

REPORT OF THE U.S. GEOLOGICAL SURVEY'S  
ANALYTICAL EVALUATION PROGRAM  
STANDARD REFERENCE WATER SAMPLES NOS. 78, 79, NUTRIENT NO. 6, and  
PRECIPITATION NO. 1

January 1982

*Handwritten notes on the right side of the page, including "1/19/82" and "10/1/82".*

### PURPOSE AND PLAN

As a means of providing an independent and objective evaluation of the water-quality data published by the U.S. Geological Survey and other cooperating laboratories, standard reference water samples are prepared and distributed at regular intervals. This report summarizes the analytical results submitted by 79 laboratories for Standard Reference Water Samples Nos. 78, 79, Nutrient No. 6 and Precipitation No. 1 distributed during October 23-26, 1981.

"Instructions for Analysis and Reporting Results," that accompanied standard reference water samples at the time of their distribution, did not specify any particular order for performing the determinations. Furthermore, each participating laboratory was asked to perform only those determinations that it routinely makes in the course of its normal operations and no restrictions were placed on the choice of methods to be used. This program serves primarily as a quality-control tool to alert participating laboratories to deficiencies in their analytical operations. Laboratories are identified in this report only by a preassigned code number.

### PREPARATION OF SAMPLES

Approximately 300 gallons of Sample No. 78 and 79 were collected. Sample No. 79 was acidified to a pH of about 1.5 with nitric acid and then the trace elements were added. Thymol was added to both samples and each sample was then filtered through a 0.45- $\mu$ m membrane filter into a large polyethylene drum. Each sample was mixed overnight with a motor-driven stirrer, pumped through an ultraviolet (2537A) sterilizer and packaged in sterile Teflon bottles under ultraviolet radiation.

Approximately 55 gallons of Nutrient No. 6 (Nutrients) were collected and filtered through a 0.45- $\mu$ m membrane filter. Mercuric chloride (50 mg/L) and sodium chloride (225 mg/L) were added. The sample was mixed overnight with a motor-driven stirrer, packaged without sterilization and stored at 4°C. The samples were packed in ice prior to distribution.

Sufficient snow was collected to yield approximately 55 gallons of melt water for the preparation of Sample No. 1 (Precipitation). The sample was mixed overnight with a motor-driven stirrer, filtered, pumped through an ultraviolet sterilizer and packaged in sterile Teflon bottles under ultraviolet radiation.

### DETERMINATIONS - NO. 78 (results in mg/L<sup>1</sup>)

Alkalinity (as CaCO <sub>3</sub> )	Phosphorus, total (P)
Boron (B)	pH
Calcium (Ca)	Potassium (K)
Chloride (Cl)	Silica (SiO <sub>2</sub> )
Dissolved Solids (residue)	Sodium (Na)
Fluoride (F)	Specific Conductance
Magnesium (Mg)	Strontium (Sr)
Nitrite (NO <sub>2</sub> -N)	Sulfate (SO <sub>4</sub> )
Nitrate (NO <sub>3</sub> -N)	Vanadium (V)

<sup>1</sup>Except specific conductance (micromhos at 25°C), pH, boron, strontium and vanadium (ug/L).

### DETERMINATIONS - No. 79 (results in ug/L)

Aluminum (Al)	Copper (Cu)	Nickel (Ni)
Arsenic (As)	Iron (Fe)	Selenium (Se)
Barium (Ba)	Lead (Pb)	Silver (Ag)
Beryllium (Be)	Lithium (Li)	Strontium (Sr)
Cadmium (Cd)	Manganese (Mn)	Thallium (Tl)
Chromium, total (Cr)	Mercury (Hg)	Zinc (Zn)
Cobalt (Co)	Molybdenum (Mo)	

### DETERMINATIONS - No. 6 (NUTRIENTS)--results in mg/L

Ammonia (NH <sub>3</sub> -N)	Organic nitrogen (N)
Nitrate (NO <sub>3</sub> -N)	Orthophosphate (PO <sub>4</sub> -P)
Nitrite (NO <sub>2</sub> -N)	Phosphorous, total (P)

### DETERMINATIONS - No. 1 (Precipitation - snowmelt) - results in mg/L<sup>1/</sup>

Calcium (Ca)	Chloride (Cl)	Fluoride (F)
Magnesium (Mg)	Nitrate (NO <sub>3</sub> nitrogen)	pH
Potassium (K)	Sodium (Na)	Specific conductance
Sulfate (SO <sub>4</sub> )		

### STATISTICAL EVALUATION

A statistical evaluation of the data has established the most reliable estimate of the true value for each of the various constituents determined. Reported values of "less than" were considered as "not determined" and hence do not enter into the computation of the means, standard deviations, etc. Mathematical computations are the same as those used previously for similar Standard Reference Water Samples of this type.

Data reported for Sample No. 1 (Precipitation) were not evaluated due to the wide variation in the reported results. Values have been listed as reported to enable comparison but no means, standard deviations nor confidence intervals were determined. Otherwise, the mean, percent deviation from the mean, standard deviation, and total range were calculated for each determination. Confidence limits about the mean were also calculated in order to define the concentration range within which the true value may be expected to fall with a confidence level of 95 percent. Outlying values were rejected on the basis of statistical tests as outlined in ASTM Recommended Practice for Dealing with Outlying Observations (1980 Book of ASTM Standards, Part 31, p. 16-28).

### REPORTED VALUES

The following section shows the reported value for each determination by each participating laboratory. Each reported value has been rounded off, when necessary, to conform to official USGS policy on reporting analytical data; however, the mean, standard deviation, and confidence limits about the mean are reported to one more significant figure than the reported value. Statistical information for any method used by three or more laboratories for each determination is also included. To facilitate between laboratory data-comparisons, rating tables have been prepared for each sample and are included as part of the report. Each determination is rated as a scale of 0 to 4 based on the number of "standard deviations" from the mean reported for the determination. An overall rating for each laboratory is given based on the number of determinations reported for each test sample. Participants are encouraged to submit comments or suggestions concerning this program.

<sup>1/</sup> Except pH and specific conductance.

PARTICIPATING LABORATORIES

U.S. Geological Survey

ARIZONA, Yuma: Werho  
 CALIFORNIA, Menlo Park: Barnes  
 COLORADO, Denver: Taylor, 068  
 FLORIDA, Ocala: Kirkland  
 GEORGIA, Doraville: Erdmann, 050  
 GEORGIA, Doraville: Jones, 066  
 LOUISIANA, Baton Rouge: Stallworth

Other

ALABAMA, Montgomery: Alabama Environmental Health  
 ALABAMA, University: Geological Survey of Alabama, Lloyd  
 ALABAMA, University: Geological Survey of Alabama, Malatino  
 ALASKA, College: Division of Geological & Geophysical Surveys  
 CALIFORNIA, Bryte: California Department of Water Resources  
 CALIFORNIA, Castaic: Castaic Chemical Laboratory  
 CALIFORNIA, La Mesa: Alvarado Filtration Plant  
 CALIFORNIA, La Verne: Metropolitan Water District of So. California  
 CALIFORNIA, Los Gatos: Santa Clara Valley Water District  
 CALIFORNIA, Oakland: East Bay Municipal Utility District  
 CALIFORNIA, Palm Desert: Regional Water Quality Control Board  
 CALIFORNIA, Sacramento: U.S. Bureau of Reclamation Planning Division  
 COLORADO, Aurora: Core Laboratories Incorporated  
 COLORADO, Fort Collins: B-13 Engineering Research Center  
 COLORADO, Grand Junction: Occidental Oil Shale, Inc.  
 FLORIDA, Live Oak: Suwannee River Water Management District  
 FLORIDA, Orlando: Orlando Utilities Commission  
 FLORIDA, Palatka: St. Johns River Water Management District  
 FLORIDA, West Palm Beach: South Florida Water Management District  
 FLORIDA, Tampa: Hillsborough County Env. Protection Agency  
 GEORGIA, Athens: Department of Horticulture  
 GEORGIA, Athens: Soil Testing & Plant Tissue Analysis Laboratory  
 GEORGIA, Atlanta: Environmental Protection Division  
 ILLINOIS, Champaign: Environmental Protection Agency  
 ILLINOIS, Marion: Illinois Environmental Protection Agency  
 IOWA, Des Moines: University Hygienic Laboratory  
 KANSAS, Lawrence: Kansas Geological Survey  
 KANSAS, Topeka: Inorganic Chemical Sec., KDHE  
 MAINE, Augusta: Maine Department of Environmental Protection  
 MARYLAND, Annapolis: Water Resources Administration Lab Services  
 MARYLAND, Baltimore: Martel Laboratory Services  
 MASSACHUSETTS, Barnstable: Barnstable County Health Department  
 MASSACHUSETTS, Wellesley Hills: Research and Materials Division  
 MICHIGAN, Garden City: Analytic & Biological Laboratories  
 MINNESOTA, Minneapolis: Analytical Serv./Minnesota Department of Health  
 MINNESOTA, St. Paul: Metropolitan Waste Control Commission  
 MISSOURI, Columbia: Env. Trace Substances Research Center  
 MISSOURI, Jefferson City: DEQ, Laboratory Services Program  
 MONTANA, Butte: Montana Bureau of Mines & Geology

Other--continued

NEW HAMPSHIRE, Concord: NH Water Supply & Pollution Control Lab  
 NEW JERSEY, Trenton: Environmental & Chemical Laboratory Services  
 NEW MEXICO, Albuquerque: Water Resources Laboratory  
 NEW MEXICO, Albuquerque: NM State Scientific Laboratory  
 NEW MEXICO, Gallup: Soil, Water, and Materials Testing Laboratory  
 NEW YORK, C.ISLIP: Suffolk County Health Services Department  
 NEW YORK, Hempstead: Nassau County Department of Health  
 NEW YORK, Melville: H2M Corporation  
 NEW YORK, Oakdale: Suffolk County Water Authority  
 NEW YORK, Rochester: Environmental Health Laboratory  
 NEVADA, Boulder City: Southern Nevada Water System  
 NEVADA, Reno: Nevada State Health Laboratory  
 NEVADA, Reno: Desert Research Institute  
 NORTH CAROLINA, Charlotte: Mecklenburg County Environmental Health Department  
 NORTH DAKOTA, Bismarck: North Dakota State Water Commission  
 OHIO, Dayton: The Miami Conservancy District  
 OHIO, Medina: Medina County Sanitary Engineering Department  
 OKLAHOMA, Norman: Oklahoma Geological Survey  
 OKLAHOMA, Oklahoma City: Agricultural Laboratory  
 OREGON, Corvallis: Forestry Sciences Laboratory  
 OREGON, Sandy: Bureau of Water Works  
 PENNSYLVANIA, Harrisburg: DER, Bureau of Labs  
 PENNSYLVANIA, Pittsburgh: PA Department Environmental Resources  
 PUERTO RICO, San Juan: Department of Natural Resources  
 SOUTH DAKOTA, Brookings: Water Quality Laboratory  
 SOUTH DAKOTA, Vermillion: South Dakota Geological Survey  
 TENNESSEE, Chattanooga: TVA Laboratory Branch  
 TENNESSEE, Knoxville: Department of Civil Engineering  
 WASHINGTON, Richland: Battelle, PNL  
 WASHINGTON, Seattle: Metro Water Quality Laboratory  
 WISCONSIN, Milwaukee: Central Laboratory Services  
 WYOMING, Cheyenne: Department of Environmental Quality  
 WYOMING, Laramie: State Laboratory

STANDARD REFERENCE WATER SAMPLE NO. 78  
 OVERALL LABORATORY PERFORMANCE

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RATING 4 (EXCELLENT) 0.00 TO 0.50 STD. DEV.  
 3 (GOOD) 0.51 TO 1.00 STD. DEV.  
 2 (SATISFACTORY) 1.01 TO 1.50 STD. DEV.  
 1 (QUESTIONABLE) 1.51 TO 2.00 STD. DEV.  
 0 (POUR) > 2.00 STD. DEV.  
 ND = NOT DETERMINED

LAB	ALK(CACO3)B	CA	CL	DSRD 180	F	K	MG	NA	NO2-L
001	2 ND	4	4	0	0	3	4	4	ND
002	3 2	4	4	4	4	4	3	4	4
003	2 4	1	0	0	0	0	3	0	ND
004	3 0	4	4	4	ND	3	4	4	ND
005	1 ND	1	2	ND	1	4	4	4	2
006	3 1	4	0	2	3	2	4	4	4
007	3 4	4	3	3	3	4	4	4	2
008	3 4	4	3	3	3	3	4	4	0
009	4 ND	3	4	1	4	2	3	4	2
010	4 4	3	0	4	4	ND	4	4	2
011	0 4	4	0	2	4	3	4	4	4
012	0 0	0	0	4	3	1	0	0	ND
013	4 4	0	1	4	3	3	0	1	4
014	ND ND	4	1	ND	0	ND	4	4	ND
015	3 ND	4	2	ND	4	4	3	4	4
016	4 4	2	ND	ND	0	4	3	3	ND
017	3 ND	4	4	4	4	4	4	4	0
020	1 ND	ND	0	3	0	ND	ND	ND	ND
021	1 ND	4	4	4	1	4	3	2	ND
022	ND ND	0	0	ND	ND	0	2	0	ND
023	ND ND	2	4	4	3	3	0	0	ND
024	1 ND	1	2	ND	ND	4	3	4	2
025	4 ND	4	2	ND	4	3	3	4	4
026	1 4	4	4	2	3	3	4	4	4
027	ND 4	3	ND	ND	ND	1	3	3	ND
028	4 ND	ND	0	ND	ND	ND	ND	ND	ND
029	4 ND	ND	ND	ND	3	ND	ND	ND	ND
030	0 1	1	4	4	4	4	0	4	4
031	4 ND	4	3	ND	3	4	4	4	ND
033	ND ND	4	ND	ND	4	4	4	4	ND
034	4 ND	ND	4	ND	ND	ND	ND	ND	0
035	2 ND	4	3	4	3	3	3	2	2
036	3 4	4	4	4	4	4	4	4	2
037	4 ND	4	2	2	1	2	3	4	ND
038	0 ND	0	4	4	3	3	0	4	ND
039	4 4	4	4	3	3	2	4	4	4
041	4 ND	4	4	4	3	2	2	4	2
042	ND ND	ND	ND	ND	ND	ND	ND	ND	ND
044	3 4	4	4	4	4	4	4	4	ND
045	0 0	3	4	ND	0	0	4	4	ND

STANDARD REFERENCE WATER SAMPLE NO. 78  
OVERALL LABORATORY PERFORMANCE

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RATING 4 (EXCELLENT) 0.00 TO 0.50 STD. DEV.  
3 (GOOD) 0.51 TO 1.00 STD. DEV.  
2 (SATISFACTORY) 1.01 TO 1.50 STD. DEV.  
1 (DISTRIBUTABLE) 1.51 TO 2.00 STD. DEV.  
0 (POOR) > 2.00 STD. DEV.  
ND = NOT DETERMINED

LAB	RES-D	P, TOTAL	PH	SI02	SO4	SP. COND.	SR	V	N	AVG.
001	ND	0	2	4	3	3	ND	ND	15	2.54
002	4	4	0	4	0	4	4	ND	17	3.29
003	4	3	3	4	4	2	1	1	17	2.06
004	ND	4	4	4	4	4	ND	ND	13	3.54
005	4	ND	3	4	0	0	ND	ND	15	2.31
006	4	4	4	4	0	3	1	4	16	2.83
007	2	0	4	0	4	3	4	ND	17	3.00
008	4	0	4	0	4	3	4	ND	17	2.94
009	4	ND	4	0	2	4	3	ND	15	2.93
010	2	4	3	4	4	4	ND	4	16	3.38
011	2	2	3	0	4	4	0	3	16	2.61
012	1	ND	4	3	3	3	ND	ND	14	1.57
013	4	0	3	4	4	4	0	2	18	2.50
014	4	ND	2	ND	2	2	ND	ND	5	2.56
015	4	ND	4	ND	4	2	ND	ND	12	3.50
016	ND	2	ND	3	ND	ND	4	ND	10	2.90
017	4	3	4	ND	ND	4	ND	ND	13	3.54
020	ND	3	4	ND	2	0	ND	ND	8	1.63
021	4	ND	4	ND	1	0	ND	ND	12	2.67
022	ND	ND	0	ND	ND	3	ND	ND	7	.71
023	0	ND	3	2	2	3	ND	ND	12	2.17
024	4	3	4	4	1	ND	0	ND	13	2.54
025	4	ND	4	0	4	3	ND	ND	13	3.31
026	4	0	3	4	4	3	ND	ND	16	3.19
027	0	0	0	4	ND	ND	3	ND	10	2.10
028	0	3	4	ND	ND	2	ND	ND	6	2.17
029	3	ND	4	ND	0	ND	ND	ND	5	2.80
030	3	3	3	0	3	3	3	ND	17	2.59
031	2	3	4	4	4	3	3	2	15	3.40
033	ND	ND	ND	4	4	ND	ND	ND	7	4.00
034	4	0	ND	ND	4	ND	ND	ND	6	2.67
035	1	4	4	3	ND	0	ND	ND	14	2.71
036	4	ND	4	2	4	4	ND	ND	15	3.67
037	2	ND	4	0	3	2	0	ND	14	2.36
038	ND	ND	ND	ND	3	ND	ND	ND	5	2.33
039	4	4	4	4	3	3	0	4	18	3.44
041	4	0	4	4	3	3	ND	ND	15	3.40
042	ND	0	ND	ND	ND	ND	ND	ND	1	4.00
044	4	4	4	3	4	3	3	4	17	3.76
045	ND	ND	4	4	4	ND	0	ND	12	2.25

STANDARD REFERENCE WATER SAMPLE NO. 78  
OVERALL LABORATORY PERFORMANCE

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RATING 4 (EXCELLENT) 0.00 TO 0.50 STD. DEV.  
3 (GOOD) 0.51 TO 1.00 STD. DEV.  
2 (SATISFACTORY) 1.01 TO 1.50 STD. DEV.  
1 (QUESTIONABLE) 1.51 TO 2.00 STD. DEV.  
0 (POOR) > 2.00 STD. DEV.  
ND = NOT DETERMINED

LAB	ALK (CACO3)B	CA	CL	DSRD 180	F	K	MG	NA	NO2-N
046	ND	4	2	ND	ND	3	4	4	ND
048	1	ND	4	4	3	3	4	4	2
049	4	ND	0	ND	ND	3	4	0	2
050	4	4	3	4	3	4	4	4	4
052	0	ND	4	4	ND	1	0	4	4
053	3	ND	3	4	4	1	4	4	4
054	4	ND	3	3	4	3	3	ND	ND
055	2	ND	0	2	2	3	0	4	4
057	3	ND	4	4	ND	3	2	4	ND
058	3	ND	3	4	0	ND	2	3	4
059	4	ND	3	2	4	3	0	3	4
060	4	0	4	3	3	4	4	4	4
061	4	4	2	4	ND	4	3	4	2
062	4	ND	ND	4	ND	ND	ND	ND	ND
063	4	ND	0	3	3	4	4	4	4
064	0	ND	2	3	0	3	0	0	2
065	0	4	4	2	4	3	3	4	2
066	ND	ND	3	3	ND	4	4	4	ND
068	2	4	4	4	3	4	4	4	4
069	ND	ND	ND	3	3	ND	ND	4	ND
070	4	1	1	4	4	3	4	2	0
072	4	1	4	1	0	3	0	2	4
073	0	2	2	0	0	3	2	2	ND
074	4	ND	1	0	4	3	3	4	4
076	4	ND	4	4	4	4	4	4	ND
077	4	ND	ND	4	4	3	ND	ND	2
078	3	ND	ND	0	4	ND	ND	0	0
079	ND	ND	ND	0	ND	ND	2	0	0
080	2	3	4	4	ND	4	4	4	4
081	4	ND	4	0	2	ND	4	4	2
082	4	ND	3	ND	0	ND	4	4	ND
083	4	ND	3	4	1	ND	2	4	4
084	4	4	4	4	ND	1	4	3	4
086	3	ND	ND	ND	4	ND	ND	ND	ND
087	3	ND	0	2	ND	3	4	4	ND
088	ND	4	2	3	ND	ND	3	2	0

STANDARD REFERENCE WATER SAMPLE NO. 78  
OVERALL LABORATORY PERFORMANCE

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RAIIRI 4 (EXCELLENT) 0.00 TO 0.50 STD. DEV.  
3 (GOOD) 0.51 TO 1.00 STD. DEV.  
2 (SATISFACTORY) 1.01 TO 1.50 STD. DEV.  
1 (SUBSTITUTABLE) 1.51 TO 2.00 STD. DEV.  
0 (POOR) > 2.00 STD. DEV.  
ND = NOT DETERMINED

LAB	USER	P, TOTAL	PH	S102	S04	SP. COND.	SP	V	N	AVG.
046	ND	3	3	ND	4	1	ND	ND	10	3.20
046	0	3	4	3	4	2	ND	4	16	3.25
049	2	4	4	0	ND	3	ND	ND	11	2.36
050	4	4	1	4	4	3	3	1	18	3.39
052	2	4	4	ND	4	4	ND	ND	13	3.00
053	4	1	4	2	3	4	ND	4	16	3.25
054	3	ND	4	ND	3	4	ND	ND	11	3.45
055	0	0	4	3	0	0	3	0	17	2.06
057	4	2	3	4	4	ND	ND	ND	12	3.33
056	3	2	4	2	3	4	ND	ND	14	2.04
059	1	4	2	4	3	4	ND	ND	13	3.00
060	ND	4	4	ND	4	1	0	ND	15	3.07
061	4	ND	4	1	4	4	3	4	16	3.44
062	ND	ND	4	ND	ND	2	ND	ND	4	3.50
062	0	1	4	ND	3	0	ND	ND	13	2.62
064	4	0	1	ND	ND	1	ND	ND	13	1.46
065	4	4	4	3	4	4	4	4	18	3.28
066	0	ND	ND	4	3	ND	3	4	10	3.20
066	4	4	1	4	0	2	3	ND	17	3.18
069	ND	ND	4	ND	0	4	ND	ND	7	2.37
070	ND	4	3	4	4	4	4	ND	16	2.94
072	3	1	0	0	4	0	ND	ND	16	1.88
073	1	3	1	ND	4	2	ND	ND	14	1.57
074	4	ND	2	ND	2	4	ND	ND	13	2.92
076	ND	ND	2	3	4	4	ND	ND	12	3.75
077	4	4	3	ND	2	0	ND	ND	10	3.00
078	0	3	4	ND	0	4	ND	ND	11	1.82
079	0	0	4	ND	ND	ND	ND	ND	8	1.00
080	0	3	3	4	4	3	4	ND	16	3.31
081	2	3	4	ND	2	2	ND	ND	13	2.77
082	ND	ND	4	ND	2	ND	ND	ND	8	3.13
083	0	4	1	1	0	4	ND	ND	14	2.29
084	0	ND	0	4	3	4	0	4	16	2.88
086	ND	ND	3	ND	ND	2	ND	ND	4	3.00
087	4	4	4	ND	0	4	ND	ND	12	2.67
088	4	4	ND	4	ND	ND	4	4	12	3.08







STANDARD REFERENCE WATER SAMPLE NO. 79  
OVERALL LABORATORY PERFORMANCE

PAGE: 001

RATING 4 (EXCELLENT) 0.00 TO 0.50 STD. DEV.  
3 (GOOD) 0.51 TO 1.00 STD. DEV.  
2 (SATISFACTORY) 1.01 TO 1.50 STD. DEV.  
1 (QUESTIONABLE) 1.51 TO 2.00 STD. DEV.  
0 (POOR) > 2.00 STD. DEV.  
ND = NOT DETERMINED

LAB	AG	AL	AS	BA	BE	CD	CO	CR TOT	CU	FE
055	0	2	4	0	3	4	2	4	3	1
056	ND	ND	ND	ND	ND	0	ND	0	ND	ND
057	0	0	ND	2	3	4	ND	3	3	3
058	ND	ND	4	ND	ND	4	ND	2	0	4
059	3	3	0	2	ND	2	ND	3	3	1
060	ND	ND	ND	ND	ND	3	ND	3	3	3
061	4	4	ND	4	ND	2	4	4	4	4
062	4	ND	4	ND	ND	4	ND	4	3	4
063	4	ND	4	1	ND	3	ND	3	0	4
064	ND	ND	ND	ND	ND	ND	ND	0	0	0
065	4	3	4	3	2	4	2	2	3	4
066	ND	ND	ND	4	4	3	2	ND	4	4
068	4	3	4	4	4	3	2	3	4	4
069	ND	ND	ND	ND	ND	ND	ND	ND	ND	4
070	4	ND	3	3	4	3	2	2	4	3
072	2	1	4	3	ND	4	4	4	3	4
073	ND	ND	ND	ND	ND	ND	ND	ND	ND	3
074	4	ND	0	0	ND	3	ND	4	2	0
076	ND	ND	ND	ND	ND	ND	ND	ND	ND	4
077	3	0	4	1	2	2	3	3	3	4
079	ND	ND	ND	ND	ND	3	ND	4	4	3
081	2	3	4	ND	ND	2	ND	3	4	4
082	ND	ND	ND	ND	ND	4	4	2	4	2
083	4	ND	ND	ND	ND	ND	ND	ND	ND	ND
086	ND	ND	ND	ND	ND	ND	ND	ND	3	4
087	0	0	3	2	ND	4	ND	4	0	4
088	4	0	3	4	4	4	2	4	2	4

STANDARD REFERENCE WATER SAMPLE NO. 79  
OVERALL LABORATORY PERFORMANCE

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RATING	DESCRIPTION	SCORE	TO	STD. DEV.
4	(EXCELLENT)	0.00	TO 0.50	STD. DEV.
3	(GOOD)	0.51	TO 1.00	STD. DEV.
2	(SATISFACTORY)	1.01	TO 1.50	STD. DEV.
1	(QUESTIONABLE)	1.51	TO 2.00	STD. DEV.
0	(POOR)	> 2.00	STD. DEV.	

ND = NOT DETERMINED

LAB	HG	LT	MN	MO	NI	PB	SE	SR	TL	ZN	N	AVG.
055	1	0	4	0	2	0	0	1	0	3	20	1.70
056	ND	ND	ND	ND	ND	0	ND	ND	ND	ND	3	0.00
057	4	ND	4	ND	ND	ND	ND	ND	ND	3	11	2.64
058	4	ND	2	ND	4	3	ND	ND	ND	ND	9	3.00
059	4	ND	2	ND	4	4	2	ND	ND	3	14	2.57
060	ND	ND	0	ND	0	0	ND	1	ND	0	9	1.44
061	ND	4	4	4	3	2	ND	4	ND	4	15	3.67
062	4	ND	3	ND	ND	3	ND	ND	ND	ND	9	3.67
063	4	ND	4	ND	0	ND	ND	ND	ND	3	11	2.73
064	ND	ND	3	ND	2	ND	ND	ND	ND	3	6	1.53
065	2	4	4	0	3	4	0	3	3	4	20	2.90
066	ND	2	4	4	ND	ND	ND	3	ND	4	11	3.45
068	4	4	4	4	3	4	4	4	4	3	20	3.65
069	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	c	3.50
070	3	4	3	ND	ND	ND	ND	4	ND	4	14	3.29
072	3	2	2	ND	4	4	2	ND	ND	3	16	3.06
073	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	c	3.00
074	4	ND	4	ND	ND	ND	4	ND	ND	4	11	2.64
076	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	c	3.50
077	4	ND	3	ND	3	0	4	ND	ND	3	10	2.63
079	0	ND	ND	ND	2	3	ND	ND	ND	2	8	2.03
081	2	ND	4	ND	3	4	ND	ND	ND	3	1c	3.17
082	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	6	3.00
083	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	c	3.50
086	ND	ND	4	ND	ND	ND	ND	ND	ND	ND	3	3.07
087	ND	ND	1	ND	2	0	4	ND	ND	3	13	2.08
088	0	4	3	4	4	4	4	4	1	4	20	3.15

STANDARD REFERENCE WATER SAMPLE NO. N006  
OVERALL LABORATORY PERFORMANCE

PAGE: 001

RATING 4 (EXCELLENT) 0.00 TO 0.50 STD. DEV.  
3 (GOOD) 0.51 TO 1.00 STD. DEV.  
2 (SATISFACTORY) 1.01 TO 1.50 STD. DEV.  
1 (QUESTIONABLE) 1.51 TO 2.00 STD. DEV.  
0 (POOR) > 2.00 STD. DEV.  
ND = NOT DETERMINED

LAB	NH3-N	NO2-N	NO3-N	URG-N	P, TOTAL	PG4-P	K	R/S
001	0	4	3	ND	1	4	5	2.40
002	0	4	4	ND	3	0	2	2.20
004	4	ND	ND	3	4	4	4	3.75
005	4	4	4	ND	ND	4	4	4.00
006	4	4	1	4	4	4	6	3.30
007	ND	1	3	3	0	0	5	1.40
008	ND	1	2	3	0	0	5	1.20
009	4	3	4	4	4	4	6	3.03
010	0	4	3	3	4	ND	5	2.00
011	0	1	0	0	3	0	6	.07
013	0	3	4	4	3	4	6	3.00
014	4	1	3	ND	4	4	4	2.20
015	2	4	1	ND	ND	4	4	2.75
016	ND	ND	ND	ND	3	ND	1	3.00
020	2	ND	ND	3	4	3	4	3.00
021	ND	ND	3	ND	ND	0	6	1.30
024	4	4	4	3	3	4	6	3.07
025	3	4	3	ND	ND	4	4	3.30
026	3	3	4	3	1	4	6	3.00
028	3	ND	4	ND	ND	ND	6	3.50
029	ND	ND	0	ND	3	ND	6	1.30
030	4	4	4	ND	4	4	5	4.00
031	ND	ND	4	ND	3	4	5	3.07
034	4	4	4	ND	1	1	6	2.00
035	4	4	4	4	4	4	6	4.00
036	3	4	4	4	4	4	6	3.03
037	ND	ND	0	1	ND	ND	6	.30
041	4	4	4	4	4	4	6	4.00
042	4	ND	ND	ND	0	3	5	2.33
046	4	ND	4	ND	4	4	4	4.00
048	4	0	3	4	3	ND	5	2.00
050	3	4	4	1	4	4	6	3.33
052	4	4	4	4	3	1	6	3.33
053	3	4	2	4	0	4	6	2.03
055	3	3	4	0	4	4	6	3.00
056	1	ND	4	ND	0	ND	5	1.07
058	0	4	4	4	3	4	6	3.17
059	3	4	3	0	4	1	5	2.30
060	3	4	ND	4	0	1	5	2.40
063	0	0	1	1	4	4	6	1.07

STANDARD REFERENCE WATER SAMPLE NO. N006  
 OVERALL LABORATORY PERFORMANCE

PAGE: 001

RATING 4 (EXCELLENT) 0.00 TO 0.50 STD. DEV.  
 3 (GOOD) 0.51 TO 1.00 STD. DEV.  
 2 (SATISFACTORY) 1.01 TO 1.50 STD. DEV.  
 1 (QUESTIONABLE) 1.51 TO 2.00 STD. DEV.  
 0 (POOR) > 2.00 STD. DEV.  
 ND = NOT DETERMINED

LAB	NH3-N	NO2-N	NO3-N	URG-N	P, TOTAL	PO4-P		AVG.
064	4	1	3	4	3	ND	5	3.00
068	2	3	3	3	4	4	6	3.17
070	3	4	ND	3	4	4	5	3.60
072	0	4	4	ND	0	0	5	1.60
073	3	ND	4	ND	ND	3	5	3.33
074	3	1	3	3	ND	ND	4	2.50
078	2	1	4	ND	3	2	5	2.40
079	0	4	0	1	4	ND	5	1.80
081	3	0	2	2	3	ND	5	2.00
083	4	4	2	4	0	ND	5	2.80
084	3	4	2	ND	ND	ND	5	3.00
087	4	4	3	3	1	4	6	3.17
088	3	3	4	2	4	4	6	3.33

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	123	3.9	ELECTROMETRIC TITRATION, I-1030, USGS TWRI BK5 CH A1
11/81	002	115	2.9	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	003	123	3.9	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	004	115	2.9	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	005	125	5.6	TECHNICON AUTOANALYZER, METHYL ORANGE
11/81	006	115	2.9	AUTOMATED ELECTROMETRIC TITRATION
11/81	007	122	3.0	ELECTROMETRIC TITRATION, I-1030, USGS TWRI BK5 CH A1
11/81	008	122	3.0	ELECTROMETRIC TITRATION, I-1030, USGS TWRI BK5 CH A1
11/81	009	118	0.3	ELECTROMETRIC TITRATION, I-1030, USGS TWRI BK5 CH A1
11/81	010	117	1.2	INDICATOR, APHA STD METH, 14ED
11/81	011	128	8.1	AUTOMATED ELECTROMETRIC TITRATION
11/81	012	154	30.1	REJECT ELECTROMETRIC TITRATION, I-1030, USGS TWRI BK5 CH A1
11/81	013	120	1.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	015	122	3.0	INDICATOR, APHA STD METH, 14ED
11/81	016	120	1.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	017	121	2.2	ELECTROMETRIC TITRATION, I-1030, USGS TWRI BK5 CH A1
11/81	020	112	5.4	POTENTIOMETRIC, APHA STD METH, 14ED
12/81	021	111	6.3	INDICATOR, APHA STD METH, 14ED
11/81	024	112	5.4	TECHNICON AUTOANALYZER, METHYL ORANGE
11/81	025	119	0.5	INDICATOR, APHA STD METH, 14ED
11/81	026	112	5.4	INDICATOR, APHA STD METH, 14ED
11/81	028	118	0.3	INDICATOR, APHA STD METH, 14ED
11/81	029	117	1.2	OTHER
10/81	030	128	8.1	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	031	118	0.3	ELECTROMETRIC TITRATION, I-1030, USGS TWRI BK5 CH A1
12/81	034	120	1.3	INDICATOR, APHA STD METH, 14ED
11/81	035	123	3.9	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	036	115	2.9	ELECTROMETRIC TITRATION, AUTO, I-2030, USGS TWRI BK 5 CH A1
11/81	037	117	1.2	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	038	149	25.8	REJECT POTENTIOMETRIC, APHA STD METH, 14ED
11/81	039	118	0.3	AUTOMATED ELECTROMETRIC TITRATION
11/81	041	120	1.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	044	115	2.9	TECHNICON AUTOANALYZER, METHYL ORANGE
11/81	045	280	136.5	REJECT ELECTROMETRIC TITRATION, I-1030, USGS TWRI BK5 CH A1
11/81	048	112	5.4	AUTOMATED ELECTROMETRIC TITRATION
11/81	049	117	1.2	AUTOMATED ELECTROMETRIC TITRATION
11/81	050	120	1.3	ELECTROMETRIC TITRATION, AUTO, I-2030, USGS TWRI BK 5 CH A1
11/81	052	102	13.9	REJECT POTENTIOMETRIC, APHA STD METH, 14ED
11/81	053	116	2.0	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	054	120	1.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	055	114	3.7	INDICATOR, APHA STD METH, 14ED
11/81	057	122	3.0	OTHER
11/81	058	115	2.9	POTENTIOMETRIC, APHA STD METH, 14ED
10/81	059	120	1.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	060	118	0.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	061	117	1.2	ELECTROMETRIC TITRATION, AUTO, I-2030, USGS TWRI BK 5 CH A1
11/81	062	119	0.5	OTHER
11/81	063	120	1.3	OTHER
11/81	064	151	27.5	REJECT POTENTIOMETRIC, APHA STD METH, 14ED
11/81	065	214	80.7	REJECT POTENTIOMETRIC, APHA STD METH, 14ED

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
12/81	068	123	3.9	ELECTROMETRIC TITRATION, AUTO, I-2030, USGS TWRI BK 5 CH A1
11/81	070	120	1.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	072	120	1.3	INDICATOR, APHA STD METH, 14ED
11/81	073	110	7.1	INDICATOR, APHA STD METH, 14ED
11/81	074	119	0.5	ELECTROMETRIC TITRATION, AUTO, I-2030, USGS TWRI BK 5 CH A1
11/81	076	117	1.2	ELECTROMETRIC TITRATION, I-1030, USGS TWRI BK 5 CH A1
11/81	077	118	0.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	078	115	2.9	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	080	124	4.7	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	081	118	0.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	082	120	1.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	083	120	1.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	084	120	1.3	POTENTIOMETRIC, APHA STD METH, 14ED
11/81	086	115	2.9	OTHER
11/81	087	116	2.0	POTENTIOMETRIC, APHA STD METH, 14ED

TOTAL RANGE 102 TO 280 MEAN: 118.4  
 STANDARD DEVIATION 3.9 95 % CONFIDENCE INTRVL OF MEAN 118.4 + UR - 1.0

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	40	61.5	CURCUMIN, APHA STD METH, 14ED
11/81	003	100	3.8	EMISSION-PLASMA ICP
11/81	004	200	92.4	CURCUMIN, APHA STD METH, 14ED
11/81	006	180	73.2	CURCUMIN, APHA STD METH, 14ED
11/81	007	120	15.5	DIANTHRIMIDE, I-1110, USGS TWRI BK5 CH A1
11/81	008	110	5.8	DIANTHRIMIDE, I-1110, USGS TWRI BK5 CH A1
11/81	010	100	3.8	CURCUMIN, APHA STD METH, 14ED
11/81	011	100	3.8	OTHER
11/81	012	620	496.6	REJECT CARMINE, APHA STD METH, 14ED
11/81	013	110	5.8	EMISSION-PLASMA ICP
11/81	016	100	3.8	EMISSION-PLASMA ICP
11/81	026	100	3.8	EMISSION-PLASMA ICP
11/81	027	100	3.8	EMISSION-PLASMA ICP
10/81	030	30	71.1	CURCUMIN, APHA STD METH, 14ED
11/81	036	100	3.8	CARMINE, APHA STD METH, 14ED
11/81	039	110	5.8	CURCUMIN, APHA STD METH, 14ED
11/81	044	100	3.8	EMISSION-PLASMA ICP
11/81	045	0	100.0	CARMINIC ACID, I-1111, USGS TWRI BK5 CH A1
11/81	046	90	13.4	EMISSION-PLASMA ICP
11/81	050	110	5.8	DIANTHRIMIDE, I-1110, USGS TWRI BK5 CH A1
11/81	060	260	150.2	REJECT CURCUMIN, APHA STD METH, 14ED
11/81	061	90	13.4	EMISSION-PLASMA ICP
11/81	065	100	3.8	EMISSION-PLASMA ICP
12/81	068	90	13.4	EMISSION-PLASMA DC
11/81	070	170	63.6	CURCUMIN, APHA STD METH, 14ED
11/81	072	180	73.2	TECHNICON AUTOANALYZER, CARMINIC ACID
11/81	073	40	61.5	OTHER
11/81	080	140	34.7	CARMINE, APHA STD METH, 14ED
11/81	084	100	3.8	CURCUMIN, APHA STD METH, 14ED
11/81	088	100	3.8	EMISSION-PLASMA ICP

TOTAL RANGE	0	TO	620	MEAN:	104
STANDARD DEVIATION		44	95 % CONFIDENCE	INTRVL OF MEAN	104 + OR - 17



DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	50	0.4	ATOMIC ABS-DIRECT
11/81	002	50	0.4	ATOMIC ABS-DIRECT
11/81	003	55	9.5	EMISSION-PLASMA ICP
11/81	004	50	0.4	ATOMIC ABS-DIRECT
11/81	005	46	8.4	ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1
11/81	006	50	0.4	ATOMIC ABS-DIRECT
11/81	007	50	0.4	ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1
11/81	008	50	0.4	ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1
11/81	009	52	3.6	ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1
11/81	010	52	3.6	ATOMIC ABS-DIRECT
11/81	011	51	1.6	EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	012	39	22.3	REJECT EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	013	57	13.5	EMISSION-PLASMA ICP
11/81	014	50	0.4	ATOMIC ABS-DIRECT
11/81	015	49	2.4	ATOMIC ABS-DIRECT
11/81	016	54	7.5	EMISSION-PLASMA ICP
11/81	017	49	2.4	ATOMIC ABS-DIRECT
12/81	021	50	0.4	EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	022	38	24.3	REJECT ATOMIC ABS-DIRECT
11/81	023	47	6.4	ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1
11/81	024	46	8.4	ATOMIC ABS-DIRECT
11/81	025	50	0.4	ATOMIC ABS-DIRECT
11/81	026	50	0.4	EMISSION-PLASMA ICP
11/81	027	48	4.4	EMISSION-PLASMA ICP
10/81	030	46	8.4	EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	031	50	0.4	EMISSION-PLASMA ICP
11/81	033	50	0.4	ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1
11/81	035	50	0.4	EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	036	50	0.4	ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1
11/81	037	49	2.4	ATOMIC ABS-DIRECT
11/81	038	27	46.2	REJECT ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1
11/81	039	51	1.6	ATOMIC ABS-DIRECT
11/81	041	50	0.4	ATOMIC ABS-DIRECT
11/81	044	50	0.4	EMISSION-PLASMA ICP
11/81	045	48	4.4	ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1
11/81	046	49	2.4	EMISSION-PLASMA ICP
11/81	048	51	1.6	EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	049	56	11.5	ATOMIC ABS-DIRECT
11/81	050	48	4.4	ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1
11/81	052	49	2.4	ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1
11/81	053	48	4.4	ATOMIC ABS-DIRECT
11/81	054	52	3.6	ATOMIC ABS-DIRECT
11/81	055	61	21.5	REJECT ATOMIC ABS-DIRECT
11/81	057	51	1.6	ATOMIC ABS-DIRECT
11/81	058	48	4.4	ATOMIC ABS-DIRECT
10/81	059	48	4.4	ATOMIC ABS-DIRECT
11/81	060	50	0.4	ATOMIC ABS-DIRECT
11/81	061	54	7.5	EMISSION-PLASMA ICP
11/81	063	57	13.5	ATOMIC ABS-DIRECT
11/81	064	53	5.6	ATOMIC ABS-DIRECT

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	065	49	2.4	EMISSION-PLASMA ICP
11/81	066	48	4.4	EMISSION-PLASMA ICP
12/81	068	49	2.4	EMISSION-PLASMA ICP
11/81	070	46	8.4	ATOMIC ABS-DIRECT
11/81	072	49	2.4	EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	073	53	5.6	EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	074	46	8.4	EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	076	50	0.4	COMPLEXOMETRIC
11/81	080	51	1.6	EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	081	50	0.4	ATOMIC ABS-DIRECT
11/81	082	48	4.4	ATOMIC ABS-DIRECT
11/81	083	48	4.4	ATOMIC ABS-DIRECT
11/81	084	50	0.4	ATOMIC ABS-DIRECT
11/81	087	58	15.5	ATOMIC ABS-DIRECT
11/81	088	54	7.5	EMISSION-PLASMA ICP

TOTAL RANGE	27	10	61	MEAN:	50.2		
STANDARD DEVIATION		2.7		95 % CONFIDENCE INTRVL OF MEAN	50.2 + UR -	0.7	

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	28	0.8	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	002	28	0.8	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	003	34	20.5	OTHER
11/81	004	28	0.8	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	005	31	9.9	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	006	38	34.7	REJECT MERCURIC NITRATE, APHA STD METH, 14ED
11/81	007	26	7.9	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	008	26	7.9	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	009	29	2.8	MERCURIMETRIC, I-1184, USGS TWRI BKS CH A1
11/81	010	45	59.5	REJECT TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	011	120	325.3	REJECT TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	012	45	59.5	REJECT SILVER NITRATE, ASTM METHOD B, D512
11/81	013	23	18.5	FERRIC THIOCYANATE, AUTO, I-2187, USGS TWRI BKS CH A1
11/81	014	24	14.9	MERCURIMETRIC, I-1184, USGS TWRI BKS CH A1
11/81	015	31	9.9	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	017	28	0.8	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	020	240	750.6	REJECT ARGENTOMETRIC, APHA STD METH, 14ED
12/81	021	27	4.3	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	022	110	289.8	REJECT MOHR, I-1183, USGS TWRI BKS CH A1
11/81	023	28	0.8	MOHR, I-1183, USGS TWRI BKS CH A1
11/81	024	31	9.9	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	025	25	11.4	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	026	27	4.3	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	028	102	261.5	REJECT MERCURIC NITRATE, APHA STD METH, 14ED
10/81	030	27	4.3	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	031	26	7.9	OTHER
12/81	034	29	2.8	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	035	30	6.3	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	036	28	0.8	FERRIC THIOCYANATE, AUTO, I-2187, USGS TWRI BKS CH A1
11/81	037	25	11.4	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	038	27	4.3	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	039	29	2.8	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	041	28	0.8	FERRIC THIOCYANATE, AUTO, I-2187, USGS TWRI BKS CH A1
11/81	044	27	4.3	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	045	27	4.3	MOHR, I-1183, USGS TWRI BKS CH A1
11/81	046	25	11.4	ION-SELECTIVE ELECTRODE
11/81	048	29	2.8	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	050	28	0.8	FERRIC THIOCYANATE, AUTO, I-2187, USGS TWRI BKS CH A1
11/81	052	29	2.8	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	053	27	4.3	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	054	30	6.3	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	055	31	9.9	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	057	28	0.8	OTHER
11/81	058	29	2.8	MERCURIC NITRATE, APHA STD METH, 14ED
10/81	059	31	9.9	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	060	26	7.9	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	061	28	0.8	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	062	28	0.8	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	063	26	7.9	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	064	30	6.3	ARGENTOMETRIC, APHA STD METH, 14ED

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	065	25	11.4	OTHER
11/81	066	26	7.9	OTHER
12/81	068	27	4.3	OTHER
11/81	069	30	6.3	SILVER NITRATE, ASIM METHOD B, D512
11/81	070	29	2.8	FERRIC THIOCYANATE, AUTO, I-2187, USGS TWRI BKS CH A1
11/81	072	24	14.9	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	073	36	27.6	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	074	34	20.5	ION-SELECTIVE ELECTRODE
11/81	076	27	4.3	MOHR, I-1183, USGS TWRI BKS CH A1
11/81	077	27	4.3	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	078	36	27.6	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	079	35	24.0	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	080	28	0.8	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	081	40	41.8	REJECT MERCURIC NITRATE, APHA STD METH, 14ED
11/81	083	28	0.8	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	084	28	0.8	MERCURIMETRIC, I-1184, USGS TWRI BKS CH A1
11/81	087	25	11.4	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	088	26	7.9	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE

TOTAL RANGE	23	TO	240	MEAN:	28.2
STANDARD DEVIATION	2.8	95 % CONFIDENCE	INTRVL OF MEAN	28.2 + OR -	0.7

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	368	24.1	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	002	294	0.8	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	003	233	21.4	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	004	298	0.5	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	006	268	9.6	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	007	278	6.2	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	008	275	7.2	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	009	335	13.0	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	010	292	1.5	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	011	265	10.6	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	012	289	2.5	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	013	290	2.2	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	017	306	3.2	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	020	313	5.6	RESIDUE-FILTERABLE, APHA STD METH, 14ED
12/81	021	298	0.5	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	023	286	3.5	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	026	272	8.3	RESIDUE-FILTERABLE, APHA STD METH, 14ED
10/81	030	293	1.2	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	035	300	1.2	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	036	294	0.8	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	037	325	9.6	OTHER
11/81	038	296	0.2	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	039	316	6.6	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	041	297	0.2	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	044	293	1.2	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	048	278	6.2	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	050	309	4.2	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	053	298	0.5	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	054	300	1.2	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	055	272	8.3	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	058	365	23.1	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
10/81	059	297	0.2	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	060	279	5.9	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	063	314	5.9	OTHER
11/81	064	277	6.6	OTHER
11/81	065	291	1.8	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
12/81	068	279	5.9	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	069	282	4.9	OTHER
11/81	070	292	1.5	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	072	424	43.0	REJECT RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	073	402	35.6	REJECT RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	074	288	2.9	RESIDUE-ON-EVAPORATION, ASTM METHOD B, D1888
11/81	076	295	0.5	RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1
11/81	077	296	0.2	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	078	296	0.2	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	081	322	8.6	RESIDUE-ON-EVAPORATION, ASTM METHOD B, D1888
11/81	082	424	43.0	REJECT RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	083	340	14.7	RESIDUE-FILTERABLE, APHA STD METH, 14ED
11/81	086	294	0.8	RESIDUE-FILTERABLE, APHA STD METH, 14ED

TOTAL RANGE 233 TO 424  
STANDARD DEVIATION 23.9

MEAN: 296.5  
95% CONFIDENCE INTRVL OF MEAN 296.5 + OR - 7.1

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	1.5	18.8	SPADNS, APHA STD METH, 14ED
11/81	002	1.3	3.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	003	1.2	4.9	OTHER
11/81	005	1.4	10.9	TECHNICON AUTOANALYZER, ION-SELECTIVE ELECTRODE
11/81	006	1.2	4.9	TECHNICON AUTOANALYZER, ION-SELECTIVE ELECTRODE
11/81	007	1.2	4.9	ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BKS CH A1
11/81	008	1.2	4.9	ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BKS CH A1
11/81	009	1.3	3.0	ZIRCONIUM-ERIOCHROME R, I-1325, USGS TWRI BKS CH A1
11/81	010	1.3	3.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	011	1.3	3.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	012	1.2	4.9	ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BKS CH A1
11/81	013	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	014	0.6	52.5	REJECT OTHER
11/81	015	1.3	3.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	016	1.6	26.8	REJECT MANUAL ION-SELECTIVE ELECTRODE
11/81	017	1.3	3.0	TECHNICON AUTOANALYZER, ALIZIRIN
11/81	020	1.5	18.8	MANUAL ION-SELECTIVE ELECTRODE
12/81	021	1.4	10.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	023	1.2	4.9	ZIRCONIUM-ERIOCHROME R, I-1325, USGS TWRI BKS CH A1
11/81	025	1.3	3.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	026	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	029	1.2	4.9	OTHER
10/81	030	1.3	3.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	031	1.2	4.9	OTHER
11/81	033	1.3	3.0	OTHER
11/81	035	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	036	1.3	3.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	037	1.1	12.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	038	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	039	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	041	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	044	1.3	3.0	TECHNICON AUTOANALYZER, ALIZIRIN
11/81	045	1.5	18.8	ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BKS CH A1
11/81	048	1.2	4.9	TECHNICON AUTOANALYZER, ION-SELECTIVE ELECTRODE
11/81	050	1.3	3.0	ION-SELECTIVE ELECTRODE, AUTO, I-2327, USGS TWRI BKS CH A1
11/81	052	1.1	12.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	053	1.4	10.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	054	1.3	3.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	055	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	057	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
10/81	059	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	060	1.3	3.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	061	1.3	3.0	ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BKS CH A1
11/81	064	1.7	34.7	REJECT MANUAL ION-SELECTIVE ELECTRODE
11/81	065	1.2	4.9	OTHER
11/81	066	1.3	3.0	OTHER
12/81	068	1.2	4.9	ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BKS CH A1
11/81	070	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	072	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	073	1.2	4.9	SPADNS, APHA STD METH, 14ED

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	074	1.2	4.9	ION-SELECTIVE ELECTRODE, 1-1327, USGS TWRI BK5 CH A1
11/81	076	1.3	3.0	ZIRCONIUM-ERIOCHROME R, 1-1325, USGS TWRI BK5 CH A1
11/81	077	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	080	1.3	3.0	SPADNS, APHA STD METH, 14ED
11/81	084	1.4	10.9	MANUAL ION-SELECTIVE ELECTRODE
11/81	087	1.2	4.9	MANUAL ION-SELECTIVE ELECTRODE

TOTAL RANGE            0.6    TO            1.7                    MEAN:            1.26  
STANDARD DEVIATION    0.09                    95 % CONFIDENCE INTRVL OF MEAN    1.26 + OR -    0.02

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	6.1	6.0	ATOMIC ABS-DIRECT
11/81	002	6.7	3.2	ATOMIC ABS-DIRECT
11/81	003	7.8	20.2	EMISSION-PLASMA ICP
11/81	004	6.0	7.6	ATOMIC ABS-DIRECT
11/81	005	6.0	1.7	ATOMIC ABS-DIRECT, I-1630, USGS TWRI BKS CH A1
11/81	006	7.3	12.5	EMISSION-FLAME
11/81	007	6.6	1.7	ATOMIC ABS-DIRECT, I-1630, USGS TWRI BKS CH A1
11/81	008	6.8	4.8	ATOMIC ABS-DIRECT, I-1630, USGS TWRI BKS CH A1
11/81	009	7.2	10.9	ATOMIC ABS-DIRECT, I-1630, USGS TWRI BKS CH A1
11/81	011	6.2	4.5	EMISSION-FLAME
11/81	012	7.5	15.5	EMISSION-FLAME
11/81	013	6.8	4.8	ATOMIC ABS-DIRECT
11/81	015	6.7	3.2	ATOMIC ABS-DIRECT
11/81	016	6.4	1.4	EMISSION-PLASMA ICP
11/81	017	6.6	1.7	ATOMIC ABS-DIRECT
12/81	021	6.6	1.7	EMISSION-FLAME
11/81	022	4.0	38.4	REJECT ATOMIC ABS-DIRECT
11/81	023	6.2	4.5	EMISSION-FLAME
11/81	024	6.3	3.0	ATOMIC ABS-DIRECT
11/81	025	6.0	7.6	ATOMIC ABS-DIRECT
11/81	026	6.1	6.0	EMISSION-PLASMA ICP
11/81	027	7.5	15.5	EMISSION-PLASMA ICP
10/81	030	6.3	3.0	ATOMIC ABS-DIRECT
11/81	031	6.6	1.7	EMISSION-PLASMA ICP
11/81	033	6.7	3.2	ATOMIC ABS-DIRECT, I-1630, USGS TWRI BKS CH A1
11/81	035	6.9	6.3	EMISSION-FLAME
11/81	036	6.4	1.4	ATOMIC ABS-DIRECT, I-1630, USGS TWRI BKS CH A1
11/81	037	5.8	10.7	ATOMIC ABS-DIRECT
11/81	038	6.2	4.5	ATOMIC ABS-DIRECT
11/81	039	5.8	10.7	ATOMIC ABS-DIRECT
11/81	041	7.3	12.5	ATOMIC ABS-DIRECT
11/81	044	6.4	1.4	EMISSION-PLASMA ICP
11/81	045	3.2	50.7	REJECT ATOMIC ABS-DIRECT, I-1630, USGS TWRI BKS CH A1
11/81	046	6.2	4.5	EMISSION-PLASMA ICP
11/81	048	6.2	4.5	EMISSION-FLAME
11/81	049	7.0	7.8	ATOMIC ABS-DIRECT
11/81	050	6.2	4.5	OTHER
11/81	052	6.5	0.1	ATOMIC ABS-DIRECT
11/81	053	6.1	6.0	ATOMIC ABS-DIRECT
11/81	054	6.1	6.0	EMISSION-FLAME
11/81	055	6.5	0.1	ATOMIC ABS-DIRECT
11/81	057	6.2	4.5	ATOMIC ABS-DIRECT
11/81	058	8.1	24.8	ATOMIC ABS-DIRECT
10/81	059	6.4	1.4	ATOMIC ABS-DIRECT
11/81	060	6.1	6.0	EMISSION-FLAME
11/81	061	6.7	3.2	EMISSION-PLASMA ICP
11/81	063	6.5	0.1	ATOMIC ABS-DIRECT
11/81	064	6.8	4.8	ATOMIC ABS-DIRECT
11/81	065	7.2	10.9	EMISSION-PLASMA ICP
12/81	068	6.3	3.0	ATOMIC ABS-DIRECT, I-1630, USGS TWRI BKS CH A1



DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN		METHODS
11/81	069	12.0	84.9	REJECT	ATOMIC ABS-DIRECT
11/81	070	5.6	13.7		ATOMIC ABS-DIRECT
11/81	072	6.1	6.0		EMISSION-FLAME
11/81	073	5.1	21.4		ATOMIC ABS-DIRECT
11/81	074	7.0	7.8		ATOMIC ABS-DIRECT
11/81	076	6.7	3.2		ATOMIC ABS-DIRECT, I-1630, USGS IWRI BK5 CH A1
11/81	078	18.0	177.3	REJECT	ATOMIC ABS-DIRECT
11/81	079	5.7	12.2		EMISSION-FLAME
11/81	080	6.0	7.6		ATOMIC ABS-DIRECT
11/81	081	6.1	6.0		ATOMIC ABS-DIRECT
11/81	082	6.4	1.4		ATOMIC ABS-DIRECT
11/81	083	9.0	38.6	REJECT	ATOMIC ABS-DIRECT
11/81	084	6.0	7.6		ATOMIC ABS-DIRECT
11/81	087	3.3	49.2	REJECT	ATOMIC ABS-DIRECT
11/81	088	6.8	4.8		EMISSION-PLASMA ICP

TOTAL RANGE 3.2 TO 18.0 MEAN: 6.49  
 STANDARD DEVIATION 0.54 95 % CONFIDENCE INTRVL OF MEAN 6.49 + OR - 0.14

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN		METHODS
11/81	001	11	1.6		ATOMIC ABS-DIRECT
11/81	002	12	7.3		ATOMIC ABS-DIRECT
11/81	003	12	7.3		EMISSION-PLASMA ICP
11/81	004	11	1.6		TITRIMETRIC-EDTA, ASTM METHOD B, D1126
11/81	005	11	1.6		ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	006	11	1.6		ATOMIC ABS-DIRECT
11/81	007	11	1.6		ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	008	11	1.6		ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	009	12	7.3		ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	010	11	1.6		ATOMIC ABS-DIRECT
11/81	011	11	1.6		CALCULATION FROM CA PLUS MG
11/81	012	20	78.9	REJECT	CALCULATION FROM CA PLUS MG
11/81	013	13	16.3		EMISSION-PLASMA ICP
11/81	014	11	1.6		ATOMIC ABS-DIRECT
11/81	015	12	7.3		ATOMIC ABS-DIRECT
11/81	016	12	7.3		EMISSION-PLASMA ICP
11/81	017	11	1.6		ATOMIC ABS-DIRECT
12/81	021	12	7.3		CALCULATION FROM CA PLUS MG
11/81	022	10	10.6		ATOMIC ABS-DIRECT
11/81	023	9	19.5		ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	024	12	7.3		ATOMIC ABS-DIRECT
11/81	025	12	7.3		ATOMIC ABS-DIRECT
11/81	026	11	1.6		EMISSION-PLASMA ICP
11/81	027	12	7.3		EMISSION-PLASMA ICP
10/81	030	9	19.5		CALCULATION FROM CA PLUS MG
11/81	031	11	1.6		EMISSION-PLASMA ICP
11/81	033	11	1.6		ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	035	12	7.3		ATOMIC ABS-DIRECT
11/81	036	11	1.6		ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	037	12	7.3		ATOMIC ABS-DIRECT
11/81	038	6	46.3	REJECT	ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	039	11	1.6		ATOMIC ABS-DIRECT
11/81	041	10	10.6		ATOMIC ABS-DIRECT
11/81	044	11	1.6		EMISSION-PLASMA ICP
11/81	045	11	1.6		ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	046	11	1.6		EMISSION-PLASMA ICP
11/81	048	11	1.6		CALCULATION FROM CA PLUS MG
11/81	049	11	1.6		ATOMIC ABS-DIRECT
11/81	050	11	1.6		ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	052	13	16.3		ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	053	11	1.6		ATOMIC ABS-DIRECT
11/81	054	12	7.3		ATOMIC ABS-DIRECT
11/81	055	2	82.1	REJECT	ATOMIC ABS-DIRECT
11/81	057	10	10.6		ATOMIC ABS-DIRECT
11/81	058	10	10.6		ATOMIC ABS-DIRECT
10/81	059	15	34.2	REJECT	ATOMIC ABS-DIRECT
11/81	060	11	1.6		ATOMIC ABS-DIRECT
11/81	061	12	7.3		EMISSION-PLASMA ICP
11/81	063	11	1.6		ATOMIC ABS-DIRECT
11/81	064	24	114.7	REJECT	ATOMIC ABS-DIRECT

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHOD
11/81	065	12	7.3	EMISSION-PLASMA ICP
11/81	066	11	1.6	EMISSION-PLASMA ICP
12/81	068	11	1.6	EMISSION-PLASMA ICP
11/81	070	11	1.6	ATOMIC ABS-DIRECT
11/81	072	13	16.3	CALCULATION FROM CA PLUS MG
11/81	073	10	10.6	CALCULATION FROM CA PLUS MG
11/81	074	12	7.3	TITRIMETRIC-EDTA. ASTM METHOD B, 01126
11/81	076	11	1.6	CALCULATION FROM CA PLUS MG
11/81	079	10	10.6	ATOMIC ABS-DIRECT
11/81	080	11	1.6	CALCULATION FROM CA PLUS MG
11/81	081	11	1.6	ATOMIC ABS-DIRECT
11/81	082	11	1.6	ATOMIC ABS-DIRECT
11/81	083	10	10.6	ATOMIC ABS-DIRECT
11/81	084	11	1.6	ATOMIC ABS-DIRECT
11/81	087	11	1.6	ATOMIC ABS-DIRECT
11/81	088	12	7.3	EMISSION-PLASMA ICP

TOTAL RANGE 2 TO 24 MEAN: 11.2  
 STANDARD DEVIATION 0.8 95 % CONFIDENCE INTRVL OF MEAN 11.2 + OR - 0.2

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	30	2.0	ATOMIC ABS-DIRECT
11/81	002	30	2.0	ATOMIC ABS-DIRECT
11/81	003	40	35.9	EMISSION-PLASMA ICP
11/81	004	30	2.0	ATOMIC ABS-DIRECT
11/81	005	28	4.8	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	006	30	2.0	EMISSION-FLAME
11/81	007	29	1.4	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	008	29	1.4	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	009	28	4.8	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	010	29	1.4	ATOMIC ABS-DIRECT
11/81	011	30	2.0	EMISSION-FLAME
11/81	012	38	29.1	EMISSION-FLAME
11/81	013	24	18.4	EMISSION-PLASMA ICP
11/81	014	29	1.4	ATOMIC ABS-DIRECT
11/81	015	30	2.0	ATOMIC ABS-DIRECT
11/81	016	32	8.8	EMISSION-PLASMA ICP
11/81	017	28	4.8	ATOMIC ABS-DIRECT
12/81	021	25	15.0	EMISSION-FLAME
11/81	022	38	29.1	ATOMIC ABS-DIRECT
11/81	023	39	32.5	EMISSION-FLAME
11/81	024	29	1.4	ATOMIC ABS-DIRECT
11/81	025	28	4.8	ATOMIC ABS-DIRECT
11/81	026	30	2.0	EMISSION-PLASMA ICP
11/81	027	27	8.2	EMISSION-PLASMA ICP
10/81	030	28	4.8	ATOMIC ABS-DIRECT
11/81	031	30	2.0	EMISSION-PLASMA ICP
11/81	033	29	1.4	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	035	34	15.6	EMISSION-FLAME
11/81	036	29	1.4	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	037	30	2.0	EMISSION-FLAME
11/81	038	30	2.0	ATOMIC ABS-DIRECT
11/81	039	29	1.4	ATOMIC ABS-DIRECT
11/81	041	31	5.4	ATOMIC ABS-DIRECT
11/81	044	30	2.0	EMISSION-PLASMA ICP
11/81	045	30	2.0	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	046	28	4.8	EMISSION-PLASMA ICP
11/81	048	29	1.4	ATOMIC ABS-DIRECT
11/81	049	38	29.1	ATOMIC ABS-DIRECT
11/81	050	30	2.0	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	052	30	2.0	ATOMIC ABS-DIRECT
11/81	053	30	2.0	ATOMIC ABS-DIRECT
11/81	055	28	4.8	ATOMIC ABS-DIRECT
11/81	057	30	2.0	ATOMIC ABS-DIRECT
11/81	058	27	8.2	ATOMIC ABS-DIRECT
10/81	059	27	8.2	ATOMIC ABS-DIRECT
11/81	060	29	1.4	EMISSION-FLAME
11/81	061	30	2.0	EMISSION-PLASMA ICP
11/81	063	31	5.4	ATOMIC ABS-DIRECT
11/81	064	22	25.2	ATOMIC ABS-DIRECT
11/81	065	30	2.0	EMISSION-PLASMA ICP

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FRUM MEAN	METHODS
11/81	066	29	1.4	EMISSION-PLASMA ICP
12/81	068	30	2.0	EMISSION-PLASMA ICP
11/81	069	28	4.8	ATOMIC ABS-DIRECT
11/81	070	26	11.6	ATOMIC ABS-DIRECT
11/81	072	25	15.0	EMISSION-FLAME
11/81	073	26	11.6	ATOMIC ABS-DIRECT
11/81	074	28	4.8	EMISSION-FLAME
11/81	076	28	4.8	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	078	17	42.2	REJECT ATOMIC ABS-DIRECT
11/81	079	21	28.6	ATOMIC ABS-DIRECT
11/81	080	30	2.0	ATOMIC ABS-DIRECT
11/81	081	30	2.0	ATOMIC ABS-DIRECT
11/81	082	30	2.0	ATOMIC ABS-DIRECT
11/81	083	29	1.4	ATOMIC ABS-DIRECT
11/81	084	27	8.2	ATOMIC ABS-DIRECT
11/81	087	30	2.0	ATOMIC ABS-DIRECT
11/81	088	26	11.6	EMISSION-PLASMA ICP

TOTAL RANGE 17 TO 40 MEAN: 29.4  
 STANDARD DEVIATION 3.4 95 % CONFIDENCE INTRVL OF MEAN 29.4 + OR - 0.8

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	0.03	3.4	DIAZOTIZATION, APHA STD METH, 14ED
11/81	005	0.04	37.8	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	006	0.03	3.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	007	0.02	31.1	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	008	0.01	65.5	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	009	0.04	37.8	DIAZOTIZATION,AUTO, I-2540, USGS TWRI BKS CH A1
11/81	010	0.04	37.8	DIAZOTIZATION, EPA
11/81	011	0.03	3.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	013	0.03	3.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	015	0.03	3.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	017	0.01	65.5	DIAZOTIZATION, APHA STD METH, 14ED
11/81	024	0.02	31.1	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	025	0.03	3.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	026	0.03	3.4	DIAZOTIZATION, EPA
10/81	030	0.03	3.4	DIAZOTIZATION, EPA
12/81	034	0.00	100.0	REJECT TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	035	0.04	37.8	DIAZOTIZATION, EPA
11/81	036	0.02	31.1	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	039	0.03	3.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	041	0.04	37.8	DIAZOTIZATION,AUTO, I-2540, USGS TWRI BKS CH A1
11/81	048	0.02	31.1	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	049	0.04	37.8	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	050	0.03	3.4	DIAZOTIZATION,AUTO, I-2540, USGS TWRI BKS CH A1
11/81	052	0.03	3.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	053	0.03	3.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	055	0.03	3.4	DIAZOTIZATION, APHA STD METH, 14ED
11/81	058	0.03	3.4	DIAZOTIZATION, EPA
10/81	059	0.03	3.4	DIAZOTIZATION, APHA STD METH, 14ED
11/81	060	0.03	3.4	DIAZOTIZATION, EPA
11/81	061	0.02	31.1	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	063	0.03	3.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	064	0.04	37.8	OTHER
11/81	065	0.02	51.1	OTHER
12/81	068	0.03	3.4	DIAZOTIZATION,AUTO, I-2540, USGS TWRI BKS CH A1
11/81	070	0.32	2.5	REJECT DIAZOTIZATION, APHA STD METH, 14ED
11/81	072	0.03	3.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	074	0.03	3.4	DIAZOTIZATION, APHA STD METH, 14ED
11/81	077	0.02	31.1	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	078	0.02	31.1	OTHER
11/81	079	0.10	244.5	REJECT DIAZOTIZATION, EPA
11/81	080	0.03	3.4	DIAZOTIZATION, APHA STD METH, 14ED
11/81	081	0.04	37.8	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	083	0.03	3.4	DIAZOTIZATION, APHA STD METH, 14ED
11/81	084	0.03	3.4	DIAZOTIZATION, ASTM D1254
11/81	088	0.32	2.5	REJECT TECHNICON AUTOANALYZER, DIAZOTIZATION

TOTAL RANGE 0.00 TO 0.32  
STANDARD DEVIATION 0.008

MEAN: 0.029  
95 % CONFIDENCE INTRVL OF MEAN 0.029 + OR - 0.002

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	1.4	2.3	BRUCINE, APHA STD METH, 14ED
11/81	003	1.4	2.3	OTHER
11/81	005	1.4	2.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	006	1.4	2.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	007	1.2	12.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	008	1.3	5.0	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	009	1.4	2.3	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BKS CH A1
11/81	010	1.2	12.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	011	1.2	12.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	012	1.1	19.6	OTHER
11/81	013	1.3	5.0	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	014	1.4	2.3	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BKS CH A1
11/81	015	1.3	5.0	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	017	1.4	2.3	TECHNICON AUTOANALYZER, HYDRAZINE REDUCTION
12/81	021	1.4	2.3	OTHER
11/81	023	1.7	24.2	BRUCINE, I-1530, USGS TWRI, BKS CH A1
11/81	024	1.4	2.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	025	1.4	2.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	026	1.3	5.0	BRUCINE, APHA STD METH, 14ED
11/81	027	36.0	530.4	REJECT OTHER
11/81	028	1.8	31.5	BRUCINE, APHA STD METH, 14ED
11/81	029	1.5	9.6	OTHER
10/81	030	1.5	9.6	BRUCINE, APHA STD METH, 14ED
11/81	031	1.2	12.3	OTHER
12/81	034	1.4	2.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	035	1.6	16.9	MANUAL, CADMIUM REDUCTION
11/81	036	1.3	5.0	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	037	1.2	12.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	039	1.3	5.0	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	041	1.4	2.3	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BKS CH A1
11/81	044	1.4	2.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	048	1.4	2.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	049	1.2	12.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	050	1.4	2.3	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BKS CH A1
11/81	052	1.2	12.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	053	1.3	5.0	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	054	1.5	9.6	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	055	83.0	964.5	REJECT BRUCINE, APHA STD METH, 14ED
11/81	057	1.4	2.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	058	1.5	9.6	MANUAL, CADMIUM REDUCTION
10/81	059	1.6	16.9	BRUCINE, APHA STD METH, 14ED
11/81	061	1.4	2.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	063	0.6	56.2	REJECT TECHNICON AUTOANALYZER, HYDRAZINE REDUCTION
11/81	064	1.3	5.0	OTHER
11/81	065	1.4	2.3	OTHER
11/81	066	2.3	68.1	REJECT OTHER
12/81	068	1.4	2.3	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BKS CH A1
11/81	072	1.5	9.6	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	073	1.6	16.9	BRUCINE, APHA STD METH, 14ED
11/81	074	1.3	5.0	BRUCINE, APHA STD METH, 14ED

DATE MO/YR	CODE	REPORTED VALUE	PCI. DEV. FROM MEAN	METHODS
11/81	077	1.3	5.0	TECHNICON AUTOANALYZER, HYDRAZINE REDUCTION
11/81	078	3.1	126.5	REJECT OTHER
11/81	079	2.0	46.1	REJECT BRUCINE, APHA STD METH, 14ED
11/81	080	1.0	26.9	BRUCINE, APHA STD METH, 14ED
11/81	081	1.2	12.3	TECHNICON AUTOANALYZER, HYDRAZINE REDUCTION
11/81	083	0.1	92.7	REJECT MANUAL, CADMIUM REDUCTION
11/81	084	0.4	70.8	REJECT BRUCINE, APHA STD METH, 14ED
11/81	087	1.3	5.0	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	088	1.4	2.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION

TOTAL RANGE	0.1	TO	83.0	MEAN:	1.37
STANDARD DEVIATION	0.14			95 % CONFIDENCE INTRVL OF MEAN	1.37 + OR - 0.04



DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	0.95	28.6	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	002	0.74	0.2	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	003	0.83	12.4	OTHER
11/81	004	0.75	1.6	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	006	0.73	1.1	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	007	2.20	197.9	REJECT PHOSPHOMOLYBDATE, I-1600, USGS TWRI BK5 CH A1
11/81	008	2.20	197.9	REJECT PHOSPHOMOLYBDATE, I-1600, USGS TWRI BK5 CH A1
11/81	010	0.71	3.9	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	011	0.88	19.2	ASCORBIC ACID REDUCTION, ASTM METHOD A, D515
11/81	013	0.50	32.3	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	016	0.60	18.8	OTHER
11/81	017	0.79	7.0	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	020	0.66	10.6	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	024	0.66	10.6	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	026	5.10	590.6	REJECT PHOSPHOMOLYBDATE, EPA
11/81	027	1.00	35.4	OTHER
11/81	028	0.68	7.9	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
10/81	030	0.68	7.9	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	031	0.79	7.0	PHOSPHOMOLYBDATE, I-1600, USGS TWRI BK5 CH A1
12/81	034	1.20	62.5	REJECT PHOSPHOMOLYBDATE, EPA
11/81	035	0.78	5.6	PHOSPHOMOLYBDATE, EPA
11/81	039	0.72	2.5	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	041	0.73	1.1	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	042	0.75	1.6	PHOSPHOMOLYBDATE, EPA
11/81	044	0.72	2.5	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	046	0.65	12.0	OTHER
11/81	048	0.66	10.6	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	049	0.78	5.6	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	050	0.69	6.6	PHOSPHOMOLYBDATE,AUTO, I-2600, USGS TWRI BK5 CH A1
11/81	052	0.76	2.9	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	053	0.92	24.6	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	055	0.70	5.2	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	057	0.86	16.5	OTHER
11/81	058	0.87	17.8	PHOSPHOMOLYBDATE, EPA
10/81	059	0.74	0.2	OTHER
11/81	060	0.74	0.2	PHOSPHOMOLYBDATE, EPA
11/81	063	0.91	23.2	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	064	0.49	33.6	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	065	0.75	1.6	OTHER
12/81	068	0.72	2.5	PHOSPHOMOLYBDATE,AUTO, I-2600, USGS TWRI BK5 CH A1
11/81	070	0.71	3.9	PHOSPHOMOLYBDATE,AUTO, I-2600, USGS TWRI BK5 CH A1
11/81	072	0.58	21.5	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	073	0.79	7.0	OTHER
11/81	077	0.71	3.9	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	078	0.66	10.6	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	079	1.30	76.0	REJECT OTHER
11/81	080	0.65	12.0	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	081	0.80	8.3	OTHER
11/81	083	0.71	3.9	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	087	0.74	0.2	PHOSPHOMOLYBDATE, EPA

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	088	0.73	1.1	TECHNICON AUTODANALYZER, PHOSPHOMOLYBDATE
TOTAL RANGE		0.49	TO	5.10
STANDARD DEVIATION		0.102		
				MEAN: 0.738
95 % CONFIDENCE INTRVL OF MEAN				0.738 + OR - 0.030

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	8.6	3.5	ELECTROMETRIC
11/81	002	7.8	6.1	ELECTROMETRIC
11/81	003	8.5	2.3	ELECTROMETRIC
11/81	004	8.4	1.1	ELECTROMETRIC
11/81	005	8.5	2.3	ELECTROMETRIC, I-1586, USGS TWRI BKS CH A1
11/81	006	8.2	1.3	ELECTROMETRIC
11/81	007	8.4	1.1	ELECTROMETRIC, I-1586, USGS TWRI BKS CH A1
11/81	008	8.4	1.1	ELECTROMETRIC, I-1586, USGS TWRI BKS CH A1
11/81	009	8.4	1.1	ELECTROMETRIC, I-1586, USGS TWRI BKS CH A1
11/81	010	8.5	2.3	ELECTROMETRIC
11/81	011	8.5	2.3	ELECTROMETRIC
11/81	012	8.4	1.1	ELECTROMETRIC, I-1586, USGS TWRI BKS CH A1
11/81	013	8.5	2.3	ELECTROMETRIC
11/81	014	8.0	3.7	ELECTROMETRIC
11/81	015	8.4	1.1	ELECTROMETRIC
11/81	017	8.4	1.1	ELECTROMETRIC, I-1586, USGS TWRI BKS CH A1
11/81	020	8.2	1.3	ELECTROMETRIC
12/81	021	8.4	1.1	ELECTROMETRIC
11/81	022	7.8	6.1	ELECTROMETRIC, I-1586, USGS TWRI BKS CH A1
11/81	023	8.1	2.5	ELECTROMETRIC, I-1586, USGS TWRI BKS CH A1
11/81	024	8.2	1.3	ELECTROMETRIC
11/81	025	8.2	1.3	ELECTROMETRIC
11/81	026	8.5	2.3	ELECTROMETRIC
11/81	027	7.5	9.7	REJECT OTHER
11/81	028	8.3	0.1	ELECTROMETRIC
11/81	029	8.3	0.1	OTHER
10/81	030	8.5	2.3	ELECTROMETRIC
11/81	031	8.3	0.1	ELECTROMETRIC, I-1586, USGS TWRI BKS CH A1
11/81	035	8.4	1.1	ELECTROMETRIC
11/81	036	8.3	0.1	ELECTROMETRIC
11/81	037	8.4	1.1	ELECTROMETRIC
11/81	039	8.3	0.1	ELECTROMETRIC
11/81	041	8.3	0.1	ELECTROMETRIC
11/81	044	8.2	1.3	ELECTROMETRIC
11/81	045	8.4	1.1	ELECTROMETRIC, I-1586, USGS TWRI BKS CH A1
11/81	046	8.5	2.3	ELECTROMETRIC
11/81	048	8.3	0.1	ELECTROMETRIC
11/81	049	8.3	0.1	ELECTROMETRIC
11/81	050	7.9	4.9	ELECTROMETRIC, I-1586, USGS TWRI BKS CH A1
11/81	052	8.3	0.1	ELECTROMETRIC
11/81	053	8.4	1.1	ELECTROMETRIC
11/81	054	8.4	1.1	ELECTROMETRIC
11/81	055	8.3	0.1	ELECTROMETRIC
11/81	057	8.5	2.3	ELECTROMETRIC
11/81	058	8.4	1.1	ELECTROMETRIC
10/81	059	8.6	3.5	ELECTROMETRIC
11/81	060	8.4	1.1	ELECTROMETRIC
11/81	061	8.4	1.1	ELECTROMETRIC
11/81	062	8.3	0.1	ELECTROMETRIC
11/81	063	8.3	0.1	ELECTROMETRIC

DATE MO/YR	CODE	REPORTED VALUE	PCI. DEV. FROM MEAN	METHODS
11/81	064	7.9	4.9	ELECTROMETRIC
11/81	065	8.3	0.1	ELECTROMETRIC
12/81	068	7.9	4.9	OTHER
11/81	069	8.4	1.1	ELECTROMETRIC
11/81	070	8.5	2.3	ELECTROMETRIC
11/81	072	7.8	6.1	ELECTROMETRIC
11/81	073	7.9	4.9	ELECTROMETRIC
11/81	074	8.6	3.5	ELECTROMETRIC
11/81	076	8.0	3.7	ELECTROMETRIC, 1-1586, USGS IWRI BK5 CH A1
11/81	077	8.5	2.3	ELECTROMETRIC
11/81	078	8.2	1.3	ELECTROMETRIC
11/81	079	8.3	0.1	ELECTROMETRIC
11/81	080	8.5	2.3	ELECTROMETRIC
11/81	081	8.2	1.3	ELECTROMETRIC
11/81	082	8.3	0.1	ELECTROMETRIC
11/81	083	8.7	4.7	ELECTROMETRIC
11/81	084	7.8	6.1	ELECTROMETRIC
11/81	086	8.5	2.3	ELECTROMETRIC
11/81	087	8.2	1.3	ELECTROMETRIC

TOTAL RANGE	7.5	TO	8.7	MEAN:	8.31		
STANDARD DEVIATION	0.21			95 % CONFIDENCE INTRVL OF MEAN	8.31 + GR -	0.05	

DATE MO/YR	CGDE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	4.9	3.3	MOLYBDATE BLUE, I-1700, USGS TWRI BK5 CH A1
11/81	002	5.0	1.3	ATOMIC ABS-DIRECT
11/81	003	4.9	3.3	EMISSION-PLASMA
11/81	004	5.2	2.6	TECHNICON AUTOANALYZER, MOLYBDOSILICATE BLUE
11/81	005	5.1	0.7	OTHER
11/81	006	5.0	1.3	MOLYBDOSILICATE, APHA STD METH, 14ED
11/81	007	3.8	25.0	MOLYBDATE BLUE, AUTO, I-2700, USGS TWRI BK5 CH A1
11/81	008	3.8	25.0	MOLYBDATE BLUE, AUTO, I-2700, USGS TWRI BK5 CH A1
11/81	009	6.3	24.4	MOLYBDATE BLUE, AUTO, I-2700, USGS TWRI BK5 CH A1
11/81	010	5.0	1.3	MOLYBDOSILICATE, APHA STD METH, 14ED
11/81	011	2.2	56.6	REJECT MOLYBDOSILICATE, APHA STD METH, 14ED
11/81	012	4.6	9.2	MOLYBDATE BLUE, I-1700, USGS TWRI BK5 CH A1
11/81	013	4.8	5.2	EMISSION-PLASMA
11/81	016	5.5	8.6	EMISSION-PLASMA
11/81	023	5.8	14.5	MOLYBDATE BLUE, I-1700, USGS TWRI BK5 CH A1
11/81	024	5.2	2.6	TECHNICON AUTOANALYZER, MOLYBDOSILICATE BLUE
11/81	025	6.2	22.4	MOLYBDOSILICATE, APHA STD METH, 14ED
11/81	026	5.3	4.6	EMISSION-PLASMA
11/81	027	5.2	2.6	OTHER
10/81	030	2.3	54.6	REJECT EMISSION-PLASMA
11/81	031	5.2	2.6	EMISSION-PLASMA
11/81	033	4.9	3.3	MOLYBDATE BLUE, I-1700, USGS TWRI BK5 CH A1
11/81	035	4.7	7.2	MOLYBDOSILICATE, APHA STD METH, 14ED
11/81	036	4.5	11.2	MOLYBDATE BLUE, I-1700, USGS TWRI BK5 CH A1
11/81	037	6.4	26.3	ATOMIC ABS-DIRECT
11/81	039	5.0	1.3	ATOMIC ABS-DIRECT
11/81	041	5.0	1.3	HETEROPOLY BLUE, APHA STD METH, 14ED
11/81	044	4.6	9.2	TECHNICON AUTOANALYZER, MOLYBDOSILICATE BLUE
11/81	045	5.0	1.3	MOLYBDATE BLUE, I-1700, USGS TWRI BK5 CH A1
11/81	048	5.4	6.6	ATOMIC ABS-DIRECT
11/81	049	2.7	46.7	REJECT TECHNICON AUTOANALYZER, MOLYBDOSILICATE BLUE
11/81	050	5.1	0.7	MOLYBDATE BLUE, AUTO, I-2700, USGS TWRI BK5 CH A1
11/81	053	4.5	11.2	TECHNICON AUTOANALYZER, MOLYBDOSILICATE BLUE
11/81	055	5.4	6.6	ATOMIC ABS-DIRECT
11/81	057	5.0	1.3	ATOMIC ABS-DIRECT
11/81	058	4.4	13.1	HETEROPOLY BLUE, APHA STD METH, 14ED
10/81	059	4.9	3.3	MOLYBDOSILICATE, APHA STD METH, 14ED
11/81	061	6.0	18.4	EMISSION-PLASMA
11/81	065	5.5	8.6	OTHER
11/81	066	4.9	3.3	EMISSION-PLASMA
12/81	068	5.3	4.6	EMISSION-PLASMA
11/81	070	5.0	1.3	MOLYBDATE BLUE, AUTO, I-2700, USGS TWRI BK5 CH A1
11/81	072	8.9	75.7	REJECT HETEROPOLY BLUE, APHA STD METH, 14ED
11/81	076	5.6	10.5	MOLYBDATE BLUE, I-1700, USGS TWRI BK5 CH A1
11/81	080	4.8	5.2	MOLYBDOSILICATE, APHA STD METH, 14ED
11/81	083	4.0	21.0	ATOMIC ABS-DIRECT
11/81	084	5.0	1.3	MOLYBDATE BLUE, I-1700, USGS TWRI BK5 CH A1
11/81	088	5.2	2.6	TECHNICON AUTOANALYZER, MOLYBDOSILICATE BLUE

TOTAL RANGE 2.2 TO 8.9  
STANDARD DEVIATION 0.56

MEAN: 5.07  
95 % CONFIDENCE INTRVL OF MEAN 5.07 + OR - 0.17

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	75	6.9	TURBIDIMETRIC
11/81	002	84	19.8	GRAVIMETRIC, APHA STD METH, 14ED
11/81	003	70	0.2	OTHER
11/81	004	72	2.7	TURBIDIMETRIC
11/81	005	82	16.9	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	006	54	23.0	TURBIDIMETRIC
11/81	007	71	1.2	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	008	72	2.7	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	009	77	9.8	THORIN TITRIMETRIC, I-1820, USGS TWRI BKS CH A1
11/81	010	69	1.6	TURBIDIMETRIC
11/81	011	68	3.0	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	012	74	5.5	OTHER
11/81	013	70	0.2	TURBIDIMETRIC
11/81	014	76	8.4	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	015	68	3.0	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	020	62	11.6	TURBIDIMETRIC
12/81	021	81	15.5	GRAVIMETRIC, APHA STD METH, 14ED
11/81	023	76	8.4	THORIN TITRIMETRIC, I-1820, USGS TWRI BKS CH A1
11/81	024	61	13.0	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	025	68	3.0	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	026	70	0.2	TURBIDIMETRIC
11/81	029	58	17.3	OTHER
10/81	030	65	7.3	TURBIDIMETRIC
11/81	031	71	1.2	OTHER
11/81	033	71	1.2	OTHER
12/81	034	71	1.2	TURBIDIMETRIC
11/81	036	72	2.7	GRAVIMETRIC, APHA STD METH, 14ED
11/81	037	66	5.9	TURBIDIMETRIC
11/81	038	74	5.5	GRAVIMETRIC, APHA STD METH, 14ED
11/81	039	65	7.3	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	041	66	5.9	COMPLEXOMETRIC METHYLTHYMOL BLUE, AUTO, I-2822, USGS TWRI BKS CH A
11/81	044	72	2.7	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	045	69	1.6	THORIN TITRIMETRIC, I-1820, USGS TWRI BKS CH A1
11/81	046	72	2.7	TURBIDIMETRIC
11/81	048	68	3.0	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	050	69	1.6	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	052	71	1.2	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	053	74	5.5	TURBIDIMETRIC
11/81	054	73	4.1	TURBIDIMETRIC
11/81	055	17	75.8	REJECT GRAVIMETRIC, APHA STD METH, 14ED
11/81	057	72	2.7	TURBIDIMETRIC
11/81	058	73	4.1	TURBIDIMETRIC
10/81	059	74	5.5	TURBIDIMETRIC
11/81	060	68	3.0	TURBIDIMETRIC
11/81	061	72	2.7	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	063	74	5.5	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	065	70	0.2	OTHER
11/81	066	74	5.5	OTHER
12/81	068	8	88.6	REJECT TURBIDIMETRIC
11/81	069	58	17.3	TURBIDIMETRIC

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	070	70	0.2	TURBIDIMETRIC
11/81	072	71	1.2	TURBIDIMETRIC
11/81	073	69	1.6	TURBIDIMETRIC
11/81	074	63	10.2	TURBIDIMETRIC
11/81	076	71	1.2	THURIN TITRIMETRIC, I-1820, USGS TWRI BKS CH A1
11/81	077	63	10.2	TURBIDIMETRIC
11/81	078	39	44.4	REJECT OTHER
11/81	080	72	2.7	GRAVIMETRIC, APHA STD METH, 14ED
11/81	081	77	9.8	TURBIDIMETRIC
11/81	082	76	8.4	TURBIDIMETRIC
11/81	083	44	37.3	REJECT GRAVIMETRIC, APHA STD METH, 14ED
11/81	084	66	5.9	GRAVIMETRIC, APHA STD METH, 14ED
11/81	087	58	17.3	TURBIDIMETRIC

TOTAL RANGE 8 TO 84      MEAN: 70.1  
 STANDARD DEVIATION 5.7      95 % CONFIDENCE INTKVL OF MEAN 70.1 + UR - 1.5

DATE MO/YR	CCUE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	487	5.8	WHEATSTONE BRIDGE
11/81	002	468	1.7	WHEATSTONE BRIDGE
11/81	003	425	7.6	DIRECT READING INSTRUMENT
11/81	004	469	1.9	WHEATSTONE BRIDGE
11/81	005	898	95.2	REJECT WHEATSTONE BRIDGE
11/81	006	476	3.5	WHEATSTONE BRIDGE
11/81	007	475	3.2	DIRECT READING INSTRUMENT, I-1780, USGS TWRI BK5 A1
11/81	008	479	4.1	DIRECT READING INSTRUMENT, I-1780, USGS TWRI BK5 A1
11/81	009	462	0.4	DIRECT READING INSTRUMENT, I-1780, USGS TWRI BK5 A1
11/81	010	461	0.2	DIRECT READING INSTRUMENT
11/81	011	460	0.0	WHEATSTONE BRIDGE
11/81	012	483	5.0	WHEATSTONE BRIDGE
11/81	013	450	2.2	DIRECT READING INSTRUMENT
11/81	014	420	8.7	DIRECT READING INSTRUMENT
11/81	015	420	8.7	DIRECT READING INSTRUMENT
11/81	017	468	1.7	WHEATSTONE BRIDGE, I-1780, USGS TWRI BK5 CH A1
11/81	020	338	26.5	REJECT DIRECT READING INSTRUMENT
12/81	021	260	43.5	REJECT WHEATSTONE BRIDGE
11/81	022	476	3.5	OTHER
11/81	023	475	3.2	WHEATSTONE BRIDGE, I-1780, USGS TWRI BK5 CH A1
11/81	025	480	4.3	DIRECT READING INSTRUMENT
11/81	026	486	5.6	WHEATSTONE BRIDGE
11/81	028	423	8.1	DIRECT READING INSTRUMENT
10/81	030	486	5.6	WHEATSTONE BRIDGE
11/81	031	440	4.4	WHEATSTONE BRIDGE, I-1780, USGS TWRI BK5 CH A1
11/81	035	520	13.0	DIRECT READING INSTRUMENT
11/81	036	447	2.8	WHEATSTONE BRIDGE
11/81	037	420	8.7	DIRECT READING INSTRUMENT
11/81	039	485	5.4	DIRECT READING INSTRUMENT
11/81	041	484	5.2	WHEATSTONE BRIDGE
11/81	044	476	3.5	DIRECT READING INSTRUMENT
11/81	046	410	10.9	DIRECT READING INSTRUMENT
11/81	048	423	8.1	DIRECT READING INSTRUMENT
11/81	049	437	5.0	WHEATSTONE BRIDGE
11/81	050	474	3.0	DIRECT READING INSTRUMENT, I-1780, USGS TWRI BK5 A1
11/81	052	464	0.9	WHEATSTONE BRIDGE
11/81	053	457	0.7	WHEATSTONE BRIDGE
11/81	054	456	0.9	WHEATSTONE BRIDGE
11/81	055	400	13.1	DIRECT READING INSTRUMENT
11/81	058	466	1.3	DIRECT READING INSTRUMENT
10/81	059	470	2.2	DIRECT READING INSTRUMENT
11/81	060	417	9.4	DIRECT READING INSTRUMENT
11/81	061	460	0.0	DIRECT READING INSTRUMENT, I-1780, USGS TWRI BK5 A1
11/81	062	496	7.8	OTHER
11/81	063	640	39.1	REJECT DIRECT READING INSTRUMENT
11/81	064	512	11.3	DIRECT READING INSTRUMENT
11/81	065	470	2.2	DIRECT READING INSTRUMENT
12/81	068	424	7.8	OTHER
11/81	069	460	0.0	WHEATSTONE BRIDGE
11/81	070	449	2.4	DIRECT READING INSTRUMENT



DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	072	381	17.2	WHEATSTONE BRIDGE
11/81	073	493	7.2	DIRECT READING INSTRUMENT
11/81	074	470	2.2	WHEATSTONE BRIDGE
11/81	076	473	2.8	WHEATSTONE BRIDGE
11/81	077	627	36.3	REJECT WHEATSTONE BRIDGE
11/81	078	470	2.2	WHEATSTONE BRIDGE
11/81	080	474	3.0	WHEATSTONE BRIDGE
11/81	081	432	6.1	DIRECT READING INSTRUMENT
11/81	083	465	1.1	DIRECT READING INSTRUMENT
11/81	084	460	0.0	DIRECT READING INSTRUMENT
11/81	086	489	6.3	WHEATSTONE BRIDGE
11/81	087	472	2.6	WHEATSTONE BRIDGE

TOTAL RANGE 260 TO  
STANDARD DEVIATION 27.7

898

MEAN: 460.1

95 % CONFIDENCE INTRVL OF MEAN 460.1 + UR - 7.4

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	450	2.8	ATOMIC ABS-DIRECT
11/81	003	540	16.7	EMISSION PLASMA ICP
11/81	006	390	15.7	ATOMIC ABS-DIRECT
11/81	007	480	3.7	ATOMIC ABS-DIRECT, I-1800, USGS TWRI BKS CH A1
11/81	008	480	3.7	ATOMIC ABS-DIRECT, I-1800, USGS TWRI BKS CH A1
11/81	009	440	4.9	ATOMIC ABS-DIRECT, I-1800, USGS TWRI BKS CH A1
11/81	011	1300	180.9	REJECT EMISSION-FLAME
11/81	013	4000	764.4	REJECT ATOMIC ABS-DIRECT
11/81	016	470	1.6	EMISSION PLASMA ICP
11/81	024	220	52.5	REJECT ATOMIC ABS-DIRECT
11/81	027	430	7.1	EMISSION PLASMA ICP
10/81	030	430	7.1	OTHER
11/81	031	440	4.9	EMISSION PLASMA ICP
11/81	037	1000	116.1	REJECT EMISSION-FLAME
11/81	039	180	61.1	REJECT ATOMIC ABS-DIRECT
11/81	044	430	7.1	EMISSION PLASMA ICP
11/81	045	80	82.7	REJECT ATOMIC ABS-DIRECT, I-1800, USGS TWRI BKS CH A1
11/81	050	420	9.2	ATOMIC ABS-DIRECT, I-1800, USGS TWRI BKS CH A1
11/81	055	500	8.1	ATOMIC ABS-DIRECT
11/81	060	560	21.0	ATOMIC ABS-DIRECT
11/81	061	440	4.9	EMISSION PLASMA ICP
11/81	065	450	2.8	EMISSION PLASMA ICP
11/81	066	430	7.1	EMISSION PLASMA ICP
12/81	068	440	4.9	ATOMIC ABS-DIRECT, I-1800, USGS TWRI BKS CH A1
11/81	070	460	0.6	ATOMIC ABS-DIRECT
11/81	080	480	3.7	ATOMIC ABS-DIRECT
11/81	084	570	23.2	ATOMIC ABS-DIRECT
11/81	088	450	2.8	EMISSION PLASMA ICP

TOTAL RANGE 80 TO 4000 MEAN: 463  
STANDARD DEVIATION 45 95 % CONFIDENCE INTRVL OF MEAN 463 + UR - 20

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	003	3	70.9	ATOMIC ASB-FLAMELESS
11/81	006	12	16.6	ATOMIC ASB-FLAMELESS
11/81	010	12	16.6	ATOMIC ASB-FLAMELESS
11/81	011	14	36.0	ATOMIC ASB-FLAMELESS
11/81	013	17	65.1	EMISSION-PLASMA ICP
11/81	031	4	61.1	EMISSION-PLASMA ICP
11/81	039	10	2.9	OTHER
11/81	044	10	2.9	EMISSION-PLASMA ICP
11/81	048	12	16.6	ATOMIC ASB-FLAMELESS
11/81	050	19	84.6	CATALYTIC OXIDATION, I-1880, USGS TWRI BKS CH A1
11/81	053	10	2.9	ATOMIC ASB-FLAMELESS
11/81	055	0	100.0	OTHER
11/81	061	10	2.9	EMISSION-PLASMA ICP
11/81	065	10	2.9	ATOMIC ASB-FLAMELESS
11/81	066	10	2.9	EMISSION-PLASMA ICP
11/81	084	12	16.6	ATOMIC ASB-FLAMELESS
11/81	088	10	2.9	EMISSION-PLASMA ICP

TOTAL RANGE 0 TO 19 MEAN: 10.3  
 STANDARD DEVIATION 4.6 95 % CONFIDENCE INTRVL OF MEAN 10.3 + OR - 2.4

STATISTICS BY METHOD FOR SAMPLE: 78

DETERMINATION: ALK(CACO3)

METHOD	MEAN	STD DEV	N
ELECTROMETRIC TITRATION, I-1030, USGS TWRI BKS CH A1	120.1	2.4	7
ELECTROMETRIC TITRATION, AUTO, I-2030, USGS TWRI BK 5 CH A1	118.8	5.0	5
POTENTIOMETRIC, APHA STD METH, 14ED	118.9	5.5	24
INDICATOR, APHA STD METH, 14ED	116.3	4.2	10
AUTOMATED ELECTROMETRIC TITRATION	118.0	6.0	5
TECHNICON AUTOANALYZER, METHYL ORANGE	117.3	6.8	3
OTHER	118.6	2.7	5
***** OVER ALL *****	118.4	3.9	59

DETERMINATION: B

METHOD	MEAN	STD DEV	N
DIANTHRIMIDE, I-1110, USGS TWRI BKS CH A1	113	6	3
CURCUMIN, APHA STD METH, 14ED	116	6.3	8
EMISSION-PLASMA ICP	99	6	10
***** OVER ALL *****	104	44	28

DETERMINATION: CA

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT, I-1136, USGS TWRI BKS CH A1	49.0	1.8	10
EDTA TITRIMETRIC, APHA STD METH, 14ED	49.7	2.3	9
ATOMIC ABS-DIRECT	50.3	2.9	28
EMISSION-PLASMA ICP	51.3	3.0	13
***** OVER ALL *****	50.2	2.7	61

DETERMINATION: CL

METHOD	MEAN	STD DEV	N
MOHR, I-1183, USGS TWRI BKS CH A1	27.3	0.6	3
MERCURIMETRIC, I-1184, USGS TWRI BKS CH A1	27.0	2.6	3
FERRIC THIOCYANATE, AUTO, I-2187, USGS TWRI BKS CH A1	27.2	2.4	5
ARGENTOMETRIC, APHA STD METH, 14ED	28.0	2.3	14
MERCURIC NITRATE, APHA STD METH, 14ED	30.1	5.9	10
TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE	27.9	2.0	16
OTHER	27.7	5.3	6
***** OVER ALL *****	28.2	2.8	60

STATISTICS BY METHOD FOR SAMPLE: 78

DETERMINATION: DSRD 180

METHOD	MEAN	STD DEV	N
RESIDUE-ON-EVAPORATION, I-1750, USGS TWRI BK5 CH A1	299.3	34.5	15
RESIDUE-FILTERABLE, APHA STD METH, 14ED	293.6	16.1	25
OTHER	299.5	23.6	4
***** OVER ALL *****	296.5	23.9	46

DETERMINATION: F

METHOD	MEAN	STD DEV	N
ZIRCONIUM-ERIOCHROME R, I-1325, USGS TWRI BK5 CH A1	1.27	0.06	3
ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BK5 CH A1	1.26	0.11	7
MANUAL ION-SELECTIVE ELECTRODE	1.26	0.09	28
TECHNICON AUTOANALYZER, ION-SELECTIVE ELECTRODE	1.27	0.12	3
SPADNS, APHA STD METH, 14ED	1.33	0.15	3
OTHER	1.23	0.05	6
***** OVER ALL *****	1.26	0.09	53

DETERMINATION: K

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT, I-1630, USGS TWRI BK5 CH A1	6.66	0.27	8
ATOMIC ABS-DIRECT	6.38	0.57	29
EMISSION-FLAME	6.45	0.56	11
EMISSION-PLASMA ICP	6.77	0.56	10
***** OVER ALL *****	6.49	0.54	59

DETERMINATION: MG

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT, I-1447, USGS TWRI BK5 CH A1	11.1	1.0	10
ATOMIC ABS-DIRECT	11.0	0.7	26
EMISSION-PLASMA ICP	11.6	0.7	13
CALCULATION FROM CA PLUS MG	11.0	1.2	8
***** OVER ALL *****	11.2	0.8	61

DETERMINATION: NA

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1	28.9	0.8	9
ATOMIC ABS-DIRECT	29.1	3.2	34
EMISSION-FLAME	30.8	4.8	10
EMISSION-PLASMA ICP	29.7	3.8	13
***** OVER ALL *****	29.4	3.4	66

STATISTICS BY METHOD FOR SAMPLE: 78

DETERMINATION: NO2-N

METHOD	MEAN	STD DEV	N
DIAZOTIZATION,AUTO, I-2540, USGS TWRI BK5 CH A1	0.035	0.006	4
DIAZOTIZATION, APHA STD METH, 14ED	0.027	0.008	7
TECHNICON AUTOANALYZER, DIAZOTIZATION	0.027	0.008	20
DIAZOTIZATION, EPA	0.033	0.005	6
OTHER	0.027	0.012	3
***** OVER ALL *****	0.029	0.008	41

DETERMINATION: NO3-N

METHOD	MEAN	STD DEV	N
CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 CH A1	1.40	0.00	5
BRUCINE, APHA STD METH, 14ED	1.44	0.24	8
TECHNICON AUTOANALYZER, HYDRAZINE REDUCTION	1.30	0.10	3
TECHNICON AUTOANALYZER, CADMIUM REDUCTION	1.33	0.09	25
OTHER	1.33	0.14	7
***** OVER ALL *****	1.37	0.14	51

DETERMINATION: P, TOTAL

METHOD	MEAN	STD DEV	N
PHOSPHOMOLYBDATE,AUTO, I-2600, USGS TWRI BK5 CH A1	0.707	0.015	3
PHOSPHOMOLYBDATE, EPA	0.776	0.055	5
PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA	0.718	0.026	5
DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED	0.719	0.093	12
TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE	0.706	0.143	10
OTHER	0.780	0.117	9
***** OVER ALL *****	0.738	0.102	46

DETERMINATION: PH

METHOD	MEAN	STD DEV	N
ELECTROMETRIC, I-1586, USGS TWRI BK5 CH A1	8.25	0.24	12
ELECTROMETRIC	8.33	0.20	54
***** OVER ALL *****	8.31	0.21	66

STATISTICS BY METHOD FOR SAMPLE: 78

DETERMINATION: SI02

METHOD	MEAN	STD DEV	N
MOLYBDATE BLUE, I-1700, USGS TWRI BK5 CH A1	5.04	0.45	8
MOLYBDATE BLUE, AUTO, I-2700, USGS TWRI BK5 CH A1	4.80	1.05	5
MOLYBDOSILICATE, APHA STD METH, 14ED	5.10	0.55	6
TECHNICON AUTOANALYZER, MOLYBDOSILICATE BLUE	4.94	0.36	5
ATOMIC ABS-DIRECT	5.17	0.72	7
EMISSION-PLASMA	5.24	0.39	8
OTHER	5.27	0.21	3
***** OVER ALL *****	5.07	0.56	44

DETERMINATION: S04

METHOD	MEAN	STD DEV	N
THORIN TITRIMETRIC, I-1820, USGS TWRI BK5 CH A1	73.3	3.9	4
GRAVIMETRIC, APHA STD METH, 14ED	74.8	6.6	6
TURBIDIMETRIC	68.7	5.9	26
TECHNICON AUTOANALYZER, METHYL THYMOL BLUE	70.5	4.4	15
OTHER	69.7	5.4	7
***** OVER ALL *****	70.1	5.7	59

DETERMINATION: SP. COND.

METHOD	MEAN	STD DEV	N
WHEATSTONE BRIDGE, I-1780, USGS TWRI BK5 CH A1	461.0	18.5	3
DIRECT READING INSTRUMENT, I-1780, USGS TWRI BK5 A1	470.0	8.5	5
WHEATSTONE BRIDGE	465.9	23.3	22
DIRECT READING INSTRUMENT	452.0	33.0	24
OTHER	465.3	37.2	3
***** OVER ALL *****	460.1	27.7	57

DETERMINATION: SR

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT, I-1800, USGS TWRI BK5 CH A1	452	27	5
ATOMIC ABS-DIRECT	487	63	7
EMISSION PLASMA ICP	453	35	9
***** OVER ALL *****	463	45	22

STATISTICS BY METHOD FOR SAMPLE: 78

DETERMINATION: V

METHOD	MEAN	STD DEV	N
EMISSION-PLASMA ICP	10.2	4.1	6
ATOMIC ASB-FLAMELESS	10.6	3.3	8
***** OVER ALL *****	10.3	4.6	17



DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	10	108.6	ATOMIC ABS-DIRECT, EPA
11/81	003	1	79.1	ATOMIC ABS-DIRECT
11/81	006	5	4.3	ATOMIC ABS-FLAMELESS
11/81	007	5	4.3	ATOMIC ABS-FLAMELESS
11/81	008	5	4.3	ATOMIC ABS-FLAMELESS
11/81	010	4	16.6	ATOMIC ABS-FLAMELESS
11/81	011	4	16.6	ATOMIC ABS-FLAMELESS
11/81	014	4	16.6	ATOMIC ABS-FLAMELESS
12/81	015	3	37.4	ATOMIC ABS-FLAMELESS
11/81	016	4	16.6	ATOMIC ABS-FLAMELESS
11/81	017	4	16.6	ATOMIC ABS-FLAMELESS
12/81	021	72	401.6	REJECT ATOMIC ABS-DIRECT
11/81	026	4	16.6	ATOMIC ABS-FLAMELESS
11/81	029	4	16.6	OTHER
10/81	030	6	25.1	ATOMIC ABS-FLAMELESS
11/81	031	7	46.0	EMISSION-PLASMA ICP
11/81	035	2	58.3	ATOMIC ABS-FLAMELESS
11/81	039	10	108.6	ATOMIC ABS-DIRECT, EPA
11/81	041	2	58.3	ATOMIC ABS-DIRECT
11/81	044	3	37.4	EMISSION-PLASMA ICP
11/81	048	4	16.6	ATOMIC ABS-FLAMELESS
11/81	050	4	16.6	ATOMIC ABS-CHELATION/EXTRACTION, I-1720, USGS TWR1 HK5 A1
11/81	052	4	16.6	ATOMIC ABS-DIRECT
11/81	053	3	37.4	ATOMIC ABS-FLAMELESS
11/81	055	10	108.6	ATOMIC ABS-DIRECT, EPA
11/81	057	10	108.6	ATOMIC ABS-DIRECT
10/81	059	3	37.4	ATOMIC ABS-FLAMELESS
11/81	061	4	16.6	EMISSION-PLASMA ICP
11/81	062	5	4.3	ATOMIC ABS-FLAMELESS
11/81	063	5	4.3	ATOMIC ABS-DIRECT, EPA
11/81	065	4	16.6	ATOMIC ABS-DIRECT
12/81	068	4	16.6	ATOMIC ABS-CHELATION/EXTRACTION, I-1720, USGS TWR1 HK5 A1
11/81	070	5	4.3	ATOMIC ABS-DIRECT
11/81	072	2	58.3	ATOMIC ABS-DIRECT, EPA
11/81	074	5	4.3	ATOMIC ABS-DIRECT
11/81	077	7	46.0	ATOMIC ABS-DIRECT, EPA
11/81	081	2	58.3	ATOMIC ABS-FLAMELESS
11/81	083	5	4.3	ATOMIC ABS-FLAMELESS
11/81	087	10	108.6	ATOMIC ABS-DIRECT, EPA
11/81	086	4	16.6	EMISSION-PLASMA ICP

TOTAL RANGE 1 10  
STANDARD DEVIATION 2.4

72

MEAN: 4.8  
95 % CONFIDENCE INTRVL OF MEAN 4.8 + OR - 0.8

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN		METHODS
11/81	003	550	650.0	REJECT	EMISSION PLASMA ICP
11/81	006	20	0.0		ATOMIC ABS-FLAMELESS
11/81	010	20	0.0		ATOMIC ABS-FLAMELESS
11/81	011	0	100.0		ATOMIC ABS-FLAMELESS
11/81	025	10	50.0		ATOMIC ABS-DIRECT
11/81	026	1600	900.0	REJECT	EMISSION PLASMA ICP
11/81	027	10	50.0		EMISSION PLASMA ICP
11/81	029	30	50.0		OTHER
10/81	030	20	0.0		ATOMIC ABS-FLAMELESS
11/81	039	40	100.0		ATOMIC ABS-DIRECT
11/81	048	20	0.0		ATOMIC ABS-DIRECT
11/81	053	20	0.0		ATOMIC ABS-FLAMELESS
11/81	055	0	100.0		ATOMIC ABS-DIRECT
11/81	057	100	400.0	REJECT	ATOMIC ABS-DIRECT
10/81	059	10	50.0		ATOMIC ABS-FLAMELESS
11/81	061	20	0.0		EMISSION PLASMA ICP
11/81	065	10	50.0		EMISSION PLASMA ICP
12/81	066	10	50.0		ATOMIC ABS-CHELATION/EXTRACTION, I-1052, USGS PROVISIONAL
11/81	072	50	150.0		ATOMIC ABS-DIRECT
11/81	077	60	200.0		ATOMIC ABS-DIRECT
11/81	081	10	50.0		ATOMIC ABS-FLAMELESS
11/81	087	230	50.0	REJECT	ATOMIC ABS-FLAMELESS
11/81	088	220	0.0	REJECT	EMISSION PLASMA ICP

TOTAL RANGE 0 TO 1600  
STANDARD DEVIATION 16

MEAN: 20  
95 % CONFIDENCE INTRVL OF MEAN 20 + UR - 8

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	16	14.7	OTHER
11/81	002	15	20.1	ATOMIC ABS-HYDRIDE(SODIUM BOROHYDRIDE)
11/81	006	19	1.3	ATOMIC ABS-FLAMELESS
11/81	007	17	9.4	ATOMIC ABS-FLAMELESS
11/81	008	17	9.4	ATOMIC ABS-FLAMELESS
11/81	010	17	9.4	ATOMIC ABS-FLAMELESS
11/81	011	18	4.1	ATOMIC ABS-FLAMELESS
11/81	013	22	17.3	ATOMIC ABS-FLAMELESS
11/81	014	17	9.4	ATOMIC ABS-FLAMELESS
12/81	015	13	30.7	ATOMIC ABS-FLAMELESS
11/81	017	20	6.6	ATOMIC ABS-FLAMELESS
12/81	021	22	17.3	ATOMIC ABS-FLAMELESS
11/81	022	29	54.6	ATOMIC ABS-HYDRIDE(SODIUM BOROHYDRIDE)
11/81	026	11	41.4	ATOMIC ABS-HYDRIDE(SODIUM BOROHYDRIDE)
11/81	029	18	4.1	OTHER
10/81	030	17	9.4	ATOMIC ABS-FLAMELESS
11/81	031	18	4.1	ATOMIC ABS-HYDRIDE(SODIUM BOROHYDRIDE)
11/81	035	28	49.2	ATOMIC ABS-FLAMELESS
11/81	036	20	6.6	SILVER DIETHYLDITHIUCARBAMATE, APHA STD METH, 14ED
11/81	037	13	30.7	OTHER
11/81	038	27	43.9	ATOMIC ABS-FLAMELESS
11/81	039	18	4.1	ATOMIC ABS-FLAMELESS
11/81	041	32	70.6	ATOMIC ABS-FLAMELESS
11/81	044	18	4.1	ATOMIC ABS-HYDRIDE(SODIUM BOROHYDRIDE)
11/81	046	28	49.2	ATOMIC ABS-HYDRIDE(SODIUM BOROHYDRIDE)
11/81	048	10	46.7	ATOMIC ABS-FLAMELESS
11/81	050	16	14.7	ATOMIC ABS-HYDRIDE,AUTO, I-2062, USGS TWRI BKS CH A1
11/81	053	13	30.7	ATOMIC ABS-FLAMELESS
11/81	055	20	6.6	OTHER
11/81	058	20	6.6	ATOMIC ABS-FLAMELESS
10/81	059	30	59.9	ATOMIC ABS-FLAMELESS
11/81	062	21	11.9	ATOMIC ABS-FLAMELESS
11/81	063	18	4.1	ATOMIC ABS-FLAMELESS
11/81	065	21	11.9	ATOMIC ABS-HYDRIDE(SODIUM BOROHYDRIDE)
12/81	068	18	4.1	ATOMIC ABS-HYDRIDE,AUTO, I-2062, USGS TWRI BKS CH A1
11/81	070	16	14.7	ATOMIC ABS-HYDRIDE(SODIUM BOROHYDRIDE)
11/81	072	17	9.4	ATOMIC ABS-FLAMELESS
11/81	074	6	68.0	ATOMIC ABS-HYDRIDE(ZINC), APHA STD METH, 14ED
11/81	077	17	9.4	ATOMIC ABS-FLAMELESS
11/81	081	18	4.1	ATOMIC ABS-FLAMELESS
11/81	087	15	20.1	ATOMIC ABS-FLAMELESS
11/81	088	22	17.3	OTHER

TOTAL RANGE 6 TO 32  
STANDARD DEVIATION 5.3

MEAN: 18.8  
95 % CONFIDENCE INTRVL OF MEAN 18.8 + OR - 1.7

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN		METHODS
11/81	002	30	87.3	REJECT	ATOMIC ABS-DIRECT
11/81	003	230	2.5		EMISSION PLASMA ICP
11/81	006	280	18.7		ATOMIC ABS-DIRECT
11/81	007	320	35.7		EMISSION-FLAME
11/81	008	310	31.4		EMISSION-FLAME
11/81	010	270	14.5		ATOMIC ABS-FLAMELESS
11/81	011	220	6.7		ATOMIC ABS-DIRECT
11/81	013	250	6.0		EMISSION PLASMA ICP
11/81	014	210	11.0		EMISSION PLASMA ICP
12/81	015	220	6.7		ATOMIC ABS-DIRECT
11/81	016	240	1.8		EMISSION PLASMA ICP
11/81	017	230	2.5		ATOMIC ABS-DIRECT
12/81	021	260	10.2		ATOMIC ABS-DIRECT
11/81	026	260	10.2		EMISSION PLASMA ICP
11/81	027	220	6.7		EMISSION PLASMA ICP
10/81	030	210	11.0		ATOMIC ABS-FLAMELESS
11/81	031	180	23.7		ATOMIC ABS-DIRECT, I-1084, USGS TWRI BKS CH A1
11/81	035	190	19.4		ATOMIC ABS-FLAMELESS
11/81	037	200	15.2		ATOMIC ABS-DIRECT
11/81	039	240	1.8		ATOMIC ABS-DIRECT
11/81	041	210	11.0		ATOMIC ABS-DIRECT
11/81	044	240	1.8		EMISSION PLASMA ICP
11/81	048	210	11.0		ATOMIC ABS-DIRECT
11/81	050	200	15.2		ATOMIC ABS-DIRECT, I-1084, USGS TWRI BKS CH A1
11/81	053	360	52.7		ATOMIC ABS-FLAMELESS
11/81	055	0	100.0	REJECT	ATOMIC ABS-DIRECT
11/81	057	300	27.2		ATOMIC ABS-DIRECT
10/81	059	300	27.2		ATOMIC ABS-FLAMELESS
11/81	061	240	1.8		EMISSION PLASMA ICP
11/81	063	160	32.2		ATOMIC ABS-DIRECT
11/81	065	200	15.2		EMISSION PLASMA ICP
11/81	066	220	6.7		EMISSION PLASMA ICP
12/81	068	230	2.5		EMISSION PLASMA ICP
11/81	070	260	10.2		ATOMIC ABS-DIRECT
11/81	072	260	10.2		ATOMIC ABS-DIRECT
11/81	074	420	78.1	REJECT	ATOMIC ABS-DIRECT
11/81	077	150	36.4		ATOMIC ABS-FLAMELESS
11/81	087	180	23.7		ATOMIC ABS-FLAMELESS
11/81	088	230	2.5		EMISSION PLASMA ICP

TOTAL RANGE 0 10  
STANDARD DEVIATION 45

420

MEAN: 236

95 % CONFIDENCE INTRVL OF MEAN

236 + UR -

15

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	50	6.5	ATOMIC ABS-DIRECT
11/81	003	50	6.5	EMISSION-PLASMA ICP
11/81	006	40	14.8	ATOMIC ABS-DIRECT
11/81	011	38	19.1	ATOMIC ABS-FLAMELESS
11/81	013	41	12.7	EMISSION-PLASMA ICP
11/81	016	50	6.5	EMISSION-PLASMA ICP
10/81	030	85	81.1	REJECT ATOMIC ABS-FLAMELESS
11/81	037	50	6.5	ATOMIC ABS-DIRECT
11/81	039	48	2.2	ATOMIC ABS-DIRECT
11/81	044	45	4.1	EMISSION-PLASMA ICP
11/81	048	45	4.1	ATOMIC ABS-DIRECT
11/81	050	50	6.5	ATOMIC ABS-DIRECT, I-1095, TWRI BKS CH A1
11/81	053	170	262.1	REJECT ATOMIC ABS-FLAMELESS
11/81	055	50	6.5	ATOMIC ABS-DIRECT
11/81	057	50	6.5	ATOMIC ABS-DIRECT
11/81	065	53	12.9	ATOMIC ABS-DIRECT
11/81	066	49	4.4	EMISSION-PLASMA ICP
12/81	066	46	2.0	EMISSION-PLASMA ICP
11/81	070	48	2.2	ATOMIC ABS-DIRECT
11/81	077	41	12.7	ATOMIC ABS-DIRECT
11/81	086	48	2.2	EMISSION-PLASMA ICP

TOTAL RANGE 38 TO 170 MEAN: 46.9  
 STANDARD DEVIATION 4.2 95 % CONFIDENCE INTRVL OF MEAN 46.9 + UR - 2.0

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	10	2.2	ATOMIC ABS-DIRECT, EPA
11/81	003	9	8.1	ATOMIC ABS-DIRECT
11/81	006	9	8.1	ATOMIC ABS-FLAMELESS
11/81	007	15	53.2	ANODIC STRIPPING VOLTAMMETRY
11/81	008	15	53.2	ANODIC STRIPPING VOLTAMMETRY
11/81	010	18	83.9	ATOMIC ABS-FLAMELESS
11/81	011	10	2.2	ATOMIC ABS-FLAMELESS
11/81	013	10	2.2	ATOMIC ABS-FLAMELESS
11/81	014	9	8.1	ATOMIC ABS-FLAMELESS
12/81	015	9	8.1	ATOMIC ABS-FLAMELESS
11/81	016	11	12.4	ATOMIC ABS-FLAMELESS
11/81	017	9	8.1	ATOMIC ABS-FLAMELESS
11/81	020	9	8.1	ATOMIC ABS-DIRECT
12/81	021	10	2.2	ATOMIC ABS-FLAMELESS
11/81	022	9	8.1	ATOMIC ABS-DIRECT
11/81	026	9	8.1	ATOMIC ABS-FLAMELESS
11/81	027	10	2.2	EMISSION-PLASMA ICP
11/81	029	10	2.2	OTHER
10/81	030	9	8.1	ATOMIC ABS-FLAMELESS
11/81	031	15	53.2	EMISSION-PLASMA ICP
11/81	035	8	18.3	ATOMIC ABS-FLAMELESS
11/81	036	20	104.3	ATOMIC ABS-CHELATION/EXTRACTION, I-1136, USGS TWRI BKS CH A1
11/81	037	8	18.3	ATOMIC ABS-FLAMELESS
11/81	039	10	2.2	ATOMIC ABS-FLAMELESS
11/81	041	6	38.7	ATOMIC ABS-DIRECT
11/81	044	10	2.2	EMISSION-PLASMA ICP
11/81	046	6	38.7	EMISSION-PLASMA ICP
11/81	048	8	18.3	ATOMIC ABS-DIRECT
11/81	050	12	22.6	ATOMIC ABS-CHELATION/EXTRACTION, I-1136, USGS TWRI BKS CH A1
11/81	052	12	22.6	ATOMIC ABS-DIRECT
11/81	053	2	79.6	ATOMIC ABS-FLAMELESS
11/81	055	10	2.2	ATOMIC ABS-DIRECT, EPA
11/81	056	0	100.0	ATOMIC ABS-DIRECT
11/81	057	10	2.2	ATOMIC ABS-DIRECT
11/81	058	11	12.4	ATOMIC ABS-FLAMELESS
10/81	059	6	38.7	ATOMIC ABS-FLAMELESS
11/81	060	13	32.8	ATOMIC ABS-DIRECT, EPA
11/81	061	14	43.0	EMISSION-PLASMA ICP
11/81	062	11	12.4	ATOMIC ABS-FLAMELESS
11/81	063	8	18.3	ATOMIC ABS-DIRECT, EPA
11/81	065	10	2.2	EMISSION-PLASMA ICP
11/81	066	7	28.5	EMISSION-PLASMA ICP
12/81	068	8	18.3	EMISSION-PLASMA ICP
11/81	070	12	22.6	ATOMIC ABS-DIRECT, EPA
11/81	072	10	2.2	ATOMIC ABS-DIRECT, EPA
11/81	074	8	18.3	ATOMIC ABS-DIRECT
11/81	077	6	38.7	ATOMIC ABS-CHELATION/EXTRACTION, EPA
11/81	079	13	32.8	ATOMIC ABS-FLAMELESS
11/81	081	6	38.7	ATOMIC ABS-FLAMELESS

DATE MO/YR	CODE	REPORTED VALUE	PCI. DEV. FROM MEAN	METHODS
11/81	082	11	12.4	ATOMIC ABS-FLAMELESS
11/81	087	9	8.1	ATOMIC ABS-FLAMELESS
11/81	088	9	8.1	EMISSION-PLASMA ICP

TOTAL RANGE	0	TO	20	MEAN:	9.8
STANDARD DEVIATION		3.4		95 % CONFIDENCE INTRVL OF MEAN	9.8 + UR - 0.9

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	003	30	98.3	REJECT ATOMIC ABS-DIRECT, EPA
11/81	006	20	52.2	ATOMIC ABS-FLAMELESS
11/81	007	15	0.9	ATOMIC ABS-FLAMELESS
11/81	008	15	0.9	ATOMIC ABS-FLAMELESS
11/81	010	14	7.5	ATOMIC ABS-FLAMELESS
11/81	011	11	27.3	ATOMIC ABS-FLAMELESS
11/81	016	14	7.5	ATOMIC ABS-FLAMELESS
11/81	025	17	12.4	ATOMIC ABS-FLAMELESS
11/81	027	15	0.9	EMISSION-PLASMA ICP
10/81	030	12	20.7	ATOMIC ABS-FLAMELESS
11/81	039	11	27.3	ATOMIC ABS-DIRECT, EPA
11/81	044	16	5.7	EMISSION-PLASMA ICP
11/81	048	23	52.0	ATOMIC ABS-FLAMELESS
11/81	050	16	5.7	ATOMIC ABS-CHELATION/EXTRACTION, 1-1240, USGS TWRI BKS CH A1
11/81	055	20	32.2	ATOMIC ABS-DIRECT, EPA
11/81	061	15	0.9	EMISSION-PLASMA ICP
11/81	065	11	27.3	EMISSION-PLASMA ICP
11/81	066	20	32.2	EMISSION-PLASMA ICP
12/81	068	10	33.9	EMISSION-PLASMA ICP
11/81	070	20	32.2	ATOMIC ABS-DIRECT, EPA
11/81	072	15	0.9	ATOMIC ABS-DIRECT, EPA
11/81	077	13	14.1	ATOMIC ABS-DIRECT, EPA
11/81	082	14	7.5	ATOMIC ABS-FLAMELESS
11/81	088	11	27.3	EMISSION-PLASMA ICP

TOTAL RANGE 10 10 30 MEAN: 15.1  
 STANDARD DEVIATION 3.5 95 % CONFIDENCE INTRVL OF MEAN 15.1 + OR - 1.5



DATE MO/YR	CLDE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	30	11.7	ATOMIC ABS-DIRECT, EPA
11/81	003	27	0.5	ATOMIC ABS-DIRECT
11/81	006	30	11.7	ATOMIC ABS-DIRECT, EPA
11/81	007	13	51.6	EMISSION-PLASMA DC
11/81	008	13	51.6	EMISSION-PLASMA DC
11/81	010	28	4.3	ATOMIC ABS-FLAMELESS
11/81	011	19	29.2	ATOMIC ABS-FLAMELESS
11/81	013	20	25.5	ATOMIC ABS-FLAMELESS
11/81	014	30	11.7	ATOMIC ABS-FLAMELESS
12/81	015	33	22.9	ATOMIC ABS-FLAMELESS
11/81	016	67	149.5	REJECT ATOMIC ABS-FLAMELESS
11/81	017	28	4.3	ATOMIC ABS-FLAMELESS
11/81	020	22	18.1	ATOMIC ABS-DIRECT, I-1236, USGS TWRI BKS CH A1
12/81	021	26	3.2	ATOMIC ABS-DIRECT
11/81	022	25	6.9	ATOMIC ABS-DIRECT
11/81	026	25	6.9	ATOMIC ABS-FLAMELESS
11/81	027	50	86.2	REJECT EMISSION-PLASMA ICP
11/81	029	28	4.3	OTHER
10/81	030	37	37.8	ATOMIC ABS-FLAMELESS
11/81	031	30	11.7	EMISSION-PLASMA ICP
11/81	035	20	25.5	ATOMIC ABS-FLAMELESS
11/81	036	20	25.5	ATOMIC ABS-CHELATION/EXTRACTION, I-1238, USGS TWRI BKS CH A1
11/81	038	41	52.7	ATOMIC ABS-FLAMELESS
11/81	039	30	11.7	ATOMIC ABS-DIRECT, EPA
11/81	041	33	22.9	ATOMIC ABS-DIRECT
11/81	044	33	22.9	EMISSION-PLASMA ICP
11/81	046	28	4.3	EMISSION-PLASMA ICP
11/81	048	28	4.3	ATOMIC ABS-DIRECT
11/81	050	16	40.4	ATOMIC ABS-CHELATION/EXTRACTION, I-1238, USGS TWRI BKS CH A1
11/81	052	31	15.4	ATOMIC ABS-DIRECT
11/81	053	61	127.2	REJECT ATOMIC ABS-FLAMELESS
11/81	055	25	6.9	ATOMIC ABS-DIRECT, EPA
11/81	056	1600	858.1	REJECT ATOMIC ABS-DIRECT
11/81	057	30	11.7	ATOMIC ABS-DIRECT
11/81	058	20	25.5	ATOMIC ABS-FLAMELESS
10/81	059	31	15.4	ATOMIC ABS-FLAMELESS
11/81	060	32	19.2	ATOMIC ABS-DIRECT, EPA
11/81	061	27	0.5	EMISSION-PLASMA ICP
11/81	062	29	8.0	ATOMIC ABS-DIRECT
11/81	063	30	11.7	ATOMIC ABS-DIRECT, EPA
11/81	064	10	62.8	ATOMIC ABS-DIRECT, EPA
11/81	065	34	26.6	EMISSION-PLASMA ICP
12/81	068	31	15.4	ATOMIC ABS-DIRECT, I-1236, USGS TWRI BKS CH A1
11/81	070	20	25.5	ATOMIC ABS-DIRECT, EPA
11/81	072	25	6.9	ATOMIC ABS-DIRECT, EPA
11/81	074	28	4.3	ATOMIC ABS-DIRECT
11/81	077	30	11.7	ATOMIC ABS-DIRECT, EPA
11/81	079	25	6.9	ATOMIC ABS-FLAMELESS
11/81	081	30	11.7	ATOMIC ABS-FLAMELESS

DATE MO/YR	CLDE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	082	34	26.6	ATOMIC ABS-FLAMELESS
11/81	087	27	0.5	ATOMIC ABS-FLAMELESS
11/81	088	27	0.5	EMISSION-PLASMA ICP

TOTAL RANGE 10 TO 1000      MEAN: 26.9  
STANDARD DEVIATION 6.2      95 % CONFIDENCE INTVL OF MEAN      26.9 + UR = 1.8

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	20	18.3	ATOMIC ABS-DIRECT, EPA
11/81	003	10	59.1	ATOMIC ABS-DIRECT
11/81	006	28	14.4	ATOMIC ABS-DIRECT, EPA
11/81	007	30	22.6	ATOMIC ABS-FLAMELESS
11/81	008	30	22.6	ATOMIC ABS-FLAMELESS
11/81	010	22	10.1	ATOMIC ABS-FLAMELESS
11/81	011	18	26.4	ATOMIC ABS-FLAMELESS
11/81	013	18	26.4	EMISSION-PLASMA ICP
11/81	014	23	6.0	ATOMIC ABS-FLAMELESS
11/81	015	33	34.9	ATOMIC ABS-DIRECT
11/81	016	30	22.6	ATOMIC ABS-DIRECT
11/81	017	23	6.0	ATOMIC ABS-FLAMELESS
11/81	020	25	2.2	ATOMIC ABS-DIRECT, I-1270, USGS TWRI BKS CH A1
11/81	022	23	6.0	ATOMIC ABS-DIRECT
11/81	025	28	14.4	ATOMIC ABS-DIRECT
11/81	026	180	635.6	REJECT EMISSION-PLASMA ICP
11/81	027	20	18.3	EMISSION-PLASMA ICP
11/81	029	21	14.2	GIPER
10/81	030	20	18.3	ATOMIC ABS-FLAMELESS
11/81	031	24	1.9	EMISSION-PLASMA ICP
11/81	035	21	14.2	ATOMIC ABS-FLAMELESS
11/81	036	50	104.3	REJECT ATOMIC ABS-CHELATION/EXTRACTION, I-1271, USGS TWRI BKS CH A1
11/81	037	30	22.6	ATOMIC ABS-DIRECT
11/81	038	29	18.5	ATOMIC ABS-FLAMELESS
11/81	039	30	22.6	ATOMIC ABS-DIRECT, EPA
11/81	041	23	6.0	ATOMIC ABS-DIRECT
11/81	044	24	1.9	EMISSION-PLASMA ICP
11/81	046	25	2.2	EMISSION-PLASMA ICP
11/81	048	23	6.0	ATOMIC ABS-DIRECT, EPA
11/81	050	27	10.3	ATOMIC ABS-CHELATION/EXTRACTION, I-1271, USGS TWRI BKS CH A1
11/81	052	33	34.9	ATOMIC ABS-DIRECT
11/81	053	28	14.4	ATOMIC ABS-FLAMELESS
11/81	055	30	22.6	ATOMIC ABS-DIRECT, EPA
11/81	057	30	22.6	ATOMIC ABS-DIRECT
11/81	058	8	67.3	ATOMIC ABS-FLAMELESS
10/81	059	20	18.3	ATOMIC ABS-FLAMELESS
11/81	060	28	14.4	ATOMIC ABS-DIRECT, EPA
11/81	061	24	1.9	EMISSION-PLASMA ICP
11/81	062	21	14.2	ATOMIC ABS-FLAMELESS
11/81	063	60	145.2	REJECT ATOMIC ABS-DIRECT, EPA
11/81	064	10	59.1	ATOMIC ABS-DIRECT, EPA
11/81	065	19	22.4	EMISSION-PLASMA ICP
11/81	066	26	6.3	EMISSION-PLASMA ICP
12/81	068	24	1.9	EMISSION-PLASMA ICP
11/81	070	25	2.2	ATOMIC ABS-DIRECT, EPA
11/81	072	28	14.4	ATOMIC ABS-DIRECT, EPA
11/81	074	32	30.8	ATOMIC ABS-DIRECT
11/81	077	30	22.6	ATOMIC ABS-DIRECT, EPA
11/81	079	27	10.3	ATOMIC ABS-DIRECT, EPA

## STANDARD REFERENCE SAMPLE 79

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DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	081	26	6.3	ATOMIC ABS-FLAMELESS
11/81	082	27	10.3	ATOMIC ABS-FLAMELESS
11/81	086	20	18.3	ATOMIC ABS-DIRECT
11/81	087	37	51.2	ATOMIC ABS-DIRECT, EPA
11/81	088	17	30.5	EMISSION-PLASMA ICP

TOTAL RANGE	8	10	180	MEAN:	24.5		
STANDARD DEVIATION		5.9		95 % CONFIDENCE INTRVL OF MEAN	24.5 + UK -	1.7	

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	700	7.9	ATOMIC ABS-DIRECT, EPA
11/81	003	690	9.2	ATOMIC ABS-DIRECT
11/81	005	750	1.3	ATOMIC ABS-DIRECT, I-1381, USGS TWRI BKS CH A1
11/81	006	760	0.0	ATOMIC ABS-DIRECT, EPA
11/81	007	740	2.7	PHENANTHROLINE, APHA STD METH, 14ED
11/81	008	750	1.3	PHENANTHROLINE, APHA STD METH, 14ED
11/81	010	920	21.0	ATOMIC ABS-FLAMELESS
11/81	011	810	6.6	ATOMIC ABS-DIRECT, EPA
11/81	012	880	15.8	ATOMIC ABS-DIRECT
11/81	013	800	5.2	EMISSION-PLASMA ICP
11/81	014	720	5.3	ATOMIC ABS-DIRECT, EPA
12/81	015	780	2.6	ATOMIC ABS-DIRECT
11/81	016	800	5.2	ATOMIC ABS-DIRECT
11/81	017	760	0.0	ATOMIC ABS-DIRECT
11/81	020	730	4.0	ATOMIC ABS-DIRECT
12/81	021	830	9.2	ATOMIC ABS-DIRECT
11/81	022	850	11.8	ATOMIC ABS-DIRECT
11/81	024	0	100.0	REJECT PHENANTHROLINE, APHA STD METH, 14ED
11/81	026	780	2.6	EMISSION-PLASMA ICP
11/81	027	750	1.3	EMISSION-PLASMA ICP
11/81	029	760	0.0	OTHER
10/81	030	940	23.7	ATOMIC ABS-FLAMELESS
11/81	031	770	1.3	EMISSION-PLASMA ICP
11/81	035	760	0.0	ATOMIC ABS-DIRECT, EPA
11/81	036	800	5.2	ATOMIC ABS-DIRECT, EPA
11/81	037	760	0.0	ATOMIC ABS-DIRECT
11/81	038	860	13.1	ATOMIC ABS-DIRECT, I-1381, USGS TWRI BKS CH A1
11/81	039	760	0.0	ATOMIC ABS-DIRECT, EPA
11/81	041	770	1.3	ATOMIC ABS-DIRECT
11/81	044	800	5.2	EMISSION-PLASMA ICP
11/81	045	540	29.0	ATOMIC ABS-DIRECT, I-1381, USGS TWRI BKS CH A1
11/81	046	750	1.3	EMISSION-PLASMA ICP
11/81	048	720	5.3	ATOMIC ABS-DIRECT, EPA
11/81	050	790	3.9	ATOMIC ABS-DIRECT, I-1381, USGS TWRI BKS CH A1
11/81	052	800	5.2	ATOMIC ABS-DIRECT
11/81	053	710	6.6	ATOMIC ABS-DIRECT
11/81	054	820	7.9	ATOMIC ABS-DIRECT
11/81	055	640	15.8	ATOMIC ABS-DIRECT, EPA
11/81	057	700	7.9	ATOMIC ABS-DIRECT
11/81	058	730	4.0	ATOMIC ABS-DIRECT, EPA
10/81	059	630	17.1	ATOMIC ABS-FLAMELESS
11/81	060	820	7.9	ATOMIC ABS-DIRECT, EPA
11/81	061	740	2.7	EMISSION-PLASMA ICP
11/81	062	740	2.7	ATOMIC ABS-DIRECT
11/81	063	750	1.3	ATOMIC ABS-DIRECT, EPA
11/81	064	530	30.3	ATOMIC ABS-DIRECT, EPA
11/81	065	760	0.0	EMISSION-PLASMA ICP
11/81	066	740	2.7	EMISSION-PLASMA ICP
12/81	068	760	0.0	EMISSION-PLASMA ICP

DATE MO/YR	CODE	REPORTED VALUE	PCI. DEV. FROM MEAN	METHODS
11/81	069	740	2.7	ATOMIC ABS-DIRECT, EPA
11/81	070	800	5.2	ATOMIC ABS-DIRECT, EPA
11/81	072	750	1.3	ATOMIC ABS-DIRECT, EPA
11/81	073	830	9.2	PERANANTHROLINE, ALPHA STD METH, 14ED
11/81	074	570	25.0	ATOMIC ABS-DIRECT
11/81	076	770	1.3	OTHER
11/81	077	750	1.3	ATOMIC ABS-DIRECT, EPA
11/81	079	810	6.6	ATOMIC ABS-DIRECT, EPA
11/81	081	750	1.3	ATOMIC ABS-DIRECT
11/81	082	850	11.8	ATOMIC ABS-DIRECT
11/81	086	780	2.6	ATOMIC ABS-DIRECT
11/81	087	740	2.7	ATOMIC ABS-DIRECT
11/81	088	780	2.6	EMISSION-PLASMA ICP

TOTAL RANGE	0	10	940	MEAN:	760		
STANDARD DEVIATION		74		95 % CONFIDENCE INTERVAL OF MEAN	760 + OR -	19	

DATE MU/YR	CGDE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	2.8	42.0	OTHER
11/81	002	2.0	1.4	ATOMIC ABS-FLAMELESS, APHA STD METH, 14ED
11/81	006	2.3	16.6	ATOMIC ABS-FLAMELESS, EPA
11/81	007	2.1	6.5	ATOMIC ABS-FLAMELESS,AUTO, I-2462, USGS TWRI BKS CH A1
11/81	008	2.1	6.5	ATOMIC ABS-FLAMELESS,AUTO, I-2462, USGS TWRI BKS CH A1
11/81	010	1.9	3.7	ATOMIC ABS-FLAMELESS, EPA
11/81	011	2.1	6.5	ATOMIC ABS-FLAMELESS, EPA
11/81	013	2.0	1.4	ATOMIC ABS-FLAMELESS, EPA
11/81	014	2.1	6.5	ATOMIC ABS-FLAMELESS, EPA
12/81	015	2.2	11.6	ATOMIC ABS-FLAMELESS, EPA
11/81	017	2.2	11.6	TECHNICON AUTOANALYZER,ATOMIC ABS-FLAMELESS, EPA
11/81	020	0.8	59.4	ATOMIC ABS-FLAMELESS, EPA
12/81	021	2.4	21.7	ATOMIC ABS-FLAMELESS, EPA
11/81	026	3.7	87.6	ATOMIC ABS-FLAMELESS, EPA
11/81	029	2.0	1.4	OTHER
10/81	030	2.1	6.5	ATOMIC ABS-FLAMELESS, APHA STD METH, 14ED
11/81	031	2.7	36.9	OTHER
11/81	033	1.9	3.7	ATOMIC ABS-FLAMELESS, EPA
11/81	035	1.2	39.2	ATOMIC ABS-FLAMELESS, EPA
11/81	036	0.2	89.9	ATOMIC ABS-FLAMELESS, APHA STD METH, 14ED
11/81	037	1.9	3.7	ATOMIC ABS-FLAMELESS, EPA
11/81	038	2.0	1.4	ATOMIC ABS-FLAMELESS, I-1462, USGS TWRI BKS CH A1
11/81	039	2.2	11.6	ATOMIC ABS-FLAMELESS, EPA
11/81	041	2.0	1.4	ATOMIC ABS-FLAMELESS, APHA STD METH, 14ED
11/81	044	1.8	8.7	ATOMIC ABS-FLAMELESS,AUTO, I-2462, USGS TWRI BKS CH A1
11/81	048	1.7	13.8	ATOMIC ABS-FLAMELESS, EPA
11/81	050	2.8	42.0	ATOMIC ABS-FLAMELESS,AUTO, I-2462, USGS TWRI BKS CH A1
11/81	053	2.7	36.9	ATOMIC ABS-FLAMELESS, EPA
11/81	054	2.1	6.5	ATOMIC ABS-FLAMELESS, EPA
11/81	055	3.2	62.3	ATOMIC ABS-FLAMELESS, EPA
11/81	057	2.0	1.4	ATOMIC ABS-FLAMELESS, EPA
11/81	058	2.2	11.6	ATOMIC ABS-FLAMELESS, EPA
10/81	059	2.1	6.5	ATOMIC ABS-FLAMELESS, EPA
11/81	062	2.1	6.5	ATOMIC ABS-FLAMELESS, EPA
11/81	063	1.8	8.7	ATOMIC ABS-FLAMELESS, EPA
11/81	065	1.0	49.3	ATOMIC ABS-FLAMELESS, EPA
12/81	068	2.0	1.4	ATOMIC ABS-FLAMELESS,AUTO, I-2462, USGS TWRI BKS CH A1
11/81	070	1.6	18.9	ATOMIC ABS-FLAMELESS, EPA
11/81	072	1.6	18.9	ATOMIC ABS-FLAMELESS, EPA
11/81	074	1.9	3.7	ATOMIC ABS-FLAMELESS, APHA STD METH, 14ED
11/81	077	1.9	3.7	ATOMIC ABS-FLAMELESS, EPA
11/81	079	0.2	89.9	ATOMIC ABS-FLAMELESS, EPA
11/81	081	1.2	39.2	ATOMIC ABS-FLAMELESS, EPA
11/81	088	22.0	15.6	REJECT OTHER

TOTAL RANGE 0.2 10 22.0  
STANDARD DEVIATION 0.65

MEAN: 1.97  
95 % CONFIDENCE INTRVL OF MEAN 1.97 + UR - 0.20

DATE MO/YR	CLDE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	750	13.6	EMISSION-FLAME
11/81	003	590	10.7	ATOMIC ABS-DIRECT
11/81	007	620	6.1	ATOMIC ABS-DIRECT, I-1425, USGS TWRI BKS CH A1
11/81	008	620	6.1	ATOMIC ABS-DIRECT, I-1425, USGS TWRI BKS CH A1
11/81	011	890	34.8	EMISSION-FLAME
11/81	013	700	6.0	ATOMIC ABS-DIRECT
11/81	016	660	3.0	EMISSION PLASMA ICP
10/81	030	600	9.2	ATOMIC ABS-FLAMELESS
11/81	031	630	4.6	EMISSION PLASMA ICP
11/81	037	0	100.0	REJECT EMISSION-FLAME
11/81	039	630	4.6	ATOMIC ABS-DIRECT
11/81	045	670	1.4	EMISSION-FLAME
11/81	048	610	7.6	ATOMIC ABS-DIRECT
11/81	050	780	18.1	ATOMIC ABS-DIRECT, I-1425, USGS TWRI BKS CH A1
11/81	055	460	30.4	ATOMIC ABS-DIRECT
11/81	061	660	0.1	EMISSION PLASMA ICP
11/81	065	670	1.4	EMISSION PLASMA ICP
11/81	066	540	18.2	EMISSION PLASMA ICP
12/81	068	640	3.1	EMISSION PLASMA ICP
11/81	070	640	3.1	ATOMIC ABS-DIRECT
11/81	072	790	19.6	EMISSION-FLAME
11/81	088	700	6.0	EMISSION PLASMA ICP

TOTAL RANGE 0 10  
STANDARD DEVIATION 91

890

MEAN: 660  
95 % CONFIDENCE INTERVAL OF MEAN 660 + OR - 42



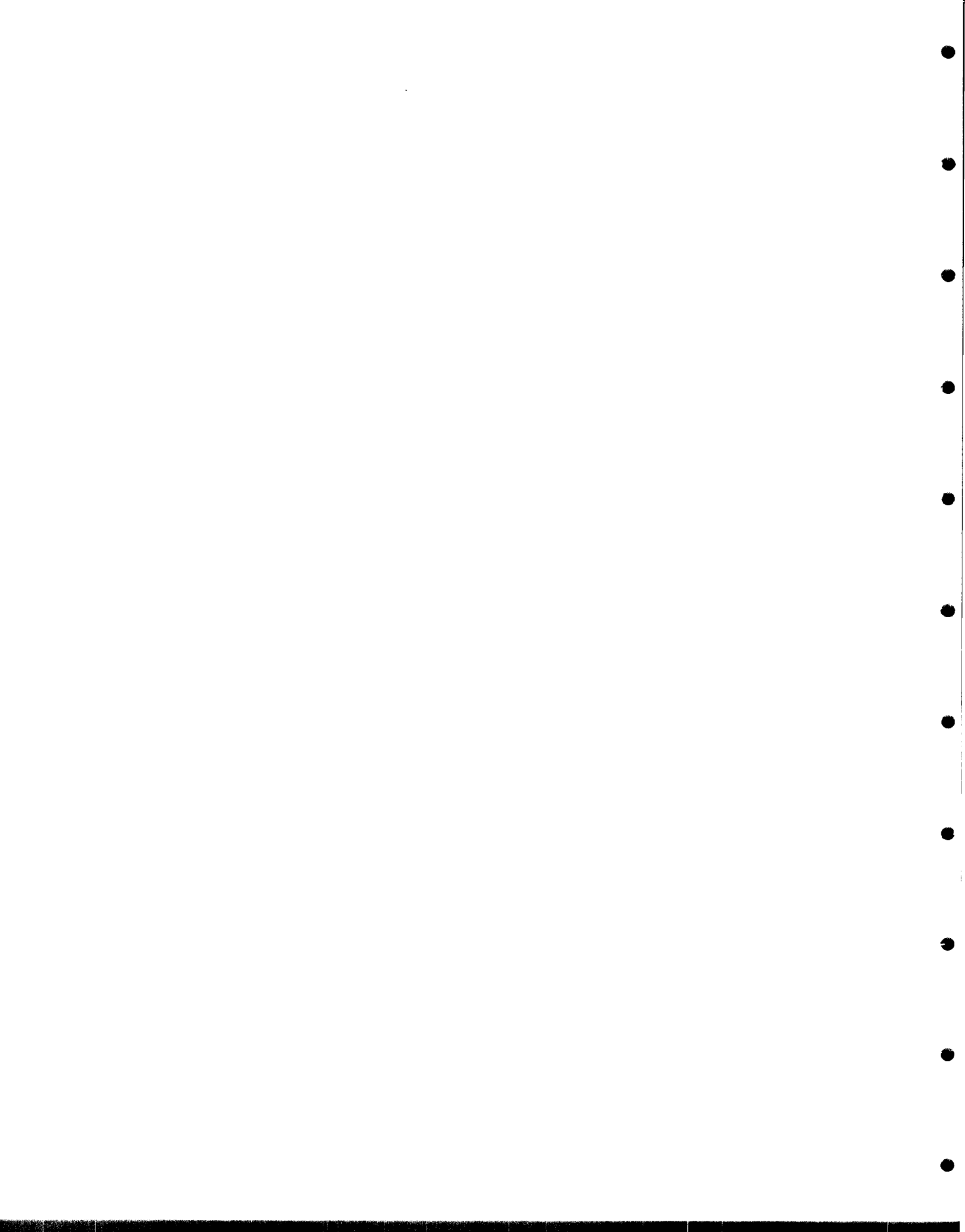
DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	600	6.0	ATOMIC ABS-DIRECT, EPA
11/81	003	560	1.0	EMISSION-PLASMA ICP
11/81	006	580	2.5	ATOMIC ABS-DIRECT, EPA
11/81	007	500	11.6	ATOMIC ABS-DIRECT, I-1454, USGS TWRI BKS CH A1
11/81	008	500	11.6	ATOMIC ABS-DIRECT, I-1454, USGS TWRI BKS CH A1
11/81	010	610	7.8	ATOMIC ABS-FLAMELESS
11/81	011	590	4.3	ATOMIC ABS-DIRECT, EPA
11/81	012	580	2.5	ATOMIC ABS-DIRECT
11/81	013	640	13.1	EMISSION-PLASMA ICP
11/81	014	520	8.1	ATOMIC ABS-DIRECT, EPA
12/81	015	580	2.5	ATOMIC ABS-DIRECT
11/81	016	570	0.7	ATOMIC ABS-DIRECT
11/81	017	580	2.5	ATOMIC ABS-DIRECT
11/81	020	540	4.6	ATOMIC ABS-DIRECT, I-1454, USGS TWRI BKS CH A1
11/81	022	480	15.2	ATOMIC ABS-DIRECT
11/81	026	570	0.7	EMISSION-PLASMA ICP
11/81	027	530	6.3	EMISSION-PLASMA ICP
11/81	029	510	9.9	UIPER
10/81	030	600	6.0	ATOMIC ABS-FLAMELESS
11/81	031	570	0.7	EMISSION-PLASMA ICP
11/81	035	590	4.3	ATOMIC ABS-DIRECT, EPA
11/81	036	600	6.0	ATOMIC ABS-DIRECT, EPA
11/81	037	550	2.8	ATOMIC ABS-DIRECT
11/81	038	580	2.5	ATOMIC ABS-DIRECT, I-1454, USGS TWRI BKS CH A1
11/81	039	520	8.1	ATOMIC ABS-DIRECT, EPA
11/81	041	460	18.7	ATOMIC ABS-DIRECT
11/81	044	560	1.0	EMISSION-PLASMA ICP
11/81	046	550	2.8	EMISSION-PLASMA ICP
11/81	048	560	1.0	ATOMIC ABS-DIRECT, EPA
11/81	050	570	0.7	ATOMIC ABS-DIRECT, I-1454, USGS TWRI BKS CH A1
11/81	052	700	23.7	ATOMIC ABS-DIRECT
11/81	053	480	15.2	ATOMIC ABS-DIRECT
11/81	054	610	7.8	ATOMIC ABS-DIRECT
11/81	055	560	1.0	ATOMIC ABS-DIRECT, EPA
11/81	057	560	1.0	ATOMIC ABS-DIRECT
11/81	058	510	9.9	ATOMIC ABS-DIRECT, EPA
10/81	059	510	9.9	ATOMIC ABS-DIRECT, EPA
11/81	060	680	20.2	ATOMIC ABS-DIRECT, EPA
11/81	061	560	1.0	EMISSION-PLASMA ICP
11/81	062	520	8.1	ATOMIC ABS-DIRECT
11/81	063	570	0.7	ATOMIC ABS-DIRECT, EPA
11/81	064	540	4.6	ATOMIC ABS-DIRECT, EPA
11/81	065	570	0.7	EMISSION-PLASMA ICP
11/81	066	560	2.5	EMISSION-PLASMA ICP
12/81	068	570	0.7	EMISSION-PLASMA ICP
11/81	069	540	4.6	ATOMIC ABS-DIRECT, EPA
11/81	070	600	6.0	ATOMIC ABS-DIRECT, EPA
11/81	072	500	11.6	ATOMIC ABS-DIRECT, EPA
11/81	073	600	6.0	ATOMIC ABS-DIRECT

DATE MO/YR	CCODE	REPORTED VALUE	PCI. DEV. FROM MEAN	METHODS
11/81	074	570	0.7	ATOMIC ABS-DIRECT
11/81	076	610	7.8	ATOMIC ABS-DIRECT, I-1454, USGS TWRI BKS CH A1
11/81	077	540	4.6	ATOMIC ABS-DIRECT, EPA
11/81	081	570	0.7	ATOMIC ABS-DIRECT
11/81	082	620	9.6	ATOMIC ABS-DIRECT
11/81	086	580	2.5	ATOMIC ABS-DIRECT
11/81	087	640	13.1	ATOMIC ABS-DIRECT
11/81	088	610	7.8	EMISSION-PLASMA ICP

TOTAL RANGE	460	TO	700	MEAN:	566		
STANDARD DEVIATION	46			95 % CONFIDENCE INTVL OF MEAN	566 + OR -	12	

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN		METHODS
11/81	003	70	233.3	REJECT	EMISSION-PLASMA ICP
11/81	006	22	4.8		ATOMIC ABS-FLAMELESS
11/81	011	28	33.3		ATOMIC ABS-FLAMELESS
11/81	013	20	4.8		EMISSION-PLASMA ICP
11/81	016	23	9.5		ATOMIC ABS-FLAMELESS
11/81	027	130	519.0	REJECT	EMISSION-PLASMA ICP
10/81	030	28	33.3		ATOMIC ABS-FLAMELESS
11/81	031	20	4.8		EMISSION-PLASMA ICP
11/81	038	23	9.5		ATOMIC ABS-FLAMELESS
11/81	039	18	14.3		ATOMIC ABS-DIRECT
11/81	048	21	0.0		ATOMIC ABS-FLAMELESS
11/81	050	21	0.0		ATOMIC ABS-CHELATION/EXTRACTION, 1-1490, USGS TWRI BKS CH A1
11/81	055	0	100.0	REJECT	ATOMIC ABS-DIRECT
11/81	061	20	4.8		EMISSION-PLASMA ICP
11/81	065	11	47.6		EMISSION-PLASMA ICP
11/81	066	19	9.5		EMISSION-PLASMA ICP
12/81	068	20	4.8		EMISSION-PLASMA ICP
11/81	088	21	0.0		EMISSION-PLASMA ICP

TOTAL RANGE 0 10 130 MEAN: 21.0  
 STANDARD DEVIATION 4.0 95 % CONFIDENCE INTVL OF MEAN 21.0 + 0R - 2.2



DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	003	5	45.2	ATOMIC ABS-DIRECT
11/81	006	30	228.8	ATOMIC ABS-DIRECT, EPA
11/81	007	5	45.2	ATOMIC ABS-FLAMELESS
11/81	008	5	45.2	ATOMIC ABS-FLAMELESS
11/81	010	3	67.1	ATOMIC ABS-FLAMELESS
11/81	011	3	67.1	ATOMIC ABS-FLAMELESS
11/81	016	7	23.3	ATOMIC ABS-FLAMELESS
11/81	020	10	9.6	ATOMIC ABS-DIRECT
11/81	022	6	34.2	ATOMIC ABS-DIRECT
11/81	027	10	9.6	EMISSION-PLASMA ICP
11/81	029	15	64.4	OTHER
11/81	036	20	119.2	ATOMIC ABS-CHELATION/EXTRACTION, I-1500, USGS TWRI BK5 CH A1
11/81	039	20	119.2	ATOMIC ABS-DIRECT, EPA
11/81	044	11	20.5	EMISSION-PLASMA ICP
11/81	048	5	45.2	ATOMIC ABS-DIRECT, EPA
11/81	050	6	34.2	ATOMIC ABS-CHELATION/EXTRACTION, I-1500, USGS TWRI BK5 CH A1
11/81	052	20	119.2	ATOMIC ABS-DIRECT
11/81	053	1	89.0	ATOMIC ABS-FLAMELESS
11/81	055	0	100.0	ATOMIC ABS-DIRECT, EPA
11/81	058	6	34.2	ATOMIC ABS-FLAMELESS
11/81	059	6	34.2	ATOMIC ABS-FLAMELESS
11/81	060	190	982.2	REJECT ATOMIC ABS-DIRECT, EPA
11/81	061	1	89.0	EMISSION-PLASMA ICP
11/81	063	30	228.8	ATOMIC ABS-DIRECT, EPA
11/81	064	20	119.2	ATOMIC ABS-DIRECT, EPA
11/81	065	2	78.1	EMISSION-PLASMA ICP
12/81	068	3	67.1	ATOMIC ABS-CHELATION/EXTRACTION, I-1500, USGS TWRI BK5 CH A1
11/81	072	10	9.6	ATOMIC ABS-DIRECT, EPA
11/81	077	5	45.2	ATOMIC ABS-DIRECT, EPA
11/81	079	18	97.3	ATOMIC ABS-DIRECT, EPA
11/81	081	3	67.1	ATOMIC ABS-FLAMELESS
11/81	087	0	100.0	ATOMIC ABS-DIRECT, EPA
11/81	088	6	34.2	EMISSION-PLASMA ICP

TOTAL RANGE 0 TO  
STANDARD DEVIATION 8.2

190

MEAN: 9.1

95 % CONFIDENCE INTRVL OF MEAN

9.1 + UR -

5.0



DATE MO/YR	CCDE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	1	76.1	OTHER
11/81	003	1	76.1	ATOMIC ABS-FLAMELESS
11/81	006	4	4.2	ATOMIC ABS-FLAMELESS
11/81	007	4	4.2	ATOMIC ABS-FLAMELESS
11/81	008	3	28.2	ATOMIC ABS-FLAMELESS
11/81	010	3	28.2	ATOMIC ABS-FLAMELESS
11/81	011	3	28.2	ATOMIC ABS-FLAMELESS
11/81	013	3	28.2	ATOMIC ABS-FLAMELESS
11/81	014	3	28.2	ATOMIC ABS-DIRECT, EPA
11/81	016	3	28.2	ATOMIC ABS-FLAMELESS
11/81	017	4	4.2	ATOMIC ABS-FLAMELESS
11/81	020	15	259.2	REJECT ATOMIC ABS-DIRECT
11/81	022	10	139.4	ATOMIC ABS-DIRECT
11/81	026	6	43.7	ATOMIC ABS-FLAMELESS
11/81	027	40	857.7	REJECT EMISSION-PLASMA ICP
11/81	029	9	115.5	OTHER
10/81	030	3	28.2	ATOMIC ABS-FLAMELESS
11/81	031	48	49.3	REJECT ATOMIC ABS-DIRECT
11/81	035	7	67.6	ATOMIC ABS-FLAMELESS
11/81	037	4	4.2	ATOMIC ABS-FLAMELESS
11/81	038	18	331.0	REJECT ATOMIC ABS-FLAMELESS
11/81	039	2	52.1	ATOMIC ABS-FLAMELESS
11/81	041	3	28.2	ATOMIC ABS-DIRECT
11/81	046	2	52.1	ATOMIC ABS-DIRECT, EPA
11/81	050	3	28.2	ATOMIC ABS-CHELATION/EXTRACTION, I-1400, USGS TWRI BKS CH A1
11/81	053	3	28.2	ATOMIC ABS-FLAMELESS
11/81	055	10	139.4	ATOMIC ABS-DIRECT, EPA
11/81	056	3000	731.0	REJECT ATOMIC ABS-DIRECT
11/81	058	6	43.7	ATOMIC ABS-FLAMELESS
10/81	059	3	28.2	ATOMIC ABS-FLAMELESS
11/81	060	33	690.1	REJECT ATOMIC ABS-DIRECT, EPA
11/81	061	1	76.1	EMISSION-PLASMA ICP
11/81	062	2	52.1	ATOMIC ABS-FLAMELESS
11/81	065	5	19.7	EMISSION-PLASMA ICP
12/81	068	4	4.2	ATOMIC ABS-CHELATION/EXTRACTION, I-1400, USGS TWRI BKS CH A1
11/81	072	5	19.7	ATOMIC ABS-DIRECT, EPA
11/81	077	16	283.1	REJECT ATOMIC ABS-CHELATION/EXTRACTION, EPA
11/81	079	6	43.7	ATOMIC ABS-FLAMELESS
11/81	081	3	28.2	ATOMIC ABS-FLAMELESS
11/81	087	10	139.4	ATOMIC ABS-DIRECT, EPA
11/81	088	3	28.2	EMISSION-PLASMA ICP

TOTAL RANGE 1 10 3000  
STANDARD DEVIATION 2.5

MEAN: 4.2  
95 % CONFIDENCE INTRVL OF MEAN 4.2 + UR - 0.9

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	20	70.5	OTHER
11/81	002	10	14.7	ATOMIC ABS-HYDRIDE (NABH4)
11/81	006	22	87.6	ATOMIC ABS-FLAMELESS
11/81	007	14	19.4	ATOMIC ABS-FLAMELESS
11/81	008	14	19.4	ATOMIC ABS-FLAMELESS
11/81	011	13	10.9	ATOMIC ABS-FLAMELESS
11/81	013	13	10.9	ATOMIC ABS-FLAMELESS
11/81	014	11	6.2	ATOMIC ABS-FLAMELESS
12/81	015	12	2.3	ATOMIC ABS-FLAMELESS
11/81	017	13	10.9	ATOMIC ABS-FLAMELESS
12/81	021	9	23.3	ATOMIC ABS-FLAMELESS
11/81	022	0	100.0	ATOMIC ABS-HYDRIDE (NABH4)
11/81	026	15	27.9	ATOMIC ABS-FLAMELESS
11/81	029	12	2.3	OTHER
10/81	030	13	10.9	ATOMIC ABS-FLAMELESS
11/81	031	13	10.9	ATOMIC ABS-HYDRIDE (NABH4)
11/81	035	12	2.3	ATOMIC ABS-FLAMELESS
11/81	036	20	70.5	ATOMIC ABS-HYDRIDE, AUTO, 1-2667, USGS
11/81	037	12	2.3	ATOMIC ABS-FLAMELESS
11/81	039	13	10.9	ATOMIC ABS-FLAMELESS
11/81	044	13	10.9	ATOMIC ABS-HYDRIDE (NABH4)
11/81	048	10	14.7	ATOMIC ABS-FLAMELESS
11/81	050	15	27.9	ATOMIC ABS-HYDRIDE, AUTO, 1-2667, USGS
11/81	053	12	2.3	ATOMIC ABS-FLAMELESS
11/81	055	2	82.9	OTHER
10/81	059	5	57.4	ATOMIC ABS-FLAMELESS
11/81	065	0	100.0	ATOMIC ABS-HYDRIDE (NABH4)
12/81	068	13	10.9	ATOMIC ABS-HYDRIDE, AUTO, 1-2667, USGS
11/81	072	6	48.8	ATOMIC ABS-FLAMELESS
11/81	074	12	2.3	ATOMIC ABS-HYDRIDE, 1-1667, USGS TWRI BKS CH A1
11/81	077	13	10.9	ATOMIC ABS-FLAMELESS
11/81	087	13	10.9	ATOMIC ABS-FLAMELESS
11/81	088	12	2.3	OTHER

TOTAL RANGE 0 10  
STANDARD DEVIATION 4.8

22

MEAN: 11.7  
95 % CONFIDENCE INTRVL OF MEAN 11.7 + OR - 1.7



DATE MO/YR	CODE	REPORTED VALUE	PCI. DEV. FROM MEAN		METHODS
11/81	002	500	24.7		ATOMIC ABS-DIRECT
11/81	003	320	20.2		EMISSION PLASMA ICP
11/81	006	330	17.7		ATOMIC ABS-DIRECT
11/81	007	450	12.2		ATOMIC ABS-DIRECT, I-1800, USGS TWRI BKS CH A1
11/81	008	450	12.2		ATOMIC ABS-DIRECT, I-1800, USGS TWRI BKS CH A1
11/81	011	1000	149.4	REJECT	EMISSION-FLAME
11/81	016	390	2.7		EMISSION PLASMA ICP
11/81	024	470	17.2		ATOMIC ABS-DIRECT
11/81	027	360	10.2		EMISSION PLASMA ICP
10/81	030	370	7.7		OTHER
11/81	031	360	10.2		EMISSION PLASMA ICP
11/81	036	400	0.2		ATOMIC ABS-DIRECT
11/81	037	800	99.5	REJECT	EMISSION-FLAME
11/81	039	170	57.6	REJECT	ATOMIC ABS-DIRECT
11/81	044	360	10.2		EMISSION PLASMA ICP
11/81	045	70	62.5	REJECT	ATOMIC ABS-DIRECT, I-1800, USGS TWRI BKS CH A1
11/81	050	380	5.2		ATOMIC ABS-DIRECT, I-1800, USGS TWRI BKS CH A1
11/81	055	500	24.7		ATOMIC ABS-DIRECT
11/81	060	510	27.2		ATOMIC ABS-DIRECT
11/81	061	390	2.7		EMISSION PLASMA ICP
11/81	065	370	7.7		EMISSION PLASMA ICP
11/81	066	350	12.7		EMISSION PLASMA ICP
12/81	066	380	5.2		EMISSION PLASMA ICP
11/81	070	400	0.2		ATOMIC ABS-DIRECT
11/81	088	380	5.2		EMISSION PLASMA ICP

TOTAL RANGE 70 TO 1000

STANDARD DEVIATION 56

MEAN: 401

95 % CONFIDENCE INTVL OF MEAN 401 + OR - 26

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	003	3	58.5	ATOMIC ABS - FLAMELESS
11/81	006	6	16.9	ATOMIC ABS - FLAMELESS
11/81	011	3	58.5	ATOMIC ABS - FLAMELESS
10/81	030	4	44.6	ATOMIC ABS - FLAMELESS
11/81	039	20	176.9	OTHER
11/81	053	2	72.3	ATOMIC ABS - FLAMELESS
11/81	055	800	976.9	REJECT OTHER
11/81	065	0	100.0	ANODIC STRIPPING VOLTAMMETRY
12/81	068	5	50.8	ATOMIC ABS - FLAMELESS
11/81	088	22	204.6	OTHER

TOTAL RANGE 0 TO 800      MEAN: 7.2  
 STANDARD DEVIATION 8.0      95 % CONFIDENCE INTVL OF MEAN 7.2 + UR - 6.2

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	15	4.8	ATOMIC ABS-DIRECT, EPA
11/81	003	14	2.2	ATOMIC ABS-DIRECT
11/81	006	11	23.2	ATOMIC ABS-DIRECT, EPA
11/81	007	5	65.1	ATOMIC ABS-DIRECT, I-1900, USGS TWRI BKS CH A1
11/81	008	5	65.1	ATOMIC ABS-DIRECT, I-1900, USGS TWRI BKS CH A1
11/81	011	10	30.2	ATOMIC ABS-DIRECT, EPA
11/81	013	13	9.2	EMISSION-PLASMA ICP
11/81	014	10	30.2	ATOMIC ABS-DIRECT
12/81	015	20	39.7	ATOMIC ABS-DIRECT
11/81	016	12	16.2	ATOMIC ABS-DIRECT
11/81	020	25	74.6	ATOMIC ABS-DIRECT, I-1900, USGS TWRI BKS CH A1
11/81	022	17	18.7	ATOMIC ABS-DIRECT
11/81	026	30	109.5	EMISSION-PLASMA ICP
11/81	027	70	388.9	REJECT EMISSION-PLASMA ICP
11/81	029	15	4.8	OTHER
11/81	031	14	2.2	EMISSION-PLASMA ICP
11/81	035	6	58.1	ATOMIC ABS-DIRECT, EPA
11/81	037	10	30.2	ATOMIC ABS-DIRECT
11/81	038	24	67.6	ATOMIC ABS-DIRECT, I-1900, USGS TWRI BKS CH A1
11/81	039	20	39.7	ATOMIC ABS-DIRECT, EPA
11/81	041	13	9.2	ATOMIC ABS-DIRECT
11/81	044	15	4.8	EMISSION-PLASMA ICP
11/81	048	8	44.1	ATOMIC ABS-DIRECT
11/81	050	20	39.7	OTHER
11/81	052	20	39.7	ATOMIC ABS-DIRECT
11/81	053	21	46.7	ATOMIC ABS-DIRECT
11/81	055	10	30.2	ATOMIC ABS-DIRECT, EPA
11/81	057	10	30.2	ATOMIC ABS-DIRECT
10/81	059	11	23.2	ATOMIC ABS-DIRECT, EPA
11/81	060	27	88.6	ATOMIC ABS-DIRECT, EPA
11/81	061	15	4.8	EMISSION-PLASMA ICP
11/81	063	10	30.2	ATOMIC ABS-DIRECT, EPA
11/81	064	10	30.2	ATOMIC ABS-DIRECT, EPA
11/81	065	17	18.7	EMISSION-PLASMA ICP
11/81	066	14	2.2	EMISSION-PLASMA ICP
12/81	068	18	25.7	EMISSION-PLASMA ICP
11/81	070	13	9.2	ATOMIC ABS-DIRECT, EPA
11/81	072	19	32.7	ATOMIC ABS-DIRECT, EPA
11/81	074	15	4.8	ATOMIC ABS-DIRECT
11/81	077	11	23.2	ATOMIC ABS-DIRECT, EPA
11/81	079	6	58.1	ATOMIC ABS-DIRECT, EPA
11/81	081	18	25.7	ATOMIC ABS-DIRECT
11/81	083	10	30.2	ATOMIC ABS-DIRECT
11/81	087	11	23.2	ATOMIC ABS-DIRECT, EPA
11/81	088	12	16.2	EMISSION-PLASMA ICP

TOTAL RANGE 5 TO 70  
STANDARD DEVIATION 5.7

MEAN: 14.3  
95 % CONFIDENCE INTRVL OF MEAN 14.3 + OR - 1.7

STATISTICS BY METHOD FOR SAMPLE: 79

DETERMINATION: AG

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT	4.4	2.9	7
ATOMIC ABS-FLAMELESS	4.0	1.1	18
EMISSION-PLASMA ICP	4.5	1.7	4
ATOMIC ABS-DIRECT, EPA	7.7	3.2	7
***** OVER ALL *****	4.8	2.4	39

DETERMINATION: AL

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT	30	24	6
ATOMIC ABS-FLAMELESS	14	8	7
EMISSION PLASMA ICP	13	6	3
***** OVER ALL *****	20	16	18

DETERMINATION: AS

METHOD	MEAN	STD DEV	N
ATOMIC ABS-HYDRIDE (SODIUM BOROHYDRIDE)	19.5	6.3	8
ATOMIC ABS-FLAMELESS	19.3	5.2	25
OTHER	17.8	3.5	5
***** OVER ALL *****	18.8	5.3	42

DETERMINATION: BA

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT	235	37	13
ATOMIC ABS-FLAMELESS	237	75	7
EMISSION PLASMA ICP	231	17	12
***** OVER ALL *****	236	45	36

DETERMINATION: BE

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT	47.5	4.2	10
EMISSION-PLASMA ICP	47.0	3.3	7
***** OVER ALL *****	46.9	4.2	19

STATISTICS BY METHOD FOR SAMPLE: 79

DETERMINATION: CO

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT	7.9	3.4	9
ATOMIC ABS-FLAMELESS	9.5	2.9	22
EMISSION-PLASMA ICP	9.9	3.0	9
ATOMIC ABS-DIRECT, EPA	10.5	1.8	6
***** OVER ALL *****	9.8	3.4	52

DETERMINATION: CO

METHOD	MEAN	STD DEV	N
ATOMIC ABS-FLAMELESS	15.5	3.6	10
EMISSION-PLASMA ICP	14.0	3.6	7
ATOMIC ABS-DIRECT, EPA	15.8	4.1	5
***** OVER ALL *****	15.1	3.5	23

DETERMINATION: CR TOT

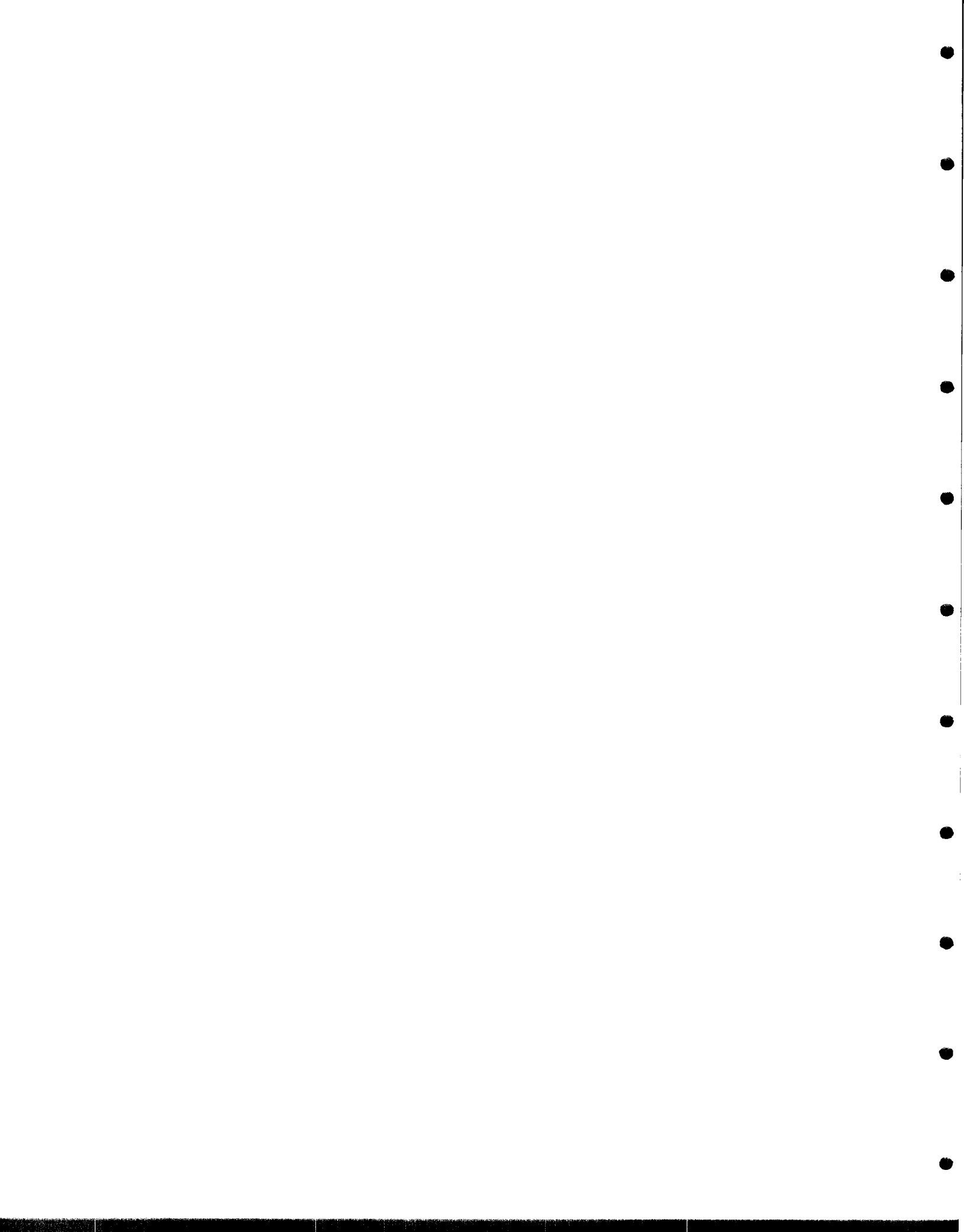
METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT	28.6	2.5	9
ATOMIC ABS-FLAMELESS	28.0	6.4	16
EMISSION-PLASMA ICP	29.8	3.1	6
ATOMIC ABS-DIRECT, EPA	26.2	6.7	10
***** OVER ALL *****	26.9	6.2	48

DETERMINATION: CU

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT	26.5	7.0	11
ATOMIC ABS-FLAMELESS	23.1	5.7	15
EMISSION-PLASMA ICP	22.1	3.2	10
ATOMIC ABS-DIRECT, EPA	26.3	6.6	12
***** OVER ALL *****	24.5	5.9	51

DETERMINATION: FE

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT, 1-1381, USGS TWRI BKS CH A1	735	138	4
PHENANTHROLINE, APHA STD METH, 14ED	773	49	3
ATOMIC ABS-DIRECT, EPA	742	69	10
ATOMIC ABS-DIRECT	766	69	20
ATOMIC ABS-FLAMELESS	830	173	3
EMISSION-PLASMA ICP	766	22	11
***** OVER ALL *****	760	74	61



STATISTICS BY METHOD FOR SAMPLE: 79

DETERMINATION: HG

METHOD	MEAN	STD DEV	N
ATOMIC ABS-FLAMELESS,AUTO, 1-2462, USGS TWRI BK5 CH A1	2.16	0.38	5
ATOMIC ABS-FLAMELESS, EPA	1.93	0.68	28
ATOMIC ABS-FLAMELESS, APHA STD METH, 14ED	1.64	0.81	5
OTHER	2.50	0.44	3
***** OVER ALL *****	1.97	0.65	43

DETERMINATION: LI

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT, 1-1425, USGS TWRI BK5 CH A1	673	92	3
ATOMIC ABS-DIRECT	605	80	6
EMISSION-FLAME	775	91	4
EMISSION FLASMA ICP	646	52	7
***** OVER ALL *****	660	91	21

DETERMINATION: MN

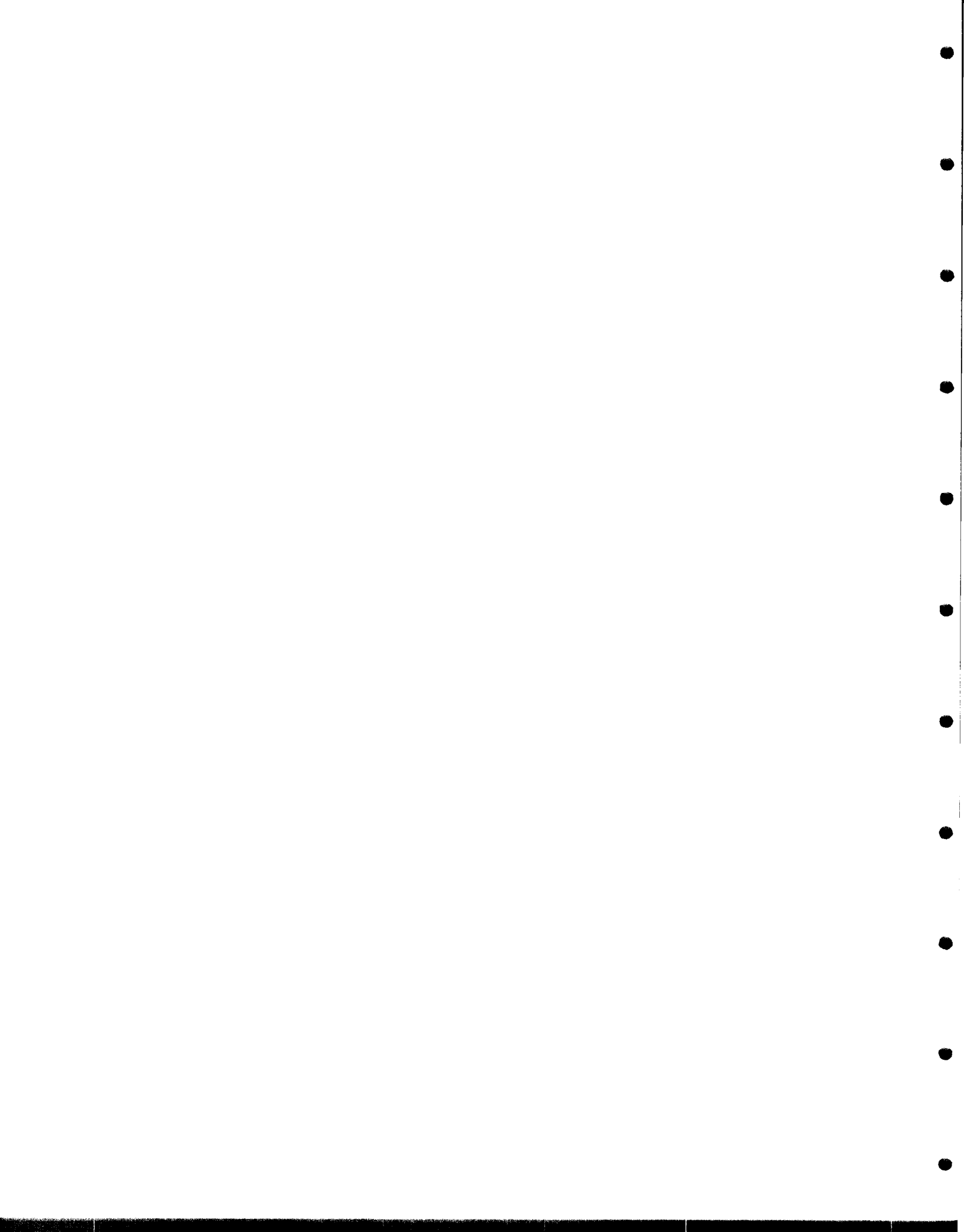
METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT, 1-1454, USGS TWRI BK5 CH A1	550	45	6
ATOMIC ABS-DIRECT, EPA	562	45	16
ATOMIC ABS-DIRECT	569	59	18
EMISSION-FLASMA ICP	573	28	12
***** OVER ALL *****	566	46	57

DETERMINATION: MO

METHOD	MEAN	STD DEV	N
EMISSION-FLASMA ICP	18.7	3.5	7
ATOMIC ABS-FLAMELESS	24.2	3.1	6
***** OVER ALL *****	21.0	4.0	15

DETERMINATION: NI

METHOD	MEAN	STD DEV	N
ATOMIC ABS-CHELATION/EXTRACTION, 1-1500, USGS TWRI BK5 CH A1	9.7	9.1	3
ATOMIC ABS-DIRECT	10.3	6.8	4
ATOMIC ABS-FLAMELESS	4.3	1.9	9
EMISSION-FLASMA ICP	6.0	4.5	5
ATOMIC ABS-DIRECT, EPA	13.8	11.4	10
***** OVER ALL *****	9.1	8.2	32





STATISTICS BY METHOD FOR SAMPLE: 79

DETERMINATION: PB

METHOD	MEAN	STD DEV	N
ATOMIC ABS-FLAMELESS	3.7	1.5	20
EMISSION-PLASMA ICP	3.0	2.0	3
ATOMIC ABS-DIRECT, EPA	6.0	3.8	5
***** OVER ALL *****	4.2	2.5	34

DETERMINATION: SE

METHOD	MEAN	STD DEV	N
ATOMIC ABS-HYDRIDE,AUTO, 1-2667, USGS	16.0	3.6	3
ATOMIC ABS-HYDRIDE(NABH4)	7.2	6.7	5
ATOMIC ABS-FLAMELESS	12.3	3.4	20
OTHER	11.5	7.4	4
***** OVER ALL *****	11.7	4.8	33

DETERMINATION: SR

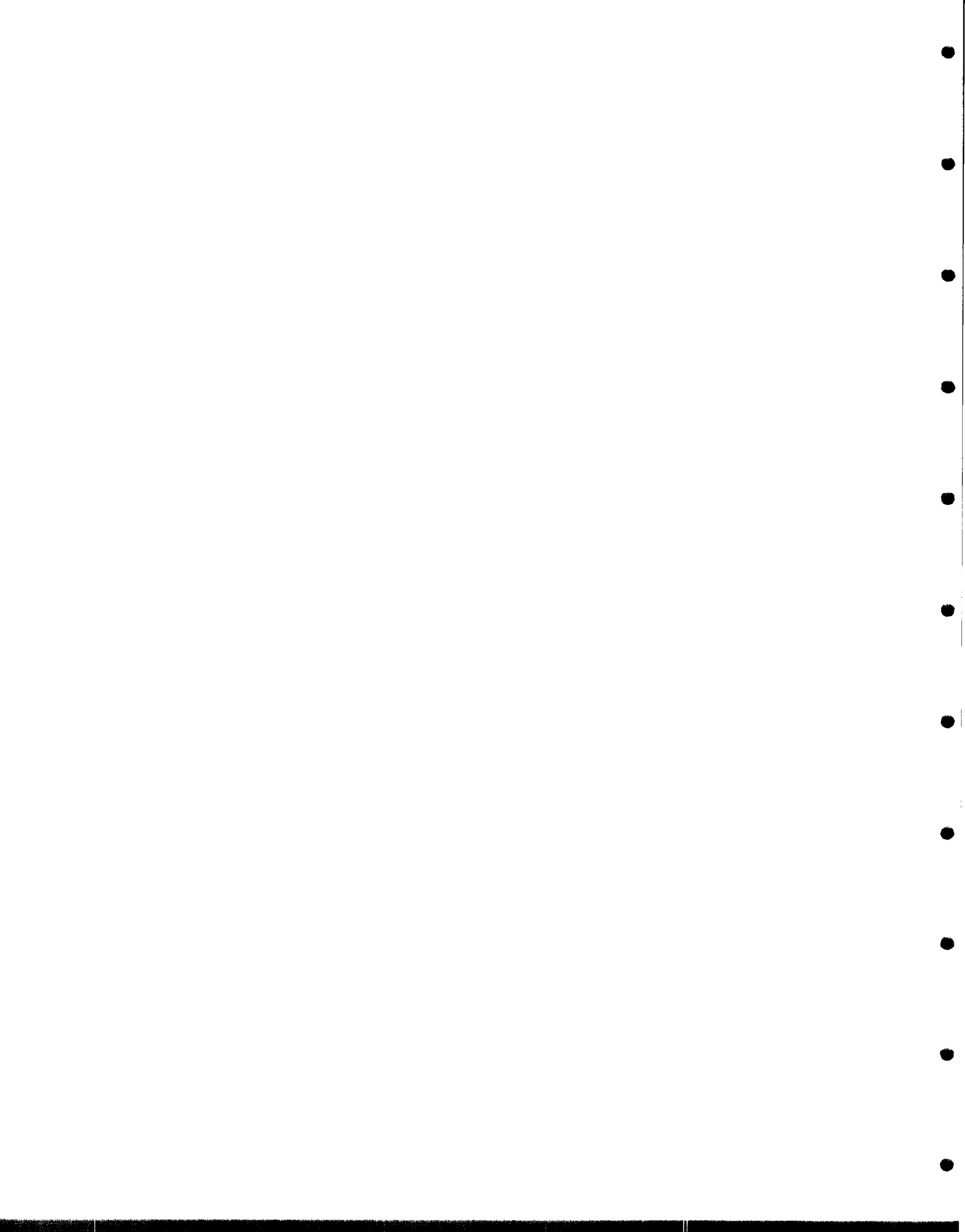
METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT, 1-1800, USGS TWRI BKS CH A1	427	40	3
ATOMIC ABS-DIRECT	444	69	7
EMISSION PLASMA ICP	366	21	10
***** OVER ALL *****	401	56	21

DETERMINATION: IL

METHOD	MEAN	STD DEV	N
ATOMIC ABS - FLAMELESS	3.8	1.5	6
***** OVER ALL *****	7.2	8.0	9

DETERMINATION: ZN

METHOD	MEAN	STD DEV	N
ATOMIC ABS-DIRECT, 1-1900, USGS TWRI BKS CH A1	14.8	11.3	4
ATOMIC ABS-DIRECT	14.1	4.4	14
EMISSION-PLASMA ICP	16.4	5.4	9
ATOMIC ABS-DIRECT, EPA	12.7	5.6	15
***** OVER ALL *****	14.3	5.7	44



DATE MO/YR	CODE	REPORTED VALUE	PC1. DEV. FROM MEAN		METHODS
11/81	001	2.30	259.1	REJECT	ION-SELECTIVE ELECTRODE, I-1524, USGS TWRI BKS CH A1
11/81	002	0.01	98.4		OTHER
11/81	004	0.65	1.5		PHENATE, AUTO, EPA
11/81	005	0.71	10.9		PHENATE, AUTO, EPA
11/81	006	0.65	1.5		PHENATE, AUTO, EPA
11/81	009	0.71	10.9		INDOPHENOL,AUTO, I-2523, USGS TWRI BKS CH A1
11/81	010	0.10	84.4		OTHER
11/81	011	1.80	181.0	REJECT	PHENATE, AUTO, EPA
11/81	013	0.09	85.9		PHENATE, AUTO, EPA
11/81	014	0.74	15.5		PHENATE, AUTO, EPA
12/81	015	0.37	42.2		PHENATE, AUTO, EPA
11/81	020	0.98	53.0		PHENATE, AUTO, EPA
11/81	024	0.58	9.4		PHENATE, AUTO, EPA
11/81	025	0.82	28.0		ION-SELECTIVE ELECTRODE, EPA
11/81	026	0.84	31.2		ION-SELECTIVE ELECTRODE, EPA
11/81	028	0.64	31.2		OTHER
10/81	030	0.57	11.0		ION-SELECTIVE ELECTRODE, EPA
12/81	034	0.60	6.3		PHENATE, AUTO, EPA
11/81	035	0.64	0.1		DISTILLATION-NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA
11/81	036	0.80	24.9		PHENATE, AUTO, EPA
11/81	041	0.64	0.1		INDOPHENOL,AUTO, I-2523, USGS TWRI BKS CH A1
11/81	042	0.77	20.2		OTHER
11/81	046	0.71	10.9		INDOPHENOL,AUTO, I-2523, USGS TWRI BKS CH A1
11/81	048	0.63	1.6		PHENATE, AUTO, EPA
11/81	050	0.85	32.7		OTHER
11/81	052	0.70	9.3		PHENATE, AUTO, EPA
11/81	053	0.85	32.7		PHENATE, AUTO, EPA
11/81	055	0.80	24.9		DISTILLATION-NESSLERIZATION OR TITRIMETRIC, APHA STD METH, 14ED
11/81	056	0.20	68.8		DISTILLATION-NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA
11/81	058	1.70	165.4	REJECT	DISTILLATION-NESSLERIZATION OR TITRIMETRIC, APHA STD METH, 14ED
10/81	059	0.79	23.3		ION-SELECTIVE ELECTRODE, EPA
11/81	060	0.80	24.9		DISTILLATION-NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA
11/81	063	0.08	87.5		PHENATE, AUTO, EPA
11/81	064	0.73	14.0		OTHER
12/81	068	0.94	46.8		OTHER
11/81	070	0.90	40.5		ION-SELECTIVE ELECTRODE, EPA
11/81	072	2.50	290.3	REJECT	DISTILLATION-NESSLERIZATION OR TITRIMETRIC, APHA STD METH, 14ED
11/81	073	0.90	40.5		DISTILLATION-NESSLERIZATION OR TITRIMETRIC, APHA STD METH, 14ED
11/81	074	0.80	24.9		ION-SELECTIVE ELECTRODE, EPA
11/81	078	0.33	48.5		OTHER
11/81	079	0.10	84.4		DISTILLATION-NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA
11/81	081	0.80	24.9		PHENATE, AUTO, EPA
11/81	083	0.55	14.1		PHENATE, AUTO, EPA
11/81	084	0.79	23.3		ION-SELECTIVE ELECTRODE, I-1524, USGS TWRI BKS CH A1
11/81	087	0.76	18.7		ION-SELECTIVE ELECTRODE, EPA
11/81	088	0.78	21.8		PHENATE, AUTO, EPA

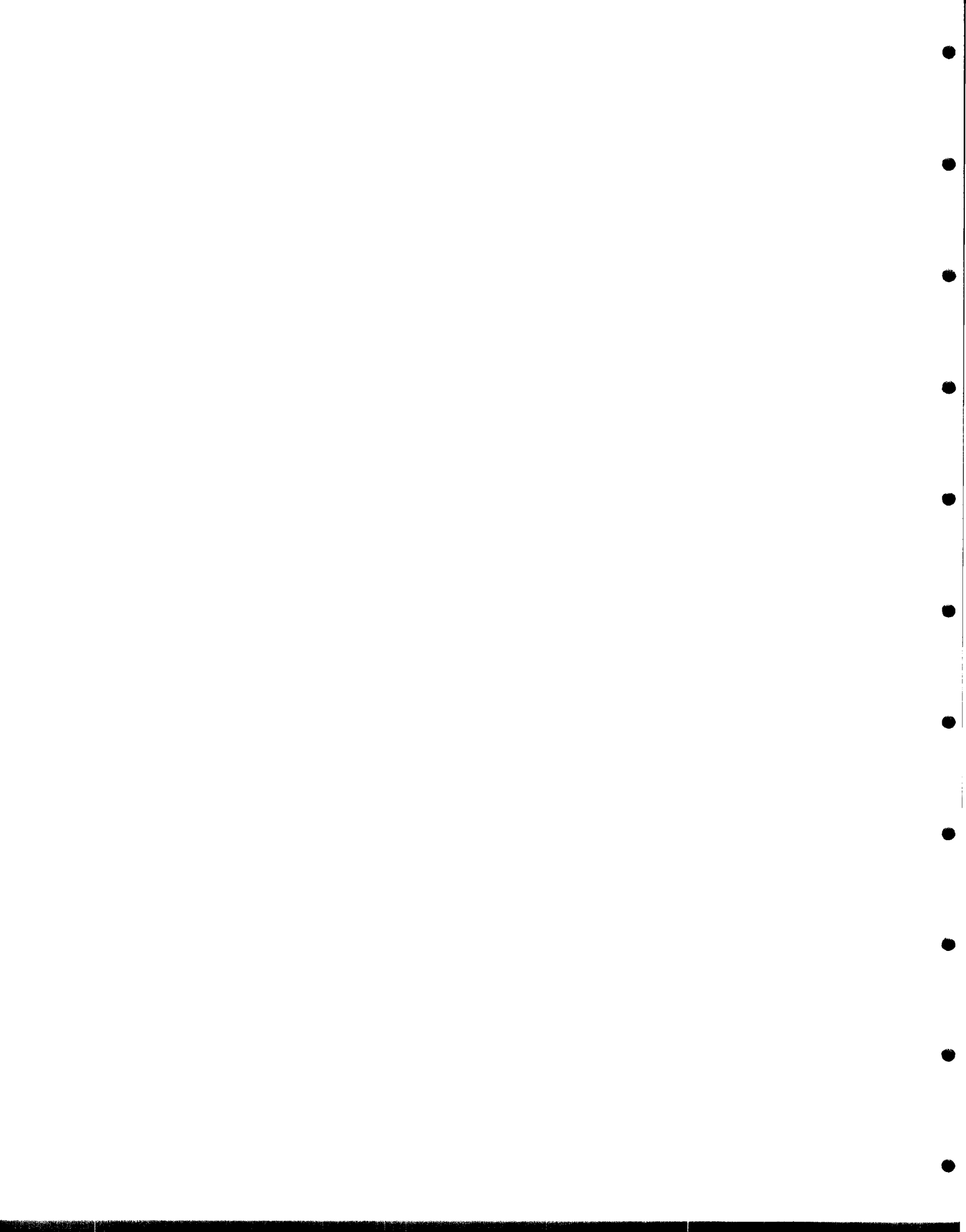
TOTAL RANGE 0.01 TO 2.50  
STANDARD DEVIATION 0.260

MEAN: 0.640  
95 % CONFIDENCE INTRVL OF MEAN 0.640 + OR - 0.081

DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	1.4	2.4	DIAZOTIZATION,AUTO, I-2540, USGS TWRI BK5 CH A1
11/81	002	1.5	4.5	DIAZOTIZATION, APHA STD METH, 14ED
11/81	005	1.4	2.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	006	1.4	2.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	007	1.1	23.3	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	008	1.1	23.3	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	009	1.3	9.4	DIAZOTIZATION,AUTO, I-2540, USGS TWRI BK5 CH A1
11/81	010	1.5	4.5	DIAZOTIZATION, EPA
11/81	011	1.1	23.3	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	013	1.3	9.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	014	1.7	18.5	DIAZOTIZATION, EPA
12/81	015	1.5	4.5	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	024	1.4	2.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	025	1.4	2.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	026	1.3	9.4	DIAZOTIZATION, EPA
10/81	030	1.4	2.4	DIAZOTIZATION, EPA
12/81	034	1.4	2.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	035	1.5	4.5	DIAZOTIZATION, EPA
11/81	036	1.4	2.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	041	1.4	2.4	DIAZOTIZATION,AUTO, I-2540, USGS TWRI BK5 CH A1
11/81	048	1.8	25.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	050	1.4	2.4	DIAZOTIZATION, I-1540, USGS TWRI BK5 CH A1
11/81	052	1.4	2.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	053	1.4	2.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	055	1.6	11.5	DIAZOTIZATION, APHA STD METH, 14ED
11/81	058	1.4	2.4	DIAZOTIZATION, EPA
10/81	059	1.5	4.5	DIAZOTIZATION, APHA STD METH, 14ED
11/81	060	1.4	2.4	DIAZOTIZATION, EPA
11/81	063	0.7	51.2	REJECT TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	064	1.7	18.5	OTHER
12/81	068	1.6	11.5	DIAZOTIZATION,AUTO, I-2540, USGS TWRI BK5 CH A1
11/81	070	1.4	2.4	DIAZOTIZATION, APHA STD METH, 14ED
11/81	072	1.4	2.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	074	1.7	18.5	DIAZOTIZATION, EPA
11/81	078	1.1	23.3	OTHER
11/81	079	1.4	2.4	DIAZOTIZATION, EPA
11/81	081	1.8	25.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	083	1.4	2.4	DIAZOTIZATION, APHA STD METH, 14ED
11/81	084	1.5	4.5	DIAZOTIZATION, ASTM D1254
11/81	087	1.4	2.4	TECHNICON AUTOANALYZER, DIAZOTIZATION
11/81	088	1.6	11.5	DIAZOTIZATION, APHA STD METH, 14ED

TOTAL RANGE 0.7 TO 1.8  
STANDARD DEVIATION 0.17

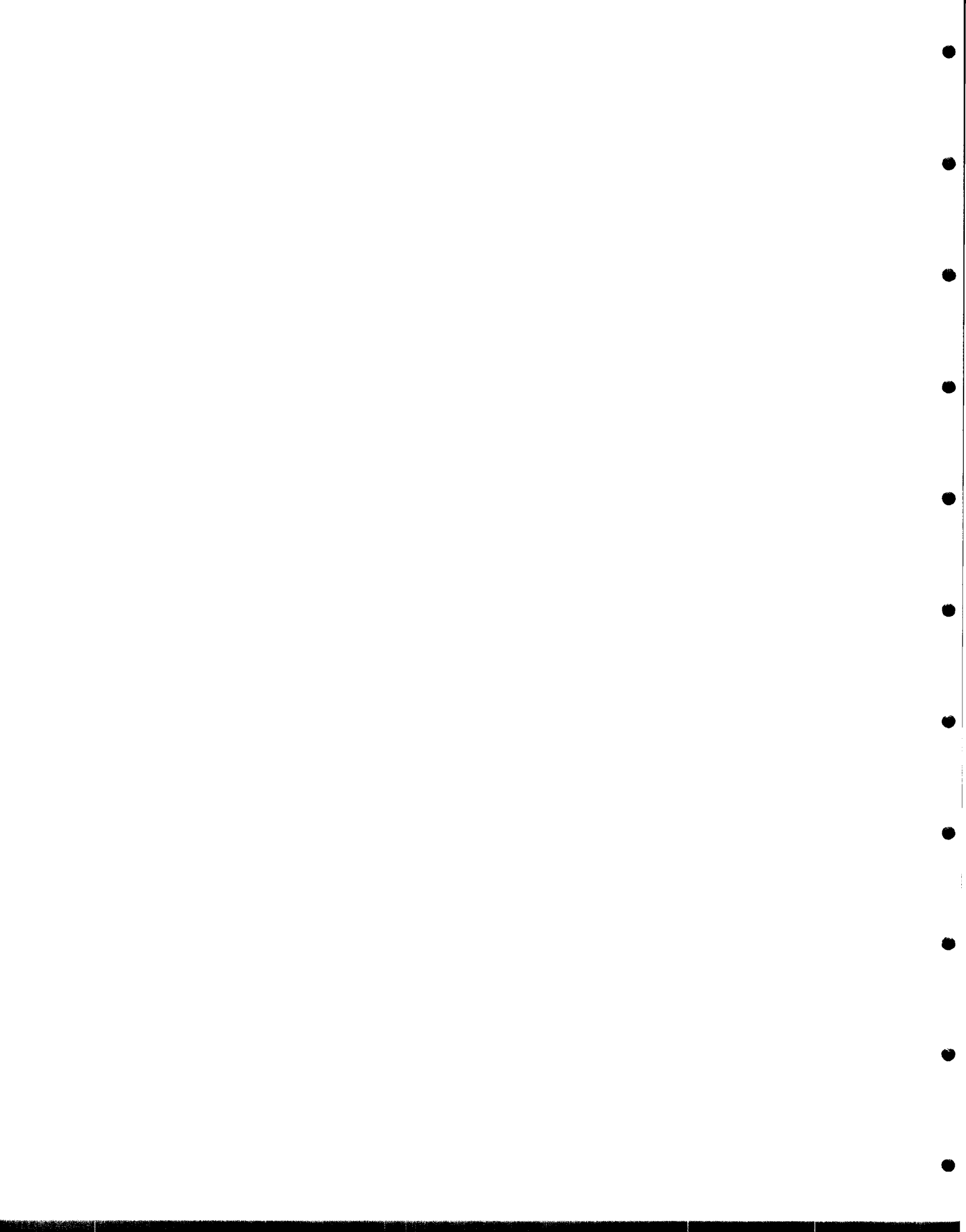
MEAN: 1.43  
95 % CONFIDENCE INTRVL OF MEAN 1.43 + UR - 0.05



DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	1.6	19.5	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 CH A1
11/81	002	1.9	4.4	BRUCINE, APHA STD METH, 14ED
11/81	005	1.8	9.4	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	006	3.2	61.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	007	2.6	30.9	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	008	2.7	35.9	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	009	1.9	4.4	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 CH A1
11/81	010	1.5	24.5	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	011	3.9	96.3	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	013	1.8	9.4	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	014	1.5	24.5	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 CH A1
12/81	015	3.3	66.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
12/81	021	1.4	29.5	OTHER
11/81	024	1.8	9.4	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	025	1.6	19.5	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	026	2.1	5.7	BRUCINE, APHA STD METH, 14ED
11/81	028	2.3	15.8	BRUCINE, APHA STD METH, 14ED
11/81	029	3.5	76.1	OTHER
10/81	030	1.8	9.4	BRUCINE, APHA STD METH, 14ED
11/81	031	1.7	14.4	OTHER
12/81	034	1.9	4.4	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	035	2.1	5.7	MANUAL, CADMIUM REDUCTION
11/81	036	1.7	14.4	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	037	3.6	81.2	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	041	1.8	9.4	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 CH A1
11/81	046	2.2	10.7	OTHER
11/81	048	1.5	24.5	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	050	1.7	14.4	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 CH A1
11/81	052	2.0	0.7	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	053	2.8	40.9	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	055	1.8	9.4	BRUCINE, APHA STD METH, 14ED
11/81	056	1.9	4.4	BRUCINE, APHA STD METH, 14ED
11/81	058	2.2	10.7	MANUAL, CADMIUM REDUCTION
10/81	059	1.5	24.5	BRUCINE, APHA STD METH, 14ED
11/81	063	0.8	59.7	TECHNICON AUTOANALYZER, HYDRAZINE REDUCTION
11/81	064	1.5	24.5	OTHER
12/81	068	1.6	19.5	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 CH A1
11/81	072	1.7	14.4	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	073	2.2	10.7	BRUCINE, APHA STD METH, 14ED
11/81	074	1.6	19.5	BRUCINE, APHA STD METH, 14ED
11/81	078	2.2	10.7	BRUCINE, APHA STD METH, 14ED
11/81	079	16.0	705.3	REJECT BRUCINE, APHA STD METH, 14ED
11/81	081	1.3	34.6	TECHNICON AUTOANALYZER, HYDRAZINE REDUCTION
11/81	083	1.3	34.6	MANUAL, CADMIUM REDUCTION
11/81	084	1.1	44.6	BRUCINE, APHA STD METH, 14ED
11/81	087	1.5	24.5	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	088	2.0	0.7	BRUCINE, APHA STD METH, 14ED

TOTAL RANGE 0.8 TO 16.0  
STANDARD DEVIATION 0.66

MEAN: 1.99  
95 % CONFIDENCE INTRVL OF MEAN 1.99 + OR - 0.20



DATE MO/YR	CODE	REPORTED VALUE	PCI. DEV. FROM MEAN	METHODS
11/81	004	1.70	37.5	UTHER
11/81	006	1.10	11.0	PHENATE, AUTO, EPA
11/81	007	0.85	31.3	NESSLERIZATION, I-1550, ORG N BY DIFF, USGS TWRI BKS CH A1
11/81	008	0.85	31.3	NESSLERIZATION, I-1550, ORG N BY DIFF, USGS TWRI BKS CH A1
11/81	009	1.00	19.1	SALICYLATE,AUTO, I-2552, ORG N BY DIFF, USGS TWRI BKS CH A1
11/81	010	1.60	29.4	TOTAL KJELDAHL, ORG N BY DIFF, EPA
11/81	011	0.00	100.0	PHENATE, AUTO, EPA
11/81	013	1.40	13.2	PHENATE, AUTO, EPA
11/81	020	0.73	41.0	NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA
11/81	024	1.60	29.4	TOTAL KJELDAHL, ORG N BY DIFF, EPA
11/81	026	0.84	32.1	TOTAL KJELDAHL, ORG N BY DIFF, EPA
11/81	035	1.20	3.0	NESSLERIZATION OR TITRIMETRIC, APHA STD METH, 14ED
11/81	036	1.10	11.0	PHENATE, AUTO, EPA
11/81	037	2.20	77.9	NESSLERIZATION OR TITRIMETRIC, APHA STD METH, 14ED
11/81	041	1.00	19.1	SALICYLATE,AUTO, I-2552, ORG N BY DIFF, USGS TWRI BKS CH A1
11/81	048	1.20	3.0	PHENATE, AUTO, EPA
11/81	050	0.35	71.7	SALICYLATE,AUTO, I-2552, ORG N BY DIFF, USGS TWRI BKS CH A1
11/81	052	1.10	11.0	TOTAL KJELDAHL, ORG N BY DIFF, EPA
11/81	053	1.20	3.0	PHENATE, AUTO, EPA
11/81	055	4.20	239.7	REJECT NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA
11/81	058	1.30	5.1	NESSLERIZATION OR TITRIMETRIC, APHA STD METH, 14ED
10/81	059	0.10	91.9	NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA
11/81	060	1.40	13.2	NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA
11/81	063	2.30	86.0	OTHER
11/81	064	1.40	13.2	TOTAL KJELDAHL, ORG N BY DIFF, EPA
12/81	066	1.60	29.4	SALICYLATE,AUTO, I-2552, ORG N BY DIFF, USGS TWRI BKS CH A1
11/81	070	0.95	23.2	NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA
11/81	074	0.80	35.3	NESSLERIZATION OR TITRIMETRIC, APHA STD METH, 14ED
11/81	079	2.10	69.8	NESSLERIZATION OR TITRIMETRIC, APHA STD METH, 14ED
11/81	081	2.00	61.7	OTHER
11/81	083	1.20	3.0	NESSLERIZATION OR TITRIMETRIC, APHA STD METH, 14ED
11/81	087	1.60	29.4	NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA
11/81	088	1.80	45.6	PHENATE, AUTO, EPA

TOTAL RANGE 0.00 TO 4.20  
STANDARD DEVIATION 0.548

MEAN: 1.237  
95 % CONFIDENCE INTRVL OF MEAN 1.237 + OR - 0.197





DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	1.3	17.3	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	002	1.7	8.2	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	004	1.5	4.5	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	006	1.6	1.8	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	007	4.9	211.9	REJECT PHOSPHOMOLYBDATE, I-1600, USGS TWRI BK5 CH A1
11/81	008	4.8	205.5	REJECT PHOSPHOMOLYBDATE, I-1600, USGS TWRI BK5 CH A1
11/81	009	1.5	4.5	PHOSPHOMOLYBDATE,AUTO, I-2600, USGS TWRI BK5 CH A1
11/81	010	1.6	1.8	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	011	1.7	8.2	ASCORBIC ACID REDUCTION, ASTM METHOD A, D515
11/81	013	1.7	8.2	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	014	1.5	4.5	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	016	1.4	10.9	OTHER
11/81	020	1.6	1.8	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	024	1.4	10.9	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	026	1.9	20.9	PHOSPHOMOLYBDATE, EPA
11/81	029	1.4	10.9	OTHER
10/81	030	1.5	4.5	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	031	1.7	8.2	OTHER
12/81	034	1.9	20.9	PHOSPHOMOLYBDATE, EPA
11/81	035	1.5	4.5	PHOSPHOMOLYBDATE, EPA
11/81	036	1.5	4.5	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	041	1.5	4.5	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	042	1.1	30.0	PHOSPHOMOLYBDATE, EPA
11/81	046	1.5	4.5	OTHER
11/81	048	1.4	10.9	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	050	1.5	4.5	PHOSPHOMOLYBDATE,AUTO, I-2600, USGS TWRI BK5 CH A1
11/81	052	1.7	8.2	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	053	2.0	27.3	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	055	1.6	1.8	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	056	0.4	74.5	REJECT PHOSPHOMOLYBDATE, EPA
11/81	058	1.7	8.2	PHOSPHOMOLYBDATE, EPA
10/81	059	1.6	1.8	OTHER
11/81	060	23.0	364.0	REJECT PHOSPHOMOLYBDATE, EPA
11/81	063	1.5	4.5	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	064	1.4	10.9	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
12/81	068	1.6	1.8	PHOSPHOMOLYBDATE,AUTO, I-2600, USGS TWRI BK5 CH A1
11/81	070	1.5	4.5	PHOSPHOMOLYBDATE,AUTO, I-2600, USGS TWRI BK5 CH A1
11/81	072	0.7	55.4	REJECT DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	078	1.4	10.9	DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	079	1.6	1.8	PHOSPHOMOLYBDATE, EPA
11/81	081	1.7	8.2	OTHER
11/81	083	2.4	52.8	REJECT DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED
11/81	087	1.9	20.9	PHOSPHOMOLYBDATE, EPA
11/81	088	1.6	1.8	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE

TOTAL RANGE 0.4 TO 23.0  
STANDARD DEVIATION 0.18

MEAN: 1.57  
95 % CONFIDENCE INTRVL OF MEAN 1.57 + UR - 0.06



DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	001	1.1	2.7	ASCORBIC ACID, APHA STD METH, 14ED
11/81	002	0.1	91.2	REJECT ASCORBIC ACID, APHA STD METH, 14ED
11/81	004	1.2	6.1	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	005	1.1	2.7	ASCORBIC ACID, APHA STD METH, 14ED
11/81	006	1.2	6.1	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	007	3.6	218.4	REJECT PHOSPHOMOLYBDATE, I-1601, USGS TWRI BK5 CH A1
11/81	008	3.6	218.4	REJECT PHOSPHOMOLYBDATE, I-1601, USGS TWRI BK5 CH A1
11/81	009	1.1	2.7	PHOSPHOMOLYBDATE,AUTO, I-2601, USGS TWRI BK5 CH A1
11/81	011	1.7	50.4	REJECT ASCORBIC ACID REDUCTION, ASTM METHOD A, 0515
11/81	013	1.1	2.7	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	014	1.1	2.7	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
12/81	015	1.2	6.1	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	020	1.0	11.5	ASCORBIC ACID, APHA STD METH, 14ED
12/81	021	0.7	38.1	OTHER
11/81	024	1.1	2.7	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	025	1.1	2.7	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	026	1.1	2.7	PHOSPHONOLYBDATE, EPA
10/81	030	1.1	2.7	PHOSPHONOLYBDATE, EPA
11/81	031	1.2	6.1	PHOSPHOMOLYBDATE, I-1601, USGS TWRI BK5 CH A1
12/81	034	1.4	23.8	PHOSPHONOLYBDATE, EPA
11/81	035	1.2	6.1	PHOSPHONOLYBDATE, EPA
11/81	036	1.2	6.1	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	041	1.2	6.1	PHOSPHOMOLYBDATE,AUTO, I-2601, USGS TWRI BK5 CH A1
11/81	042	1.0	11.5	PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA
11/81	046	1.1	2.7	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	050	1.2	6.1	PHOSPHOMOLYBDATE,AUTO, I-2601, USGS TWRI BK5 CH A1
11/81	052	1.4	23.8	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	053	1.1	2.7	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
11/81	055	1.2	6.1	ASCORBIC ACID, APHA STD METH, 14ED
11/81	058	1.2	6.1	PHOSPHONOLYBDATE, EPA
10/81	059	1.4	23.8	OTHER
11/81	060	1.4	23.8	PHOSPHONOLYBDATE, EPA
11/81	063	1.2	6.1	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE
12/81	068	1.1	2.7	PHOSPHOMOLYBDATE,AUTO, I-2601, USGS TWRI BK5 CH A1
11/81	070	1.1	2.7	PHOSPHOMOLYBDATE, I-1601, USGS TWRI BK5 CH A1
11/81	072	0.7	38.1	ASCORBIC ACID, APHA STD METH, 14ED
11/81	073	1.0	11.5	OTHER
11/81	078	0.9	20.4	ASCORBIC ACID, APHA STD METH, 14ED
11/81	087	1.2	6.1	PHOSPHONOLYBDATE, EPA
11/81	088	1.1	2.7	TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE

TOTAL RANGE 0.1 TO 3.6  
STANDARD DEVIATION 0.15

MEAN: 1.13  
95 % CONFIDENCE INTRVL OF MEAN 1.13 + OR - 0.05



STATISTICS BY METHOD FOR SAMPLE: N006

DETERMINATION: NH3-N

METHOD	MEAN	STD DEV	N
INDOPHENOL,AUTO, I-2523, USGS TWRI BKS CH A1	0.687	0.040	3
DISTILLATION-NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA	0.435	0.338	4
ION-SELECTIVE ELECTRODE, EPA	0.783	0.104	7
PHENATE, AUTO, EPA	0.621	0.243	17
OTHER	0.571	0.368	8
***** OVER ALL *****	0.640	0.260	42

DETERMINATION: NO2-N

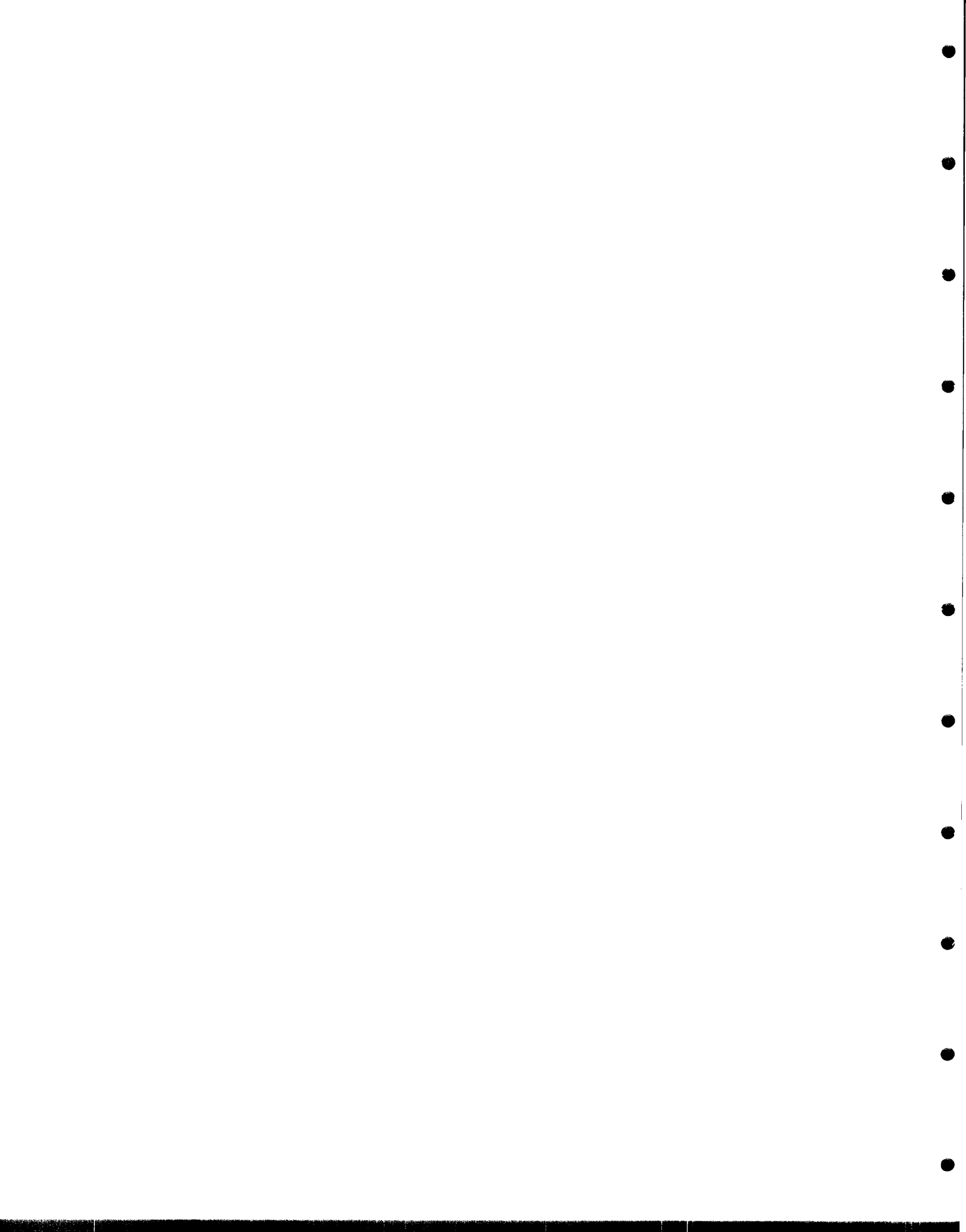
METHOD	MEAN	STD DEV	N
DIAZOTIZATION,AUTO, I-2540, USGS TWRI BKS CH A1	1.42	0.13	4
DIAZOTIZATION, APHA STD METH, 14ED	1.50	0.09	6
TECHNICON AUTOANALYZER, DIAZOTIZATION	1.39	0.20	17
DIAZOTIZATION, EPA	1.48	0.14	4
***** OVER ALL *****	1.43	0.17	40

DETERMINATION: NO3-N

METHOD	MEAN	STD DEV	N
CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BKS CH A1	1.68	0.15	6
BRUCINE, APHA STD METH, 14ED	1.87	0.34	12
TECHNICON AUTOANALYZER, CADMIUM REDUCTION	2.27	0.79	18
MANUAL, CADMIUM REDUCTION	1.87	0.49	3
OTHER	2.06	0.66	5
***** OVER ALL *****	1.99	0.66	46

DETERMINATION: ORG-N

METHOD	MEAN	STD DEV	N
SALICYLATE,AUTO, I-2552, ORG N BY DIFF, USGS TWRI BKS CH A1	0.987	0.511	4
NESSLERIZATION OR TITRIMETRIC, APHA STD METH, 14ED	1.467	0.557	6
NESSLERIZATION, TITRIMETRIC OR POTENTIOMETRIC, EPA	0.956	0.591	5
PHENATE, AUTO, EPA	1.114	0.549	7
TOTAL KJELDAHL, ORG N BY DIFF, EPA	1.308	0.332	5
OTHER	2.000	0.300	3
***** OVER ALL *****	1.237	0.548	32



STATISTICS BY METHOD FOR SAMPLE: N006

DETERMINATION: P, TOTAL

METHOD	MEAN	STD DEV	N
PHOSPHOMOLYBDATE,AUTO, I-2600, USGS TWRI BKS CH A1	1.52	0.05	4
PHOSPHOMOLYBDATE, EPA	1.66	0.29	7
PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA	1.54	0.05	5
DIGESTION-ASCORBIC ACID, APHA STD METH, 14ED	1.51	0.13	7
TECHNICON AUTOANALYZER, PHUSPHOMOLYBDATE	1.59	0.21	8
OTHER	1.55	0.14	6
***** OVER ALL *****	1.57	0.16	36

DETERMINATION: PO4-P

METHOD	MEAN	STD DEV	N
PHOSPHOMOLYBDATE,AUTO, I-2601, USGS TWRI BKS CH A1	1.15	0.05	4
PHOSPHOMOLYBDATE, EPA	1.23	0.13	7
PHOSPHOMOLYBDATE-ASCORBIC ACID,AUTO, EPA	1.12	0.08	6
ASCORBIC ACID, APHA STD METH, 14ED	1.00	0.18	6
TECHNICON AUTOANALYZER, PHOSPHOMOLYBDATE	1.17	0.10	8
OTHER	1.03	0.35	3
***** OVER ALL *****	1.13	0.15	36



DATE MO/YR	CODE	REPORTED VALUE	PCT. DEV. FROM MEAN	METHODS
11/81	002	0.7		ATOMIC ABS-DIRECT
11/81	005	0.9		ATOMIC ABS-DIRECT, 1-1136, USGS TWRI BKS CH A1
11/81	007	1.2		ATOMIC ABS-DIRECT, 1-1136, USGS TWRI BKS CH A1
11/81	008	1.3		ATOMIC ABS-DIRECT, 1-1136, USGS TWRI BKS CH A1
11/81	009	0.7		ATOMIC ABS-DIRECT, 1-1136, USGS TWRI BKS CH A1
11/81	011	0.6		EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	013	0.9		EMISSION-PLASMA ICP
12/81	015	0.8		ATOMIC ABS-DIRECT
11/81	016	0.8		EMISSION-PLASMA ICP
11/81	018	0.5		EMISSION-FLAME
12/81	021	2.0		EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	022	0.6		ATOMIC ABS-DIRECT
11/81	024	4.4		ATOMIC ABS-DIRECT
11/81	025	1.0		ATOMIC ABS-DIRECT
11/81	026	0.8		EMISSION-PLASMA ICP
11/81	027	0.7		EMISSION-PLASMA ICP
10/81	030	0.8		EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	037	1.0		ATOMIC ABS-DIRECT
11/81	040	0.7		ATOMIC ABS-DIRECT
11/81	041	1.1		ATOMIC ABS-DIRECT
11/81	044	0.8		ATOMIC ABS-DIRECT
11/81	046	0.7		EMISSION-PLASMA ICP
11/81	048	2.0		EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	049	0.8		ATOMIC ABS-DIRECT
11/81	050	0.7		ATOMIC ABS-DIRECT, 1-1136, USGS TWRI BKS CH A1
11/81	052	0.8		ATOMIC ABS-DIRECT, 1-1136, USGS TWRI BKS CH A1
11/81	055	0.7		ATOMIC ABS-DIRECT
11/81	058	0.7		OTHER
10/81	059	0.7		OTHER
11/81	063	0.5		ATOMIC ABS-DIRECT
11/81	064	2.0		ATOMIC ABS-DIRECT
11/81	066	0.8		EMISSION-PLASMA ICP
12/81	068	0.7		EMISSION-PLASMA ICP
11/81	070	0.8		ATOMIC ABS-DIRECT
11/81	073	0.8		EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	074	20.0		EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	077	1.6		EDTA TITRIMETRIC, APHA STD METH, 14ED
11/81	081	0.8		ATOMIC ABS-DIRECT
11/81	087	0.9		ATOMIC ABS-DIRECT

TOTAL RANGE 0.5 TO 20.0

DATE MO/YR	CODE	REPORTED VALUE	METHODS
11/81	002	1.7	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	007	0.1	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	008	0.1	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	009	1.0	MERCURIMETRIC, I-1184, USGS TWRI BKS CH A1
11/81	011	0.5	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	013	0.5	OTHER
11/81	014	0.7	MERCURIC NITRATE, APHA STD METH, 14ED
12/81	015	1.5	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	018	0.0	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	020	20.0	OTHER
12/81	021	8.9	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	022	1.8	MOHR, I-1183, USGS TWRI BKS CH A1
11/81	024	12.0	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	025	0.0	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	026	0.0	ARGENTOMETRIC, APHA STD METH, 14ED
10/81	030	2.0	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	040	0.4	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	041	1.9	FERRIC THIOCYANATE, AUTO, I-2187, USGS TWRI BKS CH A1
11/81	044	0.0	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	046	0.1	ION-SELECTIVE ELECTRODE
11/81	050	0.4	FERRIC THIOCYANATE, AUTO, I-2187, USGS TWRI BKS CH A1
11/81	052	0.4	TECHNICON AUTOANALYZER, MERCURIC THIOCYANATE
11/81	055	5.0	ARGENTOMETRIC, APHA STD METH, 14ED
10/81	059	0.9	OTHER
11/81	064	0.9	ARGENTOMETRIC, APHA STD METH, 14ED
11/81	066	0.4	OTHER
12/81	068	0.5	OTHER
11/81	069	1.5	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	070	0.7	FERRIC THIOCYANATE, AUTO, I-2187, USGS TWRI BKS CH A1
11/81	073	2.8	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	074	5.3	ION-SELECTIVE ELECTRODE
11/81	078	8.0	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	079	0.0	MERCURIC NITRATE, APHA STD METH, 14ED
11/81	081	9.7	MERCURIC NITRATE, APHA STD METH, 14ED

TOTAL RANGE 0.0 TO 20.0

DATE MO/YR	CODE	REPORTED VALUE	METHODS
11/81	002	0.1	MANUAL ION-SELECTIVE ELECTRODE
11/81	007	0.0	ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BKS CH A1
11/81	008	0.0	ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BKS CH A1
11/81	009	0.0	ZIRCONIUM-ERIOCHROME R, I-1325, USGS TWRI BKS CH A1
11/81	011	0.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	014	0.0	ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BKS CH A1
11/81	018	0.0	ZIRCONIUM-ERIOCHROME R, I-1325, USGS TWRI BKS CH A1
11/81	020	0.1	MANUAL ION-SELECTIVE ELECTRODE
11/81	025	0.1	MANUAL ION-SELECTIVE ELECTRODE
11/81	026	0.1	MANUAL ION-SELECTIVE ELECTRODE
11/81	029	0.0	OTHER
10/81	030	0.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	040	0.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	041	0.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	044	0.0	TECHNICON AUTOANALYZER, ALIZIRIN
11/81	048	0.1	TECHNICON AUTOANALYZER, ION-SELECTIVE ELECTRODE
11/81	050	0.0	TECHNICON AUTOANALYZER, ION-SELECTIVE ELECTRODE
11/81	052	0.0	MANUAL ION-SELECTIVE ELECTRODE
11/81	055	0.0	MANUAL ION-SELECTIVE ELECTRODE
10/81	059	0.0	OTHER
11/81	064	0.3	MANUAL ION-SELECTIVE ELECTRODE
11/81	066	0.0	OTHER
12/81	068	0.1	ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BKS CH A1
11/81	073	0.1	SPADNS, APHA STD METH, 14ED
11/81	074	0.0	ION-SELECTIVE ELECTRODE, I-1327, USGS TWRI BKS CH A1
11/81	087	0.0	MANUAL ION-SELECTIVE ELECTRODE

TOTAL RANGE 0.0 TO 0.3

DATE MO/YR	CODE	REPORTED VALUE	METHODS
11/81	002	0.1	ATOMIC ABS-DIRECT
11/81	007	0.1	ATOMIC ABS-DIRECT, 1-1630, USGS TWRI BKS CH A1
11/81	008	0.1	ATOMIC ABS-DIRECT, 1-1630, USGS TWRI BKS CH A1
11/81	009	0.1	ATOMIC ABS-DIRECT, 1-1630, USGS TWRI BKS CH A1
11/81	011	0.0	EMISSION-FLAME
11/81	013	0.1	ATOMIC ABS-DIRECT
12/81	015	0.1	ATOMIC ABS-DIRECT
11/81	018	0.0	EMISSION-FLAME
11/81	022	0.0	ATOMIC ABS-DIRECT
11/81	024	0.2	ATOMIC ABS-DIRECT
11/81	025	0.1	ATOMIC ABS-DIRECT
11/81	026	1.7	EMISSION-PLASMA ICP
11/81	027	0.7	EMISSION-PLASMA ICP
10/81	030	0.1	ATOMIC ABS-DIRECT
11/81	037	0.2	ATOMIC ABS-DIRECT
11/81	040	0.1	ATOMIC ABS-DIRECT
11/81	041	0.1	ATOMIC ABS-DIRECT
11/81	044	0.1	ATOMIC ABS-DIRECT
11/81	048	0.1	ATOMIC ABS-DIRECT
11/81	049	0.1	ATOMIC ABS-DIRECT
11/81	050	0.1	OTHER
11/81	055	0.1	ATOMIC ABS-DIRECT
11/81	058	0.2	OTHER
10/81	059	0.1	OTHER
11/81	063	0.0	ATOMIC ABS-DIRECT
11/81	064	0.0	ATOMIC ABS-DIRECT
11/81	073	0.0	ATOMIC ABS-DIRECT
11/81	074	0.1	ATOMIC ABS-DIRECT
11/81	078	0.0	ATOMIC ABS-DIRECT
11/81	079	0.2	EMISSION-FLAME
11/81	081	0.1	ATOMIC ABS-DIRECT
11/81	087	0.1	ATOMIC ABS-DIRECT

TOTAL RANGE      0.0    10      1.7

DATE MO/YR	CODE	REPORTED VALUE	METHODS
-11/81	002	0.3	ATOMIC ABS-DIRECT
11/81	007	0.3	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	008	0.3	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	009	0.1	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	011	0.0	EMISSION-FLAME
11/81	013	0.1	EMISSION-PLASMA ICP
12/81	015	0.2	ATOMIC ABS-DIRECT
11/81	016	0.3	EMISSION-PLASMA ICP
11/81	018	0.1	EMISSION-FLAME
11/81	022	0.3	ATOMIC ABS-DIRECT
11/81	024	2.2	ATOMIC ABS-DIRECT
11/81	025	0.3	ATOMIC ABS-DIRECT
11/81	026	0.7	EMISSION-PLASMA ICP
11/81	027	0.5	EMISSION-PLASMA ICP
10/81	030	0.2	ATOMIC ABS-DIRECT
11/81	037	0.2	EMISSION-FLAME
11/81	040	0.2	ATOMIC ABS-DIRECT
11/81	041	0.2	ATOMIC ABS-DIRECT
11/81	044	0.2	ATOMIC ABS-DIRECT
11/81	046	0.2	EMISSION-PLASMA ICP
11/81	048	0.2	ATOMIC ABS-DIRECT
11/81	049	0.2	ATOMIC ABS-DIRECT
11/81	050	0.2	ATOMIC ABS-DIRECT, I-1735, USGS TWRI BK5 CH A1
11/81	052	0.1	ATOMIC ABS-DIRECT
11/81	055	0.2	ATOMIC ABS-DIRECT
11/81	058	0.5	OTHER
10/81	059	0.2	OTHER
11/81	063	0.2	ATOMIC ABS-DIRECT
11/81	064	0.2	ATOMIC ABS-DIRECT
11/81	066	0.2	EMISSION-PLASMA ICP
11/81	070	0.2	ATOMIC ABS-DIRECT
11/81	073	0.0	ATOMIC ABS-DIRECT
11/81	074	0.2	EMISSION-FLAME
11/81	078	0.2	ATOMIC ABS-DIRECT
11/81	079	0.8	ATOMIC ABS-DIRECT
11/81	081	0.2	ATOMIC ABS-DIRECT
11/81	087	0.8	ATOMIC ABS-DIRECT
TOTAL RANGE		0.0 10	2.2



DATE MO/YR	CGDE	REPORTED VALUE	METHOD
11/81	002	0.1	ATOMIC ABS-DIRECT
11/81	007	0.2	ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	008	0.2	ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	009	0.1	ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	011	0.5	CALCULATION FROM CA PLUS MG
11/81	013	0.1	EMISSION-PLASMA ICP
12/81	015	0.1	ATOMIC ABS-DIRECT
11/81	016	0.1	EMISSION-PLASMA ICP
11/81	018	0.0	ATOMIC ABS-DIRECT
11/81	022	0.1	ATOMIC ABS-DIRECT
11/81	024	0.8	ATOMIC ABS-DIRECT
11/81	025	0.7	ATOMIC ABS-DIRECT
11/81	026	0.3	EMISSION-PLASMA ICP
11/81	027	0.1	EMISSION-PLASMA ICP
11/81	037	0.1	ATOMIC ABS-DIRECT
11/81	040	0.1	ATOMIC ABS-DIRECT
11/81	041	0.1	ATOMIC ABS-DIRECT
11/81	044	0.1	ATOMIC ABS-DIRECT
11/81	046	0.1	EMISSION-PLASMA ICP
11/81	048	5.0	CALCULATION FROM CA PLUS MG
11/81	049	0.1	ATOMIC ABS-DIRECT
11/81	050	0.0	ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	052	0.1	ATOMIC ABS-DIRECT, I-1447, USGS TWRI BKS CH A1
11/81	055	0.0	ATOMIC ABS-DIRECT
11/81	058	0.1	OTHER
10/81	059	0.1	OTHER
11/81	063	0.1	ATOMIC ABS-DIRECT
11/81	064	0.6	ATOMIC ABS-DIRECT
11/81	066	0.1	EMISSION-PLASMA ICP
12/81	068	0.0	EMISSION-PLASMA ICP
11/81	070	0.1	ATOMIC ABS-DIRECT
11/81	073	0.0	CALCULATION FROM CA PLUS MG
11/81	074	2.4	TITRIMETRIC-EDTA. ASTM METHOD B, D1126
11/81	077	2.4	CALCULATION FROM CA PLUS MG
11/81	079	0.1	ATOMIC ABS-DIRECT
11/81	081	0.1	ATOMIC ABS-DIRECT
11/81	087	0.1	ATOMIC ABS-DIRECT

TOTAL RANGE 0.0 TO 5.0

DATE MO/YR	CODE	REPORTED VALUE	METHODS
11/81	002	0.1	BRUCINE, APHA STD METH, 14ED
11/81	005	0.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	007	0.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	008	0.4	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	009	0.1	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 Ch A1
11/81	011	0.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	013	0.6	OTHER
11/81	014	0.3	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 Ch A1
12/81	015	0.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	018	0.1	BRUCINE, APHA STD METH, 14ED
12/81	021	0.5	OTHER
11/81	024	0.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	025	1.0	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	026	0.1	BRUCINE, APHA STD METH, 14ED
11/81	027	1.2	OTHER
11/81	029	0.2	OTHER
10/81	030	0.1	BRUCINE, APHA STD METH, 14ED
12/81	034	0.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	040	0.5	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	041	0.1	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 Ch A1
11/81	044	0.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	046	0.4	OTHER
11/81	048	0.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	049	0.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	050	0.1	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 Ch A1
11/81	052	0.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION
11/81	055	2.1	BRUCINE, APHA STD METH, 14ED
11/81	058	0.1	MANUAL, CADMIUM REDUCTION
10/81	059	0.1	OTHER
11/81	063	0.1	TECHNICON AUTOANALYZER, HYDRAZINE REDUCTION
11/81	064	0.1	OTHER
11/81	066	0.1	OTHER
12/81	068	0.1	CADMIUM REDUCTION-DIAZOTIZATION,AUTO, I-2545, USGS TWRI BK5 Ch A1
11/81	073	0.1	BRUCINE, APHA STD METH, 14ED
11/81	074	0.1	BRUCINE, APHA STD METH, 14ED
11/81	077	0.1	TECHNICON AUTOANALYZER, HYDRAZINE REDUCTION
11/81	078	0.1	OTHER
11/81	079	0.2	BRUCINE, APHA STD METH, 14ED
11/81	081	0.1	TECHNICON AUTOANALYZER, HYDRAZINE REDUCTION
11/81	087	0.1	TECHNICON AUTOANALYZER, CADMIUM REDUCTION

TOTAL RANGE 0.1 TO 2.1



DATE MO/YR	CODE	REPORTED VALUE	METHODS
11/81	002	6.0	ELECTROMETRIC
11/81	005	6.4	ELECTROMETRIC, 1-1586, USGS TWRI BKS CH A1
11/81	007	5.4	ELECTROMETRIC, 1-1586, USGS TWRI BKS CH A1
11/81	008	5.5	ELECTROMETRIC, 1-1586, USGS TWRI BKS CH A1
11/81	009	6.4	ELECTROMETRIC, 1-1586, USGS TWRI BKS CH A1
11/81	011	6.3	ELECTROMETRIC
11/81	013	6.0	ELECTROMETRIC
11/81	014	6.6	ELECTROMETRIC
12/81	015	6.0	ELECTROMETRIC
11/81	018	5.4	ELECTROMETRIC
11/81	020	6.0	ELECTROMETRIC
11/81	022	5.0	ELECTROMETRIC, 1-1586, USGS TWRI BKS CH A1
11/81	024	6.2	ELECTROMETRIC
11/81	025	6.2	ELECTROMETRIC
11/81	026	7.1	ELECTROMETRIC
11/81	027	5.6	
11/81	029	6.2	OTHER
10/81	030	6.4	ELECTROMETRIC
11/81	037	6.4	ELECTROMETRIC
11/81	040	4.5	ELECTROMETRIC
11/81	041	6.3	ELECTROMETRIC
11/81	044	5.4	ELECTROMETRIC
11/81	046	6.5	ELECTROMETRIC
11/81	048	6.1	ELECTROMETRIC
11/81	049	6.2	ELECTROMETRIC
11/81	050	8.1	ELECTROMETRIC, 1-1586, USGS TWRI BKS CH A1
11/81	052	5.8	ELECTROMETRIC
11/81	055	6.2	ELECTROMETRIC
11/81	058	5.8	ELECTROMETRIC
10/81	059	6.3	OTHER
11/81	063	5.9	ELECTROMETRIC
11/81	064	7.9	ELECTROMETRIC
12/81	068	6.2	ELECTROMETRIC
11/81	069	7.1	ELECTROMETRIC
11/81	070	7.5	ELECTROMETRIC
11/81	073	6.9	ELECTROMETRIC
11/81	074	6.4	ELECTROMETRIC
11/81	077	6.2	ELECTROMETRIC
11/81	078	5.7	ELECTROMETRIC
11/81	079	7.0	ELECTROMETRIC
11/81	081	7.8	ELECTROMETRIC
11/81	086	6.1	ELECTROMETRIC
11/81	087	5.9	ELECTROMETRIC

TOTAL RANGE 4.5 TO 8.1

DATE MO/YR	CODE	REPORTED VALUE	METHODS
11/81	002	8.8	GRAVIMETRIC, APHA STD METH, 14ED
11/81	007	0.4	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	008	0.2	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	009	4.5	THOMIN TITRIMETRIC, I-1820, USGS TARI BKS CH A1
11/81	011	1.0	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	013	1.2	OTHER
11/81	014	5.0	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
12/81	015	0.8	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	018	0.0	TURBIDIMETRIC
11/81	020	5.0	TURBIDIMETRIC
12/81	021	41.0	GRAVIMETRIC, APHA STD METH, 14ED
11/81	024	8.1	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	025	1.0	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	026	1.0	TURBIDIMETRIC
11/81	029	4.0	OTHER
10/81	030	1.1	TURBIDIMETRIC
12/81	034	0.5	TURBIDIMETRIC
11/81	040	1.0	TURBIDIMETRIC
11/81	041	7.3	COMPLEXOMETRIC METHYLTHYMOL BLUE,AUTO, I-2822, USGS TARI BKS CH A
11/81	044	0.0	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	050	1.0	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	052	1.0	TECHNICON AUTOANALYZER, METHYL THYMOL BLUE
11/81	055	0.0	GRAVIMETRIC, APHA STD METH, 14ED
11/81	058	0.2	TURBIDIMETRIC
10/81	059	0.9	OTHER
11/81	066	1.1	OTHER
12/81	068	1.1	TURBIDIMETRIC
11/81	073	1.0	TURBIDIMETRIC
11/81	074	1.5	TURBIDIMETRIC
11/81	078	0.5	OTHER
11/81	081	0.0	TURBIDIMETRIC
11/81	087	2.1	TURBIDIMETRIC

TOTAL RANGE 0.0 TO 41.0



DATE MO/YR	CODE	REPORTED VALUE	METHODS
11/81	002	88	WHEATSTONE BRIDGE
11/81	005	19	WHEATSTONE BRIDGE
11/81	007	9	DIRECT READING INSTRUMENT, 1-1780, USGS TWRI BKS A1
11/81	008	10	DIRECT READING INSTRUMENT, 1-1780, USGS TWRI BKS A1
11/81	009	8	DIRECT READING INSTRUMENT, 1-1780, USGS TWRI BKS A1
11/81	011	9	WHEATSTONE BRIDGE
11/81	013	9	DIRECT READING INSTRUMENT
11/81	014	10	DIRECT READING INSTRUMENT
12/81	015	9	DIRECT READING INSTRUMENT
11/81	018	6	WHEATSTONE BRIDGE
11/81	020	9	DIRECT READING INSTRUMENT
12/81	021	650	WHEATSTONE BRIDGE
11/81	022	8	DIRECT READING INSTRUMENT, 1-1780, USGS TWRI BKS A1
11/81	024	9	DIRECT READING INSTRUMENT
11/81	025	19	DIRECT READING INSTRUMENT
11/81	026	11	WHEATSTONE BRIDGE
10/81	030	9	WHEATSTONE BRIDGE
11/81	037	8	DIRECT READING INSTRUMENT
11/81	040	22	DIRECT READING INSTRUMENT
11/81	041	10	WHEATSTONE BRIDGE
11/81	044	8	DIRECT READING INSTRUMENT
11/81	046	7	DIRECT READING INSTRUMENT
11/81	048	9	DIRECT READING INSTRUMENT
11/81	049	11	WHEATSTONE BRIDGE
11/81	050	6	DIRECT READING INSTRUMENT, 1-1780, USGS TWRI BKS A1
11/81	052	8	WHEATSTONE BRIDGE
11/81	055	7	DIRECT READING INSTRUMENT
10/81	059	8	OTHER
11/81	063	290	DIRECT READING INSTRUMENT
11/81	064	12	DIRECT READING INSTRUMENT
12/81	068	7	OTHER
11/81	069	12	WHEATSTONE BRIDGE
11/81	070	8	DIRECT READING INSTRUMENT
11/81	073	11	DIRECT READING INSTRUMENT
11/81	074	11	WHEATSTONE BRIDGE
11/81	077	13	WHEATSTONE BRIDGE
11/81	078	9	WHEATSTONE BRIDGE
11/81	086	122	WHEATSTONE BRIDGE
11/81	087	8	WHEATSTONE BRIDGE

TOTAL RANGE

6

TO

650

