

F/A



SAIF POWER LIMITED

SAIF GROUP

Ref: NEPRA/12/11

July 02, 2012

The Registrar
National Electric Power Regulatory Authority
OPF Building, 3rd Floor
Shahrah-e-Jamhuriat
Islamabad

Fr Na Pl.
- AD (MP) + Pr
2/7/12

Registrar	4841
Dy. No.	02-07-12
Dated	02-07-12

Dear Sir,

Tariff Modification Petition

Kindly find attach our Tariff Modification Petition details of which are attached herewith.

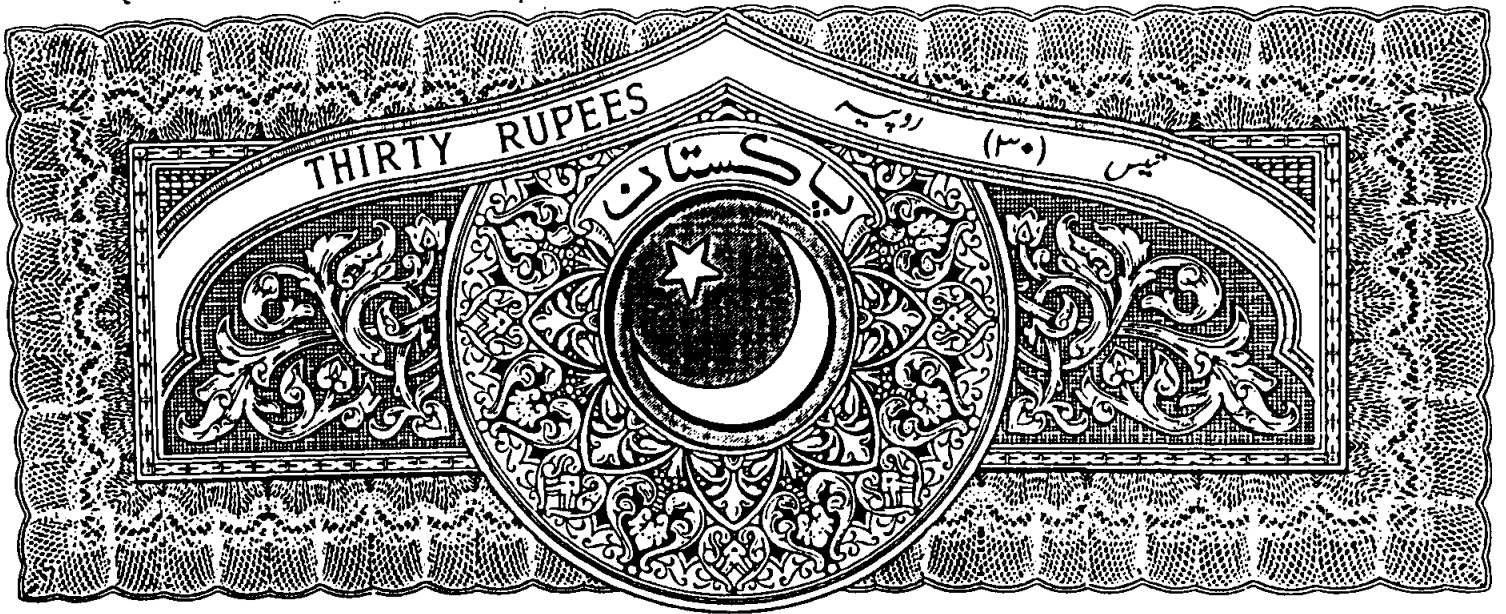
Further, HBL bankers' cheque no. 7103813 dated June 29, 2012 amounting Rs. 1,108,974 (net of withholding tax at the rate of 6% on gross fee of PKR 1,179,759) is attached with this letter as petition fee.

Yours' truly,

Sohail H Hydari
Chief Operating Officer

Received alongwith Cheque of Rs. 1,108,974.00

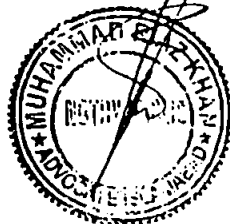
009



BEFORE THE NATIONAL ELECTRIC POWER
REGULATORY AUTHORITY

I, Sohail H. Hydari, Chief Operating Officer, Saif Power Limited, being duly authorized representative / attorney of Saif Power Limited, hereby solemnly affirm and declare that the contents of the accompanying Modification Petition No: NEPRA/12/11 dated July 02, 2012 including all supporting documents are true and correct to the best of my knowledge and belief and that nothing has been concealed. I also affirm that all further documentation and information to be provided by me in connection with the accompanying petition shall be true to the best of my knowledge and belief.

ATTESTED



02/07/2012

Sohail H. Hydari
DEPONENT

SAIF POWER LIMITED

Rule 3

PETITION

Petition under Sections 31 of the National Electric Power Regulatory Authority Act, 1997 read with Rule 3 of the NEPRA Tariff Standards and Procedures Rules, 1998 (the "Rules") for Revision/Modification of the Generation Tariff Determination dated June 20, 2011 of Saif Power Limited--(the Company/Petitioner")

Rules 3(2)(a)

PETITIONER'S NAME AND ADDRESS

Saif Power Limited, through
Mr. Sohail H Hydari
Chief Operating Officer

4th Floor, Kulsum Plaza, 2020 Blue Area, Jinnah Avenue,
Islamabad
Tel: +92 51 282 9415, 282 3924
Fax:+92 51 220 1110

Rules 3(2)(a)

Generation License No.IGSPL/04/2006 dated June 21, 2006

Rules 3(2)(b)

GROUND

Amended Operating Regime as authorized by the Economic Coordination Committee of GOP requiring changes in tariff component of Energy

Rules 3(2)(c)

RELIEF SOUGHT

Relief sought is mentioned in Section 6 of this Tariff Modification Petition

Rules 3(2)(f)

SUMMARY OF EVIDENCE

Attached herewith as Annexures of the Tariff Petition



PROVISIONS OF THE AGREEMENT

Section 5.7 of the Implementation Agreement states;

"High Speed Diesel Cost Recovery after 30th June 2011

(a) If prior to June 30, 2011 (which date upon any extension(s) of the present Gas Allocation, as provided in (i) below, shall be deemed to be a date that is three hundred and sixty five (365) days prior to the end of such extended date the Gas Allocation for the firm delivery of Gas (as defined in the Gas Supply Agreement) during nine (9) Month of each Year will expire or shall materially reduce in duration within the following twelve (12) Months so that the Company will be able to continue to operate the Complex on Gas in a manner that will allow the Company to operate the Complex on Gas in a manner consistent with its Tariff Approval or (ii) the Power Purchase Agreement has not been modified or amended in a matter that will allow the Company to operate the Complex using high speed diesel beyond ninety (90) Days in a Year, consistent with the Tariff Approval (for high speed diesel), the GOP and the Company shall meet within (10) Business Days of the beginning of the Pre-Expiry Period and continue to meet at reasonable intervals until the Parties have agreed a mechanism reasonably acceptable to the Parties that will compensate the Company for the continued operation of the Complex.

(b) One of the three (3) options under Section 5.7(a) providing for either an extension in the Gas Allocation or an amendment or modification in the Power Purchase Agreement or a mechanism which will compensate the Company for the continued operation of the Complex shall be agreed upon between the Company and the GOP prior to the end of the Pre-Expiry Period.

(c) If by the date that is five (5) Business Days prior to the end of the Pre-Expiry Period, the Parties have not agreed on the mechanism which will compensate the Company for the continued operation of the Complex or the Gas Allocation has not been extended or the Power Purchase Agreement has not been modified or amended as provided for in Section 5.7(a), either Party may terminate this Agreement by giving thirty (30) days prior notice to the other Party. Upon termination of this Agreement following the delivery of such notice, the Power Purchase Agreement shall immediately terminate and the provisions of Section 14.5 and Section 14.6 and the Article XV shall apply."

Point (b) above is one of the important links to this Petition.



2002 POLICY GUIDELINES

Under the 2002 Policy Guidelines and with special reference to Guidelines for Tariff Determination, Section 1.4 9a) states;

"Tariff should be determined allowing reasonable Internal Rate of Returns (IRR) on equity investment"

This basically means that IPPs tariff is structured on a cost + IRR model

Section 1.13 continues to say;

"As fuel cost is a pass through, prices of different fuels e.g gas, oil, coal, etc., tend to distort the evaluation. Therefore, levelized tariff be evaluated on the basis of capacity purchase price, efficiency (taking into account fuel cost) and O&M costs."

Therefore, as Authority has already determined the IRR for the Company, any additional operations cost for the Company in current operation regime that is imposed by an external situation (relating to GOP) and is beyond Company's control and is not covered under the existing tariff determination for the Company is a pass through item and needs to be treated as such to ensure that Company's determined IRR is not diluted.

APPEAL TO THE AUTHORITY

Based on above presentation, we request the Authority for;

1. Adjustment on HSD O&M variable component to make it 2.215 times the cost of O&M Gas component as against existing cost factor of 1.44 times.
2. Conduct of HSD Heat rate test after each major maintenance.
3. Adjustment of Specific gravity of HSD fuel to reflect the actual position during Gas months.
4. Adjustments for item no.1 and 3 may be made effective from July 1, 2011.

Detailed explanations of the items are given hereunder;



HSD HEAT RATE TEST AFTER EACH MAJOR MAINTENANCE

As the HSD fuel component initially determined for all the 4 similar IPPs was discrepant. The Power Purchaser, GOP and the Company/ies agreed that a heat rate test would be conducted after the major maintenance (when the turbines would be brought back to the near brand new position). In this way, the heat rate benchmark would be reestablished again to allow a more true representation. The results of such heat rate test would become the benchmark for the HSD fuel cost component in the tariff till next major maintenance which has a cycle of around 5-6 years. Other related provision and annexures would remain the same.





GOVERNMENT OF PAKISTAN
MINISTRY OF WATER AND POWER
(PRIVATE POWER & INFRASTRUCTURE BOARD)

"Annex-A (I) "

No. 1(102)PPIB/11/PRJ

15th July 2011

SUBJECT: CONTINUED OPERATION OF FOUR (04) IPPs OF 842 MW CUMULATIVE CAPACITY, WHICH ARE BASED ON PIPELINE QUALITY GAS FROM SNGPL SYSTEM

Pursuant to Power Policy 2002, four (04) SNGPL gas based IPP projects namely Saif, Sapphire Orient and Halmore, have been set up. The aggregate (pipeline quality) gas requirement of 152 MMCFD for these projects was earlier allocated through the SNGPL system by the Economic Coordination Committee (ECC) of the Cabinet in year 2004 on nine (9) months firm basis, which ended on 30th June 2011. In order to ensure continued operation of the four (04) IPPs beyond 30th June 2011, PPIB / Ministry of Water & Power (MoW&P) earlier initiated a Summary for the ECC, on which the following decision was taken by the ECC in its meeting held on 30th June 2011:

- i. Firm gas allocation of 76 MMCFD to IPPs, namely Saif, Sapphire, Orient and Halmore, till 30th November 2011;
- ii. Cost differential on account of use of alternate fuel-(HSD) by the four IPPs should be equally shared by the SNGPL and the Government; and
- iii. Modification of tariff by NEPRA allowing operation of gas based IPPs on backup fuel (HSD), with full cost recovery, for whatever period gas was not made available to them.

2. In order to deliberate on the modalities of compliance of the above mentioned ECC decision, a meeting has been scheduled to be held on Wednesday, 20th July 2011 at 1300 hrs in Board Room of PPIB Islamabad.

3. You are requested to kindly make it convenient to attend the above meeting.

Best regards,

Yours sincerely,

(N. A. Zuberi)

Managing Director

- | | |
|---|---|
| 1. Mr. Muhammad Zargham Eshaq Khan
Joint Secretary (Power)
Ministry of Water & Power
Islamabad | 2. Mr. Saeed Ullah Shah
Director General (Gas)
Ministry of Petroleum & Natural Resources
Islamabad |
| 3. Rana Muhammad Amjad
General Manager (Sales)
WAPDA House
Lahore | 4. Mr. Masood Ahmad
General Manager (Sales)
SNGPL
Lahore |

House No. 50, Nazimuddin Road, F-7/4, Islamabad - Pakistan

Tel: +92 (51) 9100118 up to 9100129 Fax: +92 (51) 9100331 & 9100132

E-mail: ppib@ppib.gov.pk Internet: www.ppib.gov.pk



NATIONAL TRANSMISSION & DESPATCH COMPANY

Tel # 042-99202229
Fax # 042-99201179

Office of the
Chief Executive Officer
National Transmission & Despatch Company
414-WAPDA House, Lahore

No. 48-55 / COO(CPPA)/CE-LPPs

Dated: 29/06/2011

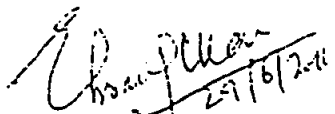
The Registrar,
National Electric Power Regulatory Authority,
Islamic Republic of Pakistan,
2nd Floor, OPF Building, G-5/2,
Shahrah-e-Jamhuriat,
Islamabad.

Subject: Continued Operation of four (4) IPPs of 842 MW Cumulative Capacity, which are based on Pipeline Quality Gas from SNGPL system - GOP Policy guideline

In pursuance to the GoP Policy Guideline as mentioned in the Ministry of Water & Power, Government of Pakistan, Islamabad letter P-II 7(166)/08 dated 28th June 2011 (copy enclosed) with respect to the four (4) IPPs, i.e Saif, Sapphire, Orient and Halmore for operation on HSD beyond 30th June 2011 till such time gas is made available for these projects or some other policy decision is taken by the GoP to address gas requirement of these four gas based IPPs.

NEPRA is requested to allow NTDC / General Manager (System Operation) NPCC to allow dispatch for the above mentioned four (4) Power Plants on HSD beyond 30th June 2011 due to non-availability of gas this may help to some extent the menace of load shedding in the country.

Matter may please be treated on priority basis.


(Ehsan-ul-Majeed Khan)
General Manager (CPPA)

D.A./ As above.

CC to:

- Managing Director (PEPCO) WAPDA House, Lahore
- Managing Director (PPIB), 50-Nizami-Uddin Road Islamabad
- Joint Secretary Power, Ministry of Water & Power Islamabad.
- General Manager (System Operation) NPCC Islamabad.
- • M/s Saif Power Limited Islamabad.
- M/s Sapphire Electric Power Company, Lahore.
- M/s Halmore Power Project Islamabad.
- M/s Orient Power Company Lahore.



APPENDIX G: CALCULATION OF FACTORED FIRED HOURS AND FACTORED STARTS

1A). FACTORED FIRED HOURS - OPERATION ON NATURAL GAS

$$\text{Factored Fired Hours} = (K + (M * I)) * (G + 6 * P)$$

1B). FACTORED FIRED HOURS - OPERATION ON HIGH SPEED DIESEL

$$\text{Factored Fired Hours} = (K + (M * I)) * (1.5 * D) + 6 * P$$

Where:

G = Annual Base Load Operating Hours on Gas Fuel

D = Annual Base Load Operating Hours on High Speed Diesel Fuel

A_r = Heavy Fuel Severity Factor (Residual A_r = 3 to 4, Crude A_r = 2 to 3)

P = Annual Peak Load Operating Hours

I = Percent Water/Steam Injection Referenced to Inlet Air Flow

M & K = Water/Steam Injection Constants as stated in the table below

M	K	Control	Steam Injection	N2/N3 Material
0	1	Dry	<2.2%	GTD-222/FSX-414
0	1	Dry	>2.2%	GTD-222
.18	.6	Dry	>2.2%	FSX-414
.18	1	Wet	>0%	GTD-222
.55	1	Wet	>0%	FSX-414

L

[Handwritten signature]

*

TABLE 3: API TABLE 54B, VOLUME CORRECTION TO 15°C										DENSITY AT 15°C = 840 kg/m ³
Temp.	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
-10.00	1.0210	1.0211	1.0212	1.0212	1.0213	1.0214	1.0215	1.0216	1.0216	1.0217
-9.00	1.0201	1.0202	1.0203	1.0203	1.0204	1.0205	1.0206	1.0207	1.0208	1.0209
-8.00	1.0193	1.0194	1.0195	1.0195	1.0196	1.0197	1.0198	1.0199	1.0199	1.0200
-7.00	1.0185	1.0186	1.0187	1.0187	1.0188	1.0189	1.0190	1.0191	1.0191	1.0192
-6.00	1.0176	1.0177	1.0178	1.0178	1.0179	1.0180	1.0181	1.0182	1.0183	1.0184
-5.00	1.0168	1.0169	1.0170	1.0170	1.0171	1.0172	1.0173	1.0174	1.0174	1.0175
-4.00	1.0160	1.0161	1.0162	1.0162	1.0163	1.0164	1.0165	1.0166	1.0166	1.0167
-3.00	1.0151	1.0152	1.0153	1.0153	1.0154	1.0155	1.0156	1.0157	1.0158	1.0159
-2.00	1.0143	1.0144	1.0145	1.0145	1.0146	1.0147	1.0148	1.0149	1.0149	1.0150
-1.00	1.0134	1.0135	1.0136	1.0137	1.0138	1.0139	1.0140	1.0141	1.0141	1.0142
-0.00	1.0126	1.0127	1.0128	1.0128	1.0129	1.0130	1.0131	1.0132	1.0132	1.0133
+0.00	1.0126	1.0125	1.0124	1.0124	1.0123	1.0122	1.0121	1.0120	1.0120	1.0119
1.00	1.0118	1.0117	1.0116	1.0116	1.0115	1.0114	1.0113	1.0112	1.0111	1.0110
2.00	1.0109	1.0108	1.0107	1.0107	1.0106	1.0105	1.0104	1.0103	1.0103	1.0102
3.00	1.0101	1.0100	1.0099	1.0099	1.0098	1.0097	1.0096	1.0095	1.0095	1.0094
4.00	1.0093	1.0092	1.0091	1.0090	1.0089	1.0088	1.0087	1.0086	1.0086	1.0085
5.00	1.0084	1.0083	1.0082	1.0082	1.0081	1.0080	1.0079	1.0078	1.0078	1.0077
6.00	1.0076	1.0075	1.0074	1.0074	1.0073	1.0072	1.0071	1.0070	1.0069	1.0068
7.00	1.0067	1.0066	1.0065	1.0065	1.0064	1.0063	1.0062	1.0061	1.0061	1.0060
8.00	1.0059	1.0058	1.0057	1.0057	1.0056	1.0055	1.0054	1.0053	1.0053	1.0052
9.00	1.0051	1.0050	1.0049	1.0048	1.0047	1.0046	1.0045	1.0044	1.0044	1.0043
10.00	1.0042	1.0041	1.0040	1.0040	1.0039	1.0038	1.0037	1.0036	1.0036	1.0035
11.00	1.0034	1.0033	1.0032	1.0032	1.0031	1.0030	1.0029	1.0028	1.0027	1.0026
12.00	1.0025	1.0024	1.0023	1.0023	1.0022	1.0021	1.0020	1.0019	1.0019	1.0018
13.00	1.0017	1.0016	1.0015	1.0015	1.0014	1.0013	1.0012	1.0011	1.0010	1.0009
14.00	1.0008	1.0007	1.0006	1.0006	1.0005	1.0004	1.0003	1.0002	1.0002	1.0001
15.00	1.0000	0.9999	0.9998	0.9998	0.9997	0.9996	0.9995	0.9994	0.9994	0.9993
16.00	0.9992	0.9991	0.9990	0.9989	0.9988	0.9987	0.9986	0.9985	0.9985	0.9984
17.00	0.9983	0.9982	0.9981	0.9981	0.9980	0.9979	0.9978	0.9977	0.9977	0.9976
18.00	0.9975	0.9974	0.9973	0.9972	0.9971	0.9970	0.9969	0.9968	0.9968	0.9967
19.00	0.9966	0.9965	0.9964	0.9964	0.9963	0.9962	0.9961	0.9960	0.9960	0.9959

029

22

TABLE 53B, GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

TEMP C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C											TEMP. C
	813.0	815.0	817.0	819.0	821.0	823.0	825.0	827.0	829.0	831.0	833.0	
4.50	805.5	807.5	809.5	811.5	813.5	815.6	817.6	819.6	821.6	823.6	825.7	4.50
4.75	805.6	807.7	809.7	811.7	813.7	815.7	817.8	819.8	821.8	823.8	825.8	4.75
5.00	805.8	807.9	809.9	811.9	813.9	815.9	817.9	820.0	822.0	824.0	826.0	5.00
5.25	806.0	808.0	810.0	812.1	814.1	816.1	818.1	820.1	822.1	824.2	826.2	5.25
5.50	806.2	808.2	810.2	812.2	814.3	816.3	818.3	820.3	822.3	824.3	826.4	5.50
5.75	806.4	808.4	810.4	812.4	814.4	816.5	818.5	820.5	822.5	824.5	826.5	5.75
6.00	806.6	808.6	810.6	812.8	814.8	816.6	818.7	820.7	822.7	824.7	826.7	6.00
6.25	806.7	808.7	810.8	812.8	814.8	816.8	818.8	820.8	822.8	824.9	826.9	6.25
6.50	808.9	808.9	810.9	813.0	815.0	817.0	819.0	821.0	823.0	825.0	827.1	6.50
6.75	807.1	809.1	811.1	813.1	815.1	817.2	819.2	821.2	823.2	825.2	827.2	6.75
7.00	807.3	809.3	811.3	813.3	815.3	817.3	819.4	821.4	823.4	825.4	827.4	7.00
7.25	807.4	809.5	811.5	813.5	815.5	817.5	819.5	821.8	823.6	825.8	827.6	7.25
7.50	807.8	808.6	811.7	813.7	815.7	817.7	819.7	821.7	823.7	825.8	827.8	7.50
7.75	807.8	809.8	811.8	813.9	815.8	817.9	819.9	821.9	823.9	825.9	827.9	7.75
8.00	808.0	810.0	812.0	814.0	816.0	818.1	820.1	822.1	824.1	826.1	828.1	8.00
8.25	808.2	810.2	812.2	814.2	816.2	818.2	820.2	822.3	824.3	826.3	828.3	8.25
8.50	808.3	810.4	812.4	814.4	816.4	818.4	820.4	822.4	824.4	826.5	828.5	8.50
8.75	808.5	810.5	812.8	814.8	816.8	818.8	820.6	822.6	824.8	826.8	828.6	8.75
9.00	808.7	810.7	812.7	814.7	816.7	818.6	820.8	822.8	824.8	826.8	828.8	9.00
9.25	808.9	810.9	812.9	814.9	816.9	818.9	821.0	823.0	825.0	827.0	829.0	9.25
9.50	809.1	811.1	813.1	815.1	817.1	819.1	821.1	823.1	825.1	827.2	829.2	9.50
9.75	809.2	811.3	813.3	815.3	817.3	819.3	821.3	823.3	825.3	827.3	829.3	9.75
10.00	809.4	811.4	813.4	815.4	817.5	819.5	821.5	823.5	825.5	827.5	829.6	10.00
10.25	809.8	811.8	813.6	815.6	817.8	819.6	821.7	823.7	825.7	827.7	829.7	10.25
10.50	809.8	811.8	813.8	815.8	817.8	819.8	821.8	823.8	825.9	827.9	829.8	10.50
10.75	810.0	812.0	814.0	816.0	818.0	820.0	822.0	824.0	826.0	828.0	830.0	10.75
11.00	810.1	812.1	814.2	816.2	818.2	820.2	822.2	824.2	826.2	828.2	830.2	11.00
11.25	810.3	812.3	814.3	816.3	818.3	820.4	822.4	824.4	826.4	828.4	830.4	11.25
11.50	810.5	812.5	814.5	816.5	818.5	820.5	822.6	824.5	826.6	828.6	830.6	11.50
11.75	810.7	812.7	814.7	816.7	818.7	820.7	822.7	824.7	826.7	828.7	830.7	11.75
12.00	810.9	812.9	814.9	816.9	819.9	820.9	822.9	824.9	826.9	828.9	830.9	12.00

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 813.0 TO 833.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53B, GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C											TEMP. C
	813.0	815.0	817.0	818.0	821.0	823.0	825.0	827.0	829.0	831.0	833.0	
12.00	810.9	812.9	814.9	818.9	819.9	820.8	822.8	824.8	826.9	828.9	830.9	12.00
12.25	811.0	813.0	815.0	817.1	819.1	821.1	823.1	825.1	827.1	829.1	831.1	12.25
12.50	811.2	813.2	815.2	817.2	819.2	821.2	823.2	825.3	827.3	829.3	831.3	12.50
12.75	811.4	813.4	815.4	817.4	819.4	821.4	823.4	825.4	827.4	829.4	831.4	12.75
13.00	811.6	813.6	815.6	817.8	819.8	821.8	823.6	825.8	827.6	829.8	831.8	13.00
13.25	811.7	813.8	816.8	817.8	819.8	821.8	823.8	825.8	827.8	829.8	831.8	13.25
13.50	811.9	813.9	815.9	817.9	818.9	821.9	823.9	825.8	827.8	829.8	831.8	13.50
13.75	812.1	814.1	816.1	818.1	820.1	822.1	824.1	826.1	828.1	830.1	832.1	13.75
14.00	812.3	814.3	816.3	818.3	820.3	822.3	824.3	826.3	828.3	830.3	832.3	14.00
14.25	812.5	814.5	816.5	818.5	820.5	822.5	824.5	826.5	828.5	830.5	832.5	14.25
14.50	812.8	814.8	816.8	818.8	820.8	822.8	824.8	826.8	828.8	830.8	832.8	14.50
14.75	812.8	814.8	816.8	818.8	820.8	822.8	824.8	826.8	828.8	830.8	832.8	14.75
15.00	813.0	815.0	817.0	819.0	821.0	823.0	825.0	827.0	829.0	831.0	833.0	15.00
15.25	813.2	815.2	817.2	818.2	821.2	823.2	825.2	827.2	829.2	831.2	833.2	15.25
15.50	813.4	815.4	817.4	819.4	821.4	823.4	825.3	827.3	829.3	831.3	833.3	15.50
15.75	813.5	815.5	817.5	819.5	821.5	823.5	825.5	827.5	828.5	831.5	833.5	15.75
16.00	813.7	815.7	817.7	818.7	821.7	823.7	825.7	827.7	828.7	831.7	833.7	16.00
16.25	813.9	815.9	817.9	819.9	821.9	823.9	825.9	827.9	829.9	831.9	833.9	16.25
16.50	814.1	818.1	818.1	820.1	822.1	824.1	826.0	828.0	830.0	832.0	834.0	16.50
16.75	814.2	816.2	818.2	820.2	822.2	824.2	826.2	828.2	830.2	832.2	834.2	16.75
17.00	814.4	818.4	819.4	820.4	822.4	824.4	826.4	828.4	830.4	832.4	834.4	17.00
17.25	814.6	818.6	818.6	820.6	822.6	824.6	826.6	828.6	830.6	832.6	834.6	17.25
17.50	814.8	818.8	818.8	820.8	822.8	824.8	826.7	828.7	830.7	832.7	834.7	17.50
17.75	815.0	817.0	818.8	820.8	822.8	824.9	826.9	828.8	830.9	832.9	834.9	17.75
18.00	815.1	817.1	819.1	821.1	823.1	825.1	827.1	829.1	831.1	833.1	835.1	18.00
18.25	815.3	817.3	819.3	821.3	823.3	825.3	827.3	829.3	831.3	833.3	835.3	18.25
18.50	815.5	817.5	819.5	821.5	823.5	825.5	827.4	829.4	831.4	833.4	835.4	18.50
16.75	815.7	817.7	819.7	821.6	823.6	825.6	827.9	829.8	831.6	833.8	835.8	18.75
19.00	815.8	817.8	819.8	821.8	823.8	825.8	827.8	829.8	831.8	833.8	835.8	19.00
19.25	816.0	818.0	820.0	822.0	824.0	826.0	828.0	830.0	832.0	834.0	836.0	19.25
19.50	816.2	818.2	820.2	822.2	824.2	826.2	828.1	830.1	832.1	834.1	836.1	19.50

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 813.0 TO 833.0

631

24

11

TABLE 53B, GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

MP. C	DENSITY AT OBSERVED TEMPERATURE										TEMP. C	
	813.0	815.0	817.0	819.0	821.0	823.0	825.0	827.0	829.0	831.0		833.0
.50	816.2	818.2	820.2	822.2	824.2	826.2	828.1	830.1	832.1	834.1	836.1	19.50
.75	816.4	818.4	820.4	822.3	824.3	826.3	828.3	830.3	832.3	834.3	836.3	19.75
.00	816.6	818.5	820.5	822.5	824.5	826.5	828.5	830.5	832.5	834.5	836.5	20.00
.25	816.7	818.7	820.7	822.7	824.7	826.7	828.7	830.7	832.7	834.6	836.6	20.25
.50	816.9	818.9	820.9	822.9	824.9	826.9	828.9	830.8	832.8	834.8	836.8	20.50
.75	817.1	819.1	821.1	823.0	825.0	827.0	829.0	831.0	833.0	835.0	837.0	20.75
.00	817.3	819.3	821.2	823.2	825.2	827.2	829.2	831.2	833.2	835.2	837.1	21.00
.25	817.4	819.4	821.4	823.4	825.4	827.4	829.4	831.4	833.3	835.3	837.3	21.25
.50	817.8	819.8	821.6	823.6	825.6	827.6	829.5	831.5	833.5	835.5	837.5	21.50
.75	817.8	819.8	821.8	823.8	825.7	827.7	829.7	831.7	833.7	835.7	837.7	21.75
.00	818.0	820.0	821.9	823.9	825.9	827.9	829.9	831.9	833.9	835.9	837.8	22.00
.25	818.1	820.1	822.1	824.1	826.1	828.1	830.1	832.1	834.0	836.0	838.0	22.25
.50	818.3	820.3	822.3	824.3	826.3	828.3	830.2	832.2	834.2	836.2	838.2	22.50
.75	818.5	820.5	822.5	824.5	826.4	828.4	830.4	832.4	834.4	836.4	838.4	22.75
.00	818.7	820.7	822.6	824.6	826.6	828.6	830.6	832.6	834.6	836.5	838.0	23.00
.25	818.8	820.8	822.8	824.8	826.8	828.8	830.8	832.7	834.7	836.7	838.1	23.25
.50	819.0	821.0	823.0	825.0	827.0	828.9	830.9	832.9	834.9	836.9	838.2	23.50
.75	819.2	821.2	823.2	825.1	827.1	829.1	831.1	833.1	835.1	837.1	839.0	23.75
.00	819.4	821.4	823.3	825.3	827.3	829.3	831.3	833.3	835.3	837.2	839.2	24.00
.25	819.8	821.5	823.5	825.5	827.5	829.5	831.4	833.4	835.4	837.4	839.4	24.25
.50	819.7	821.7	823.7	825.7	827.7	829.6	831.6	833.6	835.6	837.6	839.6	24.50
.75	819.9	821.9	823.9	825.8	827.8	829.8	831.8	833.8	835.8	837.7	839.7	24.75
.00	820.1	822.1	824.0	826.0	828.0	830.0	832.0	834.0	835.9	837.9	839.9	25.00
.25	820.3	822.2	824.2	826.2	828.2	830.2	832.1	834.1	836.1	838.1	840.1	25.25
.50	820.4	822.4	824.4	826.4	828.4	830.3	832.3	834.3	836.3	838.3	840.3	25.50
.75	820.6	822.6	824.6	826.6	828.5	830.5	832.5	834.5	836.5	838.4	840.4	25.75
1.00	820.8	822.8	824.7	826.7	828.7	830.7	832.7	834.8	836.6	838.5	840.6	26.00
1.25	821.0	822.9	824.9	826.9	828.9	830.9	832.8	834.8	836.6	838.5	840.6	26.25
1.50	821.1	823.1	825.1	827.1	829.1	831.0	833.0	835.0	837.0	838.4	841.0	26.50
1.75	821.3	823.3	825.3	827.3	829.2	831.2	833.2	835.2	837.1	839.1	841.1	26.75
2.00	821.5	823.5	825.4	827.4	829.4	831.4	833.4	835.3	837.3	839.3	841.3	27.00

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 813.0 TO 833.0

140

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53B, GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

EMP. C	DENSITY AT OBSERVED TEMPERATURE										TEMP. C	
	813.0	815.0	817.0	819.0	821.0	823.0	825.0	827.0	829.0	831.0		833.0
7.00	821.5	823.5	825.4	827.4	829.4	831.4	833.4	835.3	837.3	839.3	841.3	27.00
7.25	821.7	823.6	825.6	827.6	829.6	831.6	833.5	835.5	837.5	839.5	841.5	27.25
7.50	821.8	823.8	825.8	827.8	829.7	831.7	833.7	835.7	837.7	839.8	841.6	27.50
7.75	822.0	824.0	826.0	827.9	829.9	831.8	833.9	835.8	837.8	839.8	841.8	27.75
8.00	822.2	824.2	826.1	828.1	830.1	832.1	834.0	836.0	838.0	840.0	842.0	28.00
8.25	822.4	824.3	826.3	828.3	830.3	832.2	834.2	836.2	838.2	840.2	842.2	28.25
8.50	822.5	824.5	826.5	828.5	830.4	832.4	834.4	836.4	838.3	840.3	842.3	28.50
8.75	822.7	824.7	826.7	828.6	830.6	832.6	834.6	836.5	838.4	840.5	842.5	28.75
9.00	822.9	824.9	826.8	828.8	830.8	832.8	834.7	836.7	838.6	840.7	842.7	29.00
9.25	823.1	825.0	827.0	828.0	831.0	832.8	834.9	836.9	838.9	840.9	842.8	29.25
9.50	823.2	825.2	827.2	829.2	831.1	833.1	835.1	837.1	839.0	841.0	843.0	29.50
9.75	823.4	825.4	827.4	829.3	831.3	833.3	835.3	837.2	839.2	841.2	843.2	29.75
10.00	823.6	825.6	827.5	829.5	831.5	833.5	835.4	837.4	839.4	841.4	843.4	30.00
10.25	823.8	825.7	827.7	829.7	831.7	833.6	835.6	837.6	839.6	841.5	843.5	30.25
10.50	823.9	825.9	827.9	829.8	831.8	833.8	835.6	837.7	839.7	841.7	843.7	30.50
10.75	824.1	826.1	828.1	830.0	832.0	834.0	835.9	837.9	839.9	841.9	843.9	30.75
11.00	824.3	826.3	828.2	830.2	832.2	834.1	836.1	838.1	840.1	842.1	844.1	31.00
11.25	824.5	826.4	828.4	830.4	832.3	834.3	836.3	838.3	840.3	842.2	844.2	31.25
11.50	824.6	826.6	828.6	830.5	832.5	834.5	836.5	838.4	840.4	842.4	844.4	31.50
11.75	824.8	826.8	828.7	830.7	832.7	834.7	836.8	838.8	840.8	842.8	844.8	31.75
12.00	825.0	827.0	828.9	830.9	832.9	834.8	836.8	838.7	840.8	842.8	844.7	32.00
12.25	825.2	827.1	829.1	831.1	833.0	835.0	837.0	838.8	840.8	842.9	844.9	32.25
12.50	825.3	827.3	829.3	831.2	833.2	835.2	837.1	839.1	841.1	843.1	845.1	32.50
12.75	825.5	827.5	829.4	831.4	833.4	835.3	837.3	839.3	841.3	843.3	845.3	32.75
13.00	825.7	827.6	829.6	831.6	833.5	835.5	837.5	839.5	841.5	843.4	845.4	33.00
13.25	825.9	827.8	829.8	831.8	833.7	835.7	837.7	839.6	841.6	843.6	845.6	33.25
13.50	826.0	828.0	830.0	831.9	833.9	835.9	837.8	839.8	841.8	843.8	845.8	33.50
13.75	826.2	828.2	830.1	832.1	834.1	836.0	838.0	840.0	842.0	844.0	846.0	33.75
14.00	826.4	828.3	830.3	832.3	834.2	836.2	838.2	840.2	842.1	844.1	846.1	34.00
14.25	826.5	828.5	830.5	832.4	834.4	836.4	838.3	840.3	842.3	844.3	846.3	34.25
14.50	826.7	828.7	830.7	832.6	834.6	836.5	838.5	840.5	842.5	844.5	846.5	34.50

3

TABLE 53B, GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

TEMP C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C											TEMP C
	833.0	835.0	837.0	839.0	841.0	843.0	845.0	847.0	849.0	851.0	853.0	
27.00	841.3	843.3	845.3	847.3	849.3	851.3	853.2	855.2	857.2	859.2	861.2	27.00
27.25	841.5	843.5	845.5	847.4	849.4	851.4	853.4	855.4	857.4	859.4	861.4	27.25
27.50	841.6	843.6	845.6	847.6	849.6	851.6	853.6	855.6	857.6	859.6	861.6	27.50
27.75	841.8	843.8	845.8	847.8	849.8	851.8	853.8	855.8	857.8	859.7	861.7	27.75
28.00	842.0	844.0	846.0	848.0	850.0	852.0	853.9	855.9	857.9	859.9	861.9	28.00
28.25	842.2	844.1	846.1	848.1	850.1	852.1	854.1	856.1	858.1	860.1	862.1	28.25
28.50	842.3	844.3	846.3	848.3	850.3	852.3	854.3	856.3	858.3	860.3	862.3	28.50
28.75	842.5	844.5	846.5	848.5	850.5	852.5	854.5	856.4	858.4	860.4	862.4	28.75
29.00	842.7	844.7	846.7	848.7	850.6	852.6	854.6	856.6	858.6	860.6	862.6	29.00
29.25	842.8	844.8	846.8	848.8	850.8	852.8	854.8	856.8	858.8	860.8	862.8	29.25
29.50	843.0	845.0	847.0	849.0	851.0	853.0	855.0	857.0	859.0	860.9	862.9	29.50
29.75	843.2	845.2	847.2	849.2	851.2	853.2	855.1	857.1	859.1	861.1	863.1	29.75
30.00	843.4	845.4	847.4	849.3	851.3	853.3	855.3	857.3	859.3	861.3	863.3	30.00
30.25	843.5	845.5	847.5	849.5	851.5	853.5	855.5	857.5	859.5	861.5	863.5	30.25
30.50	843.7	845.7	847.7	849.7	851.7	853.7	855.7	857.6	859.6	861.6	863.6	30.50
30.75	843.9	845.9	847.9	849.9	851.8	853.8	855.8	857.8	859.8	861.8	863.8	30.75
31.00	844.1	846.0	848.0	850.0	852.0	854.0	856.0	858.0	860.0	862.0	864.0	31.00
31.25	844.2	846.2	848.2	850.2	852.2	854.2	856.2	858.2	860.2	862.1	864.1	31.25
31.60	844.4	846.4	848.4	850.4	852.4	854.4	856.3	858.3	860.3	862.3	864.3	31.50
31.75	844.8	846.6	848.6	850.5	852.5	854.5	856.5	858.5	860.5	862.5	864.5	31.75
32.00	844.7	846.7	848.7	850.7	852.7	854.7	856.7	858.7	860.7	862.7	864.6	32.00
32.25	844.8	846.9	848.9	850.9	852.9	854.9	856.9	858.9	860.8	862.8	864.8	32.25
32.60	845.1	847.1	849.1	851.1	853.1	855.0	857.0	859.0	861.0	863.0	865.0	32.50
32.75	845.3	847.3	849.2	851.2	853.2	855.2	857.2	859.2	861.2	863.2	865.2	32.75
33.00	845.4	847.4	849.4	851.4	853.4	855.4	857.4	859.4	861.4	863.3	865.3	33.00
33.25	845.6	847.6	849.6	851.6	853.6	855.6	857.5	859.5	861.5	863.5	865.5	33.25
33.50	845.8	847.8	849.8	851.8	853.7	855.7	857.7	859.7	861.7	863.7	865.7	33.50
33.75	846.0	847.9	849.9	851.9	853.9	855.9	857.9	859.9	861.9	863.9	865.9	33.75
34.00	846.1	848.1	850.1	852.1	854.1	856.1	858.1	860.0	862.0	864.0	866.0	34.00
34.25	846.3	848.3	850.3	852.3	854.3	856.2	858.2	860.2	862.2	864.2	866.2	34.25
34.50	846.5	848.5	850.5	852.4	854.4	856.4	858.4	860.4	862.4	864.4	866.4	34.50

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY - 833.0 TO 853.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53B, GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C											TEMP. C
	833.0	835.0	837.0	839.0	841.0	843.0	845.0	847.0	849.0	851.0	853.0	
34.50	846.8	848.5	850.5	852.4	854.4	856.4	858.4	860.4	862.4	864.4	866.4	34.50
34.75	846.7	848.6	850.8	852.8	854.8	856.8	858.6	860.8	862.8	864.6	866.5	34.75
35.00	846.8	848.8	850.8	852.8	854.8	856.8	858.7	860.7	862.7	864.7	866.7	35.00
35.25	847.0	849.0	851.0	853.0	854.9	856.9	858.9	860.9	862.9	864.9	866.9	35.25
35.50	847.2	849.2	851.1	853.1	855.1	857.1	859.1	861.1	863.1	865.1	867.0	35.50
35.75	847.3	849.3	851.3	853.3	855.3	857.3	859.3	861.3	863.2	865.2	867.2	35.75
36.00	847.5	849.5	851.5	853.5	855.6	857.5	859.4	861.4	863.4	865.4	867.4	36.00
36.25	847.7	849.7	851.7	853.8	855.6	857.6	859.6	861.6	863.6	865.6	867.6	36.25
36.50	847.9	849.8	851.8	853.8	855.8	857.8	859.8	861.8	863.8	865.7	867.7	36.50
36.75	848.0	850.0	852.0	854.0	856.0	858.0	860.0	861.9	863.9	865.8	867.9	36.75
37.00	848.2	850.2	852.2	854.2	856.2	858.1	860.1	862.1	864.1	866.1	868.1	37.00
37.25	848.4	850.4	852.3	854.3	856.3	858.3	980.3	862.3	864.3	866.3	868.3	37.25
37.50	848.5	850.5	852.5	854.5	856.5	858.5	860.5	862.5	864.4	866.4	868.4	37.50
37.75	848.7	850.7	852.7	854.7	856.7	858.7	860.6	862.6	864.6	866.6	868.6	37.75
38.00	848.9	850.9	852.9	854.9	856.8	858.8	860.8	862.8	864.8	866.8	868.8	38.00
38.25	848.1	851.0	853.0	855.0	857.0	859.0	861.0	863.0	865.0	866.9	868.9	38.25
38.50	849.2	851.2	853.2	855.2	857.2	859.2	861.1	863.1	865.1	867.1	869.1	38.50
38.75	849.4	851.4	853.4	855.4	857.4	859.3	861.3	863.3	865.3	867.3	869.3	38.75
39.00	849.6	851.6	853.6	855.6	857.6	859.6	861.5	863.5	865.5	867.5	869.4	39.00
39.25	849.8	851.7	853.7	855.7	857.7	859.7	861.7	863.7	865.6	867.6	869.6	39.25
39.50	849.9	851.8	853.9	855.9	857.9	859.8	861.8	863.8	865.8	867.8	869.8	39.50
39.75	850.1	852.1	854.1	856.1	858.0	860.0	862.0	864.0	866.8	868.0	870.0	39.75
40.00	850.3	852.3	854.2	856.2	858.2	860.2	862.2	864.2	866.2	868.1	870.1	40.00
40.25	850.4	852.4	854.4	856.4	858.4	860.4	862.4	864.3	866.3	868.3	870.3	40.25
40.50	850.6	852.6	854.6	856.6	858.6	860.5	862.6	864.5	866.5	868.5	870.5	40.50
40.75	850.8	852.8	854.8	856.7	858.7	860.7	862.7	864.7	866.7	868.6	870.6	40.75
41.00	851.0	852.9	854.9	856.9	858.9	860.9	862.9	864.8	866.8	868.8	870.9	41.00
41.25	851.1	853.1	855.1	857.1	859.1	861.1	863.0	865.0	867.0	869.0	871.0	41.25
41.50	851.3	853.3	855.3	857.3	859.2	861.2	863.2	865.2	867.2	869.2	871.2	41.50
41.75	851.5	853.5	855.4	857.4	859.4	861.4	863.4	865.4	867.4	869.3	871.3	41.75
42.00	851.8	853.8	855.6	857.8	859.6	861.6	863.8	865.5	867.5	869.5	871.5	42.00

(5)

TABLE 63B. GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C											TEMP. C
	853.0	855.0	857.0	859.0	861.0	863.0	865.0	867.0	869.0	871.0	873.0	
4.50	845.8	847.8	849.8	851.8	853.8	855.8	857.8	859.8	861.8	863.9	865.9	4.50
4.75	846.0	848.0	850.0	852.0	854.0	856.0	858.0	860.0	862.0	864.0	866.0	4.75
5.00	846.1	848.1	850.2	852.2	854.2	856.2	858.2	860.2	862.2	864.2	866.2	5.00
5.25	846.3	848.3	850.3	852.3	854.3	856.3	858.3	860.3	862.4	864.4	866.4	5.25
5.50	846.5	848.5	850.5	852.5	854.5	856.5	858.5	860.5	862.5	864.5	866.5	5.50
5.75	846.7	848.7	850.7	852.7	854.7	856.7	858.7	860.7	862.7	864.7	866.7	5.75
6.00	848.8	848.8	850.8	852.8	854.8	856.9	858.9	860.9	862.9	864.9	866.9	6.00
6.25	847.0	849.0	851.0	853.0	855.0	857.0	859.0	861.0	863.0	865.0	867.0	6.25
6.50	847.2	849.2	851.2	853.2	855.2	857.2	859.2	861.2	863.2	865.2	867.2	6.50
6.75	847.3	848.3	851.3	853.4	855.4	857.4	859.4	861.4	863.4	865.4	867.4	6.75
7.00	847.5	849.5	851.5	853.5	855.5	857.5	859.5	861.5	863.5	865.5	867.5	7.00
7.25	847.7	849.7	851.7	853.7	855.7	857.7	859.7	861.7	863.7	865.7	867.7	7.25
7.50	847.9	849.9	851.9	853.9	855.9	857.9	859.9	861.9	863.9	865.9	867.9	7.50
7.75	848.0	850.0	852.0	854.0	856.0	858.0	860.0	862.1	864.1	866.1	868.1	7.75
8.00	848.2	850.2	852.2	854.2	856.2	858.2	860.2	862.2	864.2	866.2	868.2	8.00
8.25	848.4	850.4	852.4	854.4	856.4	858.4	860.4	862.4	864.4	866.4	868.4	8.25
8.50	848.5	850.5	852.5	854.5	856.5	858.5	860.5	862.5	864.5	866.5	868.5	8.50
8.75	848.7	850.7	852.7	854.7	856.7	858.7	860.7	862.7	864.7	866.7	868.7	8.75
9.00	848.9	850.9	852.9	854.9	856.9	858.9	860.9	862.9	864.9	866.9	868.9	9.00
9.25	849.1	851.1	853.1	855.1	857.1	859.1	861.1	863.1	865.1	867.1	869.1	9.25
9.50	849.2	851.2	853.2	855.2	857.2	859.2	861.2	863.3	865.3	867.3	869.3	9.50
9.75	849.4	851.4	853.4	855.4	857.4	859.4	861.4	863.4	865.4	867.4	869.4	9.75
10.00	849.8	851.6	853.6	855.6	857.6	859.6	861.6	863.6	865.6	867.6	869.6	10.00
10.25	849.7	851.7	853.7	855.7	857.7	859.7	861.7	863.7	865.7	867.7	869.7	10.25
10.50	849.9	851.9	853.9	855.9	857.9	859.9	861.9	863.9	865.9	867.9	869.9	10.50
10.75	850.1	852.1	854.1	856.1	858.1	860.1	862.1	864.1	866.1	868.1	870.1	10.75
11.00	850.3	852.3	854.3	856.3	858.3	860.3	862.3	864.3	866.3	868.3	870.3	11.00
11.25	850.4	852.4	854.4	856.4	858.4	860.4	862.4	864.4	866.4	868.4	870.4	11.25
11.50	850.6	852.6	854.6	856.6	858.6	860.6	862.6	864.6	866.6	868.6	870.6	11.50
11.75	850.8	852.8	854.8	856.8	858.8	860.8	862.8	864.8	866.8	868.8	870.8	11.75
12.00	850.9	852.9	854.9	856.9	859.0	861.0	863.0	865.0	867.0	869.0	871.0	12.00

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY - 853.0 TO 873.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 63B. GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C											TEMP. C
	853.0	855.0	857.0	859.0	861.0	863.0	865.0	867.0	869.0	871.0	873.0	
12.00	850.9	852.9	854.9	856.8	858.0	861.0	863.0	866.0	867.0	868.0	871.0	12.00
12.25	851.1	853.1	855.1	857.1	858.1	861.1	863.1	865.1	867.1	868.1	871.1	12.25
12.50	851.3	853.3	855.3	857.3	859.3	861.3	863.3	865.3	867.3	869.3	871.3	12.50
12.75	851.5	853.5	855.5	857.5	859.5	861.5	863.5	865.5	867.5	869.5	871.5	12.75
13.00	851.6	853.6	855.6	857.6	859.6	861.6	863.6	865.6	867.6	869.6	871.6	13.00
13.25	851.8	853.8	855.8	857.8	859.8	861.8	863.8	865.8	867.8	869.8	871.8	13.25
13.50	852.0	854.0	856.0	858.0	860.0	862.0	864.0	866.0	868.0	870.0	872.0	13.50
13.75	852.1	854.1	856.1	858.1	860.1	862.1	864.1	866.1	868.1	870.1	872.1	13.75
14.00	852.3	854.3	856.3	858.3	860.3	862.3	864.3	866.3	868.3	870.3	872.3	14.00
14.25	852.5	854.5	856.5	858.5	860.5	862.5	864.5	866.5	868.5	870.5	872.5	14.25
14.50	852.7	854.7	856.7	858.7	860.7	862.7	864.7	866.7	868.7	870.7	872.7	14.50
14.75	852.8	854.8	856.8	858.8	860.8	862.8	864.8	866.8	868.8	870.8	872.8	14.75
15.00	853.0	855.0	857.0	859.0	861.0	863.0	865.0	867.0	869.0	871.0	873.0	15.00
15.25	853.2	855.2	857.2	859.2	861.2	863.2	865.2	867.2	869.2	871.2	873.2	15.25
15.50	853.3	855.3	857.3	859.3	861.3	863.3	865.3	867.3	869.3	871.3	873.3	15.50
15.75	853.5	855.5	857.5	859.5	861.5	863.5	865.5	867.5	869.5	871.5	873.5	15.75
16.00	853.7	855.7	857.7	859.7	861.7	863.7	865.7	867.7	869.7	871.7	873.7	16.00
16.25	853.8	855.8	857.8	859.8	861.8	863.8	865.8	867.8	869.8	871.8	873.8	16.25
16.50	854.0	856.0	858.0	860.0	862.0	864.0	866.0	868.0	870.0	872.0	874.0	16.50
16.75	854.2	856.2	858.2	860.2	862.2	864.2	866.2	868.2	870.2	872.2	874.2	16.75
17.00	854.4	856.4	858.4	860.4	862.4	864.4	866.4	868.4	870.4	872.4	874.4	17.00
17.25	854.5	856.5	858.5	860.5	862.5	864.5	866.5	868.5	870.5	872.5	874.5	17.25
17.50	854.7	856.7	858.7	860.7	862.7	864.7	866.7	868.7	870.7	872.7	874.7	17.50
17.75	854.9	856.9	858.9	860.9	862.9	864.9	866.9	868.9	870.9	872.9	874.9	17.75
18.00	855.0	857.0	859.0	861.0	863.0	865.0	867.0	869.0	871.0	873.0	875.0	18.00
18.25	855.1	857.1	859.1	861.1	863.1	865.1	867.1	869.1	871.1	873.1	875.1	18.25
18.50	855.4	857.4	859.4	861.4	863.4	865.4	867.4	869.4	871.4	873.4	875.4	18.50
18.75	855.6	857.6	859.6	861.6	863.6	865.6	867.6	869.6	871.6	873.6	875.6	18.75
19.00	855.7	857.7	859.7	861.7	863.7	865.7	867.7	869.7	871.7	873.7	875.7	19.00

(7)

TABLE 53B, GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C											TEMP. C
	853.0	855.0	857.0	859.0	861.0	863.0	865.0	867.0	869.0	871.0	873.0	
34.50	866.4	868.4	870.3	872.3	874.3	876.3	878.3	880.3	882.3	884.3	886.3	34.50
34.75	866.5	868.5	870.5	872.5	874.5	876.5	878.5	880.5	882.5	884.4	886.4	34.75
35.00	866.7	868.7	870.7	872.7	874.7	876.7	878.6	880.6	882.6	884.6	886.8	35.00
35.25	866.9	868.9	870.9	872.8	874.8	876.8	878.8	880.8	882.8	884.8	886.8	35.25
35.50	867.0	869.0	871.0	873.0	875.0	877.0	879.0	881.0	883.0	884.9	886.9	35.50
35.75	867.2	869.2	871.2	873.2	875.2	877.2	879.2	881.1	883.1	885.1	887.1	35.75
36.00	867.4	869.4	871.4	873.4	875.3	877.3	879.3	881.3	883.3	885.3	887.3	36.00
36.25	867.8	869.5	871.5	873.5	875.5	877.5	879.5	881.5	883.5	885.5	887.5	36.25
36.50	867.7	869.7	871.7	873.7	875.7	877.7	879.7	881.8	883.6	885.6	887.6	36.50
36.75	867.9	869.9	871.9	873.9	875.9	877.8	879.8	881.8	883.8	885.8	887.8	36.75
37.00	868.1	870.1	872.1	874.0	876.0	878.0	880.0	882.0	884.0	886.0	888.0	37.00
37.25	868.3	870.2	872.2	874.2	876.2	878.2	880.2	882.2	884.2	886.1	888.1	37.25
37.80	868.4	870.4	872.4	874.4	876.4	878.4	880.3	882.3	884.3	886.3	888.3	37.50
37.75	868.8	870.6	872.6	874.5	876.5	878.5	880.6	882.6	884.5	886.5	888.5	37.75
38.00	868.8	870.7	872.7	874.7	876.7	878.7	880.7	882.7	884.7	886.8	888.8	38.00
38.25	868.9	870.9	872.9	874.9	876.9	878.9	880.9	882.8	884.8	886.8	888.8	38.25
38.50	869.1	871.1	873.1	875.1	877.1	879.0	881.0	883.0	885.0	887.0	889.0	38.50
38.75	869.3	871.3	873.2	875.2	877.2	879.2	881.2	883.2	885.2	887.2	889.1	38.75
39.00	869.4	871.4	873.4	875.4	877.4	879.4	881.4	883.4	885.3	887.3	889.3	39.00
39.25	869.6	871.6	873.6	875.6	877.6	879.5	881.5	883.5	885.5	887.5	889.5	39.25
39.50	869.8	871.8	873.8	875.8	877.7	879.7	881.7	883.7	885.7	887.7	889.7	39.50
39.75	870.0	871.9	873.9	875.9	877.9	879.9	881.9	883.9	885.8	887.8	889.8	39.75
40.00	870.1	872.1	874.1	876.1	878.1	880.1	882.0	884.0	886.0	888.0	890.0	40.00
40.25	870.3	872.3	874.3	876.3	878.2	880.2	882.2	884.2	886.2	888.2	890.2	40.25
40.50	870.5	872.5	874.4	876.4	878.4	880.4	882.4	884.4	886.4	888.3	890.3	40.50
40.75	870.8	872.6	874.8	876.8	878.8	880.8	882.8	884.5	886.5	888.6	890.5	40.75
41.00	870.8	872.8	874.8	876.8	878.8	880.7	882.7	884.7	886.7	888.7	890.7	41.00
41.25	871.0	873.0	875.0	876.9	878.9	880.9	882.9	884.9	886.9	888.9	890.8	41.25
41.50	871.2	873.1	875.1	877.1	879.1	881.1	883.1	885.1	887.0	889.0	891.0	41.50
41.75	871.3	873.3	875.3	877.3	879.3	881.3	883.2	885.2	887.2	889.2	891.2	41.75
42.00	871.5	873.5	875.5	877.4	879.4	881.4	883.4	885.4	887.4	889.4	891.4	42.00

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY - 853.0 TO 873.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53B, GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C											TEMP. C
	853.0	855.0	857.0	859.0	861.0	863.0	865.0	867.0	869.0	871.0	873.0	
42.00	871.5	873.5	875.5	877.4	879.4	881.4	883.4	885.4	887.4	889.4	891.4	42.00
42.25	871.7	873.7	875.8	877.8	879.6	881.6	883.6	885.6	887.5	889.5	891.5	42.25
42.60	871.8	873.8	875.8	877.8	879.8	881.8	883.7	885.7	887.7	889.7	891.7	42.50
42.75	872.0	874.0	876.0	878.0	880.0	881.9	883.9	885.9	887.9	889.9	891.9	42.75
43.00	872.2	874.2	876.1	878.1	880.1	882.1	884.1	886.1	888.1	890.0	892.0	43.00
43.25	872.4	874.3	876.3	878.3	880.3	882.3	884.3	886.2	888.2	890.2	892.2	43.25
43.50	872.5	874.5	876.5	878.5	880.5	882.4	884.4	886.4	888.4	890.4	892.4	43.50
43.75	872.7	874.7	876.7	878.6	880.6	882.6	884.6	886.6	888.6	890.6	892.5	43.75
44.00	872.9	874.9	876.8	878.8	880.8	882.8	884.8	886.8	888.7	890.7	892.7	44.00
44.25	873.0	875.0	877.0	879.0	881.0	883.0	884.9	886.9	888.9	890.9	892.9	44.25
44.50	873.2	875.2	877.2	879.2	881.1	883.1	885.1	887.1	889.1	891.1	893.0	44.50
44.75	873.4	875.4	877.3	879.3	881.3	883.3	885.3	887.3	889.2	891.2	893.2	44.75
45.00	873.6	875.5	877.5	879.5	881.5	883.5	885.5	887.4	889.4	891.4	893.4	45.00
45.25	873.7	875.7	877.7	879.7	881.7	883.6	885.6	887.6	889.6	891.6	893.6	45.25
45.50	873.9	875.9	877.9	879.8	881.8	883.8	885.8	887.8	889.8	891.7	893.7	45.50
45.75	874.1	876.0	878.0	880.0	882.0	884.0	886.0	887.9	889.9	891.9	893.9	45.75
46.00	874.2	876.2	878.2	880.2	882.2	884.1	886.1	888.1	890.1	892.1	894.1	46.00
46.25	874.4	876.4	878.4	880.4	882.3	884.3	886.3	888.3	890.3	892.3	894.2	46.25
46.50	874.6	876.6	878.5	880.5	882.5	884.5	886.5	888.4	890.4	892.4	894.4	46.50
46.75	874.7	876.7	878.7	880.7	882.7	884.7	886.6	888.6	890.6	892.6	894.6	46.75
47.00	874.9	876.9	878.9	880.9	882.8	884.8	886.8	888.8	890.8	892.8	894.7	47.00
47.25	875.1	877.1	879.1	881.0	883.0	885.0	887.0	889.0	891.0	893.0	894.9	47.25
47.50	875.3	877.2	879.2	881.2	883.2	885.2	887.2	889.1	891.1	893.1	895.1	47.50
47.75	875.4	877.4	879.4	881.4	883.4	885.3	887.3	889.3	891.3	893.3	895.2	47.75
48.00	875.6	877.6	879.6	881.5	883.5	885.5	887.5	889.5	891.5	893.4	895.4	48.00
48.25	875.8	877.8	879.7	881.7	883.7	885.7	887.7	889.6	891.6	893.6	895.6	48.25
48.50	875.9	877.9	879.9	881.9	883.9	885.9	887.8	889.8	891.8	893.8	895.8	48.50
48.75	876.1	878.1	880.1	882.1	884.0	886.0	888.0	890.0	892.0	893.9	895.9	48.75
49.00	876.3	878.3	880.2	882.2	884.2	886.2	888.2	890.2	892.1	894.1	896.1	49.00
49.25	876.5	878.4	880.4	882.4	884.4	886.4	888.3	890.3	892.3	894.3	896.3	49.25
49.50	876.6	878.6	880.6	882.6	884.6	886.6	888.6	890.6	892.6	894.6	896.6	49.50

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY - 853.0 TO 873.0

TABLE 53B, GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE										TEMP. C	
	873.0	875.0	877.0	879.0	881.0	883.0	885.0	887.0	889.0	891.0		893.0
CORRESPONDING DENSITY AT 15 C												
27.00	881.2	883.2	885.2	887.1	889.1	891.1	893.1	895.1	897.1	899.1	901.1	27.00
27.25	881.3	883.3	885.3	887.3	889.3	891.3	893.3	895.3	897.3	899.3	901.3	27.25
27.50	881.5	883.5	885.5	887.5	889.5	891.5	893.5	895.5	897.4	899.4	901.4	27.50
27.75	881.7	883.7	885.7	887.7	889.6	891.6	893.6	895.6	897.6	899.6	901.6	27.75
28.00	881.8	883.8	885.8	887.8	889.8	891.8	893.8	895.8	897.8	899.8	901.8	28.00
28.25	882.0	884.0	886.0	888.0	890.0	892.0	894.0	896.0	898.0	900.0	901.9	28.25
28.50	882.2	884.2	886.2	888.2	890.1	892.1	894.1	896.1	898.1	900.1	902.1	28.50
28.75	882.3	884.3	886.3	888.3	890.3	892.3	894.3	896.3	898.3	900.3	902.3	28.75
29.00	882.5	884.5	886.5	888.5	890.5	892.5	894.5	896.5	898.5	900.5	902.4	29.00
29.25	882.7	884.7	886.7	888.7	890.7	892.7	894.6	896.6	898.6	900.6	902.6	29.25
29.50	882.9	884.8	886.8	888.8	890.8	892.8	894.8	896.8	898.8	900.8	902.8	29.50
29.75	883.0	885.0	887.0	889.0	891.0	893.0	895.0	897.0	899.0	901.0	903.0	29.75
30.00	883.2	885.2	887.2	889.2	891.2	893.2	895.2	897.1	899.1	901.1	903.1	30.00
30.25	883.4	885.4	887.4	889.3	891.3	893.3	895.3	897.3	899.3	901.3	903.3	30.25
30.50	883.5	885.5	887.5	889.5	891.5	893.5	895.5	897.5	899.5	901.5	903.5	30.50
30.75	883.7	885.7	887.7	889.7	891.7	893.7	895.7	897.6	899.6	901.6	903.6	30.75
31.00	883.9	885.9	887.9	889.9	891.6	893.8	895.8	897.8	899.8	901.8	903.8	31.00
31.25	884.0	886.0	888.0	890.0	892.0	894.0	896.0	898.0	900.0	902.0	904.0	31.25
31.80	884.2	886.2	888.2	890.2	892.2	894.2	896.2	898.2	900.2	902.1	904.1	31.50
31.75	884.4	886.4	888.4	890.4	892.4	894.3	896.3	898.3	900.3	902.3	904.3	31.75
32.00	884.8	886.5	888.5	890.5	892.5	894.5	896.5	898.5	900.5	902.5	904.5	32.00
32.25	884.7	886.7	888.7	890.7	892.7	894.7	896.7	898.7	900.7	902.6	904.6	32.25
32.50	884.9	886.9	888.9	890.9	892.9	894.9	896.8	898.8	900.8	902.8	904.8	32.50
32.76	885.1	887.1	889.1	891.0	893.0	895.0	897.0	899.0	901.0	903.0	905.0	32.75
33.00	885.2	887.2	889.2	891.2	893.2	895.2	897.2	899.2	901.2	903.2	905.1	33.00
33.25	885.4	887.4	889.4	891.4	893.4	895.4	897.3	899.3	901.3	903.3	905.3	33.25
33.50	885.6	887.6	889.6	891.5	893.5	895.5	897.5	899.5	901.5	903.5	905.5	33.50
33.75	885.7	887.7	889.7	891.7	893.7	895.7	897.7	899.7	901.7	903.7	905.7	33.75
34.00	885.9	887.8	889.9	891.9	893.9	895.9	897.9	899.9	901.8	903.8	905.8	34.00
34.25	886.1	888.1	890.1	892.1	894.0	896.0	898.0	900.0	902.0	904.0	906.0	34.25
34.50	886.3	888.2	890.2	892.2	894.2	896.2	898.2	900.2	902.2	904.2	906.2	34.50

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 873.0 TO 893.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53B, GENERALIZED PRODUCTS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE										TEMP. C	
	873.0	875.0	877.0	879.0	881.0	883.0	885.0	887.0	889.0	891.0		893.0
CORRESPONDING DENSITY AT 15 C												
34.50	886.3	888.2	890.2	892.2	894.2	896.2	898.2	900.2	902.2	904.2	906.2	34.50
34.75	886.4	888.4	890.4	892.4	894.4	896.4	898.4	900.4	902.3	904.3	906.3	34.75
35.00	886.6	888.6	890.6	892.6	894.6	896.6	898.6	900.6	902.5	904.5	906.5	35.00
35.25	886.8	888.8	890.7	892.7	894.7	896.7	898.7	900.7	902.7	904.7	906.7	35.25
35.50	886.9	888.9	890.9	892.9	894.9	896.9	898.9	900.9	902.8	904.8	906.8	35.50
35.75	887.1	889.1	891.1	893.1	895.1	897.1	899.0	901.0	903.0	905.0	907.0	35.75
36.00	887.3	889.3	891.3	893.2	895.2	897.2	899.2	901.2	903.2	905.2	907.2	36.00
36.25	887.5	889.4	891.4	893.4	895.4	897.4	899.4	901.4	903.4	905.3	907.3	36.25
36.50	887.6	889.6	891.6	893.6	895.6	897.6	899.5	901.5	903.5	905.5	907.5	36.50
36.75	887.8	889.8	891.6	893.8	895.7	897.7	899.7	901.7	903.7	905.7	907.7	36.75
37.00	888.0	889.9	891.9	893.9	895.9	897.9	899.9	901.9	903.9	905.9	907.9	37.00
37.25	888.1	890.1	892.1	894.1	896.1	898.1	900.1	902.0	904.0	906.0	908.0	37.25
37.50	888.3	890.3	892.3	894.3	896.3	898.2	900.2	902.2	904.2	906.2	908.2	37.50
37.75	888.5	890.4	892.4	894.4	896.4	898.4	900.4	902.4	904.4	906.4	908.3	37.75
38.00	888.6	890.6	892.6	894.8	896.8	898.6	900.6	902.5	904.5	906.5	908.5	38.00
38.25	888.8	890.6	892.8	894.8	896.8	898.7	900.7	902.7	904.7	906.7	908.7	38.25
38.60	889.0	891.0	893.0	894.9	896.9	898.9	900.9	902.9	904.9	906.9	908.9	38.50
38.75	889.1	891.1	893.1	895.1	897.1	899.1	901.1	903.1	905.0	907.0	909.0	38.75
39.00	889.3	891.3	893.3	895.3	897.3	899.2	901.2	903.2	905.2	907.2	909.2	39.00
39.25	889.5	891.5	893.5	895.4	897.4	899.4	901.4	903.4	905.4	907.4	909.4	39.25
39.50	889.7	891.6	893.6	895.6	897.6	899.6	901.6	903.6	905.6	907.5	909.5	39.50
39.75	889.8	891.8	893.8	895.8	897.8	899.8	901.7	903.7	905.7	907.7	909.7	39.75
40.00	890.0	892.0	894.0	895.9	897.9	899.9	901.9	903.9	905.9	907.9	909.9	40.00
40.25	890.2	892.1	894.1	896.1	898.1	900.1	902.1	904.1	906.1	908.0	910.0	40.25
40.50	890.3	892.3	894.3	896.3	898.3	900.3	902.3	904.2	906.2	908.2	910.2	40.50
40.75	890.5	892.5	894.5	896.5	898.6	900.4	902.4	904.4	906.4	908.4	910.4	40.75
41.00	890.7	892.7	894.6	896.8	898.8	900.6	902.6	904.6	906.6	908.6	910.5	41.00
41.25	890.8	892.8	894.6	896.8	898.8	900.8	902.8	904.7	906.7	908.7	910.7	41.25
41.50	891.0	893.0	895.0	897.0	899.0	900.9	902.9	904.9	906.9	908.9	910.9	41.50
41.75	891.2	893.2	895.2	897.1	899.1	901.1	903.1	905.1	907.1	909.1	911.0	41.75
42.00	891.4	893.3	895.3	897.3	899.3	901.3	903.3	905.3	907.2	909.2	911.2	42.00

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 873.0 TO 893.0