

KERNFORSCHUNGSZENTRUM KARLSRUHE

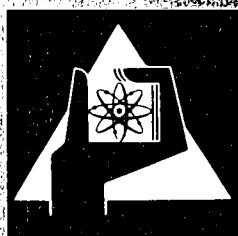
November 1977

KFK 2536

Institut für Heiße Chemie
Institut für Datenverarbeitung in der Technik
Projekt Wiederaufarbeitung und Abfallbehandlung

Distribution of U (VI), Pu (IV) and Nitric Acid in the System Uranyl Nitrate - Plutonium (IV) Nitrate - Nitric Acid - Water / 30% TBP in Aliphatic Diluents: A Compilation and Critical Evaluation of Equilibrium Data

G. Petrich, Z. Kolarik



GESELLSCHAFT
FÜR
KERNFORSCHUNG M.B.H.

KARLSRUHE

Als Manuskript vervielfältigt

Für diesen Bericht behalten wir uns alle Rechte vor

GESELLSCHAFT FÜR KERNFORSCHUNG M. B. H.
KARLSRUHE

KERNFORSCHUNGSZENTRUM KARLSRUHE

KFK 2536

PWA 51/77

Institut für Heisse Chemie
Institut für Datenverarbeitung in der Technik
Projekt Wiederaufarbeitung und Abfallbehandlung

Distribution of U(VI), Pu(IV) and Nitric Acid in the
System Uranyl Nitrate - Plutonium(IV) Nitrate -
Nitric Acid - Water/30 % TBP in Aliphatic Diluents:
A Compilation and Critical Evaluation of Equilibrium Data

G. Petrich, Z. Kolarik

Gesellschaft für Kernforschung m.b.H., Karlsruhe

Abstract

Distribution ratios of U(VI), Pu(IV) and nitric acid in the system uranyl nitrate - plutonium nitrate(IV) - nitric acid - water/30 vol.% TBP in an alkane diluent were systematically gathered from the available literature; about 50 % of the data are French, British and German results which have not yet been published. In the first part of this paper the distribution data are grouped according to increasing equilibrium concentrations of nitric acid, uranium(VI) and plutonium(IV) in the aqueous phase, segmented in 2 temperature ranges. In the second part the data are ordered according to their origin and the way of presentation in the original source. The data were critically evaluated and apparently erroneous distribution ratios were detected by a combined grouping - modelling procedure.

Zusammenfassung

Die Verteilung von U(VI), Pu(IV) und HNO₃ im System Uranyl-nitrat - Plutonium(IV)nitrat - Salpetersäure - Wasser / 30 % TBP in aliphatischen Verdünnungsmitteln: Sammlung und kritische Beurteilung von Gleichgewichtsdaten.

Es wurde eine Sammlung von Verteilungskoeffizienten von U(VI), Pu(IV) und HNO₃ im System UO₂(NO₃)₂ - Pu(NO₃)₄ - HNO₃ - H₂O/30 Vol.-% TBP in aliphatischen Verdünnungsmitteln zusammengestellt. Die Hälfte der Daten entstammt einer systematischen Suche in der offenen Literatur. Die andere Hälfte sind bisher unveröffentlichte französische, englische und deutsche Ergebnisse. Im ersten Teil des Berichtes sind die Daten nach steigenden wäßrigen Gleichgewichtskonzentrationen von HNO₃, U(VI), Pu(IV) für zwei Temperaturbereiche geordnet. Im zweiten Teil sind die Daten nach Herkunft und Reihenfolge der Originalberichte geordnet. Alle Verteilungskoeffizienten wurden durch Gruppierungs- und Modellierungstechniken kritisch geprüft. Offenbar fehlerhafte Meßergebnisse wurden in dem Bericht markiert.

Introduction

Extraction of uranyl and plutonium(IV) nitrates by a solution of TBP in an organic diluent is an important part of the reprocessing of spent nuclear fuel in the Purex process. A good performance of the extraction part of the process is reached at a rather high loading of the organic phase with uranium (~ 90 g U/l, i.e. ~ 80 % of the maximum loading). Here a reasonable uranium throughput is possible and both uranium and plutonium are effectively decontaminated from fission products. However, the extraction operations must be done under well controlled conditions; for example, a maloperation causing an increase of the loading of the organic phase with uranium over 80 % could lead to an instable regime and an accumulation of plutonium in an extraction apparatus, to losses of uranium and plutonium to the raffinate etc. Thus a well elaborated flowsheet for extraction operations is needed for planning the construction of a reprocessing plant. The optimum flowsheet conditions and the effect of variations of process variables may be predicted (and only then experimentally tested), if a reliable computer program for the calculation of concentration profiles in mixer-settlers and extraction columns is available. Knowledge of distribution ratios of uranyl nitrate, plutonium(IV) nitrate and nitric acid at any reasonable concentration of each of them and at any reasonable temperature is necessary for the calculation of concentration profiles. The distribution ratios have to be calculated using a mathematical model, which smooths and generalizes distribution data published for different concentration ranges. To develop such a model we screened the literature for existing data as thoroughly as possible. The data are widely scattered in different sources; some have been published in periodicals, some in reports, which sometimes are not easily available, and some have not yet been published and remain practically inaccessible in laboratory records. We gathered distribution data from European, American, Indian and Japanese sources (some Japanese reports containing data on plutonium(IV) could not be obtained) and, moreover, this compilation contains unpublished results of work done at the Nuclear Research Centre in Karlsruhe, Germany, research

institutions of the French Atomic Energy Commission (CEA) and the British Nuclear Fuels Limited (BNFL).

In order not to exceed a reasonable scope of this compilation, we did not gather all data on the extraction of U(VI), Pu(IV) and nitric acid by TBP, but selected data according to the following criteria set for the planning of the construction of a future modern reprocessing plant:

- i) a 30 vol.% solution of TBP in an aliphatic diluent, mostly kerosene, is used as the starting organic phase (solvent);
- ii) no metal salt like aluminium nitrate is present in the aqueous phase and nitric acid is the only salting out agent used.

The data so selected were not further classified according to molecular size and structure of the diluent. Results of earlier investigations, see e.g. Shevchenko et al., Radiokhimiya 2, 281 (1960) and Nemodruk and Glukhova, Russ. J. Inorg. Chem. 8, 1370 (1963), show that no significant effect of these factors on the distribution ratios of U(VI), Pu(IV) and nitric acid is to be expected. It even appears that distribution ratios measured by various investigators with the same alkane diluent may differ more than distribution ratios measured by the same investigator with various alkane diluents.

At the present time the compilation is being extended for distribution data on uranium(IV) and neptunium(VI), both in the presence and absence of uranium(VI).

Detection of outliers

The final objective of this data collection is to develop a mathematical model for the distribution equilibria which will be a function of the 4 independent variables, i.e. temperature and aqueous concentrations of the solutes. Any anomalous observations or outliers in the data which form the basis for the development of such a model may cause substantial displacements in the estimated model parameters. Independent of the employed modelling procedure, erroneous data incorporated in valid observations may lead to the unjustified rejection of a model structure. It is therefore necessary to homogenize the data before a functional relationship is fitted to the observations and to discard anomalous observations which can result from even carefully prepared experiments due to a change of uncontrolled experimental conditions.

It is not always a simple task to discriminate between a real outlier and a mere deviation from an assumed functional relationship that still has to be validated. For the present system the data analysis is further complicated by the facts that

- the dependent variables are functions of 4 independent variables. The resulting 5 dimensional space does not lend itself for graphical inspection.
- the data are not homogeneously distributed over the data space but are in fact clustered in concentration ranges that have been traditionally of most interest to the experimenter.

In view of the central significance of a distribution model for the simulation of all extractor types we therefore decided to apply a 3-step procedure on the data in order to eliminate wild observations:

Step 1: Inspection of the data grouped in narrow concentration and temperature ranges to crudely prune the observations.

Step 2: Least-square fit of the data remaining after step 1 to two functional relationships based on two different approaches for the description of the chemistry of the system.

Step 3: Various repetitions of step 2 with the previously discarded data reincorporated.

Only if both models and the grouping technique suggest that a data point is erroneous, this distribution ratio has been marked as an outlier by a negative sign in the tables. Since step 1 requires narrow ranges for the independent variables this method ensured that no data from very sparsely populated regions were discarded, except where chemical reasoning made the measured value highly improbable.

Step 1: Data inspection by grouping techniques

Outlier removal for 2-dimensional data (1 independent variable) through regression analysis and its associated statistical tools or even by simple visual display is common practice although not always free of personal judgement. The straight forward approach to apply the same technique to multidimensional data is in our case to slice the space of 4 independent variables into thin segments in which 3 independent variables may be considered as practically constant. This leaves only 1 independent variable for inspection of the dependent variable (distribution ratio). The segments have a similar appearance as the tables in part 1 of this report. Here the data are first segmented according to the HNO_3 concentration; next the data are grouped in $\text{UO}_2(\text{NO}_3)_2$ concentrations; the data are then sliced in temperature groups and finally the data are aligned along the remaining independent variable, i.e. Pu(IV) concentration.

To keep 3 of the 4 independent variables practically constant, the segments have to be as thin as practicable for a reasonable density of data points. This proved to be a problem for some concentration and temperature ranges. On the other hand the segment width should not be less than at least the experimental error of the determination of the corresponding variables. For partial compensation of these restrictions the width of the segments and the sequence of independent variables were varied during the computerized inspection procedure until the particular distribution ratios selected for removal were the same on further variation. By this method a suitable data base of plausible observations was obtained for least-square fitting the data to the models in step 2.

An important by-product of the grouping procedure was to obtain "average standard deviations" for the measurements of distribution ratios in different concentration regions from data scatter. The variation of measurement error is a prerequisite for least square fitting the data: it is a measure of how much weight a particular distribution ratio will have in the final distribution model. Only rarely have the errors been explicitly stated in the original report.

Steps 2 and 3: Least square fitting the data

Two mathematical models were suggested for generalizing the distribution data and calculating distribution ratios. They will only shortly be mentioned here, because they are to be published in detail elsewhere. One model empirically expresses the formal equilibrium constants of the heterogenous extraction reactions of U(VI), Pu(IV) and nitric acid as functions of their analytical aqueous concentrations and the temperature. It necessarily includes calculation of the concentration of uncomplexed TBP in the organic phase. The other model is also empirical and correlates the distribution ratios with the analytical aqueous concentrations of U(VI), Pu(IV) and nitrate ions; here the concentration of uncomplexed TBP is not needed for the calculations. The equations are similar to those

describing the distribution of metal species in a two-phase system with complex formation in the aqueous phase. None of the models utilizes activity coefficients. Variations of thermodynamic activities of components with the composition of phases are incorporated in the empirical form of the equations.

In least square fitting the data with both models, the minimum of the square error sum

$$\sum_{i=1}^N \left[(D_{\text{exp},i} - D_{\text{calc},i})/E_i \right]^2$$

was sought. Here D_{exp} and D_{calc} are the measured and calculated distribution ratios respectively, E_i is the experimental error assigned to $D_{\text{exp},i}$ and N is the number of data points taken for the fitting operation.

Organization of the tables

1. To facilitate retrieval, the distribution data compiled in part 1 of this report have been printed in concentration and temperature groups:

1.1 Rough grouping according to the aqueous HNO_3 -concentrations with lower and upper concentration limits given by any 2 adjacent values of

0.0 0.01 0.1 0.25 0.45 0.60 0.90 1.10 1.80 2.10
2.75 3.05 3.80 4.10 5.10 and 11 M.

1.2 Within each HNO_3 group the data are subgrouped with aqueous $\text{UO}_2(\text{NO}_3)_2$ concentration range limits given by 0.0 0.2 2 7.5 15 25 50 100 350 g/l.

1.3 Within each $\text{UO}_2(\text{NO}_3)_2$ subgroup the data are again subdivided in temperatures up to 30°C and above 30°C . Temperature subgroups are separated by a blank line.

1.4 Within each temperature group the data are rearranged along increasing aqueous $\text{Pu}(\text{NO}_3)_4$ concentrations.

2. For cross reference of the data a second set of tables has been prepared in part 2 of this report where all data of part 1 are rearranged along ascending source numbers.

3. Titles above the columns represent:

SOURCE	A reference number pointing to the origin of the data, c.f. references and "Source number codes"
U-AQU	Aqueous $\text{UO}_2(\text{NO}_3)_2$ equilibrium concentration in g/l
PU-AQU	Aqueous $\text{Pu}(\text{NO}_3)_4$ equilibrium concentration in g/l
H-AQU	Aqueous HNO_3 equilibrium concentration in mole/l
D-U	Distribution ratio of $\text{UO}_2(\text{NO}_3)_2$ for 30 % TBP
D-PU	Distribution ratio of $\text{Pu}(\text{NO}_3)_4$ for 30 % TBP
D-H	Distribution ratio of HNO_3 for 30 % TBP
T	Temperature in $^\circ\text{C}$

4. To improve readability of the tables, blanks are printed
 - for U-AQU (or PU-AQU) whenever the aqueous $\text{UO}_2(\text{NO}_3)_2$ (or $\text{Pu}(\text{NO}_3)_4$) concentration is less than 0.005 g/l (zero concentration or traces only).
 - for D-U, D-PU, D-H if no distribution ratio has been reported for this measurement.
5. A negative sign of the distribution ratio marks that we suspect this value to be erroneous.
6. Source number codes
Each measurement has been given a 4 digit code number which is referred to as "source number".

The first digit of a source number is a code for the country where the measurement originated:

1	USA
2	Great Britain
3	France
4	USSR
5	Germany
6	Japan
7	Belgium
8	India
9	others

The second digit of a source number indicates the method by which the data have been extracted from the literature:

0-6	numerical value from original report
7	obtained from a graphical representation. One aqueous concentration had to be estimated.
8	obtained from a graphical presentation
9	one aqueous concentration had to be estimated.

Negative source numbers indicate, that the original report does not mention whether initial or equilibrium concentrations are given.

Some statistics of the tables

Total number of

measurements: all temperatures	1419
T 30°C	418
distribution ratios: total	2013
so far unpublished	955
U	796
Pu	753
HNO ₃	464
outliers: total	182
U	53
Pu	54
HNO ₃	75
determined in same measurement: U and Pu	283
U and HNO ₃	248
Pu and HNO ₃	108
U and Pu and HNO ₃	45

Range of

aqueous UO ₂ (NO ₃) ₂ concentration	0 to 346 g/l
Pu(NO ₃) ₄ concentration	0 to 114 g/l
HNO ₃ concentration	0 to 10.3 M
temperature	0 to 72°C

"CALL FOR DATA"

As already mentioned in the introduction we are presently extending the data collection for the inclusion of U(IV) and Np(VI) distribution ratios. There does not seem to be very much such data in the open literature, or it simply escaped our attention. But obviously all laboratories working on a better understanding of the PUREX process must have made at least some efforts what this question is concerned. There may be internal reports, classified reports or other work that was never published because the amount of data was too small or because the data seemed to be contradictory. The work involved to make all the necessary experiments is well beyond the capacities of a single laboratory, in particular if other solutes are present in the system. Only a common data base may help to solve this problem. We therefore would be extremely grateful to all workers in this field who make us their data available for publication.

Acknowledgement

We express our gratitude to all investigators of the French Commissariat à l'Energie Atomique whose data are included in this collection and to the management of the respective research departments for their permission to publish the data. We are also indebted to Dr. P.D. Wilson of British Nuclear Fuels Ltd. for his consent to quote his data. Grateful thanks are extended to Dr. W. Ochsenfeld of this center for his continuous interest and for many stimulating discussions.

References

Source No.

- 1001 - 1004 J.R. Flanary, Progr. Nucl. Energy, Ser. III, 1, 195 (1956)
- 1011 - 1024 ORNL-1141 (1952); taken from L.L. Smith, DP-700 (1962), p. 66
- 1031 - 1033 KAPL-1002 (1954); taken from L.L. Smith, DP-700 (1962), p. 72
- 1042 - 1049 D.G. Karraker, unpublished results; taken from L.L. Smith, DP-700 (1962), p. 63
- 1051 - 1055 D.R. Olander, L. Donadieu and M. Benedict, A.I.Ch.E. Journal 7, 152 (1961)
- 1101 - 1157 J.W. Coddling, W.O. Haas, Jr. and F.K. Heumann, Ind. Eng. Chem. 50, 145 (1958)
- 1201 - 1214 W. Davis, Jr., Nucl. Sci. Eng. 14, 159 (1962)
- 1221 - 1228 W. Davis, Jr., J. Mrochek and R.R. Judkins, J. Inorg. Nucl. Chem. 32, 1689 (1970)
- 1301 - 1351 T.H. Siddall, III, S.G. Parker and W.E. Prout, DP-53 (1957)
- 1361 - 1372 E.K. Dukes, DP-250 (1957)
- 1381 - 1386 E.K. Dukes, J. Am. Chem. Soc. 82, 9 (1960)
- 1391 - 1393 see source no. 1031 - 1033
- 1901 - 1910 see source no. 1001 - 1004
- 1911 - 1924 HW-27727 (1953), taken from L.L. Smith, DP-700 (1962), p. 73
- 1931 - 1936 J.R. Flanary et al., ORNL-1481 (1953); taken from R.L. Stevenson and P.E. Smith, in Reactor Handbook, Vol. 2, Interscience Publ., New York (1961), p. 156
- 2001 - 2015 P.E. Burns and C. Hanson, J. Appl. Chem. 14, 117 (1964)
- 2018 - 2029 J.H. Miles and B.P.K. Sharpe, AERE-M 2635 (1975)
- 2031 - 2095 J.K. Smith and P.D. Wilson, BNFL-Memo 284 (W) (1975)
- 3001 - 3006 M. Germain, D. Gourisse and M. Sougnez, J. Inorg. Nucl. Chem. 32, 245 (1970)

- 3021 - 3035 N. Damien, unpublished results; taken from P. Leroy, CEA-R 3207 (1967)
- 3041 - 3072 F. Regnaud, unpublished results; taken from G. Vergnaud, CEA-R 2946 (1966)
- 3101 - 3226 J. Durandet, X. Talmont, Ph. Renault, Y.L. Gladel and P. Regnaut, Chim. Ind., Génie Chim. 86, 29 (1961)
- 3301 - 3530 Commissariat à l'Energie Atomique (CEA), unpublished work
- 3531 - 3541 P. Moszkowicz, CEA-R 4735 (1976)
- 3701 - 3725 see source no. 3001 - 3006
- 4001 - 4819 V.E. Vereshchagin, V.B. Shevchenko and E.V. Renard, Radiokhimiya 17, 766 (1975)
- 4821 - 4840 S.M. Karpacheva, L.P. Khorkhorina and A.M. Rozen, Zh. Neorg. Khim. 2, 1441 (1957); Russ. J. Inorg. Chem. 2, 363 (1957)
- 5001 - 5009 W. Baehr, KFK 797 (1968)
- 5101 - 5162 unpublished results of work done at the Institute of Hot Chemistry, Nuclear Research Centre, Karlsruhe, Germany (1967)
- 5171 - 5178 W. Ochsenfeld, H. Schmieder, F. Baumgaertner and E. Kuhn, KFK 671 (1967)
- 5201 - 5700 unpublished results of work done at the Institute of Hot Chemistry, Nuclear Research Centre, Karlsruhe, Germany (1974-1977)
- 6801 - 6814 A. Kaya, T. Segawa, T. Tsujino and T. Aochi, PNCT-AR-67, Ann. Rep. Tokai Works 67/68 (1968), p. 21
- 7001 - 7020 E. Lopez-Menchero, L. Salomon and G. Bardone, ETR-183 (1966)
- 7021 - 7082 E. Lopez-Menchero, W. Drent and G. Magni, ETR-101 (1961)
- 8021 - 8160 N. Srinivasan et al., BARC-432 (1969)
- 8201 - 8230 N. Srinivasan et al., BARC-428 (1969)
- 9001 - 9003 S. Havelka and M. Beran, UJV 938/63 (1963)

AQUEOUS HNO3 FROM .00 TO .01

AQUEOUS HNO3 FROM .00 TO .01 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
6801		.05	.000		-.260		23
3111	8.45		.000	.169			20
3112	9.88		.000	.185			20
1318	14.04		.000	.114			70
3113	16.90		.000	.369			20
3114	18.30		.000	.429			20
3115	22.70		.000	.559			20
1221	18.09		.000	.411			25
9001	23.09		.000	.680			25
1317	20.95		.000	.219			70
3116	28.80		.000	.705			20
3117	34.50		.000	.797			20
3118	39.20		.000	.855			20
3119	41.90		.000	.916			20
1222	28.66		.000	.655			25
1223	38.42		.000	.833			25
1316	29.04		.000	.323			70
1315	44.51		.000	.540			70
3120	56.70		.000	.928			20
3121	62.00		.000	.939			20
3122	75.10		.000	.900			20
3123	88.00		.000	.883			20
1224	59.39		.000	.936			25
1225	73.65		.000	.921			25
1226	91.00		.000	.883			25
1314	53.80		.000	.602			70
1313	67.84		.000	.681			70
1312	92.12		.000	.700			70
3124	102.20		.000	.853			20
3125	132.10		.000	.748			20
3126	147.50		.000	.706			20
9002	109.50		.000	.910			25

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
1227	116.78		.000	.796			25
1228	205.57		.000	.556			25
9003	223.76		.000	.560			25
1311	125.21		.000	.679			70

AQUEOUS HNO3 FROM .01 TO .10

AQUEOUS HNO3 FROM .01 TO .10 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2031			.020			.013	22
2032			.046			-.030	22
2033			.092			.054	22
5001			.020			.025	25
1201			.057			.056	25
1202			.074			.063	25
5003			.080			.063	25
1203			.091			.068	25
3534			.095	-.470			25
3533			.095	-.432			25
3532			.095	-.399			25
3531			.095	-.349			25
1107	.19		.097	.250			25
1151			.015		-.004		25
5404		7.12	.088		.052	.136	25
5403		10.10	.080		.074	-.188	25
2053			.048			.020	40
2070			.050			.017	60
1108	.22		.048	.085			25
5341	.93		.055	.102			25
5342	4.11		.052	.242			25
5343	7.36		.053	.376			25
1145	11.66		.050	.490		-.320	25
5344	13.15		.052	.546			25
5007	14.59		.020	.274		-.025	60
5002	15.90		.020	.403		-.025	25
5004	16.00		.080	-.419		.063	25
5345	22.40		.051	.808			25
-4825	23.33		.050	.898			25
1144	23.80		.050	-.017		.040	25
1146	23.80		.050	-1.090		-.320	25
7043	20.71		.011	.322		-1.000	50
5008	15.40		.080	.221		.063	60

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
-4824	35.94		.050	.947			25
5346	38.95		.050	1.083			25
5178	39.04		.048	1.200			25
5347	48.75		.048	1.086			25
7044	38.56		.011	.648		-.909	50
3212	52.10		.020	.960			20
5348	57.45		.050	1.115			25
-4823	58.56		.050	.935			25
-4822	75.70		.050	1.025			25
1147	86.17		.051	.994		-.647	25
7045	59.03		.011	.746		-1.000	50
7046	81.41		.010	.746		-1.100	50
7065	85.69		.081	.822		-.200	60
-4821	225.90		.050	.526			25
7047	101.64		.011	.728		-1.000	50
7066	107.59		.089	.750		-.190	60

AQUEOUS HNO3 FROM .10 TO .25

AQUEOUS HNO3 FROM .10 TO .25 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2018			.100			.061	15
2019			.200			.135	15
2021			.100			.053	20
2034			.200			.095	22
3021			.200			.100	23
1109			.100			.045	25
2024			.100			.047	25
5005			.170			.088	25
1204			.174			.099	25
1110			.200			.080	25
2027			.100			.043	30
2089			.101			.045	30
1152			.100		.023		25
1931			.200		.070		25
1033			.200		.074		25
5119		.01	.200		.090		25
6802		.05	.110		-.395		23
5118		.09	.200		.080		25
5408		.94	.106		.032	.094	25
5415		1.66	.203		.193	.108	25
5407		1.87	.112		.059	.098	25
5414		1.96	.163		-.173	-.141	25
5120		2.06	.100		.030		25
5121		2.10	.100		-.010		25
5406		2.56	.106		.060	.085	25
5413		3.10	.193		.217	.114	25
5117		3.92	.200		-.080		25
5405		3.98	.112		.088	.107	25
5412		4.92	.215		.321	.144	25
5411		9.12	.172		.171	.151	25
5410		13.70	.166		.242	.175	25
5402		13.80	.113		.201	-.221	25
5409		17.75	.178		.368	.185	25
2054			.101			.040	40
2071			.101			.034	60
1393			.200		.099		70
-4826	16.90		.100	-1.310			25
5006	24.99		.120	.892		.083	25

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
7021	22.14		.120	.580		-.333	40
7062	18.57		.100	.449		-.910	60
5009	24.76		.160	.919		.063	60
-4827	34.99		.100	1.313			25
7022	41.42		.121	.839		-.190	40
7063	38.09		.103	.800		-.291	60
-4828	60.46		.100	1.220			25
7023	60.94		.116	.922		-.224	40
7024	86.65		.110	.854		-.230	40
7064	58.56		.107	.866		-.130	60
7025	108.78		.108	.825		-.250	40

AQUEOUS HNO3 FROM .25 TO .45

AQUEOUS HNO3 FROM .25 TO .45 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2020			.300			.180	15
2001			.270			.082	20
2022			.300			.120	20
2035			.364			.151	22
2036			.413			.159	22
3022			.440			.136	23
5363			.290			-.010	25
2025			.300			.108	25
1051			.321			.125	25
1205			.359			.126	25
2028			.300			.101	30
2090			.389			.130	30
6803		.04	.310		-.608		23
5425		.60	.375		.579	.136	25
5416		.72	.298		.347	.111	25
5162		.88	.300		.260		25
5424		1.20	.378		.621	.143	25
5423		1.29	.335		.459	.125	25
5422		2.29	.352		.621	.153	25
5421		3.62	.375		.821	.165	25
5420		5.02	.396		.960	.179	25
5115		5.31	.400		.590		25
5161		7.41	.300		-.190		25
5419		7.58	.438		1.159	.189	25
5160		14.51	.300		-.240		25
5524		50.19	.360		1.114		28
2055			.394			.114	40
2072			.407			.102	60
5321	1.03	.71	.285	-.859	-.463	.123	25
5314	.99	.79	.285	1.283	.253	.123	25
5331	.38	.84	.270	1.649	.243	-.157	25
5177	26.66		.305	1.800			25
7001	44.04		.300	1.514		-.300	25
5310	48.55	.93	.310	1.415	.260	.058	25
7005	40.47		.300	-.776		.050	55
1310	44.04		.300	.903			70

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3220	54.50		.430	1.339			20
7002	61.89		.300	1.308		-.300	25
7017	52.37		.300	1.120		-.300	55
7006	59.51		.300	.880		-.017	55
7018	71.41		.300	1.000		-.300	55
7007	76.17		.300	1.020		-.008	55
1309	55.46		.300	.888			70
1308	92.84		.300	.808			70
7052	135.68		.450	.695		.091	50
1307	110.69		.300	.744			70
1361	111.88		.280	.702		-.021	70

AQUEOUS HNO3 FROM .45 TO .60

AQUEOUS HNO3 FROM .45 TO .60 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2023			.500			.165	20
1052			.499			.166	25
2026			.500			.152	25
1111			.510			.155	25
1206			.517			.169	25
3537			.500	2.654			25
3536			.500	2.683			25
3535			.500	2.686			25
1106	.07		.530	2.650			25
2029			.500			.142	30
3001			.500		.810		22
1153			.490		.640		25
1042			.476		.730	-.252	30
1011			.520		.960		25
5114			.600		1.400		25
6804		.04	.510		.837		23
5113		.04	.600		1.500		25
3421	.11	.10	.500	3.600	1.100		25
5112		.44	.600		1.300		25
3301		.80	.500		.938		25
5158		.89	.600		1.560		25
3426	.10	.90	.500	3.900	1.340		25
5157		1.04	.600		1.420		25
3325		2.00	.500		.850		25
3041		2.50	.500		.800		25
5156		4.54	.600		1.450		25
3431	.09	4.67	.490	2.700	1.200		25
3042		5.00	.500		.800		25
3302		5.00	.500		.860		25
3326		5.00	.500		.850		25
3043		7.50	.500		.800		25
3303		9.50	.500		.895		25
3436	.09	9.58	.480	3.300	1.180		25
5155		9.80	.600		1.320		25
3044		10.00	.500		.800		25
3327		10.00	.500		.850		25
3441	.09	18.70	.480	3.100	1.230		25
5153		19.90	.600		1.280		25
3328		20.00	.500		.850		25
3304		21.00	.500		.833		25
3305		49.00	.500		.837		25

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3329		50.00	.500		.850		25
2056			.593				.159 40
3422	.87	.10	.490	3.800	.900		25
3427	1.25	1.00	.470	3.200	1.080		25
3432	.89	4.70	.470	3.700	1.000		25
3437	1.61	9.48	.460	3.100	.960		25
3442	.92	17.93	.520	3.000	1.350		25
3142	3.25		.488	2.920			20
3141	5.47		.488	2.779			20
1137	6.83		.510	2.927		.139	25
3140	8.86		.508	2.607			20
3139	10.90		.493	2.514			20
-4829	10.24		.500	-1.721			25
1138	11.90		.510	2.540		.100	25
1139	11.90		.510	2.640		-.025	25
3423	10.78	.08	.520	2.700	.800		25
3428	11.11	1.05	.500	2.700	.800		25
3433	9.64	3.75	.500	2.800	.800		25
3438	8.86	8.45	.490	2.800	.840		25
3443	8.03	17.65	.550	3.100	.980		25
7048	14.28		.524	1.567		.114	50
3188	21.60		.503	2.106			20
3138	23.30		.508	2.082			20
-4830	21.90		.500	1.880			25
1140	23.33		.510	2.173		.084	25
1141	23.80		.510	2.160		-.022	25
3213	26.10		.460	1.946			20
3195	29.75		.470	1.913			20
3137	30.30		.508	1.917			20
3136	37.10		.498	1.712			20
3201	39.50		.490	1.620			20
3208	47.20		.495	1.564			20
5176	41.42		.487	1.700			25
3045	35.00	2.50	.500		.400		25

AQUEOUS HNO3 FROM .45 TO .60 (CONTINUED)

AQUEOUS HNO3 FROM .60 TO .90

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3046	35.00	5.00	.500		.500		25
3047	35.00	10.00	.500		.525		25
3048	35.00	15.00	.500		.600		25
7049	32.14		.504	1.363		.101	50
3135	52.90		.503	1.431			20
3134	71.60		.503	1.214			20
3133	90.40		.503	1.046			20
-4831	60.70		.500	1.333			25
1142	72.84		.520	1.271		.042	25
1143	85.46		.520	1.162		-.090	25
-4832	96.64		.500	1.032			25
3429	100.00	.93	.510	1.000	.300		25
3434	100.00	4.80	.500	1.000	.250		25
3439	100.00	10.74	.490	1.000	.270		25
3444	94.48	19.64	.550	1.050	.280		25
7050	61.41		.490	1.105		.084	50
7051	99.98		.460	.852		.074	50
1306	52.84		.500	1.185			70
3132	108.00		.517	.926			20
3131	127.00		.499	.827			20
3130	147.00		.522	.728			20
3129	167.00		.538	.671			20
3127	189.00		.542	.608			20
3128	205.00		.562	.566			20
3424	101.86	.11	.530	.970	.130		25
3425	150.56	1.05	.520	.720	.100		25
3430	152.78	1.10	.510	.720	.200		25
3435	153.47	5.00	.500	.720	.200		25
3440	149.32	10.00	.490	.730	.180		25
3445	142.86	19.55	.560	.770	.220		25
7053	245.66		.471	.471		.017	50
1305	110.45		.600	.793			70

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2002			.640				.175 20
3101			.663				.166 20
2037			.787				.205 22
2038			.873				.225 22
3023			.700				.171 23
1053			.625				.187 25
1207			.685				.184 25
1208			.843				.203 25
1054			.874				.211 25
2091			.727				.187 30
1043			.711		1.600		-.238 30
1001			.700		1.500		25
5111		5.58	.610		1.300		25
2057			.765				.174 40
2073			.729				.154 60
5613		.02	.810		2.160		30
5618		.02	.820		2.200		35
5614		.02	.820		2.130		39
5619		.02	.810		2.150		45
5615		.02	.810		2.020		50
5620		.02	.810		2.440		55
5616		.02	.830		2.200		62
5621		.02	.830		2.284		64
5617		.02	.820		2.120		70
5628		7.77	.780		1.900		50
5627		7.93	.780		1.890		41
5622		7.96	.740		1.880		36
5626		8.03	.780		1.890		30
5623		8.08	.680		1.830		47
5630		8.08	.770		1.675		71
5629		8.13	.780		1.770		60
5624		8.48	.740		1.710		56
5625		8.58	.750		1.600		64
5635		24.38	.850		1.560		71
5634		24.62	.860		1.600		60
5633		25.57	.860		1.576		50
5632		25.67	.870		1.570		40
5631		26.29	.870		1.530		31
5526		50.67	.640		1.151		31

AQUEOUS HNO3 FROM .60 TO .90 (CONTINUED)

AQUEOUS HNO3 FROM .90 TO 1.10

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
8201	8.50		.900	3.882			25
3214	16.50		.840	3.042			20
3221	36.10		.850	2.036			20
1304	30.47		.800	1.719		.112	70
1303	43.32		.800	1.511		.125	70
1365	54.75		.670	1.043		.087	70
1302	84.27		.900	1.031		.089	70
5690	77.12	5.35	.795	.980	.920		69
5689	74.74	5.93	.800	1.020	.830		60
5688	72.13	6.64	.790	1.110	.686		50
5687	69.75	7.24	.800	1.190	.605		41
5686	67.84	7.91	.810	1.284	.468		32
5685	88.55	12.79	.860	.830	.934		70
5684	84.74	14.27	.870	.904	.816		59
5683	80.93	15.75	.870	.980	.670		50
5682	78.08	17.21	.875	1.075	.544		41
5681	74.27	18.71	.880	1.180	.432		31
1362	252.32		.880	.434		.034	70

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3102			.960			.187	20
2003			1.060			.210	20
3024			.930			.194	23
1055			.976			.222	25
1112			1.030			.213	25
3539			1.000	7.185			25
3538			1.000	7.209			25
1105	.03		1.090	7.610			25
2092			.919			.208	30
1381			1.030		2.200		0
3002			1.000		2.700		22
3353			1.000		3.400		23
1154			.990		2.900		25
1932			1.000		3.000		25
1044			.972		2.800	-.252	30
1012			.930		3.000		25
1021			.960		3.100		25
1032			1.000		3.000		25
6805		.02	.980		1.980		23
3366		.03	1.000		3.700		25
3396	.11	.11	.940	9.600	3.700		25
3365		.13	1.000		3.600		25
3364		.40	1.000		3.400		25
3401	.09	1.00	.990	9.000	3.800		25
3363		1.09	.930		3.200		25
3330		2.00	1.000		2.550		25
3306		2.20	1.000		2.273		25
3362		2.23	.950		3.100		25
3049		2.50	1.000		2.000		25
3406	.08	4.16	.970	7.400	3.100		25
3050		5.00	1.000		2.000		25
3331		5.00	1.000		2.300		25
3411	.10	8.77	.970	5.700	2.600		25
3307		9.50	1.000		1.916		25
3051		10.00	1.000		1.900		25
3332		10.00	1.000		1.950		25
3416	.09	17.41	.970	6.800	2.200		25
3052		20.00	1.000		1.835		25
3308		20.00	1.000		1.600		25
3333		20.00	1.000		1.600		25
3309		26.20	1.000		1.458		25

AQUEOUS HNO3 FROM .90 TO 1.10 (CONTINUED)

AQUEOUS HNO3 FROM .90 TO 1.10 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5525		35.61	1.070		-1.164		28
3310		49.50	1.000		1.156		25
3334		50.00	1.000		1.200		25
2058			.995			.203	40
2074			.952			.179	60
1392			1.000	4.240			70
8037	.29		.989	9.207	3.802		25
8036	.94	.02	1.002	8.468	2.933		25
3397	1.01	.10	.980	9.800	2.800		25
8027	.39	.44	1.100	7.821	3.552		25
8026	.61	.62	1.100	8.672	2.303		25
3402	1.00	1.21	.970	8.900	2.800		25
3407	1.11	5.17	.960	7.400	2.400		25
3412	1.00	8.50	.930	6.500	2.200		25
3417	.81	18.82	1.030	4.200	1.700		25
3152	2.10		1.020	6.571			20
3151	6.15		.990	5.073			20
1132	3.78		1.030	6.478		.175	25
3446	4.89		1.000	5.333			25
8035	4.00	.07	1.041	6.500	1.883		25
8050	2.10	.24	.960	6.857	1.990	-.240	25
8025	7.35	.71	1.090	6.401	1.765		25
3475	5.36		1.000	4.620			35
7026	5.24		1.060	4.730		.156	40
3503	5.64		1.000	3.990			50
7067	6.90		1.047	-4.448		.158	60
1325	5.24		1.090	3.180		.138	70
3150	14.00		.990	4.200			20
3447	9.97		1.000	4.082			25
1133	11.66		1.040	4.204		-.933	25
3398	10.44	.10	1.010	4.500	1.000		25
3403	9.00	1.06	1.000	4.700	1.600		25
3408	8.44	3.39	1.010	4.500	1.680		25
3413	9.73	8.31	.980	4.100	1.360		25
3418	11.81	19.21	.930	3.200	1.270		25

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3476	11.24		1.000	3.585			35
7027	12.85		1.050	3.574		.127	40
3504	12.52		1.000	2.944			50
7068	15.00		1.040	2.857		.132	60
3189	21.50		.911	2.837			20
-4833	17.28		1.000	3.154			25
3448	23.66		1.000	2.697			25
1134	24.99		1.040	2.743		.069	25
7054	15.23		1.024	2.578		.114	50
1324	19.28		1.090	2.220		.119	70
3196	29.90		.980	2.492			20
3149	37.50		.950	2.176			20
3202	40.00		.960	2.030			20
3209	49.30		1.060	1.846			20
8202	25.50		.935	2.275			25
-4834	41.90		1.000	1.977			25
8203	47.00		.950	-1.447			25
3449	47.40		1.000	1.783			25
8045	42.80	.60	1.030	2.047	.488	-.107	25
8024	27.60	1.20	1.100	2.754	.619		25
3053	35.00	2.50	1.000		.800		25
3054	35.00	5.00	1.000		.850		25
3055	35.00	10.00	1.000		.825		25
3056	35.00	20.00	1.000		.750		25
3477	25.71		1.000	2.450			35
3478	43.09		1.000	1.796			35
7028	36.66		1.030	1.993		.087	40
3505	28.85		1.000	2.063			50
3506	49.27		1.000	1.585			50
7069	38.09		.960	1.806		.115	60
1323	35.47		1.080	1.624		.093	70
3148	63.50		.920	1.548			20
3147	95.20		1.020	1.106			20
3450	71.50		1.000	1.331			25
8204	74.00		.970	1.216			25
1135	88.31		1.060	1.216		-.050	25

AQUEOUS HNO3 FROM .90 TO 1.10 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
-4835	94.26		1.000	1.008			25
3451	95.80		1.000	1.074			25
3404	99.52	1.08	1.000	1.050	.260		25
3409	98.57	5.29	1.000	1.050	.340		25
3414	95.45	10.10	.980	1.100	.310		25
3419	99.00	18.42	.960	1.000	.380		25
3479	72.70		1.000	1.263			35
3480	98.07		1.000	1.016			35
7029	62.37		1.020	1.416		.064	40
7030	85.22		1.010	1.145		.079	40
3507	76.41		1.000	1.176			50
7055	90.69		.950	1.034		.075	50
7008	53.32		1.000	-.357		-.100	55
7009	72.84		1.000	-.556		-.075	55
7010	89.98		1.000	-.714		-.050	55
7070	61.41		1.020	1.360		.080	60
7071	86.65		1.020	1.063		.083	60
1322	57.13		1.070	1.392		.069	70
1372	59.51		1.000	1.120		.050	70
1321	75.22		1.060	1.136		.064	70
3146	157.00		1.080	.731			20
3145	223.00		1.060	.537			20
3143	346.00		1.100	.353			20
8265	108.00		.980	.935			25
1136	111.40		1.070	1.026		.032	25
3452	146.70		1.000	.755			25
8206	180.00		.985	.617			25
3400	152.00	.11	1.000	.750	-.100		25
3399	104.50	.12	1.000	1.000	-.160		25
3405	147.37	1.09	1.010	.760	.220		25
3410	148.03	5.89	1.000	.760	.280		25
3415	145.44	9.91	.990	.790	.230		25
3420	145.68	18.33	.960	.740	.300		25
3481	149.01		1.000	.731			35
7031	112.35		1.010	.905		.045	40
3508	101.02		1.000	.978			50
7056	136.40		.948	.768		-.020	50
3509	149.25		1.000	.729			50

AQUEOUS HNO3 FROM .90 TO 1.10 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
7057	234.71		.950	.502		.016	50
7072	113.07		1.025	.853		.068	60
1301	122.59		1.000	.818		.080	70
1320	123.78		1.050	.810		.048	70
1319	176.15		1.080	.619		.037	70

AQUEOUS HNO3 FROM 1.10 TO 1.80

AQUEOUS HNO3 FROM 1.10 TO 1.80 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2004			1.420			.215	20
3103			1.580			.222	20
2039			1.490			.240	22
2040			1.750			.244	22
3025			1.120			.205	23
3026			1.360			.213	23
3027			1.570			.217	23
3028			1.700			.218	23
1209			1.240			.225	25
1210			1.600			.229	25
1382			1.400		3.900		0
1045			1.490		5.060	.233	30
5110			1.500		4.900		25
1023			1.660		-8.600		25
1013			1.780		8.100		25
5301	.06		1.715	14.324	4.091	.233	25
5109		.02	1.500		5.000		25
5608		.02	1.330		4.600		29
5145		.13	1.400		5.080		25
5302	.05	.14	1.735	15.764	6.487	.233	25
5150		.15	1.250		4.270		25
5108		.15	1.500		5.100		25
5149		.55	1.320		4.750		25
5144		.72	1.430		4.060		25
4819		1.12	1.694		8.214		26
5152		1.80	1.500		4.550		25
5107		2.17	1.470		5.000		25
4818		3.05	1.755		6.295		26
5148		3.30	1.350		3.700		25
4817		3.93	1.773		6.794		26
5151		4.70	1.500		4.280		25
5143		5.19	1.450		-2.830		25
5142		5.59	1.450		-2.500		25
5106		5.74	1.500		4.200		25
5147		7.10	1.410		3.220		25
5361		7.10	1.470		3.783	.204	25
5502		8.03	1.760		4.643	-.145	25
5501		9.70	1.670		4.015	-.138	25
5140		11.64	1.510		-2.320		25
5141		12.50	1.510		-2.200		25
5146		17.90	1.430		2.410		25

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5138		18.88	1.560		2.920		25
5139		21.75	1.560		2.360		25
2059			1.490			.226	40
2075			1.390			.225	60
2076			1.470			.222	60
2077			1.770			.237	60
5604		.02	1.340		5.060		35
5609		.02	1.320		5.170		40
5605		.02	1.330		5.390		45
5610		.02	1.320		5.670		51
5606		.02	1.325		5.920		55
5611		.02	1.310		6.110		60
5607		.02	1.320		6.060		65
5612		.02	1.300		6.770		70
5645		2.68	1.410		6.380		69
5644		2.89	1.420		5.950		61
5643		3.25	1.430		5.240		49
5642		3.58	1.430		4.760		40
5641		3.92	1.440		4.330		31
5640		5.11	1.390		4.950		70
5639		5.50	1.400		4.650		60
5638		5.97	1.410		4.380		50
5637		6.48	1.400		3.960		40
5636		7.05	1.410		3.590		31
5527		29.88	1.140		1.608		31
5201	1.68		1.700	13.452		.182	25
8207	1.90		1.720	10.474			25
5303	.62	.15	1.770	15.121	5.318	.212	25
4741	.50	8.20	1.711		4.122		26
4740	.60	10.50	1.726		3.962		26
8208	4.40		1.790	8.864			25
5304	2.51	.18	1.780	-8.290	3.845	.185	25
4739	5.00	4.30	1.764	6.000	3.256		26
4738	3.50	10.90	1.767	7.429	2.771		26
4737	3.70	19.40	1.791		2.304		26
7073	5.24		1.537	6.270		-.135	60

AQUEOUS HNO3 FROM 1.10 TO 1.80 (CONTINUED)

AQUEOUS HNO3 FROM 1.80 TO 2.10

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3216	8.61		1.490	5.865			20
3215	10.40		1.220	4.846			20
8034	14.80	.24	1.106	4.081	1.016		25
3223	19.60		1.610	3.765			20
3190	20.50		1.520	3.683			20
3222	25.50		1.170	2.878			20
3203	35.30		1.400	2.285			20
7003	27.37		1.500	2.957		.073	25
7019	30.95		1.500	2.540		.073	55
7074	32.37		1.532	2.220		.101	60
1367	35.71		1.320	-1.267		.083	70
7004	52.37		1.500	1.864		-.073	25
8033	56.00	.71	1.145	1.696	.430		25
8023	58.00	1.49	1.220	1.759	-.313		25
8022	99.20	1.63	1.190	1.137	.232		25
7011	52.84		1.500	-.306		-.097	55
7020	57.13		1.500	1.625		.073	55
7012	72.60		1.500	-.492		.077	55
7013	86.88		1.500	-.712		.063	55
7075	61.41		1.492	1.400		.086	60
7076	88.79		1.475	1.050		.071	60
5670	80.70	9.06	1.785	.986	1.435		69
5669	75.70	9.94	1.795	1.074	1.265		59
5668	72.84	11.28	1.800	1.174	1.060		50
3144	286.00		1.120	.424			20
8032	105.60	1.11	1.191	.975	.269		25
8031	184.00	1.68	1.184	.603	.159		25
8021	184.00	1.69	1.170	.630	.172		25

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2005			1.980				.217 20
5251			1.805				.233 25
1211			2.030				.229 25
2093			1.860				.242 30
3003			2.000		6.000		22
3354			2.000		8.900		23
1155			2.000		6.300		25
1046			2.060		8.270	.225	30
1002			2.000		8.000		25
3350		.01	1.990		9.060		25
6806		.01	1.970		5.510		23
8070		.02	2.030		8.460		25
3311		1.50	2.000		6.667		25
3335		2.00	2.000		7.150		25
3057		2.50	2.000		6.500		25
3312		3.50	2.000		6.000		25
5324	.11	4.53	1.890	-.643	4.260	.180	25
5318	.02	4.85	1.890	-1.735	4.016	.180	25
3058		5.00	2.000		5.300		25
3336		5.00	2.000		5.350		25
4816		6.75	1.812		4.667		26
3313		7.00	2.000		4.814		25
4815		7.31	1.818		4.624		26
4814		8.78	1.830		4.396		26
4813		9.24	1.835		4.502		26
3059		10.00	2.000		4.000		25
3337		10.00	2.000		4.050		25
4812		10.30	1.843		4.204		26
5511		10.66	1.970		4.070	.160	28
3314		16.00	2.000		3.125		25
3060		20.00	2.000		2.875		25
3338		20.00	2.000		2.900		25
3315		27.20	2.000		2.379		25
3316		37.20	2.000		2.016		25
3339		50.00	2.000		1.850		25
2060			1.870			.234	40
2061			1.870			.235	40
5516		13.46	2.000		3.464	.145	31
5241	1.63		1.848	13.350		.180	25

AQUEOUS HNO3 FROM 1.80 TO 2.10 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
8087	.30		2.000	-26.000	8.059		25
8086	.70	.01	2.020	-21.571	7.066		25
3701	1.67	.02	2.000		4.300		22
8085	1.66	.03	2.020	-18.072	5.176		25
8100	.40	.03	1.990		7.500	.216	25
8101	.40	.21	1.980		7.055	.212	25
5174	2.62		1.997	-9.100			25
3453	4.33		2.000	9.630			25
3702	3.09	.02	2.000		3.300		22
8084	6.50	.09	2.040	9.046	3.000		25
5305	5.53	.23	1.815	7.389	2.966	.149	25
3482	3.50		2.000	9.690			35
7032	2.62		2.030	11.810		.174	40
3510	4.12		2.000	7.820			50
7077	3.09		2.070	8.770		.173	60
1334	3.81		1.890	6.060		.159	70
8209	8.40		1.850	6.810			25
3454	9.70		2.000	6.330			25
-4836	10.14		2.000	6.056			25
8210	14.50		1.890	4.828			25
3703	11.43	.02	2.000		1.400		22
5306	8.36	.28	1.860	7.316	2.587	.108	25
5307	14.65	.41	1.915	5.314	1.454	.078	25
4736	12.60	3.90	1.824	4.762	-1.308		26
4735	14.00	11.20	1.838	3.643	1.375		26
3483	10.97		2.000	5.600			35
7058	10.24		2.038	4.950		.117	50
3511	12.48		2.000	4.696			50
7078	10.71		2.080	4.310		-.086	60
1333	10.00		1.970	4.570		.127	70
3191	21.60		2.000	3.801			20
3455	20.80		2.000	3.841			25
8211	21.50		1.920	3.674			25
3704	17.38	.02	2.000		1.000		22
5308	24.85	.53	1.940	3.555	.816	-.052	25
4734	17.00	18.20	1.855	3.294	1.462		26

AQUEOUS HNO3 FROM 1.80 TO 2.10 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
4733	20.00	39.50	1.876	2.550	1.144		26
3484	23.21		2.000	3.400			35
1332	20.47		1.890	3.090		.122	70
3204	39.70		1.860	2.484			20
8212	26.00		1.940	3.154			25
5202	26.90		1.920	3.431		.054	25
8213	31.00		1.950	2.806			25
5175	36.66		1.998	2.600			25
8214	37.00		1.960	2.405			25
8215	41.00		1.960	2.195			25
5203	43.90		1.910	2.278		.042	25
3456	46.60		2.000	2.032			25
1935	49.80		2.000		-.460		25
3705	37.37	.02	2.000		.530		22
4001	29.40	.59	2.000	3.129	1.000		26
5309	40.85	.62	2.038	2.392	.647	.044	25
8082	49.00	.62	2.070	2.122	.605		25
3061	40.00	2.50	2.000		.700		25
3062	40.00	5.00	2.000		.700		25
3063	40.00	10.00	2.000		.800		25
4002	40.30	11.20	2.000	2.035	.652		26
4732	36.00	17.50	1.896	2.111	.857		26
3064	40.00	20.00	2.000		.950		25
4731	50.00	43.50	1.917	1.580	.602		26
4730	44.00	94.00	1.924	1.182	.602		26
3485	42.70		2.000	2.145			35
7034	27.37		2.050	2.930		.082	40
3512	26.42		2.000	2.884			50
7059	28.56		2.028	2.610		.090	50
3513	49.04		2.000	1.850			50
7079	27.14		1.990	2.579		.077	60
1331	31.66		1.940	2.440		.108	70
-4837	50.70		2.000	1.967			25
8216	54.00		1.990	1.833			25
5204	60.80		1.950	1.743		.036	25
8217	66.30		2.000	1.531			25
3457	72.80		2.000	1.435			25

AQUEOUS HNO3 FROM 1.80 TO 2.10 (CONTINUED)

AQUEOUS HNO3 FROM 1.80 TO 2.10 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5205	81.65		1.945	1.359		.031	25
-4838	85.46		2.000	1.298			25
8218	96.00		2.015	1.094			25
3458	97.10		2.000	1.119			25
4729	87.00	10.90	1.942	1.126	.431		26
4728	87.00	19.50	1.941	1.080	.441		26
4727	87.00	40.50	1.941	1.064	.430		26
4003	53.00	72.70	2.000	1.283	.568		26
4726	99.00	78.50	1.948	.838	.396		26
4725	92.00	96.40	1.947	.815	.435		26
3486	73.32		2.000	1.402			35
7035	61.65		1.940	1.644		.058	40
7036	88.55		1.890	1.204		.048	40
3514	76.51		2.000	1.301			50
7060	84.50		1.830	1.186		.057	50
7014	50.23		2.000	-.313		.100	55
7015	75.22		2.000	-.418		.075	55
7016	89.26		2.000	-.635		.047	55
7080	63.08		1.990	1.351		.065	60
7081	89.03		1.960	1.115		.060	60
1330	52.37		1.960	1.680		.097	70
1329	71.89		1.970	1.325		-.041	70
1328	57.83		2.040	1.071		-.029	70
5700	75.22	4.64	1.860	1.100	1.740		70
5699	71.65	5.38	1.870	1.196	1.440		60
5698	68.56	6.29	1.880	1.306	1.120		50
5697	65.70	7.27	1.890	1.426	.860		40
5680	84.74	8.25	1.990	.950	1.630		70
5696	61.65	8.27	1.900	1.560	.656		31
5679	80.70	9.39	1.990	1.010	1.345		60
5678	77.12	10.80	2.020	1.100	1.070		50
5677	74.03	12.74	2.030	1.236	.800		40
5667	68.56	13.07	1.810	1.310	.790		41
5676	70.46	14.20	2.060	1.360	.620		31
5666	64.75	14.96	1.810	1.440	.600		30
5206	102.50		1.975	1.107		.026	25
-4839	121.16		2.000	.961			25
5207	125.50		1.970	.920		.024	25
3459	146.90		2.000	.770			25

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
-4840	280.89		2.000	.426			25
3706	123.30	.02	2.000		.180		22
4005	324.00	3.30	2.000	.364	.197		26
4721	293.00	20.40	1.983	.362	.211		26
4724	150.00	22.00	1.963	.653	.277		26
4720	326.00	36.60	1.984	.325	.219		26
4004	144.00	42.60	2.000	.693	.317		26
4723	165.00	74.00	1.965	.570	.281		26
4006	303.00	78.00	2.000	.340	.244		26
4722	161.00	90.10	1.965	.559	.319		26
4719	312.00	97.50	1.982	.315	.257		26
3487	101.17		2.000	1.045			35
3488	149.97		2.000	.742			35
7037	122.83		1.910	.895		.037	40
3515	101.64		2.000	1.032			50
7061	124.97		1.914	.890		.024	50
3516	149.25		2.000	.742			50
7082	109.02		1.900	.952		.053	60
1327	147.58		2.010	.727		-.015	70
1326	202.33		2.030	.585		-.010	70

AQUEOUS HNO3 FROM 2.10 TO 2.75

AQUEOUS HNO3 FROM 2.10 TO 2.75 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3104			2.150			.223	20
2006			2.720			.223	20
2041			2.210			.247	22
2042			2.400			.243	22
3029			2.310			.216	23
1113			2.130			.216	25
1212			2.430			.226	25
5252			2.670			.217	25
1104	.01		2.190	18.700			25
2094			2.750			.237	30
1383			2.160		6.600		0
1911			2.200		8.450		25
5105			2.700		11.200		25
1014			2.130		10.400		25
1015			2.400		11.300		25
5104		.01	2.700		11.000		25
5315	.13	.05	2.600	-10.423	-15.688	.219	25
5322	.15	.07	2.600	-4.303	-18.819	.219	25
5128		.07	2.520		-8.000		25
5137		.07	2.650		-7.520		25
5349	.04	.08	2.545	27.394	11.724	.230	25
5103		.09	2.700		10.500		25
5130		.09	2.700		10.500		25
5332	.05	.14	2.580	-18.481	-6.517	.240	25
5127		.36	2.600		9.150		25
5136		.37	2.700		8.600		25
5102		1.12	2.700		10.500		25
5126		1.98	2.620		7.730		25
5335	.03	2.28	2.610	-11.538	9.190	.192	25
4808		2.34	2.620		-12.236		26
5101		2.37	2.700		9.700		25
5319	.02	2.55	2.725	-2.031	8.451	.178	25
5124		4.52	2.600		6.450		25
4806		4.90	2.700		9.163		26
4807		4.90	2.700		8.653		26
4805		6.41	2.730		7.566		26
5129		7.10	2.700		6.300		25
4804		7.68	2.740		6.784		26
5125		10.30	2.600		-2.900		25
5122		12.91	2.600		4.760		25
5123		16.16	2.600		3.700		25

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2062			2.690			.239	40
2078			2.110			.238	60
2079			2.110			.239	60
2080			2.450			.246	60
5599		.02	2.630	11.520			31
5595		.02	2.630	12.640			37
5600		.02	2.620	13.760			40
5596		.02	2.620	12.990			45
5601		.02	2.610	14.320			49
5597		.02	2.610	15.560			54
5602		.02	2.590	15.910			60
5598		.02	2.600	17.200			65
5603		.02	2.580	17.100			69
5569		.19	2.670	13.090			71
5568		2.10	2.660	12.260			65
5567		2.17	2.640	11.310			60
5566		2.20	2.620	11.210			55
5564		2.25	2.660	10.970			46
5565		2.25	2.690	11.020			51
5563		2.34	2.590	10.490			46
5562		2.46	2.610	9.960			40
5594		2.56	2.740	11.720			71
5560		2.72	2.640	8.970			31
5561		2.72	2.600	9.000			35
5548		4.83	2.660	9.190			70
5547		5.19	2.690	8.690			61
5546		5.81	2.680	7.730			50
5521		19.50	2.740	3.660	.091		37
5538		48.28	2.300	1.728			40
3168	.68		2.120	19.118			20
3167	1.31		2.120	14.542			20
5211	1.11		2.565	20.315		.181	25
1126	1.45		2.130	14.918		.192	25
5352	1.05	.11	2.675	22.333	8.155	.183	25
5350	.30	.12	2.585	-15.738	7.884	.222	25
4782	.60	5.40	2.614		6.722		26
4781	.70	7.00	2.638	-19.714	6.086		26
3166	2.44		2.120	12.480			20

AQUEOUS HNO3 FROM 2.10 TO 2.75 (CONTINUED)

AQUEOUS HNO3 FROM 2.10 TO 2.75 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3165	4.60		2.120	10.087			20
3217	5.15		2.240	9.748			20
3164	7.00		2.120	8.129			20
8219	3.40		2.700	11.912			25
5208	3.73		2.205	12.225		.139	25
1127	4.76		2.140	10.550		.117	25
1901	2.19		2.305	16.700	4.000		25
1912	2.69		2.600		4.950		25
1902	3.52		2.386	13.700	3.700		25
1903	4.93		2.448	12.100	2.300		25
1904	7.02		2.513	-10.200	-1.300		25
5354	7.26	.20	2.720	8.292	3.687	.114	25
4780	6.00	3.30	2.717	8.433	4.333		26
4783	6.00	3.30	2.717	8.417	-7.091		26
3224	12.00		2.340	6.158			20
1128	12.14		2.140	6.294		.079	25
1129	12.62		2.140	5.792		.086	25
1905	10.19		2.580	-7.900	-1.600		25
1906	14.31		2.637	-6.400	-1.300		25
5359	11.30	2.66	2.715	6.973	2.729	.070	25
7033	7.62		2.110	6.750		.127	40
3163	20.50		2.160	4.098			20
1907	17.40		2.667	-5.400	-1.100		25
1908	22.38		2.703	-4.500	-1.000		25
3197	30.10		2.290	3.143			20
3162	42.20		2.140	2.320			20
3210	49.00		2.200	2.100			20
1130	27.37		2.150	3.304		.053	25
5173	29.75		2.496	3.200			25
1909	29.85		2.741	-3.600	-.790		25
8083	30.00	.34	2.130	3.000	1.115		25
8090	25.20	.40	2.260	3.349	1.083	.075	25
3161	65.50		2.220	1.594			20
3160	89.90		2.250	1.205			20
5209	59.00		2.460	1.847		.035	25
1131	94.74		2.200	1.204		.034	25

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
1368	88.07		2.360	1.027		.047	70
5650	79.15	9.27	2.480	.964	1.815		70
5649	75.22	10.28	2.500	1.064	1.520		59
5648	70.46	11.88	2.510	1.200	1.240		49
5647	66.65	13.67	2.530	1.325	.960		39
5646	63.08	15.32	2.540	1.470	.762		30
3159	113.70		2.250	.986			20
3158	138.00		2.250	.828			20
3157	165.40		2.220	.698			20
3156	188.60		2.230	.621			20
3155	214.80		2.230	.551			20
3154	238.60		2.200	.499			20
3153	263.10		2.240	.455			20
5210	101.50		2.465	1.118		.025	25
8081	124.00	1.13	2.180	.871	.324		25
1366	159.49		2.320	.657		.026	70
1363	223.76		2.120	.468		.019	70
1364	238.04		2.190	.440		.023	70

AQUEOUS HNO3 FROM 2.75 TO 3.05

AQUEOUS HNO3 FROM 2.75 TO 3.05 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3105			2.990			.217	20
2043			3.020			.236	22
5364			2.940			.220	25
3541			3.000	-24.571			25
3540			3.000	-23.067			25
3004			3.000		-11.000		22
3355			3.000		16.000		23
1156			3.000		16.000		25
1047			3.010		15.800	.216	30
3351			2.940		16.600		25
6807		.01	2.970		-9.200		23
3361		.02	3.000		16.500		25
3367		.02	3.000		15.500		25
5333	.03	.07	3.040	32.339	13.333	.230	25
3369		.09	3.000		14.200		25
3360		.09	3.000		16.100		25
3371	.11	.10	2.940	31.000	15.000		25
3359		.31	2.910		15.200		25
3368		.33	3.000		13.900		25
3376	.11	1.00	3.030	29.000	14.500		25
3370		1.06	3.000		11.900		25
3358		1.10	2.940		13.000		25
3317		1.40	3.000		13.571		25
5135		1.82	2.760		8.410		25
3357		1.87	2.930		12.600		25
3340		2.00	3.000		11.150		25
3065		2.50	3.000		10.080		25
5362		3.26	2.820		8.788	.174	25
5554		4.68	2.850		8.100		29
3066		5.00	3.000		7.440		25
3341		5.00	3.000		7.450		25
3381	.14	5.01	3.050	-13.200	9.200		25
5134		5.26	2.850		6.000		25
5133		6.45	2.850		-4.420		25
3318		6.75	3.000		6.444		25
3386	.09	7.20	2.990	19.000	7.500		25
4803		9.44	2.770		5.773		26
3067		10.00	3.000		5.150		25
3342		10.00	3.000		5.200		25
4802		10.05	2.780		5.761		26
4801		14.44	2.810		4.952		26

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3319		15.00	3.000				25
3391	.09	19.62	3.000	11.500			25
3068		20.00	3.000				25
3343		20.00	3.000				25
3320		48.50	3.000				25
3344		50.00	3.000				25
2063			2.950			.235	40
5545		2.41	2.890		12.400		70
5544		2.55	2.870		11.920		60
5593		2.56	2.780		11.790		66
5592		2.58	2.760		11.780		60
5588		2.58	2.780		11.790		65
5591		2.61	2.770		11.720		56
5543		2.72	2.870		11.340		50
5587		2.72	2.820		11.010		55
5590		2.80	2.790		10.930		52
5586		2.94	2.810		10.340		46
5589		2.96	2.820		10.530		47
5542		3.08	2.880		9.810		40
5585		3.11	2.800		9.920		40
5584		3.20	2.830		9.610		37
5541		3.27	2.940		9.370		31
5553		3.49	2.830		10.620		70
5559		3.58	2.780		10.440		64
5552		3.75	2.780		9.980		59
5558		3.82	2.810		9.760		55
5551		3.92	2.810		9.670		51
5557		4.06	2.790		9.190		46
5550		4.42	2.830		8.460		40
5556		4.42	2.810		8.520		40
5555		4.49	2.800		8.420		35
5549		4.68	2.790		8.530		31
5583		5.09	2.830		9.650		71
5582		5.19	2.820		8.520		66
5572		5.28	2.890		8.285		45
5581		5.35	2.860		8.580		60
5573		5.38	2.860		8.350		56
5578		5.43	2.810		7.790		50
5580		5.57	2.850		7.840		55
5577		5.71	2.900		7.830		45

AQUEOUS HNO3 FROM 2.75 TO 3.05 (CONTINUED)

AQUEOUS HNO3 FROM 2.75 TO 3.05 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5579		5.71	2.860		7.860		50
5576		5.74	2.860		7.780		42
5571		5.90	2.860		7.870		40
5575		6.07	2.850		7.140		37
5570		6.21	2.860		7.140		35
5574		6.33	2.870		6.910		30
5528		20.55	2.880		3.010	-.073	34
5531		31.55	3.050		2.690		37
3177	.42		2.940	-63.462			20
3176	1.72		2.980	21.105			20
8148	.36		2.920		12.546	.236	25
8147	.73	.01	2.940		10.551	.197	25
8146	1.40	.02	2.930		8.873	.198	25
3707	1.19	.02	3.000		8.500		22
8160	.30	.03	2.940	24.167	12.790	.207	25
3372	1.04	.09	2.940	25.000	11.000		25
5316	.22	.09	3.045	-5.378	-9.348	.217	25
5323	.23	.10	3.045	-2.467	11.168	.217	25
3377	.90	.83	3.040	22.400	11.800		25
3382	1.61	6.42	2.970	13.700	5.700		25
3387	1.33	9.26	2.880	11.300	5.400		25
3392	1.00	14.35	3.000	9.300	4.600		25
3218	3.85		2.900	13.013			20
3175	4.25		3.050	13.012			20
3460	3.96		3.000	12.922			25
5171	7.14		3.000	10.000			25
3708	2.14	.02	3.000		6.600		22
5353	3.90	.16	2.770	10.872	6.280	.144	25
5355	5.08	.24	2.960	-15.506	-3.698	-.084	25
4779	7.00	9.40	2.755	5.943	3.468		26
3489	2.67		3.000	14.340			35
3517	3.21		3.000	11.450			50
1343	2.86		3.000	9.170		.173	70
3461	9.61		3.000	7.419			25
8220	10.00		2.870	7.150			25
1913	12.59		3.000		-2.050		25
3709	8.33	.02	3.000		3.100		22

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3710	12.62	.02	3.000		2.400		22
3373	10.53	.12	2.950	7.600	3.300		25
5356	9.92	.20	2.965	8.276	4.022	.083	25
5357	10.10	.46	2.920	8.020	3.391	.079	25
5358	11.00	1.26	2.830	7.391	3.230	.078	25
3378	14.17	1.46	3.000	6.000	2.400		25
3383	11.86	6.07	2.970	5.900	2.700		25
3388	14.18	12.73	2.900	4.500	2.200		25
3393	12.49	17.59	2.850	4.100	2.200		25
3490	11.00		3.000	6.530			35
3518	13.12		3.000	5.164			50
1342	10.00		3.020	5.020		.133	70
3192	21.80		2.950	4.271			20
3462	19.70		3.000	4.406			25
5172	21.66		2.998	4.400			25
5212	23.10		2.830	4.171		.055	25
3375	23.42	.10	2.970	-7.790	-4.400		25
4778	16.90	3.20	2.808	4.651	2.219		26
4777	17.00	9.90	2.818	4.076	2.020		26
4776	16.00	20.40	2.828	3.469	1.833		26
3491	21.90		3.000	3.910			35
1341	21.66		2.990	3.220		.097	70
3198	30.10		2.950	3.372			20
3205	39.30		2.880	2.664			20
3211	49.00		3.050	2.173			20
8221	29.20		2.980	3.253			25
5213	37.85		2.865	2.748		.042	25
8222	40.50		3.010	2.444			25
3463	46.30		3.000	2.197			25
1910	49.23		2.758	-2.300	-.570		25
3711	29.28	.02	3.000		1.500		22
4007	36.50	.48	3.000	2.630	1.104		26
3069	40.00	2.50	3.000		-.700		25
4775	41.40	3.16	2.878	2.336	1.076		26
3070	40.00	5.00	3.000		.850		25
3071	40.00	10.00	3.000		1.125		25
4774	35.00	10.90	2.869	2.617	.872		26

AQUEOUS HNO3 FROM 2.75 TO 3.05 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3072	40.00	20.00	3.000		1.550		25
4773	48.00	21.00	2.892	1.829	.871		26
4008	47.00	41.00	3.000	1.553	.807		26
4772	34.00	78.10	2.898	1.059	.883		26
3492	42.85		3.000	2.256			35
3519	25.80		3.000	3.200			50
3520	49.99		3.000	1.962			50
1340	31.42		2.940	2.460		.082	70
1339	33.80		3.000	2.320		.077	70
5214	57.50		2.945	1.904		.033	25
8223	62.00		3.030	1.653			25
3464	73.20		3.000	1.469			25
5215	77.60		2.940	1.443		.028	25
3465	96.90		3.000	1.141			25
5216	99.80		2.995	1.142		.024	25
3725	81.17	.02	3.000		.620		22
3374	100.00	.10	2.970	1.120	.540		25
3379	94.92	1.00	2.980	1.180	.500		25
4009	85.10	3.41	3.000	1.234	.616		26
3384	95.65	5.68	3.050	1.150	.500		25
3389	99.63	9.20	2.990	1.080	.500		25
4771	81.70	11.20	2.921	1.236	.589		26
3394	95.37	17.32	2.920	1.080	.560		25
4770	81.00	20.20	2.921	1.156	.574		26
4769	82.00	42.50	2.923	1.043	.527		26
4768	82.00	75.10	2.926	.837	.547		26
4767	81.00	100.00	2.930	.626	.574		26
3493	73.32		3.000	1.420			35
3494	57.60		3.000	1.113			35
7041	86.88		3.030	1.277		.044	40
3521	76.51		3.000	1.335			50
1338	57.13		2.860	1.683		.059	70
1337	81.17		2.830	1.246		.056	70
1336	81.89		3.000	1.189		.053	70
5695	80.46	4.13	3.000	1.070	2.050		69
5694	77.36	4.59	3.015	1.154	1.770		62
5693	72.36	5.47	3.030	1.284	1.396		49
5665	86.17	6.26	2.820	1.020	1.950		70

AQUEOUS HNO3 FROM 2.75 TO 3.05 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5692	68.32	6.43	3.050	1.430	1.090		39
5664	79.98	7.12	2.830	1.125	1.670		60
5691	66.41	7.31	3.050	1.510	.884		31
5663	74.98	8.15	2.840	1.250	1.410		50
5662	69.27	9.54	2.860	1.390	1.130		40
5661	64.03	11.28	2.880	1.570	.890		31
3170	148.80		3.020	.788			20
3169	193.40		3.040	.617			20
8224	101.20		3.050	1.059			25
5217	121.50		2.995	.947		.023	25
3466	147.60		3.000	.764			25
3712	113.55	.02	3.000		.380		22
3380	147.44	1.00	2.960	.780	.380		25
4011	297.00	3.11	3.000	.394	.296		26
3385	141.98	5.38	3.050	.810	.370		25
3390	152.63	9.47	3.010	.760	.380		25
4766	161.00	10.70	2.953	.652	.430		26
4762	303.00	10.70	2.972	.360	.290		26
3395	143.42	17.21	2.940	.760	.430		25
4010	147.00	19.50	3.000	.707	.405		26
4761	304.00	20.90	2.971	.349	.278		26
4765	159.00	39.30	2.951	.629	.331		26
4760	307.00	42.60	2.969	.332	.270		26
4759	296.00	76.20	2.966	.311	.286		26
4764	169.00	80.40	2.952	.530	.358		26
4012	284.00	95.60	3.000	.313	.319		26
4763	162.00	98.90	2.951	.446	.384		26
3495	150.32		3.000	.741			35
7042	112.59		2.913	1.011		.037	40
3522	102.36		3.000	1.036			50
3523	149.25		3.000	.745			50
1335	221.38		3.030	.492		.043	70

AQUEOUS HNO3 FROM 3.05 TO 3.80

AQUEOUS HNO3 FROM 3.05 TO 3.80 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T	SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2007			3.450			.209	20								
2008			3.690			.207	20	7038	4.52		3.140	13.110		.117	40
2044			3.500			.223	22	1351	2.62		3.700	9.730		.189	70
3030			3.500			.197	23								
1114			3.310			.200	25	3225	8.90		3.130	8.270			20
1213			3.350			.211	25	1122	10.95		3.320	7.543		.066	25
5253			3.615			.210	25	4755	14.80	7.90	3.779	4.270	2.759		26
1103	.01		3.370	30.100			25	4754	10.00	17.60	3.776	4.300	2.688		26
2095			3.440			.221	30								
1384			3.100		11.000		0	3174	16.70		3.060	5.593			20
1385			3.800		15.500		0	8144	17.20	.22	3.280		1.797	.073	25
1024			3.800		-36.000		25	5312	21.65	.34	3.515	4.499	1.777	.048	25
1016			3.500		20.000		25	5311	24.40	.38	3.060	3.984	1.458	.048	25
5317	.03	.05	3.550	28.033	18.000	.213	25	8150	16.80	.40	3.320	5.022	1.680	.072	25
5334	.07	.10	3.545	-14.329	-9.417	.214	25	4756	19.00	3.60	3.792	4.211	2.833		26
4811		3.55	3.570		11.915		26								
4810		4.85	3.620		10.186		26	3173	35.00		3.160	2.886			20
4809		6.15	3.650		8.976		26	1123	27.61		3.340	3.397		.048	25
5503		6.41	3.190		6.866	-.103	25	8143	46.80	.46	3.380		.874	-.059	25
5512		8.13	3.240		6.260	.099	28								
5132		16.97	3.060		3.640		25	7039	26.90		3.160	3.416		.068	40
5131		19.36	3.060		2.600		25	1348	32.14		3.600	2.730		.086	70
2064			3.750			.221	40	3172	58.10		3.100	1.874			20
2081			3.290			.231	60	8142	90.50	.76	3.330		.526	-.069	25
2082			3.720			.225	60								
5517		10.78	3.490		5.790	.118	31	7040	59.27		3.056	1.803		.049	40
5529		19.84	3.510		3.820		34	1370	90.46		3.540	.947		.042	70
5533		36.09	3.540		2.384		37	5675	87.60	7.19	3.490	.950	2.070		70
5536		62.38	3.480		1.521		40	5655	87.36	8.01	3.680	.910	2.260		72
								5674	83.08	8.17	3.510	1.045	1.710		60
1120	.90		3.380	23.158		.160	25	5654	79.98	8.87	3.710	1.060	1.900		59
5351	.36	.09	3.095	27.069	10.023	.178	25	5673	78.55	9.44	3.530	1.130	1.410		50
								5653	76.17	9.97	3.720	1.150	1.630		51
3219	2.16		3.730	23.194			20	5672	74.51	10.97	3.530	1.240	1.130		40
8225	2.08		3.520	19.519			25	5652	71.17	11.78	3.740	1.300	1.260		41
5218	2.45		3.125	18.106		.141	25	5671	68.79	12.36	3.540	1.445	.905		32
1121	4.76		3.310	12.900		.106	25	5651	67.84	13.48	3.750	1.430	.970		32
8145	6.50	.09	3.230		3.886	.105	25								
4758	2.40	2.01	3.575		-12.010		26	3171	102.30		3.170	1.105			20
4757	2.40	7.60	3.647		6.303		26	1124	103.79		3.420	1.147		.025	25

AQUEOUS HNO3 FROM 3.05 TO 3.80 (CONTINUED)

AQUEOUS HNO3 FROM 3.80 TO 4.10

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5242	121.26		3.143	1.010		.020	25
1125	122.11		3.440	1.012		.023	25
8141	191.50	1.32	3.230	.572	.295	-.096	25
1345	109.97		3.590	.968		.058	70
1344	199.95		3.630	.564		.047	70
1369	249.94		3.270	.371		.034	70

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3106			3.900			.195	20
5254			3.965			.204	25
3005			4.000		20.000		22
3356			4.000		25.400		23
1157			4.000		21.500		25
1933			4.000		24.000		25
3352			3.950		26.100		25
1017			3.900		23.000		25
1003			4.000		25.000		25
1031			4.000		23.900		25
6808		.01	3.930		-15.400		23
2065			3.860			.215	40
2066			4.020			.216	40
1391			4.000		27.000		70
5520		15.27	3.880		4.840	.095	34
5537		78.39	3.810		1.241		40
3713	.95	.02	4.000		14.800		22
3714	1.67	.02	4.000		11.900		22
3467	3.72		4.000	15.161			25
1117	5.24		3.930	13.273		-.059	25
3715	6.43	.02	4.000		5.400		22
3496	2.45		4.000	16.240			35
3524	3.09		4.000	12.400			50
3226	7.80		3.850	9.269			20
8226	8.50		3.860	8.635			25
3468	9.61		4.000	9.886			25
3716	10.24	.02	4.000		3.900		22
3497	11.31		4.000	6.655			35
3525	13.35		4.000	5.380			50
1350	10.00		3.940	5.520		.109	70
3193	21.90		3.910	4.447			20
3469	19.40		4.000	4.624			25
5243	21.28		4.005	4.590		.050	25
5219	22.30		3.920	4.469		.047	25

AQUEOUS HNO3 FROM 3.80 TO 4.10 (CONTINUED)

AQUEOUS HNO3 FROM 3.80 TO 4.10 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3717	24.99	.02	4.000		2.100		22
5313	21.60	.34	4.080	4.519	2.109	.046	25
3498	21.78		4.000	4.054			35
1349	20.71		3.810	3.480		.092	70
3199	30.10		3.870	3.458			20
3206	35.70		3.930	2.690			20
8227	26.50		3.960	3.623			25
5220	39.45		3.980	2.687		.035	25
8228	42.00		3.980	2.381			25
3470	46.60		4.000	2.215			25
4013	40.00	.55	4.000	2.450	1.273		26
4753	46.00	12.50	3.870	1.909	1.072		26
4752	36.00	21.20	3.858	2.125	1.175		26
4014	35.00	39.20	4.000	1.686	1.135		26
3499	43.20		4.000	2.290			35
3526	25.30		4.000	3.316			50
5660	44.99	5.95	3.820	1.470	3.330		70
5659	35.75	6.41	3.830	1.755	3.080		60
5658	35.94	7.15	3.850	2.010	2.720		51
5657	31.90	8.13	3.870	2.380	2.230		40
5656	28.09	9.20	3.880	2.810	1.920		31
1118	56.42		3.990	1.958		-.021	25
5221	59.20		3.920	1.875		.028	25
8229	61.00		3.980	1.705			25
3471	73.10		4.000	1.482			25
5222	77.55		3.990	1.457		.025	25
3472	96.90		4.000	1.142			25
8230	58.00		3.990	1.082			25
5223	99.75		4.045	1.163		.022	25
4015	74.00	10.10	4.000	1.365	.804		26
4750	86.00	22.00	3.910	1.070	.718		26
4749	82.00	42.00	3.910	.984	.695		26
4748	78.00	82.20	3.915	.692	.622		26
3500	74.27		4.000	1.420			35
3501	98.55		4.000	1.110			35
3527	50.61		4.000	1.930			50

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3528	76.65		4.000	1.350			50
1347	56.65		3.870	1.650		.065	70
1346	82.12		3.900	1.223		.056	70
5224	121.00		3.980	.959		.020	25
3473	147.60		4.000	.765			25
3718	109.97	.02	4.000		.660		22
4017	299.00	3.15	4.000	.378	.340		26
4751	160.00	9.60	3.940	.625	.510		26
4744	297.00	9.80	3.957	.370	.388		26
4747	156.00	18.40	3.939	.641	.462		26
4743	297.00	18.90	3.955	.364	.381		26
4018	306.00	39.40	4.000	.337	.365		26
4016	159.00	40.20	4.000	.591	.493		26
4742	296.00	73.00	3.945	.318	.390		26
4746	160.00	75.50	3.938	.491	.510		26
4745	156.00	100.50	3.938	.369	.477		26
3502	150.32		4.000	.740			35
3529	103.43		4.000	1.025			50
3530	148.77		4.000	.752			50

AQUEOUS HNO3 FROM 4.10 TO 5.10

AQUEOUS HNO3 FROM 4.10 TO 5.10 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2009			4.240			.195	20
2010			4.920			.181	20
2045			4.130			.216	22
3031			4.470			.190	23
1214			4.140			.202	25
5255			4.585			.194	25
1102	.01		4.630	35.100			25
3006			5.000		30.000		22
1048			4.150		28.200	.193	30
1914			4.600		20.500		25
1022			4.200		22.000		25
1018			4.500		25.000		25
6809			4.890		22.100		23
1915		.01	4.600		21.500		25
1916		.01	4.900		26.850		25
3321		1.40	5.000		21.784		25
3345		2.00	5.000		17.750		25
3346		5.00	5.000		10.200		25
3322		6.00	5.000		8.867		25
5504		6.55	4.690		8.869	-.061	25
5513		8.68	4.760		7.190	.065	28
3347		10.00	5.000		6.400		25
3323		14.70	5.000		4.796		25
3348		20.00	5.000		4.000		25
3324		47.50	5.000		2.147		25
3349		50.00	5.000		2.500		25
2067			4.920			.199	40
2083			4.220			.217	60
2084			4.560			.208	60
2085			4.920			.200	60
5518		12.31	4.920		6.180	.053	31
5534		47.32	5.100		2.000		37
5532		48.52	5.050		2.000		37
5535		78.39	4.640		1.293		40
5522		98.47	4.560		.794	-.048	45
3187	.71		4.260	29.832			20
3186	1.54		4.280	25.390			20
5225	1.86		4.515	24.328		-.026	25
1917	1.70		4.600	-13.850			25

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3719	.71	.02	4.500			18.000	22
3720	1.43	.02	4.500			14.100	22
3185	3.55		4.400	17.099			20
1116	5.71		4.580	14.500		.070	25
3721	5.95	.02	4.500		6.000		22
3722	9.52	.02	4.500		4.500		22
3184	19.40		4.500	5.155			20
3194	22.40		4.970	4.362			20
5226	20.55		4.930	4.783		.045	25
3723	23.57	.02	4.500		2.300		22
3200	30.10		4.940	3.488			20
3207	39.70		4.880	2.710			20
3183	41.70		4.540	2.590			20
5227	37.70		4.970	2.785		.034	25
1936	32.30		5.000	-1.600			25
3182	63.50		4.640	1.764			20
5229	78.00		5.005	1.429		.024	25
3181	111.30		4.650	1.024			20
3180	159.50		4.730	.727			20
3179	212.50		4.910	.551			20
3178	263.60		4.890	.451			20
5230	102.00		5.010	1.108		.022	25
5231	123.50		4.970	.935		.021	25
1119	149.01		4.110	.783		-.011	25
3724	109.50	.02	4.500		.720		22
1371	192.81		4.180	.519		.036	70

AQUEOUS HNO3 FROM 5.10 TO 11.00

AQUEOUS HNO3 FROM 5.10 TO 11.00 (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3107			5.330			.167	20
2011			5.680			.169	20
2012			7.000			.132	20
3108			7.470			.141	20
3109			8.110			.134	20
2013			8.120			.132	20
2014			8.930			.125	20
2015			10.120			.116	20
3110			10.290			.119	20
2046			5.130			.195	22
2047			6.160			.175	22
2048			7.640			.145	22
2049			7.770			.152	22
2050			7.850			.150	22
2051			8.940			.141	22
3032			5.920			.162	23
3033			7.200			.140	23
3034			8.400			.127	23
3035			9.060			.123	23
5256			5.655			.173	25
1115			5.910			.162	25
1101	.01		5.990	36.700			25
1386			5.300		25.000		0
1049			6.480		43.400	.152	30
1919			7.000		23.500		25
6812			7.870		49.500		23
6811			6.900		39.400		23
6813			8.870		34.000		23
1019			5.250		34.000		25
1004			6.000		35.000		25
1020			6.250		41.000		25
6810			5.920		24.500		23
6814			9.870		20.200		23
1920			6.900		30.700		25
1921		.01	7.300		34.150		25
5505		7.22	5.190		9.636	-.067	25
5506		7.34	6.790		9.544	-.052	25
5507		7.74	6.990		8.457	-.050	25
5508		7.93	7.490		8.735	-.054	25
5514		9.66	6.050		7.480	.043	28
5515		10.30	7.100		7.270	.032	28

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2068			5.370			.195	40
2069			8.190			.140	40
2086			5.460			.187	60
2087			6.130			.175	60
2088			7.960			.151	60
5519		14.60	6.970		5.480	.034	31
5530		26.05	5.120		3.330		34
5523		113.52	5.180		.785	-.112	45
1922	.76		7.000	-20.200			25
1923	2.12		6.700	-12.800			25
1924	4.43		8.200	-4.800			25
1918	9.00		5.200	-4.300			25
5228	56.00		5.115	1.946		.028	25

SOURCE-NUMBER LISTING

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
1001			.700		1.500		25
1002			2.000		8.000		25
1003			4.000		25.000		25
1004			6.000		35.000		25
1011			.520		.960		25
1012			.930		3.000		25
1013			1.780		8.100		25
1014			2.130		10.400		25
1015			2.400		11.300		25
1016			3.500		20.000		25
1017			3.900		23.000		25
1018			4.500		25.000		25
1019			5.250		34.000		25
1020			6.250		41.000		25
1021			.960		3.100		25
1022			4.200		22.000		25
1023			1.660		-8.600		25
1024			3.800		-36.000		25
1031			4.000		23.900		25
1032			1.000		3.000		25
1033			.200		.074		25
1042			.476		.730	-.252	30
1043			.711		1.600	-.238	30
1044			.972		2.800	-.252	30
1045			1.490		5.060	.233	30
1046			2.060		8.270	.225	30
1047			3.010		15.800	.216	30
1048			4.150		28.200	.193	30
1049			6.480		43.400	.152	30
1051			.321			.125	25
1052			.499			.166	25
1053			.625			.187	25
1054			.874			.211	25
1055			.976			.222	25
1101	.01		5.990	36.700			25
1102	.01		4.630	35.100			25
1103	.01		3.370	30.100			25
1104	.01		2.190	18.700			25
1105	.03		1.090	7.610			25
1106	.07		.530	2.650			25
1107	.19		.097	.250			25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
1108	.22		.048	.085			25
1109			.100			.045	25
1110			.200			.080	25
1111			.510			.155	25
1112			1.030			.213	25
1113			2.130			.216	25
1114			3.310			.200	25
1115			5.910			.162	25
1116	5.71		4.580	14.500		.070	25
1117	5.24		3.930	13.273		-.059	25
1118	56.42		3.990	1.958		-.021	25
1119	149.01		4.110	.783		-.011	25
1120	.90		3.380	23.158		.160	25
1121	4.76		3.310	12.900		.106	25
1122	10.95		3.320	7.543		.066	25
1123	27.61		3.340	3.397		.048	25
1124	103.79		3.420	1.147		.025	25
1125	122.11		3.440	1.012		.023	25
1126	1.45		2.130	14.918		.192	25
1127	4.76		2.140	10.550		.117	25
1128	12.14		2.140	6.294		.079	25
1129	12.62		2.140	5.792		.086	25
1130	27.37		2.150	3.304		.053	25
1131	94.74		2.200	1.204		.034	25
1132	3.78		1.030	6.478		.175	25
1133	11.66		1.040	4.204		-.933	25
1134	24.99		1.040	2.743		.069	25
1135	88.31		1.060	1.216		-.050	25
1136	111.40		1.070	1.026		.032	25
1137	6.83		.510	2.927		.139	25
1138	11.90		.510	2.540		.100	25
1139	11.90		.510	2.640		-.025	25
1140	23.33		.510	2.173		.084	25
1141	23.80		.510	2.160		-.022	25
1142	72.84		.520	1.271		.042	25
1143	85.46		.520	1.162		-.090	25
1144	23.80		.050	-.017		.040	25
1145	11.66		.050	.490		-.320	25
1146	23.80		.050	-1.090		-.320	25
1147	86.17		.051	.994		-.647	25
1151			.015		-.004		25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
1152			.100		.023		25
1153			.490		.640		25
1154			.990		2.900		25
1155			2.000		6.300		25
1156			3.000		16.000		25
1157			4.000		21.500		25
1201			.057			.056	25
1202			.074			.063	25
1203			.091			.068	25
1204			.174			.099	25
1205			.359			.126	25
1206			.517			.169	25
1207			.685			.184	25
1208			.843			.203	25
1209			1.240			.225	25
1210			1.600			.229	25
1211			2.030			.229	25
1212			2.430			.226	25
1213			3.350			.211	25
1214			4.140			.202	25
1221	18.09		.000	.411			25
1222	28.66		.000	.655			25
1223	38.42		.000	.833			25
1224	59.39		.000	.936			25
1225	73.65		.000	.921			25
1226	91.00		.000	.883			25
1227	116.78		.000	.796			25
1228	205.57		.000	.556			25
1301	122.59	1.000	.818			.080	70
1302	84.27	.900	1.031			.089	70
1303	43.32	.800	1.511			.125	70
1304	30.47	.800	1.719			.112	70
1305	110.45	.600	.793				70
1306	52.84	.500	1.185				70
1307	110.69	.300	.744				70
1308	92.84	.300	.808				70
1309	55.46	.300	.888				70
1310	44.04	.300	.903				70
1311	125.21	.000	.679				70
1312	92.12	.000	.700				70
1313	67.84	.000	.681				70

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
1314	53.80		.000	.602			70
1315	44.51		.000	.540			70
1316	29.04		.000	.323			70
1317	20.95		.000	.219			70
1318	14.04		.000	.114			70
1319	176.15		1.080	.619		.037	70
1320	123.78		1.050	.810		.048	70
1321	75.22		1.060	1.136		.064	70
1322	57.13		1.070	1.392		.069	70
1323	35.47		1.080	1.624		.093	70
1324	19.28		1.090	2.220		.119	70
1325	5.24		1.090	3.180		.138	70
1326	202.33		2.030	.585		-.010	70
1327	147.58		2.010	.727		-.015	70
1328	97.83		2.040	1.071		-.029	70
1329	71.89		1.970	1.325		-.041	70
1330	52.37		1.960	1.680		.097	70
1331	31.66		1.940	2.440		.108	70
1332	20.47		1.890	3.090		.122	70
1333	10.00		1.970	4.570		.127	70
1334	3.81		1.890	6.060		.159	70
1335	221.38		3.030	.492		.043	70
1336	81.89		3.000	1.189		.053	70
1337	81.17		2.830	1.246		.056	70
1338	57.13		2.860	1.683		.059	70
1339	33.80		3.000	2.320		.077	70
1340	31.42		2.940	2.460		.082	70
1341	21.66		2.990	3.220		.097	70
1342	10.00		3.020	5.020		.133	70
1343	2.86		3.000	9.170		.173	70
1344	199.95		3.630	.564		.047	70
1345	109.97		3.590	.968		.058	70
1346	82.12		3.900	1.223		.056	70
1347	56.65		3.870	1.650		.065	70
1348	32.14		3.600	2.730		.086	70
1349	20.71		3.810	3.480		.092	70
1350	10.00		3.940	5.520		.109	70
1351	2.62		3.700	9.730		.189	70
1361	111.88		.280	.702		-.021	70
1362	252.32		.880	.434		.034	70
1363	223.76		2.120	.468		.019	70

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
1364	23E.04		2.190	.440		.023	70
1365	54.75		.670	1.043		.087	70
1366	159.49		2.320	.657		.026	70
1367	35.71		1.320	-1.267		.083	70
1368	88.07		2.360	1.027		.047	70
1369	249.94		3.270	.371		.034	70
1370	90.46		3.540	.947		.042	70
1371	192.81		4.180	.519		.036	70
1372	59.51		1.000	1.120		.050	70
1381			1.030		2.200		0
1382			1.400		3.900		0
1383			2.160		6.600		0
1384			3.100		11.000		0
1385			3.800		15.500		0
1386			5.300		25.000		0
1391			4.000		27.000		70
1392			1.000		4.240		70
1393			.200		.099		70
1901	2.19		2.305	16.700	4.000		25
1902	3.52		2.386	13.700	3.700		25
1903	4.93		2.448	12.100	2.300		25
1904	7.02		2.513	-10.200	-1.300		25
1905	10.19		2.580	-7.900	-1.600		25
1906	14.31		2.637	-6.400	-1.300		25
1907	17.40		2.667	-5.400	-1.100		25
1908	22.38		2.703	-4.500	-1.000		25
1909	29.85		2.741	-3.600	-.790		25
1910	49.23		2.798	-2.300	-.570		25
1911			2.200		8.450		25
1912	2.69		2.600		4.950		25
1913	12.59		3.000		-2.050		25
1914			4.600		20.500		25
1915		.01	4.600		21.500		25
1916		.01	4.900		26.850		25
1917	1.70		4.600		-13.850		25
1918	5.00		5.200		-4.300		25
1919			7.000		23.500		25
1920			6.900		30.700		25
1921		.01	7.300		34.150		25
1922	.76		7.000		-20.200		25
1923	2.12		6.700		-12.800		25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
1924	4.43		8.200	-4.800			25
1931			.200	.070			25
1932			1.000	3.000			25
1933			4.000	24.000			25
1935	49.80		2.000	-.460			25
1936	32.30		5.000	-1.600			25
2001			.270			.082	20
2002			.640			.175	20
2003			1.060			.210	20
2004			1.420			.215	20
2005			1.980			.217	20
2006			2.720			.223	20
2007			3.450			.209	20
2008			3.690			.207	20
2009			4.240			.195	20
2010			4.920			.181	20
2011			5.680			.169	20
2012			7.000			.132	20
2013			8.120			.132	20
2014			8.930			.125	20
2015			10.120			.116	20
2018			.100			.061	15
2019			.200			.135	15
2020			.300			.180	15
2021			.100			.053	20
2022			.300			.120	20
2023			.500			.165	20
2024			.100			.047	25
2025			.300			.108	25
2026			.500			.152	25
2027			.100			.043	30
2028			.300			.101	30
2029			.500			.142	30
2031			.020			.013	22
2032			.046			-.030	22
2033			.092			.054	22
2034			.200			.095	22
2035			.364			.151	22
2036			.413			.159	22
2037			.787			.205	22
2038			.873			.225	22

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2039			1.490			.240	22
2040			1.750			.244	22
2041			2.210			.247	22
2042			2.400			.243	22
2043			3.020			.236	22
2044			3.500			.223	22
2045			4.130			.216	22
2046			5.130			.195	22
2047			6.160			.175	22
2048			7.640			.145	22
2049			7.770			.152	22
2050			7.850			.150	22
2051			8.940			.141	22
2053			.048			.020	40
2054			.101			.040	40
2055			.394			.114	40
2056			.593			.159	40
2057			.765			.174	40
2058			.995			.203	40
2059			1.490			.226	40
2060			1.870			.234	40
2061			1.870			.235	40
2062			2.690			.239	40
2063			2.950			.235	40
2064			3.750			.221	40
2065			3.860			.215	40
2066			4.020			.216	40
2067			4.920			.199	40
2068			5.370			.195	40
2069			8.190			.140	40
2070			.050			.017	60
2071			.101			.034	60
2072			.407			.102	60
2073			.729			.154	60
2074			.952			.179	60
2075			1.390			.225	60
2076			1.470			.222	60
2077			1.770			.237	60
2078			2.110			.238	60
2079			2.110			.239	60
2080			2.450			.246	60

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
2081			3.290			.231	60
2082			3.720			.225	60
2083			4.220			.217	60
2084			4.560			.208	60
2085			4.920			.200	60
2086			5.460			.187	60
2087			6.130			.175	60
2088			7.960			.151	60
2089			.101			.045	30
2090			.389			.130	30
2091			.727			.187	30
2092			.919			.208	30
2093			1.860			.242	30
2094			2.750			.237	30
2095			3.440			.221	30
3001			.500				22
3002			1.000		.810		22
3003			2.000		2.700		22
3004			3.000		6.000		22
3005			4.000		-11.000		22
3006			5.000		20.000		22
3021			.200		30.000		22
3022			.440			.100	23
3023			.700			.136	23
3024			.930			.171	23
3025			1.120			.194	23
3026			1.360			.205	23
3027			1.570			.213	23
3028			1.700			.217	23
3029			2.310			.218	23
3030			3.500			.216	23
3031			4.470			.197	23
3032			5.920			.190	23
3033			7.200			.162	23
3034			8.400			.140	23
3035			9.060			.127	23
3041		2.50	.500			.123	23
3042		5.00	.500		.800		25
3043		7.50	.500		.800		25
3044		10.00	.500		.800		25
3045	35.00	2.50	.500		.400		25

SCURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3046	35.00	5.00	.500		.500		25
3047	35.00	10.00	.500		.525		25
3048	35.00	15.00	.500		.600		25
3049		2.50	1.000		2.000		25
3050		5.00	1.000		2.000		25
3051		10.00	1.000		1.900		25
3052		20.00	1.000		1.835		25
3053	35.00	2.50	1.000		.800		25
3054	35.00	5.00	1.000		.850		25
3055	35.00	10.00	1.000		.825		25
3056	35.00	20.00	1.000		.750		25
3057		2.50	2.000		6.500		25
3058		5.00	2.000		5.300		25
3059		10.00	2.000		4.000		25
3060		20.00	2.000		2.875		25
3061	40.00	2.50	2.000		.700		25
3062	40.00	5.00	2.000		.700		25
3063	40.00	10.00	2.000		.800		25
3064	40.00	20.00	2.000		.950		25
3065		2.50	3.000	10.080			25
3066		5.00	3.000	7.440			25
3067		10.00	3.000	5.150			25
3068		20.00	3.000	3.425			25
3069	40.00	2.50	3.000	-.700			25
3070	40.00	5.00	3.000	.850			25
3071	40.00	10.00	3.000	1.125			25
3072	40.00	20.00	3.000	1.550			25
3101			.663			.166	20
3102			.960			.187	20
3103			1.580			.222	20
3104			2.150			.223	20
3105			2.990			.217	20
3106			3.900			.195	20
3107			5.330			.167	20
3108			7.470			.141	20
3109			8.110			.134	20
3110			10.290			.119	20
3111	8.45		.000	.169			20
3112	9.88		.000	.185			20
3113	16.90		.000	.369			20
3114	18.30		.000	.429			20

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3115	22.70		.000	.559			20
3116	28.80		.000	.705			20
3117	34.50		.000	.797			20
3118	39.20		.000	.855			20
3119	41.90		.000	.916			20
3120	56.70		.000	.928			20
3121	62.00		.000	.939			20
3122	75.10		.000	.900			20
3123	88.00		.000	.883			20
3124	102.20		.000	.853			20
3125	132.10		.000	.748			20
3126	147.50		.000	.706			20
3127	189.00		.542	.608			20
3128	205.00		.562	.566			20
3129	167.00		.538	.671			20
3130	147.00		.522	.728			20
3131	127.00		.499	.827			20
3132	108.00		.517	.926			20
3133	90.40		.503	1.046			20
3134	71.60		.503	1.214			20
3135	52.90		.503	1.431			20
3136	37.10		.498	1.712			20
3137	30.30		.508	1.917			20
3138	23.30		.508	2.082			20
3139	10.90		.493	2.514			20
3140	8.86		.508	2.607			20
3141	5.47		.488	2.779			20
3142	3.25		.488	2.920			20
3143	346.00		1.100	.353			20
3144	286.00		1.120	.424			20
3145	223.00		1.060	.537			20
3146	157.00		1.080	.731			20
3147	95.20		1.020	1.106			20
3148	63.50		.920	1.548			20
3149	37.50		.990	2.176			20
3150	14.00		.990	4.200			20
3151	6.15		.990	5.073			20
3152	2.10		1.020	6.571			20
3153	263.10		2.240	.455			20
3154	238.60		2.200	.499			20
3155	214.80		2.230	.551			20

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3156	188.60		2.230	.621			20
3157	165.40		2.220	.698			20
3158	138.00		2.250	.828			20
3159	113.70		2.250	.986			20
3160	89.90		2.250	1.205			20
3161	65.50		2.220	1.594			20
3162	42.20		2.140	2.320			20
3163	20.50		2.160	4.098			20
3164	7.00		2.120	8.129			20
3165	4.60		2.120	10.087			20
3166	2.44		2.120	12.480			20
3167	1.31		2.120	14.542			20
3168	.68		2.120	19.118			20
3169	193.40		3.040	.617			20
3170	148.80		3.020	.788			20
3171	102.30		3.170	1.105			20
3172	58.10		3.100	1.874			20
3173	35.00		3.160	2.886			20
3174	16.70		3.060	5.593			20
3175	4.25		3.050	13.012			20
3176	1.72		2.980	21.105			20
3177	.42		2.940	-63.462			20
3178	263.60		4.890	.451			20
3179	212.50		4.910	.551			20
3180	159.50		4.730	.727			20
3181	111.30		4.650	1.024			20
3182	63.50		4.640	1.764			20
3183	41.70		4.540	2.590			20
3184	19.40		4.500	5.155			20
3185	3.55		4.400	17.099			20
3186	1.54		4.280	25.390			20
3187	.71		4.260	29.832			20
3188	21.60		.503	2.106			20
3189	21.50		.911	2.837			20
3190	20.50		1.520	3.683			20
3191	21.60		2.000	3.801			20
3192	21.80		2.950	4.271			20
3193	21.90		3.910	4.447			20
3194	22.40		4.970	4.362			20
3195	29.75		.470	1.913			20
3196	29.90		.980	2.492			20

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3197	30.10		2.290	3.143			20
3198	30.10		2.950	3.372			20
3199	30.10		3.870	3.458			20
3200	30.10		4.940	3.488			20
3201	39.50		.490	1.620			20
3202	40.00		.960	2.030			20
3203	39.30		1.400	2.285			20
3204	39.70		1.860	2.484			20
3205	39.30		2.880	2.664			20
3206	39.70		3.930	2.690			20
3207	39.70		4.880	2.710			20
3208	47.20		.495	1.564			20
3209	49.30		1.060	1.846			20
3210	49.00		2.200	2.100			20
3211	49.00		3.050	2.173			20
3212	52.10		.020	.960			20
3213	26.10		.460	1.946			20
3214	16.50		.840	3.042			20
3215	10.40		1.220	4.846			20
3216	8.61		1.490	5.865			20
3217	5.15		2.240	9.748			20
3218	3.85		2.900	13.013			20
3219	2.16		3.730	23.194			20
3220	54.50		.430	1.339			20
3221	36.10		.850	2.036			20
3222	25.50		1.170	2.878			20
3223	19.60		1.610	3.765			20
3224	12.00		2.340	6.158			20
3225	8.90		3.130	8.270			20
3226	7.80		3.850	9.269			20
3301		.80	.500		.938		25
3302		5.00	.500		.860		25
3303		9.50	.500		.895		25
3304		21.00	.500		.833		25
3305		49.00	.500		.837		25
3306		2.20	1.000		2.273		25
3307		9.50	1.000		1.916		25
3308		20.00	1.000		1.600		25
3309		26.20	1.000		1.458		25
3310		49.50	1.000		1.156		25
3311		1.50	2.000		6.667		25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3312		3.50	2.000		6.000		25
3313		7.00	2.000		4.814		25
3314		16.00	2.000		3.125		25
3315		27.20	2.000		2.379		25
3316		37.20	2.000		2.016		25
3317		1.40	3.000		13.571		25
3318		6.75	3.000		6.444		25
3319		15.00	3.000		4.167		25
3320		48.50	3.000		1.994		25
3321		1.40	5.000		21.786		25
3322		6.00	5.000		8.867		25
3323		14.70	5.000		4.796		25
3324		47.50	5.000		2.147		25
3325		2.00	.500		.850		25
3326		5.00	.500		.850		25
3327		10.00	.500		.850		25
3328		20.00	.500		.850		25
3329		50.00	.500		.850		25
3330		2.00	1.000		2.550		25
3331		5.00	1.000		2.300		25
3332		10.00	1.000		1.950		25
3333		20.00	1.000		1.600		25
3334		50.00	1.000		1.200		25
3335		2.00	2.000		7.150		25
3336		5.00	2.000		5.350		25
3337		10.00	2.000		4.050		25
3338		20.00	2.000		2.900		25
3339		50.00	2.000		1.850		25
3340		2.00	3.000		11.150		25
3341		5.00	3.000		7.450		25
3342		10.00	3.000		5.200		25
3343		20.00	3.000		3.500		25
3344		50.00	3.000		1.950		25
3345		2.00	5.000		17.750		25
3346		5.00	5.000		10.200		25
3347		10.00	5.000		6.400		25
3348		20.00	5.000		4.000		25
3349		50.00	5.000		2.500		25
3350		.01	1.990		9.060		25
3351			2.940		16.600		25
3352			3.950		26.100		25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3353			1.000		3.400		23
3354			2.000		8.900		23
3355			3.000		16.000		23
3356			4.000		25.400		23
3357		1.87	2.930		12.600		25
3358		1.10	2.940		13.000		25
3359		.31	2.910		15.200		25
3360		.09	3.000		16.100		25
3361		.02	3.000		16.500		25
3362		2.23	.950		3.100		25
3363		1.09	.930		3.200		25
3364		.40	1.000		3.400		25
3365		.13	1.000		3.600		25
3366		.03	1.000		3.700		25
3367		.02	3.000		15.500		25
3368		.33	3.000		13.900		25
3369		.09	3.000		14.200		25
3370		1.06	3.000		11.900		25
3371	.11	.10	2.940	31.000	15.000		25
3372	1.04	.09	2.940	25.000	11.000		25
3373	10.53	.12	2.950	7.600	3.300		25
3374	100.00	.10	2.970	1.120	.540		25
3375	23.42	.10	2.970	-.790	-.400		25
3376	.11	1.00	3.030	29.000	14.500		25
3377	.90	.83	3.040	22.400	11.800		25
3378	14.17	1.46	3.000	6.000	2.400		25
3379	94.92	1.00	2.980	1.180	.500		25
3380	147.44	1.00	2.960	.780	.380		25
3381	.14	5.01	3.050	-13.200	9.200		25
3382	1.61	6.42	2.970	13.700	5.700		25
3383	11.86	6.07	2.970	5.900	2.700		25
3384	95.65	5.68	3.050	1.150	.500		25
3385	141.98	5.38	3.050	.810	.370		25
3386	.09	7.20	2.990	19.000	7.500		25
3387	1.33	9.26	2.880	11.300	5.400		25
3388	14.18	12.73	2.900	4.500	2.200		25
3389	99.63	9.20	2.990	1.080	.500		25
3390	152.63	9.47	3.010	.760	.380		25
3391	.09	19.62	3.000	11.500	4.000		25
3392	1.00	14.35	3.000	9.300	4.600		25
3393	12.49	17.59	2.850	4.100	2.200		25

SCURCE-NUMBER LISTING (CONTINUED)

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3394	95.37	17.32	2.920	1.080	.560		25
3395	143.42	17.21	2.940	.760	.430		25
3396	.11	.11	.940	9.600	3.700		25
3397	1.01	.10	.980	9.800	2.800		25
3398	10.44	.10	1.010	4.500	1.000		25
3399	104.50	.12	1.000	1.000	-.160		25
3400	152.00	.11	1.000	.750	-.100		25
3401	.09	1.00	.990	9.000	3.800		25
3402	1.00	1.21	.970	8.900	2.800		25
3403	9.00	1.06	1.000	4.700	1.600		25
3404	99.52	1.08	1.000	1.050	.260		25
3405	147.37	1.09	1.010	.760	.220		25
3406	.08	4.16	.970	7.400	3.100		25
3407	1.11	5.17	.960	7.400	2.400		25
3408	8.44	3.39	1.010	4.500	1.680		25
3409	98.57	5.29	1.000	1.050	.340		25
3410	148.03	5.89	1.000	.760	.280		25
3411	.10	8.77	.970	5.700	2.600		25
3412	1.00	8.50	.930	6.500	2.200		25
3413	9.73	8.31	.980	4.100	1.360		25
3414	95.45	10.10	.980	1.100	.310		25
3415	145.44	9.91	.990	.790	.230		25
3416	.09	17.41	.970	6.800	2.200		25
3417	.81	18.82	1.030	4.200	1.700		25
3418	11.81	19.21	.930	3.200	1.270		25
3419	99.00	18.42	.960	1.000	.380		25
3420	145.68	18.33	.960	.740	.300		25
3421	.11	.10	.500	3.600	1.100		25
3422	.87	.10	.490	3.800	.900		25
3423	10.78	.08	.520	2.700	.800		25
3424	101.86	.11	.530	.970	.130		25
3425	150.56	1.05	.520	.720	.100		25
3426	.10	.90	.500	3.900	1.340		25
3427	1.25	1.00	.470	3.200	1.080		25
3428	11.11	1.05	.500	2.700	.800		25
3429	100.00	.93	.510	1.000	.300		25
3430	152.78	1.10	.510	.720	.200		25
3431	.09	4.67	.490	2.700	1.200		25
3432	.89	4.70	.470	3.700	1.000		25
3433	9.64	3.75	.500	2.800	.800		25
3434	100.00	4.80	.500	1.000	.250		25

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3435	153.47	5.00	.500	.720	.200		25
3436	.09	9.58	.480	3.300	1.180		25
3437	1.61	9.48	.460	3.100	.960		25
3438	8.86	8.45	.490	2.800	.840		25
3439	100.00	10.74	.490	1.000	.270		25
3440	149.32	10.00	.490	.730	.180		25
3441	.09	18.70	.480	3.100	1.230		25
3442	.92	17.93	.520	3.000	1.350		25
3443	8.03	17.65	.550	3.100	.980		25
3444	94.48	19.64	.550	1.050	.280		25
3445	142.86	19.55	.560	.770	.220		25
3446	4.89		1.000	5.333			25
3447	9.97		1.000	4.082			25
3448	23.66		1.000	2.697			25
3449	47.40		1.000	1.783			25
3450	71.50		1.000	1.331			25
3451	95.80		1.000	1.074			25
3452	146.70		1.000	.755			25
3453	4.33		2.000	9.630			25
3454	9.70		2.000	6.330			25
3455	20.80		2.000	3.841			25
3456	46.60		2.000	2.032			25
3457	72.80		2.000	1.435			25
3458	97.10		2.000	1.119			25
3459	146.90		2.000	.770			25
3460	3.96		3.000	12.922			25
3461	9.61		3.000	7.419			25
3462	19.70		3.000	4.406			25
3463	46.30		3.000	2.197			25
3464	73.20		3.000	1.469			25
3465	96.90		3.000	1.141			25
3466	147.60		3.000	.764			25
3467	3.72		4.000	15.161			25
3468	9.61		4.000	9.886			25
3469	19.40		4.000	4.624			25
3470	46.60		4.000	2.215			25
3471	73.10		4.000	1.482			25
3472	96.90		4.000	1.142			25
3473	147.60		4.000	.765			25
3475	5.36		1.000	4.620			35
3476	11.24		1.000	3.585			35

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3477	25.71		1.000	2.450			35
3478	43.09		1.000	1.796			35
3479	72.70		1.000	1.263			35
3480	58.07		1.000	1.016			35
3481	149.01		1.000	.731			35
3482	3.50		2.000	9.690			35
3483	10.57		2.000	5.600			35
3484	23.21		2.000	3.400			35
3485	42.70		2.000	2.145			35
3486	73.32		2.000	1.402			35
3487	101.17		2.000	1.045			35
3488	149.97		2.000	.742			35
3489	2.67		3.000	14.340			35
3490	11.00		3.000	6.530			35
3491	21.90		3.000	3.910			35
3492	42.85		3.000	2.256			35
3493	73.32		3.000	1.420			35
3494	57.60		3.000	1.113			35
3495	150.32		3.000	.741			35
3496	2.45		4.000	16.240			35
3497	11.31		4.000	6.655			35
3498	21.78		4.000	4.054			35
3499	43.20		4.000	2.290			35
3500	74.27		4.000	1.420			35
3501	98.55		4.000	1.110			35
3502	150.32		4.000	.740			35
3503	5.64		1.000	3.990			50
3504	12.52		1.000	2.944			50
3505	28.85		1.000	2.063			50
3506	49.27		1.000	1.585			50
3507	76.41		1.000	1.176			50
3508	101.02		1.000	.978			50
3509	149.25		1.000	.729			50
3510	4.12		2.000	7.820			50
3511	12.48		2.000	4.696			50
3512	26.42		2.000	2.884			50
3513	49.04		2.000	1.850			50
3514	76.51		2.000	1.301			50
3515	101.64		2.000	1.032			50
3516	149.25		2.000	.742			50
3517	3.21		3.000	11.450			50

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3518	13.12		3.000	5.164			50
3519	25.80		3.000	3.200			50
3520	49.99		3.000	1.962			50
3521	76.51		3.000	1.335			50
3522	102.36		3.000	1.036			50
3523	149.25		3.000	.745			50
3524	3.09		4.000	12.400			50
3525	13.35		4.000	5.380			50
3526	25.30		4.000	3.316			50
3527	50.61		4.000	1.930			50
3528	76.65		4.000	1.350			50
3529	103.43		4.000	1.025			50
3530	148.77		4.000	.752			50
3531			.095	-.349			25
3532			.095	-.399			25
3533			.095	-.432			25
3534			.095	-.470			25
3535			.500	2.686			25
3536			.500	2.683			25
3537			.500	2.654			25
3538			1.000	7.209			25
3539			1.000	7.185			25
3540			3.000	-23.067			25
3541			3.000	-24.571			25
3701	1.67	.02	2.000		4.300		22
3702	3.09	.02	2.000		3.300		22
3703	11.43	.02	2.000		1.400		22
3704	17.38	.02	2.000		1.000		22
3705	37.37	.02	2.000		.530		22
3706	123.30	.02	2.000		.180		22
3707	1.19	.02	3.000		8.500		22
3708	2.14	.02	3.000		6.600		22
3709	8.33	.02	3.000		3.100		22
3710	12.62	.02	3.000		2.400		22
3711	29.28	.02	3.000		1.500		22
3712	113.55	.02	3.000		.380		22
3713	.95	.02	4.000		14.800		22
3714	1.67	.02	4.000		11.900		22
3715	6.43	.02	4.000		5.400		22
3716	10.24	.02	4.000		3.900		22
3717	24.99	.02	4.000		2.100		22

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
3718	109.97	.02	4.000		.660		22
3719	.71	.02	4.500		18.000		22
3720	1.43	.02	4.500		14.100		22
3721	5.95	.02	4.500		6.000		22
3722	9.52	.02	4.500		4.500		22
3723	23.57	.02	4.500		2.300		22
3724	109.50	.02	4.500		.720		22
3725	81.17	.02	3.000		.620		22
4001	29.40	.59	2.000	3.129	1.000		26
4002	40.30	11.20	2.000	2.035	.652		26
4003	53.00	72.70	2.000	1.283	.568		26
4004	144.00	42.60	2.000	.693	.317		26
4005	324.00	3.30	2.000	.364	.197		26
4006	303.00	78.00	2.000	.340	.244		26
4007	36.50	.48	3.000	2.630	1.104		26
4008	47.00	41.00	3.000	1.553	.807		26
4009	85.10	3.41	3.000	1.234	.616		26
4010	147.00	19.50	3.000	.707	.405		26
4011	257.00	3.11	3.000	.394	.296		26
4012	284.00	95.60	3.000	.313	.319		26
4013	40.00	.55	4.000	2.450	1.273		26
4014	35.00	39.20	4.000	1.686	1.135		26
4015	74.00	10.10	4.000	1.365	.804		26
4016	159.00	40.20	4.000	.591	.493		26
4017	259.00	3.15	4.000	.378	.340		26
4018	306.00	39.40	4.000	.337	.365		26
4719	312.00	97.50	1.982	.315	.257		26
4720	326.00	36.60	1.984	.325	.219		26
4721	293.00	20.40	1.983	.362	.211		26
4722	161.00	90.10	1.965	.559	.319		26
4723	165.00	74.00	1.965	.570	.281		26
4724	150.00	22.00	1.963	.653	.277		26
4725	92.00	96.40	1.947	.815	.435		26
4726	99.00	78.50	1.948	.838	.396		26
4727	87.00	40.50	1.941	1.064	.430		26
4728	87.00	19.50	1.941	1.080	.441		26
4729	87.00	10.90	1.942	1.126	.431		26
4730	44.00	94.00	1.924	1.182	.602		26
4731	50.00	43.50	1.917	1.580	.602		26
4732	36.00	17.50	1.896	2.111	.857		26
4733	20.00	39.50	1.876	2.550	1.144		26

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
4734	17.00	18.20	1.855	3.294	1.462		26
4735	14.00	11.20	1.838	3.643	1.375		26
4736	12.60	3.90	1.824	4.762	-1.308		26
4737	3.70	19.40	1.791		2.304		26
4738	3.50	10.90	1.767	7.429	2.771		26
4739	5.00	4.30	1.764	6.000	3.256		26
4740	.60	10.50	1.726		3.962		26
4741	.50	8.20	1.711		4.122		26
4742	296.00	73.00	3.945	.318	.390		26
4743	297.00	18.90	3.955	.364	.381		26
4744	297.00	9.80	3.957	.370	.388		26
4745	156.00	100.50	3.938	.369	.477		26
4746	160.00	75.50	3.938	.491	.510		26
4747	156.00	18.40	3.939	.641	.462		26
4748	78.00	82.20	3.915	.692	.622		26
4749	82.00	42.00	3.910	.984	.695		26
4750	86.00	22.00	3.910	1.070	.718		26
4751	160.00	9.60	3.940	.625	.510		26
4752	36.00	21.20	3.858	2.125	1.175		26
4753	46.00	12.50	3.870	1.909	1.072		26
4754	10.00	17.60	3.776	4.300	2.688		26
4755	14.80	7.90	3.779	4.270	2.759		26
4756	19.00	3.60	3.792	4.211	2.833		26
4757	2.40	7.60	3.647		6.303		26
4758	2.40	2.01	3.575		-12.010		26
4759	296.00	76.20	2.966	.311	.286		26
4760	307.00	42.60	2.969	.332	.270		26
4761	304.00	20.90	2.971	.349	.278		26
4762	303.00	10.70	2.972	.360	.290		26
4763	162.00	98.90	2.951	.446	.384		26
4764	169.00	80.40	2.952	.530	.358		26
4765	159.00	39.30	2.951	.629	.331		26
4766	161.00	10.70	2.953	.652	.430		26
4767	81.00	100.00	2.930	.626	.574		26
4768	82.00	75.10	2.926	.837	.547		26
4769	82.00	42.50	2.923	1.043	.527		26
4770	81.00	20.20	2.921	1.156	.574		26
4771	81.70	11.20	2.921	1.236	.589		26
4772	34.00	78.10	2.898	1.059	.883		26
4773	48.00	21.00	2.892	1.829	.871		26
4774	35.00	10.90	2.869	2.617	.872		26

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
4775	41.40	3.16	2.878	2.336	1.076		26
4776	16.00	20.40	2.828	3.469	1.833		26
4777	17.00	9.90	2.818	4.076	2.020		26
4778	16.90	3.20	2.808	4.651	2.219		26
4779	7.00	9.40	2.755	5.943	3.468		26
4780	6.00	3.30	2.717	8.433	4.333		26
4781	.70	7.00	2.638	-19.714	6.086		26
4782	.60	5.40	2.614		6.722		26
4783	6.00	3.30	2.717	8.417	-7.091		26
4801		14.44	2.810		4.952		26
4802		10.05	2.780		5.761		26
4803		9.44	2.770		5.773		26
4804		7.68	2.740		6.784		26
4805		6.41	2.730		7.566		26
4806		4.90	2.700		9.163		26
4807		4.90	2.700		8.653		26
4808		2.34	2.620	-12.236			26
4809		6.15	3.650		8.976		26
4810		4.85	3.620		10.186		26
4811		3.55	3.570		11.915		26
4812		10.30	1.843		4.204		26
4813		9.24	1.835		4.502		26
4814		8.78	1.830		4.396		26
4815		7.31	1.818		4.624		26
4816		6.75	1.812		4.667		26
4817		3.93	1.773		6.794		26
4818		3.05	1.755		6.295		26
4819		1.12	1.694		8.214		26
-4821	225.90		.050	.526			25
-4822	75.70		.050	1.025			25
-4823	58.56		.050	.935			25
-4824	35.94		.050	.947			25
-4825	23.33		.050	.898			25
-4826	16.90		.100	-1.310			25
-4827	34.99		.100	1.313			25
-4828	60.46		.100	1.220			25
-4829	10.24		.500	-1.721			25
-4830	21.90		.500	1.880			25
-4831	60.70		.500	1.333			25
-4832	96.64		.500	1.032			25
-4833	17.28		1.000	3.154			25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
-4834	41.90		1.000	1.977			25
-4835	94.26		1.000	1.008			25
-4836	10.14		2.000	6.056			25
-4837	50.70		2.000	1.967			25
-4838	85.46		2.000	1.298			25
-4839	121.16		2.000	.961			25
-4840	280.89		2.000	.426			25
5001			.020			.025	25
5002	15.90		.020	.403		-.025	25
5003			.080			.063	25
5004	16.00		.080	-.419		.063	25
5005			.170			.088	25
5006	24.99		.120	.892		.083	25
5007	14.59		.020	.274		-.025	60
5008	15.40		.080	.221		.063	60
5009	24.76		.160	.919		.063	60
5101		2.37	2.700		9.700		25
5102		1.12	2.700		10.500		25
5103		.09	2.700		10.500		25
5104		.01	2.700		11.000		25
5105			2.700		11.200		25
5106		5.74	1.500		4.200		25
5107		2.17	1.470		5.000		25
5108		.15	1.500		5.100		25
5109		.02	1.500		5.000		25
5110			1.500		4.900		25
5111		5.58	.610		1.300		25
5112		.44	.600		1.300		25
5113		.04	.600		1.500		25
5114			.600		1.400		25
5115		5.31	.400		.590		25
5117		3.92	.200		-.080		25
5118		.09	.200		.080		25
5119		.01	.200		.090		25
5120		2.06	.100		.030		25
5121		2.10	.100		-.010		25
5122		12.91	2.600		4.760		25
5123		16.16	2.600		3.700		25
5124		4.52	2.600		6.450		25
5125		10.30	2.600		-2.900		25
5126		1.98	2.620		7.730		25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5127		.36	2.600		9.150		25
5128		.07	2.520		-8.000		25
5129		7.10	2.700		6.300		25
5130		.09	2.700		10.500		25
5131		19.36	3.060		2.600		25
5132		16.97	3.060		3.640		25
5133		6.45	2.850		-4.420		25
5134		5.26	2.850		6.000		25
5135		1.82	2.760		8.410		25
5136		.37	2.700		8.600		25
5137		.07	2.650		-7.520		25
5138		18.88	1.560		2.920		25
5139		21.75	1.560		2.360		25
5140		11.64	1.510		-2.320		25
5141		12.50	1.510		-2.200		25
5142		5.59	1.450		-2.500		25
5143		5.19	1.450		-2.830		25
5144		.72	1.430		4.060		25
5145		.13	1.400		5.080		25
5146		17.90	1.430		2.410		25
5147		7.10	1.410		3.220		25
5148		3.30	1.350		3.700		25
5149		.55	1.320		4.750		25
5150		.15	1.250		4.270		25
5151		4.70	1.500		4.280		25
5152		1.80	1.500		4.550		25
5153		19.90	.600		1.280		25
5155		9.80	.600		1.320		25
5156		4.54	.600		1.450		25
5157		1.04	.600		1.420		25
5158		.89	.600		1.560		25
5160		14.51	.300		-.240		25
5161		7.41	.300		-.190		25
5162		.88	.300		.260		25
5171	7.14		3.000	10.000			25
5172	21.66		2.998	4.400			25
5173	29.75		2.496	3.200			25
5174	2.62		1.997	-9.100			25
5175	36.66		1.998	2.600			25
5176	41.42		.487	1.700			25
5177	26.66		.305	1.800			25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5178	39.04		.048	1.200			25
5201	1.68		1.700	13.452		.182	25
5202	26.90		1.920	3.431		.054	25
5203	43.90		1.910	2.278		.042	25
5204	60.80		1.950	1.743		.036	25
5205	81.65		1.945	1.359		.031	25
5206	102.50		1.975	1.107		.026	25
5207	125.50		1.970	.920		.024	25
5208	3.73		2.205	12.225		.139	25
5209	59.00		2.460	1.847		.035	25
5210	101.50		2.465	1.118		.025	25
5211	1.11		2.565	20.315		.181	25
5212	23.10		2.830	4.171		.055	25
5213	37.85		2.865	2.748		.042	25
5214	57.50		2.945	1.904		.033	25
5215	77.60		2.940	1.443		.028	25
5216	99.80		2.995	1.142		.024	25
5217	121.50		2.995	.947		.023	25
5218	2.45		3.125	18.106		.141	25
5219	22.30		3.920	4.469		.047	25
5220	39.45		3.980	2.687		.035	25
5221	59.20		3.920	1.875		.028	25
5222	77.55		3.990	1.457		.025	25
5223	99.75		4.045	1.163		.022	25
5224	121.00		3.980	.959		.020	25
5225	1.86		4.515	24.328		-.026	25
5226	20.55		4.930	4.783		.045	25
5227	37.70		4.970	2.785		.034	25
5228	56.00		5.115	1.946		.028	25
5229	78.00		5.005	1.429		.024	25
5230	102.00		5.010	1.108		.022	25
5231	123.50		4.970	.935		.021	25
5241	1.63		1.848	13.350		.180	25
5242	121.26		3.143	1.010		.020	25
5243	21.28		4.005	4.590		.050	25
5251			1.805			.233	25
5252			2.670			.217	25
5253			3.615			.210	25
5254			3.965			.204	25
5255			4.585			.194	25
5256			5.655			.173	25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5301	.06		1.715	14.324	4.091	.233	25
5302	.05	.14	1.735	15.764	6.487	.233	25
5303	.62	.15	1.770	15.121	5.318	.212	25
5304	2.51	.18	1.780	-8.290	3.845	.185	25
5305	5.53	.23	1.815	7.389	2.966	.149	25
5306	8.36	.28	1.860	7.316	2.587	.108	25
5307	14.65	.41	1.915	5.314	1.454	.078	25
5308	24.85	.53	1.940	3.555	.816	-.052	25
5309	40.85	.62	2.038	2.392	.647	.044	25
5310	48.55	.93	.310	1.415	.260	.058	25
5311	24.40	.38	3.060	3.984	1.458	.048	25
5312	21.65	.34	3.515	4.499	1.777	.048	25
5313	21.60	.34	4.080	4.519	2.109	.046	25
5314	.99	.79	.285	1.283	.253	.123	25
5315	.13	.05	2.600	-10.423	-15.688	.219	25
5316	.22	.09	3.045	-5.378	-9.348	.217	25
5317	.03	.05	3.550	28.033	18.000	.213	25
5318	.02	4.85	1.890	-1.735	4.016	.180	25
5319	.02	2.55	2.725	-2.031	8.451	.178	25
5321	1.03	.71	.285	-.859	-.463	.123	25
5322	.15	.07	2.600	-4.303	-18.819	.219	25
5323	.23	.10	3.045	-2.467	11.168	.217	25
5324	.11	4.53	1.890	-.643	4.260	.180	25
5331	.38	.84	.270	1.649	.243	-.157	25
5332	.05	.14	2.580	-18.481	-6.517	.240	25
5333	.03	.07	3.040	32.339	13.333	.230	25
5334	.07	.10	3.545	-14.329	-9.417	.214	25
5335	.03	2.28	2.610	-11.538	9.190	.192	25
5341	.93		.055	.102			25
5342	4.11		.052	.242			25
5343	7.36		.053	.376			25
5344	13.15		.052	.546			25
5345	22.40		.051	.808			25
5346	38.95		.050	1.083			25
5347	48.75		.048	1.086			25
5348	57.45		.050	1.115			25
5349	.04	.08	2.545	27.394	11.724	.230	25
5350	.30	.12	2.585	-15.738	7.884	.222	25
5351	.36	.09	3.095	27.069	10.023	.178	25
5352	1.05	.11	2.675	22.333	8.155	.183	25
5353	3.90	.16	2.770	10.872	6.280	.144	25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5354	7.26	.20	2.720	8.292	3.687	.114	25
5355	5.08	.24	2.960	-15.506	-3.698	-.084	25
5356	9.92	.20	2.965	8.276	4.022	.083	25
5357	10.10	.46	2.920	8.020	3.391	.079	25
5358	11.00	1.26	2.830	7.391	3.230	.078	25
5359	11.30	2.66	2.715	6.973	2.729	.070	25
5361		7.10	1.470		3.783	.204	25
5362		3.26	2.820		8.788	.174	25
5363			.290			-.010	25
5364			2.940			.220	25
5402		13.80	.113		.201	-.221	25
5403		10.10	.080		.074	-.188	25
5404		7.12	.088		.052	.136	25
5405		3.98	.112		.088	.107	25
5406		2.56	.106		.060	.085	25
5407		1.87	.112		.059	.098	25
5408		.94	.106		.032	.094	25
5409		17.75	.178		.368	.185	25
5410		13.70	.166		.242	.175	25
5411		9.12	.172		.171	.151	25
5412		4.92	.215		.321	.144	25
5413		3.10	.193		.217	.114	25
5414		1.96	.163		-.173	-.141	25
5415		1.66	.203		.193	.108	25
5416		.72	.298		.347	.111	25
5419		7.58	.438		1.159	.189	25
5420		5.02	.396		.960	.179	25
5421		3.62	.375		.821	.165	25
5422		2.29	.352		.621	.153	25
5423		1.29	.335		.459	.125	25
5424		1.20	.378		.621	.143	25
5425		.60	.375		.579	.136	25
5501		9.70	1.670		4.015	-.138	25
5502		8.03	1.760		4.643	-.145	25
5503		6.41	3.190		6.866	-.103	25
5504		6.55	4.690		8.869	-.061	25
5505		7.22	5.190		9.636	-.067	25
5506		7.34	6.790		9.544	-.052	25
5507		7.74	6.990		8.457	-.050	25
5508		7.93	7.490		8.735	-.054	25
5511		10.66	1.970		4.070	.160	28

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5512		8.13	3.240		6.260	.099	28
5513		8.68	4.760		7.190	.065	28
5514		9.66	6.050		7.480	.043	28
5515		10.30	7.100		7.270	.032	28
5516		13.46	2.000		3.464	.145	31
5517		10.78	3.490		5.790	.118	31
5518		12.31	4.920		6.180	.053	31
5519		14.60	6.970		5.480	.034	31
5520		15.27	3.880		4.840	.095	34
5521		19.50	2.740		3.660	.091	37
5522		98.47	4.560		.794	-.048	45
5523		113.52	5.180		.785	-.112	45
5524		50.19	.360		1.114		28
5525		35.61	1.070		-1.164		28
5526		50.67	.640		1.151		31
5527		29.88	1.140		1.608		31
5528		20.55	2.880		3.010	-.073	34
5529		19.84	3.510		3.820		34
5530		26.05	5.120		3.330		34
5531		31.55	3.050		2.690		37
5532		48.52	5.050		2.000		37
5533		36.09	3.540		2.384		37
5534		47.32	5.100		2.000		37
5535		78.39	4.640		1.293		40
5536		62.38	3.480		1.521		40
5537		78.39	3.810		1.241		40
5538		48.28	2.300		1.728		40
5541		3.27	2.940		9.370		31
5542		3.08	2.880		9.810		40
5543		2.72	2.870		11.340		50
5544		2.55	2.870		11.920		60
5545		2.41	2.890		12.400		70
5546		5.81	2.680		7.730		50
5547		5.19	2.690		8.690		61
5548		4.83	2.660		9.190		70
5549		4.68	2.790		8.530		31
5550		4.42	2.830		8.460		40
5551		3.92	2.810		9.670		51
5552		3.75	2.780		9.980		59
5553		3.49	2.830		10.620		70
5554		4.68	2.850		8.100		29

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5555		4.49	2.800		8.420		35
5556		4.42	2.810		8.520		40
5557		4.06	2.790		9.190		46
5558		3.82	2.810		9.760		55
5559		3.58	2.780		10.440		64
5560		2.72	2.640		8.970		31
5561		2.72	2.600		9.000		35
5562		2.46	2.610		9.960		40
5563		2.34	2.590		10.490		46
5564		2.25	2.660		10.970		46
5565		2.25	2.690		11.020		51
5566		2.20	2.620		11.210		55
5567		2.17	2.640		11.310		60
5568		2.10	2.660		12.260		65
5569		.19	2.670		13.090		71
5570		6.21	2.860		7.140		35
5571		5.90	2.860		7.870		40
5572		5.28	2.890		8.285		45
5573		5.38	2.860		8.350		56
5574		6.33	2.870		6.910		30
5575		6.07	2.850		7.140		37
5576		5.74	2.860		7.780		42
5577		5.71	2.900		7.830		45
5578		5.43	2.810		7.790		50
5579		5.71	2.860		7.860		50
5580		5.57	2.850		7.840		55
5581		5.35	2.860		8.580		60
5582		5.19	2.820		8.520		66
5583		5.09	2.830		9.650		71
5584		3.20	2.830		9.610		37
5585		3.11	2.800		9.920		40
5586		2.94	2.810		10.340		46
5587		2.72	2.820		11.010		55
5588		2.58	2.780		11.790		65
5589		2.96	2.820		10.530		47
5590		2.80	2.790		10.930		52
5591		2.61	2.770		11.720		56
5592		2.58	2.760		11.780		60
5593		2.56	2.780		11.740		66
5594		2.56	2.740		11.720		71
5595		.02	2.630		12.640		37

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5596		.02	2.620		12.990		45
5597		.02	2.610		15.560		54
5598		.02	2.600		17.200		65
5599		.02	2.630		11.520		31
5600		.02	2.620		13.760		40
5601		.02	2.610		14.320		49
5602		.02	2.590		15.910		60
5603		.02	2.580		17.100		69
5604		.02	1.340		5.060		35
5605		.02	1.330		5.390		45
5606		.02	1.325		5.920		55
5607		.02	1.320		6.060		65
5608		.02	1.330		4.600		29
5609		.02	1.320		5.170		40
5610		.02	1.320		5.670		51
5611		.02	1.310		6.110		60
5612		.02	1.300		6.770		70
5613		.02	.810		2.160		30
5614		.02	.820		2.130		39
5615		.02	.810		2.020		50
5616		.02	.830		2.200		62
5617		.02	.820		2.120		70
5618		.02	.820		2.200		35
5619		.02	.810		2.150		45
5620		.02	.810		2.440		55
5621		.02	.830		2.284		64
5622		7.96	.740		1.880		36
5623		8.08	.680		1.830		47
5624		8.48	.740		1.710		56
5625		8.58	.750		1.600		64
5626		8.03	.780		1.890		30
5627		7.93	.780		1.890		41
5628		7.77	.780		1.900		50
5629		8.13	.780		1.770		60
5630		8.08	.770		1.675		71
5631		26.29	.870		1.530		31
5632		25.67	.870		1.570		40
5633		25.57	.860		1.576		50
5634		24.62	.860		1.600		60
5635		24.38	.850		1.560		71
5636		7.05	1.410		3.590		31

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5637		6.48	1.400		3.960		40
5638		5.97	1.410		4.380		50
5639		5.50	1.400		4.650		60
5640		5.11	1.390		4.950		70
5641		3.92	1.440		4.330		31
5642		3.58	1.430		4.760		40
5643		3.25	1.430		5.240		49
5644		2.89	1.420		5.950		61
5645		2.68	1.410		6.380		69
5646	63.08	15.32	2.540	1.470	.762		30
5647	66.65	13.67	2.530	1.325	.960		39
5648	70.46	11.88	2.510	1.200	1.240		49
5649	75.22	10.28	2.500	1.064	1.520		59
5650	79.15	9.27	2.480	.964	1.815		70
5651	67.84	13.48	3.750	1.430	.970		32
5652	71.17	11.78	3.740	1.300	1.260		41
5653	76.17	9.97	3.720	1.150	1.630		51
5654	79.98	8.87	3.710	1.060	1.900		59
5655	87.36	8.01	3.680	.910	2.260		72
5656	28.09	9.20	3.880	2.810	1.920		31
5657	31.90	8.13	3.870	2.380	2.230		40
5658	35.94	7.15	3.850	2.010	2.720		51
5659	39.75	6.41	3.830	1.755	3.080		60
5660	44.99	5.95	3.820	1.470	3.330		70
5661	64.03	11.28	2.880	1.570	.890		31
5662	69.27	9.54	2.860	1.390	1.130		40
5663	74.98	8.15	2.840	1.250	1.410		50
5664	79.98	7.12	2.830	1.125	1.670		60
5665	86.17	6.26	2.820	1.020	1.950		70
5666	64.75	14.96	1.810	1.440	.600		30
5667	68.56	13.07	1.810	1.310	.790		41
5668	72.84	11.28	1.800	1.174	1.060		50
5669	75.70	9.94	1.795	1.074	1.265		59
5670	80.70	9.06	1.785	.986	1.435		69
5671	68.79	12.36	3.540	1.445	.905		32
5672	74.51	10.97	3.530	1.240	1.130		40
5673	78.55	9.44	3.530	1.130	1.410		50
5674	83.08	8.17	3.510	1.045	1.710		60
5675	87.60	7.19	3.490	.950	2.070		70
5676	70.46	14.20	2.060	1.360	.620		31
5677	74.03	12.74	2.030	1.236	.800		40

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
5678	77.12	10.80	2.020	1.100	1.070		50
5679	80.70	9.39	1.990	1.010	1.345		60
5680	84.74	8.25	1.990	.950	1.630		70
5681	74.27	18.71	.880	1.180	.432		31
5682	78.08	17.21	.875	1.075	.544		41
5683	80.93	15.75	.870	.980	.670		50
5684	84.74	14.27	.870	.904	.816		59
5685	88.55	12.79	.860	.830	.934		70
5686	67.84	7.91	.810	1.284	.468		32
5687	69.75	7.24	.800	1.190	.605		41
5688	72.13	6.64	.790	1.110	.686		50
5689	74.74	5.93	.800	1.020	.830		60
5690	77.12	5.35	.795	.980	.920		69
5691	66.41	7.31	3.050	1.510	.884		31
5692	68.32	6.43	3.050	1.430	1.090		39
5693	72.36	5.47	3.030	1.284	1.396		49
5694	77.36	4.59	3.015	1.154	1.770		62
5695	80.46	4.13	3.000	1.070	2.050		69
5696	61.65	8.27	1.900	1.560	.656		31
5697	65.70	7.27	1.890	1.426	.860		40
5698	68.56	6.29	1.880	1.306	1.120		50
5699	71.65	5.38	1.870	1.196	1.440		60
5700	75.22	4.64	1.860	1.100	1.740		70
6801		.05	.000		-.260		23
6802		.05	.110		-.395		23
6803		.04	.310		-.608		23
6804		.04	.510		.837		23
6805		.02	.980		1.980		23
6806		.01	1.970		5.510		23
6807		.01	2.970		-9.200		23
6808		.01	3.930		-15.400		23
6809			4.890		22.100		23
6810			5.920		24.500		23
6811			6.900		39.400		23
6812			7.870		49.500		23
6813			8.870		34.000		23
6814			9.870		20.200		23
7001	44.04		.300	1.514		-.300	25
7002	61.89		.300	1.308		-.300	25
7003	27.37		1.500	2.957		.073	25
7004	52.37		1.500	1.864		-.073	25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
7005	40.47		.300	-.776		.050	55
7006	59.51		.300	.880		-.017	55
7007	76.17		.300	1.020		-.008	55
7008	53.32		1.000	-.357		-.100	55
7009	72.84		1.000	-.556		-.075	55
7010	89.98		1.000	-.714		-.050	55
7011	52.84		1.500	-.306		-.097	55
7012	72.60		1.500	-.492		.077	55
7013	86.88		1.500	-.712		.063	55
7014	50.23		2.000	-.313		.100	55
7015	75.22		2.000	-.418		.075	55
7016	89.26		2.000	-.635		.047	55
7017	52.37		.300	1.120		-.300	55
7018	71.41		.300	1.000		-.300	55
7019	30.95		1.500	2.540		.073	55
7020	57.13		1.500	1.625		.073	55
7021	22.14		.120	.580		-.333	40
7022	41.42		.121	.839		-.190	40
7023	60.94		.116	.922		-.224	40
7024	86.65		.110	.854		-.230	40
7025	108.78		.108	.825		-.250	40
7026	5.24		1.060	4.730		.156	40
7027	12.85		1.050	3.574		.127	40
7028	36.66		1.030	1.993		.087	40
7029	62.37		1.020	1.416		.064	40
7030	85.22		1.010	1.145		.079	40
7031	112.35		1.010	.905		.045	40
7032	2.62		2.030	11.810		.174	40
7033	7.62		2.110	6.750		.127	40
7034	27.37		2.050	2.930		.082	40
7035	61.65		1.940	1.644		.058	40
7036	88.55		1.890	1.204		.048	40
7037	122.83		1.910	.895		.037	40
7038	4.52		3.140	13.110		.117	40
7039	26.90		3.160	3.416		.068	40
7040	59.27		3.056	1.803		.049	40
7041	86.88		3.030	1.277		.044	40
7042	112.59		2.913	1.011		.037	40
7043	20.71		.011	.322		-1.000	50
7044	38.56		.011	.648		-.909	50
7045	59.03		.011	.746		-1.000	50

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
7046	81.41		.010	.746		-1.100	50
7047	101.64		.011	.728		-1.000	50
7048	14.28		.524	1.567		.114	50
7049	32.14		.504	1.363		.101	50
7050	61.41		.490	1.105		.084	50
7051	99.98		.460	.852		.074	50
7052	135.68		.450	.695		.091	50
7053	245.66		.471	.471		.017	50
7054	15.23		1.024	2.578		.114	50
7055	90.69		.950	1.034		.075	50
7056	136.40		.948	.768		-.020	50
7057	234.71		.950	.502		.016	50
7058	10.24		2.038	4.950		.117	50
7059	28.56		2.028	2.610		.090	50
7060	84.50		1.830	1.186		.057	50
7061	124.97		1.914	.890		.024	50
7062	18.57		.100	.449		-.910	60
7063	38.09		.103	.800		-.291	60
7064	58.56		.107	.866		-.130	60
7065	85.69		.081	.822		-.200	60
7066	107.59		.089	.750		-.190	60
7067	6.90		1.047	-4.448		.158	60
7068	15.00		1.040	2.857		.132	60
7069	38.09		.960	1.806		.115	60
7070	61.41		1.020	1.360		.080	60
7071	86.65		1.020	1.063		.083	60
7072	113.07		1.025	.853		.068	60
7073	5.24		1.537	6.270		-.135	60
7074	32.37		1.532	2.220		.101	60
7075	61.41		1.492	1.400		.086	60
7076	88.79		1.475	1.050		.071	60
7077	3.09		2.070	8.770		.173	60
7078	10.71		2.080	4.310		-.086	60
7079	27.14		1.990	2.579		.077	60
7080	63.08		1.990	1.351		.065	60
7081	89.03		1.960	1.115		.060	60
7082	109.02		1.900	.952		.053	60
8021	184.00	1.69	1.170	.630	.172		25
8022	99.20	1.63	1.190	1.137	.232		25
8023	58.00	1.49	1.220	1.759	-.313		25
8024	27.60	1.20	1.100	2.754	.619		25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
8025	7.35	.71	1.090	6.401	1.765		25
8026	.61	.62	1.100	8.672	2.303		25
8027	.39	.44	1.100	7.821	3.552		25
8031	184.00	1.68	1.184	.603	.159		25
8032	105.60	1.11	1.191	.975	.269		25
8033	56.00	.71	1.145	1.696	.430		25
8034	14.80	.24	1.106	4.081	1.016		25
8035	4.00	.07	1.041	6.500	1.883		25
8036	.94	.02	1.002	8.468	2.933		25
8037	.29		.989	9.207	3.802		25
8045	42.80	.60	1.030	2.047	.488	-.107	25
8050	2.10	.24	.960	6.857	1.990	-.240	25
8070		.02	2.030		8.460		25
8081	124.00	1.13	2.180	.871	.324		25
8082	49.00	.62	2.070	2.122	.605		25
8083	30.00	.34	2.130	3.000	1.115		25
8084	6.50	.09	2.040	9.046	3.000		25
8085	1.66	.03	2.020	-18.072	5.176		25
8086	.70	.01	2.020	-21.571	7.066		25
8087	.30		2.000	-26.000	8.059		25
8090	25.20	.40	2.260	3.349	1.083	.075	25
8100	.40	.03	1.990		7.500	.216	25
8101	.40	.21	1.980		7.055	.212	25
8141	191.50	1.32	3.230	.572	.295	-.096	25
8142	90.50	.76	3.330		.526	-.069	25
8143	46.80	.46	3.380		.874	-.059	25
8144	17.20	.22	3.280		1.797	.073	25
8145	6.50	.09	3.230		3.886	.105	25
8146	1.40	.02	2.930		8.873	.198	25
8147	.73	.01	2.940		10.551	.197	25
8148	.36		2.920		12.546	.236	25
8150	16.80	.40	3.320	5.022	1.680	.072	25
8160	.30	.03	2.940	24.167	12.790	.207	25
8201	8.50		.900		3.882		25
8202	25.50		.935		2.275		25
8203	47.00		.950	-1.447			25
8204	74.00		.970	1.216			25
8205	108.00		.980	.935			25
8206	180.00		.985	.617			25
8207	1.90		1.720	10.474			25
8208	4.40		1.790	8.864			25

SOURCE-NUMBER LISTING (CONTINUED)

SOURCE	U-AQU	PU-AQU	H-AQU	D-U	D-PU	D-H	T
8209	8.40		1.850	6.810			25
8210	14.50		1.890	4.828			25
8211	21.50		1.920	3.674			25
8212	26.00		1.940	3.154			25
8213	31.00		1.950	2.806			25
8214	37.00		1.960	2.405			25
8215	41.00		1.960	2.195			25
8216	54.00		1.990	1.833			25
8217	66.30		2.000	1.531			25
8218	96.00		2.015	1.094			25
8219	3.40		2.700	11.912			25
8220	10.00		2.870	7.150			25
8221	29.20		2.980	3.253			25
8222	40.50		3.010	2.444			25
8223	62.00		3.030	1.653			25
8224	101.20		3.050	1.059			25
8225	2.08		3.520	19.519			25
8226	8.50		3.860	8.635			25
8227	26.50		3.960	3.623			25
8228	42.00		3.980	2.381			25
8229	61.00		3.980	1.705			25
8230	98.00		3.990	1.082			25
9001	23.09		.000	.680			25
9002	109.50		.000	.910			25
9003	223.76		.000	.560			25