-1	-557.4	1.3965	28.435	0.2634	8.366-1	29.326	.0406	1.000	-1.000	0.2388	1.3958	1066	.0134	.723	480
520	8.112-1	-538.6	1.4343	28.435	0.3154	7.719-1	29.310	.0432	1.000	-1.000	0.2393	1.3951	1109	.0143	.721	520
537	7.849-1	-533.1	1.4447	28.435	0.3397	7.475-1	29.294	.0443	1.000	-1.000	0.2396	1.3946	1127	.0147	.721	537
560	7.497-1	-524.6	1.4602	28.435	0.3948	7.154-1	29.256	.0457	1.000	-1.000	0.2403	1.3938	1152	.0152	.722	560
600	6.905-1	-505.6	1.4929	28.435	0.5818	6.643-1	29.107	.0479	1.000	-1.000	0.2425	1.3915	1194	.0160	.725	600
640	6.269-1	-475.3	1.5417	28.435	0.9810	6.153-1	28.754	.0495	1.000	-1.000	0.2472	1.3876	1239	.0167	.734	640
680	5.726-1	-446.5	1.5856	28.435	0.2518	5.726-1	28.435	.0512	1.000	-1.000	0.2518	1.3837	1283	.0174	.740	680
PRESSURE = 50.00 ATM																
360	5.842 0	-587.4	1.2210	28.435	0.2455	5.578 0	29.329	.0319	1.000	-1.000	0.2387	1.3960	923	.0104	.734	360
400	5.261 0	-577.6	1.2470	28.435	0.2473	5.021 0	29.329	.0349	1.000	-1.000	0.2386	1.3963	973	.0114	.730	400
440	4.785 0	-567.6	1.2707	28.435	0.2496	4.564 0	29.329	.0378	1.000	-1.000	0.2386	1.3962	1021	.0124	.726	440
480	4.387 0	-557.6	1.2925	28.435	0.2539	4.184 0	29.329	.0406	1.000	-1.000	0.2388	1.3959	1066	.0134	.722	480
520	4.051 0	-539.4	1.3291	28.435	0.2848	3.861 0	29.325	.0433	1.000	-1.000	0.2391	1.3952	1109	.0144	.720	520
537	3.924 0	-534.6	1.3381	28.435	0.2897	3.741 0	29.322	.0443	1.000	-1.000	0.2393	1.3948	1127	.0147	.720	537
560	3.759 0	-527.8	1.3507	28.435	0.3006	3.584 0	29.315	.0458	1.000	-1.000	0.2396	1.3942	1151	.0152	.720	560
600	3.500 0	-515.1	1.3725	28.435	0.3368	3.342 0	29.285	.0482	1.000	-1.000	0.2405	1.3928	1191	.0161	.721	600
640	3.262 0	-500.4	1.3963	28.435	0.4077	3.126 0	29.214	.0505	1.000	-1.000	0.2419	1.3909	1231	.0169	.723	640
680	3.032 0	-481.8	1.4244	28.435	0.5330	2.927 0	29.068	.0525	1.000	-1.000	0.2443	1.3882	1271	.0177	.726	680
720	2.795 0	-456.6	1.4603	28.435	0.7403	2.739 0	28.798	.0543	1.000	-1.000	0.2483	1.3845	1312	.0184	.732	720
760	2.562 0	-426.3	1.5014	28.435	0.2537	2.562 0	28.435	.0558	1.000	-1.000	0.2537	1.3799	1354	.0192	.739	760

TABLE 29A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.032523; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5522; MW = 28.4097;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .06364; H2O= .11099; N2= .72014; O2= .09660; AR= .00864

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
360	1.0807-1	5.4034 0	-829.6	1.9135	1.7525	1.5916	1.4306	1.3181	0.2510	1.3859	934.4	.0288	.0093	.7750	360
380	1.0238-1	5.1190 0	-824.6	1.9271	1.7661	1.6052	1.4442	1.3317	0.2511	1.3857	960.0	.0303	.0099	.7707	380
400	9.7262-2	4.8631 0	-819.5	1.9400	1.7790	1.6180	1.4571	1.3446	0.2513	1.3854	984.8	.0318	.0104	.7668	400
420	9.2630-2	4.6315 0	-814.5	1.9522	1.7913	1.6303	1.4694	1.3569	0.2514	1.3851	1009.0	.0332	.0109	.7634	420
440	8.8420-2	4.4210 0	-809.5	1.9639	1.8030	1.6420	1.4811	1.3686	0.2516	1.3847	1032.6	.0346	.0115	.7604	440
460	8.4576-2	4.2288 0	-804.4	1.9751	1.8142	1.6532	1.4922	1.3797	0.2518	1.3842	1055.6	.0361	.0120	.7579	460
480	8.1052-2	4.0526 0	-799.4	1.9858	1.8249	1.6639	1.5030	1.3905	0.2521	1.3837	1078.1	.0374	.0125	.7558	480
500	7.7809-2	3.8905 0	-794.4	1.9961	1.8352	1.6742	1.5133	1.4008	0.2524	1.3831	1100.1	.0388	.0130	.7542	500
520	7.4817-2	3.7408 0	-789.3	2.0060	1.8451	1.6841	1.5232	1.4107	0.2527	1.3825	1121.7	.0401	.0135	.7529	520
537	7.2493-2	3.6246 0	-785.1	2.0140	1.8531	1.6921	1.5311	1.4186	0.2529	1.3819	1139.3	.0412	.0139	.7522	537
540	7.2046-2	3.6023 0	-784.3	2.0156	1.8546	1.6937	1.5327	1.4202	0.2530	1.3818	1142.7	.0415	.0139	.7521	540
560	6.9473-2	3.4736 0	-779.2	2.0248	1.8638	1.7029	1.5419	1.4294	0.2534	1.3810	1163.4	.0428	.0144	.7519	560
580	6.7077-2	3.3539 0	-774.1	2.0337	1.8727	1.7118	1.5508	1.4383	0.2537	1.3802	1183.6	.0440	.0149	.7519	580
600	6.4841-2	3.2421 0	-769.0	2.0423	1.8813	1.7204	1.5594	1.4469	0.2542	1.3794	1203.5	.0453	.0153	.7520	600
620	6.2750-2	3.1375 0	-764.0	2.0506	1.8897	1.7287	1.5678	1.4553	0.2546	1.3785	1223.0	.0465	.0158	.7520	620
640	6.0789-2	3.0394 0	-758.9	2.0587	1.8978	1.7368	1.5759	1.4634	0.2550	1.3775	1242.1	.0478	.0162	.7518	640
660	5.8947-2	2.9473 0	-753.8	2.0666	1.9056	1.7447	1.5837	1.4712	0.2555	1.3766	1261.0	.0490	.0167	.7511	660
680	5.7213-2	2.8606 0	-748.6	2.0742	1.9133	1.7523	1.5913	1.4788	0.2560	1.3756	1279.5	.0502	.0171	.7503	680
700	5.5578-2	2.7789 0	-743.5	2.0816	1.9207	1.7597	1.5988	1.4863	0.2565	1.3745	1297.6	.0514	.0176	.7495	700
720	5.4034-2	2.7017 0	-738.4	2.0889	1.9279	1.7670	1.6060	1.4935	0.2571	1.3734	1315.5	.0525	.0180	.7487	720
740	5.2574-2	2.6287 0	-733.2	2.0959	1.9350	1.7740	1.6131	1.5006	0.2576	1.3723	1333.1	.0537	.0185	.7482	740
760	5.1190-2	2.5595 0	-728.1	2.1028	1.9418	1.7809	1.6199	1.5074	0.2582	1.3712	1350.5	.0548	.0189	.7479	760
780	4.9878-2	2.4939 0	-722.9	2.1095	1.9486	1.7876	1.6267	1.5142	0.2588	1.3700	1367.6	.0559	.0194	.7476	780
800	4.8631-2	2.4315 0	-717.7	2.1161	1.9551	1.7942	1.6332	1.5207	0.2594	1.3689	1384.4	.0570	.0198	.7475	800
820	4.7445-2	2.3722 0	-712.5	2.1225	1.9615	1.8006	1.6396	1.5271	0.2600	1.3677	1401.0	.0581	.0202	.7473	820
840	4.6315-2	2.3158 0	-707.3	2.1288	1.9678	1.8069	1.6459	1.5334	0.2607	1.3664	1417.3	.0592	.0207	.7473	840
860	4.5238-2	2.2619 0	-702.1	2.1349	1.9739	1.8130	1.6520	1.5395	0.2613	1.3652	1433.4	.0603	.0211	.7473	860
880	4.4210-2	2.2105 0	-696.9	2.1409	1.9800	1.8190	1.6581	1.5456	0.2620	1.3639	1449.3	.0613	.0215	.7473	880
900	4.3228-2	2.1614 0	-691.6	2.1468	1.9859	1.8249	1.6640	1.5515	0.2626	1.3627	1465.0	.0624	.0219	.7474	900
920	4.2288-2	2.1144 0	-686.4	2.1526	1.9916	1.8307	1.6697	1.5572	0.2633	1.3614	1480.5	.0634	.0224	.7472	920
940	4.1388-2	2.0694 0	-681.1	2.1583	1.9973	1.8364	1.6754	1.5629	0.2640	1.3601	1495.8	.0645	.0228	.7469	940
960	4.0526-2	2.0263 0	-675.8	2.1638	2.0029	1.8419	1.6810	1.5685	0.2647	1.3588	1510.9	.0655	.0232	.7467	960
980	3.9699-2	1.9849 0	-670.5	2.1693	2.0083	1.8474	1.6864	1.5739	0.2654	1.3575	1525.9	.0665	.0237	.7464	980
1000	3.8905-2	1.9452 0	-665.2	2.1747	2.0137	1.8528	1.6918	1.5793	0.2662	1.3562	1540.6	.0675	.0241	.7461	1000
1020	3.8142-2	1.9071 0	-659.9	2.1799	2.0190	1.8580	1.6971	1.5846	0.2669	1.3549	1555.2	.0685	.0245	.7458	1020
1040	3.7408-2	1.8704 0	-654.5	2.1851	2.0242	1.8632	1.7023	1.5898	0.2676	1.3535	1569.6	.0695	.0250	.7455	1040
1060	3.6703-2	1.8351 0	-649.1	2.1902	2.0293	1.8683	1.7074	1.5949	0.2684	1.3522	1583.8	.0705	.0254	.7451	1060
1080	3.6023-2	1.8011 0	-643.8	2.1953	2.0343	1.8734	1.7124	1.5999	0.2691	1.3509	1597.9	.0715	.0258	.7448	1080
1100	3.5368-2	1.7684 0	-638.4	2.2002	2.0393	1.8783	1.7173	1.6048	0.2699	1.3496	1611.9	.0724	.0263	.7444	1100
1120	3.4736-2	1.7368 0	-633.0	2.2051	2.0441	1.8832	1.7222	1.6097	0.2706	1.3483	1625.7	.0734	.0267	.7439	1120
1140	3.4127-2	1.7063 0	-627.6	2.2099	2.0489	1.8880	1.7270	1.6145	0.2714	1.3469	1639.3	.0744	.0271	.7435	1140

TABLE 29A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.032523; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5522; MW = 28.4097;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .06364; H2O= .11099; N2= .72014; O2= .09660; AR= .00864

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=50.)								
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
1160	3.3539-2	1.6769 0	-622.1	2.2146	2.0536	1.8927	1.7317	1.6192	0.2721	1.3456	1652.8	.0753	.0276	.7431	1160
1180	3.2970-2	1.6485 0	-616.7	2.2193	2.0583	1.8973	1.7364	1.6239	0.2729	1.3443	1666.2	.0763	.0280	.7426	1180
1200	3.2421-2	1.6210 0	-611.2	2.2238	2.0629	1.9019	1.7410	1.6285	0.2737	1.3430	1679.4	.0772	.0285	.7422	1200
1220	3.1889-2	1.5945 0	-605.7	2.2284	2.0674	1.9065	1.7455	1.6330	0.2744	1.3417	1692.6	.0781	.0289	.7418	1220
1240	3.1375-2	1.5687 0	-600.2	2.2328	2.0719	1.9109	1.7500	1.6375	0.2752	1.3405	1705.6	.0791	.0293	.7413	1240
1260	3.0877-2	1.5438 0	-594.7	2.2373	2.0763	1.9153	1.7544	1.6419	0.2760	1.3392	1718.5	.0800	.0298	.7409	1260
1280	3.0394-2	1.5197 0	-589.2	2.2416	2.0807	1.9197	1.7587	1.6462	0.2768	1.3379	1731.2	.0809	.0302	.7404	1280
1300	2.9927-2	1.4963 0	-583.6	2.2459	2.0850	1.9240	1.7630	1.6505	0.2775	1.3367	1743.9	.0818	.0307	.7400	1300
1320	2.9473-2	1.4737 0	-578.1	2.2501	2.0892	1.9282	1.7673	1.6548	0.2783	1.3354	1756.4	.0827	.0311	.7396	1320
1340	2.9033-2	1.4517 0	-572.5	2.2543	2.0934	1.9324	1.7715	1.6590	0.2791	1.3342	1768.9	.0836	.0316	.7392	1340
1360	2.8606-2	1.4303 0	-566.9	2.2585	2.0975	1.9366	1.7756	1.6631	0.2798	1.3330	1781.2	.0845	.0320	.7387	1360
1380	2.8192-2	1.4096 0	-561.3	2.2626	2.1016	1.9407	1.7797	1.6672	0.2806	1.3318	1793.4	.0854	.0324	.7383	1380
1400	2.7789-2	1.3895 0	-555.7	2.2666	2.1057	1.9447	1.7838	1.6713	0.2813	1.3306	1805.6	.0862	.0329	.7379	1400
1420	2.7398-2	1.3699 0	-550.1	2.2706	2.1097	1.9487	1.7877	1.6752	0.2821	1.3294	1817.6	.0871	.0333	.7375	1420
1440	2.7017-2	1.3509 0	-544.4	2.2746	2.1136	1.9527	1.7917	1.6792	0.2829	1.3282	1829.6	.0880	.0338	.7372	1440
1460	2.6647-2	1.3324 0	-538.8	2.2785	2.1175	1.9566	1.7956	1.6831	0.2836	1.3271	1841.4	.0888	.0342	.7369	1460
1480	2.6287-2	1.3143 0	-533.1	2.2823	2.1214	1.9604	1.7995	1.6870	0.2843	1.3260	1853.2	.0897	.0346	.7365	1480
1500	2.5936-2	1.2968 0	-527.4	2.2862	2.1252	1.9642	1.8033	1.6908	0.2851	1.3248	1864.9	.0906	.0351	.7362	1500
1520	2.5595-2	1.2798 0	-521.7	2.2899	2.1290	1.9680	1.8071	1.6946	0.2858	1.3237	1876.5	.0914	.0355	.7360	1520
1540	2.5263-2	1.2631 0	-515.9	2.2937	2.1327	1.9718	1.8108	1.6983	0.2865	1.3226	1888.1	.0922	.0359	.7357	1540
1560	2.4939-2	1.2469 0	-510.2	2.2974	2.1364	1.9755	1.8145	1.7020	0.2873	1.3216	1899.5	.0931	.0364	.7354	1560
1580	2.4623-2	1.2312 0	-504.5	2.3010	2.1401	1.9791	1.8182	1.7057	0.2880	1.3205	1910.9	.0939	.0368	.7351	1580
1600	2.4315-2	1.2158 0	-498.7	2.3047	2.1437	1.9828	1.8218	1.7093	0.2887	1.3195	1922.2	.0947	.0372	.7349	1600
1620	2.4015-2	1.2008 0	-492.9	2.3083	2.1473	1.9864	1.8254	1.7129	0.2894	1.3185	1933.4	.0956	.0376	.7346	1620
1640	2.3722-2	1.1861 0	-487.1	2.3118	2.1509	1.9899	1.8290	1.7165	0.2901	1.3175	1944.6	.0964	.0381	.7344	1640
1660	2.3437-2	1.1718 0	-481.3	2.3153	2.1544	1.9934	1.8325	1.7200	0.2908	1.3165	1955.6	.0972	.0385	.7341	1660
1680	2.3158-2	1.1579 0	-475.5	2.3188	2.1579	1.9969	1.8360	1.7235	0.2915	1.3155	1966.7	.0980	.0389	.7339	1680
1700	2.2885-2	1.1443 0	-469.6	2.3223	2.1613	2.0004	1.8394	1.7269	0.2921	1.3145	1977.6	.0988	.0393	.7337	1700
1720	2.2619-2	1.1310 0	-463.8	2.3257	2.1647	2.0038	1.8428	1.7303	0.2928	1.3136	1988.5	.0996	.0398	.7335	1720
1740	2.2359-2	1.1180 0	-457.9	2.3291	2.1681	2.0072	1.8462	1.7337	0.2934	1.3127	1999.3	.1004	.0402	.7333	1740
1760	2.2105-2	1.1052 0	-452.1	2.3324	2.1715	2.0105	1.8496	1.7371	0.2941	1.3118	2010.1	.1012	.0406	.7331	1760
1780	2.1857-2	1.0928 0	-446.2	2.3358	2.1748	2.0139	1.8529	1.7404	0.2947	1.3109	2020.8	.1020	.0410	.7329	1780
1800	2.1614-2	1.0807 0	-440.3	2.3391	2.1781	2.0172	1.8562	1.7437	0.2954	1.3100	2031.5	.1028	.0414	.7327	1800
1900	2.0476-2	1.0238 0	-410.6	2.3551	2.1942	2.0332	1.8723	1.7598	0.2983	1.3060	2083.9	.1067	.0435	.7319	1900
2000	1.9452-2	9.7262-1	-380.6	2.3705	2.2095	2.0486	1.8876	1.7751	0.3011	1.3023	2135.0	.1104	.0455	.7313	2000
2100	1.8526-2	9.2630-1	-350.4	2.3852	2.2243	2.0633	1.9024	1.7899	0.3038	1.2989	2184.9	.1141	.0474	.7308	2100
2200	1.7684-2	8.8420-1	-319.9	2.3994	2.2385	2.0775	1.9166	1.8041	0.3063	1.2957	2233.5	.1177	.0494	.7304	2200
2300	1.6915-2	8.4576-1	-289.1	2.4131	2.2521	2.0912	1.9302	1.8177	0.3087	1.2927	2281.1	.1213	.0513	.7300	2300
2400	1.6210-2	8.1052-1	-258.1	2.4263	2.2653	2.1044	1.9434	1.8309	0.3110	1.2900	2327.7	.1248	.0532	.7296	2400
2500	1.5562-2	7.7810-1	-226.9	2.4390	2.2781	2.1171	1.9562	1.8437	0.3131	1.2874	2373.4	.1282	.0551	.7292	2500

TABLE 29A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.032523; EQUIV. RATIO= 0.500; CHEM. EQUIV. RATIO= 0.5522; MW = 28.4097;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .06364; H2O= .11099; N2= .72014; O2= .09660; AR= .00864

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	R
2600	1.4963-2	7.4817-1	-195.5	2.4513	2.2904	2.1294	1.9685	1.8560	0.3151	1.2850	2418.1	.1316	.0569	.7287	2600
2700	1.4409-2	7.2046-1	-163.9	2.4633	2.3023	2.1414	1.9804	1.8679	0.3171	1.2828	2462.0	.1350	.0588	.7282	2700
2800	1.3895-2	6.9473-1	-132.1	2.4748	2.3139	2.1529	1.9920	1.8795	0.3189	1.2807	2505.2	.1383	.0606	.7276	2800
2900	1.3415-2	6.7077-1	-100.1	2.4861	2.3251	2.1642	2.0032	1.8907	0.3206	1.2788	2547.6	.1415	.0624	.7268	2900
3000	1.2968-2	6.4841-1	-68.0	2.4970	2.3360	2.1750	2.0141	1.9016	0.3222	1.2770	2589.3	.1447	.0642	.7261	3000
3100	1.2550-2	6.2750-1	-35.7	2.5075	2.3466	2.1856	2.0247	1.9122	0.3238	1.2753	2630.4	.1479	.0660	.7254	3100
3200	1.2158-2	6.0789-1	-3.2	2.5178	2.3569	2.1959	2.0350	1.9225	0.3252	1.2738	2670.9	.1510	.0678	.7246	3200
3300	1.1789-2	5.8947-1	29.4	2.5279	2.3669	2.2060	2.0450	1.9325	0.3266	1.2723	2710.7	.1541	.0695	.7239	3300
3400	1.1443-2	5.7213-1	62.1	2.5376	2.3767	2.2157	2.0548	1.9423	0.3279	1.2709	2750.0	.1572	.0713	.7231	3400
3500	1.1116-2	5.5578-1	94.9	2.5472	2.3862	2.2253	2.0643	1.9518	0.3291	1.2697	2788.7	.1602	.0730	.7224	3500
3600	1.0807-2	5.4034-1	127.9	2.5565	2.3955	2.2346	2.0736	1.9611	0.3303	1.2685	2827.0	.1632	.0747	.7217	3600
3700	1.0515-2	5.2574-1	161.0	2.5655	2.4046	2.2436	2.0827	1.9702	0.3314	1.2673	2864.7	.1661	.0763	.7211	3700
3800	1.0238-2	5.1190-1	194.2	2.5744	2.4134	2.2525	2.0915	1.9790	0.3324	1.2663	2901.9	.1691	.0780	.7205	3800
3900	9.9756-3	4.9878-1	227.5	2.5830	2.4221	2.2611	2.1002	1.9877	0.3334	1.2653	2938.7	.1719	.0796	.7200	3900
4000	9.7262-3	4.8631-1	260.9	2.5915	2.4305	2.2696	2.1086	1.9961	0.3343	1.2644	2975.1	.1748	.0812	.7194	4000
4100	9.4890-3	4.7445-1	294.3	2.5997	2.4388	2.2778	2.1169	2.0044	0.3352	1.2635	3011.0	.1777	.0828	.7188	4100
4200	9.2630-3	4.6315-1	327.9	2.6078	2.4469	2.2859	2.1250	2.0125	0.3360	1.2627	3046.5	.1805	.0844	.7183	4200
4300	9.0476-3	4.5238-1	361.5	2.6157	2.4548	2.2938	2.1329	2.0204	0.3368	1.2619	3081.6	.1833	.0860	.7177	4300
4400	8.8420-3	4.4210-1	395.2	2.6235	2.4625	2.3016	2.1406	2.0281	0.3375	1.2612	3116.4	.1860	.0876	.7171	4400
4500	8.6455-3	4.3228-1	429.0	2.6311	2.4701	2.3092	2.1482	2.0357	0.3382	1.2605	3150.7	.1888	.0891	.7165	4500
4600	8.4575-3	4.2288-1	462.9	2.6385	2.4776	2.3166	2.1557	2.0432	0.3389	1.2599	3184.7	.1915	.0907	.7157	4600
4700	8.2776-3	4.1388-1	496.8	2.6458	2.4849	2.3239	2.1630	2.0505	0.3395	1.2592	3218.4	.1942	.0922	.7149	4700
4800	8.1052-3	4.0526-1	530.8	2.6530	2.4920	2.3311	2.1701	2.0576	0.3401	1.2587	3251.7	.1968	.0938	.7141	4800
4900	7.9397-3	3.9699-1	564.8	2.6600	2.4990	2.3381	2.1771	2.0646	0.3407	1.2581	3284.6	.1995	.0953	.7133	4900
5000	7.7809-3	3.8905-1	598.9	2.6669	2.5059	2.3450	2.1840	2.0715	0.3413	1.2576	3317.3	.2021	.0968	.7126	5000
5100	7.6284-3	3.8142-1	633.1	2.6736	2.5127	2.3517	2.1908	2.0783	0.3418	1.2571	3349.6	.2047	.0983	.7118	5100
5200	7.4817-3	3.7408-1	667.3	2.6803	2.5193	2.3584	2.1974	2.0849	0.3423	1.2566	3381.6	.2073	.0998	.7111	5200
5300	7.3405-3	3.6703-1	701.6	2.6868	2.5259	2.3649	2.2040	2.0915	0.3428	1.2561	3413.4	.2099	.1013	.7104	5300
5400	7.2046-3	3.6023-1	735.9	2.6932	2.5323	2.3713	2.2104	2.0979	0.3433	1.2557	3444.8	.2124	.1028	.7098	5400

TABLE 29.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.032523; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 0.14696 LB/IN² (0.01 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4315-4	-498.7	2.3047	28.410	.095	1.0000	-1.0000	0.2888	1.3194	1922.1	.0372	.735	0.2887	1.3195	1922.2	.0372	.735
1700	2.2885-4	-469.6	2.3223	28.410	.099	1.0000	-1.0000	0.2922	1.3144	1977.5	.0394	.734	0.2921	1.3145	1977.6	.0393	.734
1800	2.1614-4	-440.2	2.3391	28.410	.103	1.0000	-1.0000	0.2956	1.3098	2031.3	.0415	.733	0.2954	1.3100	2031.5	.0414	.733
1900	2.0476-4	-410.5	2.3551	28.410	.107	1.0000	-1.0000	0.2986	1.3056	2083.6	.0435	.732	0.2983	1.3060	2083.9	.0435	.732
2000	1.9452-4	-380.5	2.3705	28.410	.110	1.0000	-1.0000	0.3016	1.3017	2134.5	.0455	.731	0.3011	1.3023	2135.0	.0455	.731
2100	1.8526-4	-350.2	2.3853	28.410	.114	1.0000	-1.0000	0.3045	1.2979	2184.1	.0476	.731	0.3038	1.2989	2184.9	.0474	.731
2200	1.7684-4	-319.6	2.3996	28.410	.118	1.0000	-1.0000	0.3074	1.2943	2232.4	.0496	.730	0.3063	1.2957	2233.6	.0494	.730
2300	1.6915-4	-288.7	2.4133	28.409	.121	1.0001	-1.0000	0.3103	1.2908	2279.4	.0516	.730	0.3087	1.2927	2281.1	.0513	.730
2400	1.6210-4	-257.5	2.4266	28.409	.125	1.0002	-1.0000	0.3133	1.2873	2325.3	.0536	.729	0.3110	1.2900	2327.7	.0532	.730
2500	1.5562-4	-226.1	2.4394	28.409	.128	1.0003	-1.0000	0.3164	1.2838	2370.0	.0557	.728	0.3131	1.2874	2373.4	.0551	.729
2600	1.4963-4	-194.3	2.4519	28.408	.132	1.0006	-1.0000	0.3199	1.2801	2413.5	.0579	.727	0.3151	1.2851	2418.2	.0569	.729
2700	1.4408-4	-162.1	2.4640	28.408	.135	1.0010	-1.0000	0.3237	1.2761	2455.7	.0602	.726	0.3171	1.2828	2462.2	.0588	.728
2800	1.3893-4	-129.5	2.4759	28.406	.138	1.0017	-1.0000	0.3284	1.2716	2496.4	.0628	.723	0.3189	1.2808	2505.4	.0606	.728
2900	1.3413-4	-96.4	2.4875	28.404	.142	1.0029	-1.0001	0.3341	1.2665	2535.5	.0658	.719	0.3206	1.2789	2547.9	.0624	.727
3000	1.2964-4	-62.6	2.4989	28.400	.145	1.0048	-1.0001	0.3416	1.2603	2572.8	.0693	.713	0.3222	1.2771	2589.9	.0642	.726
3100	1.2543-4	-28.0	2.5103	28.395	.148	1.0077	-1.0002	0.3516	1.2528	2607.8	.0738	.704	0.3238	1.2755	2631.3	.0660	.725
3200	1.2148-4	7.8	2.5217	28.386	.151	1.0122	-1.0003	0.3652	1.2438	2640.3	.0797	.691	0.3252	1.2741	2672.3	.0678	.724
3300	1.1774-4	45.2	2.5332	28.372	.154	1.0191	-1.0005	0.3838	1.2328	2670.1	.0878	.673	0.3266	1.2728	2713.0	.0696	.723
3400	1.1419-4	84.8	2.5450	28.352	.157	1.0293	-1.0008	0.4095	1.2201	2697.2	.0990	.650	0.3279	1.2717	2753.6	.0713	.722
3500	1.1082-4	127.4	2.5573	28.322	.160	1.0441	-1.0013	0.4445	1.2058	2721.9	.1148	.620	0.3291	1.2708	2794.2	.0730	.721
3600	1.0757-4	174.1	2.5705	28.279	.163	1.0652	-1.0020	0.4916	1.1906	2745.1	.1369	.585	0.3302	1.2701	2835.3	.0748	.720
3700	1.0444-4	226.3	2.5848	28.218	.166	1.0943	-1.0030	0.5536	1.1754	2768.2	.1674	.549	0.3313	1.2698	2877.1	.0765	.718
3800	1.0139-4	285.4	2.6005	28.134	.169	1.1332	-1.0044	0.6332	1.1611	2792.4	.2087	.512	0.3322	1.2698	2920.2	.0783	.716
3900	9.8383-5	353.6	2.6182	28.019	.171	1.1837	-1.0063	0.7326	1.1485	2819.3	.2632	.477	0.3332	1.2702	2964.9	.0801	.713
4000	9.5405-5	432.7	2.6383	27.867	.174	1.2469	-1.0087	0.8529	1.1379	2849.7	.3328	.446	0.3340	1.2712	3012.0	.0819	.710
4100	9.2428-5	524.8	2.6610	27.673	.177	1.3235	-1.0118	0.9941	1.1295	2884.6	.4187	.419	0.3348	1.2728	3062.0	.0839	.705
4200	8.9433-5	632.2	2.6869	27.429	.179	1.4135	-1.0155	1.1555	1.1231	2924.2	.5205	.398	0.3356	1.2751	3115.7	.0860	.699
4300	8.6405-5	756.6	2.7161	27.131	.181	1.5164	-1.0200	1.3355	1.1185	2968.9	.6358	.381	0.3364	1.2781	3173.6	.0884	.691
4400	8.3338-5	899.8	2.7490	26.777	.184	1.6302	-1.0253	1.5310	1.1154	3018.8	.7596	.370	0.3371	1.2820	3236.4	.0910	.681
4500	8.0231-5	1063.1	2.7857	26.365	.186	1.7514	-1.0311	1.7364	1.1136	3074.1	.8839	.366	0.3380	1.2868	3304.6	.0939	.669
4600	7.7098-5	1247.1	2.8262	25.898	.188	1.8734	-1.0372	1.9416	1.1129	3134.9	.9978	.366	0.3389	1.2925	3378.5	.0973	.656
4700	7.3962-5	1450.9	2.8700	25.385	.190	1.9861	-1.0432	2.1306	1.1131	3201.1	****	.373	0.3398	1.2991	3458.2	.1009	.641
4800	7.0862-5	1671.9	2.9165	24.838	.193	2.0767	-1.0485	2.2819	1.1143	3272.1	****	.385	0.3408	1.3065	3543.0	.1049	.626
4900	6.7849-5	1905.2	2.9646	24.277	.195	2.1315	-1.0524	2.3723	1.1164	3347.2	****	.401	0.3419	1.3145	3632.0	.1091	.611
5000	6.4978-5	2143.7	3.0128	23.725	.197	2.1408	-1.0541	2.3839	1.1195	3425.1	****	.420	0.3430	1.3229	3723.1	.1133	.597
5100	6.2300-5	2379.2	3.0594	23.202	.200	2.1021	-1.0536	2.3111	1.1237	3504.4	****	.441	0.3440	1.3312	3814.3	.1174	.585
5200	5.9851-5	2603.5	3.1030	22.727	.202	2.0218	-1.0509	2.1637	1.1289	3583.7	.9430	.463	0.3450	1.3392	3903.1	.1212	.575
5300	5.7648-5	2810.2	3.1424	22.311	.204	1.9124	-1.0464	1.9634	1.1355	3662.1	.8278	.485	0.3459	1.3464	3987.8	.1248	.567
5400	5.5687-5	2995.3	3.1770	21.959	.207	1.7884	-1.0410	1.7366	1.1435	3739.2	.7123	.505	0.3468	1.3528	4067.0	.1281	.560

TABLE 29.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.032523; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 1.46959 LB/IN2 (0.10 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4315-3	-498.7	2.1437	28.410	.095	1.0000	-1.0000	0.2888	1.3194	1922.1	.0372	.735	0.2887	1.3195	1922.2	.0372	.735
1700	2.2885-3	-469.6	2.1613	28.410	.099	1.0000	-1.0000	0.2922	1.3144	1977.5	.0394	.734	0.2921	1.3145	1977.6	.0393	.734
1800	2.1614-3	-440.2	2.1781	28.410	.103	1.0000	-1.0000	0.2956	1.3098	2031.3	.0415	.733	0.2954	1.3100	2031.5	.0414	.733
1900	2.0476-3	-410.5	2.1942	28.410	.107	1.0000	-1.0000	0.2986	1.3056	2083.6	.0435	.732	0.2983	1.3060	2083.9	.0435	.732
2000	1.9452-3	-380.5	2.2096	28.410	.110	1.0000	-1.0000	0.3016	1.3017	2134.5	.0455	.731	0.3011	1.3023	2135.0	.0455	.731
2100	1.8526-3	-350.2	2.2244	28.410	.114	1.0000	-1.0000	0.3045	1.2980	2184.1	.0475	.731	0.3038	1.2989	2184.9	.0474	.731
2200	1.7684-3	-319.6	2.2386	28.410	.118	1.0000	-1.0000	0.3073	1.2944	2232.5	.0495	.730	0.3063	1.2957	2233.6	.0494	.730
2300	1.6915-3	-288.8	2.2523	28.410	.121	1.0001	-1.0000	0.3101	1.2910	2279.6	.0515	.730	0.3087	1.2927	2281.1	.0513	.730
2400	1.6210-3	-257.6	2.2656	28.409	.125	1.0001	-1.0000	0.3130	1.2877	2325.6	.0535	.729	0.3110	1.2900	2327.7	.0532	.730
2500	1.5562-3	-226.2	2.2784	28.409	.128	1.0002	-1.0000	0.3158	1.2844	2370.5	.0556	.729	0.3131	1.2874	2373.4	.0551	.729
2600	1.4963-3	-194.4	2.2909	28.409	.132	1.0003	-1.0000	0.3188	1.2810	2414.4	.0576	.728	0.3151	1.2850	2418.1	.0569	.729
2700	1.4409-3	-162.4	2.3029	28.409	.135	1.0005	-1.0000	0.3220	1.2777	2457.1	.0598	.727	0.3171	1.2828	2462.1	.0588	.728
2800	1.3894-3	-130.0	2.3147	28.408	.138	1.0008	-1.0000	0.3254	1.2741	2498.8	.0620	.726	0.3189	1.2808	2505.3	.0606	.728
2900	1.3414-3	-97.3	2.3262	28.407	.142	1.0013	-1.0000	0.3293	1.2704	2539.3	.0644	.724	0.3206	1.2788	2547.8	.0624	.727
3000	1.2966-3	-64.1	2.3374	28.405	.145	1.0021	-1.0000	0.3338	1.2662	2578.6	.0670	.721	0.3222	1.2771	2589.6	.0642	.726
3100	1.2547-3	-30.5	2.3485	28.403	.148	1.0032	-1.0001	0.3392	1.2616	2616.5	.0699	.718	0.3238	1.2754	2630.8	.0660	.725
3200	1.2153-3	3.7	2.3593	28.399	.151	1.0049	-1.0001	0.3459	1.2564	2653.0	.0732	.713	0.3252	1.2739	2671.5	.0678	.725
3300	1.1783-3	38.7	2.3701	28.394	.154	1.0074	-1.0002	0.3543	1.2503	2687.9	.0773	.707	0.3266	1.2725	2711.7	.0695	.724
3400	1.1433-3	74.7	2.3808	28.386	.157	1.0110	-1.0003	0.3650	1.2432	2721.0	.0822	.698	0.3279	1.2712	2751.5	.0713	.723
3500	1.1102-3	111.8	2.3916	28.375	.160	1.0162	-1.0005	0.3788	1.2351	2752.2	.0885	.686	0.3291	1.2701	2790.9	.0730	.722
3600	1.0788-3	150.6	2.4025	28.360	.163	1.0234	-1.0007	0.3966	1.2258	2781.5	.0966	.670	0.3302	1.2691	2830.2	.0747	.721
3700	1.0488-3	191.3	2.4137	28.338	.166	1.0334	-1.0010	0.4196	1.2155	2809.1	.1071	.651	0.3313	1.2683	2869.4	.0764	.720
3800	1.0201-3	234.7	2.4253	28.308	.169	1.0469	-1.0015	0.4490	1.2044	2835.3	.1208	.628	0.3323	1.2676	2908.7	.0781	.719
3900	9.9255-4	281.4	2.4374	28.267	.172	1.0648	-1.0021	0.4860	1.1929	2860.7	.1387	.602	0.3333	1.2671	2948.3	.0797	.718
4000	9.6588-4	332.2	2.4502	28.213	.175	1.0879	-1.0030	0.5319	1.1815	2886.0	.1619	.574	0.3341	1.2669	2988.4	.0814	.717
4100	9.3995-4	388.1	2.4640	28.142	.177	1.1171	-1.0041	0.5875	1.1706	2912.0	.1913	.545	0.3349	1.2669	3029.4	.0831	.715
4200	9.1460-4	450.0	2.4790	28.051	.180	1.1531	-1.0056	0.6536	1.1607	2939.5	.2281	.516	0.3357	1.2673	3071.5	.0848	.713
4300	8.8968-4	519.1	2.4952	27.936	.183	1.1962	-1.0073	0.7300	1.1521	2969.3	.2730	.488	0.3364	1.2679	3115.0	.0865	.710
4400	8.6507-4	596.4	2.5130	27.795	.185	1.2465	-1.0095	0.8165	1.1448	3001.7	.3267	.463	0.3370	1.2690	3160.4	.0883	.707
4500	8.4064-4	682.8	2.5324	27.624	.188	1.3040	-1.0121	0.9123	1.1389	3037.1	.3893	.440	0.3376	1.2705	3207.9	.0902	.703
4600	8.1632-4	779.1	2.5536	27.421	.190	1.3683	-1.0151	1.0163	1.1342	3075.8	.4603	.420	0.3382	1.2725	3257.8	.0922	.698
4700	7.9206-4	886.3	2.5766	27.184	.193	1.4389	-1.0185	1.1277	1.1308	3117.8	.5386	.403	0.3388	1.2749	3310.5	.0944	.691
4800	7.6782-4	1004.9	2.6016	26.913	.195	1.5151	-1.0223	1.2451	1.1283	3163.1	.6221	.390	0.3394	1.2778	3366.2	.0967	.684
4900	7.4359-4	1135.4	2.6285	26.607	.197	1.5955	-1.0265	1.3667	1.1267	3212.0	.7077	.381	0.3400	1.2813	3425.3	.0992	.676
5000	7.1941-4	1278.2	2.6573	26.267	.200	1.6781	-1.0311	1.4897	1.1259	3264.4	.7915	.376	0.3406	1.2853	3487.8	.1020	.666
5100	6.9533-4	1433.3	2.6880	25.895	.202	1.7599	-1.0358	1.6098	1.1258	3320.3	.8683	.374	0.3412	1.2899	3554.0	.1050	.656
5200	6.7146-4	1599.9	2.7204	25.497	.204	1.8364	-1.0404	1.7208	1.1264	3379.6	.9329	.376	0.3419	1.2950	3623.8	.1082	.645
5300	6.4796-4	1776.9	2.7541	25.078	.206	1.9026	-1.0448	1.8151	1.1276	3442.2	.9802	.382	0.3426	1.3006	3696.9	.1117	.633
5400	6.2501-4	1962.1	2.7887	24.646	.209	1.9529	-1.0484	1.8846	1.1295	3507.7	****	.391	0.3434	1.3066	3772.8	.1153	.621

TABLE 29.3B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.032523; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 14.6959 LB/IN² (1.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4315-2	-498.7	1.9828	28.410	.095	1.0000	-1.0000	0.2888	1.3194	1922.1	.0372	.735	0.2887	1.3195	1922.2	.0372	.735
1700	2.2885-2	-469.6	2.0004	28.410	.099	1.0000	-1.0000	0.2922	1.3144	1977.5	.0394	.734	0.2921	1.3145	1977.6	.0393	.734
1800	2.1614-2	-440.2	2.0172	28.410	.103	1.0000	-1.0000	0.2955	1.3098	2031.3	.0415	.733	0.2954	1.3100	2031.5	.0414	.733
1900	2.0476-2	-410.5	2.0332	28.410	.107	1.0000	-1.0000	0.2986	1.3056	2083.6	.0435	.732	0.2983	1.3060	2083.9	.0435	.732
2000	1.9452-2	-380.5	2.0486	28.410	.110	1.0000	-1.0000	0.3016	1.3017	2134.5	.0455	.731	0.3011	1.3023	2135.0	.0455	.731
2100	1.8526-2	-350.2	2.0634	28.410	.114	1.0000	-1.0000	0.3045	1.2980	2184.1	.0475	.731	0.3038	1.2989	2184.9	.0474	.731
2200	1.7684-2	-319.6	2.0776	28.410	.118	1.0000	-1.0000	0.3073	1.2945	2232.5	.0495	.730	0.3063	1.2957	2233.6	.0494	.730
2300	1.6915-2	-288.8	2.0914	28.410	.121	1.0000	-1.0000	0.3100	1.2911	2279.7	.0515	.730	0.3087	1.2927	2281.1	.0513	.730
2400	1.6210-2	-257.6	2.1046	28.410	.125	1.0000	-1.0000	0.3128	1.2878	2325.8	.0535	.730	0.3110	1.2900	2327.7	.0532	.730
2500	1.5562-2	-226.2	2.1174	28.409	.128	1.0001	-1.0000	0.3155	1.2847	2370.8	.0555	.729	0.3131	1.2874	2373.4	.0551	.729
2600	1.4963-2	-194.5	2.1299	28.409	.132	1.0002	-1.0000	0.3183	1.2815	2414.8	.0575	.728	0.3151	1.2850	2418.1	.0569	.728
2700	1.4409-2	-162.6	2.1419	28.409	.135	1.0003	-1.0000	0.3211	1.2784	2457.8	.0595	.728	0.3171	1.2828	2462.1	.0588	.728
2800	1.3894-2	-130.3	2.1537	28.409	.138	1.0004	-1.0000	0.3241	1.2753	2499.9	.0616	.727	0.3189	1.2808	2505.2	.0606	.728
2900	1.3415-2	-97.7	2.1651	28.408	.142	1.0006	-1.0000	0.3272	1.2721	2541.0	.0638	.726	0.3206	1.2788	2547.7	.0624	.727
3000	1.2967-2	-64.8	2.1762	28.408	.145	1.0010	-1.0000	0.3305	1.2688	2581.1	.0661	.724	0.3222	1.2770	2589.5	.0642	.726
3100	1.2548-2	-31.6	2.1871	28.406	.148	1.0015	-1.0000	0.3342	1.2654	2620.3	.0684	.722	0.3238	1.2754	2630.6	.0660	.725
3200	1.2156-2	2.0	2.1978	28.405	.151	1.0022	-1.0001	0.3384	1.2617	2658.5	.0709	.720	0.3252	1.2738	2671.2	.0678	.725
3300	1.1786-2	36.1	2.2083	28.402	.154	1.0032	-1.0001	0.3432	1.2578	2695.6	.0737	.718	0.3266	1.2724	2711.2	.0695	.724
3400	1.1438-2	70.7	2.2186	28.399	.157	1.0046	-1.0001	0.3488	1.2535	2731.6	.0768	.714	0.3279	1.2711	2750.6	.0713	.723
3500	1.1110-2	105.9	2.2288	28.395	.160	1.0065	-1.0002	0.3554	1.2487	2766.4	.0803	.709	0.3291	1.2698	2789.7	.0730	.722
3600	1.0799-2	141.8	2.2389	28.389	.163	1.0092	-1.0003	0.3634	1.2434	2800.0	.0843	.703	0.3303	1.2687	2828.3	.0747	.721
3700	1.0504-2	178.6	2.2490	28.380	.166	1.0128	-1.0004	0.3732	1.2375	2832.3	.0890	.696	0.3313	1.2677	2866.6	.0764	.721
3800	1.0223-2	216.5	2.2591	28.369	.169	1.0175	-1.0005	0.3851	1.2311	2863.4	.0948	.687	0.3324	1.2668	2904.6	.0780	.720
3900	9.9559-3	255.7	2.2693	28.354	.172	1.0239	-1.0008	0.3996	1.2239	2893.2	.1017	.675	0.3333	1.2660	2942.5	.0797	.719
4000	9.7002-3	296.5	2.2797	28.334	.175	1.0320	-1.0011	0.4173	1.2163	2921.9	.1103	.661	0.3342	1.2654	2980.2	.0813	.719
4100	9.4549-3	339.3	2.2902	28.308	.178	1.0425	-1.0015	0.4388	1.2082	2949.7	.1207	.645	0.3351	1.2648	3018.0	.0829	.718
4200	9.2189-3	384.4	2.3011	28.274	.180	1.0557	-1.0020	0.4644	1.1999	2976.9	.1336	.627	0.3358	1.2644	3055.9	.0845	.717
4300	8.9911-3	432.3	2.3124	28.232	.183	1.0720	-1.0026	0.4948	1.1915	3003.9	.1493	.607	0.3366	1.2642	3094.1	.0861	.716
4400	8.7703-3	483.6	2.3241	28.179	.186	1.0918	-1.0034	0.5303	1.1834	3031.0	.1683	.585	0.3372	1.2642	3132.8	.0877	.714
4500	8.5555-3	538.6	2.3365	28.114	.188	1.1152	-1.0044	0.5709	1.1757	3058.9	.1910	.563	0.3379	1.2643	3172.0	.0893	.713
4600	8.3459-3	597.9	2.3495	28.035	.191	1.1426	-1.0056	0.6166	1.1687	3087.8	.2179	.541	0.3385	1.2647	3212.1	.0910	.711
4700	8.1407-3	662.0	2.3633	27.940	.194	1.1738	-1.0070	0.6670	1.1625	3118.1	.2491	.519	0.3390	1.2653	3253.1	.0927	.708
4800	7.9391-3	731.5	2.3779	27.828	.196	1.2087	-1.0087	0.7217	1.1571	3150.2	.2848	.497	0.3395	1.2661	3295.2	.0944	.705
4900	7.7407-3	806.5	2.3934	27.697	.199	1.2472	-1.0106	0.7801	1.1526	3184.1	.3249	.477	0.3400	1.2673	3338.7	.0961	.702
5000	7.5450-3	887.6	2.4098	27.548	.201	1.2889	-1.0127	0.8415	1.1489	3220.0	.3695	.458	0.3404	1.2686	3383.6	.0980	.699
5100	7.3516-3	974.9	2.4271	27.379	.204	1.3336	-1.0150	0.9054	1.1460	3257.9	.4180	.441	0.3408	1.2703	3430.0	.0999	.695
5200	7.1604-3	1068.7	2.4453	27.190	.206	1.3809	-1.0176	0.9713	1.1438	3298.0	.4700	.425	0.3413	1.2723	3478.2	.1018	.690
5300	6.9713-3	1169.2	2.4644	26.981	.208	1.4305	-1.0205	1.0387	1.1423	3340.1	.5246	.412	0.3417	1.2746	3528.2	.1039	.685
5400	6.7841-3	1276.5	2.4845	26.752	.211	1.4821	-1.0235	1.1070	1.1413	3384.4	.5805	.402	0.3421	1.2771	3580.2	.1062	.679

TABLE 29.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.032523; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 146.959 LB/IN2 (10.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4315-1	-498.7	1.8218	28.410	.095	1.0000	-1.0000	0.2888	1.3194	1922.1	.0372	.735	0.2887	1.3195	1922.2	.0372	.735
1700	2.2885-1	-469.6	1.8394	28.410	.099	1.0000	-1.0000	0.2922	1.3144	1977.5	.0394	.734	0.2921	1.3145	1977.6	.0393	.734
1800	2.1614-1	-440.2	1.8562	28.410	.103	1.0000	-1.0000	0.2955	1.3098	2031.3	.0415	.733	0.2954	1.3100	2031.5	.0414	.733
1900	2.0476-1	-410.5	1.8723	28.410	.107	1.0000	-1.0000	0.2986	1.3056	2083.6	.0435	.732	0.2983	1.3060	2083.9	.0435	.732
2000	1.9452-1	-380.5	1.8877	28.410	.110	1.0000	-1.0000	0.3016	1.3017	2134.5	.0455	.731	0.3011	1.3023	2135.0	.0455	.731
2100	1.8526-1	-350.2	1.9025	28.410	.114	1.0000	-1.0000	0.3044	1.2980	2184.1	.0475	.731	0.3038	1.2989	2184.9	.0474	.731
2200	1.7684-1	-319.6	1.9167	28.410	.118	1.0000	-1.0000	0.3072	1.2945	2232.5	.0495	.730	0.3063	1.2957	2233.5	.0494	.730
2300	1.6915-1	-288.8	1.9304	28.410	.121	1.0000	-1.0000	0.3100	1.2912	2279.7	.0515	.730	0.3087	1.2927	2281.1	.0513	.730
2400	1.6210-1	-257.6	1.9437	28.410	.125	1.0000	-1.0000	0.3127	1.2879	2325.9	.0535	.730	0.3110	1.2900	2327.7	.0532	.730
2500	1.5562-1	-226.2	1.9565	28.410	.128	1.0000	-1.0000	0.3154	1.2848	2370.9	.0555	.729	0.3131	1.2874	2373.4	.0551	.729
2600	1.4963-1	-194.6	1.9689	28.410	.132	1.0001	-1.0000	0.3180	1.2818	2415.0	.0574	.729	0.3151	1.2850	2418.1	.0569	.729
2700	1.4409-1	-162.6	1.9809	28.409	.135	1.0001	-1.0000	0.3207	1.2788	2458.2	.0594	.728	0.3171	1.2828	2462.1	.0588	.728
2800	1.3894-1	-130.4	1.9927	28.409	.138	1.0002	-1.0000	0.3234	1.2759	2500.4	.0615	.727	0.3189	1.2807	2505.2	.0606	.728
2900	1.3415-1	-97.9	2.0041	28.409	.142	1.0003	-1.0000	0.3262	1.2729	2541.8	.0635	.726	0.3206	1.2788	2547.7	.0624	.727
3000	1.2968-1	-65.2	2.0152	28.409	.145	1.0005	-1.0000	0.3291	1.2700	2582.3	.0656	.725	0.3222	1.2770	2589.4	.0642	.726
3100	1.2549-1	-32.1	2.0260	28.408	.148	1.0007	-1.0000	0.3320	1.2671	2622.0	.0678	.724	0.3238	1.2754	2630.5	.0660	.725
3200	1.2157-1	1.2	2.0366	28.407	.151	1.0010	-1.0000	0.3352	1.2641	2660.9	.0700	.723	0.3252	1.2738	2671.0	.0678	.725
3300	1.1788-1	34.9	2.0470	28.406	.154	1.0015	-1.0000	0.3386	1.2611	2698.9	.0723	.721	0.3266	1.2723	2710.9	.0695	.724
3400	1.1441-1	69.0	2.0571	28.405	.157	1.0021	-1.0001	0.3423	1.2579	2736.1	.0748	.720	0.3279	1.2710	2750.3	.0713	.723
3500	1.1113-1	103.4	2.0671	28.403	.160	1.0029	-1.0001	0.3463	1.2546	2772.5	.0773	.717	0.3291	1.2697	2789.2	.0730	.722
3600	1.0803-1	138.2	2.0769	28.400	.163	1.0039	-1.0001	0.3509	1.2512	2808.1	.0801	.715	0.3303	1.2686	2827.6	.0747	.722
3700	1.0510-1	173.6	2.0866	28.397	.166	1.0053	-1.0002	0.3560	1.2475	2842.8	.0831	.712	0.3314	1.2675	2865.6	.0763	.721
3800	1.0232-1	209.5	2.0962	28.392	.169	1.0071	-1.0002	0.3618	1.2436	2876.7	.0864	.708	0.3324	1.2665	2903.1	.0780	.720
3900	9.9672-2	246.0	2.1057	28.386	.172	1.0095	-1.0003	0.3686	1.2394	2909.7	.0900	.704	0.3333	1.2656	2940.3	.0796	.720
4000	9.7153-2	283.2	2.1151	28.378	.175	1.0125	-1.0004	0.3764	1.2349	2941.8	.0942	.699	0.3343	1.2648	2977.3	.0813	.719
4100	9.4750-2	321.3	2.1245	28.368	.178	1.0163	-1.0005	0.3855	1.2301	2973.1	.0990	.692	0.3351	1.2641	3013.9	.0829	.718
4200	9.2452-2	360.4	2.1339	28.355	.180	1.0211	-1.0007	0.3960	1.2250	3003.6	.1044	.684	0.3359	1.2634	3050.3	.0845	.718
4300	9.0251-2	400.6	2.1434	28.339	.183	1.0270	-1.0010	0.4083	1.2196	3033.3	.1108	.675	0.3367	1.2629	3086.6	.0860	.717
4400	8.8138-2	442.1	2.1529	28.319	.186	1.0343	-1.0013	0.4225	1.2140	3062.4	.1182	.665	0.3374	1.2624	3122.8	.0876	.716
4500	8.6105-2	485.1	2.1626	28.295	.189	1.0431	-1.0016	0.4389	1.2083	3091.0	.1269	.653	0.3380	1.2620	3159.0	.0892	.715
4600	8.4144-2	530.0	2.1724	28.265	.191	1.0536	-1.0021	0.4576	1.2025	3119.3	.1369	.640	0.3387	1.2618	3195.3	.0908	.714
4700	8.2248-2	576.7	2.1825	28.229	.194	1.0659	-1.0026	0.4788	1.1967	3147.5	.1486	.625	0.3392	1.2616	3231.7	.0923	.713
4800	8.0411-2	625.8	2.1928	28.185	.197	1.0803	-1.0033	0.5024	1.1911	3175.7	.1620	.610	0.3398	1.2616	3268.4	.0939	.712
4900	7.8627-2	677.3	2.2034	28.134	.199	1.0967	-1.0040	0.5285	1.1857	3204.3	.1773	.594	0.3403	1.2617	3305.4	.0955	.710
5000	7.6890-2	731.6	2.2144	28.074	.202	1.1151	-1.0049	0.5569	1.1807	3233.5	.1947	.577	0.3408	1.2620	3342.9	.0971	.709
5100	7.5196-2	788.7	2.2257	28.005	.204	1.1356	-1.0059	0.5873	1.1762	3263.4	.2142	.560	0.3412	1.2624	3380.9	.0987	.707
5200	7.3540-2	849.1	2.2374	27.925	.207	1.1579	-1.0070	0.6196	1.1721	3294.3	.2358	.544	0.3416	1.2629	3419.4	.1003	.705
5300	7.1920-2	912.7	2.2496	27.835	.209	1.1820	-1.0083	0.6532	1.1686	3326.1	.2595	.527	0.3420	1.2636	3458.7	.1019	.703
5400	7.0332-2	979.8	2.2621	27.734	.212	1.2076	-1.0097	0.6880	1.1656	3359.2	.2854	.511	0.3424	1.2645	3498.7	.1035	.701

TABLE 29.5B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.032523; EQUIV. RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522; P = 734.797 LB/IN² (50.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2158 0	-498.7	1.7093	28.410	.095	1.0000	-1.0000	0.2888	1.3194	1922.1	.0372	.735	0.2887	1.3195	1922.2	.0372	.735
1700	1.1443 0	-469.6	1.7269	28.410	.099	1.0000	-1.0000	0.2922	1.3144	1977.5	.0394	.734	0.2921	1.3145	1977.6	.0393	.734
1800	1.0807 0	-440.2	1.7437	28.410	.103	1.0000	-1.0000	0.2956	1.3098	2031.3	.0415	.733	0.2954	1.3100	2031.5	.0414	.733
1900	1.0238 0	-410.5	1.7598	28.410	.107	1.0000	-1.0000	0.2986	1.3056	2083.6	.0435	.732	0.2983	1.3060	2083.9	.0435	.732
2000	9.7262-1	-380.5	1.7752	28.410	.110	1.0000	-1.0000	0.3016	1.3017	2134.5	.0455	.731	0.3011	1.3023	2135.0	.0455	.731
2100	9.2631-1	-350.2	1.7900	28.410	.114	1.0000	-1.0000	0.3044	1.2980	2184.1	.0475	.731	0.3038	1.2989	2184.9	.0474	.731
2200	8.8420-1	-319.6	1.8042	28.410	.118	1.0000	-1.0000	0.3072	1.2945	2232.5	.0495	.730	0.3063	1.2957	2233.5	.0494	.730
2300	8.4576-1	-288.8	1.8179	28.410	.121	1.0000	-1.0000	0.3100	1.2912	2279.7	.0515	.730	0.3087	1.2927	2281.1	.0513	.730
2400	8.1052-1	-257.6	1.8312	28.410	.125	1.0000	-1.0000	0.3127	1.2879	2325.9	.0535	.730	0.3110	1.2900	2327.7	.0532	.730
2500	7.7810-1	-226.2	1.8440	28.410	.128	1.0000	-1.0000	0.3153	1.2848	2371.0	.0554	.729	0.3131	1.2874	2373.3	.0551	.729
2600	7.4817-1	-194.6	1.8564	28.410	.132	1.0000	-1.0000	0.3179	1.2818	2415.1	.0574	.729	0.3151	1.2850	2418.1	.0569	.729
2700	7.2046-1	-162.7	1.8684	28.410	.135	1.0001	-1.0000	0.3205	1.2789	2458.3	.0594	.728	0.3171	1.2828	2462.0	.0588	.728
2800	6.9473-1	-130.5	1.8801	28.410	.138	1.0001	-1.0000	0.3232	1.2761	2500.6	.0614	.727	0.3189	1.2807	2505.2	.0606	.728
2900	6.7077-1	-98.0	1.8915	28.410	.142	1.0000	-1.0000	0.3258	1.2732	2542.1	.0635	.727	0.3206	1.2788	2547.6	.0624	.727
3000	6.4840-1	-65.3	1.9026	28.409	.145	1.0003	-1.0000	0.3285	1.2705	2582.7	.0655	.726	0.3222	1.2770	2589.4	.0642	.726
3100	6.2748-1	-32.3	1.9134	28.409	.148	1.0004	-1.0000	0.3312	1.2677	2622.6	.0676	.725	0.3238	1.2753	2630.5	.0660	.725
3200	6.0786-1	0.9	1.9240	28.409	.151	1.0006	-1.0000	0.3341	1.2650	2661.7	.0697	.724	0.3252	1.2738	2670.9	.0678	.725
3300	5.8943-1	34.5	1.9343	28.408	.154	1.0009	-1.0000	0.3370	1.2622	2700.1	.0719	.723	0.3266	1.2723	2710.8	.0695	.724
3400	5.7208-1	68.4	1.9444	28.407	.157	1.0012	-1.0000	0.3401	1.2595	2737.7	.0741	.721	0.3279	1.2710	2750.2	.0713	.723
3500	5.5571-1	102.5	1.9543	28.406	.160	1.0017	-1.0001	0.3433	1.2567	2774.6	.0764	.720	0.3291	1.2697	2789.0	.0730	.722
3600	5.4024-1	137.0	1.9641	28.404	.163	1.0022	-1.0001	0.3468	1.2538	2810.8	.0788	.718	0.3303	1.2685	2827.3	.0747	.722
3700	5.2560-1	171.9	1.9736	28.402	.166	1.0030	-1.0001	0.3506	1.2508	2846.4	.0813	.716	0.3314	1.2674	2865.2	.0763	.721
3800	5.1172-1	207.2	1.9830	28.400	.169	1.0040	-1.0001	0.3547	1.2478	2881.2	.0839	.714	0.3324	1.2664	2902.6	.0780	.721
3900	4.9854-1	242.8	1.9923	28.396	.172	1.0052	-1.0002	0.3592	1.2447	2915.4	.0868	.712	0.3334	1.2655	2939.6	.0796	.720
4000	4.8601-1	279.0	2.0014	28.392	.175	1.0068	-1.0002	0.3642	1.2414	2948.8	.0898	.709	0.3343	1.2646	2976.3	.0813	.719
4100	4.7406-1	315.7	2.0105	28.387	.178	1.0088	-1.0003	0.3698	1.2380	2981.6	.0931	.706	0.3351	1.2638	3012.6	.0829	.719
4200	4.6266-1	353.0	2.0195	28.380	.181	1.0112	-1.0004	0.3760	1.2344	3013.8	.0968	.702	0.3359	1.2631	3048.6	.0844	.718
4300	4.5177-1	390.9	2.0284	28.371	.183	1.0142	-1.0005	0.3831	1.2306	3045.3	.1008	.697	0.3367	1.2625	3084.4	.0860	.717
4400	4.4134-1	429.6	2.0373	28.361	.186	1.0178	-1.0007	0.3911	1.2267	3076.1	.1053	.691	0.3374	1.2619	3119.9	.0876	.717
4500	4.3134-1	469.2	2.0462	28.348	.189	1.0222	-1.0008	0.4001	1.2227	3106.4	.1103	.685	0.3381	1.2614	3155.2	.0892	.716
4600	4.2173-1	509.7	2.0551	28.333	.192	1.0274	-1.0010	0.4102	1.2185	3136.2	.1160	.677	0.3387	1.2609	3190.4	.0907	.715
4700	4.1249-1	551.3	2.0640	28.314	.194	1.0336	-1.0013	0.4217	1.2142	3165.6	.1224	.669	0.3393	1.2605	3225.4	.0923	.714
4800	4.0358-1	594.1	2.0730	28.292	.197	1.0409	-1.0016	0.4344	1.2098	3194.6	.1296	.660	0.3399	1.2603	3260.5	.0938	.713
4900	3.9498-1	638.2	2.0821	28.266	.199	1.0494	-1.0020	0.4486	1.2055	3223.3	.1377	.650	0.3404	1.2600	3295.5	.0954	.712
5000	3.8666-1	683.8	2.0914	28.235	.202	1.0591	-1.0025	0.4642	1.2011	3252.0	.1468	.639	0.3409	1.2599	3330.6	.0969	.711
5100	3.7859-1	731.1	2.1007	28.199	.205	1.0701	-1.0030	0.4813	1.1969	3280.7	.1570	.627	0.3414	1.2599	3365.9	.0985	.710
5200	3.7076-1	780.1	2.1102	28.157	.207	1.0824	-1.0036	0.4998	1.1929	3309.6	.1684	.615	0.3418	1.2600	3401.3	.1000	.708
5300	3.6315-1	831.1	2.1200	28.110	.210	1.0960	-1.0043	0.5196	1.1891	3338.7	.1809	.602	0.3422	1.2601	3437.0	.1015	.707
5400	3.5574-1	884.1	2.1299	28.055	.212	1.1109	-1.0051	0.5405	1.1856	3368.3	.1947	.589	0.3426	1.2604	3473.0	.1030	.706

TABLE 29C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.032523; EQUIV.RATIO = 0.500; CHEM. EQUIV. RATIO = 0.5522;
WET AIR (W/A= 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES					T R		
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S		COND BTU/ FT HR R	PRAN R
PRESSURE = 0.01 ATM																
360	1.215-3	-915.2	1.7191	28.410	0.2556	1.130-3	29.706	.0317	1.000	-1.000	0.2366	1.3937	916	.0102	.734	360
400	1.090-3	-903.0	1.7510	28.410	0.4145	1.016-3	29.667	.0346	1.000	-1.000	0.2373	1.3930	966	.0112	.731	400
440	9.521-4	-864.7	1.8413	28.410	2.0869	9.090-4	29.208	.0364	1.000	-1.000	0.2426	1.3895	1020	.0119	.739	440
PRESSURE = 0.10 ATM																
360	1.216-2	-915.3	1.5757	28.410	0.2472	1.130-2	29.707	.0317	1.000	-1.000	0.2366	1.3938	916	.0102	.734	360
400	1.094-2	-905.2	1.6024	28.410	0.2656	1.017-2	29.703	.0347	1.000	-1.000	0.2369	1.3933	966	.0113	.730	400
440	9.903-3	-892.4	1.6326	28.410	0.4219	9.230-3	29.657	.0374	1.000	-1.000	0.2377	1.3922	1013	.0122	.727	440
480	8.800-3	-860.5	1.7015	28.410	1.4863	8.359-3	29.301	.0394	1.000	-1.000	0.2420	1.3890	1064	.0130	.733	480
520	7.482-3	-789.3	1.8451	28.410	0.2527	7.482-3	28.410	.0401	1.000	-1.000	0.2527	1.3825	1122	.0135	.753	520
PRESSURE = 1.00 ATM																
360	1.215-1	-915.3	1.4326	28.410	0.2464	1.130-1	29.707	.0317	1.000	-1.000	0.2366	1.3938	916	.0102	.734	360
400	1.094-1	-905.4	1.4587	28.410	0.2508	1.017-1	29.707	.0347	1.000	-1.000	0.2368	1.3933	966	.0113	.730	400
440	9.940-2	-895.1	1.4833	28.410	0.2691	9.244-2	29.702	.0376	1.000	-1.000	0.2372	1.3925	1013	.0123	.726	440
480	9.084-2	-882.8	1.5099	28.410	0.3710	8.464-2	29.667	.0403	1.000	-1.000	0.2380	1.3913	1058	.0132	.724	480
520	8.267-2	-853.2	1.5693	28.410	0.6727	7.769-2	29.502	.0426	1.000	-1.000	0.2403	1.3890	1103	.0141	.726	520
537	7.900-2	-840.0	1.5943	28.410	0.9313	7.488-2	29.344	.0433	1.000	-1.000	0.2423	1.3875	1123	.0144	.730	537
560	7.307-2	-811.6	1.6460	28.410	1.5736	7.079-2	28.948	.0439	1.000	-1.000	0.2471	1.3842	1154	.0147	.739	560
600	6.484-2	-769.0	1.7204	28.410	0.2542	6.484-2	28.410	.0453	1.000	-1.000	0.2542	1.3794	1204	.0153	.752	600
PRESSURE = 10.00 ATM																
360	1.214 0	-915.3	1.2895	28.410	0.2463	1.130 0	29.707	.0317	1.000	-1.000	0.2366	1.3938	916	.0102	.734	360
400	1.093 0	-905.4	1.3156	28.410	0.2494	1.017 0	29.707	.0347	1.000	-1.000	0.2368	1.3933	966	.0113	.730	400
440	9.933-1	-895.4	1.3396	28.410	0.2540	9.246-1	29.707	.0376	1.000	-1.000	0.2372	1.3925	1013	.0123	.726	440
480	9.104-1	-885.0	1.3621	28.410	0.2670	8.474-1	29.703	.0403	1.000	-1.000	0.2376	1.3915	1057	.0133	.723	480
520	8.393-1	-862.8	1.4067	28.410	0.3287	7.818-1	29.687	.0430	1.000	-1.000	0.2383	1.3902	1100	.0142	.722	520
537	8.122-1	-857.2	1.4175	28.410	0.3523	7.571-1	29.671	.0440	1.000	-1.000	0.2388	1.3895	1118	.0146	.722	537
560	7.757-1	-848.4	1.4335	28.410	0.4056	7.246-1	29.631	.0455	1.000	-1.000	0.2396	1.3884	1142	.0151	.722	560
600	7.145-1	-829.0	1.4668	28.410	0.5865	6.728-1	29.477	.0476	1.000	-1.000	0.2420	1.3858	1184	.0159	.727	600
640	6.487-1	-798.8	1.5155	28.410	0.9724	6.229-1	29.113	.0493	1.000	-1.000	0.2469	1.3818	1229	.0165	.736	640
680	5.721-1	-748.6	1.5913	28.410	0.2560	5.721-1	28.410	.0502	1.000	-1.000	0.2560	1.3756	1279	.0171	.750	680
PRESSURE = 50.00 ATM																
360	6.033 0	-915.3	1.1895	28.410	0.2463	5.650 0	29.707	.0317	1.000	-1.000	0.2366	1.3938	916	.0102	.734	360
400	5.434 0	-905.4	1.2156	28.410	0.2492	5.085 0	29.707	.0347	1.000	-1.000	0.2368	1.3933	966	.0113	.730	400
440	4.943 0	-895.4	1.2395	28.410	0.2526	4.623 0	29.707	.0376	1.000	-1.000	0.2372	1.3925	1013	.0123	.726	440
480	4.533 0	-885.2	1.2617	28.410	0.2579	4.238 0	29.706	.0403	1.000	-1.000	0.2376	1.3915	1057	.0133	.723	480
520	4.187 0	-863.7	1.3050	28.410	0.2992	3.911 0	29.703	.0430	1.000	-1.000	0.2382	1.3903	1100	.0142	.721	520
537	4.056 0	-858.7	1.3145	28.410	0.3039	3.789 0	29.700	.0441	1.000	-1.000	0.2385	1.3897	1117	.0146	.721	537
560	3.885 0	-851.5	1.3277	28.410	0.3146	3.630 0	29.692	.0456	1.000	-1.000	0.2389	1.3887	1141	.0151	.721	560
600	3.618 0	-838.3	1.3504	28.410	0.3498	3.385 0	29.661	.0480	1.000	-1.000	0.2400	1.3869	1181	.0160	.722	600
640	3.372 0	-823.0	1.3750	28.410	0.4186	3.166 0	29.589	.0503	1.000	-1.000	0.2416	1.3847	1220	.0168	.724	640
680	3.134 0	-804.1	1.4037	28.410	0.5399	2.964 0	29.438	.0523	1.000	-1.000	0.2442	1.3818	1260	.0176	.728	680
720	2.890 0	-778.8	1.4397	28.410	0.7406	2.773 0	29.158	.0541	1.000	-1.000	0.2483	1.3780	1301	.0183	.734	720
760	2.625 0	-743.2	1.4878	28.410	1.0656	2.584 0	28.684	.0554	1.000	-1.000	0.2549	1.3728	1345	.0190	.743	760

TABLE 30A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.048785; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7761; MW = 28.3851;
 WET AIR (W/A = 0.03); GASEOUS COMPOSITION: CO2= .09375; H2O= .14189; N2= .70836; O2= .04751; AR= .00850

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R		R
360	1.0798-1	5.3988 0	-1123.4	1.9139	1.7528	1.5917	1.4306	1.3180	0.2532	1.3819	933.5	.0277	.0089	.7870	360
380	1.0229-1	5.1146 0	-1118.3	1.9276	1.7665	1.6054	1.4443	1.3317	0.2534	1.3813	958.9	.0291	.0094	.7820	380
400	9.7178-2	4.8589 0	-1113.2	1.9406	1.7795	1.6184	1.4573	1.3447	0.2537	1.3808	983.6	.0306	.0100	.7776	400
420	9.2550-2	4.6275 0	-1108.2	1.9530	1.7919	1.6308	1.4697	1.3571	0.2540	1.3802	1007.6	.0321	.0105	.7738	420
440	8.8344-2	4.4172 0	-1103.1	1.9648	1.8037	1.6426	1.4816	1.3690	0.2543	1.3795	1031.1	.0335	.0111	.7705	440
460	8.4502-2	4.2251 0	-1098.0	1.9761	1.8151	1.6540	1.4929	1.3803	0.2547	1.3787	1054.0	.0349	.0116	.7679	460
480	8.0982-2	4.0491 0	-1092.9	1.9870	1.8259	1.6648	1.5037	1.3911	0.2551	1.3780	1076.4	.0363	.0121	.7657	480
500	7.7742-2	3.8871 0	-1087.8	1.9974	1.8363	1.6752	1.5141	1.4015	0.2555	1.3771	1098.2	.0376	.0126	.7640	500
520	7.4752-2	3.7376 0	-1082.7	2.0074	1.8463	1.6853	1.5242	1.4116	0.2559	1.3763	1119.6	.0390	.0131	.7627	520
537	7.2430-2	3.6215 0	-1078.4	2.0155	1.8544	1.6933	1.5322	1.4196	0.2563	1.3755	1137.1	.0401	.0135	.7619	537
540	7.1984-2	3.5992 0	-1077.6	2.0171	1.8560	1.6949	1.5338	1.4212	0.2563	1.3754	1140.6	.0403	.0136	.7618	540
560	6.9413-2	3.4706 0	-1072.4	2.0264	1.8653	1.7043	1.5432	1.4306	0.2568	1.3744	1161.1	.0416	.0140	.7616	560
580	6.7019-2	3.3510 0	-1067.3	2.0355	1.8744	1.7133	1.5522	1.4396	0.2573	1.3734	1181.2	.0429	.0145	.7617	580
600	6.4785-2	3.2393 0	-1062.1	2.0442	1.8831	1.7220	1.5609	1.4483	0.2578	1.3724	1201.0	.0441	.0149	.7618	600
620	6.2695-2	3.1348 0	-1057.0	2.0527	1.8916	1.7305	1.5694	1.4568	0.2584	1.3713	1220.4	.0454	.0154	.7619	620
640	6.0736-2	3.0368 0	-1051.8	2.0609	1.8998	1.7387	1.5776	1.4650	0.2589	1.3703	1239.4	.0466	.0159	.7616	640
660	5.8896-2	2.9448 0	-1046.6	2.0688	1.9077	1.7467	1.5856	1.4730	0.2595	1.3691	1258.1	.0479	.0163	.7608	660
680	5.7163-2	2.8582 0	-1041.4	2.0766	1.9155	1.7544	1.5933	1.4807	0.2601	1.3680	1276.5	.0491	.0168	.7598	680
700	5.5530-2	2.7765 0	-1036.2	2.0841	1.9231	1.7620	1.6009	1.4883	0.2607	1.3668	1294.6	.0503	.0173	.7588	700
720	5.3988-2	2.6994 0	-1031.0	2.0915	1.9304	1.7693	1.6082	1.4956	0.2613	1.3656	1312.4	.0515	.0177	.7578	720
740	5.2529-2	2.6264 0	-1025.8	2.0987	1.9376	1.7765	1.6154	1.5028	0.2620	1.3644	1329.9	.0526	.0182	.7573	740
760	5.1146-2	2.5573 0	-1020.5	2.1057	1.9446	1.7835	1.6224	1.5098	0.2626	1.3632	1347.1	.0537	.0186	.7569	760
780	4.9835-2	2.4917 0	-1015.2	2.1125	1.9514	1.7903	1.6292	1.5166	0.2633	1.3619	1364.1	.0549	.0191	.7567	780
800	4.8589-2	2.4294 0	-1010.0	2.1192	1.9581	1.7970	1.6359	1.5233	0.2640	1.3606	1380.8	.0560	.0195	.7565	800
820	4.7404-2	2.3702 0	-1004.7	2.1257	1.9646	1.8035	1.6424	1.5298	0.2646	1.3594	1397.3	.0571	.0200	.7564	820
840	4.6275-2	2.3138 0	-999.4	2.1321	1.9710	1.8099	1.6488	1.5362	0.2654	1.3581	1413.6	.0582	.0204	.7564	840
860	4.5199-2	2.2600 0	-994.1	2.1383	1.9772	1.8161	1.6551	1.5425	0.2661	1.3567	1429.6	.0593	.0208	.7564	860
880	4.4172-2	2.2086 0	-988.7	2.1445	1.9834	1.8223	1.6612	1.5486	0.2668	1.3554	1445.4	.0603	.0213	.7564	880
900	4.3190-2	2.1595 0	-983.4	2.1505	1.9894	1.8283	1.6672	1.5546	0.2675	1.3541	1461.1	.0614	.0217	.7565	900
920	4.2251-2	2.1126 0	-978.0	2.1563	1.9953	1.8342	1.6731	1.5605	0.2683	1.3528	1476.5	.0624	.0221	.7563	920
940	4.1352-2	2.0676 0	-972.7	2.1621	2.0010	1.8399	1.6788	1.5662	0.2690	1.3514	1491.7	.0635	.0226	.7560	940
960	4.0491-2	2.0245 0	-967.3	2.1678	2.0067	1.8456	1.6845	1.5719	0.2698	1.3501	1506.7	.0645	.0230	.7556	960
980	3.9664-2	1.9832 0	-961.9	2.1734	2.0123	1.8512	1.6901	1.5775	0.2706	1.3487	1521.6	.0656	.0235	.7553	980
1000	3.8871-2	1.9436 0	-956.5	2.1788	2.0177	1.8567	1.6956	1.5830	0.2713	1.3474	1536.3	.0666	.0239	.7549	1000
1020	3.8109-2	1.9054 0	-951.0	2.1842	2.0231	1.8620	1.7009	1.5883	0.2721	1.3460	1550.8	.0676	.0244	.7545	1020
1040	3.7376-2	1.8688 0	-945.6	2.1895	2.0284	1.8673	1.7062	1.5936	0.2729	1.3447	1565.1	.0686	.0248	.7540	1040
1060	3.6671-2	1.8335 0	-940.1	2.1947	2.0336	1.8725	1.7114	1.5988	0.2737	1.3434	1579.3	.0696	.0253	.7536	1060
1080	3.5992-2	1.7996 0	-934.6	2.1998	2.0387	1.8777	1.7166	1.6040	0.2745	1.3420	1593.3	.0706	.0257	.7531	1080
1100	3.5337-2	1.7669 0	-929.1	2.2049	2.0438	1.8827	1.7216	1.6090	0.2753	1.3407	1607.2	.0716	.0262	.7526	1100
1120	3.4706-2	1.7353 0	-923.6	2.2099	2.0488	1.8877	1.7266	1.6140	0.2761	1.3393	1621.0	.0725	.0266	.7521	1120
1140	3.4097-2	1.7049 0	-918.1	2.2147	2.0537	1.8926	1.7315	1.6189	0.2769	1.3380	1634.6	.0735	.0271	.7516	1140

TABLE 30A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.048785; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7761; MW = 28.3851;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .09375; H2O= .14189; N2= .70836; O2= .04751; AR= .00850

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R	
1160	3.3510-2	1.6755 0	-912.5	2.2196	2.0585	1.8974	1.7363	1.6237	0.2778	1.3367	1648.0	.0745	.0275	.7510	1160
1180	3.2942-2	1.6471 0	-907.0	2.2243	2.0632	1.9021	1.7411	1.6285	0.2786	1.3354	1661.4	.0754	.0280	.7505	1180
1200	3.2393-2	1.6196 0	-901.4	2.2290	2.0679	1.9068	1.7457	1.6331	0.2794	1.3341	1674.6	.0764	.0285	.7500	1200
1220	3.1862-2	1.5931 0	-895.8	2.2336	2.0725	1.9115	1.7504	1.6378	0.2802	1.3328	1687.6	.0773	.0289	.7494	1220
1240	3.1348-2	1.5674 0	-890.2	2.2382	2.0771	1.9160	1.7549	1.6423	0.2810	1.3315	1700.6	.0783	.0294	.7489	1240
1260	3.0850-2	1.5425 0	-884.6	2.2427	2.0816	1.9205	1.7594	1.6468	0.2818	1.3302	1713.4	.0792	.0298	.7484	1260
1280	3.0368-2	1.5184 0	-878.9	2.2472	2.0861	1.9250	1.7639	1.6513	0.2827	1.3289	1726.1	.0801	.0303	.7478	1280
1300	2.9901-2	1.4950 0	-873.3	2.2515	2.0904	1.9294	1.7683	1.6557	0.2835	1.3277	1738.7	.0810	.0307	.7473	1300
1320	2.9448-2	1.4724 0	-867.6	2.2559	2.0948	1.9337	1.7726	1.6600	0.2843	1.3264	1751.2	.0819	.0312	.7468	1320
1340	2.9008-2	1.4504 0	-861.9	2.2602	2.0991	1.9380	1.7769	1.6643	0.2851	1.3252	1763.6	.0828	.0316	.7463	1340
1360	2.8582-2	1.4291 0	-856.2	2.2644	2.1033	1.9422	1.7811	1.6685	0.2859	1.3240	1775.9	.0837	.0321	.7458	1360
1380	2.8167-2	1.4084 0	-850.4	2.2686	2.1075	1.9464	1.7853	1.6727	0.2867	1.3228	1788.1	.0846	.0326	.7453	1380
1400	2.7765-2	1.3883 0	-844.7	2.2727	2.1116	1.9505	1.7894	1.6768	0.2875	1.3216	1800.2	.0855	.0330	.7448	1400
1420	2.7374-2	1.3687 0	-838.9	2.2768	2.1157	1.9546	1.7935	1.6809	0.2883	1.3204	1812.2	.0864	.0335	.7443	1420
1440	2.6994-2	1.3497 0	-833.2	2.2808	2.1197	1.9586	1.7975	1.6849	0.2891	1.3192	1824.1	.0873	.0339	.7439	1440
1460	2.6624-2	1.3312 0	-827.4	2.2848	2.1237	1.9626	1.8015	1.6889	0.2899	1.3181	1836.0	.0882	.0344	.7435	1460
1480	2.6264-2	1.3132 0	-821.6	2.2888	2.1277	1.9666	1.8055	1.6929	0.2907	1.3169	1847.7	.0890	.0348	.7431	1480
1500	2.5914-2	1.2957 0	-815.7	2.2927	2.1316	1.9705	1.8094	1.6968	0.2915	1.3158	1859.4	.0899	.0353	.7428	1500
1520	2.5573-2	1.2787 0	-809.9	2.2965	2.1354	1.9744	1.8133	1.7007	0.2923	1.3147	1870.9	.0907	.0357	.7424	1520
1540	2.5241-2	1.2620 0	-804.1	2.3004	2.1393	1.9782	1.8171	1.7045	0.2930	1.3136	1882.4	.0916	.0362	.7421	1540
1560	2.4917-2	1.2459 0	-798.2	2.3041	2.1431	1.9820	1.8209	1.7083	0.2938	1.3125	1893.8	.0924	.0366	.7418	1560
1580	2.4602-2	1.2301 0	-792.3	2.3079	2.1468	1.9857	1.8246	1.7120	0.2946	1.3115	1905.1	.0933	.0371	.7415	1580
1600	2.4294-2	1.2147 0	-786.4	2.3116	2.1505	1.9894	1.8283	1.7157	0.2953	1.3104	1916.4	.0941	.0375	.7412	1600
1620	2.3995-2	1.1997 0	-780.5	2.3153	2.1542	1.9931	1.8320	1.7194	0.2961	1.3094	1927.6	.0950	.0380	.7409	1620
1640	2.3702-2	1.1851 0	-774.6	2.3189	2.1578	1.9967	1.8356	1.7230	0.2968	1.3084	1938.7	.0958	.0384	.7406	1640
1660	2.3416-2	1.1708 0	-768.6	2.3225	2.1614	2.0003	1.8392	1.7266	0.2975	1.3074	1949.8	.0966	.0388	.7403	1660
1680	2.3138-2	1.1569 0	-762.7	2.3261	2.1650	2.0039	1.8428	1.7302	0.2983	1.3064	1960.7	.0974	.0393	.7400	1680
1700	2.2865-2	1.1433 0	-756.7	2.3296	2.1685	2.0074	1.8463	1.7337	0.2990	1.3055	1971.6	.0983	.0397	.7397	1700
1720	2.2599-2	1.1300 0	-750.7	2.3331	2.1720	2.0109	1.8498	1.7372	0.2997	1.3045	1982.5	.0991	.0402	.7395	1720
1740	2.2340-2	1.1170 0	-744.7	2.3366	2.1755	2.0144	1.8533	1.7407	0.3004	1.3036	1993.3	.0999	.0406	.7392	1740
1760	2.2086-2	1.1043 0	-738.7	2.3400	2.1789	2.0178	1.8568	1.7442	0.3011	1.3027	2004.0	.1007	.0410	.7390	1760
1780	2.1838-2	1.0919 0	-732.7	2.3434	2.1823	2.0212	1.8602	1.7476	0.3018	1.3018	2014.7	.1015	.0415	.7388	1780
1800	2.1595-2	1.0798 0	-726.6	2.3468	2.1857	2.0246	1.8635	1.7509	0.3024	1.3009	2025.3	.1023	.0419	.7385	1800
1900	2.0458-2	1.0229 0	-696.2	2.3632	2.2022	2.0411	1.8800	1.7674	0.3056	1.2969	2077.5	.1062	.0440	.7375	1900
2000	1.9436-2	9.7178-1	-665.5	2.3790	2.2179	2.0568	1.8957	1.7831	0.3086	1.2931	2128.4	.1100	.0461	.7366	2000
2100	1.8510-2	9.2550-1	-634.5	2.3941	2.2330	2.0719	1.9109	1.7983	0.3115	1.2897	2178.0	.1138	.0482	.7359	2100
2200	1.7669-2	8.8344-1	-603.2	2.4087	2.2476	2.0865	1.9254	1.8128	0.3142	1.2864	2226.5	.1174	.0502	.7352	2200
2300	1.6900-2	8.4503-1	-571.7	2.4227	2.2616	2.1005	1.9394	1.8268	0.3168	1.2835	2273.9	.1211	.0522	.7345	2300
2400	1.6196-2	8.0982-1	-539.9	2.4362	2.2751	2.1141	1.9530	1.8404	0.3192	1.2807	2320.3	.1246	.0542	.7338	2400
2500	1.5548-2	7.7742-1	-507.8	2.4493	2.2882	2.1271	1.9660	1.8534	0.3215	1.2781	2365.8	.1281	.0562	.7332	2500

TABLE 30A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.048785; EQUIV. RATIO= 0.750; CHEM. EQUIV. RATIO= 0.7761; MW = 28.3851;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .09375; H2O= .14189; N2= .70836; O2= .04751; AR= .00850

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	FT/S	LB/FT HR	BTU/FT HR R	R		
2600	1.4950-2	7.4752-1	-475.6	2.4620	2.3009	2.1398	1.9787	1.8661	0.3237	1.2757	2410.3	.1316	.0581	.7325	2600
2700	1.4397-2	7.1984-1	-443.1	2.4742	2.3131	2.1520	1.9910	1.8784	0.3258	1.2735	2454.1	.1350	.0601	.7318	2700
2800	1.3883-2	6.9413-1	-410.4	2.4861	2.3250	2.1639	2.0028	1.8902	0.3278	1.2714	2497.1	.1383	.0620	.7310	2800
2900	1.3404-2	6.7019-1	-377.5	2.4976	2.3366	2.1755	2.0144	1.9018	0.3296	1.2695	2539.4	.1416	.0639	.7301	2900
3000	1.2957-2	6.4785-1	-344.5	2.5088	2.3478	2.1867	2.0256	1.9130	0.3314	1.2677	2580.9	.1449	.0658	.7293	3000
3100	1.2539-2	6.2695-1	-311.3	2.5197	2.3586	2.1976	2.0365	1.9239	0.3330	1.2660	2621.9	.1481	.0677	.7284	3100
3200	1.2147-2	6.0736-1	-277.9	2.5303	2.3692	2.2082	2.0471	1.9345	0.3346	1.2644	2662.2	.1513	.0696	.7275	3200
3300	1.1779-2	5.8896-1	-244.4	2.5407	2.3796	2.2185	2.0574	1.9448	0.3360	1.2629	2701.9	.1545	.0714	.7266	3300
3400	1.1433-2	5.7163-1	-210.7	2.5507	2.3896	2.2285	2.0674	1.9548	0.3374	1.2616	2741.0	.1576	.0733	.7257	3400
3500	1.1106-2	5.5530-1	-176.9	2.5605	2.3994	2.2383	2.0772	1.9646	0.3387	1.2603	2779.7	.1607	.0751	.7248	3500
3600	1.0798-2	5.3988-1	-142.9	2.5701	2.4090	2.2479	2.0868	1.9742	0.3400	1.2591	2817.7	.1637	.0769	.7239	3600
3700	1.0506-2	5.2529-1	-108.9	2.5794	2.4183	2.2572	2.0961	1.9835	0.3411	1.2580	2855.3	.1667	.0786	.7231	3700
3800	1.0229-2	5.1146-1	-74.7	2.5885	2.4274	2.2663	2.1052	1.9926	0.3422	1.2570	2892.5	.1697	.0804	.7223	3800
3900	9.9670-3	4.9835-1	-40.4	2.5974	2.4363	2.2752	2.1141	2.0015	0.3433	1.2560	2929.2	.1726	.0821	.7215	3900
4000	9.7178-3	4.8589-1	-6.1	2.6061	2.4450	2.2839	2.1228	2.0102	0.3443	1.2551	2965.4	.1755	.0839	.7207	4000
4100	9.4808-3	4.7404-1	28.4	2.6146	2.4535	2.2924	2.1314	2.0188	0.3452	1.2542	3001.2	.1784	.0856	.7199	4100
4200	9.2550-3	4.6275-1	63.0	2.6230	2.4619	2.3008	2.1397	2.0271	0.3461	1.2534	3036.6	.1813	.0873	.7190	4200
4300	9.0398-3	4.5199-1	97.6	2.6311	2.4700	2.3089	2.1478	2.0352	0.3469	1.2526	3071.6	.1841	.0889	.7181	4300
4400	8.8343-3	4.4172-1	132.4	2.6391	2.4780	2.3169	2.1558	2.0432	0.3477	1.2519	3106.2	.1869	.0906	.7173	4400
4500	8.6380-3	4.3190-1	167.2	2.6469	2.4858	2.3247	2.1636	2.0510	0.3484	1.2513	3140.5	.1897	.0923	.7164	4500
4600	8.4502-3	4.2251-1	202.0	2.6546	2.4935	2.3324	2.1713	2.0587	0.3491	1.2506	3174.4	.1925	.0939	.7153	4600
4700	8.2704-3	4.1352-1	237.0	2.6621	2.5010	2.3399	2.1788	2.0662	0.3498	1.2500	3207.9	.1952	.0956	.7142	4700
4800	8.0982-3	4.0491-1	272.0	2.6695	2.5084	2.3473	2.1862	2.0736	0.3504	1.2494	3241.1	.1979	.0972	.7131	4800
4900	7.9329-3	3.9664-1	307.1	2.6767	2.5156	2.3545	2.1934	2.0808	0.3510	1.2489	3274.0	.2006	.0989	.7121	4900
5000	7.7742-3	3.8871-1	342.2	2.6838	2.5227	2.3616	2.2005	2.0879	0.3516	1.2484	3306.6	.2032	.1005	.7111	5000
5100	7.6218-3	3.8109-1	377.4	2.6908	2.5297	2.3686	2.2075	2.0949	0.3522	1.2479	3338.8	.2059	.1021	.7102	5100
5200	7.4752-3	3.7376-1	412.6	2.6976	2.5365	2.3754	2.2143	2.1017	0.3527	1.2474	3370.8	.2085	.1037	.7092	5200
5300	7.3342-3	3.6671-1	447.9	2.7043	2.5432	2.3822	2.2211	2.1085	0.3532	1.2470	3402.4	.2111	.1053	.7084	5300
5400	7.1984-3	3.5992-1	483.3	2.7109	2.5499	2.3888	2.2277	2.1151	0.3537	1.2466	3433.8	.2137	.1068	.7075	5400

TABLE 30.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.048785; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 0.14696 LB/IN² (0.01 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4294-4	-786.4	2.3116	28.385	.094	1.0000	-1.0000	0.2954	1.3104	1916.4	.0375	.741	0.2953	1.3104	1916.4	.0375	.741
1700	2.2865-4	-756.7	2.3296	28.385	.098	1.0000	-1.0000	0.2991	1.3054	1971.6	.0397	.740	0.2990	1.3055	1971.6	.0397	.740
1800	2.1595-4	-726.6	2.3468	28.385	.102	1.0000	-1.0000	0.3026	1.3008	2025.1	.0419	.739	0.3024	1.3009	2025.3	.0419	.739
1900	2.0458-4	-696.2	2.3633	28.385	.106	1.0000	-1.0000	0.3058	1.2966	2077.3	.0440	.737	0.3056	1.2969	2077.5	.0440	.737
2000	1.9436-4	-665.4	2.3790	28.385	.110	1.0000	-1.0000	0.3090	1.2927	2128.1	.0462	.737	0.3086	1.2931	2128.4	.0461	.737
2100	1.8510-4	-634.4	2.3942	28.385	.114	1.0000	-1.0000	0.3120	1.2890	2177.5	.0482	.736	0.3115	1.2897	2178.0	.0482	.736
2200	1.7669-4	-603.0	2.4088	28.385	.117	1.0000	-1.0000	0.3150	1.2855	2225.7	.0503	.735	0.3142	1.2864	2226.5	.0502	.735
2300	1.6900-4	-571.4	2.4228	28.385	.121	1.0001	-1.0000	0.3180	1.2821	2272.7	.0524	.734	0.3168	1.2835	2273.9	.0522	.734
2400	1.6196-4	-539.4	2.4364	28.385	.125	1.0002	-1.0000	0.3211	1.2787	2318.6	.0546	.733	0.3192	1.2807	2320.3	.0542	.734
2500	1.5548-4	-507.1	2.4496	28.384	.128	1.0003	-1.0000	0.3243	1.2753	2363.2	.0567	.732	0.3215	1.2781	2365.8	.0562	.733
2600	1.4950-4	-474.6	2.4624	28.384	.132	1.0006	-1.0000	0.3278	1.2718	2406.7	.0590	.731	0.3237	1.2757	2410.4	.0581	.732
2700	1.4396-4	-441.6	2.4748	28.383	.135	1.0011	-1.0000	0.3318	1.2679	2448.9	.0615	.729	0.3258	1.2735	2454.2	.0601	.732
2800	1.3881-4	-408.2	2.4870	28.381	.138	1.0020	-1.0000	0.3368	1.2635	2489.5	.0642	.725	0.3278	1.2714	2497.3	.0620	.731
2900	1.3401-4	-374.2	2.4989	28.379	.142	1.0034	-1.0001	0.3433	1.2582	2528.3	.0675	.720	0.3296	1.2695	2539.7	.0639	.730
3000	1.2952-4	-339.4	2.5107	28.374	.145	1.0059	-1.0001	0.3521	1.2515	2565.0	.0716	.713	0.3313	1.2678	2581.6	.0658	.729
3100	1.2531-4	-303.6	2.5224	28.367	.148	1.0098	-1.0002	0.3644	1.2432	2599.0	.0769	.702	0.3330	1.2662	2622.9	.0677	.728
3200	1.2135-4	-266.4	2.5343	28.356	.151	1.0159	-1.0004	0.3819	1.2328	2630.1	.0843	.686	0.3345	1.2648	2663.9	.0696	.727
3300	1.1760-4	-227.0	2.5464	28.338	.154	1.0254	-1.0007	0.4068	1.2202	2657.9	.0946	.664	0.3360	1.2635	2704.8	.0715	.726
3400	1.1403-4	-184.7	2.5590	28.311	.157	1.0397	-1.0011	0.4418	1.2056	2683.0	.1093	.637	0.3374	1.2625	2745.6	.0733	.725
3500	1.1061-4	-138.2	2.5725	28.271	.160	1.0603	-1.0018	0.4897	1.1898	2706.2	.1300	.605	0.3386	1.2617	2786.9	.0752	.723
3600	1.0732-4	-86.2	2.5871	28.212	.163	1.0891	-1.0027	0.5535	1.1739	2729.0	.1587	.570	0.3398	1.2613	2828.8	.0770	.721
3700	1.0411-4	-26.9	2.6034	28.129	.166	1.1276	-1.0040	0.6354	1.1590	2753.2	.1973	.536	0.3409	1.2612	2872.0	.0789	.719
3800	1.0096-4	41.5	2.6216	28.016	.169	1.1770	-1.0058	0.7366	1.1461	2780.2	.2480	.502	0.3419	1.2616	2916.9	.0807	.716
3900	9.7847-5	121.0	2.6423	27.866	.172	1.2379	-1.0081	0.8569	1.1356	2811.0	.3124	.471	0.3427	1.2625	2964.0	.0827	.712
4000	9.4743-5	213.5	2.6657	27.674	.174	1.3106	-1.0109	0.9957	1.1273	2846.3	.3920	.443	0.3436	1.2640	3013.9	.0847	.707
4100	9.1633-5	320.8	2.6921	27.435	.177	1.3952	-1.0143	1.1523	1.1210	2886.1	.4878	.418	0.3444	1.2662	3067.3	.0869	.701
4200	8.8503-5	444.5	2.7220	27.144	.179	1.4917	-1.0184	1.3262	1.1165	2930.8	.5999	.396	0.3451	1.2690	3124.6	.0892	.693
4300	8.5344-5	586.6	2.7554	26.798	.182	1.5998	-1.0232	1.5170	1.1133	2980.3	.7265	.379	0.3458	1.2727	3186.5	.0918	.684
4400	8.2152-5	748.4	2.7926	26.396	.184	1.7184	-1.0287	1.7231	1.1113	3034.9	.8635	.367	0.3466	1.2772	3253.5	.0948	.672
4500	7.8930-5	931.5	2.8337	25.937	.186	1.8442	-1.0349	1.9399	1.1103	3094.9	*****	.360	0.3475	1.2826	3326.3	.0981	.658
4600	7.5689-5	1136.4	2.8787	25.425	.188	1.9705	-1.0413	2.1571	1.1102	3160.2	*****	.358	0.3484	1.2890	3405.2	.1019	.642
4700	7.2456-5	1362.4	2.9273	24.868	.190	2.0868	-1.0477	2.3575	1.1109	3231.0	*****	.361	0.3494	1.2963	3490.2	.1061	.626
4800	6.9271-5	1606.6	2.9787	24.280	.192	2.1789	-1.0532	2.5170	1.1125	3306.7	*****	.369	0.3504	1.3044	3580.7	.1107	.608
4900	6.6186-5	1863.5	3.0317	23.682	.194	2.2320	-1.0571	2.6088	1.1148	3386.5	*****	.381	0.3516	1.3132	3675.5	.1155	.591
5000	6.3261-5	2125.4	3.0846	23.098	.196	2.2346	-1.0587	2.6113	1.1182	3469.1	*****	.397	0.3528	1.3223	3772.5	.1203	.576
5100	6.0547-5	2382.6	3.1355	22.549	.199	2.1839	-1.0577	2.5170	1.1225	3552.9	*****	.414	0.3539	1.3313	3869.2	.1251	.562
5200	5.8084-5	2625.9	3.1828	22.056	.201	2.0870	-1.0543	2.3371	1.1280	3636.3	*****	.433	0.3550	1.3398	3963.0	.1295	.550
5300	5.5886-5	2848.0	3.2251	21.629	.203	1.9592	-1.0491	2.0987	1.1349	3718.4	.9459	.451	0.3560	1.3475	4051.8	.1337	.541
5400	5.3947-5	3044.8	3.2619	21.273	.206	1.8179	-1.0428	1.8347	1.1433	3798.7	.8064	.468	0.3569	1.3542	4134.2	.1374	.534

TABLE 30.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.048785; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 1.46959 LB/IN² (0.10 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4294-3	-786.4	2.1505	28.385	.094	1.0000	-1.0000	0.2954	1.3104	1916.4	.0375	.741	0.2953	1.3104	1916.4	.0375	.741
1700	2.2865-3	-756.7	2.1685	28.385	.098	1.0000	-1.0000	0.2991	1.3054	1971.6	.0397	.740	0.2990	1.3055	1971.6	.0397	.740
1800	2.1595-3	-726.6	2.1857	28.385	.102	1.0000	-1.0000	0.3026	1.3008	2025.1	.0419	.739	0.3024	1.3009	2025.3	.0419	.739
1900	2.0458-3	-696.2	2.2022	28.385	.106	1.0000	-1.0000	0.3058	1.2966	2077.3	.0440	.738	0.3056	1.2969	2077.5	.0440	.737
2000	1.9436-3	-665.4	2.2179	28.385	.110	1.0000	-1.0000	0.3090	1.2927	2128.1	.0461	.737	0.3086	1.2931	2128.4	.0461	.737
2100	1.8510-3	-634.4	2.2331	28.385	.114	1.0000	-1.0000	0.3120	1.2891	2177.5	.0482	.736	0.3115	1.2897	2178.0	.0482	.736
2200	1.7669-3	-603.0	2.2477	28.385	.117	1.0000	-1.0000	0.3150	1.2856	2225.8	.0503	.735	0.3142	1.2864	2226.5	.0502	.735
2300	1.6900-3	-571.4	2.2617	28.385	.121	1.0000	-1.0000	0.3179	1.2823	2272.9	.0524	.734	0.3168	1.2835	2273.9	.0522	.734
2400	1.6196-3	-539.5	2.2753	28.385	.125	1.0001	-1.0000	0.3207	1.2791	2318.8	.0545	.734	0.3192	1.2807	2320.3	.0542	.734
2500	1.5548-3	-507.2	2.2885	28.385	.128	1.0002	-1.0000	0.3236	1.2759	2363.8	.0566	.733	0.3215	1.2781	2365.8	.0562	.733
2600	1.4950-3	-474.7	2.3012	28.385	.132	1.0003	-1.0000	0.3266	1.2728	2407.6	.0587	.732	0.3237	1.2757	2410.4	.0581	.733
2700	1.4396-3	-441.9	2.3136	28.384	.135	1.0005	-1.0000	0.3298	1.2696	2450.4	.0609	.731	0.3258	1.2735	2454.2	.0601	.732
2800	1.3882-3	-408.8	2.3257	28.383	.138	1.0009	-1.0000	0.3333	1.2663	2492.1	.0633	.729	0.3278	1.2714	2497.2	.0620	.731
2900	1.3402-3	-375.2	2.3374	28.382	.142	1.0015	-1.0000	0.3373	1.2626	2532.7	.0658	.727	0.3296	1.2695	2539.5	.0639	.730
3000	1.2955-3	-341.3	2.3489	28.380	.145	1.0024	-1.0001	0.3421	1.2586	2571.9	.0685	.723	0.3313	1.2677	2581.2	.0658	.729
3100	1.2536-3	-306.8	2.3603	28.378	.148	1.0038	-1.0001	0.3481	1.2538	2609.6	.0717	.719	0.3330	1.2661	2622.3	.0677	.728
3200	1.2142-3	-271.6	2.3714	28.373	.151	1.0060	-1.0002	0.3559	1.2483	2645.7	.0755	.713	0.3346	1.2646	2662.9	.0696	.727
3300	1.1771-3	-235.5	2.3825	28.367	.154	1.0093	-1.0002	0.3661	1.2416	2679.8	.0802	.705	0.3360	1.2632	2703.0	.0714	.726
3400	1.1421-3	-198.3	2.3937	28.357	.158	1.0143	-1.0004	0.3797	1.2336	2711.8	.0862	.694	0.3374	1.2619	2742.8	.0733	.725
3500	1.1089-3	-159.4	2.4049	28.342	.161	1.0215	-1.0006	0.3979	1.2242	2741.6	.0941	.679	0.3387	1.2608	2782.3	.0751	.724
3600	1.0773-3	-118.5	2.4164	28.321	.164	1.0316	-1.0009	0.4220	1.2134	2769.3	.1045	.661	0.3399	1.2599	2821.8	.0769	.723
3700	1.0471-3	-74.8	2.4284	28.292	.167	1.0457	-1.0014	0.4535	1.2017	2795.3	.1182	.639	0.3410	1.2592	2861.4	.0787	.722
3800	1.0181-3	-27.5	2.4410	28.251	.169	1.0645	-1.0021	0.4937	1.1894	2820.4	.1362	.614	0.3421	1.2587	2901.3	.0805	.720
3900	9.9001-4	24.3	2.4545	28.195	.172	1.0889	-1.0029	0.5439	1.1773	2845.5	.1594	.588	0.3430	1.2584	2941.8	.0822	.719
4000	9.6273-4	81.6	2.4690	28.121	.175	1.1196	-1.0041	0.6044	1.1660	2871.7	.1887	.561	0.3439	1.2584	2983.3	.0840	.717
4100	9.3606-4	145.5	2.4848	28.025	.178	1.1569	-1.0055	0.6754	1.1560	2899.7	.2249	.534	0.3447	1.2587	3025.9	.0858	.714
4200	9.0986-4	217.0	2.5020	27.905	.181	1.2008	-1.0073	0.7560	1.1474	2930.3	.2688	.508	0.3454	1.2595	3070.0	.0876	.711
4300	8.8400-4	297.0	2.5208	27.758	.183	1.2510	-1.0093	0.8453	1.1404	2963.7	.3208	.483	0.3461	1.2606	3115.9	.0895	.708
4400	8.5839-4	386.3	2.5413	27.581	.186	1.3074	-1.0118	0.9424	1.1348	3000.2	.3813	.459	0.3467	1.2621	3164.0	.0915	.703
4500	8.3297-4	485.7	2.5637	27.372	.188	1.3697	-1.0146	1.0463	1.1306	3039.9	.4507	.437	0.3473	1.2641	3214.4	.0935	.698
4600	8.0767-4	595.8	2.5879	27.130	.190	1.4378	-1.0178	1.1568	1.1274	3082.8	.5287	.417	0.3479	1.2665	3267.5	.0958	.692
4700	7.8247-4	717.3	2.6140	26.855	.193	1.5113	-1.0215	1.2734	1.1251	3128.9	.6146	.399	0.3484	1.2694	3323.6	.0982	.684
4800	7.5734-4	850.7	2.6421	26.546	.195	1.5901	-1.0255	1.3958	1.1236	3178.3	.7066	.385	0.3490	1.2729	3382.8	.1008	.675
4900	7.3230-4	996.6	2.6721	26.203	.197	1.6730	-1.0299	1.5227	1.1228	3231.0	.8019	.374	0.3495	1.2769	3445.6	.1036	.665
5000	7.0735-4	1155.3	2.7042	25.827	.199	1.7581	-1.0347	1.6514	1.1226	3287.2	.8963	.367	0.3501	1.2814	3512.0	.1067	.654
5100	6.8258-4	1326.8	2.7381	25.421	.202	1.8421	-1.0396	1.7775	1.1230	3346.9	.9846	.364	0.3508	1.2865	3582.3	.1102	.642
5200	6.5809-4	1510.5	2.7738	24.989	.204	1.9206	-1.0445	1.8941	1.1239	3410.1	****	.364	0.3515	1.2921	3656.3	.1138	.629
5300	6.3403-4	1705.0	2.8109	24.539	.206	1.9878	-1.0490	1.9929	1.1254	3476.5	****	.367	0.3523	1.2982	3733.9	.1178	.616
5400	6.1060-4	1908.2	2.8488	24.078	.208	2.0378	-1.0528	2.0645	1.1275	3545.9	****	.373	0.3531	1.3048	3814.4	.1219	.602

TABLE 30.3B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.048785; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 14.6959 LB/IN2 (1.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS (GAM)S FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4294-2	-786.4	1.9894	28.385	.094	1.0000	-1.0000	0.2954	1.3104	1916.4	.0375	.741	0.2953	1.3104	1916.4	.0375	.741
1700	2.2865-2	-756.7	2.0074	28.385	.098	1.0000	-1.0000	0.2991	1.3054	1971.6	.0397	.740	0.2990	1.3055	1971.6	.0397	.740
1800	2.1595-2	-726.6	2.0246	28.385	.102	1.0000	-1.0000	0.3026	1.3008	2025.1	.0419	.739	0.3024	1.3009	2025.3	.0419	.739
1900	2.0458-2	-696.2	2.0411	28.385	.106	1.0000	-1.0000	0.3058	1.2966	2077.3	.0440	.738	0.3056	1.2969	2077.5	.0440	.737
2000	1.9436-2	-665.4	2.0569	28.385	.110	1.0000	-1.0000	0.3090	1.2927	2128.1	.0461	.737	0.3086	1.2931	2128.4	.0461	.737
2100	1.8510-2	-634.4	2.0720	28.385	.114	1.0000	-1.0000	0.3120	1.2891	2177.6	.0482	.736	0.3115	1.2897	2178.0	.0482	.736
2200	1.7669-2	-603.0	2.0866	28.385	.117	1.0000	-1.0000	0.3149	1.2856	2225.8	.0503	.735	0.3142	1.2864	2226.5	.0502	.735
2300	1.6900-2	-571.4	2.1006	28.385	.121	1.0000	-1.0000	0.3178	1.2824	2272.9	.0524	.734	0.3168	1.2835	2273.9	.0522	.734
2400	1.6196-2	-539.5	2.1142	28.385	.125	1.0000	-1.0000	0.3205	1.2792	2319.0	.0544	.734	0.3192	1.2807	2320.3	.0542	.734
2500	1.5548-2	-507.3	2.1274	28.385	.128	1.0001	-1.0000	0.3233	1.2762	2364.0	.0565	.733	0.3215	1.2781	2365.8	.0562	.733
2600	1.4950-2	-474.8	2.1401	28.385	.132	1.0002	-1.0000	0.3261	1.2733	2408.1	.0586	.732	0.3237	1.2757	2410.4	.0581	.733
2700	1.4396-2	-442.1	2.1525	28.385	.135	1.0003	-1.0000	0.3289	1.2704	2451.1	.0607	.731	0.3258	1.2735	2454.1	.0601	.732
2800	1.3882-2	-409.0	2.1645	28.384	.138	1.0004	-1.0000	0.3318	1.2675	2493.3	.0629	.730	0.3278	1.2714	2497.2	.0620	.731
2900	1.3403-2	-375.7	2.1762	28.384	.142	1.0007	-1.0000	0.3349	1.2645	2534.5	.0651	.729	0.3296	1.2695	2539.5	.0639	.730
3000	1.2956-2	-342.1	2.1876	28.383	.145	1.0011	-1.0000	0.3383	1.2614	2574.7	.0674	.727	0.3314	1.2677	2581.1	.0658	.729
3100	1.2538-2	-308.1	2.1987	28.382	.148	1.0016	-1.0000	0.3420	1.2582	2614.0	.0699	.725	0.3330	1.2660	2622.1	.0677	.728
3200	1.2145-2	-273.6	2.2097	28.380	.151	1.0025	-1.0001	0.3464	1.2546	2652.1	.0726	.722	0.3346	1.2645	2662.5	.0696	.727
3300	1.1776-2	-238.7	2.2204	28.377	.154	1.0037	-1.0001	0.3516	1.2507	2689.1	.0755	.719	0.3360	1.2630	2702.4	.0714	.727
3400	1.1428-2	-203.3	2.2310	28.373	.158	1.0055	-1.0002	0.3579	1.2462	2724.9	.0789	.714	0.3374	1.2617	2741.8	.0733	.726
3500	1.1099-2	-167.1	2.2415	28.368	.161	1.0081	-1.0002	0.3658	1.2411	2759.3	.0829	.709	0.3387	1.2605	2780.7	.0751	.725
3600	1.0788-2	-130.1	2.2519	28.360	.164	1.0117	-1.0003	0.3756	1.2353	2792.2	.0877	.701	0.3399	1.2594	2819.4	.0769	.724
3700	1.0492-2	-91.9	2.2624	28.349	.167	1.0167	-1.0005	0.3881	1.2286	2823.6	.0934	.692	0.3411	1.2585	2857.7	.0787	.723
3800	1.0211-2	-52.3	2.2729	28.334	.170	1.0234	-1.0007	0.4038	1.2211	2853.5	.1006	.681	0.3422	1.2576	2895.8	.0804	.722
3900	9.9419-3	-11.0	2.2836	28.314	.173	1.0324	-1.0010	0.4235	1.2128	2882.0	.1095	.667	0.3432	1.2569	2933.9	.0822	.721
4000	9.6840-3	32.5	2.2947	28.286	.175	1.0440	-1.0015	0.4477	1.2040	2909.5	.1206	.651	0.3441	1.2563	2972.0	.0839	.720
4100	9.4359-3	78.7	2.3061	28.251	.178	1.0587	-1.0020	0.4772	1.1949	2936.3	.1342	.634	0.3450	1.2559	3010.4	.0856	.718
4200	9.1963-3	128.1	2.3180	28.205	.181	1.0770	-1.0027	0.5123	1.1858	2963.1	.1509	.614	0.3458	1.2557	3049.1	.0873	.717
4300	8.9639-3	181.3	2.3305	28.147	.184	1.0990	-1.0036	0.5530	1.1772	2990.3	.1710	.594	0.3465	1.2557	3088.3	.0891	.715
4400	8.7377-3	238.9	2.3437	28.075	.186	1.1249	-1.0046	0.5992	1.1692	3018.5	.1948	.574	0.3472	1.2559	3128.3	.0908	.713
4500	8.5168-3	301.3	2.3577	27.987	.189	1.1545	-1.0059	0.6502	1.1622	3048.1	.2225	.553	0.3478	1.2563	3169.1	.0925	.711
4600	8.3005-3	369.1	2.3726	27.882	.192	1.1876	-1.0074	0.7055	1.1561	3079.5	.2543	.532	0.3484	1.2570	3211.1	.0943	.708
4700	8.0881-3	442.6	2.3884	27.759	.194	1.2238	-1.0090	0.7641	1.1510	3112.8	.2903	.511	0.3489	1.2580	3254.2	.0961	.705
4800	7.8791-3	522.0	2.4052	27.617	.197	1.2629	-1.0109	0.8253	1.1469	3148.1	.3307	.491	0.3493	1.2592	3298.7	.0980	.701
4900	7.6734-3	607.7	2.4228	27.457	.199	1.3046	-1.0130	0.8886	1.1436	3185.5	.3755	.471	0.3498	1.2607	3344.6	.0999	.697
5000	7.4705-3	699.8	2.4414	27.276	.201	1.3488	-1.0152	0.9536	1.1411	3225.0	.4245	.453	0.3502	1.2625	3392.1	.1018	.693
5100	7.2703-3	798.5	2.4610	27.076	.204	1.3953	-1.0177	1.0201	1.1393	3266.4	.4778	.435	0.3506	1.2646	3441.3	.1039	.688
5200	7.0726-3	903.9	2.4814	26.856	.206	1.4440	-1.0205	1.0881	1.1380	3309.9	.5347	.419	0.3510	1.2669	3492.3	.1061	.682
5300	6.8774-3	1016.1	2.5028	26.617	.208	1.4948	-1.0234	1.1574	1.1372	3355.3	.5947	.406	0.3514	1.2696	3545.3	.1084	.675
5400	6.6847-3	1135.4	2.5251	26.360	.211	1.5475	-1.0266	1.2277	1.1368	3402.8	.6567	.394	0.3518	1.2725	3600.2	.1109	.668

TABLE 30.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.048785; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 146.959 LB/IN² (10.00 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4294-1	-786.4	1.8283	28.385	.094	1.0000	-1.0000	0.2954	1.3104	1916.4	.0375	.741	0.2953	1.3104	1916.4	.0375	.741
1700	2.2865-1	-756.7	1.8464	28.385	.098	1.0000	-1.0000	0.2991	1.3054	1971.6	.0397	.740	0.2990	1.3055	1971.6	.0397	.740
1800	2.1595-1	-726.6	1.8635	28.385	.102	1.0000	-1.0000	0.3026	1.3008	2025.1	.0419	.739	0.3024	1.3009	2025.3	.0419	.739
1900	2.0458-1	-696.2	1.8800	28.385	.106	1.0000	-1.0000	0.3058	1.2966	2077.3	.0440	.738	0.3056	1.2969	2077.5	.0440	.737
2000	1.9436-1	-665.4	1.8958	28.385	.110	1.0000	-1.0000	0.3090	1.2927	2128.1	.0461	.737	0.3086	1.2931	2128.4	.0461	.737
2100	1.8510-1	-634.4	1.9109	28.385	.114	1.0000	-1.0000	0.3120	1.2891	2177.6	.0482	.736	0.3115	1.2897	2178.0	.0482	.736
2200	1.7669-1	-603.0	1.9255	28.385	.117	1.0000	-1.0000	0.3149	1.2857	2225.8	.0503	.735	0.3142	1.2864	2226.5	.0502	.735
2300	1.6900-1	-571.4	1.9395	28.385	.121	1.0000	-1.0000	0.3177	1.2824	2273.0	.0524	.735	0.3168	1.2835	2273.9	.0522	.734
2400	1.6196-1	-539.5	1.9531	28.385	.125	1.0000	-1.0000	0.3205	1.2793	2319.1	.0544	.734	0.3192	1.2807	2320.3	.0542	.734
2500	1.5548-1	-507.3	1.9663	28.385	.128	1.0000	-1.0000	0.3232	1.2763	2364.1	.0565	.733	0.3215	1.2781	2365.8	.0562	.733
2600	1.4950-1	-474.9	1.9790	28.385	.132	1.0001	-1.0000	0.3258	1.2735	2408.3	.0585	.732	0.3237	1.2757	2410.4	.0581	.733
2700	1.4397-1	-442.2	1.9913	28.385	.135	1.0001	-1.0000	0.3285	1.2707	2451.5	.0606	.732	0.3258	1.2735	2454.1	.0601	.732
2800	1.3882-1	-409.2	2.0033	28.385	.138	1.0002	-1.0000	0.3311	1.2680	2493.8	.0627	.731	0.3278	1.2714	2497.1	.0620	.731
2900	1.3404-1	-375.9	2.0150	28.384	.142	1.0003	-1.0000	0.3338	1.2654	2535.3	.0648	.730	0.3296	1.2695	2539.4	.0639	.730
3000	1.2957-1	-342.4	2.0264	28.384	.145	1.0005	-1.0000	0.3366	1.2627	2576.0	.0670	.728	0.3314	1.2677	2581.0	.0658	.729
3100	1.2538-1	-308.6	2.0374	28.383	.148	1.0008	-1.0000	0.3395	1.2600	2615.8	.0692	.727	0.3330	1.2660	2622.0	.0677	.728
3200	1.2146-1	-274.5	2.0483	28.383	.151	1.0011	-1.0000	0.3426	1.2573	2654.8	.0715	.726	0.3346	1.2644	2662.3	.0696	.727
3300	1.1778-1	-240.1	2.0589	28.381	.154	1.0016	-1.0000	0.3460	1.2545	2693.0	.0738	.724	0.3360	1.2630	2702.1	.0714	.727
3400	1.1431-1	-205.3	2.0692	28.380	.158	1.0023	-1.0001	0.3497	1.2515	2730.3	.0764	.722	0.3374	1.2616	2741.4	.0733	.726
3500	1.1103-1	-170.1	2.0794	28.378	.161	1.0033	-1.0001	0.3540	1.2483	2766.8	.0791	.719	0.3387	1.2604	2780.1	.0751	.725
3600	1.0793-1	-134.5	2.0895	28.374	.164	1.0047	-1.0001	0.3589	1.2448	2802.3	.0821	.716	0.3400	1.2592	2818.4	.0769	.724
3700	1.0500-1	-98.3	2.0994	28.370	.167	1.0065	-1.0002	0.3647	1.2411	2836.8	.0854	.712	0.3411	1.2582	2856.3	.0786	.723
3800	1.0222-1	-61.5	2.1092	28.364	.170	1.0089	-1.0003	0.3716	1.2369	2870.3	.0891	.708	0.3422	1.2572	2893.9	.0804	.722
3900	9.9569-2	-23.9	2.1190	28.357	.173	1.0122	-1.0004	0.3799	1.2323	2902.8	.0934	.702	0.3432	1.2563	2931.1	.0821	.721
4000	9.7045-2	14.5	2.1287	28.346	.176	1.0164	-1.0005	0.3898	1.2272	2934.3	.0984	.695	0.3442	1.2556	2968.0	.0839	.720
4100	9.4634-2	54.1	2.1385	28.333	.178	1.0218	-1.0007	0.4016	1.2217	2964.8	.1043	.687	0.3451	1.2549	3004.8	.0856	.719
4200	9.2325-2	94.9	2.1483	28.316	.181	1.0286	-1.0010	0.4158	1.2158	2994.3	.1112	.678	0.3459	1.2543	3041.4	.0873	.718
4300	9.0109-2	137.3	2.1583	28.294	.184	1.0371	-1.0013	0.4326	1.2095	3023.1	.1193	.667	0.3467	1.2538	3078.0	.0890	.717
4400	8.7975-2	181.5	2.1684	28.267	.187	1.0475	-1.0017	0.4522	1.2030	3051.3	.1289	.655	0.3475	1.2534	3114.6	.0906	.716
4500	8.5917-2	227.9	2.1789	28.233	.190	1.0599	-1.0022	0.4748	1.1965	3079.2	.1401	.642	0.3481	1.2532	3151.4	.0923	.715
4600	8.3926-2	276.6	2.1896	28.191	.192	1.0746	-1.0029	0.5003	1.1901	3107.2	.1531	.628	0.3488	1.2531	3188.4	.0940	.713
4700	8.1994-2	328.0	2.2006	28.141	.195	1.0914	-1.0036	0.5288	1.1839	3135.5	.1680	.613	0.3493	1.2531	3225.8	.0957	.711
4800	8.0116-2	382.4	2.2121	28.082	.197	1.1104	-1.0044	0.5599	1.1782	3164.4	.1849	.598	0.3499	1.2533	3263.7	.0974	.710
4900	7.8286-2	440.1	2.2240	28.012	.200	1.1314	-1.0054	0.5932	1.1731	3194.2	.2037	.583	0.3504	1.2537	3302.0	.0991	.708
5000	7.6499-2	501.1	2.2363	27.931	.203	1.1542	-1.0065	0.6283	1.1686	3225.0	.2246	.567	0.3508	1.2542	3341.1	.1007	.705
5100	7.4753-2	565.8	2.2491	27.839	.205	1.1786	-1.0077	0.6645	1.1647	3257.0	.2474	.551	0.3512	1.2549	3380.8	.1024	.703
5200	7.3043-2	634.1	2.2624	27.736	.208	1.2042	-1.0090	0.7016	1.1614	3290.3	.2723	.535	0.3516	1.2557	3421.3	.1042	.701
5300	7.1369-2	706.1	2.2761	27.622	.210	1.2310	-1.0105	0.7389	1.1587	3324.8	.2991	.519	0.3520	1.2567	3462.5	.1059	.698
5400	6.9728-2	781.9	2.2902	27.496	.212	1.2586	-1.0120	0.7764	1.1566	3360.6	.3279	.503	0.3523	1.2579	3504.7	.1077	.695

TABLE 30.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.048785; EQUIV. RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761; P = 734.797 LB/IN² (50.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2147 0	-786.4	1.7157	28.385	.094	1.0000	-1.0000	0.2954	1.3104	1916.4	.0375	.741	0.2953	1.3104	1916.4	.0375	.741
1700	1.1433 0	-756.7	1.7338	28.385	.098	1.0000	-1.0000	0.2991	1.3054	1971.6	.0397	.740	0.2990	1.3055	1971.6	.0397	.740
1800	1.0798 0	-726.6	1.7509	28.385	.102	1.0000	-1.0000	0.3026	1.3008	2025.1	.0419	.739	0.3024	1.3009	2025.3	.0419	.739
1900	1.0229 0	-696.2	1.7674	28.385	.106	1.0000	-1.0000	0.3058	1.2966	2077.3	.0440	.738	0.3056	1.2969	2077.5	.0440	.737
2000	9.7178-1	-665.4	1.7832	28.385	.110	1.0000	-1.0000	0.3089	1.2927	2128.1	.0461	.737	0.3086	1.2931	2128.4	.0461	.737
2100	9.2551-1	-634.4	1.7983	28.385	.114	1.0000	-1.0000	0.3120	1.2891	2177.6	.0482	.736	0.3115	1.2897	2178.0	.0482	.736
2200	8.8344-1	-603.0	1.8129	28.385	.117	1.0000	-1.0000	0.3149	1.2857	2225.8	.0503	.735	0.3142	1.2864	2226.5	.0502	.735
2300	8.4503-1	-571.4	1.8269	28.385	.121	1.0000	-1.0000	0.3177	1.2824	2273.0	.0524	.735	0.3168	1.2835	2273.9	.0522	.734
2400	8.0982-1	-539.5	1.8405	28.385	.125	1.0000	-1.0000	0.3204	1.2793	2319.1	.0544	.734	0.3192	1.2807	2320.3	.0542	.734
2500	7.7742-1	-507.3	1.8537	28.385	.128	1.0000	-1.0000	0.3231	1.2764	2364.2	.0565	.733	0.3215	1.2781	2365.8	.0562	.733
2600	7.4752-1	-474.9	1.8664	28.385	.132	1.0000	-1.0000	0.3257	1.2736	2408.3	.0585	.732	0.3237	1.2757	2410.3	.0581	.733
2700	7.1984-1	-442.2	1.8787	28.385	.135	1.0001	-1.0000	0.3283	1.2709	2451.6	.0606	.732	0.3258	1.2735	2454.1	.0601	.732
2800	6.9412-1	-409.2	1.8907	28.385	.138	1.0001	-1.0000	0.3309	1.2682	2494.0	.0626	.731	0.3278	1.2714	2497.1	.0620	.731
2900	6.7019-1	-376.0	1.9024	28.385	.142	1.0002	-1.0000	0.3334	1.2657	2535.6	.0647	.730	0.3296	1.2695	2539.4	.0639	.730
3000	6.4784-1	-342.5	1.9137	28.385	.145	1.0003	-1.0000	0.3360	1.2632	2576.4	.0668	.729	0.3314	1.2677	2581.0	.0658	.729
3100	6.2693-1	-308.8	1.9248	28.384	.148	1.0004	-1.0000	0.3386	1.2607	2616.4	.0689	.728	0.3330	1.2660	2621.9	.0677	.728
3200	6.0733-1	-274.8	1.9356	28.384	.151	1.0007	-1.0000	0.3413	1.2582	2655.7	.0711	.727	0.3346	1.2644	2662.3	.0696	.728
3300	5.8891-1	-240.5	1.9461	28.383	.154	1.0009	-1.0000	0.3441	1.2557	2694.3	.0733	.725	0.3360	1.2630	2702.0	.0714	.727
3400	5.7157-1	-206.0	1.9564	28.382	.158	1.0013	-1.0000	0.3471	1.2532	2732.1	.0756	.724	0.3374	1.2616	2741.2	.0733	.726
3500	5.5522-1	-171.1	1.9665	28.381	.161	1.0019	-1.0001	0.3503	1.2506	2769.2	.0780	.722	0.3387	1.2604	2779.9	.0751	.725
3600	5.3976-1	-135.9	1.9765	28.379	.164	1.0026	-1.0001	0.3539	1.2480	2805.5	.0805	.720	0.3400	1.2592	2818.1	.0769	.724
3700	5.2513-1	-100.3	1.9862	28.377	.167	1.0035	-1.0001	0.3578	1.2451	2841.1	.0831	.718	0.3411	1.2581	2855.9	.0786	.723
3800	5.1125-1	-64.3	1.9958	28.374	.170	1.0048	-1.0001	0.3622	1.2422	2876.0	.0859	.715	0.3422	1.2571	2893.2	.0804	.722
3900	4.9807-1	-27.9	2.0053	28.370	.173	1.0064	-1.0002	0.3672	1.2390	2910.1	.0890	.712	0.3432	1.2562	2930.2	.0821	.721
4000	4.8553-1	9.1	2.0146	28.364	.176	1.0085	-1.0003	0.3730	1.2355	2943.3	.0924	.708	0.3442	1.2553	2966.8	.0839	.721
4100	4.7358-1	46.8	2.0239	28.357	.178	1.0112	-1.0004	0.3797	1.2318	2975.8	.0962	.704	0.3451	1.2546	3003.1	.0856	.720
4200	4.6216-1	85.1	2.0332	28.349	.181	1.0145	-1.0005	0.3875	1.2279	3007.5	.1005	.699	0.3460	1.2539	3039.1	.0873	.719
4300	4.5123-1	124.3	2.0424	28.338	.184	1.0188	-1.0007	0.3965	1.2236	3038.4	.1054	.693	0.3468	1.2533	3074.9	.0890	.718
4400	4.4076-1	164.5	2.0516	28.324	.187	1.0239	-1.0009	0.4071	1.2191	3068.5	.1109	.686	0.3475	1.2527	3110.6	.0906	.717
4500	4.3071-1	205.8	2.0609	28.307	.190	1.0303	-1.0011	0.4193	1.2143	3098.1	.1172	.678	0.3482	1.2523	3146.1	.0923	.716
4600	4.2103-1	248.4	2.0703	28.285	.192	1.0379	-1.0014	0.4332	1.2094	3127.1	.1245	.669	0.3489	1.2519	3181.6	.0940	.714
4700	4.1170-1	292.5	2.0798	28.260	.195	1.0468	-1.0018	0.4490	1.2044	3155.8	.1327	.660	0.3495	1.2516	3217.1	.0956	.713
4800	4.0268-1	338.2	2.0894	28.229	.198	1.0572	-1.0023	0.4667	1.1993	3184.2	.1421	.650	0.3501	1.2515	3252.7	.0973	.711
4900	3.9395-1	385.9	2.0992	28.192	.200	1.0691	-1.0028	0.4863	1.1944	3212.7	.1525	.639	0.3506	1.2514	3288.5	.0989	.710
5000	3.8548-1	435.5	2.1092	28.149	.203	1.0825	-1.0034	0.5076	1.1897	3241.4	.1642	.627	0.3511	1.2514	3324.4	.1006	.709
5100	3.7725-1	487.4	2.1195	28.099	.206	1.0973	-1.0041	0.5304	1.1853	3270.5	.1771	.616	0.3516	1.2516	3360.7	.1022	.707
5200	3.6924-1	541.7	2.1300	28.042	.208	1.1134	-1.0049	0.5545	1.1812	3300.1	.1912	.603	0.3520	1.2518	3397.3	.1038	.705
5300	3.6143-1	598.4	2.1408	27.977	.211	1.1307	-1.0058	0.5795	1.1776	3330.4	.2065	.591	0.3524	1.2522	3434.3	.1055	.704
5400	3.5382-1	657.6	2.1519	27.904	.213	1.1488	-1.0068	0.6051	1.1744	3361.5	.2229	.578	0.3528	1.2527	3471.8	.1071	.702

TABLE 30C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.048785; EQUIV.RATIO = 0.750; CHEM. EQUIV. RATIO = 0.7761;
WET AIR (W/A= 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES				T R			
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLVLT	DLVDLP	CP BTU/ LB R	(GAM)S		VS FT/S	COND BTU/ FT HR R	PRAN
PRESSURE = 0.01 ATM																
360	1.258-3	-1233.0	1.6677	28.385	0.2561	1.145-3	30.098	.0314	1.000	-1.000	0.2345	1.3914	910	.0100	.734	360
400	1.129-3	-1220.8	1.6996	28.385	0.4108	1.029-3	30.058	.0343	1.000	-1.000	0.2355	1.3900	959	.0110	.731	400
440	9.855-4	-1183.3	1.7878	28.385	2.0276	9.207-4	29.584	.0361	1.000	-1.000	0.2411	1.3859	1012	.0118	.740	440
PRESSURE = 0.10 ATM																
360	1.258-2	-1233.1	1.5292	28.385	0.2480	1.145-2	30.100	.0314	1.000	-1.000	0.2345	1.3914	910	.0100	.734	360
400	1.132-2	-1222.9	1.5560	28.385	0.2669	1.030-2	30.096	.0344	1.000	-1.000	0.2351	1.3902	958	.0111	.730	400
440	1.025-2	-1210.2	1.5862	28.385	0.4190	9.352-3	30.048	.0372	1.000	-1.000	0.2362	1.3884	1005	.0121	.727	440
480	9.109-3	-1178.8	1.6538	28.385	1.4485	8.467-3	29.680	.0391	1.000	-1.000	0.2408	1.3848	1055	.0128	.734	480
520	7.475-3	-1082.7	1.8463	28.385	0.2559	7.475-3	28.385	.0390	1.000	-1.000	0.2559	1.3763	1120	.0131	.763	520
PRESSURE = 1.00 ATM																
360	1.258-1	-1233.1	1.3909	28.385	0.2472	1.145-1	30.100	.0314	1.000	-1.000	0.2345	1.3914	910	.0100	.734	360
400	1.132-1	-1223.1	1.4172	28.385	0.2526	1.030-1	30.099	.0344	1.000	-1.000	0.2351	1.3902	958	.0111	.730	400
440	1.029-1	-1212.7	1.4419	28.385	0.2715	9.366-2	30.095	.0373	1.000	-1.000	0.2357	1.3887	1005	.0121	.726	440
480	9.403-2	-1200.4	1.4687	28.385	0.3711	8.575-2	30.058	.0400	1.000	-1.000	0.2368	1.3869	1049	.0131	.724	480
520	8.557-2	-1167.8	1.5342	28.385	0.6740	7.871-2	29.887	.0423	1.000	-1.000	0.2394	1.3842	1094	.0139	.727	520
537	8.177-2	-1154.6	1.5591	28.385	0.9238	7.585-2	29.724	.0430	1.000	-1.000	0.2415	1.3825	1114	.0142	.731	537
560	7.563-2	-1126.6	1.6101	28.385	1.5444	7.169-2	29.315	.0436	1.000	-1.000	0.2464	1.3792	1145	.0145	.740	560
600	6.479-2	-1062.1	1.7220	28.385	0.2578	6.479-2	28.385	.0441	1.000	-1.000	0.2578	1.3724	1201	.0149	.762	600
PRESSURE = 10.00 ATM																
360	1.256 0	-1233.1	1.2527	28.385	0.2471	1.145 0	30.100	.0314	1.000	-1.000	0.2345	1.3914	910	.0100	.734	360
400	1.130 0	-1223.1	1.2789	28.385	0.2512	1.030 0	30.100	.0344	1.000	-1.000	0.2351	1.3902	958	.0111	.730	400
440	1.028 0	-1213.0	1.3031	28.385	0.2568	9.368-1	30.099	.0373	1.000	-1.000	0.2357	1.3887	1005	.0121	.726	440
480	9.420-1	-1202.5	1.3259	28.385	0.2706	8.586-1	30.096	.0401	1.000	-1.000	0.2365	1.3871	1049	.0131	.723	480
520	8.685-1	-1177.1	1.3771	28.385	0.3416	7.921-1	30.079	.0427	1.000	-1.000	0.2374	1.3852	1091	.0140	.722	520
537	8.404-1	-1171.2	1.3882	28.385	0.3644	7.671-1	30.062	.0438	1.000	-1.000	0.2379	1.3843	1108	.0144	.722	537
560	8.028-1	-1162.2	1.4047	28.385	0.4160	7.341-1	30.021	.0452	1.000	-1.000	0.2389	1.3829	1133	.0149	.723	560
600	7.394-1	-1142.5	1.4386	28.385	0.5910	6.816-1	29.862	.0474	1.000	-1.000	0.2415	1.3800	1174	.0157	.728	600
640	6.714-1	-1112.3	1.4872	28.385	0.9642	6.309-1	29.485	.0490	1.000	-1.000	0.2465	1.3759	1219	.0164	.737	640
680	5.892-1	-1059.9	1.5663	28.385	1.7557	5.781-1	28.706	.0497	1.000	-1.000	0.2564	1.3696	1270	.0169	.753	680
PRESSURE = 50.00 ATM																
360	6.230 0	-1233.1	1.1560	28.385	0.2471	5.725 0	30.100	.0314	1.000	-1.000	0.2345	1.3914	910	.0100	.734	360
400	5.612 0	-1223.1	1.1823	28.385	0.2511	5.152 0	30.100	.0344	1.000	-1.000	0.2351	1.3902	958	.0111	.730	400
440	5.106 0	-1213.0	1.2064	28.385	0.2555	4.684 0	30.100	.0373	1.000	-1.000	0.2357	1.3887	1005	.0121	.726	440
480	4.684 0	-1202.7	1.2289	28.385	0.2617	4.294 0	30.099	.0401	1.000	-1.000	0.2364	1.3871	1049	.0131	.723	480
520	4.327 0	-1177.9	1.2789	28.385	0.3131	3.963 0	30.096	.0428	1.000	-1.000	0.2373	1.3853	1091	.0141	.722	520
537	4.192 0	-1172.6	1.2888	28.385	0.3177	3.839 0	30.092	.0439	1.000	-1.000	0.2376	1.3845	1108	.0144	.722	537
560	4.016 0	-1165.1	1.3025	28.385	0.3281	3.678 0	30.084	.0453	1.000	-1.000	0.2382	1.3833	1131	.0150	.722	560
600	3.740 0	-1151.4	1.3262	28.385	0.3623	3.430 0	30.052	.0478	1.000	-1.000	0.2395	1.3810	1171	.0158	.723	600
640	3.486 0	-1135.7	1.3515	28.385	0.4291	3.207 0	29.977	.0501	1.000	-1.000	0.2413	1.3784	1210	.0166	.726	640
680	3.240 0	-1116.4	1.3807	28.385	0.5466	3.003 0	29.821	.0521	1.000	-1.000	0.2440	1.3753	1249	.0174	.730	680
720	2.988 0	-1090.9	1.4170	28.385	0.7408	2.808 0	29.532	.0538	1.000	-1.000	0.2483	1.3714	1289	.0182	.735	720
760	2.714 0	-1055.5	1.4648	28.385	1.0553	2.617 0	29.042	.0551	1.000	-1.000	0.2550	1.3665	1333	.0189	.745	760

TABLE 31A .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.065046; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.3614;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .12289; H2O= .17179; N2= .69696; O2= .00000; AR= .00836

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=50.)								
R	LB/FT3	LB/FT3	BTU/LB	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	BTU/LB R	FT/S	LB/FT HR	BTU/FT HR R	R		
360	1.0789-1	5.3943 0	-1408.2	1.9086	1.7473	1.5861	1.4249	1.3122	0.2552	1.3780	932.6	.0265	.0085	.7988	360
380	1.0221-1	5.1103 0	-1403.1	1.9224	1.7612	1.5999	1.4387	1.3260	0.2556	1.3772	957.8	.0280	.0090	.7930	380
400	9.7097-2	4.8548 0	-1398.0	1.9355	1.7743	1.6130	1.4518	1.3391	0.2561	1.3764	982.4	.0295	.0096	.7881	400
420	9.2473-2	4.6236 0	-1392.8	1.9480	1.7868	1.6256	1.4643	1.3516	0.2565	1.3755	1006.4	.0309	.0101	.7839	420
440	8.8270-2	4.4135 0	-1387.7	1.9599	1.7987	1.6375	1.4763	1.3636	0.2570	1.3746	1029.7	.0323	.0106	.7804	440
460	8.4432-2	4.2216 0	-1382.6	1.9714	1.8102	1.6489	1.4877	1.3750	0.2574	1.3736	1052.5	.0337	.0112	.7775	460
480	8.0914-2	4.0457 0	-1377.4	1.9823	1.8211	1.6599	1.4987	1.3860	0.2579	1.3726	1074.7	.0351	.0117	.7752	480
500	7.7677-2	3.8839 0	-1372.2	1.9929	1.8317	1.6704	1.5092	1.3965	0.2585	1.3715	1096.5	.0364	.0122	.7734	500
520	7.4690-2	3.7345 0	-1367.1	2.0030	1.8418	1.6806	1.5194	1.4067	0.2590	1.3705	1117.7	.0378	.0127	.7721	520
537	7.2370-2	3.6185 0	-1362.7	2.0112	1.8500	1.6888	1.5275	1.4148	0.2595	1.3696	1135.1	.0389	.0131	.7713	537
540	7.1923-2	3.5962 0	-1361.9	2.0128	1.8516	1.6904	1.5291	1.4165	0.2596	1.3694	1138.6	.0391	.0132	.7712	540
560	6.9355-2	3.4677 0	-1356.7	2.0223	1.8610	1.6998	1.5386	1.4259	0.2602	1.3682	1159.0	.0404	.0136	.7710	560
580	6.6963-2	3.3482 0	-1351.5	2.0314	1.8702	1.7090	1.5477	1.4350	0.2608	1.3671	1179.0	.0417	.0141	.7711	580
600	6.4731-2	3.2366 0	-1346.3	2.0403	1.8790	1.7178	1.5566	1.4439	0.2614	1.3659	1198.6	.0430	.0146	.7713	600
620	6.2643-2	3.1321 0	-1341.0	2.0488	1.8876	1.7264	1.5652	1.4525	0.2620	1.3647	1217.9	.0442	.0150	.7715	620
640	6.0685-2	3.0343 0	-1335.8	2.0572	1.8959	1.7347	1.5735	1.4608	0.2627	1.3635	1236.8	.0455	.0155	.7711	640
660	5.8846-2	2.9423 0	-1330.5	2.0653	1.9040	1.7428	1.5816	1.4689	0.2633	1.3622	1255.4	.0467	.0160	.7701	660
680	5.7116-2	2.8558 0	-1325.2	2.0731	1.9119	1.7507	1.5895	1.4768	0.2640	1.3609	1273.7	.0479	.0165	.7689	680
700	5.5484-2	2.7742 0	-1320.0	2.0808	1.9196	1.7584	1.5971	1.4844	0.2647	1.3597	1291.7	.0491	.0169	.7678	700
720	5.3943-2	2.6971 0	-1314.7	2.0883	1.9270	1.7658	1.6046	1.4919	0.2654	1.3584	1309.4	.0503	.0174	.7666	720
740	5.2485-2	2.6242 0	-1309.3	2.0956	1.9343	1.7731	1.6119	1.4992	0.2661	1.3570	1326.8	.0515	.0179	.7660	740
760	5.1103-2	2.5552 0	-1304.0	2.1027	1.9414	1.7802	1.6190	1.5063	0.2669	1.3557	1344.0	.0526	.0183	.7656	760
780	4.9793-2	2.4897 0	-1298.7	2.1096	1.9484	1.7871	1.6259	1.5132	0.2676	1.3544	1360.9	.0538	.0188	.7653	780
800	4.8548-2	2.4274 0	-1293.3	2.1164	1.9552	1.7939	1.6327	1.5200	0.2684	1.3530	1377.5	.0549	.0192	.7651	800
820	4.7364-2	2.3682 0	-1287.9	2.1230	1.9618	1.8006	1.6393	1.5266	0.2691	1.3517	1393.9	.0560	.0197	.7650	820
840	4.6236-2	2.3118 0	-1282.5	2.1295	1.9683	1.8071	1.6458	1.5331	0.2699	1.3503	1410.1	.0571	.0201	.7650	840
860	4.5161-2	2.2581 0	-1277.1	2.1359	1.9746	1.8134	1.6522	1.5395	0.2707	1.3489	1426.1	.0582	.0206	.7651	860
880	4.4135-2	2.2067 0	-1271.7	2.1421	1.9809	1.8197	1.6584	1.5457	0.2715	1.3476	1441.8	.0592	.0210	.7652	880
900	4.3154-2	2.1577 0	-1266.3	2.1482	1.9870	1.8258	1.6645	1.5518	0.2723	1.3462	1457.4	.0603	.0215	.7653	900
920	4.2216-2	2.1108 0	-1260.8	2.1542	1.9930	1.8318	1.6705	1.5578	0.2731	1.3448	1472.7	.0614	.0219	.7650	920
940	4.1318-2	2.0659 0	-1255.4	2.1601	1.9989	1.8376	1.6764	1.5637	0.2739	1.3434	1487.9	.0624	.0224	.7646	940
960	4.0457-2	2.0228 0	-1249.9	2.1659	2.0046	1.8434	1.6822	1.5695	0.2747	1.3421	1502.9	.0635	.0228	.7642	960
980	3.9631-2	1.9816 0	-1244.4	2.1715	2.0103	1.8491	1.6879	1.5752	0.2756	1.3407	1517.7	.0645	.0233	.7637	980
1000	3.8839-2	1.9419 0	-1238.8	2.1771	2.0159	1.8547	1.6934	1.5807	0.2764	1.3393	1532.3	.0655	.0237	.7632	1000
1020	3.8077-2	1.9039 0	-1233.3	2.1826	2.0214	1.8601	1.6989	1.5862	0.2772	1.3379	1546.7	.0666	.0242	.7627	1020
1040	3.7345-2	1.8672 0	-1227.8	2.1880	2.0268	1.8655	1.7043	1.5916	0.2781	1.3366	1561.0	.0676	.0247	.7622	1040
1060	3.6640-2	1.8320 0	-1222.2	2.1933	2.0321	1.8708	1.7096	1.5969	0.2789	1.3352	1575.2	.0686	.0251	.7617	1060
1080	3.5962-2	1.7981 0	-1216.6	2.1985	2.0373	1.8761	1.7148	1.6021	0.2798	1.3338	1589.1	.0696	.0256	.7611	1080
1100	3.5308-2	1.7654 0	-1211.0	2.2037	2.0424	1.8812	1.7200	1.6073	0.2806	1.3325	1603.0	.0706	.0260	.7605	1100
1120	3.4677-2	1.7339 0	-1205.4	2.2087	2.0475	1.8863	1.7250	1.6123	0.2815	1.3311	1616.7	.0716	.0265	.7599	1120
1140	3.4069-2	1.7034 0	-1199.7	2.2137	2.0525	1.8913	1.7300	1.6173	0.2823	1.3298	1630.2	.0726	.0270	.7592	1140

TABLE 31A CONTINUED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.065046; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.3614;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .12289; H2O= .17179; N2= .69696; O2= .00000; AR= .00836

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
1160	3.3482-2	1.6741 0	-1194.1	2.2186	2.0574	1.8962	1.7349	1.6223	0.2832	1.3285	1643.6	.0735	.0274	.7586	1160
1180	3.2914-2	1.6457 0	-1188.4	2.2235	2.0623	1.9010	1.7398	1.6271	0.2841	1.3271	1656.9	.0745	.0279	.7580	1180
1200	3.2366-2	1.6183 0	-1182.7	2.2283	2.0670	1.9058	1.7446	1.6319	0.2849	1.3258	1670.1	.0754	.0284	.7573	1200
1220	3.1835-2	1.5917 0	-1177.0	2.2330	2.0717	1.9105	1.7493	1.6366	0.2858	1.3245	1683.1	.0764	.0289	.7567	1220
1240	3.1321-2	1.5661 0	-1171.3	2.2376	2.0764	1.9152	1.7539	1.6413	0.2867	1.3232	1696.0	.0773	.0293	.7561	1240
1260	3.0824-2	1.5412 0	-1165.5	2.2422	2.0810	1.9198	1.7585	1.6458	0.2875	1.3219	1708.8	.0783	.0298	.7555	1260
1280	3.0343-2	1.5171 0	-1159.8	2.2468	2.0855	1.9243	1.7631	1.6504	0.2884	1.3207	1721.5	.0792	.0303	.7548	1280
1300	2.9876-2	1.4938 0	-1154.0	2.2512	2.0900	1.9288	1.7676	1.6549	0.2892	1.3194	1734.1	.0801	.0307	.7542	1300
1320	2.9423-2	1.4712 0	-1148.2	2.2557	2.0944	1.9332	1.7720	1.6593	0.2901	1.3182	1746.5	.0811	.0312	.7536	1320
1340	2.8984-2	1.4492 0	-1142.4	2.2600	2.0988	1.9376	1.7763	1.6637	0.2910	1.3169	1758.9	.0820	.0317	.7530	1340
1360	2.8558-2	1.4279 0	-1136.6	2.2643	2.1031	1.9419	1.7807	1.6680	0.2918	1.3157	1771.1	.0829	.0321	.7524	1360
1380	2.8144-2	1.4072 0	-1130.7	2.2686	2.1074	1.9462	1.7849	1.6722	0.2927	1.3145	1783.3	.0838	.0326	.7519	1380
1400	2.7742-2	1.3871 0	-1124.9	2.2728	2.1116	1.9504	1.7891	1.6765	0.2935	1.3133	1795.3	.0847	.0331	.7513	1400
1420	2.7351-2	1.3676 0	-1119.0	2.2770	2.1158	1.9545	1.7933	1.6806	0.2944	1.3121	1807.3	.0856	.0336	.7507	1420
1440	2.6971-2	1.3486 0	-1113.1	2.2811	2.1199	1.9587	1.7974	1.6847	0.2952	1.3110	1819.2	.0865	.0340	.7502	1440
1460	2.6602-2	1.3301 0	-1107.2	2.2852	2.1240	1.9627	1.8015	1.6888	0.2960	1.3098	1831.0	.0874	.0345	.7498	1460
1480	2.6242-2	1.3121 0	-1101.3	2.2892	2.1280	1.9668	1.8055	1.6929	0.2969	1.3087	1842.7	.0882	.0350	.7493	1480
1500	2.5892-2	1.2946 0	-1095.3	2.2932	2.1320	1.9708	1.8095	1.6968	0.2977	1.3075	1854.3	.0891	.0354	.7489	1500
1520	2.5552-2	1.2776 0	-1089.3	2.2972	2.1359	1.9747	1.8135	1.7008	0.2985	1.3064	1865.8	.0900	.0359	.7485	1520
1540	2.5220-2	1.2610 0	-1083.4	2.3011	2.1398	1.9786	1.8174	1.7047	0.2993	1.3053	1877.3	.0908	.0363	.7482	1540
1560	2.4897-2	1.2448 0	-1077.4	2.3049	2.1437	1.9825	1.8213	1.7086	0.3001	1.3043	1888.6	.0917	.0368	.7478	1560
1580	2.4581-2	1.2291 0	-1071.4	2.3088	2.1475	1.9863	1.8251	1.7124	0.3009	1.3032	1899.9	.0925	.0373	.7474	1580
1600	2.4274-2	1.2137 0	-1065.3	2.3126	2.1513	1.9901	1.8289	1.7162	0.3017	1.3022	1911.1	.0934	.0377	.7471	1600
1620	2.3974-2	1.1987 0	-1059.3	2.3163	2.1551	1.9939	1.8326	1.7199	0.3025	1.3011	1922.3	.0942	.0382	.7467	1620
1640	2.3682-2	1.1841 0	-1053.2	2.3200	2.1588	1.9976	1.8364	1.7237	0.3033	1.3001	1933.4	.0951	.0386	.7464	1640
1660	2.3397-2	1.1698 0	-1047.2	2.3237	2.1625	2.0013	1.8400	1.7273	0.3041	1.2991	1944.4	.0959	.0391	.7461	1660
1680	2.3118-2	1.1559 0	-1041.1	2.3274	2.1661	2.0049	1.8437	1.7310	0.3049	1.2982	1955.3	.0967	.0396	.7457	1680
1700	2.2846-2	1.1423 0	-1035.0	2.3310	2.1697	2.0085	1.8473	1.7346	0.3056	1.2972	1966.2	.0976	.0400	.7454	1700
1720	2.2581-2	1.1290 0	-1028.8	2.3346	2.1733	2.0121	1.8509	1.7382	0.3064	1.2962	1977.0	.0984	.0405	.7451	1720
1740	2.2321-2	1.1161 0	-1022.7	2.3381	2.1769	2.0156	1.8544	1.7417	0.3071	1.2953	1987.8	.0992	.0409	.7448	1740
1760	2.2067-2	1.1034 0	-1016.6	2.3416	2.1804	2.0192	1.8579	1.7452	0.3079	1.2944	1998.4	.1000	.0414	.7446	1760
1780	2.1819-2	1.0910 0	-1010.4	2.3451	2.1839	2.0226	1.8614	1.7487	0.3086	1.2935	2009.1	.1008	.0418	.7443	1780
1800	2.1577-2	1.0789 0	-1004.2	2.3485	2.1873	2.0261	1.8649	1.7522	0.3093	1.2926	2019.6	.1016	.0423	.7440	1800
1900	2.0441-2	1.0221 0	-973.1	2.3654	2.2041	2.0429	1.8817	1.7690	0.3127	1.2885	2071.7	.1056	.0445	.7427	1900
2000	1.9419-2	9.7097-1	-941.7	2.3815	2.2203	2.0590	1.8978	1.7851	0.3159	1.2848	2122.4	.1095	.0466	.7416	2000
2100	1.8495-2	9.2473-1	-909.9	2.3970	2.2357	2.0745	1.9133	1.8006	0.3190	1.2813	2171.8	.1133	.0488	.7406	2100
2200	1.7654-2	8.8270-1	-877.9	2.4119	2.2507	2.0894	1.9282	1.8155	0.3219	1.2780	2220.1	.1170	.0509	.7396	2200
2300	1.6886-2	8.4432-1	-845.6	2.4262	2.2650	2.1038	1.9426	1.8299	0.3246	1.2750	2267.4	.1207	.0530	.7387	2300
2400	1.6183-2	8.0914-1	-813.0	2.4401	2.2789	2.1177	1.9564	1.8437	0.3272	1.2722	2313.6	.1243	.0551	.7378	2400
2500	1.5535-2	7.7677-1	-780.1	2.4535	2.2923	2.1311	1.9698	1.8572	0.3297	1.2696	2358.9	.1278	.0572	.7369	2500

TABLE 31A CONCLUDED .- PROPERTIES BASED ON CONSTANT GASEOUS COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A=0.065046; EQUIV. RATIO= 1.000; CHEM. EQUIV. RATIO= 1.0000; MW = 28.3614;
 WET AIR (W/A= 0.03); GASEOUS COMPOSITION: CO2= .12289; H2O= .17179; N2= .69696; O2= .00000; AR= .00836

T	DENSITY		H	ENTROPY					CP	GAM	VS	VIS	COND	PRAN	T
	(P=1.0)	(P=50.)		(P=.01)	(P=.10)	(P=1.0)	(P=10.)	(P=50.)							
R	LB/FT3	LB/FT3	BTU/LB	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	BTU/ LB R	FT/S	LB/ FT HR	BTU/ FT HR R	R		
2600	1.4938-2	7.4690-1	-747.0	2.4665	2.3053	2.1441	1.9828	1.8701	0.3320	1.2672	2403.3	.1313	.0593	.7360	2600
2700	1.4385-2	7.1923-1	-713.7	2.4791	2.3179	2.1566	1.9954	1.8827	0.3343	1.2650	2447.0	.1348	.0613	.7352	2700
2800	1.3871-2	6.9355-1	-680.2	2.4913	2.3300	2.1688	2.0076	1.8949	0.3363	1.2629	2489.8	.1382	.0633	.7342	2800
2900	1.3393-2	6.6963-1	-646.5	2.5031	2.3419	2.1807	2.0194	1.9067	0.3383	1.2610	2531.9	.1416	.0653	.7332	2900
3000	1.2946-2	6.4731-1	-612.5	2.5146	2.3534	2.1922	2.0309	1.9182	0.3402	1.2592	2573.4	.1449	.0673	.7322	3000
3100	1.2529-2	6.2643-1	-578.4	2.5258	2.3646	2.2033	2.0421	1.9294	0.3419	1.2575	2614.2	.1482	.0693	.7312	3100
3200	1.2137-2	6.0685-1	-544.1	2.5367	2.3755	2.2142	2.0530	1.9403	0.3436	1.2559	2654.4	.1514	.0713	.7302	3200
3300	1.1769-2	5.8846-1	-509.7	2.5473	2.3860	2.2248	2.0636	1.9509	0.3452	1.2545	2693.9	.1546	.0732	.7292	3300
3400	1.1423-2	5.7116-1	-475.1	2.5576	2.3964	2.2351	2.0739	1.9612	0.3467	1.2531	2733.0	.1578	.0751	.7281	3400
3500	1.1097-2	5.5484-1	-440.4	2.5677	2.4064	2.2452	2.0840	1.9713	0.3480	1.2518	2771.5	.1609	.0770	.7271	3500
3600	1.0788-2	5.3943-1	-405.5	2.5775	2.4163	2.2550	2.0938	1.9811	0.3494	1.2507	2809.5	.1640	.0789	.7260	3600
3700	1.0497-2	5.2485-1	-370.5	2.5871	2.4259	2.2646	2.1034	1.9907	0.3506	1.2496	2846.9	.1671	.0808	.7251	3700
3800	1.0221-2	5.1103-1	-335.4	2.5964	2.4352	2.2740	2.1128	2.0001	0.3518	1.2485	2884.0	.1701	.0826	.7241	3800
3900	9.9586-3	4.9793-1	-300.2	2.6056	2.4444	2.2831	2.1219	2.0092	0.3529	1.2476	2920.5	.1731	.0845	.7231	3900
4000	9.7097-3	4.8548-1	-264.8	2.6145	2.4533	2.2921	2.1309	2.0182	0.3539	1.2466	2956.7	.1760	.0863	.7220	4000
4100	9.4728-3	4.7364-1	-229.4	2.6233	2.4621	2.3008	2.1396	2.0269	0.3549	1.2458	2992.4	.1790	.0881	.7210	4100
4200	9.2473-3	4.6236-1	-193.8	2.6319	2.4706	2.3094	2.1482	2.0355	0.3558	1.2450	3027.7	.1819	.0899	.7198	4200
4300	9.0322-3	4.5161-1	-158.2	2.6402	2.4790	2.3178	2.1566	2.0439	0.3567	1.2443	3062.6	.1847	.0917	.7187	4300
4400	8.8270-3	4.4135-1	-122.5	2.6485	2.4872	2.3260	2.1648	2.0521	0.3575	1.2436	3097.1	.1876	.0935	.7176	4400
4500	8.6308-3	4.3154-1	-86.7	2.6565	2.4953	2.3340	2.1728	2.0601	0.3583	1.2429	3131.3	.1904	.0952	.7164	4500
4600	8.4432-3	4.2216-1	-50.9	2.6644	2.5032	2.3419	2.1807	2.0680	0.3590	1.2423	3165.1	.1932	.0970	.7150	4600
4700	8.2635-3	4.1318-1	-14.9	2.6721	2.5109	2.3497	2.1884	2.0757	0.3597	1.2417	3198.6	.1960	.0988	.7137	4700
4800	8.0914-3	4.0457-1	21.1	2.6797	2.5185	2.3572	2.1960	2.0833	0.3604	1.2411	3231.7	.1987	.1005	.7124	4800
4900	7.9262-3	3.9631-1	57.2	2.6871	2.5259	2.3647	2.2034	2.0908	0.3610	1.2406	3264.5	.2014	.1022	.7111	4900
5000	7.7677-3	3.8839-1	93.3	2.6944	2.5332	2.3720	2.2107	2.0981	0.3616	1.2401	3297.0	.2041	.1040	.7100	5000
5100	7.6154-3	3.8077-1	129.5	2.7016	2.5404	2.3791	2.2179	2.1052	0.3622	1.2396	3329.1	.2068	.1057	.7088	5100
5200	7.4690-3	3.7345-1	165.7	2.7086	2.5474	2.3862	2.2250	2.1123	0.3628	1.2392	3361.0	.2094	.1073	.7077	5200
5300	7.3280-3	3.6640-1	202.0	2.7155	2.5543	2.3931	2.2319	2.1192	0.3633	1.2387	3392.6	.2120	.1090	.7066	5300
5400	7.1923-3	3.5962-1	238.4	2.7223	2.5611	2.3999	2.2387	2.1260	0.3638	1.2383	3423.9	.2147	.1107	.7056	5400

TABLE 31.1B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.065046; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 0.14696 LB/IN2 (0.01 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS (GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	
1600	2.4274-4	-1065.3	2.3126	28.361	.093	1.0000	-1.0000	0.3017	1.3022	1911.1	.0377	.747	0.3017	1.3022	1911.1	.0377	.747
1700	2.2846-4	-1035.0	2.3310	28.361	.098	1.0000	-1.0000	0.3056	1.2972	1966.2	.0400	.745	0.3056	1.2972	1966.2	.0400	.745
1800	2.1577-4	-1004.2	2.3485	28.361	.102	1.0000	-1.0000	0.3093	1.2926	2019.6	.0423	.744	0.3093	1.2926	2019.6	.0423	.744
1900	2.0441-4	-973.1	2.3654	28.361	.106	1.0000	-1.0000	0.3127	1.2885	2071.7	.0445	.743	0.3127	1.2885	2071.7	.0445	.743
2000	1.9419-4	-941.7	2.3815	28.361	.109	1.0000	-1.0000	0.3161	1.2846	2122.3	.0467	.741	0.3159	1.2848	2122.4	.0466	.742
2100	1.8494-4	-909.9	2.3970	28.361	.113	1.0001	-1.0000	0.3193	1.2809	2171.6	.0489	.740	0.3190	1.2813	2171.9	.0488	.741
2200	1.7654-4	-877.8	2.4119	28.361	.117	1.0002	-1.0000	0.3226	1.2773	2219.5	.0511	.739	0.3219	1.2780	2220.2	.0509	.740
2300	1.6886-4	-845.4	2.4263	28.361	.121	1.0004	-1.0000	0.3261	1.2737	2266.2	.0534	.737	0.3246	1.2750	2267.4	.0530	.739
2400	1.6182-4	-812.6	2.4403	28.360	.124	1.0008	-1.0000	0.3301	1.2698	2311.4	.0558	.736	0.3272	1.2722	2313.7	.0551	.738
2500	1.5534-4	-779.3	2.4539	28.359	.128	1.0015	-1.0000	0.3348	1.2655	2355.1	.0584	.733	0.3297	1.2697	2359.0	.0572	.737
2600	1.4935-4	-745.6	2.4671	28.356	.131	1.0026	-1.0001	0.3406	1.2604	2397.1	.0613	.730	0.3320	1.2673	2403.6	.0593	.736
2700	1.4380-4	-711.1	2.4801	28.353	.135	1.0045	-1.0001	0.3483	1.2544	2437.0	.0647	.726	0.3342	1.2651	2447.4	.0613	.735
2800	1.3864-4	-675.8	2.4929	28.347	.138	1.0073	-1.0002	0.3585	1.2471	2474.8	.0688	.720	0.3363	1.2631	2490.6	.0633	.734
2900	1.3381-4	-639.3	2.5057	28.338	.142	1.0115	-1.0003	0.3721	1.2383	2510.1	.0739	.713	0.3383	1.2613	2533.3	.0653	.733
3000	1.2929-4	-601.2	2.5187	28.324	.145	1.0177	-1.0004	0.3902	1.2279	2543.0	.0804	.703	0.3401	1.2597	2575.6	.0673	.732
3100	1.2503-4	-561.1	2.5318	28.304	.148	1.0263	-1.0007	0.4141	1.2162	2573.5	.0888	.691	0.3419	1.2582	2617.6	.0693	.730
3200	1.2100-4	-518.2	2.5454	28.275	.151	1.0382	-1.0010	0.4451	1.2034	2602.3	.0998	.675	0.3435	1.2570	2659.6	.0713	.729
3300	1.1717-4	-471.8	2.5597	28.235	.154	1.0543	-1.0015	0.4848	1.1901	2629.8	.1141	.656	0.3450	1.2561	2701.7	.0733	.727
3400	1.1350-4	-420.9	2.5749	28.181	.157	1.0753	-1.0022	0.5346	1.1768	2657.0	.1329	.633	0.3464	1.2554	2744.2	.0752	.725
3500	1.0998-4	-364.5	2.5913	28.109	.160	1.1024	-1.0030	0.5961	1.1642	2684.6	.1575	.607	0.3476	1.2551	2787.5	.0772	.723
3600	1.0657-4	-301.2	2.6091	28.015	.163	1.1366	-1.0042	0.6706	1.1526	2713.7	.1894	.579	0.3488	1.2551	2831.7	.0792	.720
3700	1.0324-4	-229.9	2.6286	27.895	.166	1.1790	-1.0057	0.7594	1.1424	2744.8	.2303	.548	0.3499	1.2555	2877.4	.0811	.717
3800	9.9980-5	-148.9	2.6502	27.744	.169	1.2304	-1.0075	0.8636	1.1337	2778.6	.2826	.516	0.3508	1.2563	2925.0	.0831	.713
3900	9.6761-5	-56.6	2.6742	27.557	.172	1.2918	-1.0099	0.9841	1.1265	2815.5	.3484	.485	0.3517	1.2577	2974.9	.0852	.708
4000	9.3564-5	48.5	2.7008	27.330	.174	1.3643	-1.0127	1.1221	1.1208	2855.9	.4300	.455	0.3526	1.2596	3027.6	.0875	.702
4100	9.0373-5	168.4	2.7304	27.057	.177	1.4487	-1.0162	1.2784	1.1164	2900.1	.5293	.427	0.3533	1.2622	3083.7	.0899	.695
4200	8.7173-5	304.9	2.7633	26.736	.179	1.5457	-1.0204	1.4543	1.1131	2948.5	.6472	.402	0.3541	1.2654	3143.9	.0925	.685
4300	8.3954-5	459.9	2.7997	26.362	.181	1.6554	-1.0254	1.6501	1.1108	3001.4	.7825	.382	0.3549	1.2695	3208.7	.0954	.674
4400	8.0708-5	635.5	2.8401	25.932	.183	1.7766	-1.0311	1.8643	1.1093	3059.2	.9314	.367	0.3557	1.2744	3278.9	.0987	.661
4500	7.7438-5	833.3	2.8845	25.447	.185	1.9058	-1.0374	2.0918	1.1087	3122.3	*****	.357	0.3566	1.2802	3355.0	.1024	.645
4600	7.4155-5	1054.0	2.9330	24.909	.187	2.0359	-1.0442	2.3212	1.1089	3190.8	*****	.352	0.3575	1.2870	3437.5	.1067	.628
4700	7.0885-5	1296.9	2.9853	24.329	.189	2.1555	-1.0507	2.5337	1.1098	3265.0	*****	.353	0.3586	1.2947	3526.4	.1114	.610
4800	6.7670-5	1559.2	3.0405	23.719	.191	2.2496	-1.0565	2.7027	1.1115	3344.2	*****	.358	0.3598	1.3033	3621.2	.1165	.591
4900	6.4562-5	1835.0	3.0973	23.101	.193	2.3023	-1.0605	2.7986	1.1140	3427.6	*****	.367	0.3610	1.3125	3720.5	.1218	.573
5000	6.1623-5	2115.7	3.1540	22.500	.195	2.3012	-1.0620	2.7966	1.1174	3513.8	*****	.379	0.3623	1.3221	3822.1	.1272	.556
5100	5.8906-5	2390.8	3.2085	21.938	.198	2.2427	-1.0608	2.6874	1.1219	3601.0	*****	.393	0.3635	1.3316	3923.2	.1325	.542
5200	5.6451-5	2650.0	3.2589	21.436	.200	2.1346	-1.0569	2.4834	1.1275	3687.8	*****	.408	0.3647	1.3406	4021.0	.1376	.530
5300	5.4272-5	2885.3	3.3037	21.005	.202	1.9938	-1.0510	2.2155	1.1346	3772.8	*****	.423	0.3658	1.3486	4113.2	.1422	.520
5400	5.2362-5	3092.2	3.3424	20.648	.204	1.8400	-1.0441	1.9216	1.1433	3855.7	.8976	.438	0.3667	1.3555	4198.3	.1464	.512

TABLE 31.2B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.065046; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 1.46959 LB/IN² (0.10 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM VS FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4274-3	-1065.3	2.1513	28.361	.093	1.0000	-1.0000	0.3017	1.3022	1911.1	.0377	.747	0.3017	1.3022	1911.1	.0377	.747
1700	2.2846-3	-1035.0	2.1697	28.361	.098	1.0000	-1.0000	0.3056	1.2972	1966.2	.0400	.745	0.3056	1.2972	1966.2	.0400	.745
1800	2.1577-3	-1004.2	2.1873	28.361	.102	1.0000	-1.0000	0.3093	1.2926	2019.6	.0423	.744	0.3093	1.2926	2019.6	.0423	.744
1900	2.0441-3	-973.1	2.2041	28.361	.106	1.0000	-1.0000	0.3127	1.2885	2071.7	.0445	.743	0.3127	1.2885	2071.7	.0445	.743
2000	1.9419-3	-941.7	2.2203	28.361	.109	1.0000	-1.0000	0.3160	1.2847	2122.3	.0467	.741	0.3159	1.2848	2122.4	.0466	.742
2100	1.8495-3	-909.9	2.2358	28.361	.113	1.0000	-1.0000	0.3191	1.2811	2171.7	.0488	.740	0.3190	1.2813	2171.8	.0488	.741
2200	1.7654-3	-877.9	2.2507	28.361	.117	1.0001	-1.0000	0.3222	1.2777	2219.9	.0510	.739	0.3219	1.2780	2220.1	.0509	.740
2300	1.6886-3	-845.5	2.2651	28.361	.121	1.0002	-1.0000	0.3253	1.2744	2266.8	.0532	.738	0.3246	1.2750	2267.4	.0530	.739
2400	1.6182-3	-812.8	2.2790	28.361	.124	1.0004	-1.0000	0.3286	1.2711	2312.6	.0554	.737	0.3272	1.2722	2313.6	.0551	.738
2500	1.5535-3	-779.7	2.2925	28.360	.128	1.0007	-1.0000	0.3321	1.2676	2357.1	.0577	.735	0.3297	1.2696	2359.0	.0572	.737
2600	1.4937-3	-746.3	2.3056	28.359	.131	1.0012	-1.0000	0.3361	1.2639	2400.3	.0602	.733	0.3320	1.2673	2403.5	.0593	.736
2700	1.4383-3	-712.5	2.3183	28.357	.135	1.0021	-1.0000	0.3409	1.2598	2442.1	.0629	.731	0.3343	1.2650	2447.2	.0613	.735
2800	1.3868-3	-678.1	2.3308	28.355	.138	1.0034	-1.0001	0.3468	1.2551	2482.4	.0658	.728	0.3363	1.2630	2490.2	.0633	.734
2900	1.3387-3	-643.1	2.3431	28.350	.142	1.0054	-1.0001	0.3542	1.2496	2521.0	.0693	.724	0.3383	1.2611	2532.6	.0653	.733
3000	1.2938-3	-607.2	2.3553	28.344	.145	1.0082	-1.0002	0.3637	1.2432	2557.8	.0733	.719	0.3402	1.2594	2574.4	.0673	.732
3100	1.2517-3	-570.3	2.3674	28.334	.148	1.0122	-1.0003	0.3758	1.2357	2592.7	.0781	.713	0.3419	1.2578	2615.8	.0693	.731
3200	1.2120-3	-531.9	2.3796	28.321	.151	1.0177	-1.0005	0.3911	1.2273	2625.8	.0839	.706	0.3435	1.2565	2656.8	.0713	.730
3300	1.1745-3	-491.9	2.3919	28.303	.155	1.0250	-1.0007	0.4104	1.2179	2657.2	.0911	.696	0.3451	1.2552	2697.5	.0732	.728
3400	1.1389-3	-449.7	2.4045	28.278	.158	1.0347	-1.0010	0.4344	1.2079	2687.2	.1000	.685	0.3465	1.2542	2738.2	.0752	.727
3500	1.1051-3	-404.9	2.4175	28.244	.161	1.0471	-1.0014	0.4637	1.1974	2716.2	.1110	.671	0.3478	1.2533	2778.9	.0771	.725
3600	1.0727-3	-356.8	2.4310	28.201	.164	1.0628	-1.0019	0.4991	1.1869	2744.7	.1247	.656	0.3491	1.2527	2819.7	.0790	.724
3700	1.0417-3	-304.8	2.4453	28.145	.167	1.0822	-1.0025	0.5412	1.1767	2773.2	.1415	.637	0.3502	1.2523	2861.0	.0809	.722
3800	1.0118-3	-248.3	2.4603	28.075	.170	1.1058	-1.0034	0.5905	1.1670	2802.4	.1623	.617	0.3512	1.2522	2902.8	.0828	.720
3900	9.8276-4	-186.5	2.4764	27.988	.172	1.1340	-1.0044	0.6473	1.1582	2832.7	.1877	.594	0.3522	1.2523	2945.5	.0846	.717
4000	9.5455-4	-118.6	2.4936	27.882	.175	1.1672	-1.0057	0.7118	1.1503	2864.4	.2186	.570	0.3531	1.2527	2989.2	.0866	.715
4100	9.2701-4	-43.8	2.5120	27.754	.178	1.2056	-1.0072	0.7840	1.1435	2898.1	.2560	.545	0.3539	1.2535	3034.2	.0885	.711
4200	9.0000-4	38.5	2.5319	27.603	.180	1.2496	-1.0090	0.8639	1.1377	2933.8	.3008	.518	0.3546	1.2546	3080.8	.0905	.707
4300	8.7342-4	129.2	2.5532	27.426	.183	1.2992	-1.0111	0.9515	1.1330	2971.9	.3539	.492	0.3552	1.2560	3129.1	.0925	.703
4400	8.4719-4	229.0	2.5761	27.221	.185	1.3548	-1.0136	1.0467	1.1291	3012.4	.4163	.466	0.3558	1.2579	3179.6	.0947	.697
4500	8.2123-4	338.8	2.6008	26.986	.188	1.4165	-1.0164	1.1497	1.1261	3055.6	.4885	.442	0.3564	1.2602	3232.4	.0969	.691
4600	7.9547-4	459.2	2.6273	26.721	.190	1.4846	-1.0197	1.2606	1.1239	3101.6	.5708	.420	0.3570	1.2629	3287.9	.0994	.683
4700	7.6987-4	591.2	2.6556	26.423	.192	1.5588	-1.0234	1.3794	1.1223	3150.5	.6625	.401	0.3575	1.2662	3346.3	.1021	.674
4800	7.4439-4	735.4	2.6860	26.092	.195	1.6390	-1.0276	1.5058	1.1213	3202.5	.7620	.385	0.3581	1.2699	3408.1	.1050	.664
4900	7.1903-4	892.5	2.7184	25.728	.197	1.7239	-1.0322	1.6380	1.1209	3257.9	.8665	.372	0.3587	1.2742	3473.5	.1081	.653
5000	6.9381-4	1063.1	2.7529	25.332	.199	1.8112	-1.0371	1.7732	1.1209	3316.7	.9717	.363	0.3594	1.2790	3542.8	.1116	.640
5100	6.6880-4	1247.1	2.7893	24.907	.201	1.8976	-1.0423	1.9061	1.1215	3379.0	*****	.357	0.3601	1.2844	3616.1	.1154	.627
5200	6.4409-4	1444.0	2.8275	24.458	.203	1.9781	-1.0473	2.0294	1.1227	3445.0	*****	.355	0.3608	1.2904	3693.3	.1195	.613
5300	6.1985-4	1652.3	2.8672	23.990	.205	2.0468	-1.0520	2.1337	1.1243	3514.3	*****	.356	0.3616	1.2968	3774.3	.1239	.599
5400	5.9629-4	1869.7	2.9078	23.513	.207	2.0971	-1.0558	2.2087	1.1265	3586.6	*****	.360	0.3625	1.3038	3858.4	.1285	.585

TABLE 31.3B -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.065046; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 14.6959 LB/IN² (1.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	2.4274-2	-1065.3	1.9901	28.361	.093	1.0000	-1.0000	0.3017	1.3022	1911.1	.0377	.747	0.3017	1.3022	1911.1	.0377	.747
1700	2.2846-2	-1035.0	2.0085	28.361	.098	1.0000	-1.0000	0.3056	1.2972	1966.2	.0400	.745	0.3056	1.2972	1966.2	.0400	.745
1800	2.1577-2	-1004.2	2.0261	28.361	.102	1.0000	-1.0000	0.3093	1.2926	2019.6	.0423	.744	0.3093	1.2926	2019.6	.0423	.744
1900	2.0441-2	-973.1	2.0429	28.361	.106	1.0000	-1.0000	0.3127	1.2885	2071.7	.0445	.743	0.3127	1.2885	2071.7	.0445	.743
2000	1.9419-2	-941.7	2.0590	28.361	.109	1.0000	-1.0000	0.3159	1.2847	2122.4	.0466	.742	0.3159	1.2848	2122.4	.0466	.742
2100	1.8495-2	-909.9	2.0745	28.361	.113	1.0000	-1.0000	0.3191	1.2812	2171.8	.0488	.740	0.3190	1.2813	2171.8	.0488	.741
2200	1.7654-2	-877.9	2.0894	28.361	.117	1.0000	-1.0000	0.3221	1.2779	2220.0	.0510	.739	0.3219	1.2780	2220.1	.0509	.740
2300	1.6886-2	-845.5	2.1038	28.361	.121	1.0001	-1.0000	0.3250	1.2747	2267.1	.0531	.738	0.3246	1.2750	2267.4	.0530	.739
2400	1.6183-2	-812.9	2.1177	28.361	.124	1.0002	-1.0000	0.3279	1.2717	2313.1	.0553	.737	0.3272	1.2722	2313.6	.0551	.738
2500	1.5535-2	-779.9	2.1312	28.361	.128	1.0003	-1.0000	0.3309	1.2687	2358.0	.0575	.736	0.3297	1.2696	2358.9	.0572	.737
2600	1.4937-2	-746.7	2.1442	28.360	.131	1.0006	-1.0000	0.3340	1.2656	2401.9	.0597	.735	0.3320	1.2672	2403.4	.0593	.736
2700	1.4384-2	-713.1	2.1569	28.359	.135	1.0010	-1.0000	0.3374	1.2625	2444.6	.0620	.733	0.3343	1.2650	2447.1	.0613	.735
2800	1.3869-2	-679.2	2.1692	28.358	.138	1.0016	-1.0000	0.3413	1.2591	2486.2	.0645	.731	0.3363	1.2630	2490.0	.0633	.734
2900	1.3390-2	-644.9	2.1812	28.356	.142	1.0025	-1.0001	0.3459	1.2554	2526.6	.0672	.729	0.3383	1.2610	2532.2	.0653	.733
3000	1.2942-2	-610.0	2.1931	28.353	.145	1.0038	-1.0001	0.3514	1.2512	2565.6	.0701	.726	0.3402	1.2593	2573.9	.0673	.732
3100	1.2523-2	-574.5	2.2047	28.349	.148	1.0057	-1.0001	0.3580	1.2465	2603.3	.0734	.723	0.3419	1.2577	2614.9	.0693	.731
3200	1.2129-2	-538.3	2.2162	28.342	.151	1.0083	-1.0002	0.3662	1.2412	2639.6	.0771	.719	0.3436	1.2562	2655.5	.0713	.730
3300	1.1758-2	-501.2	2.2276	28.334	.155	1.0117	-1.0003	0.3761	1.2352	2674.5	.0814	.714	0.3451	1.2548	2695.6	.0732	.729
3400	1.1407-2	-463.0	2.2390	28.322	.158	1.0162	-1.0005	0.3883	1.2286	2707.9	.0864	.709	0.3466	1.2536	2735.4	.0751	.728
3500	1.1075-2	-423.5	2.2505	28.307	.161	1.0220	-1.0006	0.4029	1.2214	2740.2	.0923	.702	0.3479	1.2526	2774.9	.0770	.726
3600	1.0760-2	-382.4	2.2621	28.286	.164	1.0293	-1.0009	0.4204	1.2137	2771.3	.0993	.694	0.3492	1.2516	2814.3	.0789	.725
3700	1.0459-2	-339.3	2.2738	28.260	.167	1.0385	-1.0012	0.4412	1.2057	2801.5	.1075	.685	0.3504	1.2509	2853.5	.0808	.724
3800	1.0172-2	-294.0	2.2859	28.227	.170	1.0496	-1.0016	0.4654	1.1976	2831.2	.1172	.675	0.3515	1.2502	2892.8	.0827	.722
3900	9.8970-3	-246.1	2.2984	28.186	.173	1.0629	-1.0020	0.4934	1.1895	2860.6	.1286	.663	0.3525	1.2498	2932.2	.0845	.721
4000	9.6324-3	-195.2	2.3113	28.136	.176	1.0788	-1.0026	0.5253	1.1817	2890.1	.1421	.649	0.3535	1.2495	2971.9	.0863	.719
4100	9.3771-3	-140.9	2.3247	28.075	.178	1.0972	-1.0033	0.5611	1.1743	2920.1	.1579	.634	0.3543	1.2494	3012.0	.0882	.717
4200	9.1302-3	-82.8	2.3386	28.002	.181	1.1184	-1.0041	0.6009	1.1675	2950.7	.1763	.618	0.3551	1.2495	3052.6	.0900	.715
4300	8.8906-3	-20.6	2.3533	27.917	.184	1.1424	-1.0051	0.6445	1.1614	2982.3	.1976	.600	0.3558	1.2499	3093.9	.0918	.713
4400	8.6575-3	46.2	2.3686	27.817	.187	1.1693	-1.0063	0.6917	1.1559	3015.0	.2223	.581	0.3565	1.2504	3135.9	.0937	.710
4500	8.4302-3	117.9	2.3847	27.702	.189	1.1991	-1.0076	0.7423	1.1511	3049.1	.2507	.560	0.3571	1.2512	3178.9	.0956	.707
4600	8.2080-3	194.8	2.4016	27.571	.192	1.2316	-1.0090	0.7960	1.1471	3084.7	.2831	.539	0.3576	1.2522	3222.9	.0975	.703
4700	7.9905-3	277.2	2.4194	27.424	.194	1.2669	-1.0107	0.8525	1.1437	3121.8	.3199	.518	0.3581	1.2535	3268.2	.0995	.699
4800	7.7771-3	365.3	2.4379	27.260	.197	1.3050	-1.0126	0.9115	1.1409	3160.5	.3614	.496	0.3586	1.2550	3314.7	.1015	.695
4900	7.5675-3	459.5	2.4574	27.078	.199	1.3458	-1.0146	0.9731	1.1388	3200.9	.4078	.475	0.3590	1.2567	3362.6	.1036	.690
5000	7.3613-3	560.0	2.4777	26.878	.201	1.3893	-1.0169	1.0371	1.1371	3243.1	.4592	.455	0.3594	1.2588	3412.2	.1058	.685
5100	7.1583-3	667.0	2.4988	26.659	.204	1.4356	-1.0195	1.1035	1.1359	3287.0	.5156	.436	0.3598	1.2611	3463.4	.1081	.678
5200	6.9582-3	780.8	2.5209	26.422	.206	1.4846	-1.0223	1.1724	1.1351	3332.7	.5765	.419	0.3602	1.2637	3516.4	.1105	.672
5300	6.7609-3	901.6	2.5439	26.167	.208	1.5362	-1.0253	1.2435	1.1347	3380.4	.6413	.404	0.3606	1.2665	3571.4	.1130	.664
5400	6.5663-3	1029.6	2.5679	25.893	.210	1.5899	-1.0286	1.3164	1.1347	3430.1	.7089	.391	0.3611	1.2697	3628.5	.1158	.656

TABLE 31.4B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.065046; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 146.959 LB/IN2 (10.00 ATM)
 WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM VS FT/S	COND BTU/ FT HR R	PRAN		
1600	2.4274-1	-1065.3	1.8289	28.361	.093	1.0000	-1.0000	0.3017	1.3022	1911.1	.0377	.747	0.3017	1.3022	1911.1	.0377	.747
1700	2.2846-1	-1035.0	1.8473	28.361	.098	1.0000	-1.0000	0.3056	1.2972	1966.2	.0400	.745	0.3056	1.2972	1966.2	.0400	.745
1800	2.1577-1	-1004.2	1.8649	28.361	.102	1.0000	-1.0000	0.3093	1.2926	2019.6	.0423	.744	0.3093	1.2926	2019.6	.0423	.744
1900	2.0441-1	-973.1	1.8817	28.361	.106	1.0000	-1.0000	0.3127	1.2885	2071.7	.0445	.743	0.3127	1.2885	2071.7	.0445	.743
2000	1.9419-1	-941.7	1.8978	28.361	.109	1.0000	-1.0000	0.3159	1.2847	2122.4	.0466	.742	0.3159	1.2848	2122.4	.0466	.742
2100	1.8495-1	-909.9	1.9133	28.361	.113	1.0000	-1.0000	0.3190	1.2812	2171.8	.0488	.741	0.3190	1.2813	2171.8	.0488	.741
2200	1.7654-1	-877.9	1.9282	28.361	.117	1.0000	-1.0000	0.3220	1.2779	2220.1	.0509	.740	0.3219	1.2780	2220.1	.0509	.740
2300	1.6886-1	-845.6	1.9426	28.361	.121	1.0000	-1.0000	0.3248	1.2749	2267.2	.0531	.739	0.3246	1.2750	2267.4	.0530	.739
2400	1.6183-1	-812.9	1.9565	28.361	.124	1.0001	-1.0000	0.3275	1.2719	2313.4	.0552	.738	0.3272	1.2722	2313.6	.0551	.738
2500	1.5535-1	-780.0	1.9699	28.361	.128	1.0002	-1.0000	0.3303	1.2692	2358.5	.0573	.737	0.3297	1.2696	2358.9	.0572	.737
2600	1.4938-1	-746.9	1.9829	28.361	.131	1.0003	-1.0000	0.3330	1.2665	2402.6	.0595	.735	0.3320	1.2672	2403.4	.0593	.736
2700	1.4384-1	-713.4	1.9955	28.360	.135	1.0005	-1.0000	0.3358	1.2638	2445.8	.0616	.734	0.3343	1.2650	2447.0	.0613	.735
2800	1.3870-1	-679.7	2.0078	28.360	.138	1.0008	-1.0000	0.3387	1.2610	2488.0	.0639	.733	0.3363	1.2629	2489.9	.0633	.734
2900	1.3391-1	-645.7	2.0197	28.359	.142	1.0012	-1.0000	0.3420	1.2582	2529.3	.0662	.731	0.3383	1.2610	2532.1	.0653	.733
3000	1.2944-1	-611.3	2.0314	28.357	.145	1.0018	-1.0000	0.3456	1.2552	2569.5	.0686	.729	0.3402	1.2592	2573.6	.0673	.732
3100	1.2526-1	-576.5	2.0428	28.355	.148	1.0027	-1.0001	0.3497	1.2520	2608.8	.0712	.727	0.3419	1.2576	2614.5	.0693	.731
3200	1.2133-1	-541.3	2.0539	28.352	.151	1.0039	-1.0001	0.3545	1.2485	2646.9	.0740	.725	0.3436	1.2560	2654.9	.0713	.730
3300	1.1764-1	-505.6	2.0649	28.348	.155	1.0055	-1.0001	0.3601	1.2446	2684.0	.0771	.722	0.3452	1.2546	2694.7	.0732	.729
3400	1.1416-1	-469.3	2.0758	28.343	.158	1.0077	-1.0002	0.3667	1.2404	2720.0	.0804	.719	0.3466	1.2534	2734.1	.0751	.728
3500	1.1087-1	-432.3	2.0865	28.335	.161	1.0104	-1.0003	0.3744	1.2358	2754.9	.0842	.716	0.3480	1.2522	2773.1	.0770	.727
3600	1.0775-1	-394.4	2.0972	28.326	.164	1.0139	-1.0004	0.3836	1.2307	2788.7	.0884	.712	0.3493	1.2511	2811.7	.0789	.726
3700	1.0479-1	-355.5	2.1078	28.313	.167	1.0182	-1.0005	0.3942	1.2253	2821.6	.0931	.707	0.3505	1.2502	2850.1	.0808	.724
3800	1.0198-1	-315.5	2.1185	28.298	.170	1.0235	-1.0007	0.4066	1.2196	2853.6	.0985	.702	0.3516	1.2493	2888.2	.0826	.723
3900	9.9294-2	-274.1	2.1293	28.278	.173	1.0299	-1.0009	0.4208	1.2137	2884.9	.1046	.696	0.3527	1.2486	2926.1	.0845	.722
4000	9.6730-2	-231.2	2.1401	28.254	.176	1.0375	-1.0012	0.4369	1.2076	2915.5	.1115	.689	0.3537	1.2480	2963.9	.0863	.721
4100	9.4273-2	-186.6	2.1511	28.225	.179	1.0464	-1.0015	0.4552	1.2015	2945.8	.1193	.682	0.3546	1.2475	3001.7	.0881	.719
4200	9.1914-2	-140.1	2.1623	28.190	.182	1.0568	-1.0019	0.4755	1.1955	2975.8	.1282	.673	0.3554	1.2472	3039.5	.0899	.718
4300	8.9645-2	-91.5	2.1738	28.149	.184	1.0686	-1.0024	0.4979	1.1896	3005.9	.1383	.664	0.3562	1.2470	3077.5	.0917	.716
4400	8.7456-2	-40.5	2.1855	28.100	.187	1.0820	-1.0030	0.5224	1.1840	3036.1	.1496	.653	0.3570	1.2469	3115.6	.0935	.714
4500	8.5341-2	13.1	2.1975	28.044	.190	1.0970	-1.0036	0.5489	1.1788	3066.7	.1623	.642	0.3576	1.2469	3154.1	.0953	.712
4600	8.3293-2	69.4	2.2099	27.979	.193	1.1136	-1.0043	0.5773	1.1739	3097.8	.1765	.630	0.3582	1.2471	3192.8	.0971	.710
4700	8.1307-2	128.6	2.2226	27.905	.195	1.1317	-1.0051	0.6073	1.1695	3129.5	.1922	.616	0.3588	1.2474	3232.0	.0989	.708
4800	7.9376-2	190.9	2.2357	27.822	.198	1.1512	-1.0060	0.6387	1.1656	3162.0	.2097	.602	0.3593	1.2479	3271.7	.1007	.706
4900	7.7498-2	256.4	2.2493	27.730	.200	1.1722	-1.0070	0.6714	1.1622	3195.4	.2290	.587	0.3598	1.2485	3312.0	.1025	.703
5000	7.5667-2	325.2	2.2632	27.627	.203	1.1945	-1.0081	0.7050	1.1592	3229.7	.2502	.572	0.3602	1.2493	3352.9	.1043	.700
5100	7.3881-2	397.4	2.2775	27.515	.205	1.2179	-1.0093	0.7394	1.1567	3264.9	.2734	.555	0.3606	1.2502	3394.4	.1061	.697
5200	7.2137-2	473.1	2.2921	27.392	.208	1.2425	-1.0106	0.7743	1.1546	3301.2	.2987	.539	0.3609	1.2513	3436.7	.1080	.694
5300	7.0433-2	552.3	2.3072	27.259	.210	1.2682	-1.0120	0.8096	1.1529	3338.5	.3262	.522	0.3613	1.2526	3479.7	.1099	.691
5400	6.8766-2	635.0	2.3227	27.116	.213	1.2948	-1.0136	0.8453	1.1516	3376.8	.3560	.505	0.3616	1.2540	3523.6	.1118	.687

TABLE 31.5B .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.065046; EQUIV. RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000; P = 734.797 LB/IN2 (50.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1600	1.2137 0	-1065.3	1.7162	28.361	.093	1.0000	-1.0000	0.3017	1.3022	1911.1	.0377	.747	0.3017	1.3022	1911.1	.0377	.747
1700	1.1423 0	-1035.0	1.7346	28.361	.098	1.0000	-1.0000	0.3056	1.2972	1966.2	.0400	.745	0.3056	1.2972	1966.2	.0400	.745
1800	1.0789 0	-1004.2	1.7522	28.361	.102	1.0000	-1.0000	0.3093	1.2926	2019.6	.0423	.744	0.3093	1.2926	2019.6	.0423	.744
1900	1.0221 0	-973.1	1.7690	28.361	.106	1.0000	-1.0000	0.3127	1.2885	2071.7	.0445	.743	0.3127	1.2885	2071.7	.0445	.743
2000	9.7097-1	-941.7	1.7851	28.361	.109	1.0000	-1.0000	0.3159	1.2848	2122.4	.0466	.742	0.3159	1.2848	2122.4	.0466	.742
2100	9.2473-1	-909.9	1.8006	28.361	.113	1.0000	-1.0000	0.3190	1.2812	2171.8	.0488	.741	0.3190	1.2813	2171.8	.0488	.741
2200	8.8270-1	-877.9	1.8155	28.361	.117	1.0000	-1.0000	0.3219	1.2780	2220.1	.0509	.740	0.3219	1.2780	2220.1	.0509	.740
2300	8.4432-1	-845.6	1.8299	28.361	.121	1.0000	-1.0000	0.3247	1.2749	2267.3	.0531	.739	0.3246	1.2750	2267.4	.0530	.739
2400	8.0914-1	-813.0	1.8438	28.361	.124	1.0001	-1.0000	0.3274	1.2721	2313.5	.0552	.738	0.3272	1.2722	2313.6	.0551	.738
2500	7.7677-1	-780.1	1.8572	28.361	.128	1.0001	-1.0000	0.3300	1.2693	2358.6	.0573	.737	0.3297	1.2696	2358.9	.0572	.737
2600	7.4689-1	-746.9	1.8702	28.361	.131	1.0002	-1.0000	0.3326	1.2668	2402.9	.0594	.736	0.3320	1.2672	2403.4	.0593	.736
2700	7.1922-1	-713.6	1.8828	28.361	.135	1.0003	-1.0000	0.3352	1.2642	2446.3	.0615	.735	0.3343	1.2650	2447.0	.0613	.735
2800	6.9352-1	-679.9	1.8950	28.360	.138	1.0005	-1.0000	0.3378	1.2618	2488.7	.0637	.733	0.3363	1.2629	2489.9	.0633	.734
2900	6.6960-1	-646.0	1.9069	28.360	.142	1.0007	-1.0000	0.3405	1.2593	2530.3	.0659	.732	0.3383	1.2610	2532.0	.0653	.733
3000	6.4726-1	-611.8	1.9185	28.359	.145	1.0011	-1.0000	0.3435	1.2568	2571.0	.0681	.731	0.3402	1.2592	2573.5	.0673	.732
3100	6.2635-1	-577.3	1.9298	28.358	.148	1.0016	-1.0000	0.3466	1.2541	2610.8	.0705	.729	0.3419	1.2575	2614.4	.0693	.731
3200	6.0674-1	-542.4	1.9409	28.356	.151	1.0023	-1.0001	0.3502	1.2513	2649.8	.0729	.727	0.3436	1.2560	2654.7	.0713	.730
3300	5.8830-1	-507.2	1.9517	28.354	.155	1.0033	-1.0001	0.3542	1.2484	2687.8	.0755	.725	0.3452	1.2546	2694.4	.0732	.729
3400	5.7093-1	-471.6	1.9624	28.350	.158	1.0046	-1.0001	0.3588	1.2452	2724.8	.0783	.723	0.3466	1.2533	2733.7	.0751	.728
3500	5.5453-1	-435.5	1.9728	28.346	.161	1.0062	-1.0002	0.3640	1.2417	2761.0	.0813	.720	0.3480	1.2520	2772.4	.0770	.727
3600	5.3902-1	-398.8	1.9832	28.340	.164	1.0083	-1.0002	0.3701	1.2380	2796.3	.0846	.718	0.3493	1.2509	2810.8	.0789	.726
3700	5.2432-1	-361.4	1.9934	28.333	.167	1.0108	-1.0003	0.3770	1.2340	2830.6	.0881	.715	0.3505	1.2499	2848.8	.0808	.725
3800	5.1035-1	-323.3	2.0036	28.323	.170	1.0140	-1.0004	0.3850	1.2298	2864.2	.0920	.711	0.3517	1.2490	2886.5	.0826	.724
3900	4.9706-1	-284.4	2.0137	28.312	.173	1.0178	-1.0006	0.3940	1.2253	2896.9	.0963	.707	0.3528	1.2482	2923.8	.0845	.722
4000	4.8439-1	-244.5	2.0238	28.297	.176	1.0224	-1.0007	0.4043	1.2206	2928.9	.1011	.703	0.3538	1.2475	2961.0	.0863	.721
4100	4.7228-1	-203.5	2.0339	28.280	.179	1.0278	-1.0009	0.4158	1.2158	2960.4	.1065	.698	0.3547	1.2468	2997.9	.0881	.720
4200	4.6069-1	-161.3	2.0441	28.259	.182	1.0341	-1.0012	0.4287	1.2109	2991.3	.1124	.693	0.3556	1.2463	3034.8	.0899	.719
4300	4.4958-1	-117.7	2.0543	28.234	.185	1.0413	-1.0014	0.4429	1.2059	3021.9	.1189	.687	0.3564	1.2459	3071.5	.0917	.717
4400	4.3891-1	-72.6	2.0647	28.205	.187	1.0495	-1.0018	0.4585	1.2010	3052.2	.1261	.681	0.3572	1.2455	3108.2	.0935	.716
4500	4.2863-1	-26.0	2.0752	28.170	.190	1.0587	-1.0021	0.4754	1.1963	3082.4	.1341	.674	0.3579	1.2453	3145.0	.0952	.714
4600	4.1873-1	22.5	2.0858	28.131	.193	1.0691	-1.0026	0.4936	1.1917	3112.7	.1429	.666	0.3585	1.2452	3181.8	.0970	.712
4700	4.0916-1	72.8	2.0966	28.086	.195	1.0804	-1.0031	0.5131	1.1874	3143.1	.1525	.658	0.3591	1.2452	3218.7	.0988	.711
4800	3.9991-1	125.1	2.1076	28.035	.198	1.0928	-1.0036	0.5336	1.1833	3173.8	.1630	.649	0.3597	1.2452	3255.9	.1006	.709
4900	3.9094-1	179.6	2.1189	27.977	.201	1.1062	-1.0042	0.5552	1.1795	3204.9	.1744	.639	0.3602	1.2454	3293.2	.1023	.707
5000	3.8225-1	236.2	2.1303	27.913	.203	1.1206	-1.0049	0.5776	1.1761	3236.4	.1868	.629	0.3607	1.2457	3330.9	.1041	.705
5100	3.7380-1	295.1	2.1420	27.842	.206	1.1358	-1.0057	0.6007	1.1730	3268.5	.2002	.618	0.3611	1.2461	3368.8	.1058	.703
5200	3.6559-1	356.3	2.1539	27.765	.208	1.1519	-1.0065	0.6242	1.1703	3301.2	.2146	.606	0.3615	1.2466	3407.1	.1075	.701
5300	3.5760-1	420.0	2.1660	27.680	.211	1.1687	-1.0074	0.6481	1.1680	3334.5	.2301	.594	0.3619	1.2473	3445.9	.1093	.698
5400	3.4982-1	486.0	2.1783	27.589	.213	1.1862	-1.0083	0.6722	1.1660	3368.5	.2467	.581	0.3622	1.2480	3485.0	.1110	.696

TABLE 31C .- LOW TEMPERATURE PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.065046; EQUIV.RATIO = 1.000; CHEM. EQUIV. RATIO = 1.0000;
WET AIR (W/A= 0.03)

T R	HETEROGENEOUS PHASE PROPERTIES					DENSITY LB/FT ³	MW	VIS LB/ FT S	GAS PHASE PROPERTIES				T R			
	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	CP BTU/ LB R				DLVOLT	DLVDLP	CP BTU/ LB R	(GAM)S		VS FT/S	COND BTU/ FT HR R	PRAN
PRESSURE = 0.01 ATM																
360	1.302-3	-1541.0	1.6126	28.361	0.2566	1.160-3	30.505	.0311	1.000	-1.000	0.2324	1.3890	903	.0098	.735	360
400	1.168-3	-1528.9	1.6444	28.361	0.4071	1.043-3	30.464	.0340	1.000	-1.000	0.2337	1.3868	951	.0109	.731	400
440	1.020-3	-1492.3	1.7307	28.361	1.9701	9.329-4	29.974	.0358	1.000	-1.000	0.2396	1.3823	1004	.0116	.740	440
PRESSURE = 0.10 ATM																
360	1.303-2	-1541.1	1.4788	28.361	0.2487	1.160-2	30.507	.0311	1.000	-1.000	0.2324	1.3891	903	.0098	.734	360
400	1.172-2	-1530.9	1.5057	28.361	0.2682	1.044-2	30.503	.0341	1.000	-1.000	0.2333	1.3870	951	.0109	.730	400
440	1.061-2	-1518.2	1.5360	28.361	0.4163	9.478-3	30.454	.0369	1.000	-1.000	0.2348	1.3846	997	.0119	.727	440
480	9.430-3	-1487.4	1.6024	28.361	1.4119	8.580-3	30.073	.0388	1.000	-1.000	0.2396	1.3805	1047	.0127	.734	480
520	7.469-3	-1367.1	1.8418	28.361	0.2590	7.469-3	28.361	.0378	1.000	-1.000	0.2590	1.3705	1118	.0127	.772	520
PRESSURE = 1.00 ATM																
360	1.302-1	-1541.1	1.3453	28.361	0.2479	1.160-1	30.507	.0311	1.000	-1.000	0.2324	1.3891	903	.0098	.734	360
400	1.172-1	-1531.1	1.3717	28.361	0.2544	1.044-1	30.507	.0341	1.000	-1.000	0.2333	1.3870	951	.0109	.730	400
440	1.065-1	-1520.6	1.3966	28.361	0.2737	9.493-2	30.502	.0370	1.000	-1.000	0.2343	1.3848	997	.0119	.726	440
480	9.734-2	-1508.2	1.4235	28.361	0.2711	8.691-2	30.464	.0397	1.000	-1.000	0.2357	1.3824	1041	.0129	.725	480
520	8.858-2	-1472.7	1.4949	28.361	0.6752	7.976-2	30.288	.0420	1.000	-1.000	0.2385	1.3792	1085	.0138	.728	520
537	8.465-2	-1459.6	1.5197	28.361	0.9165	7.685-2	30.119	.0427	1.000	-1.000	0.2406	1.3775	1105	.0141	.731	537
560	7.830-2	-1432.0	1.6700	28.361	1.5161	7.262-2	29.696	.0433	1.000	-1.000	0.2456	1.3741	1135	.0143	.741	560
600	6.473-2	-1346.3	1.7178	28.361	0.2614	6.473-2	28.361	.0430	1.000	-1.000	0.2614	1.3659	1199	.0146	.771	600
PRESSURE = 10.00 ATM																
360	1.299 0	-1541.1	1.2117	28.361	0.2479	1.160 0	30.507	.0311	1.000	-1.000	0.2324	1.3891	903	.0098	.734	360
400	1.170 0	-1531.1	1.2381	28.361	0.2530	1.044 0	30.507	.0341	1.000	-1.000	0.2333	1.3870	951	.0109	.730	400
440	1.064 0	-1520.9	1.2625	28.361	0.2596	9.495-1	30.507	.0370	1.000	-1.000	0.2342	1.3849	997	.0119	.726	440
480	9.748-1	-1510.3	1.2856	28.361	0.2741	8.702-1	30.503	.0398	1.000	-1.000	0.2353	1.3826	1040	.0129	.724	480
520	8.988-1	-1481.7	1.3432	28.361	0.3542	8.028-1	30.485	.0425	1.000	-1.000	0.2365	1.3802	1082	.0139	.723	520
537	8.698-1	-1475.6	1.3547	28.361	0.3762	7.775-1	30.468	.0435	1.000	-1.000	0.2371	1.3791	1099	.0143	.723	537
560	8.308-1	-1466.3	1.3717	28.361	0.4261	7.440-1	30.426	.0449	1.000	-1.000	0.2382	1.3774	1123	.0148	.724	560
600	7.653-1	-1446.3	1.4061	28.361	0.5954	6.907-1	30.262	.0471	1.000	-1.000	0.2410	1.3742	1164	.0156	.729	600
640	6.948-1	-1416.2	1.4546	28.361	0.9562	6.392-1	29.872	.0487	1.000	-1.000	0.2462	1.3699	1208	.0162	.739	640
680	6.098-1	-1364.6	1.5325	28.361	1.7211	5.854-1	29.067	.0494	1.000	-1.000	0.2561	1.3639	1260	.0167	.755	680
PRESSURE = 50.00 ATM																
360	6.433 0	-1541.1	1.1184	28.361	0.2479	5.802 0	30.507	.0311	1.000	-1.000	0.2324	1.3891	903	.0098	.734	360
400	5.797 0	-1531.1	1.1448	28.361	0.2529	5.222 0	30.507	.0341	1.000	-1.000	0.2333	1.3870	951	.0109	.730	400
440	5.275 0	-1520.9	1.1691	28.361	0.2583	4.747 0	30.507	.0370	1.000	-1.000	0.2342	1.3849	997	.0119	.726	440
480	4.839 0	-1510.4	1.1919	28.361	0.2655	4.352 0	30.507	.0398	1.000	-1.000	0.2352	1.3826	1040	.0129	.723	480
520	4.472 0	-1482.5	1.2483	28.361	0.3266	4.016 0	30.503	.0425	1.000	-1.000	0.2363	1.3802	1082	.0139	.722	520
537	4.333 0	-1477.0	1.2586	28.361	0.3311	3.891 0	30.500	.0436	1.000	-1.000	0.2368	1.3792	1098	.0143	.722	537
560	4.151 0	-1469.2	1.2729	28.361	0.3413	3.728 0	30.491	.0451	1.000	-1.000	0.2375	1.3777	1122	.0148	.723	560
600	3.866 0	-1454.9	1.2975	28.361	0.3745	3.476 0	30.458	.0475	1.000	-1.000	0.2390	1.3751	1161	.0157	.724	600
640	3.604 0	-1438.8	1.3235	28.361	0.4393	3.250 0	30.380	.0498	1.000	-1.000	0.2410	1.3722	1199	.0165	.727	640
680	3.350 0	-1419.2	1.3532	28.361	0.5532	3.043 0	30.219	.0519	1.000	-1.000	0.2439	1.3688	1238	.0173	.731	680
720	3.090 0	-1393.6	1.3897	28.361	0.7411	2.845 0	29.920	.0536	1.000	-1.000	0.2483	1.3649	1278	.0180	.737	720
760	2.807 0	-1358.3	1.4373	28.361	1.0452	2.650 0	29.414	.0548	1.000	-1.000	0.2550	1.3601	1322	.0187	.747	760

TABLE 32.1D -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN² (0.01 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0780-3	-1404.2	1.9163	28.338	.027	1.0000	-1.0000	0.2555	1.3779	932.9	.0086	.792	0.2555	1.3779	932.9	.0086	.792
380	1.0212-3	-1399.0	1.9301	28.338	.028	1.0000	-1.0000	0.2560	1.3769	958.1	.0092	.786	0.2560	1.3769	958.1	.0092	.786
400	9.7018-4	-1393.9	1.9432	28.338	.030	1.0000	-1.0000	0.2565	1.3758	982.6	.0097	.782	0.2565	1.3758	982.6	.0097	.782
420	9.2398-4	-1388.8	1.9558	28.338	.031	1.0000	-1.0000	0.2571	1.3748	1006.5	.0103	.778	0.2571	1.3748	1006.5	.0103	.778
440	8.8198-4	-1383.6	1.9677	28.338	.032	1.0000	-1.0000	0.2576	1.3736	1029.8	.0108	.774	0.2576	1.3736	1029.8	.0108	.775
460	8.4363-4	-1378.5	1.9792	28.338	.034	1.0000	-1.0000	0.2583	1.3724	1052.4	.0113	.771	0.2582	1.3725	1052.5	.0113	.772
480	8.0848-4	-1373.3	1.9902	28.338	.035	1.0000	-1.0000	0.2589	1.3711	1074.6	.0118	.769	0.2588	1.3713	1074.6	.0118	.770
500	7.7614-4	-1368.1	2.0008	28.338	.037	1.0001	-1.0000	0.2596	1.3698	1096.2	.0124	.767	0.2595	1.3700	1096.3	.0123	.768
520	7.4629-4	-1362.9	2.0110	28.338	.038	1.0001	-1.0000	0.2604	1.3683	1117.3	.0129	.764	0.2601	1.3688	1117.5	.0128	.767
537	7.2310-4	-1358.6	2.0192	28.338	.039	1.0002	-1.0000	0.2612	1.3669	1134.5	.0133	.762	0.2607	1.3677	1134.8	.0133	.766
540	7.1864-4	-1357.7	2.0208	28.338	.039	1.0002	-1.0000	0.2614	1.3666	1137.9	.0134	.762	0.2608	1.3675	1138.2	.0133	.766
560	6.9297-4	-1352.5	2.0304	28.338	.040	1.0004	-1.0000	0.2625	1.3647	1158.0	.0140	.759	0.2615	1.3661	1158.6	.0138	.766
580	6.6906-4	-1347.2	2.0396	28.337	.042	1.0007	-1.0000	0.2638	1.3625	1177.5	.0146	.755	0.2622	1.3648	1178.5	.0143	.766
600	6.4673-4	-1341.9	2.0486	28.336	.043	1.0012	-1.0000	0.2654	1.3598	1196.5	.0152	.749	0.2629	1.3634	1198.1	.0148	.766
620	6.2584-4	-1336.6	2.0573	28.335	.044	1.0019	-1.0001	0.2675	1.3566	1214.9	.0160	.740	0.2637	1.3620	1217.3	.0152	.766
640	6.0624-4	-1331.2	2.0658	28.333	.045	1.0029	-1.0001	0.2702	1.3528	1232.6	.0169	.729	0.2645	1.3606	1236.2	.0157	.766
660	5.8780-4	-1325.8	2.0742	28.330	.047	1.0043	-1.0002	0.2736	1.3482	1249.7	.0179	.713	0.2653	1.3591	1254.7	.0162	.765
680	5.7043-4	-1320.3	2.0824	28.325	.048	1.0063	-1.0002	0.2779	1.3426	1265.9	.0192	.694	0.2661	1.3577	1273.0	.0167	.763
700	5.5401-4	-1314.6	2.0906	28.319	.049	1.0089	-1.0003	0.2834	1.3361	1281.4	.0207	.672	0.2670	1.3562	1291.1	.0172	.762
720	5.3846-4	-1308.9	2.0986	28.311	.050	1.0125	-1.0005	0.2903	1.3285	1296.1	.0226	.647	0.2679	1.3548	1308.9	.0177	.760
740	5.2369-4	-1303.0	2.1067	28.299	.051	1.0171	-1.0007	0.2987	1.3198	1309.9	.0248	.621	0.2688	1.3533	1326.5	.0182	.758
760	5.0964-4	-1296.9	2.1148	28.284	.053	1.0229	-1.0009	0.3091	1.3102	1323.0	.0274	.594	0.2697	1.3519	1343.9	.0188	.757
780	4.9623-4	-1290.6	2.1230	28.265	.054	1.0303	-1.0013	0.3216	1.2998	1335.5	.0305	.567	0.2707	1.3505	1361.2	.0193	.755
800	4.8340-4	-1284.1	2.1313	28.240	.055	1.0392	-1.0017	0.3363	1.2889	1347.4	.0340	.543	0.2718	1.3491	1378.5	.0198	.753
820	4.7110-4	-1277.2	2.1398	28.209	.056	1.0499	-1.0022	0.3534	1.2778	1359.0	.0379	.522	0.2729	1.3477	1395.6	.0204	.751
840	4.5926-4	-1269.9	2.1486	28.171	.057	1.0625	-1.0028	0.3729	1.2668	1370.4	.0422	.504	0.2740	1.3463	1412.8	.0209	.748
860	4.4785-4	-1262.2	2.1576	28.125	.058	1.0767	-1.0035	0.3947	1.2561	1381.9	.0468	.491	0.2752	1.3451	1430.0	.0215	.744
880	4.3682-4	-1254.1	2.1669	28.070	.059	1.0925	-1.0043	0.4183	1.2462	1393.7	.0514	.482	0.2765	1.3438	1447.3	.0221	.740
900	4.2615-4	-1245.5	2.1766	28.007	.060	1.1094	-1.0052	0.4431	1.2373	1406.0	.0559	.479	0.2778	1.3427	1464.7	.0228	.736
920	4.1580-4	-1236.4	2.1866	27.934	.061	1.1269	-1.0061	0.4684	1.2295	1418.9	.0600	.480	0.2792	1.3416	1482.2	.0235	.731
940	4.0577-4	-1226.8	2.1970	27.853	.063	1.1439	-1.0070	0.4928	1.2229	1432.5	.0634	.486	0.2807	1.3405	1499.8	.0242	.725
960	3.9605-4	-1216.7	2.2076	27.764	.064	1.1592	-1.0079	0.5148	1.2178	1446.9	.0659	.497	0.2821	1.3396	1517.6	.0249	.719
980	3.8664-4	-1206.2	2.2184	27.669	.065	1.1714	-1.0086	0.5323	1.2142	1462.2	.0671	.513	0.2836	1.3387	1535.4	.0257	.713
1000	3.7757-4	-1195.4	2.2292	27.572	.066	1.1785	-1.0091	0.5430	1.2123	1478.6	.0668	.534	0.2852	1.3379	1553.3	.0265	.707
1020	3.6886-4	-1184.6	2.2400	27.474	.067	1.1783	-1.0092	0.5438	1.2126	1496.1	.0648	.560	0.2867	1.3372	1571.1	.0273	.701
1040	3.6054-4	-1173.8	2.2505	27.381	.068	1.1688	-1.0088	0.5322	1.2156	1515.1	.0611	.589	0.2881	1.3364	1588.7	.0280	.696
1060	3.5266-4	-1163.4	2.2604	27.298	.069	1.1488	-1.0078	0.5064	1.2221	1536.1	.0561	.621	0.2895	1.3357	1605.9	.0288	.691
1080	3.4526-4	-1153.6	2.2695	27.229	.070	1.1199	-1.0064	0.4687	1.2327	1559.2	.0503	.650	0.2907	1.3349	1622.5	.0295	.688
1100	3.3834-4	-1144.7	2.2777	27.178	.071	1.0871	-1.0047	0.4260	1.2470	1584.1	.0448	.671	0.2918	1.3340	1638.5	.0301	.685
1120	3.3187-4	-1136.5	2.2851	27.142	.072	1.0573	-1.0031	0.3874	1.2627	1609.5	.0406	.683	0.2929	1.3330	1653.8	.0307	.684
1140	3.2578-4	-1129.1	2.2916	27.121	.073	1.0348	-1.0019	0.3589	1.2765	1633.3	.0379	.687	0.2938	1.3320	1668.5	.0312	.683

TABLE 32.1D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN2 (0.01 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLVDLT	DLVDLP	REACTING COMPOSITIONS				FROZEN COMPOSITIONS					
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.2002-4	-1122.1	2.2977	27.108	.074	1.0201	-1.0011	0.3410	1.2861	1654.2	.0364	.688	0.2946	1.3309	1682.7	.0317	.683
1180	3.1451-4	-1115.4	2.3035	27.101	.074	1.0113	-1.0006	0.3310	1.2916	1672.2	.0358	.688	0.2955	1.3298	1696.7	.0322	.683
1200	3.0923-4	-1108.8	2.3090	27.097	.075	1.0063	-1.0004	0.3261	1.2941	1688.0	.0358	.687	0.2963	1.3286	1710.4	.0327	.683
1220	3.0413-4	-1102.3	2.3143	27.095	.076	1.0035	-1.0002	0.3240	1.2947	1702.5	.0360	.687	0.2971	1.3275	1723.9	.0331	.684
1240	2.9921-4	-1095.9	2.3196	27.094	.077	1.0020	-1.0001	0.3235	1.2943	1716.2	.0363	.687	0.2979	1.3264	1737.3	.0336	.684
1260	2.9446-4	-1089.4	2.3248	27.093	.078	1.0011	-1.0001	0.3237	1.2934	1729.4	.0368	.687	0.2987	1.3253	1750.5	.0341	.685
1280	2.8985-4	-1082.9	2.3299	27.093	.079	1.0007	-1.0000	0.3244	1.2923	1742.3	.0373	.687	0.2994	1.3241	1763.6	.0345	.685
1300	2.8539-4	-1076.4	2.3349	27.092	.080	1.0004	-1.0000	0.3253	1.2911	1755.1	.0378	.687	0.3002	1.3230	1776.6	.0350	.686
1320	2.8107-4	-1069.9	2.3399	27.092	.081	1.0002	-1.0000	0.3262	1.2899	1767.7	.0383	.687	0.3010	1.3220	1789.5	.0354	.686
1340	2.7687-4	-1063.4	2.3448	27.092	.082	1.0001	-1.0000	0.3272	1.2888	1780.3	.0388	.688	0.3017	1.3209	1802.3	.0358	.687
1360	2.7280-4	-1056.8	2.3497	27.092	.082	1.0001	-1.0000	0.3281	1.2878	1792.8	.0393	.688	0.3025	1.3198	1815.0	.0363	.687
1380	2.6884-4	-1050.2	2.3545	27.092	.083	1.0001	-1.0000	0.3289	1.2868	1805.2	.0398	.688	0.3033	1.3188	1827.5	.0367	.688
1400	2.6500-4	-1043.7	2.3592	27.092	.084	1.0000	-1.0000	0.3297	1.2859	1817.6	.0403	.688	0.3040	1.3177	1840.0	.0372	.688
1420	2.6127-4	-1037.1	2.3639	27.092	.085	1.0000	-1.0000	0.3305	1.2850	1830.0	.0408	.688	0.3048	1.3167	1852.4	.0376	.689
1440	2.5764-4	-1030.4	2.3685	27.092	.086	1.0000	-1.0000	0.3312	1.2843	1842.3	.0413	.689	0.3055	1.3157	1864.7	.0381	.689
1460	2.5411-4	-1023.8	2.3731	27.092	.087	1.0000	-1.0000	0.3318	1.2836	1854.5	.0418	.689	0.3063	1.3147	1876.8	.0385	.690
1480	2.5068-4	-1017.2	2.3776	27.092	.088	1.0000	-1.0000	0.3324	1.2829	1866.7	.0422	.689	0.3070	1.3137	1888.9	.0389	.691
1500	2.4734-4	-1010.5	2.3821	27.092	.088	1.0000	-1.0000	0.3329	1.2824	1878.9	.0427	.690	0.3077	1.3127	1900.9	.0394	.691
1520	2.4408-4	-1003.9	2.3865	27.092	.089	1.0000	-1.0000	0.3334	1.2818	1890.9	.0431	.690	0.3085	1.3117	1912.9	.0398	.692
1540	2.4091-4	-997.2	2.3908	27.092	.090	1.0000	-1.0000	0.3339	1.2813	1903.0	.0436	.690	0.3092	1.3108	1924.7	.0402	.693
1560	2.3782-4	-990.5	2.3951	27.092	.091	1.0000	-1.0000	0.3343	1.2809	1915.0	.0440	.690	0.3099	1.3098	1936.5	.0406	.693
1580	2.3481-4	-983.8	2.3994	27.092	.092	1.0000	-1.0000	0.3347	1.2804	1926.9	.0444	.691	0.3106	1.3089	1948.1	.0411	.694
1600	2.3188-4	-977.1	2.4036	27.092	.093	1.0000	-1.0000	0.3350	1.2801	1938.7	.0448	.691	0.3113	1.3080	1959.7	.0415	.694
1620	2.2901-4	-970.4	2.4078	27.092	.093	1.0000	-1.0000	0.3354	1.2797	1950.5	.0453	.691	0.3120	1.3070	1971.3	.0419	.695
1640	2.2622-4	-963.7	2.4119	27.092	.094	1.0000	-1.0000	0.3357	1.2794	1962.3	.0457	.692	0.3127	1.3062	1982.7	.0423	.695
1660	2.2350-4	-957.0	2.4160	27.092	.095	1.0000	-1.0000	0.3360	1.2790	1974.0	.0461	.692	0.3134	1.3053	1994.1	.0428	.696
1680	2.2084-4	-950.3	2.4200	27.092	.096	1.0000	-1.0000	0.3363	1.2788	1985.6	.0465	.692	0.3141	1.3044	2005.4	.0432	.696
1700	2.1824-4	-943.5	2.4240	27.092	.097	1.0000	-1.0000	0.3365	1.2785	1997.2	.0469	.693	0.3148	1.3036	2016.7	.0436	.697
1720	2.1570-4	-936.8	2.4279	27.092	.097	1.0000	-1.0000	0.3368	1.2782	2008.7	.0473	.693	0.3154	1.3027	2027.8	.0440	.697
1740	2.1322-4	-930.1	2.4318	27.092	.098	1.0000	-1.0000	0.3370	1.2780	2020.1	.0477	.693	0.3161	1.3019	2038.9	.0444	.698
1760	2.1080-4	-923.3	2.4357	27.092	.099	1.0000	-1.0000	0.3372	1.2777	2031.5	.0481	.694	0.3168	1.3011	2050.0	.0448	.698
1780	2.0843-4	-916.6	2.4395	27.092	.100	1.0000	-1.0000	0.3375	1.2775	2042.8	.0485	.694	0.3174	1.3003	2061.0	.0453	.699
1800	2.0611-4	-909.8	2.4432	27.092	.100	1.0000	-1.0000	0.3377	1.2773	2054.1	.0488	.694	0.3180	1.2995	2071.9	.0457	.699
1900	1.9527-4	-876.0	2.4615	27.092	.104	1.0000	-1.0000	0.3386	1.2763	2109.6	.0507	.696	0.3211	1.2958	2125.6	.0477	.701
2000	1.8550-4	-842.1	2.4789	27.092	.108	1.0000	-1.0000	0.3396	1.2753	2163.5	.0526	.697	0.3240	1.2923	2177.9	.0498	.703
2100	1.7667-4	-808.1	2.4955	27.092	.112	1.0000	-1.0000	0.3406	1.2742	2216.0	.0545	.699	0.3269	1.2891	2228.9	.0518	.704
2200	1.6864-4	-774.0	2.5114	27.092	.115	1.0000	-1.0000	0.3417	1.2731	2267.2	.0563	.700	0.3296	1.2860	2278.7	.0539	.705
2300	1.6131-4	-739.7	2.5266	27.092	.119	1.0000	-1.0000	0.3429	1.2719	2317.0	.0582	.701	0.3321	1.2832	2327.3	.0559	.706
2400	1.5458-4	-705.4	2.5412	27.092	.122	1.0000	-1.0000	0.3442	1.2706	2365.7	.0601	.701	0.3346	1.2805	2374.9	.0579	.707
2500	1.4840-4	-670.9	2.5553	27.092	.126	1.0001	-1.0000	0.3456	1.2693	2413.2	.0620	.701	0.3369	1.2780	2421.5	.0599	.708

TABLE 32.1D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN² (0.01 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS (GAM)S FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
2600	1.4269-4	-636.3	2.5689	27.092	.129	1.0002	-1.0000	0.3471	1.2678	2459.6	.0641	.701	0.3392	1.2757	2467.2	.0619	.708
2700	1.3741-4	-601.5	2.5820	27.092	.133	1.0003	-1.0000	0.3489	1.2662	2504.9	.0663	.698	0.3413	1.2735	2512.1	.0639	.709
2800	1.3250-4	-566.5	2.5947	27.091	.136	1.0006	-1.0000	0.3509	1.2644	2549.1	.0687	.695	0.3433	1.2715	2556.2	.0659	.709
2900	1.2792-4	-531.3	2.6071	27.090	.139	1.0012	-1.0000	0.3536	1.2623	2592.0	.0716	.688	0.3452	1.2696	2599.5	.0679	.709
3000	1.2365-4	-495.7	2.6191	27.089	.143	1.0021	-1.0001	0.3571	1.2596	2633.6	.0751	.678	0.3470	1.2678	2642.2	.0699	.709
3100	1.1965-4	-459.8	2.6309	27.086	.146	1.0036	-1.0001	0.3620	1.2561	2673.5	.0795	.665	0.3488	1.2662	2684.2	.0719	.708
3200	1.1590-4	-423.3	2.6425	27.082	.149	1.0061	-1.0002	0.3693	1.2513	2711.3	.0852	.646	0.3504	1.2646	2725.7	.0738	.708
3300	1.1236-4	-385.8	2.6540	27.076	.152	1.0102	-1.0003	0.3803	1.2445	2746.2	.0930	.623	0.3520	1.2632	2766.8	.0758	.707
3400	1.0901-4	-347.0	2.6656	27.065	.155	1.0171	-1.0005	0.3977	1.2350	2777.4	.1038	.596	0.3534	1.2620	2807.5	.0778	.706
3500	1.0583-4	-305.9	2.6775	27.047	.159	1.0287	-1.0009	0.4258	1.2219	2803.8	.1191	.567	0.3548	1.2609	2848.2	.0798	.705
3600	1.0278-4	-261.2	2.6901	27.019	.162	1.0482	-1.0015	0.4713	1.2045	2824.8	.1414	.539	0.3562	1.2600	2889.2	.0818	.703
3700	9.9828-5	-210.8	2.7039	26.972	.165	1.0803	-1.0026	0.5438	1.1840	2841.7	.1743	.514	0.3574	1.2594	2930.9	.0839	.701
3800	9.6933-5	-151.3	2.7198	26.898	.168	1.1303	-1.0044	0.6527	1.1630	2858.2	.2224	.492	0.3586	1.2593	2974.1	.0860	.698
3900	9.4047-5	-78.9	2.7386	26.784	.170	1.2008	-1.0069	0.8011	1.1449	2879.0	.2902	.470	0.3597	1.2597	3019.9	.0883	.694
4000	9.1131-5	10.1	2.7611	26.619	.173	1.2903	-1.0103	0.9827	1.1313	2907.4	.3801	.447	0.3607	1.2608	3069.2	.0907	.688
4100	8.8162-5	118.4	2.7879	26.395	.176	1.3947	-1.0144	1.1875	1.1221	2943.8	.4925	.423	0.3616	1.2627	3122.8	.0932	.681
4200	8.5131-5	248.1	2.8191	26.110	.178	1.5111	-1.0193	1.4088	1.1161	2987.7	.6264	.400	0.3625	1.2655	3181.4	.0961	.672
4300	8.2037-5	400.7	2.8550	25.760	.180	1.6381	-1.0249	1.6446	1.1123	3038.3	.7798	.380	0.3634	1.2692	3245.6	.0993	.660
4400	7.8883-5	577.5	2.8956	25.345	.182	1.7741	-1.0311	1.8936	1.1100	3095.3	.9485	.364	0.3644	1.2739	3316.0	.1029	.646
4500	7.5680-5	779.7	2.9410	24.869	.185	1.9158	-1.0380	2.1512	1.1090	3158.6	*****	.353	0.3653	1.2797	3393.1	.1070	.630
4600	7.2448-5	1007.7	2.9911	24.336	.187	2.0562	-1.0452	2.4069	1.1089	3228.2	*****	.347	0.3664	1.2865	3477.2	.1116	.612
4700	6.9216-5	1260.4	3.0455	23.756	.189	2.1841	-1.0521	2.6415	1.1097	3303.9	*****	.345	0.3676	1.2944	3568.3	.1168	.593
4800	6.6032-5	1534.3	3.1032	23.145	.190	2.2843	-1.0582	2.8276	1.1113	3385.1	*****	.348	0.3688	1.3032	3665.7	.1223	.574
4900	6.2952-5	1823.2	3.1627	22.525	.192	2.3403	-1.0624	2.9341	1.1138	3470.9	*****	.354	0.3701	1.3126	3767.9	.1281	.556
5000	6.0039-5	2117.6	3.2222	21.921	.194	2.3394	-1.0640	2.9345	1.1173	3559.5	*****	.363	0.3715	1.3225	3872.7	.1340	.539
5100	5.7351-5	2406.2	3.2793	21.359	.197	2.2779	-1.0626	2.8183	1.1218	3649.3	*****	.375	0.3728	1.3322	3977.0	.1398	.524
5200	5.4926-5	2677.8	3.3321	20.857	.199	2.1638	-1.0585	2.5988	1.1275	3738.5	*****	.388	0.3741	1.3414	4077.8	.1453	.511
5300	5.2780-5	2923.6	3.3789	20.427	.201	2.0153	-1.0523	2.3100	1.1346	3825.8	*****	.400	0.3752	1.3497	4172.7	.1504	.501
5400	5.0905-5	3138.9	3.4192	20.073	.203	1.8537	-1.0450	1.9942	1.1435	3910.8	.9836	.412	0.3762	1.3567	4259.9	.1550	.493

TABLE 32.2D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO ϕ 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO ϕ 1.2239; P = 1.46959 LB/IN² (0.10 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	DLV DLT	DLV DLP	REACTING COMPOSITIONS					FROZEN COMPOSITIONS				
								CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0780-2	-1404.2	1.7549	28.338	.027	1.0000	-1.0000	0.2555	1.3779	932.9	.0086	.792	0.2555	1.3779	932.9	.0086	.792
380	1.0212-2	-1399.0	1.7687	28.338	.028	1.0000	-1.0000	0.2560	1.3769	958.1	.0092	.786	0.2560	1.3769	958.1	.0092	.786
400	9.7018-3	-1393.9	1.7819	28.338	.030	1.0000	-1.0000	0.2565	1.3758	982.6	.0097	.782	0.2565	1.3758	982.6	.0097	.782
420	9.2398-3	-1388.8	1.7944	28.338	.031	1.0000	-1.0000	0.2571	1.3748	1006.5	.0103	.778	0.2571	1.3748	1006.5	.0103	.778
440	8.8198-3	-1383.6	1.8064	28.338	.032	1.0000	-1.0000	0.2576	1.3736	1029.8	.0108	.774	0.2576	1.3736	1029.8	.0108	.775
460	8.4363-3	-1378.5	1.8178	28.338	.034	1.0000	-1.0000	0.2582	1.3725	1052.5	.0113	.772	0.2582	1.3725	1052.5	.0113	.772
480	8.0848-3	-1373.3	1.8288	28.338	.035	1.0000	-1.0000	0.2589	1.3712	1074.6	.0118	.769	0.2588	1.3713	1074.6	.0118	.770
500	7.7614-3	-1368.1	1.8394	28.338	.037	1.0000	-1.0000	0.2595	1.3699	1096.3	.0123	.768	0.2595	1.3700	1096.3	.0123	.768
520	7.4629-3	-1362.9	1.8496	28.338	.038	1.0000	-1.0000	0.2602	1.3686	1117.4	.0129	.766	0.2601	1.3688	1117.5	.0128	.767
537	7.2311-3	-1358.6	1.8578	28.338	.039	1.0001	-1.0000	0.2608	1.3674	1134.7	.0133	.765	0.2607	1.3677	1134.8	.0133	.766
540	7.1865-3	-1357.7	1.8594	28.338	.039	1.0001	-1.0000	0.2610	1.3672	1138.1	.0134	.765	0.2608	1.3675	1138.2	.0133	.766
560	6.9298-3	-1352.5	1.8689	28.338	.040	1.0001	-1.0000	0.2618	1.3657	1158.4	.0139	.764	0.2615	1.3661	1158.6	.0138	.766
580	6.6908-3	-1347.2	1.8782	28.338	.042	1.0002	-1.0000	0.2627	1.3640	1178.2	.0144	.762	0.2622	1.3648	1178.5	.0143	.766
600	6.4677-3	-1342.0	1.8871	28.338	.043	1.0004	-1.0000	0.2637	1.3622	1197.5	.0149	.761	0.2629	1.3634	1198.0	.0148	.766
620	6.2590-3	-1336.7	1.8957	28.337	.044	1.0006	-1.0000	0.2649	1.3602	1216.4	.0155	.758	0.2637	1.3620	1217.2	.0152	.766
640	6.0632-3	-1331.4	1.9042	28.337	.045	1.0009	-1.0000	0.2663	1.3580	1234.9	.0161	.754	0.2644	1.3606	1236.1	.0157	.766
660	5.8793-3	-1326.0	1.9124	28.336	.047	1.0014	-1.0000	0.2679	1.3555	1252.9	.0167	.747	0.2652	1.3591	1254.6	.0162	.765
680	5.7061-3	-1320.7	1.9204	28.334	.048	1.0020	-1.0001	0.2698	1.3527	1270.5	.0175	.740	0.2660	1.3577	1272.8	.0167	.764
700	5.5427-3	-1315.2	1.9283	28.332	.049	1.0028	-1.0001	0.2721	1.3494	1287.5	.0183	.730	0.2669	1.3562	1290.7	.0172	.763
720	5.3882-3	-1309.8	1.9360	28.330	.050	1.0040	-1.0002	0.2749	1.3457	1304.0	.0193	.718	0.2677	1.3547	1308.4	.0177	.761
740	5.2419-3	-1304.2	1.9435	28.326	.051	1.0055	-1.0002	0.2782	1.3414	1320.0	.0203	.705	0.2686	1.3532	1325.8	.0182	.761
760	5.1031-3	-1298.6	1.9510	28.321	.053	1.0074	-1.0003	0.2822	1.3366	1335.4	.0215	.689	0.2695	1.3517	1343.0	.0187	.760
780	4.9711-3	-1293.0	1.9584	28.315	.054	1.0099	-1.0004	0.2870	1.3312	1350.3	.0229	.672	0.2704	1.3503	1359.9	.0191	.759
800	4.8454-3	-1287.2	1.9657	28.307	.055	1.0130	-1.0006	0.2927	1.3253	1364.6	.0246	.653	0.2713	1.3488	1376.7	.0196	.758
820	4.7255-3	-1281.2	1.9731	28.296	.056	1.0168	-1.0007	0.2993	1.3187	1378.4	.0264	.634	0.2723	1.3473	1393.3	.0201	.757
840	4.6109-3	-1275.2	1.9804	28.283	.057	1.0214	-1.0010	0.3071	1.3117	1391.7	.0285	.614	0.2732	1.3458	1409.7	.0206	.756
860	4.5011-3	-1268.9	1.9877	28.267	.058	1.0270	-1.0012	0.3160	1.3042	1404.6	.0309	.594	0.2743	1.3444	1426.0	.0211	.755
880	4.3958-3	-1262.5	1.9951	28.248	.059	1.0335	-1.0016	0.3263	1.2963	1417.0	.0336	.575	0.2753	1.3429	1442.3	.0216	.754
900	4.2945-3	-1255.9	2.0025	28.224	.060	1.0411	-1.0019	0.3379	1.2883	1429.2	.0365	.557	0.2764	1.3415	1458.4	.0221	.752
920	4.1970-3	-1249.0	2.0101	28.196	.061	1.0498	-1.0024	0.3509	1.2801	1441.1	.0397	.542	0.2775	1.3402	1474.5	.0227	.750
940	4.1028-3	-1241.8	2.0178	28.163	.062	1.0596	-1.0029	0.3652	1.2720	1452.9	.0431	.528	0.2786	1.3389	1490.6	.0233	.747
960	4.0119-3	-1234.4	2.0256	28.124	.063	1.0705	-1.0035	0.3809	1.2642	1464.7	.0467	.518	0.2798	1.3376	1506.7	.0238	.744
980	3.9238-3	-1226.6	2.0337	28.080	.064	1.0824	-1.0042	0.3977	1.2566	1476.6	.0503	.510	0.2810	1.3363	1522.8	.0245	.741
1000	3.8385-3	-1218.5	2.0419	28.030	.066	1.0950	-1.0049	0.4155	1.2494	1488.7	.0538	.506	0.2822	1.3352	1538.9	.0251	.737
1020	3.7556-3	-1210.0	2.0503	27.973	.067	1.1082	-1.0056	0.4339	1.2427	1501.0	.0572	.505	0.2835	1.3341	1555.2	.0257	.733
1040	3.6752-3	-1201.1	2.0589	27.911	.068	1.1217	-1.0064	0.4526	1.2366	1513.6	.0603	.507	0.2848	1.3330	1571.5	.0264	.729
1060	3.5971-3	-1191.9	2.0677	27.843	.069	1.1348	-1.0072	0.4711	1.2312	1526.6	.0631	.512	0.2861	1.3320	1587.9	.0271	.724
1080	3.5212-3	-1182.3	2.0767	27.770	.070	1.1470	-1.0079	0.4885	1.2265	1540.0	.0652	.521	0.2875	1.3311	1604.4	.0278	.720
1100	3.4475-3	-1172.4	2.0858	27.692	.071	1.1575	-1.0086	0.5039	1.2227	1553.9	.0667	.533	0.2888	1.3303	1620.9	.0285	.715
1120	3.3761-3	-1162.1	2.0950	27.612	.072	1.1652	-1.0091	0.5160	1.2198	1568.4	.0673	.549	0.2902	1.3296	1637.5	.0292	.710
1140	3.3070-3	-1151.7	2.1042	27.530	.073	1.1690	-1.0093	0.5233	1.2181	1583.6	.0668	.568	0.2915	1.3288	1654.1	.0300	.705

TABLE 32.2D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 1.46959 LB/IN² (0.10 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1160	3.2405-3	-1141.3	2.1133	27.449	.073	1.1673	-1.0093	0.5238	1.2179	1599.7	.0653	.590	0.2928	1.3282	1670.5	.0307	.701
1180	3.1767-3	-1130.8	2.1222	27.373	.074	1.1590	-1.0089	0.5157	1.2196	1616.8	.0625	.614	0.2940	1.3275	1686.8	.0314	.697
1200	3.1158-3	-1120.7	2.1307	27.303	.075	1.1432	-1.0080	0.4980	1.2237	1635.3	.0588	.638	0.2952	1.3269	1702.8	.0321	.694
1220	3.0580-3	-1111.0	2.1387	27.243	.076	1.1209	-1.0068	0.4717	1.2305	1655.2	.0545	.660	0.2963	1.3262	1718.4	.0327	.691
1240	3.0034-3	-1101.9	2.1462	27.195	.077	1.0949	-1.0054	0.4403	1.2398	1676.5	.0502	.677	0.2974	1.3255	1733.5	.0333	.689
1260	2.9518-3	-1093.4	2.1529	27.160	.078	1.0692	-1.0040	0.4092	1.2505	1698.4	.0464	.688	0.2983	1.3246	1748.0	.0339	.688
1280	2.9031-3	-1085.5	2.1592	27.135	.079	1.0473	-1.0027	0.3828	1.2610	1719.7	.0437	.692	0.2992	1.3237	1762.0	.0344	.687
1300	2.8567-3	-1078.0	2.1649	27.119	.080	1.0308	-1.0018	0.3632	1.2698	1739.7	.0419	.693	0.3001	1.3228	1775.6	.0349	.687
1320	2.8123-3	-1070.9	2.1704	27.108	.081	1.0195	-1.0011	0.3500	1.2761	1757.7	.0408	.692	0.3009	1.3218	1788.9	.0354	.687
1340	2.7697-3	-1064.0	2.1756	27.102	.082	1.0121	-1.0007	0.3419	1.2801	1774.0	.0404	.691	0.3017	1.3208	1801.9	.0358	.687
1360	2.7286-3	-1057.2	2.1806	27.098	.082	1.0075	-1.0004	0.3371	1.2824	1788.9	.0403	.690	0.3025	1.3197	1814.7	.0363	.688
1380	2.6888-3	-1050.5	2.1855	27.096	.083	1.0046	-1.0003	0.3345	1.2835	1802.8	.0404	.690	0.3032	1.3187	1827.4	.0367	.688
1400	2.6503-3	-1043.8	2.1903	27.095	.084	1.0029	-1.0002	0.3331	1.2839	1816.1	.0407	.689	0.3040	1.3177	1839.9	.0372	.688
1420	2.6129-3	-1037.2	2.1950	27.094	.085	1.0018	-1.0001	0.3326	1.2838	1829.1	.0410	.689	0.3048	1.3167	1852.3	.0376	.689
1440	2.5765-3	-1030.5	2.1997	27.093	.086	1.0011	-1.0001	0.3325	1.2835	1841.7	.0414	.689	0.3055	1.3157	1864.6	.0381	.690
1460	2.5412-3	-1023.9	2.2043	27.093	.087	1.0007	-1.0000	0.3326	1.2831	1854.2	.0419	.689	0.3062	1.3147	1876.8	.0385	.690
1480	2.5068-3	-1017.2	2.2088	27.093	.088	1.0005	-1.0000	0.3329	1.2826	1866.5	.0423	.689	0.3070	1.3137	1888.9	.0389	.691
1500	2.4734-3	-1010.5	2.2133	27.092	.088	1.0003	-1.0000	0.3333	1.2822	1878.7	.0427	.690	0.3077	1.3127	1900.9	.0393	.691
1520	2.4408-3	-1003.9	2.2177	27.092	.089	1.0002	-1.0000	0.3336	1.2817	1890.8	.0431	.690	0.3085	1.3117	1912.9	.0398	.692
1540	2.4091-3	-997.2	2.2220	27.092	.090	1.0001	-1.0000	0.3340	1.2812	1902.9	.0436	.690	0.3092	1.3108	1924.7	.0402	.693
1560	2.3782-3	-990.5	2.2264	27.092	.091	1.0001	-1.0000	0.3344	1.2808	1914.9	.0440	.691	0.3099	1.3098	1936.5	.0406	.693
1580	2.3481-3	-983.8	2.2306	27.092	.092	1.0001	-1.0000	0.3347	1.2804	1926.8	.0444	.691	0.3106	1.3089	1948.1	.0411	.694
1600	2.3188-3	-977.1	2.2348	27.092	.093	1.0001	-1.0000	0.3351	1.2800	1938.7	.0449	.691	0.3113	1.3080	1959.7	.0415	.694
1620	2.2902-3	-970.4	2.2390	27.092	.093	1.0000	-1.0000	0.3354	1.2797	1950.5	.0453	.691	0.3120	1.3070	1971.3	.0419	.695
1640	2.2622-3	-963.7	2.2431	27.092	.094	1.0000	-1.0000	0.3357	1.2794	1962.3	.0457	.692	0.3127	1.3062	1982.7	.0423	.695
1660	2.2350-3	-957.0	2.2472	27.092	.095	1.0000	-1.0000	0.3360	1.2790	1974.0	.0461	.692	0.3134	1.3053	1994.1	.0428	.696
1680	2.2084-3	-950.3	2.2512	27.092	.096	1.0000	-1.0000	0.3363	1.2787	1985.6	.0465	.692	0.3141	1.3044	2005.4	.0432	.696
1700	2.1824-3	-943.5	2.2552	27.092	.097	1.0000	-1.0000	0.3365	1.2785	1997.2	.0469	.693	0.3148	1.3036	2016.7	.0436	.697
1720	2.1570-3	-936.8	2.2591	27.092	.097	1.0000	-1.0000	0.3368	1.2782	2008.7	.0473	.693	0.3154	1.3027	2027.8	.0440	.697
1740	2.1322-3	-930.1	2.2630	27.092	.098	1.0000	-1.0000	0.3370	1.2780	2020.1	.0477	.693	0.3161	1.3019	2038.9	.0444	.698
1760	2.1080-3	-923.3	2.2669	27.092	.099	1.0000	-1.0000	0.3372	1.2777	2031.5	.0481	.694	0.3168	1.3011	2050.0	.0448	.698
1780	2.0843-3	-916.6	2.2707	27.092	.100	1.0000	-1.0000	0.3375	1.2775	2042.8	.0485	.694	0.3174	1.3003	2061.0	.0453	.699
1800	2.0611-3	-909.8	2.2745	27.092	.100	1.0000	-1.0000	0.3377	1.2773	2054.1	.0488	.694	0.3180	1.2995	2071.9	.0457	.699
1900	1.9527-3	-876.0	2.2927	27.092	.104	1.0000	-1.0000	0.3386	1.2763	2109.6	.0507	.696	0.3211	1.2958	2125.6	.0477	.701
2000	1.8550-3	-842.1	2.3101	27.092	.108	1.0000	-1.0000	0.3396	1.2753	2163.5	.0526	.697	0.3240	1.2923	2177.9	.0498	.703
2100	1.7667-3	-808.1	2.3267	27.092	.112	1.0000	-1.0000	0.3406	1.2742	2216.0	.0545	.699	0.3269	1.2891	2228.9	.0518	.704
2200	1.6864-3	-774.0	2.3426	27.092	.115	1.0000	-1.0000	0.3417	1.2731	2267.2	.0563	.700	0.3296	1.2860	2278.7	.0539	.705
2300	1.6131-3	-739.7	2.3578	27.092	.119	1.0000	-1.0000	0.3429	1.2719	2317.0	.0582	.701	0.3321	1.2832	2327.3	.0559	.706
2400	1.5458-3	-705.4	2.3724	27.092	.122	1.0000	-1.0000	0.3441	1.2707	2365.7	.0600	.702	0.3346	1.2805	2374.9	.0579	.707
2500	1.4840-3	-670.9	2.3865	27.092	.126	1.0000	-1.0000	0.3454	1.2694	2413.3	.0619	.703	0.3369	1.2780	2421.5	.0599	.708

TABLE 32.2D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 1.46959 LB/IN² (0.10 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4269-3	-636.3	2.4001	27.092	.129	1.0001	-1.0000	0.3468	1.2681	2459.8	.0638	.703	0.3392	1.2757	2467.2	.0619	.708
2700	1.3741-3	-601.6	2.4132	27.092	.133	1.0001	-1.0000	0.3482	1.2667	2505.3	.0658	.703	0.3413	1.2735	2512.1	.0639	.709
2800	1.3250-3	-566.7	2.4259	27.092	.136	1.0002	-1.0000	0.3498	1.2653	2549.9	.0678	.702	0.3433	1.2715	2556.1	.0659	.709
2900	1.2793-3	-531.6	2.4382	27.091	.139	1.0004	-1.0000	0.3515	1.2638	2593.5	.0700	.700	0.3452	1.2696	2599.4	.0679	.709
3000	1.2366-3	-496.4	2.4501	27.091	.143	1.0006	-1.0000	0.3534	1.2621	2636.1	.0724	.697	0.3470	1.2678	2642.0	.0699	.709
3100	1.1967-3	-460.9	2.4618	27.090	.146	1.0011	-1.0000	0.3558	1.2602	2677.6	.0751	.692	0.3488	1.2661	2684.0	.0718	.709
3200	1.1593-3	-425.2	2.4731	27.089	.149	1.0019	-1.0001	0.3588	1.2579	2718.1	.0781	.685	0.3504	1.2646	2725.3	.0738	.708
3300	1.1240-3	-389.1	2.4842	27.087	.152	1.0031	-1.0001	0.3628	1.2550	2757.2	.0818	.675	0.3519	1.2631	2766.1	.0757	.708
3400	1.0909-3	-352.6	2.4951	27.084	.155	1.0049	-1.0002	0.3684	1.2513	2794.7	.0864	.663	0.3534	1.2618	2806.3	.0777	.707
3500	1.0595-3	-315.3	2.5059	27.079	.159	1.0079	-1.0003	0.3763	1.2464	2830.2	.0921	.648	0.3548	1.2605	2846.2	.0797	.706
3600	1.0298-3	-277.2	2.5167	27.071	.162	1.0126	-1.0004	0.3880	1.2398	2863.2	.0996	.630	0.3561	1.2594	2885.7	.0816	.705
3700	1.0015-3	-237.6	2.5275	27.059	.165	1.0199	-1.0007	0.4053	1.2310	2892.9	.1095	.609	0.3574	1.2584	2925.0	.0835	.704
3800	9.7450-4	-195.8	2.5386	27.041	.168	1.0313	-1.0010	0.4314	1.2195	2919.0	.1230	.588	0.3585	1.2576	2964.2	.0855	.703
3900	9.4853-4	-150.9	2.5503	27.014	.171	1.0491	-1.0017	0.4703	1.2054	2941.5	.1417	.567	0.3596	1.2569	3003.7	.0875	.702
4000	9.2338-4	-101.2	2.5629	26.971	.174	1.0758	-1.0026	0.5268	1.1893	2961.3	.1674	.546	0.3607	1.2565	3043.8	.0895	.700
4100	8.9878-4	-44.8	2.5768	26.909	.176	1.1138	-1.0040	0.6044	1.1729	2980.9	.2026	.526	0.3617	1.2564	3085.1	.0915	.697
4200	8.7447-4	20.4	2.5925	26.820	.179	1.1642	-1.0060	0.7036	1.1583	3003.1	.2490	.506	0.3625	1.2567	3128.0	.0937	.694
4300	8.5024-4	96.5	2.6104	26.698	.182	1.2256	-1.0084	0.8205	1.1464	3029.9	.3077	.485	0.3634	1.2574	3173.2	.0959	.689
4400	8.2597-4	184.9	2.6307	26.539	.184	1.2958	-1.0114	0.9494	1.1376	3062.3	.3788	.462	0.3641	1.2587	3221.1	.0982	.684
4500	8.0158-4	286.6	2.6536	26.340	.187	1.3726	-1.0148	1.0855	1.1313	3099.9	.4616	.439	0.3648	1.2605	3272.1	.1007	.677
4600	7.7707-4	402.2	2.6790	26.102	.189	1.4547	-1.0186	1.2266	1.1270	3142.4	.5558	.418	0.3655	1.2629	3326.5	.1034	.669
4700	7.5244-4	532.1	2.7069	25.825	.192	1.5415	-1.0228	1.3721	1.1241	3189.3	.6602	.398	0.3662	1.2658	3384.4	.1063	.660
4800	7.2772-4	676.8	2.7374	25.508	.194	1.6327	-1.0274	1.5217	1.1223	3240.4	.7731	.381	0.3668	1.2694	3446.3	.1095	.649
4900	7.0295-4	836.5	2.7703	25.153	.196	1.7270	-1.0324	1.6743	1.1213	3295.6	.8917	.368	0.3675	1.2736	3512.2	.1130	.638
5000	6.7819-4	1011.6	2.8057	24.762	.198	1.8224	-1.0377	1.8273	1.1211	3354.9	*****	.358	0.3683	1.2784	3582.5	.1167	.625
5100	6.5355-4	1201.8	2.8433	24.340	.200	1.9156	-1.0432	1.9756	1.1215	3418.2	*****	.351	0.3690	1.2838	3657.2	.1209	.611
5200	6.2915-4	1406.4	2.8830	23.890	.202	2.0016	-1.0485	2.1120	1.1225	3485.4	*****	.347	0.3699	1.2899	3736.2	.1253	.597
5300	6.0518-4	1623.5	2.9244	23.422	.204	2.0744	-1.0534	2.2269	1.1241	3556.3	*****	.346	0.3707	1.2965	3819.2	.1301	.582
5400	5.8186-4	1850.7	2.9669	22.944	.206	2.1277	-1.0575	2.3097	1.1263	3630.4	*****	.348	0.3717	1.3036	3905.6	.1351	.567

TABLE 32.3D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN² (1.00 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
360	1.0780-1	-1404.2	1.5935	28.338	.027	1.0000	-1.0000	0.2555	1.3779	932.9	.0086	.792	0.2555	1.3779	932.9	.0086	.792
380	1.0212-1	-1399.0	1.6074	28.338	.028	1.0000	-1.0000	0.2560	1.3769	958.1	.0092	.786	0.2560	1.3769	958.1	.0092	.786
400	9.7018-2	-1393.9	1.6205	28.338	.030	1.0000	-1.0000	0.2565	1.3758	982.6	.0097	.782	0.2565	1.3758	982.6	.0097	.782
420	9.2398-2	-1388.8	1.6330	28.338	.031	1.0000	-1.0000	0.2571	1.3748	1006.5	.0103	.778	0.2571	1.3748	1006.5	.0103	.778
440	8.8198-2	-1383.6	1.6450	28.338	.032	1.0000	-1.0000	0.2576	1.3736	1029.8	.0108	.775	0.2576	1.3736	1029.8	.0108	.775
460	8.4363-2	-1378.5	1.6565	28.338	.034	1.0000	-1.0000	0.2582	1.3725	1052.5	.0113	.772	0.2582	1.3725	1052.5	.0113	.772
480	8.0848-2	-1373.3	1.6675	28.338	.035	1.0000	-1.0000	0.2588	1.3713	1074.6	.0118	.770	0.2588	1.3713	1074.6	.0118	.770
500	7.7614-2	-1368.1	1.6781	28.338	.037	1.0000	-1.0000	0.2595	1.3700	1096.3	.0123	.768	0.2595	1.3700	1096.3	.0123	.768
520	7.4629-2	-1362.9	1.6882	28.338	.038	1.0000	-1.0000	0.2601	1.3687	1117.5	.0128	.767	0.2601	1.3688	1117.5	.0128	.767
537	7.2311-2	-1358.6	1.6965	28.338	.039	1.0000	-1.0000	0.2607	1.3676	1134.8	.0133	.766	0.2607	1.3677	1134.8	.0133	.766
540	7.1865-2	-1357.7	1.6981	28.338	.039	1.0000	-1.0000	0.2608	1.3674	1138.2	.0133	.766	0.2608	1.3675	1138.2	.0133	.766
560	6.9298-2	-1352.5	1.7076	28.338	.040	1.0000	-1.0000	0.2616	1.3660	1158.5	.0138	.765	0.2615	1.3661	1158.6	.0138	.766
580	6.6909-2	-1347.3	1.7168	28.338	.042	1.0001	-1.0000	0.2624	1.3645	1178.4	.0143	.765	0.2622	1.3648	1178.5	.0143	.766
600	6.4678-2	-1342.0	1.7257	28.338	.043	1.0001	-1.0000	0.2632	1.3630	1197.8	.0148	.765	0.2629	1.3634	1198.0	.0148	.766
620	6.2591-2	-1336.7	1.7343	28.338	.044	1.0002	-1.0000	0.2641	1.3614	1216.9	.0153	.764	0.2637	1.3620	1217.2	.0152	.766
640	6.0635-2	-1331.4	1.7427	28.338	.045	1.0003	-1.0000	0.2650	1.3597	1235.6	.0158	.762	0.2644	1.3606	1236.0	.0157	.766
660	5.8797-2	-1326.1	1.7509	28.338	.047	1.0004	-1.0000	0.2661	1.3579	1254.0	.0164	.759	0.2652	1.3591	1254.5	.0162	.765
680	5.7067-2	-1320.8	1.7589	28.337	.048	1.0006	-1.0000	0.2672	1.3560	1272.0	.0169	.756	0.2660	1.3577	1272.7	.0167	.764
700	5.5435-2	-1315.4	1.7666	28.337	.049	1.0009	-1.0000	0.2685	1.3539	1289.6	.0175	.752	0.2668	1.3562	1290.6	.0172	.763
720	5.3894-2	-1310.1	1.7742	28.336	.050	1.0013	-1.0000	0.2700	1.3517	1306.8	.0182	.747	0.2677	1.3547	1308.2	.0177	.762
740	5.2435-2	-1304.6	1.7816	28.335	.051	1.0017	-1.0001	0.2716	1.3493	1323.7	.0188	.742	0.2685	1.3532	1325.6	.0181	.761
760	5.1052-2	-1299.2	1.7889	28.333	.053	1.0024	-1.0001	0.2735	1.3466	1340.1	.0195	.736	0.2694	1.3517	1342.7	.0186	.761
780	4.9740-2	-1293.7	1.7960	28.331	.054	1.0031	-1.0001	0.2756	1.3437	1356.2	.0203	.728	0.2703	1.3502	1359.5	.0191	.760
800	4.8492-2	-1288.2	1.8030	28.328	.055	1.0042	-1.0002	0.2780	1.3406	1372.0	.0212	.720	0.2712	1.3487	1376.1	.0196	.760
820	4.7304-2	-1282.6	1.8099	28.325	.056	1.0054	-1.0002	0.2808	1.3372	1387.3	.0221	.710	0.2721	1.3472	1392.5	.0200	.760
840	4.6170-2	-1276.9	1.8167	28.321	.057	1.0069	-1.0003	0.2840	1.3334	1402.3	.0231	.700	0.2730	1.3456	1408.7	.0205	.759
860	4.5088-2	-1271.2	1.8235	28.316	.058	1.0088	-1.0004	0.2876	1.3294	1416.9	.0243	.688	0.2739	1.3441	1424.7	.0210	.759
880	4.4054-2	-1265.4	1.8301	28.309	.059	1.0110	-1.0005	0.2917	1.3251	1431.1	.0256	.675	0.2749	1.3426	1440.5	.0214	.759
900	4.3063-2	-1259.5	1.8367	28.301	.060	1.0137	-1.0007	0.2963	1.3204	1444.9	.0270	.661	0.2758	1.3412	1456.2	.0219	.758
920	4.2113-2	-1253.6	1.8433	28.292	.061	1.0168	-1.0008	0.3016	1.3155	1458.4	.0286	.647	0.2768	1.3397	1471.7	.0224	.757
940	4.1200-2	-1247.5	1.8498	28.281	.062	1.0205	-1.0010	0.3075	1.3103	1471.5	.0303	.632	0.2778	1.3382	1487.1	.0229	.756
960	4.0323-2	-1241.3	1.8564	28.267	.063	1.0247	-1.0012	0.3141	1.3048	1484.3	.0322	.618	0.2789	1.3368	1502.4	.0234	.755
980	3.9478-2	-1234.9	1.8629	28.251	.064	1.0295	-1.0015	0.3215	1.2992	1496.9	.0343	.604	0.2799	1.3354	1517.6	.0239	.753
1000	3.8663-2	-1228.4	1.8695	28.233	.065	1.0350	-1.0018	0.3296	1.2934	1509.2	.0365	.590	0.2810	1.3340	1532.7	.0245	.751
1020	3.7876-2	-1221.7	1.8761	28.212	.066	1.0412	-1.0022	0.3385	1.2874	1521.3	.0389	.578	0.2820	1.3326	1547.7	.0250	.749
1040	3.7116-2	-1214.8	1.8828	28.187	.067	1.0481	-1.0025	0.3483	1.2814	1533.2	.0415	.567	0.2831	1.3313	1562.7	.0256	.747
1060	3.6380-2	-1207.8	1.8895	28.160	.068	1.0556	-1.0030	0.3590	1.2754	1545.0	.0441	.557	0.2842	1.3300	1577.7	.0261	.745
1080	3.5666-2	-1200.5	1.8963	28.128	.069	1.0639	-1.0035	0.3705	1.2694	1556.7	.0469	.549	0.2854	1.3287	1592.7	.0267	.743
1100	3.4974-2	-1192.9	1.9032	28.093	.070	1.0728	-1.0040	0.3829	1.2634	1568.3	.0497	.543	0.2865	1.3275	1607.6	.0273	.740
1120	3.4301-2	-1185.2	1.9103	28.054	.071	1.0824	-1.0046	0.3960	1.2576	1580.0	.0525	.539	0.2877	1.3264	1622.6	.0279	.737
1140	3.3647-2	-1177.1	1.9174	28.010	.072	1.0925	-1.0052	0.4099	1.2519	1591.6	.0553	.536	0.2888	1.3253	1637.6	.0285	.734

TABLE 32.3D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN² (1.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	FROZEN GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.3011-2	-1168.8	1.9246	27.963	.073	1.1029	-1.0058	0.4244	1.2465	1603.4	.0581	.536	0.2900	1.3243	1652.7	.0291	.731
1180	3.2392-2	-1160.1	1.9320	27.911	.074	1.1137	-1.0065	0.4393	1.2413	1615.3	.0607	.538	0.2912	1.3233	1667.8	.0297	.728
1200	3.1788-2	-1151.2	1.9395	27.855	.075	1.1244	-1.0071	0.4544	1.2364	1627.4	.0631	.542	0.2924	1.3224	1683.0	.0304	.724
1220	3.1200-2	-1141.9	1.9472	27.796	.076	1.1348	-1.0078	0.4692	1.2320	1639.7	.0652	.548	0.2936	1.3216	1698.3	.0311	.721
1240	3.0627-2	-1132.4	1.9549	27.733	.077	1.1445	-1.0084	0.4833	1.2280	1652.3	.0670	.557	0.2948	1.3208	1713.6	.0317	.717
1260	3.0069-2	-1122.6	1.9628	27.667	.078	1.1528	-1.0089	0.4960	1.2246	1665.2	.0682	.567	0.2960	1.3201	1728.9	.0324	.713
1280	2.9527-2	-1112.6	1.9706	27.599	.079	1.1590	-1.0093	0.5062	1.2219	1678.6	.0689	.580	0.2972	1.3195	1744.3	.0330	.710
1300	2.9000-2	-1102.4	1.9786	27.530	.080	1.1623	-1.0096	0.5129	1.2202	1692.6	.0688	.595	0.2983	1.3189	1759.7	.0337	.707
1320	2.8490-2	-1092.1	1.9864	27.462	.081	1.1618	-1.0096	0.5149	1.2195	1707.2	.0679	.612	0.2994	1.3184	1775.0	.0344	.704
1340	2.7997-2	-1081.8	1.9941	27.396	.082	1.1565	-1.0093	0.5109	1.2202	1722.6	.0662	.630	0.3005	1.3179	1790.2	.0350	.701
1360	2.7524-2	-1071.7	2.0016	27.335	.082	1.1459	-1.0087	0.5002	1.2225	1739.0	.0636	.648	0.3016	1.3174	1805.2	.0356	.698
1380	2.7070-2	-1061.9	2.0088	27.279	.083	1.1302	-1.0078	0.4829	1.2266	1756.5	.0605	.666	0.3026	1.3168	1819.9	.0362	.696
1400	2.6637-2	-1052.4	2.0156	27.232	.084	1.1105	-1.0066	0.4606	1.2324	1774.9	.0571	.680	0.3035	1.3162	1834.2	.0368	.694
1420	2.6225-2	-1043.5	2.0220	27.193	.085	1.0891	-1.0054	0.4359	1.2397	1794.0	.0537	.690	0.3044	1.3156	1848.2	.0374	.693
1440	2.5832-2	-1035.0	2.0279	27.164	.086	1.0683	-1.0042	0.4118	1.2476	1813.4	.0509	.696	0.3053	1.3149	1861.6	.0379	.692
1460	2.5458-2	-1027.0	2.0334	27.142	.087	1.0502	-1.0031	0.3907	1.2554	1832.4	.0486	.698	0.3061	1.3141	1874.7	.0384	.692
1480	2.5099-2	-1019.3	2.0386	27.126	.088	1.0356	-1.0022	0.3740	1.2622	1850.4	.0470	.698	0.3069	1.3133	1887.5	.0388	.692
1500	2.4754-2	-1012.0	2.0435	27.115	.088	1.0247	-1.0015	0.3616	1.2677	1867.3	.0459	.696	0.3077	1.3124	1900.0	.0393	.692
1520	2.4422-2	-1004.9	2.0483	27.108	.089	1.0169	-1.0011	0.3528	1.2717	1882.9	.0453	.695	0.3084	1.3115	1912.2	.0397	.693
1540	2.4101-2	-997.9	2.0528	27.103	.090	1.0114	-1.0007	0.3469	1.2744	1897.5	.0450	.694	0.3092	1.3106	1924.2	.0402	.693
1560	2.3789-2	-991.0	2.0573	27.099	.091	1.0078	-1.0005	0.3431	1.2762	1911.2	.0450	.693	0.3099	1.3097	1936.1	.0406	.693
1580	2.3486-2	-984.1	2.0616	27.097	.092	1.0053	-1.0003	0.3406	1.2773	1924.3	.0451	.693	0.3106	1.3088	1947.9	.0410	.694
1600	2.3191-2	-977.3	2.0659	27.096	.093	1.0036	-1.0002	0.3390	1.2780	1937.0	.0453	.692	0.3113	1.3079	1959.6	.0415	.694
1620	2.2904-2	-970.6	2.0701	27.095	.093	1.0025	-1.0002	0.3381	1.2783	1949.4	.0456	.692	0.3120	1.3070	1971.2	.0419	.695
1640	2.2624-2	-963.8	2.0743	27.094	.094	1.0017	-1.0001	0.3375	1.2784	1961.5	.0459	.692	0.3127	1.3061	1982.6	.0423	.695
1660	2.2351-2	-957.1	2.0784	27.093	.095	1.0012	-1.0001	0.3373	1.2784	1973.4	.0462	.693	0.3134	1.3053	1994.0	.0428	.696
1680	2.2084-2	-950.3	2.0824	27.093	.096	1.0009	-1.0001	0.3371	1.2783	1985.2	.0466	.693	0.3141	1.3044	2005.4	.0432	.696
1700	2.1824-2	-943.6	2.0864	27.093	.097	1.0006	-1.0000	0.3371	1.2782	1996.9	.0470	.693	0.3148	1.3035	2016.6	.0436	.697
1720	2.1570-2	-936.8	2.0903	27.093	.097	1.0004	-1.0000	0.3372	1.2780	2008.5	.0473	.693	0.3154	1.3027	2027.8	.0440	.697
1740	2.1322-2	-930.1	2.0942	27.093	.098	1.0003	-1.0000	0.3373	1.2778	2020.0	.0477	.693	0.3161	1.3019	2038.9	.0444	.698
1760	2.1080-2	-923.3	2.0981	27.092	.099	1.0002	-1.0000	0.3375	1.2776	2031.4	.0481	.694	0.3168	1.3011	2050.0	.0448	.698
1780	2.0843-2	-916.6	2.1019	27.092	.100	1.0002	-1.0000	0.3376	1.2774	2042.8	.0485	.694	0.3174	1.3003	2061.0	.0453	.699
1800	2.0612-2	-909.8	2.1057	27.092	.100	1.0001	-1.0000	0.3378	1.2772	2054.0	.0489	.694	0.3180	1.2995	2071.9	.0457	.699
1900	1.9527-2	-876.0	2.1240	27.092	.104	1.0001	-1.0000	0.3387	1.2763	2109.5	.0507	.696	0.3211	1.2958	2125.6	.0477	.701
2000	1.8550-2	-842.1	2.1414	27.092	.108	1.0000	-1.0000	0.3396	1.2753	2163.5	.0526	.697	0.3240	1.2923	2177.9	.0498	.703
2100	1.7667-2	-808.1	2.1580	27.092	.112	1.0000	-1.0000	0.3406	1.2742	2216.0	.0545	.699	0.3269	1.2891	2228.9	.0518	.704
2200	1.6864-2	-774.0	2.1738	27.092	.115	1.0000	-1.0000	0.3417	1.2731	2267.2	.0563	.700	0.3296	1.2860	2278.7	.0539	.705
2300	1.6131-2	-739.7	2.1890	27.092	.119	1.0000	-1.0000	0.3429	1.2719	2317.1	.0581	.701	0.3321	1.2832	2327.3	.0559	.706
2400	1.5458-2	-705.4	2.2037	27.092	.122	1.0000	-1.0000	0.3441	1.2707	2365.7	.0600	.702	0.3346	1.2805	2374.9	.0579	.707
2500	1.4840-2	-670.9	2.2177	27.092	.126	1.0000	-1.0000	0.3454	1.2694	2413.3	.0619	.703	0.3369	1.2780	2421.5	.0599	.708

TABLE 32.3D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN² (1.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4269-2	-636.3	2.2313	27.092	.129	1.0000	-1.0000	0.3467	1.2681	2459.9	.0637	.703	0.3392	1.2757	2467.2	.0619	.708
2700	1.3741-2	-601.6	2.2444	27.092	.133	1.0000	-1.0000	0.3480	1.2668	2505.5	.0656	.704	0.3413	1.2735	2512.1	.0639	.709
2800	1.3250-2	-566.7	2.2571	27.092	.136	1.0001	-1.0000	0.3494	1.2655	2550.1	.0675	.704	0.3433	1.2715	2556.1	.0659	.709
2900	1.2793-2	-531.7	2.2694	27.092	.139	1.0001	-1.0000	0.3508	1.2642	2593.9	.0695	.703	0.3452	1.2696	2599.4	.0679	.709
3000	1.2367-2	-496.6	2.2813	27.092	.143	1.0002	-1.0000	0.3523	1.2629	2636.8	.0715	.703	0.3470	1.2678	2642.0	.0699	.709
3100	1.1968-2	-461.2	2.2929	27.091	.146	1.0003	-1.0000	0.3539	1.2615	2679.0	.0737	.701	0.3488	1.2661	2683.9	.0718	.709
3200	1.1593-2	-425.8	2.3041	27.091	.149	1.0006	-1.0000	0.3557	1.2600	2720.2	.0759	.699	0.3504	1.2645	2725.2	.0738	.708
3300	1.1242-2	-390.1	2.3151	27.090	.152	1.0009	-1.0000	0.3577	1.2583	2760.6	.0783	.695	0.3519	1.2631	2765.9	.0757	.708
3400	1.0911-2	-354.2	2.3258	27.089	.155	1.0015	-1.0000	0.3602	1.2565	2800.1	.0810	.691	0.3534	1.2617	2806.0	.0777	.707
3500	1.0599-2	-318.1	2.3363	27.088	.159	1.0024	-1.0001	0.3632	1.2543	2838.6	.0841	.685	0.3548	1.2605	2845.6	.0796	.707
3600	1.0303-2	-281.5	2.3466	27.086	.162	1.0037	-1.0001	0.3672	1.2516	2875.9	.0877	.677	0.3561	1.2593	2884.7	.0815	.706
3700	1.0024-2	-244.6	2.3567	27.082	.165	1.0056	-1.0002	0.3726	1.2482	2911.8	.0919	.668	0.3573	1.2582	2923.4	.0834	.705
3800	9.7579-3	-206.9	2.3667	27.077	.168	1.0085	-1.0003	0.3800	1.2438	2946.0	.0970	.657	0.3585	1.2572	2961.8	.0853	.705
3900	9.5051-3	-168.5	2.3767	27.070	.171	1.0128	-1.0004	0.3902	1.2383	2978.3	.1034	.644	0.3596	1.2563	2999.8	.0872	.704
4000	9.2638-3	-128.8	2.3868	27.059	.174	1.0191	-1.0007	0.4044	1.2313	3008.3	.1115	.630	0.3607	1.2555	3037.7	.0892	.703
4100	9.0326-3	-87.4	2.3970	27.043	.177	1.0284	-1.0010	0.4243	1.2225	3035.7	.1219	.615	0.3617	1.2548	3075.5	.0911	.701
4200	8.8102-3	-43.7	2.4075	27.021	.179	1.0416	-1.0015	0.4519	1.2121	3060.6	.1354	.599	0.3626	1.2542	3113.3	.0930	.700
4300	8.5951-3	3.3	2.4186	26.989	.182	1.0602	-1.0022	0.4891	1.2003	3083.6	.1530	.583	0.3635	1.2538	3151.6	.0950	.698
4400	8.3858-3	54.5	2.4304	26.944	.185	1.0853	-1.0032	0.5377	1.1881	3105.8	.1757	.567	0.3643	1.2537	3190.4	.0969	.696
4500	8.1810-3	111.2	2.4431	26.883	.188	1.1175	-1.0045	0.5978	1.1762	3128.8	.2043	.550	0.3650	1.2537	3230.2	.0990	.693
4600	7.9792-3	174.4	2.4570	26.803	.191	1.1564	-1.0061	0.6681	1.1657	3154.0	.2394	.532	0.3657	1.2541	3271.3	.1010	.690
4700	7.7795-3	245.1	2.4722	26.700	.193	1.2010	-1.0081	0.7459	1.1571	3182.3	.2810	.513	0.3663	1.2547	3313.9	.1032	.686
4800	7.5814-3	323.8	2.4888	26.574	.196	1.2499	-1.0103	0.8280	1.1503	3214.1	.3289	.493	0.3669	1.2558	3358.2	.1054	.681
4900	7.3846-3	410.8	2.5067	26.423	.198	1.3017	-1.0128	0.9122	1.1452	3249.4	.3828	.472	0.3675	1.2571	3404.5	.1077	.676
5000	7.1891-3	506.2	2.5260	26.249	.201	1.3559	-1.0155	0.9973	1.1415	3288.0	.4423	.452	0.3680	1.2588	3452.8	.1100	.671
5100	6.9948-3	610.2	2.5466	26.050	.203	1.4119	-1.0185	1.0826	1.1388	3329.5	.5072	.433	0.3685	1.2609	3503.3	.1125	.664
5200	6.8018-3	722.8	2.5684	25.828	.205	1.4696	-1.0216	1.1683	1.1370	3373.7	.5768	.416	0.3690	1.2632	3556.0	.1152	.657
5300	6.6103-3	843.9	2.5915	25.584	.207	1.5289	-1.0250	1.2542	1.1359	3420.5	.6506	.400	0.3695	1.2660	3611.1	.1180	.650
5400	6.4205-3	973.6	2.6157	25.318	.210	1.5894	-1.0286	1.3402	1.1354	3469.9	.7274	.386	0.3700	1.2691	3668.5	.1210	.641

TABLE 32.4D .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN2 (10.00 ATM)
WET AIR (W/A= 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM VS FT/S	COND BTU/ FT HR R	PRAN			
360	1.0780	0	-1404.2	1.4322	28.338	.027	1.0000	-1.0000	0.2555	1.3779	932.9	.0086	.792	0.2555	1.3779	932.9	.0086	.792
380	1.0212	0	-1399.0	1.4460	28.338	.028	1.0000	-1.0000	0.2560	1.3769	958.1	.0092	.786	0.2560	1.3769	958.1	.0092	.786
400	9.7018	-1	-1393.9	1.4592	28.338	.030	1.0000	-1.0000	0.2565	1.3758	982.6	.0097	.782	0.2565	1.3758	982.6	.0097	.782
420	9.2398	-1	-1388.8	1.4717	28.338	.031	1.0000	-1.0000	0.2571	1.3748	1006.5	.0103	.778	0.2571	1.3748	1006.5	.0103	.778
440	8.8198	-1	-1383.6	1.4837	28.338	.032	1.0000	-1.0000	0.2576	1.3736	1029.8	.0108	.775	0.2576	1.3736	1029.8	.0108	.775
460	8.4363	-1	-1378.5	1.4951	28.338	.034	1.0000	-1.0000	0.2582	1.3725	1052.5	.0113	.772	0.2582	1.3725	1052.5	.0113	.772
480	8.0848	-1	-1373.3	1.5061	28.338	.035	1.0000	-1.0000	0.2588	1.3713	1074.6	.0118	.770	0.2588	1.3713	1074.6	.0118	.770
500	7.7614	-1	-1368.1	1.5167	28.338	.037	1.0000	-1.0000	0.2595	1.3700	1096.3	.0123	.768	0.2595	1.3700	1096.3	.0123	.768
520	7.4629	-1	-1362.9	1.5269	28.338	.038	1.0000	-1.0000	0.2601	1.3687	1117.5	.0128	.767	0.2601	1.3688	1117.5	.0128	.767
537	7.2311	-1	-1358.6	1.5351	28.338	.039	1.0000	-1.0000	0.2607	1.3676	1134.8	.0133	.766	0.2607	1.3677	1134.8	.0133	.766
540	7.1865	-1	-1357.7	1.5367	28.338	.039	1.0000	-1.0000	0.2608	1.3674	1138.2	.0133	.766	0.2608	1.3675	1138.2	.0133	.766
560	6.9299	-1	-1352.5	1.5462	28.338	.040	1.0000	-1.0000	0.2615	1.3660	1158.5	.0138	.766	0.2615	1.3661	1158.6	.0138	.766
580	6.6909	-1	-1347.3	1.5554	28.338	.042	1.0000	-1.0000	0.2623	1.3646	1178.4	.0143	.766	0.2622	1.3648	1178.5	.0143	.766
600	6.4679	-1	-1342.0	1.5643	28.338	.043	1.0000	-1.0000	0.2630	1.3632	1197.9	.0148	.766	0.2629	1.3634	1198.0	.0148	.766
620	6.2592	-1	-1336.7	1.5730	28.338	.044	1.0000	-1.0000	0.2638	1.3617	1217.1	.0152	.766	0.2637	1.3620	1217.2	.0152	.766
640	6.0636	-1	-1331.5	1.5813	28.338	.045	1.0001	-1.0000	0.2646	1.3602	1235.9	.0157	.765	0.2644	1.3606	1236.0	.0157	.766
660	5.8798	-1	-1326.2	1.5895	28.338	.047	1.0001	-1.0000	0.2655	1.3587	1254.3	.0162	.763	0.2652	1.3591	1254.5	.0162	.765
680	5.7069	-1	-1320.8	1.5974	28.338	.048	1.0002	-1.0000	0.2664	1.3571	1272.4	.0168	.762	0.2660	1.3576	1272.7	.0167	.764
700	5.5438	-1	-1315.5	1.6052	28.338	.049	1.0003	-1.0000	0.2674	1.3554	1290.2	.0173	.760	0.2668	1.3562	1290.6	.0172	.763
720	5.3897	-1	-1310.1	1.6127	28.338	.050	1.0004	-1.0000	0.2684	1.3536	1307.7	.0178	.757	0.2677	1.3547	1308.2	.0177	.762
740	5.2440	-1	-1304.8	1.6201	28.337	.051	1.0005	-1.0000	0.2695	1.3518	1324.8	.0184	.755	0.2685	1.3532	1325.5	.0181	.762
760	5.1059	-1	-1299.4	1.6273	28.337	.053	1.0007	-1.0000	0.2707	1.3500	1341.7	.0189	.753	0.2694	1.3517	1342.6	.0186	.761
780	4.9749	-1	-1293.9	1.6343	28.336	.054	1.0010	-1.0000	0.2720	1.3480	1358.3	.0195	.750	0.2702	1.3502	1359.4	.0191	.761
800	4.8504	-1	-1288.5	1.6412	28.335	.055	1.0013	-1.0001	0.2733	1.3459	1374.5	.0201	.747	0.2711	1.3486	1375.9	.0195	.761
820	4.7319	-1	-1283.0	1.6480	28.334	.056	1.0017	-1.0001	0.2748	1.3437	1390.5	.0207	.743	0.2720	1.3471	1392.2	.0200	.760
840	4.6190	-1	-1277.5	1.6546	28.333	.057	1.0022	-1.0001	0.2764	1.3414	1406.2	.0213	.739	0.2729	1.3456	1408.4	.0205	.760
860	4.5114	-1	-1271.9	1.6612	28.331	.058	1.0028	-1.0001	0.2782	1.3390	1421.6	.0220	.735	0.2738	1.3441	1424.3	.0209	.760
880	4.4085	-1	-1266.4	1.6676	28.329	.059	1.0035	-1.0002	0.2802	1.3365	1436.7	.0227	.729	0.2747	1.3425	1440.0	.0214	.760
900	4.3102	-1	-1260.7	1.6739	28.327	.060	1.0044	-1.0002	0.2823	1.3338	1451.6	.0235	.723	0.2757	1.3410	1455.5	.0218	.760
920	4.2160	-1	-1255.1	1.6801	28.324	.061	1.0054	-1.0003	0.2847	1.3310	1466.1	.0244	.716	0.2766	1.3395	1470.8	.0223	.759
940	4.1258	-1	-1249.3	1.6863	28.320	.062	1.0066	-1.0003	0.2873	1.3280	1480.4	.0253	.708	0.2776	1.3380	1486.0	.0228	.759
960	4.0392	-1	-1243.6	1.6924	28.316	.063	1.0080	-1.0004	0.2901	1.3249	1494.4	.0263	.700	0.2786	1.3365	1501.0	.0233	.758
980	3.9561	-1	-1237.7	1.6984	28.311	.064	1.0097	-1.0005	0.2932	1.3216	1508.2	.0273	.691	0.2795	1.3350	1515.8	.0238	.757
1000	3.8761	-1	-1231.8	1.7043	28.305	.065	1.0116	-1.0006	0.2967	1.3182	1521.7	.0285	.682	0.2805	1.3335	1530.5	.0243	.756
1020	3.7992	-1	-1225.9	1.7103	28.298	.066	1.0137	-1.0007	0.3004	1.3146	1534.9	.0297	.672	0.2815	1.3321	1545.1	.0247	.756
1040	3.7250	-1	-1219.8	1.7161	28.289	.067	1.0162	-1.0009	0.3045	1.3109	1547.9	.0310	.662	0.2825	1.3306	1559.5	.0252	.754
1060	3.6535	-1	-1213.7	1.7220	28.280	.068	1.0190	-1.0010	0.3091	1.3070	1560.7	.0324	.652	0.2835	1.3292	1573.9	.0258	.753
1080	3.5845	-1	-1207.5	1.7278	28.269	.069	1.0222	-1.0012	0.3140	1.3030	1573.2	.0340	.642	0.2845	1.3278	1588.1	.0263	.752
1100	3.5178	-1	-1201.1	1.7336	28.257	.070	1.0257	-1.0014	0.3194	1.2988	1585.5	.0356	.632	0.2856	1.3264	1602.3	.0268	.751
1120	3.4532	-1	-1194.7	1.7394	28.243	.071	1.0297	-1.0017	0.3253	1.2945	1597.6	.0373	.623	0.2866	1.3251	1616.4	.0273	.749
1140	3.3907	-1	-1188.1	1.7452	28.227	.072	1.0340	-1.0019	0.3317	1.2901	1609.5	.0391	.614	0.2877	1.3238	1630.4	.0278	.748

TABLE 32.4D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
 (ONLY GAS PHASE PERMITTED)

 FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN² (10.00 ATM)
 WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
1160	3.3302-1	-1181.4	1.7510	28.209	.073	1.0388	-1.0022	0.3386	1.2856	1621.3	.0410	.605	0.2887	1.3225	1644.3	.0284	.746
1180	3.2714-1	-1174.6	1.7569	28.189	.074	1.0441	-1.0025	0.3461	1.2810	1632.9	.0430	.598	0.2898	1.3212	1658.3	.0289	.744
1200	3.2143-1	-1167.6	1.7628	28.167	.075	1.0499	-1.0029	0.3541	1.2764	1644.3	.0451	.591	0.2908	1.3200	1672.1	.0295	.743
1220	3.1589-1	-1160.4	1.7687	28.142	.076	1.0561	-1.0033	0.3628	1.2717	1655.6	.0472	.585	0.2919	1.3188	1686.0	.0300	.741
1240	3.1049-1	-1153.0	1.7747	28.115	.077	1.0629	-1.0037	0.3721	1.2670	1666.8	.0495	.580	0.2930	1.3177	1699.9	.0306	.739
1260	3.0524-1	-1145.5	1.7807	28.085	.078	1.0701	-1.0042	0.3821	1.2622	1678.0	.0517	.576	0.2940	1.3166	1713.7	.0311	.737
1280	3.0012-1	-1137.8	1.7868	28.052	.079	1.0778	-1.0047	0.3926	1.2575	1689.1	.0540	.574	0.2951	1.3156	1727.6	.0317	.734
1300	2.9513-1	-1129.8	1.7930	28.017	.080	1.0859	-1.0052	0.4037	1.2529	1700.2	.0563	.572	0.2962	1.3146	1741.5	.0323	.732
1320	2.9026-1	-1121.6	1.7992	27.978	.081	1.0944	-1.0057	0.4153	1.2484	1711.3	.0586	.572	0.2973	1.3137	1755.4	.0329	.730
1340	2.8550-1	-1113.2	1.8056	27.937	.082	1.1031	-1.0063	0.4273	1.2441	1722.5	.0609	.573	0.2983	1.3128	1769.4	.0335	.727
1360	2.8085-1	-1104.5	1.8120	27.892	.083	1.1120	-1.0068	0.4395	1.2399	1733.8	.0631	.575	0.2994	1.3120	1783.4	.0341	.725
1380	2.7631-1	-1095.6	1.8185	27.845	.083	1.1209	-1.0074	0.4517	1.2360	1745.2	.0651	.578	0.3005	1.3112	1797.5	.0347	.723
1400	2.7188-1	-1086.4	1.8251	27.795	.084	1.1296	-1.0080	0.4637	1.2325	1756.8	.0670	.583	0.3015	1.3106	1811.7	.0353	.720
1420	2.6754-1	-1077.0	1.8317	27.742	.085	1.1377	-1.0085	0.4751	1.2293	1768.7	.0686	.589	0.3025	1.3099	1825.8	.0359	.718
1440	2.6330-1	-1067.4	1.8385	27.687	.086	1.1449	-1.0090	0.4854	1.2265	1780.9	.0699	.597	0.3036	1.3094	1840.1	.0365	.715
1460	2.5917-1	-1057.6	1.8452	27.631	.087	1.1508	-1.0094	0.4941	1.2243	1793.5	.0708	.606	0.3046	1.3088	1854.3	.0371	.713
1480	2.5513-1	-1047.7	1.8520	27.573	.088	1.1548	-1.0097	0.5006	1.2228	1806.4	.0713	.616	0.3056	1.3084	1868.6	.0377	.711
1500	2.5120-1	-1037.6	1.8587	27.516	.089	1.1564	-1.0098	0.5041	1.2219	1819.9	.0712	.627	0.3065	1.3080	1882.8	.0383	.709
1520	2.4739-1	-1027.6	1.8654	27.459	.089	1.1551	-1.0098	0.5041	1.2219	1833.9	.0705	.639	0.3075	1.3075	1897.0	.0389	.707
1540	2.4369-1	-1017.5	1.8720	27.404	.090	1.1505	-1.0095	0.5001	1.2229	1848.5	.0692	.652	0.3084	1.3072	1911.1	.0395	.705
1560	2.4011-1	-1007.6	1.8784	27.352	.091	1.1423	-1.0091	0.4917	1.2249	1863.7	.0674	.664	0.3093	1.3068	1925.0	.0400	.703
1580	2.3665-1	-997.9	1.8846	27.305	.092	1.1307	-1.0084	0.4794	1.2279	1879.6	.0651	.676	0.3101	1.3064	1938.7	.0406	.702
1600	2.3333-1	-988.4	1.8905	27.262	.093	1.1163	-1.0075	0.4636	1.2319	1896.0	.0626	.686	0.3110	1.3059	1952.1	.0411	.701
1620	2.3014-1	-979.3	1.8962	27.225	.093	1.1001	-1.0065	0.4458	1.2369	1912.9	.0600	.694	0.3118	1.3054	1965.2	.0416	.700
1640	2.2708-1	-970.6	1.9015	27.195	.094	1.0833	-1.0055	0.4272	1.2425	1930.1	.0575	.699	0.3125	1.3049	1978.0	.0421	.699
1660	2.2414-1	-962.2	1.9066	27.170	.095	1.0672	-1.0044	0.4095	1.2482	1947.3	.0554	.702	0.3133	1.3043	1990.5	.0426	.699
1680	2.2131-1	-954.2	1.9114	27.151	.096	1.0528	-1.0035	0.3936	1.2538	1964.0	.0536	.703	0.3140	1.3037	2002.7	.0430	.698
1700	2.1859-1	-946.5	1.9160	27.136	.097	1.0406	-1.0027	0.3803	1.2589	1980.2	.0523	.703	0.3147	1.3030	2014.6	.0435	.698
1720	2.1596-1	-939.0	1.9204	27.124	.097	1.0306	-1.0021	0.3695	1.2632	1995.6	.0513	.702	0.3154	1.3023	2026.3	.0439	.699
1740	2.1341-1	-931.7	1.9246	27.116	.098	1.0229	-1.0016	0.3613	1.2667	2010.3	.0506	.700	0.3161	1.3016	2037.8	.0444	.699
1760	2.1094-1	-924.5	1.9287	27.110	.099	1.0170	-1.0012	0.3551	1.2693	2024.2	.0502	.699	0.3167	1.3008	2049.1	.0448	.699
1780	2.0853-1	-917.5	1.9327	27.105	.100	1.0126	-1.0009	0.3505	1.2713	2037.4	.0500	.698	0.3174	1.3001	2060.3	.0452	.699
1800	2.0619-1	-910.5	1.9365	27.102	.100	1.0093	-1.0007	0.3472	1.2728	2050.1	.0500	.698	0.3180	1.2994	2071.4	.0457	.700
1900	1.9529-1	-876.2	1.9551	27.095	.104	1.0022	-1.0002	0.3407	1.2753	2108.7	.0510	.697	0.3211	1.2958	2125.5	.0477	.701
2000	1.8551-1	-842.2	1.9725	27.093	.108	1.0007	-1.0001	0.3401	1.2750	2163.3	.0527	.697	0.3240	1.2923	2177.9	.0498	.703
2100	1.7667-1	-808.1	1.9892	27.093	.112	1.0003	-1.0000	0.3408	1.2741	2215.9	.0545	.699	0.3269	1.2891	2228.9	.0518	.704
2200	1.6864-1	-774.0	2.0050	27.092	.115	1.0001	-1.0000	0.3418	1.2731	2267.1	.0563	.700	0.3296	1.2860	2278.7	.0539	.705
2300	1.6131-1	-739.8	2.0203	27.092	.119	1.0001	-1.0000	0.3429	1.2719	2317.0	.0581	.701	0.3321	1.2832	2327.3	.0559	.706
2400	1.5459-1	-705.4	2.0349	27.092	.122	1.0001	-1.0000	0.3441	1.2707	2365.7	.0600	.702	0.3346	1.2805	2374.9	.0579	.707
2500	1.4840-1	-670.9	2.0489	27.092	.126	1.0000	-1.0000	0.3454	1.2694	2413.3	.0618	.703	0.3369	1.2780	2421.5	.0599	.708

TABLE 32.4D CONCLUDED - PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN² (10.00 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN
2600	1.4269-1	-636.3	2.0625	27.092	.129	1.0000	-1.0000	0.3467	1.2682	2459.9	.0637	.704	0.3392	1.2757	2467.2	.0619	.708
2700	1.3741-1	-601.6	2.0756	27.092	.133	1.0000	-1.0000	0.3480	1.2669	2505.5	.0656	.704	0.3413	1.2735	2512.1	.0639	.709
2800	1.3250-1	-566.7	2.0883	27.092	.136	1.0000	-1.0000	0.3493	1.2656	2550.2	.0675	.705	0.3433	1.2715	2556.1	.0659	.709
2900	1.2793-1	-531.7	2.1006	27.092	.139	1.0000	-1.0000	0.3506	1.2644	2594.0	.0694	.705	0.3452	1.2696	2599.4	.0679	.709
3000	1.2367-1	-496.6	2.1125	27.092	.143	1.0001	-1.0000	0.3519	1.2631	2637.1	.0713	.705	0.3470	1.2678	2642.0	.0699	.709
3100	1.1968-1	-461.4	2.1241	27.092	.146	1.0001	-1.0000	0.3533	1.2619	2679.4	.0732	.704	0.3488	1.2661	2683.9	.0718	.709
3200	1.1594-1	-426.0	2.1353	27.092	.149	1.0002	-1.0000	0.3547	1.2606	2720.9	.0752	.703	0.3504	1.2645	2725.1	.0738	.708
3300	1.1242-1	-390.4	2.1462	27.092	.152	1.0003	-1.0000	0.3561	1.2594	2761.7	.0773	.702	0.3519	1.2631	2765.8	.0757	.708
3400	1.0912-1	-354.7	2.1569	27.091	.155	1.0005	-1.0000	0.3577	1.2581	2801.8	.0794	.700	0.3534	1.2617	2805.9	.0777	.707
3500	1.0600-1	-318.9	2.1673	27.091	.159	1.0007	-1.0000	0.3594	1.2567	2841.2	.0816	.698	0.3548	1.2604	2845.4	.0796	.707
3600	1.0305-1	-282.9	2.1774	27.090	.162	1.0011	-1.0000	0.3613	1.2552	2879.8	.0840	.695	0.3561	1.2592	2884.4	.0815	.706
3700	1.0026-1	-246.6	2.1873	27.089	.165	1.0017	-1.0001	0.3636	1.2535	2917.7	.0866	.692	0.3573	1.2581	2923.0	.0834	.706
3800	9.7616-2	-210.1	2.1971	27.088	.168	1.0026	-1.0001	0.3664	1.2516	2954.6	.0894	.687	0.3585	1.2571	2961.1	.0853	.705
3900	9.5106-2	-173.3	2.2066	27.085	.171	1.0038	-1.0001	0.3699	1.2493	2990.6	.0926	.682	0.3596	1.2561	2998.8	.0872	.704
4000	9.2717-2	-136.1	2.2161	27.082	.174	1.0055	-1.0002	0.3744	1.2465	3025.6	.0962	.676	0.3607	1.2552	3036.0	.0891	.703
4100	9.0441-2	-98.4	2.2254	27.078	.177	1.0079	-1.0003	0.3803	1.2432	3059.3	.1005	.668	0.3617	1.2544	3073.0	.0909	.702
4200	8.8268-2	-60.0	2.2346	27.072	.180	1.0112	-1.0004	0.3880	1.2391	3091.6	.1056	.660	0.3626	1.2536	3109.7	.0928	.701
4300	8.6188-2	-20.7	2.2439	27.063	.182	1.0159	-1.0006	0.3981	1.2341	3122.3	.1116	.650	0.3635	1.2529	3146.1	.0947	.700
4400	8.4192-2	19.7	2.2532	27.051	.185	1.0222	-1.0008	0.4113	1.2281	3151.4	.1190	.640	0.3643	1.2524	3182.4	.0966	.699
4500	8.2273-2	61.7	2.2626	27.035	.188	1.0308	-1.0012	0.4285	1.2210	3178.8	.1281	.629	0.3651	1.2519	3218.7	.0985	.697
4600	8.0420-2	105.6	2.2722	27.014	.191	1.0423	-1.0016	0.4505	1.2131	3204.8	.1392	.618	0.3658	1.2515	3255.1	.1004	.695
4700	7.8625-2	152.0	2.2822	26.985	.194	1.0572	-1.0022	0.4781	1.2045	3229.7	.1528	.606	0.3665	1.2512	3291.7	.1024	.693
4800	7.6880-2	201.4	2.2926	26.948	.196	1.0758	-1.0030	0.5117	1.1957	3254.2	.1693	.594	0.3672	1.2511	3328.7	.1043	.691
4900	7.5177-2	254.5	2.3036	26.899	.199	1.0985	-1.0040	0.5510	1.1872	3279.1	.1889	.580	0.3678	1.2512	3366.2	.1062	.689
5000	7.3508-2	311.8	2.3151	26.839	.202	1.1248	-1.0052	0.5952	1.1793	3305.1	.2119	.566	0.3683	1.2514	3404.6	.1082	.687
5100	7.1868-2	373.7	2.3274	26.765	.204	1.1542	-1.0066	0.6430	1.1725	3332.9	.2381	.552	0.3688	1.2518	3443.8	.1102	.684
5200	7.0254-2	440.4	2.3404	26.677	.207	1.1860	-1.0081	0.6930	1.1668	3362.8	.2675	.536	0.3693	1.2524	3484.0	.1122	.681
5300	6.8663-2	512.3	2.3540	26.574	.209	1.2195	-1.0098	0.7437	1.1622	3394.8	.2998	.519	0.3698	1.2533	3525.3	.1142	.678
5400	6.7094-2	589.2	2.3684	26.457	.212	1.2540	-1.0117	0.7943	1.1587	3429.0	.3349	.502	0.3702	1.2543	3567.8	.1163	.674

TABLE 32.5D -- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN2 (50.00 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT3	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLVDLT	DLVDLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
360	5.3899	0	-1404.2	1.3194	28.338	.027	1.0000	-1.0000	0.2555	1.3779	932.9	.0086	.792	0.2555	1.3779	932.9	.0086	.792
380	5.1062	0	-1399.0	1.3332	28.338	.028	1.0000	-1.0000	0.2560	1.3769	958.1	.0092	.786	0.2560	1.3769	958.1	.0092	.786
400	4.8509	0	-1393.9	1.3464	28.338	.030	1.0000	-1.0000	0.2565	1.3758	982.6	.0097	.782	0.2565	1.3758	982.6	.0097	.782
420	4.6199	0	-1388.8	1.3589	28.338	.031	1.0000	-1.0000	0.2571	1.3747	1006.5	.0103	.778	0.2571	1.3748	1006.5	.0103	.778
440	4.4099	0	-1383.6	1.3709	28.338	.032	1.0000	-1.0000	0.2576	1.3736	1029.8	.0108	.775	0.2576	1.3736	1029.8	.0108	.775
460	4.2182	0	-1378.5	1.3823	28.338	.034	1.0000	-1.0000	0.2582	1.3725	1052.5	.0113	.772	0.2582	1.3725	1052.5	.0113	.772
480	4.0424	0	-1373.3	1.3933	28.338	.035	1.0000	-1.0000	0.2588	1.3712	1074.6	.0118	.770	0.2588	1.3713	1074.6	.0118	.770
500	3.8807	0	-1368.1	1.4039	28.338	.037	1.0000	-1.0000	0.2595	1.3700	1096.3	.0123	.768	0.2595	1.3700	1096.3	.0123	.768
520	3.7315	0	-1362.9	1.4141	28.338	.038	1.0000	-1.0000	0.2601	1.3687	1117.5	.0128	.767	0.2601	1.3688	1117.5	.0128	.767
537	3.6156	0	-1358.6	1.4223	28.338	.039	1.0000	-1.0000	0.2607	1.3676	1134.8	.0133	.766	0.2607	1.3677	1134.8	.0133	.766
540	3.5933	0	-1357.7	1.4239	28.338	.039	1.0000	-1.0000	0.2608	1.3674	1138.2	.0133	.766	0.2608	1.3675	1138.2	.0133	.766
560	3.4649	0	-1352.5	1.4334	28.338	.040	1.0000	-1.0000	0.2615	1.3660	1158.5	.0138	.766	0.2615	1.3661	1158.6	.0138	.766
580	3.3455	0	-1347.3	1.4426	28.338	.042	1.0000	-1.0000	0.2622	1.3647	1178.4	.0143	.766	0.2622	1.3648	1178.5	.0143	.766
600	3.2339	0	-1342.0	1.4515	28.338	.043	1.0000	-1.0000	0.2630	1.3633	1198.0	.0148	.766	0.2629	1.3634	1198.0	.0148	.766
620	3.1296	0	-1336.7	1.4602	28.338	.044	1.0000	-1.0000	0.2638	1.3618	1217.1	.0152	.766	0.2637	1.3620	1217.2	.0152	.766
640	3.0318	0	-1331.5	1.4685	28.338	.045	1.0000	-1.0000	0.2646	1.3603	1235.9	.0157	.766	0.2644	1.3606	1236.0	.0157	.766
660	2.9399	0	-1326.2	1.4767	28.338	.047	1.0000	-1.0000	0.2654	1.3588	1254.4	.0162	.764	0.2652	1.3591	1254.5	.0162	.765
680	2.8535	0	-1320.8	1.4846	28.338	.048	1.0001	-1.0000	0.2662	1.3573	1272.5	.0167	.763	0.2660	1.3576	1272.7	.0167	.764
700	2.7719	0	-1315.5	1.4924	28.338	.049	1.0001	-1.0000	0.2671	1.3557	1290.4	.0172	.762	0.2668	1.3562	1290.6	.0172	.763
720	2.6949	0	-1310.2	1.4999	28.338	.050	1.0001	-1.0000	0.2680	1.3541	1307.9	.0177	.760	0.2677	1.3547	1308.2	.0177	.762
740	2.6221	0	-1304.8	1.5073	28.338	.051	1.0002	-1.0000	0.2690	1.3525	1325.1	.0182	.759	0.2685	1.3532	1325.5	.0181	.762
760	2.5531	0	-1299.4	1.5144	28.338	.053	1.0003	-1.0000	0.2700	1.3508	1342.1	.0187	.758	0.2694	1.3517	1342.5	.0186	.761
780	2.4876	0	-1294.0	1.5215	28.338	.054	1.0004	-1.0000	0.2710	1.3490	1358.8	.0193	.756	0.2702	1.3502	1359.3	.0191	.761
800	2.4254	0	-1288.6	1.5284	28.337	.055	1.0005	-1.0000	0.2721	1.3473	1375.2	.0198	.755	0.2711	1.3486	1375.9	.0195	.761
820	2.3662	0	-1283.1	1.5351	28.337	.056	1.0007	-1.0000	0.2733	1.3454	1391.3	.0203	.753	0.2720	1.3471	1392.2	.0200	.761
840	2.3098	0	-1277.6	1.5417	28.336	.057	1.0009	-1.0000	0.2745	1.3435	1407.2	.0208	.751	0.2729	1.3456	1408.3	.0205	.761
860	2.2560	0	-1272.1	1.5482	28.336	.058	1.0012	-1.0001	0.2758	1.3416	1422.9	.0214	.749	0.2738	1.3440	1424.1	.0209	.761
880	2.2047	0	-1266.6	1.5545	28.335	.059	1.0015	-1.0001	0.2772	1.3396	1438.2	.0220	.746	0.2747	1.3425	1439.8	.0214	.761
900	2.1556	0	-1261.0	1.5608	28.334	.060	1.0019	-1.0001	0.2787	1.3375	1453.4	.0226	.743	0.2756	1.3410	1455.3	.0218	.760
920	2.1086	0	-1255.4	1.5669	28.332	.061	1.0024	-1.0001	0.2803	1.3354	1468.3	.0232	.739	0.2766	1.3395	1470.6	.0223	.760
940	2.0637	0	-1249.8	1.5730	28.331	.062	1.0029	-1.0002	0.2819	1.3332	1483.0	.0239	.735	0.2775	1.3379	1485.6	.0228	.760
960	2.0205	0	-1244.2	1.5789	28.329	.063	1.0035	-1.0002	0.2837	1.3309	1497.5	.0246	.731	0.2785	1.3364	1500.6	.0232	.759
980	1.9791	0	-1238.5	1.5848	28.327	.064	1.0043	-1.0002	0.2857	1.3285	1511.7	.0253	.726	0.2794	1.3349	1515.3	.0237	.758
1000	1.9394	0	-1232.7	1.5906	28.324	.065	1.0052	-1.0003	0.2878	1.3260	1525.7	.0261	.720	0.2804	1.3334	1529.9	.0242	.758
1020	1.9011	0	-1227.0	1.5963	28.321	.066	1.0061	-1.0003	0.2900	1.3235	1539.5	.0270	.714	0.2814	1.3319	1544.4	.0247	.757
1040	1.8643	0	-1221.1	1.6019	28.317	.067	1.0073	-1.0004	0.2924	1.3209	1553.0	.0278	.708	0.2824	1.3305	1558.7	.0252	.756
1060	1.8289	0	-1215.3	1.6075	28.313	.068	1.0086	-1.0005	0.2951	1.3181	1566.4	.0288	.701	0.2833	1.3290	1572.9	.0257	.756
1080	1.7947	0	-1209.3	1.6131	28.308	.069	1.0101	-1.0006	0.2979	1.3153	1579.5	.0298	.695	0.2843	1.3275	1586.9	.0261	.755
1100	1.7617	0	-1203.3	1.6186	28.302	.070	1.0117	-1.0007	0.3009	1.3124	1592.5	.0308	.687	0.2853	1.3261	1600.8	.0266	.754
1120	1.7299	0	-1197.3	1.6240	28.296	.071	1.0136	-1.0008	0.3042	1.3093	1605.2	.0319	.680	0.2863	1.3247	1614.6	.0271	.753
1140	1.6991	0	-1191.2	1.6294	28.288	.072	1.0157	-1.0009	0.3078	1.3062	1617.8	.0331	.673	0.2873	1.3233	1628.3	.0276	.752

TABLE 32.5D CONTINUED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN² (50.00 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS						
						DLV DLT	DLV DLP	CP BTU/ LB R	(GAM)S	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
1160	1.6693	0	-1185.0	1.6348	28.280	.073	1.0180	-1.0010	0.3116	1.3029	1630.1	.0343	.665	0.2883	1.3219	1641.9	.0282	.751
1180	1.6404	0	-1178.7	1.6402	28.271	.074	1.0206	-1.0012	0.3158	1.2996	1642.3	.0356	.658	0.2893	1.3206	1655.5	.0287	.750
1200	1.6125	0	-1172.3	1.6455	28.260	.075	1.0235	-1.0014	0.3202	1.2962	1654.2	.0370	.651	0.2904	1.3193	1668.9	.0292	.748
1220	1.5854	0	-1165.9	1.6509	28.249	.076	1.0267	-1.0016	0.3251	1.2926	1666.0	.0384	.644	0.2914	1.3180	1682.3	.0297	.747
1240	1.5591	0	-1159.3	1.6562	28.236	.077	1.0302	-1.0018	0.3303	1.2890	1677.7	.0400	.637	0.2924	1.3167	1695.6	.0302	.746
1260	1.5336	0	-1152.7	1.6615	28.221	.078	1.0340	-1.0021	0.3358	1.2853	1689.1	.0415	.631	0.2934	1.3155	1708.9	.0307	.744
1280	1.5088	0	-1145.9	1.6669	28.205	.079	1.0382	-1.0023	0.3419	1.2815	1700.5	.0432	.625	0.2944	1.3143	1722.1	.0313	.743
1300	1.4846	0	-1139.0	1.6722	28.187	.080	1.0427	-1.0026	0.3483	1.2776	1711.6	.0449	.619	0.2955	1.3131	1735.2	.0318	.742
1320	1.4611	0	-1132.0	1.6776	28.168	.081	1.0476	-1.0029	0.3552	1.2737	1722.7	.0467	.614	0.2965	1.3120	1748.4	.0323	.740
1340	1.4382	0	-1124.8	1.6830	28.147	.082	1.0529	-1.0033	0.3625	1.2698	1733.7	.0485	.610	0.2975	1.3109	1761.5	.0329	.739
1360	1.4159	0	-1117.5	1.6884	28.124	.083	1.0586	-1.0036	0.3704	1.2658	1744.6	.0504	.606	0.2985	1.3099	1774.6	.0334	.737
1380	1.3941	0	-1110.0	1.6939	28.098	.083	1.0646	-1.0040	0.3786	1.2619	1755.4	.0524	.603	0.2995	1.3088	1787.8	.0340	.735
1400	1.3729	0	-1102.3	1.6994	28.071	.084	1.0711	-1.0044	0.3874	1.2580	1766.2	.0543	.601	0.3005	1.3079	1800.9	.0345	.734
1420	1.3521	0	-1094.5	1.7049	28.041	.085	1.0779	-1.0049	0.3965	1.2541	1777.0	.0564	.599	0.3015	1.3070	1814.0	.0351	.732
1440	1.3318	0	-1086.5	1.7105	28.009	.086	1.0850	-1.0054	0.4060	1.2503	1787.8	.0584	.599	0.3025	1.3061	1827.2	.0356	.730
1460	1.3120	0	-1078.2	1.7162	27.975	.087	1.0923	-1.0058	0.4158	1.2467	1798.6	.0604	.599	0.3035	1.3053	1840.4	.0362	.729
1480	1.2926	0	-1069.8	1.7219	27.939	.088	1.0999	-1.0063	0.4258	1.2432	1809.5	.0624	.599	0.3045	1.3045	1853.6	.0368	.727
1500	1.2735	0	-1061.2	1.7277	27.900	.089	1.1075	-1.0069	0.4359	1.2398	1820.5	.0643	.601	0.3054	1.3038	1866.9	.0373	.725
1520	1.2549	0	-1052.4	1.7336	27.859	.089	1.1151	-1.0074	0.4459	1.2368	1831.7	.0661	.603	0.3064	1.3032	1880.2	.0379	.723
1540	1.2367	0	-1043.4	1.7395	27.815	.090	1.1226	-1.0079	0.4556	1.2339	1843.0	.0678	.607	0.3073	1.3026	1893.6	.0385	.722
1560	1.2189	0	-1034.2	1.7454	27.770	.091	1.1296	-1.0084	0.4648	1.2314	1854.6	.0693	.611	0.3083	1.3020	1907.0	.0390	.720
1580	1.2014	0	-1024.8	1.7514	27.723	.092	1.1360	-1.0088	0.4733	1.2293	1866.4	.0707	.616	0.3092	1.3015	1920.4	.0396	.718
1600	1.1843	0	-1015.2	1.7574	27.675	.093	1.1415	-1.0092	0.4806	1.2275	1878.4	.0717	.622	0.3101	1.3011	1933.9	.0401	.716
1620	1.1676	0	-1005.6	1.7634	27.625	.094	1.1459	-1.0096	0.4886	1.2262	1890.8	.0724	.628	0.3110	1.3007	1947.4	.0407	.715
1640	1.1513	0	-995.8	1.7694	27.575	.094	1.1488	-1.0098	0.4907	1.2253	1903.5	.0728	.636	0.3118	1.3003	1960.9	.0412	.713
1660	1.1354	0	-986.0	1.7753	27.525	.095	1.1499	-1.0099	0.4927	1.2250	1916.6	.0728	.644	0.3126	1.3000	1974.3	.0418	.711
1680	1.1198	0	-976.1	1.7812	27.476	.096	1.1489	-1.0099	0.4923	1.2253	1930.0	.0724	.652	0.3135	1.2997	1987.7	.0423	.710
1700	1.1047	0	-966.3	1.7870	27.428	.097	1.1455	-1.0098	0.4892	1.2262	1943.9	.0715	.661	0.3143	1.2994	2001.0	.0429	.709
1720	1.0901	0	-956.5	1.7927	27.383	.097	1.1398	-1.0094	0.4833	1.2277	1958.1	.0703	.670	0.3150	1.2990	2014.2	.0434	.707
1740	1.0758	0	-947.0	1.7983	27.340	.098	1.1316	-1.0090	0.4748	1.2300	1972.8	.0687	.679	0.3158	1.2987	2027.2	.0439	.706
1760	1.0621	0	-937.6	1.8036	27.300	.099	1.1214	-1.0083	0.4639	1.2328	1987.9	.0668	.687	0.3165	1.2984	2040.1	.0444	.705
1780	1.0488	0	-928.4	1.8088	27.264	.100	1.1094	-1.0076	0.4512	1.2363	2003.3	.0649	.694	0.3172	1.2980	2052.7	.0449	.705
1800	1.0359	0	-919.5	1.8138	27.233	.101	1.0963	-1.0067	0.4373	1.2402	2018.9	.0629	.699	0.3179	1.2977	2065.1	.0454	.704
1900	9.7796	-1	-879.1	1.8357	27.137	.104	1.0376	-1.0028	0.3761	1.2606	2094.8	.0556	.705	0.3211	1.2952	2123.4	.0477	.703
2000	9.2801	-1	-843.0	1.8542	27.107	.108	1.0114	-1.0009	0.3503	1.2707	2159.0	.0540	.701	0.3240	1.2921	2177.2	.0498	.703
2100	8.8353	-1	-808.4	1.8710	27.098	.112	1.0036	-1.0003	0.3437	1.2730	2214.7	.0549	.700	0.3269	1.2890	2228.6	.0518	.704
2200	8.4328	-1	-774.1	1.8870	27.095	.115	1.0013	-1.0001	0.3427	1.2727	2266.7	.0564	.700	0.3296	1.2860	2278.5	.0539	.706
2300	8.0658	-1	-739.8	1.9023	27.094	.119	1.0006	-1.0001	0.3433	1.2718	2316.9	.0582	.701	0.3321	1.2832	2327.2	.0559	.706
2400	7.7296	-1	-705.4	1.9169	27.093	.122	1.0003	-1.0000	0.3443	1.2706	2365.7	.0600	.702	0.3346	1.2805	2374.8	.0579	.707
2500	7.4203	-1	-671.0	1.9310	27.093	.126	1.0002	-1.0000	0.3455	1.2694	2413.3	.0619	.703	0.3369	1.2780	2421.5	.0599	.708

TABLE 32.5D CONCLUDED .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS
(ONLY GAS PHASE PERMITTED)

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN² (50.00 ATM)
WET AIR (W/A = 0.03)

T R	DENSITY LB/FT ³	H BTU/LB	ENTROPY BTU/ LB R	MW	VIS LB/ FT HR	REACTING COMPOSITIONS						FROZEN COMPOSITIONS					
						DLV DLT	DLV DLP	CP BTU/ LB R	VS FT/S	COND BTU/ FT HR R	PRAN	CP BTU/ LB R	FROZEN GAM	VS FT/S	COND BTU/ FT HR R	PRAN	
2600	7.1348-1	-636.4	1.9445	27.093	.129	1.0002	-1.0000	0.3467	1.2682	2459.9	.0637	.704	0.3392	1.2757	2467.2	.0619	.708
2700	6.8706-1	-601.6	1.9576	27.093	.133	1.0001	-1.0000	0.3480	1.2669	2505.5	.0656	.704	0.3413	1.2735	2512.0	.0639	.709
2800	6.6252-1	-566.8	1.9703	27.092	.136	1.0001	-1.0000	0.3493	1.2656	2550.2	.0674	.705	0.3433	1.2715	2556.2	.0659	.709
2900	6.3967-1	-531.8	1.9826	27.092	.139	1.0001	-1.0000	0.3506	1.2644	2594.1	.0693	.705	0.3452	1.2696	2599.4	.0679	.709
3000	6.1834-1	-496.6	1.9945	27.092	.143	1.0001	-1.0000	0.3519	1.2632	2637.1	.0712	.705	0.3470	1.2678	2641.9	.0699	.709
3100	5.9840-1	-461.4	2.0061	27.092	.146	1.0001	-1.0000	0.3531	1.2620	2679.5	.0731	.705	0.3488	1.2661	2683.8	.0718	.709
3200	5.7969-1	-426.0	2.0173	27.092	.149	1.0001	-1.0000	0.3544	1.2608	2721.1	.0750	.704	0.3504	1.2645	2725.1	.0738	.708
3300	5.6213-1	-390.5	2.0282	27.092	.152	1.0002	-1.0000	0.3557	1.2596	2762.0	.0770	.704	0.3519	1.2631	2765.8	.0757	.708
3400	5.4559-1	-354.9	2.0389	27.092	.155	1.0002	-1.0000	0.3570	1.2585	2802.3	.0790	.703	0.3534	1.2617	2805.8	.0777	.707
3500	5.3000-1	-319.1	2.0492	27.092	.159	1.0003	-1.0000	0.3584	1.2573	2841.9	.0810	.702	0.3548	1.2604	2845.4	.0796	.707
3600	5.1527-1	-283.2	2.0593	27.091	.162	1.0005	-1.0000	0.3598	1.2561	2880.8	.0831	.700	0.3561	1.2592	2884.4	.0815	.706
3700	5.0133-1	-247.1	2.0692	27.091	.165	1.0008	-1.0000	0.3614	1.2549	2919.2	.0852	.698	0.3573	1.2581	2922.9	.0834	.706
3800	4.8813-1	-210.9	2.0789	27.090	.168	1.0011	-1.0000	0.3632	1.2536	2956.8	.0875	.696	0.3585	1.2570	2960.9	.0853	.705
3900	4.7560-1	-174.5	2.0883	27.089	.171	1.0017	-1.0001	0.3652	1.2521	2993.8	.0899	.693	0.3596	1.2561	2998.5	.0872	.704
4000	4.6368-1	-137.8	2.0976	27.088	.174	1.0024	-1.0001	0.3676	1.2504	3030.0	.0926	.690	0.3607	1.2551	3035.7	.0890	.704
4100	4.5234-1	-100.9	2.1067	27.086	.177	1.0034	-1.0001	0.3706	1.2485	3065.4	.0954	.686	0.3616	1.2543	3072.4	.0909	.703
4200	4.4153-1	-63.7	2.1157	27.083	.180	1.0048	-1.0002	0.3743	1.2463	3099.9	.0987	.681	0.3626	1.2535	3108.8	.0928	.702
4300	4.3120-1	-26.1	2.1246	27.080	.182	1.0066	-1.0002	0.3788	1.2437	3133.5	.1023	.676	0.3635	1.2528	3144.9	.0947	.701
4400	4.2133-1	12.1	2.1333	27.075	.185	1.0092	-1.0003	0.3846	1.2406	3166.0	.1064	.670	0.3643	1.2521	3180.7	.0965	.699
4500	4.1186-1	50.9	2.1421	27.068	.188	1.0126	-1.0005	0.3918	1.2369	3197.4	.1112	.663	0.3651	1.2515	3216.3	.0984	.698
4600	4.0278-1	90.5	2.1508	27.059	.191	1.0171	-1.0006	0.4010	1.2325	3227.6	.1168	.655	0.3659	1.2509	3251.6	.1003	.697
4700	3.9404-1	131.2	2.1595	27.048	.194	1.0229	-1.0009	0.4125	1.2275	3256.6	.1234	.648	0.3666	1.2505	3286.9	.1022	.695
4800	3.8562-1	173.1	2.1683	27.033	.197	1.0305	-1.0012	0.4269	1.2218	3284.3	.1312	.639	0.3672	1.2501	3322.0	.1041	.693
4900	3.7747-1	216.7	2.1773	27.013	.199	1.0401	-1.0016	0.4444	1.2156	3311.1	.1404	.630	0.3679	1.2497	3357.3	.1059	.692
5000	3.6958-1	262.1	2.1865	26.988	.202	1.0520	-1.0021	0.4655	1.2089	3337.1	.1513	.621	0.3685	1.2495	3392.6	.1078	.690
5100	3.6191-1	309.9	2.1960	26.957	.205	1.0664	-1.0028	0.4902	1.2022	3362.8	.1640	.612	0.3690	1.2494	3428.2	.1097	.688
5200	3.5444-1	360.3	2.2057	26.918	.207	1.0834	-1.0035	0.5183	1.1955	3388.6	.1786	.601	0.3695	1.2494	3464.2	.1115	.687
5300	3.4714-1	413.7	2.2159	26.870	.210	1.1028	-1.0045	0.5494	1.1892	3415.1	.1953	.590	0.3700	1.2496	3500.7	.1134	.685
5400	3.3999-1	470.2	2.2265	26.813	.212	1.1243	-1.0055	0.5827	1.1836	3442.6	.2139	.579	0.3705	1.2498	3537.7	.1153	.683

TABLE 32.1E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 0.14696 LB/IN2 (0.01 ATM)
 WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES							GAS PHASE PROPERTIES REACTING COMPOSITIONS										GAS PHASE PROPERTIES FROZEN COMPOSITIONS			
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R		FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R	
360	1.349-3	-1565.3	1.5639	27.092	0.258	.249	1.150-3	30.238	.031	1.0000	-1.000	.234	1.390	907	.010	.735	.234	1.390	.010	.735
400	1.210-3	-1553.1	1.5957	27.092	0.404	.255	1.034-3	30.198	.034	1.0000	-1.000	.235	1.388	956	.011	.731	.235	1.388	.011	.731
440	1.056-3	-1517.2	1.6802	27.093	1.921	.261	9.249-4	29.718	.036	1.0000	-1.000	.241	1.384	1009	.012	.740	.241	1.384	.012	.740
480	8.085-4	-1378.4	1.9830	27.164	0.266	.261	7.937-4	27.819	.034	1.0000	-1.000	.263	1.372	1085	.012	.782	.263	1.372	.012	.782
520	7.463-4	-1367.7	2.0044	27.212	0.269	.262	7.332-4	27.841	.037	1.0001	-1.000	.264	1.370	1128	.013	.777	.264	1.370	.013	.778
537	7.231-4	-1363.3	2.0129	27.237	0.270	.263	7.107-4	27.852	.038	1.0002	-1.000	.265	1.369	1145	.013	.774	.264	1.370	.013	.777
560	6.930-4	-1356.9	2.0244	27.275	0.272	.263	6.815-4	27.870	.040	1.0003	-1.000	.265	1.367	1169	.014	.771	.265	1.368	.014	.776
600	6.467-4	-1346.0	2.0433	27.350	0.276	.265	6.369-4	27.903	.042	1.0009	-1.000	.268	1.363	1207	.015	.761	.266	1.366	.015	.776
640	6.063-4	-1334.9	2.0612	27.435	0.281	.266	5.978-4	27.940	.045	1.0024	-1.000	.272	1.357	1243	.016	.742	.267	1.363	.015	.774
680	5.705-4	-1323.5	2.0785	27.525	0.288	.267	5.634-4	27.977	.047	1.0054	-1.000	.278	1.347	1276	.019	.708	.268	1.360	.017	.770
720	5.385-4	-1311.7	2.0953	27.615	0.301	.269	5.327-4	28.010	.050	1.0112	-1.000	.290	1.333	1305	.022	.660	.269	1.357	.018	.766
760	5.097-4	-1299.4	2.1120	27.699	0.319	.271	5.051-4	28.033	.052	1.0211	-1.001	.307	1.315	1331	.026	.607	.271	1.354	.019	.762
800	4.835-4	-1286.1	2.1290	27.770	0.346	.272	4.800-4	28.040	.055	1.0367	-1.002	.333	1.293	1354	.033	.555	.273	1.351	.020	.757
840	4.594-4	-1271.6	2.1467	27.819	0.383	.274	4.568-4	28.023	.057	1.0592	-1.003	.369	1.271	1376	.041	.515	.274	1.348	.021	.751
880	4.369-4	-1255.3	2.1656	27.840	0.430	.277	4.353-4	27.975	.059	1.0888	-1.004	.413	1.249	1398	.050	.492	.277	1.345	.022	.743
920	4.159-4	-1237.1	2.1859	27.826	0.484	.279	4.152-4	27.891	.061	1.1237	-1.006	.464	1.231	1421	.059	.486	.279	1.342	.023	.732
960	3.960-4	-1216.7	2.2076	27.764	0.515	.282	3.960-4	27.764	.064	1.1592	-1.008	.515	1.218	1447	.066	.497	.282	1.340	.025	.719
1000	3.776-4	-1195.4	2.2292	27.572	0.543	.285	3.776-4	27.572	.066	1.1785	-1.009	.543	1.212	1479	.067	.534	.285	1.338	.026	.707
1040	3.605-4	-1173.8	2.2505	27.381	0.532	.288	3.605-4	27.381	.068	1.1688	-1.009	.532	1.216	1515	.061	.589	.288	1.336	.028	.696
1080	3.453-4	-1153.6	2.2695	27.229	0.469	.291	3.453-4	27.229	.070	1.1199	-1.006	.469	1.233	1559	.050	.650	.291	1.335	.029	.688
1120	3.319-4	-1136.5	2.2851	27.142	0.387	.293	3.319-4	27.142	.072	1.0573	-1.003	.387	1.263	1610	.041	.683	.293	1.333	.031	.684
1160	3.200-4	-1122.1	2.2977	27.108	0.341	.295	3.200-4	27.108	.074	1.0201	-1.001	.341	1.286	1654	.036	.688	.295	1.331	.032	.683
1200	3.092-4	-1108.8	2.3090	27.097	0.326	.296	3.092-4	27.097	.075	1.0063	-1.000	.326	1.294	1688	.036	.687	.296	1.329	.033	.683
1240	2.992-4	-1095.9	2.3196	27.094	0.323	.298	2.992-4	27.094	.077	1.0020	-1.000	.323	1.294	1716	.036	.687	.298	1.326	.034	.684
1280	2.899-4	-1082.9	2.3299	27.093	0.324	.299	2.899-4	27.093	.079	1.0007	-1.000	.324	1.292	1742	.037	.687	.299	1.324	.035	.685
1320	2.811-4	-1069.9	2.3399	27.092	0.326	.301	2.811-4	27.092	.081	1.0002	-1.000	.326	1.290	1768	.038	.687	.301	1.322	.035	.686
1360	2.728-4	-1056.8	2.3497	27.092	0.328	.302	2.728-4	27.092	.082	1.0001	-1.000	.328	1.288	1793	.039	.688	.302	1.320	.036	.687
1400	2.650-4	-1043.7	2.3592	27.092	0.330	.304	2.650-4	27.092	.084	1.0000	-1.000	.330	1.286	1818	.040	.688	.304	1.318	.037	.688

TABLE 32.2E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 1.46959 LB/IN² (0.10 ATM)
WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS								
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLVDLT	DLVDLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R			BTU/ LB R	BTU/ FT S R		
360	1.349-2	-1565.4	1.4347	27.092	0.250	.249	1.150-2	30.240	.031	1.0000	-1.000	.234	1.390	907	.010	.735	.234	1.390	.010	.735
400	1.213-2	-1555.1	1.4617	27.092	0.270	.255	1.035-2	30.236	.034	1.0000	-1.000	.235	1.388	956	.011	.730	.235	1.388	.011	.730
440	1.099-2	-1542.3	1.4921	27.092	0.414	.261	9.395-3	30.188	.037	1.0000	-1.000	.236	1.386	1002	.012	.727	.236	1.386	.012	.727
480	9.763-3	-1512.0	1.5574	27.094	1.383	.267	8.506-3	29.815	.039	1.0000	-1.000	.241	1.382	1052	.013	.734	.241	1.382	.013	.734
520	7.663-3	-1385.5	1.8091	27.184	5.565	.271	7.398-3	28.091	.038	1.0000	-1.000	.261	1.372	1124	.013	.772	.261	1.372	.013	.772
537	7.231-3	-1363.3	1.8515	27.237	0.270	.263	7.107-3	27.853	.038	1.0000	-1.000	.264	1.369	1145	.013	.776	.264	1.370	.013	.777
560	6.930-3	-1357.0	1.8630	27.275	0.271	.263	6.815-3	27.870	.040	1.0001	-1.000	.265	1.368	1169	.014	.775	.265	1.368	.014	.776
600	6.468-3	-1346.1	1.8818	27.351	0.274	.265	6.369-3	27.904	.042	1.0003	-1.000	.266	1.365	1208	.015	.771	.266	1.366	.015	.776
640	6.063-3	-1335.0	1.8996	27.436	0.277	.266	5.979-3	27.943	.045	1.0008	-1.000	.268	1.361	1245	.016	.764	.267	1.363	.015	.774
680	5.706-3	-1323.9	1.9165	27.528	0.281	.267	5.635-3	27.983	.047	1.0017	-1.000	.271	1.356	1280	.017	.749	.268	1.360	.016	.771
720	5.388-3	-1312.6	1.9327	27.623	0.286	.269	5.330-3	28.023	.050	1.0036	-1.000	.276	1.349	1313	.019	.727	.269	1.357	.018	.767
760	5.103-3	-1301.0	1.9483	27.717	0.293	.270	5.056-3	28.060	.052	1.0069	-1.000	.282	1.340	1343	.021	.697	.271	1.354	.018	.765
800	4.846-3	-1289.1	1.9636	27.806	0.303	.272	4.809-3	28.091	.055	1.0123	-1.001	.292	1.328	1371	.024	.661	.272	1.351	.019	.762
840	4.611-3	-1276.7	1.9787	27.885	0.317	.274	4.583-3	28.113	.057	1.0205	-1.001	.306	1.314	1397	.028	.620	.274	1.348	.020	.760
880	4.396-3	-1263.7	1.9938	27.952	0.335	.276	4.376-3	28.122	.059	1.0324	-1.002	.325	1.299	1421	.033	.580	.276	1.344	.022	.756
920	4.197-3	-1249.8	2.0092	27.999	0.360	.278	4.185-3	28.113	.061	1.0487	-1.002	.350	1.282	1444	.039	.546	.278	1.341	.023	.751
960	4.012-3	-1234.8	2.0252	28.025	0.391	.280	4.006-3	28.083	.063	1.0696	-1.003	.380	1.265	1466	.046	.521	.280	1.338	.024	.745
1000	3.838-3	-1218.5	2.0418	28.025	0.427	.282	3.838-3	28.028	.066	1.0950	-1.005	.415	1.249	1489	.054	.506	.282	1.335	.025	.737
1040	3.675-3	-1201.1	2.0589	27.911	0.453	.285	3.675-3	27.911	.068	1.1217	-1.006	.453	1.237	1514	.060	.507	.285	1.333	.026	.729
1080	3.521-3	-1182.3	2.0767	27.770	0.488	.287	3.521-3	27.770	.070	1.1470	-1.008	.488	1.227	1540	.065	.521	.287	1.331	.028	.720
1120	3.376-3	-1162.1	2.0950	27.612	0.516	.290	3.376-3	27.612	.072	1.1652	-1.009	.516	1.220	1568	.067	.549	.290	1.330	.029	.710
1160	3.240-3	-1141.3	2.1133	27.449	0.524	.293	3.240-3	27.449	.073	1.1673	-1.009	.524	1.218	1600	.065	.590	.293	1.328	.031	.701
1200	3.116-3	-1120.7	2.1307	27.303	0.498	.295	3.116-3	27.303	.075	1.1432	-1.008	.498	1.224	1635	.059	.638	.295	1.327	.032	.694
1240	3.003-3	-1101.9	2.1462	27.195	0.440	.297	3.003-3	27.195	.077	1.0949	-1.005	.440	1.240	1676	.050	.677	.297	1.325	.033	.689
1280	2.903-3	-1085.5	2.1592	27.135	0.383	.299	2.903-3	27.135	.079	1.0473	-1.003	.383	1.261	1720	.044	.692	.299	1.324	.034	.687
1320	2.812-3	-1070.9	2.1704	27.108	0.350	.301	2.812-3	27.108	.081	1.0195	-1.001	.350	1.276	1758	.041	.692	.301	1.322	.035	.687
1360	2.729-3	-1057.2	2.1806	27.098	0.337	.302	2.729-3	27.098	.082	1.0075	-1.000	.337	1.282	1789	.040	.690	.302	1.320	.036	.688
1400	2.650-3	-1043.8	2.1903	27.095	0.333	.304	2.650-3	27.095	.084	1.0029	-1.000	.333	1.284	1816	.041	.689	.304	1.318	.037	.688

TABLE 32.3E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 14.6959 LB/IN2 (1.00 ATM)
WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS								
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)	S VS	COND	PRAN	CP	GAM	COND	PRAN	
R	L / FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R		BTU/ LB R	BTU/ FT S R			
360	1.348-1	-1565.4	1.3057	27.092	0.249	.249	1.150-1	30.240	.031	1.0000	-1.000	.234	1.390	907	.010	.735	.234	1.390	.010	.735
400	1.213-1	-1555.3	1.3323	27.092	0.257	.255	1.035-1	30.239	.034	1.0000	-1.000	.235	1.388	956	.011	.730	.235	1.388	.011	.730
440	1.103-1	-1544.7	1.3574	27.092	0.276	.261	9.410-2	30.235	.037	1.0000	-1.000	.236	1.387	1002	.012	.726	.236	1.387	.012	.726
480	1.008-1	-1532.2	1.3845	27.092	0.372	.267	8.615-2	30.197	.040	1.0000	-1.000	.237	1.384	1046	.013	.724	.237	1.384	.013	.724
520	9.171-2	-1493.9	1.4617	27.093	0.678	.328	7.907-2	30.025	.042	1.0000	-1.000	.240	1.381	1091	.014	.727	.240	1.381	.014	.727
537	8.763-2	-1480.7	1.4865	27.095	0.916	.324	7.619-2	29.859	.043	1.0000	-1.000	.242	1.380	1110	.014	.731	.242	1.380	.014	.731
560	8.100-2	-1453.1	1.5369	27.107	1.526	.314	7.201-2	29.446	.043	1.0000	-1.000	.247	1.376	1141	.014	.741	.247	1.376	.014	.741
600	6.468-2	-1346.1	1.7205	27.351	0.274	.265	6.369-2	27.905	.042	1.0001	-1.000	.266	1.365	1208	.015	.774	.266	1.366	.015	.774
640	6.063-2	-1335.1	1.7382	27.437	0.276	.266	5.979-2	27.943	.045	1.0002	-1.000	.267	1.362	1246	.016	.771	.267	1.363	.015	.775
680	5.707-2	-1324.0	1.7550	27.529	0.278	.267	5.636-2	27.985	.047	1.0005	-1.000	.269	1.359	1281	.017	.764	.268	1.360	.016	.771
720	5.389-2	-1312.8	1.7710	27.626	0.281	.269	5.331-2	28.027	.050	1.0011	-1.000	.271	1.355	1315	.018	.754	.269	1.357	.017	.768
760	5.105-2	-1301.5	1.7862	27.723	0.284	.270	5.058-2	28.069	.052	1.0022	-1.000	.274	1.349	1348	.019	.742	.271	1.354	.018	.766
800	4.849-2	-1290.1	1.8009	27.818	0.288	.272	4.811-2	28.108	.055	1.0039	-1.000	.279	1.343	1379	.021	.725	.272	1.351	.019	.764
840	4.617-2	-1278.5	1.8151	27.908	0.293	.274	4.588-2	28.144	.057	1.0067	-1.000	.284	1.336	1408	.023	.704	.274	1.348	.020	.763
880	4.405-2	-1266.6	1.8289	27.992	0.301	.275	4.384-2	28.174	.059	1.0107	-1.001	.292	1.327	1436	.025	.678	.275	1.344	.021	.761
920	4.211-2	-1254.4	1.8424	28.067	0.310	.277	4.197-2	28.196	.061	1.0165	-1.001	.301	1.317	1462	.028	.649	.277	1.341	.022	.759
960	4.032-2	-1241.8	1.8559	28.131	0.322	.279	4.024-2	28.209	.063	1.0244	-1.001	.314	1.306	1486	.032	.619	.279	1.338	.023	.756
1000	3.866-2	-1228.6	1.8693	28.181	0.337	.281	3.863-2	28.211	.065	1.0349	-1.002	.329	1.294	1510	.036	.591	.281	1.334	.024	.752
1040	3.712-2	-1214.8	1.8828	28.187	0.348	.283	3.712-2	28.187	.067	1.0481	-1.003	.348	1.281	1533	.041	.567	.283	1.331	.026	.747
1080	3.567-2	-1200.5	1.8963	28.128	0.371	.285	3.567-2	28.128	.069	1.0639	-1.003	.371	1.269	1557	.047	.549	.285	1.329	.027	.743
1120	3.430-2	-1185.2	1.9103	28.054	0.396	.288	3.430-2	28.054	.071	1.0824	-1.005	.396	1.258	1580	.053	.539	.288	1.326	.028	.737
1160	3.301-2	-1168.8	1.9246	27.963	0.424	.290	3.301-2	27.963	.073	1.1029	-1.006	.424	1.246	1603	.058	.536	.290	1.324	.029	.731
1200	3.179-2	-1151.2	1.9395	27.855	0.454	.292	3.179-2	27.855	.075	1.1244	-1.007	.454	1.236	1627	.063	.542	.292	1.322	.030	.724
1240	3.063-2	-1132.4	1.9549	27.733	0.483	.295	3.063-2	27.733	.077	1.1445	-1.008	.483	1.228	1652	.067	.557	.295	1.321	.032	.717
1280	2.953-2	-1112.6	1.9706	27.599	0.506	.297	2.953-2	27.599	.079	1.1590	-1.009	.506	1.222	1679	.069	.580	.297	1.320	.033	.710
1320	2.849-2	-1092.1	1.9864	27.462	0.515	.299	2.849-2	27.462	.081	1.1618	-1.010	.515	1.220	1707	.068	.612	.299	1.318	.034	.704
1360	2.752-2	-1071.7	2.0016	27.335	0.500	.302	2.752-2	27.335	.082	1.1459	-1.009	.500	1.223	1739	.064	.648	.302	1.317	.036	.698
1400	2.664-2	-1052.4	2.0156	27.232	0.461	.304	2.664-2	27.232	.084	1.1105	-1.007	.461	1.232	1775	.057	.680	.304	1.316	.037	.694

TABLE 32.4E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 146.959 LB/IN² (10.00 ATM)
 WET AIR (W/A = 0.03)

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS								
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP	(GAM)S	VS	COND	PRAN	CP	GAM	COND	PRAN
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R			BTU/ LB R		BTU/ FT S R	
360	1.344 0	-1565.4	1.1767	27.092	0.249	.249	1.150 0	30.240	.031	1.0000	-1.000	.234	1.390	907	.010	.735	.234	1.390	.010	.735
400	1.210 0	-1555.3	1.2033	27.092	0.255	.255	1.035 0	30.240	.034	1.0000	-1.000	.235	1.388	956	.011	.730	.235	1.388	.011	.730
440	1.101 0	-1544.9	1.2279	27.092	0.263	.261	9.411-1	30.239	.037	1.0000	-1.000	.236	1.387	1002	.012	.726	.236	1.387	.012	.726
480	1.009 0	-1534.2	1.2513	27.092	0.278	.267	8.626-1	30.236	.040	1.0000	-1.000	.236	1.385	1045	.013	.723	.236	1.385	.013	.723
520	9.302-1	-1502.6	1.3151	27.092	0.367	.333	7.958-1	30.218	.042	1.0000	-1.000	.238	1.382	1088	.014	.722	.238	1.382	.014	.722
537	9.002-1	-1496.3	1.3270	27.092	0.388	.333	7.707-1	30.202	.044	1.0000	-1.000	.238	1.381	1105	.014	.723	.238	1.381	.014	.723
560	8.598-1	-1486.7	1.3444	27.092	0.437	.332	7.375-1	30.160	.045	1.0000	-1.000	.239	1.380	1129	.015	.724	.239	1.380	.015	.724
600	7.920-1	-1466.4	1.3795	27.094	0.603	.330	6.847-1	29.999	.047	1.0000	-1.000	.242	1.377	1170	.016	.728	.242	1.377	.016	.728
640	7.185-1	-1435.7	1.4288	27.111	0.980	.322	6.337-1	29.618	.049	1.0000	-1.000	.247	1.373	1214	.016	.738	.247	1.373	.016	.738
680	6.268-1	-1380.9	1.5116	27.240	1.922	.300	5.806-1	28.828	.049	1.0001	-1.000	.257	1.365	1265	.017	.753	.257	1.366	.017	.754
720	5.390-1	-1312.9	1.6095	27.627	0.279	.269	5.331-1	28.029	.050	1.0003	-1.000	.270	1.356	1316	.018	.763	.269	1.357	.017	.768
760	5.106-1	-1301.7	1.6246	27.725	0.281	.270	5.058-1	28.072	.052	1.0007	-1.000	.272	1.353	1349	.019	.758	.270	1.354	.018	.766
800	4.850-1	-1290.4	1.6391	27.822	0.283	.272	4.812-1	28.114	.055	1.0012	-1.000	.274	1.348	1381	.020	.751	.272	1.351	.019	.765
840	4.619-1	-1279.0	1.6530	27.916	0.286	.273	4.590-1	28.154	.057	1.0021	-1.000	.277	1.344	1412	.021	.743	.273	1.348	.020	.764
880	4.408-1	-1267.5	1.6664	28.006	0.289	.275	4.387-1	28.191	.059	1.0034	-1.000	.280	1.338	1441	.023	.732	.275	1.344	.021	.763
920	4.216-1	-1255.9	1.6793	28.091	0.293	.277	4.201-1	28.224	.061	1.0053	-1.000	.285	1.332	1469	.024	.718	.277	1.341	.022	.761
960	4.039-1	-1244.1	1.6918	28.169	0.298	.279	4.030-1	28.253	.063	1.0079	-1.000	.290	1.326	1497	.026	.701	.279	1.337	.023	.759
1000	3.876-1	-1232.1	1.7041	28.239	0.304	.281	3.872-1	28.277	.065	1.0115	-1.001	.297	1.319	1523	.028	.682	.281	1.334	.024	.757
1040	3.725-1	-1219.8	1.7161	28.289	0.305	.283	3.725-1	28.289	.067	1.0162	-1.001	.305	1.311	1548	.031	.662	.283	1.331	.025	.754
1080	3.584-1	-1207.5	1.7278	28.269	0.314	.285	3.584-1	28.269	.069	1.0222	-1.001	.314	1.303	1573	.034	.642	.285	1.328	.026	.752
1120	3.453-1	-1194.7	1.7394	28.243	0.325	.287	3.453-1	28.243	.071	1.0297	-1.002	.325	1.295	1598	.037	.623	.287	1.325	.027	.749
1160	3.330-1	-1181.4	1.7510	28.209	0.339	.289	3.330-1	28.209	.073	1.0388	-1.002	.339	1.286	1621	.041	.605	.289	1.322	.028	.746
1200	3.214-1	-1167.6	1.7628	28.167	0.354	.291	3.214-1	28.167	.075	1.0499	-1.003	.354	1.276	1644	.045	.591	.291	1.320	.029	.743
1240	3.105-1	-1153.0	1.7747	28.115	0.372	.293	3.105-1	28.115	.077	1.0629	-1.004	.372	1.267	1667	.049	.580	.293	1.318	.031	.739
1280	3.001-1	-1137.8	1.7868	28.052	0.393	.295	3.001-1	28.052	.079	1.0778	-1.005	.393	1.258	1689	.054	.574	.295	1.316	.032	.734
1320	2.903-1	-1121.6	1.7992	27.978	0.415	.297	2.903-1	27.978	.081	1.0944	-1.006	.415	1.248	1711	.059	.572	.297	1.314	.033	.730
1360	2.809-1	-1104.5	1.8120	27.892	0.439	.299	2.809-1	27.892	.083	1.1120	-1.007	.439	1.240	1734	.063	.575	.299	1.312	.034	.725
1400	2.719-1	-1086.4	1.8251	27.795	0.464	.302	2.719-1	27.795	.084	1.1296	-1.008	.464	1.232	1757	.067	.583	.302	1.311	.035	.720

TABLE 32.5E .- PROPERTIES BASED ON EQUILIBRIUM COMPOSITIONS

FUEL H/C ATOM RATIO = 2.100; F/A = 0.081307; EQUIV. RATIO = 1.250; CHEM. EQUIV. RATIO = 1.2239; P = 734.797 LB/IN2 (50.00 ATM)
 WET AIR (W/A= 0.03)

HETEROGENEOUS PROPERTIES						GAS PHASE PROPERTIES REACTING COMPOSITIONS						GAS PHASE PROPERTIES FROZEN COMPOSITIONS										
T	DENSITY	H	ENTROPY	MW	CP	CP	DENSITY	MW	VIS	DLV DLT	DLV DLP	CP (GAM)	S VS	COND	PRAN	CP	GAM	COND	PRAN			
R	L /FT3	BTU/LB	BTU/ LB R		REACT BTU/ LB R	FROZ BTU/ LB R	LB/FT3		LB/ FT S			BTU/ LB R	FT/S	BTU/ FT S R		BTU/ LB R		BTU/ FT S R				
360	6.638	0	-1565.4	1.0866	27.092	0.249	.249	5.752	0	30.240	.031	1.0000	-1.000	.234	1.390	907	.010	.735	.234	1.390	.010	.735
400	5.983	0	-1555.3	1.1131	27.092	0.255	.255	5.176	0	30.240	.034	1.0000	-1.000	.235	1.388	956	.011	.730	.235	1.388	.011	.730
440	5.446	0	-1545.0	1.1377	27.092	0.261	.261	4.706	0	30.240	.037	1.0000	-1.000	.236	1.387	1002	.012	.726	.236	1.387	.012	.726
480	4.998	0	-1534.3	1.1608	27.092	0.269	.267	4.314	0	30.239	.040	1.0000	-1.000	.236	1.385	1045	.013	.723	.236	1.385	.013	.723
520	4.620	0	-1503.3	1.2234	27.092	0.340	.333	3.981	0	30.236	.043	1.0000	-1.000	.237	1.383	1087	.014	.722	.237	1.383	.014	.722
537	4.477	0	-1497.6	1.2342	27.092	0.344	.333	3.857	0	30.232	.044	1.0000	-1.000	.238	1.382	1104	.014	.722	.238	1.382	.014	.722
560	4.289	0	-1489.5	1.2491	27.092	0.354	.334	3.695	0	30.224	.045	1.0000	-1.000	.238	1.380	1128	.015	.722	.238	1.380	.015	.722
600	3.995	0	-1474.7	1.2745	27.092	0.387	.334	3.445	0	30.192	.048	1.0000	-1.000	.240	1.378	1167	.016	.724	.240	1.378	.016	.724
640	3.724	0	-1458.1	1.3013	27.093	0.450	.334	3.222	0	30.116	.050	1.0000	-1.000	.242	1.375	1205	.017	.727	.242	1.375	.017	.727
680	3.462	0	-1438.0	1.3317	27.097	0.566	.332	3.017	0	29.958	.052	1.0000	-1.000	.245	1.372	1244	.017	.730	.245	1.372	.017	.730
720	3.190	0	-1411.6	1.3694	27.120	0.774	.327	2.821	0	29.665	.053	1.0000	-1.000	.249	1.368	1285	.018	.736	.249	1.368	.018	.736
760	2.885	0	-1373.6	1.4207	27.221	1.176	.314	2.628	0	29.168	.055	1.0001	-1.000	.256	1.362	1328	.019	.744	.256	1.362	.019	.744
800	2.510	0	-1311.2	1.5005	27.623	2.077	.285	2.430	0	28.387	.055	1.0004	-1.000	.269	1.352	1376	.020	.755	.268	1.353	.019	.760
840	2.310	0	-1279.2	1.5400	27.918	0.284	.273	2.295	0	28.157	.057	1.0009	-1.000	.275	1.346	1413	.021	.754	.273	1.348	.020	.764
880	2.205	0	-1267.8	1.5533	28.010	0.286	.275	2.194	0	28.195	.059	1.0015	-1.000	.278	1.341	1443	.022	.749	.275	1.344	.021	.763
920	2.109	0	-1256.3	1.5660	28.097	0.288	.277	2.101	0	28.232	.061	1.0023	-1.000	.280	1.337	1472	.023	.741	.277	1.341	.022	.762
960	2.020	0	-1244.7	1.5784	28.179	0.291	.279	2.016	0	28.265	.063	1.0035	-1.000	.284	1.332	1500	.025	.732	.279	1.337	.023	.760
1000	1.939	0	-1233.0	1.5903	28.255	0.295	.280	1.937	0	28.295	.065	1.0051	-1.000	.288	1.326	1527	.026	.721	.280	1.334	.024	.758
1040	1.864	0	-1221.1	1.6019	28.317	0.292	.282	1.864	0	28.317	.067	1.0073	-1.000	.292	1.321	1553	.028	.708	.282	1.330	.025	.756
1080	1.795	0	-1209.3	1.6131	28.308	0.298	.284	1.795	0	28.308	.069	1.0101	-1.001	.298	1.315	1580	.030	.695	.284	1.328	.026	.755
1120	1.730	0	-1197.3	1.6240	28.296	0.304	.286	1.730	0	28.296	.071	1.0136	-1.001	.304	1.309	1605	.032	.680	.286	1.325	.027	.753
1160	1.669	0	-1185.0	1.6348	28.280	0.312	.288	1.669	0	28.280	.073	1.0180	-1.001	.312	1.303	1630	.034	.665	.288	1.322	.028	.751
1200	1.613	0	-1172.3	1.6455	28.260	0.320	.290	1.613	0	28.260	.075	1.0235	-1.001	.320	1.296	1654	.037	.651	.290	1.319	.029	.748
1240	1.559	0	-1159.3	1.6562	28.236	0.330	.292	1.559	0	28.236	.077	1.0302	-1.002	.330	1.289	1678	.040	.637	.292	1.317	.030	.746
1280	1.509	0	-1145.9	1.6669	28.205	0.342	.294	1.509	0	28.205	.079	1.0382	-1.002	.342	1.281	1700	.043	.625	.294	1.314	.031	.743
1320	1.461	0	-1132.0	1.6776	28.168	0.355	.296	1.461	0	28.168	.081	1.0476	-1.003	.355	1.274	1723	.047	.614	.296	1.312	.032	.740
1360	1.416	0	-1117.5	1.6884	28.124	0.370	.299	1.416	0	28.124	.083	1.0586	-1.004	.370	1.266	1745	.050	.606	.299	1.310	.033	.737
1400	1.373	0	-1102.3	1.6994	28.071	0.387	.301	1.373	0	28.071	.084	1.0711	-1.004	.387	1.258	1766	.054	.601	.301	1.308	.035	.734

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<p>Thermodynamic and transport combustion properties have been calculated for a wide range of conditions for the reaction of hydrocarbons with air. Three hydrogen-carbon atom ratios were selected to represent the range of aircraft fuels (H/C = 1.7, 2.0, and 2.1). For each of these H/C ratios, combustion properties were calculated for the following conditions:</p> <p>Equivalence ratio: 0, 0.25, 0.5, 0.75, 1.0, and 1.25 Water - dry air mass ratio: 0 and 0.03 Pressure, kPa: 1.01325, 10.1325, 101.325, 1013.25, and 5066.25 (or in atm: 0.01, 0.1, 1, 10, and 50) Temperature, K: every 10 degrees from 200 to 900 K; every 50 degrees from 900 to 3000 K Temperature, °R: every 20 degrees from 360° to 1600° R; every 100 degrees from 1600° to 5400° R</p> <p>The properties presented are composition, density, molecular weight, enthalpy, entropy, specific heat at constant pressure, volume derivatives, isentropic exponent, velocity of sound, viscosity, thermal conductivity, and Prandtl number. Property tables are based on compositions that were calculated by assuming both (1) chemical equilibrium (for both homogeneous and heterogeneous phases) and (2) constant compositions for all temperatures. Properties in SI units are presented in part I (TP-1906) for the Kelvin temperature schedules, and the corresponding compositions are presented in part II (TP-1907). Properties in U. S. customary units are presented in this report for the Rankine temperature schedules, and corresponding compositions are presented in part IV (TP-1909).</p>		14. Sponsoring Agency Code
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