UNITED STATES
DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY

REPORT OF THE U.S. GEOLOGICAL SURVEY'S ANALYTICAL EVALUATION PROGRAM -- STANDARD REFERENCE WATER SAMPLES T-115 (TRACE CONSTITUENTS), M-118 (MAJOR CONSTITUENTS), N-30 (NUTRIENTS), N-31 (NUTRIENTS) P-17 (PRECIPITATION-LOW IONIC STRENGTH), Hg-11 (MERCURY), AND Hg-12 (MERCURY).

Denver, Colorado
September 1991

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RESULTS OF THE U.S. GEOLOGICAL SURVEY'S ANALYTICAL EVALUATION PROGRAM FOR STANDARD REFERENCE SAMPLES DISTRIBUTED IN APRIL 1991:

T-115, M-118, N-30, N-31, P-17, Hg-11, and Hg-12

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ABSTRACT

This report presents the results of the U.S. Geological Survey's analytical evaluation program for seven standard reference samples--T-115 (trace constituents), M-118 (major constituents), N-30 (nutrients), N-31 (nutrients), P-17 (low ionic strength), Hg-11 (mercury), and Hg-12 (mercury)--that were distributed in April 1991 to 194 laboratories participating in the U.S. Geological Survey sponsored interlaboratory testing program. Analytical data that were received from 136 of the laboratories were evaluated with respect to: overall laboratory performance and relative laboratory performance for each analyte in the seven reference samples. Results of these evaluations are presented in tabular form. Also presented are tables and graphs summarizing the analytical data provided by each laboratory for each analyte in the seven standard reference samples. The most probable values for each analyte was determined using nonparametric statistics.

INTRODUCTION

The U.S. Geological Survey (USGS) conducts an interlaboratory evaluation program semiannually. This program provides a variety of reference materials to accomplish quality assurance testing of laboratories and to provide an adequate supply of samples that contribute to quality control programs of participating laboratories. Natural-matrix reference materials are preferred for use in this interlaboratory evaluation program. A series of samples are prepared and distributed each spring and fall. Occasionally, sediment samples are provided.

The program began in 1962 with a single sample containing major constituents that was prepared from distilled water and reagent grade chemicals. Twenty-three USGS laboratories participated in the 1962 determinations of six constituents in the major standard reference sample (SRS). Since that time, objectives of the program have been to:

(1.) evaluate and improve the performance of USGS and other participating laboratories;

(2.) provide a library of carefully prepared, homogeneous, stable reference materials for use in the quality assurance programs of laboratories;

(3.) identify analytical problem areas;

(4.) identify quality assurance needs with respect to environmental analyses and develop new reference materials to meet these needs; and

(5.) ascertain the accuracy and precision of analytical methods.

More than 150 USGS and non-USGS laboratories participate in the program, which can currently provide eight standard reference sample types:

1. Trace constituents.
2. Major constituents.
3. Nutrients.
4. Low ionic strength.
5. Mercury.
6. Water and suspended sediment mixtures for trace metals.
7. Acid mine drainage
8. Sediment (bed material) for "total recoverable" major and trace constituents.

When sufficient data are available, most probable values are statistically determined for each analyte in the SRS.

Though this is not a laboratory certification program, participation in this continuing quality assurance program is mandatory for all laboratories providing water-analyses data for USGS data storage or use (publications). Federal, State, municipal, and university laboratories also can participate. Analyses of these standard reference samples provides the means to alert participating laboratories of possible deficiencies in their analytical operations, and also provides reference materials for in-house quality control programs. Participating laboratories are identifed only by a confidential code number.

A library of SRS, from previous evaluations, are available on request. Participating laboratories can request previous SRS for further testing, continuing quality assurance, and quality control programs by contacting:

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H. Keith Long	(303) 236-1493	FTS 776-1493	Branch of Quality Assurance
Jerry W. Farrar	(303) 236-1490	FTS 776-1490	Denver Federal Center
			Box 25046 MS 401
			Denver, CO 80225

Purpose and Scope

This report summarizes the analytical results submitted by 136 of the 194 laboratories (table 3) that requested and were shipped SRS for the April 1991 evaluation. Not all SRS are requested, nor necessarily analyzed by all the laboratories; nor do all laboratories enrolled in the program participate in each evaluation. Analytical results for the following, which were mailed the week of April 22, 1991, are presented in this report:

T-115	Trace constituents
M-118	Major constituents
N-30	Nutrients--low level concentrations
N-31	Nutrients--high level concentrations
P-17	Precipitation (low ionic strength)
Hg-11	Mercury--low level concentration
Hg-12	Mercury--high level concentration

It was requested that analytical results be returned by June 10, 1991 for evaluation and preparation of this report. Analytical data received from laboratories after July 1, 1991 have not been included in this report. Each participating laboratory is requested to perform those determinations routinely made on the respective SRS for USGS investigations and to idicate the analytical method used to determine the concentration of each analyte. When analytical-method information was provided, it has been included in the respective data table. We have attempted to present the analytical data in ways that allow participants to evaluate data distribution, scatter, outliers, central tendency, bias skewness, and method relations.

Preparation of Standard Reference Samples

All of the SRS used in this evaluation were prepared by personnel of the USGS Branch of Quality Assurance in Denver, Colo. All the SRS were analyzed for analyte concentrations and property values prior to mailing.

Trace constituent sample T-115 was prepared using water collected from Fall River near Idaho Springs, Colo. The water was pumped through 5- and 0.45-μm filters in series into a 1300-L polypropylene drum. The water was acidified to pH 2 with nitric acid; the water was supplemented with reagent-grade chemicals to achieve selected analyte concentrations. The water was continuously stirred for 72 hours prior to bottling. Each sample was then bottled after being pumped through an ultraviolet sterilizer and 0.45- and 0.2-μm filters in series. Bottles used were acid leached, deionized-water rinsed, autoclave sterilized, 500-mL polypropylene bottles. Samples are stored in a warehouse until requested for use.

Major constituent sample M-118 was prepared using water collected from the Platte River, in north Denver, Colo. The water was pumped through 5- and 0.45-μm filters in series into a 600-L polypropylene drum. The water was not supplemented with reagent-grade chemicals to modify analyte concentrations. The water was continuously stirred for 48 hours prior to bottling. Each sample was then bottled, after being pumped through an ultraviolet sterilizer and 0.45 and 0.2-μm filters in series. Bottles used were acid leached, deionized water rinsed, autoclave sterilized, 500-mL polypropylene bottles. Samples are stored in a warrehouse until requested for use.

Nutrient samples N-30 and N-31 were prepared using water collected from Chicago Creek, near Idaho Springs, Colo. These samples were prepared the week prior to the mailing for this round-robin evaluation. The water was pumped through 5- and 0.45-μm filters in series into a 400-L polypropylene drum. The water was acidified to approximately pH 6 with with hydrochloric acid and desired nutrient concentrations were obtained by adding reagent-grade chemicals. The water was continuously stirred

for 36 hours after which each nonpreserved sample was bottled after being pumped through a ultraviolet sterilizer and a 0.2-μm filter. The remaining water was preserved with mercuric chloride, to a concentration of 50 mg/L, and with sodium chloride, to a concentration of 450 mg/L. The preserved water was continuously stirred for 36 hours. The preserved samples were bottled using the same procedure as for the nonpreserved samples. Bottles used were new, amber, acid leached, deionized-water rinsed, polyethylene, 250 mL bottles. (Nonpreserved nutrient sample use will not be encouraged since USGS protocol calls for field preservation of nutrient samples with mercuric chloride.) Samples are refrigeraged at 4 ^{o}C until requested for use.

Sample P-17 was prepared in a 400-L polypropylene drum using snowmelt collected near Idaho Springs, Colo. The collected snow was allowed to melt, after which the snowmelt was pumped into the drum through 5- and 0.45 μm filters in series. The snowmelt was continuously stirred for 72 hours during which desired analyte concentrations were obtained by adding reagent-grade chemicals. Each sample was then bottled after being pumped through a ultraviolet sterilizer and 045- and 0.2-μm filters in series. Bottles used were new, acid leached, deionized water rinsed, autoclave sterilized, 500 mL polypropylene bottles. Samples are stored in a warehouse until requested for use.

Samples Hg-11 and Hg-12 were prepared using water collected from the Fall River, near Idaho Springs, Colo. Both samples wrre prepared in a 90-L polytporopylene drum. The creek water was pumped into this drum through 5- and 0.45-μm filters in series. The water was then continuously stirred for 36 hours. Hydrochloric acid (5-percent, v/v) and dichromate ion (0.05-percent, w/w) were added to stabilize the samples. Desired mercury concentrations were obtained by adding a mercury standard solution. Bottles used were new, acid leached, deionized water rinsed, 125 mL glass bottles with tetrafluoroethylene fluorocarbon resin caps. Samples are stored in a warehouse until requested for use.

LABORATORY ANALYSES

Analytes in the various SRS that the participating laboratories were asked to determine are summarized in table 1. The number of analytes varied from 26 in T-115 (trace constituents) to 1 in Hg-11 and Hg-12 (mercury).

Table 1.-- *Analytes determined in standard reference samples distributed in April 1991*

[mg/L, milligrams per liter; µg/L, micrograms per liter; µS/cm, microsiemens per centimeter at 25 degrees Celsius]

Analyte or property		Units	T-115	M-118	N-30,31	P-17	Hg-11,12
Alk	Alkalinity as $CaCO_3$	mg/L		X		X	
Ag	Silver	µg/L	X				
Al	Aluminum	µg/L	X				
As	Arsenic	µg/L	X				
B	Boron	µg/L	X	X			
Ba	Barium	µg/L	X				
Be	Beryllium	µg/L	X				
Ca	Calcium	mg/L	X	X		X	
Cd	Cadmium	µg/L	X				
Cl	Chloride	mg/L	X	X		X	
Co	Cobalt	µg/L	X				
Cr	Chromium, total	µg/L	X				
Cu	Copper	µg/L	X				
DSRD	Dissolved solids	mg/L		X			
F	Fluoride	mg/L		X			
Fe	Iron	µg/L	X				
Hg	Mercury	µg/L					X
K	Potassium	mg/L	X	X		X	
Li	Lithium	µg/L	X				
Mg	Magnesium	mg/L	X	X		X	
Mn	Manganese	µg/L	X				
Mo	Molybdenum	µg/L	X				
Na	Sodium	mg/L	X	X		X	
NH_3-N	Ammonia as nitrogen	mg/L			X		
NH_3+org N	Ammonia+organic nitrogen	mg/L			X		
Ni	Nickel	mg/L	X				
NO_3+NO_2-N	Nitrate + nitrite as nitrogen	mg/L			X		
Pb	Lead	µg/L	X				
pH		units		X		X	
PO_4-P	Orthophosphate as phosphorus	mg/L			X	X	
P, total	Total phosphorus	mg/L		X	X		
Sb	Antimony	µg/L	X				
Se	Selenium	µg/L	X				
SiO_2	Silica	mg/L	X	X			
SO_4	Sulfate	mg/L		X		X	
Sp Cond	Specific conductance	µS/cm		X		X	
Sr	Strontium	µg/L	X	X			
V	Vanadium	µg/L	X	X			
Zn	Zinc	µg/L	X				

STATISTICAL PRESENTATION OF DATA

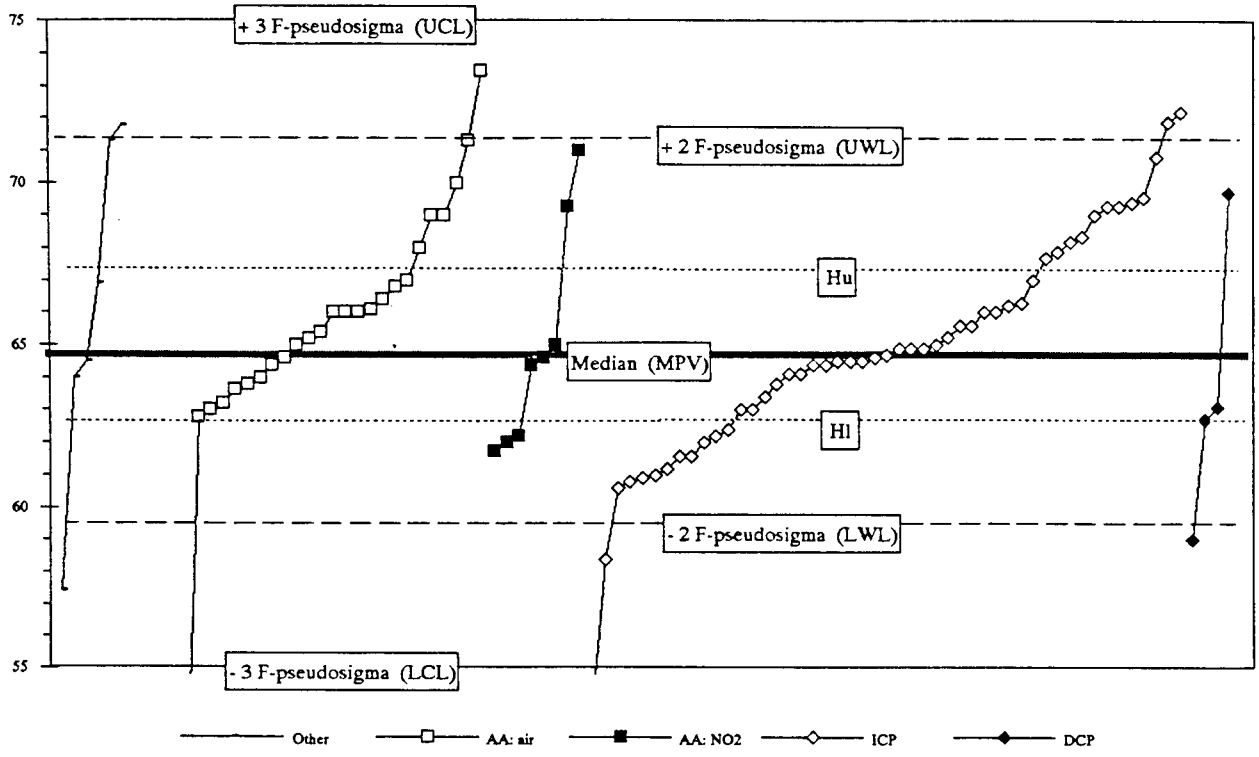
Data in this report have been evaluated using nonparametric statistics as described by Hoaglin and others (1983). This statistical approach is a resistant statistic since the median is not influenced by outliers as is the mean in traditional statistics. It presents a better treatment for analytical data that includes outliers and "less than" values at the upper, lower, or both ends of the data set.

Analytical data for each analyte are presented in tabular and graphical forms in Tables 11 through 17. Tabulated data for each analyte include the laboratory code number, reported values, analytical method, most probable value (MPV), number of reported values (N), data range, Z-value, and the F-pseudosigma. (The Z-value is equivalent to the Z-score of traditional statistics, being the number of F-pseudosigma deviations the reported value is from the MPV. The F-pseudosigma is equivalent to the standard deviation of traditional statistics when the data has a Gaussian distribution.) If an analyte has a sufficient number of determinations by a given method, usually 10, the traditioOnal standard deviation (σ) for that analytical method is reported in the block of data listed for each analyte.

The median value is considered the MPV. Reported values of "less than" are used to establish the median, but are not considered range limits. The median (midpoint) divides the ordered data into halves and is designated the MPV. The hinges include the middle 50-percent of the data and are the mid-values of the upper and lowere halves of the data. (The hinges are similar to quartiles, but are not mathematically equivalent.) The range of data between the upper hinge (Hu) and the lower hinge (Hl), the hinge spread (H-spr), is used to calculate the F-pseudosigma, the 95-percent confidence level MPV, the laboratory performance rating, the upper warning level (UWL) and lower warning level (LWL), the upper control level (UCL) and the lower control level (LCL). The F-pseudosigma is calculated by comparixon of the H-spr value to the Gaussian distribution relation; 67.45-percent of the data "hinges" between plus and minuys 1σ, resulting in a H-spr of 2 x 0.6745 = 1.349σ. This relation allows the calculation of the F-psudosigma = (H-spr)/1.349. The 95-percent confidence level MPV is expressed as the Median +/- (1.96 x F-pseudosigma)/$\sqrt{N}$. Laboratories reporting "less than" values are not performance rated unless their reported "less than" values are greater than two Z-values from the MPV. The laboratory- performance rating scale is explained in the next section of this report.

The graphical plot of the reported data is shown in figure 1. We attempt to maintain the upper and lower boundaries of the graphical plots at +3 and -3 F-pseudosigma deviations from the Median. (Computer-program scaling constraints do not permit these outer boundaries to always be graphed at exactly these values.) The graphical plot is a modified control chart with reported values grouped by

analytical method in ascending order of value. Lines designate the MPV, Hu, Hl, and the (UWL) and (LWL) at +2 and -2 F-pseudosigma, respectively. "Less than" detection-limit values are not plotted.



NOTE: vertical scale is the concentration value of the individual analyte in appropriate units (see table 1.) Methods shown ire defined in Tables 2 and 11 through 18.

Figure 1.--Statistical parameters shown on reported-data graphs

LABORATORY PERFORMANCE RATINGS

To facilitate interlaboratory performance comparisons, laboratory performance ratings, based on the analyses reported for each SRS, are included in performance tables 4 through 10 in this report. Averages of the analyte ratings and the number of analyte values reported for each SRS are given for each participating laboratory. Laboratory performance for each analyte and the overalll averages are rated on a scale 4 to 0, based on the absolute Z-value, as listed below:

Rating	Absolute Z-value
4 (Excellent)	0.00 to 0.50
3 (Good)	0.51 to 1.00
2 (Satisfactory)	1.01 to 1.50
1 (Questionable)	1.51 to 2.00
0 (Poor)	Greater than 2.00

Laboratories were requested to identify the method used for each determination according to table 2 codes. They also were asked to use the references listed below the table to further define the method.

Table 2.--*Analytical-method codes*

Code	Method
0	Other
1	Atomic absorption: direct, air
2	Atomic absorption: direct, nitrous oxide
3	Atomic abosorption: flameless (graphite furnace)
4	Inductively coupled argon plasma
5	Direct coupled plasma
6	Mass spectrometry/inductively coupled argon plasma
7	Ion chromatography
8	Atomic absorption: cold vapor
10	Atomic absorption: extraction [*specify chelating agents*]
11	Atomic abosrption: hydride [*specify reducing agent*]
12	Flame photometry
20	Titration: colorimetric [*specify color reagent*]
21	Titration: electrometric
22	Colorimetric: [*specify reducing or oxidizing agent/color reagent*]
30	Anoidic stripping voltammetry
40	Selective ion electrode
50	Gravimetric: [*specify filtration, evaporation, and so forth*]

1. American Public Health Association and others. 17th edition, 1989. Standard methods for the examination of water and wastewater: Washington, D.C., American Public Health Association, 1527p.

2. American Society for Testing and Materials. 1990, Annual book of ASTM standards: Philadelphia, v.11.01, 591p. and v.11.02, 866p.

3. Kopp, J.F., and McKee, G.F., 1979, Methods for chemical analysis of water and wastes: Cincinnati, U.S. Environmental Protection Agency, EPA 600/4-79-020, rev. 1983, 460p.

4. Fishman, M.J., and Freidman, L.C., eds., 1989. Methods for determination of inorganic substances in water and fluvial sediments (3rd ed.): U.S. Geological Survey Techniques of Water-Resources investigations, Book 5, Chapter A1, 545p.

5. Miscellaneous manufacturer's instrument manuals or references.

DISCUSSION

Users need to review the tabulated and graphical plots for each analyte because these tables and plots give indications of the method and instrumentation precision, and help provide additional evidence as to the desirability of upgrading methods or equipment or both. Some analyte MPV's can be observed to be "biased" by a specific method or unfairly rate a laboratory because of the methods used.

REFERENCE

Hoaglin, D.C., Mosteller, F., and Tukey, J.W., eds., 1983, Understanding Robust and Exploratory Data Analysis: John Wiley and Sons, Inc., 447p.

State	City	PARTICIPATING LABORATORY
Alaska	Fairbanks	Alaska Department of Natural Resources, Geology & Geophysics
Arizona	Yuma	Burns and Roe Services Corporation, Yuma Desalting Plant Lab
Arkansas	Arkadelphia	Ouachita Baptist University
	Little Rock	Arkansas Department of Pollution Control and Ecology
California	Castaic	Castaic Chemical Laboratory, Department of Water Resources
	Davis	University of California - Davis
	La Verne	The Metropolitan Water District of Southern California
	Lakeside	Helix Water District, RM Levy Treatment Plant
	Los Gatos	Santa Clara Valley Water District, Rinconada Water Treatment Plant
	Mammoth Lake	Sierra Nevada Aquatic Research Laboratory University of California
	Martinez	Central Contra Costa Sanitary District
	Oakland	East Bay Muncipal Utility District, Lab Services Division
	Riverside	University of California, Riverside
	Sacramento	Anlab
	Sacramento	BOR/USGS
	San diego	San Diego Water Utilities Department
	Santa Fe Springs	West Coast Analytical Service, Inc.
	Three Rivers	Southern Research Center
	West Sacramento	California Department of Water Resources Chemical Laboratory
Colorado	Arvada	USGS NWQL
	Aurora	Core Laboratories Inc.
	Denver	Bureau of Reclamation
	Denver	Denver Water Department, Quality Control Laboratory
	Englewood	Public Service
	Fort Collins	Environmental Services/Water Utilities
	Fort Collins	Soil Testing Laboratory
	Fort Collins	U.S. Forest Service
	Golden	EG & G, Rocky Flats Plant
	Golden	Huffman Laboratories
	Northglenn	Northglenn WTP
	Westminster	City of Westminster
Florida	Brooksville	SW Florida Management. District
	Ocala	USGS
	Tallahassee	City of Tallahassee, Water Quality Laboratory
	Tallahassee	FDER Analytical Laboratory
	Tallahassee	Savannah Laboratories
	Tampa	Hillsborough County Environmental Protection Commission
	W. Palm Beach	South Florida Water Management District
Georgia	Athens	Soil Testing and Plant Analysis Laboratory, University of GA
	Atlanta	Georgia Department of Natural Resources-EPD
	Doraville	USGS (Drake)
	Tifton	US Department of Agriculture, SE Watershed Laboratory
Hawaii	Honolulu	University of Hawaii at Manoa Dept. of Oceanography
Idaho	Boise	US Bureau of Reclamation
Illinois	Champaign	Illinois Environmental Protection Agency, Laboratory Services
	Chicago	Illinois Environmental Protection Agency
Indiana	Indianapolis	Indianapolis Department of Public Works
	Valparaiso	Northern Laboratories
Iowa	Des Moines	University Hygienic Laboratory, Des Moines Branch

State	City	PARTICIPATING LABORATORY
Kansas	Lawrence	Kansas Geological Survey
	Topeka	KS Dep't of Health & Environment, Div. of Laboratories & Research
Kentucy	Berea	US Forest Service, NE Forest Experiment Station
	Frankfort	Division of Environmental Services
	Louisville	Metropolitan Sewer District
Louisianna	Baton Rouge	USGS (Garrison)
Massachusetts	Wellesley Hills	Massachusetts Department of Public Works
Maryland	Baltimore	Martel Laboratory Services, Inc.
Maine	Augusta	Maine Department of Environmental Protection
	Orono	Department of Plant & Soil Science, University of Maine
Michigan	Houghton	Michigan Technical University, School of Forestry & Wood Products
Minnesota	Minneapolis	Braun Intertec Environmental, Inc.
	Minneapolis	University of Minnesota, Dept of Geology and Geophisics
	St. Paul	Metropolitan Waste Control Commission
	St. Paul	University of Minnesota Research Analytical Lab
	St. Peter	Brown/Nicollet Health Services
	Vadnais Heights	St. Paul Water Utility
Missouri	Columbia	Environmental Trace Substances Research Center
	Columbia	University of Missouri School of Natural Resources
	Jefferson City	Missouri Dept. of Health/State Public Health Laboratory
Montana	Butte	Montana Bureau of Mines and Geology
	Helena	Montana Dept. Health & Environmental Sciences / Chemistry Lab
North Carolina	Brown Summit	Lake Townsend Water Filtration Plant
	Durham	School of Forestry & Environment Resources, Duke University
	Durham	City of Durham, Brown Water Treatment Facility
	Greensboro	City of Greensboro
North Dakota	Bismarck	North Dakota State Water Commission
New Jersey	Trenton	New Jersey Department of Health
New Mexico	Albuquerque	City of Albuquerque Water Resources Laboratory
	Gallup	Bureau of Indian Affairs-Natural Resources & Engr Laboratory
Nevada	Boulder City	BOR, Lower Colorado Regional Laboratory
	Las Vegas	City of Las Vegas, Wastewater Treatment Lab
	Las Vegas	Clark County Sanitation District
	Reno	Nevada State Health Laboratory
	Sparks	Reno-Sparks Wastewater Treatment Facility
	Sutcliffe	Pyramid Lake Fisheries
New York	Albany	NYS Department of Health, Wadsworth Center for Labs & Research
	Albany	USGS (Ross)
	Brokport	State University of New York
	Hempstead	Nassau County Department of Health
	Ithaca	Cornell Agronomy Analytical Lab
	Milbrook	Institute of Ecosystem Studies
	New York City	New York City Health Department
	North Babylon	EcoTest Laboratories, Inc
	Oakdale	Suffolk County Water Authority
	Port Washington	Nytest Environmental, Inc
	Rochester	Monroe County Environmental Health Laboratory
	Syracuse	Onondaga County Department of Drainage & Sanitation
Ohio	Cincinnati	US EPA
	Columbus	Columbus Surveillance Laboratory

State	City	PARTICIPATING LABORATORY
Ohio	Franklin	EOS Franklin
	Medina	Medina County Sanitary Engineer
	Tiffin	Heidelberg College, Water Quality Laboratory
Oklahoma	Norman	Oklahoma Geological Survey
	Oklahoma City	Oklahoma State Department of Health
Oregon	Corvallis	US Department of Agriculture, Forestry Sciences Laboratory
	Tigard	United Sewerage Agency
Pennsylvania	Harrisburg	Pennsylvania DER, Bureau of Laboratories
	Somerset	Geochemical Testing
Puetro Rico	San Juan	Department of Natural Resources, Laboratory Division
South Carolina	Columbia	South Carolina Water Resources Commission
South Dakota	Brookings	Water Quality Laboratory
	Vermillion	South Dakota Geological Survey
Tennessee	Chattanooga	TVA, Laboratory Branch
	Cookeville	Tennessee Tech University
Texas	Tyler	Standard Laboratories
Utah	Salt Lake City	Utah State Dept. of Health Laboratory, QA Section
Virginia	Manassas	Occoquan Watershed Monitoring Laboratory
	Richmond	Consolidated Laboratory Services
Vermont	Waterbury	Vermont Agency of Natural Resources, Environmental Conservation Lab
Washington	Richland	Battelle Pacific Northwest
	Richland	Battelle Pacific Northwest Laboratory
	Seatle	Brooks Rand, Ltd
Wisconsin	Green Bay	Green Bay Metropolitan Sewerage District
	Madison	State Laboratory of Hygiene, University of Wisconsin
	Milwaukee	Milwaukee Metropolitan Sewerage District, Central Laboratory
Wyoming	Casper	Core Laboratories Inc.
	Cheyenne	Department of Environmental Quality, Water Quality Division
	Laramie	Wyoming Department of Agriculture, Division of Laboratories
	Larimie	University of Wyoming, Department of Geology & Geophysics

Table 4. -- *Overall laboratory performance ratings for standard reference water samples distributed in April 1991*

[Lab, laboratory number; OWR, overall weighted rating for all sample types; OLR, overall laboratory rating for reported values of a sample type; V/76, number of reported values of 76 total possible values from all sample types; V/26, V/16, V/24, V/11, and V/1, number of reported values possible for T-115, M-118, P-17, N-30, N-31, Hg-11, and Hg-12, respectively]

Standard reference sample =			T-115		M-118		N-30, N-31		P-17		Hg-11, Hg-12	
Lab	OWR	V/74	OLR	V/26	OLR	V/16	OLR	V/20	OLR	V/10	OLR	V/2
1	3.5	73	3.7	26	3.8	16	3.1	20	3.1	9	4.0	2
2	3.1	28	2.1	7	2.5	6	3.8	8	3.9	7		
3	2.6	61	3.0	26	2.5	15	2.6	10	1.9	8	0.0	2
4	2.3	3			2.3	3						
5	3.1	41	3.0	20	2.5	11	3.8	10				
7	2.4	53	2.4	24	2.2	13	2.5	8	2.3	6	2.0	2
8	1.3	46	1.9	22	1.1	14	0.4	10				
10	3.5	17			3.7	12	3.0	5				
13	2.5	41	1.5	16	3.4	13	2.6	10			3.5	2
14	1.4	37	0.5	15	1.7	13			2.3	9		
15	2.6	63	2.2	26	3.3	16	1.9	10	3.2	9	4.0	2
16	2.2	43	2.6	19	2.5	13	0.9	9			2.0	2
17	1.5	10			0.0	1	1.7	9				
18	3.0	50	3.2	23	3.2	16	2.7	9			1.5	2
20	1.8	20			1.5	11	2.6	5	1.3	4		
21	3.7	6	4.0	1			3.6	5				
22	1.9	7					1.5	6	4.0	1		
23	2.4	50	1.9	19	2.8	12	2.8	9	2.3	9	2.0	1
24	3.0	39	2.8	24	3.5	13					1.0	2
27	2.1	27	1.7	11	2.1	10			2.8	6		
28	1.9	58	1.8	25	1.7	15	1.7	7	2.1	9	3.5	2
29	2.3	35	1.5	12	3.2	12	2.4	9			1.0	2
32	2.5	50	2.8	24	2.2	15	2.0	5	2.6	5	3.0	1
33	2.9	7							2.9	7		
34	3.5	2									3.5	2
35	3.5	2	3.5	2								
37	2.9	36	2.6	14	3.3	13			3.3	7	0.5	2
38	3.2	26			2.8	10	3.1	8	3.9	8		
39	2.8	38	3.1	21	2.7	11	1.3	4			2.5	2
40	3.2	13			3.2	13						
41	1.8	11			4.0	1	1.6	10				
42	2.8	41	2.8	19	2.8	13	3.3	3	2.8	4	1.5	2
43	3.3	21	3.0	5	3.5	10	3.2	6				
45	2.8	53	2.9	22	3.5	14	2.1	15			3.5	2
46	3.4	59	3.3	21	3.4	14	3.3	15	3.4	7	3.5	2
48	2.2	52	1.7	20	2.5	11	3.5	10	1.2	9	3.5	2
49	2.9	13	3.0	3	2.9	11						
50	3.3	26	3.4	18	3.1	7					4.0	1
51	2.3	34	2.1	17	2.5	12	2.8	5				
52	3.2	56	3.1	23	3.3	14	3.3	15	3.5	2	3.5	2
54	3.9	8			3.9	8						
55	2.9	51	3.5	23	2.5	15	2.4	13				
56	2.9	14			2.7	9	3.4	5				
57	2.5	37	2.6	19	2.2	13	2.8	5				
59	2.5	31	2.3	18	3.0	1	3.1	10			1.5	2
60	2.4	16			3.2	5	2.0	11				
61	2.6	47	2.9	18	1.7	14	2.6	7	2.8	6	4.0	2
62	2.3	3							2.3	3		
63	1.9	51	1.9	25	1.5	16	2.6	8			3.0	2
64	3.5	22			3.4	9	3.5	4	3.7	9		
65	1.4	25	0.9	14	2.5	4	1.5	6			4.0	1
68	2.9	48	2.8	25	3.4	13	2.6	8			1.5	2
69	3.0	34	2.8	16	3.2	11	3.4	5			3.0	2
70	2.5	43	2.4	21	2.8	14	2.0	7			3.0	1
71	2.2	11			2.2	11						
72	2.5	35	2.6	19	2.2	9	2.9	7				
73	3.3	9	3.3	9								
74	3.1	55	2.7	23	3.5	15	2.3	6	3.7	9	4.0	2
75	3.4	33	3.6	14	3.7	10	2.3	7			4.0	2
76	2.0	28	2.3	15	1.2	10	3.0	3				
77	1.7	26	1.7	16	2.4	5	1.0	5				
78	2.3	45	2.8	19	2.2	12	1.5	8	0.8	4	4.0	2
79	2.9	30	2.5	10	2.8	4	3.4	14			1.0	2
80	2.2	26	2.4	12	1.9	14						
81	2.8	17	3.1	15							0.0	2
83	2.7	23	2.3	9	3.6	9	1.8	5				
86	2.3	24	2.5	12	2.3	6	1.7	6				
87	2.1	41	2.2	18	2.4	12	1.6	11				
88	2.5	8					2.5	8				
89	3.0	56	2.3	18	3.0	13	3.6	14	3.3	9	4.0	2

Table 4. -- *Overall laboratory performance ratings for standard reference water samples distributed in April 1991--Continued*

Standard reference sample =			T-115		M-118		N-30, N-31		P-17		Hg-11, Hg-12	
Lab	OWR	V/74	OLR	V/26	OLR	V/16	OLR	V/20	OLR	V/10	OLR	V/2
90	1.8	33	0.7	10	1.8	6	2.6	15			1.5	2
91	2.5	45	2.4	20	2.3	12	2.8	13				
92	1.7	31	1.3	4	1.8	12	1.7	10	2.0	5		
93	2.6	20			2.3	7	2.0	5	3.3	8		
94	3.4	21			3.8	12	3.0	9				
97	2.5	44	1.7	18	3.5	13	2.8	12			0.0	1
98	2.9	40	2.8	20	2.9	13			3.2	5	2.0	2
100	3.1	53	2.3	23	3.7	15	3.6	13			4.0	2
101	2.1	31	1.5	15	2.9	8			2.4	8		
102	1.7	18			1.8	4	1.7	14				
103	2.5	31	2.5	22	2.4	9						
104	2.3	19	0.0	1	3.0	5	2.2	13				
105	2.9	62	2.6	25	2.9	15	3.5	13	3.4	7	2.0	2
106	2.1	17	1.3	10	3.1	7						
108	2.3	14	2.1	7	0.0	1	2.5	4			3.5	2
109	3.2	20	2.4	7	3.6	13						
110	3.0	11					4.0	4	2.4	7		
113	2.6	39	2.4	18	2.7	13	2.9	8				
118	1.9	33	1.5	11	1.6	7	2.3	15				
119	3.3	51	3.5	21	3.3	14	3.0	14			3.5	2
120	2.4	42	2.3	17	2.7	10	2.4	13			1.5	2
121	3.1	27	2.8	19	3.9	8						
122	2.4	9			2.4	9						
123	2.8	25	2.2	5	2.8	4	3.3	12	2.0	4		
124	1.9	54	1.2	20	2.5	15	3.1	9	0.9	8	3.0	2
126	1.9	9	2.0	8							1.0	1
128	3.3	43	3.5	22	3.5	13	2.1	8				
129	2.9	29	1.5	2	2.6	12	3.3	15				
130	2.3	42	2.3	18	2.7	15			1.7	9		
131	2.3	32	2.3	18	2.3	14						
132	2.6	26	1.7	10	2.3	7	3.9	9				
133	2.2	33	2.6	14	2.6	7	1.3	10			2.5	2
134	3.3	60	3.1	21	3.8	16	3.3	12	2.9	9	3.5	2
138	3.2	45	3.3	23	3.0	11	3.0	9			3.5	2
140	2.9	31	3.3	12	2.4	11	2.9	8				
141	2.7	62	2.9	26	2.3	16	3.4	11	1.9	7	1.5	2
143	3.1	16			3.8	5	2.7	10	4.0	1		
144	2.7	11	2.3	7	4.0	3					2.0	1
145	3.2	40	3.1	18	3.3	13	3.1	9				
146	2.8	40	3.1	25	2.2	13					3.0	2
149	2.0	29	1.5	13	1.8	9	3.0	7				
150	2.4	19			3.8	4	2.0	12	2.3	3		
151	2.9	37	2.6	18	3.6	12	2.4	5			2.5	2
152	2.8	24	2.7	13	2.9	8	2.0	1	3.0	2		
153	2.3	19	3.0	9	1.6	10						
154	2.6	53	2.9	23	2.8	13	1.9	15			3.0	2
158	2.8	28	1.4	5	3.5	6	2.4	9	3.6	8		
161	1.7	11	1.9	10							0.0	1
167	2.7	43	3.2	19	2.7	13	1.7	9			3.5	2
171	3.0	2					3.0	2				
173	1.7	33	1.6	13	1.1	7	1.8	11			3.0	2
177	1.1	8			0.8	5	1.7	3				
178	3.0	2							3.0	2		
179	2.2	41	2.4	16	2.1	9	1.9	14			3.0	2
180	2.0	41	1.6	22	2.8	11	1.8	8				
182	1.5	43	1.8	21	1.7	15	0.2	5			0.0	2
183	1.4	11			0.9	8	2.7	3				
184	2.7	41	2.8	25	1.8	5	3.5	6	1.3	3	3.5	2
185	3.0	4					3.0	4				
188	2.3	14			2.1	7			2.4	7		
190	2.2	31	2.3	13	2.5	13	1.5	4	0.0	1		
191	3.2	26	3.2	10	3.5	10	2.8	6				
193	2.7	18	2.9	15			1.3	3				
194	2.9	26	2.6	14	3.5	6	3.2	5			2.0	1

Table 5. -- *Laboratory performance ratings for standard reference water sample T-115 (trace constituents)*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/26, number of reported values of 26 values; RV, reported value; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

Analyte =			Ag (Silver)		Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)	
95% confidence MPV =			5.7	+/- 0.3	40	+/- 6	14.0	+/- 0.5	99	+/- 3	250	+/- 3	53.5	+/- 0.8
F-pseudosigma =			1.4	μ g/L	20	μ g/L	2.0	μ g/L	11	μ g/L	12	μ g/L	3.0	μ g/L
Lab	OLR	V/26	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.7	26	5.5	4	35	4	13.0	4	106	3	253	4	52.8	4
2	2.1	7			53	3								
3	3.0	26	6.0	4	30	3	13.0	4	90	3	247	4	56.0	3
5	3.0	20	7.7	2	< 30	NR	< 30	NR	101	4	250	4		
7	2.4	24	9.4	0	40	4	14.8	4	108	3	245	4	47.2	0
8	1.9	22			460	0					255	4	57.0	2
13	1.5	16	3.2	1	<2	0	23.8	0			291	0		
14	0.5	15			164	0			120	1				
15	2.2	26	6.9	3	45	4	13.0	4	107	3	224	0	48.0	1
16	2.6	19	5.7	4	< 300	NR	< 60	NR	174	0	242	3	51.0	3
18	3.2	23	6.3	4	74	1	14.3	4	93	3	285	0	55.0	3
21	4.0	1												
23	1.9	19	4.2	2	57	3	9.8	0			274	0	77.4	0
24	2.8	24	38.0	0	35	4	17.8	1	99	4	246	4		
27	1.7	11			82	0					245	4		
28	1.8	25	23.0	0	68	2	34.0	0	99	4	261	3	56.0	3
29	1.5	12	4.3	3			19.4	0			263	2		
32	2.8	24	5.5	4	30	3	14.8	4	100	4	251	4	61.1	0
35	3.5	2					12.9	3						
37	2.6	14					12.0	3	102	4	255	4		
39	3.1	21	5.0	4	50	4	1.0	0	86	2	249	4	54.0	4
42	2.8	19	4.5	3			14.0	4			273	0		
43	3.0	5												
45	2.9	22	5.7	4	25	3	13.2	4	169	0	234	2	53.5	4
46	3.3	21	5.5	4	27	3	14.4	4	104	4	245	4	52.0	3
48	1.7	20	7.1	3	480	0	14.9	4	< 100	NR	270	1	80.0	0
49	3.0	2												
50	3.4	18	5.0	4	28	3	13.0	4			262	2		
51	2.1	17			39	4	45.0	0						
52	3.1	23	19.3	0	< 100	NR	14.5	4	< 3400	NR	251	4	54.0	4
55	3.5	23			< 50	NR	14.1	4	< 50	0	248	4	53.0	4
57	2.6	19	6.2	4	< 250	NR	13.0	4	< 500	NR	240	3	51.0	3
59	2.3	18	< 1	0	< 0.1	0	15.0	4			258	3		
61	2.9	18	< 10	NR	< 50	NR	40.0	0	99	4	242	3	52.3	4
63	1.9	25	5.0	4	47	4	12.5	3	60	0	166	0	57.0	2
65	0.9	14	11.2	0			37.1	0			179	0	48.8	1
68	2.8	25	3.8	2	234	0	11.0	2	76	0	250	4	52.8	4
69	2.8	16	6.4	4			14.2	4			305	0		
70	2.4	21	1.0	0	< 100	NR	12.1	3	91	3	244	4	47.0	0
72	2.6	19	5.7	4	55	3	12.7	3			243	3	51.7	3
73	3.3	9	5.0	4	14	2	10.3	1						
74	2.7	23	5.6	4	26	3	14.2	4			240	3	50.5	2
75	3.6	14					12.9	3						
76	2.3	15	5.1	4			10.8	1			274	0		
77	1.7	16	5.0	4	40	4	15.0	4	320	0	477	0		
78	2.8	19	6.2	4	29	3	15.3	3			236	2	57.0	2
79	2.5	10	4.8	3										
80	2.4	12	5.5	4			15.0	4			248	4		
81	3.1	15	5.0	4	20	2	16.0	3			213	0	50.0	2
83	2.3	9												
86	2.5	12			23	3			89	3				
87	2.2	18	9.0	0			14.2	4			175	0		
89	2.3	18	7.2	2	185	0	13.1	4			269	1		
90	0.7	10	5.3	4							298	0		
91	2.4	20			163	0	12.0	3			246	4	54.0	4

Table 5. -- *Laboratory performance ratings for standard reference water sample T-115 (trace constituents)--Continued*

			Analyte =	Ag (Silver)		Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)	
			95% confidence MPV =	5.7	+/- 0.3	40	+/- 6	14.0	+/- 0.5	99	+/- 3	250	+/- 3	53.5	+/- 0.8
			F-pseudosigma =	1.4	µ g/L	20	µ g/L	2.0	µ g/L	11	µ g/L	12	µ g/L	3.0	µ g/L
Lab	OLR	V/26		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
92	1.3	4													
97	1.7	18		7.0	3	47	NR	16.3	2			290	0	52.4	4
98	2.8	20		< 10	NR	< 20	NR	< 40	NR	92	3	246	4	53.0	4
100	2.3	23		10.0	0	< 40	NR	14.7	4	25	0	240	3	47.4	0
101	1.5	15		11.4	0							282	0		
103	2.5	22		< 1	0					90	3	250	4	56.0	3
104	0.0	1													
105	2.6	25		5.85	4	31	4	14.6	4			264	2	54.2	4
106	1.3	10				171	0								
108	2.1	7													
109	2.4	7								129	0				
113	2.4	18		7.57	2	36	4	13.6	4			314	0		
118	1.5	11		9	0										
119	3.5	21		5.6	4	57	3	14.0	4	87	2	240	3	54.3	4
120	2.3	17		5.99	4			11.7	2			240	3	58.4	1
121	2.8	19		< 5	NR					119	1	256	3		
123	2.2	5													
124	1.2	20		< 200	NR	< 100	NR	8.0	0	100	4	226	0	61.0	0
126	2.0	8										320	0		
128	3.5	22		4.26	2	< 26	NR	13.6	4	91	3	252	4	53.5	4
129	1.5	2								155	0				
130	2.3	18				43	4			86	2	237	2		
131	2.3	18		< 10	NR	170	0	< 50	NR	94	4	235	2		
132	1.7	10				< 300	NR								
133	2.6	14		6.2	4			12.3	3			253	4	54.7	4
134	3.1	21		5.7	4			8.7	0	92	3				
138	3.3	23		6	4	45	4	12.3	3			245	4	49.9	2
140	3.3	12													
141	2.9	26		6	4	24	3	29.0	0	96	4	257	3	54.0	4
144	2.3	7		6.1	4			14.0	4					84.0	0
145	3.1	18				35	4	< 39	NR	104	4	246	4	54.0	4
146	3.1	25		6.1	4	44	4	15.8	3	100	4	258	3	53.5	4
149	1.5	13		4.7	3	20	2	12.0	3			370	0		
151	2.6	18		10.5	0			14.0	4			311	0	47.8	1
152	2.7	13										257	3	55.0	3
153	3.0	9		5.6	4										
154	2.9	23		4.2	2	45	4	13.9	4	64	0	246	4	50.0	2
158	1.4	5													
161	1.9	10		5.0	4	0	0								
167	3.2	19		4.0	2	< 100	NR	15.0	4	106	3	258	3	55.0	3
173	1.6	13		3.8	2			14.0	4			235	2		
179	2.4	16		3.8	2			12.0	3					56.0	3
180	1.6	22		3.7	2	45	4	3.7	0	93	3	277	0	71.4	0
182	1.8	21		6.0	4	33	4	5.0	0			192	0		
184	2.8	25		8.6	0	23	3	18.3	0	93	3	243	3	50.6	3
190	2.3	13													
191	3.2	10				0	4					251	4		
193	2.9	15		6.0	4	26	3	13.0	4			62	0	49.0	1
194	2.6	14		5.0	4			15.0	4			240	3		

Table 5. -- *Laboratory performance ratings for standard reference water sample T-115 (trace constituents)--Continued*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/26, number of reported values of 26 values; RV, reported value; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

Analyte =	Ca (Calcium)		Cd (Cadmium)		Co (Cobalt)		Cr (Chromium)		Cu (Copper)		Fe (Iron)		K (Potassium)	
95% confidence MPV =	50.9	+/- 0.4	14.0	+/- 0.3	15.4	+/- 0.8	35.7	+/- 0.8	17.0	+/- 0.8	1175	+/- 12	5.41	+/- 0.1
F-pseudosigma =	2.0	m g/L	1.6	μ g/L	2.9	μ g/L	3.9	μ g/L	3.6	μ g/L	60	μ g/L	0.32	m g/L
Lab	RV	Rating	RV	Rating	RV	Rating	RV	ting	RV	Rating	RV	Rating	RV	Rating
1	50.0	4	12.8	3	13.0	3	36.2	4	19.9	3	1175	4	5.50	4
2	49.4	3											5.31	4
3	54.5	1	14.0	4	10.0	1	36.0	4	16.0	4	1210	3	5.31	4
5	53.7	2	13.9	4	12.7	3	31.6	2	16.1	4	1170	4	5.58	3
7	51.2	4	14.3	4	16.7	4	30.4	2	14.1	3	1100	2	5.38	4
8	52.3	3	12.0	2	17.0	3	32.0	3	15.0	3	1200	4	5.60	3
13	51.7	4	6.1	0			63.8	0	< 50	NR	1130	3	5.24	3
14	59.4	0			20.0	1	50.0	0	23.0	1	131	0	7.37	0
15	47.2	1	13.3	4	14.6	4	33.0	3	13.5	3	1080	1	6.71	0
16	49.2	3	13.6	4	13.5	3	38.5	3	13.1	2	1182	4	5.95	1
18	52.7	3	12.0	2	14.0	4	36.0	4	16.0	4	1190	4	5.40	4
21											1182	4		
23	130.0	0	12.0	2			41.5	2	19.6	3	1128	3		
24	47.4	1	19.5	0	14.2	4	35.4	4	18.4	4	1170	4	5.68	2
27	46.3	0	16.6	1			38.2	3	14.5	3	1206	3	6.68	0
28	51.6	4	13.0	3	27.0	0	24.0	0	26.0	0	1259	2	4.80	1
29			3.1	0			33.2	3	10.0	1	1050	0		
32	51.2	4	14.7	4	15.3	4	38.5	3	17.2	4	1700	0	6.30	0
35														
37	36.9	0	14.5	4			32.0	3	20.0	3	1240	2	5.40	4
39	51.2	4	12.0	2	13.0	3	35.0	4	13.0	2	1180	4		
42	52.7	3	10.0	0			32.0	3	16.0	4	1220	3	5.66	3
43	49.0	3											5.20	3
45	5.2	0	14.5	4			36.8	4	15.2	3	1060	1	5.46	4
46	49.0	3	13.2	3	18.0	3	35.3	4	15.4	4	1210	3	5.46	4
48	54.6	1	10.0	0			41.3	2	10.0	1	730	0	5.19	3
49											1200	4		
50			14.0	4	15.0	4	38.0	3	17.0	4	1160	4		
51	48.0	2	5.7	0	18.3	2	35.7	4	18.0	4	1110	2	6.37	0
52	51.7	4	14.5	4	15.6	4	49.0	0	21.0	2	1230	3	5.46	4
55	50.4	4	13.9	4	15.1	4	39.4	3	< 10	NR	1174	4	5.35	4
57	50.0	4	15.0	3	< 100	NR	35.0	4	18.0	4	1150	4	6.00	1
59	50.0	4	13.0	3			34.0	4	27.0	0	1190	4	5.80	2
61	50.5	4	13.6	4	11.0	1	32.9	3	14.9	3	1158	4	5.50	4
63	42.3	0	15.0	3	6.0	0	35.0	4	12.5	2	1090	2	5.25	4
65			17.2	0			< 0.01	0	16.8	4	1146	4	7.42	0
68	48.7	2	14.6	4	15.6	4	37.2	4	23.2	1	1170	4	5.38	4
69	49.8	3	14.2	4			36.9	4	22.0	2	1300	0	5.96	1
70	51.1	4	11.0	1	< 20	NR	31.0	2	16.0	4	1140	3	5.20	3
72	52.9	3			14.5	4	32.7	3	41.0	0	1110	2	5.10	3
73			13.5	4			35.8	4	17.5	4	1141	3		
74	49.4	3	13.0	3	15.0	4	32.0	3	18.0	4	1090	2	5.00	2
75	52.6	3	13.6	4			33.8	4	13.6	3	1190	4	5.41	4
76	50.6	4	13.6	4			27.3	0	18.0	4	1235	3	4.17	0
77			10.0	0			49.0	0	134.0	0	1260	2	5.90	1
78	59.9	0	18.0	0			36.0	4	17.0	4	1160	4	4.90	1
79			12.4	2			32.0	3	15.0	3	1100	2	5.50	4
80	5.5	0											5.86	2
81			15.0	3	15.0	4	35.0	4	16.0	4	1150	4		
83	50.1	4							10.0	1	1155	4	5.70	3
86	50.6	4					27.0	0			1214	3	5.44	4
87	52.0	3	15.0	3			36.0	4	20.0	3	1240	2	4.83	1
89	47.8	1	12.5	3	23.7	0	40.0	2	18.5	4	1340	0	5.79	2
90			16.0	2			47.4	0	< 100	NR	1332	0		
91	50.9	4	19.0	0	17.0	3	38.0	3	16.0	4	1100	2		

Table 5. -- *Laboratory performance ratings for standard reference water sample T-115 (trace constituents)--Continued*

Analyte =	Ca (Calcium)		Cd (Cadmium)		Co (Cobalt)		Cr (Chromium)		Cu (Copper)		Fe (Iron)		K (Potassium)	
95% confidence MPV =	50.9	+/- 0.4	14.0	+/- 0.3	15.4	+/- 0.8	35.7	+/- 0.8	17.0	+/- 0.8	1175	+/- 12	5.41	+/- 0.1
F-pseudosigma =	2.0	m g/L	1.6	μ g/L	2.9	μ g/L	3.9	μ g/L	3.6	μ g/L	60	μ g/L	0.32	m g/L
Lab	RV	Rating	RV	Rating	RV	Rating	RV	ting	RV	Rating	RV	Rating	RV	Rating
92	10.8	0											4.83	1
97			10.8	0	17.9	3	41.7	1	17.9	4	1264	2		
98	45.6	0	13.0	3	20.0	1	34.0	4	15.0	3	1200	4	5.50	4
100	51.3	4	18.0	0	18.0	3	40.0	2	15.0	3	1230	3	5.23	3
101	50.0	4	18.0	0			54.0	0	22.2	2	1200	4	5.70	3
103	48.0	2	14.0	4	15.0	4	38.0	3	22.0	2	1050	0	5.60	2
104														
105	53.7	2	12.9	3	15.8	4	39.5	3	19.5	3	1070	1	4.97	2
106	49.1	3									1080	1	5.30	4
108			8.0	0			36.0	4	21.0	2			5.81	2
109	49.4	3									958	0		
113	51.9	4	17.1	1			43.1	1	19.7	3	1200	4	5.62	3
118	54.0	1	20.0	0			29.0	1	19.0	3	1025	0		
119	50.7	4	15.4	3			36.7	4	15.0	3	1170	4	5.30	4
120	52.6	3	12.2	2			33.6	3	17.5	4	1300	0	7.20	0
121	52.7	3	13.0	3	15.5	4	43.5	0	17.0	4	1210	3	5.30	4
123	57.1	0									1300	0	5.63	3
124	55.4	0	18.0	0	21.0	1	< 50	NR	54.0	0			5.62	3
126	51.9	4									1250	2		
128	51.2	4	14.4	4	14.4	4	35.8	4	15.7	4	1210	3	5.57	4
129											1140	3		
130	46.6	0	14.0	4			39.0	3	14.0	3	1111	2	4.80	1
131	51.3	4	8.0	0	< 20	NR	40.0	2	20.0	3	1180	4	7.50	0
132	45.5	0	10.0	0					20.0	3	1200	4	4.10	0
133	51.7	4	18.1	0			34.9	4	16.2	4	1225	3		
134	51.0	4	14.6	4	15.6	4	46.0	0	16.7	4	1100	2	6.10	0
138	51.4	4	12.9	3	13.6	3	34.2	4	17.8	4	1132	3	5.37	4
140	47.9	2	13.4	4			38.3	3	21.1	2	1147	4	5.33	4
141	49.9	3	14.5	4	16.0	4	34.5	4	20.0	3	1175	4	6.55	0
144			16.0	2					13.0	2				
145	50.4	4	16.0	2	18.0	3	40.0	2	< 26	NR	1181	4	5.64	3
146	47.1	1	11.6	1	14.8	4	34.5	4	16.4	4	1180	4	5.27	4
149							41.6	1	25.0	0	1020	0		
151	51.0	4	14.5	4			29.3	1	16.5	4	1120	3	5.40	4
152	53.9	1									1188	4	5.73	3
153	58.4	0	14.1	4			35.4	4	15.5	4			5.14	3
154	49.2	3	14.5	4	8.0	0			16.0	4	1165	4	5.21	3
158			8.8	0			33.0	3	20.0	3				
161			15.0	3			32.0	3	20.0	3	1487	0		
167	51.0	4	30.0	0	< 20	NR	35.0	4	22.0	2	1170	4	5.90	2
173			7.2	0			45.0	0	30.0	0	1200	4		
179	51.6	4	18.5	0			52.3	0	14.3	3	1210	3	58.0	0
180	54.1	1	15.6	2	15.8	4	38.2	3	19.4	3	1080	1	6.20	0
182	57.0	0	9.9	0	19.0	2	33.0	3	16.0	4			5.79	2
184	48.7	2	12.4	2	13.5	3	36.7	4	13.6	3	1162	4	5.40	4
190	47.0	1	15.0	3			31.0	2	14.0	3	1123	3	5.40	4
191	51.9	4									1230	3	5.50	4
193			14.0	4	18.0	3	30.0	2	17.0	4	1210	3		
194	49.5	3	16.0	2			37.0	4	28.0	0	1090	2	7.53	0

Table 5. -- *Laboratory performance ratings for standard reference water sample T-115 (trace constituents)--Continued*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/26, number of reported values of 26 values; RV, reported value; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

Analyte =	Li (Lithium)		Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)	
95% confidence MPV =	132	+/- 4	27.6	+/- 0.2	455	+/- 5	46	+/- 1	140	+/- 1	17.4	+/- 0.6	13.4	+/- 0.5
F-pseudosigma =	12	μ g/L	1.0	m g/L	21	μ g/L	4	μ g/L	5	m g/L	2.7	μ g/L	2.4	μ g/L
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	130	4	26.7	3	445	4	45	4	141	4	14.7	3	11.7	3
2			30.0	0					147	2			20.0	0
3	14	0	27.9	4	456	4	46	4	154	0	20.0	3	14.0	4
5	133	4	29.3	1	459	4	46	4	132	2	18.7	4	< 30	NR
7	116	2	23.5	0	394	0	35	0	136	3	18.0	4	11.9	3
8	138	3	25.2	0	480	2	50	3	153	0	20.0	3	4.0	0
13			27.7	4	430	2			143	3			26.0	0
14			30.4	0	486	0			55	0	40.0	0	106.0	0
15	100	0	26.3	2	428	2	48	3	134	2	14.7	3	16.9	2
16			27.1	3	424	2	40	2	135	3	24.8	0	< 30	NR
18			28.4	3	458	4			145	3	15.0	3	10.5	2
21														
23			27.9	4	444	4			140	4	20.9	2	11.3	3
24	136	4	27.4	4	440	3	43	3	140	4	13.7	2	14.6	4
27			26.3	2					133	2			17.8	1
28	100	0	25.4	0	461	4	46	4	139	4	22.0	1	14.0	4
29	122	3									17.0	4	2.2	0
32	135	4	31.2	0	454	4	46	4	158	0	17.0	4	12.6	4
35														
37			40.6	0			40	2	40	0			< 60	NR
39			27.9	4	455	4	44	4					16	2
42	135	4	28.8	2	480	2	50	3	143	3				
43			27.0	3					137	3				
45			28.3	3	463	4	69	0	140	4	16.3	4	14.5	4
46			28.1	3	456	4	39	1	138	4	5.0	0	13.0	4
48			29.1	1	280	0	40	2	141	4	19.7	3	16.5	2
49					476	2								
50	120	2			450	4	50	3			18.0	4	15.0	3
51			27.0	3	477	2			128	0	17.0	4	12.0	3
52			27.8	4	451	4	61	0	141	4	18.6	4	13.2	4
55	140	3	27.8	4	447	4	50	3	134	2	17.9	4	13.3	4
57			26.0	1	455	4	200	0	136	3	< 100	NR	12.0	3
59			27.0	3	440	3			152	0	18.0	4	10.0	2
61			27.4	4	443	3	52	2	137	3	0.0	0	< 50	NR
63	< 200	NR	25.4	0	387	0	25	0	15	0	31.0	0	12.5	4
65					432	2			93	0	79.0	0	17.8	1
68	138	3	28.0	4	447	4	38	1	141	4	20.0	3	15.5	3
69	141	3	27.3	4	466	3			135	2			13.7	4
70	118	2	26.8	3	437	3			136	3	< 50	NR	7.8	0
72			28.4	3	438	3			121	1	25.6	0	14.0	4
73											17.7	4	< 25	NR
74			25.5	0	434	3	44	4	137	3	16.0	3	11.4	3
75			27.6	4	442	3	46	4			14.5	2	13.2	4
76			28.7	2	460	4			145	3			18.6	0
77	100	0			453	4			152	0			10.0	2
78			32.9	0	460	4			138	4	17.0	4	13.5	4
79					510	0					14.0	2	13.0	4
80			28.0	4					130	1	17.0	4	15.0	3
81					480	2					18.0	4	14.0	4
83			26.0	1	415	1			130	1			10.2	2
86			29.1	1	447	4	36	0	142	4			4.6	0
87			26.6	2	387	0			133	2	31.0	0	15.4	3
89			27.9	4	503	0			140	4	< 50	NR	13.2	4
90					490	1			153	0	23.9	0	19.3	0
91			26.7	3	429	2	44	4	150	1	16.0	3	5.3	0

Table 5. -- *Laboratory performance ratings for standard reference water sample T-115 (trace constituents)--Continued*

Analyte =	Li (Lithium)		Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)	
95% confidence MPV =	132 +/- 4		27.6 +/- 0.2		455 +/- 5		46 +/- 1		140 +/- 1		17.4 +/- 0.6		13.4 +/- 0.5	
F-pseudosigma =	12	μ g/L	1.0	m g/L	21	μ g/L	4	μ g/L	5	m g/L	2.7	μ g/L	2.4	μ g/L
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
92			6.5	0					139	4				
97					521	0					56.5	0	42.3	0
98	130	4	26.4	2	418	1	47	4	137	3	< 20	NR	< 40	NR
100	124	3	26.7	3	480	2	< 50	NR	139	4	16.0	3	16.5	2
101			28.0	4	486	2			144	3	32.7	0	78.0	0
103	110	1	25.0	0	460	4	103	46 4	140	4	16.0	3	11.0	3
104														
105	143	3	28.5	3	427	2	105	48 3	153	0	23.5	0	12.5	4
106			23.1	0	449	0			95	0				
108											16.0	3	8.0	0
109			27.3	4	444	4			141	4				
113			28.1	3	502	0			149	1	17.5	4	14.9	3
118					455	4					30.0	0	26.0	0
119			28.1	3	450	4			139	4	15.4	3	13.7	4
120			27.6	4	446	4			153	0	17.3	4	14.9	3
121			28.2	3	470	3	121	55 0	144	3	16.0	3	18.0	1
123			27.6	4					139	4				
124	140	3	30.7	0	500	0	124	25 0	134	2	< 20	NR	< 50	NR
126			26.8	3					150	1	17.4	4	59.0	0
128			27.6	4	460	4	128	43 3	144	3			13.0	4
129														
130	117	2	25.6	0	431	2			132	2	12.0	1		
131	166	0	27.3	4	443	3	131	43 3	147	2	10.0	0	< 50	NR
132			27.5	4	410	0			137	3	20.0	3	20.0	0
133			28.3	3							16.5	4	33.0	0
134	134	4	28.0	4	470	3			138	4	17.5	4	12.5	4
138			28.3	3	429	2	138	41 2	140	4	16.8	4	12.7	4
140			27.5	4	464	4			140	4	19.6	3	15.1	3
141	135	4	27.8	4	447	4	141	47 4	142	4	14.0	2	5.0	0
144											14.5	2	10.8	2
145	132	4	27.8	4	459	4	145	49 3			24.0	0	< 84	NR
146			26.4	2	459	4	146	48 4	131	1	13.6	2	14.2	4
149					453	4	149	49 3					< 2	0
151			27.3	4	427	2			14	0	15.7	3	11.6	3
152	134	4	26.9	3	471	3	152	79 0	137	3				
153			26.8	3					130	1			13.5	4
154			26.2	2	455	4			143	3	19.8	3	13.5	4
158													9.0	1
161					480	2					24.0	0	5.3	0
167			28.0	4	450	4	167	< 100 NR	140	4	17.0	4	14.0	4
173					459	4			145	3			6.8	0
179			31.6	0	428	2			138	4	18.0	4	10.6	2
180			32.2	0	502	0			151	0	19.7	3	15.5	3
182	38	0	27.0	3			182	74 0	128	0	18.0	4	13.0	4
184	122	3	26.9	3	434	3	184	46 4	137	3	16.4	4	13.8	4
190			26.0	1	492	1			137	3	14.0	2	15.0	3
191			28.0	4	470	0			150	1				
193					467	3			137	3	18.0	4	15.0	3
194			28.6	2	440	3			140	4			13.0	4

Table 5. -- *Laboratory performance ratings for standard reference water sample T-115 (trace constituents)--Continued*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/26, number of reported values of 26 values; RV, reported value; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

Analyte =	Sb (Antimony)		Se (Selenium)		SiO2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
95% confidence MPV =	26.3	+/- 1.2	3.6	+/- 0.2	9.9	+/- 0.1	672	+/- 8	17.7	+/- 0.9	381	+/- 4
F-pseudosigma =	3.7	μ g/L	0.8	μ g/L	0.5	m g/L	26	μ g/L	2.8	μ g/L	21	μ g/L
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	27.1	4	3.7	4	9.6	3	682	4	16.9	4	365	3
2					10.2	3						
3	28.0	4	4.0	3	10.4	3	680	4	10.0	0	387	4
5	32.8	1	< 40	NR	10.2	3			16.2	3	410	2
7	< 34	NR	3.5	4	4.7	0	616	0	< 10	NR	371	4
8	11.0	0			8.6	0	720	1	21.0	2	420	1
13			1.9	0	9.9	4					17	0
14					1.0	0					387	4
15	20.1	1	2.5	2	9.1	2	648	3	22.1	1	370	3
16	< 350	NR	< 30	NR			651	3	20.4	3	362	3
18	27.5	4	3.5	4			662	4	19.0	4	395	3
21												
23	40.4	0	2.9	3	10.9	1					439	0
24			1.0	0	10.2	3	675	4	15.9	3	351	2
27												
28			8.0	0	8.9	1	7	0	20.0	3	361	3
29			1.6	0							410	2
32	25.3	4			12.0	0	678	4	18.0	NR	40	0
35			3.7	4								
37	< 30	NR	3.9	4	9.4	3						
39			3.0	3	8.0	0	686	3	17.0	4	374	4
42	26.5	4	3.3	4			703	2	15.0	3	386	4
43					9.6	3						
45	31.6	2	3.1	3	9.4	3					370	3
46			3.6	4							384	4
48	26.2	4	4.0	3							280	0
49												
50			4.0	3			640	2	17.0	4	374	4
51			76.0	0	9.9	4					345	1
52	45.0	0	3.4	4	10.3	3	680	4	17.4	4	401	3
55	21.0	2	3.9	4	9.8	4	694	3	18.0	4	385	4
57	36.0	0	6.6	0	9.6	3			< 50	NR	360	2
59	43.0	0					688	3			368	3
61	< 50	NR	< 10	NR					16.2	3	376	4
63	23.0	3	3.0	3	9.7	4	670	4	7.0	0	360	2
65			5.0	1								
68	22.9	3	4.9	1			674	4	18.7	4	53	0
69			3.9	4							394	3
70	24.0	3	3.0	3			618	0	21.0	2	388	4
72	23.6	3	3.6	4							923	0
73			< 50	NR							386	4
74	88.7	0	4.0	3			625	1	16.0	3	342	1
75			3.6	4							376	4
76			2.6	2							378	4
77			2.9	3							400	3
78	26.2	4	4.1	3							385	4
79											350	2
80			5.0	1	8.0	0					407	2
81			3.0	3							382	4
83											375	4
86											380	4
87	28.0	4	3.9	4	10.8	1					379	4
89			3.3	4	9.6	3					396	3
90											430	0
91			1.9	0			672	4	21.0	2	407	2

Table 5. -- *Laboratory performance ratings for standard reference water sample T-115 (trace constituents)--Continued*

Analyte =	Sb (Antimony)		Se (Selenium)		SiO2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
95% confidence MPV =	26.3	+/- 1.2	3.6	+/- 0.2	9.9	+/- 0.1	672	+/- 8	17.7	+/- 0.9	381	+/- 4
F-pseudosigma =	3.7	μ g/L	0.8	μ g/L	0.5	m g/L	26	μ g/L	2.8	μ g/L	21	μ g/L
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
92												
97	49.8	0	3.0	3	10.2	3	638	2	17.9	4	188	0
98	50.0	0	< 70	NR	9.6	3	652	3	18.0	4	353	2
100	27.4	4	3.6	4			599	0	14.2	2	406	2
101									23.4	0	420	1
103					12.8	0	700	2	19.0	4	390	4
104					5.3	0						
105	26.7	4	4.0	4	8.8	0	629	1	20.1	3	344	1
106					1.4	0	650	3			355	2
108											378	4
109					9.2	2						
113			2.7	2	16.1	0					384	4
118					9.7	4					380	4
119	26.3	4	4.0	3	10.4	3					370	3
120			2.6	2							286	0
121					9.9	4	672	4	17.0	4	369	3
123												
124	191.0	0	4.0	3	9.3	2	771	0	20.0	3	411	2
126											410	2
128	28.7	3	4.4	3	10.4	3			16.7	4	398	3
129												
130					10.1	4	647	3	20.0	3	368	3
131	< 50	NR	< 100	NR	9.9	4	650	3			390	4
132												
133			1.7	0							446	0
134			3.0	3	10.1	4	710	2	18.0	4	380	4
138	26.0	4	4.0	3			652	3	16.6	4	355	2
140											392	3
141	20.5	1	1.0	0	9.7	4	410	0	17.0	4	380	4
144												
145							674	4	24.0	0	402	2
146	29.3	3	4.2	3	10.3	3	69	0	15.6	3	377	4
149	21.0	2	2.0	0							350	2
151	24.5	4	3.9	4	9.1	2						
152					10.0	4	700	2			403	2
153												
154	31.0	2	2.9	3	10.4	3	684	4	13.4	1	376	4
158											309	0
161											375	4
167			5.0	1	10.1	4			< 40	NR	378	4
173			0.8	0	7.1	0					360	2
179	27.0	4	< 5	NR							388	4
180	14.9	0	15.0	0					17.0	4	402	3
182	23.0	3	2.0	0	4.2	0			30.0	0	383	4
184	25.6	4	4.5	2			608	0	16.2	3	377	4
190					9.6	4					450	0
191					9.9	4	670	4				
193			< 5	NR							396	3
194			< 5	NR							420	1

Table 6. -- *Laboratory performance ratings for standard reference water sample M-116 (major constituents)*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all values; V/26, number of reported values of 26 values; RV, reported value; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

	Analyte =	Alkalinity		B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD	
	95% confidence MPV =	169	+/- 1	0.18	+/- 0.01	64.7	+/- 0.7	55.0	+/- 0.5	454	+/- 4
	F-pseudosigma =	8	m g/L	0.02	μ g/L	3.3	m g/L	2.2	m g/L	16	m g/L
Lab	OLR	V/16	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.8	16	173	4	0.19	4	64.6	4	56.0	4	454	3
2	2.5	6					62.2	3				
3	2.5	15	172	4	0.02	0	72.2	0	55.3	4	456	4
4	2.3	3							66.5	0		
5	2.5	11	207	0	0.24	0	64.9	4	53.6	3	480	2
7	2.2	13	244	0			66.2	4	56.3	3		
8	1.1	14	170	4	0.08	0	69.3	2	32.3	0		
10	3.7	12	171	4	0.20	3	66.0	4			458	4
13	3.4	13	162	3			64.6	4	56.0	4	452	3
14	1.7	13	165	3	0.20	3	69.7	1	61.0	0		
15	3.3	16	172	4	0.19	4	58.4	1	55.3	4	451	3
16	2.5	13	170	4	0.30	0	64.1	4	57.0	3	429	0
17	0.0	1										
18	3.2	16	168	4	178	0	64.7	4	55.0	4	447	3
20	1.5	11	173	4			71.8	0	51.4	1	439	2
23	2.8	12	170	4	0.29	0	61.7	3			442	2
24	3.5	13	170	4	0.21	2	61.6	3	53.5	3		
27	2.1	10	168	4			59.0	1	53.2	3		
28	1.7	15	170	4	0.16	3	68.2	2	59.5	0		
29	3.2	12	168	4	0.17	4	64.0	4	28.0	0	455	4
32	2.2	15	164	3			66.9	3	56.0	4	458	4
37	3.3	13	168	4	0.18	4	61.2	2	57.0	3	449	3
38	2.8	10	176	3			62.0	3			456	4
39	2.7	11	170	4	0.16	3	67.7	3	55.0	4		
40	3.2	13	169	4	0.17	4	65.6	4			449	3
41	4.0	1										
42	2.8	13	161	2			69.4	2	54.4	4	476	3
43	3.5	10	171	4			66.0	4	59.0	1	456	4
45	3.5	14	168	4	0.17	4	66.1	4	53.8	3	478	2
46	3.4	14	178	2	0.18	4	64.1	4	54.8	4	470	3
48	2.5	11	169	4			62.2	3	62.0	0	459	4
49	2.9	11	171	4			66.0	4	55.0	4	441	2
50	3.1	7	177	3	0.20	3			54.0	4	452	3
51	2.5	12	168	4			62.0	3	54.6	4	460	4
52	3.3	14	170	4	< 3.4	NR	64.4	4	56.3	3	472	3
54	3.9	8	171	4			66.0	4			450	3
55	2.5	15	170	4	0.05	0	65.3	4	57.0	3	500	0
56	2.7	9	165	3			63.6	4	52.0	2		
57	2.2	13	168	4	< 0.5	NR	63.0	3	54.0	4	360	0
59	3.0	1										
60	3.2	5	170	4							441	2
61	1.7	14	161	2	0.16	3	71.9	0	67.1	0	435	1
63	1.5	16	150	0	0.17	4	54.3	0	54.0	4	420	0
64	3.4	9					66.3	4	58.1	2		
65	2.5	4							55.8	4		
68	3.4	13	167	4	0.22	1	60.9	2	54.5	4		
69	3.2	11	167	4			62.8	3	53.4	3	452	3
70	2.8	14	168	4	150	0	63.4	4	55.0	4	434	1
71	2.2	11	176	3			70.0	1	54.0	4	470	3
72	2.2	9	167	4					55.0	4	472	3
73	NR	1										
74	3.5	15	171	4	0.19	4	62.4	3	56.0	4	457	4
75	3.7	10	169	4			65.4	4	56.0	4	458	4
76	1.2	10	168	4			50.6	0	65.2	0		
77	2.4	5			0.29	0						
78	2.2	12	192	0			71.3	0	55.0	4	475	3
79	2.8	4	173	4					60.0	0		
80	1.9	14	920	0	0.21	2	68.0	2	52.5	2	455	4

Table 6. -- *Laboratory performance ratings for standard reference water sample M-116 (major constituents)--Continued*

	Analyte =	Alkalinity			B (Boron)			Ca (Calcium)			Cl (Chloride)			DSRD		
	95% confidence MPV =	169	+/-	1	0.18	+/-	0.01	64.7	+/-	0.7	55.0	+/-	0.5	454	+/-	4
	F-pseudosigma =	8		m g/L	0.02		μ g/L	3.3		m g/L	2.2		m g/L	16		m g/L
Lab	OLR	V/16	RV		Rating	RV		Rating	RV		Rating	RV		Rating	RV		Rating
83	3.6	9	170		4				63.8		4	54.7		4			
86	2.3	6				0.16		3	67.0		3						
87	2.4	12	168		4				65.0		4	51.0		1	450		3
89	3.0	13	171		4				63.2		1	54.5		4	425		0
90	1.8	6	154		1				64.5		4				428		0
91	2.3	12	164		3				69.3		4	55.0		4	426		0
92	1.8	12	167		4				13.8		0	61.0		0	440		2
93	2.3	7										53.2		3			
94	3.8	12	164		3				64.5		3	54.3		4	457		4
97	3.5	13	169		4				64.6		4	54.8		4	457		4
98	2.9	13	165		3	0.17		4	64.4		4	54.0		4			
100	3.7	15	169		4	0.17		4	65.6		4	53.7		3	455		4
101	2.9	8							65.2		4	67.2		0	449		3
102	1.8	4															
103	2.4	9				0.15		2	63.0		3						
104	3.0	5	177		3												
105	2.9	15	172		4				70.8		1	56.8		3	469		4
106	3.1	7							62.7		3						
108	0.0	1															
109	3.6	13	171		4	0.18		4	63.0		3	57.0		3	449		3
113	2.7	13	171		4				66.4		3	56.2		3	467		4
118	1.6	7	176		3				69.0		2				470		3
119	3.3	14	172		4	0.20		3	63.8		4	55.0		4	436		1
120	2.7	10	166		4				66.8		3	53.1		3	470		3
121	3.9	8				0.18		4	64.5		4						
122	2.4	9	164		3				67.0		3				492		1
123	2.8	4							73.5		0						
124	2.5	15	48		0	0.17		4	69.3		2	52.5		2	442		2
128	3.5	13	166		4	0.16		3	64.9		4	55.0		4			
129	2.6	12	173		4	0.20		3	69.0		2	54.2		4	434		1
130	2.7	15	169		4	154		0	60.8		2	54.6		4	409		0
131	2.3	14	170		4	0.17		4	64.9		4	57.5		2			
132	2.3	7	165		3				64.4		4						
133	2.6	7	173		4				67.9		3				478		2
134	3.8	16	170		4	0.17		4	64.0		4	54.0		4	454		3
138	3.0	11	166		4				69.0		2	56.9		3			
140	2.4	11							6.2		0	56.0		4	437		1
141	2.3	16	139		0	0.14		1	65.0		4	55.2		4	470		3
143	3.8	5	170		4							53.0		3			
144	4.0	3	170		4												
145	3.3	13	167		4	0.18		4	64.5		4	62.8		0			
146	2.2	13	175		3	0.35		0	60.6		2	57.0		3	462		4
149	1.8	9							43.0		0	61.8		0	441		2
150	3.8	4										56.9		3			
151	3.6	12	170		4				65.0		4	56.0		4	452		3
152	2.9	8							68.3		2						
153	1.6	10	165		3				71.3		0						
154	2.8	13	161		2				61.6		3	53.6		3	462		4
158	3.5	6	162		3							53.0		3			
167	2.7	13	167		4	0.17		4	66.0		4	53.7		3			
173	1.1	7										102		0	456		4
177	0.8	5										65.0		0			
179	2.1	9	276		0				45.9		0	232		0			
180	2.8	11	171		4	0.16		3	69.6		2	56.0		4			
182	1.7	15	164		3	0.20		3	71.0		1	52.8		3	432		1
183	0.9	8	170		4				57.4		0	42.5		0			
184	1.8	5	173		4							56.6		3	408		0
188	2.1	7	359		0				64.4		4	52.3		2			
190	2.5	13	173		4				61.0		2	54.0		4	449		3
191	3.5	10	167		4				63.1		4						
194	3.5	6	166		4							53.9		4			

Table 6.-- *Laboratory performance ratings for standard reference water sample M-116 (major constituents)--Continued*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all values; V/26, number of reported values of 26 values; RV, reported value; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

Analyte =	F (Fluoride)		K (Potassium)		Mg (Magnesium)		Na (Sodium)		P (total Phosphorus)	
95% confidence MPV =	0.89 +/- 0.01		5.00 +/- 0.07		14.0 +/- 0.1		66.1 +/- 0.6		1.42 +/- 0.03	
F-pseudosigma =	0.05	m g/L	0.36	m g/L	0.6	m g/L	3.2	m g/L	0.13	m g/L
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	0.87	4	5.20	3	13.8	4	66.4	4	1.51	3
2			4.76	3	15.1	1	61.8	2		
3	0.84	3	4.86	4	14.7	2	70.0	2	14.1	0
4	0.93	3								
5			4.64	3	14.2	4	62.9	3		
7	0.82	2	5.31	3	12.0	0	63.8	3	1.26	2
8			6.20	0	15.9	0	74.1	0	1.95	0
10	0.88	4	5.10	4	14.1	4	64.0	3		
13	0.90	4	4.78	3	14.0	4	67.0	4	0.92	0
14	0.52	0	6.10	0	14.7	2	27.1	0	1.29	2
15	0.87	4	5.96	0	14.2	4	64.2	3	1.50	3
16	0.84	3	5.33	3	13.9	4	65.3	4	1.27	2
17									0.13	0
18	0.89	4	5.10	4	13.8	4	65.7	4	1.42	4
20			6.51	0	15.8	0	76.4	0	1.42	4
23	0.92	3	4.60	2	13.8	4	59.4	0	1.41	4
24	0.87	4	4.60	2	13.8	4	65.1	4		
27	1.56	0	5.49	2	13.4	2	65.9	4		
28	0.81	1	3.30	0	14.6	3	67.2	4	4.70	0
29	0.93	3	5.00	4	14.0	4	65.0	4		
32	1.04	0	5.30	3	14.6	3	73.6	0	1.69	0
37	0.90	4	4.90	4	13.6	3	68.5	3		
38			4.90	4	14.1	4	62.2	2	1.44	4
39	0.92	3			14.6	3			10.0	0
40	0.92	3	5.00	4	14.2	4	62.4	2		
41										
42	0.86	3	5.25	3	14.7	2	70.5	2	1.41	4
43			5.10	4	14.0	4	67.0	4		
45	0.85	3	4.84	4	14.5	3	67.1	4	1.43	4
46	0.91	4	4.78	3	14.5	3	65.6	4	1.45	4
48			4.82	4	13.7	4	67.0	4	1.70	0
49	0.90	4	5.50	2	16.0	0	67.0	4		
50										
51			5.57	1	13.4	3	60.0	1	1.34	3
52	1.02	0	4.90	4	14.0	4	66.6	4	1.46	4
54	0.88	4			14.0	4				
55	0.94	3	4.90	4	14.8	2	64.2	3	1.38	4
56			4.98	4	13.0	1	62.7	2		
57	0.83	2	5.40	2	13.0	1	64.0	3	6.40	0
59										
60									1.58	2
61	0.95	2	5.90	0	15.4	0	72.0	1	1.43	4
63	0.90	4	4.80	3	11.9	0	3.6	0	1.30	3
64			5.15	4	14.1	4	63.5	3	1.42	4
65			6.56	0			65.3	4		
68			4.81	3	14.0	4	64.7	4	1.42	4
69	0.86	3	5.36	3	13.7	4	63.3	3		
70	0.89	4	4.70	3	13.3	2	65.2	4		
71	0.80	1	5.10	4	13.0	1	110.0	0	0.89	0
72	0.80	1							1.02	0
73										
74	0.90	4	4.80	3	12.9	1	63.5	3	1.46	4
75			5.00	4	14.0	4	67.4	4		
76	0.88	4	3.70	0	13.1	2	62.8	2		
77	0.90	4	5.40	2			68.0	3		
78	0.88	4	4.54	2	14.9	2	67.0	4	0.17	0
79										
80	0.81	1	5.00	4	14.0	4	59.0	0	4.61	0

Table 6.-- *Laboratory performance ratings for standard reference water sample M-116 (major constituents)--Continued*

Analyte =	F (Fluoride)		K (Potassium)		Mg (Magnesium)		Na (Sodium)		P (total Phosphorus)	
95% confidence MPV =	0.89 +/- 0.01		5.00 +/- 0.07		14.0 +/- 0.1		66.1 +/- 0.6		1.42 +/- 0.03	
F-pseudosigma =	0.05 m g/L		0.36 m g/L		0.6 m g/L		3.2 m g/L		0.13 m g/L	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
83	0.91	4	5.16	4	13.1	2	62.7	2		
86			5.28	3	15.3	0	70.3	2	1.49	3
87			4.36	1	13.7	4	65.0	4	1.35	3
89	0.89	4	5.25	3	13.9	4	66.4	4	1.39	4
90							60.8	1	1.67	1
91	0.86	3			14.5	3	77.0	0	1.51	3
92			3.45	0	2.9	0	63.7	3	1.28	2
93			5.43	2	13.9	4	59.2	0		
94	0.88	4	5.00	4	13.7	4	67.1	4	1.44	4
97	0.87	4			13.9	4			1.42	4
98	0.75	0	5.40	2	13.8	4	69.5	2	1.40	4
100	0.88	4	4.91	4	13.8	4	66.4	4	1.44	4
101			5.10	4	14.0	4	66.0	4		
102									1.30	3
103			3.90	0	14.0	4	68.0	3	1.30	3
104									1.64	1
105	0.69	0	4.59	2	15.1	1	66.1	4	1.38	4
106			5.07	4	11.2	0	62.9	3		
108									1.68	0
109	0.89	4	4.96	4	13.5	3	65.0	4		
113	0.95	2	4.96	4	14.0	4	69.2	3	1.43	4
118									0.01	0
119	0.89	4	4.60	2	13.7	4	63.9	3	1.40	4
120			6.06	0	14.0	4	76.6	0	1.38	4
121			4.84	4	14.2	4	68.0	3		
122			5.64	1	15.1	1	61.7	2		
123			5.19	3	14.2	4	64.5	4		
124	1.00	0	4.94	4	15.1	1	67.2	4	1.42	4
128	0.88	4	4.94	4	13.8	4	66.4	4	1.51	3
129	0.68	0	4.80	3	13.5	3	64.0	3		
130	1.00	0	4.69	3	13.2	2	68.5	3		
131	2.00	0	2.70	0	13.8	4	68.0	3	1.70	0
132			5.40	2	13.6	3	110.0	0		
133					18.3	0	70.7	2	1.34	3
134	0.87	4	5.20	3	14.0	4	66.0	4	1.40	4
138	0.86	3	5.10	4	15.0	1	68.9	3	1.55	2
140	0.97	1	4.90	4	14.1	4	69.2	3	1.33	3
141	0.92	3	5.86	0	14.5	3	70.9	1	1.39	4
143										
144										
145	1.40	0	4.98	4	14.1	4	66.9	4	1.46	4
146			3.87	0	13.4	3	65.7	4		
149	0.94	3	4.60	2	12.9	1	67.0	4	1.10	0
150									1.40	4
151	1.01	0	5.00	4	13.9	4	67.0	4		
152			5.22	3	14.3	4	69.7	2	1.48	4
153	0.74	0	5.14	4	13.2	2	66.6	4	1.53	3
154	0.89	4	5.41	2	13.1	2	69.9	2	1.29	2
158	0.85	3								
167	0.13	0	5.00	4	15.0	1	66.0	4	1.36	4
173	1.20	0								
177	0.93	3					71.6	1		
179			5.10	4	15.6	0	64.6	4	1.40	4
180	0.87	4	5.53	2	16.2	0	70.6	2	1.44	4
182	2.20	0	4.89	4	12.0	0	59.0	0	0.94	0
183	0.78	0			15.5	0				
184									2.76	0
188			5.10	4	14.2	4	58.1	0		
190	1.00	0	4.80	3	13.0	1	64.0	3	0.89	0
191			5.00	4	14.1	4	69.7	2	1.30	3
194	0.91	4								

Table 6.-- *Laboratory performance ratings for standard reference water sample M-116 (major constituents)--Continued*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all values; V/26, number of reported values of 26 values; RV, reported value; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

Analyte =	pH		SiO2 (Silica)		SO4 (Sulfate)		Sp Cond		Sr (Strontium)		V (Vanadium)	
95% confidence MPV =	8.33	+/- 0.03	8.45	+/- 0.14	126	+/- 1	753	+/- 6	491	+/- 7	2.7	+/- 1.7
F-pseudosigma =	0.13		0.59	m g/L	7	m g/L	29	µ S/cm	21	µ g/L	3.7	µ g/L
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	8.35	4	8.37	4	127	4	753	4	502	3	3.3	4
2	8.46	3	8.89	3								
3	8.40	3	9.20	2	126	4	727	3	503	3	< 10	NR
4					123	4						
5	8.22	3			127	4	783	2				
7	8.30	4	8.51	4	120	3	657	0	455	1	< 10	NR
8	8.37	4	8.56	4	2	0	812	0	860	0	8.0	2
10	8.40	3	8.40	4	130	3	760	4				
13	8.29	4	8.90	3	123	4	743	4				
14	8.26	3	0.77	0	128	4	765	4				
15	8.38	4	7.75	2	123	4	760	4	493	4	1.1	4
16					137	1	651	0	482	4	< 100	NR
17												
18	7.58	0	8.90	3	127	4	764	4	457	1	1.3	4
20	8.22	3			120	3	682	0				
23	8.32	4			128	4	759	4				
24	8.30	4	8.74	4	123	4	765	4	491	4		
27	8.03	0			132	3	722	2				
28	7.60	0	7.56	1	115	1	525	0	511	3	2.3	4
29	8.18	2			122	3	790	2				
32	7.83	0	9.40	1	116	2	775	3	473	3	2.5	4
37	8.31	4	8.45	4	138	1	757	4				
38	8.40	3	4.02	0			803	1				
39	8.40	3	6.80	0	125	4			505	3		
40	8.38	4	8.90	3	120	3	750	4	435	0		
41							760	4				
42	8.20	3			123	4	740	4	531	1		
43	8.50	2	8.40	4	126	4						
45	8.35	4	8.19	4	130	3	728	3				
46	8.38	4	8.28	4	139	1	760	4				
48	8.60	0			138	1	759	4				
49	8.31	4			62	0	762	4				
50	8.10	1			127	4	761	4				
51	8.19	2	8.52	4	137	1	728	0				
52	8.35	4	9.26	2	129	4	722	2	492	4	< 5	NR
54	8.36	4			128	4	742	4				
55	8.40	3	8.88	3	150	0	760	4	537	0	< 10	NR
56	8.34	4			69	0	743	4				
57	8.39	4	7.50	1	100	0	763	4			< 50	NR
59			8.10	3								
60	8.35	4					760	4				
61	8.36	4	4.80	0	128	4	690	3			< 0.01	NR
63	8.50	2	9.60	1	33	0	689	0	465	2	10.0	1
64	8.26	3	8.10	3			753	4				
65					135	2						
68	8.42	3	8.15	3			755	4	484	4	2.7	4
69	8.43	3			133	2	760	4				
70	8.31	4	8.60	4	135	2	734	3	444	0	< 20	NR
71	8.35	4			130	3						
72	8.40	3	9.30	2	132	3	694	0				
73											< 2	NR
74	8.36	4	8.05	3	120	3	758	4	495	4		
75	8.20	3			135	2	750	4				
76	7.95	0			153	0	685	0				
77					121	3						
78	8.40	3			120	3	700	1				
79	8.40	3					747	4				
80	7.94	0	6.50	0	125	4	753	4				

Table 6.-- *Laboratory performance ratings for standard reference water sample M-116 (major constituents)--Continued*

Analyte =	pH		SiO2 (Silica)		SO4 (Sulfate)		Sp Cond		Sr (Strontium)		V (Vanadium)	
95% confidence MPV =	8.33 +/- 0.03		8.45 +/- 0		126 +/- 1		753 +/- 6		491 +/- 7		2.7 +/- 1.7	
F-pseudosigma =	0.13		0.59	m g/L	7	m g/L	29	µ S/cm	21	µ g/L	3.7	µ g/L
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
83			8.40	4	126	4						
86												
87	8.20	3	9.20	2	186	0	7180	0				
89	8.33	4	8.28	4	122	3	89	0				
90	8.35	4										
91	8.20	3			106	0	732	3	520	2		
92	8.13	1	7.80	2	125	4	753	4				
93	8.42	3			125	4	691	0				
94	8.42	3			129	4	759	4				
97	8.39	4	9.03	3	136	1	772	3	498	4	5.3	3
98	7.50	0	8.40	4	130	3			491	4	< 3	NR
100	8.38	4	8.36	4	127	4	748	4	421	0	< 10	NR
101	8.50	2			118	2						
102			10.88	0	143	0	744	4				
103			11.80	0					510	3	2.0	4
104	8.30	4	8.39	4			774	3				
105	8.38	4	7.60	2	128	4	739	4	500	4	6.6	2
106	8.28	4	8.24	4					451	4		
108												
109	8.23	3	8.57	4	128	4	746	4				
113	7.81	0	10.20	0	126	4	684	0				
118	8.40	3	9.66	0			600	0				
119	8.41	3	9.00	3	124	4	770	3				
120	8.18	2			126	4						
121			8.56	4					500	4	1.0	4
122	8.45	3			128	4	761	4				
123												
124	8.35	4	8.00	3	123	4	742	4	628	0	< 10	NR
128	8.42	3	8.68	4	125	4	806	1			< 3	NR
129	8.26	3			121	3	784	2				
130	8.29	4	8.66	4	126	4	767	4	492	4	6.0	3
131	8.15	2	8.05	3	108	0	713	2	487	4		
132	8.39	4			43	0						
133	8.30	4									< 10	NR
134	8.32	4	8.45	4	124	4	760	4	480	3	1.1	4
138			8.90	3	125	4			491	4	< 3	NR
140	8.05	0			126	4	718	2				
141	8.40	3	8.76	3	132	3	799	1	310	0	1.7	4
143	8.38	4	8.73	4								
144	8.35	4					740	4				
145	8.30	4			127	4	728	3	487	4	< 18	NR
146	8.33	4	9.22	2			665	0	471	3	10.0	1
149					129	4						
150	8.30	4			124	4						
151	8.34	4	8.25	4	124	4	766	4				
152			8.26	4	129	4	512	0				
153	7.95	0			140	0	140	0				
154	8.53	1			121	3	762	4	500	4		
158	8.33	4			124	4	757	4				
167	8.00	0	8.50	4	130	3	811	0			< 40	NR
173	7.80	0	7.16	0	125	4	524	0				
177			7.20	0	145	0						
179	8.22	3					760	4				
180	8.40	3			120	3					< 1.6	NR
182	8.30	4	3.80	0	130	3	760	4			17.0	0
183	8.42	3			78	0	47	0				
184					119	2						
188	8.08	1										
190	8.20	3	8.36	4	115	1	753	4				
191	8.35	4	8.60	4	124	4			464	2		
194	8.32	4			121	3	719	2				

Table 7. -- *Laboratory performance ratings for standard reference water sample N-30 (nutrients)*

[MPV, most probable value; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/5, number of reported values of 5 values; RV, reported value; <, less than; X.1, Lab code for values of nonpreserved samples.]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

Analyte =			NH3 as N		NH3 + Org N as N		NO2 + NO3 as N		total P		PO4 as P	
PRESERVED			Ammonia		Ammonia + Organic		Nitrate + Nitrite		Phosphorus		Orthophosphate	
95% confidence MPV =			0.205 +/- 0.009		0.407 +/- 0.046		0.414 +/- 0.016		0.280 +/- 0.008		0.260 +/- 0.009	
F-pseudosigma =			0.027	mg/L	0.119	mg/L	0.052	mg/L	0.025	mg/L	0.026	mg/L
Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.6	5	0.216	4	0.368	4	0.416	4	0.278	4	0.223	2
2	3.0	2	0.196	4							0.228	2
7	4.0	1					0.390	4				
10	3.6	5	0.210	4	0.330	3	0.450	3	0.280	4	0.260	4
16	1.8	5	0.226	3	0.339	3	0.273	0	0.294	3	0.159	0
21	4.0	1					0.412	4				
29	2.0	2					0.440	4			0.320	0
39	2.0	3	0.190	3			0.369	3	0.170 -	0		
43	2.0	1					0.470	2				
45	0.8	5	0.371	0	0.650	0	0.512	1	0.295	3	0.358	0
48	3.6	5	0.170	2	0.410	4	0.420	4	0.280	4	0.255	4
52	3.8	5	0.216	4	0.524	3	0.407	4	0.277	4	0.270	4
55	3.2	5	0.200	4	0.440	4	0.430	4	1.550	0	0.250	4
56	4.0	3			0.360	4			0.280	4	0.260	4
60	2.0	4	0.200	4	0.350	4	0.300	0	0.330	0		
63	3.8	5	0.210	4	0.320	3	0.4	4	0.290	4	0.260	4
65	4.0	2	0.200	4			0.410	4				
68	3.7	3	0.190	3	0.410	4			0.282	4		
75	1.7	3					0.388	4	0.446	0	0.218	1
76	3.5	2	0.220	3			0.410	4				
78	0.0	1					4.400	0				
79	3.0	3	0.200	4	0.390	4			0.240	1		
88	0.7	3	0.140	0			0.810	0			0.290	2
89	4.0	5	0.198	4	0.407	4	0.396	4	0.287	4	0.249	4
90	2.0	5	0.218	4	0.403	4	0.521	0	0.305	2	0.339	0
92	2.7	3					0.500	1	0.260	3	0.250	4
93	2.0	2	0.237	2			0.341	2				
97	3.4	5	0.180	3	0.340	3	0.460	3	0.27	4	0.260	4
100	2.8	4	0.250	1			0.430	4	0.300	3	0.280	3
108	1.5	2							0.400	0	0.240	3
118	2.6	5	0.060	0	0.520	3	0.470	2	0.290	4	0.270	4
119	2.8	5	0.250	1	0.500	3	0.478	2	0.280	4	0.250	4
120	3.6	5	0.205	4	0.422	4	0.410	4	0.258	3	0.240	3
123	1.5	2	0.150	0			0.446	3				
124	3.3	4	0.200	4			0.420	4	0.250	2	0.280	3
133	0.0	2	0.736	0	1.879	0						
134	3.0	5	0.210	4	0.650	0	0.400	4	0.280	4	0.240	3
140	1.6	5	0.600	0	0.780	0	0.380	3	0.260	3	0.230	2
141	2.0	5	0.226	3	0.340	3	0.411	4	0.210	0	0.130	0
145	2.6	5	0.180	3	0.450	4	0.360	2	0.330	0	0.270	4
154	2.2	5	0.180	3	0.320	3	0.390	4	0.230	0	0.210	1
173	1.0	4	1.050	0			1.895	0	0.410	0	0.260	4
177	4.0	2	0.200	4			0.440	4				
179	2.5	4	0.498	0	< 0.60	NR	0.395	4	0.278	4	0.292	2
182	0.0	4	0.800	0			0.520	0	0.420	0	0.420	0
183	2.0	2							0.230	0	0.270	4
194	3.5	4	0.180	3	0.300	3	0.410	4	0.290	4		

Table 7. -- *Laboratory performance ratings for standard reference water sample N-30 (nutrients)--Continued*

Analyte =	NH3 as N		NH3 + Org N as N		NO2 + NO3 as N		total P		PO4 as P	
NONPRESERVED	Ammonia		Ammonia+Organic N		Nitrate + Nitrite nitroge		Phosphorus		Orthophosphate	
95% confidence MPV =	0.210 +/- 0.005		0.309 +/- 0.031		0.442 +/- 0.012		0.280 +/- 0.004		0.260 +/- 0.006	
F-pseudosigma =	0.019	mg/L	0.095	mg/L	0.052	mg/L	0.015	mg/L	0.022	mg/L

Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	2.8	5	0.190	2	0.274	4	0.436	4	0.277	4	0.166	0
2	2.5	2	0.235	2							0.273	3
3	2.6	5	0.210	4	0.850	0	0.500	2	0.290	3	0.260	4
5	2.4	5	0.220	3	0.196	2	0.622	0	0.270	3	0.270	4
7	0.0	3	0.260	0					0.510	0	0.000	0
8	0.2	5	0.280	0	0.620	0	0.530	1	0.450	0	0.440	0
13	2.0	5	0.195	3	0.265	4	0.363	1	0.315	0	0.235	2
15	3.4	5	0.204	4	0.309	4	0.372	2	0.289	3	0.252	4
17	0.0	3	0.590	0			1.460	0			1.620	0
18	2.8	4	0.220	3	0.220	3	0.360	1	0.281	4		
20	3.0	4	0.252	0	< 2.5	NR	0.450	4	0.280	4	0.260	4
21	3.4	5	0.213	4	0.291	4	0.541	1	0.284	4	0.264	4
22	4.0	1							0.280	4		
23	2.8	5	0.210	4	0.510	0	0.440	4	0.280	4	0.230	2
28	1.6	5	0.500	0	0.610	0	0.450	4	0.530	0	0.270	4
29	1.5	2					0.490	3			0.370	0
32	1.5	2					0.410	3			0.320	0
38	3.0	5	0.231	2	0.263	4	0.428	4	0.298	2	0.247	3
41	3.3	3					0.469	3	0.280	4	0.275	3
45	0.2	5	0.379	0	0.576	0	0.634	0	0.306	1	0.391	0
46	3.8	5	0.214	4	0.330	4	0.421	4	0.278	4	0.248	3
51	3.2	5	0.200	3	0.340	4	0.400	3	0.266	3	0.244	3
52	2.2	5	0.221	3	0.471	1	0.442	4	0.258	2	0.298	1
56	2.0	1					0.510	2				
59	3.2	5	0.220	3	0.300	4	0.440	4	0.300	2	0.280	3
60	1.0	4	0.350	0	0.350	4	0.670	0	0.340	0		
61	3.4	5	0.210	4	0.330	4	0.460	4	0.270	3	0.230	2
64	2.3	3	0.210	4					0.290	3	0.310	0
69	4.0	1					0.420	4				
70	3.7	3	0.204	4			0.469	3			0.250	4
72	2.8	5	0.170	0	0.300	4	0.450	4	0.280	4	0.290	2
74	2.8	4	0.209	4			0.350	1	0.290	3	0.281	3
77	2.3	3	0.190	2			0.410	3			0.230	2
78	0.5	2					0.160	0			0.198	1
83	0.0	1					2.900	0				
86	2.0	1					0.510	2				
87	1.4	5	0.300	0	0.480	1	0.640	0	0.260	2	0.260	4
88	2.0	3	0.210	4			1.200	0			0.290	2
89	4.0	5	0.209	4	0.355	4	0.437	4	0.282	4	0.256	4
91	1.6	5	0.290	0	0.340	4	0.320	0	0.330	0	0.250	4
92	2.0	3					0.520	1	0.260	2	0.280	3
94	2.8	4	0.200	3	0.280	4	0.390	2	0.262	2		
97	3.4	5	0.200	3	0.260	3	0.490	3	0.280	4	0.260	4
100	2.8	4	0.210	4			0.440	4	0.300	2	0.300	1
102	2.6	5	0.230	2	0.270	4	0.440	4	0.288	3	0.160	0
104	1.0	3					0.507	2	0.320	0	0.302	1
105	3.0	5	0.220	3	0.980	0	0.438	4	0.280	4	0.260	4
110	0.0	1					0.275	0				
113	3.3	4	0.200	3	< 0.5	NR	0.423	4	0.267	3	0.246	3
118	2.8	5	0.060	0	0.260	3	0.460	4	0.290	3	0.260	4
119	2.6	5	0.200	3	0.500	0	0.480	3	0.270	3	0.250	4
120	3.3	3					0.420	4	0.260	2	0.260	4
128	2.3	3	0.160	0			0.420	4	0.290	3		
129	2.4	5	1.580	0	1.580	0	0.431	4	0.280	4	0.252	4
132	3.3	4	0.200	3			0.460	4	0.260	2	0.250	4
133	4.0	3					0.466	4	0.283	4	0.253	4
134	3.0	5	0.190	2	0.420	2	0.440	4	0.280	4	0.240	3
138	2.2	5	0.222	3	0.521	0	0.420	4	0.307	1	0.280	3
141	2.2	5	0.210	4	0.230	3	0.431	4	0.200	0	0.180	0
143	4.0	5	0.210	4	0.300	4	0.455	4	0.282	4	0.250	4
149	3.5	2	0.210	4			0.470	3				
150	4.0	4	0.209	4			0.450	4	0.280	4	0.260	4
151	3.7	3	0.210	3			0.430	4			0.266	4
158	3.3	4	0.220	3			0.490	3	0.270	3	0.270	4
167	3.4	5	0.220	3	0.220	3	0.438	4	0.273	4	0.248	3
171	2.0	4	0.212	4			0.758	0	0.288	3	0.220	1
173	0.5	4	0.780	0			1.760	0	0.410	0	0.290	2
179	2.8	4	0.338	0	< 0.6	NR	0.427	4	0.279	4	0.275	3
180	2.6	5	0.206	4	0.490	1	0.465	4	0.223	0	0.259	4
184	3.3	3	0.196	3	0.300	4			0.270	3		
185	2.7	3	0.186	2					0.260	2	0.260	4
191	3.3	3	0.190	2			0.450	4			0.250	4
193	1.5	2	0.140	0			0.400	3				

Table 8. -- *Laboratory performance ratings for standard reference water sample N-31 (nutrients)*

[MPV, most probable value; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/5, number of reported values of 5 values; RV, reported value; <, less than; X.1, Lab code for values of nonpreserved samples.]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

	Analyte =	NH3 as N		NH3 + Org N as N		NO2 + NO3 as N		total P		PO4 as P	
PRESERVED		Ammonia		Ammonia + Organic N		Nitrate + Nitrite		Phosphorus		Orthophosphate	
95% confidence MPV =		0.577 +/- 0.019		0.787 +/- 0.053		1.428 +/- 0.033		1.600 +/- 0.017		1.565 +/- 0.044	
F-pseudosigma =		0.059	mg/L	0.133	mg/L	0.099	mg/L	0.048	mg/L	0.126	mg/L
Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.4	5	0.580	4	0.786	4	1.432	4	1.650	2	1.440	3
2	4.0	2	0.590	4							1.620	4
16	1.6	5	0.537	3	0.735	4	1.760	0	1.435	0	1.335	1
29	1.5	2					1.490	3			1.950	0
39	1.0	3	0.510	2			1.270	1			0.885	0
43	2.0	1					1.520	2				
45	2.0	5	0.742	0	1.040	1	1.490	3	1.610	4	1.730	2
48	3.0	5	0.530	3	0.710	3	1.290	2	1.600	4	1.640	3
52	3.4	5	0.609	3	0.683	3	1.390	4	1.620	4	1.630	3
55	4.0	5	0.570	4	0.820	4	1.400	4	1.580	4	1.560	4
60	0.8	4	2.360	0	2.740	0	0.570	0	1.560	3		
63	2.6	5	0.690	1	0.800	4	1.430	4	1.700	0	1.660	4
65	0.5	2	0.670	1			1.130	0				
68	2.7	3	0.530	3	0.630	2			1.640	3		
75	2.0	3					1.420	4	1.550	2	0.694	0
76	3.5	2	0.580	4			1.350	3				
79	3.3	3	0.570	4	0.790	4			1.550	2		
88	1.7	3	0.510	2			1.850	0			1.660	3
89	3.6	5	0.569	4	0.674	3	1.420	4	1.640	3	1.570	4
90	1.8	5	0.688	1	0.841	4	0.903	0	1.800	0	1.600	4
92	1.7	3					1.740	0	1.510	1	1.560	4
93	4.0	2	0.600	4			1.400	4				
97	3.0	5	0.500	2	0.740	4	1.550	2	1.590	4	1.650	3
100	3.8	4	0.610	3			1.440	4	1.620	4	1.550	4
108	2.0	2							1.710	0	1.540	4
118	1.8	5	0.160	0	0.910	3	1.420	4	1.500	0	1.420	2
119	3.0	5	0.520	3	0.800	4	1.630	0	1.590	4	1.600	4
120	4.0	5	0.549	4	0.788	4	1.450	4	1.578	4	1.577	4
123	3.0	2	0.566	4			1.530	2				
124	4.0	4	0.600	4			1.460	4	1.620	4	1.580	4
133	0.0	2	1.560	0	3.160	0						
134	3.8	5	0.570	4	0.760	4	1.400	4	1.600	4	1.500	3
140	2.4	5	0.230	0	0.340	0	1.400	4	1.620	4	1.560	4
141	3.8	5	0.584	4	0.740	4	1.440	4	1.610	4	1.470	3
145	2.6	5	0.600	4	0.910	3	1.380	4	1.700	0	1.380	2
154	1.6	5	0.531	3	0.640	2	1.363	3	7.000	0	6.730	0
173	1.3	4	1.850	0			2.866	0	1.570	3	1.390	2
177	0.5	2	1.000	0			1.261	1				
179	2.0	5	0.833	0	1.440	0	1.303	2	1.600	4	1.526	4
182	0.0	4	1.600	0			1.940	0	0.880	0	0.880	0
183	3.0	2							1.590	4	1.740	2
190	1.5	4	0.513	2	0.163	0			1.115	0	1.575	4

Table 8. -- *Laboratory performance ratings for standard reference water sample N-31 (nutrients)*

[MPV, most probable value; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/5, number of reported values of 5 values; RV, reported value; <, less than; X.1, Lab code for values of nonpreserved samples.]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

	Analyte =	NH3 as N		NH3 + Org N as N		NO2 + NO3 as N		total P		PO4 as P	
NONPRESERVED		Ammonia		Ammonia + Organic N		Nitrate + Nitrite		Phosphorus		Orthophosphate	
95% confidence MPV =		0.580 +/- 0.007		0.739 +/- 0.079		1.510 +/- 0.017		1.610 +/- 0.015		1.592 +/- 0.018	
F-pseudosigma =		0.025	mg/L	0.245	mg/L	0.068	mg/L	0.056	mg/L	0.069	mg/L
Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	2.8	5	0.547	2	0.682	4	1.520	4	1.677	2	1.500	2
2	3.5	2	0.600	3							1.600	4
3	2.6	5	0.560	3	2.560	0	1.450	3	1.640	3	1.570	4
5	3.8	5	0.565	3	0.648	4	1.530	4	1.610	4	1.570	4
7	2.5	4	0.580	4			1.440	2	1.600	4	1.300	0
8	0.4	5	0.320	0	1.180	1	1.110	0	1.720	1	0.700	0
13	3.0	5	0.570	4	0.570	3	1.510	4	1.770	0	1.600	4
15	2.2	5	0.525	1	0.713	4	1.330	0	1.680	2	1.620	4
17	0.0	4	0.240	0			0.470	0	0.290	0	0.250	0
18	3.0	5	0.590	4	0.670	4	1.370	0	1.580	3	1.600	4
20	2.3	4	0.627	1	2.500	0	1.510	4	1.610	4		
22	4.0	1							1.606	4		
23	3.6	5	0.590	4	0.840	4	1.500	4	1.570	3	1.540	3
28	1.0	5	0.980	0	1.100	2	1.374	0	1.930	0	1.657	3
29	2.0	2					1.540	4			1.940	0
32	3.5	2					1.47	3			1.620	4
38	3.0	5	0.698	0	0.659	4	1.476	4	1.560	3	1.569	4
42	3.3	3					1.532	4	1.650	3	1.640	3
45	1.2	5	0.723	0	0.966	3	1.810	0	1.660	3	1.750	0
46	3.4	5	0.586	4	0.730	4	1.401	1	1.620	4	1.565	4
52	3.0	5	0.618	2	0.790	4	1.500	4	1.640	3	1.680	2
57	2.8	5	0.570	4	1.000	2	1.250	0	1.600	4	1.600	4
59	3.6	5	0.590	4	0.700	4	1.510	4	1.600	4	1.500	2
60	2.0	4	0.560	3	1.030	2	2.020	0	1.660	3		
61	3.4	5	0.600	3	0.670	4	1.570	3	1.650	3	1.570	4
64	3.7	3	0.580	4					1.630	4	1.650	3
69	3.0	1					1.450	3				
70	2.0	4	0.554	3			1.447	3	1.806	0	1.500	2
72	2.6	5	0.510	0	0.590	3	1.540	4	1.660	3	1.640	3
74	3.5	4	0.604	3			1.450	3	1.620	4	1.620	4
78	0.0	2					5.390	0			1.940	0
83	0.0	1					1.650	0				
86	2.0	1					1.580	2				
87	1.0	5	0.560	3	1.000	2	1.810	0	1.800	0	1.800	0
88	2.3	3	0.590	4			3.210	0			1.630	3
89	4.0	5	0.586	4	0.739	4	1.530	4	1.590	4	1.580	4
91	1.6	5	0.680	0	0.690	4	1.300	0	1.730	0	1.610	4
92	2.7	3					1.760	0	1.590	4	1.590	4
94	3.3	4	0.570	4	0.680	4	1.430	2	1.580	3		
97	3.0	5	0.600	3	0.710	4	1.630	1	1.630	4	1.650	3
100	3.5	4	0.580	4			1.500	4	1.620	4	1.500	2
102	1.0	4	0.650	0			1.520	4	1.450	0	1.400	0
104	0.7	3					1.084	0	1.905	0	1.670	2
105	2.8	5	0.580	4	1.840	0	1.434	2	1.600	4	1.600	4
113	3.6	5	0.560	3	0.857	4	1.501	4	1.663	3	1.560	4
118	2.2	5	0.160	0	0.690	4	1.510	4	1.550	2	1.460	1
119	2.2	5	0.520	0	0.860	4	1.740	0	1.650	3	1.600	4
120	3.7	3					1.500	4	1.580	3	1.580	4
128	1.7	3	0.530	1			1.540	4	1.760	0		
129	2.8	5	0.590	4	0.590	3	1.454	3	1.260	0	1.562	4
132	4.0	4	0.580	4			1.500	4	1.600	4	1.580	4
133	0.0	3					1.202	0	1.400	0	1.310	0
134	3.0	5	0.550	2	0.880	3	1.500	4	1.600	4	1.500	2
138	2.4	5	0.653	0	2.770	0	1.520	4	1.600	4	1.600	4
141	3.2	5	0.569	4	0.620	4	1.520	4	1.550	2	1.520	2
143	3.8	5	0.590	4	0.600	3	1.520	4	1.630	4	1.590	4
149	3.0	2	0.540	2			1.540	4				
150	3.8	4	0.577	4			1.470	3	1.600	4	1.600	4
151	3.7	3	0.590	4			1.550	3			1.625	4
152	2.0	1	0.545	2								
158	3.8	4	0.570	4			1.480	4	1.580	3	1.560	4
167	3.0	5	0.560	3	0.560	3	1.563	3	1.680	2	1.612	4
173	1.0	4	1.590	0			2.987	0	1.570	3	1.460	1
179	2.2	5	0.758	0	1.040	2	1.378	1	1.600	4	1.594	4
180	1.4	5	0.540	2	1.400	0	1.580	2	1.650	3	1.920	0
184	3.7	3	0.594	4	0.750	4			1.570	3		
185	4.0	1	0.569	4								
191	2.3	3	0.560	3			1.530	4			1.380	0
193	1.0	1	0.522	1								
194	2.0	1					1.420	2				

Table 9.-- *Laboratory performance ratings for standard reference water sample P-17 (low ionic strength)*

[MPV, most probable value; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter at 25 degrees Celsius; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/11, number of reported values of 11 analytes; RV, reported values; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

			Analyte =	Acid as CaCO3		Ca (Calcium)		Cl (Chloride)		F (Fluoride)		K (Potassium)	
			95% confidence MPV	1.67 +/- 0.46		0.30 +/- 0.01		0.416 +/- 0.105		INSUFF DATA		0.057 +/- 0.005	
			F-pseudosigma =	0.88 mg/L		0.03 mg/L		0.294 mg/L		mg/L		0.012 mg/L	
Lab	OLR	V/10		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.1	9		0.03	1	0.32	3	0.376	4	0.02	NR	0.052	4
2	3.9	7				0.30	4	0.356	4			0.054	4
3	1.9	8		< 10	NR	0.34	1	0.620	3	< 0.1	NR	0.110	0
7	2.3	6				0.35	1	0.350	4	< 0.03	NR	< 1.19	NR
14	2.3	9		2.00	4	0.37	0	0.850	2	< 0.2	NR	0.070	2
15	3.2	9		1.21	3	0.31	3	0.377	4	< 0.1	NR	0.052	4
20	1.3	4				< 5	NR	< 5.5	NR			< 0.5	NR
22	4.0	1											
23	2.3	9		1.11	3	1.21	0	0.630	3	0.02	NR		
27	2.8	6				0.30	4	0.320	4				
28	2.1	9				0.30	4	0.490	4	0.02	NR	0.200	0
32	2.6	5				0.34	1	0.380	4			< 0.2	NR
33	2.9	7				0.28	3	0.350	4	0.01	NR	0.030	0
37	3.3	7				0.31	4					0.050	3
38	3.9	8		1.67	4	0.29	4					0.060	4
42	2.8	4				0.31	4			0.02	NR		
46	3.4	7				0.31	4	0.320	4	0.023	NR	0.050	3
48	1.2	9				0.28	3	7.000	0			0.120	0
52	3.5	2		< 2	NR	< 0.7	NR	< 0.5	NR	< 0.1	NR	< 0.1	NR
61	2.8	6		0.98	3	< 0.1	NR	0.470	4	0.02	NR	< 0.5	NR
62	2.3	3		0.40	2								
64	3.7	9				0.29	4	0.380	4			0.050	3
74	3.7	9		1.50	4	0.31	4	0.386	4	< 0.02	NR	0.045	3
78	0.8	4						5.000	0	< 0.1	NR		
89	3.3	9		1.83	4	0.28	3	0.746	2	< 0.05	NR	0.063	4
92	2.0	5				0.18	0	1.000	1			< 0.1	NR
93	3.3	8				0.32	3	0.336	4			0.052	4
98	3.2	5				0.31	4	< 0.2	NR	< 0.1	NR		
101	2.4	8				0.34	1	2.900	0			0.060	4
105	3.4	7		2.60	2	0.33	3	< 1.0	NR	< 0.2	NR	0.055	4
110	2.4	7				0.37	0	0.372	4			0.080	1
123	2.0	4				0.30	4					0.035	1
124	0.9	8		8.00	0	2.70	0	3.000	0	< 0.1	NR	3.100	0
130	1.7	9		3.00	1	0.30	4	0.800	2			0.190	0
134	2.9	9			0	0.38	0	0.380	4	< 0.1	NR	0.060	4
141	1.9	7			2	0.18	0	0.432	4	0.038	NR	< 0.01	NR
143	4.0	1											
150	2.3	3						0.520	4				
152	3.0	2				0.30	4						
158	3.6	8		5.35		0.30	4	0.400	4			0.050	3
178	3.0	2											
184	1.3	3						0.390	4	< 0.1	NR		
188	2.4	7		2.80		0.33	2	0.709	3			0.059	4
190	0.0	1											

Table 9.-- *Laboratory performance ratings for standard reference water sample P-17 (low ionic strength)--Continued*

Analyte =	Mg (Magnesium)		Na (Sodium)		pH		PO4 as P		SO4 (Sulfate)		Sp. Cond.	
95% confidence MPV	0.045 +/- 0.003		0.283 +/- 0.150		5.55 +/- 0.09		0.004 +/- 0.002		0.500 +/- 0.041		7.00 +/- 0.24	
F-pseudosigma =	0.007 mg/L		0.044 mg/L		0.27		0.003 mg/L		0.107 mg/L		0.68	µ S/cm
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	0.043	4	0.285	4	4.10	0	< 0.01	NR	0.48	4	7.33	4
2	0.041	3	0.272	4	5.64	4			0.50	4		
3	0.040	3	0.350	1	5.38	3	< 0.01	NR	0.93	0	7.00	4
7	< 0.056	NR	0.241	3	5.30	3	< 0.16	NR	0.00	0	6.50	3
14	0.040	3	0.120	0	5.16	2			0.45	4	7.00	4
15	0.044	4	0.258	3	5.68	4	< 0.02	NR	0.18	0	6.94	4
20	< 5	NR	< 5	NR	7.07	0	0.002	3	5.50	0	6.31	2
22							0.004	4				
23	0.020	0	0.290	4	5.59	4	0.000	2	0.30	1	7.08	4
27	0.039	3			7.26	0			0.35	2	6.70	4
28	0.100	0	0.400	0	5.66	4	0.080	0	0.53	4	7.40	3
32			0.370	1					0.50	4	7.40	3
33	0.040	NR	0.250	3	5.26	2	< 0.01	NR	0.45	4	7.12	4
37	0.043	4	0.300	4	5.57	4			0.64	2	7.70	2
38	0.044	4	0.250	3	5.60	4	0.003	4			7.02	4
42			0.244	3	6.25	0			0.49	4		
46	0.045	4	0.273	4	5.83	2	0.002	3				
48	0.060	0	0.370	1	6.10	0	0.005	4	0.00	0	6.46	3
52	< 0.05	NR	< 0.4	NR	5.44	4	0.006	3	< 10	NR	< 10	NR
61	< 0.05	NR	0.267	4	5.60	4	< 0.04	NR	1.10	0	6.20	2
62					5.15	2					7.47	3
64	0.040	3	0.270	4	5.49	4	0.004	4	0.50	4	7.44	3
74	0.046	4	0.313	3	5.51	4	< 0.001	NR	0.49	4	6.61	3
78					5.70	3			0.85	0	13.30	0
89	0.046	4	0.318	3	5.66	4	< 0.002	NR	0.59	3	7.59	3
92			0.320	3	5.32	3	0.006	3	< 5	NR		
93	0.034	2	0.258	3	5.40	3			0.47	4	6.62	3
98	0.047	4	0.300	4	4.00	0	< 0.3	NR	0.50	4		
101	0.050	3	0.280	4	5.72	3			0.30	1	6.40	3
105	0.046	4	0.298	4	5.71	3	< 0.002	NR	< 1	NR	7.00	4
110	0.080	0	0.270	4	5.55	4			0.55	4		
123	0.020	0	0.260	3								
124	0.200	0	1.900	0	5.68	4	< 0.03	NR	< 2	NR	6.59	3
130	0.060	0	0.370	1	5.09	1			0.50	4	8.00	2
134	0.050	3	0.300	4	5.33	3	< 0.01	NR	0.49	4	6.77	4
141	0.050	3	0.060	0	5.85	2					6.00	2
143					5.53	4						
150					5.10	1	0.001	2	< 5	NR		
152					5.90	2						
158	0.046	4	0.280	4	5.41	3			0.60	3	7.02	4
178					5.37	3					6.60	3
184							0.023	0	0.90	0		
188	0.042	4	2.810	0	5.21	2	0.000	2				
190											11.00	0

Table 10.-- *Laboratory performance ratings for standard reference water sample Hg-11 and Hg-12 (mercury)*

[MPV, most probable value; ug/L, micrograms per liter; Lab, laboratory number; OLR, overall laboratory rating; RV, reported valued]
OLR, overall laboratory rating for all reported values; V/11, number of reported values of 2 analytes; RV, reported values; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionable)	1.51-2.00
3 (Good)	0.51-1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01-1.50	NR (Not Rated)	

			Analyte =	Hg - 11 (mercury)			Hg - 12 (mercury)	
			95% Confidence MPV =	1.00	+/- 0.05		1.44	+/- 0.07
			F-pseudosigma =	0.19	µ g/L		0.25	µ g/L
Lab	OLR	V/2		RV	Rating		RV	Rating
1	4.0	2		0.93	4		1.53	4
3	0.0	2		12.00	0		14.00	0
7	2.0	2		0.75	2		1.10	2
13	3.5	2		1.10	3		1.55	4
15	4.0	2		0.92	4		1.41	4
16	2.0	2		0.70	1		1.20	3
18	1.5	2		1.40	0		1.23	3
23	2.0	1		1.27	2			
24	1.0	2		0.70	1		1.80	1
28	3.5	2		1.10	3		1.40	4
29	1.0	2		10.50	0		1.70	2
32	3.0	1		1.10	3			
34	3.5	2		0.92	4		1.22	3
37	0.5	2		1.40	0		1.90	1
39	2.5	2		1.00	4		1.80	1
42	1.5	2		1.13	3		2.30	0
45	3.5	2		0.95	4		1.24	3
46	3.5	2		0.91	4		1.28	3
48	3.5	2		0.88	3		1.40	4
50	4.0	1					1.50	4
52	3.5	2		1.00	4		1.30	3
59	1.5	2		1.49	0		1.66	3
61	4.0	2		1.05	4		1.44	4
63	3.0	2		0.95	4		1.70	2
65	4.0	1					1.37	4
68	1.5	2		0.70	1		1.80	2
69	3.0	2		0.82	3		1.20	3
70	3.0	1					1.60	3
74	4.0	2		0.91	4		1.32	4
75	4.0	2		1.04	4		1.39	4
78	4.0	2		0.94	4		1.44	4
79	1.0	2		0.46	0		1.18	2
81	0.0	2		1.40	0		0.50	0
89	4.0	2		0.93	4		1.51	4
90	1.5	2		1.14	3		2.36	0
97	0.0	1					2.42	0
98	2.0	2		0.75	2		1.80	2
100	4.0	2		1.08	4		1.37	4
105	2.0	2		1.33	1		1.61	3
108	3.5	2		0.97	4		1.63	3
119	3.5	2		1.15	3		1.45	4
120	1.5	2		1.31	1		1.73	2
124	3.0	2		0.90	3		1.60	3
126	1.0	1					1.00	1
133	2.5	2		0.80	2		1.21	3
134	3.5	2		1.10	3		1.40	4
138	3.5	2		1.10	3		1.40	4
141	1.5	2		0.67	1		1.13	2
144	2.0	1		0.80	2			
146	3.0	2		1.10	3		1.30	3
151	2.5	2		1.30	1		1.40	4
154	3.0	2		1.20	2		1.50	4
161	0.0	1					4.40	0
167	3.5	2		1.00	4		1.62	3
173	3.0	2		1.20	2		1.45	4
179	3.0	2		0.83	3		1.30	3
182	0.0	2		16.00	0		19.00	0
184	3.5	2		1.16	3		1.51	4
194	2.0	1		0.80	2			

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

0.	Other		
1.	AA: direct, air	= atomic absorption: direct, air	
2.	AA: direct, N20	= atomic absorption, direct, nitrous oxide	
3.	AA: flameless	= atomic absorption: flameless (graphite furnace)	
4.	ICP	= inductively coupled plasma	
5.	DCP	= direct coupled plasma	
6.	MS/ICP	= mass spectrometry/inductively coupled plasma	
10.	AA: extraction	= atomic absorption: extraction	*[chelating agent(s) specified]*
11.	AA: hydride	= atomic absorption: hydride	*[reducing agent specified]*
22.	Colorimetric	= color: [color reagent specified]	

Abbreviations and symbols

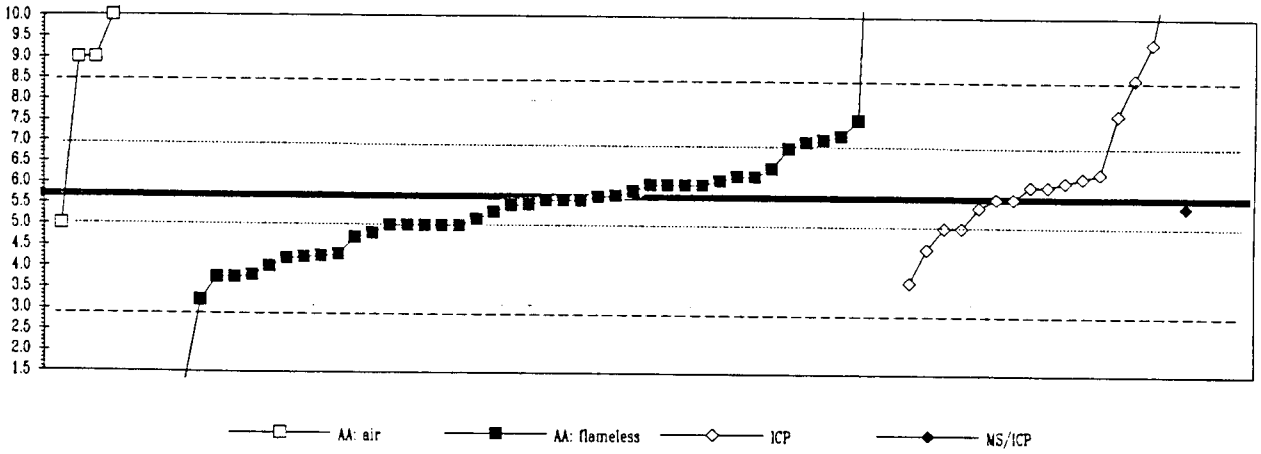
N	= number of samples
St dev	= traditional standard deviation
MPV	= 95% confidence most probable value
F-pseudsigma	= nonparametric statistic deviation
Hu	= upper hinge value
Hl	= lower hinge value
μ g/L	= micrograms per liter
mg/L	= milligrams per liter
Lab	= laboratory code number
NR	= not rated, less than value reported
<	= less than

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other		4. ICP		
1. AA: direct, air		6. MS/ICP		
3. AA: flameless				
N =	0	7	42	16	1
Minimum =		5.0	1.0	3.7	5.5
Maximum =		23.0	38.0	11.4	5.5
Median =		10.0	5.6	5.9	
St dev =		2.3	1.1	1.5	

Analyte = Ag (Silver) μ g/L

95% confidence MPV =	5.7	+/-	0.3
F-pseudosigma =	1.4		
N =	66		
Range =	1.0	-	38.0
Hu =	6.9		
Hl =	5.0		



Lab	Rating	Z-value	0	1	3	4	6
1	4	-0.15				5.5	
3	4	0.21				6.0	
5	2	1.43				7.7	
7	0	2.64				9.4	
13	1	-1.78			3.2		
15	3	0.85			6.9		
16	4	0.00				5.7	
18	4	0.43				6.3	
23	2	-1.05			4.2		
24	0	23.05			38.0		
28	0	12.35		23.0			
29	3	-1.00			4.3		
32	4	-0.14					5.5
39	4	-0.50				5.0	
42	3	-0.86				4.5	
45	4	0.02			5.7		
46	4	-0.15			5.5		
48	3	1.00			7.1		
50	4	-0.50			5.0		
52	0	9.71			19.3		
57	4	0.36			6.2		
59	0	-3.35				< 1	
61	NR	NR				< 10	
63	4	-0.50			5.0		
65	0	3.93		11.2			
68	2	-1.36			3.8		
69	4	0.50			6.4		
70	0	-3.35			1.0		
72	4	0.00				5.7	
73	4	-0.50				5.0	
74	4	-0.06			5.6		
76	4	-0.40			5.1		
77	4	-0.50			5.0		
78	4	0.36			6.2		
79	3	-0.64			4.8		
80	4	-0.14			5.5		
81	4	-0.50			5.0		
87	0	2.36		9.0			
89	2	1.06			7.2		
90	4	-0.26			5.3		
97	3	0.95			7.0		
98	NR	NR				< 10	
100	0	3.07		10.0			
101	0	4.07				11.4	
103	0	-3.35				< 1	

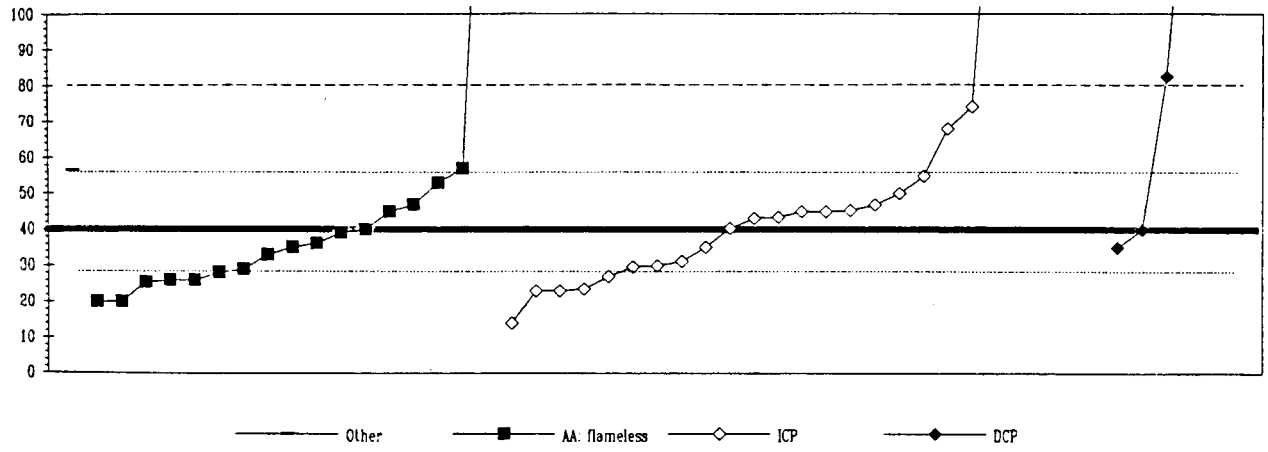
Lab	Rating	Z-value	0	1	3	4	6
105	4	0.11			5.9		
113	2	1.33			7.6		
118	0	2.36		9.0			
119	4	-0.07			5.6		
120	4	0.21			6.0		
121	NR	NR				< 5	
124	NR	NR				< 200	
128	2	-1.03			4.3		
131	NR	NR				< 10	
133	4	0.36				6.2	
134	4	0.00			5.7		
138	4	0.21			6.0		
141	4	0.21				6.0	
144	4	0.29			6.1		
146	4	0.29				6.1	
149	3	-0.71			4.7		
151	0	3.43		10.5			
153	4	-0.07			5.6		
154	2	-1.07			4.2		
161	4	-0.50		5.0			
167	2	-1.21			4.0		
173	2	-1.39			3.8		
179	2	-1.39			3.8		
180	2	-1.43				3.7	
182	4	0.21			6.0		
184	0	2.03				8.6	
193	4	0.21			6.0		
194	4	-0.50			5.0		

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP		
2. AA: direct, N2O			5. DCP		
3. AA: flameless					
N =	1	0	17	25	5
Minimum =	57		20	14	35
Maximum =	57		185	480	164
Median =			35	49	82
St Dev =			11	15	

Analyte = Al (Aluminum) μ g/L

95% confidence MPV =	40	+/-	6
F-pseudosigma =	20		
N =	48		
Range =	14	-	480
Hu =	56		
Hl =	29		



Lab	Rating	Z-value	0	2	3	4	5
1	4	-0.26					35
2	3	0.65			53		
3	3	-0.52				30	
5	NR	NR				< 30	
7	4	0.00				40	
8	0	21.21				460	
13	0	-1.93		< 2			
14	0	6.25					164
15	4	0.24				45	
16	NR	NR				< 300	
18	1	1.71				74	
23	3	0.82	57				
24	4	-0.26			35		
27	0	2.13					82
28	2	1.40				68	
32	3	-0.54				30	
39	4	0.50				50	
45	3	-0.75			25		
46	3	-0.67				27	
48	0	22.22				480	
50	3	-0.62			28		
51	4	-0.06			39		
52	NR	NR				< 100	
55	NR	NR				< 50	
57	NR	NR				< 250	
59	0	-2.03				< 0.1	
61	NR	NR				< 50	
63	4	0.34				47	
68	0	9.79				234	
70	NR	NR				< 100	
72	3	0.75				55	
73	2	-1.32				14	
74	3	-0.72			26		
77	4	-0.01			40		
78	3	-0.57			29		
81	2	-1.02			20		
86	3	-0.87				23	
89	0	7.32			185		
91	0	6.20				163	
97	NR	NR			47		
98	NR	NR				< 20	
100	NR	NR			< 40		
105	4	-0.45				31	
106	0	6.61					171
113	4	-0.21			36		

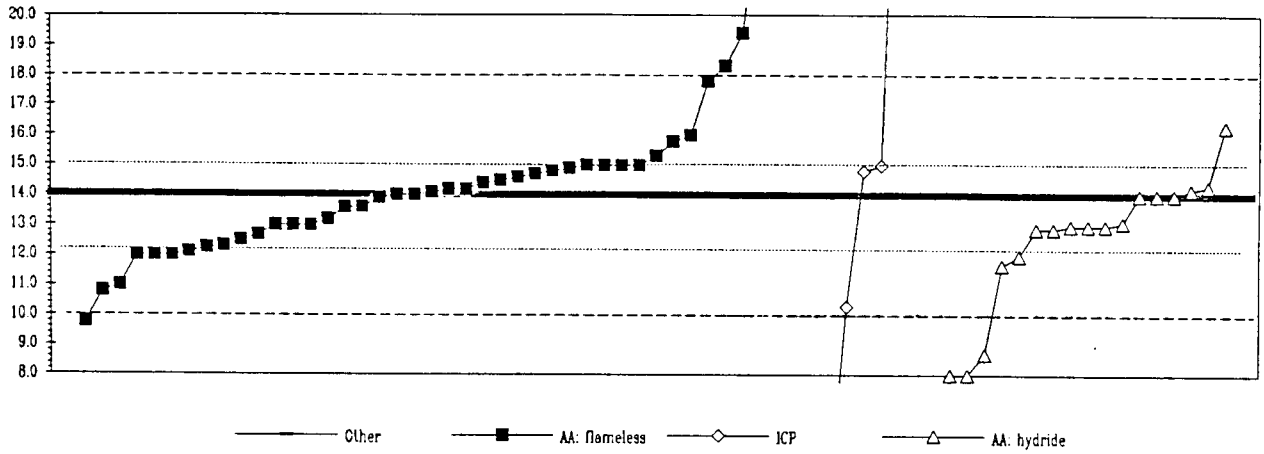
Lab	Rating	Z-value	0	2	3	4	5
119	3	0.85			57		
124	NR	NR				< 100	
128	NR	NR				< 26	
130	4	0.14				43	
131	0	6.56				170	
132	NR	NR		< 300			
138	4	0.24			45		
141	3	-0.84				24	
145	4	-0.26				35	
146	4	0.17				44	
149	2	-1.02			20		
154	4	0.24				45	
161	0	-2.03		0.1			
167	NR	NR				< 100	
180	4	0.26				45	
182	4	-0.36			33		
184	3	-0.87				23	
191	4	-0.01					40
193	3	-0.72			26		

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other 3. AA: flameless 4.ICP		11. AA: hydride, NaBH4		
N =	1	43	6	17
Minimum =	5.0	9.8	3.7	1.0
Maximum =	5.0	45.0	34.0	16.3
Median =		14.2	14.9	13.0
St Dev =		1.9		2.3

Analyte = As (Arsenic) μg/L

95% confidence MPV =	14.0	+/-	0.5
F-pseudosigma =	2.0		
N =	67		
Range =	1.0	-	45.0
Hu =	15.0		
HI =	12.3		



Lab	Rating	Z-value	0	3	4	11
1	4	-0.50				13.0
3	4	-0.50		13.0		
5	NR	NR			< 30	
7	4	0.40		14.8		
13	0	4.85		23.8		
15	4	-0.50		13.0		
16	NR	NR			< 60	
18	4	0.15				14.3
23	0	-2.09		9.8		
24	1	1.88		17.8		
28	0	9.90			34.0	
29	0	2.67		19.4		
32	4	0.40			14.8	
35	3	-0.54				12.9
37	3	-0.99				12.0
39	0	-6.44				1.0
42	4	0.00				14.0
45	4	-0.40		13.2		
46	4	0.20		14.4		
48	4	0.45		14.9		
50	4	-0.50				13.0
51	0	15.35		45.0		
52	4	0.25		14.5		
55	4	0.05		14.1		
57	4	-0.50				13.0
59	4	0.50			15.0	
61	0	12.87		40.0		
63	3	-0.74		12.5		
65	0	11.44		37.1		
68	2	-1.49		11.0		
69	4	0.10		14.2		
70	3	-0.94		12.1		
72	3	-0.64		12.7		
73	1	-1.83			10.3	
74	4	0.10		14.2		
75	3	-0.54				12.9
76	1	-1.58		10.8		
77	4	0.50		15.0		
78	3	0.64		15.3		
80	4	0.50		15.0		
81	3	0.93		16.0		
87	4	0.10				14.2
89	4	-0.45				13.1
91	3	-0.99		12.0		
97	2	1.14				16.3

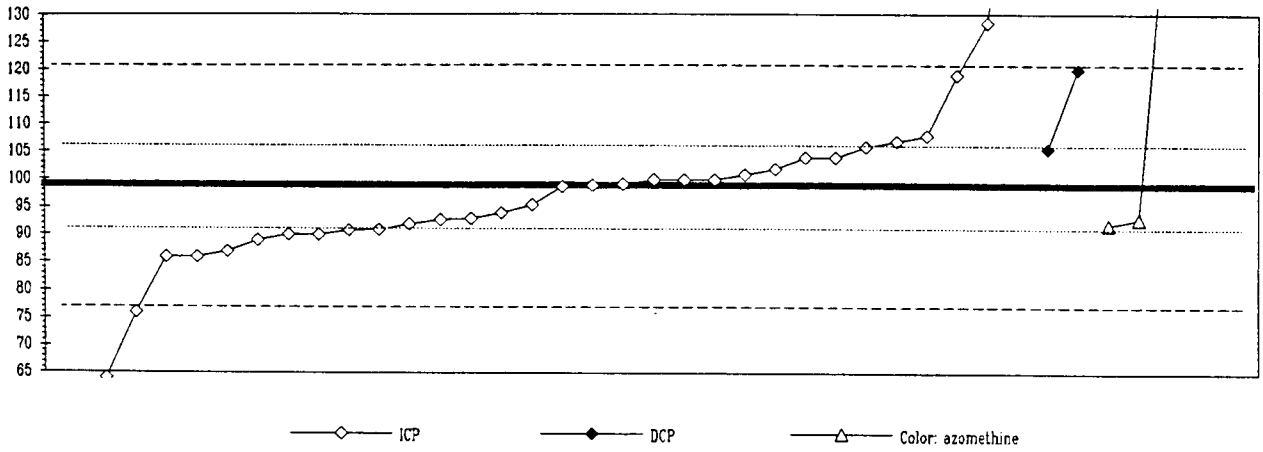
Lab	Rating	Z-value	0	3	4	11
98	NR	NR			< 40	
100	4	0.35		14.7		
105	4	0.30		14.6		
113	4	-0.19		13.6		
119	4	0.00				14.0
120	2	-1.15				11.7
124	0	-2.97				8.0
128	4	-0.20		13.6		
131	NR	NR			< 50	
133	3	-0.87		12.3		
134	0	-2.62				8.7
138	3	-0.84		12.3		
141	0	7.43			29.0	
144	4	0.00		14.0		
145	NR	NR			< 39	
146	3	0.89		15.8		
149	3	-0.99		12.0		
151	4	0.00				14.01
154	4	-0.05		13.9		
167	4	0.50		15.0		
173	4	0.00		14.0		
179	3	-0.99		12.0		
180	0	-5.10			3.7	
182	0	-4.46	5.0			
184	0	2.13		18.3		
193	4	-0.50		13.0		
194	4	0.50		15.0		

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other	22. Color: azomethine		
4. ICP			
5. DCP			
N =	0	33	2	5
Minimum =		25	106	92
Maximum =		174	120	320
Median =		97		
St Dev =		12		

Analyte = B (Boron) μg/L

95% confidence MPV =	99	+/-	3
F-pseudosigma =	11		
N =	40		
Range =	25	-	320
Hu =	106		
Hl =	91		



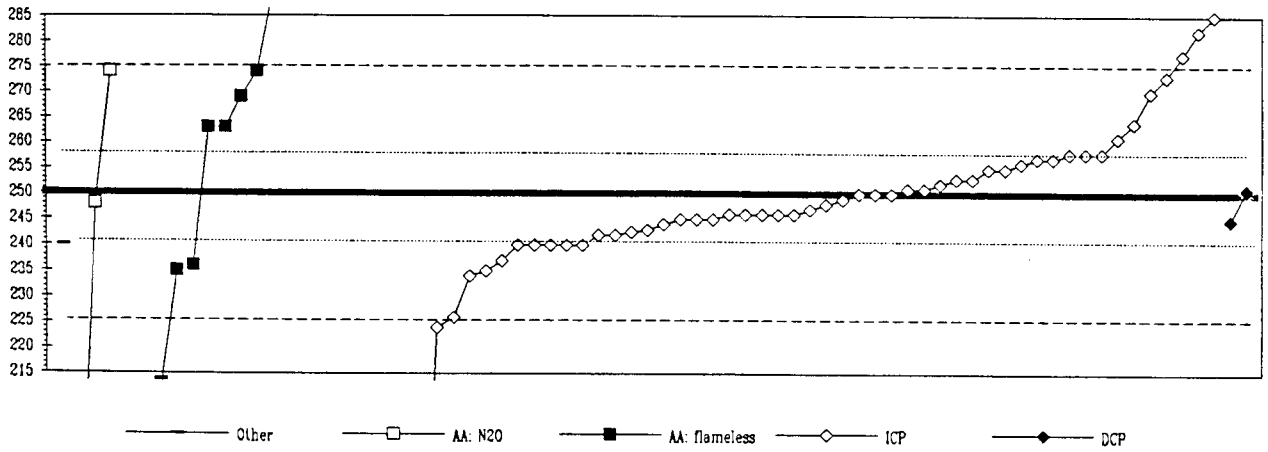
Lab	Rating	Z-value	0	4	5	22
1	3	0.60			106	
3	3	-0.82		90		
5	4	0.18		101		
7	3	0.82		108		
14	1	1.91			120	
15	3	0.73		107		
16	0	6.81		174		
18	3	-0.55		93		
24	4	-0.02		99		
28	4	0.00		99		
32	4	0.09		100		
37	4	0.27		102		
39	2	-1.18		86		
45	0	6.36				169
46	4	0.45		104		
48	NR	NR		< 100		
52	NR	NR		< 3400		
55	0	-4.45		< 50		
57	NR	NR		< 500		
61	4	0.03		99		
63	0	-3.54		60		
68	0	-2.09		76		
70	3	-0.73		91		
77	0	20.08				320
86	3	-0.91		89		
98	3	-0.64		92		
100	0	-6.72		25		
103	3	-0.82		90		
109	0	2.68		129		
119	2	-1.09		87		
121	1	1.82		119		
124	4	0.09		100		
128	3	-0.74		91		
129	0	5.09				155
130	2	-1.18		86		
131	4	-0.45		94		
134	3	-0.64				92
141	4	-0.32		96		
145	4	0.45		104		
146	4	0.09		100		
154	0	-3.18		64		
167	3	0.64		106		
180	3	-0.55				93
184	3	-0.56		93		

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP		
2. AA: direct, N20			5. DCP		
3. AA: flameless					
N =	1	4	18	50	2
Minimum =	240	175	62	166	245
Maximum =	240	274	477	285	251
Median =			282	248	
St Dev =			28	12	

Analyte = Ba (Barium) μg/L

95% confidence MPV =	250	+/-	3
F-pseudosigma =	12		
N =	75		
Range =	62	-	477
Hu =	258		
Hl =	242		



Lab	Rating	Z-value	0	2	3	4	5
1	4	0.30				253	
3	4	-0.21				247	
5	4	0.04				250	
7	4	-0.39				245	
8	4	0.47				255	
13	0	3.57			291		
15	0	-2.19				224	
16	3	-0.64				242	
18	0	3.05				285	
23	0	2.11		274			
24	4	-0.30				246	
27	4	-0.39					245
28	3	0.99				261	
29	2	1.16			263		
32	4	0.13				251	
37	4	0.47				255	
39	4	-0.04				249	
42	0	2.02				273	
45	2	-1.33				234	
46	4	-0.39				245	
48	1	1.76				270	
50	2	1.16			263		
52	4	0.13				251	
55	4	-0.13				248	
57	3	-0.82				240	
59	3	0.73				258	
61	3	-0.64				242	
63	0	-7.17				166	
65	0	-6.02		179			
68	4	0.04				250	
69	0	4.77			305		
70	4	-0.47				244	
72	3	-0.56				243	
74	3	-0.82				240	
76	0	2.11			274		
77	0	19.55			477		
78	2	-1.16			236		
80	4	-0.13		248			
81	0	-3.14			213		
87	0	-6.40		175			
89	1	1.68			269		
90	0	4.17			298		
91	4	-0.30				246	
97	0	3.48			290		
98	4	-0.30				246	

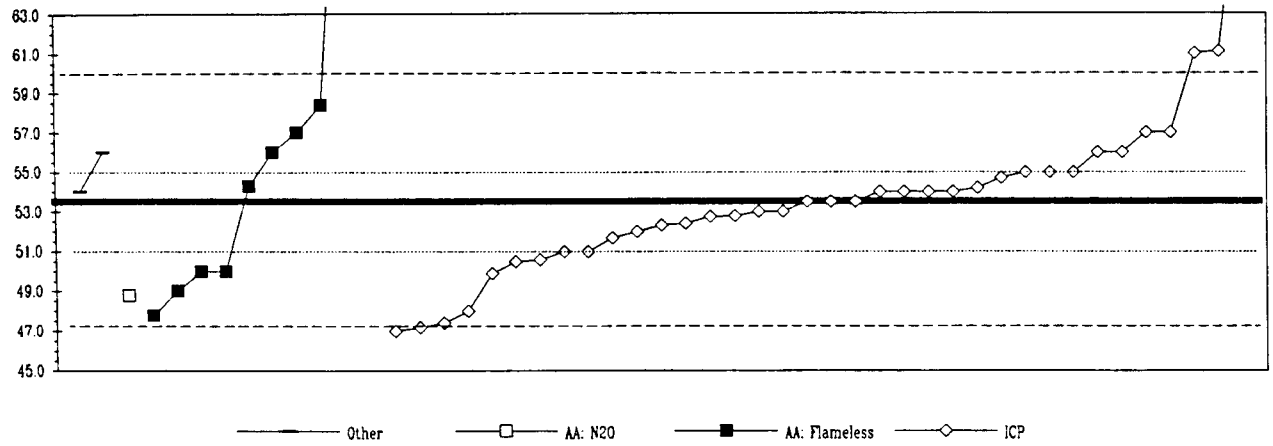
Lab	Rating	Z-value	0	2	3	4	5
100	3	-0.82				240	
101	0	2.79				282	
103	4	0.04				250	
105	2	1.25				264	
113	0	5.52			314		
119	3	-0.82				240	
120	3	-0.82	240				
121	3	0.56				256	
124	0	-2.02				226	
126	0	6.06			320		
128	4	0.21				252	
130	2	-1.07				237	
131	2	-1.25				235	
133	4	0.30				253	
138	4	-0.39				245	
141	3	0.64				257	
145	4	-0.30				246	
146	3	0.73				258	
149	0	10.35			370		
151	0	5.28			311		
152	3	0.64				257	
154	4	-0.30				246	
167	3	0.73				258	
173	2	-1.25			235		
180	0	2.39				277	
182	0	-4.94			192		
184	3	-0.59				243	
191	4	0.13					251
193	0	-16.11			62		
194	3	-0.82				240	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP	
2. AA: direct. N20				
3. AA: flameless				
N =	2	1	10	37
Minimum =	54.0	48.8	47.8	47.0
Maximum =	56.0	48.8	84.0	80.0
Median =			55.2	53.5
St Dev =			12.4	6.3

Analyte = Be (Beryllium) μg/L

95% confidence MPV =	53.5	+/-	0.8
F-pseudosigma =	3.0		
N =	50		
Range =	47.0	-	84.0
Hu =	55.0		
Hl =	51.0		



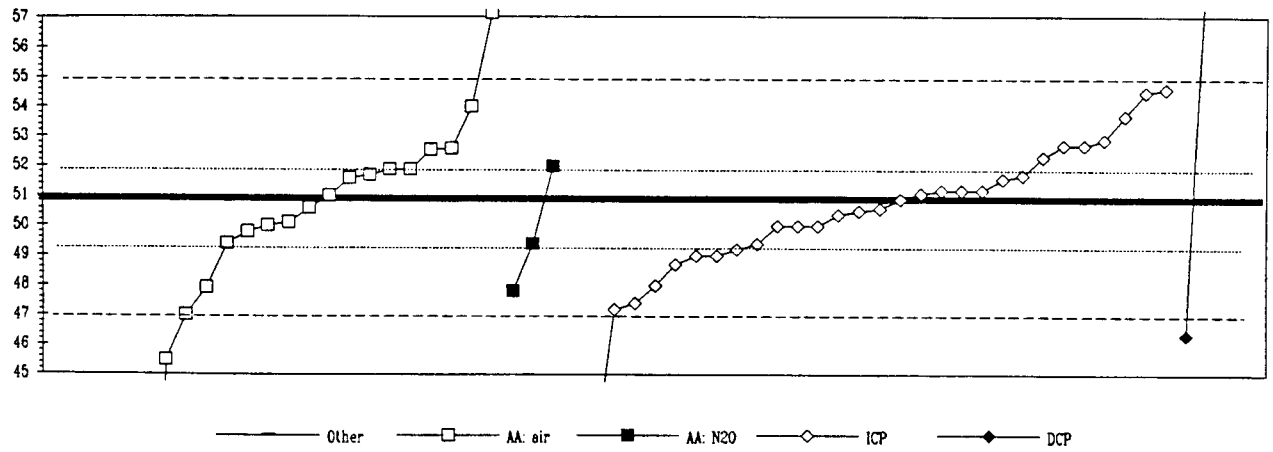
Lab	Rating	Z-value	0	2	3	4
1	4	-0.25				52.8
3	3	0.84				56.0
7	0	-2.12				47.2
8	2	1.18				57.0
15	1	-1.85				48.0
16	3	-0.84				51.0
18	3	0.51				55.0
23	0	8.06			77.4	
28	3	0.84	56.0			
32	0	2.56				61.1
39	4	0.17				54.0
45	4	0.00				53.5
46	3	-0.51				52.0
48	0	8.94				80.0
52	4	0.17	54.0			
55	4	-0.17				53.0
57	3	-0.84				51.0
61	4	-0.40				52.3
63	2	1.18				57.0
65	1	-1.59		48.8		
68	4	-0.24				52.8
70	0	-2.19				47.0
72	3	-0.61				51.7
74	2	-1.01				50.5
78	2	1.18			57.0	
81	2	-1.18			50.0	
91	4	0.17				54.0
97	4	-0.37				52.4
98	4	-0.17				53.0
100	0	-2.06				47.4
103	3	0.84				56.0
105	4	0.24				54.2
119	4	0.27			54.3	
120	1	1.65			58.4	
124	0	2.53				61.0
128	4	0.00				53.5
133	4	0.40				54.7
138	2	-1.21				49.9
141	4	0.17				54.0
144	0	10.29			84.0	
145	4	0.17				54.0
146	4	0.00				53.5
151	1	-1.92			47.8	
152	3	0.51				55.0
154	2	-1.18			50.0	
167	3	0.51				55.0
179	3	0.84			56.0	
180	0	6.04				71.4
184	3	-0.98				50.6
193	1	-1.52			49.0	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP		
1. AA: direct, air			5. DCP		
2. AA: direct, N2O					
N =	2	21	5	50	5
Minimum =	58.4	5.2	47.8	36.9	46.3
Maximum =	130	59.9	57.0	55.4	59.4
Median =		50.6	51.0	50.7	51.0
St Dev =		2.7		2.5	

Analyte = Ca (Calcium) mg/L

95% confidence MPV =	50.9	+/-	0.4
F-pseudosigma =	2.0		
N =	83		
Range =	5.2	-	130
Hu =	51.9		
Hl =	49.2		



Lab	Rating	Z-value	0	1	2	4	5
1	4	-0.44				50.0	
2	3	-0.75			49.4		
3	1	1.80				54.5	
5	2	1.40				53.7	
7	4	0.15				51.2	
8	3	0.70				52.3	
13	4	0.40		51.7			
14	0	4.25					59.4
15	1	-1.85				47.2	
16	3	-0.85				49.2	
18	3	0.90				52.7	
23	0	39.52	130				
24	1	-1.75				47.4	
27	0	-2.28					46.3
28	4	0.34				51.6	
32	4	0.15				51.2	
37	0	-6.99				36.9	
39	4	0.15				51.2	
42	3	0.90				52.7	
43	3	-0.95				49.0	
45	0	-22.86		5.2			
46	3	-0.95				49.0	
48	1	1.85				54.6	
51	2	-1.45				48.0	
52	4	0.40				51.7	
55	4	-0.25				50.4	
57	4	-0.45				50.0	
59	4	-0.45				50.0	
61	4	-0.20				50.5	
63	0	-4.30				42.3	
68	2	-1.10				48.7	
69	3	-0.55		49.8			
70	4	0.10				51.1	
72	3	1.00				52.9	
74	3	-0.75				49.4	
75	3	0.85		52.6			
76	4	-0.15		50.6			
78	0	4.50		59.9			
80	0	-22.68		5.5			
83	4	-0.40		50.1			
86	4	-0.15				50.6	
87	3	0.55			52.0		
89	1	-1.55			47.8		
91	4	0.00				50.9	
92	0	-20.04		10.6			

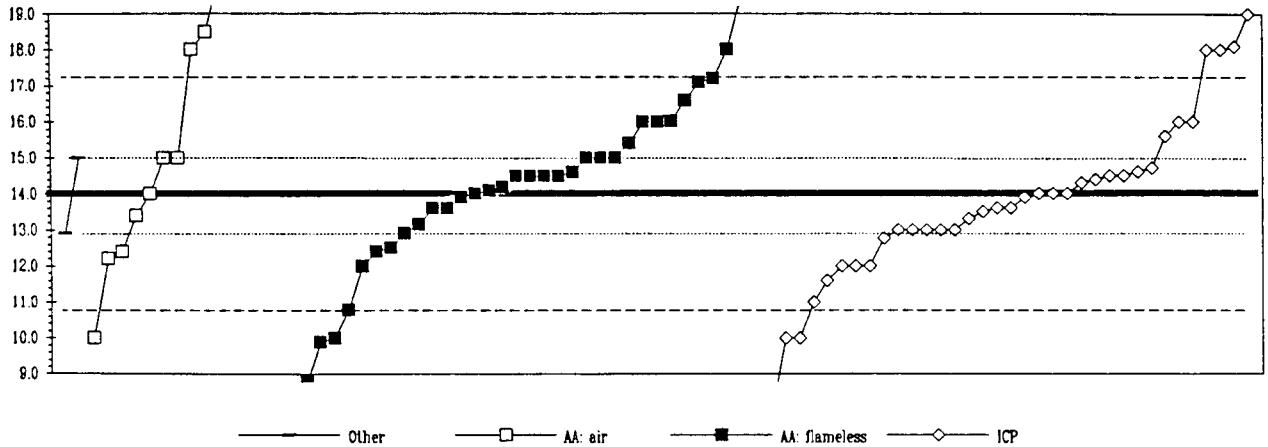
Lab	Rating	Z-value	0	1	2	4	5
98	0	-2.65				45.6	
100	4	0.20				51.3	
101	4	-0.45		50.0			
103	2	-1.45				48.0	
105	2	1.40				53.7	
106	3	-0.90					49.1
109	3	-0.75		49.4			
113	4	0.50		51.9			
118	1	1.55		54.0			
119	4	-0.10				50.7	
120	3	0.83		52.6			
121	3	0.90				52.7	
123	0	3.12		57.1			
124	0	2.25				55.4	
126	4	0.50		51.9			
128	4	0.15				51.2	
130	0	-2.15				46.6	
131	4	0.20				51.3	
132	0	-2.70		45.5			
133	4	0.40				51.7	
134	4	0.05		51.0			
138	4	0.25				51.4	
140	2	-1.50		47.9			
141	3	-0.52				49.9	
145	4	-0.23				50.4	
146	1	-1.90				47.1	
151	4	0.05			51.0		
152	1	1.52				53.9	
153	0	3.75	58.4				
154	3	-0.85				49.2	
167	4	0.05					51.0
179	4	0.35		51.6			
180	1	1.59				54.1	
182	0	3.05			57.0		
184	2	-1.12				48.7	
190	1	-1.95		47.0			
191	4	0.50					51.9
194	3	-0.70				49.5	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP	
1. AA: direct, air				
3. AA: flameless				
N =	2	10	38	34
Minimum =	12.9	10.0	3.1	8.0
Maximum =	15.0	20.0	30.0	19.0
Median =		14.5	14.2	13.7
St Dev =		3.4	2.5	2.4

Analyte = Cd (Cadmium) μg/L

95% confidence MPV =	14.0	+/-	0.3
F-pseudosigma =	1.5		
N =	84		
Range =	3.1	-	30.0
Hu =	15.0		
Hl =	13.0		



Lab	Rating	Z-value	0	1	3	4
1	3	-0.82				12.6
3	4	0.00				14.0
5	4	-0.07				13.9
7	4	0.20				14.3
8	2	-1.32				12.0
13	0	-5.23			6.1	
15	4	-0.46				13.3
16	4	-0.26				13.6
18	2	-1.32				12.0
23	2	-1.32			12.0	
24	0	3.62			19.5	
27	1	1.71			16.6	
28	3	-0.66				13.0
29	0	-7.17			3.1	
32	4	0.46				14.7
37	4	0.33				14.5
39	2	-1.32				12.0
42	0	-2.63				10.0
45	4	0.33			14.5	
46	3	-0.55			13.2	
48	0	-2.63				10.0
50	4	0.00			14.0	
51	0	-5.46			5.7	
52	4	0.33			14.5	
55	4	-0.07			13.9	
57	3	0.66			15.0	
59	3	-0.66				13.0
61	4	-0.26				13.6
63	3	0.66			15.0	
65	0	2.11			17.2	
68	4	0.39				14.6
69	4	0.13			14.2	
70	1	-1.97				11.0
73	4	-0.33				13.5
74	3	-0.66				13.0
75	4	-0.26			13.6	
76	4	-0.26			13.6	
77	0	-2.63			10.0	
78	0	2.63			18.0	
79	2	-1.05			12.4	
81	3	0.66			15.0	
87	3	0.66		15.0		
89	3	-0.99			12.5	
90	2	1.33			16.0	
91	0	3.29				19.0

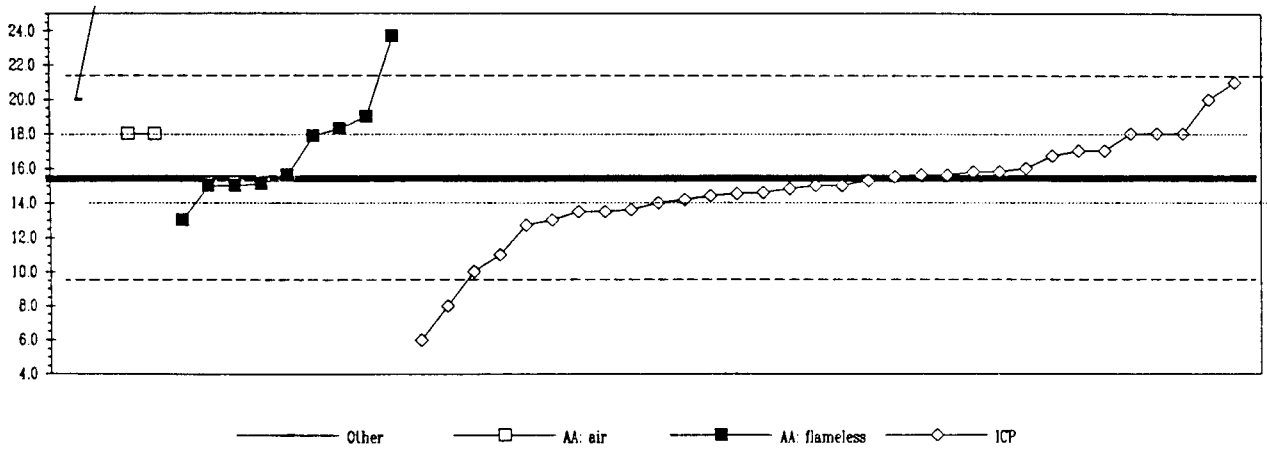
Lab	Rating	Z-value	0	1	3	4
97	0	-2.11			10.8	
98	3	-0.66				13.0
100	0	2.63		18.0		
101	0	2.63				18.0
103	4	0.00				14.0
105	3	-0.72			12.9	
108	0	-3.95			8.0	
113	0	2.04			17.1	
118	0	3.95		20.0		
119	3	0.92			15.4	
120	2	-1.18		12.2		
121	3	-0.66				13.0
124	0	2.63				18.0
128	4	0.26				14.4
130	4	0.00				14.0
131	0	-3.95				8.0
132	0	-2.63		10.0		
133	0	2.70				18.1
134	4	0.39			14.6	
138	3	-0.72	12.9			
140	4	-0.39		13.4		
141	4	0.33				14.5
144	2	1.32			16.0	
145	2	1.32				16.0
146	1	-1.58				11.6
151	4	0.33			14.5	
153	4	0.07			14.1	
154	4	0.33			14.5	
158	0	-3.42			8.8	
161	3	0.66		15.0		
167	0	10.53			30.0	
173	0	-4.47			7.2	
179	0	2.96		18.5		
180	2	1.05				15.6
182	0	-2.70			9.9	
184	2	-1.05		12.4		
190	3	0.66	15.0			
193	4	0.00		14.0		
194	2	1.32			16.0	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP	
1. AA: direct, air				
3. AA: flameless				
N =	2	1	8	29
Minimum =	20.0	18.0	13.0	6.0
Maximum =	27.0	18.0	23.7	21.0
Median =			15.4	15.0
St Dev =			3.3	1.9

Analyte = Co (Cobalt) μ g/L

95% confidence MPV =	15.4	+/-	0.9
R-pseudosigma =	2.9		
N =	40		
Range =	6.0	-	27.0
Hu =	18.0		
Hl =	14.1		



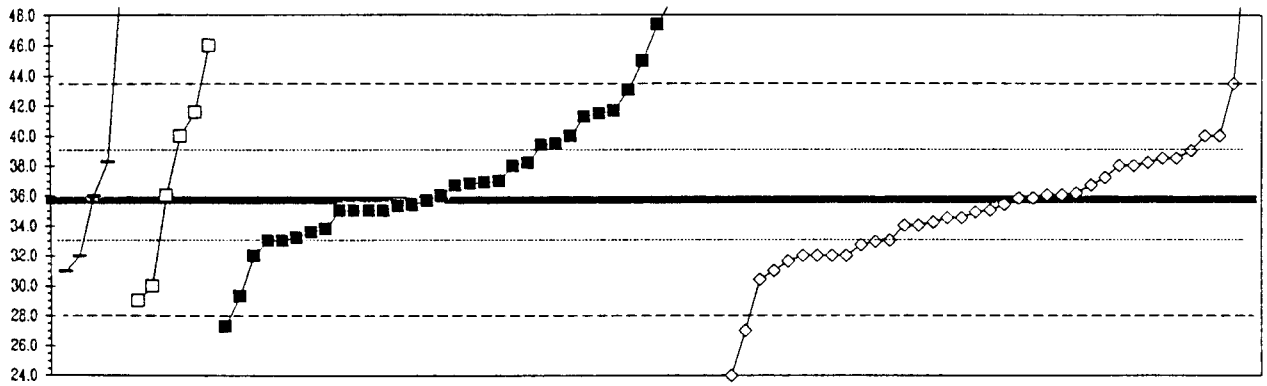
Lab	Rating	Z-value	0	1	3	4
1	3	-0.84			13.0	
3	1	-1.89				10.0
5	3	-0.95				12.7
7	4	0.46				16.7
8	3	0.56				17.0
14	1	1.61	20.0			
15	4	-0.28				14.6
16	3	-0.67				13.5
18	4	-0.49				14.0
24	4	-0.42				14.2
28	0	4.06	27.0			
32	4	-0.04				15.3
39	3	-0.84				13.0
46	3	0.91				18.0
50	4	-0.14			15.0	
51	2	1.02			18.3	
52	4	0.07				15.6
55	4	-0.11			15.1	
57	NR	NR				< 100
61	1	-1.54				11.0
63	0	-3.29				6.0
68	4	0.07				15.6
70	NR	NR				< 20
72	4	-0.32				14.5
74	4	-0.14				15.0
81	4	-0.14			15.0	
89	0	2.91			23.7	
91	3	0.56				17.0
97	3	0.88			17.9	
98	1	1.61				20.0
100	3	0.91		18.0		
103	4	-0.14				15.0
105	4	0.14				15.8
121	4	0.04				15.5
124	1	1.96				21.0
128	4	-0.35				14.4
131	NR	NR				< 20
134	4	0.07			15.6	
138	3	-0.63				13.6
141	4	0.21				16.0
145	3	0.91				18.0
146	4	-0.21				14.8
154	0	-2.59				8.0
167	NR	NR				< 20
180	4	0.14				15.8
182	2	1.26			19.0	
184	3	-0.67				13.5
193	3	0.91		18.0		

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP	
1. AA: direct, air				
3. AA: flameless				
N =	5	6	35	37
Minimum =	31.0	29.0	27.3	24.0
Maximum =	50.0	46.0	63.8	54.0
Median =	36.0	38.0	36.8	35.0
St Dev =			4.3	3.7

Analyte = Cr (Chromium) μg/L

95% confidence MPV =	35.7	+/-	0.8
F-pseudosigma =	3.9		
N =	83		
Range =	24.0	-	63.8
Hu =	38.2		
Hl =	33.0		



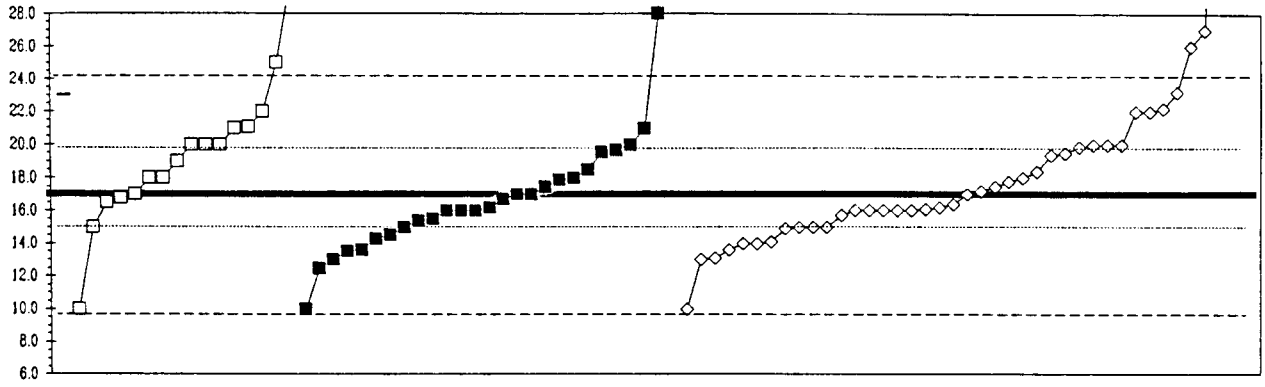
Lab	Rating	Z-value	0	1	3	4
1	4	0.12				36.2
3	4	0.08				36.0
5	2	-1.06				31.6
7	2	-1.37				30.4
8	3	-0.96				32.0
13	0	7.29			63.8	
14	0	3.71	50.0			
15	3	-0.70				33.0
16	3	0.73				38.5
18	4	0.08				36.0
23	2	1.50			41.5	
24	4	-0.08				35.4
27	3	0.65			38.2	
28	0	-3.04				24.0
29	3	-0.65			33.2	
32	3	0.73				38.5
37	3	-0.96				32.0
39	4	-0.18				35.0
42	3	-0.96				32.0
45	4	0.29			36.8	
46	4	-0.10			35.3	
48	2	1.45			41.3	
50	3	0.60			38.0	
51	4	0.00			35.7	
52	0	3.45			49.0	
55	3	0.96			39.4	
57	4	-0.18			35.0	
59	4	-0.44				34.0
61	3	-0.73				32.9
63	4	-0.18			35.0	
65	0	-9.26	< 0.01			
68	4	0.39				37.2
69	4	0.31			36.9	
70	2	-1.22				31.0
72	3	-0.78				32.7
73	4	0.03				35.8
74	3	-0.96				32.0
75	4	-0.49			33.8	
76	0	-2.18			27.3	
77	0	3.45			49.0	
78	4	0.08		36.0		
79	3	-0.96			32.0	
81	4	-0.18			35.0	
86	0	-2.26				27.0
87	4	0.08	36.0			
89	2	1.12			40.0	
90	0	3.04			47.4	
91	3	0.60				38.0
97	1	1.56			41.7	
98	4	-0.44				34.0
100	2	1.12		40.0		
101	0	4.75				54.0
103	3	0.60				38.0
105	3	0.99			39.5	
108	4	0.08			36.0	
113	1	1.91			43.1	
118	1	-1.74		29.0		
119	4	0.26			36.7	
120	3	-0.54			33.6	
121	0	2.02				43.5
124	NR	NR				< 50
128	4	0.03				35.8
130	3	0.86				39.0
131	2	1.12				40.0
133	4	-0.21				34.9
134	0	2.67		46.0		
138	4	-0.39				34.2
140	3	0.67	38.3			
141	4	-0.31				34.5
145	2	1.12				40.0
146	4	-0.31				34.5
149	1	1.53		41.6		
151	1	-1.66			29.3	
153	4	-0.08			35.4	
158	3	-0.70			33.0	
161	3	-0.96	32.0			
167	4	-0.18			35.0	
173	0	2.41			45.0	
179	0	4.31			52.3	
180	3	0.65				38.2
182	3	-0.70			33.0	
184	4	0.26				36.7
190	2	-1.22	31.0			
193	2	-1.48		30.0		
194	4	0.34			37.0	

Table 11.-- *Statistical summary of reported data for standard reference sample T-115 (trace constituents)--Continued*

0. Other		4. ICP		
1. AA: direct, air				
3. AA: flameless				
N =	1	16	27	40
Minimum =	23.0	10.0	10.0	10.0
Maximum =	23.0	30.0	134	54.0
Median =		19.5	16.0	16.7
St Dev =		3.5	3.4	3.6

Analyte = Cu(Copper) μ g/L

95% confidence MPV =	17.0	+/-	0.8
F-pseudosigma =	3.6		
N =	84		
Range =	10.0	-	134
Hu =	19.8		
Hl =	15.0		



Lab	Rating	Z-value	0	1	3	4
1	3	0.82				19.9
3	4	-0.28				16.0
5	4	-0.25				16.1
7	3	-0.81				14.1
8	3	-0.56				15.0
13	NR	NR			< 50	
14	1	1.68	23.0			
15	3	-0.98			13.5	
16	2	-1.09				13.1
18	4	-0.28				16.0
23	3	0.73			19.6	
24	4	0.39				18.4
27	3	-0.70			14.5	
28	0	2.53				26.0
29	1	-1.97			10.0	
32	4	0.06				17.2
37	3	0.84				20.0
39	2	-1.12				13.0
42	4	-0.28				16.0
45	3	-0.51			15.2	
46	4	-0.45			15.4	
48	1	-1.97				10.0
50	4	0.00			17.0	
51	4	0.28			18.0	
52	2	1.12		21.0		
55	NR	NR				< 10
57	4	0.28		18.0		
59	0	2.81				27.0
61	3	-0.59				14.9
63	2	-1.26			12.5	
65	4	-0.06		16.8		
68	1	1.74				23.2
69	2	1.40		22.0		
70	4	-0.28				16.0
72	0	6.74				41.0
73	4	0.14				17.5
74	4	0.28				18.0
75	3	-0.95			13.6	
76	4	0.28		18.0		
77	0	32.85			134	
78	4	0.00			17.0	
79	3	-0.56			15.0	
81	4	-0.28			16.0	
83	1	-1.97		10.0		
87	3	0.84		20.0		

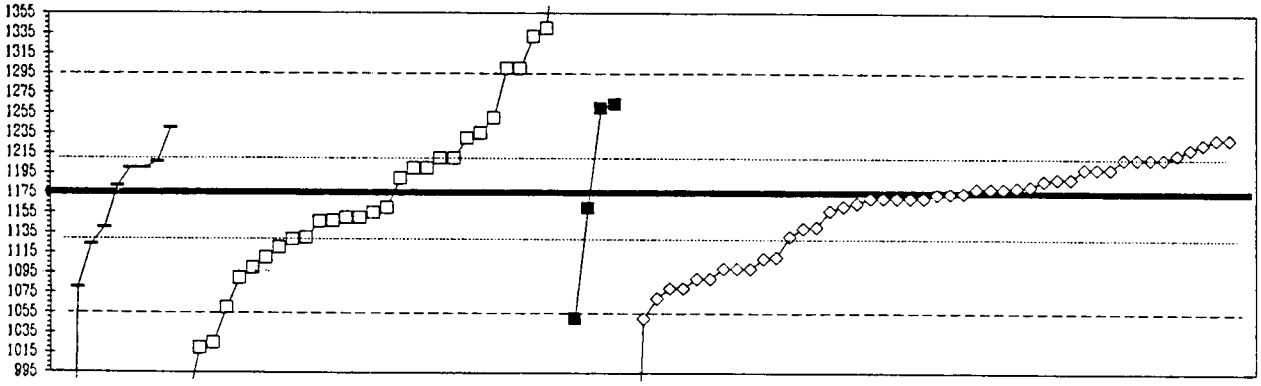
Lab	Rating	Z-value	0	1	3	4
89	4	0.42			18.5	
90	NR	NR		< 100		
91	4	-0.28				16.0
97	4	0.25			17.9	
98	3	-0.56				15.0
100	3	-0.56		15.0		
101	2	1.46				22.2
103	2	1.40				22.0
105	3	0.70				19.5
108	2	1.12			21.0	
113	3	0.76			19.7	
118	3	0.56		19.0		
119	3	-0.56				15.0
120	4	0.14			17.5	
121	4	0.00				17.0
124	0	10.39				54.0
128	4	-0.36				15.7
130	3	-0.84				14.0
131	3	0.84				20.0
132	3	0.84			20.0	
133	4	-0.22				16.2
134	4	-0.08			16.7	
138	4	0.22				17.8
140	2	1.15		21.1		
141	3	0.84				20.0
144	2	-1.12			13.0	
145	NR	NR				< 26
146	4	-0.17				16.4
149	0	2.25		25.0		
151	4	-0.14		16.5		
153	4	-0.42			15.5	
154	4	-0.28			16.0	
158	3	0.84		20.0		
161	3	0.84		20.0		
167	2	1.40				22.0
173	0	3.65		30.0		
179	3	-0.76			14.3	
180	3	0.67				19.4
182	4	-0.28			16.0	
184	3	-0.95				13.6
190	3	-0.84				14.0
193	4	0.00		17.0		
194	0	3.09			28.0	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP	
1. AA: direct, air				
3. AA: flameless				
N =	9	29	4	50
Minimum =	131	958	1050	730
Maximum =	1240	1487	1264	1700
Median =	1182	1155		1175
St Dev =	53	85		92

Analyte = Fe (Iron) μg/L

95% confidence MPV =	1175	+/-	12
F-pseudosigma =	60		
N =	92		
Range =	131	-	1700
Hu =	1210		
Hl =	1129		



Other AA: air AA: flameless ICP

Lab	Rating	Z-value	0	1	3	4
1	4	0.00				1175
3	3	0.59				1210
5	4	-0.08				1170
7	2	-1.24				1100
8	4	0.42				1200
13	3	-0.74		1130		
14	0	-17.38	131			
15	1	-1.58				1080
16	4	0.12				1182
18	4	0.25				1190
21	4	0.12	1182			
23	3	-0.78		1128		
24	4	-0.08				1170
27	3	0.52	1206			
28	2	1.40				1259
29	0	-2.08			1050	
32	0	8.75				1700
37	2	1.09				1240
39	4	0.09				1180
42	3	0.75				1220
45	1	-1.91		1060		
46	3	0.59				1210
48	0	-7.41				730
49	4	0.42	1200			
50	4	-0.24			1160	
51	2	-1.08		1110		
52	3	0.92				1230
55	4	-0.01				1174
57	4	-0.41		1150		
59	4	0.25				1190
61	4	-0.28				1158
63	2	-1.41				1090
65	4	-0.48		1146		
68	4	-0.08				1170
69	0	2.09		1300		
70	3	-0.58				1140
72	2	-1.08				1110
73	3	-0.56				1141
74	2	-1.41				1090
75	4	0.25		1190		
76	3	1.00		1235		
77	2	1.42			1260	
78	4	-0.24		1160		
79	2	-1.24				1100
81	4	-0.41		1150		
83	4	-0.33		1155		

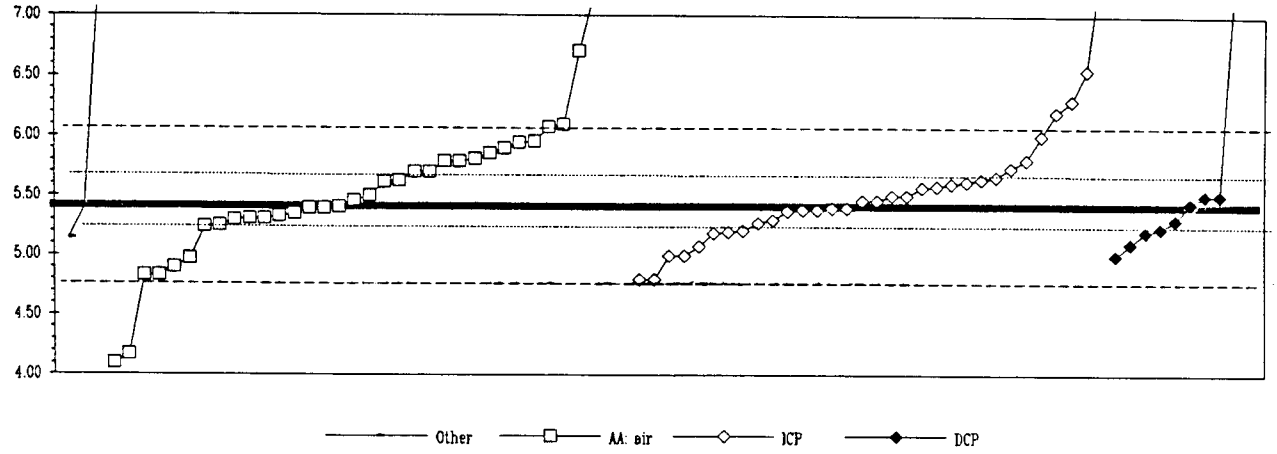
Lab	Rating	Z-value	0	1	3	4
86	3	0.65				1214
87	2	1.09	1240			
89	0	2.75		1340		
90	0	2.62		1332		
91	2	-1.24				1100
97	2	1.49			1264	
98	4	0.42				1200
100	3	0.92		1230		
101	4	0.42				1200
103	0	-2.08				1050
105	1	-1.74				1070
106	1	-1.58	1080			
109	0	-3.61		958		
113	4	0.42	1200			
118	0	-2.49		1025		
119	4	-0.08				1170
120	0	2.09		1300		
121	3	0.59				1210
124	0	2.09				1300
126	2	1.25		1250		
128	3	0.59				1210
129	3	-0.58	1140			
130	2	-1.06				1111
131	4	0.09				1180
132	4	0.42		1200		
133	3	0.84				1225
134	2	-1.24		1100		
138	3	-0.71				1132
140	4	-0.46		1147		
141	4	0.00				1175
145	4	0.10				1181
146	4	0.09				1180
149	0	-2.58		1020		
151	3	-0.91		1120		
152	4	0.22				1188
154	4	-0.16				1165
161	0	5.20		1487		
167	4	-0.08				1170
173	4	0.42		1200		
179	3	0.59		1210		
180	1	-1.58				1080
184	4	-0.21				1162
190	3	-0.86	1123			
191	3	0.92				1230
193	3	0.59		1210		
194	2	-1.41		1090		

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other		5. DCP			
1. AA: direct, air		12. Flame			
4. ICP					
N =	3	35	32	9	1
Minimum =	5.14	4.10	4.80	5.00	6.37
Maximum =	7.42	58.00	7.50	7.37	6.37
Median =	5.40	5.50	5.45	5.30	
St Dev =		0.49	0.40	0.19	

Analyte = K (Potassium) mg/L

95% confidence MPV =	5.41	+/-	0.07
F-pseudosigma =	0.32		
N =	80		
Range =	4.10	-	58.0
Hu =	5.68		
Hl =	5.25		



Lab	Rating	Z-value	0	1	4	5	12
1	4	0.28		5.50			
2	4	-0.31		5.31			
3	4	-0.31		5.31			
5	3	0.53			5.58		
7	4	-0.09			5.38		
8	3	0.59			5.60		
13	3	-0.53		5.24			
14	0	6.08				7.37	
15	0	4.03		6.71			
16	1	1.67		5.95			
18	4	-0.03			5.40		
24	2	-1.02			5.08		
27	0	2.08		6.08			
28	1	-1.89			4.80		
32	0	2.76			6.30		
37	4	-0.03		5.40			
42	3	0.78			5.66		
43	3	-0.65			5.20		
45	4	0.16		5.46			
46	4	0.16			5.46		
48	3	-0.68			5.19		
51	0	2.98					6.37
52	4	0.16			5.46		
55	4	-0.19		5.35			
57	1	1.83			6.00		
59	2	1.21			5.80		
61	4	0.28			5.50		
63	4	-0.50		5.25			
65	0	6.23	7.42				
68	4	-0.09			5.38		
69	1	1.71		5.96			
70	3	-0.65				5.20	
72	3	-0.96				5.10	
74	2	-1.27				5.00	
75	4	0.00		5.41			
76	0	-3.85		4.17			
77	1	1.52		5.90			
78	1	-1.58		4.90			
79	4	0.28			5.50		
80	2	1.40		5.86			
83	3	0.90		5.70			
86	4	0.09				5.44	
87	1	-1.80		4.83			
89	2	1.18		5.79			
92	1	-1.80		4.83			

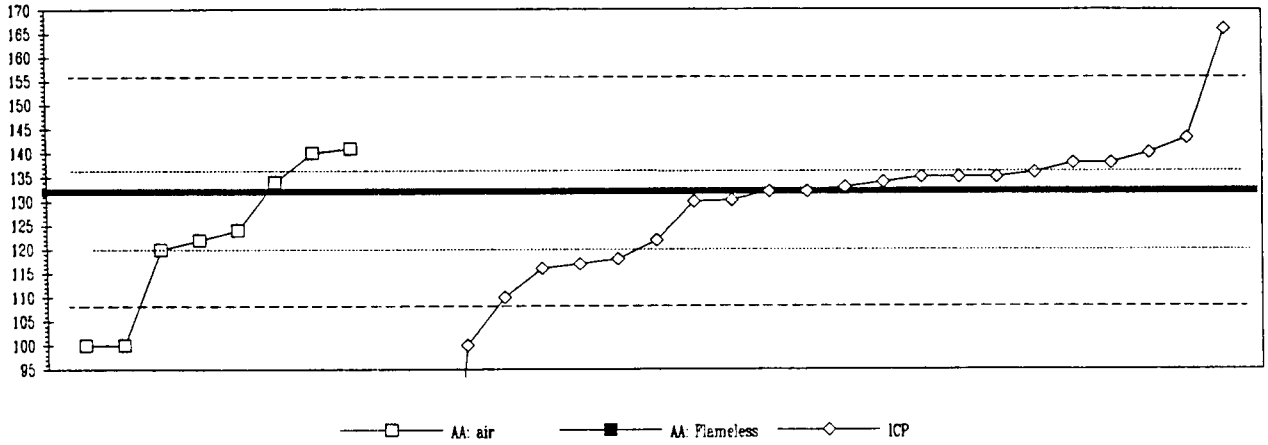
Lab	Rating	Z-value	0	1	4	5	12
98	4	0.28				5.50	
100	3	-0.56				5.23	
101	3	0.90		5.70			
103	2	-1.27			5.00		
105	2	-1.36		4.97			
106	4	-0.34				5.30	
109	2	1.24		5.81			
113	3	0.65		5.62			
119	4	-0.34			5.30		
120	0	5.55		7.20			
121	4	-0.34		5.30			
123	3	0.68		5.63			
124	3	0.65			5.62		
128	4	0.50			5.57		
130	1	-1.89			4.80		
131	0	6.48			7.50		
132	0	-4.06		4.10			
134	0	2.14		6.10			
138	4	-0.12			5.37		
140	4	-0.25		5.33			
141	0	3.54			6.55		
145	3	0.70			5.64		
146	4	-0.43			5.27		
151	4	-0.03		5.40			
152	3	1.00			5.73		
153	3	-0.84	5.14				
154	3	-0.62			5.21		
167	2	-1.27			5.00		
179	0	163		58			
180	0	2.45			6.20		
182	2	1.18		5.79			
184	4	-0.03			5.40		
190	4	-0.03	5.40				
191	4	0.28				5.50	
194	0	6.57		7.53			

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP	
1. AA: direct, air				
3. AA: flameless				
N =	0	8	1	21
Minimum =		100	38	14
Maximum =		141	38	166
Median =		123		133
St dev =		16		11

Analyte = Li (Lithium) μ g/L

95% confidence MPV =	132	+/-	4
F-pseudosigma =	12		
N =	30		
Range =	14	-	141
Hu =	136		
Hl =	120		



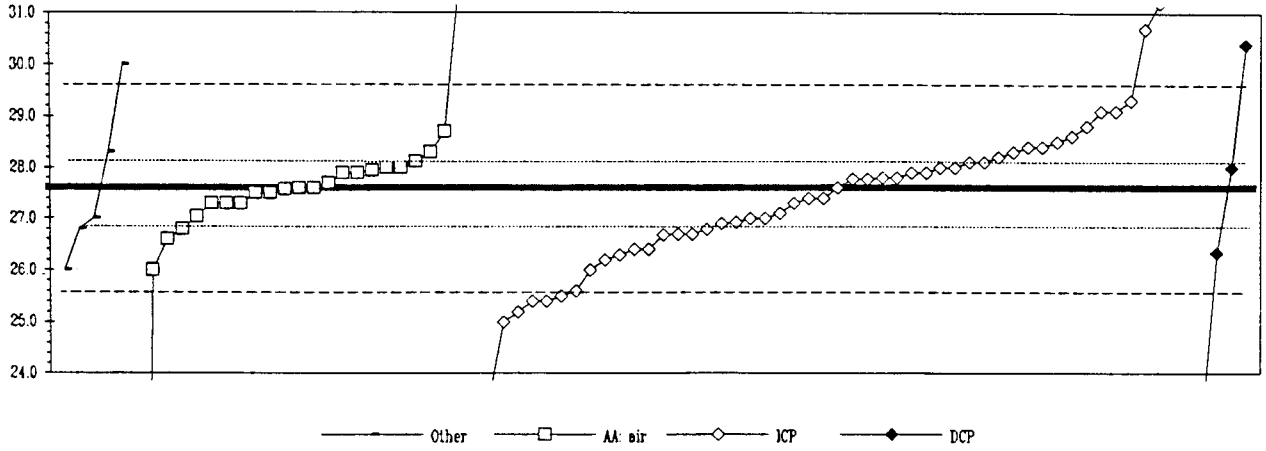
Lab	Rating	Z-value	0	1	3	4
1	4	-0.15				130
3	0	-9.95				14
5	4	0.08				133
7	2	-1.35				116
8	3	0.51				138
15	0	-2.70				100
24	4	0.34				136
28	0	-2.70		100		
29	3	-0.84		122		
32	4	0.25				135
42	4	0.25				135
50	2	-1.01		120		
55	3	0.67		140		
63	NR	NR				< 200
68	3	0.51				138
69	3	0.76		141		
70	2	-1.18				118
77	0	-2.70		100		
98	4	-0.17				130
100	3	-0.67		124		
103	1	-1.85				110
105	3	0.93				143
124	3	0.67				140
130	2	-1.26				117
131	0	2.87				166
134	4	0.17		134		
141	4	0.25				135
145	4	0.00				132
152	4	0.17				134
182	0	-7.93			38	
184	3	-0.84				122

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115* (trace constituents)--Continued

0. Other			5. DCP	
1. AA: direct, air				
4. ICP				
N =	5	24	49	4
Minimum =	26.0	6.5	23.5	23.1
Maximum =	30.0	32.9	40.6	30.4
Median =	27.0	27.6	27.6	28.0
St dev =		1.0	1.2	

Analyte = Mg (Magnesium) mg/L

95% confidence MPV =	27.6	+/-	0.2
F-pseudosigma =	1.0		
N =	82		
Range =	6.5	-	40.6
Hu =	28.1		
Hl =	26.8		



Lab	Rating	Z-value	0	1	4	5
1	3	-0.93			26.7	
2	0	2.50	30.0			
3	4	0.32			27.9	
5	1	1.77			29.3	
7	0	-4.24			23.5	
8	0	-2.48			25.2	
13	4	0.11		27.7		
14	0	2.92				30.4
15	2	-1.34			26.3	
16	3	-0.51			27.1	
18	3	0.84			28.4	
23	4	0.32		27.9		
24	4	-0.20			27.4	
27	2	-1.30				26.3
28	0	-2.27			25.4	
32	0	5.75			31.2	
37	0	13.53			40.6	
39	4	0.32			27.9	
42	2	1.26			28.8	
43	3	-0.61			27.0	
45	3	0.74		28.3		
46	3	0.53			28.1	
48	1	1.57			29.1	
51	3	-0.57		27.0		
52	4	0.22			27.8	
55	4	0.20			27.8	
57	1	-1.65			26.0	
59	3	-0.61			27.0	
61	4	-0.20			27.4	
63	0	-2.27			25.4	
68	4	0.43			28.0	
69	4	-0.30		27.3		
70	3	-0.82			26.8	
72	3	0.84			28.4	
74	0	-2.17			25.5	
75	4	0.01		27.6		
76	2	1.15		28.7		
78	0	5.51		32.9		
80	4	0.37		28.0		
83	1	-1.65		26.0		
86	1	1.57			29.1	
87	2	-1.03		26.6		
89	4	0.32		27.9		
91	3	-0.92			26.7	
92	0	-21.85		6.5		

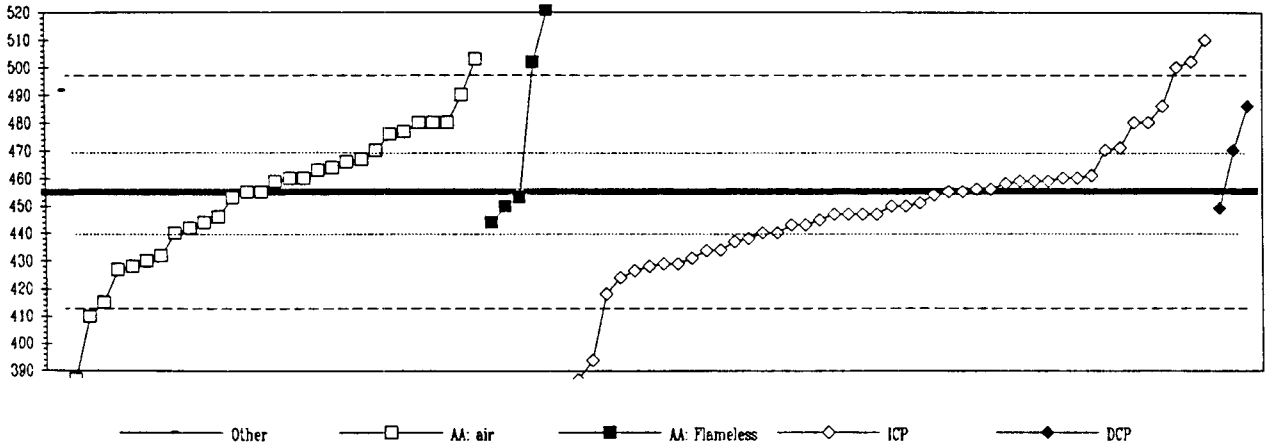
Lab	Rating	Z-value	0	1	4	5
98	2	-1.23			26.4	
100	3	-0.92			26.7	
101	4	0.43		28.0		
103	0	-2.69			25.0	
105	3	0.94			28.5	
106	0	-4.66				23.1
109	4	-0.30		27.3		
113	3	0.55		28.1		
119	3	0.53			28.1	
120	4	0.01		27.6		
121	3	0.63			28.2	
123	4	-0.01		27.6		
124	0	3.23			30.7	
126	3	-0.82		26.8		
128	4	0.01			27.6	
130	0	-2.07			25.6	
131	4	-0.30			27.3	
132	4	-0.09		27.5		
133	3	0.74			28.3	
134	4	0.43		28.0		
138	3	0.74	28.3			
140	4	-0.09		27.5		
141	4	0.22			27.8	
145	4	0.20			27.8	
146	2	-1.23			26.4	
151	4	-0.30		27.3		
152	3	-0.68			26.9	
153	3	-0.82	26.8			
154	2	-1.44			26.2	
167	4	0.43			28.0	
179	0	4.16		31.6		
180	0	4.73			32.2	
182	3	-0.61	27.0			
184	3	-0.72			26.9	
190	1	-1.65	26.0			
191	4	0.43				28.0
194	2	1.05			28.6	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other		4. ICP			
1. AA: direct, air		5. DCP			
3. AA: flameless					
N =	1	29	5	46	3
Minimum =		387	444	280	449
Maximum =		503	521	510	486
Median =		459		449	
St dev =		23		22	

Analyte = Mn (Manganese) μ g/L

95% confidence MPV =	455	+/-	5
F-pseudosigma =	21		
N =	84		
Range =	0	-	521
Hu =	469		
Hl =	440		



Lab	Rating	Z-value	0	1	3	4	5
1	4	-0.46				445	
3	4	0.07				456	
5	4	0.21				459	
7	0	-2.86				394	
8	2	1.21				480	
13	2	-1.16		430			
14	0	-21.51					486
15	2	-1.25				428	
16	2	-1.44				424	
18	4	0.17				458	
23	4	-0.50			444		
24	3	-0.69				440	
28	4	0.31				461	
32	4	-0.02				454	
39	4	0.02				455	
42	2	1.21				480	
45	4	0.40		463			
46	4	0.07				456	
48	0	-8.26				280	
49	2	1.02		476			
50	4	-0.21			450		
51	2	1.07		477			
52	4	-0.17				451	
55	4	-0.36				447	
57	4	0.02		455			
59	3	-0.69				440	
61	3	-0.54				443	
63	0	-3.20				387	
65	2	-1.07		432			
68	4	-0.36				447	
69	3	0.54		466			
70	3	-0.83				437	
72	3	-0.78				438	
74	3	-0.97				434	
75	3	-0.59		442			
76	4	0.26		460			
77	4	-0.07			453		
78	4	0.26		460			
79	0	2.63				510	
81	2	1.21		480			
83	1	-1.87		415			
86	4	-0.36				447	
87	0	-3.20		387			
89	0	2.30		503			
90	1	1.68		490			

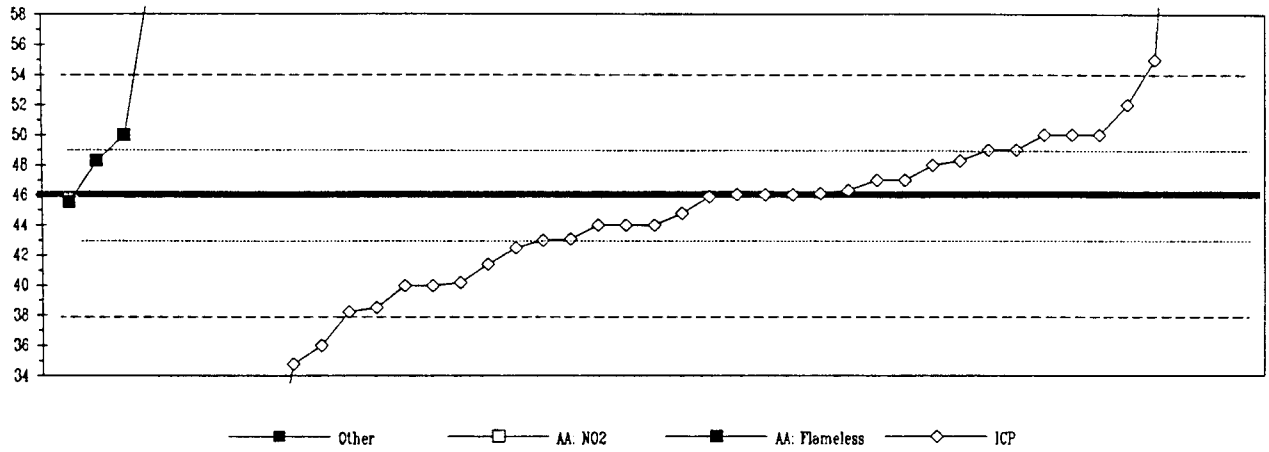
Lab	Rating	Z-value	0	1	3	4	5
91	2	-1.21				429	
97	0	3.15			521		
98	1	-1.73				418	
100	2	1.21		480			
101	2	1.49				486	
103	4	0.26				460	
105	2	-1.33				427	
106	0	-21.51					449
109	4	-0.50		444			
113	0	2.24			502		
118	4	0.02		455			
119	4	-0.21				450	
120	4	-0.40		446			
121	3	0.73				470	
124	0	2.15				500	
128	4	0.26				460	
130	2	-1.11				431	
131	3	-0.54				443	
132	0	-2.11		410			
134	3	0.73		470			
138	2	-1.21				429	
140	4	0.45		464			
141	4	-0.36				447	
145	4	0.21				459	
146	4	0.21				459	
149	4	-0.07		453			
151	2	-1.30		427			
152	3	0.78				471	
154	4	0.02				455	
161	2	1.21		480			
167	4	-0.21				450	
173	4	0.21		459			
179	2	-1.25		428			
180	0	2.26				502	
184	3	-0.98				434	
190	1	1.78	492				
191	0	-21.51					470
193	3	0.59		467			
194	3	-0.69		440			

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP	
2. AA: direct, N2O				
3. AA: flameless				
N =	0	0	6	36
Minimum =			46	25
Maximum =			74	200
Median =				46
St dev =				5

Analyte = Mo (Molybdenum) µg/L

95% confidence MPV =	46	+/-	1
F-pseudosigma =	4		
N =	42		
Range =	25	-	200
Hu =	49		
Hl =	43		



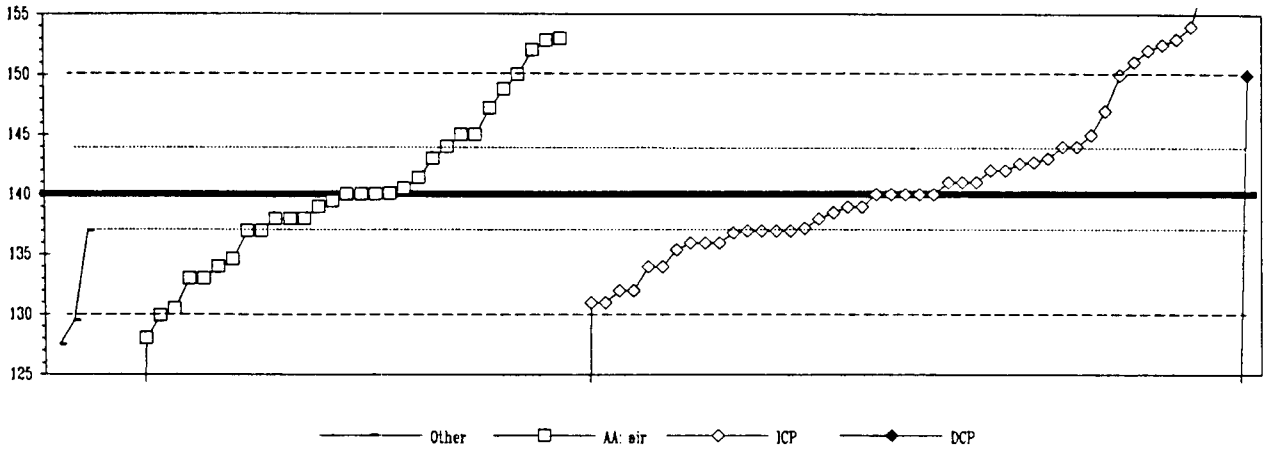
Lab	Rating	Z-value	0	2	3	4
1	4	-0.28				45
3	4	0.00				46
5	4	-0.02				46
7	0	-2.56				35
8	3	0.91				50
15	3	0.53			48	
16	2	-1.33				40
24	3	-0.66				43
28	4	0.00				46
32	4	0.07				46
37	2	-1.37				40
39	4	-0.46				44
42	3	0.91				50
45	0	5.17			69	
46	1	-1.71				39
48	2	-1.37				40
50	3	0.91			50	
52	0	3.38			61	
55	3	0.91				50
57	0	35.21				200
61	2	1.37				52
63	0	-4.80				25
68	1	-1.78				38
74	4	-0.46				44
75	4	-0.11			46	
86	0	-2.29				36
91	4	-0.46				44
98	4	0.23				47
100	NR	NR				< 50
103	4	0.00				46
105	3	0.53				48
121	0	2.06				55
124	0	-4.80				25
128	3	-0.80				43
131	3	-0.69				43
138	2	-1.05				41
141	4	0.23				47
145	3	0.69				49
146	4	0.46				48
149	3	0.69				49
152	0	7.55				79
167	NR	NR				< 100
182	0	6.40			74	
184	4	0.02				46

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other	5. DCP			
1. AA: direct. air				
4. ICP				
N =	3	33	45	3
Minimum =	128	14	40	55
Maximum =	137	153	158	150
Median =		139	140	
St dev =		7	6	

Analyte = Na (Sodium) mg/L

95% confidence MPV =	140	+/-	1
F-pseudosigma =	5		
N =	84		
Range =	14	-	158
Hu =	144		
Hl =	137		



Lab	Rating	Z-value	0	1	4	5
1	4	0.26		141		
2	2	1.35		147		
3	0	2.62			154	
5	2	-1.50			132	
7	3	-0.75			136	
8	0	2.34			153	
13	3	0.56		143		
14	0	-15.85				55
15	2	-1.12			134	
16	3	-0.86			135	
18	3	0.94			145	
23	4	0.00		140		
24	4	0.00			140	
27	2	-1.31		133		
28	4	-0.28			139	
32	0	3.37			158	
37	0	-18.68			40	
42	3	0.56			143	
43	3	-0.56			137	
45	4	0.00		140		
46	4	-0.37			138	
48	4	0.19			141	
51	0	-2.34	128			
52	4	0.19			141	
55	2	-1.12		134		
57	3	-0.75			136	
59	0	2.25			152	
61	3	-0.56			137	
63	0	-23.36		15		
65	0	-8.90		93		
68	4	0.19			141	
69	2	-1.01		135		
70	3	-0.75			136	
72	1	-1.69			131	
74	3	-0.56			137	
76	3	0.94		145		
77	0	2.25		152		
78	4	-0.37		138		
80	1	-1.79		130		
83	1	-1.89		130		
86	4	0.37			142	
87	2	-1.31		133		
89	4	0.00		140		
90	0	2.44		153		
91	1	1.87			150	

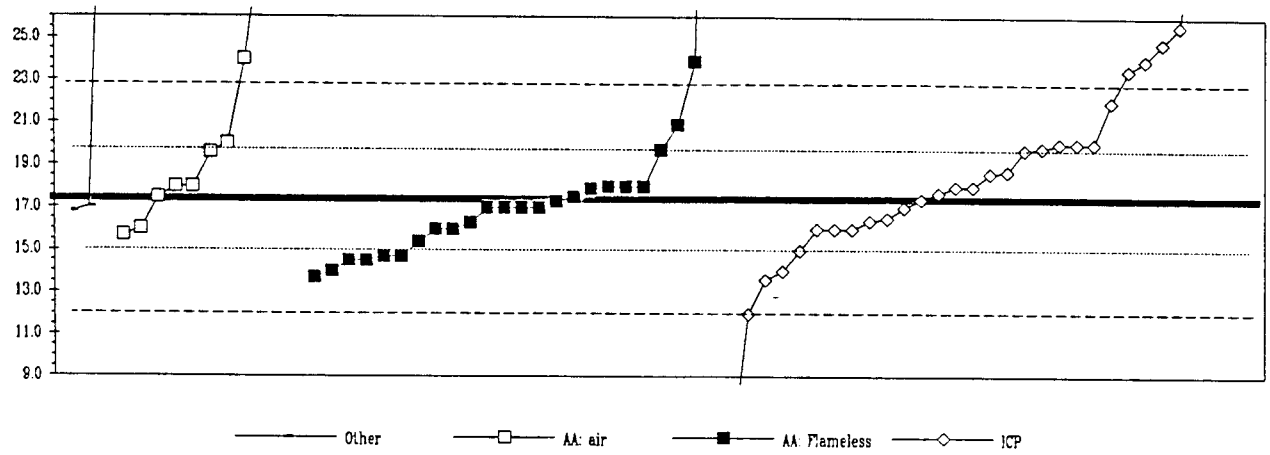
Lab	Rating	Z-value	0	1	4	5
92	4	-0.19		139		
98	3	-0.56			137	
100	4	-0.19			139	
101	3	0.75		144		
103	4	0.00			140	
105	0	2.44			153	
106	0	-8.41				95
109	4	0.09		141		
113	1	1.65		149		
119	4	-0.19			139	
120	0	2.40		153		
121	3	0.75			144	
123	4	-0.11		139		
124	2	-1.12			134	
126	1	1.87		150		
128	3	0.75			144	
130	2	-1.50			132	
131	2	1.31			147	
132	3	-0.56		137		
134	4	-0.37		138		
138	4	0.00			140	
140	4	0.02		140		
141	4	0.37			142	
145	4	0.48			143	
146	1	-1.69			131	
151	0	-23.55		14		
152	3	-0.52			137	
153	1	-1.97	130			
154	3	0.51			143	
167	4	0.00			140	
173	3	0.94		145		
179	4	-0.37		138		
180	0	2.08			151	
182	0	-2.25		128		
184	3	-0.60			137	
190	3	-0.56	137			
191	1	1.87				150
193	3	-0.56		137		
194	4	0.00			140	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP	
1. AA: direct, air				
3. AA: flameless				
N =	4	11	24	30
Minimum =	14.0	15.7	13.7	5.0
Maximum =	40.0	79.0	56.5	32.7
Median =		19.6	16.8	18.0
St dev =		2.7	2.4	3.5

Analyte = Ni (Nickel) μg/L

* 95% confidence MPV =	17.4	+/-	0.6
F-pseudosigma =	2.7		
N =	69		
Range =	5.0	-	79.0
Hu =	19.7		
Hl =	16.0		



Lab	Rating	Z-value	0	1	3	4
1	3	-1.00			14.7	
3	3	0.96				20.0
5	4	0.48				18.7
7	4	0.22				18.0
8	3	0.96				20.0
14	0	8.35	40.0			
15	3	-1.00			14.7	
16	0	2.73				24.8
18	3	-0.89				15.0
23	2	1.29			20.9	
24	2	-1.37			13.7	
28	1	1.70				22.0
29	4	-0.15			17.0	
32	4	-0.15				17.0
45	4	-0.41			16.3	
46	0	-4.58				5.0
48	3	0.85			19.7	
50	4	0.22			18.0	
51	4	-0.15			17.0	
52	4	0.44				18.6
55	4	0.18			17.9	
57	NR	NR		< 100		
59	4	0.22				18.0
61	0	-2.73				< 10
63	0	5.03				31.0
65	0	22.77		79.0		
68	3	0.96				20.0
70	NR	NR				< 50
72	0	3.03				25.6
73	4	0.11				17.7
74	3	-0.52			16.0	
75	2	-1.07			14.5	
78	4	-0.15	17.0			
79	2	-1.26			14.0	
80	4	-0.15			17.0	
81	4	0.22			18.0	
87	0	5.03		31.0		
89	NR	NR			< 50	
90	0	2.40			23.9	
91	3	-0.52				16.0
97	0	14.45			56.5	
98	NR	NR				< 20
100	3	-0.52		16.0		
101	0	5.65				32.7
103	3	-0.52				16.0

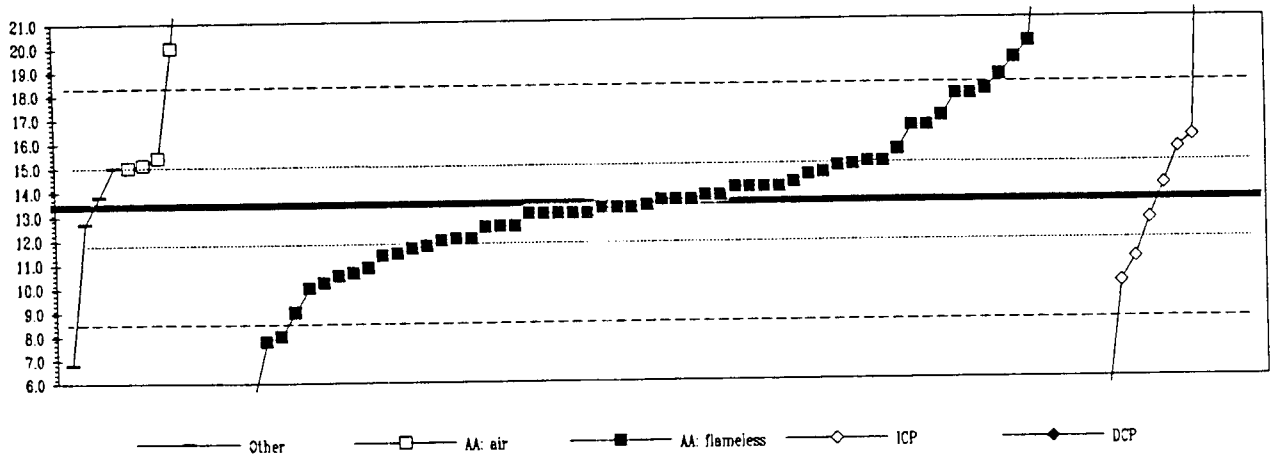
Lab	Rating	Z-value	0	1	3	4
105	0	2.25				23.5
108	3	-0.52			16.0	
113	4	0.03		17.5		
118	0	4.66		30.0		
119	3	-0.74			15.4	
120	4	-0.04			17.3	
121	3	-0.52				16.0
124	NR	NR				< 20
128	4	0.00				17.4
130	1	-2.00				12.0
131	0	-2.73				10.0
132	3	0.96		20.0		
133	4	-0.33				16.5
134	4	0.04			17.5	
138	4	-0.22	16.8			
140	3	0.81		19.6		
141	2	-1.26				14.0
144	2	-1.07			14.5	
145	0	2.44				24.0
146	2	-1.40				13.6
151	3	-0.63		15.7		
154	3	0.89				19.8
161	0	2.44		24.0		
167	4	-0.15			17.0	
179	4	0.22			18.0	
180	3	0.85				19.7
182	4	0.22		18.0		
184	4	-0.37				16.4
190	2	-1.26	14.0			
193	4	0.22		18.0		

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other		4. ICP			
1. AA: direct. air		5. DCP			
3. AA: flameless					
N =	4	5	60	10	1
Minimum =	6.8	15.0	2.2	4.0	106
Maximum =	15.0	26.0	59.0	78.0	106
Median =			13.2	13.3	
St dev =			2.6	2.4	

Analyte = Pb (Lead) μ g/L

95% confidence MPV =	13.4	+/-	0.5
F-pseudosigma =	2.4		
N =	80		
Range =	2.2	-	78.0
Hu =	15.0		
Hl =	11.7		



Lab	Rating	Z-value	0	1	3	4	5
1	3	-0.69			11.7		
2	0	2.70			20.0		
3	4	0.25			14.0		
5	NR	NR				< 30	
7	3	-0.61			11.9		
8	0	-3.64				4.0	
13	0	5.15			26.0		
14	0	37.85					106
15	2	1.43			16.9		
16	NR	NR				< 30	
18	2	-1.19			10.5		
23	3	-0.86			11.3		
24	4	0.49			14.6		
27	1	1.80			17.8		
28	4	0.25				14.0	
29	0	-4.58			2.2		
32	4	-0.33				12.6	
37	NR	NR				< 60	
39	2	1.06				16.0	
45	4	0.45			14.5		
46	4	-0.16			13.0		
48	2	1.27			16.5		
50	3	0.65			15.0		
51	3	-0.57			12.0		
52	4	-0.08			13.2		
55	4	-0.04			13.3		
57	3	-0.57			12.0		
59	2	-1.39				10.0	
61	NR	NR				< 50	
63	4	-0.37			12.5		
65	1	1.80			17.8		
68	3	0.86			15.5		
69	4	0.12			13.7		
70	0	-2.29			7.8		
72	4	0.25			14.0		
73	NR	NR				< 25	
74	3	-0.82			11.4		
75	4	-0.08			13.2		
76	0	2.13			18.6		
77	2	-1.39			10.0		
78	4	0.04			13.5		
79	4	-0.16			13.0		
80	3	0.65			15.0		
81	4	0.25			14.0		
83	2	-1.31			10.2		

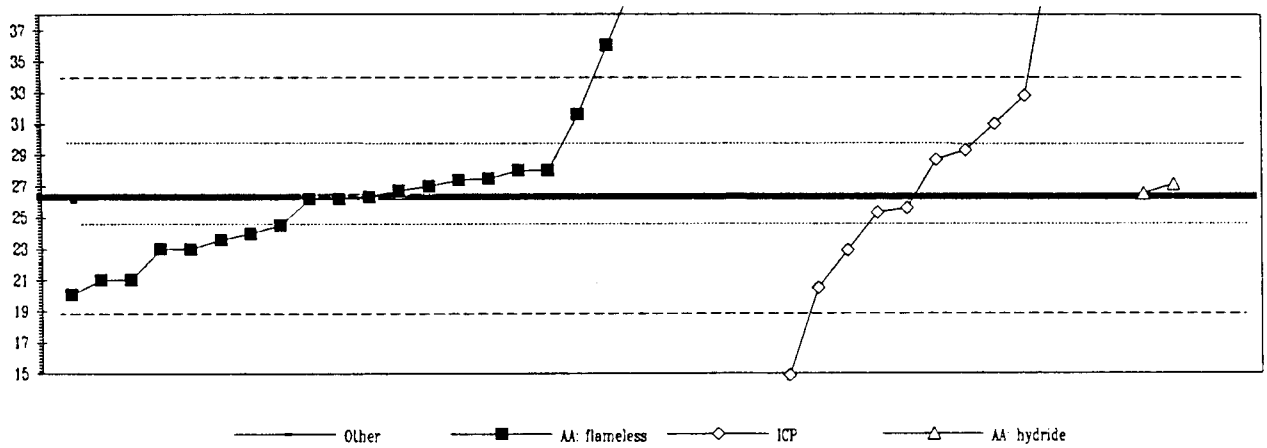
Lab	Rating	Z-value	0	1	3	4	5
86	0	-3.60			4.6		
87	3	0.82		15.4			
89	4	-0.08			13.2		
90	0	2.41			19.3		
91	0	-3.31			5.3		
97	0	11.81			42.3		
98	NR	NR				< 40	
100	2	1.27			16.5		
101	0	26.41				78.0	
103	3	-0.98				11.0	
105	4	-0.39			12.5		
108	0	-2.21			8.0		
113	3	0.59			14.9		
118	0	5.15		26.0			
119	4	0.12			13.7		
120	3	0.61			14.9		
121	1	1.88			18.0		
124	NR	NR				< 50	
126	0	18.64			59.0		
128	4	-0.16			13.0		
131	NR	NR				< 50	
132	0	2.70		20.0			
133	0	8.01				33.0	
134	4	-0.37			12.5		
138	4	-0.29	12.7				
140	3	0.69		15.1			
141	0	-3.43				5.0	
144	2	-1.06			10.8		
145	NR	NR				< 84	
146	4	0.33			14.2		
149	0	-4.66			< 2		
151	3	-0.74			11.6		
153	4	0.04			13.5		
154	4	0.04			13.5		
158	1	-1.80			9.0		
161	0	-3.31			5.3		
167	4	0.25			14.0		
173	0	-2.72	6.8				
179	2	-1.14			10.6		
180	3	0.86				15.5	
182	4	-0.16			13.0		
184	4	0.16	13.8				
190	3	0.65	15				
193	3	0.65		15			
194	4	-0.16			13		

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP		
1. AA: direct, air			11. AA: hydride		
3. AA: flameless					
N =	1	0	23	13	2
Minimum =	26.0		20.1	11.0	26.5
Maximum =	26.0		88.7	191	27.1
Median =			26.7	28.7	
St dev =			3.8	5.6	

Analyte = Sb (Antimony) μ g/L

95% confidence MPV =	26.3	+/-	1.2
F-pseudosigma =	3.7		
N =	39		
Range =	11.0	-	191
Hu =	28.0		
Hl =	23.0		



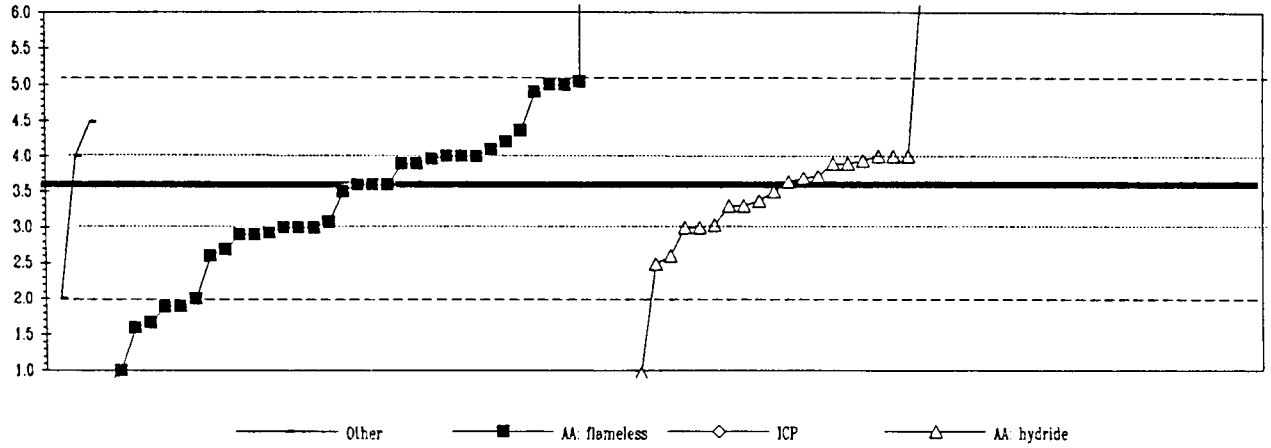
Lab	Rating	Z-value	0	1	3	4	11
1	4	0.23					27.1
3	4	0.47			28.0		
5	1	1.77				32.8	
7	NR	NR			< 34		
8	0	-4.11				11.0	
15	1	-1.66			20.1		
16	NR	NR				< 350	
18	4	0.34			27.5		
23	0	3.82			40.4		
32	4	-0.26				25.3	
37	NR	NR				< 30	
42	4	0.07					26.5
45	2	1.44			31.6		
48	4	-0.01			26.2		
52	0	5.06			45.0		
55	2	-1.42			21.0		
57	0	2.63			36.0		
59	0	4.52				43.0	
61	NR	NR				< 50	
63	3	-0.88			23.0		
68	3	-0.90				22.9	
70	3	-0.61			24.0		
72	3	-0.71			23.6		
74	0	16.85			88.7		
78	4	-0.01			26.2		
87	4	0.47			28.0		
97	0	6.35			49.8		
98	0	6.41				50.0	
100	4	0.31			27.4		
105	4	0.12			26.7		
119	4	0.01			26.3		
124	0	44.45				191	
128	3	0.66				28.7	
131	NR	NR				< 50	
138	4	-0.07	26.0				
141	1	-1.55				20.5	
146	3	0.82				29.3	
149	2	-1.42			21.0		
151	4	-0.47			24.5		
154	2	1.28				31.0	
179	4	0.20			27.0		
180	0	-3.06				14.9	
182	3	-0.88			23.0		
184	4	-0.18				25.6	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP		
2. AA: direct, N20			11. AA: hydride		
3. AA: flameless					
N =	3	0	34	2	20
Minimum =	2.0		0.8	8.0	1.0
Maximum =	4.5		76.0	15.0	6.6
Median =			3.6		3.6
St dev =			1.0		0.5

Analyte = Se (Selenium) μg/L

95% confidence MPV =	3.6	+/-	0.2
F-pseudosigma =	0.8		
N =	59		
Range =	0.8	-	76.0
Hu =	4.0		
Hl =	3.0		



Lab	Rating	Z-value	0	2	3	4	11
1	4	0.13					3.7
3	3	0.52			4.0		
5	NR	NR				< 40	
7	4	-0.13			3.5		
13	0	-2.22			1.9		
15	2	-1.45					2.5
16	NR	NR				< 30	
18	4	-0.13					3.5
23	3	-0.87			2.9		
24	0	-3.39			1.0		
28	0	5.73				8.0	
29	0	-2.61			1.6		
35	4	0.16					3.7
37	4	0.39					3.9
39	3	-0.78					3.0
42	4	-0.39					3.3
45	3	-0.68			3.1		
46	4	0.00			3.6		
48	3	0.52			4.0		
50	3	0.52					4.0
51	0	94.36			76.0		
52	4	-0.30					3.4
55	4	0.39			3.9		
57	0	3.91					6.6
61	NR	NR			< 10		
63	3	-0.78			3.0		
65	1	1.88			5.0		
68	1	1.69			4.9		
69	4	0.39			3.9		
70	3	-0.78			3.0		
72	4	0.00			3.6		
73	NR	NR			< 50		
74	3	0.52			4.0		
75	4	0.05					3.6
76	2	-1.30			2.6		
77	3	-0.91			2.9		
78	3	0.65			4.1		
80	1	1.82			5.0		
81	3	-0.78			3.0		
87	4	0.39					3.9
89	4	-0.39					3.3
91	0	-2.23			1.9		
97	3	-0.74					3.0
98	NR	NR					< 70
100	4	0.00			3.6		

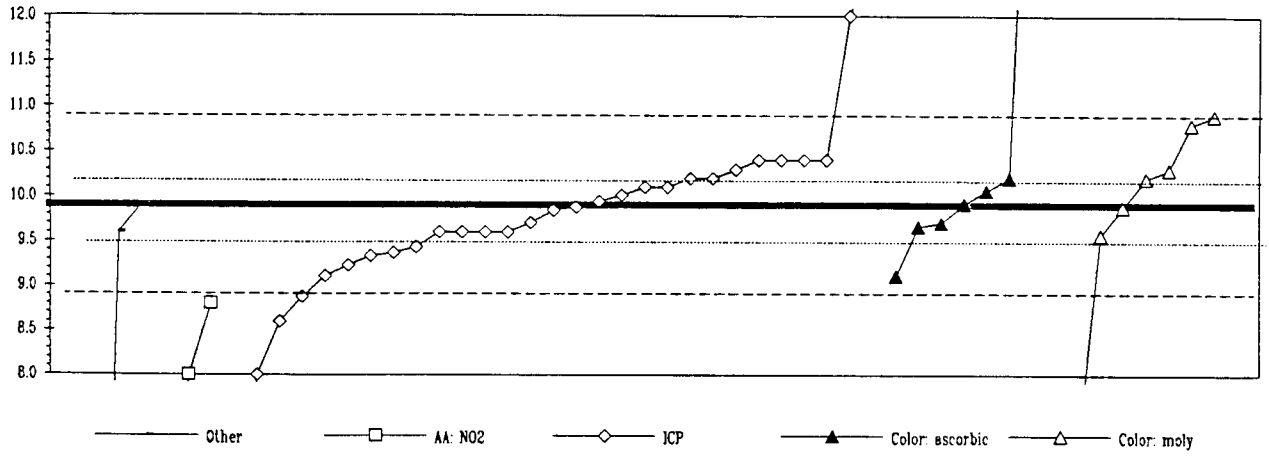
Lab	Rating	Z-value	0	2	3	4	11
105	4	0.48			4.0		
113	2	-1.19			2.7		
119	3	0.52					4.0
120	2	-1.30					2.6
124	3	0.52					4.0
128	3	0.99			4.4		
131	NR	NR				< 100	
133	0	-2.52			1.7		
134	3	-0.78					3.0
138	3	0.52	4.0				
141	0	-3.44					1.0
146	3	0.78			4.2		
149	0	-2.09			2.0		
151	4	0.44					3.9
154	3	-0.91			2.9		
167	1	1.82			5.0		
173	0	-3.65			0.8		
179	NR	NR			< 5		
180	0	14.86				15.0	
182	0	-2.09	2.0				
184	2	1.15	4.5				
193	NR	NR			< 5		
194	NR	NR			< 5		

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other		22a. Color: ascorbic acid			
2. AA: direct, N20					
4. ICP		22m. Color: molybdosilicic acid			
N =	4	3	29	7	8
Minimum =	1.0	4.2	4.7	9.1	5.3
Maximum =	9.9	8.8	12.8	16.1	10.9
Median =			9.8		
St dev =			0.5		

Analyte = SiO2 (Silica) mg/L

95% confidence MPV =	9.9	+/-	0.1
F-pseudosigma =	0.5		
N =	51		
Range =	1.0	-	16.1
Hu =	10.2		
Hl =	9.5		



Lab	Rating	Z-value	0	2	4	22a	22m
1	3	-0.54			9.6		
2	3	0.61					10.2
3	3	1.00			10.4		
5	3	0.61			10.2		
7	0	-9.91			4.7		
8	0	-2.45			8.6		
13	4	0.00					9.9
14	0	-17.07	1.0				
15	2	-1.47			9.1		
23	1	1.95					10.9
24	3	0.61			10.2		
28	1	-1.91			8.9		
32	0	4.06			12.0		
37	3	-0.98			9.4		
39	0	-3.60			8.0		
43	3	-0.54			9.6		
45	3	-0.86			9.4		
51	4	0.06				9.9	
52	3	0.80					10.3
55	4	-0.08			9.8		
57	3	-0.54			9.6		
63	4	-0.34			9.7		
80	0	-3.60		8.0			
87	1	1.76					10.8
89	3	-0.61					9.6
97	3	0.61				10.2	
98	3	-0.54			9.6		
103	0	5.59			12.8		
104	0	-8.78					5.3
105	0	-2.12		8.8			
106	0	-16.23	1.4				
109	2	-1.24			9.2		
113	0	11.86				16.1	
118	4	-0.42				9.7	
119	3	1.00			10.4		
121	4	0.00			9.9		
124	2	-1.05			9.3		
128	3	1.00			10.4		
130	4	0.42			10.1		
131	4	0.11			9.9		
134	4	0.34				10.1	
141	4	-0.34				9.7	
146	3	0.80			10.3		
151	2	-1.47				9.1	
152	4	0.25			10.0		

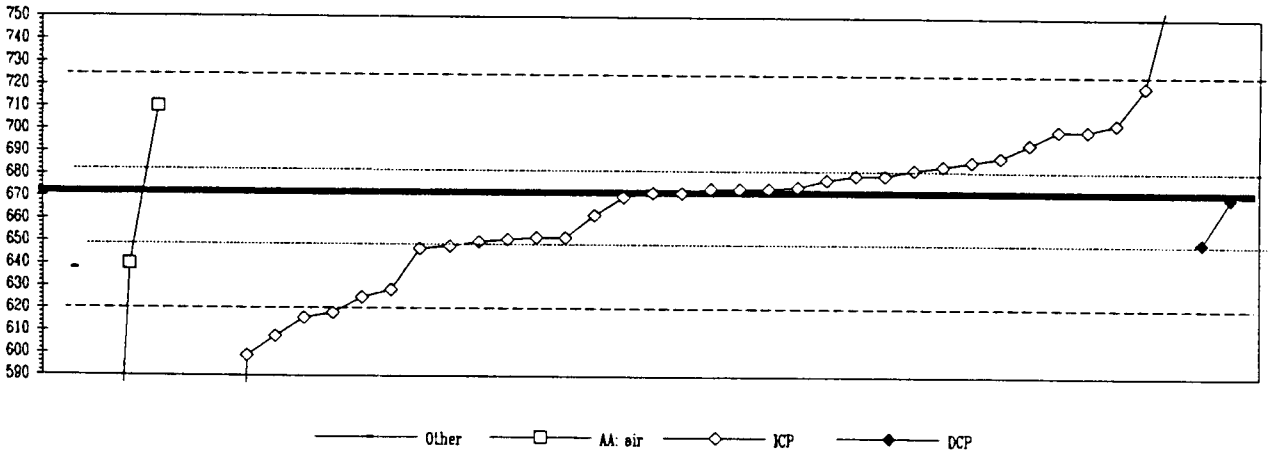
Lab	Rating	Z-value	0	2	4	22a	22m
154	3	1.00			10.4		
167	4	0.42			10.1		
173	0	-5.32					7.1
182	0	-10.87		4.2			
190	4	-0.46	9.6				
191	4	0.04	9.9				

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			5. DCP	
1. AA: direct, air				
4. ICP				
N =	1	3	33	2
Minimum =	638	410	7	650
Maximum =	638	710	771	670
Median =		640	671	660
St dev =			30	

Analyte = Sr (Strontium) μg/L

95% confidence MPV =	672	+/-	8
F-pseudosigma =	26		
N =	39		
Range =	7	-	771
Hu =	682		
Hl =	648		



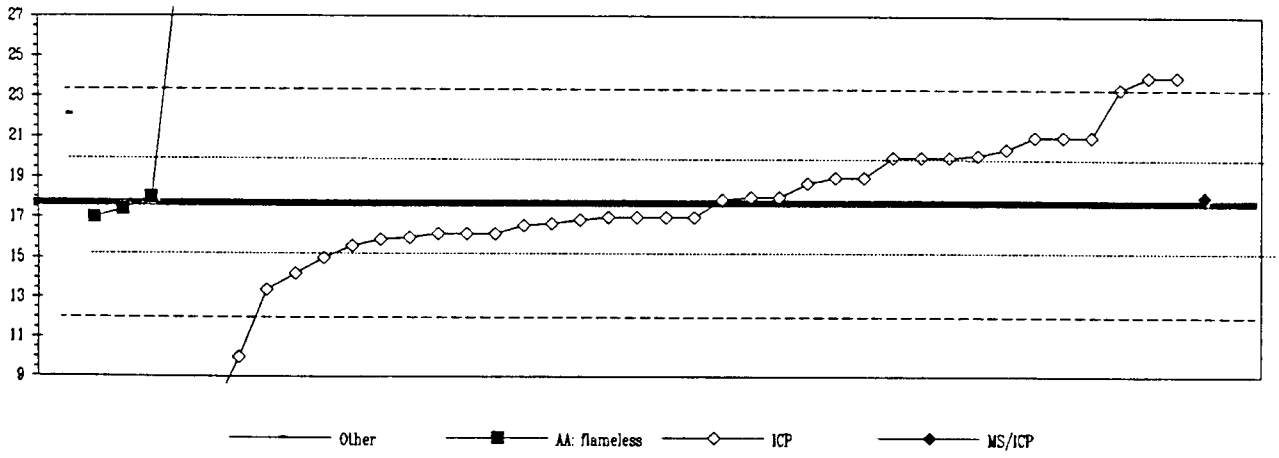
Lab	Rating	Z-value	0	1	4	5
1	4	0.41			682	
3	4	0.31			680	
7	0	-2.19			616	
8	1	1.88			720	
15	3	-0.94			648	
16	3	-0.82			651	
18	4	-0.39			662	
24	4	0.12			675	
28	0	-26.06			7	
32	4	0.24			678	
39	3	0.55			686	
42	2	1.21			703	
50	2	-1.25		640		
52	4	0.31			680	
55	3	0.86			694	
59	3	0.63			688	
63	4	-0.08			670	
68	4	0.08			674	
70	0	-2.12			618	
74	1	-1.84			625	
91	4	0.00			672	
97	2	-1.33	638			
98	3	-0.78			652	
100	0	-2.86			599	
103	2	1.10			700	
105	1	-1.70			629	
106	3	-0.86				650
121	4	0.00			672	
124	0	3.88			771	
130	3	-0.98			647	
131	3	-0.86			650	
134	2	1.49		710		
138	3	-0.78			652	
141	0	-10.27		410		
145	4	0.08			674	
146	0	-23.63			69	
152	2	1.10			700	
154	4	0.47			684	
184	0	-2.51			608	
191	4	-0.08				670

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other			4. ICP		
2. AA: direct, N2O			6. MS/ICP		
3. AA: flameless					
N =	1	0	4	34	1
Minimum =	22.1		17.0	7.0	18.0
Maximum =	22.1		30.0	24.0	18.0
Median =			17.7	17.0	
St dev =				3.0	

Analyte = V (Vanadium) μg/L

95% confidence MPV =	17.7	+/-	0.9
F-pseudosigma =	2.8		
N =	40		
Range =	0.0	-	23
Hu =	20.0		
Hl =	16.2		



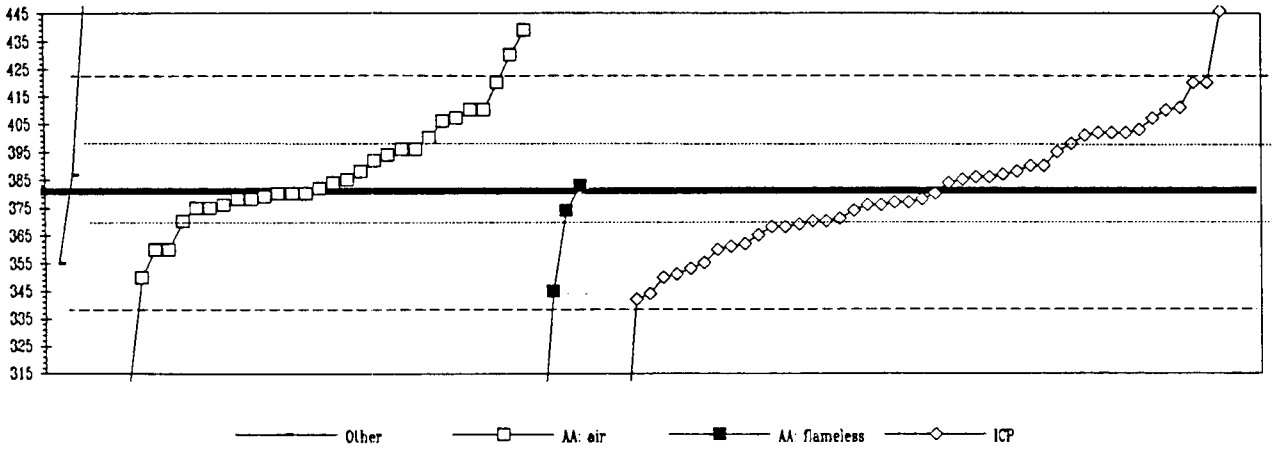
Lab	Rating	Z-value	0	2	3	4	6
1	4	-0.27				16.9	
3	0	-2.72				10.0	
5	3	-0.51				16.2	
7	NR	NR				< 10	
8	2	1.19				21.0	
15	1	1.58	22.1				
16	3	0.98				20.4	
18	4	0.48				19.0	
24	3	-0.62				15.9	
28	3	0.83				20.0	
32	4	0.12					18.0
39	4	-0.23				17.0	
42	3	-0.94				15.0	
50	4	-0.23			17.0		
52	4	-0.09			17.4		
55	4	0.12				18.0	
57	NR	NR				< 50	
61	3	-0.51				16.2	
63	0	-3.78				7.0	
68	4	0.37				18.7	
70	2	1.19				21.0	
74	3	-0.59				16.0	
91	2	1.19				21.0	
97	4	0.09				17.9	
98	4	0.12				18.0	
100	2	-1.22				14.2	
101	0	2.04				23.4	
103	4	0.48				19.0	
105	3	0.87				20.1	
121	4	-0.23				17.0	
124	3	0.83				20.0	
128	4	-0.34				16.7	
130	3	0.83				20.0	
134	4	0.12			18.0		
138	4	-0.37				16.6	
141	4	-0.23				17.0	
145	0	2.25				24.0	
146	3	-0.73				15.6	
154	1	-1.51				13.4	
167	NR	NR				< 40	
180	4	-0.23				17.0	
182	0	4.38			30.0		
184	3	-0.51				16.2	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-115 (trace constituents)--Continued*

0. Other		4. ICP		
1. AA: direct, air				
3. AA: flameless				
N =	3	32	4	47
Minimum =	355	17	286	40
Maximum =	450	439	383	923
Median =		381		378
St dev =		20		22

Analyte = Zn (Zinc) μg/L

95% confidence MPV =	381	+/-	4
F-pseudosigma =	21		
N =	86		
Range =	17	-	923
Hu =	398		
Hl =	370		



Lab	Rating	Z-value	0	1	3	4
1	3	-0.77				365
3	4	0.29				387
5	2	1.40				410
7	4	-0.48				371
8	1	1.88				420
13	0	-17.54		17		
14	4	0.29	387			
15	3	-0.53				370
16	3	-0.92				362
18	3	0.67				395
23	0	2.79		439		
24	2	-1.45				351
28	3	-0.96				361
29	2	1.40		410		
32	0	-16.44				40
39	4	-0.34				374
42	4	0.24				386
45	3	-0.53		370		
46	4	0.14				384
48	0	-4.87				280
50	4	-0.34			374	
51	1	-1.73			345	
52	3	0.96				401
55	4	0.19				385
57	2	-1.01		360		
59	3	-0.63				368
61	4	-0.24				376
63	2	-1.01				360
68	0	-15.81				53
69	3	0.63		394		
70	4	0.34				388
72	0	26.11				923
73	4	0.24				386
74	1	-1.88				342
75	4	-0.24		376		
76	4	-0.14		378		
77	3	0.92		400		
78	4	0.19		385		
79	2	-1.49				350
80	2	1.25		407		
81	4	0.05		382		
83	4	-0.29		375		
86	4	-0.05		380		
87	4	-0.10		379		
89	3	0.72		396		

Lab	Rating	Z-value	0	1	3	4
90	0	2.36		430		
91	2	1.25				407
97	0	-9.30		188		
98	2	-1.35				353
100	2	1.20		406		
101	1	1.88				420
103	4	0.43				390
105	1	-1.78				344
106	2	-1.25	355			
108	4	-0.14		378		
113	4	0.14		384		
118	4	-0.05		380		
119	3	-0.53				370
120	0	-4.58			286	
121	3	-0.58				369
124	2	1.45				411
126	2	1.40		410		
128	3	0.82				398
130	3	-0.63				368
131	4	0.43				390
133	0	3.13				446
134	4	-0.05		380		
138	2	-1.25				355
140	3	0.53		392		
141	4	-0.05				380
145	2	1.01				402
146	4	-0.19				377
149	2	-1.49		350		
152	2	1.06				403
154	4	-0.24				376
158	0	-3.47		309		
161	4	-0.29		375		
167	4	-0.14				378
173	2	-1.01		360		
179	4	0.34		388		
180	3	1.00				402
182	4	0.10			383	
184	4	-0.19				377
190	0	3.32	450			
193	3	0.72		396		
194	1	1.88		420		

Table 12. -- *Statistical summary of reported data for standard reference water sample M-118 (major constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

0.	Other	
1.	AA: direct, air	= atomic absorption: direct, air
2.	AA: direct, N20	= atomic absorption: direct, nitrous oxide
3.	AA: flameless	= atomic absorption: flameless (graphite furnace)
4.	ICP	= inductively coupled argon plasma
5.	DCP	= direct coupled plasma
6.	MS/ICP	= mass spectrometry/inductively coupled argon plasma
7.	IC	= ion chromatography
20.	Titrate: color	= titration: colorimetric *[color reagent specified]*
21.	Titrate: electro	= titration: electrometric
22.	Color	= colorimetric: *[color reagent specified]*
40.	Ion electrode	= specific ion electrode
50.	Gravimetric	= gravimetric: *[precipitate specified]*
12.	Flame photo	= flame photometric
41.	Electro	= electrometric: *[meter specified]*

Abbreviations and symbols

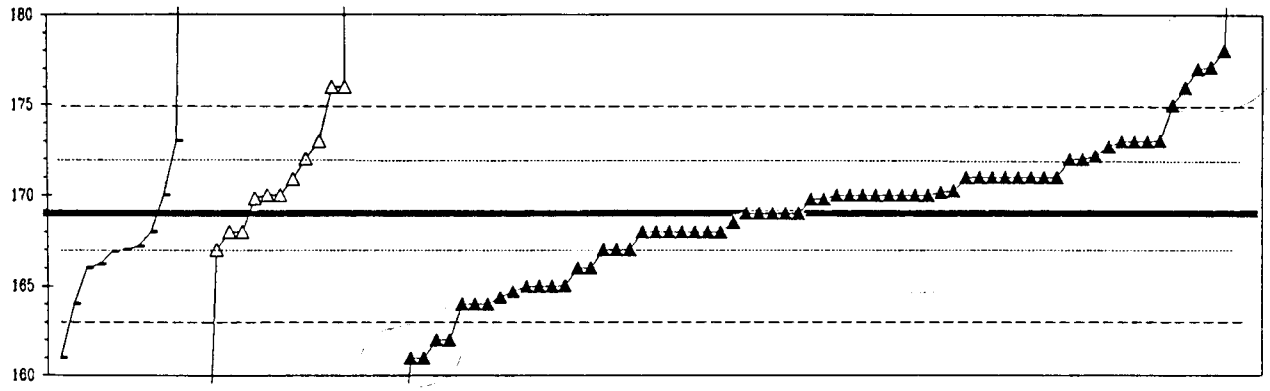
N	= number of reported values
St dev	= traditional standard deviation
MPV	= 95% confidence most probable value
F-pseudosigma	= nonparametric statistic deviation
Hu	= upper hinge value
Hl	= lower hinge value
μ g/L	= micrograms per liter
m g/L	= milligrams per liter
Lab	= laboratory by code number
NR	= not rated, less than value reported
<	= less than

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (Major constituent)--Continued*

0. Other	20. Titrate: colorimetric	21. Titrate: electrometric
N =	11	13	71
Minimum =	161	150	48
Maximum =	207	920	359
Median =	167	170	170
Std Dev =	3	3	4

Analyte = Alk (as CaCO3) mg/L

95% confidence MPV =	169	+/-	0.8
* F-pseudosigma =	5		
N =	95		
Range =	48	-	920
Hu =	172		
Hl =	167		



Lab#	Rating	Z-value	0	20	21
1	3	0.66			173
3	3	0.52			172
5	0	7.52	207		
7	0	14.92			244
8	4	0.12		170	
10	4	0.32			171
13	2	-1.48			162
14	3	-0.88			165
15	3	0.52			172
16	4	0.08		170	
18	4	-0.28	168		
20	3	0.72			173
23	4	0.08			170
24	4	0.12			170
27	4	-0.28			168
28	4	0.12			170
29	4	-0.28			168
32	2	-1.08			164
37	4	-0.28			168
38	2	1.31			176
39	4	0.12	170		
40	4	-0.08			169
42	1	-1.68			161
43	4	0.32			171
45	4	-0.28			168
46	1	1.72			178
48	4	-0.08			169
49	4	0.32			171
50	1	1.52			177
51	4	-0.28			168
52	4	0.12			170
54	4	0.32			171
55	4	0.12			170
56	3	-0.88			165
57	4	-0.28		168	
60	4	0.12			170
61	1	-1.68			161
63	0	-3.88		150	
68	4	-0.48	167		
69	4	-0.44	167		
70	4	-0.28			168
71	2	1.32		176	
72	4	-0.48			167
74	4	0.32			171
75	4	-0.08			169
76	4	-0.28		168	
78	0	4.52			192
79	3	0.72			173
80	0	150.12		920	
83	4	0.16			170
87	4	-0.28			168
89	4	0.32			171
90	0	-3.12			154
91	2	-1.08			164
92	4	-0.48			167
94	2	-1.08			164
97	4	-0.18			169
98	3	-0.88			165
100	4	-0.08			169
104	1	1.54			177
105	3	0.56			172
109	4	0.32			171
113	4	0.30		171	
118	2	1.32		176	
119	3	0.52		172	
120	3	-0.68			166
122	3	-1.00			164
124	0	-24.28			48
128	3	-0.68	166		
129	3	0.72		173	
130	4	-0.08			169
131	4	0.12			170
132	3	-0.94			165
133	3	0.72			173
134	4	0.17			170
138	3	-0.64	166		
141	0	-6.08			139
143	4	0.12			170
144	4	0.08			170
145	4	-0.50	167		
146	2	1.12			175
151	4	0.12			170
153	3	-0.88			165
154	1	-1.68	161		
158	2	-1.48			162
167	4	-0.48			167
179	0	21.32			276
180	4	0.32			171
182	2	-1.08	164		
183	4	0.12		170	
184	3	0.72			173
188	0	37.93			359
190	3	0.72	173		
191	4	-0.48		167	
194	3	-0.68			166

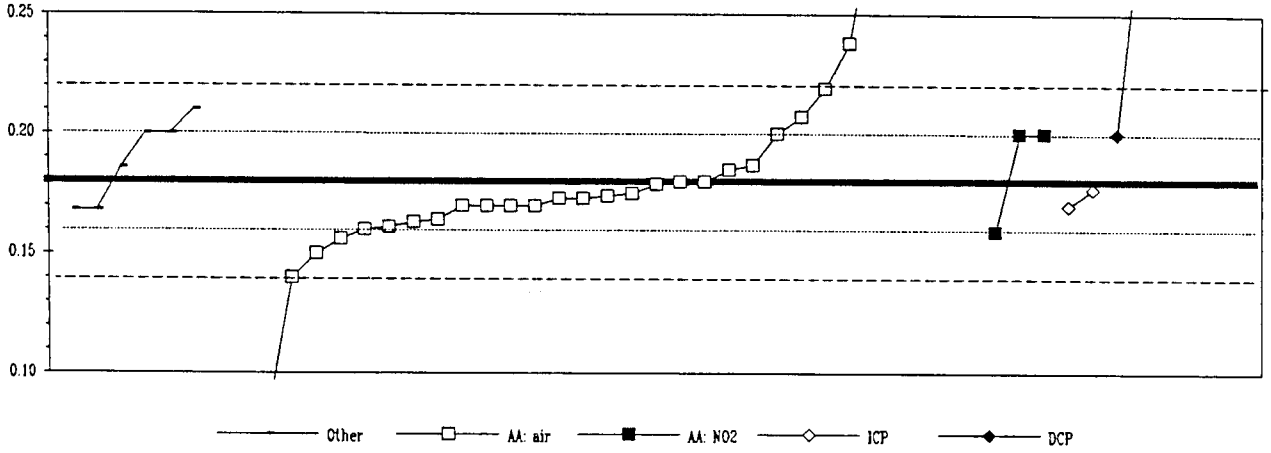
* A F-pseudosigma of 5 is used based on historical data

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other		4. ICP			
1. AA: direct, air		5. DCP			
2. AA: direct, N20					
N =	6	32	3	2	3
Minimum =	0.17	0.02	0.16	0.17	0.20
Maximum =	0.21	178	0.20	0.18	0.29
Median =	0.19	0.17	0.20	0.17	0.29
Std Dev =		0.02			

Analyte = B (Boron) mg/L

95% confidence MPV =	0.18	+/-	0.01
F-pseudosigma =	0.02		
N =	48		
Range =	0.02	-	178
Hu =	0.20		
Hl =	0.17		



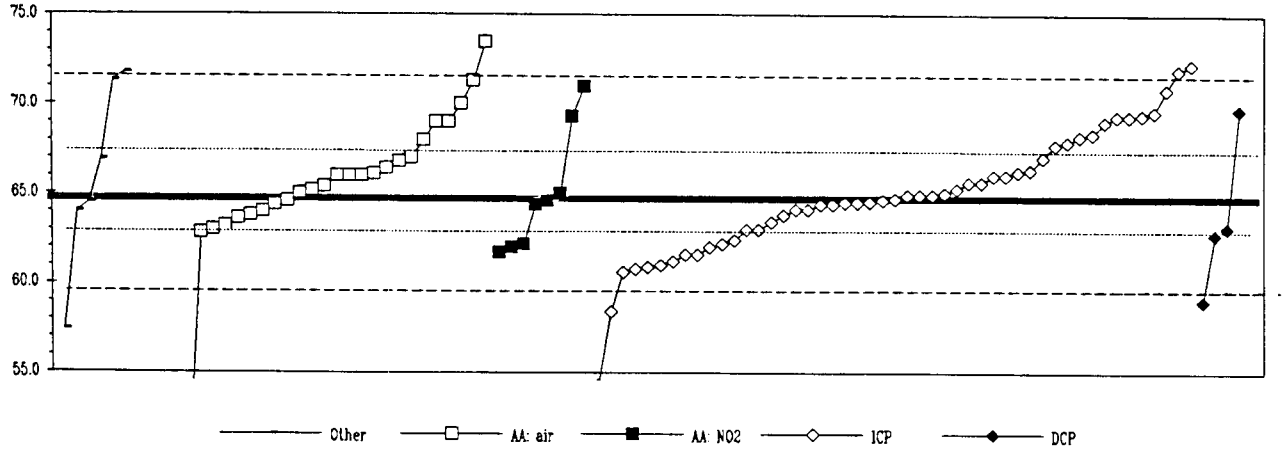
Lab #	Rating	Z-value	0	1	2	4	5
1	4	0.33	0.19				
3	0	-6.66		0.02			
7	0	2.53		0.24			
8	0	-3.96		0.08			
10	3	0.93					0.20
14	3	0.93	0.20				
15	4	0.38		0.19			
16	0	4.93		0.30			
18	0	7496		178			
23	0	4.72					0.29
24	2	1.22		0.21			
28	3	-0.76		0.16			
29	4	-0.34				0.17	
37	4	-0.04				0.18	
39	3	-0.93		0.16			
40	4	-0.17		0.17			
45	4	-0.42	0.17				
46	4	-0.13		0.18			
50	3	0.93			0.20		
52	NR	NR		< 3.4			
55	0	-5.40		0.05			
57	NR	NR		< 0.5			
61	3	-0.63		0.16			
63	4	-0.34		0.17			
68	1	1.73		0.22			
70	0	6316		150			
74	4	0.30		0.19			
77	0	4.72					0.29
80	2	1.35	0.21				
86	3	-0.59		0.16			
98	4	-0.34		0.17			
100	4	-0.21		0.17			
103	2	-1.18		0.15			
109	4	0.08		0.18			
119	3	0.93		0.20			
121	4	0.08		0.18			
124	4	-0.34		0.17			
128	3	-0.72		0.16			
129	3	0.93			0.20		
130	0	6485		154			
131	4	-0.34		0.17			
134	4	-0.42	0.17				
141	1	-1.60		0.14			
145	4	0.04		0.18			
146	0	7.08		0.35			
167	4	-0.21		0.17			
180	3	-0.80			0.16		
182	3	0.93	0.20				

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other			4. ICP		
1. AA: direct, air			5. DCP		
2. AA: direct, N2O					
N =	6	29	8	49	4
Minimum =	57.4	6.2	61.7	54.3	59.0
Maximum =	71.8	73.5	71.0	72.2	69.7
Median =	65.7	65.2	64.5	64.7	62.9
Std Dev =		2.7	3.4	3.1	

Analyte = Ca (Calcium) mg/L

95% confidence MPV =	64.7	+/-	0.7
F-pseudosigma =	3.3		
N =	96		
Range =	6.2	-	73.5
Hu =	67.3		
Hl =	62.9		



Lab #	Rating	Z-value	0	1	2	4	5
1	4	-0.01				64.6	
2	3	-0.76			62.2		
3	0	2.31				72.2	
5	4	0.07				64.9	
7	4	0.47				66.2	
8	2	1.42				69.3	
10	4	0.41		66.0			
13	4	-0.02		64.6			
14	1	1.54					69.7
15	1	-1.92				58.4	
16	4	-0.17				64.1	
18	4	0.01				64.7	
20	0	2.18	71.8				
23	3	-0.90			61.7		
24	3	-0.94				61.6	
27	1	-1.74					59.0
28	2	1.08				68.2	
29	4	-0.20	64.0				
32	3	0.69	66.9				
37	2	-1.06				61.2	
38	3	-0.82			62.0		
39	3	0.93				67.7	
40	4	0.29				65.6	
42	2	1.45				69.4	
43	4	0.41				66.0	
45	4	0.44		66.1			
46	4	-0.17				64.1	
48	3	-0.76				62.2	
49	4	0.41		66.0			
51	3	-0.82				62.0	
52	4	-0.08				64.4	
54	4	0.41		66.0			
55	4	0.18				65.3	
56	4	-0.32		63.6			
57	3	-0.51				63.0	
61	0	2.22				71.9	
63	0	-3.18				54.3	
64	4	0.50				66.3	
68	2	-1.15				60.9	
69	3	-0.57		62.8			
70	4	-0.39				63.4	
71	1	1.64		70.0			
74	3	-0.69				62.4	
75	4	0.23		65.4			
76	0	-4.31		50.6			
78	0	2.03		71.3			
80	2	1.02		68.0			
83	4	-0.27		63.8			
86	3	0.72				67.0	
87	4	0.10			65.0		

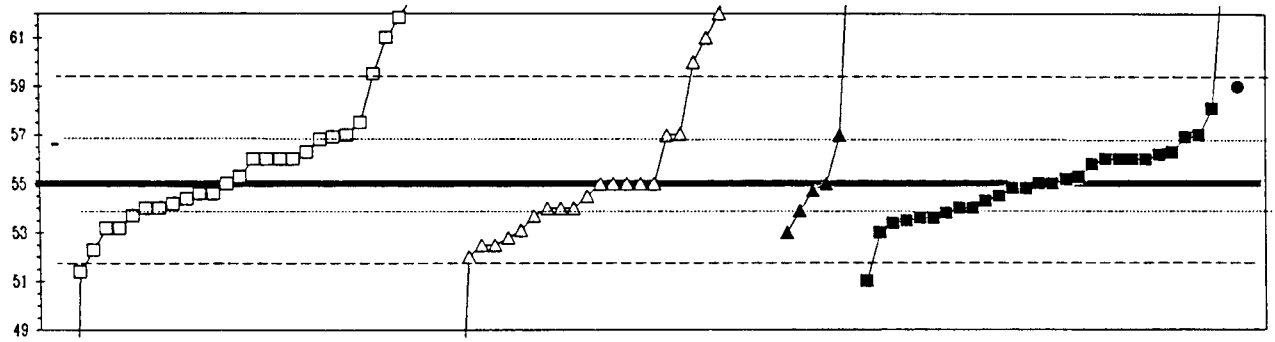
Lab #	Rating	Z-value	0	1	2	4	5
89	1	-1.92		63.2			
90	4	-0.17	64.5				
91	4	0.01				69.3	
92	0	2.18		13.8			
93	3	-0.90				64.5	
94	4	-0.02			64.6		
98	4	-0.08				64.4	
100	4	0.29				65.6	
101	4	0.16		65.2			
103	3	-0.51				63.0	
105	1	1.88				70.8	
106	3	-0.60					62.7
109	3	-0.51		63.0			
113	3	0.53		66.4			
118	2	1.33		69.0			
119	4	-0.27				63.8	
120	3	0.65		66.8			
121	4	-0.05				64.5	
122	3	0.72		67.0			
123	0	2.70		73.5			
124	2	1.42			69.3		
128	4	0.07				64.9	
129	2	1.33		69.0			
130	2	-1.18				60.8	
131	4	0.07				64.9	
132	4	-0.08		64.4			
133	3	0.99				67.9	
134	4	-0.20		64.0			
138	2	1.33				69.0	
140	0	-17.94		6.2			
141	4	0.10				65.0	
145	4	-0.05				64.5	
146	2	-1.25				60.6	
149	0	-6.64		43.0			
151	4	0.10		65.0			
152	2	1.13				68.3	
153	0	2.03	71.3				
154	3	-0.94				61.6	
167	4	0.41				66.0	
179	0	-5.75		45.9			
180	2	1.50				69.6	
182	1	1.94			71.0		
183	0	-2.23	57.4				
188	4	-0.08			64.4		
190	2	-1.12				61.0	
191	4	-0.48					63.1

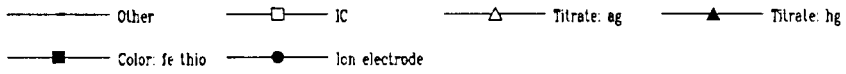
Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other			20h. Titrate: Hg			
7. IC			22. Color: Fe thio			
20a. Titrate: Ag			40. Ion electrode			
N =	1	28	26	6	28	1
Minimum =	57	52	51	53	53	92
Maximum =	57	67	58	59	65	194
Median =		55	55		55	
Std Dev =		2.5	3.6		1.5	

Analyte = Cl (Chloride) mg/L

95% Confidence MPV =	55.0	+/-	0.5
F-pseudosigma =	2.2		
N =	90		
Range =	51.0	-	194
Hu =	56.9		
Hl =	53.9		





Lab #	Rating	Z-value	0	7	20a	20h	22	40
1	4	0.45		56.0				
3	4	0.13					55.3	
4	0	5.17		66.5				
5	3	-0.63					53.6	
7	3	0.58		56.3				
8	0	-10.21		32.3				
13	4	0.45					56.0	
14	0	2.70		61.0				
15	4	0.13		55.3				
16	3	0.91			57.0			
18	4	0.00					55.0	
20	1	-1.62		51.4				
24	3	-0.67					53.5	
27	3	-0.81		53.2				
28	0	2.02		59.5				
29	0	-12.14			28.0			
32	4	0.45		56.0				
37	3	0.90		57.0				
39	4	0.00				55.0		
42	4	-0.27		54.4				
43	1	1.80						59.0
45	3	-0.54					53.8	
46	4	-0.09					54.8	
48	0	3.15			62.0			
49	4	0.00			55.0			
50	4	-0.45					54.0	
51	4	-0.18		54.6				
52	3	0.58					56.3	
55	3	0.90					57.0	
56	2	-1.34			52.0			
57	4	-0.45			54.0			
61	0	5.44				67.1		
63	4	-0.45					54.0	
64	2	1.39					56.1	
65	4	0.36					55.8	
68	4	-0.22					54.5	
69	3	-0.72					53.4	
70	4	0.00			55.0			
71	4	-0.45			54.0			
72	4	0.00			55.0			
74	4	0.45		56.0				
75	4	0.45					56.0	
76	0	4.59			65.2			
78	4	0.00			55.0			
79	0	2.25			60.0			
80	2	-1.12			52.5			
83	4	-0.12				54.7		
87	1	-1.80					51.0	
89	4	-0.22			54.5			
91	4	0.00		55.0				

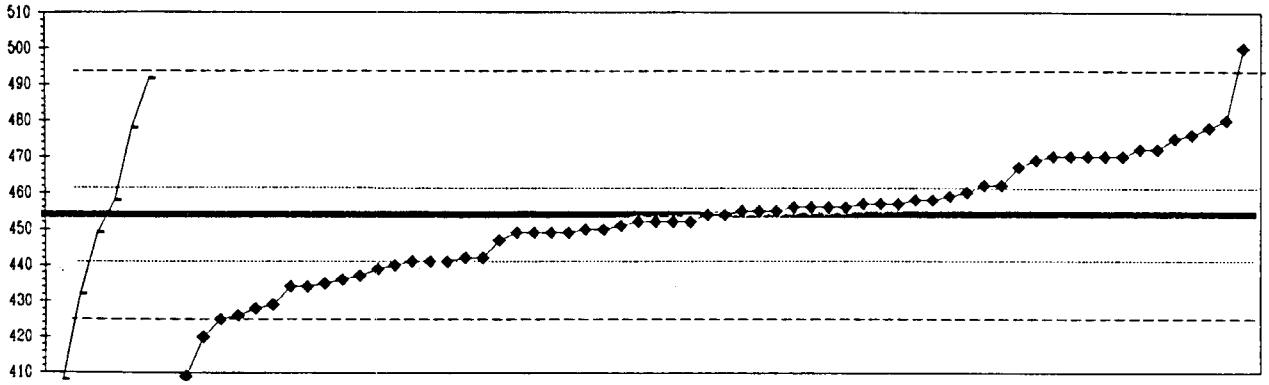
Lab #	Rating	Z-value	0	7	20a	20h	22	40
92	0	2.70			61.0			
93	3	-0.81		53.2				
94	4	-0.31					54.3	
97	4	-0.09					54.8	
98	4	-0.45		54.0				
100	3	-0.58		53.7				
101	0	5.49			67.2			
105	3	0.81		56.8				
109	3	0.90				57.0		
113	3	0.54					56.2	
119	4	0.00			55.0			
120	3	-0.85			53.1			
124	2	-1.12			52.5			
126	4	0.00					55.0	
129	4	-0.36		54.2				
130	4	-0.18		54.6				
131	2	1.12		57.5				
134	4	-0.45		54.0				
136	3	0.85		56.9				
140	4	0.45					56.0	
141	4	0.09					55.2	
143	3	-0.90					53.0	
145	0	3.49		62.8				
146	3	0.90			57.0			
149	0	3.06		61.8				
150	3	0.85					56.9	
151	4	0.45		56.0				
154	3	-0.63					53.6	
156	3	-0.90				53.0		
167	3	-0.58			53.7			
173	0	21.13			102.0			
177	0	4.50					65.0	
179	0	79.59			232.0			
180	4	0.45					56.0	
182	3	-0.99			52.8			
183	0	-5.62			42.5			
184	3	0.72	56.6					
186	2	-1.22		52.3				
190	4	-0.45			54.0			
194	4	-0.49				53.9		

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other	50e. Residue: evap	50f. Residue: filter
N =	6	63	0
Min =	408	360	
Max =	492	500	
Median =	454	454	
Std Dev =		10	

Analyte = DSRD (Dissolved Solids) mg/L

95% Confidence MPV =	454	+/-	4
F-pseudosigma =	16		
N =	69		
Range =	360	-	500
Hu =	462		
Hl =	441		



Lab #	Rating	Z-value	0	50e	50f
1	4	0.00		454	
3	4	0.13		456	
5	1	1.67		480	
10	4	0.26	458		
13	4	-0.13		452	
15	4	-0.19		451	
16	1	-1.61		429	
18	4	-0.45		447	
20	3	-0.96		439	
23	3	-0.77		442	
29	4	0.06		455	
32	4	0.26		458	
37	4	-0.32		449	
38	4	0.13		456	
40	4	-0.32	449		
42	2	1.41		476	
43	4	0.13		456	
45	1	1.54		478	
46	2	1.03		470	
48	4	0.32		459	
49	3	-0.84		441	
50	4	-0.13		452	
51	4	0.39		460	
52	2	1.16		472	
54	4	-0.26		450	
55	0	2.95		500	
57	0	-6.04		360	
60	3	-0.84		441	
61	2	-1.22		435	
63	0	-2.18		420	
69	4	-0.13		452	
70	2	-1.28		434	
71	2	1.03		470	
72	2	1.16		472	
74	4	0.19		457	
75	4	0.26		458	
78	2	1.35		475	
80	4	0.06		455	
87	4	-0.26		450	
89	1	-1.86		425	
90	1	-1.67		428	
91	1	-1.80		426	
92	3	-0.90		440	
94	4	0.19		457	
97	4	0.19		457	
100	4	0.06		455	
101	4	-0.32		449	
105	3	0.96		469	
109	4	-0.32		449	
113	3	0.84		467	

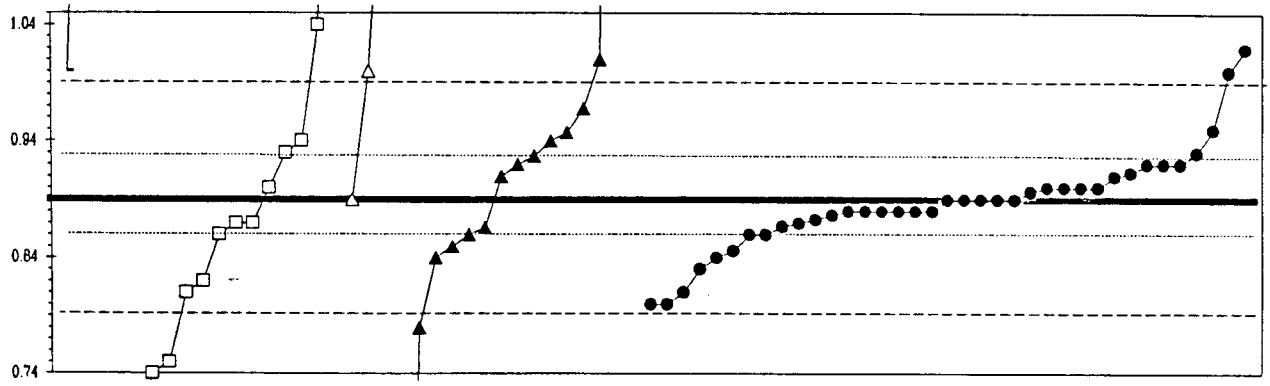
Lab #	Rating	Z-value	0	50e	50f
118	2	1.03		470	
119	2	-1.16		436	
120	2	1.03		470	
122	0	2.41	492		
124	3	-0.77		442	
129	2	-1.28		434	
130	0	-2.69		409	
133	1	1.54	478		
134	4	0.00		454	
140	2	-1.09		437	
141	2	1.03		470	
146	3	0.51		462	
149	3	-0.84		441	
151	4	-0.13		452	
154	3	0.51		462	
173	4	0.13		456	
182	2	-1.41	432		
184	0	-2.95	408		
190	4	-0.32		449	

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other			22s. Color: SPADNS			
7. IC			40. Ion Electrode			
22e. Color: eriochrome						
N =	2	15	3	15	37	
Min =	1.00	0.52	0.89	0.13	0.80	
Max =	1.40	1.56	1.20	2.20	1.02	
Median =		0.86		0.92	0.89	
Std Dev =		0.09		0.06	0.04	

Analyte = F (Fluoride) mg/L

95% Confidence MPV =	0.89	+/-	0.01
F-pseudosigma =	0.05		
N =	72		
Range =	0.13	-	2.20
Hu =	0.93		
Hl =	0.86		



Other IC Color: eriochrome Color: spadns Ion Electrode

Lab #	Rating	Z-value	0	7	22e	22s	40
1	4	-0.39		0.87			
3	3	-0.98				0.84	
4	3	0.79		0.93			
7	2	-1.38		0.82			
10	4	-0.20					0.88
13	4	0.20					0.90
14	0	-7.29		0.52			
15	4	-0.33					0.87
16	3	-0.98					0.84
18	4	0.00					0.89
20	3	0.59					0.92
24	4	-0.39					0.87
27	0	13.19		1.56			
28	1	-1.58		0.81			
29	3	0.79					0.93
32	0	2.95		1.04			
37	4	0.20					0.90
39	3	0.59					0.92
40	3	0.59					0.92
42	3	-0.59					0.86
45	3	-0.87					0.85
46	4	0.45					0.91
49	4	0.20					0.90
52	0	2.56					1.02
54	4	-0.20					0.88
55	3	0.98		0.94			
57	2	-1.18					0.83
61	2	1.18					0.95
63	4	0.20					0.90
69	3	-0.59					0.86
70	4	0.00					0.89
71	1	-1.77					0.80
72	1	-1.77					0.80
74	4	0.14					0.90
76	4	-0.20					0.88
77	4	0.20		0.90			
78	4	-0.20					0.88
80	1	-1.58					0.81
83	4	0.39					0.91
89	4	0.00					0.89
91	3	-0.59				0.86	
94	4	-0.26					0.88
97	4	-0.45					0.87
98	0	-2.76		0.75			
100	4	-0.20					0.88
105	0	-3.94		0.69			
109	4	0.00					0.89
113	2	1.12				0.95	
119	4	0.00					0.89
124	0	2.17					1.00

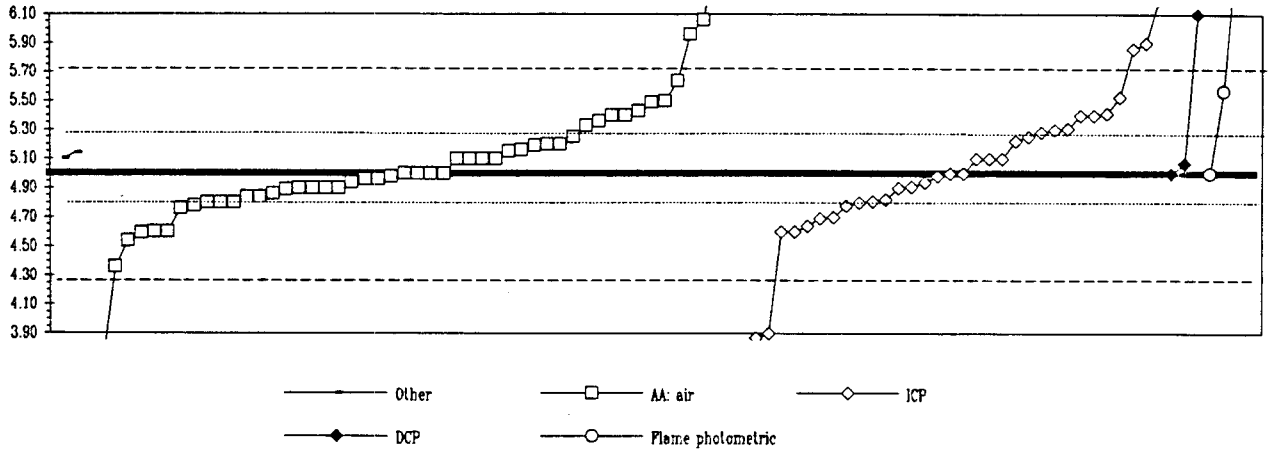
Lab #	Rating	Z-value	0	7	22e	22s	40
128	4	-0.20					0.88
129	0	-4.14		0.68			
130	0	2.17	1.00				
131	0	21.86				2.00	
134	4	-0.39		0.87			
138	3	-0.59		0.86			
140	1	1.54				0.97	
141	3	0.59				0.92	
145	0	10.04	1.40				
149	3	0.98				0.94	
151	0	2.36				1.01	
153	0	-2.95		0.74			
154	4	0.00			0.89		
156	3	-0.79				0.85	
167	0	-14.97				0.13	
173	0	6.10			1.20		
177	3	0.73				0.93	
180	4	-0.47				0.87	
182	0	25.60				2.20	
183	0	-2.17				0.78	
190	0	2.17			1.00		
194	4	0.39				0.91	

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other	5. DCP				
1. AA: direct, air	12. Flame photometric				
4. ICP					
N =	2	49	34	3	3
Min =	5.10	3.45	2.70	5.00	5.00
Max =	5.14	6.56	6.20	6.10	6.51
Median =		5.00	4.99		
Std Dev =		0.34	0.35		

Analyte = K (Potassium) mg/L

95% Confidence MPV =	5.00	+/-	0.07
F-pseudosigma =	0.36		
N =	91		
Range =	2.70	-	6.56
Hu =	5.29		
Hl =	4.81		



Lab #	Rating	Z-value	0	1	4	5	12
1	3	0.56		5.20			
2	3	-0.67		4.76			
3	4	-0.39		4.86			
5	3	-1.00			4.64		
7	3	0.86			5.31		
8	0	3.34			6.20		
10	4	0.28		5.10			
13	3	-0.61		4.78			
14	0	3.06				6.10	
15	0	2.67		5.96			
16	3	0.92		5.33			
18	4	0.28			5.10		
20	0	4.20					6.51
23	2	-1.11		4.60			
24	2	-1.11			4.60		
27	2	1.36		5.49			
28	0	-4.73			3.30		
29	4	0.00					5.00
32	3	0.83			5.30		
37	4	-0.28		4.90			
38	4	-0.28		4.90			
40	4	0.00			5.00		
42	3	0.70			5.25		
43	4	0.28			5.10		
45	4	-0.45		4.84			
46	3	-0.61			4.78		
48	4	-0.50			4.82		
49	2	1.39		5.50			
51	1	1.59					5.57
52	4	-0.28			4.90		
55	4	-0.28		4.90			
56	4	-0.06		4.98			
57	2	1.11			5.40		
61	0	2.50			5.90		
63	3	-0.56		4.80			
64	4	0.42		5.15			
65	0	4.34		6.56			
68	3	-0.53			4.81		
69	3	1.00		5.36			
70	3	-0.83			4.70		
71	4	0.28	5.10				
74	3	-0.56			4.80		
75	4	0.00		5.00			
76	0	-3.62		3.70			
77	2	1.11		5.40			
78	2	-1.28		4.54			
80	4	0.00		5.00			
83	4	0.45		5.16			
86	3	0.78			5.28		
87	1	-1.78		4.36			

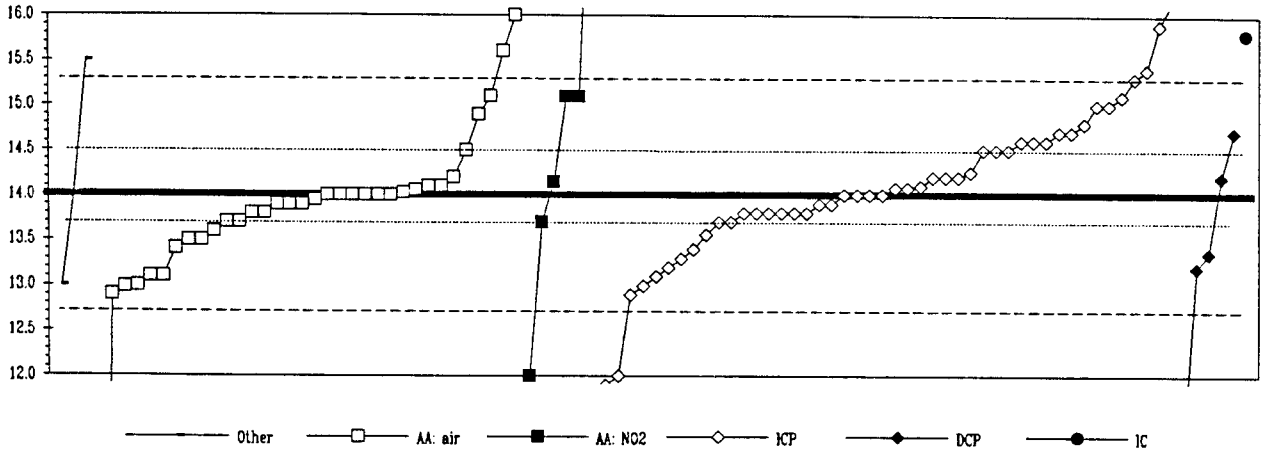
Lab #	Rating	Z-value	0	1	4	5	12
89	3	0.70		5.25			
92	0	-4.31		3.45			
93	2	1.20		5.43			
94	4	0.00		5.00			
98	2	1.11			5.40		
100	4	-0.25			4.91		
101	4	0.28		5.10			
103	0	-3.06			3.90		
105	2	-1.14		4.59			
106	4	0.19				5.07	
109	4	-0.11		4.96			
113	4	-0.11		4.96			
119	2	-1.11			4.60		
120	0	2.95		6.06			
121	4	-0.45		4.84			
122	1	1.78		5.64			
123	3	0.53		5.19			
124	4	-0.17		4.94			
128	4	-0.17			4.94		
129	3	-0.56		4.80			
130	3	-0.86			4.69		
131	0	-6.40			2.70		
132	2	1.11		5.40			
134	3	0.56		5.20			
138	4	0.28			5.10		
140	4	-0.28		4.90			
141	0	2.39			5.86		
145	4	-0.05			4.98		
146	0	-3.14			3.87		
149	2	-1.11		4.60			
151	4	0.00		5.00			
152	3	0.62			5.22		
153	4	0.39	5.14				
154	2	1.14			5.41		
167	4	0.00			5.00		
179	4	0.28		5.10			
180	2	1.47			5.53		
182	4	-0.31		4.89			
188	4	0.28		5.10			
190	3	-0.56		4.80			
191	4	0.00				5.00	

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other			4. ICP			
1. AA: direct, air			5. DCP			
2. AA: direct, N2O			7 IC			
N =	3	34	6	46	5	1
Min =	13.0	2.9	12.0	11.9	11.2	15.8
Max =	15.5	16.0	18.3	16.2	14.7	15.8
Median =	14.0	13.9	14.6	14.0	13.4	15.8
Std Dev =		0.6		0.7		

Analyte = Mg (Magnesium) mg/L

95% Confidence MPV =	14.0	+/-	0.1
F-pseudosigma =	0.6		
N =	95		
Range =	2.9	-	18.3
Hu =	14.5		
Hl =	13.7		



Lab #	Rating	Z-value	0	1	2	4	5	7
1	4	-0.32		13.8				
2	1	1.75			15.1			
3	2	1.11				14.7		
5	4	0.32				14.2		
7	0	-3.17				12.0		
8	0	3.02				15.9		
10	4	0.16		14.1				
13	4	0.00		14.0				
14	2	1.11					14.7	
15	4	0.32				14.2		
16	4	-0.16				13.9		
18	4	-0.32				13.8		
20	0	2.87						15.8
23	4	-0.32		13.8				
24	4	-0.32				13.8		
27	2	-1.02					13.4	
28	3	0.95				14.6		
29	4	0.00	14.0					
32	3	0.95				14.6		
37	3	-0.70				13.6		
38	4	0.10		14.1				
39	3	0.95				14.6		
40	4	0.32					14.2	
42	2	1.11				14.7		
43	4	0.00				14.0		
45	3	0.79		14.5				
46	3	0.79				14.5		
48	4	-0.48				13.7		
49	0	3.17		16.0				
51	3	-0.94		13.4				
52	4	0.00				14.0		
54	4	0.00		14.0				
55	2	1.27				14.8		
56	1	-1.62		13.0				
57	1	-1.59				13.0		
61	0	2.22				15.4		
63	0	-3.33				11.9		
64	4	0.13				14.1		
66	4	0.00				14.0		
69	4	-0.48		13.7				
70	2	-1.11				13.3		
71	1	-1.59	13.0					
74	1	-1.75				12.9		
75	4	0.00		14.0				
76	2	-1.43		13.1				
78	2	1.43		14.9				
80	4	0.00		14.0				
83	2	-1.43		13.1				
86	0	2.06				15.3		
87	4	-0.48		13.7				

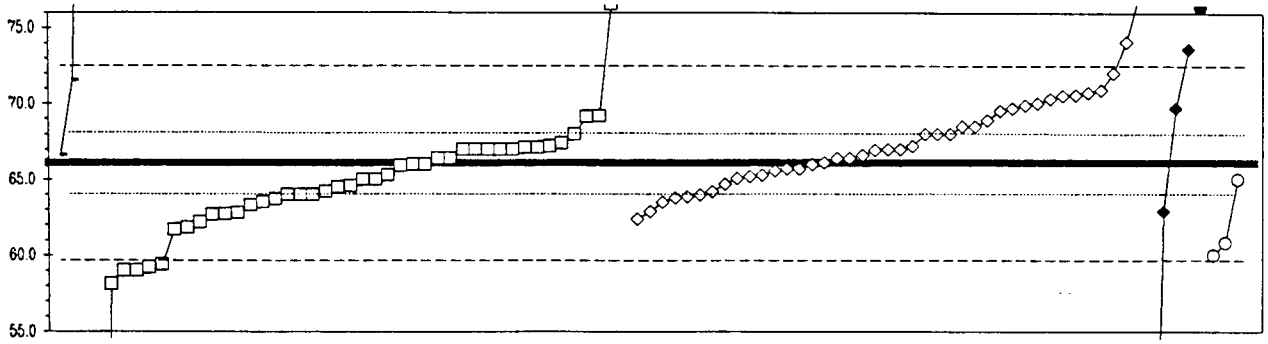
Lab #	Rating	Z-value	0	1	2	4	5	7
89	4	-0.16		13.9				
91	3	0.79				14.5		
92	0	-17.65		2.9				
93	4	-0.16				13.9		
94	4	-0.48			13.7			
97	4	-0.16		13.9				
98	4	-0.32				13.8		
100	4	-0.32				13.8		
101	4	0.00		14.0				
103	4	0.00				14.0		
105	1	1.75				15.1		
106	0	-4.44					11.2	
109	3	-0.79		13.5				
113	4	-0.08		14.0				
119	4	-0.48				13.7		
120	4	0.05		14.0				
121	4	0.32				14.2		
122	1	1.75		15.1				
123	4	0.32		14.2				
124	1	1.75			15.1			
126	4	-0.32				13.8		
129	3	-0.79		13.5				
130	2	-1.27				13.2		
131	4	-0.32				13.8		
132	3	-0.63		13.6				
133	0	6.82			18.3			
134	4	0.00		14.0				
138	1	1.59				15.0		
140	4	0.16		14.1				
141	3	0.79				14.5		
145	4	0.13				14.1		
146	3	-0.95				13.4		
149	1	-1.75		12.9				
151	4	-0.16		13.9				
152	4	0.40				14.3		
153	2	-1.27					13.2	
154	2	-1.43				13.1		
167	1	1.59				15.0		
179	0	2.54		15.6				
180	0	3.43				16.2		
182	0	-3.17			12.0			
183	0	2.38	15.5					
188	4	0.24			14.2			
190	1	-1.59		13.0				
191	4	0.16				14.1		

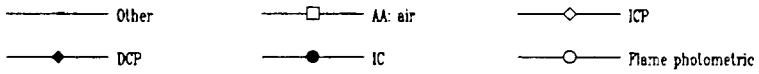
Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other		5. DCP				
1. AA: direct, air		7. IC				
4. ICP		12. Flame photometric				
N =	3	43	41	4	1	3
Min =	66.6	3.6	62.4	27.1	76.4	60.0
Max =	110	110	77.0	73.6	76.4	65.0
Median =		65.0	67.0			
Std Dev =		2.9	2.7			

Analyte = Na (Sodium) mg/L

95% Confidence MPV =	66.1	+/-	0.6
F-pseudosigma =	3.2		
N =	95		
Range =	3.6	-	110
Hu =	68.3		
Hl =	64.0		





Lab #	Rating	Z-value	0	1	4	5	7	12
1	4	0.09		66.4				
2	2	-1.35		61.8				
3	2	1.22			70.0			
5	3	-1.00			62.9			
7	3	-0.72			63.8			
8	0	2.51			74.1			
10	3	-0.66		64.0				
13	4	0.28		67.0				
14	0	-12.24				27.1		
15	3	-0.60			64.2			
16	4	-0.25			65.3			
18	4	-0.13			65.7			
20	0	3.22					76.4	
23	0	-2.10		59.4				
24	4	-0.31			65.1			
27	4	-0.06		65.9				
28	4	0.35			67.2			
29	4	-0.35						65.0
32	0	2.35				73.6		
37	3	0.75			68.5			
38	2	-1.22		62.2				
40	2	-1.16			62.4			
42	2	1.38			70.5			
43	4	0.28			67.0			
45	4	0.31		67.1				
46	4	-0.16			65.6			
48	4	0.28			67.0			
49	4	0.28		67.0				
51	1	-1.91						60.0
52	4	0.16			66.6			
55	3	-0.60		64.2				
56	2	-1.06		62.7				
57	3	-0.66			64.0			
61	1	1.85			72.0			
63	0	-19.61		3.6				
64	3	-0.82		63.5				
65	4	-0.25		65.3				
68	4	-0.44			64.7			
69	3	-0.88		63.3				
70	4	-0.28			65.2			
71	0	13.77	110					
74	3	-0.82			63.5			
75	4	0.41		67.4				
76	2	-1.04		62.8				
77	3	0.60		68.0				
78	4	0.28		67.0				
80	0	-2.23		59.0				
83	2	-1.07		62.7				
86	2	1.32			70.3			
87	4	-0.35		65.0				

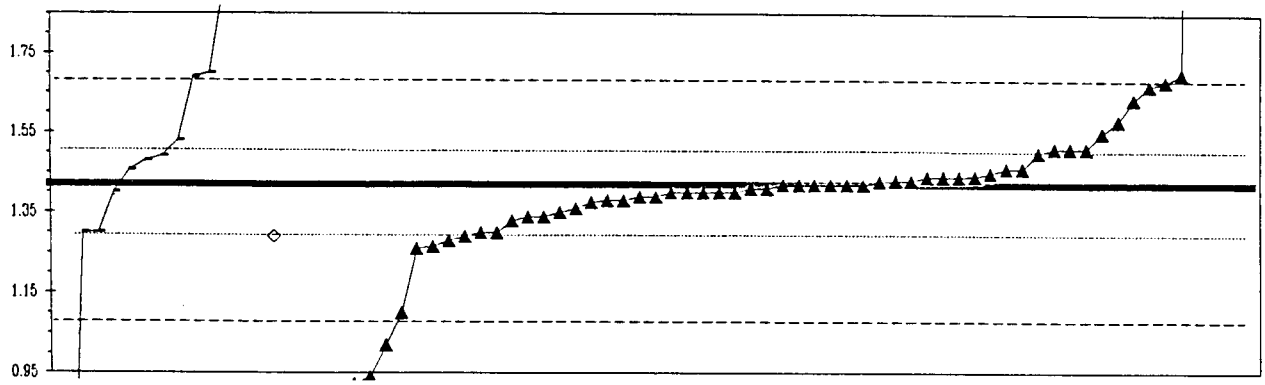
Lab #	Rating	Z-value	0	1	4	5	7	12
89	4	0.09		66.4				
90	1	-1.66						60.8
91	0	3.42			77.0			
92	3	-0.75		63.7				
93	0	-2.16		59.2				
94	4	0.31		67.1				
98	2	1.07			69.5			
100	4	0.09			66.4			
101	4	-0.03		66.0				
103	3	0.60			68.0			
105	4	0.00			66.1			
106	3	-1.00				62.9		
109	4	-0.35		65.0				
113	3	0.96		69.2				
119	3	-0.69			63.9			
120	0	3.29		76.6				
121	3	0.60			68.0			
122	2	-1.38		61.7				
123	4	-0.50		64.5				
124	4	0.35		67.2				
128	4	0.09			66.4			
129	3	-0.66		64.0				
130	3	0.75			68.5			
131	3	0.60			68.0			
132	0	13.77		110				
133	2	1.44			70.7			
134	4	-0.03		66.0				
138	3	0.88			68.9			
140	3	0.97		69.2				
141	1	1.51			70.9			
145	4	0.26			66.9			
146	4	-0.13			65.7			
149	4	0.28		67.0				
151	4	0.28		67.0				
152	2	1.13			69.7			
153	4	0.16	66.6					
154	2	1.19			69.9			
167	4	-0.03			66.0			
177	1	1.71	71.6					
179	4	-0.47		64.6				
180	2	1.40			70.6			
182	0	-2.23		59.0				
188	0	-2.51		58.1				
190	3	-0.66		64.0				
191	2	1.13				69.7		

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other 4. ICP 22. Color: ascorbic acid			
N =	13	1	61
Min =	0.17	1.29	0.01
Max =	4.70	1.29	14.1
Median =	1.49		1.41
Std Dev =	0.14		0.12

Analyte = total P (Phosphorus) mg/L

95% Confidence MPV =	1.42	+/-	0.03
F-pseudosigma =	0.13		
N =	75		
Range =	0.01	-	14.1
Hu =	1.51		
HI =	1.34		



Lab #	Rating	Z-value	0	4	22
1	3	0.71			1.51
3	0	100.62			14.10
7	2	-1.27			1.26
8	0	4.21	1.95		
13	0	-3.94			0.92
14	2	-1.03		1.29	
15	3	0.63			1.50
16	2	-1.23			1.27
17	0	-10.24			0.13
18	4	0.00			1.42
20	4	0.00			1.42
23	4	-0.08			1.41
28	0	26.03	4.70		
32	0	2.14	1.69		
38	4	0.17			1.44
39	0	65.08			10.0
42	4	-0.08			1.41
45	4	0.08			1.43
46	4	0.23			1.45
48	0	2.22			1.70
51	3	-0.63			1.34
52	4	0.32			1.46
55	4	-0.32			1.38
57	0	39.52			6.40
60	2	1.27			1.58
61	4	0.08			1.43
63	3	-0.95			1.30
64	4	0.00			1.42
68	4	0.00			1.42
71	0	-4.21			0.89
72	0	-3.17			1.02
74	4	0.32			1.46
78	0	-9.91	0.17		
80	0	25.31			4.61
86	3	0.56	1.49		
87	3	-0.56			1.35
89	4	-0.24			1.39
90	1	1.98			1.67
91	3	0.71			1.51
92	2	-1.11			1.28
94	4	0.16			1.44
97	4	0.00			1.42
98	4	-0.16	1.40		
100	4	0.16			1.44
102	3	-0.95			1.30
103	3	-0.95	1.30		
104	1	1.71			1.64
105	4	-0.32			1.38
108	0	2.06			1.68
113	4	0.06			1.43

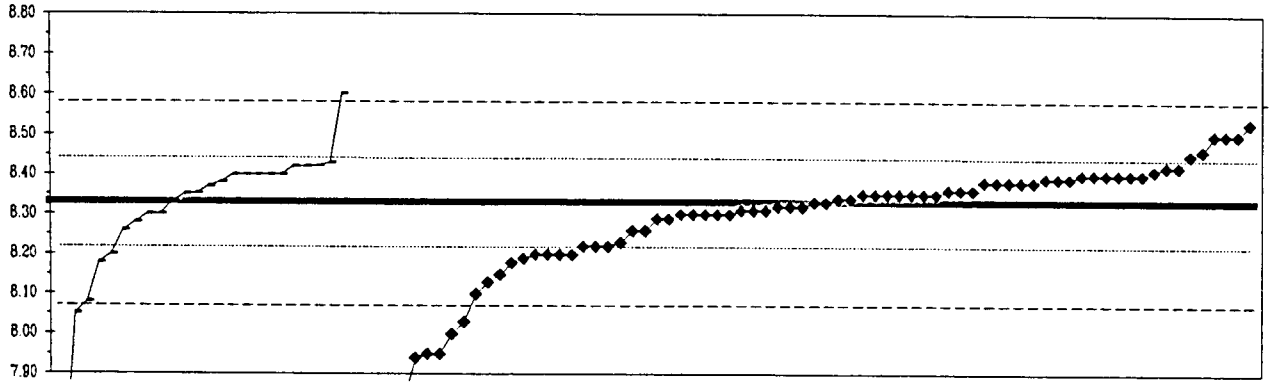
Lab #	Rating	Z-value	0	4	22
118	0	-11.19			0.01
119	4	-0.16			1.40
120	4	-0.36			1.38
124	4	0.00			1.42
128	3	0.71			1.51
131	0	2.22	1.70		
133	3	-0.63			1.34
134	4	-0.16			1.40
138	2	1.03			1.55
140	3	-0.71			1.33
141	4	-0.24			1.39
143	4	-0.16			1.40
145	4	0.29	1.46		
149	0	-2.54			1.10
150	4	-0.16			1.40
152	4	0.48	1.48		
153	3	0.87	1.53		
154	2	-1.03			1.29
167	4	-0.48			1.36
179	4	-0.16			1.40
180	4	0.16			1.44
182	0	-3.81			0.94
184	0	10.63	2.76		
190	0	-4.23			0.89
191	3	-0.95	1.30		

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other 41. Electrometric		
N =	24	75
Min =	7.58	7.50
Max =	8.60	8.53
Median =	8.36	8.32
Std Dev =	0.12	0.13

Analyte = pH

95% Confidence MPV =	8.33	+/-	0.03
F-pseudosigma =	0.13		
N =	99		
Range =	7.50	-	8.60
Hu =	8.40		
Hl =	8.22		



Lab #	Rating	Z-value	0	41
1	4	0.17	8.35	
2	3	1.00		8.46
3	3	0.54		8.40
5	3	-0.85		8.22
7	4	-0.23	8.30	
8	4	0.31	8.37	
10	3	0.54	8.40	
13	4	-0.31		8.29
14	3	-0.54	8.26	
15	4	0.39	8.38	
18	0	-5.78	7.58	
20	3	-0.85		8.22
23	4	-0.08		8.32
24	4	-0.23		8.30
27	0	-2.31		8.03
28	0	-5.63		7.60
29	2	-1.16	8.18	
32	0	-3.85		7.83
37	4	-0.15		8.31
38	3	0.54	8.40	
39	3	0.54		8.40
40	4	0.39		8.38
42	3	-1.00		8.20
43	2	1.31		8.50
45	4	0.15		8.35
46	4	0.39		8.38
48	0	2.08	8.60	
49	4	-0.15		8.31
50	1	-1.77		8.10
51	2	-1.08		8.19
52	4	0.15	8.35	
54	4	0.23		8.36
55	3	0.54		8.40
56	4	0.08		8.34
57	4	0.46		8.39
60	4	0.15		8.35
61	4	0.23		8.36
63	2	1.31		8.50
64	3	-0.54		8.26
68	3	0.69	8.42	
69	3	0.77	8.43	
70	4	-0.15		8.31
71	4	0.15		8.35
72	3	0.54	8.40	
74	4	0.23		8.36
75	3	-1.00		8.20
76	0	-2.93		7.95
78	3	0.54		8.40
79	3	0.54		8.40
80	0	-3.01		7.94

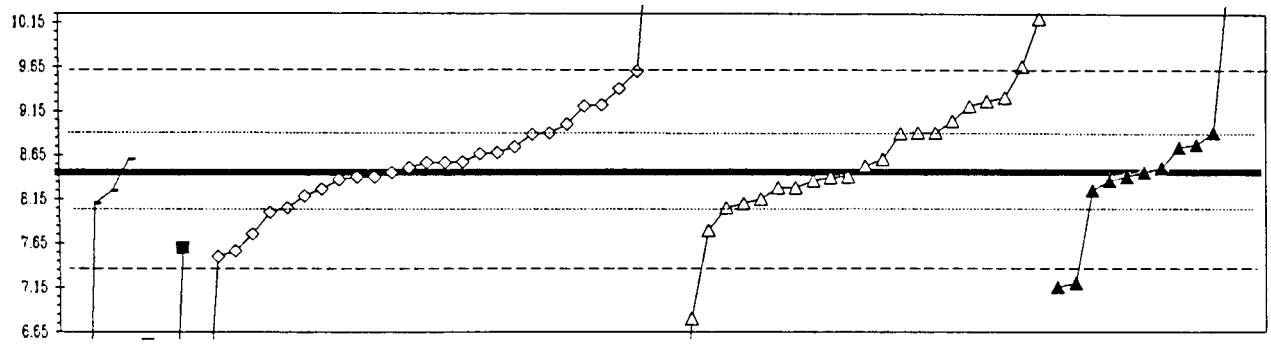
Lab #	Rating	Z-value	0	41
87	3	-1.00		8.20
89	4	0.00		8.33
90	4	0.15		8.35
91	3	-1.00		8.20
92	1	-1.54		8.13
93	3	0.71	8.42	
94	3	0.69		8.42
97	4	0.46		8.39
98	0	-6.40		7.50
100	4	0.39		8.38
101	2	1.31		8.50
104	4	-0.23		8.30
105	4	0.39		8.38
106	4	-0.39	8.28	
109	3	-0.77		8.23
113	0	-4.01		7.81
118	3	0.54		8.40
119	3	0.62		8.41
120	2	-1.16		8.18
122	3	0.93		8.45
124	4	0.15		8.35
128	3	0.69		8.42
129	3	-0.54		8.26
130	4	-0.31		8.29
131	2	-1.39		8.15
132	4	0.46		8.39
133	4	-0.23		8.30
134	4	-0.08		8.32
140	0	-2.16	8.05	
141	3	0.54	8.40	
143	4	0.39		8.38
144	4	0.15		8.35
145	4	-0.23		8.30
146	4	0.00		8.33
150	4	-0.23	8.30	
151	4	0.08		8.34
153	0	-2.93		7.95
154	1	1.54		8.53
158	4	0.00	8.33	
167	0	-2.54		8.00
173	0	-4.09		7.80
179	3	-0.85		8.22
180	3	0.54	8.40	
182	4	-0.23		8.30
183	3	0.69	8.42	
188	1	-1.93	8.08	
190	3	-1.00	8.20	
191	4	0.15		8.35
194	4	-0.08		8.32

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other			4. ICP				
1. AA: direct.air			22a. Color: ascorbic acid				
2. AA: direct. N20			22m. Color: molybdo				
N =	4	1	2	27	22	11	
Min =	0.77	7.60	3.80	4.02	8.40	7.16	
Max =	8.60	7.6	8.56	10.2	10.9	8.9	
Median =				8.46	9.64	8.45	
Std Dev =				0.53	0.72	0.61	

Analyte = SiO2 (Silica) mg/L

95% Confidence MPV =	8.45	+/-	0.14
F-pseudosigma =	0.59		
N =	67		
Range =	0.77	-	10.9
Hu =	8.90		
Hl =	8.10		



Lab #	Rating	Z-value	0	1	2	4	22a	22m
1	4	-0.14				8.37		
2	3	0.75					8.89	
3	2	1.27				9.20		
7	4	0.10				8.51		
8	4	0.19				8.56		
10	4	-0.08						8.40
13	3	0.76					8.90	
14	0	-13.03	0.77					
15	2	-1.19				7.75		
18	3	0.76					8.90	
24	4	0.49				8.74		
28	1	-1.51				7.56		
32	1	1.61				9.40		
37	4	0.00				8.45		
38	0	-7.52					4.02	
39	0	-2.80					6.80	
40	3	0.76				8.90		
43	4	-0.08				8.40		
45	4	-0.44				8.19		
46	4	-0.29					8.28	
51	4	0.12					8.52	
52	2	1.37					9.26	
55	3	0.73				8.88		
57	1	-1.61				7.50		
59	3	-0.59					8.10	
61	0	-6.19				4.80		
63	1	1.95				9.60		
64	3	-0.59	8.10					
66	3	-0.51					8.15	
70	4	0.25					8.60	
72	2	1.44					9.30	
74	3	-0.66					8.05	
80	0	-3.31		6.50				
83	4	-0.08					8.40	
87	2	1.27					9.20	
89	4	-0.29					8.28	
92	2	-1.10					7.80	
97	3	0.98					9.03	
98	4	-0.08				8.40		
100	4	-0.15					8.36	
102	0	4.12						10.88
103	0	5.68				11.80		
104	4	-0.10					8.39	
105	2	-1.44			7.60			
106	4	-0.36	8.24					
109	4	0.20				8.57		
113	0	2.97					10.20	
118	0	2.05					9.66	
119	3	0.93				9.00		
121	4	0.19				8.56		

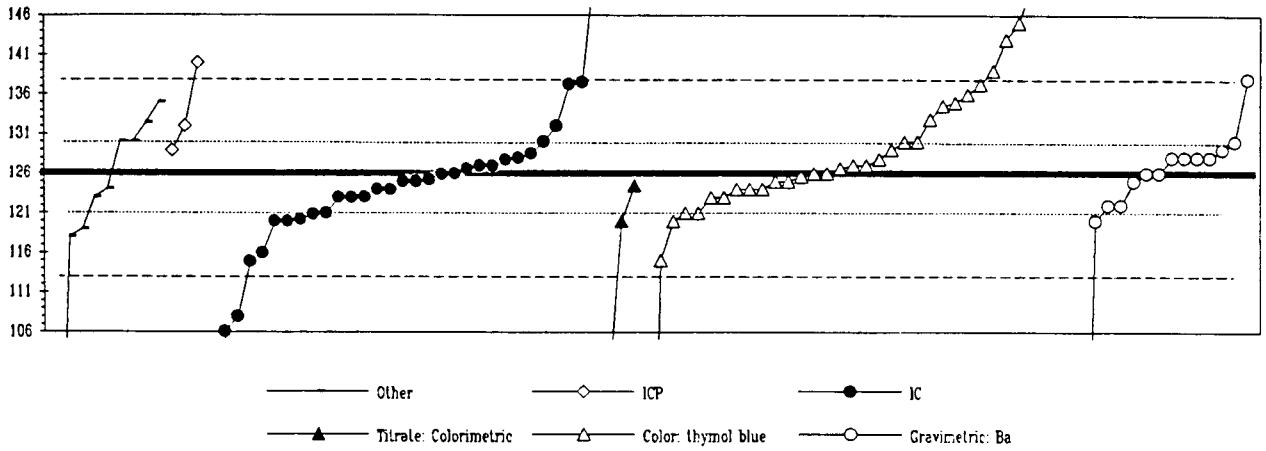
Lab #	Rating	Z-value	0	1	2	4	22a	22m
124	3	-0.76				8.00		
128	4	0.39				8.68		
130	4	0.36				8.66		
131	3	-0.68				8.05		
134	4	0.00						8.45
138	3	0.76						8.90
141	3	0.53						8.76
143	4	0.48						8.73
146	2	1.31				9.22		
151	4	-0.34						8.25
152	4	-0.32				8.26		
167	4	0.08						8.50
173	0	-2.19						7.16
177	0	-2.12						7.20
182	0	-7.89			3.8			
190	4	-0.15						8.36
191	4	0.25	8.60					

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other			20. Tritrate: colorimetric			
4. ICP			22. Color: thymol blue			
7. Ion Chromatography			50. Gravimetric: Ba			
N =	9	3	31	3	32	16
Min =	78	129	2	100	62	33
Max =	135	140	153	125	186	138
Median =	124		125		127	127
Std Dev =	6.3		6.9		7.0	4.5

Analyte = S04 (Sulfate) mg/L

95% Confidence MPV =	126	+/-	1.3
F-pseudosigma =	6.7		
N =	94		
Range =	2	-	186
Hu =	130		
HI =	121		



Lab #	Rating	Z-value	0	4	7	20	22	50
1	4	0.16			127			
3	4	0.01					126	
4	4	-0.44			123			
5	4	0.10					127	
7	3	-0.89			120			
8	0	-16.53			2			
10	3	0.61	130					
13	4	-0.44					123	
14	4	0.31			128			
15	4	-0.44			123			
16	1	1.70					137	
18	4	0.16					127	
20	3	-0.85			120			
23	4	0.28					128	
24	4	-0.44					123	
27	3	0.91			132			
28	1	-1.66			115			
29	3	-0.59						122
32	2	-1.49			116			
37	1	1.73			138			
39	4	-0.14			125			
40	3	-0.89				120		
42	4	-0.43			123			
43	4	0.01						126
45	3	0.61					130	
46	1	1.96					139	
48	1	1.81						138
49	0	-9.59					62	
50	4	0.16					127	
51	1	1.70			137			
52	4	0.46						129
54	4	0.31						128
55	0	3.60					150	
56	0	-8.48						69
57	0	-3.89				100		
61	4	0.31						126
63	0	-13.93						33
65	2	1.30					135	
69	2	1.04					133	
70	2	1.36	135					
71	3	0.61						130
72	3	0.97	132					
74	3	-0.89			120			
75	2	1.36					135	
76	0	4.05			153			
77	3	-0.74			121			
78	3	-0.89						120
80	4	-0.22				125		
83	4	0.01						126
87	0	9.00					186	

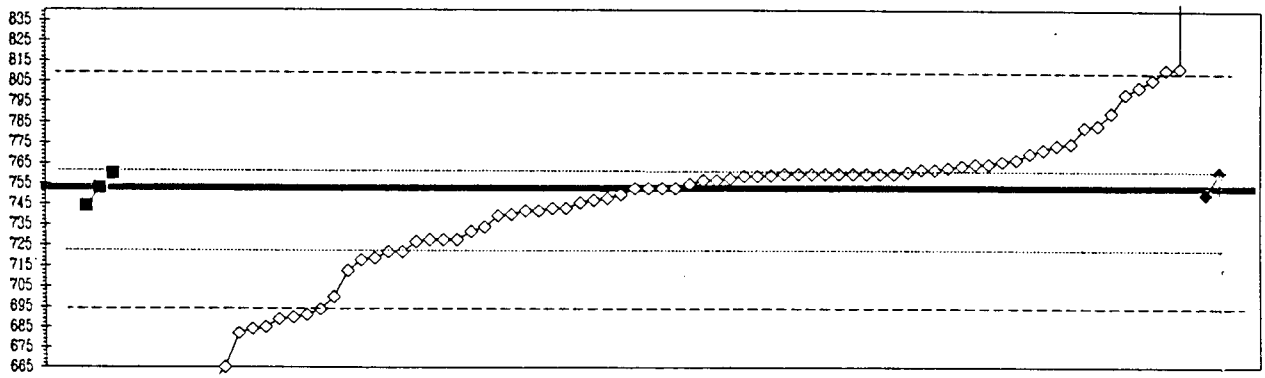
Lab #	Rating	Z-value	0	4	7	20	22	50
89	3	-0.59						122
91	0	-2.98			106			
92	4	-0.14						125
93	4	-0.11			125			
94	4	0.46					129	
97	1	1.51					136	
98	3	0.61			130			
100	4	0.16			127			
101	2	-1.19	118					
102	0	2.56					143	
105	4	0.26			128			
109	4	0.31						128
113	4	-0.01			126			
119	4	-0.29					124	
120	4	-0.05					126	
122	4	0.31						128
124	4	-0.44	123					
128	4	-0.14					125	
129	3	-0.76			121			
130	4	0.01			126			
131	0	-2.69			108			
132	0	-12.37						43
134	4	-0.29			124			
138	4	-0.14			125			
140	4	0.01					126	
141	3	0.91		132				
145	4	0.11			127			
149	4	0.38			129			
150	4	-0.29					124	
151	4	-0.29			124			
152	4	0.44		129				
153	0	2.11		140				
154	3	-0.74					121	
158	4	-0.29					124	
167	3	0.61					130	
173	4	-0.14					125	
177	0	2.86					145	
180	3	-0.89					120	
182	3	0.61	130					
183	0	-7.25	78					
184	2	-1.04	119					
190	1	-1.64					115	
191	4	-0.29	124					
194	3	-0.74					121	

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other		41w. Electro: Wheatstone
41d. Electro: direct reading		
41i. Electro: inductive		
N =	2	3	79	3
Min =	140	744	47	739
Max =	512	760	7180	761
Median =			753	
Std Dev =			30	

Analyte = Specific Conductance μ S/cm

95% Confidence MPV =	753	+/-	6
F-pseudosigma =	29		
N =	87		
Range =	47	-	7180
Hu =	761		
Hl =	722		



Lab #	Rating	Z-value	0	41d	41i	41w
1	4	0.00			753	
3	3	-0.90			727	
5	2	1.04			783	
7	0	-3.32			657	
8	0	2.04			812	
10	4	0.24		760		
13	4	-0.35			743	
14	4	0.42			765	
15	4	0.24			760	
16	0	-3.53			651	
18	4	0.38			764	
20	0	-2.46			682	
23	4	0.22			759	
24	4	0.42			765	
27	2	-1.07			722	
28	0	-7.89			525	
29	2	1.28			790	
32	3	0.76			775	
37	4	0.14			757	
38	1	1.71			803	
40	4	-0.10				750
41	4	0.24			760	
42	4	-0.46			740	
45	3	-0.86			728	
46	4	0.24			760	
48	4	0.21			759	
49	4	0.31			762	
50	4	0.28			761	
51	3	-0.86			728	
52	2	-1.07			722	
54	4	-0.38			742	
55	4	0.24			760	
56	4	-0.35			743	
57	4	0.35			763	
60	4	0.24			760	
61	0	-2.21			689	
63	0	-2.18			690	
64	4	0.00			753	
68	4	0.07			755	
69	4	0.24			760	
70	3	-0.66			734	
72	0	-2.04			694	
74	4	0.17			758	
75	4	-0.10			750	
76	0	-2.35			685	
78	1	-1.83			700	
79	4	-0.21			747	
80	4	0.00		753		
87	0	222.31			7180	
89	0	-22.97			89	

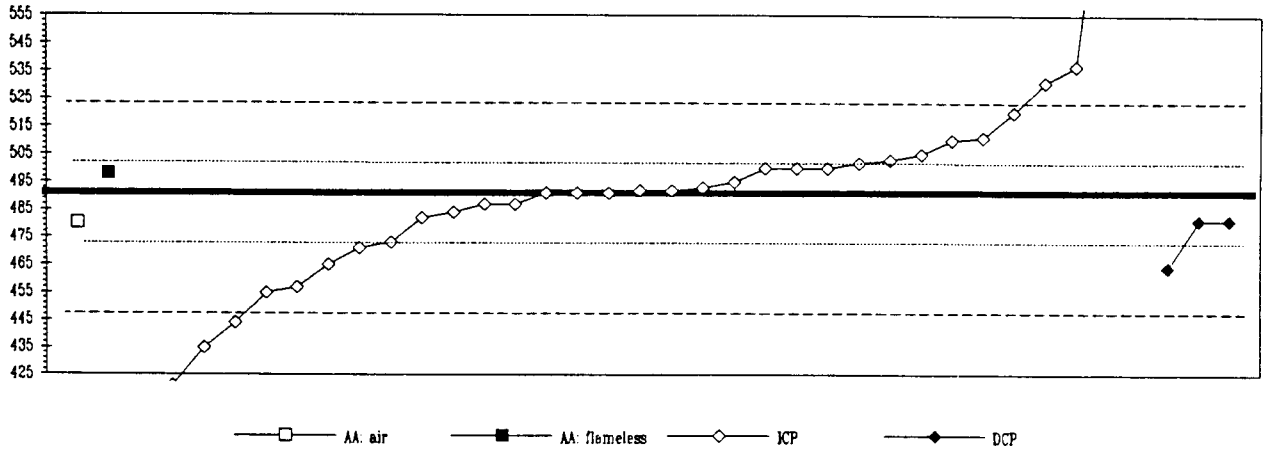
Lab #	Rating	Z-value	0	41d	41i	41w
91	3	-0.73			732	
92	4	0.00			753	
93	0	-2.14			691	
94	4	0.21			759	
97	3	0.66			772	
100	4	-0.17			748	
102	4	-0.31		744		
104	3	0.73			774	
105	4	-0.48				739
109	4	-0.24			746	
113	0	-2.39			684	
118	0	-5.29			600	
119	3	0.59			770	
122	4	0.28				761
124	4	-0.38			742	
128	1	1.83			806	
129	2	1.07			784	
130	4	0.48			767	
131	2	-1.38			713	
134	4	0.24			760	
140	2	-1.21			718	
141	1	1.59			799	
144	4	-0.45			740	
145	3	-0.86			728	
146	0	-3.04			665	
151	4	0.45			766	
152	0	-8.34	512			
153	0	-21.20	140			
154	4	0.31			762	
158	4	0.14			757	
167	0	2.01			811	
173	0	-7.92			524	
179	4	0.24			760	
182	4	0.24			760	
183	0	-24.42			47	
190	4	0.00			753	
194	2	-1.18			719	

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other		4. ICP			
1. AA: direct, air		5. DCP			
3. AA: flameless					
N =	0	1	1	33	2
Min =		480	498	310	464
Max =		480	498	860	481
Median =				492	
Std Dev =				23	

Analyte = Sr (Strontium) μ g/L

95% Confidence MPV =	491	+/-	6.9
F-pseudosigma =	21		
N =	37		
Range =	310	-	860
Hu =	502		
Hl =	473		



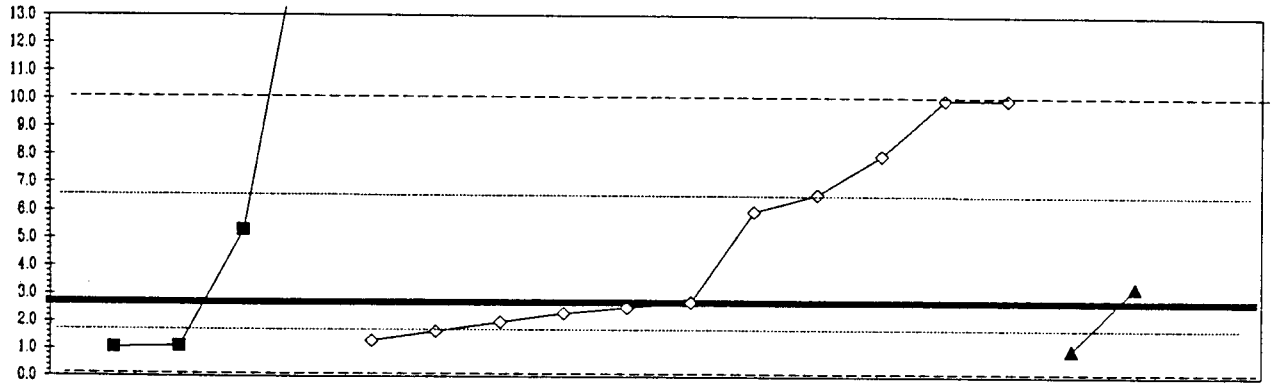
Lab #	Rating	Z-value	0	1	3	4	5
1	3	0.51				502	
3	3	0.56				503	
7	1	-1.68				455	
8	0	17.24				660	
15	4	0.09				493	
16	4	-0.42				482	
18	1	-1.59				457	
24	4	0.00				491	
28	3	0.94				511	
32	3	-0.84				473	
39	3	0.65				505	
40	0	-2.62				435	
42	1	1.87				531	
52	4	0.05				492	
55	0	2.15				537	
63	2	-1.21				465	
68	4	-0.33				484	
70	0	-2.20				444	
74	4	0.19				495	
91	2	1.36				520	
97	4	0.33			498		
98	4	0.00				491	
100	0	-3.27				421	
103	3	0.89				510	
105	4	0.42				500	
106	4	-0.47					481
121	4	0.42				500	
124	0	6.40				628	
130	4	0.05				492	
131	4	-0.19				487	
134	3	-0.51		480			
138	4	0.00				491	
141	0	-8.46				310	
145	4	-0.19				487	
146	3	-0.93				471	
154	4	0.42				500	
191	2	-1.26					464

Table 12.-- *Statistical summary of reported data for standard reference water sample M-118 (major constituent)--Continued*

0. Other	22. Color: catalytic oxidation			
3. AA: flameless				
4. ICP				
N =	0	4	11	2
Min =		1.1	1.3	1.0
Max =		17.0	10.0	3.3
Median =			2.7	
Std Dev =			3.4	

Analyte = V (Vanadium) μ g/L

95% Confidence MPV =	2.7	+/-	1.7
F-pseudosigma =	3.7		
N =	17		
Range =	1.0	-	17.0
Hu =	6.6		
Hl =	1.7		



AA: flameless — ICP — Color: catalytic oxidation

Lab #	Rating	Z-value	0	3	4	22
1	4	0.15				3.3
3	NR	NR			< 10	
7	NR	NR			< 10	
8	2	1.44			8.0	
15	4	-0.46		1.1		
16	NR	NR			< 100	
18	4	-0.39			1.3	
28	4	-0.11			2.3	
32	4	-0.06			2.5	
52	NR	NR			< 5	
55	NR	NR			< 10	
57	NR	NR			< 50	
61	NR	NR			< 0.01	
63	1	1.99			10.0	
68	4	0.00			2.7	
70	NR	NR			< 20	
73	NR	NR				< 2
97	3	0.70		5.3		
98	NR	NR			< 3	
100	NR	NR			< 10	
103	4	-0.20			2.0	
105	2	1.06			6.6	
121	4	-0.47				1.0
124	NR	NR			< 10	
128	NR	NR			< 3	
130	3	0.90			6.0	
133	NR	NR				< 10
134	4	-0.44		1.1		
138	NR	NR			< 3	
141	4	-0.29			1.7	
145	NR	NR			< 18	
146	1	1.99			10.0	
167	NR	NR			< 40	
180	NR	NR			< 1.6	
182	0	3.90		17.0		

Table 13. -- *Statistical summary of reported data for standard reference water sample N-30 (Nutrients)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

0.	Other		
7.	IC	=	ion chromatography
22.	Color	=	colorimetric: *[color reagent specified]*
40.	Ion electrode	=	specific ion electrode

Abbreviations and symbols

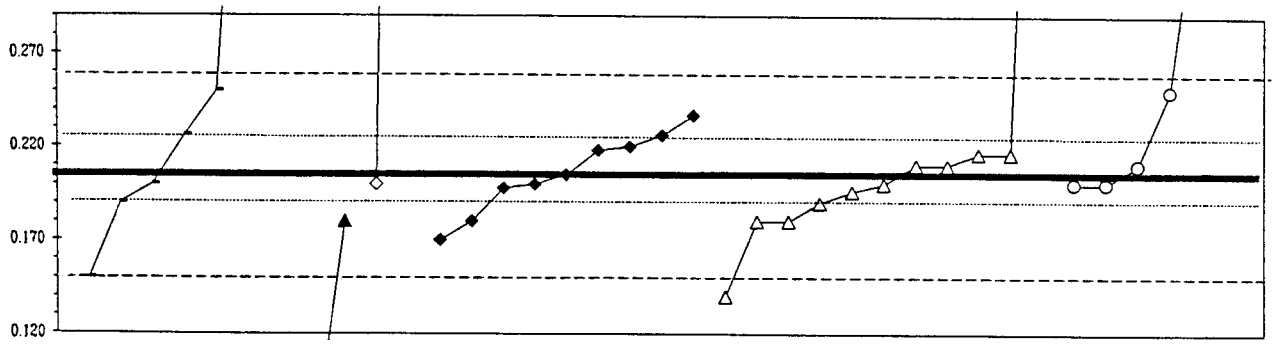
N =	number of reported values
St dev =	traditional standard deviation
MPV =	95% confidence most probable value
F-pseudosigma =	nonparametric statistic deviation
Hu =	upper hinge value
Hl =	lower hinge value
mg/L =	milligrams per liter
Lab =	laboratory by code number
NR =	not rated, less than value reported
< =	less than

Table 13.-- *Statistical summary of reported data for standard reference water sample N-30 (preserved nutrients)--(Continued)*

0. Other			22p. Color: phenate			
22i. Color: indophenol			22s. Color: salicylate			
22n. Color: Nessler.			40. Ion electrode			
N =	7	2	2	9	11	6
Min =	0.150	0.060	0.200	0.170	0.140	0.200
Max =	0.800	0.180	1.050	0.237	0.600	0.736
Median =				0.205	0.200	
St Dev =				0.022	0.023	

Analyte = NH3-N (Ammonia as nitrogen) mg/L

95% Confidence MPV =	0.205	+/-	0.009
F-pseudosigma =	0.027		
N =	37		
Range =	0.060	-	1.050
Hu =	0.226		
Hl =	0.190		



Other — Color: indophenol — Color: nesslerization — Color: phenate — Color: salicylate — Ion electrode

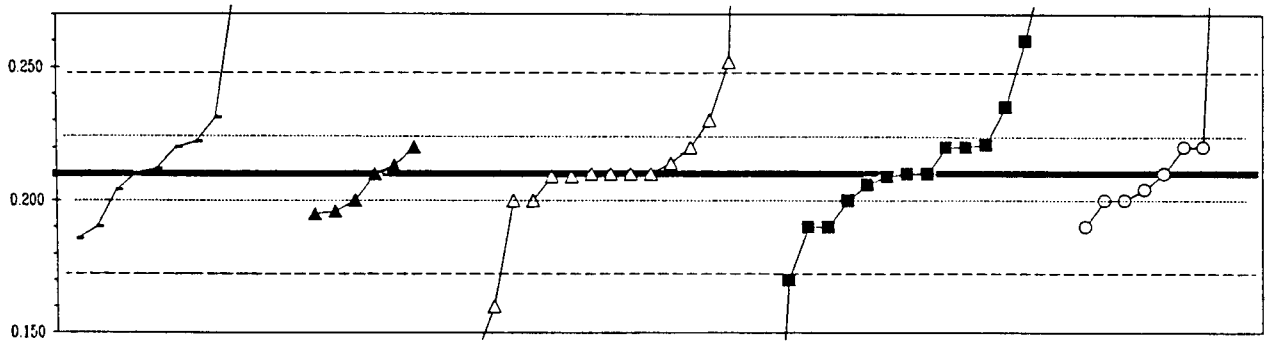
Lab #	Rating	Z-value	0	22i	22n	22p	22s	40
1	4	0.41					0.216	
2	4	-0.34					0.196	
10	4	0.19						0.210
16	3	0.79	0.226					
39	3	-0.56	0.190					
45	0	6.22						0.371
48	2	-1.31				0.170		
52	4	0.41					0.216	
55	4	-0.19					0.200	
60	4	-0.19	0.200					
63	4	0.19					0.210	
65	4	-0.19						0.200
68	3	-0.56					0.190	
76	3	0.56				0.220		
79	4	-0.19				0.200		
88	0	-2.44					0.140	
89	4	-0.26				0.198		
90	4	0.49				0.218		
93	2	1.20				0.237		
97	3	-0.94		0.180				
100	1	1.69	0.250					
118	0	-5.43		0.060				
119	1	1.69						0.250
120	4	0.00				0.205		
123	0	-2.06	0.150					
124	4	-0.19						0.200
133	0	19.90						0.736
134	4	0.19					0.210	
140	0	14.80					0.600	
141	3	0.79				0.226		
145	3	-0.94					0.180	
154	3	-0.94				0.180		
173	0	31.66			1.050			
177	4	-0.19			0.200			
179	0	10.98	0.498					
182	0	22.30	0.800					
194	3	-0.94					0.180	

Table 13.-- *Statistical summary of reported data for standard reference water sample N-30 (nonpreserved nutrients)--(Continued)*

0. Other			22p. Color: phenate				
22i. Color: indophenol			22s. Color: salicylate				
22n. Color: Nesslerization			40. Ion electrode				
N =	12	6	2	15	16	8	
Min =	0.186	0.195	0.780	0.140	0.060	0.190	
Max =	0.590	0.220	1.580	0.500	0.300	0.379	
Median =	0.221			0.210	0.215	0.207	
St Dev =	0.016			0.020	0.022		

Analyte = NH3-N (Ammonia as nitrogen) mg/L

95% Confidence MPV =	0.210	+/-	0.005
F-pseudosigma =	0.019		
N =	59		
Range =	0.060	-	1.580
Hu =	0.226		
Hl =	0.200		



Lab #	Rating	Z-value	0	22i	22n	22p	22s	40
1	2	-1.04					0.190	
2	2	1.30					0.235	
3	4	0.00				0.210		
5	3	0.52		0.220				
7	0	2.59					0.260	
8	0	3.63	0.280					
13	3	-0.78		0.195				
15	4	-0.31						0.204
17	0	19.72	0.590					
18	3	0.52				0.220		
20	0	2.18				0.252		
21	4	0.16		0.213				
23	4	0.00				0.210		
28	0	15.05				0.500		
38	2	1.09	0.231					
45	0	8.77						0.379
46	4	0.21				0.214		
51	3	-0.52						0.200
52	3	0.57					0.221	
59	3	0.52	0.220					
60	0	7.26	0.350					
61	4	0.00					0.210	
64	4	0.00		0.210				
70	4	-0.31	0.204					
72	0	-2.08					0.170	
74	4	-0.05					0.209	
77	2	-1.04						0.190
87	0	4.67					0.300	
88	4	0.00					0.210	
89	4	-0.05				0.209		
91	0	4.15					0.290	
94	3	-0.52				0.200		
97	3	-0.52		0.200				
100	4	0.00	0.210					
102	2	1.04				0.230		
105	3	0.52					0.220	
113	3	-0.52				0.200		
118	0	-7.78					0.060	
119	3	-0.52						0.200
128	0	-2.59				0.160		

Lab #	Rating	Z-value	0	22i	22n	22p	22s	40
129	0	71.08			1.580			
132	3	-0.52					0.200	
134	2	-1.04					0.190	
138	3	0.62	0.222					
141	4	0.00				0.210		
143	4	0.00				0.210		
149	4	0.00						0.210
150	4	-0.05				0.209		
151	3	0.52						0.220
158	3	0.52					0.220	
167	3	0.52						0.220
171	4	0.10	0.212					
173	0	29.57			0.780			
179	0	6.64	0.338					
180	4	-0.21					0.206	
184	3	-0.73		0.196				
185	2	-1.26	0.186					
191	2	-1.04	0.190					
193	0	-3.63				0.140		

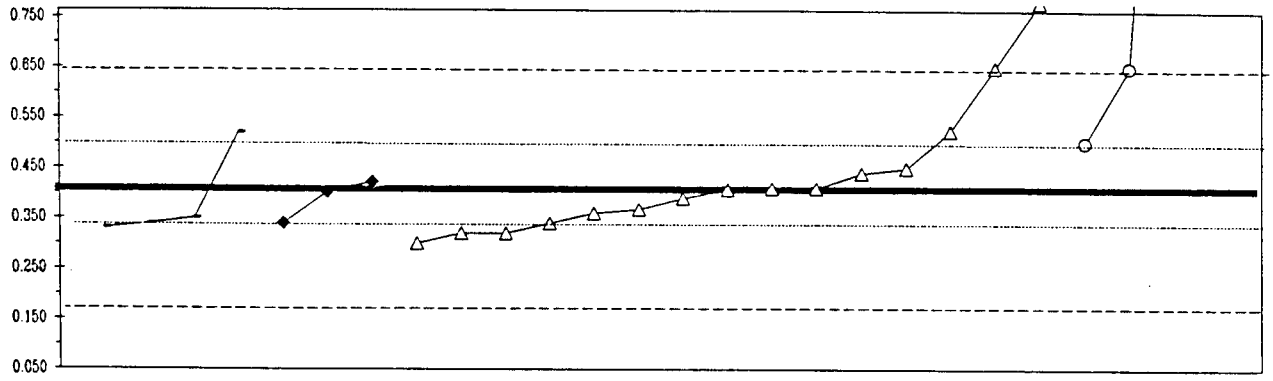
Table 13.-- *Statistical summary of reported data for standard reference water sample N-30 (preserved nutrients)--(Continued)*

mg/l

0. Other		40. Ion electrode		
22p. Color: phenate				
22s. Color: salicylate				
N =	4	3	15	3
Min =	0.330	0.340	0.300	0.500
Max =	0.520	0.422	0.780	1.879
Median =			0.407	
St Dev =			0.092	

Analyte = NH3+OrgN (Ammonia + Organic Nitrogen)

95% Confidence MPV =	0.407	+/-	0.046
F-pseudosigma =	0.119		
N =	25		
Range =	0.300	-	1.879
Hu =	0.500		
Hl =	0.340		



Lab #	Rating	Z-value	Other 0	22p	22s	Color: phenate 40
1	4	-0.33			0.368	
10	3	-0.65	0.330			
16	3	-0.57	0.339			
45	0	2.05				0.650
48	4	0.03			0.410	
52	3	0.99			0.524	
55	4	0.28			0.440	
56	4	-0.40			0.360	
60	4	-0.48	0.350			
63	3	-0.73			0.320	
68	4	0.03			0.410	
79	4	-0.14			0.390	
89	4	0.00			0.407	
90	4	-0.03		0.403		
97	3	-0.56			0.340	
118	3	0.95	0.520			
119	3	0.78				0.500
120	4	0.13		0.422		
133	0	12.41				1.879
134	0	2.05			0.650	
140	0	3.14			0.780	
141	3	-0.56		0.340		
145	4	0.36			0.450	
154	3	-0.73			0.320	
179	NR	NR < 0.60				
194	3	-0.90			0.300	

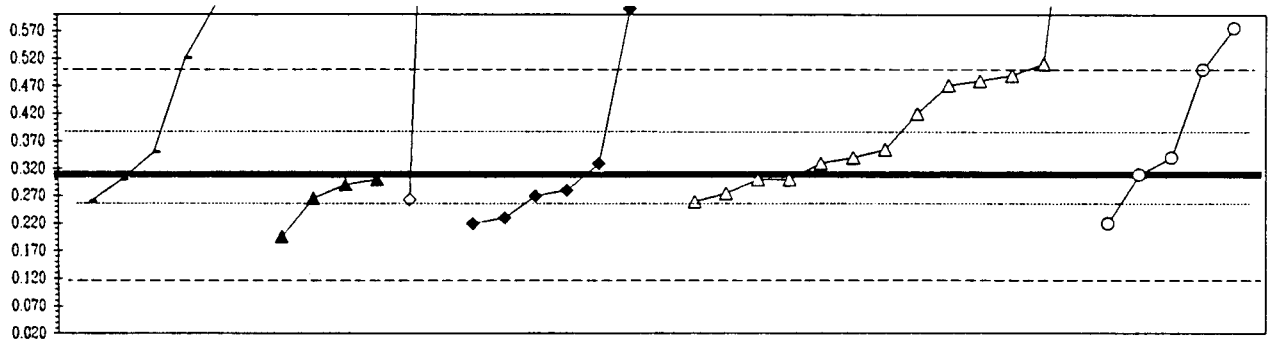
Table 13.-- *Statistical summary of reported data for standard reference water sample N-30 (nonpreserved nutrients)--(Continued)*

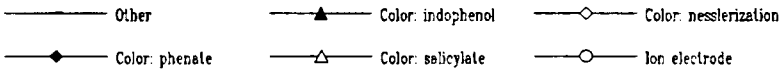
mg/L

0. Other			22p. Color: phenate			
22i. Color: indophenol			22s. Color: salicylate			
22n. Color: Nessler			40. Ion electrode			
N =	5	4	2	7	13	5
Min =	0.260	0.196	0.263	0.220	0.260	0.220
Max =	0.620	0.300	1.580	0.850	0.980	0.576
Median =					0.355	
St Dev =					0.091	

Analyte = NH3+OrgN (Ammonia+Organic Nitrogen)

95% Confidence MPV =	0.309	+/-	0.031
F-pseudosigma =	0.095		
N =	36		
Range =	0.196	-	1.580
Hu =	0.388		
Hl =	0.260		





Lab #	Rating	Z-value	0	22i	22n	22p	22s	40
1	4	-0.37					0.274	
3	0	5.72				0.850		
5	2	-1.20		0.196				
8	0	3.29	0.620					
13	4	-0.47		0.265				
15	4	0.00						0.309
18	3	-0.94				0.220		
20	NR	NR					< 2.5	
21	4	-0.19		0.291				
23	0	2.13					0.510	
28	0	3.18				0.610		
38	4	-0.49			0.263			
45	0	2.82						0.576
46	4	0.22				0.330		
51	4	0.33						0.340
52	1	1.71					0.471	
59	4	-0.10	0.300					
60	4	0.43	0.350					
61	4	0.22					0.330	
72	4	-0.10					0.300	
87	1	1.81					0.480	
89	4	0.49					0.355	
91	4	0.33					0.340	
94	4	-0.31				0.280		
97	3	-0.52					0.260	
102	4	-0.41				0.270		
105	0	7.10					0.980	
113	NR	NR					< 0.5	
118	3	-0.52	0.260					
119	0	2.02						0.500
129	0	13.45			1.580			
134	2	1.17					0.420	
138	0	2.24	0.521					
141	3	-0.84				0.230		
143	4	-0.10					0.300	
167	3	-0.94						0.220
179	NR	NR	< 0.6					
180	1	1.92					0.490	
184	4	-0.10		0.300				

Table 13.-- *Statistical summary of reported data for standard reference water sample N-30 (preserved nutrients)--(Continued)*

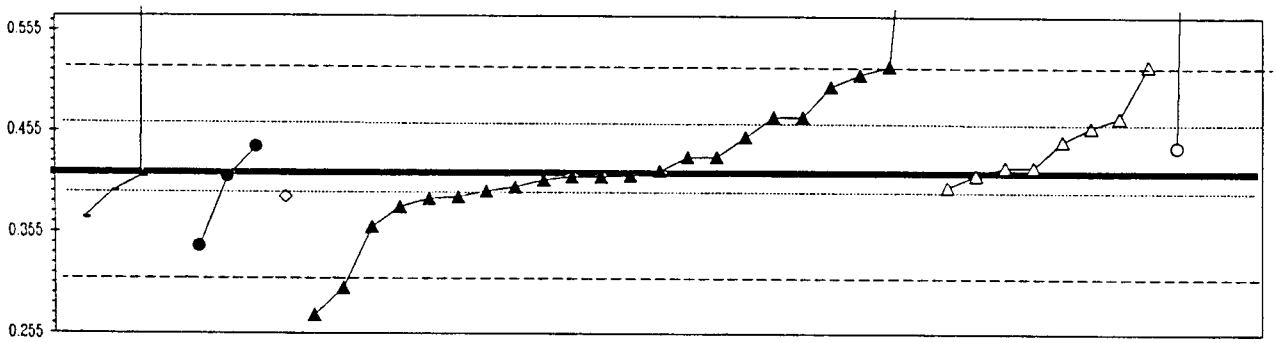
mg/L

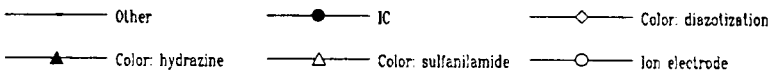
Analyte = NO3 + NO2 as N (Nitrate+Nitrite Nitrogen)

0. Other	22h. Color: hydrazine
7. Ion chromatography	22s. Color: sulfanilamide
22c. Color: diazotization	40. Ion electrode

	4	3	1	22	8	2
N =						
Min =	0.369	0.341	0.390	0.273	0.400	0.440
Max =	4.400	0.440	0.390	0.810	0.521	1.895
Median =				0.411	0.433	
St Dev =				0.061	0.040	

95% Confidence MPV =	0.414	+/-	0.016
F-pseudosigma =	0.052		
N =	40		
Range =	0.273	-	4.400
Hu =	0.465		
Hl =	0.396		





Lab #	Rating	Z-value	0	7	22a	22c	22h	40
1	4	0.04				0.416		
7	4	-0.47			0.390			
10	3	0.70				0.450		
16	0	-2.74				0.273		
21	4	-0.04					0.412	
29	4	0.50		0.440				
39	3	-0.87	0.369					
43	2	1.09				0.470		
45	1	1.90				0.512		
48	4	0.12					0.420	
52	4	-0.14				0.407		
55	4	0.31				0.430		
60	0	-2.21				0.300		
63	4	-0.27				0.400		
65	4	-0.08				0.410		
75	4	-0.50				0.388		
76	4	-0.08		0.410				
78	0	77.37	4.400					
88	0	7.69				0.810		
89	4	-0.35				0.396		
90	0	2.08					0.521	
92	1	1.67				0.500		
93	2	-1.42		0.341				
97	3	0.89					0.460	
100	4	0.31				0.430		
118	2	1.09				0.470		
119	2	1.09					0.470	
120	4	-0.08	0.410					
123	3	0.62					0.446	
124	4	0.12					0.420	
134	4	-0.27					0.400	
140	3	-0.66				0.380		
141	4	-0.06				0.411		
145	2	-1.05				0.360		
154	4	-0.47				0.390		
173	0	26.75						1.895
177	4	0.50						0.440
179	4	-0.37	0.395					
182	0	2.06				0.520		
194	4	-0.08				0.410		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-30 (nonpreserved nutrients)--(Continued)*

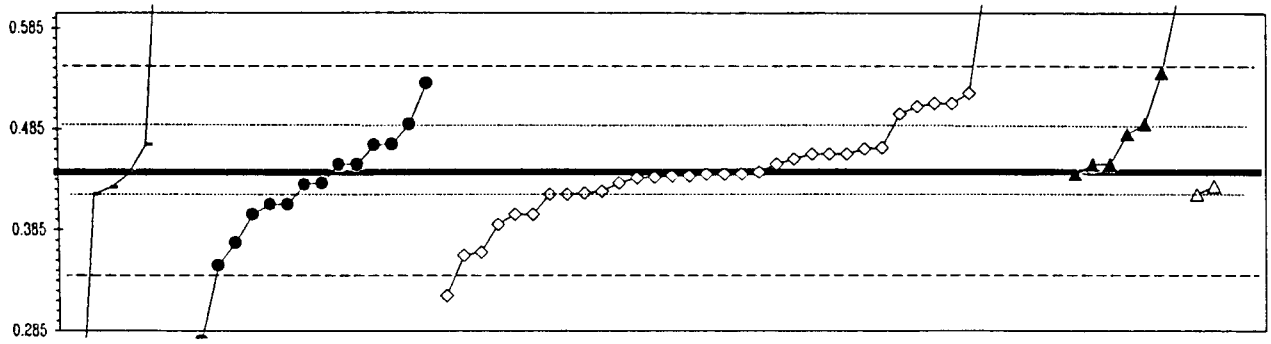
mg/L

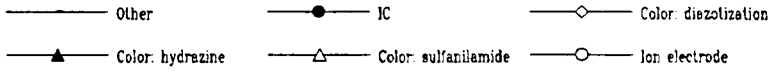
Analyte = NO3 + NO2 as N (Nitrate+Nitrite Nitrogen)

0. Other	22h. Color: hydrazine
7. Ion chromatography	22s. Color: sulfanilamide
22c. Color: diazotization	40. Ion electrode

	7	14	37	6	2	1
N =						
Min =	0.160	0.275	0.320	0.450	0.420	1.760
Max =	1.460	0.530	2.900	0.622	0.428	1.760
Median =	0.440	0.431	0.440	0.485		
St Dev =		0.04881	0.045			

95% Confidence MPV =	0.442	+/- 0.012
F-pseudosigma =	0.052	
N =	67	
Range =	0.160	- 2.900
Hu =	0.490	
Hl =	0.421	





Lab #	Rating	Z-value	0	7	22c	22h	22s	40
1	4	-0.12			0.436			
3	2	1.13			0.500			
5	0	3.49				0.622		
8	1	1.71		0.530				
13	1	-1.53			0.363			
15	2	-1.36		0.372				
17	0	19.76	1.460					
18	1	-1.59			0.360			
20	4	0.16			0.450			
21	1	1.92				0.541		
23	4	-0.04			0.440			
28	4	0.16		0.450				
29	3	0.93		0.490				
32	3	-0.62		0.410				
38	4	-0.27					0.428	
41	3	0.52		0.469				
45	0	3.73			0.634			
46	4	-0.41			0.421			
51	3	-0.82		0.400				
52	4	0.00			0.442			
56	2	1.32			0.510			
59	4	-0.04	0.440					
60	0	4.43			0.670			
61	4	0.35			0.460			
69	4	-0.43			0.420			
70	3	0.52	0.469					
72	4	0.16				0.450		
74	1	-1.79		0.350				
77	3	-0.62		0.410				
78	0	-5.47	0.160					
83	0	47.71			2.900			
86	2	1.32			0.510			
87	0	3.84			0.640			
88	0	14.71			1.200			
89	4	-0.10			0.437			
91	0	-2.37			0.320			
92	1	1.51			0.520			
94	2	-1.01			0.390			
97	3	0.93				0.490		
100	4	-0.04			0.440			

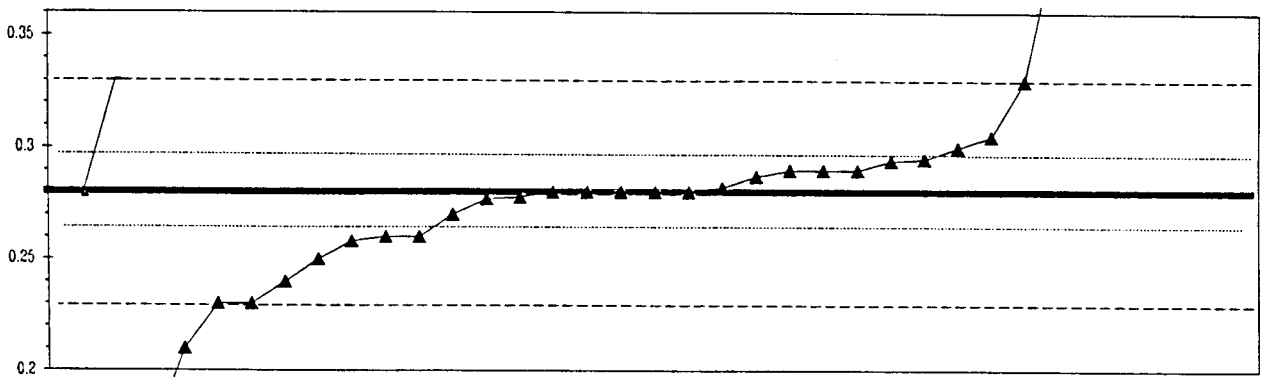
Lab #	Rating	Z-value	0	7	22c	22h	22s	40
102	4	-0.04			0.440			
104	2	1.26			0.507			
105	4	-0.08			0.438			
110	0	-3.24		0.275				
113	4	-0.37			0.423			
116	4	0.35			0.460			
119	3	0.74				0.480		
120	4	-0.43					0.420	
128	4	-0.43			0.420			
129	4	-0.21		0.431				
132	4	0.35			0.460			
133	4	0.47			0.466			
134	4	-0.04			0.440			
138	4	-0.43	0.420					
141	4	-0.21			0.431			
143	4	0.25			0.455			
149	3	0.54		0.470				
150	4	0.16				0.450		
151	4	-0.23		0.430				
158	3	-0.82			0.400			
167	4	-0.08			0.438			
171	0	6.13	0.758					
173	0	25.58						1.760
179	4	-0.29	0.427					
180	4	0.45			0.465			
191	4	0.16		0.450				
193	3	-0.82			0.400			

Table 13.-- *Statistical summary of reported data for standard reference water sample N-30 (preserved nutrients)--(Continued)*

	0. Other	22a. Color: ascorbic, phosphomolybdate	22p. Color: persulfate
N =	2	31	1
Min =	0.278	0.170	0.410
Max =	0.330	1.550	0.410
Median =		0.280	
St Dev =		0.026	

Analyte = total P (Phosphorus) mg/L

95% Confidence MPV =	0.280	+/-	0.008
F-pseudosigma =	0.025		
N =	34		
Range =	0.170	-	1.550
Hu =	0.298		
Hl =	0.264		



Other — Color: ascorbic — Color: persulfate

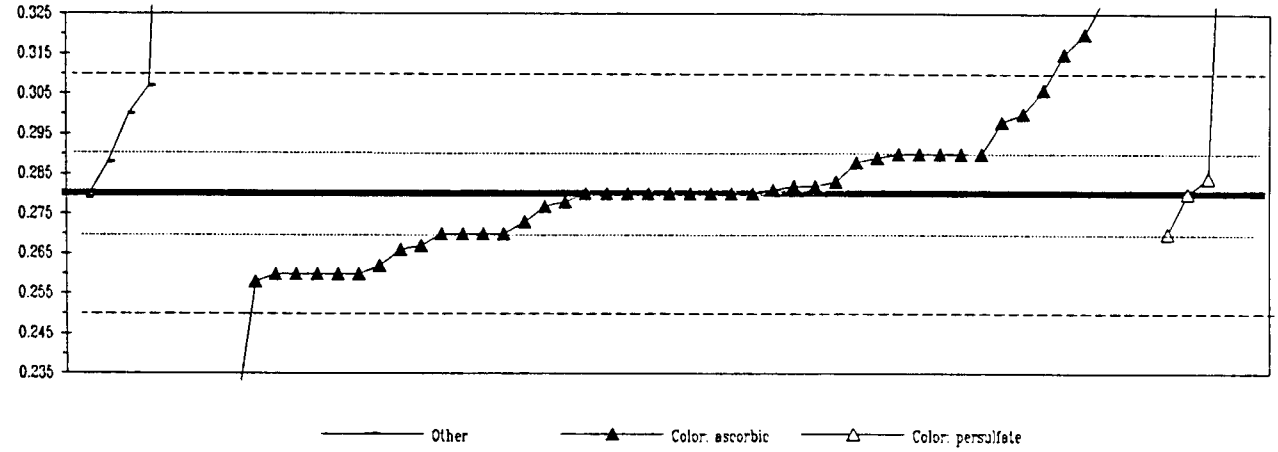
Lab #	Rating	Z-value	0	22a	22p
1	4	-0.08		0.278	
10	4	0.00		0.280	
16	3	0.56		0.294	
39	0	-4.43		0.170	
45	3	0.60		0.295	
48	4	0.00		0.280	
52	4	-0.12		0.277	
55	0	51.14		1.550	
56	4	0.00		0.280	
60	0	2.01		0.330	
63	4	0.40		0.290	
68	4	0.08		0.282	
75	0	6.68		0.446	
79	1	-1.61		0.240	
89	4	0.28		0.287	
90	2	1.01		0.305	
92	3	-0.81		0.260	
97	4	-0.40		0.270	
100	3	0.81		0.300	
108	0	4.83		0.400	
118	4	0.40		0.290	
119	4	0.00		0.280	
120	3	-0.89		0.258	
124	2	-1.21		0.250	
134	4	0.00		0.280	
140	3	-0.81		0.260	
141	0	-2.82		0.210	
145	0	2.01	0.330		
154	0	-2.01		0.230	
173	0	5.23			0.410
179	4	-0.08	0.278		
182	0	5.64		0.420	
183	0	-2.01		0.230	
194	4	0.40		0.290	

Table 13.-- *Statistical summary of reported data for standard reference water sample N-30 (nonpreserved nutrients)--(Continued)*

0. Other			
22a. Color: ascorbic, phosphomolybdate			
22p. Color: persulfate			
N =	6	46	4
Min =	0.279	0.200	0.270
Max =	0.530	0.510	0.410
Median =		0.280	
St Dev =		0.012	

Analyte = total P (Phosphorus) mg/L

95% Confidence MPV =	0.280	+/-	0.004
F-pseudosigma =	0.015		
N =	56		
Range =	0.200	-	0.530
Hu =	0.290		
Hl =	0.270		



Lab #	Rating	Z-value	0	22a	22p
1	4	-0.20		0.277	
3	3	0.67		0.290	
5	3	-0.67			0.270
7	0	15.51		0.510	
8	0	11.47	0.450		
13	0	2.36		0.315	
15	3	0.61		0.289	
18	4	0.07		0.281	
20	4	0.00		0.280	
21	4	0.27			0.284
22	4	0.00		0.280	
23	4	0.00		0.280	
28	0	16.86	0.530		
38	2	1.21		0.298	
41	4	0.00		0.280	
45	1	1.75		0.306	
46	4	-0.13		0.278	
51	3	-0.94		0.266	
52	2	-1.48		0.258	
59	2	1.35	0.300		
60	0	4.05		0.340	
61	3	-0.67		0.270	
64	3	0.67		0.290	
72	4	0.00		0.280	
74	3	0.67		0.290	
87	2	-1.35		0.260	
89	4	0.13		0.282	
91	0	3.37		0.330	
92	2	-1.35		0.260	
94	2	-1.21		0.262	
97	4	0.00		0.280	
100	2	1.35		0.300	
102	3	0.54		0.288	
104	0	2.70		0.320	
105	4	0.00		0.280	
113	3	-0.88		0.267	
118	3	0.67		0.290	
119	3	-0.67		0.270	
120	2	-1.35		0.260	
128	3	0.67		0.290	

Lab #	Rating	Z-value	0	22a	22p
129	4	0.00			0.280
132	2	-1.35		0.260	
133	4	0.20		0.283	
134	4	0.00		0.280	
138	1	1.82	0.307		
141	0	-5.40		0.200	
143	4	0.13		0.282	
150	4	0.00		0.280	
158	3	-0.67		0.270	
167	4	-0.47		0.273	
171	3	0.54	0.288		
173	0	8.77			0.410
179	4	-0.07	0.279		
180	0	-3.84		0.223	
184	3	-0.67		0.270	
185	2	-1.35		0.260	

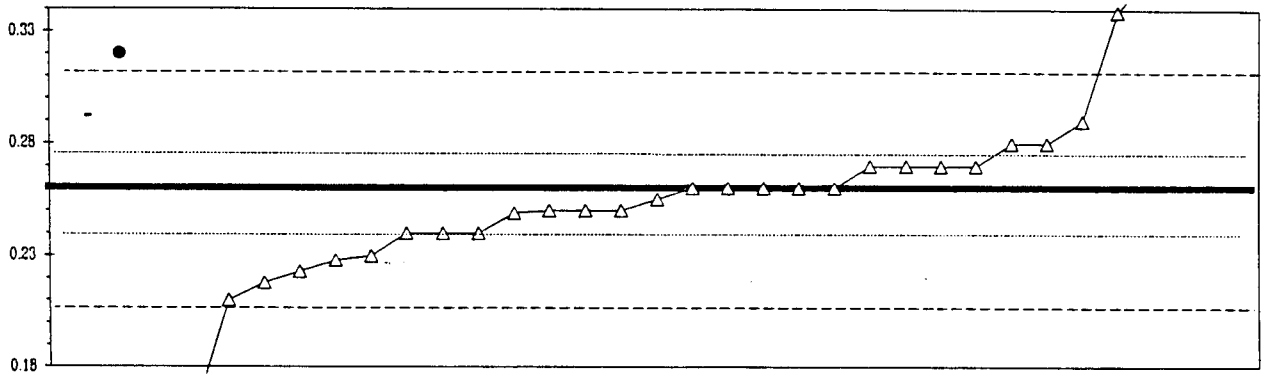
Table 13.-- *Statistical summary of reported data for standard reference water sample N-30 (preserved nutrients)--(Continued)*

mg/L

Analyte = P04-P (orthophosphate phosphorus)

95% Confidence MPV =	0.260	+/-	0.009
F-pseudosigma =	0.026		
N =	32		
Range =	0.130	-	0.420
Hu =	0.275		
Hl =	0.240		

0. Other			
7. Ion chromatography			
22a. Color: ascorbic acid, phosphomolybdate			
N =	1	1	30
Min =	0.292	0.320	0.130
Max =	0.292	0.320	0.420
Median =			0.258
St Dev =			0.020



Other IC Color: ascorbic

Lab #	Rating	Z-value	0	7	22a
1	2	-1.43			0.223
2	2	-1.23			0.228
10	4	0.00			0.260
16	0	-3.89			0.159
29	0	2.31		0.320	
45	0	3.78			0.358
48	4	-0.19			0.255
52	4	0.39			0.270
55	4	-0.39			0.250
56	4	0.00			0.260
63	4	0.00			0.260
75	1	-1.62			0.218
88	2	1.16			0.290
89	4	-0.42			0.249
90	0	3.04			0.339
92	4	-0.39			0.250
97	4	0.00			0.260
100	3	0.77			0.280
108	3	-0.77			0.240
118	4	0.39			0.270
119	4	-0.39			0.250
120	3	-0.77			0.240
124	3	0.77			0.280
134	3	-0.77			0.240
140	2	-1.16			0.230
141	0	-5.01			0.130
145	4	0.39			0.270
154	1	-1.93			0.210
173	4	0.00			0.260
179	2	1.23	0.292		
182	0	6.17			0.420
183	4	0.39			0.270

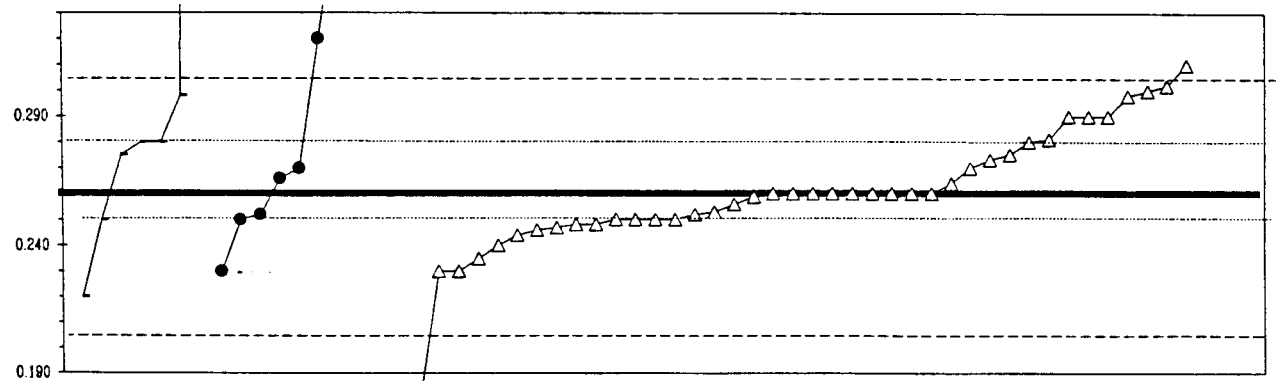
Table 13.-- *Statistical summary of reported data for standard reference water sample N-30 (nonpreserved nutrients)--(Continued)*

mg/L

0. Other		22i. Color: indophenol		
7. Ion chromatography				
22a. Color: ascorbic acid, phosphomolybdate				
N =	7	8	43	1
Min =	0.220	0.230	0.166	
Max =	1.620	0.440	0.391	
Median =	0.280	0.268	0.260	
St Dev =			0.020	

Analyte = PO4-P (orthophosphate phosphorus)

95% Confidence MPV =	0.260	+/-	0.006
F-pseudosigma =	0.022		
N =	59		
Range =	0.166	-	1.620
Hu =	0.280		
Hl =	0.250		



Lab #	Rating	Z-value	0	7	22a	22i
1	0	-4.23			0.166	
2	3	0.58			0.273	
3	4	0.00			0.260	
5	4	0.45				0.270
7	0	-9.44		< 0.05		
8	0	8.09		0.440		
13	2	-1.12			0.235	
15	4	-0.36			0.252	
17	0	61.15	1.620			
20	4	0.00			0.260	
21	4	0.18			0.264	
23	2	-1.35			0.230	
28	4	0.45		0.270		
29	0	4.95		0.370		
32	0	2.70		0.320		
38	3	-0.58			0.247	
41	3	0.67			0.275	
45	0	5.89			0.391	
46	3	-0.54			0.248	
51	3	-0.72			0.244	
52	1	1.71			0.298	
59	3	0.90	0.280			
61	2	-1.35			0.230	
64	0	2.25			0.310	
70	4	-0.45	0.250			
72	2	1.35			0.290	
74	3	0.94			0.281	
77	2	-1.35		0.230		
78	1	1.71	0.298			
87	4	0.00			0.260	
88	2	1.35			0.290	
89	4	-0.18			0.256	
91	4	-0.45			0.250	
92	3	0.90			0.280	
97	4	0.00			0.260	
100	1	1.80			0.300	
102	0	-4.50			0.160	
104	1	1.89			0.302	
105	4	0.00			0.260	
113	3	-0.63			0.246	

Lab #	Rating	Z-value	0	7	22a	22i
118	4	0.00			0.260	
119	4	-0.45			0.250	
120	4	0.00			0.260	
129	4	-0.36		0.252		
132	4	-0.45			0.250	
133	4	-0.31			0.253	
134	3	-0.90			0.240	
138	3	0.90	0.280			
141	0	-3.60			0.180	
143	4	-0.45			0.250	
150	4	0.00			0.260	
151	4	0.27		0.266		
158	4	0.45			0.270	
167	3	-0.54			0.248	
171	1	-1.80	0.220			
173	2	1.35			0.290	
179	3	0.67	0.275			
180	4	-0.04			0.259	
185	4	0.00			0.260	
191	4	-0.45		0.250		

Table 14. -- *Statistical summary of reported data for standard reference water sample N-31 (Nutrients)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

0.	Other		
7.	IC	=	ion chromatography
22.	Color	=	colorimetric: *[color reagent specified]*
40.	Ion electrode	=	specific ion electrode

Abbreviations and symbols

N =	number of reported values
St dev =	traditional standard deviation
MPV =	95% confidence most probable value
F-pseudosigma =	nonparametric statistic deviation
Hu =	upper hinge value
Hl =	lower hinge value
mg/L =	milligrams per liter
Lab =	laboratory by code number
NR =	not rated, less than value reported
< =	less than

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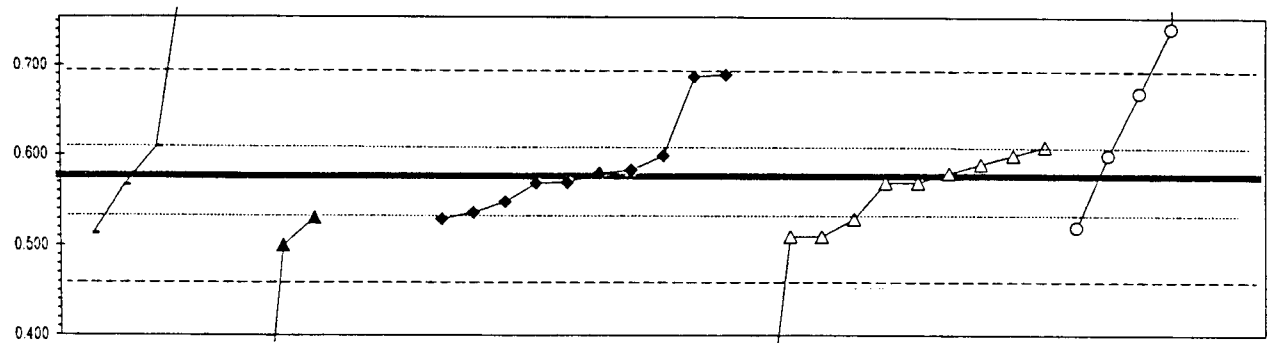
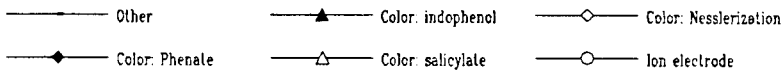
Table 13.-- *Statistical summary of reported data for standard reference water sample N-31 (preserved nutrients)--(Continued)*

0. Other			22p. Color: phenate			
22i. Color: indophenol			22s. Color: salicylate			
22n. Color: Nesslerization			40. Ion electrode			
N =	5	3	3	10	10	5
Min =	0.513	0.160	1.000	0.530	0.230	0.520
Max =	1.600	0.531	2.360	0.690	0.610	1.560
Median =				0.575	0.555	
St Dev =				0.057	0.038	

Analyte = NH3-N (Ammonia as nitrogen) mg/l

95% Confidence MPV =	0.577	+/-	0.019
F-pseudosigma =	0.059		
N =	36		
Range =	0.160	-	2.360
Hu =	0.610		
Hl =	0.531		





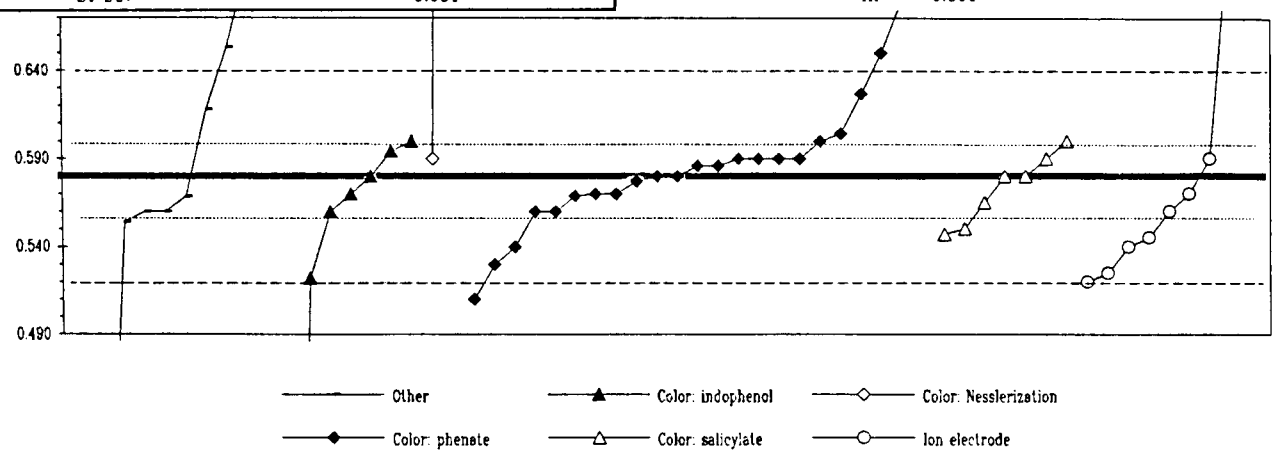
Lab #	Rating	Z-value	0	22i	22n	22p	22s	40
1	4	0.05					0.580	
2	4	0.22					0.590	
16	3	-0.69				0.537		
39	2	-1.14					0.510	
45	0	2.82						0.742
46	3	-0.80				0.530		
52	3	0.55	0.609					
55	4	-0.12					0.570	
60	0	30.45			2.360			
63	1	1.93				0.690		
65	1	1.59						0.670
68	3	-0.80					0.530	
76	4	0.05				0.580		
79	4	-0.12				0.570		
88	2	-1.14					0.510	
89	4	-0.14				0.569		
90	1	1.90				0.688		
93	4	0.39				0.600		
97	2	-1.31		0.500				
100	3	0.56					0.610	
118	0	-7.12		0.160				
119	3	-0.97						0.520
120	4	-0.48				0.549		
123	4	-0.19	0.566					
124	4	0.39						0.600
133	0	16.79						1.560
134	4	-0.12					0.570	
140	0	-5.93					0.230	
141	4	0.12				0.584		
145	4	0.39					0.600	
154	3	-0.79		0.531				
173	0	21.74			1.850			
177	0	7.22			1.000			
179	0	4.37	0.833					
182	0	17.47	1.600					
190	2	-1.09	0.513					

Table 13.-- *Statistical summary of reported data for standard reference water sample N-31 (nonpreserved nutrients)--(Continued)*

0. Other			22p. Color: phenate				
22i. Color: indophenol			22s. Color: salicylate				
22n. Color: Nesslerization			40. Ion electrode				
N =	10	7	2	23	7	8
Min =	0.240	0.160	0.590	0.510	0.547	0.520
Max =	0.758	0.600	1.590	0.980	0.600	0.723
Median =	0.564	0.570		0.586	0.580	0.553
St Dev =				0.031		

Analyte = NH3-N (Ammonia as N) mg/L

95% Confidence MPV =	0.580	+/-	0.007
F-pseudosigma =	0.025		
N =	57		
Range =	0.160	-	1.590
Hu =	0.594		
HI =	0.560		



Lab #	Rating	Z-value	0	22i	22n	22p	22s	40
1	2	-1.31					0.547	
2	3	0.79					0.600	
3	3	-0.79				0.560		
5	3	-0.60					0.565	
7	4	0.00					0.580	
8	0	-10.32	0.320					
13	4	-0.40		0.570				
15	0	-2.18						0.525
17	0	-13.49	0.240					
18	4	0.40				0.590		
20	1	1.86				0.627		
23	4	0.40				0.590		
28	0	15.87				0.980		
38	0	4.68	0.698					
45	0	5.67						0.723
46	4	0.24				0.586		
52	1	1.51	0.618					
57	4	-0.40						0.570
59	4	0.40				0.590		
60	3	-0.79	0.560					
61	3	0.79				0.600		
64	4	0.00		0.580				
70	2	-1.03	0.554					
72	0	-2.78				0.510		
74	3	0.95				0.604		
87	3	-0.79				0.560		
88	4	0.40					0.590	
89	4	0.24				0.586		
91	0	3.97				0.680		
94	4	-0.40				0.570		
97	3	0.79		0.600				
100	4	0.00					0.580	
102	0	2.78				0.650		
105	4	0.00				0.580		
113	3	-0.79		0.560				
118	0	-16.66		0.160				
119	0	-2.38						0.520
128	1	-1.98				0.530		
129	4	0.40			0.590			
132	4	0.00				0.580		

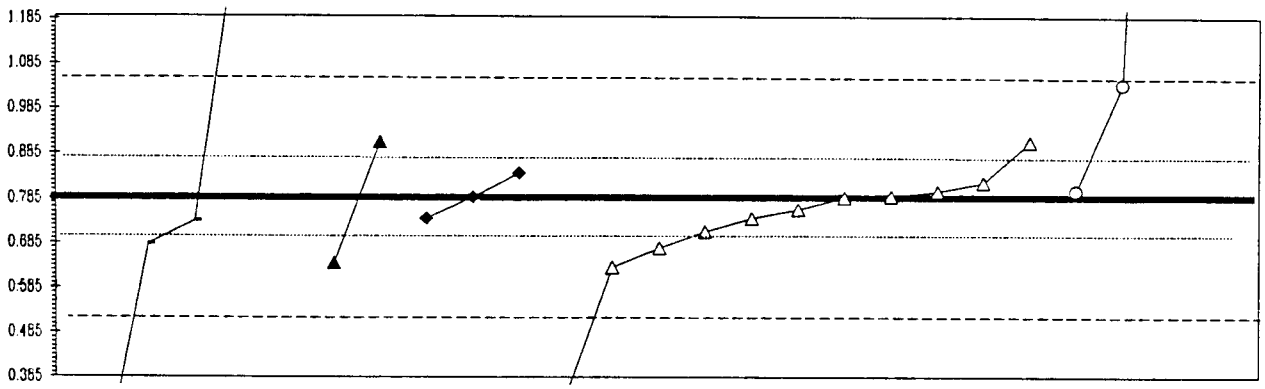
Lab #	Rating	Z-value	0	22i	22n	22p	22s	40
134	2	-1.19					0.550	
138	0	2.90	0.653					
141	4	-0.44				0.569		
143	4	0.40				0.590		
149	1	-1.59						0.540
150	4	-0.12				0.577		
151	4	0.40						0.590
152	2	-1.39						0.545
158	4	-0.40				0.570		
167	3	-0.79						0.560
173	0	40.07			1.590			
179	0	7.06	0.758					
180	1	-1.59				0.540		
184	3	0.56		0.594				
185	4	-0.46	0.569					
191	3	-0.79	0.560					
193	0	-2.30		0.522				

Table 13.-- *Statistical summary of reported data for standard reference water sample N-31 (preserved nutrients)--(Continued)*

0. Other			22s. Color: salicylate		
22k. Color: potasium			40. Ion electrode		
22p. Color: phenate					
N =	5	2	3	11	3
Min =	0.163	0.640	0.740	0.340	0.800
Max =	2.740	0.910	0.841	0.910	3.160
Median =				0.760	
St Dev =				0.079	

Analyte = NH3+OrgN (Ammonia+Organic nitrogen) mg/l

95% Confidence MPV =	0.787	+/-	0.053
F-pseudosigma =	0.133		
N =	24		
Range =	0.163	-	3.160
Hu =	0.876		
Hl =	0.697		



Other — Color: potassium — Color: phenate — Color: salicylate — Ion electrode

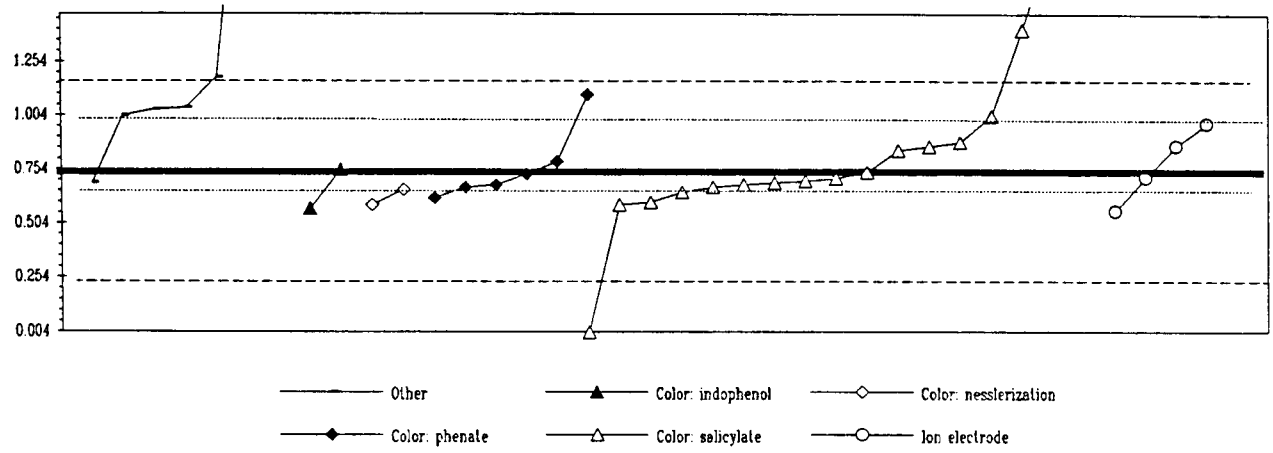
Lab #	Rating	Z-value	0	22k	22p	22s	40
1	4	-0.01				0.786	
16	4	-0.40	0.735				
45	1	1.91					1.040
48	3	-0.58				0.710	
52	3	-0.78	0.683				
55	4	0.25				0.820	
60	0	14.72	2.740				
63	4	0.10				0.800	
68	2	-1.18				0.630	
79	4	0.02				0.790	
89	3	-0.85				0.674	
90	4	0.41			0.841		
97	4	-0.35				0.740	
118	3	0.93		0.910			
119	4	0.10					0.800
120	4	0.01			0.786		
133	0	17.88					3.160
134	4	-0.20				0.760	
140	0	-3.37				0.340	
141	4	-0.35			0.740		
145	3	0.93				0.910	
154	2	-1.11		0.640			
179	0	4.92	1.440				
190	0	-4.70	0.163				

Table 13.-- *Statistical summary of reported data for standard reference water sample N-31 (nonpreserved nutrients)--(Continued)*

0. Other			22p. Color: phenate			
22i. Color: indophenol			22s. Color: salicylate			
22n. Color: Nesslerization			40. Ion electrode			
N =	7	2	2	6	16	4
Min =	0.690	0.570	0.590	0.620	0.590	0.560
Max =	2.770	0.750	0.659	1.100	2.500	0.966
Median =					0.725	
St Dev =					0.211	

Analyte = NH3+OrgN (Ammonia+Organic nitrogen) mg/L

95% Confidence MPV =	0.739	+/-	0.079
F-pseudosigma =	0.245		
N =	37		
Range =	0.560	-	2.770
Hu =	1.000		
Hl =	0.670		



Lab #	Rating	Z-value	0	22i	22n	22p	22s	40
1	4	-0.23					0.682	
3	0	7.44	2.560					
5	4	-0.37					0.648	
8	1	1.80	1.180					
13	3	-0.69		0.570				
15	4	-0.11						0.713
18	4	-0.28				0.670		
20	0	7.20					2.500	
23	4	0.41					0.840	
28	2	1.48				1.100		
38	4	-0.33			0.659			
45	3	0.93						0.966
46	4	-0.04				0.730		
52	4	0.21				0.790		
57	2	1.07	1.000					
59	4	-0.16					0.700	
60	2	1.19	1.030					
61	4	-0.28					0.670	
72	3	-0.61					0.590	
87	2	1.07					1.000	
89	4	0.00					0.739	
91	4	-0.20					0.690	
94	4	-0.24				0.680		
97	4	-0.12					0.710	
105	0	4.50					1.840	
113	4	0.48					0.857	
118	4	-0.20	0.690					
119	4	0.49						0.860
129	3	-0.61			0.590			
134	3	0.58					0.880	
138	0	8.30	2.770					
141	4	-0.49				0.620		
143	3	-0.57					0.600	
167	3	-0.73						0.560
179	2	1.23	1.040					
180	0	2.70					1.400	
184	4	0.04		0.750				

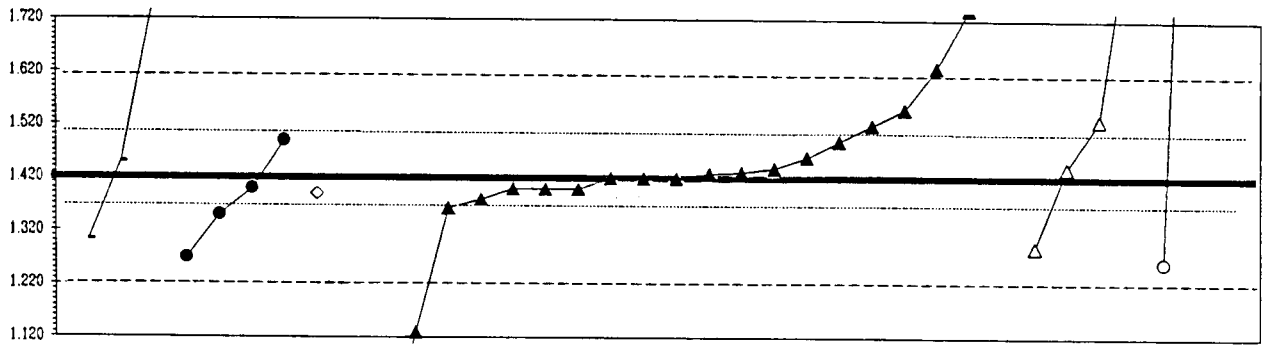
Table 13.-- *Statistical summary of reported data for standard reference water sample N-31 (preserved nutrients)--(Continued)*

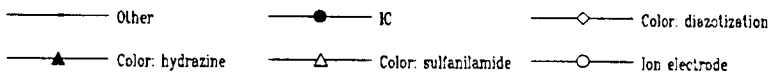
mg/l

Analyte = NO3 + NO2 as N (Nitrate+Nitrite nitrogen

0. Other			22h. Color: hydrazine			
7. Ion chromatography			22s. Color: sulfanilamide			
22c. Color: diazotization			40. Ion electrode			
N =	3	4	1	21	4	2
Min =	1.303	1.270	1.390	0.570	1.290	1.261
Max =	1.760	1.490	1.390	1.850	1.940	2.866
Median =				1.420		
St Dev =				0.102		

95% Confidence MPV =	1.420	+/-	0.033
F-pseudosigma =	0.099		
N =	35		
Range =	0.000	-	21.000
Hu =	1.505		
Hl =	1.372		





Lab #	Rating	Z-value	0	7	22a	22c	22h	40
1	4	0.12				1.432		
16	0	3.44	1.760					
29	3	0.71		1.490				
39	1	-1.52		1.270				
43	2	1.01				1.520		
45	3	0.71				1.490		
48	2	-1.31					1.290	
52	4	-0.30			1.390			
55	4	-0.20				1.400		
60	0	-6.59				0.570		
63	4	0.10				1.430		
65	0	-2.93				1.130		
75	4	0.00				1.420		
76	3	-0.71		1.350				
88	0	4.35				1.850		
89	4	0.00				1.420		
90	0	-5.22				0.903		
92	0	3.23				1.740		
93	4	-0.20		1.400				
97	2	1.31				1.550		
100	4	0.20				1.440		
118	4	0.00				1.420		
119	0	2.12				1.630		
120	4	0.30	1.450					
123	2	1.11					1.530	
124	4	0.40				1.460		
134	4	-0.20				1.400		
140	4	-0.20				1.400		
141	4	0.20					1.440	
145	4	-0.40				1.380		
154	3	-0.58				1.363		
173	0	14.61						2.866
177	1	-1.61						1.261
179	2	-1.18	1.303					
182	0	5.25					1.940	

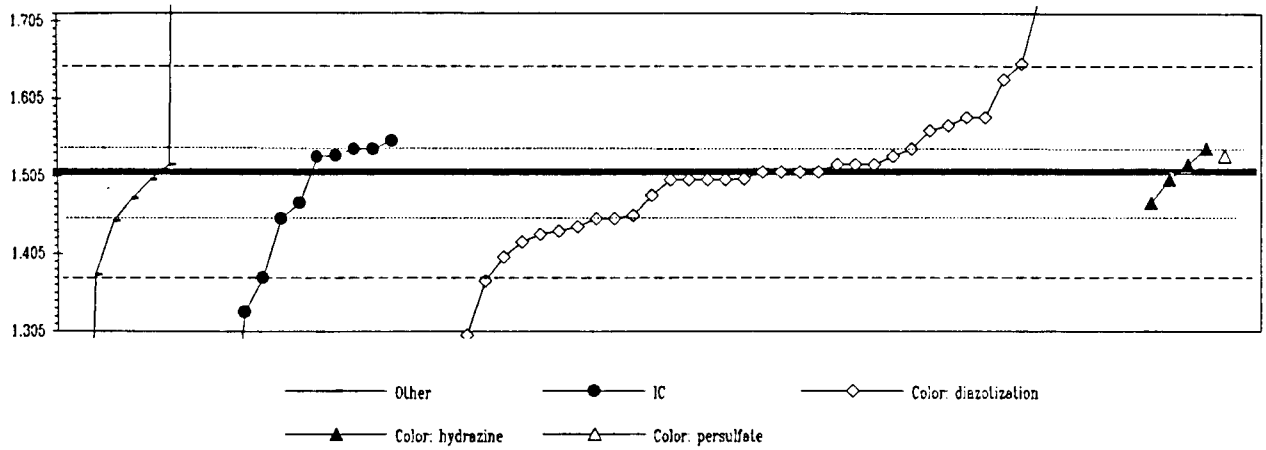
Table 13.-- *Statistical summary of reported data for standard reference water sample N-31 (nonpreserved nutrients)--(Continued)*

mg/L

0. Other			22h. Color: hydrazine		
7. Ion chromatography			22p. Color: persulfate		
22c. Color:cd diazotization					
N =	8	10	40	4	1
Min =	0.470	1.110	1.084	1.470	1.530
Max =	5.390	1.550	3.210	1.540	1.530
Median =		1.500	1.510		
St Dev =		0.081	0.064		

Analyte = NO3 + NO2 as N (Nitrate+Nitrite nitrogen)

95% Confidence MPV =	1.510	+/-	0.017
F-pseudosigma =	0.068		
N =	63		
Range =	0.470	-	5.390
Hu =	1.540		
Hl =	1.449		



Lab #	Rating	Z-value	0	7	22c	22h	22p
1	4	0.15			1.520		
3	3	-0.88			1.450		
5	4	0.29					1.530
7	2	-1.03			1.440		
8	0	-5.90		1.110			
13	4	0.00			1.510		
15	0	-2.65		1.330			
17	0	-15.33	0.470				
18	0	-2.06			1.370		
20	4	0.00			1.510		
23	4	-0.15			1.500		
28	0	-2.01		1.374			
29	4	0.44		1.540			
32	3	-0.59		1.470			
38	4	-0.50	1.476				
42	4	0.32		1.532			
45	0	4.42			1.810		
46	1	-1.61			1.401		
52	4	-0.15			1.500		
57	0	-3.83			1.250		
59	4	0.00			1.510		
60	0	7.52			2.020		
61	3	0.88			1.570		
69	3	-0.88			1.450		
70	3	-0.93	1.447				
72	4	0.44			1.540		
74	3	-0.88		1.450			
78	0	57.20	5.390				
83	0	2.06			1.650		
86	2	1.03			1.580		
87	0	4.42			1.810		
88	0	25.06			3.210		
89	4	0.29			1.530		
91	0	-3.10			1.300		
92	0	3.69			1.760		
94	2	-1.18			1.430		
97	1	1.77			1.630		
100	4	-0.15			1.500		
102	4	0.15			1.520		
104	0	-6.28			1.084		

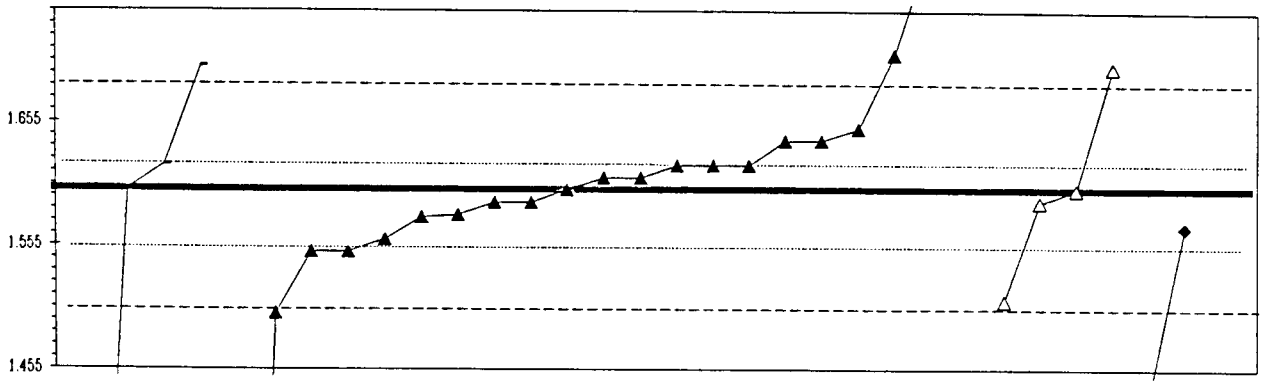
Lab #	Rating	Z-value	0	7	22c	22h	22p
105	2	-1.12			1.434		
113	4	-0.13			1.501		
118	4	0.00			1.510		
119	0	3.39			1.740		
120	4	-0.15	1.500				
128	4	0.44				1.540	
129	3	-0.83			1.454		
132	4	-0.15				1.500	
133	0	-4.54			1.202		
134	4	-0.15			1.500		
138	4	0.15	1.520				
141	4	0.15				1.520	
143	4	0.15			1.520		
149	4	0.44		1.540			
150	3	-0.59				1.470	
151	3	0.59		1.550			
158	4	-0.44			1.480		
167	3	0.78			1.563		
173	0	21.78	2.987				
179	1	-1.95	1.378				
180	2	1.03			1.580		
191	4	0.29		1.530			
194	2	-1.33			1.420		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-31 (preserved nutrients)--(Continued)*

0. Other		22p. Color: persulfate		
22a. Color: ascorbic, phosphomolybdate				
22m. Color: molybdate				
N =	4	21	4	2
Min =	1.115	0.880	1.510	1.435
Max =	1.700	7.000	1.700	1.570
Median =		1.610		
St Dev =		0.047		

Analyte = total P (Phosphorus) mg/L

95% Confidence MPV =	1.600	+/-	0.017
F-pseudosigma =	0.048		
N =	31		
Range =	0.880	-	7.000
Hu =	1.620		
Hl =	1.555		



Other Color: Ascorbic Color: molybdate Color: persulfate

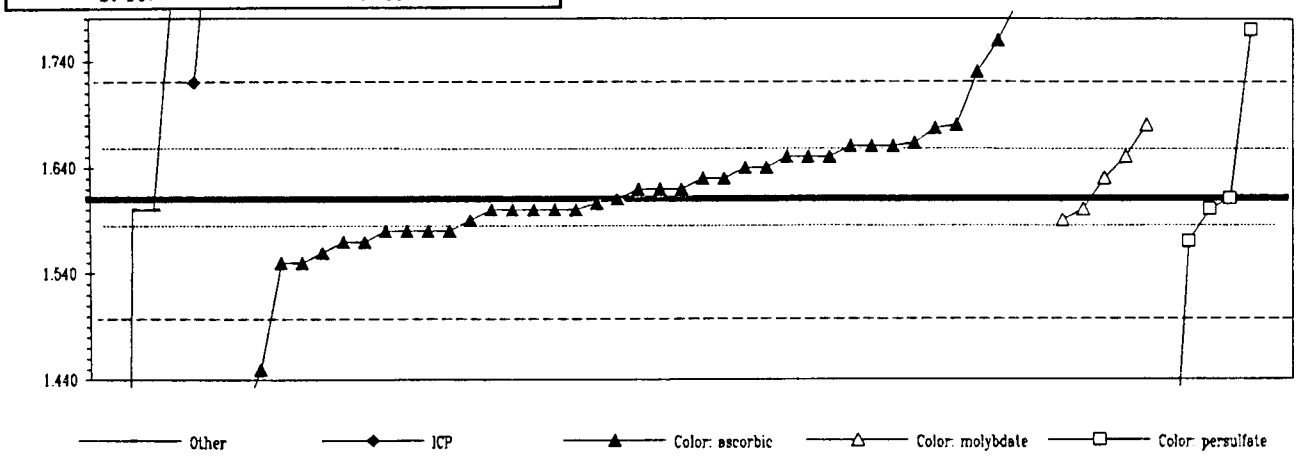
Lab #	Rating	Z-value	0	22a	22m	22p
1	2	1.04		1.650		
16	0	-3.42				1.435
45	4	0.21		1.610		
48	4	0.00		1.600		
52	4	0.42	1.620			
55	4	-0.42		1.580		
60	3	-0.83		1.560		
63	0	2.08			1.700	
68	3	0.83		1.640		
75	2	-1.04		1.550		
79	2	-1.04		1.550		
89	3	0.83		1.640		
90	0	4.15		1.800		
92	1	-1.87			1.510	
97	4	-0.21			1.590	
100	4	0.42		1.620		
108	0	2.28		1.710		
118	0	-2.08		1.500		
119	4	-0.21		1.590		
120	4	-0.46		1.578		
124	4	0.42		1.620		
134	4	0.00			1.600	
140	4	0.42		1.620		
141	4	0.21		1.610		
145	0	2.08	1.700			
154	0	112.07		7.000		
173	3	-0.62				1.570
179	4	0.00	1.600			
182	0	-14.94		0.880		
183	4	-0.21		1.590		
190	0	-10.07	1.115			

Table 13.-- *Statistical summary of reported data for standard reference water sample N-31 (nonpreserved nutrients)--(Continued)*

	0. Other	4. ICP	22a. Color: ascorbic	22m. Color: molybdate	22p. Color: persulfate
N =	4	2	39	5	5
Min =	0.290	1.720	1.400	1.590	1.260
Max =	1.806	1.930	1.905	1.680	1.770
Median =			1.620		
St Dev =			0.055		

Analyte = total P mg/L

95% Confidence MPV =	1.610	+/-	0.015
F-pseudosigma =	0.056		
N =	55		
Range =	0.290	-	1.930
Hu =	1.660		
Hl =	1.585		



Lab #	Rating	Z-value	0	4	22a	22m	22p
1	2	1.21			1.677		
3	3	0.54			1.640		
5	4	0.00					1.610
7	4	-0.18			1.600		
8	1	1.98		1.720			
13	0	2.88					1.770
15	2	1.26				1.680	
17	0	-23.74	0.290				
18	3	-0.54			1.580		
20	4	0.00			1.610		
22	4	-0.07			1.606		
23	3	-0.72			1.570		
28	0	5.76		1.930			
38	3	-0.90			1.560		
42	3	0.72				1.650	
45	3	0.90			1.660		
46	4	0.18			1.620		
52	3	0.54			1.640		
57	4	-0.18			1.600		
59	4	-0.18			1.600		
60	3	0.90			1.660		
61	3	0.72			1.650		
64	4	0.36			1.630		
70	0	3.53	1.806				
72	3	0.90			1.660		
74	4	0.18			1.620		
87	0	3.42			1.800		
89	4	-0.36			1.590		
91	0	2.16			1.730		
92	4	-0.36				1.590	
94	3	-0.54			1.580		
97	4	0.36				1.630	
100	4	0.18			1.620		
102	0	-2.88			1.450		
104	0	5.31			1.905		
105	4	-0.18			1.600		
113	3	0.95			1.663		
118	2	-1.08			1.550		
119	3	0.72			1.650		
120	3	-0.54			1.580		

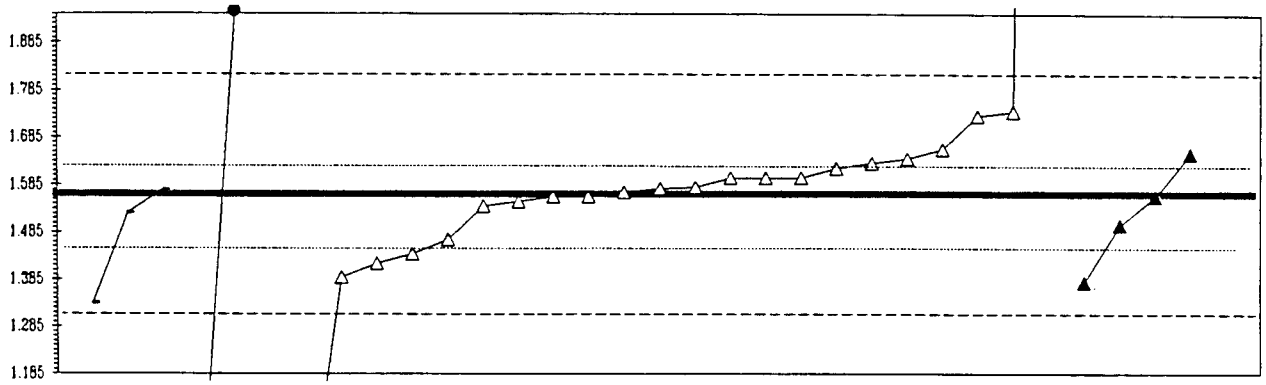
Lab #	Rating	Z-value	0	4	22a	22m	22p
128	0	2.70			1.760		
129	0	-6.30					1.260
132	4	-0.18					1.600
133	0	-3.78			1.400		
134	4	-0.18				1.600	
138	4	-0.18	1.600				
141	2	-1.08			1.550		
143	4	0.36			1.630		
150	4	-0.18			1.600		
158	3	-0.54			1.580		
167	2	1.26			1.680		
173	3	-0.72					1.570
179	4	-0.18	1.600				
180	3	0.72			1.650		
184	3	-0.72			1.570		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-31 (preserved nutrients)--(Continued)*

0. Other			22m. Color: molybdate	
7. Ion chromatography				
22a. Color: ascorbic acid, phosphomolybdate				
N =	3	2	23	4
Min =	1.335	0.885	0.694	1.380
Max =	1.575	1.950	6.730	1.650
Median =			1.577	
St Dev =			0.092	

Analyte = PO4-P mg/L (orthophosphate phosphorus)

95% Confidence MPV =	1.565	+/-	0.044
F-pseudosigma =	0.126		
N =	32		
Range =	0.694	-	6.730
Hu =	1.625		
Hl =	1.455		



Other IC Color: ascorbic Color: molybdate

Lab #	Rating	Z-value	0	7	22a	22m
1	3	-0.99			1.440	
2	4	0.44			1.620	
16	1	-1.83	1.335			
29	0	3.06		1.950		
39	0	-5.40		0.885		
45	2	1.31			1.730	
48	3	0.60			1.640	
52	3	0.52			1.630	
55	4	-0.04			1.560	
63	4	0.28			1.600	
75	0	-6.91			0.694	
88	3	0.75			1.660	
89	4	0.04			1.570	
90	4	0.28			1.600	
92	4	-0.04				1.560
97	3	0.67				1.650
100	4	-0.12			1.550	
108	4	-0.20			1.540	
118	2	-1.15			1.420	
119	4	0.28			1.600	
120	4	0.10			1.577	
124	4	0.12			1.580	
134	3	-0.52				1.500
140	4	-0.04			1.560	
141	3	-0.75			1.470	
145	2	-1.47				1.380
154	0	40.99			6.730	
173	2	-1.39			1.390	
179	4	-0.31	1.526			
182	0	-5.44			0.880	
183	2	1.39			1.740	
190	4	0.08	1.575			

Table 13.-- *Statistical summary of reported data for standard reference water sample N-31 (nonpreserved nutrients)--(Continued)*

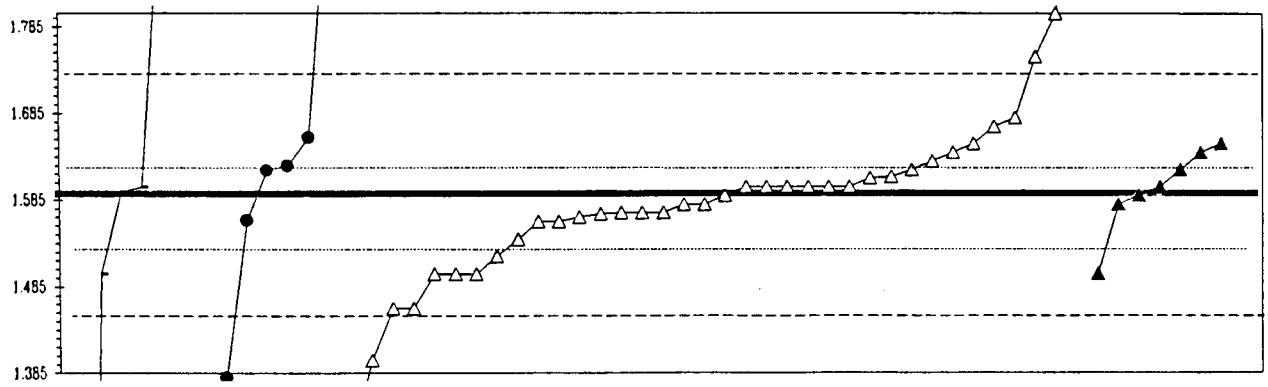
mg/L

0. Other	22m. Color: molybdate
7. Ion chromatography	
22a. Color: ascorbic acid, phosphomolybdate	

	5	8	36	7
N =				
Min =	0.250	0.700	1.310	1.500
Max =	1.940	1.940	1.920	1.650
Median =			1.585	
St Dev =			0.069	

Analyte = PO4-P (orthophosphate phosphorus)

95% Confidence MPV =	1.592	+/-	0.018
F-pseudosigma =	0.069		
N =	56		
Range =	0.250	-	1.940
Hu =	1.623		
Hl =	1.530		



Lab #	Rating	Z-value	0	7	22a	22m
1	2	-1.34			1.500	
2	4	0.12			1.600	
3	4	-0.32			1.570	
5	4	-0.32			1.570	
7	0	-4.26		1.300		
8	0	-13.01		0.700		
13	4	0.12				1.600
15	4	0.41				1.620
17	0	-19.57	0.250			
20	4	0.12			1.600	
23	3	-0.76			1.540	
28	3	0.95		1.657		
29	0	5.08		1.940		
32	4	0.41		1.620		
38	4	-0.34			1.569	
42	3	0.70				1.640
45	0	2.30			1.750	
46	4	-0.39			1.565	
52	2	1.28			1.680	
57	4	0.12			1.600	
59	2	-1.34			1.500	
61	4	-0.32			1.570	
64	3	0.85			1.650	
70	2	-1.34	1.500			
72	3	0.70			1.640	
74	4	0.41			1.620	
78	0	5.08	1.940			
87	0	3.03			1.800	
88	3	0.55			1.630	
89	4	-0.18			1.580	
91	4	0.26			1.610	
92	4	-0.03				1.590
97	3	0.85				1.650
100	2	-1.34			1.500	
102	0	-2.80			1.400	
104	2	1.14			1.670	
105	4	0.12			1.600	
113	4	-0.47			1.560	
118	1	-1.93			1.460	
119	4	0.12			1.600	

Lab #	Rating	Z-value	0	7	22a	22m
120	4	-0.18			1.580	
129	4	-0.44		1.562		
132	4	-0.18				1.580
133	0	-4.11			1.310	
134	2	-1.34				1.500
138	4	0.12	1.600			
141	2	-1.05			1.520	
143	4	-0.03			1.590	
150	4	0.12			1.600	
151	4	0.48		1.625		
158	4	-0.47			1.560	
167	4	0.29			1.612	
173	1	-1.93			1.460	
179	4	0.03	1.594			
180	0	4.78			1.920	
191	0	-3.09		1.380		

Table 15. -- *Statistical summary of reported data for standard reference water sample P-17 (Precipitation - low ionic strength)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

0. Other
1. AA: direct, air = atomic absorption: direct, air
2. AA: direct, N20 = atomic absorption: direct, nitrous oxide
4. ICP = inductively coupled argon plasma
5. DCP = direct coupled plasma
7. IC = ion chromatography
20. Titrate: = titration: colorimetric *[color reagent specified]*
21. Titrate: = titration: electrometric
22. Color = colorimetric: *[color reagent specified]*
40. Ion electrode = specific ion electrode
41. Electro = electrometric *[meter specified]*
51. Turbid = turbidimetric *[suspension specified]*

Abbreviations and symbols

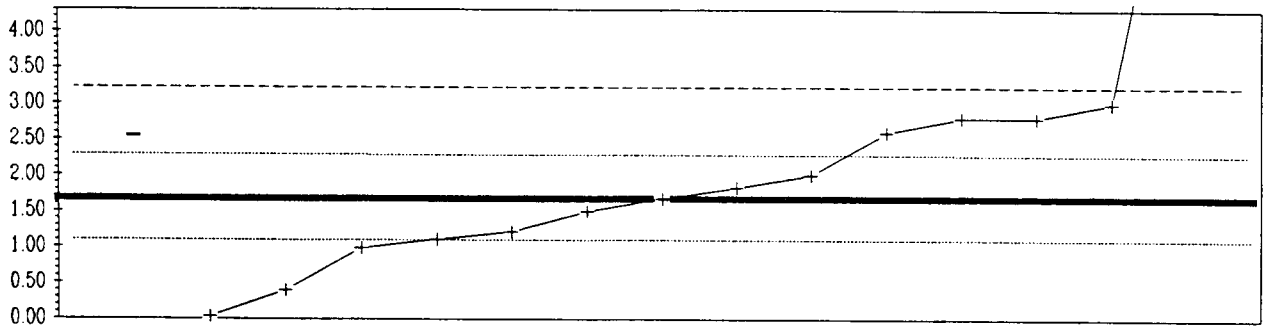
N = number of reported values
St dev = traditional standard deviation
MPV = 95% confidence most probable value
F-pseudosigma = nonparametric statistic deviation
Hu = upper hinge value
Hl = lower hinge value
mg/L = milligrams per liter
μ S/cm = microsiemens per centimeter at 25 C
Lab = laboratory by code number
NR = not rated, less than value reported
< = less than

Table 15.-- *Statistical summary of reported data for standard reference water sample P-17 (precipitation - low ionic strength)--Continued*

0. Other 21. Titrate: electrometric		
N =	1	13
Min =	2.55	0.03
Max =	2.55	8.00
Median =		1.67
St Dev =		0.92

Analyte = Acidity as CaCO3 mg/L

95% Confidence MPV =	1.67	+/-	0.46
F-pseudosigma =	0.88		
N =	14		
Range =	0.03	-	8.00
Hu =	2.30		
Hl =	1.11		



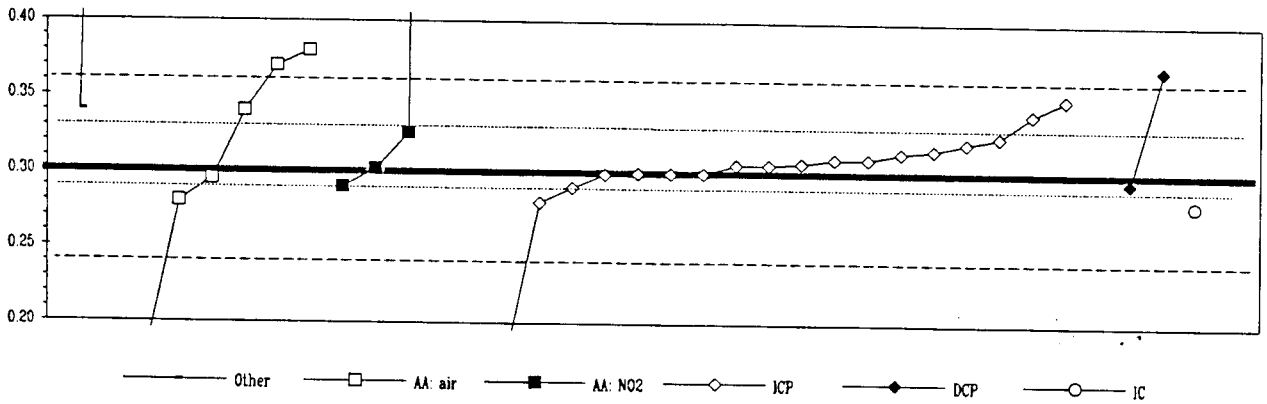
Lab #	Rating	Z-value	0	21
1	1	-1.86		0.03
3	NR	NR		< 10
14	4	0.37		2.00
15	3	-0.52		1.21
23	3	-0.63		1.11
38	4	0.00		1.67
52	NR	NR		< 2
61	3	-0.78		0.98
62	2	-1.44		0.40
74	4	-0.19		1.50
89	4	0.18		1.83
105	2	1.05		2.60
124	0	7.18		8.00
130	1	1.51		3.00
158	0	4.17	2.55	2.80
188	2	1.28		2.60

Table 15.-- *Statistical summary of reported data for standard reference water sample P-17 (precipitation - low ionic strength)--Continued*

0. Other			4. ICP			
1. AA: direct, air			5. DCP			
2. AA: direct, N2O			7. IC			
N =	2	6	4	18	2	1
Min =	0.34	0.18	0.29	0.18	0.30	0.28
Max =	1.21	0.38	2.70	0.35	0.37	0.28
Median =				0.31		
St Dev =				0.03		

Analyte = Ca (Calcium) mg/L

95% Confidence MPV =	0.30	+/-	0.01
F-pseudosigma =	0.03		
N =	33		
Range =	0.18	-	2.70
Hu =	0.33		
Hl =	0.29		



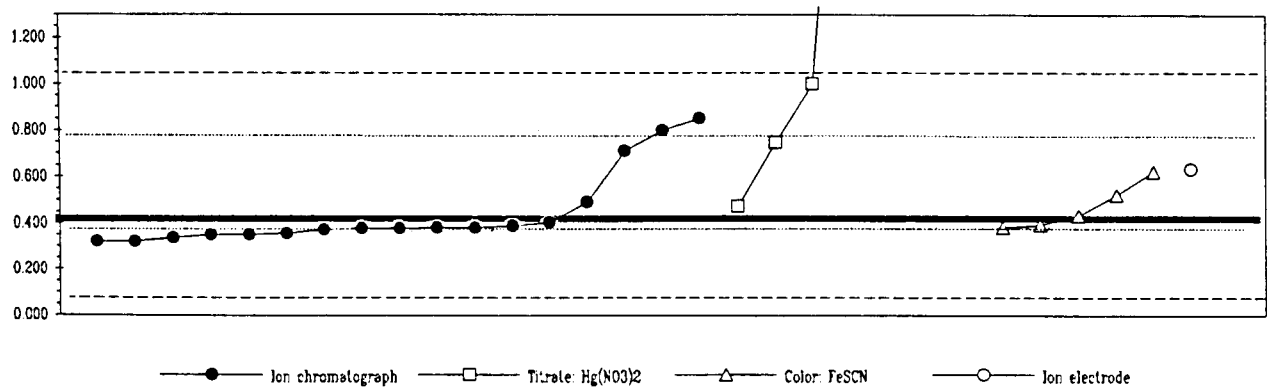
Lab #	Rating	Z-value	0	1	2	4	5	7
1	3	0.67				0.32		
2	4	0.18			0.30			
3	1	1.51				0.34		
7	1	1.86				0.35		
14	0	2.56					0.37	
15	3	0.60				0.31		
20	NR	NR						< 5
23	0	31.99	1.21					
27	4	-0.07					0.30	
28	4	0.11				0.30		
32	1	1.51	0.34					
33	3	-0.60						0.28
37	4	0.32				0.31		
38	4	-0.25			0.29			
42	4	0.46				0.31		
46	4	0.32				0.31		
48	3	-0.60				0.28		
52	NR	NR			< 0.7			
61	NR	NR				< 0.1		
64	4	-0.25				0.29		
74	4	0.35				0.31		
89	3	-0.60		0.28				
92	0	-4.10		0.18				
93	3	0.84				0.32		
98	4	0.46				0.31		
101	1	1.51		0.34				
105	3	0.98				0.33		
110	0	2.56		0.37				
123	4	-0.07		0.30				
124	0	84.20			2.70			
130	4	0.11				0.30		
134	0	2.91		0.38				
141	0	-4.10				0.18		
152	4	0.07				0.30		
158	4	0.11				0.30		
168	2	1.02			0.33			

Table 15.-- *Statistical summary of reported data for standard reference water sample P-17 (precipitation - low ionic strength)--Continued*

0. Other		22. Color: FeSCN			
7. Ion chromatograph		40. Ion electrode			
20h. Titrate: Hg(NO3)2					
N =	0	17	7	5	1
Minimum =		0.320	0.470	0.380	0.630
Maximum =		0.850	7.000	0.620	0.630
Median =		0.377			
St Dev =		0.169			

Analyte = Cl (Chloride) mg/L

95% Confidence MPV =	0.416	+/-	0.105
F-pseudosigma =	0.294		
N =	30		
Range =	0.320	-	7.000
Hu =	0.773		
Hl =	0.377		



Lab #	Rating	Z-value	0	7	20h	22	40
1	4	-0.14		0.376			
2	4	-0.20		0.356			
3	3	0.69				0.620	
7	4	-0.22		0.350			
14	2	1.48		0.850			
15	4	-0.13		0.377			
20	NR	NR		< 5.5			
23	3	0.73					0.630
27	4	-0.33		0.320			
28	4	0.25		0.490			
32	4	-0.12		0.380			
33	4	-0.22		0.350			
46	4	-0.33		0.320			
48	0	22.40			7.000		
52	NR	NR				< 0.5	
61	4	0.18			0.470		
64	4	-0.12				0.380	
74	4	-0.10		0.386			
78	0	15.60			5.000		
89	2	1.12			0.746		
92	1	1.99			1.000		
93	4	-0.27		0.336			
98	NR	NR		< 0.2			
101	0	8.45			2.900		
105	NR	NR		< 1.0			
110	4	-0.15		0.372			
124	0	8.79			3.000		
130	2	1.31		0.800			
134	4	-0.12		0.380			
141	4	0.05				0.432	
150	4	0.35				0.520	
158	4	-0.05		0.400			
184	4	-0.09				0.390	
188	3	1.00		0.709			

Table 15.-- *Statistical summary of reported data for standard reference water sample P-17 (precipitation - low ionic strength)--Continued*

0. Other		40. Ion electrode		
7. Ion chromatograph				
22. Color: Zr eriochrome				
N =	0	3	0	5
Minimum =		0.010		0.020
Maximum =		0.020		0.038
Median =				
St Dev =				

Analyte = F (Fluoride) mg/L

95% Confidence MPV =	INSUFF DATA		
F-pseudosigma =			
N =	8		
Range =	0.010	-	0.038
Hu =			
Hl =			

Lab #	Rating	Z-value	0	7	22	40
1				0.017		
3					< 0.1	
7				< 0.03		
14				< 0.2		
15						< 0.1
23						0.020
28				0.020		
33				0.010		
42						0.020
46						0.023
52						< 0.1
61						0.020
74						< 0.02
78						< 0.1
89						< 0.05
98				< 0.1		
105				< 0.2		
124						< 0.1
134			< 0.1			
141						0.038
164						< 0.1

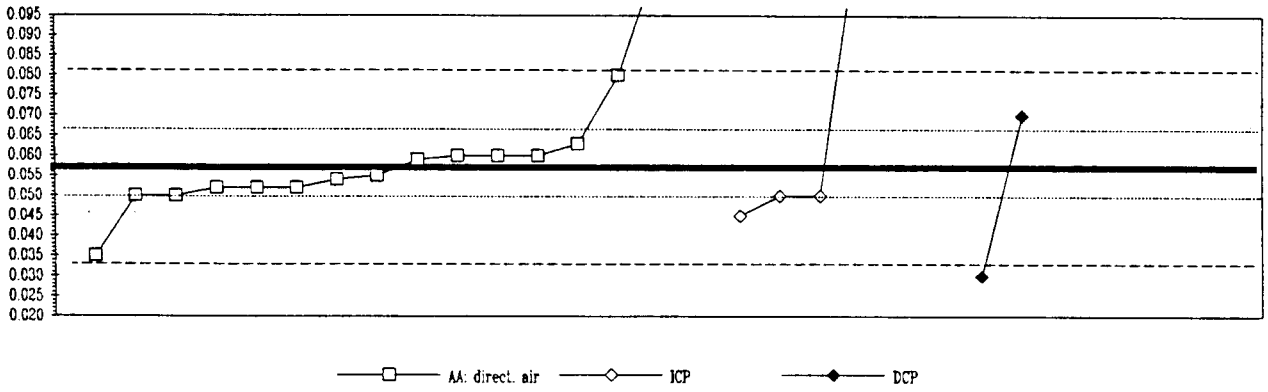
Table 15.-- *Statistical summary of reported data for standard reference water sample P-17 (precipitation - low ionic strength)--Continued*

0. Other
1. AA: direct. air
4. ICP
5. DCP

N =	0	16	6	2
Minimum =		0.035	0.045	0.030
Maximum =		3.100	0.200	0.070
Median =		0.057		
St Dev =		0.017		

Analyte = K (Potassium) mg/L

95% Confidence MPV =	0.057	+/-	0.005
F-pseudosigma =	0.012		
N =	23		
Range =	0.030	-	3.100
Hu =	0.067		
Hl =	0.050		



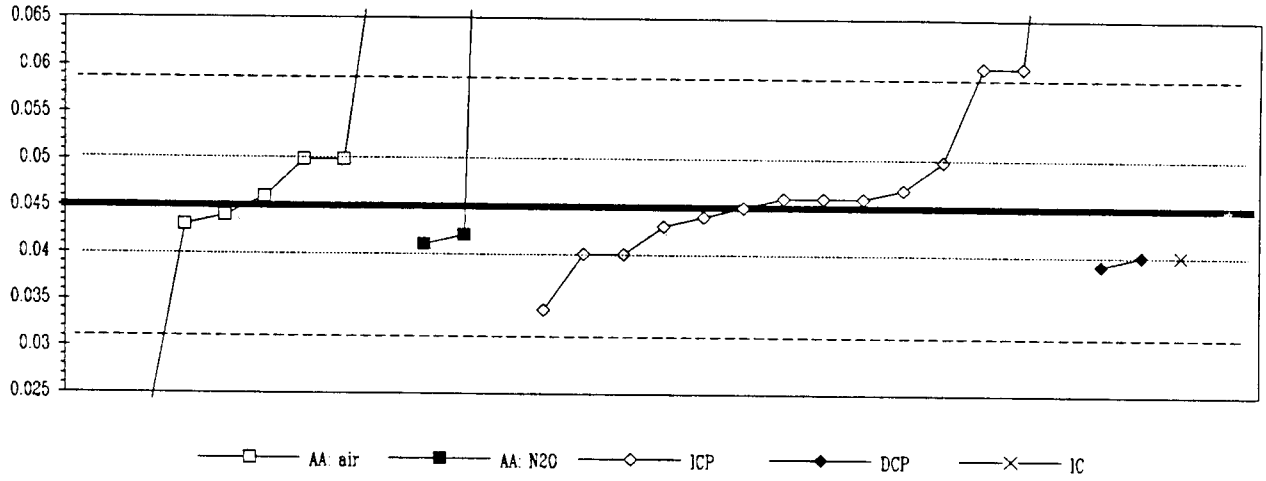
Lab #	Rating	Z-value	0	1	4	5
1	4	-0.41		0.052		
2	4	-0.25		0.054		
3	0	4.33		0.110		
7	NR	NR			< 1.19	
14	2	1.06				0.070
15	4	-0.41		0.052		
20	NR	NR				< 5.0
28	0	11.69			0.200	
32	NR	NR	< 0.2			
33	0	-2.21				0.030
37	3	-0.57		0.050		
38	4	0.25		0.060		
46	3	-0.57			0.050	
48	0	5.15			0.120	
52	NR	NR		< 0.1		
61	NR	NR			< 0.500	
64	3	-0.57		0.050		
74	3	-0.98			0.045	
89	4	0.49		0.063		
92	NR	NR	< 0.1			
93	4	-0.41		0.052		
101	4	0.25		0.060		
105	4	-0.16		0.055		
110	1	1.88		0.080		
123	1	-1.80		0.035		
124	0	248.79		3.100		
130	0	10.87			0.190	
134	4	0.25		0.060		
141	NR	NR			< 0.01	
158	3	-0.57			0.050	
188	4	0.16		0.059		

Table 15.-- *Statistical summary of reported data for standard reference water sample P-17 (precipitation - low ionic strength)--Continued*

0. Other			4. ICP			
1. AA: direct, air			5. DCP			
2. AA: direct, N20			7. IC			
N =	0	8	3	14	2	1
Min =		0.020	0.041	0.034	0.039	0.040
Max =		0.080	0.200	0.100	0.040	0.040
Median =				0.046		
St Dev =				0.007		

Analyte = Mg Magnesium) mg/L

95% Confidence MPV =	0.045	+/-	0.003
F-pseudosigma =	0.007		
N =	28		
Range =	0.020	-	0.200
Hu =	0.050		
Hl =	0.040		



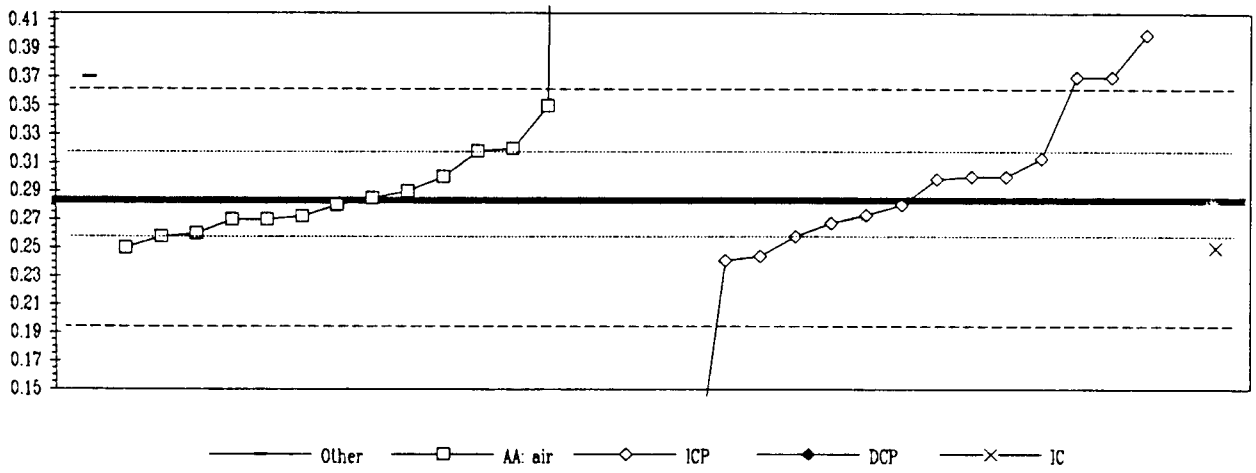
Lab #	Rating	Z-value	0	1	2	4	5	7
1	4	-0.27		0.043				
2	3	-0.54			0.041			
3	3	-0.67				0.040		
7	NR	NR				< 0.056		
14	3	-0.67					0.040	
15	4	-0.13				0.044		
20	NR	NR						< 5
23	0	-3.37		0.020				
27	3	-0.81					0.039	
28	0	7.42				0.100		
33	NR	NR						0.040
37	4	-0.27				0.043		
38	4	-0.13		0.044				
46	4	0.00				0.045		
48	0	2.02				0.060		
52	NR	NR			< 0.05			
61	NR	NR				< 0.05		
64	3	-0.67				0.040		
74	4	0.13				0.046		
89	4	0.13		0.046				
93	2	-1.48				0.034		
98	4	0.27				0.047		
101	3	0.67		0.050				
105	4	0.13				0.046		
110	0	4.72		0.080				
123	0	-3.37		0.020				
124	0	20.91			0.200			
130	0	2.02				0.060		
134	3	0.67		0.050				
141	3	0.67				0.050		
158	4	0.13				0.046		
188	4	-0.40			0.042			

Table 15.-- *Statistical summary of reported data for standard reference water sample P-17 (precipitation - low ionic strength)--Continued*

0. Other			5. DCP		
1. AA: direct, air			7. IC		
4. ICP					
N =	1	15	14	1	1
Minimum =	0.370	0.250	0.060	0.120	0.250
Maximum =	0.370	2.810	0.400	0.120	0.250
Median =		0.283	0.299		
St Dev =		0.029	0.052		

Analyte = Na (Sodium) mg/L

95% Confidence MPV =	0.283	+/-	0.015
F-pseudosigma =	0.044		
N =	32		
Range =	0.060	-	2.810
Hu =	0.319		
HI =	0.259		



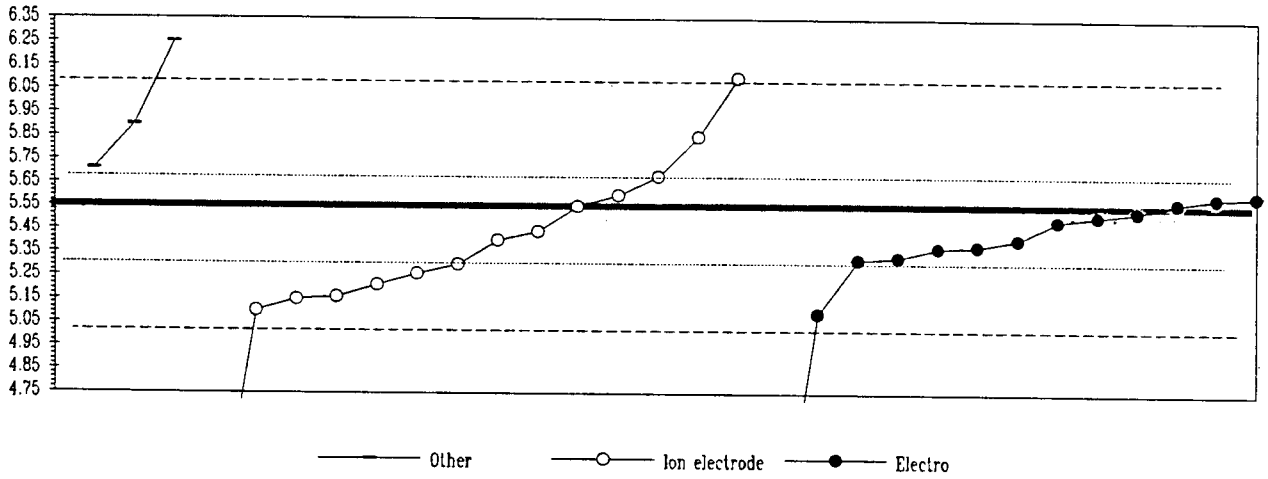
Lab #	Rating	Z-value	0	1	4	5	7
1	4	0.06		0.285			
2	4	-0.24		0.272			
3	1	1.52		0.350			
7	3	-0.93			0.241		
14	0	-3.65				0.120	
15	3	-0.55			0.258		
20	NR	NR					< 5
23	4	0.17		0.290			
28	0	2.64			0.400		
32	1	1.97	0.370				
33	3	-0.73					0.250
37	4	0.39			0.300		
38	3	-0.73		0.250			
42	3	-0.87			0.244		
46	4	-0.21			0.273		
48	1	1.97			0.370		
52	NR	NR		< 0.4			
61	4	-0.35			0.267		
64	4	-0.28		0.270			
74	3	0.69			0.313		
89	3	0.80		0.318			
92	3	0.84		0.320			
93	3	-0.55		0.258			
98	4	0.39			0.300		
101	4	-0.06		0.280			
105	4	0.35			0.298		
110	4	-0.28		0.270			
123	3	-0.51		0.260			
124	0	36.37		1.900			
130	1	1.97			0.370		
134	4	0.39		0.300			
141	0	-5.00			0.060		
158	4	-0.06			0.280		
188	0	56.83		2.810			

Table 15.-- *Statistical summary of reported data for standard reference water sample P-17 (precipitation - low ionic strength)--Continued*

0. Other			
40. Ion electrode			
41. Electrometric			
N =	3	14	22
Min =	5.71	4.10	4.00
Max =	6.25	6.10	7.26
Median =		5.35	5.58
St Dev =		#DIV/0!	#DIV/0!

Analyte = pH

95% Confidence MPV =	5.55	+/-	0.09
F-pseudosigma =	0.27		
N =	39		
Range =	4.00	-	7.26
Hu =	5.68		
Hl =	5.31		



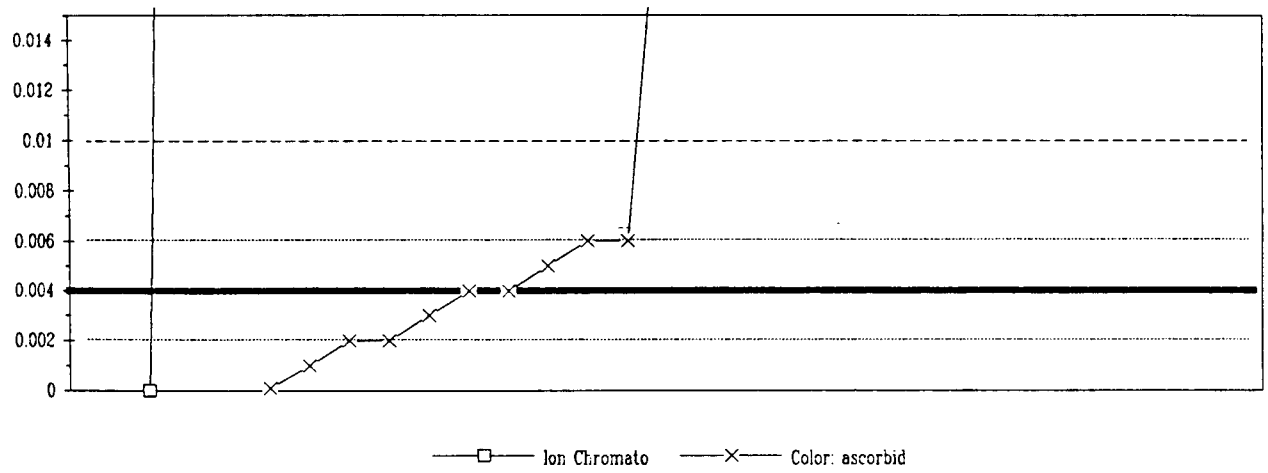
Lab #	Rating	Z-value	0	40	41
1	0	-5.29		4.10	
2	4	0.33			5.64
3	3	-0.62			5.38
7	3	-0.91		5.30	
14	2	-1.42		5.16	
15	4	0.47		5.68	
20	0	5.54			7.07
23	4	0.15			5.59
27	0	6.23			7.26
28	4	0.40			5.66
33	2	-1.06		5.26	
37	4	0.07			5.57
38	4	0.18		5.60	
42	0	2.55	6.25		
46	2	1.02			5.83
48	0	2.01		6.10	
52	4	-0.40		5.44	
61	4	0.18			5.60
62	2	-1.46		5.15	
64	4	-0.22			5.49
74	4	-0.15			5.51
78	3	0.55			5.70
89	4	0.40			5.66
92	3	-0.84			5.32
93	3	-0.54		5.40	
98	0	-5.65			4.00
101	3	0.62			5.72
105	3	0.58	5.71		
110	4	0.00		5.55	
124	4	0.47			5.68
130	1	-1.68			5.09
134	3	-0.80			5.33
141	2	1.09		5.85	
143	4	-0.07			5.53
150	1	-1.64		5.10	
152	2	1.27	5.90		
158	3	-0.51			5.41
178	3	-0.66			5.37
188	2	-1.24		5.21	

Table 15.-- *Statistical summary of reported data for standard reference water sample P-17 (precipitation - low ionic strength)--Continued*

0. Other			
7. Ion chromatograph			
22. Color: ascorbic acid			
N =	0	2	11
Min =		0.000	0.000
Max =		0.080	0.023
Median =			0.004
St Dev =			#DIV/0!

Analyte = PO4 as P (Orthophosphate) mg/L

95% Confidence MPV =	0.004	+/-	0.002
F-pseudosigma =	0.003		
N =	13		
Range =	0.000	-	0.080
Hu =	0.006		
Hl =	0.002		



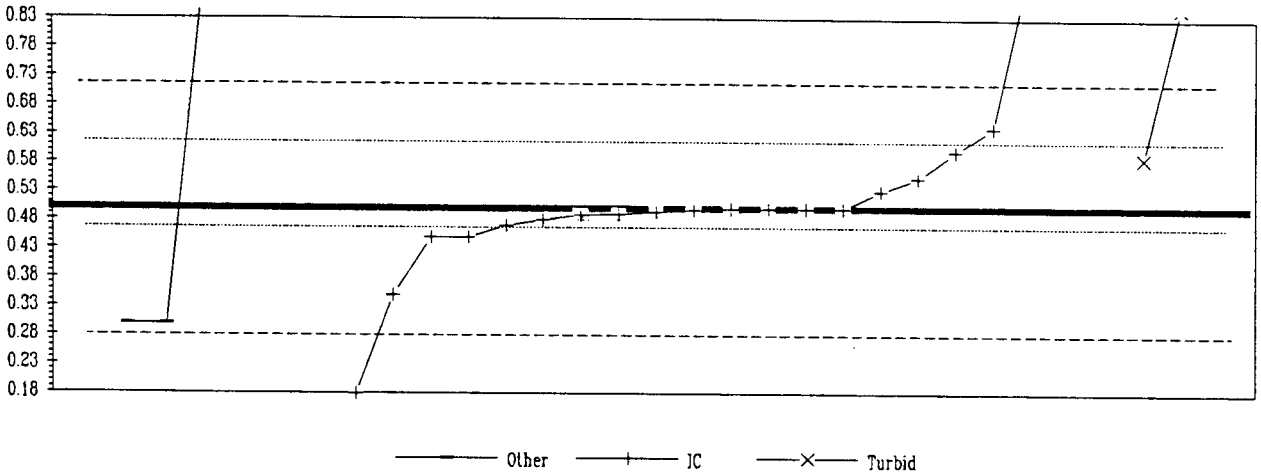
Lab #	Rating	Z-value	0	7	22
1	NR	NR		< 0.01	
3	NR	NR			< 0.01
7	NR	NR		< 0.16	
15	NR	NR			< 0.02
20	3	-0.67			0.002
22	4	0.00			0.004
23	2	-1.32			0.000
28	0	25.63		0.080	
33	NR	NR		< 0.01	
38	4	-0.34			0.003
46	3	-0.67			0.002
48	4	0.34			0.005
52	3	0.67			0.006
61	NR	NR			< 0.04
64	4	0.00			0.004
74	NR	NR			< 0.001
89	NR	NR			< 0.002
92	3	0.67			0.006
98	NR	NR		< 0.3	
105	NR	NR			< 0.002
124	NR	NR			< 0.03
134	NR	NR			< 0.01
150	2	-1.01			0.001
184	0	6.41			0.023
188	2	-1.32		0.000	

Table 15.-- *Statistical summary of reported data for standard reference water sample P-17 (precipitation-low ionic strength)--Continued*

	0. Other	7. Ion chromatograph	51. Turbidimetric
N =	4	20	3
Minimum =	0.300	0.179	0.588
Maximum =	8.000	5.500	1.100
Median =		0.499	
St Dev =		0.097	

Analyte = SO4 (Sulfate) mg/L

95% confidence MPV =	0.500	+/-	0.041
F-pseudosigma =	0.107		
N =	27		
Range =	0.179	-	8.000
Hu =	0.620		
Hu =	0.475		



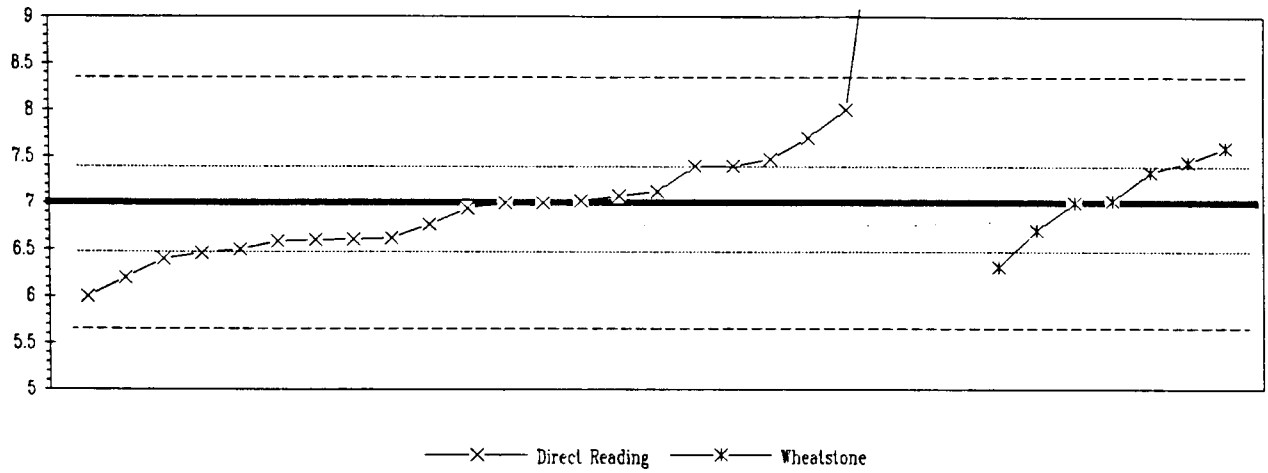
Lab #	Rating	Z-value	0	7	51
1	4	-0.19		0.48	
2	4	-0.02		0.50	
3	0	4.00		0.93	
7	0	-4.09		< 0.06	
14	4	-0.47		0.45	
15	0	-2.99		0.18	
20	0	46.52		5.50	
23	1	-1.86	0.30		
27	2	-1.40		0.35	
28	4	0.28		0.53	
32	4	0.00		0.50	
33	4	-0.47		0.45	
37	2	1.30		0.64	
42	4	-0.06		0.49	
48	0	69.78	8.00		
52	NR	NR			< 10
61	0	5.58			1.10
64	4	0.00		0.50	
74	4	-0.10		0.49	
78	0	3.26			0.85
89	3	0.82			0.59
92	NR	NR			< 5
93	4	-0.28		0.47	
98	4	0.00		0.50	
101	1	-1.86	0.30		
105	NR	NR		< 1	
110	4	0.49		0.55	
124	NR	NR			< 2
130	4	0.00		0.50	
134	4	-0.09		0.49	
150	NR	NR	< 5		
158	3	0.93		0.60	
184	0	3.72	0.90		

Table 15.-- *Statistical summary of reported data for standard reference water sample P-17 (precipitation-low ionic strength)--Continued*

41d. Direct Reading			
41w. Wheatstone bridge conductivity			
N =	0	23	7
Minimum =		6.00	6.31
Maximum =		0.00	13.30
Median =		7.00	7.02
St Dev =		0.50	0.45

Analyte = Specific Conductance μ S/cm

95% confidence MPV =	7.00	+/-	0.24
F-pseudosigma =	0.68		
N =	30		
Range =	6.00	-	13.30
Hu =	7.40		
Hl =	6.48		



Lab #	Rating	Z-value	41d	41w
1	4	0.48		7.33
3	4	0.00	7.00	
7	3	-0.73	6.50	
14	4	0.00	7.00	
15	4	-0.09	6.94	
20	2	-1.01		6.31
23	4	0.12	7.08	
27	4	-0.44		6.70
28	3	0.59	7.40	
32	3	0.59	7.40	
33	4	0.18	7.12	
37	2	1.03	7.70	
38	4	0.03		7.02
48	3	-0.79	6.46	
52	NR	NR	< 10	
61	2	-1.17	6.20	
62	3	0.69	7.47	
64	3	0.65		7.44
74	3	-0.57	6.61	
78	0	9.24	13.30	
89	3	0.87		7.59
93	3	-0.56	6.62	
101	3	-0.88	6.40	
105	4	0.00		7.00
124	3	-0.60	6.59	
130	2	1.47	8.00	
134	4	-0.34	6.77	
141	2	-1.47	6.00	
158	4	0.03	7.02	
178	3	-0.59	6.60	
190	0	5.87	11.00	

Table 16. -- *Statistical summary of reported data for standard reference water sample Hg-11 (Mercury)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

0. Other
3. AA: cold vapor = atomic absorption: cold vapor

Abbreviations and symbols

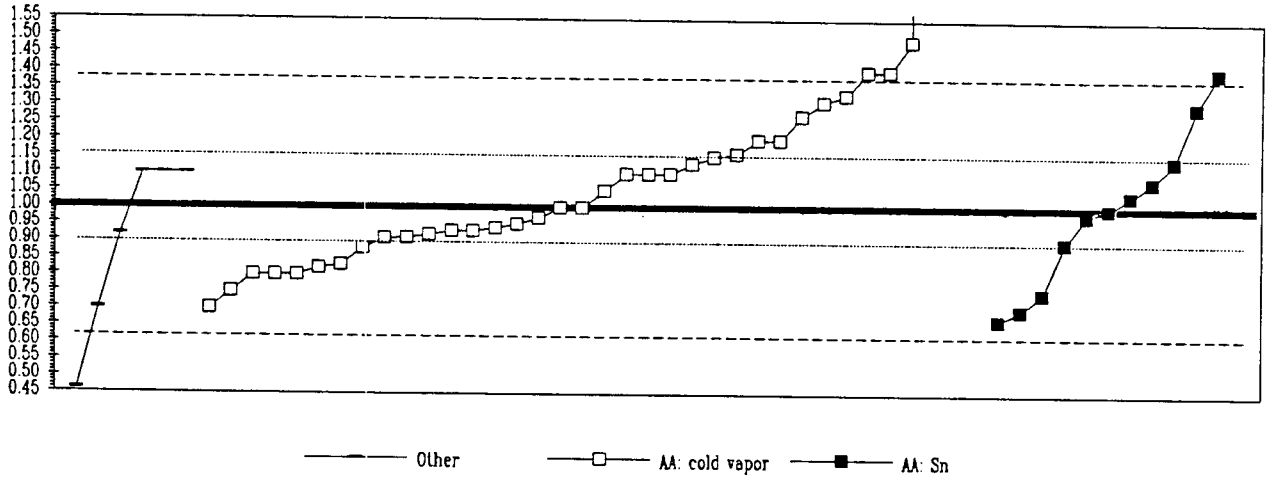
N = number of reported values
St dev = traditional standard deviation
MPV = 95% confidence most probable value
F-pseudosigma = nonparametric statistic deviation
Hu = upper hinge value
Hl = lower hinge value
μ g/L = micrograms per liter
Lab = laboratory by code number

Table 16.- *Statistical summary of reported data for standard reference water sample Hg-11 (Mercury)--Continued*

0. Other		11. AA: SnCl
3. AA: cold vapor		
N =	6	36	11
Min =	0.46	0.70	0.67
Max =	1.10	16.00	1.40
Median =	1.01	1.03	1.00
Std Dev =		0.21	0.23

Analyte = Hg μ g/L

95% Confidence MPV =	1.00	+/-	0.05
F-pseudosigma =	0.19		
N =	53		
Range =	0.46	-	16.00
Hu =	1.16		
Hl =	0.90		



Lab #	Rating	Z-value	0	3	11
1	4	-0.36		0.93	
3	0	57.07		12.00	
7	2	-1.30			0.75
13	3	0.52		1.10	
15	4	-0.42		0.92	
16	1	-1.56	0.70		
18	0	2.08		1.40	
23	2	1.40		1.27	
24	1	-1.56			0.70
28	3	0.52		1.10	
29	0	49.29		10.50	
32	3	0.52	1.10		
34	4	-0.42	0.92		
37	0	2.08			1.40
39	4	0.00		1.00	
42	3	0.67		1.13	
45	4	-0.10			0.98
46	4	-0.47		0.91	
48	3	-0.62		0.88	
52	4	0.00			1.00
59	0	2.54		1.49	
61	4	0.26		1.05	
63	4	-0.26		0.95	
68	1	-1.56		0.70	
69	3	-0.93		0.82	
74	4	-0.47		0.91	
75	4	0.21			1.04
78	4	-0.31		0.94	
79	0	-2.80	0.46		
81	0	2.08		1.40	
89	4	-0.36		0.93	
90	3	0.73			1.14
98	2	-1.30		0.75	
100	4	0.42			1.08
105	1	1.71		1.33	
108	4	-0.16		0.97	
119	3	0.78		1.15	
120	1	1.61		1.31	
124	3	-0.52			0.90
133	2	-1.04		0.80	

Lab #	Rating	Z-value	0	3	11
134	3	0.52	1.10		
138	3	0.52	1.10		
141	1	-1.71			0.67
144	2	-1.04		0.80	
146	3	0.52		1.10	
151	1	1.56			1.30
154	2	1.04		1.20	
167	4	0.00		1.00	
173	2	1.04		1.20	
179	3	-0.88		0.83	
182	0	77.83		16.00	
184	3	0.83		1.16	
194	2	-1.04		0.80	

Table 17. -- *Statistical summary of reported data for standard reference water sample Hg-12 (Mercury)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

0. Other
3. AA: cold vapor = atomic absorption: cold vapor

Abbreviations and symbols

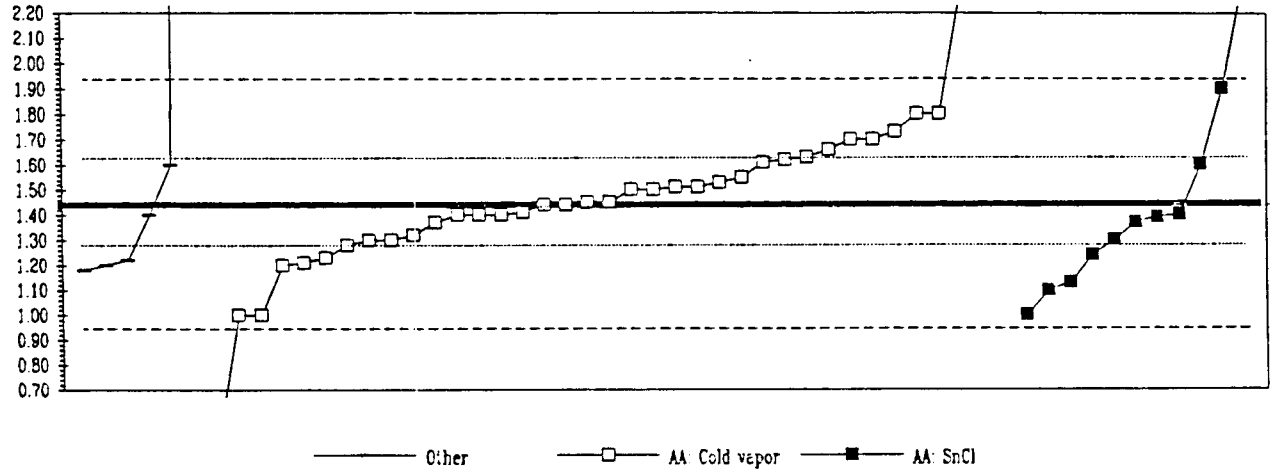
N =	number of reported values
St dev =	traditional standard deviation
MPV =	95% confidence most probable value
F-pseudosigma =	nonparametric statistic deviation
Hu =	upper hinge value
Hl =	lower hinge value
μ g/L =	micrograms per liter
Lab =	laboratory by code number

Table 17.- *Statistical summary of reported data for standard reference water sample Hg-12 (Mercury)--Continued*

0 Other		11. AA: SnCl
3. AA: cold vapor		
N =	6	37	12
Min =	1.18	0.50	1.00
Max =	19.00	14.00	2.42
Median =	1.31	1.45	1.38
Std Dev =		0.20	0.26

Analyte = Hg μg/L

95% Confidence MPV =	1.44	+/-	0.07
F-pseudosigma =	0.25		
N =	43		
Range =	0.50	-	19.00
Hu =	1.63		
Hl =	1.29		



Lab #	Rating	Z-value	0	3	11
1	4	0.36		1.53	
3	0	50.58		14.00	
7	2	-1.37			1.10
13	4	0.44		1.55	
15	4	-0.12		1.41	
16	3	-0.97	1.20		
18	3	-0.85		1.23	
24	1	-1.77			1.00
28	4	-0.16		1.40	
29	2	1.05		1.70	
34	3	-0.89	1.22		
37	1	1.85			1.90
39	1	-1.77		1.00	
42	0	3.46		2.30	
45	3	-0.81			1.24
46	3	-0.64		1.28	
48	4	-0.16		1.40	
50	4	0.24		1.50	
52	3	-0.56			1.30
59	3	0.89		1.66	
61	4	0.00		1.44	
63	2	1.05		1.70	
65	4	-0.28		1.37	
68	2	1.45		1.80	
69	3	-0.97		1.20	
70	3	0.64	1.60		
74	4	-0.48		1.32	
75	4	-0.20			1.39
78	4	0.00		1.44	
79	2	-1.05	1.18		
81	0	-3.79		0.50	
89	4	0.28		1.51	
90	0	3.70			2.36
97	0	3.95			2.42
98	2	1.45		1.80	
100	4	-0.28			1.37
105	3	0.68		1.61	
108	3	0.77		1.63	
119	4	0.04		1.45	
120	2	1.17		1.73	

Lab #	Rating	Z-value	0	3	11
124	3	0.64			1.60
126	1	-1.77		1.00	
133	3	-0.93		1.21	
134	4	-0.16		1.40	
138	4	-0.16	1.40		
141	2	-1.25			1.13
146	3	-0.56		1.30	
151	4	-0.16			1.40
154	4	0.24		1.50	
161	0	11.92		4.40	
167	3	0.72		1.62	
173	4	0.04		1.45	
179	3	-0.56		1.30	
182	0	70.71	19.00		
184	4	0.28		1.51	

Table 18.-- *Most probable values for constituents and properties in standard reference water samples distributed in April 1991*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligram per liter; uS/cm, microsiemen per centimeter at 25 degrees Celsius]

T-115 (trace constituents)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Ag	5.7	µ g/L	1.4	Li	132	µ g/L	12
Al	40	µ g/L	20	Mg	27.6	m g/L	1.0
As	14.0	µ g/L	2.0	Mn	455	µ g/L	21
B	99	µ g/L	11	Mo	46	µ g/L	4
Ba	250	µ g/L	12	Na	140	m g/L	5
Be	53.5	µ g/L	3.0	Ni	17.4	µ g/L	2.7
Ca	50.9	m g/L	2.0	Pb	13.4	µ g/L	2.4
Cd	14.0	µ g/L	1.5	Sb	26.3	µ g/L	3.7
Co	15.4	µ g/L	2.9	Se	3.6	µ g/L	0.8
Cr	35.7	µ g/L	3.9	SiO2	9.9	m g/L	0.5
Cu	17.0	µ g/L	3.6	Sr	672	µ g/L	26
Fe	1175	µ g/L	60	V	17.7	µ g/L	2.8
K	5.41	m g/L	0.32	Zn	381	µ g/L	21

M-118 (major constituents)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Alkalinity	169	m g/L	5	Na	66.1	m g/L	3.2
B	0.18	m g/L	0.02	total P	1.42	m g/L	0.13
Ca	64.7	m g/L	3.3	pH	8.33		0.13
Cl	55.0	m g/L	2.2	SiO2	8.45	m g/L	0.59
DSRD	454	m g/L	16	SO4	126	m g/L	6.7
F	0.89	m g/L	0.05	Sp Cond	753	µ S/cm	29
K	5.00	m g/L	0.36	Sr	491	µ g/L	21
Mg	14.0	m g/L	0.6	V	2.7	µ g/L	3.7

N-30 (Nutrient) PRESERVED

Analyte	MPV		F-pseudosigma
NH3 - N	0.205	m g/L	0.027
NH3 + Org N	0.407	m g/L	0.119
NO2 + NO3	0.414	m g/L	0.052
total P	0.280	m g/L	0.025
PO4 - P	0.260	m g/L	0.026

N-30 (Nutrient) NONPRESERVED

Analyte	MPV		F-pseudosigma
NH3 - N	0.210	m g/L	0.019
NH3 + Org N	0.309	m g/L	0.095
NO2 + NO3	0.442	m g/L	0.052
total P	0.280	m g/L	0.015
PO4 - P	0.260	m g/L	0.022

N-31 (Nutrient) PRESERVED

Analyte	MPV		F-pseudosigma
NH3 - N	0.577	m g/L	0.059
NH3 + Org N	0.787	m g/L	0.133
NO2 + NO3	1.420	m g/L	0.099
total P	1.600	m g/L	0.048
PO4 - P	1.565	m g/L	0.126

N-31 (Nutrient) NONPRESERVED

Analyte	MPV		F-pseudosigma
NH3 - N	0.580	m g/L	0.025
NH3 + Org N	0.739	m g/L	0.245
NO2 + NO3	1.510	m g/L	0.068
total P	1.610	m g/L	0.056
PO4 - P	1.592	m g/L	0.069

P-17 (precipitation - low ionic strength)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Acidity	1.67	m g/L	0.88	Na	0.283	m g/L	0.044
Ca	0.30	m g/L	0.03	pH	5.55		0.27
Cl	0.416	m g/L	0.294	PO4 - P	0.004	m g/L	0.003
F	INSUFF DATA			SO4	0.500	m g/L	0.107
K	0.057	m g/L	0.012	Sp Cond	7.00	µ S/cm	0.68
Mg	0.045	m g/L	0.007				

Hg-11 (mercury)

Analyte	MPV		F-pseudosigma
Hg	1.00	µ g/L	0.19

Hg-12 (mercury)

Analyte	MPV		F-pseudosigma
Hg	1.44	µ g/L	0.25