NATIONAL WATER INFORMATION SYSTEM USER'S MANUAL

VOLUME 2, CHAPTER 2. WATER-QUALITY SYSTEM

By David V. Maddy, Lari E. Lopp, D. Lynn Jackson,
Richard H. Coupe, and Terry L. Schertz

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CONVERSION FACTORS

Multiply	By	To Obtain
foot (ft)	0.3048	meter (m)
foot squared per day (ft^2/d)	0.0929	meter squared per day (m^2/d)
cubic foot per second (ft^3/s)	0.02832	cubic meter per second (m^3/s)
gallon per minute (gal/min)	0.0630	liter per second (L/s)
million gallon per day (Mgal/d)	0.0438	cubic meter per second (m^3/s)
inch (in.)	25.40	millimeter (mm)
inch per year (in/yr)	25.40	millimeter per year (mm/yr)
mile (mi)	1.609	kilometer (km)
square mile (mi^2)	2.590	square kilometer (km^2)

Temperature in degrees Fahrenheit (^oC) as follows:

$$^oF = 1.8 \times {}^oC + 32$$

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ABSTRACT

The Water-Quality System is a water-quality data storage and retrieval system that is part of the National Water Information System developed by the U.S. Geological Survey's Water Resources Division. The National Water Information System is a distributed water data base in which data can be processed over a network of minicomputers at U.S. Geological Survey offices throughout the United States. This system comprises the Automated DAta Processing System, the Ground-Water Site Inventory System, the Water-Quality System, and the Water-Use Data System.

The Water-Quality System provides for entering new sites, updating existing sites within the local data base, and updating the Water Data Storage and Retrieval System (WATSTORE), which is the national data base. In addition, the Water-Quality System provides for retrieving and displaying water-quality data stored in the local data base. This manual contains instructions for users of the Water-Quality System and discusses the general operating procedures for the programs found within the system.

1 INTRODUCTION

The National Water Information System (NWIS) water-quality data-processing system available for use on the Prime* minicomputers has been designed as an interactive system. Most of the available programs are "conversational" routines that interact with the user, accepting input from the terminal and displaying output on the screen. Some programs that generate large volumes of output write to disk files for later viewing or

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* Use of firm names and trade names in this manual is for identification purposes only and does not constitute endorsement by the U.S. Geological Survey.

spooling, and a few programs accept input from files. Programs that read from or write to files request names from the user; a few pathnames are "hard coded" in the programs.

There are four appendixes in this manual; A and B are online as continuous parts of this document; C and D are online as separate documents named APPENDIX.C and APPENDIX.D.

Section 2 of this document discusses interactive use of the water-quality data-processing system through the system menu (QWDATA.CPL). Any of the programs may be invoked directly by using the PRIMOS "resume" command (Calvillo, 1985). To access the default water-quality and site files in the directory WATSTORE>DATA, the programs may be invoked by entering the following command line format:

```
RESUME program_pathname
```

where (1) "program_pathname" is the pathname of the program to be invoked.

Cursor control within NWIS is provided by the DISCUR cursor control library package, which includes the TERMINALID package. The user's terminal type must be specified prior to using the NWIS programs. Once the "system" is told the terminal type, the type is stored in a file and "remembered." The following command is used to set the user's terminal type:

```
TERMNL [options]
```

The TERMNL command without any options displays a list of terminals that are in use at the user's site. The user then selects the terminal type being used. The following options are available:

- ALL--shows all terminal types supported by NWIS.
- mnemonic--used to set the terminal type without listing them all on the screen. If the terminal has a printer attached to its printer port, add a "P" to the end of the mnemonic. For example, "TERMNL -TAB" would set to TAB 132/15, "TERMNL -TABP" would set to TAB L32/15 with printer attached, and "TERMNL -GRAPHON" would set to GRAPHON GO-140. Use "TERMNL -ALL" for a list of the available mnemonics.

The following command displays the user's currently selected terminal type:

SHOWTERM

In addition to the default site and QW files in the directory WATSTORE>DATA, the NWIS also provides for use of multiple files with one copy of the system software. The SITEFILE and QWFILE in the directory WATSTORE>DATA are the default files and the access and use of them requires no additional installation. Access to multiple QW files and site files is managed by the NWIS S_GPATH utilities. The multiple files are associated with data base numbers and user ID's in a data base definition file and then associated with path names from a master file of generic file names and path names. More information is located in the following files:

WATSTORE>UTILITIES>S_GPATH>S_GPATH.ADMIN.DOC, and
MULT.DATABASES.DOC

1.1 Management Overview

The Water-Quality File is a keyed-indexed file managed by a Prime software system called MIDAS (Multiple Indexed Data Access System). This system allows records to be retrieved efficiently on the basis of the values of selected data defined as KEY elements. In addition to the Water-Quality File, the system also includes a Site File that is accessed to select water-quality records by location. Additional MIDAS files used for checking the validity of parameter codes and geologic unit codes are included.

Each water-quality record to be stored is initialized by "logging in" the data; this is typically done when field data are available. At login time, a record number (unique within each District processing system) is assigned to each analysis by the program; the record number may be used later to access the analysis for updating or viewing. Analyses may be logged in by personnel who have access rights for entering data.

When YES/NO questions are asked throughout the programs, an answer of "Y", "y", "YES", "yes", "N", "n", "NO", "no", or a blank is required; any other answer should receive an error prompt and a repeat of the question. An answer of blank (or carriage return) will default to "yes". Similarly, where the

user may answer a prompt with "QUIT"; "Q", "q", or "quit" also will be accepted. Several programs request a numeric response to select an option (1, 2, or 3). When numeric data are requested, it is not necessary to enter final decimal points; however, imbedded decimal points must be entered. Note that a carriage return is sometimes referred to as "<CR>", during explanation of a program.

Many of the interactive programs use cursor-control routines to display forms on the terminal screen for ease of data entry. These forms routines function as follows:

A. Entry of input values must be terminated with a carriage return. This allows the user time to evaluate the entry and, if necessary, backspace and reenter before entering the carriage return. The carriage return causes the cursor to move to the beginning of the next field.

B. Any default values displayed on the input forms may be accepted by entering a carriage return.

C. If an invalid entry or a question mark (?) is entered for a field, the programs will display a list of valid codes and their meanings and then reposition the cursor to the beginning of the field.

D. The format for entering dates is year (4 digits), month (2 digits), and day (2 digits); this format (YYYYMMDD) is displayed instead of spaces on the input forms.

E. If data are unavailable for a nonmandatory field, the field may be skipped by entering a carriage return.

NOTE: The programs corresponding to major sections 2, 3, 4, and 5 are all Command Processor Language (CPL) programs (QWDATA, QWLAB, QWSYSTEM, and QWGRAPH). The programs used in sections 3.1 (GETLAB) and 4.3 (QWRESTON) are also CPL programs. All other programs have a suffix of .RUN (in WATSTORE>QW_PM>RUN), except that the pathname for the programs in section 2.2.5 (Update Site File) is WATSTORE>SITEDIR>RUN>STNUP.CPL and the pathname for the program in section 4.5 (STNCHANGE) is WATSTORE>SITEDIR>RUN>STNCHANGE.RUN. Lastly, the pathname for the program that produces Piper diagrams, section 5.4 (QWPIPER), is WATSTORE>QW_PM>RUN>QWPIPER.SEG.

1.2 Purpose of the Manual

The purpose of the user's manual is to serve as a reference guide and to aid the user in the use of the water-quality system programs.

1.3 Acknowledgments

In addition to the authors of the programs within the Water-Quality System, acknowledgment is given to several people who contributed by preparing, reviewing, and revising documentation. These personnel include:

Kerry T. Garcia
Kathleen K. Fitzgerald
Sharon B. Mathey

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2 INTERACTIVE PROGRAMS FOR DATA ENTRY AND RETRIEVAL-- System Command QWDATA

The programs in the QWDATA general-purpose data entry and retrieval system may be invoked by selecting them from a menu that is displayed at the terminal by the command:

```
QWDATA
```

In response to the QWDATA command, the following menu is displayed:

```
QW DATA PROCESSING ROUTINE REV 90.1

QW SYSTEM OPTIONS

1 -- LOGIN SAMPLES

2 -- ADD / CHANGE / DELETE DATA INCLUDING
     Enter field or miscellaneous data,
     Edit or flag samples,
     Count QW records, or
     Update Site File.

3 -- RETRIEVE SAMPLES INCLUDING
     Check entry or make loglist,
     Locate samples,
     Provide cation/anion balance,
     Make tables or PSTAT data set.

4 -- CHECK SUPPORT FILES INCLUDING
     List Site records,
     Access Parameter Code Dictionary,
     Access Geologic Unit Code File,
     Access State/County File.

5 -- CHANGE DEFAULT DATA BASE NUMBER

99 -- EXIT TO PRIMOS

Please enter a number from the above list:
```

Figure 1.--Data Entry/Retrieval menu

At the conclusion of each selected program, the above menu is redisplayed until 99--EXIT TO PRIMOS is selected. The options for the functions are given in the following pages with the name of the program used in each option shown in capital letters.

Prior to execution of any program from QWDATA.CPL, the following messages will appear. These messages are from a MIDAS utility, which is invoked to close any MIDAS files that may have been left open from previous execution of QWDATA programs.

```
A CLEANUP OF THE USER ENVIRONMENT IN PROCESS

***** PLEASE WAIT *******

[MPLUSCLUP Rev. 21.0.2 Copyright (c) 1987, Prime Computer, Inc.]
[Serial #IDA7-J8Q22S-QOF3XX (USGS)]
No cleanup was required.
```

2.1 Function 1 -- Login Samples (WATSTORE>QW_PM>RUN>QWLOGIN)

This function of the main menu invokes the login analysis routine. The program clears the terminal screen and displays the following form for entry of all the analysis heading information:

```
(1) AGENCY CODE: USGS_ (2) STATION NUMBER: _________________
(3) BEGIN DATE: YYYYMMDD (4) BEGIN TIME: HHMM
(5) END DATE: YYYYMMDD (6) END TIME: HHMM (7) MEDIUM CODE: _
(8) HYDROLOGIC CONDITIONS: 9 (9) SAMPLE TYPE: 9
                                  (10) HYDROLOGIC EVENT: 9
(11) PROJECT NUMBER: _________ (12) ANALYSIS TYPES: __________
(13) GEOLOGIC UNIT CODE: _________ (14) DATA CATEGORY: QW
(15) COLLECTING AGENCY (00027): _1028 (16) ANALYZING AGENCY
                                        (00028)  _1028
(17) REMARKS:_____________________________________________
(18) ANALYSIS STATUS: H(19) ANALYSIS SOURCE: 9 (20) LAB NUMBER:
```

The cursor is then positioned at the U in USGS. If this agency code is correct (the usual case), it is accepted by entering a <CR>; if not, any valid agency code (e.g., USEPA) may be entered followed by a <CR>. Valid agency codes can be found in Appendix B in this manual. The cursor is then positioned to the first blank following STATION NUMBER: and the program waits for input. Enter the station number, followed by a <CR>. Now the program checks the Site File to see if it contains an entry for the given station identification (agency code and station number). If an entry is found, the station name is displayed and the cursor is moved to the next input field. If no entry is found in the Site File, an error message is displayed and the cursor returns to the first blank following AGENCY CODE:. (In this situation, you may exit the program by entering "quit" in the station number field.) A valid entry in the Site File is mandatory for entry of water-quality data.

When a station number has been accepted, the cursor is moved to the first Y following BEGIN DATE:. The begin date is a mandatory entry and must be in the correct format. The date is checked for validity including being less than or equal to the current system date (future dates are invalid). If the begin date is more than 1 year prior to the current system date, a message is displayed and you are given the opportunity to reenter the date. Note that for composites, the full end date (year, month, and day) must be entered. Unlike the WATSTORE system, there are no restrictions on composites that span the end of the month. However, composites that span the end of a year will not

be correctly entered when sent to the Amdahl. The only checks made on end date are to ensure that it is 1) a valid date, and 2) not earlier than the begin date. (If a composite spans more than 30 days, a warning message is written and you are given the opportunity to change the end date). Begin and/or end times may be omitted; if times are entered, they are checked for validity.

The next three items (BEGIN TIME, END DATE, and END TIME) are optional; the items may be omitted by entering carriage returns. MEDIUM CODE is a mandatory entry; it is checked against the following list of valid medium codes:

Medium Code	Description
0	Not determined
A	Artificial
B	Solids (street sweepings, etc.)
C	Animal tissue
D	Plant tissue
E	Core material
F	Interstitial water
G	Soil
H	Bottom material
J	Sludge
K	Soil moisture
L-P	Taxonomic data (L) Phytoplanktonic species composition and enumeration (M) Phytoplanktonic species composition (N) Periphytic species composition (O) Benthic invertebrates species composition and enumeration (P) Periphytic diatoms species composition and enumeration
1	Suspended sediment
2	Leachate
3	Dry deposition
4	Landfill effluent
5	Elutriation
6	Ground water
7	Wet deposition
8	Bulk deposition
9	Surface water

If the medium code entry is omitted, invalid, or consists of "?", a list of valid medium codes is displayed and the cursor is repositioned to accept the entry.

For each of the next three items (8, 9, and 10), an entry of a <CR> results in the default values shown on the form (9 -- Not Determined, 9 -- Regular, and 9 -- Routine Sample). Note that if the medium code entered is "6 -- Ground Water," HYDROLOGIC CONDITIONS and HYDROLOGIC EVENT are skipped and the default values of "9 -- Not Determined" and "A -- Routine Sample" are entered into the record. On the rare occasions when some other value is desired, the items can be changed before the record is stored in the Water-Quality File, as explained subsequently. An invalid code or an entry of "?" for any of these three items displays a list of valid codes:

Hydrologic Condition Code	Description
A	Not determined
4	Stable, low stage
5	Falling stage
6	Stable, high stage
7	Peak stage
8	Rising stage
9	Stable, normal stage

Sample Type Code	Description
A	Not determined
H	Composite (time)
1	Spike
3	Reference
5	Duplicate
7	Replicate
9	Regular

Hydrologic Event Code	Description
A	Spring breakup
B	Under ice cover
C	Glacial lake outbreak
D	Mudflow
E	Tidal action
H	Dambreak
J	Storm
1	Drought
2	Spill
3	Regulated flow
4	Snowmelt
5	Earthquake
6	Hurricane
7	Flood
8	Volcanic action
9	Routine sample

The PROJECT NUMBER and ANALYSIS TYPES items are optional and may be omitted by entry of a <CR>; an entry of "?", followed by a <CR> for ANALYSIS TYPES, displays the following list of valid types:

Analysis Types	Description
CH	Chemical
BI	Biological
SE	Sediment
NU	Nutrients
PE	Pesticides
BE	Bed Material
ME	Metals
RA	Radiochemical

If the medium code is not "6 -- Ground Water" the GEOLOGIC UNIT CODE item is skipped. For ground-water samples, however, the Site File entry is searched for a geologic unit code. If a value is found, it is displayed on the form; it may be replaced with some other value or may be accepted by entering a <CR>. The DATA CATEGORY item is an extension of the file system that may be implemented later; for now, the displayed value "QW" should be accepted by entering a <CR>. Following the <CR>, the program searches the file to ensure that the analysis information is unique. If a record with the same combination of Agency Code, Station Number, Medium Code, Dates, and Data Category is found, the entry is rejected with an error message and the record number of the duplicate record is displayed.

The Water-Quality File has a requirement of unique secondary key 7 values (the combination of fields given previously) in order to allow analysis updating to be done correctly. If duplicate secondary keys were allowed, there would be no way to distinguish between a new record and an update to an existing record.

If the analysis information is acceptable, the cursor is positioned to the "_" preceding the 1028 for parameter code 00027, COLLECTING AGENCY. The default value, 1028, may be accepted or a new value entered and accepted by a <CR>. The cursor is then positioned to the "_" preceding the 1028 for parameter code 00028, ANALYZING AGENCY. Again the default value, 1028, may be accepted or a new value entered and accepted by a <CR>. Other acceptable fixed values for COLLECTING and ANALYZING agency codes are listed in Appendix B.

The cursor is then positioned to the REMARKS item; up to 50 characters of information may be stored in this item. After you enter a <CR> to end the remarks field entry, the cursor is positioned to accept a value for ANALYSIS STATUS. An invalid entry or a "?" causes a display of valid analysis status codes. A <CR> with no entry causes the default value "H -- initial entry" to be accepted for that field and the cursor is positioned to ANALYSIS SOURCE. An invalid entry or "?" causes a display of valid analysis source codes; a <CR> causes the default value "A -- not reported" to be accepted. Valid codes for ANALYSIS STATUS and ANALYSIS SOURCE are as follows:

Analysis Status Code	Description
A	Not determined
H	Initial entry
1	Retrieved, in review
3	Data in temporary hold status
7	Reviewed, approved for transfer to EPA STORET
9	Proprietary data (Regional Hydrologist approval required)

Analysis Source Code	Description
A	Not determined
B	Non-USGS field only
C	Non-USGS lab only
D	Non-USGS lab and field
F	USGS field and non-USGS field
G	USGS field and non-USGS lab
H	USGS field and non-USGS lab and field
1	USGS lab and non-USGS field
2	USGS lab and non-USGS lab
3	USGS lab and non-USGS lab and field
4	USGS lab and field and non-USGS field
5	USGS lab and field and non-USGS lab
6	USGS lab and field and non-USGS lab and field
7	USGS field only
8	USGS lab only
9	USGS lab and field

The last input item on the form is LAB NUMBER; this is the lab identification number, which is established by the Central Laboratory after the analysis is received by that office. Normally, you will not know this value at District login time and it should be left blank by entering a <CR>. If a value is entered at District login time, that value will not be updated by subsequent lab-data input programs.

When values for all 20 items on the input form have been entered or accepted, you may edit the values by responding to the following prompt:

```
TO CHANGE ITEMS ABOVE, PLEASE ENTER ITEM NUMBER
(99 TO CONTINUE) :
```

If a valid item number (1-20) is entered, the cursor is positioned to the appropriate position on the form. Changes are subject to the same edit criteria as on initial entry. After each change, the prompt is redisplayed until a value of 99 (to end the editing process) is entered.

The program next asks if you want to enter field data for the analysis. If YES, the field-data entry routine described later in section 2.2.1 is invoked; otherwise that step is skipped. The record is stored, the assigned record number is displayed, and you are asked if another analysis is to be entered. A NO ends the program. A YES produces the following prompt:

DO YOU WISH TO EDIT THE SAME HEADER?

A YES causes the previous analysis information to be redisplayed on the input form, followed by prompts for the item numbers you wish to change. This option allows the rapid login (data entry) of analyses with mostly repetitious information (analyses at one site that differ only by time, such as verticals in a lake). A NO causes a new input form to be displayed (without the previously entered values). The dialog proceeds as before, with the cursor positioned at the U in USGS of the AGENCY CODE.

2.2 Function 2 -- Add/Change/Delete Samples

This function of the main menu invokes the following submenu:

```
            ADD / CHANGE / DELETE DATA OPTIONS

      1 -- ENTER FIELD DATA

      2 -- ENTER MISCELLANEOUS DATA

      3 -- EDIT SAMPLE RECORDS INCLUDING
           Modifying QW record header,
           Modifying QW data, or
           Deleting QW records.

      4 -- FLAG APPROVED SAMPLES

      5 -- UPDATE SITE FILE

      6 -- COUNT QW RECORDS

     98 -- EXIT TO MAIN MENU

     99 -- EXIT TO PRIMOS

  Please enter a number from the above list:
```

Figure 2.--Data Options submenu

2.2.1 Option 1 -- Enter Field Data (WATSTORE>QW_PM>RUN>QWFIELD)

Selecting this option invokes the program to enter up to 40 parameters of field data. This program first asks for the number of the field form to be used. The field form is a list of parameter codes and their associated names which must be in a file named WATSTORE>SUPPORT>FIELD.PARMSnn, where "nn" represents the 2-digit form number. The contents of these files can be tailored to match your District field sheet. Fixed values for certain parameters are listed in Appendix B. Ten parameter codes (99900-99909) have been established for District use and the usage is described later in section 2.2.3. Any Prime-resident editor that produces an ASCII output file may be used to create or edit the file. The input file will be used to create a screen form for data entry. The format of each record is as follows:

Columns 1-5	Parameter code (5 digits, use leading zeros).
Columns 6-30	Name to display for this parameter (should match District field sheet name to simplify entry).
Column 31	Precision code to use for this parameter or blank (if this column is blank, precision code defaults to code from the Parameter Code Dictionary).
Column 32	Y or blank -- If this column is blank, the program will not ask for this parameter for ground-water analyses (medium code of "6".
Column 33	Y or blank -- If this column is blank, the program will not ask for this parameter for surface-water analyses (medium code of "9").
Column 34	R or blank -- If this column is blank, the program will not ask for a remark code for this parameter (the remark code defaults to blank).
Column 35	Method code to use for this parameter or blank (if this column is blank, method code defaults to blank). Valid method codes are listed in Appendix C.

Note that when this file is created and/or edited, the terminal cursor must be positioned beyond column 35, even if columns 35 or prior are blank. Because of the way Prime stores files, entering a <CR> before column 35 may cause the record to be the wrong length, and a file-read error may occur.

After the field form (file) is located and read, you are asked if analyses are to be identified by record number or by station number, date(s), time(s), medium code, and agency code. This query is omitted when the program is entered from QWLOGIN (see sec. 2.1), since data for the current record are used.

If identification is to be by station number, date, time, and medium code, a form is displayed for entry of station number, begin date, begin time, end date, end time, medium code, data category, and agency code, (station number, begin date, medium code, and agency code are necessary to uniquely identify a specific record). If identification is to be by record number, the above items for the retrieved record are displayed. With either method of identification, the station name is also displayed and you are asked to verify that this is the desired record. If the record does not exist (usually a typing error), you are notified and asked to identify another analysis. If you enter QUIT in place of a station number or record number, the program ends.

The program then displays a form showing the parameter codes and names from the requested field form (file), with spaces for the entry of values, and positions the cursor at the initial space of the first value. If the sample already contains data for any of the specified parameters, the stored value is displayed in the appropriate space, and the curscr is moved to the first field that contains no data. If all fields are occupied, the program skips to the edit section described subsequently. Enter the value and the program then prompts for a remark code, if appropriate. Valid remark codes are as follows:

Remark Code	Description
Blank	Not remarked.
0,E	Estimated value.
1,<	Actual value is known to be less than the value shown.
2,>	Actual value is known to be greater than the value shown.
3,M	Presence of material verified but not quantified.
4,N	Presumptive evidence of presence of material.
U	Material specifically analyzed for but not detected.
B,K	Results based on colony count outside the acceptable range. (non-ideal colony count).
L	Biological organism count less than 0.5 percent (may be only observed).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
X	Delete the parameter.

A <CR> with no data is interpreted as a null-value, and that parameter is not stored. For values in which no decimal point has been entered, a decimal point is assumed at the end of the value; an imbedded decimal point must be entered. The quality-assurance code for parameters is set to I.

When data for each parameter have been entered, the program provides an opportunity to modify the data by displaying the following prompt:

PLEASE ENTER PARAMETER CODE TO CHANGE (99 TO END):

and continues with this dialog until the prompt is answered with "99". If a value exists for the parameter code entered, a <CR> retains the old value; entry of a new value replaces the old one; and an entry of "D" causes the parameter to be deleted from the record. Deleted parameters are written to the file QWUP.CURnn (nn is the appropriate data base number) in the directory WATSAVE for use in updating the national data base on the Amdahl in Reston.

As each value is entered, the following checks are made:

- If the value is negative, the parameter code is checked against a list of codes for which negative values are permitted; if the entry is invalid, a message is displayed and the value is rejected.

- If the value is for a parameter that can contain fixed values, the fixed values file list is checked; if the value is invalid for that parameter, a message is displayed and the value is rejected.

- If the value for pH (parameter code 00400) is greater than 14, a message is displayed and the value is rejected. If the value for pH is outside the range of 4.5 to 9.0, a message will be displayed during data editing, but the value will be retained.

When data entry is complete, the record is stored and the dialog restarted with the request for record identification or QUIT to end.

The edit-validation module of QWFIELD has been removed, in efforts to speed update operations. Users will need to run QWVALID (Option 7) to validate updates.

2.2.2 Option 2 -- Input Miscellaneous Data (WATSTORE>QW_PM>RUN>QWINPUT)

This option invokes program QWINPUT to add up to 40 parameters of data from cooperator labs or District labs. (A separate program is used for adding analytical data from the USGS Central Lab, see sec. 4.2). This program first asks if the records are to be identified by record number or by agency code, station number, date, time, and medium code. Next, the program asks for the name of the input file that contains the parameter list; the input file must be in the directory you are working in or the full pathname must be specified. The contents of these files can be tailored to meet the needs of the District. Ten parameter codes (99900-99909) have been established for District use and the usage is described later in section 2.2.3. Any Prime-resident editor that produces an ASCII output file may be used to create or edit the file. The input file will be used to create a screen form for data entry. The format of the records in the file is as follows:

Record 1

Column 1	The analysis-source code (from the standard WATSTORE list) for this data.

Records 2-n

Columns 1-5	Parameter code (5 digits, use leading zeros).
Columns 6-30	Name to display for this parameter (should match lab sheet name to simplify entry).
Column 31	Precision code to use for this parameter or blank (if this column is blank, precision code defaults to code from Parameter Code Dictionary).
Column 32	Quality-assurance code to use for this parameter or blank (if this column is blank, quality assurance code defaults to A--not reported).

Column 33	R or blank--If this column is blank, the program will not ask for a remark code for this parameter (the remark code defaults to blank). Remark codes are listed on page 2-13.
Columns 34-38	Fixed value to use for this parameter (such as 1028 for parameter 00027)--or blank (if blank, has no effect). Approved fixed values are listed in Appendix B.
Column 39	Method code to use for this parameter or blank (if this column is blank, method code defaults to blank). Valid method codes are listed in Appendix C.

Note that when this file is created and/or edited, the terminal cursor must be positioned beyond column 39, even if columns 39 or prior are blank. Because of the way Prime stores files, entering a <CR> before column 39 may cause the record to be the wrong length, and a file-read error may occur.

The file containing the parameter list is located and read. The remainder of the program dialog is identical to that of the field-data entry program. Valid precision, quality-assurance, and remark codes are listed in Appendix A; method codes are listed in Appendix C. The quality-assurance codes are repeated here for convenience:

Quality Assurance Code	Description
A	Not reported.
B	Non-USGS lab value--failed edit.
C	Non-USGS field value--failed edit.
D	USGS lab value--failed edit.
E	USGS field value--failed edit.
F	Non-USGS lab value--in review.
G	Non-USGS field value--in review.
H	USGS lab value--in review.
I	USGS field value--in review.
1	Non-USGS lab value--approved for transfer to EPA STORET.
2	Non-USGS field value--approved for transfer to EPA STORET.
3	USGS lab value--approved for transfer to EPA STORET.
4	USGS field value--approved for transfer to EPA STORET.

The edit-validation module of QWINPUT has been removed, in efforts to speed update operations. Users will need to run QWVALID (Option 7) to validate updates.

2.2.3 Option 3 -- Edit Samples (WATSTORE>QW_PM>RUN>QWEDIT)

This option invokes an edit routine that allows changing the record information, deleting records, or adding, changing, and deleting parameter values. Like the field entry and miscellaneous entry programs, the edit routine gives you the choice of selecting records by record number or by station number, date, time, medium code, and agency code; displays the record-identification information; and asks you to verify that this is the desired record.

When a record has been retrieved, the edit program offers four options:

1 -- SELECT ANOTHER RECORD

2 -- MODIFY THE RECORD HEADER

3 -- MODIFY THE ANALYTICAL DATA

4 -- DELETE THE RECORD

Ten parameter codes (99900-99909) have been established in the Parameter Code Dictionary for use by individual Districts. The first five codes (99900-99904) have precision code defaults of 2, and the second five (99905-99909) have precision code defaults of 3. Their use is for storing District values for constituents who do not have a valid parameter code. Once stored, the values can be tabled and graphed, and statistics can be run. If the values need tabling, the heading is a seven-character matrix with seven characters per line and seven lines allowed. The heading may then be modified with an editor to accurately describe the constituent. Following is an example table from the data base.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	TEMPER-ATURE WATER (DEG C) (100010)	SPE-CIFIC CON-DUCT-ANCE (US/CM (00095)	9990001 9990002 9990003 9990004 9990005 9990006 9990007 (99900)	9990401 9990402 9990403 9990404 9990405 9990406 9990407 (99904)	9990501 9990502 9990503 9990504 9990505 9990506 9990507 (99905)
MAR 16...	0700	15.5	295	11	<10	86.0

The remaining dialog depends on the option selected. If you want to modify the header information, the items that can be changed are displayed with numbers and you are asked to select a number to be modified. The cursor is positioned to the appropriate value. After each change, the program asks if more changes are to be made; if so, the current values are redisplayed and the dialog is repeated. A # sign may be used to delete (blank out) a geologic unit code in the header information. When no further changes are requested, the record is updated in the file and you are asked to enter another record number (if selecting by record number) or to enter a new station number, date, time, medium code, and agency code. A QUIT terminates the program.

If you want to modify the analytical data, the parameter codes currently stored for the record are displayed with their associated values and parameter-level codes. You are prompted to enter the parameter code to be changed. Note that a limited number of values can be displayed on a single screen. If the record contains more values than can be accommodated on a screen, enter D (display) to get the next available screen of data; this dialog continues until all parameters in the record have been displayed. If you enter a parameter that exists in the record but is not displayed on the current screen, the program displays the appropriate screen; reenter the parameter code to edit. Fixed values for certain parameters are listed in Appendix B.

If the parameter requested to be changed is in the record, the cursor is positioned at the beginning of its value and a new value is accepted from the screen. If the character D (or d) is entered for the value, the parameter, its value, and the associated parameter-level codes are deleted from the record.

Note that the cursor, when accepting an entry, moves to each of the four parameter-level codes (REMARK, QUALITY-ASSURANCE, METHOD, and PRECISION). Valid parameter-level codes are listed in Appendix A. An entry for quality-assurance code is mandatory; if it is omitted, a default value of "A -- not determined" is accepted. Valid method codes are listed in Appendix C. A # sign may be used to blank the remark code and/or the method code. Deleted parameters are written to the file QWUP.CURnn (nn is the appropriate data base number) in the directory WATSAVE for use in updating the national data base on the Amdahl in Reston.

If the requested parameter is not present in the record, the parameter code is displayed at the end of the list and the cursor is positioned to accept a value. After each change, you are asked if more changes are to be made to this record; when no more changes are requested, the record is updated in the file and you are asked to enter another record number (if selecting by record number) or to enter a new station number, date, time, medium code, and agency code. A QUIT terminates the program.

If you want to delete the record, the program double-checks by asking if you really want to delete it; an answer of YES (full word, upper case) is required before the deletion will be made. An alternative for deleting a record is to place the word DELETE in the GEOLOGIC UNIT CODE field (cols. 36-43) on a 1-card. This is explained in section 4.2.2 (QWENTER).

NOTE: Many users may be aware that in the WATSTORE QW file on the Amdahl in Reston, a deleted record or parameter value is only "flagged" for deletion; it is not physically removed from the file until a later time. The deleted records or values may be recovered by removing the delete flag. That functionality is based on IBM Operating System software and is not a part of the Prime NWIS Water-Quality data-processing system. On the Prime, deleted records or values are removed from the file immediately and cannot be recovered except by reentering.

The edit-validation module of QWEDIT has been removed, in efforts to speed update operations. Users will need to run QWVALID (Option 7) to validate updates.

2.2.4 Option 4 -- Flag-Approved Samples (WATSTORE>QW_PM>RUN>QWFLAG)

This program allows the person(s) responsible for water-quality data management to set flags (District Processing Status) on the status of data. Upon data input, the flag is automatically set to indicate that the analysis is complete and has been APPROVED -- READY TO TRANSMIT to the WATSTORE Water-Quality File on the Amdahl in Reston. Optionally, analyses of local interest only may be flagged as APPROVED, BUT DO NOT TRANSMIT. The program asks if records are to be marked READY TO TRANSMIT (R) or COMPLETE, BUT DO NOT TRANSMIT (Z).

The program then asks if record identifiers will be entered from the terminal; if NO, you are prompted for the name of the file that contains the list of record identifiers. The file should contain the necessary identification beginning in column 1, one record per line.

Finally, you are asked if records are to be identified by record number, or by station number, date, time, medium code, and agency code. If the selected record is already flagged COMPLETE, BUT DO NOT TRANSMIT, a message is displayed giving you the option of changing the flag status or leaving the flag status as is. If the record identifiers are being entered from the terminal, the program updates the record and you are asked to enter another record (if selecting by record number) or to enter a new station number, date, time, medium code, and agency code.

Valid District Processing Status codes are as follows:

N -- New record
F -- Field data
L -- Laboratory data
P -- Pending approval
R -- Ready to transmit to Reston
T -- Transmitted
Z -- Local-use data

2.2.5 Option 5 -- Update Site File (WATSTORE>SITEDIR>RUN>STNUP.CPL)

These Site File processing programs are independent programs written by members of the Ground-Water Site Inventory Work Group; instructions for the use of the data-input routine are in the file

WATSTORE>GW>DOC>ASCII>GWSCREEN-ENTRY.INPUT.USER

and are not repeated here. The Edit and Update routines require no user input; explanations of their functions and messages can be found in the following:

WATSTORE>GW>DOC>ASCII>GWEDIT.USER
and
WATSTORE>GW>DOC>ASCII>GWUPT.USER

2.2.6 Option 6 -- Count Water-Quality Records (WATSTORE>QW_PM>RUN>QWCOUNT)

This option counts the number of records in the Water-Quality File for the stations selected. The program asks if you want to enter the site ID's from the terminal; if not, then you are queried for the name of the input file. Next, you are asked if you want the output to the terminal or to a file. If a file is selected, the program then queries for the name of the output file. Now the program either reads the input file of agency code, station identification numbers (5 characters, 15 characters) or prompts for agency code and site ID (separated by a space). The station identification; station name; number of records; first record number, date, and time; and last record number, date, and time are then displayed on the terminal screen or written to an output file, as chosen. If you are entering the agency code and site ID from the terminal, or getting output to the terminal, you are prompted by CONTINUE (YES OR NO).

2.3 Function 3 -- RETRIEVE SAMPLES

This function of the main menu invokes the following submenu:

```
        RETRIEVE SAMPLES OPTIONS

    1 -- CHECK QW DATA ENTRY

    2 -- MAKE LOG LIST OF QW RECORD HEADER INFORMATION

    3 -- LOCATE SITES AND/OR SAMPLES

    4 -- PROVIDE CATION-ANION BALANCE

    5 -- MAKE A PSTAT (FLAT FILE) DATA SET

    6 -- MAKE WATER-QUALITY TABLES
           (Must have file of record numbers first,
            usually obtained with option 3)

    7 -- RUN QWVALID TO EDIT DATA

   98 -- EXIT TO MAIN MENU

   99 -- EXIT TO PRIMOS

    Please enter a number from the above list:
```

Figure 3.--Retrieve Samples submenu

2.3.1 Option 1 -- Check Entry (WATSTORE>QW_PM>RUN>QWLIST)

This program displays header information and analytical data for requested records. The program asks if a list of requested records is located in a file or if the record identifiers will be entered from the terminal. The program then asks if the output should be written to the terminal or into an output file. The check entry routine gives you the choice of selecting records by record number or by station number, date, time, medium code, and agency code.

If the list of records is entered from the terminal, the program displays the first requested record on the terminal screen after displaying the prompt PLEASE ENTER RECORD NUMBER

(QUIT TO END) (for record numbers), or the prompt READY TO CONTINUE (YES OR NO)? (for station numbers).

After the record is displayed on the terminal, the program again prompts: READY TO CONTINUE (YES OR NO)? If you supply record identification, the appropriate record information will be listed on the screen until a response of QUIT is entered to terminate the program.

If the list of records for the check-entry option is located in a file, the program prompts you for the file name and whether the records will be identified by record number or station number, date, time, medium code, agency code, and data category. If the records are to be identified by record number, the format of the file is one record number per line, with the 8-digit record number beginning in column 1 of each line. If the records are to be identified by station number, date, time, medium code, agency code, and data category, the format of the input file is as follows:

Column	Description
1-5	Agency code
6-7	Data Category (code QW)
8-22	Station number
23-46	Collection date
23-26	Begin year (YYYY)
27-28	Begin month (MM)
29-39	Begin day (DD)
31-34	Begin time (2400 hrs. system)
35-38	End year (YYYY)
39-40	End mo (MM)
41-42	End day (DD)
43-46	End time (2400 hrs. system)
47	Medium code

2.3.2 Option 2 -- Log list (WATSTORE>QW_PM>RUN>QWLOGLIST)

The LOGLIST program tabulates selected information for records within a selected water year for all sites, or for a list of station numbers (up to 50) and/or a range of dates. An example of the output from this program is included in section 2.3 of Appendix D. This table is written to a file and may be spooled to a remote printer at your request. You are queried at the beginning of the program for the name of a file (in your current directory) to hold the output. If the file does not exist, it is generated; if it does exist, it is either appended or overwritten (according to your response). You are then asked for the station numbers and the time period within a given water year for which the data are to be tabulated. If station numbers are entered via an input file, the program will accept station numbers with or without the USGS Agency Code.

When the selected records have been retrieved, they are ordered by record number; however, you may request that they be sorted into some other order. Up to six sort fields (station number, project code, processing status, date of last update, record number, and lab ID) are allowed, singly or in combination. When the sort request is complete, the program asks if data for another water year (and station numbers and/or date range) are to be retrieved. After the records are tabulated, the program notifies you of the output file name and offers to spool the output file. If the response to the "Spool(?)" query is YES, you are prompted for the destination printer. A <CR> will default to the default local printer (usually PR0). If printing of the output file is requested, the program then displays a message regarding the completion of the spool request and control is returned to the RETRIEVE SAMPLES menu. An example of the output is included in Appendix D.

Valid LOGLIST status codes are as follows:

NEW	-- New record (Flag = N)
FIELD	-- Field data (F)
LAB	-- Laboratory data (L)
FD+LB	-- Pending approval (P)
APPRO	-- Ready to transmit to Reston (R)
TRANS	-- Transmitted (T)
LOCAL	-- Local-use data (Z)

2.3.3 Option 3 -- Locate Sites and/or Records (WATSTORE>QW_PM>RUN>QWSITEREC)

This program is a generalized retrieval routine, analogous to the Reston procedure QWRETR, Program E771. Unlike Program E771, however, this program does not retrieve analyses and write the data to work files. Instead, a list of record numbers that satisfy the retrieval request is written for use by other programs. The program has two sections; the first selects sites, the second selects water-quality records. Either section of the program may be skipped.

When the program is invoked, it first asks if you want to locate sites. If YES, a list of available criteria for site selection is displayed. Available selection criteria (which may be used in combination) are as follows:

Agency code	-- up to 10 agency codes
State code	-- up to 10 State codes
County code	-- up to 40 county codes
Hydrologic unit code	-- up to 10 hydrologic unit codes
Drainage basin code	-- up to 10 drainage basin codes
Polygon	-- up to 50 vertices
Range of station numbers	-- only 1 range
Type of site	-- up to 10 site types

A list of valid agency codes are found in Appendix B. State and county codes can be obtained from the FIPS Code File (FIPSFILE) using the option described in section 2.4.5. Valid site types can be found in Appendix A.

The site-selection criteria are identified on the following screen:

```
AGENCY CODE:_       STATE CODE:_       COUNTY CODE:_
HYDROLOGIC UNIT:_       DRAINAGE BASIN:_       POLYGON:_
RANGE OF STATION NUMBERS:_     TYPE OF SITE:_


CHOOSE THE ITEMS YOU WANT TO RETRIEVE ON FROM THE FORM

ENTER X (OR x) -- TO SELECT AN ITEM
ENTER CR       -- TO SKIP AN ITEM
ENTER Q (OR q) -- TO SKIP THE REST
```

If records are to be retrieved by polygons, the program asks if you have a file with the vertices in it. If YES, the program asks for the file name. The vertices should be in the file, one pair of latitude and longitude per line; latitude in columns 1-7 RIGHT-JUSTIFIED, longitude in columns 9-16 RIGHT-JUSTIFIED. You may have up to 50 vertices.

If you do not have the vertices in a file, the program asks if you want to store the vertices you are about to enter into a file. If YES, the program asks for a file name.

The program then asks if you want to get the latitude-longitude values from the FIPSFILE. If YES, the program asks for the 2-digit State code and the 3-digit county code. A county code of 000 will retrieve the State record values. If you do not want the values from the FIPSFILE, the program asks you to enter them from the terminal.

If records are to be qualified by site type, the following additional options are available.

For SW (stream) sites:

Base discharge (range)	-- only 1 range
Drainage area (range)	-- only 1 range

For GW (ground-water) sites:

Primary geologic unit	-- up to 20 geologic unit codes
Use of site	-- up to 10 use-of-site codes
Use of water	-- up to 10 use-of-water codes
Well depth (range)	-- only 1 range
Ground-water project ID	-- up to 10 project ID's

The selection criteria are ANDed together; that is, to be selected a site record must satisfy all the criteria.

If no site-selection criteria are specified, the program uses a default of searching for sites with Agency Code equal to USGS.

After the Site File has been queried for sites that satisfy your selection criteria, you are told how many sites were selected and (if the number of selected records is greater than zero) asked if the records should be sorted. The selected records may be sorted on any combination of the following fields:

Agency code
Station number
Station name
Latitude-longitude
State
County
Hydrologic unit
Drainage basin
Site type
Use of water
Geologic unit
Ground-water project ID

You are then asked if the list of sites should be saved; if YES, you are prompted for a file name and the site identification for selected sites is written to the specified file. The records saved include the following variables: agency code, station number, station name, latitude, longitude, District code, State code, county code, datum, hydrologic unit code, drainage area, geologic unit code, project number, and water level.

After sites are selected, or if you choose not to select sites, the program moves to the second section (selection of water-quality records). If sites were selected in section one, the list of selected sites is used to qualify the QW retrieval; if not, you are asked if records are to be selected only for specific sites and, if so, whether the list of site ID's will come from the terminal or from a file. If the site ID's are to be read from an input file they should be listed in the file, one site ID per line. The correct format for the input file is:

Column	DESCRIPTION
1-5	Agency code (left-justified in col. 1)
6-20	Station number (left-justified in col. 6)

Water-quality records may be selected on any combination of the following criteria:

Date (range)	-- only 1 range.
Analysis-level codes	
Medium code	-- up to 10 medium codes.
Analysis source code	-- up to 10 analysis source codes.
Hydrologic condition code	-- up to 6 hydrologic condition codes.
Hydrologic event code	-- up to 6 hydrologic event codes.
Sample type code	-- up to 6 sample type codes.
Project ID	-- up to 10 project ID's.
Geologic unit	-- up to 10 geologic unit codes.
Processing status	-- up to 6 processing status codes.
Parameter values and codes	-- up to 50 parameter codes. -- up to 50 parameter value ranges. (minimums - maximums)
Parameter level codes	
Remark codes	-- up to 5 remark codes.
Quality assurance codes	-- up to 5 quality assurance codes.
Method codes	-- up to 5 method codes.

Valid remark and quality assurance codes are listed in Appendix A. Method codes are listed in Appendix C.

The requested selection criteria are ANDed together, that is, all must be satisfied to qualify a record for selection, except parameter values and codes. Prior to the first parameter selection you are prompted for a NOT option. This option is used to locate records with missing data. For example, if the NOT option is selected with parameter code 00010, only records without temperature (parameter code 00010) are selected. If parameter values and codes are chosen, you are asked for each parameter after the first, whether the relation to the previous parameter is AND or OR.

If no water-quality record-selection criteria are specified, the program uses a default date range from 1776 to present.

The water-quality parameter selection criteria are identified on the following input form:

DATE: _ ANALYSIS-LEVEL CODES: _ PROJECT ID: _ GEOLOGIC UNIT: _

PROCESSING STATUS: _ PARAMETER VALUES AND CODES: X

YOU MAY SELECT UP TO 50 PARAMETER CODES
ENTER Q IN ANY FIELD TO SKIP THE REST OF THE FORM
PLEASE END THE LIST WITH A BLANK

NOT: _ PARAMETER CODE: _____ MINIMUM: _____ MAXIMUM: _____
REMARK CODES: _____ QA CODES: _____ METHOD CODES: _____

A MINIMUM OR MAXIMUM VALUE OF BLANK MEANS NO RESTRICTION

YOU MAY ENTER UP TO 5 REMARK CODES, QA CODES, AND/OR METHOD CODES WITH NO INTERVENING BLANKS

TO GET ONLY ANALYSES WITHOUT REMARKS, PLEASE ENTER A Z IN THE REMARK LIST.
*SELECTION OF THE NOT OPTION (X OR x) QUALIFIES RECORDS ONLY IF PARAMETERS ARE NOT PRESENT IN THE RECORD.

After water-quality records are selected, you are told how many records were selected and (if the number of selected records is greater than zero) asked if the records should be sorted. Selected records may be sorted on any combination of the following fields:

Agency code
Station number
Dates and times
Medium code
Project ID
Geologic unit code
Processing status
County code
Station name
Site type

The selected record numbers are then written to your file and you are asked if the list of sites with QW data should be saved. If YES, you are prompted for a file name; the site identification for sites with QW data is written to the specified file in the format of: agency code, station number, station name, latitude, longitude, District code, State code, county code, datum, hydrologic unit code, and drainage area; and the program ends.

2.3.4 Option 4 -- Sample List and/or Balance (WATSTORE>QW_PM>RUN>QWBAL)

For selected analyses this program creates: 1) a list of parameters and their values, 2) a cation-anion balance table, or 3) both.

When the program is invoked, it first asks if sample identification is to be entered from the terminal. If the answer is NO, the program requests the name of a file that contains a list of sample identifiers. This file should contain the necessary identification information (record number or agency code, data category, station number, begin date and time, end date and time, and medium code) in the following format, one entry in the file for each requested record.

Col. 1-5	Agency code
6-7	Data category (QW)
8-23	Station number
24-31	Begin date (YYYYYMMDD)
32-35	Begin time
36-43	End date (YYYYMMDD)
44-47	End time
48	Medium code

Then, or if sample identification is to be entered from the terminal, the program prompts for the name of a file to hold the output.

The program then asks which output options you wish (parameter listing, balance table, or both) and whether records are to be selected by record number or by agency code, station number, date, time, and medium. The program prompts for another identifier after processing each record; a record number or station ID of QUIT signals the end of the list. On concluding, the program offers to spool the output file before exiting. An example of output from this program is included in section 2.3 of Appendix D.

2.3.5 Option 5 -- Make a P-STAT Data Set (WATSTORE>QW_PM>RUN>QWPSTAT)

This program places selected data from specified records into a sequential file that may be read by the standard P-STAT input routines. Records to be retrieved must be identified by unique record number and the numbers must be in a file located in the directory from which you execute the program. (The necessary list of record numbers is usually generated by running Option 3 -- Locate samples. If you wish to create a list using the editor, the 8-digit record numbers should begin in column 1, one entry per line).

The program first asks for the name of the file that contains the record numbers, then for the name of a file to hold the output data. You then have three options for handling values that include remark codes:

1) Remark codes may be included with the associated values in the output file. Note that this format is invalid for input to PSTAT; it is provided for data verification only.

2) Remark codes may be suppressed and only the associated values included in the output file. For a remark code of N (not detected) there is no associated value; the output file will contain "-" (missing value of the first kind).

3) All values associated with remark codes may be replaced with "--" (missing value of the second kind).

Regardless of which option is chosen, a summary listing of remarked values is produced in a separate output file.

The program then asks if the desired parameters should be entered from the terminal. If the answer is NO, you are asked for the name of the file that contains the parameter list; the file is opened and read; and the program continues with no additional input. (The supplied file should contain the desired 5-digit parameter codes beginning in column 1, one parameter per line). If the parameter list is not in a file, you are prompted to enter each parameter from the terminal; a null entry (carriage return) ends the list. Only numeric parameters and the two alpha parameters CALCV and ADDPC are valid. A maximum of 347 parameters may be included. When the program ends, the name of the output file is printed at the terminal.

The first record for each analysis contains the station number, begin date, begin time, end date, and end time. If date or time are missing, as they may be for some historic samples, they are represented by "-" (missing value of the first kind). The remaining records for each analysis each contain a maximum of eight data values; the values are in the order in which parameter codes were entered. Each value occupies nine spaces and is preceded by a blank; the values are rounded according to the standards given in the Parameter Code Dictionary. If there is no value for a requested parameter, the value is represented by "-" (missing value of the first kind).

A second output file, the name of which is formed by adding ".CMND" to the file name you supply, contains the PSTAT BUILD command to identify the variables and read the data; this file also consists of 80-character records. A third output file, whose name is formed by adding ".STATS" to the supplied file name contains a summary listing of all values that have remark codes. The listing includes (for each parameter code) every unique combination of remark code and value found, and a count of occurrences of that combination.

2.3.6 Option 6 -- Water-Quality Table (WATSTORE>QW_PM>RUN>QWTABLE)

This is the NWIS water-quality data-processing tabling routine for preparing publication tables of water-quality data. NWIS supports the table types and options available from the Reston WATSTORE system on the Amdahl. In addition, three extensions are supported on the Prime QW system:

1 -- A maximum of 350 parameters may be included in a table (347 if the 3 header parameters are included).

2 -- For single-station format only, composites that span the end of a month are permitted and are printed with the proper dates.

3 -- Tables of biological data, similar to those produced by the WATSTORE program BIOTAB on the Amdahl computer, may be produced by selecting table type 4.

The program first asks for the name of the file that contains the list of record numbers to be tabled. This list is usually generated by Option 3 -- Locate samples, but a list may be created with the editor; each 8-digit record number is entered

on a separate line, beginning in column 1. After the input file is identified and opened, the program asks for the name of a file to contain the output table. If the specified output file already exists, you are asked if the file is to be reused. If YES, the program asks "OVERWRITE OR APPEND?" (i.e., replace the data already in the file, or leave it intact and add the new table to the end of the file).

The program now proceeds to collect the list of options for the proposed table. Within this program, the list of options that describe the table is referred to as the table definition. This definition, once established, may optionally be saved in a user-named file and used to define similar tables in subsequent program runs. The table definition may also be edited using one of the Prime editors (ED, EMACS, or WORDMARC) prior to running the tabling program.

After the output file name is established, the program asks "DO YOU WANT TO USE AN EXISTING TABLE DEFINITION (Y OR N)?" If YES, the program asks for the name of the file that contains the definition; and if the specified file exists, the definition is retrieved and displayed. The program asks if this is the desired definition and, if so, if there are changes to be made to the definition.

If no existing definition is to be used, the program displays the following form:

```
TABLE TYPE (1,2,3,OR 4): _

DELETE COLUMN IF NO DATA (Y OR N): Y PRINT PARAMETER CODES (Y OR
                                                        N): Y

LINES PER PAGE: 90 FOLDING OPTIONS (0,1,2,OR 3): _

REMOVE HEADING LINE (Y OR N): N
```

If you are uncertain about the meaning of a field on the form, an entry of question mark (?) will produce an explanation of the field and the effect of each option to be displayed; the cursor then returns to the same field for entry of the option value. The cursor is positioned at the underline character on line 1 for input. Examples of these options are found in Appendix D. The meaning of the TABLE TYPE codes is as follows:

1 -- Single-station format

2 -- Miscellaneous-station format

3 -- Multiple-station listing format

4 -- Tables of biological (taxonomic) data

The default table type is type 1 -- Single-station format. The values following the colon (:) on succeeding lines are the default values that will be used if a carriage return is entered for the field.

The DELETE COLUMN IF NO DATA option refers to the situation where none of the selected analyses contains a value for one of the requested parameters; the column can be removed entirely (Y) or the column headings can be retained and the no-value indicator of "--" printed for each analysis (N). The PRINT PARAMETER CODES option allows parameter codes to be included in the column headings (Y) or omitted (N). The default page length of 90 lines gives a page with the proper proportions for reduction to the standard Data Report page size. The allowable FOLDING OPTIONS are as follows:

0 -- No folding, applicable to all table types

1 -- Horizontal folding, 24 to 100 parameters per page, applicable to type 1 tables only

2 -- Horizontal folding, 11 to 100 parameters per page, applicable to type 1 and type 3 tables only

3 -- Vertical folding, maximum of 5 parameters (including date), applicable to type 1 and type 2 tables only

The REMOVE HEADING LINE option refers to the top line of the table that includes the District code and processing date; the line can be omitted (Y) or retained (N).

If TABLE TYPE 2 is selected, no additional information is requested and processing continues, as described later on page 2-39 (see paragraph beginning, "When the definition . . .").

If TABLE TYPE 1 is selected, two additional fields (REPORTING YEAR and TABLE TITLE) are added to the screen:

```
TABLE TYPE (1,2,3,OR 4): _ REPORTING YEAR (W=WATER,C=CALENDAR,
                                    BLANK=NO BREAK): _

DELETE COLUMN IF NO DATA (Y OR N): Y PRINT PARAMETER CODES (Y OR
                                                    N): Y

LINES PER PAGE: 90     FOLDING OPTIONS (0,1,2,OR 3): _

REMOVE HEADING LINE (Y OR N):     N TABLE TITLE: 0
```

The REPORTING YEAR option allows a page break and new headings each time the water year or calendar year changes; the default of blank suppresses this page break. The TABLE TITLE option allows you to select any of the following standard titles to be placed on each page of the table:

0	WATER-QUALITY DATA
1	CHEMICAL ANALYSES
2	PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT
3	PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL
4	SUSPENDED SEDIMENT DISCHARGE
5	SPECTROGRAPHIC ANALYSES
6	RADIOCHEMICAL ANALYSES
7	PESTICIDE ANALYSES
8	WATER ELEVATION, IN FEET, BELOW LAND-SURFACE DATUM
9	ELEVATION IN FEET, NGVD
A	WATER LEVEL, IN FEET ABOVE OR BELOW LAND-SURFACE DATUM
X	CROSS SECTION ANALYSES
Z	ENTER YOUR OWN HEADING (80 CHARACTERS MAXIMUM)

An additional new option, Z, allows supplying any desired nonstandard title. If option Z is selected, the word "TITLE:" is displayed on a new line, and the cursor set to accept input; the user-supplied title may have a maximum length of 80 characters.

If TABLE TYPE 4 is selected, the menu is similar to table type 1 with DELETE LINE replacing DELETE COLUMN. PRINT PARAMETER CODES and FOLDING OPTIONS are skipped over during processing.

The TABLE TITLE option displays the following titles for TABLE TYPE 4:

B - BENTHIC INVERTEBRATE ANALYSES
C - PHYTOPLANKTON ANALYSES
D - PERIPHYTON ANALYSES
Z - ENTER YOUR OWN HEADING (80 CHARACTERS MAXIMUM)

If TABLE TYPE 3 is selected, additional options are added to the form as follows:

TABLE TYPE (1,2,3,OR 4): _

DELETE COLUMN IF NO DATA (Y OR N): Y PRINT PARAMETER CODES (Y OR N): Y

LINES PER PAGE: 90 FOLDING OPTIONS (0,1,2,OR 3): _

REMOVE HEADING LINE (Y OR N): N COUNTY SKIP OPTION: _

LEFT ADJUST LOCAL ID (Y OR N): N PRINT DATES (Y OR N): Y

CENTER STATION ID (Y OR N): N REPEAT DUPLICATE ID'S (Y OR N): N

SKIP A LINE ON CHANGE OF STATION (Y OR N): N DATA FOR CONTINUING PAGES: 1

These additional options are applicable only to type 3 tables. The COUNTY SKIP option is applicable only if the alpha parameter CNTYC is included in the parameter list. If CNTYC is the last parameter in the list, county codes are used but not included in the table; if one of the skip options is invoked and CNTYC is not in the parameter list, it is added as the last parameter. The following COUNTY SKIP options are available:

O -- No action; data are not sorted by county (default)
L -- Skip three lines at a change in county, but do not print county name
P -- Skip to a new page at a change in county, but do not print county name
Q -- Skip three lines at a change in county and print county name
R -- Skip to a new page at a change in county and print county name

The LEFT-ADJUST LOCAL ID option is applicable only if the alpha parameter LOCAL is included in the parameter list; the local identifier (usually well number) may be left-justified under the column heading (Y) or printed verbatim with any blanks that may be included in the Site File retained (N).

The PRINT DATES option allows for the suppression of the DATE column in type 3 tables. If the alpha parameter DATES is not included in the parameter list, it is added by the program after the last alpha parameter. This column may be included in the table (PRINT DATES = Y) or the column may be omitted (PRINT DATES = N).

The CENTER STATION ID option affects the alpha parameters STAID (station number) and SNAME (station name). These values may be centered under their column heading (Y) or printed exactly as they are found in the Site File, with any blanks retained (N).

The REPEAT DUPLICATE ID'S option affects the alpha parameters STAID, LOCAL, and LATLG (latitude-longitude). If the analyses are sorted on one of these fields, the value may be printed with every analysis (Y) or printed only for the first analysis (N).

The SKIP A LINE ON CHANGE OF STATION option is valid only if the analyses are sorted by station identifier. The program will insert a blank line before each new station if you answer "Y". (A blank line is inserted after every five analyses whether or not this option is invoked.)

The DATA FOR CONTINUING PAGES option allows you to select the identification that will be printed with an analysis if the number of parameters selected requires more than one page per analysis. The seven available options are:

1 -- Date
2 -- Station number
3 -- Station name
4 -- Local well number
5 -- Latitude-longitude
6 -- Station number and date
7 -- Local well number and date

The default for this option is number 1, Date.

When the definition is completed, you are asked, "DO YOU WANT TO CHANGE THE DEFINITION?" If YES, the cursor is positioned on the first option after TABLE TYPE and you are instructed to <CR> over fields that are acceptable and change fields that are incorrect. This cycle is continued until you answer NO to "DO YOU WANT TO CHANGE THE DEFINITION?".

The program then gives you the option of saving the table definition for reuse and then asks if parameters are to be entered from the terminal. If NO, you are prompted for the name of a file that contains the list of parameters to be tabled. This file should contain valid parameter codes (with leading zeros) beginning in column 1, one parameter per line. If you elect to enter parameters from the terminal, a prompt of ">" is entered for each parameter; the parameter list is ended by entering a null (<CR>). The rules for parameter codes are as follows:

Numeric parameters contained in the Parameter Code Dictionary are supported.

Alpha parameter codes supported by this tabling routine are:

CODE	DESCRIPTION
ADDPC	All parameters in analyses
AGNCY	Agency code -- 5 characters
ANULL	Blank 9-character column for spacing
ASRCE	Analysis source -- 1 character
ASTAT	Analysis status -- 1 character
CALCV	Calculated parameters
CNTYC	County code -- 3 characters
CTBDA	Contributing drainage area -- 8 characters
DATES	Sample dates, month-day-year -- 6 characters
DISTR	District code -- 2 characters
EDATE	Ending date -- 6 characters YYMMDD
ETIME	Ending time -- 4 characters
EVENT	Hydrologic event -- 1 character
GUNIT	Geologic unit code -- 8 characters
HSTAT	Hydrologic condition code -- 1 character
HUNIT	Hydrologic unit -- 8 characters
LABNO	Laboratory number -- 7 characters
LATLG	Latitude-Longitude sequence number -- 15 characters
LOCAL	Local well number -- 26 characters
MEDIM	Medium code -- 1 character
SAMPL	Record number -- 8 characters
SITEC	Site type -- 2 characters
SNAME	Station name -- 50 characters
STAID	Station number -- 15 characters
STATE	State code -- 2 characters
STYPE	Sample type code -- 1 character
TIMES	Sample times -- 4 characters

Parameters are placed in the table in the order in which they are found in the list.

If the alpha parameter CALCV (include all possible calculated parameters) is included, the calculated parameters, in ascending order of parameter code, are included at the point where the CALCV parameter was entered.

If the alpha parameter ADDPC is included, it must be the last parameter in the list; the program will not read more parameters after ADDPC.

If the alpha parameter ADDPC is included, all numeric parameters (including those calculated parameters that might be stored) are printed in ascending order of parameter code. Alpha parameters are not sorted.

A maximum of 350 parameters may be included in a single table (347 if the 3 header parameters are included).

If an invalid numeric parameter is requested, an error message is written and the requested parameter is ignored.

If the alpha parameter DATES is not included in the list, it is inserted as the first parameter. (Date printing may be suppressed for type 3 tables only).

If vertical folding is requested and more than five parameters (including DATES) are requested, the program responds with a parameter count and then an error message; whether the parameters are entered from the terminal, or read from a file, the entire parameter list must be reentered.

Multiple occurrences of the same parameter are not permitted; if a parameter is entered more than once, the first occurrence is retained and others are deleted from the list.

Parameters other than biological (taxonomic) parameters and medium codes other than L, M, N, O, and P will be eliminated by the program for table type 4.

When parameters have been entered, the program prompts you for your choice of rounding options. You may choose:

- default rounding (D), which produces tables with each individual parameter value rounded to the appropriate level using the rounding instructions stored in the Parameter Code Dictionary;
- user-set rounding (U), which produces tables with each individual parameter value rounded using the rounding instruction stored in the analysis at the parameter level (precision code); or
- no rounding (N), which produces tables with each individual parameter unrounded (output as stored in the analysis but converted to real value from character representation).

The program then informs you that data are being processed. Processing consists of retrieving the requested values and doing any necessary rounding, calculating, and editing. When this process is completed, the program informs you that data are processed and tabling is beginning. (These messages are given so that the terminal user will know that something is being done; very long tables take a long time to prepare). When the table is finished, the program writes a message, prints the name of the file that contains the finished table, and asks if you want to prepare another table at this time. If YES, the program dialog starts over from the beginning; if NO, the program ends.

2.3.7 Option 7 -- Edit-Validation Program (WATSTORE>QW_PM>RUN>QWVALID)

This program performs the chemical logic and validation checks similar to Program K227 (the Reston edit routine called on input of data to the WATSTORE Water-Quality File) for selected analyses. Analyses are selected by record number. On entry, the program asks if record numbers are to be entered from the terminal. If the answer is NO, the program asks for the name of the file that contains the list of selected record numbers. The program then asks for the name of a file to hold the output. If you choose to enter record numbers from the terminal, the program asks for a record number after processing each analysis; an entry of QUIT in the record number field terminates the program.

Data written to the output file include the record number, station ID, analysis date and time, and the number of parameters stored for the analysis. An example is in section 2.3 of Appendix D. A list of parameters and values that exceed alert limits or fail chemical logic checks is output. If sufficient data are available the percent difference is output. A listing of parameters and their values is produced. When comparing computed values to stored values, both values are first rounded (using the precision information stored in the Parameter Code Dictionary); an error message is generated only if the rounded values are not identical. Invalid parameters (not in the Parameter Code Dictionary) and parameters with invalid negative values are deleted from the record. The output file contains carriage-control characters and should be spooled with the -ftn option.

The alert messages have been modified in anticipation of an improved alert reporting system. Alert messages will include the appropriate code: DW for Drinking Water, AQ for AQuatic, or REC for RECreational standards.

NOTE: This program requires a relatively long time to execute; if many analyses are to be checked, a CPL file should be prepared with answers to the program queries and run as a phantom or batch job. An example of such a CPL file is included in the file WATSAVE>BATCH.SAMP.

2.4 Function 4 -- Check Support Files

Function 4 of the main menu displays the following submenu:

```
        CHECK SUPPORT FILES OPTIONS

  1 -- LIST SITE RECORDS

  2 -- CHECK PARAMETER CODE DICTIONARY

  3 -- LIST PARAMETER CODE DICTIONARY

  4 -- CHECK GEOLOGIC UNIT CODE FILE

  5 -- CHECK FIPS CODE FILE

  6 -- LIST STATE/COUNTY DATA

  7 -- DUMP PARAMETER CODE DICTIONARY WITH PRECISION CODES

 98 -- EXIT TO MAIN MENU

 99 -- EXIT TO PRIMOS

Please enter a number from the above list:
```

Figure 4.--Check Support Files submenu

2.4.1 Option 1 -- List Site Records (WATSTORE>QW_PM>RUN>SHOWSITE)

This routine produces a listing, to the terminal or to a file, of the contents of selected Site File records. You are asked if station numbers will be entered from the terminal. If the answer is NO, you are prompted for the name of a file that contains a list of station numbers. The input file should be in the following format:

```
Agency code    --  5 characters
Station number -- 15 characters
```

The program then asks for the name of a file to hold the output. The output file includes carriage-control characters, and should be spooled with the -ftn option. Example output is included in section 2.4 of Appendix D.

2.4.2 Option 2 -- Check Parameter Code Dictionary (WATSTORE>QW_PM>RUN>CKPCD)

This routine retrieves records from the Parameter Code Dictionary and displays the parameter code and descriptive name at the terminal. Three types of retrievals are available:

- Retrieve data for a parameter name.
- Retrieve data for one parameter code.
- Retrieve data for a range of parameter codes.

For the name retrieval type, parameters that have a "long name" beginning with the character string that is entered are retrieved and displayed. This retrieval can be useful for getting a list of all allowable parameters for different forms of an element; for example, NITROGEN. To exit a retrieval by parameter name subroutine, the entire word QUIT must be entered.

2.4.3 Option 3 -- List Parameter Code Dictionary (WATSTORE>QW_PM>RUN>PCDLIST)

This routine retrieves and lists the entire Parameter Code Dictionary and is somewhat time-consuming, depending on system activity. When the dictionary has been read, it can be sorted by combinations of parameter code, long name, table order number, and short name. Again, the sort requires some time to run because of the size of the dictionary. After the sort finishes, you have the option to eliminate the long name from the output (to save paper and/or viewing and printing time). Once again, the time to create the output is lengthy.

The output file is PCDLIST and a warning message about its length is included in the program-ending message. Example output is included in section 2.4 of Appendix D.

If you want to retrieve the Parameter Code Dictionary with precision codes, see section 2.4.7, Option 7.

2.4.4 Option 4 -- Check Geologic Unit Code File (WATSTORE>QW_PM>RUN>CKGEO)

This routine retrieves geologic unit codes and formation names and displays them at the terminal. The program asks for a geologic unit code and retrieves the associated name.

You can provide the entire geologic unit code (for example, 111ALVM) and, if that code exists, get back the formation name (Holocene alluvium), or can provide a partial geologic unit code (from one to eight characters). An entry of the partial geologic unit code (12) results in retrieval (by partial key search) of all geologic unit codes and associated formation names between 119xxxxx and 130xxxxx. A blank geologic unit code terminates the program.

2.4.5 Option 5 -- Check Federal Information Processing Standards (FIPS) Code File (WATSTORE>QW_PM>RUN>CKFIPS)

This routine allows you to browse in the FIPS Code File (FIPSFILE) and retrieve a State code given a State name, a State name given a State code, a county code given a State-county name, and a county name given a State-county code. The options are as follows:

1 -- EXIT
2 -- Get a State code
3 -- Get a State name
4 -- Get a county code
5 -- Get a county name

2.4.6 Option 6 -- List State/County Data (WATSTORE>QW_PM>RUN>CKSTCTY)

This routine also interacts with the FIPSFILE (see sec. 2.4.5), and allows you to retrieve a tabular listing of State names, State abbreviations, State codes, minimum and maximum latitudes, minimum and maximum longitudes, and minimum and maximum altitudes. You may also retrieve county names, county codes, minimum and maximum latitudes, minimum and maximum longitudes for a single State, and both of the previous lists of data for all counties for all States (long and time-consuming). The output can be to the terminal or to a file. Example output is included in sec. 2.4 of Appendix D.

2.4.7 Option 7 -- List Parameter Code Dictionary with Precision Codes (WATSTORE>QW_PM>RUN>PCDDUMP)

This program retrieves and lists (dumps) selected columns of the entire Parameter Code Dictionary.

There are two output options, the long name or the short name. The long name includes the parameter code, the short name, and the full long name (170 characters). The short name output includes the parameter code, the short name, the table order, the first 40 characters of the long name, the units, and the precision.

The program first asks if you want the long-name or the short-name output, and warns that the output can be very large. This program takes a few minutes to execute and creates an output file called PCDDUMP. This file is 300 to 400 PRIMOS records, depending on the option selected. An example of the short name output is in section 2.4 of Appendix D.

2.5 Function 5 -- Change Data-Base Number (WATSTORE>GW>RUN>MOD.USER_DBN_DEF)

This independent function was written by the Ground-Water Site Inventory work group, and allows you to change your default data-base number. When the program is invoked, a submenu (see below) appears from which you select the appropriate option.

```
                              SUBMENU

Program MOD.USER_DB_DEF          Rev 90.1          01/90

Program to allow user to modify data-base numbers

Possible actions:
   1. List public data bases at this site.
   2. List my current data-base numbers.
   3. Change data-base number for GWSI only.
   4. Change data-base number for QW only.
   5. Change data-base number for GWSI and QW.
   9. Exit routine to change data-base numbers.
```

Figure 5.-Change Data-Base Number submenu

When you select option 1 from the submenu, the program accesses a file called SITE.DBN.DEF located in the WATSTORE>SUPPORT directory. This file is modified appropriately by individual Districts for their specific use. An example of the SITE.DBN.DEF file is as follows:

```
*    This file described the public data bases available at this
*    site.  Not all data bases need to be included here--it is
*    just for the user's information when the user wants to
*    change data-base numbers.  This file is not checked for
*    valid numbers nor does an entry here mean the user has
*    access to the data base.
*
*    A comment starts with an "*" and will not be displayed to
*    the user.
*
*    Use any editor to update this ASCII file.  If done from the
*    menu, the line editor (ED) will be selected for you.
*
Data Base #01 - Standard data base for this site.
```

The DBA must modify this file by adding to the end of the file the appropriate data-base number and a brief description of that data base.

Selecting option 2 of the submenu displays the current GW and QW data bases you are accessing. Options 3, 4, and 5 modify the WATSTORE>SUPPORT>USER.DBN.DEF file and allows you to change the data base that is used. To exit the program, select option 9.

3 LAB PROGRAMS--INTERACTIVE AND PHANTOM-- System Command QWLAB

The programs invoked through this menu are used to:

(a) transfer laboratory analysis data and laboratory accounting data from the Prime computer located at the USGS National Water-Quality Laboratory (NWQL) facility in Arvada, Colorado, and

(b) process the accounting data.

Most of the output file names generated by the programs in this subsystem are qualified by the system date and time when the programs are initiated. In the subsequent discussion of the programs, the following format will be used to identify the file names:

filename.YYMMDD.TTTT

Where:

(1) "filename" is the major identification portion of the file name and will vary from program to program.

(2) "YYMMDD" is the system date in 2-digit-year (YY), 2-digit-month (MM), and 2-digit-day (DD) format.

(3) "TTTT" is the system time in 4-digit, 2400-hours format.

Access to the QWLAB subsystem should be limited to the person(s) in your District who is assigned the task of retrieving the results of laboratory analyses and maintaining a record of laboratory charges.

The programs in QWLAB may be invoked by selecting them from a menu that is displayed at the terminal by the command:

QWLAB

In response to the command, the following menu is displayed:

```
                QW LAB PROCESSING ROUTINE REV 90.1

     LAB OPTIONS
       1 -- GET LAB DATA FROM CENTRAL LAB     [Phantom process]
       2 -- RUN LABWEEK TO GET LAB COST       [Interactive]
       3 -- RUN LABCOST TO GET BUDGET         [Interactive]
       4 -- RUN LABPURGE TO ZERO BUDGET FILE [Interactive]
      99 -- EXIT TO PRIMOS
     Please enter a number from the above list:
```

Figure 6.--Lab Programs menu

3.1 Option 1 -- Retrieve National Water-Quality Laboratory Data (WATSTORE>QW_PM>RUN>GETLAB)

A response of "1" to the above prompt invokes the GETLAB.CPL as a phantom process. The program requires no terminal input.

GETLAB is a CPL program that invokes several network file transfer processes and FORTRAN programs to retrieve your District's analytical data and laboratory charges from the NWQL. NWQL personnel enter completed analyses into the Lab's Prime computer several times a week. For most District applications, it is sufficient to retrieve these data weekly. Note: Retrieve the data only between midnight and 6 a.m., using a job timer.

The user who runs this program must have protect rights in the directory from which the job is run, and the FTS_PH1 phantom must also have DALURW rights to the directory. Analytical data are retrieved in card-image format and placed in a file named QWCARDS in the directory from which the GETLAB is invoked. Because the QWCARDS data file is deleted and rewritten each time GETLAB is invoked, an online backup copy of QWCARDS (QWCARDS.YYMMDD.TTTT) is written in this directory. After all data have been processed and reviewed, the backup copies of the data should be deleted. A command output file (LAB$COMO.YYMMDD.TTTTTT) is also created in the directory from which GETLAB is invoked. This file should be checked to determine that the procedure has been successfully completed. An example of the LAB$COMO output is in section 3.1 of Appendix D.

3.2 Option 2 -- Process Laboratory Accounting Records (WATSTORE>QW_PM>RUN>LABWEEK)

The file QWCARDS, which is created by Option 1 of the QWLAB menu, contains accounting records for Laboratory charges. The accounting records are subset from the analytical data by the program(s) (QWCARDSIN or QWENTER) used to enter the analytical data into the water-quality file and saved in a file named WATSAVE>QWACCNTING.pgmname.YYMMDD.TTTT (where "pgmname" identifies the data-input program used to process the analytical data). (See secs. 4.1 and 4.2 for discussion of processing analytical data.)

When OPTION 2 -- RUN LABWEEK TO GET LAB COST is selected, the LABWEEK program is invoked as an interactive process. Your input to Labweek consists of responding to prompts for: (a) the program used to process the analytical data, and (b) the date and time the program was run. The names of the accounting input file used (WATSAVE>QWACCNTNG.pgmname.YYMMDD.TTTT) and the Labweek report file generated (LABWEEK.YYMMDD.TTTT) are written to the terminal by the program. After the Labweek report has been spooled, the file may be deleted. The program deletes the accounting input file if all the accounting records are successfully processed.

The LABWEEK output includes the laboratory identifier, project account number or name of Federal program (BENCHMARK, NASQAN), cost of the analysis, station number, date, time, and schedules requested for each analysis. Total costs per project are included at the bottom of the output for that LABWEEK retrieval. The information provided in the LABWEEK output should be used only as an estimate of laboratory charges a project incurs because some charges do not appear in the output. For example, a charge for materials (M card) is transmitted to Headquarters for billing, but is not transmitted to the Districts.

3.3 Option 3 -- Accounting Information (year-to-date) (WATSTORE>QW_PM>RUN>LABCOST)

Program WATSTORE>QW_PM>RUN>LABCOST.RUN prepares a report of lab costs to the current date for a user-selected fiscal year. The report includes account numbers, expenditures for each account, and the number of analyses for each account; plus a total cost for District and Network analyses. You are queried for the 4-digit fiscal year and for the name of a file to hold the report.

The project costs that appear on the LABCOST output should be used only as an estimate of laboratory charges. Some charges are not sent to the Districts. For example, a charge for materials (M card) is sent to Headquarters for billing, but is not transmitted to the Districts.

3.4 Option 4 -- Purging Accounting File (WATSTORE>QW_PM>RUN>LABPURGE)

Program WATSTORE>QW_PM>RUN>LABPURGE deletes all the records for a specified fiscal year from the Lab Accounting File. [It is neither necessary nor desirable to retain these records online after the fiscal year closeout.] You are queried for the 4-digit fiscal year; the selected records are copied to a sequential file in the UFD WATSAVE before being deleted. The name of the output file is supplied by the program and printed for the user; it is prudent to back up this file on tape in case the records should be needed later.

4 WATER-QUALITY SYSTEM PROGRAMS--INTERACTIVE AND PHANTOM-- System Command QWSYSTEM

The programs invoked through this menu are used to:

(1) enter National Water-Quality Laboratory analyses into the Water-Quality File,

(2) enter non-USGS data into the Water-Quality File,

(3) change or delete site ID's,

(4) process special-purpose retrievals, and

(5) transfer completed, approved analyses to the WATSTORE National Water-Quality File.

Most of the output file names generated by the programs in this subsystem are qualified by the system date and time when the programs are initiated. In the subsequent discussion of the programs, the following format will be used to identify the file names:

filename.YYMMDD.TTTT

Where:

1) "filename" is the major identification portion of the file name and will vary from program to program.

2) "YYMMDD" is the system date in 2-digit-year (YY), 2-digit-month (MM), and 2-digit-day (DD) format.

3) "TTTT" is the system time in 4-digit, 2400-hours format.

Access to the QWSYSTEM subsystem should be limited to the person(s) in your District who is assigned the task of entering the results of laboratory analyses into the QW File and transferring District file updates to the USGS WATSTORE Water-Quality File located on the Amdahl computer in Reston, Virginia.

The programs in QWSYSTEM may be invoked by selecting them from a menu that is displayed at the terminal by the command:

QWSYSTEM

In response to the QWSYSTEM command, the following menu is displayed:

```
                    QW SYSTEM ROUTINES REV 90.1

     SYSTEM OPTIONS

 1 -- RUN QWCARDSIN TO PROCESS LOGGED IN SAMPLES    [Phantom]
 2 -- RUN QWENTER TO PROCESS SAMPLES NOT LOGGED IN [Phantom]
 3 -- RUN QWRESTON TO PROCESS RESTON UPDATES        [Phantom]
 4 -- RUN QWFIXED TO PRODUCE 1 AND *-CARD OUTPUT    [Interactive]
 5 -- RUN STNCHANGE TO CHANGE STATION NUMBER        [Interactive]
 6 -- CHANGE DEFAULT DATA-BASE NUMBER               [Interactive]
99 -- EXIT TO PRIMOS
     Please enter a number from the above list:
```

Figure 7.--System Programs menu

4.1 Option 1 -- Enter National Water-Quality Laboratory Data (WATSTORE>QW_PM>RUN>QWCARDSIN)

QWCARDSIN is a FORTRAN (F77) program that updates records with analytical data from the National Water-Quality Laboratory (NWQL) in Arvada, Colorado. The analytical data are transferred (along with lab charges/accounting data) from the laboratory into a fixed-format, card-image file, which is used as input to QWCARDSIN. Prior to execution of QWCARDSIN, the GETLAB.CPL (see sec. 3.1) should be invoked to transfer the analytical data into the proper file (QWCARDS) on your District's Prime computer.

QWCARDSIN is invoked from the QWSYSTEM menu (via CARDSIN.CPL) as a phantom process. For this process to execute successfully, the data must be located in the file QWCARDS in the directory from which the QWSYSTEM menu is invoked. QWCARDSIN may be run interactively, but this is not recommended because no user input is required if the data are properly located, and the program often executes for several hours. If the data are not located in the correct file (QWCARDS) in the current directory, the program attempts to write the following message to the terminal:

FILE QWCARDS NOT FOUND -- IS THE DATA LOCATED IN ANOTHER FILE?

If the program is running as an interactive process, you may respond with a YES or NO. A YES allows the program to continue and prompt for a different file name. This prompt to the terminal causes the phantom to end abnormally if the program is running as a phantom process, unless the appropriate responses are included in the CPL used to initiate the program. A NO terminates the program.

The data in the input file (QWCARDS) are transferred from the lab in sets of card-images. A set of card-types (1, *, 5, 7, X, M, and #) contains the information to describe each analysis and is interpreted by QWCARDSIN to create a water-quality update record. An entry for each analysis must already exist in the water-quality file on your system. (See sec. 2.1 -- QWLOGIN.) QWCARDSIN will not create water-quality records; its function is to locate water-quality records in the file and add the laboratory determinations to the existing records. Following is a description of each of the card types used to identify an analysis:

Card-type 1 contains the information describing the water-quality record header (site ID, medium code, and collection dates and times).

Card-type * contains the lab determinations for each of the parameter codes and any associated qualifiers (remarks, quality assurance codes, laboratory method codes, and precision codes). The data are in a fixed-field format with two parameter code sets per card. A complete description of the 1- and *-card format can be found in section 4.2. Valid remark, quality-assurance, method, and precision codes are listed in Appendix A.

Card-type 5 contains any comments to the lab that were coded on the Request for Analytical Services form.

Card-type 7 contains any comments from the lab concerning the analysis.

Card-type X contains a parameter code, a parameter value, and a message code. The format of the X card is an X in column 1, parameter code in columns 3-7, laboratory method code in columns 8-10 (enclosed in parentheses), equal sign in column 11, and message code in column 12. Several message codes (up to 7) within one X card may appear, replicating the format in columns 3-12. The total record length of the X card is 72. The message codes are in the following list:

A -- run by Alternate method
B -- sample Broken/spilled in shipment
D -- requested by District or project
F -- improper Filter used
H -- pH greater than 7.0
I -- requIred sample type not received
M -- results sent by separate Memo
O -- insufficient amOunt of water
P -- sample discarded, improper Preservation
R -- sample Ruined
U -- Unable to determine, interference
W -- sample discarded, Warm when received
X -- lab code 586 was reported as O
Z -- lab code 588 was reported as O
L -- Low surrogate recovery

Card-type # contains the project account number, a list of the schedules used, and the cost of the analysis.

QWCARDS also contains laboratory accounting data on card-types D, M, N, and A. The D- and N-type cards contain information on the charges against District and Network accounts, respectively. The M (material, e.g., bottles, supplies) and A-type cards identify Laboratory charge adjustments.

The output files generated by QWCARDSIN are:

WATLIST.YYMMDD.TTTT, which contains: 1) a listing of the records that were updated, 2) a cation-anion balance table if the balance can be computed, and 3) a listing of any error messages generated for each analysis. An example of the WATLIST report is included in section 4 of Appendix D. The alert messages have been modified in anticipation of an improved alert reporting system. Alert messages will include the appropriate code: DW for Drinking Water, AQ for AQuatic, or REC for RECreational standards.

BADQW.YYMMDD.TTTT is an error file, which contains the input-card sets for any transactions that could not be processed. These transactions normally include: 1) invalid card-types, 2) card sets for analyses which have not been logged in, and 3) A-card transactions. The BADQW file should be reviewed after every run of the program. If the file contains any data cards, the necessary steps should be taken to correct any errors on the cards and to login any new analyses that should be stored in your file. The QWCARDS file may be deleted, BADQW file renamed to QWCARDS, and the program rerun to process the corrected data.

QWACCNTNG.YYMMDD.TTTT is created in the UFD WATSAVE. This file contains the accounting records that were previously processed on the Amdahl computer by Procedure LABWEEK. This file is used as input to the NWIS program LABWEEK, which maintains the accounting information for NWQL charges. (See sec. 3.2.)

CARDSIN.COMO is a command output file generated in the current directory. This file should be checked when the CARDSIN.CPL has ended to verify successful completion.

4.2 Option 2 -- Update Water-Quality File (WATSTORE>QW_PM>RUN>QWENTER)

QWENTER is a FORTRAN (F77) program that may be used to enter laboratory analytical data into the Water-Quality File, create new records and add data from non-USGS sources to the Water-Quality File, and perform limited data editing functions as described subsequently.

Although this program may be used to enter NWQL data into the Water-Quality File without previously logging in the samples, choosing this method of creating records is not recommended because it sacrifices a measure of control over the data. If identification fields (site ID, date/time, medium code) are entered erroneously by the laboratory, the error may not be recognized until much later, when properly identifying the records may be difficult and time-consuming. Moreover, if you wish to identify records with project identifiers or to take advantage of the TYPES OF ANALYSES field in QWLOGLIST output, the records must be edited to insert the appropriate information. (See sec. 2.2.3 -- EDIT SAMPLES.)

QWENTER is invoked from the QWSYSTEM menu (via ENTER.CPL) as a phantom process. For this process to execute successfully, the data must be located in the file QWCARDS in the directory from which the QWSYSTEM menu is invoked. QWENTER may be run interactively, but this is not recommended because no user input is required if the data are properly located, and the program often executes for several hours. If the data are not located in the default file (QWCARDS) in the current directory, the program attempts to write the following message to the terminal:

FILE QWCARDS NOT FOUND -- IS THE DATA LOCATED IN ANOTHER FILE?

If the program is running as an interactive process, you may respond with a YES or NO. A YES allows the program to continue and prompt for a different file name. This prompt to the terminal causes the phantom to end abnormally if the program is running as a phantom process, unless the appropriate responses have been entered in the CPL used to invoke the program. A NO terminates the program.

If QWENTER is used to input USGS Laboratory analyses, the input cards are stored in the format described under section 4.1, Option 1 -- Enter National Water-Quality Laboratory data. No changes to the card images transferred from the lab are required. If the data are from a non-USGS source, or consist of edit transactions created by a user, the format of the input records should follow the following guidelines:

Instructions for Preparing 1-Card Transactions

Column	Identifier
1	Card type (1)
2-16	Station number
17	Medium code
18-27	Begin date and time
18-19	Begin year, last 2 digits
20-21	Begin month, use leading zeros
22-23	Begin day, use leading zeros
24-27	Begin time (2400-hours system, use leading zeros)
28-35	End date and time
28-29	End month, use leading zeros
30-31	End day, use leading zeros
32-35	End time (2400-hours system, use leading zeros)
36-43	Geologic unit code
44	Analysis status code
45	Analysis source code
46	Hydrologic condition code
47	Sample type code
48	Hydrologic event code
49-51	BLANK
52-53	Left 2 digits of year (optional value, default = 19)
54-61	BLANK
62-63	Data category (all values default to QW)
64-68	Agency code (optional, default = USGS)
69-75	BLANK
76	District processing status (valid values in QWENTER) are: P - (lab and field data, under review) R - (approved by District, ready to be transmitted to Reston) Z - (local-use data, do not transmit to Reston) NOTE: A blank or invalid value for processing status defaults to P.
77-80	BLANK

The only mandatory fields on the 1-card are station number, medium code, collection date, and (if applicable) time. If non-USGS data are to be entered, a valid agency code should be entered in the Agency Code field (columns 64-68).

A water-quality record may be deleted from the file by entering DELETE in the Geologic Unit Code field. This may be useful for deleting several records, thus saving some time. A possible way for doing this type of deletion would be to run the QWFIXED option for the stations to be deleted. Once the file of 1- and *-cards is created, the file needs to be reduced down to just a file of 1-cards and then the G MODIFY command could be used to add the word DELETE in the correct column; for example, (G M35I/DELETE/;n;*). QWENTER or QWCARDSIN can then be used to delete the analysis using the file just created.

Instructions for Preparing *-Card Transactions

The format of the *-card for QWENTER is comparable to the *-card transactions described in the WATSTORE System on the Amdahl.

Column	Identifier
1	Card Type (*)
2-76	Free field format for parameter description

The format of the parameter description is:

Pnnnnn = value (R:Q:M:N)

where:

nnnnn = a valid 5-digit parameter code as contained in the WRD Parameter Code Dictionary.

value = the measurement for or analytical determination of the constituent identified by the parameter code. Fixed values for certain parameters are listed in Appendix B.

R = the Remark code qualifying the parameter value. Remark codes are listed in Appendix A.

Q = the Quality assurance code for the parameter value. Quality assurance codes are listed in Appendix A.

M = the Method code identifying the USGS Central Laboratory method used to determine the parameter value. Valid method codes are listed in Appendix C.

N = the Number of significant digits to be used for printing the parameter value.

The values for parameter codes, parameter values and qualifiers (R, Q, M, and N) may be coded free-format within the indicated delimiters; that is, intervening blanks are allowable but not required. Values for qualifiers are optional, but

positional, from left to right within the ( ) delimiters if entered. The delimiters, (: : :) are mandatory to identify the position of qualifiers only if qualifier values are entered.

Example:

```
col.     1         2         3         4         5         6
12345678901234567890123456789012345678901234567890123456789012345678901234567890
*P00010 = 15, P00020=15,(:::),P00025=15(<::M)
```

would be interpreted by QWENTER as a value of 15 for parameter code 00010, with no values for remark and method code, and default values for quality assurance and precision. The parameter and qualifier values for parameter code 00020 would be interpreted identically to the values for parameter code 10. The third set of values would be interpreted as a value of 15 for parameter code 00025, with a remark of "<", default values for quality assurance and precision, and a value of M for method.

Valid values for parameter qualifiers are listed in Appendix A, and method codes are listed in Appendix C. Default values for parameter precision are determined by the Parameter Code Dictionary.

An existing parameter code may be deleted in QWENTER by entering the parameter code with no value on the *-card. (The "=" and "," delimiters are required to indicate no value.)

Example: *P00010= ,

would cause parameter code 00010 to be deleted from a water-quality record. For compatibility with the Amdahl water-quality processing system, a parameter code may also be deleted by entering an X in the remark code field.

A previously stored remark code may be deleted by entering "#" in the remark code field.

The output files created by program QWENTER are as follows:

WATLIST.QWENTER.YYMMDD.TTTT, which contains: 1) a listing of the records that were updated, 2) a cation-anion balance table if the balance can be computed, and 3) a listing of any error messages generated for each analysis. An example of the WATLIST report is included in section 4 of Appendix D. The alert messages have been modified in anticipation of an improved alert reporting system. Alert messages will include the appropriate code: DW for Drinking Water, AQ for AQuatic, or REC for RECreational standards.

BADQW.QWENTER.YYMMDD.TTTT is an error file which contains the input-card sets for any transactions that could not be processed. These transactions normally include: (1) invalid card-types, (2) card sets for analyses that have invalid site ID's, dates/times, and/or medium codes, and (3) A-card transactions. The BADQW file should be reviewed after every run of the program. If the file contains any data cards, the necessary steps should be taken to correct any errors on the cards so that analyses that should be stored in your file may be processed. The QWCARDS file may be deleted, BADQW file renamed to QWCARDS, and the program rerun to process the corrected data.

QWACCNTG.QWENTER.YYMMDD.TTTT is created in the UFD WATSAVE. This file contains the accounting records that were previously processed on the Amdahl computer by Procedure LABWEEK. This file is used as input to the NWIS program LABWEEK, which maintains the accounting information for NWQL charges.

ENTER.COMO is a command output file generated in the current directory. This file should be checked when the CARDSIN.CPL has ended to verify successful completion.

4.3 Option 3 -- Process Reston Updates (WATSTORE>QW_PM>RUN>QWRESTON)

Option 3 of the QWSYSTEM menu initiates QWRESTON.CPL to transfer completed and approved analyses to the WATSTORE National Water-Quality File in Reston, Virginia. (See sec. 2.2.4 -- Flag Approved Samples.) This CPL invokes a FORTRAN (F77) program (WATSTORE>QW_PM>RUN>QWCARDSOUT), which selects records that have been flagged as "ready to transmit to Reston," (R) reformats the data into WATSTORE-format card input, and writes the card images to a file together with the necessary IBM JCL to initiate a WATSTORE update job. The selected records are flagged as "transmitted" (t) and the update job is submitted as a batch process on the Amdahl computer through the Prime RJE emulator. Three file names are "hard coded" in the program:

WATSAVE>QWUP.JCL, an input file for QWCARDSOUT, contains the IBM job control language (JCL) for the Amdahl QWUPDATE procedure. This input file was included in the QW System release tape in template form. Before QWCARDSOUT is executed, the template must be edited to include the correct Amdahl job name, user ID, and accounting and password information for your District. A default return point on your Prime for the output of the Amdahl QWUPDATE job is supplied on the //*$$FILE card in the JCL. This file name is supplied to indicate the proper format for identifying a return point for the output and may be changed without interfering with the data transfer process.

QWUP.LIST, the update report from QWCARDSOUT, is generated in the directory from which the QWSYSTEM menu is invoked. This file contains a list of the records that were selected for transmittal to the WATSTORE Water-Quality File.

QWUP.JOB, the output file, contains the update job that is submitted to the Prime RJE emulator for submission as a job on the Reston Amdahl computer.

Any updated parameters or analyses edited with Option 2.2.3, Edit Samples, are written to the file QWUP.CURnn (nn is the appropriate data base number) in the directory WATSAVE for use in updating the national data base on the Amdahl in Reston. Data in QWUP.CURnn will be added to the QWUP.JOB file.

If QWUP.LIST and QWUP.JOB already exist in your directory, they will have a date-time tag added, and a new QWUP.LIST and QWUP.JOB will be created.

If updates are made to samples with collection dates prior to the last water year (backfile in WATSTORE), and if the updates are to a primary key (station number, date, time, or medium code), the WATSTORE procedure QWMOVE must be run prior to sending the updates to WATSTORE. QWMOVE moves the data from the backfile to the current file on the Amdahl in Reston. An example of the JCL for QWMOVE is in the WATSTORE>SUPPORT directory and is called QWMOVE.JCL. This procedure must be run only when a primary key is updated, not when parameter values are updated.

4.4 Option 4 -- Produce 1- and *-Cards (WATSTORE>QW_PM>RUN>QWFIXED)

Program QWFIXED retrieves selected records from the Prime Water-Quality File and outputs the data in 1- and *-card format. The format is described in section 4.2. The records to be retrieved are identified by a list of record numbers, which is read from an input file. The parameter data in the *-cards may include all stored values or may be limited to a list of parameter codes at your option. The card-images for the selected records and parameter values are written to a user-supplied file. Input and output files accessed by QWFIXED must be located in the directory from which QWFIXED is invoked.

When Option 4 on the QWSYSTEM menu is selected, the program displays the following prompt:

```
PLEASE ENTER NAME OF FILE THAT HAS THE RECORD NUMBERS (99 TO END)

     >
```

and waits for the file name to be input. When the input file has been identified and opened, the following prompt is displayed:

```
PLEASE ENTER NAME OF FILE TO HOLD OUTPUT

     >
```

and the program waits for the file name to be input. If the output file already exists in the current directory, you have the options of (1) selecting another output file, (2) overwriting the existing file, or (3) appending the data to be retrieved to the end of the existing file. After the file of record numbers and the file to hold the output have been success-fully located and opened, QWFIXED prompts:

```
DO YOU WANT TO RETRIEVE ONLY SELECTED PARAMETERS (YES OR NO)?
```

A NO causes the program to begin the retrieval process for all parameters stored in the records identified in the input file. A YES causes the program to prompt for the source of the input parameters. The parameters may be input interactively from the terminal or from a parameter list input file. When the input parameters have been read, the retrieval process begins and the following messages are displayed:

```
(1)  Processing records... Please wait
(2)  QWFIXED processing completed
(3)  Your output is in (output file name)
(4)  **** STOP  QWFIXED ENDED
```

When the QWFIXED program has ended, the QWSYSTEM menu is redisplayed.

4.5 Option 5 -- Change Station Numbers (WATSTORE>GW>RUN>STNCHANGE)

Program STNCHANGE was written and is maintained by the GWSI work group. Instructions for using this program are located in the file called WATSTORE>SITEDIR>DOC>STNCHANGE.ADMIN.DOC and will not be repeated here.

STNCHANGE is the program in the NWIS that allows you to either delete or change a station number. The station number is the primary key used to identify locations approved for WRD data collection. An entry in the Site File is required for data stored in the NWIS data bases. Updates that affect a station number are to be applied not only to the Site File, but also to associated data bases (QW, GW, ADAPS, and/or Water Use) where data for the site exist. If program STNCHANGE is used to delete a station number in the Site File, the NWIS data bases are searched and data located in the NWIS that are identified as collected at that site will be deleted. The delete transaction in the NWIS is an immediate, physical delete. The only way to recover deleted records is by reentering them. An update to a station number is also performed in the Site File and the associated data bases. Because the updates performed by STNCHANGE have the possibility of affecting data in the NWIS and the national data bases, this function should be closely coordinated and monitored within your District.

4.6 Option 6 -- Change Data-Base Number (WATSTORE>GW>RUN>MOD.USER_DBN_DEF)

This independent option was written by the Ground-Water Site Inventory work group, and allows you to change your default data-base number. When the program is invoked, a submenu (see below) appears from which you select the appropriate option.

SUBMENU

Program MOD.USER_DB_DEF Rev 90.1 01/90

Program to allow user to modify data-base numbers

Possible actions:
1. List public data bases at this site.
2. List my current data-base numbers.
3. Change data-base number for GWSI only.
4. Change data-base number for QW only.
5. Change data-base number for GWSI and QW.
9. Exit routine to change data-base numbers.

Figure 8.-Change Data-Base Number submenu

When you select option 1 from the submenu, the program accesses a file called SITE.DBN.DEF located in the WATSTORE>SUPPORT directory. This file is modified appropriately by individual Districts for their specific use. The following is an example of the SITE.DBN.DEF file:

```
*    This file described the public data bases available at this
*    site.  Not all data bases need to be included here--it is
*    just for the user's information when the user wants to
*    change data-base numbers.  This file is not checked for
*    valid numbers nor does an entry here mean the user has
*    access to the data base.
*
*    A comment starts with an "*" and will not be displayed to
*    the user.
*
*    Use any editor to update this ASCII file.  If done from the
*    menu, the line editor (ED) will be selected for you.
*
Data Base #01 - Standard data base for this site.
```

The DBA must modify this file by adding to the end of the file the appropriate data-base number and a brief description of that data base.

Selecting option 2 of the submenu displays the current GW and QW data bases you are accessing. Options 3, 4, and 5 modify the WATSTORE>SUPPORT>USER.DBN.DEF file and allow you to change the data base used. To exit the program, select option 9.

5 INTERACTIVE GRAPHIC PROGRAMS --System Command QWGRAPH

The programs in the QWGRAPH menu may be invoked by entering the command:

QWGRAPH

and the following menu is displayed:

```
                    QW GRAPHIC ROUTINES   REV 90.1

PLEASE USE THESE DEVELOPMENTAL WATER-QUALITY GRAPHICS, BUT AS
ALWAYS CHECK YOUR RESULTS CAREFULLY.  PLEASE REPORT ANY PROBLEMS
OR SUGGESTIONS TO KTGARCIA@QVARSA.

   GRAPHIC OPTIONS

 1 -- CREATE AN X,Y PLOT, STORED IN A FILE FOR USE IN TELLAGRAF

 2 -- CREATE BOXPLOTS, STORED IN A FILE FOR USE IN TELLAGRAF

 3 -- CREATE A STIFF DIAGRAM

 4 -- CREATE A PIPER DIAGRAM

 5 -- TIME SERIES PLOTS

 6 -- CREATE REGRESSION PLOTS

 7 -- CREATE FLATFILE OUTPUT

 8 -- SUMMARY STATISTICS TABLE (PERCENTILES)

 9 -- DETECTION LIMITS TABLE

10 -- STATISTICS PLOTS

99 -- EXIT TO PRIMOS

Please enter a number from the above list:
```

Figure 9.--Graphic Programs Menu

5.1 Option 1 -- X,Y Plot (WATSTORE>QW_PM>RUN>QWPLOT)

This option creates an X,Y plot that is stored in a file for use in TELLAGRAF (Integrated Software Systems Corporation, 1983). The plot is a line plot with a symbol placed at the first and last points with no symbols in between. All data are used in the plot, including remarked (i.e., less or greater than) values. After the program is invoked, it asks for the name of the file containing the record numbers. This file has the format of one record number per line entered in columns 1-8, and can be obtained through option 2.3.3 of QWDATA or created with an editor. The next prompt is for the output file name. This is the file that is created for use with TELLAGRAF.

The program then asks for the independent variable to be plotted. Enter the 5-digit parameter code, or D to have DATE as the independent variable. A <CR> defaults to date. You are then prompted for up to 10 dependent variables. A <CR> ends the list and control is returned to the menu.

5.2 Option 2 -- Boxplots (WATSTORE>QW_PM>RUN>QWBOXPLOT)

This option creates boxplots that are stored in a file for use in TELLAGRAF. After the program is invoked, it asks for the file containing the record numbers. This file can be obtained through option 2.3.3 of QWDATA or created with an editor (one record number per line entered in columns 1-8). The next prompt is for an output file name.

A boxplot (see fig. 10) is a simple graphical means of displaying statistics for the distribution of reported concentrations for a constituent. The ends of the box define the range of the middle 50 percent of the data, or that part of the data between the 25th and 75th percentiles. The median value of the data, the 50th percentile, is defined by the line across the box. The lines beyond each end of the box are called whiskers, and show the range of those data that extend 1.5 times the range between the 25th and 75th percentiles beyond the ends of the box. Data points beyond the whiskers are called outliers because their values differ so much from the rest of the data. Outliers that extend from 1.5 to 3 times the range of the 25th and 75th percentiles are plotted as an "x" and those that extend more than 3 times are plotted as an "o".

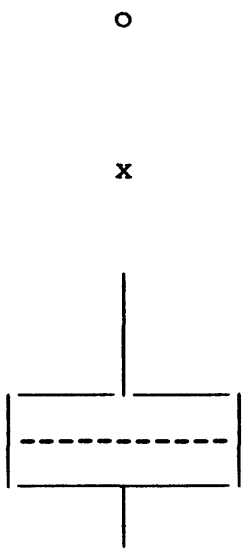

Figure 10.--Boxplot

The next prompt is for up to 10 parameters that you want plotted. A <CR> is needed to end the list, and then the following menu is displayed:

```
WHAT KIND OF RETRIEVAL
 1 = SINGLE STATION,  MULTIPLE OR SINGLE PARAMETERS
 2 = MULTIPLE STATIONS, SINGLE PARAMETER
 3 = MULTIPLE STATIONS TREATED AS ONE
```

Option 1 is for plotting one or more parameters. The program restricts the data to one station. The second option is for plotting boxplots for more than one station for a single parameter by station. The third option is for combining data from multiple stations and plotting by parameter or parameters.

The program next prompts for the title of the plot and then for the Y-axis label.

The interactive portion of the program is now finished. Statistical information is printed to the screen as the program computes the boxplots, and then control returns to the menu. The following is an example:

```
ig, k, and y  1  94    9.000  10.000  10.500  11.500  12.900
ig, k, and y  2  105   0.000   9.000  16.000  30.000  60.000
ig, k, and y  3  105   0.600   2.700   5.700  10.000  18.000
ig, k, and y  4  105   0.000  12.000  20.000  38.000  75.000
```

These numbers represent the boxplot number, data occurrence, lower limit of the whisker, lower quartile, median, upper quartile and upper limit of the whisker. The program will not compute a boxplot if there are less than five data points. For a detailed explanation of boxplots see Velleman and Hoaglin (1981).

5.3 Option 3 -- Stiff Diagrams (WATSTORE>QW_PM>RUN>QWSTIFF)

This option creates Stiff diagrams (Stiff, 1951). Depending on the device type selected, they may be plotted on a CRT screen or a plotter.

The Stiff diagram is a graphical representation of the cations and anions of an analysis in milliequivalents per liter. The Stiff plotting technique uses parallel horizontal axes extending on each side of a vertical zero axis (Hem, 1985, p. 175). Concentrations of the cations are plotted to the left of the vertical axis and anions to the right. The points are then connected and an irregular pattern results. Thus, the patterns can be compared among analyses as well as among sites to illustrate similarities and differences.

The NWIS software plots the cations calcium and magnesium alone, and combines the cations sodium and potassium. The anion sulfate is plotted by itself and the anions bicarbonate, carbonate, chloride, and fluoride are combined. Each plot represents one analysis. The software will not plot a Stiff diagram if any of these components are missing. Figure 11 is an example of a Stiff diagram produced from the software. The asterisks represent lines in the output and are used here to show the outline.

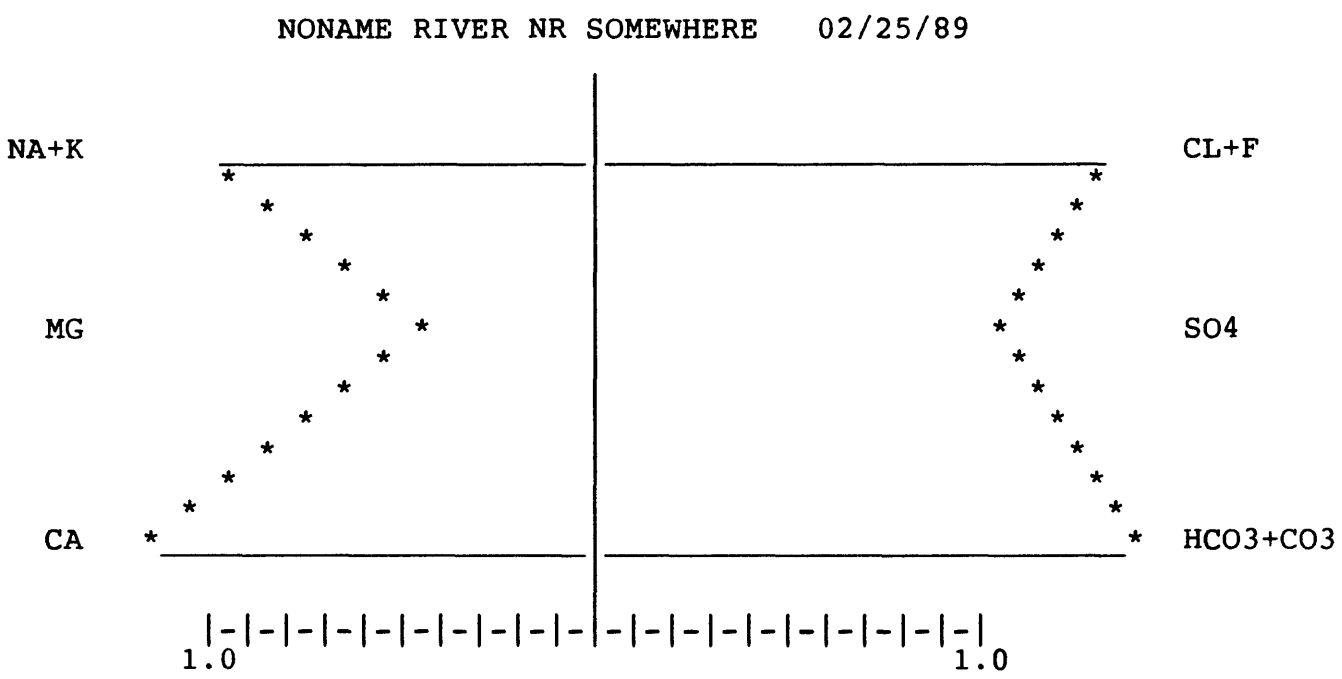

Figure 11.-Stiff diagram

The program first asks if you want the plots at the same scale (milliequivalents per inch). If YES, the program calculates the width of the plot and the next prompt is for the scale. If NO, the program asks for the width of the diagram in inches and calculates the scale. You are then prompted for the diagram height and the character and label sizes. A <CR> for any of these prompts causes the program to use the default values listed on the screen.

The next query is whether you want local well numbers plotted instead of the station number. You are then prompted for the file containing the record numbers (same format as option 1) and for the output file name.

A list of device types is printed on the screen and you are asked to select one. If you have trouble here, please see your Site Administrator, as some of these devices may not be supported at your site. To continue, a <CR> is needed following each plot.

The output file contains a list of cations and anions and the station number, date, and time for each record. A -1. represents a missing value in the list of cations and anions.

5.4 Option 4 -- Piper Diagrams (WATSTORE>QW_PM>RUN>QWPIPER)

This option creates Piper diagrams (Piper, 1983). Piper diagrams can be used to show the chemical character of water. In a Piper diagram, selected cations (positively charged ions--calcium, magnesium, and sodium plus potassium) and anions (negatively charged ions--bicarbonate plus carbonate, sulfate, and chloride) for each ground-water analysis are shown as a percentage of the total cations and anions, in milliequivalents per liter. The cations are plotted as single points on the left side triangle and anions on the right. Cation and anion plots for each sample then are projected into the central diamond field. A water type can be described depending on the location of the projected point in the central diamond. The Piper type of diagram can be used to determine whether particular water is (1) chemically similar to some other water, or (2) a simple mixture of two chemically different water types (Hem, 1985, p. 177-179).

A water type in which one cation and one anion dominate (each amounts to 50 percent or more of the cations or anions, respectively) is designated by the names of the dominant cation and anion. A water type in which no cation or anion dominates is designated a mixed-cation or mixed-anion type (Piper and others, 1953, p. 26).

The first prompt asks whether or not you want the axis labeled. The program then asks for the file containing the record numbers (same format as option 1), and then for the output file name.

You are then asked if you want a different symbol for each station. If you ask for just one symbol, the next prompt is for the marker number 0-18. These markers are listed below, and also can be found in the DISSPLA User's Manual (Integrated Software Systems Corporation, 1984, p. A-4-7). If you select a different symbol number, the program starts with 0 and proceeds through the list.

0	Square	10	Octagon with + symbol inside
1	Octogon	11	Four small triangles joined
2	Triangle	12	Square with + symbol inside
3	Plus symbol	13	Octogon with X inside
4	X Symbol	14	Square with triangle inside
5	Diamond	15	Filled-in circle
6	Upside down triangle	16	Circle
7	Square with an X inside	17	Square
8	X with horizontal line	18	Filled-in square
9	Diamond and + symbol inside		

HOW MANY COLORS DO YOU WANT TO USE (1-7): is the next query. The colors are green, blue, yellow, magenta, cyan, white, and red. The order of the colors varies with the number of stations plotted and the type of graphic device selected. Depending on the number of colors that you select, the program changes colors for each station in the order listed above, starting over again when it reaches red.

A list of device types is printed on the screen; select the appropriate one.

The output file contains a list of the station ID, date and time, a list of cations and anions, and the color and symbol used for each record. A -1. represents a missing value in the list of cations and anions.

5.5 Option 5 -- Time Series Plots (WATSTORE>QW_PM>RUN>QWTPLOT)

This option creates time series plots of data from the Water-Quality File. After choosing this option, the screen is cleared and the following form is displayed:

QW DATA BASE PATHNAME IS: WATSTORE>DATA>QWFILE

AGENCY: USGS RECORD CATEGORY: QW STATION NUMBER _____

PARAMETER CODE: _____ BEGIN DATE: YYYYMMDD END DATE: YYYYMMDD

GRAPH HEIGHT (INCHES): 12 TIME SCALE (INCHES PER YEAR): _____

MARKER TYPE (0-18): 0 ARITHMETIC OR LOG SCALE (A OR L): A

The first line is the data base from which the data will be retrieved. For the other form entries, you may <CR> to take the default value; if there is a default value it is shown on the form. An invalid station number or parameter code causes an error message to be displayed and the cursor returns to the start. A "Q" in the first space of the station number ends the program. A blank field for the begin date and end date causes plotting of the entire period of record. If the period of record is greater than 50 years, only the first 50 years are plotted. An error message informs you of this after the plot is completed. The graph height default is 12 inches, and the time scale default is 32 divided by the number of years in which there are data that you have requested. These values are in inches; however, if your device type is not this large DISSPLA attempts to scale the plot down. If your plot has some clipped edges, decrease the graph height and/or time scale. See the DISSPLA manual for the marker types. You have a choice of a semi-log or an arithmetic plot; the default is an arithmetic plot.

The program then asks if you want the points connected by a line on the plot; the default is connected. A list of device types is printed on the screen; select the appropriate one. When the plot is finished, <CR> to continue. You are then asked whether or not you want another plot. If YES, follow the same procedure as before; however, no device type will be asked for (the same one will be used).

5.6 Option 6 -- Regression Plots (WATSTORE>QW_PM>RUN>QWREGRESS)

This option creates a parameter versus parameter plot with a linear regression line plotted. It will also output some standard statistics. The procedure is as follows:

(1) The program asks for a file name that contains the record numbers.

(2) You are then asked for the output file name; this file will contain the input data and summary statistics.

(3) The next query is whether or not you want a file produced for use with TELLAGRAF. If YES, the TELLAGRAF file name will be the file name for the output (what you used in answering step 2 above, plus a suffix of ".TAG"). If you choose this option, the next query will be step 8.

(4) You have the option to suppress the plotting of the regression line.

(5) Enter the symbol number you want used on the plot; see the DISSPLA User's Manual (Integrated Software Systems Corporation, 1984) for a list of symbols.

(6) Enter the symbol height multiplication factor; 2 is the maximum. This factor will be multiplied by .08 to determine the symbol height in inches.

(7) Enter the appropriate device type.

(8) The next query is whether you want separate regressions by station; if YES, you get a plot for each station in the input file.

(9) Enter the X-axis parameter (independent variable).

(10) Enter the factor by which to multiply the X parameter.

(11) Enter the Y-axis parameter (dependent variable).

(12) Enter the factor by which to multiply the Y parameter.

(14) You may review your input; if it is not correct, answer NO to the prompt and the program will return to step 9.

(15) After the plot is finished, press <CR>. You are asked if you would like another set of parameters processed. If YES, the program returns to step 9; if NO, the program ends.

Notes: The linear regression is performed by the IMSL subroutine RLONE and is described in the IMSL Reference Manual, v.4 (IMSL, Inc., 1982). The confidence intervals for the coefficient and the intercept are 95 percent confidence intervals. You must have at least three values for the program to work.

5.7 Option 7 -- Flat File Output

WATSTORE>QW>RUN>QWFLATOUT

This option is designed to output data from the Water-Quality File in a flat file format for use in application programs. Flat file means that the output for one record may be considered to exist on one line.

The program asks for an input file containing the record numbers, and the name of an output file.

The program then asks if parameters are to be entered from the terminal. If NO, you are prompted for the name of a file that contains the list of parameters to be tabled. This file should contain valid parameter codes (with leading zeros) beginning in column 1, one parameter per line. If you elect to enter parameters from the terminal, a prompt of ">" is entered for each parameter; the parameter list is ended by entering a <CR>. The rules for parameter codes are as follows:

Numeric parameters contained in the Parameter Code Dictionary are supported.

Alpha parameter codes supported by this program are:

CODE	DESCRIPTION
ADDPC	All parameters in analyses
AGNCY	Agency code -- 5 characters
ANULL	Blank 9-character column for spacing
ASRCE	Analysis source -- 1 character
ASTAT	Analysis status -- 1 character
CALCV	Calculated parameters
CNTYC	County code -- 3 characters
CTBDA	Contributing drainage area -- 8 characters
DATES	Sample dates, month-day-year -- 6 characters
DISTR	District code -- 2 characters
EDATE	Ending date -- 6 characters YYMMDD
ETIME	Ending time -- 4 characters YYMMDD
EVENT	Hydrologic event -- 1 character
GUNIT	Geologic unit code -- 8 characters
HSTAT	Hydrologic condition code -- 1 character
HUNIT	Hydrologic unit -- 8 characters
LABNO	Laboratory number -- 7 characters
LATLG	Latitude-Longitude sequence number -- 15 characters
LOCAL	Local well number -- 26 characters
MEDIM	Medium code -- 1 character
SAMPL	Record number -- 8 characters
SITEC	Site type -- 2 characters
SNAME	Station name -- 50 characters
STAID	Station number -- 15 characters
STATE	State code -- 2 characters
STYPE	Sample type code -- 1 character
TIMES	Sample times -- 4 characters

Parameters are placed in the file in the order in which they are found in the list.

If the alpha parameter CALCV (include all possible calculated parameters) is included, the calculated parameters, in ascending order of parameter code, are included at the point where the CALCV parameter was entered.

If the alpha parameter ADDPC is included, it must be the last parameter in the list; the program will not read more parameters after ADDPC.

If the alpha parameter ADDPC is included, all numeric parameters (including those added by CALCV and ADDPC) are printed in ascending order of parameter code. Alpha parameters are not sorted.

A maximum of 350 parameters may be included in a single retrieval due to the maximum record length of the Prime.

If an invalid numeric parameter is requested, an error message is written and the requested parameter is ignored.

Multiple occurrences of the same parameter are not permitted; if a parameter is entered more than once, the first occurrence is retained and others are deleted from the list.

When parameters have been entered, the program informs you that data are being processed. When completed, the program writes a message asking if you want to prepare another file at this time. If YES, the program dialog starts over from the beginning; if NO, the program ends.

The output file contains rounded numbers in the following format:

```
Remark (1)  - col.  1
Value  (1)  - cols. 2-10
Remark (2)  - col.  11
Value  (2)  - cols. 12-20
   .
   .
   .
Remark (N)
Value  (N)
```

The exceptions to this rule are some of the alpha parameters.

LATLG: uses 19 columns; positions 3-9 contain the latitude and positions 12-19 contain the longitude.
LOCAL: uses 19 columns.
SNAME: uses 49 columns.
STAID: uses 19 columns.

Notes: For this program only, the alpha code CNTYC, the county code, will contain the State code in positions 5 and 6 and the county code in positions 7, 8, and 9 of the 10 columns used for this variable. Missing values are shown as "-999999" for numeric parameters and "--" for alpha parameters.

The parameter codes, short names, and the units are written to a file in the order that data are written to the data file. This file's name is formed by adding ".PARNAMES" to the file name you give to the data file and is written in the following format:

Parameter Code	:	cols. 1-5
Short Name	:	cols. 7-22
Units	:	cols. 24-39

5.8 Option 8 -- Summary Statistics Table (WATSTORE>QW_PM>RUN>QWPRCNTL)

This program reads the data and parameter name files created by a run of QWFLATOUT (option 5.7) and produces a table of summary statistics. The heading on the summary table requires information from the Site File that is obtained by using the following alpha codes as the first six codes in the parameter list passed to QWFLATOUT:

STAID, SNAME, DATES, LATLG, CNTYC, CTBDA

LOCAL may be included and will be used as the station name.

81024 (DRAINAGE AREA) may be included and will be used as the drainage area in place of the contributing drainage area.

The program asks for the input data file name (created by a run of QWFLATOUT). The program then asks for the parameter list file name. This file is created by a run of QWFLATOUT, or you may create your own file by using the format described on page 5-11. The names need to be in the same order as the input data. The program then prompts for the output file name and asks if you wish to report estimated percentiles for censored parameters.

At this point, the interactive portion of the QWPRCNTL program is finished. This program may run for a long time, depending on the number of parameters that are to be processed and the number of records.

A log-probability regression procedure is used to estimate the mean (and the percentiles, if requested) of censored parameters. This procedure handles multiple-detection limits.

The methods used are as follows:

Uncensored parameters:

1. The data are ranked in ascending order and positions for the percentiles are found using the following formula:

$$K = Pct * (N + 1)/100$$

where K is the expected position, Pct is the integer percentile (e.g., for the 5th percentile, Pct = 5; for the 25th percentile, Pct = 25) and N is the number of observations. If the position K is a whole number, then the value in that position in the rank order data is the value used for the percentile. If K is not a whole number, then the following interpolation is used:

$$P(Pct) = X(trunc(K)) + (K-trunc(K)) * (X(trunc(K)+1) - X(trunc(K)))$$

where P(Pct) is the desired percentile, X() is the rank order data set, trunc(K) is the truncated value of K and Pct is as above.

2. If the number of observations is greater than 1 and less than or equal to 5, only the maximum, minimum and mean are reported.

3. If the number of observations is equal to 1, only the maximum is reported.

4. If the maximum is equal to 0.0, only the maximum is reported, regardless of the number of observations.

5. All values in uncensored parameters are treated the same regardless of any codes associated with those values.

Censored parameters:

1. If the percent of values flagged with "<" or "U" is greater than 5 percent of the total number of data values for a parameter, the parameter is considered censored.

2. The mean of censored parameters is estimated with a log-probability regression procedure. The method estimates the values below a detection limit, and uses these values and the detected values of a parameter to estimate the mean. The FORTRAN implementation of this method was done by the Systems Analysis Group, WRD, USGS. This method was chosen as the best way to handle the problems presented by multiple detection limits in water-quality data. The estimated mean is flagged with an "*" and explained in a footnote on the statistical summary table.

3. If estimated percentiles are requested, the same procedure that is used to estimate data below the detection limit for the calculation of the mean is used to estimate the data below the detection limit and to calculate the percentiles. The percentile values are calculated using the same method as described in Part 1 of the previously mentioned uncensored methods. These values are also flagged with "*" to indicate that they are based on an estimated data set and the "*" is explained in a footnote.

4. If nonestimated percentiles are requested, only actual values are used for the percentile values in the statistical table. The percentiles retain a "<" flag if one is associated with the value originally and no interpolation between values is used. To establish the set of sorted data that the percentiles are selected from, all values flagged with "<" or "U" are assumed to be less than any value without a flag. For example, the following values are shown in the ascending order that would be used.

<0.1 <1 <20 .01 17 500

5. Only "<" and "U" remark codes are used to distinguish censored from uncensored parameters and subsequently established as less-than values in the statistical procedures. Other remark codes are processed as follows:

   K - treated as a detected value
   E - treated as a detected value
   > - values dropped from statistical procedures
   M - values dropped from statistical procedures
   N - values dropped from statistical procedures

6. If the average of two values must be taken to obtain the value for a percentile, the remark code of the greater value is associated with the percentile.

7. Any values equal to 0 in a censored parameter are replaced with the value of the nearest less-than value (in time-order) and the remark code is set to "<".

8. If the number of observations above the detection limit is less than 5, the estimated values are considered unreliable and are not reported.

9. If the total number of observations (above and below the detection limit) is greater than 1 and less than or equal to 5, only the maximum and minimum are reported.

10. If the total number of observations is equal to 1, only the maximum is reported.

Effective limits of the program:

1. The maximum number of parameters (header and water-quality) cannot exceed 350 due to the maximum record length of the Prime.

2. The maximum number of values per parameter per station is set to 1000.

5.9 Option 9 -- Detection Limits Table (WATSTORE>QW_PM>RUN>QWDETLIMS

This program reads the data and parameter name files created by a run of QWFLATOUT (option 5.7) and produces a table of detection limits. The heading on the table requires information from the Water-Quality File that is obtained by using DATES in the parameter list passed to QWFLATOUT.

The QWDETLIMS program produces a table of detection limits encountered in the input data file for each parameter in the parameter list file, excluding the alpha parameter codes and the numeric codes for mean discharge, instantaneous discharge, and drainage area (00060, 00061, and 81024, respectively). A maximum of 350 valid numeric parameter codes can be handled by the program, and a maximum of 19 years can be processed for each run.

The program asks for the input data file name created by QWFLATOUT. The program then asks for the parameter list file name. This file is created by a run of QWFLATOUT, or you may create your own file by using the format described on page 5-11. The names need to be in the same order as the input data.

The program then asks for the output file name and asks if you want to specify the period of record to be used (19 years, maximum) or to use the dates from the input data file (only the last 19 years will be counted). If specifying the period of record, you are then asked for the beginning year and the ending year.

At this point, the interactive portion of the QWDETLIMS program is finished. This program may run for a long time, depending on the number of parameters that are to be processed and the number of records.

The QWDETLIMS program produces a table of detection limits encountered in the input data file for each parameter in the parameter list file, excluding the alpha parameter codes and the numeric codes for mean discharge, instantaneous discharge, and drainage area (00060, 00061, and 81024, respectively). A maximum of 195 valid numeric parameter codes can be handled by the program, and a maximum of 19 years can be processed, for each run.

The output table is headed by the name of the parameter from the parameter list file, the corresponding parameter code, and the total of the nonmissing values encountered for that parameter. The table consists of a column of detection limits encountered (a data value with a remark code of "<" or "U"), columns of counts of detection limits encountered for each selected year (up to a maximum of 19 years), a summary column (the total of the counts for that detection limit), and a final column giving the percent of the total, nonmissing values represented by that detection limit. The rows are in the order of detection limits as they are encountered in the input data.

The input data file is considered as a whole. By selecting appropriate record numbers to be used by QWFLATOUT, QWDETLIMS can be used to show detection limits encountered for a single station, a single county, a specific project, a single year, or any period of years up to 19. If the output from QWFLATOUT had 50 years of data, it could be processed by QWDETLIMS in three runs.

One use of the detection limits table is for locating probable order-of-magnitude data errors. For example, if a parameter has a detection limit of <0.5 for a period of years and a single (or few) detection limit(s) of <50., the single data value should probably be reviewed. Another use is for evaluating the data before or as they are used in statistical analysis.

5.10 Option 10 -- Statistics Plots (WATSTORE>QW_PM>RUN>QWSTATPLOT)

This program displays various statistical properties of a single variable. Techniques are those taught in the course "Probability and Statistics for Data Analysis" or found in the text "A Modern Approach to Statistics" (Iman and Conover, 1983).

The program requires that the data be entered into a Prime ASCII file. You must know (1) the input data file name, (2) the sample size (number of values, a maximum of 500 values is allowed), and (3) the FORTRAN format (number of columns and type description) to read a row of the input data. Graphon terminals should be set to accept mode changes from the host "VIA GS/CAN/ ESC FF" (SETUP E, SWITCH 2 SET TO 2) and Tektronix terminals should be set in CODE ANSI. After plots, press <CR> to resume the program.

The program starts by displaying the previous two paragraphs of text and asking if you wish to continue. If NO, the program ends. If YES, the program asks for the input data file name and the sample size (number of values). The program then attempts to read and display the first row of the input data file. The program next asks for the number of columns (values/row) and the input format (to be entered without parentheses). A sample format is "10F12.2". The values based on your format line are displayed, with the prompt "OK (Y/N)".

When the data have been read, the program asks for a title to be used in the various routines (up to 42 characters of alphanumeric text) and for the variable name to use for the x-axis label (up to 50 characters of alphanumeric text).

The program then provides the following device selection menu:

```
DEVICE SELECTION MENU
**********************

1.  GRAPHON
2.  TEKTRONIX
3.  HP7475 PLOTTER
4.  META FILE

ENTER YOUR SELECTION--->
```

If the response is 1 (GRAPHON), the program then displays the following main menu:

```
                    MAIN MENU
                    *********

        (FOR HELP TYPE OPTION NUMBER FOLLOWED BY 9)
             1.  DISPLAY SAMPLE STATISTICS
             2.  STEM AND LEAF PLOT
             3.  DISPLAY REAL NUMBER LINE PLOT
             4.  PLOT BOXPLOT
             5.  PLOT HISTOGRAM
             6.  PLOT FREQUENCY POLYGON
             7.  PLOT OGIVE
             8.  PLOT EMPERICAL DISTRIBUTION FUNCTION
             9.  PLOT QUANTILE PLOT
            10.  PLOT Q-Q PLOT
            11.  PLOT LILLIEFORS TEST FOR NORMALITY
            12.  PLOT SYMMETRY PLOT
            13.  RESTART WITH NEW DATA SET
            14.  CHANGE OUTPUT DEVICE
            15.  ADD/REMOVE OUTLIERS
            16.  TRANSFORM DATA
            17.  EXIT PROGRAM
           ENTER YOUR SELECTION--->
```

If the response is 2 (TEKTRONIX), the program asks for the model number; if the response is 3 (HP7475 PLOTTER), the program asks for the paper size; and if the response is 4 (META FILE), the program asks for the name of the output file. The program then continues with the main menu described previously.

As noted in the main menu, online help for any of the 16 options can be obtained by entering the number followed by 9; the help for plotting the symmetry plot, option 12, will be displayed by entering 129. The online helps are displayed as follows:

HELP FOR SAMPLE STATISTICS
****

SUMX is sum of all values of X.
N is number of observations.
DIFS is the difference of each X from the mean.
DIFSQUARE is the sum of the squared DIFS.
DIFCUBE is the sum of the cubed DIFS.
DIFQUAD is the sum of the DIFS to the 4th power.
Then: Mean (XMEAN) is SUMX/N.
Standard deviation (SD) is square root of
(DIFSQUARE/(N-1)).
Variance is SD squared.
Coefficient of variation is SD/XMEAN.
Skew is (DIFCUBE/N)/((DIFSQUARE/N)**1.5).
Kurtosis is ((DIFQUAD/N)/((DIFSQUARE/N)**2)-3.
The mean is the arithmetic average of the sample values and is a measure of the center of the sample. The standard deviation is a measure of the variability within a sample; about two-thirds of sample observations are within one standard deviation of the mean, and 95 percent within two standard deviations of the mean. The coefficient of variation is dimensionless and can be used to compare variability of two different samples. Skew measures asymmetry of a sample around the mean--extreme values extending further out to the right cause positive skew.

Median: The central value if N is odd. The average of the two central values if N is even.
Range: The largest value of X minus the smallest value of X.
First quartile: The median of the lower half of the sample (central value or values not included).
Third quartile: The median of the upper half of the sample (central value or values not included).
Interquartile range: Third quartile minus first quartile.
Outside value: Sample values from 1.5 to 3.0 times the interquartile range less than the first quartile or greater than the third quartile.
Detached value (also called farout value): Sample values more extreme than 3.0 times the interquartile range less than the first quartile or greater than the third quartile.
The median is the central value of a sample set, and as a measure of central location is minimally affected by outliers. The interquartile range is a measure of spread of a data set--it measures the range of the central 50 percent of the dataset and is not influenced by data outside this range. Detached values occur fewer than once in 10,000 times in a normal distribution, and may suggest nonnormality or spurious data.

HELP FOR STEM AND LEAF PLOT

A stem and leaf plot shows the distribution of the individual sample observations. This version of the plot separates and lists far outside values. The remaining values are shown in the plot. Values are rounded to two significant figures. The stem shows variation in the first significant figure of the data, and the leaf lists values for the second significant figure. For example, a sample value of 134 would first be rounded to 130. A stem value of 100 and a leaf value of 10 would be selected; the data value would be displayed as 1 : 3. In some cases stem units are subdivided into two classes to show more detail; the lower class is for leaf values of 0 to 4 and the upper class is for leaf values of 5 to 9.

HELP FOR REAL NUMBER LINE PLOT

The real number line plot simply shows all sample values plotted on a single axis. It gives a general impression of the relative values of all sample observations. It may be misleading, however, when many sample values are similar and thus overplot as a single point on the line.

HELP FOR BOXPLOT

The boxplot shows nonparametric statistics graphically. The box is drawn from the first quartile to the third quartile, so its length is the interquartile range. The center line in the box is drawn at the median. Whiskers extend from the box to the upper and lower adjacent values; the upper adjacent value is defined as the largest data point less than or equal to the upper quartile plus 1.5 times the interquartile range; the lower adjacent value is defined as the smallest data point greater than or equal to the lower quartile minus 1.5 times the interquartile range. Adjacent values are plotted with an asterisk. Outside values are plotted as a circle. Boxplots thus give a general idea of the shape of the distribution, the location of most of the data points, the skew, and the existence of possible spurious values.

HELP FOR HISTOGRAM

A histogram shows the frequency distribution of data from a sample by grouping the data into equal intervals, called classes. The frequency of a class is the number of sample observations that fall within that class interval. The relative frequency of a class is its frequency divided by the total number of observations in the sample. Classes are displayed in a histogram as bars; the width of the bar shows the class width, and the height of the bar shows the class frequency or relative frequency. The shape of a histogram can change drastically depending on the number of classes and the width of the class interval. A suggested number of classes is calculated using the formula 1 + 3.33 * LOG10(N). The user inputs number of classes, class interval, and lower limit for first interval. It is suggested that several setups be tried in order to view the variable shapes of the histograms.

HELP FOR FREQUENCY POLYGON

The frequency polygon is similar to the histogram. Midpoints of the tops of histogram bars for each class are joined by a continuous line. Line segments are added at the extremes of the histogram to show frequency (or relative frequency) falling to zero outside of the histogram. The resultant graph gives an impression of the shape of the frequency distribution of a sample.

HELP FOR OGIVE

An ogive (pronounced oh-jyve) is a plot of cumulative relative frequency of a sample grouped into classes. The cumulative relative frequency for each class is represented by a point located at the upper class boundary for that class. The ogive is useful for estimating the proportion of observations in the sample that are less than or equal to any value.

HELP FOR EMPIRICAL DISTRIBUTION FUNCTION

The empirical distribution function (EDF) is a plot of cumulative relative frequency (y-axis) versus data value (x-axis) for the ordered dataset. It is similar to the ogive except that a point is plotted for each data value rather than grouping data into classes. The cumulative relative frequency for the ith ordered data point is i/N. The resultant stair-step pattern can be used to find quantiles for a dataset. Gaps in a dataset can be identified by long horizontal lines in the EDF. EDF's can also be used for comparison with cumulative distribution functions (CDF) for various theoretical distributions. For example, the CDF for the normal distribution plots as an S-shaped curve on an EDF plot.

HELP FOR QUANTILE PLOT

Quantile plots are graphs of data values versus the fraction of data less than that value. The quantile plot is similar to the empirical distribution function except that (1) points are connected as straight lines rather then steps, (2) cumulative frequency is calculated using a plotting position; here, the Cunnane formula is used [$p = (i - 0.4)/(N + 0.2)$] rather than simply i/N, and (3) the axes are reversed for the quantile plot, with plotting position shown on the x-axis.

Quantile plots may be used to estimate quantiles for a population from which a sample is drawn. Like the EDF, the quantile plot may be used to compare sample distributions or to compare a sample distribution with a theoretical distribution.

HELP FOR Q-Q PLOT

The Q-Q plot is a quantile-quantile plot, also known as a probability plot. In this plot, quantiles of the sample data are transformed into normal quantiles and plotted. The x-axis of the plot is the linear standard normal quantile scale, usually plotted from -3 to +3. Alternately, the equivalent nonlinear normal probablity scale (exceedence probability) can be used, and is usually plotted for 0.01 to 99.99 percent. The y-axis is the sample value scale. A normal sample will plot as a straight line in a Q-Q plot; therefore the normality of a dataset can be examined using this plot. Left skewness in a sample produces a convex Q-Q plot; right skewness produces a concave plot. Outliers appear on a Q-Q plot as departures from the pattern of the rest of the data.

The program first prompts the user for a marker symbol code. Available symbols and their codes are given on page 9 of the DISSPLA Pocket Guide. The user is also prompted for a symbol size multiplication factor; this factor will alter the default symbol size. For example, a factor of 2.0 will draw a symbol twice as large as the default symbol size.

HELP FOR LILLIEFORS TEST FOR NORMALITY

The Lilliefors test for normality is used to check the null hypothesis that a sample is normally distributed. To do this, the empirical distribution function of the standardized sample is first plotted. This is then compared with Lilliefors bounds which have been calculated for a designated confidence level; here the 95 percent bounds are shown. If a sample EDF falls within these bounds, the hypothesis of normality cannot be rejected at an alpha level of confidence of 0.05.

Lilliefors bounds for this program were taken from "Practical Nonparametric Statistics" (Conover, 1980, p. 463). These bounds were generated using Monte Carlo methods; that is, over 1000 sets of randomly generated normal deviates were examined for each sample size tested, and for N=10, for example, it was found that 95 percent of the samples fell within a vertical shift of 0.258 from the theoretical normal plot.

HELP FOR SYMMETRY PLOT

A symmetry plot displays the symmetry of a dataset about the median. The ordered dataset is split at the median, and data values are paired by position equidistant from the median, for example, [X(1),X(N)];[X(2),X(N-1)]. For each pair, the distances from the median are calculated and plotted against each other. The axes of the symmetry plot are at the same scale; hence a symmetric sample would plot as a straight diagonal line. Points plotted above this line are right-skewed, while points plotted below this line are left-skewed.

HELP FOR NEW DATASET RESTART

This option allows the program to be restarted with a different input file. It returns the user to the data input prompts.

HELP FOR CHANGING OUTPUT DEVICE

The change-output-device option returns the user to the device selection menu. Graphics may be directed to a Graphon (Tab) screen, a Tektronix screen, an HP7475 plotter, or to a META file.

HELP FOR REMOVING OUTLIERS

This program allows removal of possible outliers by simply selecting the option, and entering the number of high and/or low points to be removed. The program does not define outliers, but the user may experiment by removing points identified by non-parametric statistics as outside values, or by examining plots for data that appear to originate from a different distribution. Since no rigorous identification of outliers is made, this option can only be used in an exploratory way.

Sequential use of this option will cumulatively remove data points; however, the original data set will be restored if 0 is typed in response to both removal inquiries.

HELP FOR TRANSFORMING DATA
****

Transformations are used to make data (1) more symmetric, (2) more constant in variance, and (3) more linear. The transformations allowed in this program follow the ladder of powers. A transformation with large positive power (for example, the cube, with a power of 3) is used to correct left (negative) skewness. A transformation with large negative power (for example, the reciprocal square, with a power of -2) is used to correct right (positive) skewness. For transformations with negative power, a minus sign is used to preserve the order of the data.

The program will not allow transformations on data sets with values less than or equal to zero; this is because most of the listed transformations cannot be done on values less than or equal to zero, or because such a transformation might alter the ordering of the dataset. Even if outliers have previously been removed from a data set, selection of the transformation option will recall the original complete data set. Selection of the ORIGINAL UNITS option will restore the full untransformed data-set. Sequential transformations are not allowed by the program.

If the selection from the main menu is 1, the program outputs the following statistical summary:

TITLE
RAW DATA
STATISTICAL SUMMARY (N=100)

MEAN:	992.	MEDIAN:	962.0
STANDARD DEVIATION:	182.2	RANGE:	1136.
VARIANCE:	33215.	FIRST QUARTILE:	881.0
COEFFICIENT OF VARIATION:	.18377	THIRD QUARTILE:	1070.
SKEW:	2.510	INTERQUARTILE RANGE:	189.0
KURTOSIS:	10.15	# OF OUTSIDE VALUES:	0
		# OF DETACHED VALUES:	1

If the selection from the main menu is 5 or 6, the program asks for a choice between frequency or relative frequency. If the selection is 5, 6, or 7 the following information is output:

```
MINIMUM DATA VALUE IS
MAXIMUM DATA VALUE IS
RANGE OF VALUES IS
SUGGESTED NUMBER OF INTERVALS IS
SUGGESTED INTERVAL SIZE IS
```

The program then asks for the number of intervals desired, the interval desired, and the beginning value for the first interval.

If the selection from the main menu is 10, the program asks for the marker symbol code (0-18), for the multiplication factor to determine the marker symbol size, and for a choice between plotting the x-axis in quantiles or exceedance probabilities.

If the selection from the main menu is 13, the program restarts at the point of asking for the input data file name.

If the selection from the main menu is 14, the program restarts at the device-selection menu after printing some DISSPLA messages.

If the selection from the main menu is 15, the program asks how many low values and how many high values are to be removed. To get the entire, original dataset back, answer zero to both questions.

If the selection from the main menu is 16, the program displays the following transform selection menu:

TRANSFORM DATA
****

Transformations are done on the full data set. Values less than or equal to zero are not allowed. Sequential transformations are not allowed.

1. CUBE, POWER OF 3
2. SQUARE, POWER OF 2
3. ORIGINAL UNITS
4. SQUARE ROOT, POWER OF 1/2
5. LOGARITHM (BASE 10), POWER OF 0
6. RECIPROCAL ROOT, POWER OF -1/2
7. RECIPROCAL, POWER OF -1
8. RECIPROCAL SQUARE, POWER OF -2

PLEASE ENTER YOUR SELECTION--->

At this point, the interactive portion of the QWSTATPLOT program is finished. This program may run for a long time, depending on the amount of data to be processed.

There are some error messages that may appear at various times, seemingly data dependent. Users are urged to report problems or unexplained error messages (please provide COMO files, if possible) to the NWIS/WATSTORE Program Office. Among the known error messages are the following:

1. >>>>> ERROR OPENING VIRTUAL STORAGE PAGING FILE 11.
   (following device reselection)

2. SUBSCRIPTRANGE raised in QWSTATPLOT at . . .
   (SUBSCRIPTRANGE)

   ERROR raised in QWSTATPLOT at . . .
   (no on-unit for SUBSCRIPTRANGE)
   (following selection of option 2, stem and leaf plot)

3. Error: condition "ACCESS_VIOLATION$" raised at . . .
   (Referencing . . .)
   (following selection of option 4, boxplot)

4. ERROR raised in TRAN at . . .
   (LOG argument <=0)
   (following selection of option 11, Lilliefors test)

6 INDEX OF PROGRAMS

APPENDIX A. CODES USED IN WATER-QUALITY PROCESSING SYSTEM

Medium Code	Description
0	Not determined
A	Artificial
B	Solids (street sweepings, etc.)
C	Animal tissue
D	Plant tissue
E	Core material
F	Interstitial water
G	Soil
H	Bottom material
J	Sludge
K	Soil moisture
L-P	Taxonomic data (L) Phytoplanktonic species composition and enumeration (M) Phytoplanktonic species composition (N) Periphytic species composition (O) Benthic invertebrates species composition and enumeration (P) Periphytic diatoms species composition and enumeration
1	Suspended sediment
2	Leachate
3	Dry deposition
4	Landfill effluent
5	Elutriation
6	Ground water
7	Wet deposition
8	Bulk deposition
9	Surface water

Definitions of Medium Codes:

A. Artificial - Any substance that is not part of an aquatic environment and cannot be described by the Sample Medium Codes B-J or 1-9.

B. Solids (street sweepings, etc.) - Dry unconsolidated materials that are collected from a street or paved area, including the total array of materials that are collected as part of a "clean sweep," and cannot be described by Sample Medium Codes C-J or 1-9.

C. Animal Tissue - Any type of tissue that comprises either whole or parts of insects, fish, or other organisms living in an aquatic environment, or warm bodied animals that may or may not have been collected from a water body.

D. Plant Tissue - Any type of non-animal tissue that comprises either whole or parts of plants, aquatic or non-aquatic.

E. Core Material - Consolidated or unconsolidated material removed from a pipe or casing during a drilling (coring) operation.

F. Interstitial Water - Water occurring in the small openings, spaces, and voids between particles of unconsolidated materials in that portion of the vadose water zone between the root zone and the water table. The water is held in place by entrapment, ionic attraction, and capillary or adhesive forces rather than from upward pressure components of saturation.

G. Soil - A wet or dry substance composed of unconsolidated fine grain rock fragments (minerals) and organic material that has been modified sufficiently by physical, chemical, or biological processes to support terrestrial plant growth.

H. Bottom Material - A mixture of mineral and organic matter that compose the top bed deposits (usually the first few inches) underlying a body of water.

J. Sludge - An unconsolidated material, from an anthropogenic source, covering the ground or the bed of a water body, usually originating as a result of processes such as domestic or industrial waste treatment.

K. Soil Moisture - Water occupying voids between loose soil particles within the aerated root zone. The water is held in place by surface tension, capillary and hydroscopic forces in opposition to the pull of gravitational forces.

Taxonomic Data - Biological data distinct from non-taxonomic data which cannot be described by Sample Medium Codes A-K or 1-9.

L. Taxonomic Data - Phytoplanktonic species composition and enumeration

M. Taxonomic Data - Phytoplanktonic species composition

N. Taxonomic Data - Periphytic species composition

O. Taxonomic Data - Benthic invertebrates species composition and enumeration

P. Taxonomic Data - Periphytic diatoms species composition and enumeration

1. Suspended sediment - Sediment that is carried in suspension by the turbulent components of the fluid or by the Brownian movement (a law of physics).

2. Leachate - A solution obtained by passing a liquid (usually aqueous) through an unconsolidated solid medium, thereby dissolving materials (from the solid medium) which become a part of the solution. It also contains those precipitates that are the result of the solution process and subsequent chemical or biological reactions.

3. Dry Deposition - Solid, aerosol or gaseous materials deposited from the atmosphere during dry weather periods.

4. Landfill Effluent - A liquid material (usually water) that is drained or pumped from a landfill. It usually is a liquid that has percolated through solid landfill material to become a transport medium for materials dissolved from the landfill.

5. Elutriation - A process by which a mixture of an unconsolidated solid medium (usually soil) and a liquid medium (usually water) has been agitated for a given period of time to dissolve materials from the solid. The solid/liquid mixture is finally separated and the resulting solution is analyzed for materials dissolved during the elutriation process.

6. Ground Water - Water below the surface of the earth contained in the saturated zone. It does not include soil moisture or interstitial water.

7. Wet Deposition - Water reaching the earth's surface through precipitation as rain, snow, sleet, hail or condensation of fog and dew. The water may contain undissolved particulate and gaseous materials acquired from the atmosphere during precipitation.

8. Bulk Deposition - A mixture of undesignated proportions of wet and dry deposition sampled by a continuously open container.

9. Surface Water - Water on the surface of the earth stored or transported in rivers, streams, estuaries, lakes, ponds, swamps, glaciers or other aquatic areas. It may also refer to water in urban drains and storm-sewer systems.

Hydrologic Condition Code	Description
A	Not determined
4	Stable, low stage
5	Falling stage
6	Stable, high stage
7	Peak stage
8	Rising stage
9	Stable, normal stage

Sample Type Code	Description
A	Not determined
H	Composite (time)
1	Spike
3	Reference
5	Duplicate
7	Replicate
9	Regular

Hydrologic Event Code	Description
A	Spring breakup
B	Under ice cover
C	Glacial lake outbreak
D	Mudflow
E	Tidal action
H	Dambreak
J	Storm
1	Drought
2	Spill
3	Regulated flow
4	Snowmelt
5	Earthquake
6	Hurricane
7	Flood
8	Volcanic action
9	Routine sample

Analysis Types	Description
CH	Chemical
BI	Biological
SE	Sediment
NU	Nutrient
PE	Pesticide
BE	Bed material
ME	Metals
RA	Radiochemical

Analysis Status Code	Description
A	Not Determined
H	Initial entry
1	Retrieved, in review
3	Data in temporary hold status
7	Reviewed, approved for transfer to EPA STORET
9	Proprietary data (Regional Hydrologist approval required)

Analysis Source Code	Description
A	Not determined
B	Non-USGS field
C	Non-USGS lab only
D	Non-USGS lab and field
F	USGS field and non-USGS field
G	USGS field and non-USGS lab
H	USGS field and non-USGS lab and field
1	USGS lab and non-USGS field
2	USGS lab and non-USGS lab
3	USGS lab and non-USGS lab and field
4	USGS lab and field and non-USGS field
5	USGS lab and field and non-USGS lab
6	USGS lab and field and non-USGS lab and field
7	USGS field only
8	USGS lab only
9	USGS lab and field

Remark Code	Description
Blank	Not remarked.
0,E	Estimated value.
1,<	Actual value is known to be less than the value shown.
2,>	Actual value is known to be greater than the value shown.
3,M	Presence of material verified but not quantified.
4,N	Presumptive evidence of presence of material.
U	Material specifically analyzed for but not detected.
B,K	Results based on coloy count outside the acceptable range. (non-ideal colony count).
L	Biological organism count less than 0.5 percent (may be only observed).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
X	Delete the parameter.

Quality Assurance Code	Description
A	Not reported.
B	Non-USGS lab value--failed edit.
C	Non-USGS field value--failed edit.
D	USGS lab value--failed edit.
E	USGS field value--failed edit.
F	Non-USGS lab value--in review.
G	Non-USGS field value--in review.
H	USGS lab value--in review.
I	USGS field value--in review.
1	Non-USGS lab value--approved for transfer to EPA STORET.
2	Non-USGS field value--approved for transfer to EPA STORET.
3	USGS lab value--approved for transfer to EPA STORET.
4	USGS field value--approved for transfer to EPA STORET.

Site-Type Codes	Description
SW	Stream
GW	Well
SP	Spring
LK	Lake
ES	Estuary
ME	Meteorological

Valid District Processing Status codes are as follows:

N -- New Record
F -- Field data
L -- Laboratory data
P -- Pending approval
R -- Ready to transmit to Reston
T -- Transmitted
Z -- Local-use data

APPENDIX B. FIXED VALUE CODES

PARAMETER CODE	FIXED VALUE	PARAMETER NAME	DATE CREATED
00027	COLLECTING AGENCY		
00027	300.00	NAPD/NTN - NAT.ATMOS.DEPOSITION PROGRAM/ NAT.TRENDS NETWORK	19871218
00027	500.00	DEPARTMENT OF AGRICULTURE	19870331
00027	504.00	AGRICULTURAL RESEARCH SERVICE	19840312
00027	520.00	SOIL CONSERVATION SERVICE	19840312
00027	596.00	FOREST SERVICE	19840312
00027	600.00	DEPARTMENT OF COMMERCE	19840312
00027	642.00	NATIONAL INDUSTRIAL POLLUTION CONTROL COUNCIL	19840312
00027	648.00	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	19840312
00027	655.00	NATIONAL BUREAU OF STANDARDS	19840312
00027	700.00	DEPARTMENT OF DEFENSE - MILITARY	19840312
00027	701.00	AIR FORCE	19840312
00027	702.00	ARMY	19840312
00027	703.00	MARINES	19840312
00027	704.00	NAVY	19840312
00027	800.00	DEPARTMENT OF DEFENSE - CIVIL	19840312
00027	810.00	CORPS OF ENGINEERS	19840312
00027	900.00	DEPARTMENT OF HEALTH, EDUCATION AND WELFARE	19840312
00027	910.00	FOOD AND DRUG ADMINISTRATION	19840312
00027	915.00	ENVIRONMENTAL HEALTH SERVICE	19840312
00027	930.00	NATIONAL INSTITUTES OF HEALTH	19840312
00027	1000.00	DEPARTMENT OF THE INTERIOR	19840312
00027	1004.00	BUREAU OF LAND MANAGEMENT	19840312
00027	1008.00	BUREAU OF INDIAN AFFAIRS	19840312
00027	1016.00	BUREAU OF OUTDOOR RECREATION	19840312
00027	1028.00	GEOLOGICAL SURVEY	19840312
00027	1032.00	BUREAU OF MINES	19840312
00027	1050.00	BUREAU OF SPORT FISHERIES AND WILDLIFE	19840312
00027	1053.00	NATIONAL PARK SERVICE	19840312
00027	1060.00	BUREAU OF RECLAMATION	19840312
00027	1062.00	ALASKA POWER ADMINISTRATION	19840312
00027	1064.00	BONNEVILLE POWER ADMINISTRATION	19840312
00027	1068.00	SOUTHEASTERN POWER ADMINISTRATION	19840312
00027	1072.00	SOUTHWESTERN POWER ADMINISTRATION	19840312
00027	1076.00	OFFICE OF SALINE WATER	19840312
00027	1086.00	OFFICE OF WATER RESOURCES RESEARCH	19840312
00027	1800.00	ATOMIC ENERGY COMMISSION	19840312
00027	2000.00	ENVIRONMENTAL PROTECTION AGENCY	19840312
00027	2100.00	DEPARTMENT OF TRANSPORTATION	19840312
00027	2300.00	GENERAL SERVICES ADMINISTRATION	19840312
00027	2500.00	DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	19840312

00027	2555.00	U.S. PUBLIC HEALTH SERVICE, DIVISION OF INDIAN HEALTH	19890907
00027	2700.00	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	19840312
00027	3315.00	TENNESSEE VALLEY AUTHORITY	19840312
00027	3335.00	WATER RESOURCES COUNCIL	19840312
00027	6001.00	ASSOCIATION OF BAY AREA GOVERNMENTS, CALIFORNIA	19840312
00027	6003.00	ALAMEDA CO. FLOOD CONTROL AND WATER CONSERVATION DIST., CA	19861114
00027	6005.00	EAST BAY REGIONAL PARK DISTRICT, CA	19840312
00027	6010.00	CA REGIONAL WATER QUALITY CONTROL BOARD NORTH COAST REGION	19840312
00027	6020.00	SANTA CLARA VALLEY WATER DISTRICT, CALIFORNIA	19840312
00027	9700.00	STATE HEALTH LABORATORY (00 = STATE CODE)	19840312
00027	9701.00	ALABAMA	19840312
00027	9702.00	ALASKA	19840312
00027	9704.00	ARIZONA	19840312
00027	9705.00	ARKANSAS	19840312
00027	9706.00	CALIFORNIA	19840312
00027	9708.00	COLORADO	19840312
00027	9709.00	CONNECTICUT	19840312
00027	9710.00	DELAWARE	19840312
00027	9711.00	DISTRICT OF COLUMBIA	19840312
00027	9712.00	FLORIDA	19840312
00027	9713.00	GEORGIA	19840312
00027	9715.00	HAWAII	19840312
00027	9716.00	IDAHO	19840312
00027	9717.00	ILLINOIS	19840312
00027	9718.00	INDIANA	19840312
00027	9719.00	IOWA	19840312
00027	9720.00	KANSAS	19840312
00027	9721.00	KENTUCKY	19840312
00027	9722.00	LOUISIANA	19840312
00027	9723.00	MAINE	19840312
00027	9724.00	MARYLAND	19840312
00027	9725.00	MASSACHUSETTS	19840312
00027	9726.00	MICHIGAN	19840312
00027	9727.00	MINNESOTA POLLUTION CONTROL COUNCIL	19840312
00027	9728.00	MISSISSIPPI	19840312
00027	9729.00	MISSOURI	19840312
00027	9730.00	MONTANA	19840312
00027	9731.00	NEBRASKA	19840312
00027	9732.00	NEVADA	19840312
00027	9733.00	NEW HAMPSHIRE	19840312
00027	9734.00	NEW JERSEY	19840312
00027	9735.00	NEW MEXICO	19840312
00027	9736.00	NEW YORK	19840312
00027	9737.00	NORTH CAROLINA	19840312
00027	9738.00	NORTH DAKOTA	19840312
00027	9739.00	OHIO	19840312
00027	9740.00	OKLAHOMA	19840312
00027	9741.00	OREGON	19840312

00027	9742.00	PENNSYLVANIA	19840312
00027	9744.00	RHODE ISLAND	19840312
00027	9745.00	SOUTH CAROLINA	19840312
00027	9746.00	SOUTH DAKOTA	19840312
00027	9747.00	TENNESSEE	19840312
00027	9748.00	TEXAS	19840312
00027	9749.00	UTAH	19840312
00027	9750.00	VERMONT	19840312
00027	9751.00	VIRGINIA	19840312
00027	9753.00	WASHINGTON	19840312
00027	9754.00	WEST VIRGINIA	19840312
00027	9755.00	WISCONSIN	19840312
00027	9756.00	WYOMING	19840312
00027	9760.00	AMERICAN SAMOA	19840312
00027	9761.00	CANAL ZONE	19840312
00027	9762.00	CANTON AND ENDERBURY ISLANDS	19840312
00027	9766.00	GUAM	19840312
00027	9767.00	JOHNSTON ATOLL	19840312
00027	9771.00	MIDWAY ISLANDS	19840312
00027	9772.00	PUERTO RICO	19840312
00027	9773.00	RYUKYU ISLANDS, SOUTHERN	19840312
00027	9774.00	SWAN ISLANDS	19840312
00027	9775.00	TRUST TERRITORIES OF THE PACIFIC ISLANDS	19840312
00027	9776.00	U.S. MISCELLANEOUS CARIBBEAN ISLANDS	19840312
00027	9777.00	U.S. MISCELLANEOUS PACIFIC ISLANDS	19840312
00027	9778.00	VIRGIN ISLANDS	19840312
00027	9779.00	WAKE ISLAND	19840312
00027	9780.00	MEXICO	19840312
00027	9781.00	TAMAULIPAS	19840312
00027	9782.00	NUEVO LEON	19840312
00027	9783.00	COAHUILA	19840312
00027	9784.00	CHIHUAHUA	19840312
00027	9785.00	SONORA	19840312
00027	9786.00	BAJA CALIFORNIA NORTE	19840312
00027	9790.00	NEW BRUNSWICK	19840312
00027	9791.00	QUEBEC	19840312
00027	9792.00	ONTARIO	19840312
00027	9793.00	MANITOBA	19840312
00027	9794.00	SASKATCHEWAN	19840312
00027	9795.00	ALBERTA	19840312
00027	9796.00	BRITISH COLUMBIA	19840312
00027	9797.00	YUKON	19840312
00027	9801.00	PRIVATE LABORATORY	19840312
00027	9802.00	SALT RIVER VALLEY USERS ASSOCIATION	19840312
00027	9803.00	METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	19890607
00027	9804.00	FLORIDA DEPARTMENT OF POLLUTION CONTROL	19840312
00027	9805.00	CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT	19840312
00027	9806.00	FLORIDA GAME AND FRESH WATER FISH COMMISSION	19840312

00027	9807.00	FLORIDA DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES	19840312
00027	9808.00	SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT	19840312
00027	9809.00	CITY OF JACKSONVILLE, FLORIDA	19840312
00027	9810.00	REEDY CREEK IMPROVEMENT DISTRICT, FLORIDA	19840312
00027	9811.00	ORANGE COUNTY POLLUTION CONTROL DEPARTMENT, FLORIDA	19840312
00027	9812.00	BREVARD COUNTY POLLUTION CONTROL DEPARTMENT, FLORIDA	19840312
00027	9813.00	PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES	19840312
00027	9814.00	ALASKA DEPARTMENT OF FISH AND GAME	19840312
00027	9815.00	ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION	19840312
00027	9816.00	CALIFORNIA DEPARTMENT OF WATER RESOURCES	19840312
00027	9817.00	ORANGE COUNTY WATER DISTRICT, CALIF.	19840312
00027	9818.00	HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION, FL	19890607
00027	9819.00	NASSAU COUNTY DEPARTMENT OF HEALTH, NY	19840312
00027	9820.00	SUFFOLK COUNTY DEPARTMENT OF HEALTH, NY	19840312
00027	9821.00	SUFFOLK COUNTY DEPARTMENT OF ENVIR. CONTROL, NY	19840312
00027	9822.00	SUFFOLK COUNTY WATER AUTHORITY, NY	19840312
00027	9823.00	ALAMEDA COUNTY WATER DISTRICT, CA	19840312
00027	9824.00	ALAMEDA CO. FLOOD CONTROL & WATER CONSER. DIST, ZONE 7, CA	19840312
00027	9825.00	VALLEY COMMUNITY SERVICES DISTRICT (LIVERMORE), CA	19840312
00027	9826.00	CITY OF LIVERMORE WASTE TREATMENT PLANT, CA	19840312
00027	9827.00	ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY	19840312
00027	9828.00	ARKANSAS GAME AND FISH COMMISSION	19840312
00027	9829.00	NASSAU COUNTY DEPARTMENT OF PUBLIC WORKS, NY	19840312
00027	9831.00	UNIVERSITY OF IOWA, STATE HYGIENIC LABORATORY	19840312
00027	9902.00	UNIVERSITY OF ARIZONA	19840312
00027	9903.00	UNIVERSITY OF FLORIDA	19840312
00027	9904.00	FLORIDA STATE UNIVERSITY	19840312
00027	9905.00	FLORIDA TECHNOLOGICAL UNIVERSITY	19840312
00027	9906.00	UNIVERSITY OF ALASKA	19840312
00027	12001.00	CITY OF TAMPA, FLORIDA	19840312
00027	12002.00	CITY OF VERO BEACH, FLORIDA	19861114
00027	12005.00	CITY OF TALLAHASSEE, FLORIDA	19840312
00027	12007.00	ITT COMMUNITY DEVELOPMENT CORPORATION, FL	19840312
00027	12010.00	PALM BEACH COUNTY ENGINEER	19840312
00027	12020.00	PALM BEACH COUNTY HEALTH DEPT.	19840312
00027	12030.00	DADE COUNTY DEPT. OF ENV. RESOURCES MAN.	19840312
00027	16001.00	IDAHO DEPARTMENT OF WATER RESOURCES	19840312
00027	16002.00	IDAHO DEPARTMENT OF HEALTH AND WELFARE	19840312
00027	17001.00	METROPOLITAN SANITARY DIST. OF GREATER CHICAGO (MSD)	19840312

00027	17002.00	ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA)	19840312
00027	17003.00	ILLINOIS STATE WATER SURVEY (ISWS)	19840312
00027	17004.00	INTERSURVEY GEOTECHNICAL LAB, IGS	19861112
00027	20001.00	KANSAS STATE GEOLOGICAL SURVEY	19840312
00027	21001.00	GEOLOGICAL SURVEY OF KENTUCKY	19840312
00027	25001.00	BARNSTABLE COUNTY HEALTH DEPARTMENT, MASS.	19840312
00027	25003.00	LEO LAB, MASS	19840312
00027	28001.00	BUREAU OF POLLUTION CONTROL, MISSISSIPPI	19840312
00027	28002.00	BUREAU OF GEOLOGY, MISSISSIPPI	19840312
00027	29001.00	MISSOURI DEPT OF NATURAL RESOURCES, DIV. OF ENVIR. QUALITY	19840312
00027	30010.00	MONTANA BUREAU OF MINES AND GEOLOGY	19840312
00027	30020.00	MONTANA DEPT. OF FISH WILDLIFE AND PARKS	19860212
00027	30030.00	MONTANA DEPT. OF HEALTH/ENV. SCIENCES, WATER QUALITY BUREAU	19861114
00027	30040.00	MONTANA AGRICULTURAL RESEARCH CENTER	19860806
00027	31001.00	NEBRASKA DEPARTMENT OF ENVIRONMENTAL CONTROL LABORATORY	19860613
00027	32001.00	NEVADA DIVISION OF ENVIRONMENTAL PROTECTION	19870309
00027	32003.00	NEVADA DIVISION OF WATER RESOURCES	19840312
00027	32005.00	UNIV. OF NEV., DIV. OF RENEW. NAT. RESOURCES	19840312
00027	32006.00	NEVADA BUREAU OF ENVIRONMENTAL HEALTH	19840312
00027	32007.00	NEVADA BUREAU OF MINES & GEOLOGY	19840312
00027	32009.00	NEVADA DEPARTMENT OF FISH & GAME	19840312
00027	32010.00	NEVADA DIVISION OF FORESTRY	19840312
00027	32011.00	NEVADA DIVISION OF PARKS	19840312
00027	32012.00	NEVADA CONSUMER HEALTH PROTECTION SERVICE	19840312
00027	32013.00	UNIV. OF NEV., DESERT RESEARCH INSTITUTE	19840312
00027	32014.00	UNIV. OF NEV., COLLEGE OF AGRICULTURE	19840312
00027	32015.00	CLARK COUNTY DISTRICT HEALTH DEPARTMENT, NEV.	19840312
00027	32016.00	WASHOE COUNTY DISTRICT HEALTH DEPARTMENT, NEVADA	19840312
00027	32017.00	LAS VEGAS VALLEY WATER DISTRICT, NEVADA	19840312
00027	32018.00	SIERRA PACIFIC POWER CO., NEVADA	19840312
00027	32019.00	NEVADA BUREAU OF LABORATORIES AND RESEARCH	19840312
00027	32091.00	WASHOE COUNTY COG, NEVADA	19840312
00027	32092.00	CLARK COUNTY COG, NEVADA	19840312
00027	32093.00	MUNICIPAL WATER COMPANY, NEVADA	19840312
00027	34001.00	NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION	19840312
00027	34002.00	ROY F. WESTON INC., WEST CHESTER, PA	19890627
00027	34003.00	BOOTH, GARRETT, AND BLAIR INC., AMBLER, PA	19890627
00027	34004.00	CAPE MAY COUNTY, NJ, DEPARTMENT OF HEALTH	19890627
00027	34005.00	CAPE MAY COUNTY, NJ, PLANNING BOARD	19890627
00027	36010.00	NEW YORK DEPARTMENT OF HEALTH	19840312
00027	36012.00	NEW YORK DEPT. OF ENVIRONMENTAL CONSERVATION, ALBANY, NY	19890914
00027	36020.00	NASSAU COUNTY, DEPARTMENT OF PUBLIC WORKS	19861114
00027	38001.00	NORTH DAKOTA GEOLOGICAL SURVEY	19840312
00027	38002.00	NORTH DAKOTA STATE WATER COMMISSION	19840312
00027	38003.00	NORTH DAKOTA STATE HEALTH DEPARTMENT	19840312

00027	40810.00	CORPS OF ENGINEERS, TULSA DISTRICT	19870331
00027	41000.00	CITY OF PORTLAND, BUREAU OF WATER WORKS	19861114
00027	42010.00	CITY OF PHILADELPHIA, PA.	19840312
00027	42011.00	SUSQUEHANNA RIVER BASIN COMMISSION	19861114
00027	46001.00	SOUTH DAKOTA STATE UNIVERSITY SOILS LABORATORY	19840312
00027	46002.00	SOUTH DAKOTA WATER RESOURCES INSTITUTE	19840312
00027	46003.00	SOUTH DAKOTA AGRICULTURAL EXPERIMENT STATION	19840312
00027	46004.00	SOUTH DAKOTA STATE CHEMIST	19840312
00027	46005.00	SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY	19840312
00027	46006.00	SOUTH DAKOTA STATE UNIVERSITY, DEPT. STATION BIOCHEMISTRY	19861114
00027	46007.00	SOUTH DAKOTA DIVISION OF WATER RIGHTS	19890627
00027	46008.00	SOUTH DAKOTA GEOLOGICAL SURVEY, VERMILLION,SD	19890627
00027	46009.00	SOUTH DAKOTA DEPARTMENT OF HEALTH	19890627
00027	47001.00	UNIVERSITY OF TENNESSEE AT KNOXVILLE	19840312
00027	55555.00	INDIVIDUAL	19840312
00027	66666.00	DRILLER	19840312
00027	80000.00	QA PROJECT	19840312
00027	80003.00	INST. TECH. HERNPHYSIK, DORMSTADT, FEDERAL REPUBLIC OF GERMANY	19840312
00027	80010.00	ATLANTA CENTRAL LABORATORY, GA	19840312
00027	80020.00	DENVER CENTRAL LABORATORY, CO	19840312
00027	80055.00	IEAE, VIENNA, AUSTRIA	19840312
00027	80088.00	RADIOACTIVE DATING LAB, GEOLOGICAL SURVEY, SWEDEN-FRESCATI	19840312
00027	80113.00	DISTRICT WATER-QUALITY LAB, TUSCALOOSA, ALABAMA	19840312
00027	80141.00	GEOLOGICAL SURVEY OF ALABAMA	19840312
00027	80201.00	ALASKA DIV. OF GEOLOGIC AND GEOPHYSICAL SURVEYS (DGGS)	19890907
00027	80203.00	CHEMICAL AND GEOLOGICAL LABS OF ALASKA	19890907
00027	80205.00	NORTHERN TEST LAB (SOLDOTNA, ALASKA)	19890907
00027	80213.00	DISTRICT WATER-QUALITY LAB, ANCHORAGE, ALASKA	19840312
00027	80410.00	CITY OF TUCSON, AZ	19890607
00027	80413.00	DISTRICT WATER-QUALITY LAB, YUMA, ARIZONA	19840312
00027	80415.00	ARIZ. DEPT. OF ENVIRONMENTAL QUALITY	19880803
00027	80417.00	ARIZ. DEPT. OF WATER RESOURCES	19880803
00027	80501.00	OUACHITA BAPTIST UNIVERSITY, ARKADELPHIA, ARKANSAS	19880609
00027	80503.00	UNIVERSITY OF ARKANSAS, DEPT. OF ENGINEERING, FAYETTEVILLE	19880609
00027	80505.00	UNIVERSITY OF ARKANSAS, DEPT. OF GEOLOGY, FAYETTEVILLE	19880609
00027	80513.00	DISTRICT WATER-QUALITY LAB, LITTLE ROCK, ARKANSAS	19840312
00027	80601.00	HEALTH AND HUMAN SERVICES INDIAN HEALTH SERVICES, CA	19870206
00027	80613.00	DISTRICT WATER-QUALITY LAB, SACRAMENTO, CA	19890607
00027	80623.00	CITY OF SAN DIEGO LAB, CALIFORNIA	19840312
00027	80641.00	LAWRENCE LIVERMORE LAB, CALIFORNIA	19840312
00027	80650.00	UNIVERSITY OF CALIFORNIA, BERKELEY	19880725

00027	80670.00	UNIVERSITY OF CALIFORNIA, DAVIS	19871104
00027	80671.00	UNIVERSITY OF CALIFORNIA, SAN DIEGO, LA JOLLA	19840312
00027	80672.00	UNIVERSITY OF CALIFORNIA, LOS ANGELES	19840312
00027	80801.00	CITY OF ARVADA, CO	19870604
00027	80839.00	ENV.HEALTH DIV. VET.SCIENCE COLLEGE, CSU, FORT COLLINS, CO	19871022
00027	80841.00	DAVIS LABORATORIES, COLORADO	19840312
00027	80843.00	DENVER REGIONAL COUNCIL OF GOVERNMENT	19840312
00027	80845.00	METROPOLITAN DENVER SEWAGE DISPOSAL DISTRICT LAB. NO. 1	19840312
00027	80849.00	ROCKY MOUNTAIN ANALYTICAL LAB (ARVADA, CO)	19890907
00027	81113.00	DISTRICT WATER-QUALITY LAB, WASHINGTON, D.C.	19840312
00027	81210.00	ST. JOHNS WATER MANAGEMENT DISTRICT, FLORIDA	19840312
00027	81213.00	DISTRICT WATER-QUALITY LAB, OCALA, FLORIDA	19840312
00027	81223.00	INSTITUTE OF MARINE SCIENCE, MIAMI, FLORIDA	19840312
00027	81227.00	VOLUSIA COUNTY ENVIRONMENTAL CONTROL, FL	19840312
00027	81341.00	GEORGIA STATE NATURAL RESOURCES DEPARTMENT	19840312
00027	81513.00	DISTRICT WATER-QUALITY LAB, HONOLULU, HAWAII	19840312
00027	81601.00	RADIOLOGICAL & ENV. SCIENCES LAB, DOE, INEL, IDAHO FALLS, ID	19871110
00027	81603.00	ENVIRONMENTAL CHEMISTRY LAB, E.G.&G., INEL, IDAHO FALLS, ID	19871110
00027	81605.00	RADIATION MEASUREMENTS LAB, E.G.&G., INEL, IDAHO FALLS, ID	19871110
00027	81607.00	ENVIRONMENTAL ANALYSIS GROUP, WINCO, INEL, IDAHO FALLS, ID	19871110
00027	81641.00	IDAHO DEPT. OF HEALTH AND WELFARE, BUREAU OF LABORATORIES	19840312
00027	81700.00	USGS - ILLINOIS DISTRICT	19840312
00027	81741.00	BLOOMINGTON NORMAL SANITARY DISTRICT, ILLINOIS	19840312
00027	81777.00	UNIVERSITY OF CHICAGO, ILLINOIS	19840312
00027	81941.00	IOWA STATE HYGIENIC LABORATORY	19840312
00027	81951.00	IOWA DEPARTMENT OF ENVIRONMENTAL QUALITY	19840312
00027	82041.00	KANSAS STATE DEPARTMENT OF HEALTH AND ENVIRONMENT	19840312
00027	82101.00	KENTUCKY CABINET FOR HUMAN RESOURCES	19870526
00027	82103.00	BECKMAR ENVIRONMENTAL LABORATORY, KENTUCKY	19870922
00027	82213.00	DISTRICT WATER-QUALITY LAB, BATON ROUGE, LOUISIANA	19840312
00027	82241.00	LOUISIANA, GULF SOUTH RESEARCH INSTITUTE	19840312
00027	82301.00	UNIVERSITY OF MAINE LABORATORY, ORONO, ME	19870604
00027	82341.00	MAINE, DEPT. OF ENVIRONMENTAL PROTECTION	19840312
00027	82641.00	WASHTENAW COUNTY HEALTH DEPARTMENT, MICHIGAN	19840312
00027	82901.00	UNIV. OF MISSOURI ENVIRONMENTAL TRACE SUBSTANCES LAB	19881207
00027	83011.00	MT DEPT. OF ENVIRONMENTAL SCIENCE, WATER QUALITY BUREAU	19840312
00027	83101.00	HARRIS LABORATORIES, LINCOLN, NEBRASKA	19880511
00027	83113.00	DISTRICT WATER-QUALITY LAB, LINCOLN, NEBRASKA	19840312
00027	83241.00	SIERRA ENVIRONMENTAL MONITORING SERVICE, NEVADA	19840312

00027	83341.00	WATER SUPPLY & POLLUTION CONTROL COMM. LAB., N.H.	19840312
00027	83401.00	TELEDYNE ISOTOPES, INC. NEW JERSEY	19870604
00027	83441.00	NEW JERSEY DEPT. OF HEALTH LABORATORY	19840312
00027	83513.00	DISTRICT WATER-QUALITY LAB, ALBUQUERQUE, NEW MEXICO	19840312
00027	83523.00	NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY - SOCORRO	19840312
00027	83541.00	UNIVERSITY OF NEW MEXICO	19840312
00027	83542.00	USBIA SOIL, WATER, & MATERIAL TESTING LAB., NEW MEXICO	19840312
00027	83611.00	MONROE COUNTY HEALTH DEPARTMENT, NEW YORK	19840312
00027	83613.00	DISTRICT WATER-QUALITY LAB, ALBANY, NEW YORK	19840312
00027	83620.00	UPSTATE FRESHWATER INSTITUTE, NEW YORK	19840312
00027	83621.00	O'BRIEN AND GERE, NEW YORK	19840312
00027	83630.00	SYRACUSE UNIVERSITY, DEPT. OF CIVIL ENGINEERING	19840312
00027	83631.00	METROPOLITAN LABORATORY, NEW YORK	19861114
00027	83650.00	ERIE COUNTY LABORATORY, NEW YORK	19840312
00027	83671.00	COLUMBIA UNIVERSITY, NEW YORK	19840312
00027	83713.00	DISTRICT WATER-QUALITY LAB, RALEIGH, NC	19840312
00027	83741.00	NORTH CAROLINA DEPT. OF NATURAL AND ECONOMIC RESOURCES	19840312
00027	83751.00	MECKLENBURG CO. DEPT. OF ENVIRONMENTAL HEALTH LAB, NC	19861007
00027	83841.00	NORTH DAKOTA STATE LABORATORY	19840312
00027	83901.00	NATIONAL TESTING LABORATORY, WATER CHECK DIVISION, OHIO	19870922
00027	83913.00	DISTRICT WATER-QUALITY LAB, COLUMBUS, OHIO	19840312
00027	84001.00	OKLAHOMA WATER RESOURCES BOARD	19870331
00027	84003.00	OKLAHOMA STATE UNIVERSITY	19870331
00027	84005.00	OKLAHOMA STATE HEALTH DEPARTMENT RADIOCHEMISTRY LABORATORY	19870331
00027	84007.00	OKLAHOMA STATE DEPARTMENT OF AGRICULTURE	19870331
00027	84009.00	ASSOCIATION OF CENTRAL OKLAHOMA GOVERNMENTS	19870331
00027	84011.00	OKLAHOMA CORPORATION COMMISSION	19870331
00027	84013.00	DISTRICT WATER-QUALITY LAB, OKLAHOMA CITY, OK	19840312
00027	84041.00	OKLAHOMA GEOLOGICAL SURVEY	19840312
00027	84042.00	OKLAHOMA STATE HEALTH DEPARTMENT	19840312
00027	84113.00	DISTRICT WATER-QUALITY LAB, PORTLAND, OREGON	19840312
00027	84213.00	DISTRICT WATER-QUALITY LAB, HARRISBURG, PA	19840312
00027	84215.00	CHESTER COUNTY HEALTH DEPARTMENT LAB, PA	19840312
00027	84240.00	CITY OF PHILADELPHIA, PA AND USGS	19840312
00027	84540.00	SOUTH CAROLINA WATER RESOURCES COMMISSION	19840312
00027	84541.00	SAVANNAH RIVER LAB, SOUTH CAROLINA	19840312
00027	84610.00	URE PROJECT LABORATORY, OAK RIDGE, TN	19840312
00027	84699.00	PUBLIC ENTITY	19890607
00027	84813.00	DISTRICT WATER-QUALITY LAB, AUSTIN, TEXAS	19840312
00027	84823.00	INTERNATIONAL BOUNDARY WATER COMMISSION	19840312
00027	84833.00	GUADALUPE-BLANCO RIVER AUTHORITY	19840312
00027	84913.00	DISTRICT WATER-QUALITY LAB, SALT LAKE CITY, UTAH	19840312

00027	85113.00	HEADQUARTERS TRITIUM LAB, RESTON, VIRGINIA	19840312
00027	85114.00	DISTRICT WATER-QUALITY LAB, CHARLOTTESVILLE, VIRGINIA	19840312
00027	85115.00	UNIV. OF VIRGINIA DEPT. OF ENVIRONMENTAL SCIENCES LAB	19840312
00027	85116.00	VIRGINIA DIVISION OF CONSOLIDATED LABORATORY SERVICES	19890214
00027	85313.00	DISTRICT WATER-QUALITY LAB, TACOMA, WASHINGTON	19840312
00027	85341.00	AM TEST INC., WASHINGTON	19840312
00027	85342.00	MUNICIPALITY OF METROPOLITAN SEATTLE, WA	19840312
00027	85343.00	WASHINGTON STATE DEPT. OF ECOLOGY	19840312
00027	85344.00	WASHINGTON STATE DEPT. OF SOCIAL AND HEALTH SERVICES	19840312
00027	85345.00	ANALYTICAL RESOURCES INCORPORATED, SEATTLE, WA	19890907
00027	85346.00	ECOLOGY AND ENVIRONMENT INC., SEATTLE, WA	19890907
00027	85411.00	DISTRICT WATER-QUALITY LAB, CHARLESTON, WV	19861114
00027	85540.00	ROBERT E. LEE AND ASSOC. GREEN BAY, WI	19881118
00027	85541.00	MAYO CLINIC, UNIVERSITY OF WISCONSIN	19840312
00027	85542.00	UNIVERSITY OF WISCONSIN EXTENSION	19840312
00027	85543.00	STATE LABORATORY OF HYGIENE, WISCONSIN	19840312
00027	85544.00	HAZELTON LABORATORIES AMERICA, MADISON, WI	19890907
00027	85613.00	DISTRICT WATER-QUALITY LAB, CHEYENNE, WY	19840312
00027	85641.00	WYOMING DEPARTMENT OF AGRICULTURE	19840312
00027	87213.00	DISTRICT WATER-QUALITY LAB, SAN JUAN, PUERTO RICO	19840312
00027	89213.00	CHALK RIVER NUCLEAR LABORATORIES, CHALK RIVER, CANADA	19840312
00027	99001.00	PRIVATE CONTRACTOR	19840312
00027	99999.00	OTHER	19840312

00028 ANALYZING AGENCY

00028	300.00	NAPD/NTN - NAT.ATMOS.DEPOSITION PROGRAM/ NAT.TRENDS NETWORK	19871218
00028	500.00	DEPARTMENT OF AGRICULTURE	19840312
00028	504.00	AGRICULTURAL RESEARCH SERVICE	19840312
00028	520.00	SOIL CONSERVATION SERVICE	19840312
00028	596.00	FOREST SERVICE	19840312
00028	600.00	DEPARTMENT OF COMMERCE	19840312
00028	642.00	NATIONAL INDUSTRIAL POLLUTION CONTROL COUNCIL	19840312
00028	648.00	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	19840312
00028	655.00	NATIONAL BUREAU OF STANDARDS	19840312
00028	700.00	DEPARTMENT OF DEFENSE - MILITARY	19840312
00028	701.00	AIR FORCE	19840312
00028	702.00	ARMY	19840312
00028	703.00	MARINES	19840312
00028	704.00	NAVY	19840312
00028	800.00	DEPARTMENT OF DEFENSE - CIVIL	19840312
00028	810.00	CORPS OF ENGINEERS	19840312

00028	900.00	DEPARTMENT OF HEALTH, EDUCATION AND WELFARE	19840312
00028	910.00	FOOD AND DRUG ADMINISTRATION	19840312
00028	915.00	ENVIRONMENTAL HEALTH SERVICE	19840312
00028	920.00	FISH & WILDLIFE SERVICE	19881118
00028	930.00	NATIONAL INSTITUTES OF HEALTH	19890607
00028	1000.00	DEPARTMENT OF THE INTERIOR	19840312
00028	1004.00	BUREAU OF LAND MANAGEMENT	19840312
00028	1008.00	BUREAU OF INDIAN AFFAIRS	19840312
00028	1016.00	BUREAU OF OUTDOOR RECREATION	19840312
00028	1028.00	GEOLOGICAL SURVEY	19840312
00028	1032.00	BUREAU OF MINES	19840312
00028	1050.00	BUREAU OF SPORT FISHERIES AND WILDLIFE	19840312
00028	1053.00	NATIONAL PARK SERVICE	19840312
00028	1060.00	BUREAU OF RECLAMATION	19840312
00028	1062.00	ALASKA POWER ADMINISTRATION	19840312
00028	1064.00	BONNEVILLE POWER ADMINISTRATION	19840312
00028	1068.00	SOUTHEASTERN POWER ADMINISTRATION	19840312
00028	1072.00	SOUTHWESTERN POWER ADMINISTRATION	19840312
00028	1076.00	OFFICE OF SALINE WATER	19840312
00028	1086.00	OFFICE OF WATER RESOURCES RESEARCH	19840312
00028	1800.00	ATOMIC ENERGY COMMISSION	19840312
00028	2000.00	ENVIRONMENTAL PROTECTION AGENCY	19840312
00028	2100.00	DEPARTMENT OF TRANSPORTATION	19840312
00028	2300.00	GENERAL SERVICES ADMINISTRATION	19840312
00028	2500.00	DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	19840312
00028	2555.00	U.S. PUBLIC HEALTH SERVICE, DIVISION OF INDIAN HEALTH	19890907
00028	2700.00	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	19840312
00028	3315.00	TENNESSEE VALLEY AUTHORITY	19840312
00028	3335.00	WATER RESOURCES COUNCIL	19840312
00028	6001.00	ASSOCIATION OF BAY AREA GOVERNMENTS, CA	19840312
00028	6003.00	ALAMEDA CO. FLOOD CONTROL AND WATER CONSERVATION DIST., CA	19840312
00028	6005.00	EAST BAY REGIONAL PARK DISTRICT, CA	19840312
00028	6010.00	CA REGIONAL WATER QUALITY CONTROL BOARD NORTH COAST REGION	19840312
00028	6020.00	SANTA CLARA VALLEY WATER DISTRICT, CALIFORNIA	19840312
00028	9700.00	STATE HEALTH LABORATORY (00 = STATE CODE)	19840312
00028	9701.00	ALABAMA	19840312
00028	9702.00	ALASKA	19840312
00028	9704.00	ARIZONA	19840312
00028	9705.00	ARKANSAS	19840312
00028	9706.00	CALIFORNIA	19840312
00028	9708.00	COLORADO	19840312
00028	9709.00	CONNECTICUT	19840312
00028	9710.00	DELAWARE	19840312
00028	9711.00	DISTRICT OF COLUMBIA	19840312
00028	9712.00	FLORIDA	19840312
00028	9713.00	GEORGIA	19840312
00028	9715.00	HAWAII	19840312
00028	9716.00	IDAHO	19840312
00028	9717.00	ILLINOIS	19840312

00028	9718.00	INDIANA	19840312
00028	9719.00	IOWA	19840312
00028	9720.00	KANSAS	19840312
00028	9721.00	KENTUCKY	19840312
00028	9722.00	LOUISIANA	19840312
00028	9723.00	MAINE	19840312
00028	9724.00	MARYLAND	19840312
00028	9725.00	MASSACHUSETTS	19840312
00028	9726.00	MICHIGAN	19840312
00028	9727.00	MINNESOTA POLLUTION CONTROL COUNCIL	19840312
00028	9728.00	MISSISSIPPI	19840312
00028	9729.00	MISSOURI	19840312
00028	9730.00	MONTANA	19840312
00028	9731.00	NEBRASKA	19840312
00028	9732.00	NEVADA	19840312
00028	9733.00	NEW HAMPSHIRE	19840312
00028	9734.00	NEW JERSEY	19840312
00028	9735.00	NEW MEXICO	19840312
00028	9736.00	NEW YORK	19840312
00028	9737.00	NORTH CAROLINA	19840312
00028	9738.00	NORTH DAKOTA	19840312
00028	9739.00	OHIO	19840312
00028	9740.00	OKLAHOMA	19840312
00028	9741.00	OREGON	19840312
00028	9742.00	PENNSYLVANIA	19840312
00028	9744.00	RHODE ISLAND	19840312
00028	9745.00	SOUTH CAROLINA	19840312
00028	9746.00	SOUTH DAKOTA	19840312
00028	9747.00	TENNESSEE	19840312
00028	9748.00	TEXAS	19840312
00028	9749.00	UTAH	19840312
00028	9750.00	VERMONT	19840312
00028	9751.00	VIRGINIA	19840312
00028	9753.00	WASHINGTON	19840312
00028	9754.00	WEST VIRGINIA	19840312
00028	9755.00	WISCONSIN	19840312
00028	9756.00	WYOMING	19840312
00028	9760.00	AMERICAN SAMOA	19840312
00028	9761.00	CANAL ZONE	19840312
00028	9762.00	CANTON AND ENDERBURY ISLANDS	19840312
00028	9766.00	GUAM	19840312
00028	9767.00	JOHNSTON ATOLL	19861114
00028	9771.00	MIDWAY ISLANDS	19840312
00028	9772.00	PUERTO RICO	19840312
00028	9773.00	RYUKYU ISLANDS, SOUTHERN	19840312
00028	9774.00	SWAN ISLANDS	19840312
00028	9775.00	TRUST TERRITORIES OF THE PACIFIC ISLANDS	19840312
00028	9776.00	U.S. MISCELLANEOUS CARIBBEAN ISLANDS	19840312
00028	9777.00	U.S. MISCELLANEOUS PACIFIC ISLANDS	19840312
00028	9778.00	VIRGIN ISLANDS	19840312
00028	9779.00	WAKE ISLAND	19840312
00028	9780.00	MEXICO	19840312

00028	9781.00	TAMAULIPAS	19840312
00028	9782.00	NUEVO LEON	19840312
00028	9783.00	COAHUILA	19840312
00028	9784.00	CHIHUAHUA	19840312
00028	9785.00	SONORA	19840312
00028	9786.00	BAJA CALIFORNIA NORTE	19840312
00028	9790.00	NEW BRUNSWICK	19840312
00028	9791.00	QUEBEC	19840312
00028	9792.00	ONTARIO	19840312
00028	9793.00	MANITOBA	19840312
00028	9794.00	SASKATCHEWAN	19840312
00028	9795.00	ALBERTA	19840312
00028	9796.00	BRITISH COLUMBIA	19840312
00028	9797.00	YUKON	19840312
00028	9801.00	PRIVATE LABORATORY	19840312
00028	9802.00	SALT RIVER VALLEY USERS ASSOCIATION	19840312
00028	9803.00	METROPOLITAN WATER DISTRICT OF SOUTHERN CA	19890607
00028	9804.00	FLORIDA DEPARTMENT OF POLLUTION CONTROL	19840312
00028	9805.00	CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT	19840312
00028	9806.00	FLORIDA GAME AND FRESH WATER FISH COMMISSION	19840312
00028	9807.00	FLORIDA DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES	19840312
00028	9808.00	SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT	19840312
00028	9809.00	CITY OF JACKSONVILLE, FLORIDA	19840312
00028	9810.00	REEDY CREEK IMPROVEMENT DISTRICT, FLORIDA	19840312
00028	9811.00	ORANGE COUNTY POLLUTION CONTROL DEPARTMENT, FLORIDA	19840312
00028	9812.00	BREVARD COUNTY POLLUTION CONTROL DEPARTMENT, FLORIDA	19840312
00028	9813.00	PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES	19840312
00028	9814.00	ALASKA DEPARTMENT OF FISH AND GAME	19840312
00028	9815.00	ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION	19840312
00028	9816.00	CALIFORNIA DEPARTMENT OF WATER RESOURCES	19840312
00028	9817.00	ORANGE COUNTY WATER DISTRICT, CALIF.	19840312
00028	9818.00	HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION, FL	19890607
00028	9819.00	NASSAU COUNTY DEPARTMENT OF HEALTH, NY	19840312
00028	9820.00	SUFFOLK COUNTY DEPARTMENT OF HEALTH, NY	19840312
00028	9821.00	SUFFOLK COUNTY DEPARTMENT OF ENVIR. CONTROL, NY	19840312
00028	9822.00	SUFFOLK COUNTY WATER AUTHORITY, NY	19840312
00028	9823.00	ALAMEDA COUNTY WATER DISTRICT, CA	19840312
00028	9824.00	ALAMEDA CO. FLOOD CONTROL & WATER CONSER. DIST, ZONE 7, CA	19840312
00028	9825.00	VALLEY COMMUNITY SERVICES DISTRICT (LIVERMORE), CA	19840312
00028	9826.00	CITY OF LIVERMORE WASTE TREATMENT PLANT, CA	19840312
00028	9827.00	ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY	19840312

00028	9828.00	ARKANSAS GAME AND FISH COMMISSION	19840312
00028	9829.00	NASSAU COUNTY DEPARTMENT OF PUBLIC WORKS, NY	19861114
00028	9831.00	UNIVERSITY OF IOWA, STATE HYGIENIC LABORATORY	19840312
00028	9902.00	UNIVERSITY OF ARIZONA	19840312
00028	9903.00	UNIVERSITY OF FLORIDA	19840312
00028	9904.00	FLORIDA STATE UNIVERSITY	19840312
00028	9905.00	FLORIDA TECHNOLOGICAL UNIVERSITY	19840312
00028	9906.00	UNIVERSITY OF ALASKA	19840312
00028	12001.00	CITY OF TAMPA, FLORIDA	19840312
00028	12002.00	CITY OF VERO BEACH, FLORIDA	19861114
00028	12005.00	CITY OF TALLAHASSEE, FLORIDA	19840312
00028	12007.00	ITT COMMUNITY DEVELOPMENT CORPORATION, FL	19840312
00028	12010.00	PALM BEACH COUNTY ENGINEER	19840312
00028	12020.00	PALM BEACH COUNTY HEALTH DEPT.	19840312
00028	12030.00	DADE COUNTY DEPT. OF ENV. RESOURCES MAN.	19840312
00028	16001.00	IDAHO DEPARTMENT OF WATER RESOURCES	19840312
00028	16002.00	IDAHO DEPARTMENT OF HEALTH AND WELFARE	19840312
00028	17001.00	METROPOLITAN SANITARY DIST. OF GREATER CHICAGO (MSD)	19840312
00028	17002.00	ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA)	19840312
00028	17003.00	ILLINOIS STATE WATER SURVEY (ISWS)	19840312
00028	17004.00	INTERSURVEY GEOTECHNICAL LAB, IGS	19861112
00028	20001.00	KANSAS STATE GEOLOGICAL SURVEY	19840312
00028	21001.00	GEOLOGICAL SURVEY OF KENTUCKY	19861114
00028	25001.00	BARNSTABLE COUNTY HEALTH DEPARTMENT, MASS.	19840312
00028	25003.00	LEO LAB, MASS	19840312
00028	28001.00	BUREAU OF POLLUTION CONTROL, MISSISSIPPI	19840312
00028	28002.00	BUREAU OF GEOLOGY, MISSISSIPPI	19840312
00028	29001.00	MISSOURI DEPT OF NATURAL RESOURCES, DIV OF ENVIR. QUALITY	19861114
00028	30010.00	MONTANA BUREAU OF MINES AND GEOLOGY	19840312
00028	30020.00	MONTANA DEPT. OF FISH WILDLIFE AND PARKS	19861114
00028	30030.00	MONTANA DEPT. OF HEALTH/ENV. SCIENCES, WATER QUALITY BUREAU	19861114
00028	30040.00	MONTANA AGRICULTURAL RESEARCH CENTER	19860806
00028	31001.00	NEBRASKA DEPARTMENT OF ENVIRONMENTAL CONTROL LABORATORY	19860613
00028	32001.00	NEVADA DIVISION OF ENVIRONMENTAL PROTECTION	19840312
00028	32003.00	NEVADA DIVISION OF WATER RESOURCES	19840312
00028	32005.00	UNIV. OF NEV., DIV. OF RENEW. NAT. RESOURCES	19840312
00028	32006.00	NEVADA BUREAU OF ENVIRONMENTAL HEALTH	19840312
00028	32007.00	NEVADA BUREAU OF MINES & GEOLOGY	19840312
00028	32009.00	NEVADA DEPARTMENT OF FISH & GAME	19840312
00028	32010.00	NEVADA DIVISION OF FORESTRY	19840312
00028	32011.00	NEVADA DIVISION OF PARKS	19840312
00028	32012.00	NEVADA CONSUMER HEALTH PROTECTION SERVICE	19840312
00028	32013.00	UNIV. OF NEV., DESERT RESEARCH INSTITUTE	19840312
00028	32014.00	UNIV. OF NEV., COLLEGE OF AGRICULTURE	19840312
00028	32015.00	CLARK COUNTY DISTRICT HEALTH DEPARTMENT, NEVADA	19840312

00028	32016.00	WASHOE COUNTY DISTRICT HEALTH DEPARTMENT, NEVADA	19840312
00028	32017.00	LAS VEGAS VALLEY WATER DISTRICT, NEVADA	19840312
00028	32018.00	SIERRA PACIFIC POWER CO., NEVADA	19840312
00028	32019.00	NEVADA BUREAU OF LABORATORIES AND RESEARCH	19840312
00028	32091.00	WASHOE COUNTY COG, NEVADA	19840312
00028	32092.00	CLARK COUNTY COG, NEVADA	19840312
00028	32093.00	MUNICIPAL WATER COMPANY, NEVADA	19840312
00028	34001.00	NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION	19840312
00028	34002.00	ROY F. WESTON INC., WEST CHESTER, PA	19890627
00028	34003.00	BOOTH, GARRETT, AND BLAIR INC., AMBLER, PA	19890627
00028	34004.00	CAPE MAY COUNTY, NJ, DEPARTMENT OF HEALTH	19890607
00028	34005.00	CAPE MAY COUNTY, NJ, PLANNING BOARD	19890627
00028	36010.00	NEW YORK DEPARTMENT OF HEALTH	19840312
00028	36012.00	NEW YORK DEPT. OF ENVIRONMENTAL CONSERVATION, ALBANY, NY	19890914
00028	36020.00	NASSAU COUNTY, DEPARTMENT OF PUBLIC WORKS	19861114
00028	38001.00	NORTH DAKOTA GEOLOGICAL SURVEY	19840312
00028	38002.00	NORTH DAKOTA STATE WATER COMMISSION	19840312
00028	38003.00	NORTH DAKOTA STATE HEALTH DEPARTMENT	19840312
00028	39001.00	HEIDELBERG COLLEGE QW LAB, TIFFIN, OHIO	19890407
00028	40810.00	CORPS OF ENGINEERS, TULSA DISTRICT	19870331
00028	41000.00	CITY OF PORTLAND, BUREAU OF WATER WORKS	19861114
00028	42010.00	CITY OF PHILADELPHIA, PA.	19840312
00028	42011.00	SUSQUEHANNA RIVER BASIN COMMISSION	19861114
00028	46001.00	SOUTH DAKOTA STATE UNIVERSITY SOILS LABORATORY	19840312
00028	46002.00	SOUTH DAKOTA WATER RESOURCES INSTITUTE	19840312
00028	46003.00	SOUTH DAKOTA AGRICULTURAL EXPERIMENT STATION	19840312
00028	46004.00	SOUTH DAKOTA STATE CHEMIST	19840312
00028	46005.00	SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY	19840312
00028	46006.00	SOUTH DAKOTA STATE UNIVERSITY, DEPT. STATION BIOCHEMISTRY	19840312
00028	46007.00	SOUTH DAKOTA DIVISION OF WATER RIGHTS	19890627
00028	46008.00	SOUTH DAKOTA GEOLOGICAL SURVEY,VERMILLION,SD	19890627
00028	46009.00	SOUTH DAKOTA DEPARTMENT OF HEALTH	19890627
00028	47001.00	UNIVERSITY OF TENNESSEE AT KNOXVILLE	19840312
00028	55555.00	INDIVIDUAL	19840312
00028	66666.00	DRILLER	19840312
00028	80000.00	QA PROJECT	19840312
00028	80003.00	INST. TECH. HERNPHYSIK, DORMSTADT, FEDERAL REPUBLIC OF GERMANY	19840312
00028	80010.00	NATIONAL WATER-QUALITY CENTRAL LAB, ATLANTA	19840312
00028	80020.00	NATIONAL WATER-QUALITY CENTRAL LAB, DENVER	19840312
00028	80055.00	IEAE, VIENNA, AUSTRIA	19840312
00028	80088.00	RADIOACTIVE DATING LAB, GEOLOGICAL SURVEY, SWEDEN-FRESCATI	19840312
00028	80113.00	DISTRICT WATER-QUALITY LAB, TUSCALOOSA, ALABAMA	19840312
00028	80141.00	GEOLOGICAL SURVEY OF ALABAMA	19840312

00028	80201.00	ALASKA DIV. OF GEOLOGICA AND GEOPHYSICAL SURVEYS (DGGS)	19890907
00028	80203.00	CHEMICAL & GEOLOGICAL LABORATORIES OF ALASKA	19890907
00028	80205.00	NORTHERN TEST LAB (SOLDOTNA, ALASKA)	19890907
00028	80213.00	DISTRICT WATER-QUALITY LAB, ANCHORAGE, AK	19840312
00028	80410.00	CITY OF TUCSON, AZ	19890607
00028	80413.00	DISTRICT WATER-QUALITY LAB, YUMA, ARIZONA	19840312
00028	80415.00	ARIZ. DEPT. OF ENVIRONMENTAL QUALITY	19880803
00028	80417.00	ARIZ. DEPT. OF WATER RESOURCES	19880803
00028	80501.00	OUACHITA BAPTIST UNIVERSITY, ARKADELPHIA, AR	19880609
00028	80503.00	UNIVERSITY OF ARKANSAS, DEPT. OF ENGINEERING, FAYETTEVILLE	19880609
00028	80505.00	UNIVERSITY OF ARKANSAS, DEPT. OF GEOLOGY, FAYETTEVILLE	19880609
00028	80513.00	DISTRICT WATER-QUALITY LAB, LITTLE ROCK, ARKANSAS	19840312
00028	80601.00	HEALTH AND HUMAN SERVICES INDIAN HEALTH SERVICES, CA	19870206
00028	80613.00	DISTRICT WATER-QUALITY LAB, SACRAMENTO, CA	19890607
00028	80623.00	CITY OF SAN DIEGO LAB, CALIFORNIA	19840312
00028	80641.00	LAWRENCE LIVERMORE LAB, CALIFORNIA	19840312
00028	80650.00	UNIVERSITY OF CALIFORNIA, BERKELEY	19880725
00028	80670.00	UNIVERSITY OF CALIFORNIA, DAVIS	19871104
00028	80671.00	UNIVERSITY OF CALIFORNIA, SAN DIEGO, LA JOLLA	19840312
00028	80672.00	UNIVERSITY OF CALIFORNIA, LOS ANGELES	19840312
00028	80801.00	CITY OF ARVADA, CO	19870604
00028	80839.00	ENV.HEALTH DIV. VET.SCIENCE COLLEGE, CSU, FORT COLLINS, CO	19871022
00028	80841.00	DAVIS LABORATORIES, COLORADO	19840312
00028	80843.00	DENVER REGIONAL COUNCIL OF GOVERNMENT	19840312
00028	80845.00	METROPOLITAN DENVER SEWAGE DISPOSAL DISTRICT LAB. NO. 1	19840312
00028	80847.00	SOILS TESTING LABORATORY, CO STATE UNIV., FT. COLLINS, CO	19890907
00028	80849.00	ROCKY MOUNTAIN ANALYTICAL LAB, ARVADA, CO	19890907
00028	81113.00	DISTRICT WATER-QUALITY LAB, WASHINGTON, D.C.	19840312
00028	81210.00	ST. JOHNS WATER MANAGEMENT DISTRICT, FLORIDA	19840312
00028	81213.00	DISTRICT WATER-QUALITY LAB, OCALA, FLORIDA	19840312
00028	81223.00	INSTITUTE OF MARINE SCIENCE, MIAMI, FLORIDA	19840312
00028	81227.00	VOLUSIA COUNTY ENVIRONMENTAL CONTROL, FL	19840312
00028	81341.00	GEORGIA STATE NATURAL RESOURCES DEPARTMENT	19840312
00028	81513.00	DISTRICT WATER-QUALITY LAB, HONOLULU, HAWAII	19840312
00028	81601.00	RADIOLOGICAL & ENV. SCIENCES LAB, DOE, INEL, IDAHO FALLS,ID	19871110
00028	81603.00	ENVIRONMENTAL CHEMISTRY LAB, E.G.&G., INEL, IDAHO FALLS, ID	19871110
00028	81605.00	RADIATION MEASUREMENTS LAB, E.G.&G., INEL, IDAHO FALLS, ID	19871110
00028	81607.00	ENVIRONMENTAL ANALYSIS GROUP, WINCO, INEL, IDAHO FALLS, ID	19871110

00028	81641.00	IDAHO DEPT. OF HEALTH AND WELFARE, BUREAU OF LABORATORIES	19840312
00028	81700.00	USGS - ILLINOIS DISTRICT	19840312
00028	81741.00	BLOOMINGTON NORMAL SANITARY DISTRICT, IL	19840312
00028	81777.00	UNIVERSITY OF CHICAGO, ILLINOIS	19840312
00028	81941.00	IOWA STATE HYGIENIC LABORATORY	19840312
00028	81951.00	IOWA DEPARTMENT OF ENVIRONMENTAL QUALITY	19861114
00028	82041.00	KANSAS STATE DEPARTMENT OF HEALTH AND ENVIRONMENT	19840312
00028	82101.00	KENTUCKY CABINET OF HUMAN RESOURCES	19870526
00028	82103.00	BECKMAR ENVIRONMENTAL LABORATORY, KENTUCKY	19870922
00028	82213.00	DISTRICT WATER-QUALITY LAB, BATON ROUGE, LA	19840312
00028	82241.00	LOUISIANA, GULF SOUTH RESEARCH INSTITUTE	19840312
00028	82301.00	UNIVERSITY OF MAINE LABORATORY, ORONO, ME	19870604
00028	82341.00	MAINE, DEPT. OF ENVIRONMENTAL PROTECTION	19840312
00028	82641.00	WASHTENAW COUNTY HEALTH DEPARTMENT, MICHIGAN	19840312
00028	82901.00	UNIV. OF MISSOURI ENVIRONMENTAL TRACE SUBSTANCES LAB	19881207
00028	83011.00	MT DEPT. OF ENVIRONMENTAL SCIENCE, WATER QUALITY BUREAU	19840312
00028	83101.00	HARRIS LABORATORIES, LINCOLN, NEBRASKA	19880511
00028	83113.00	DISTRICT WATER-QUALITY LAB, LINCOLN, NEBRASKA	19840312
00028	83241.00	SIERRA ENVIRONMENTAL MONITORING SERVICE, NV	19840312
00028	83341.00	WATER SUPPLY & POLLUTION CONTROL COMM. LAB., NH	19840312
00028	83401.00	TELEDYNE ISOTOPES, INC. NEW JERSEY	19870604
00028	83441.00	NEW JERSEY DEPT. OF HEALTH LABORATORY	19840312
00028	83513.00	DISTRICT WATER-QUALITY LAB, ALBUQUERQUE, NM	19840312
00028	83523.00	NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY - SOCORRO	19840312
00028	83541.00	UNIVERSITY OF NEW MEXICO	19840312
00028	83542.00	USBIA SOIL, WATER, & MATERIAL TESTING LAB., NM	19840312
00028	83611.00	MONROE COUNTY HEALTH DEPARTMENT, NEW YORK	19840312
00028	83613.00	DISTRICT WATER-QUALITY LAB, ALBANY, NEW YORK	19840312
00028	83620.00	UPSTATE FRESHWATER INSTITUTE, NEW YORK	19840312
00028	83621.00	O'BRIEN AND GERE, NEW YORK	19840312
00028	83630.00	SYRACUSE UNIVERSITY, DEPT. OF CIVIL ENGINEERING	19840312
00028	83631.00	METROPOLITAN LABORATORY, NEW YORK	19840312
00028	83650.00	ERIE COUNTY LABORATORY, NEW YORK	19840312
00028	83671.00	COLUMBIA UNIVERSITY, NEW YORK	19840312
00028	83713.00	DISTRICT WATER-QUALITY LAB, RALEIGH, NC	19840312
00028	83741.00	NORTH CAROLINA DEPT. OF NATURAL AND ECONOMIC RESOURCES	19840312
00028	83751.00	MECKLENBURG CO. DEPT. OF ENVIRONMENTAL HEALTH LAB, NC	19861008
00028	83841.00	NORTH DAKOTA STATE LABORATORY	19840312
00028	83901.00	NATIONAL TESTING LABORATORY, WATER CHECK DIVISION, OHIO	19870922
00028	83913.00	DISTRICT WATER-QUALITY LAB, COLUMBUS, OHIO	19840312
00028	84001.00	OKLAHOMA WATER RESOURCES BOARD	19870331
00028	84003.00	OKLAHOMA STATE UNIVERSITY	19870331

00028	84005.00	OKLAHOMA STATE HEALTH DEPARTMENT RADIOCHEMISTRY LABORATORY	19870331
00028	84007.00	OKLAHOMA STATE DEPARTMENT OF AGRICULTURE	19870331
00028	84009.00	ASSOCIATION OF CENTRAL OKLAHOMA GOVERNMENTS	19870331
00028	84011.00	OKLAHOMA CORPORATION COMMISSION	19870331
00028	84013.00	DISTRICT WATER-QUALITY LAB, OKLAHOMA CITY, OK	19840312
00028	84041.00	OKLAHOMA GEOLOGICAL SURVEY	19840312
00028	84042.00	OKLAHOMA STATE HEALTH DEPARTMENT	19840312
00028	84113.00	DISTRICT WATER-QUALITY LAB, PORTLAND, OREGON	19840312
00028	84213.00	DISTRICT WATER-QUALITY LAB, HARRISBURG, PA	19840312
00028	84215.00	CHESTER COUNTY HEALTH DEPARTMENT LAB, PA	19840312
00028	84240.00	CITY OF PHILADELPHIA, PA AND USGS	19840312
00028	84540.00	SOUTH CAROLINA WATER RESOURCES COMMISSION	19840312
00028	84541.00	SAVANNAH RIVER LAB, SOUTH CAROLINA	19840312
00028	84610.00	URE PROJECT LABORATORY, OAK RIDGE, TN	19840312
00028	84813.00	PUBLIC ENTITY	19890907
00028	84813.00	DISTRICT WATER-QUALITY LAB, AUSTIN, TEXAS	19840312
00028	84823.00	INTERNATIONAL BOUNDARY WATER COMMISSION	19840312
00028	84833.00	GUADALUPE-BLANCO RIVER AUTHORITY	19840312
00028	84913.00	DISTRICT WATER-QUALITY LAB, SALT LAKE CITY, UT	19840312
00028	85113.00	HEADQUARTERS TRITIUM LAB, RESTON, VIRGINIA	19840312
00028	85114.00	DISTRICT WATER-QUALITY LAB, CHARLOTTESVILLE, VIRGINIA	19840312
00028	85115.00	UNIV. OF VIRGINIA DEPT. OF ENVIRONMENTAL SCIENCES LAB	19840312
00028	85116.00	VIRGINIA DIVISION OF CONSOLIDATED LABORATORY SERVICES	19890214
00028	85313.00	DISTRICT WATER-QUALITY LAB, TACOMA, WA	19840312
00028	85341.00	AM TEST INC., WASHINGTON	19840312
00028	85342.00	MUNICIPALITY OF METROPOLITAN SEATTLE, WA	19840312
00028	85343.00	WASHINGTON STATE DEPT. OF ECOLOGY	19840312
00028	85344.00	WASHINGTON STATE DEPT. OF SOCIAL AND HEALTH SERVICES	19840312
00028	85345.00	ANALYTICAL RESOURCES INCORPORATED, SEATTLE,WA	19890907
00028	85346.00	ECOLOGY AND ENVIRONMENT INC., SEATTLE, WA	19890907
00028	85411.00	DISTRICT WATER-QUALITY LAB, CHARLESTON, WV	19840312
00028	85540.00	ROBERT E. LEE AND ASSOC. GREEN BAY, WI	19890607
00028	85541.00	MAYO CLINIC, UNIVERSITY OF WISCONSIN	19840312
00028	85542.00	UNIVERSITY OF WISCONSIN EXTENSION	19840312
00028	85543.00	STATE LABORATORY OF HYGIENE, WISCONSIN	19840312
00028	85544.00	HAZELTON LABORATORIES AMERICA, MADISON, WI	19890907
00028	85613.00	DISTRICT WATER-QUALITY LAB, CHEYENNE, WY	19840312
00028	85614.00	LOUISVILLE & JEFFERSON COUNTY METRO SEWER DISTRICT LAB	19890104
00028	85641.00	WYOMING DEPARTMENT OF AGRICULTURE	19840312
00028	87213.00	DISTRICT WATER-QUALITY LAB, SAN JUAN, PUERTO RICO	19840312
00028	89213.00	CHALK RIVER NUCLEAR LABORATORIES, CHALK RIVER, CANADA	19840312
00028	99001.00	PRIVATE CONTRACTOR	19840312
00028	99999.00	OTHER	19840312

00041 WEATHER

00041	0.00	CLOUDLESS	19840312
00041	1.00	PARTLY CLOUDY	19840312
00041	2.00	CLOUDY	19840312
00041	3.00	OVERCAST	19840312
00041	10.00	PRECIPITATION WITHIN SIGHT	19840312
00041	13.00	UGLY, THREATENING SKY	19840312
00041	40.00	FOG	19840312
00041	50.00	DRIZZLE	19840312
00041	51.00	SLIGHT DRIZZLE, INTERMITTENT	19840312
00041	52.00	SLIGHT DRIZZLE, CONTINUOUS	19840312
00041	53.00	MODERATE DRIZZLE, INTERMITTENT	19840312
00041	54.00	MODERATE DRIZZLE, CONTINUOUS	19840312
00041	55.00	THICK DRIZZLE, INTERMITTENT	19840312
00041	56.00	THICK DRIZZLE, CONTINUOUS	19840312
00041	57.00	DRIZZLE AND FOG	19840312
00041	58.00	SLIGHT OR MODERATE DRIZZLE AND RAIN	19840312
00041	59.00	THICK DRIZZLE AND RAIN	19840312
00041	60.00	RAIN	19840312
00041	61.00	SLIGHT RAIN, INTERMITTENT	19840312
00041	62.00	SLIGHT RAIN, CONTINUOUS	19840312
00041	63.00	MODERATE RAIN, INTERMITTENT	19840312
00041	64.00	MODERATE RAIN, CONTINUOUS	19840312
00041	65.00	HEAVY RAIN, INTERMITTENT	19840312
00041	66.00	HEAVY RAIN, CONTINUOUS	19840312
00041	67.00	RAIN AND FOG	19840312
00041	68.00	SLIGHT OR MODERATE MIXED RAIN AND SNOW	19840312
00041	69.00	HEAVY MIXED RAIN AND SNOW	19840312
00041	70.00	SNOW OR SLEET	19840312
00041	71.00	SLIGHT SNOW IN FLAKES, INTERMITTENT	19840312
00041	72.00	SLIGHT SNOW IN FLAKES, CONTINUOUS	19840312
00041	73.00	MODERATE SNOW IN FLAKES, INTERMITTENT	19840312
00041	74.00	MODERATE SNOW IN FLAKES, CONTINUOUS	19840312
00041	75.00	HEAVY SNOW IN FLAKES, INTERMITTENT	19840312
00041	76.00	HEAVY SNOW IN FLAKES, CONTINUOUS	19840312
00041	77.00	SNOW AND FOG	19840312
00041	78.00	GRANULAR SNOW (FROZEN DRIZZLE)	19840312
00041	79.00	ICE CRYSTALS	19840312
00041	80.00	SHOWER(S)	19840312
00041	81.00	SLIGHT OR MODERATE RAIN SHOWER(S)	19840312
00041	82.00	HEAVY RAIN SHOWER(S)	19840312
00041	83.00	SLIGHT OR MODERATE SNOW SHOWER(S)	19840312
00041	84.00	HEAVY SNOW SHOWER(S)	19840312
00041	85.00	SLIGHT OR MODERATE RAIN AND SNOW SHOWER(S)	19840312
00041	86.00	HEAVY RAIN AND SNOW SHOWER(S)	19840312
00041	87.00	GRANULAR SNOW SHOWER(S)	19840312
00041	88.00	SLIGHT OR MODERATE HAIL OR RAIN AND HAIL SHOWER(S)	19840312
00041	89.00	HEAVY HAIL OR RAIN AND HAIL SHOWER(S)	19840312
00041	90.00	THUNDERSTORM	19840312
00041	93.00	SLIGHT THUNDERSTORM WITH RAIN OR SNOW	19840312

00041	94.00	SLIGHT THUNDERSTORM WITH HAIL	19840312
00041	95.00	MODERATE THUNDERSTORM WITH RAIN OR SNOW	19840312
00041	96.00	MODERATE THUNDERSTORM WITH HAIL	19840312
00041	97.00	HEAVY THUNDERSTORM WITH RAIN OR SNOW	19840312
00041	99.00	HEAVY THUNDERSTORM WITH HAIL	19840312
00115	SAMPLE TREATMENT		
00115	1.00	RAW	19840312
00115	2.00	TREATED	19840312
01300	OIL-GREASE (SEVERITY)		
01300	0.00	NONE	19840312
01300	1.00	MILD	19840312
01300	2.00	MODERATE	19840312
01300	3.00	SERIOUS	19840312
01300	4.00	EXTREME	19840312
01305	DETERGENT SUDS (SEVERITY)		
01305	0.00	NONE	19840312
01305	1.00	MILD	19840312
01305	2.00	MODERATE	19840312
01305	3.00	SERIOUS	19840312
01305	4.00	EXTREME	19840312
01310	GAS BUBBLES (SEVERITY)		
01310	0.00	NONE	19840312
01310	1.00	MILD	19840312
01310	2.00	MODERATE	19840312
01310	3.00	SERIOUS	19840312
01310	4.00	EXTREME	19840312
01315	SLUDGE, FLOATING (SEVERITY)		
01315	0.00	NONE	19840312
01315	1.00	MILD	19840312
01315	2.00	MODERATE	19840312
01315	3.00	SERIOUS	19840312
01315	4.00	EXTREME	19840312
01320	GARBAGE, FLOATING (SEVERITY)		
01320	0.00	NONE	19840312
01320	1.00	MILD	19840312
01320	2.00	MODERATE	19840312
01320	3.00	SERIOUS	19840312
01320	4.00	EXTREME	19840312

01325 ALGAE, FLOATING MATS (SEVERITY)

01325	0.00	NONE	19840312
01325	1.00	MILD	19840312
01325	2.00	MODERATE	19840312
01325	3.00	SERIOUS	19840312
01325	4.00	EXTREME	19840312

01330 ODOR, ATMOSPHERIC (SEVERITY)

01330	0.00	NONE	19840312
01330	1.00	MILD	19840312
01330	2.00	MODERATE	19840312
01330	3.00	SERIOUS	19840312
01330	4.00	EXTREME	19840312

01335 SEWAGE SOLIDS, FRESH, FLOATING (SEVERITY)

01335	0.00	NONE	19840312
01335	1.00	MILD	19840312
01335	2.00	MODERATE	19840312
01335	3.00	SERIOUS	19840312
01335	4.00	EXTREME	19840312

01340 FISH, DEAD (SEVERITY)

01340	0.00	NONE	19840312
01340	1.00	MILD	19840312
01340	2.00	MODERATE	19840312
01340	3.00	SERIOUS	19840312
01340	4.00	EXTREME	19840312

01345 DEBRIS, FLOATING (SEVERITY)

01345	0.00	NONE	19840312
01345	1.00	MILD	19840312
01345	2.00	MODERATE	19840312
01345	3.00	SERIOUS	19840312
01345	4.00	EXTREME	19840312

01350 TURBIDITY (SEVERITY)

01350	0.00	NONE	19840312
01350	1.00	MILD	19840312
01350	2.00	MODERATE	19840312
01350	3.00	SERIOUS	19840312
01350	4.00	EXTREME	19840312

01351 STREAMFLOW (SEVERITY)

01351	1.00	DRY	19840312
01351	2.00	LOW	19840312
01351	3.00	NORMAL	19840312
01351	4.00	FLOOD	19840312
01351	5.00	ABOVE NORMAL	19840312

01355 ICE COVER, FLOATING OR SOLID (SEVERITY)

01355	0.00	NONE	19840312
01355	1.00	MILD	19840312
01355	2.00	MODERATE	19840312
01355	3.00	SERIOUS	19840312
01355	4.00	EXTREME	19840312

31678 STREPTOCOCCI, FECAL, TUBE CONFIGURATION

31678	1.00	FIVE 10-ML TUBES	19840312
31678	2.00	FIVE 10-ML, FIVE 1-ML AND FIVE 0.1-ML TUBES	19840312
31678	3.00	FIVE 10-ML, ONE 1-ML AND ONE 0.1-ML TUBES	19840312
31678	4.00	ONE 50-ML AND FIVE 10-ML TUBES	19840312
31678	5.00	ONE 50-ML, FIVE 10-ML AND FIVE 1-ML TUBES	19840312
31678	6.00	FIVE 50-ML, FIVE 10-ML AND FIVE 1-ML TUBES	19840312
31678	7.00	THREE 10-ML, THREE 1-ML AND THREE 0.1-ML TUBES	19840312
31678	8.00	FIVE 100-ML, FIVE 10-ML AND FIVE 1-ML TUBES	19840312

71995 WATER USE, PRIMARY (CODES)

71995	111.00	CASH GRAINS	19840312
71995	131.00	FIELD CROPS - EXCEPT CASH GRAINS	19840312
71995	161.00	VEGETABLES AND MELONS	19840312
71995	171.00	FRUITS AND TREE NUTS	19840312
71995	181.00	HORTICULTURAL SPECIALTIES	19890607
71995	191.00	GENERAL FARM CROPS	19840312
71995	211.00	LIVESTOCK	19840312
71995	251.00	POULTRY AND EGGS	19840312
71995	271.00	ANIMAL SPECIALTIES	19890607
71995	291.00	GENERAL FARMS - PRIMARILY LIVESTOCK	19840312
71995	711.00	AGRICULTURAL SERVICES - SOIL PREP, CROP PLANTINGS, ETC.	19840312
71995	741.00	VETERINARY SERVICES	19840312
71995	761.00	ANIMAL SERVICES, FARM LABOR AND MANAGEMENT	19840312
71995	811.00	FORESTRY	19840312
71995	912.00	FISH AND WILDLIFE FARMING	19840312
71995	1011.00	METAL MINING	19840312
71995	1111.00	ANTHRACITE MINING	19840312
71995	1211.00	BITUMINOUS COAL AND LIGNITE MINING	19840312
71995	1311.00	OIL AND GAS EXTRACTION	19840312
71995	1411.00	MINING AND QUARRYING OF NONMETALIC MINERALS, - NONFUEL	19890607
71995	1521.00	BUILDING CONSTRUCTION	19840312

71995	1611.00	CONSTRUCTION - OTHER THAN BUILDING	19840312
71995	1711.00	SPECIAL TRADE (PLUMBING, HEAT, AIR, ELEC., MASONRY, ETC.)	19840312
71995	2011.00	MANUFACTURING - MEAT PRODUCTS	19840312
71995	2016.00	POULTRY AND EGG PLANTS	19840312
71995	2021.00	DAIRY PRODUCTS	19840312
71995	2032.00	CANNED & PRESERVED FRUITS AND VEGETABLES	19840312
71995	2041.00	GRAIN MILL PRODUCTS	19840312
71995	2051.00	BAKERY PRODUCTS	19840312
71995	2061.00	SUGAR AND CONFECTIONERY PRODUCTS	19890607
71995	2074.00	FATS AND OILS	19840312
71995	2084.00	BEVERAGES - ALCOHOLIC & SOFT DRINKS, SYRUPS & EXTRACTS	19840312
71995	2091.00	MISCELLANEOUS FOOD PREPARATIONS	19840312
71995	2111.00	TOBACCO MANUFACTURERS	19840312
71995	2211.00	TEXTILE MILL PRODUCTS	19840312
71995	2311.00	APPAREL - PRODUCTS FROM FABRICS	19840312
71995	2411.00	LUMBER & WOOD PRODUCTS EXCEPT FURNITURE	19840312
71995	2511.00	FURNITURE AND FIXTURES	19840312
71995	2611.00	PAPER AND ALLIED PRODUCTS	19840312
71995	2711.00	PRINTING, PUBLISHING, & ALLIED INDUSTRIES	19840312
71995	2821.00	CHEMICALS AND ALLIED PRODUCTS	19840312
71995	2911.00	PETROLEUM REFINING AND RELATED PRODUCTS	19840312
71995	3011.00	RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS	19840312
71995	3111.00	LEATHER AND LEATHER PRODUCTS	19840312
71995	3211.00	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS	19840312
71995	3281.00	CUT STONE AND STONE PRODUCTS	19840312
71995	3291.00	ABRASIVE, ASBESTOS, & MISCELLANEOUS NONMETALIC PRODUCTS	19840312
71995	3312.00	BLAST FURNACES, STEEL WORKS, & ROLLING & FINISHING MILLS	19840312
71995	3411.00	METAL PRODUCTS & TRANS. EQUIPMENT (NO MACHINERY)	19840312
71995	3511.00	MACHINERY, EXCEPT ELECTRICAL	19840312
71995	3612.00	ELECTRICAL & ELECTRONIC MACHINERY, EQUIPMENT & SUPPLIES	19840312
71995	3711.00	TRANSPORTATION EQUIPMENT REPAIRING AND PARTS	19840312
71995	3811.00	MEASURING, ANALYZING, & CONTROLLING INSTRUMENTS	19840312
71995	3911.00	MISCELLANEOUS MANUFACTURING INDUSTRIES	19840312
71995	4011.00	TRANSPORTATION - TRAINS, TAXICABS, AIRCRAFT	19840312
71995	4212.00	MOTOR FREIGHT TRANSPORTATION AND WAREHOUSING	19840312
71995	4311.00	U.S. POSTAL SERVICE	19840312
71995	4411.00	WATER TRANSPORTATION	19840312
71995	4423.00	WATER RECREATION ON BAYS, LAKES, RIVERS, & CANALS	19840312
71995	4511.00	TRANSPORTATION BY AIR	19840312
71995	4612.00	PIPELINES - EXCEPT NATURAL GAS	19840312
71995	4811.00	COMMUNICATIONS	19840312
71995	4922.00	GAS PRODUCTION AND DISTRIBUTION; ELEC. AND GAS SERVICE	19840312
71995	4941.00	WATER SUPPLY	19840312

71995	4952.00	SEWERAGE SYSTEMS	19840312
71995	4961.00	PUBLIC STEAM SUPPLY	19840312
71995	4971.00	IRRIGATION SYSTEMS	19840312
71995	5012.00	WHOLESALE TRADE - DURABLE GOODS	19840312
71995	5111.00	WHOLESALE TRADE - NONDURABLE GOODS	19840312
71995	5211.00	BUILDING MATERIALS, HARDWARE, GARDEN SUPPLY	19840312
71995	5311.00	GENERAL MERCHANDISE STORES	19840312
71995	5411.00	FOOD STORES	19840312
71995	5511.00	AUTO. DEALERS AND GASOLINE SERVICE STATIONS	19840312
71995	5611.00	APPAREL AND ACCESSORY STORES	19840312
71995	5712.00	FURNITURE, HOME FURNISHING, AND EQUIPMENT STORES	19840312
71995	5812.00	EATING AND DRINKING PLACES	19840312
71995	5912.00	MISCELLANEOUS RETAIL - DRUG, LIQUOR, BOOK, CAMERA, ETC.	19840312
71995	6011.00	BANKING	19840312
71995	6112.00	CREDIT AGENCIES	19840312
71995	6212.00	SECURITY AND COMMODITY BROKERS, DEALERS, AND SERVICES	19840312
71995	6311.00	INSURANCE	19840312
71995	6512.00	REAL ESTATE	19840312
71995	6711.00	HOLDING AND OTHER INVESTMENT OFFICES	19840312
71995	7011.00	HOTELS, MOTELS, TOURIST COURTS	19840312
71995	7021.00	ROOMING AND BOARDING HOUSES	19840312
71995	7032.00	CAMPS, TRANSIENT TRAILER PARKS, & CAMP SITES	19840312
71995	7041.00	ORGANIZATION HOTELS AND MEMBERSHIP LODGING HOUSES	19840312
71995	7211.00	LAUNDRY, CLEANING, AND GARMENT SERVICES	19840312
71995	7221.00	SHOPS - PHOTO, BEAUTY, BARBER, SHOE, FUNERAL SERVICES	19840312
71995	7311.00	ADVERTISING SERVICES	19840312
71995	7321.00	CONSUMER CREDIT AND COLLECTION	19840312
71995	7331.00	MAILING, REPRODUCTION, COMMERCIAL ART & PHOTOGRAPHY	19840312
71995	7341.00	SERVICE TO DWELLINGS AND OTHER BUILDINGS	19840312
71995	7351.00	NEWS SYNDICATES	19840312
71995	7361.00	EMPLOYMENT SERVICES	19840312
71995	7372.00	COMPUTER AND DATA PROCESSING	19840312
71995	7391.00	MISCELLANEOUS BUSINESS SERVICES	19840312
71995	7512.00	AUTOMOTIVE AND TRUCK RENTAL LEASING WITHOUT DRIVER	19840312
71995	7523.00	AUTOMOBILE PARKING	19840312
71995	7531.00	AUTOMOTIVE REPAIR SHOPS	19840312
71995	7542.00	CAR WASHES	19840312
71995	7549.00	AUTOMOTIVE SERVICES - EXCEPT REPAIR	19840312
71995	7622.00	MISCELLANEOUS REPAIR SERVICES	19840312
71995	7813.00	MOTION PICTURE-T.V. SERVICES, THEATERS, EXCEPT DRIVE-INS	19840312
71995	7911.00	RECREATION SERVICES, EXCEPT THEATERS AND PUBLIC GOLF	19840312
71995	7992.00	PUBLIC GOLF COURSES	19840312
71995	7993.00	COIN OPERATED AMUSEMENT DEVICES	19840312

71995	7996.00	AMUSEMENT PARKS, SPORTS AND RECREATION CLUBS, ETC.	19840312
71995	8011.00	HEALTH SERVICES (OFFICES)	19840312
71995	8051.00	NURSING AND PERSONAL CARE FACILITIES	19840312
71995	8062.00	HOSPITALS	19840312
71995	8071.00	MEDICAL AND DENTAL LABORATORIES	19840312
71995	8081.00	OUTPATIENT CARE FACILITIES	19840312
71995	8091.00	HEALTH & ALLIES SERVICES, NOT ELSEWHERE CLASSIFIED	19840312
71995	8111.00	LEGAL SERVICES	19840312
71995	8211.00	EDUCATIONAL SERVICES, LIBRARIES AND INFORMATION CENTERS	19840312
71995	8231.00	SOCIAL SERVICES & REHABILITATION CENTERS	19840312
71995	8411.00	MUSEUMS, ART GALLERIES, ZOOLOGICAL & BOTANICAL GARDENS	19890607
71995	8611.00	MEMBERSHIP ORGANIZATIONS	19840312
71995	8811.00	PRIVATE HOUSES, CONDOS, MUNICIPALITIES, & TRAILER PARKS	19840312
71995	8911.00	MISCELLANEOUS SERVICES (ENG.,ED., R&D, ACCOUNTING, ETC.)	19840312
71995	9111.00	GOV., LEGISLATIVE, JUSTICE, PUBLIC ORDER & SAFETY MISC.	19840312
71995	9411.00	ADMINISTRATION OF HUMAN RESOURCES PROGRAMS	19840312
71995	9511.00	AIR & WATER RESOURCE, & SOLID WASTE MGMT.	19840312
71995	9512.00	NATURAL RESOURCE CONSERVATION BY PUBLIC ADMINISTRATION	19890607
71995	9531.00	ADMIN. OF HOUSING & ECONOMIC PROGRAMS & INTERNAT'L AFFAIRS	19840312
71995	9999.00	WATER COMPACTS, AGREEMENTS & LEGISLATIVE ACTIONS	19840312
71995	14911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - FOSSIL	19840312
71995	24911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - GEOTHERMAL	19890607
71995	34911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - HYDROELECTRIC	19840312
71995	44911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - NUCLEAR	19840312
71996	WATER USE, SECONDARY (CODES)		
71996	111.00	CASH GRAINS	19840312
71996	131.00	FIELD CROPS - EXCEPT CASH GRAINS	19840312
71996	161.00	VEGETABLES AND MELONS	19840312
71996	171.00	FRUITS AND TREE NUTS	19840312
71996	181.00	HORTICULTURAL SPECIALTIES	19890608
71996	191.00	GENERAL FARM CROPS	19840312
71996	211.00	LIVESTOCK	19840312
71996	251.00	POULTRY AND EGGS	19840312
71996	271.00	ANIMAL SPECIALTIES	19890608
71996	291.00	GENERAL FARMS - PRIMARILY LIVESTOCK	19840312

71996	711.00	AGRICULTURAL SERVICES - SOIL PREP, CROP PLANTINGS, ETC.	19840312
71996	741.00	VETERINARY SERVICES	19840312
71996	761.00	ANIMAL SERVICES, FARM LABOR AND MANAGEMENT	19840312
71996	811.00	FORESTRY	19840312
71996	912.00	FISH AND WILDLIFE FARMING	19840312
71996	1011.00	METAL MINING	19840312
71996	1111.00	ANTHRACITE MINING	19840312
71996	1211.00	BITUMINOUS COAL AND LIGNITE MINING	19840312
71996	1311.00	OIL AND GAS EXTRACTION	19840312
71996	1411.00	MINING AND QUARRYING OF NONMETALIC MINERALS, - NONFUEL	19890608
71996	1521.00	BUILDING CONSTRUCTION	19840312
71996	1611.00	CONSTRUCTION - OTHER THAN BUILDING	19840312
71996	1711.00	SPECIAL TRADE (PLUMBING, HEAT, AIR, ELEC., MASONRY, ETC.)	19840312
71996	2011.00	MANUFACTURING - MEAT PRODUCTS	19840312
71996	2016.00	POULTRY AND EGG PLANTS	19840312
71996	2021.00	DAIRY PRODUCTS	19840312
71996	2032.00	CANNED & PRESERVED FRUITS AND VEGETABLES	19840312
71996	2041.00	GRAIN MILL PRODUCTS	19840312
71996	2051.00	BAKERY PRODUCTS	19840312
71996	2061.00	SUGAR AND CONFECTIONERY PRODUCTS	19890608
71996	2074.00	FATS AND OILS	19840312
71996	2084.00	BEVERAGES - ALCOHOLIC & SOFT DRINKS, SYRUPS & EXTRACTS	19840312
71996	2091.00	MISCELLANEOUS FOOD PREPARATIONS	19840312
71996	2111.00	TOBACCO MANUFACTURERS	19840312
71996	2211.00	TEXTILE MILL PRODUCTS	19840312
71996	2311.00	APPAREL - PRODUCTS FROM FABRICS	19840312
71996	2411.00	LUMBER & WOOD PRODUCTS EXCEPT FURNITURE	19840312
71996	2511.00	FURNITURE AND FIXTURES	19840312
71996	2611.00	PAPER AND ALLIED PRODUCTS	19840312
71996	2711.00	PRINTING, PUBLISHING, & ALLIED INDUSTRIES	19840312
71996	2821.00	CHEMICALS AND ALLIED PRODUCTS	19840312
71996	2911.00	PETROLEUM REFINING AND RELATED PRODUCTS	19840312
71996	3011.00	RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS	19840312
71996	3111.00	LEATHER AND LEATHER PRODUCTS	19840312
71996	3211.00	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS	19840312
71996	3281.00	CUT STONE AND STONE PRODUCTS	19840312
71996	3291.00	ABRASIVE, ASBESTOS, & MISCELLANEOUS NONMETALIC PRODUCTS	19840312
71996	3312.00	BLAST FURNACES, STEEL WORKS, & ROLLING & FINISHING MILLS	19840312
71996	3411.00	METAL PRODUCTS & TRANS. EQUIPMENT (NO MACHINERY)	19840312
71996	3511.00	MACHINERY, EXCEPT ELECTRICAL	19840312
71996	3612.00	ELECTRICAL & ELECTRONIC MACHINERY, EQUIPMENT & SUPPLIES	19840312
71996	3711.00	TRANSPORTATION EQUIPMENT REPAIRING AND PARTS	19840312
71996	3811.00	MEASURING, ANALYZING, & CONTROLLING INSTRUMENTS	19840312

71996	3911.00	MISCELLANEOUS MANUFACTURING INDUSTRIES	19840312
71996	4011.00	TRANSPORTATION - TRAINS, TAXICABS, AIRCRAFT	19840312
71996	4212.00	MOTOR FREIGHT TRANSPORTATION AND WAREHOUSING	19840312
71996	4311.00	U.S. POSTAL SERVICE	19840312
71996	4411.00	WATER TRANSPORTATION	19840312
71996	4423.00	WATER RECREATION ON BAYS, LAKES, RIVERS, & CANALS	19840312
71996	4511.00	TRANSPORTATION BY AIR	19840312
71996	4612.00	PIPELINES - EXCEPT NATURAL GAS	19840312
71996	4811.00	COMMUNICATIONS	19840312
71996	4922.00	GAS PRODUCTION AND DISTRIBUTION; ELEC. AND GAS SERVICE	19840312
71996	4941.00	WATER SUPPLY	19840312
71996	4952.00	SEWERAGE SYSTEMS	19840312
71996	4961.00	PUBLIC STEAM SUPPLY	19840312
71996	4971.00	IRRIGATION SYSTEMS	19840312
71996	5012.00	WHOLESALE TRADE - DURABLE GOODS	19840312
71996	5111.00	WHOLESALE TRADE - NONDURABLE GOODS	19840312
71996	5211.00	BUILDING MATERIALS, HARDWARE, GARDEN SUPPLY	19840312
71996	5311.00	GENERAL MERCHANDISE STORES	19840312
71996	5411.00	FOOD STORES	19840312
71996	5511.00	AUTO. DEALERS AND GASOLINE SERVICE STATIONS	19840312
71996	5611.00	APPAREL AND ACCESSORY STORES	19840312
71996	5712.00	FURNITURE, HOME FURNISHING, AND EQUIPMENT STORES	19840312
71996	5812.00	EATING AND DRINKING PLACES	19840312
71996	5912.00	MISCELLANEOUS RETAIL - DRUG, LIQUOR, BOOK, CAMERA, ETC.	19840312
71996	6011.00	BANKING	19840312
71996	6112.00	CREDIT AGENCIES	19840312
71996	6212.00	SECURITY AND COMMODITY BROKERS, DEALERS, AND SERVICES	19840312
71996	6311.00	INSURANCE	19840312
71996	6512.00	REAL ESTATE	19840312
71996	6711.00	HOLDING AND OTHER INVESTMENT OFFICES	19840312
71996	7011.00	HOTELS, MOTELS, TOURIST COURTS	19840312
71996	7021.00	ROOMING AND BOARDING HOUSES	19840312
71996	7032.00	CAMPS, TRANSIENT TRAILER PARKS, & CAMP SITES	19840312
71996	7041.00	ORGANIZATION HOTELS AND MEMBERSHIP LODGING HOUSES	19840312
71996	7211.00	LAUNDRY, CLEANING, AND GARMENT SERVICES	19840312
71996	7221.00	SHOPS - PHOTO, BEAUTY, BARBER, SHOE, FUNERAL SERVICES	19840312
71996	7311.00	ADVERTISING SERVICES	19840312
71996	7321.00	CONSUMER CREDIT AND COLLECTION	19840312
71996	7331.00	MAILING, REPRODUCTION, COMMERCIAL ART & PHOTOGRAPHY	19840312
71996	7341.00	SERVICE TO DWELLINGS AND OTHER BUILDINGS	19840312
71996	7351.00	NEWS SYNDICATES	19840312
71996	7361.00	EMPLOYMENT SERVICES	19840312
71996	7372.00	COMPUTER AND DATA PROCESSING	19840312
71996	7391.00	MISCELLANEOUS BUSINESS SERVICES	19840312

71996	7512.00	AUTOMOTIVE AND TRUCK RENTAL LEASING WITHOUT DRIVER	19840312
71996	7523.00	AUTOMOBILE PARKING	19840312
71996	7531.00	AUTOMOTIVE REPAIR SHOPS	19840312
71996	7542.00	CAR WASHES	19840312
71996	7549.00	AUTOMOTIVE SERVICES - EXCEPT REPAIR	19840312
71996	7622.00	MISCELLANEOUS REPAIR SERVICES	19840312
71996	7813.00	MOTION PICTURE-T.V. SERVICES, THEATERS, EXCEPT DRIVE-INS	19840312
71996	7911.00	RECREATION SERVICES, EXCEPT THEATERS AND PUBLIC GOLF	19840312
71996	7992.00	PUBLIC GOLF COURSES	19840312
71996	7993.00	COIN OPERATED AMUSEMENT DEVICES	19840312
71996	7996.00	AMUSEMENT PARKS, SPORTS AND RECREATION CLUBS, ETC.	19840312
71996	8011.00	HEALTH SERVICES (OFFICES)	19840312
71996	8051.00	NURSING AND PERSONAL CARE FACILITIES	19840312
71996	8062.00	HOSPITALS	19840312
71996	8071.00	MEDICAL AND DENTAL LABORATORIES	19840312
71996	8081.00	OUTPATIENT CARE FACILITIES	19840312
71996	8091.00	HEALTH & ALLIES SERVICES, NOT ELSEWHERE CLASSIFIED	19840312
71996	8111.00	LEGAL SERVICES	19840312
71996	8211.00	EDUCATIONAL SERVICES, LIBRARIES AND INFORMATION CENTERS	19840312
71996	8231.00	SOCIAL SERVICES & REHABILITATION CENTERS	19840312
71996	8411.00	MUSEUMS, ART GALLERIES, ZOOLOGICAL & BOTANICAL GARDENS	19890608
71996	8611.00	MEMBERSHIP ORGANIZATIONS	19840312
71996	8811.00	PRIVATE HOUSES, CONDOS, MUNICIPALITIES, & TRAILER PARKS	19840312
71996	8911.00	MISCELLANEOUS SERVICES (ENG.,ED., R&D, ACCOUNTING, ETC.)	19840312
71996	9111.00	GOV., LEGISLATIVE, JUSTICE, PUBLIC ORDER & SAFETY MISC.	19840312
71996	9411.00	ADMINISTRATION OF HUMAN RESOURCES PROGRAMS	19840312
71996	9511.00	AIR & WATER RESOURCE, & SOLID WASTE MANAGEMENT	19840312
71996	9512.00	NATURAL RESOURCE CONSERVATION BY PUBLIC ADMINISTRATION	19890608
71996	9531.00	ADMIN. OF HOUSING & ECONOMIC PROGRAMS & INTERNAT'L AFFAIRS	19840312
71996	9999.00	WATER COMPACTS, AGREEMENTS & LEGISLATIVE ACTIONS	19840312
71996	14911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - FOSSIL	19840312
71996	24911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - GEOTHERMAL	19890608
71996	34911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - HYDROELECTRIC	19840312
71996	44911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - NUCLEAR	19840312

71997 WATER USE, TERTIARY (CODES)

71997	111.00	CASH GRAINS	19840312
71997	131.00	FIELD CROPS - EXCEPT CASH GRAINS	19840312
71997	161.00	VEGETABLES AND MELONS	19840312
71997	171.00	FRUITS AND TREE NUTS	19840312
71997	181.00	HORTICULTURAL SPECIALTIES	19890608
71997	191.00	GENERAL FARM CROPS	19840312
71997	211.00	LIVESTOCK	19840312
71997	251.00	POULTRY AND EGGS	19840312
71997	271.00	ANIMAL SPECIALTIES	19890608
71997	291.00	GENERAL FARMS - PRIMARILY LIVESTOCK	19840312
71997	711.00	AGRICULTURAL SERVICES - SOIL PREP, CROP PLANTINGS, ETC.	19840312
71997	741.00	VETERINARY SERVICES	19840312
71997	761.00	ANIMAL SERVICES, FARM LABOR AND MANAGEMENT	19840312
71997	811.00	FORESTRY	19840312
71997	912.00	FISH AND WILDLIFE FARMING	19840312
71997	1011.00	METAL MINING	19840312
71997	1111.00	ANTHRACITE MINING	19840312
71997	1211.00	BITUMINOUS COAL AND LIGNITE MINING	19840312
71997	1311.00	OIL AND GAS EXTRACTION	19840312
71997	1411.00	MINING AND QUARRYING OF NONMETALIC MINERALS, - NONFUEL	19890608
71997	1521.00	BUILDING CONSTRUCTION	19840312
71997	1611.00	CONSTRUCTION - OTHER THAN BUILDING	19840312
71997	1711.00	SPECIAL TRADE (PLUMBING, HEAT, AIR, ELEC., MASONRY, ETC.)	19840312
71997	2011.00	MANUFACTURING - MEAT PRODUCTS	19840312
71997	2016.00	POULTRY AND EGG PLANTS	19840312
71997	2021.00	DAIRY PRODUCTS	19840312
71997	2032.00	CANNED & PRESERVED FRUITS AND VEGETABLES	19840312
71997	2041.00	GRAIN MILL PRODUCTS	19840312
71997	2051.00	BAKERY PRODUCTS	19840312
71997	2061.00	SUGAR AND CONFECTIONERY PRODUCTS	19890608
71997	2074.00	FATS AND OILS	19840312
71997	2084.00	BEVERAGES - ALCOHOLIC & SOFT DRINKS, SYRUPS & EXTRACTS	19840312
71997	2091.00	MISCELLANEOUS FOOD PREPARATIONS	19840312
71997	2111.00	TOBACCO MANUFACTURERS	19840312
71997	2211.00	TEXTILE MILL PRODUCTS	19840312
71997	2311.00	APPAREL - PRODUCTS FROM FABRICS	19840312
71997	2411.00	LUMBER & WOOD PRODUCTS EXCEPT FURNITURE	19840312
71997	2511.00	FURNITURE AND FIXTURES	19840312
71997	2611.00	PAPER AND ALLIED PRODUCTS	19840312
71997	2711.00	PRINTING, PUBLISHING, & ALLIED INDUSTRIES	19840312
71997	2821.00	CHEMICALS AND ALLIED PRODUCTS	19840312
71997	2911.00	PETROLEUM REFINING AND RELATED PRODUCTS	19840312
71997	3011.00	RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS	19840312
71997	3111.00	LEATHER AND LEATHER PRODUCTS	19840312
71997	3211.00	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS	19840312
71997	3281.00	CUT STONE AND STONE PRODUCTS	19840312

71997	3291.00	ABRASIVE, ASBESTOS, & MISCELLANEOUS NONMETALIC PRODUCTS	19840312
71997	3312.00	BLAST FURNACES, STEEL WORKS, & ROLLING & FINISHING MILLS	19840312
71997	3411.00	METAL PRODUCTS & TRANS. EQUIPMENT (NO MACHINERY)	19840312
71997	3511.00	MACHINERY, EXCEPT ELECTRICAL	19840312
71997	3612.00	ELECTRICAL & ELECTRONIC MACHINERY, EQUIPMENT & SUPPLIES	19840312
71997	3711.00	TRANSPORTATION EQUIPMENT REPAIRING AND PARTS	19840312
71997	3811.00	MEASURING, ANALYZING, & CONTROLLING INSTRUMENTS	19840312
71997	3911.00	MISCELLANEOUS MANUFACTURING INDUSTRIES	19840312
71997	4011.00	TRANSPORTATION - TRAINS, TAXICABS, AIRCRAFT	19840312
71997	4212.00	MOTOR FREIGHT TRANSPORTATION AND WAREHOUSING	19840312
71997	4311.00	U.S. POSTAL SERVICE	19840312
71997	4411.00	WATER TRANSPORTATION	19840312
71997	4423.00	WATER RECREATION ON BAYS, LAKES, RIVERS, & CANALS	19840312
71997	4511.00	TRANSPORTATION BY AIR	19840312
71997	4612.00	PIPELINES - EXCEPT NATURAL GAS	19840312
71997	4811.00	COMMUNICATIONS	19840312
71997	4922.00	GAS PRODUCTION AND DISTRIBUTION; ELEC. AND GAS SERVICE	19840312
71997	4941.00	WATER SUPPLY	19840312
71997	4952.00	SEWERAGE SYSTEMS	19840312
71997	4961.00	PUBLIC STEAM SUPPLY	19840312
71997	4971.00	IRRIGATION SYSTEMS	19840312
71997	5012.00	WHOLESALE TRADE - DURABLE GOODS	19840312
71997	5111.00	WHOLESALE TRADE - NONDURABLE GOODS	19840312
71997	5211.00	BUILDING MATERIALS, HARDWARE, GARDEN SUPPLY	19840312
71997	5311.00	GENERAL MERCHANDISE STORES	19840312
71997	5411.00	FOOD STORES	19840312
71997	5511.00	AUTO. DEALERS AND GASOLINE SERVICE STATIONS	19840312
71997	5611.00	APPAREL AND ACCESSORY STORES	19840312
71997	5712.00	FURNITURE, HOME FURNISHING, AND EQUIPMENT STORES	19840312
71997	5812.00	EATING AND DRINKING PLACES	19840312
71997	5912.00	MISCELLANEOUS RETAIL - DRUG, LIQUOR, BOOK, CAMERA, ETC.	19840312
71997	6011.00	BANKING	19840312
71997	6112.00	CREDIT AGENCIES	19840312
71997	6212.00	SECURITY AND COMMODITY BROKERS, DEALERS, AND SERVICES	19840312
71997	6311.00	INSURANCE	19840312
71997	6512.00	REAL ESTATE	19840312
71997	6711.00	HOLDING AND OTHER INVESTMENT OFFICES	19840312
71997	7011.00	HOTELS, MOTELS, TOURIST COURTS	19840312
71997	7021.00	ROOMING AND BOARDING HOUSES	19840312
71997	7032.00	CAMPS, TRANSIENT TRAILER PARKS, & CAMP SITES	19840312
71997	7041.00	ORGANIZATION HOTELS AND MEMBERSHIP LODGING HOUSES	19840312

71997	7211.00	LAUNDRY, CLEANING, AND GARMENT SERVICES	19840312
71997	7221.00	SHOPS - PHOTO, BEAUTY, BARBER, SHOE, FUNERAL SERVICES	19840312
71997	7311.00	ADVERTISING SERVICES	19840312
71997	7321.00	CONSUMER CREDIT AND COLLECTION	19840312
71997	7331.00	MAILING, REPRODUCTION, COMMERCIAL ART & PHOTOGRAPHY	19840312
71997	7341.00	SERVICE TO DWELLINGS AND OTHER BUILDINGS	19840312
71997	7351.00	NEWS SYNDICATES	19840312
71997	7361.00	EMPLOYMENT SERVICES	19840312
71997	7372.00	COMPUTER AND DATA PROCESSING	19840312
71997	7391.00	MISCELLANEOUS BUSINESS SERVICES	19840312
71997	7512.00	AUTOMOTIVE AND TRUCK RENTAL LEASING WITHOUT DRIVER	19840312
71997	7523.00	AUTOMOBILE PARKING	19840312
71997	7531.00	AUTOMOTIVE REPAIR SHOPS	19840312
71997	7542.00	CAR WASHES	19840312
71997	7549.00	AUTOMOTIVE SERVICES - EXCEPT REPAIR	19840312
71997	7622.00	MISCELLANEOUS REPAIR SERVICES	19840312
71997	7813.00	MOTION PICTURE-T.V. SERVICES, THEATERS, EXCEPT DRIVE-INS	19840312
71997	7911.00	RECREATION SERVICES, EXCEPT THEATERS AND PUBLIC GOLF	19840312
71997	7992.00	PUBLIC GOLF COURSES	19840312
71997	7993.00	COIN OPERATED AMUSEMENT DEVICES	19840312
71997	7996.00	AMUSEMENT PARKS, SPORTS AND RECREATION CLUBS, ETC.	19840312
71997	8011.00	HEALTH SERVICES (OFFICES)	19840312
71997	8051.00	NURSING AND PERSONAL CARE FACILITIES	19840312
71997	8062.00	HOSPITALS	19840312
71997	8071.00	MEDICAL AND DENTAL LABORATORIES	19840312
71997	8081.00	OUTPATIENT CARE FACILITIES	19840312
71997	8091.00	HEALTH & ALLIES SERVICES, NOT ELSEWHERE CLASSIFIED	19840312
71997	8111.00	LEGAL SERVICES	19840312
71997	8211.00	EDUCATIONAL SERVICES, LIBRARIES AND INFORMATION CENTERS	19840312
71997	8231.00	SOCIAL SERVICES & REHABILITATION CENTERS	19840312
71997	8411.00	MUSEUMS, ART GALLERIES, ZOOLOGICAL & BOTANICAL GARDENS	19890608
71997	8611.00	MEMBERSHIP ORGANIZATIONS	19840312
71997	8811.00	PRIVATE HOUSES, CONDOS, MUNICIPALITIES, & TRAILER PARKS	19840312
71997	8911.00	MISCELLANEOUS SERVICES (ENG.,ED., R&D, ACCOUNTING, ETC.)	19840312
71997	9111.00	GOV., LEGISLATIVE, JUSTICE, PUBLIC ORDER & SAFETY MISC.	19840312
71997	9411.00	ADMINISTRATION OF HUMAN RESOURCES PROGRAMS	19840312
71997	9511.00	AIR & WATER RESOURCE, & SOLID WASTE MGMT.	19840312
71997	9512.00	NATURAL RESOURCE CONSERVATION BY PUBLIC ADMINISTRATION	19890608

71997	9531.00	ADMIN. OF HOUSING & ECONOMIC PROGRAMS & INTERNAT'L AFFAIRS	19840312
71997	9999.00	WATER COMPACTS, AGREEMENTS & LEGISLATIVE ACTIONS	19840312
71997	14911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - FOSSIL	19840312
71997	24911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - GEOTHERMAL	19890608
71997	34911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - HYDROELECTRIC	19840312
71997	44911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - NUCLEAR	19840312
71998	WATER USE, QUATERNARY (CODES)		
71998	111.00	CASH GRAINS	19840312
71998	131.00	FIELD CROPS - EXCEPT CASH GRAINS	19840312
71998	161.00	VEGETABLES AND MELONS	19840312
71998	171.00	FRUITS AND TREE NUTS	19840312
71998	181.00	HORTICULTURAL SPECIALTIES	19890608
71998	191.00	GENERAL FARM CROPS	19840312
71998	211.00	LIVESTOCK	19840312
71998	251.00	POULTRY AND EGGS	19840312
71998	271.00	ANIMAL SPECIALTIES	19890608
71998	291.00	GENERAL FARMS - PRIMARILY LIVESTOCK	19840312
71998	711.00	AGRICULTURAL SERVICES - SOIL PREP, CROP PLANTINGS, ETC.	19840312
71998	741.00	VETERINARY SERVICES	19840312
71998	761.00	ANIMAL SERVICES, FARM LABOR AND MANAGEMENT	19840312
71998	811.00	FORESTRY	19840312
71998	912.00	FISH AND WILDLIFE FARMING	19840312
71998	1011.00	METAL MINING	19840312
71998	1111.00	ANTHRACITE MINING	19840312
71998	1211.00	BITUMINOUS COAL AND LIGNITE MINING	19840312
71998	1311.00	OIL AND GAS EXTRACTION	19840312
71998	1411.00	MINING AND QUARRYING OF NONMETALIC MINERALS, - NONFUEL	19890608
71998	1521.00	BUILDING CONSTRUCTION	19840312
71998	1611.00	CONSTRUCTION - OTHER THAN BUILDING	19840312
71998	1711.00	SPECIAL TRADE (PLUMBING, HEAT, AIR, ELEC., MASONRY, ETC.)	19840312
71998	2011.00	MANUFACTURING - MEAT PRODUCTS	19840312
71998	2016.00	POULTRY AND EGG PLANTS	19840312
71998	2021.00	DAIRY PRODUCTS	19840312
71998	2032.00	CANNED & PRESERVED FRUITS AND VEGETABLES	19840312
71998	2041.00	GRAIN MILL PRODUCTS	19840312
71998	2051.00	BAKERY PRODUCTS	19840312
71998	2061.00	SUGAR AND CONFECTIONERY PRODUCTS	19890608
71998	2074.00	FATS AND OILS	19840312
71998	2084.00	BEVERAGES - ALCOHOLIC & SOFT DRINKS, SYRUPS & EXTRACTS	19840312
71998	2091.00	MISCELLANEOUS FOOD PREPARATIONS	19840312

71998	2111.00	TOBACCO MANUFACTURERS	19840312
71998	2211.00	TEXTILE MILL PRODUCTS	19840312
71998	2311.00	APPAREL - PRODUCTS FROM FABRICS	19840312
71998	2411.00	LUMBER & WOOD PRODUCTS EXCEPT FURNITURE	19840312
71998	2511.00	FURNITURE AND FIXTURES	19840312
71998	2611.00	PAPER AND ALLIED PRODUCTS	19840312
71998	2711.00	PRINTING, PUBLISHING, & ALLIED INDUSTRIES	19840312
71998	2821.00	CHEMICALS AND ALLIED PRODUCTS	19840312
71998	2911.00	PETROLEUM REFINING AND RELATED PRODUCTS	19840312
71998	3011.00	RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS	19840312
71998	3111.00	LEATHER AND LEATHER PRODUCTS	19840312
71998	3211.00	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS	19840312
71998	3281.00	CUT STONE AND STONE PRODUCTS	19840312
71998	3291.00	ABRASIVE, ASBESTOS, & MISCELLANEOUS NONMETALIC PRODUCTS	19840312
71998	3312.00	BLAST FURNACES, STEEL WORKS, & ROLLING & FINISHING MILLS	19840312
71998	3411.00	METAL PRODUCTS & TRANS. EQUIPMENT (NO MACHINERY)	19840312
71998	3511.00	MACHINERY, EXCEPT ELECTRICAL	19840312
71998	3612.00	ELECTRICAL & ELECTRONIC MACHINERY, EQUIPMENT & SUPPLIES	19840312
71998	3711.00	TRANSPORTATION EQUIPMENT REPAIRING AND PARTS	19840312
71998	3811.00	MEASURING, ANALYZING, & CONTROLLING INSTRUMENTS	19840312
71998	3911.00	MISCELLANEOUS MANUFACTURING INDUSTRIES	19840312
71998	4011.00	TRANSPORTATION - TRAINS, TAXICABS, AIRCRAFT	19840312
71998	4212.00	MOTOR FREIGHT TRANSPORTATION AND WAREHOUSING	19840312
71998	4311.00	U.S. POSTAL SERVICE	19840312
71998	4411.00	WATER TRANSPORTATION	19840312
71998	4423.00	WATER RECREATION ON BAYS, LAKES, RIVERS, & CANALS	19840312
71998	4511.00	TRANSPORTATION BY AIR	19840312
71998	4612.00	PIPELINES - EXCEPT NATURAL GAS	19840312
71998	4811.00	COMMUNICATIONS	19840312
71998	4922.00	GAS PRODUCTION AND DISTRIBUTION; ELEC. AND GAS SERVICE	19840312
71998	4941.00	WATER SUPPLY	19840312
71998	4952.00	SEWERAGE SYSTEMS	19840312
71998	4961.00	PUBLIC STEAM SUPPLY	19840312
71998	4971.00	IRRIGATION SYSTEMS	19840312
71998	5012.00	WHOLESALE TRADE - DURABLE GOODS	19840312
71998	5111.00	WHOLESALE TRADE - NONDURABLE GOODS	19840312
71998	5211.00	BUILDING MATERIALS, HARDWARE, GARDEN SUPPLY	19840312
71998	5311.00	GENERAL MERCHANDISE STORES	19840312
71998	5411.00	FOOD STORES	19840312
71998	5511.00	AUTO. DEALERS AND GASOLINE SERVICE STATIONS	19840312
71998	5611.00	APPAREL AND ACCESSORY STORES	19840312
71998	5712.00	FURNITURE, HOME FURNISHING, AND EQUIPMENT STORES	19840312
71998	5812.00	EATING AND DRINKING PLACES	19840312

71998	5912.00	MISCELLANEOUS RETAIL - DRUG, LIQUOR, BOOK, CAMERA, ETC.	19840312
71998	6011.00	BANKING	19840312
71998	6112.00	CREDIT AGENCIES	19840312
71998	6212.00	SECURITY AND COMMODITY BROKERS, DEALERS, AND SERVICES	19840312
71998	6311.00	INSURANCE	19840312
71998	6512.00	REAL ESTATE	19840312
71998	6711.00	HOLDING AND OTHER INVESTMENT OFFICES	19840312
71998	7011.00	HOTELS, MOTELS, TOURIST COURTS	19840312
71998	7021.00	ROOMING AND BOARDING HOUSES	19840312
71998	7032.00	CAMPS, TRANSIENT TRAILER PARKS, & CAMP SITES	19840312
71998	7041.00	ORGANIZATION HOTELS AND MEMBERSHIP LODGING HOUSES	19840312
71998	7211.00	LAUNDRY, CLEANING, AND GARMENT SERVICES	19840312
71998	7221.00	SHOPS - PHOTO, BEAUTY, BARBER, SHOE, FUNERAL SERVICES	19840312
71998	7311.00	ADVERTISING SERVICES	19840312
71998	7321.00	CONSUMER CREDIT AND COLLECTION	19840312
71998	7331.00	MAILING, REPRODUCTION, COMMERCIAL ART & PHOTOGRAPHY	19840312
71998	7341.00	SERVICE TO DWELLINGS AND OTHER BUILDINGS	19840312
71998	7351.00	NEWS SYNDICATES	19840312
71998	7361.00	EMPLOYMENT SERVICES	19840312
71998	7372.00	COMPUTER AND DATA PROCESSING	19840312
71998	7391.00	MISCELLANEOUS BUSINESS SERVICES	19840312
71998	7512.00	AUTOMOTIVE AND TRUCK RENTAL LEASING WITHOUT DRIVER	19840312
71998	7523.00	AUTOMOBILE PARKING	19840312
71998	7531.00	AUTOMOTIVE REPAIR SHOPS	19840312
71998	7542.00	CAR WASHES	19840312
71998	7549.00	AUTOMOTIVE SERVICES - EXCEPT REPAIR	19840312
71998	7622.00	MISCELLANEOUS REPAIR SERVICES	19840312
71998	7813.00	MOTION PICTURE-T.V. SERVICES, THEATERS, EXCEPT DRIVE-INS	19840312
71998	7911.00	RECREATION SERVICES, EXCEPT THEATERS AND PUBLIC GOLF	19840312
71998	7992.00	PUBLIC GOLF COURSES	19840312
71998	7993.00	COIN OPERATED AMUSEMENT DEVICES	19840312
71998	7996.00	AMUSEMENT PARKS, SPORTS AND RECREATION CLUBS, ETC.	19840312
71998	8011.00	HEALTH SERVICES (OFFICES)	19840312
71998	8051.00	NURSING AND PERSONAL CARE FACILITIES	19840312
71998	8062.00	HOSPITALS	19840312
71998	8071.00	MEDICAL AND DENTAL LABORATORIES	19840312
71998	8081.00	OUTPATIENT CARE FACILITIES	19840312
71998	8091.00	HEALTH & ALLIES SERVICES, NOT ELSEWHERE CLASSIFIED	19840312
71998	8111.00	LEGAL SERVICES	19840312
71998	8211.00	EDUCATIONAL SERVICES, LIBRARIES AND INFORMATION CENTERS	19840312
71998	8231.00	SOCIAL SERVICES & REHABILITATION CENTERS	19840312

71998	8411.00	MUSEUMS, ART GALLERIES, ZOOLOGICAL & BOTANICAL GARDENS	19890608
71998	8611.00	MEMBERSHIP ORGANIZATIONS	19840312
71998	8811.00	PRIVATE HOUSES, CONDOS, MUNICIPALITIES, & TRAILER PARKS	19840312
71998	8911.00	MISCELLANEOUS SERVICES (ENG.,ED., R&D, ACCOUNTING, ETC.)	19840312
71998	9111.00	GOV., LEGISLATIVE, JUSTICE, PUBLIC ORDER & SAFETY MISC.	19840312
71998	9411.00	ADMINISTRATION OF HUMAN RESOURCES PROGRAMS	19840312
71998	9511.00	AIR & WATER RESOURCE, & SOLID WASTE MANAGEMENT	19840312
71998	9512.00	NATURAL RESOURCE CONSERVATION BY PUBLIC ADMINISTRATION	19890608
71998	9531.00	ADMIN. OF HOUSING & ECONOMIC PROGRAMS & INTERNAT'L AFFAIRS	19840312
71998	9999.00	WATER COMPACTS, AGREEMENTS & LEGISLATIVE ACTIONS	19840312
71998	14911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - FOSSIL	19840312
71998	24911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - GEOTHERMAL	19890608
71998	34911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - HYDROELECTRIC	19840312
71998	44911.00	COMMERCIAL ELECTRIC ENERGY ESTABLISHMENTS - NUCLEAR	19840312

71999 SAMPLE PURPOSE (CODES)

71999	10.00	ROUTINE	19840312
71999	15.00	NAWQA - NATIONAL WATER-QUALITY ASSESSMENT	19880703
71999	20.00	NASQAN	19840312
71999	30.00	BENCHMARK	19840312
71999	40.00	SW NETWORK	19840312
71999	50.00	GW NETWORK	19840312
71999	60.00	LOWFLOW NETWORK	19840312
71999	70.00	HIGHFLOW NETWORK	19840312
71999	80.00	ACID RAIN	19840312
71999	80.01	BULK OR UNDEFINED (BU)	19880105
71999	80.02	SAMPLE RELATED PROBLEM (NS)	19880105
71999	80.03	DRY WET-SIDE SAMPLE (NA)	19880105
71999	80.04	COMPLETELY MISSING SAMPLES (UN)	19880105
71999	80.05	LONG DURATION SAMPLE (LD)	19880105
71999	80.06	SAMPLING PROTOCOL (TIME) (SP)	19880105
71999	80.07	SAMPLER MALFUNCTION (S)	19880105
71999	90.00	SNOW SURVEY	19840312
71999	100.00	MT. ST. HELENS	19840312
71999	110.00	SEEPAGE STUDY	19840312
71999	120.00	IRRIGATION EFFECTS	19840312
71999	130.00	RECHARGE	19840312
71999	140.00	INJECTION	19840312
71999	150.00	BANK ERODIBILITY	19840312

72005 SAMPLE SOURCE (CODES)

72005	0.01	AIRLINE MEASUREMENT	19840312
72005	0.02	ANALOG OR GRAPHIC RECORDER	19840312
72005	0.03	CALIBRATED AIRLINE MEASUREMENT	19840312
72005	0.04	ESTIMATED	19840312
72005	0.05	PRESSURE-GAGE MEASUREMENT	19840312
72005	0.06	CALIBRATED PRESSURE-GAGE MEASUREMENT	19840312
72005	0.07	INTERPRETED FROM GEOPHYSICAL LOGS	19840312
72005	0.08	MANOMETER MEASUREMENT	19840312
72005	0.09	NONRECORDING GAGE	19840312
72005	0.10	REPORTED, METHOD NOT KNOWN	19840312
72005	0.11	STEEL-TAPE MEASUREMENT	19840312
72005	0.12	ELECTRIC-TAPE MEASUREMENT	19840312
72005	0.13	CALIBRATED ELECTRIC-TAPE MEASUREMENT	19840312
72005	0.14	OTHER	19840312
72005	1.00	WELL HEAD	19840312
72005	2.00	DRILL STEM TEST	19840312
72005	3.00	SEPARATOR	19840312
72005	4.00	BOILER	19840312
72005	5.00	FLOW LINE	19840312
72005	6.00	BATTERY	19840312
72005	7.00	UNDESIGNATED	19840312
72005	8.00	TANK	19840312
72005	9.00	PRODUCTION TEST	19840312
72005	10.00	HEATER TREATER	19840312
72005	11.00	GUN BARREL	19840312
72005	12.00	SWAB	19840312
72005	13.00	PIT	19840312
72005	14.00	MANIFOLD TEST	19840312
72005	15.00	GAS LINE DRIP	19840312
72005	16.00	CASING LEAK	19840312
72005	17.00	WIRE LINE TEST	19840312
72005	18.00	HEADER	19840312
72005	19.00	FILTER	19840312
72005	20.00	TEST TOOL	19840312
72005	21.00	LTX UNIT	19840312
72005	22.00	KNOCKOUT	19840312
72005	23.00	WELL BLEEDER	19840312
72005	24.00	FRACTURE TEST	19840312
72005	25.00	TEST WAGON	19840312
72005	26.00	PUMP	19840312
72005	27.00	TAP NEAR WELL	19840312
72005	28.00	TAP AWAY FROM WELL	19840312
72005	29.00	BUCKET	19840312
72005	30.00	PRESSURE TANK	19840312
72005	31.00	DISCHARGE PIPE	19840312
72005	32.00	FOREST SAMPLER	19840312
72005	33.00	BAILER	19840312
72005	34.00	DRAIN LINE	19840312
72005	35.00	INJECTION PUMP	19840312
72005	36.00	SPOT SAMPLE IN FLUID COLUMN	19840312

72005	37.00	TANK BATTERY INCLUDING GUN BARREL	19840312
72005	38.00	WINDMILL	19840312
72005	39.00	WATER SIPHON	19840312
72005	40.00	SPECIAL	19840312
72005	41.00	MUNICIPAL AND DOMESTIC WASTE	19840312
72005	42.00	INDUSTRIAL WASTE	19840312
72005	43.00	STORM WATER (PRIOR TO ENTERING NATURAL CHANNELS)	19840312
72005	44.00	PUBLIC WATER SUPPLIES (TREATED WATER)	19840312
72005	45.00	MINE WATER	19840312
72005	46.00	PUBLIC WATER SUPPLIES (UNTREATED WATER)	19840312
72005	47.00	WATER WELL	19840312
72005	48.00	MULTIPLE WATER WELLS	19840312
72005	49.00	OIL WELL	19840312
72005	50.00	MULTI-OIL WELL	19840312
72005	51.00	GAS WELL	19840312
72005	52.00	MULTI-GAS WELL	19840312
72005	53.00	OIL AND GAS WELL	19840312
72005	54.00	MULTI-OIL AND GAS WELL	19840312
72005	55.00	DRILLED AND ABANDONED WELL	19840312
72005	56.00	PLUGGED AND ABANDONED WELL	19840312
72005	57.00	JUNKED AND ABANDONED WELL	19840312
72005	58.00	TEMPORARILY ABANDONED WELL	19840312
72005	59.00	ABANDONED OIL WELL	19840312
72005	60.00	ABANDONED GAS WELL	19840312
72005	61.00	SALT-WATER SUPPLY WELL	19840312
72005	62.00	SALT-WATER DISPOSAL WELL	19840312
72005	63.00	INJECTION WELL	19840312
72005	64.00	SERVICE WELL	19840312
72005	65.00	WETLAND ECOSYSTEM	19840312
72005	66.00	DREDGE WAKE	19840312
72005	67.00	MAINSTREAM	19840312
72005	68.00	OVERBANK	19840312
72005	69.00	COMPOSITED PUBLIC WATER SUPPLY (UNTREATED WATER)	19840312
72005	70.00	COMPOSITED PUBLIC WATER SUPPLY (TREATED WATER)	19840312
72005	72.00	INTERSTITIAL WATER	19840312
72005	74.00	LYSIMETER	19840312
72005	76.00	OIL OR GAS TEST WELL CONVERTED TO WATER WELL	19840312
72005	77.00	SURFICIAL BANK	19840312
72005	78.00	INTERIOR BANK	19840312
72005	79.00	BEFORE PRESSURE TANK	
72005	80.00	AFTER PRESSURE TANK	
72005	1001.00	WET DEPOSITION	19840312
72005	1002.00	DUSTFALL	19840312
72005	1003.00	LANDFILL	19840312
72005	1004.00	CAST OVERBURDEN	19840312
72005	1005.00	STREET SWEEPING	19840312
72005	1006.00	LANDFILL SEEP	19840312

72006 SAMPLING CONDITION (CODES)

72006	0.01	THE SITE WAS DRY (NO WATER LEVEL IS RECORDED)	19840312
72006	0.02	THE SITE HAD BEEN FLOWING RECENTLY	19840312
72006	0.03	THE SITE WAS FLOWING, HEAD COULD NOT BE MEASURED	19840312
72006	0.04	A NEARBY SITE THAT TAPS THE AQUIFER WAS FLOWING	19840312
72006	0.05	NEARBY SITE TAPPING SAME AQUIFER HAD BEEN FLOWING RECENTLY	19840312
72006	0.06	INJECTOR SITE	19840312
72006	0.07	INJECTOR SITE MONITOR	19840312
72006	0.08	MEASUREMENT DISCONTINUED	19840312
72006	0.09	OBSTRUCTION ENCOUNTERED IN WELL ABOVE WATER SURFACE	19840312
72006	0.10	THE SITE WAS BEING PUMPED	19840312
72006	0.11	THE SITE HAD BEEN PUMPED RECENTLY	19840312
72006	0.12	NEARBY SITE TAPPING THE SAME AQUIFER WAS BEING PUMPED	19840312
72006	0.13	NEARBY SITE TAPPING THE SAME AQUIFER WAS PUMPED RECENTLY	19840312
72006	0.14	FOREIGN SUBSTANCE PRESENT ON THE SURFACE OF THE WATER	19840312
72006	0.15	WELL DESTROYED	19840312
72006	0.16	WATER LEVEL AFFECTED BY STAGE IN NEARBY SITE	19840312
72006	0.17	OTHER CONDITIONS AFFECTING THE MEASURED WATER LEVEL	19840312
72006	1.00	TESTING	19840312
72006	2.00	UNDESIGNATED	19840312
72006	3.00	SWABBING	19840312
72006	4.00	FLOWING	19840312
72006	5.00	REVERSING OUT	19840312
72006	6.00	FLOWING ON GAS LIFT	19840312
72006	7.00	AFTER ACIDIZING	19840312
72006	8.00	PUMPING	19840312
72006	9.00	MILLIPORE FILTER	19840312
72006	10.00	OPEN HOLE	19840312
72006	11.00	FLOWING ON DRILL STEM TEST	19840312
72006	12.00	AFTER DRILL STEM TEST	19840312
72006	15.00	BAILING	19840312
72006	16.00	AFTER PERFORATION	19840312
72006	17.00	TUBING FLOW	19840312
72006	18.00	PRODUCING	19840312
72006	19.00	CIRCULATING	19840312
72006	20.00	FLOWING ON PRODUCTION TEST	19840312
72006	21.00	FLOWING ON POTENTIAL TEST	19840312
72006	22.00	LIFTING	19840312
72006	23.00	FLOWING TO PIT	19840312
72006	24.00	WATER FLOODING	19840312
72006	25.00	JETTING	19840312
72006	26.00	PRODUCTION AND DEVELOPMENT TEST	19840312
72006	27.00	PRODUCTION BY UNKNOWN METHOD	19840312

72006	30.00	SEEPING	19840312
72006	31.00	NEARBY WELL PUMPING	
72006	32.00	NEARBY WELL TAKING WATER	
72006	33.00	WELL TAKING WATER	

74200 SAMPLE PRESERVATION METHOD

74200	1.00	FA, POLY BOTTLE ACID RINSED	19840312
74200	3.00	FAB, TEFLON BOTTLE, ACID RINSED, 250 ML	19840312
74200	5.00	FAR, POLY BOTTLE, ACID RINSED, 2 L	19840312
74200	7.00	FC, BROWN POLY BOTTLE, FIELD RINSED, 250 ML	19840312
74200	9.00	FU, POLY BOTTLE, FIELD RINSED	19840312
74200	11.00	RA, POLY BOTTLE, ACID RINSED	19840312
74200	13.00	RAB, TEFLON BOTTLE, ACID RINSED, 250 ML	19840312
74200	15.00	RAE, POLY BOTTLE, ACID RINSED, 250 ML	19840312
74200	17.00	RAH, POLY BOTTLE, ACID RINSED, 250 ML	19840312
74200	19.00	RC, BROWN POLY BOTTLE, FIELD RINSED, 250 ML	19840312
74200	21.00	RU, POLY BOTTLE, FIELD RINSED	19840312
74200	23.00	RUR, POLY BOTTLE, ACID RINSED, 2 L	19840312
74200	25.00	LC0023, POLY BOTTLE, FIELD RINSED, 250 ML	19840312
74200	27.00	LC0076, GLASS BOTTLE BAKED AT 350 DEG C., 125 ML	19840312
74200	29.00	LC0089, POLY BOTTLE, FIELD RINSED, 250 ML	19840312
74200	31.00	LC0239, POLY BOTTLE, ACID RINSED, 1 L	19840312
74200	33.00	LC0298, CONTACT NAT. WATER-QUALITY LAB,DENVER	19840312
74200	35.00	LC0300, GLASS BOTTLE, FIELD RINSED, 250 ML	19840312
74200	39.00	LC0439, STEEL BARREL	19840312
74200	41.00	LC0440, GLASS BOTTLE, FIELD RINSED, 500 ML	19840312
74200	43.00	LC0452, POLY BOTTLE, FIELD RINSED, 125 ML	
74200	45.00	LC0489, GLASS BOTTLE, FIELD RINSED, 125 ML	19840312
74200	47.00	LC0490, CONTACT NAT. WATER-QUALITY LAB, DENVER	
74200	49.00	LC0491, CONTACT NAT. WATER-QUALITY LAB, DENVER	
74200	51.00	LC0880, POLY BOTTLE, FIELD RINSED, 250 ML	19840312
74200	53.00	LC0995, CONTACT NAT. WATER-QUALITY LAB, DENVER	
74200	55.00	LC0996, GLASS BOTTLE, FIELD RINSED	19840312
74200	57.00	LC0997, CONTACT NAT. WATER-QUALITY LAB, DENVER	
74200	59.00	CL, SEPTUM BOTTLE, 40 ML	19840312
74200	61.00	GCC, GLASS BOTTLE, 1 L	19840312
74200	63.00	GCV, SEPTUM BOTTLE, 40 ML	19840312
74200	65.00	RCB POLY BOTTLE, FIELD RINSED, 250 ML	
74200	67.00	LC0052, GLASS BOTTLE, 1 L	19840312
74200	69.00	LC0113, GLASS BOTTLE, 125 ML	19870309
74200	71.00	LC0114, GLASS BOTTLE, 125 ML	19840312
74200	73.00	LC0127, GLASS BOTTLE, 1 L	19840312
74200	75.00	LC0305, 0.45 MICRON SILVER FILTER (IN PETRI DISH)	19840312
74200	77.00	FU, POLY BOTTLE, FIELD RINSED, 500 ML	19840312
74200	79.00	RCB, POLY BOTTLE, FIELD RINSED 250 ML	19840312
74200	81.00	RU, POLY BOTTLE, FIELD RINSED, 500 ML	19840312
74200	83.00	LC0050, POLY BOTTLE, 250 ML	19840312
74200	85.00	LC0169, POLY BOTTLE, FIELD RINSED, 500 ML	19840312
74200	87.00	CC, PLASTIC FREEZER CARTON, 1 PT	19840312

74200	89.00	CU, PLASTIC FREEZER CARTON, 1 PT	19840312
74200	91.00	BGC, WIDE MOUTH GLASS BOTTLE, 1 L	19840312
74200	93.00	CC, PLASTIC FREEZER CARTON, 1 PT	19840312
74200	95.00	PP, CONTACT NAT. WATER-QUALITY LAB, DENVER	19840312
74200	97.00	SIZE, UNTREATED	19840312
74200	99.00	BEN, POLY BOTTLE, WIDE MOUTH	19840312
74200	101.00	CHE, GLASS JAR, WIDE MOUTH	19840312
74200	103.00	CHY, GLASS VIAL	19840312
74200	105.00	DIA, CONTACT NAT. WATER-QUALITY LAB, ATLANTA	19840312
74200	107.00	PER, CONTACT NAT. WATER-QUALITY LAB, ATLANTA	19840312
74200	109.00	SHY, POLY BOTTLE	19840312
74200	111.00	ST, POLY BOTTLE	
74200	113.00	ZOO, CONTACT NAT. WATER-QUALITY LAB, ATLANTA	19840312
74200	115.00	LC0055, POLY BOTTLE	19840312
74200	117.00	LC0438, CONTACT NAT. WATER-QUALITY LAB, DENVER	
74200	119.00	LC0616, GLASS VIAL	19840312
74200	121.00	LC1049, WIDE MOUTH GLASS BOTTLE, 1 L	
74200	123.00	FAM, GLASS BOTTLE, ACID RINSED, 250 ML	
74200	125.00	FCU, BROWN POLY BOTTLE, FIELD RINSED, 250 ML	
74200	127.00	RAM, GLASS BOTTLE, ACID RINSED, 250 ML	
74200	129.00	LC0460, POLY BOTTLE, FIELD RINSED, 500 ML	
74200	131.00	LC0881, POLY BOTTLE, FIELD RINSED, 125 ML	
74200	133.00	LC1043, GLASS BOTTLE, FIELD RINSED, 1 L	
74200	135.00	LC1199, CONTACT NAT. WATER-QUALITY LAB, DENVER	
74200	137.00	LC0019, GLASS BOTTLE, 125 ML	
74200	139.00	LC0306, GLASS BOTTLE, 125 ML	
74200	141.00	LC1038, PLASTIC FREEZER CARTON, 1 PT	
74200	143.00	LC0961, CONTACT NAT. WATER-QUALITY LAB, DENVER	

82309 CONTAMINATION SOURCE, POSSIBLE (CODES)

82309	1.00	OIL SPILL	19840312
82309	3.00	GAS SPILL	19840312
82309	5.00	ORGANIC	19840312
82309	7.00	PESTICIDE	19840312
82309	9.00	HERBICIDE	19840312
82309	11.00	INSECTICIDE	19840312
82309	13.00	FEEDLOT RUNOFF	19840312
82309	15.00	SALT WATER	19840312
82309	17.00	INJECTION WELL	19840312
82309	19.00	SEWAGE TREATMENT PLANT	19840312
82309	21.00	LAND SPREADING	19840312
82309	23.00	LANDFILL	19840312
82309	25.00	SLUDGE DUMP	19840312
82309	27.00	WASTE LAGOON	19840312
82309	29.00	URBAN RUNOFF	19840312
82309	31.00	MINE DRAINAGE	19840312
82309	33.00	CONSTRUCTION DRAINAGE	19840312
82309	35.00	PULP MILL OUTFALL	19840312
82309	37.00	TEXTILE MILL OUTFALL	19840312
82309	39.00	IRRIGATION RUNOFF	19840312
82309	41.00	FERTILIZER	19840312
82309	43.00	DAIRY OPERATION	19840312

82398 SAMPLING METHOD (CODES)

82398	10.00	EQUAL WIDTH INCREMENT (EWI)	19840312
82398	20.00	EQUAL DISCHARGE INCREMENT (EDI)	19840312
82398	25.00	TIMED SAMPLING INTERVAL	
82398	30.00	SINGLE VERTICAL	19840312
82398	40.00	MULTIPLE VERTICALS	19840312
82398	50.00	POINT SAMPLE	19840312
82398	60.00	WEIGHTED BOTTLE	19840312
82398	70.00	GRAB SAMPLE (DIP)	19840312
82398	80.00	DISCHARGE INTEGRATED, EQUAL TRANSIT RATE (ETR)	19840312
82398	90.00	DISCHARGE INTEGRATED, CENTROID	19840312
82398	100.00	VAN DORN SAMPLER	19840312
82398	110.00	SEWAGE SAMPLER	19840312
82398	120.00	VELOCITY INTEGRATED	19840312
82398	200.00	ZOOPLANKTON-NET	
82398	210.00	BENTHIC INVERTEBRATE-MECHANICAL GRAB	
82398	220.00	BENTHIC INVERTEBRATE-MECHANICAL DREDGE	
82398	230.00	BENTHIC INVERTEBRATE-ARTIFICIAL SUBSTRATE	
82398	240.00	BENTHIC INVERTEBRATE-NATURAL SUBSTRATE	
82398	250.00	BENTHIC INVERTEBRATE-NET	
82398	260.00	PHYTOPLANKTON-NET	
82398	270.00	PHYTOPLANKTON-WATER BOTTLE	
82398	280.00	PERIPHYTON-NATURAL SUBSTRATE	
82398	290.00	PERIPHYTON-ARTIFICIAL SUBSTRATE	19890608
82398	1000.00	SINGLE EQUAL WIDTH INCREMENT (BEDLOAD)	19880729
82398	1010.00	MULTIPLE EQUAL WIDTH INCREMENT (BEDLOAD)	19880729
82398	1020.00	UNEQUAL WIDTH INCREMENT (BEDLOAD)	19880729
82398	4010.00	THIEF SAMPLE	19840312
82398	4020.00	OPEN-TOP BAILER	19871113
82398	4025.00	DOUBLE-VALVE BAILER	19871113
82398	4030.00	SUCTION PUMP	19840312
82398	4040.00	SUBMERSIBLE PUMP	19840312
82398	4050.00	SQUEEZE PUMP	19840312
82398	4060.00	GAS RECIPROCATING PUMP	19840312
82398	4070.00	GAS LIFT	19871113
82398	4080.00	PERISTALTIC PUMP	19840312
82398	4090.00	JET PUMP	19840312
82398	4100.00	FLOWING WELL	19840312
82398	4110.00	RESIN TRAP COLLECTOR	19871113
82398	8010.00	OTHER	19840312

82923 ATMOSPHERIC DEPOSITION TYPE WET, (CODES)

82923	1.00	SNOW	19880229
82923	2.00	HAIL	19880229
82923	3.00	MIXTURE (RAIN, SNOW, AND OR HAIL)	19880229
82923	4.00	RAIN	19880229
82923	9.99	UNKNOWN	19880229

83205 ATMOSPHERIC DEPOSITION TYPE BULK, CODES

83205	1.00	SNOW	19880229
83205	2.00	HAIL	19880229
83205	3.00	MIXTURE (RAIN, SNOW, AND OR HAIL)	19880229
83205	4.00	RAIN	19880229
83205	9.99	UNKNOWN	19880229

84060 TOPOGRAPHY, PHYSIOGRAPHIC SETTING (CODES)

84060	10.00	ALLUVIAL FAN	19840312
84060	20.00	PLAYA	19840312
84060	30.00	STREAM CHANNEL	19840312
84060	40.00	LOCAL DEPRESSION	19840312
84060	50.00	DUNES	19840312
84060	60.00	FLAT SURFACE	19840312
84060	70.00	FLOOD PLAIN	19840312
84060	80.00	HILLTOP	19840312
84060	90.00	SINKHOLE	19840312
84060	100.00	LAKE, SWAMP, OR MARSH	19840312
84060	110.00	MANGROVE SWAMP	19840312
84060	120.00	OFFSHORE (ESTUARY)	19840312
84060	130.00	PEDIMENT	19840312
84060	140.00	HILLSIDE (SLOPE)	19840312
84060	150.00	TERRACE, ALLUVIAL OR MARINE	19840312
84060	160.00	UNDULATING	19840312
84060	170.00	VALLEY FLAT	19840312
84060	180.00	UPLAND DRAW	19840312

84143 WELL PURGING CONDITION, CODE

84143	100.00	WELL PURGED TO STABLE PH	19880609
84143	110.00	WELL PURGED TO STABLE TEMPERATURE	19880609
84143	120.00	WELL PURGED TO STABLE SPECIFIC CONDUCTANCE	19880609
84143	130.00	WELL PURGED TO STABLE PH AND TEMPERATURE	19880609
84143	140.00	WELL PURGED TO STABLE PH AND SPECIFIC CONDUCTANCE	19880609
84143	150.00	WELL PURGED TO STABLE TEMPERATURE AND SPECIFIC CONDUCTANCE	19880609
84143	160.00	WELL PURGED TO STABLE PH, TEMP. AND SPECIFIC CONDUCTANCE	19880609
84143	170.00	WELL PURGED, AT LEAST THREE WELL VOLUMES	19880609
84143	500.00	WELL NOT PURGED, WATER IN CASING LESS THAN 6 HOURS	19890608
84143	510.00	WELL NOT PURGED, WATER IN CASING 6-12 HOURS	19890608
84143	520.00	WELL NOT PURGED, WATER IN CASING 12-24 HOURS	19890608
84143	530.00	WELL NOT PURGED, WATER IN CASING MORE THAN 24 HOURS	19880609

84144 WELL SELECTION CRITERIA, CODE

84144	100.00	SITE SELECTED BECAUSE IT IS NEAR/WITHIN LOCAL PROBLEM AREA	19880609
84144	200.00	SITE SELECTED WITHOUT REGARD TO LOCAL PROBLEM AREA	19880609

84145 PROJECT COMPONENT, CODE

84145	100.00	REGIONAL SAMPLING	19880609
84145	200.00	TARGETED SAMPLING (AGRICULTURAL AREA)	19880609
84145	300.00	TARGETED SAMPLING (URBAN OR SUBURBAN AREA)	19880609
84145	400.00	TARGETED SAMPLING (NATURALLY OCCURRING SUBSTANCES)	19880609
84145	500.00	TARGETED SAMPLING (LOCAL-SCALE NETWORK)	19880609
84145	600.00	TARGETED SAMPLING (OTHER)	19880609
84145	700.00	GEOCHEMICAL INVESTIGATION	19880609

84146 LAND USE, PREDOMINANT, WITHIN 100 FEET OF WELL, CODE

84146	110.00	RESIDENTIAL	19880609
84146	120.00	COMMERCIAL AND SERVICES	19880609
84146	130.00	INDUSTRIAL	19880609
84146	170.00	OTHER URBAN OR BUILT-UP LAND	19880609
84146	211.00	NONIRRIGATED CROPLAND	19880609
84146	212.00	IRRIGATED CROPLAND	19880609
84146	213.00	PASTURE	19880609
84146	220.00	ORCHARDS, GROVES, VINEYARDS, NURSERIES	19880609
84146	230.00	CONFINED FEEDING OPERATIONS	19880609
84146	240.00	OTHER AGRICULTURAL LAND	19880609
84146	300.00	RANGELAND	19880609
84146	400.00	FORESTLAND	19880609
84146	500.00	WATER	19880609
84146	600.00	WETLAND	19880609
84146	700.00	BARREN LAND	19880609

84147 LAND USE, PREDOMINANT, WITHIN 0.25 MILE OF WELL, CODE

84147	110.00	RESIDENTIAL	19880609
84147	120.00	COMMERCIAL AND SERVICES	19880609
84147	130.00	INDUSTRIAL	19880609
84147	170.00	OTHER URBAN OR BUILT-UP LAND	19880609
84147	211.00	NONIRRIGATED CROPLAND	19880609
84147	212.00	IRRIGATED CROPLAND	19880609
84147	213.00	PASTURE	19880609
84147	220.00	ORCHARDS, GROVES, VINEYARDS, NURSERIES	19880609
84147	230.00	CONFINED FEEDING OPERATIONS	19880609
84147	240.00	OTHER AGRICULTURAL LAND	19880609
84147	300.00	RANGELAND	19880609
84147	400.00	FORESTLAND	19880609
84147	500.00	WATER	19880609
84147	600.00	WETLAND	19880609
84147	700.00	BARREN LAND	19880609

84148 LAND USE, PREDOMINANT FRACTION, WITHIN 0.25 MILE OF WELL, CODE

84148	25.00	LESS THAN 25 PERCENT	19880609
84148	50.00	FROM 26 PERCENT TO 50 PERCENT	19880609
84148	75.00	FROM 51 PERCENT TO 75 PERCENT	19880609
84148	100.00	FROM 76 PERCENT TO 100 PERCENT	19880609

84149 LAND-USE CHANGES WITHIN LAST 10 YEARS, WITHIN 0.25 MILE OF WELL, CODE

84149	100.00	YES	19880609
84149	200.00	PROBABLY	19880609
84149	300.00	PROBABLY NOT	19880609
84149	400.00	NO	19880609

84164 SAMPLER TYPE, CODE

84164	100.00	VAN DORN SAMPLER	19890103
84164	110.00	SEWAGE SAMPLE	19890103
84164	120.00	VELOCITY INTEGRATED SAMPLE	19890103
84164	200.00	ZOOPLANKTON NET	19890103
84164	210.00	BENTHIC INVERTEBRATE-MECHANICAL, GRAB	19890608
84164	220.00	BENTHIC INVERTEBRATE-MECHANCIAL, DREDGE	19890608
84164	230.00	BENTHIC INVERTEBRATE-ARTIFICIAL SUBSTRATE	19890608
84164	240.00	BENTHIC INVERTEBRATE-NATURAL SUBSTRATE	19890608
84164	250.00	BENTHIC INVERTEBRATE-NET	19890608
84164	260.00	PHYTOPLANKTON NET	19890103
84164	270.00	PHYTOPLANKTON-WATER BOTTLE	19890103
84164	280.00	PERIPHYTON-NATURAL SUBSTRATE	19890103
84164	290.00	PERIPHYTON-ARTIFICIAL SUBSTRATE	19890103
84164	1000.00	BEDLOAD-HELLEY-SMITH, 3 X 3, AREA RATIO 3.22	19890103
84164	1010.00	BEDLOAD-HELLEY-SMITH, 6 X 6, AREA RATIO 3.22	19890103
84164	1020.00	BEDLOAD-HELLEY-SMITH, 3 X 3, AREA RATIO 1.40	19890103
84164	1030.00	BEDLOAD-HELLEY-SMITH, 6 X 6, AREA RATIO 1.40	19890103
84164	1040.00	BEDLOAD-HELLEY-SMITH, 6 X 12, AREA RATIO 1.40	19890103
84164	1050.00	BEDLOAD-TOUTLE RIVER TYPE 2, 6 X 12, AREA RATIO 1.40	19890103
84164	1060.00	BEDLOAD-BL-84, 3 X 3, AREA RATION, 1.40	19890103
84164	1070.00	BEDLOAD-TOUTLE RIVER TYPE 1, 6 X 6, AREA RATION 1.40	19890103
84164	1080.00	BEDLOAD-HUBBLE #5	19890103
84164	4010.00	THIEF SAMPLER	19890103
84164	4020.00	OPEN-TOP BAILER	19890103
84164	4025.00	DOUBLE-VALVE BAILER	19890103
84164	4030.00	SUCTION PUMP	19890103
84164	4040.00	SUBMERSIBLE PUMP	19890103
84164	4050.00	SQUEEZE PUMP	19890103
84164	4060.00	GAS RECIPROCATING PUMP	19890103
84164	4070.00	GAS LIFT	19890103
84164	4080.00	PERISTALTIC PUMP	19890103
84164	4090.00	JET PUMP	19890103
84164	4100.00	FLOWING WELL	19890103

84164	4110.00	RESIN TRAP COLLECTOR	19890103
84164	8010.00	OTHER	19890103

APPENDIX C. METHOD CODES

This printout was pulled March 16, 1989 from the Denver Laboratory using the SPN option. It was retrieved by using instructions that follow and are also listed in the QWTALK CONTINUUM Number 62.

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[0062] OJFEIST 02/09/89 17:57 QWTALK (14 lines)

There have been requests for a report cross-referencing lab-codes with WATSTORE code + method character and TWRI method codes. This report is now available. To get the report, LOGIN to LCOARV (user-ids available upon request to DENADP). Once logged in, enter the Schedule-Parameter-Network information system by typing in SPN -- From the first menu, select item 4 (Print parameter records) which will bring up another menu. From this, select item 7 (print method report). After the report is generated, (you may need to RETURN a few times, as indicated by menus) you will be asked for your NODE ID. Enter your PRIME NODE ID (this is so SPN will know where to send your printout). After this, a few more RETURNs will be needed to exit SPN. Your report should be printed on the printer at your location with FTS_PH1 (or something like that) on the first line of the banner page and your user-id on the second.

Column A: Number of Significant Figures for values <.01
Column B: Number of Significant Figures for values .01 to <.1
Column C: Number of Significant Figures for values .1 to <1
Column D: Number of Significant Figures for values 1 to <10
Column E: Number of Significant Figures for values 10 to <100
Column F: Number of Significant Figures for values 100 to <1000
Column G: Number of Significant Figures for values >= to 1000

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Parameter Methods

Parameter Code	MC	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
00000	A	ALK TOT FIELD CACO3	TOT ALK	0002		0000.000	0	0	1	2	2	3	3
00000	A	SP. CONDUCTANCE FLD	COND FLD	0021	I178077	0000.000	0	0	0	1	2	3	3
00000	A	PH FIELD	PH FIELD	0051	I158677	0000.000	0	0	1	2	3	0	0
00000	A	METALS TOTAL CHE-EXT	TOT CH-X	0125		0000.000	0	0	0	1	1	1	1
00000	A	URANIUM,DIR,DISS,ERR	U,DIR,ER	0214		0000.000	0	0	1	2	2	2	2
00000		PHOTOSYNTHESIS(C-14)	C-14-PHT	0438	B802077	0000.000	0	0	1	2	2	2	3
00000		CAT.EX.CAP MEQ/100G	CA.E.CAP	0441		0000.000	0	0	1	2	3	3	3
00000	A	URANIUM,EXTR,DISS,ER	U,EXT,ER	0459		0000.000	0	1	2	2	2	2	2
00000		TECHNETIUM99 D.	TC-99 D.	0462		0000.000	0	0	0	1	1	2	2
00000		S 34/32 SIRA SULFIDE	SIRA S2-	0535		0000.000	0	0	1	2	3	3	3
00000	A	RA-226,PLAN,DISS,ERR	RA226,PE	0558		0000.000	0	0	1	2	2	2	2
00000	A	RA-226,EMAN,DISS,ERR	RA226,EE	0559		0000.000	0	1	2	2	2	3	3
00000	A	METALS DISS CHE-EXT	DIS CH-X	0642		0001.000	0	0	0	1	1	1	1
00000	A	DIGESTION PROC BTM	HCL BTM	0647	I548578	0000.000	0	0	0	1	1	1	1
00000	A	DIGESTION HCL WATER	HCL WAT	0654	I348578	0000.000	0	0	0	1	1	1	1
00000	A	ICP DOES THIS	SECTION6	0730		0000.000	0	1	2	3	4	5	6
00000	A	AMETRYNE, TOTAL	AMETRYNE	0752		0000.100	0	0	1	2	2	2	2
00000	A	CHLORPYRIFOS, TOTAL	CLPYRTOT	0753		0000.010	0	1	2	2	2	2	2
00000	A	DDVP WATER	DDVP WAT	0803		0000.010	0	1	2	2	2	2	2
00000	A	DDVP BOTTOM	DDVP BTM	0817		0000.100	0	0	1	2	2	2	2
00000	A	RONNEL BOTTOM	RONN BTM	0818		0000.100	0	0	1	2	2	2	2
00000	A	DISULFOTON	DISULFOT	0820		0000.100	0	0	1	2	2	2	2
00000	A	PHOSDRIN, BTM. MAT.	PHOS BTM	0821		0000.100	0	0	1	2	2	2	2
00000	A	PHORATE BOTTOM	PHOR BTM	0822		0000.100	0	0	1	2	2	2	2
00000	A	2SPE,G.ALPHA,DS,LF	2SPE,444	0852	R112076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,G.ALPHA,DS,FF	2SPE,800	0853	R112076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,G.B,CS137,DS,FF	2SPE,798	0854	R112076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,G.B,SR90,DS,FF	2SPE,793	0855	R112076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,G.B,CS137,DS,LF	2SPE,455	0856	R112076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,G.B,SR90,SUS,LF	2SPE,447	0857	R112076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,G.B,SR90,DS,LF	2SPE,445	0858	R112076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,G.ALPHA,SUS,LF	2SPE,446	0859	R112076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,G.B,CS137,SS,LF	2SPE,456	0860	R112076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,RA226,DS,DE,FF	2SPE,794	0861	R114176	0000.000	0	1	2	2	2	2	2
00000	A	2SPE,RA226,DS,DE,LF	2SPE,449	0862	R114176	0000.000	0	1	2	2	2	2	2
00000	A	2SPE,RA226,DS,PC,LF	2SPE,458	0863	R114076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,RA226,DS,PC,FF	2SPE,799	0864	R114076	0000.000	0	0	1	2	2	2	2

Parameter Methods

Parameter Code	M C	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
00000	A	2SPE,RN222,DSH2O,DE	2SPE,490	0865	R114677	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,RA228,DS,G.SCAN	2SPE,850	0866	R114276	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,U,DIR,LF	2SPE,796	0867	R118076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,U,DIR,FF	2SPE,453	0868	R118076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,U,DIR,TOT	2SPE,618	0869	R118076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,U,EXT,FF	2SPE,454	0870	R118176	0000.000	0	1	2	2	2	2	2
00000	A	2SPE,U,EXT,LF	2SPE,797	0871	R118176	0000.000	0	1	2	2	2	2	2
00000	A	2SPE,SR90,DS,PPT,LF	2SPE,450	0872	R116076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,SR90,DS,PPT,FF	2SPE,795	0873	R116076	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,G.GAMMA,SUS,LF	2SPE,211	0874	0000000	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,G.GAMMA,BTM.MAT	2SPE,212	0875	0000000	0000.000	0	2	2	2	2	2	2
00000	A	2SPE,PB210,BTM	2SPE1182	0876	0000000	0000.000	0	0	1	2	2	2	2
00000	A	2SOE,G.GAMMA,DIS	2SOE,443	0877	0000000	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,CO60,DS,G,SCAN	2SPE,461	0878	0000000	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,H3,DIR,LIQ.SCIN	2SPE,452	0879	R117176	0000.000	0	0	0	0	2	2	2
00000	A	2SPE,H3,ENR,LIQ.SCIN	2SPE,460	0882	R117176	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,H3,ENR,GAS CT	2SPE1043	0883	0000000	0000.000	0	0	1	2	2	2	2
00000	A	2SPE,H3,DIR,GAS CT	2SPE,881	0884	0000000	0000.000	0	0	0	1	2	2	2
00000	A	MOISTURE CONTENT WT.	MC-WT %	0904		0000.100	0	2	2	3	3	3	3
00000	A	CONTRACTS DOES THIS	CONT ORG	0944		0000.000	0	0	0	0	0	0	0
00000	A	CONTRACTS DOES THIS	CONT RAD	0945		0000.000	0	0	0	0	0	0	0
00000	A	CONTRACTS DOES THIS	CONT IN	0946		0000.000	0	0	0	0	0	0	0
00000		PHOTOSYNTHESES, C-14	C-14 GRP	0961	B802077	0000.000	0	0	1	2	2	2	3
00000	A	2SPE,TRIT,EMR,LL,LS	2SPE,624	1000		0000.000	0	0	0	2	2	2	2
00000	A	2SPE,U,DIS,FLUOR,LF	2SPE1004	1005		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,U,DIS,FLUOR,FF	2SPE1006	1007		0000.000	0	0	1	2	2	2	2
00000	B	HYDROXIDE FLD I. T.	OH F-IT	1168		0000.000	0	0	1	2	2	3	3
00000	B	BICARBONATE FLD I.T.	HCO3 FIT	1170		0000.000	0	0	1	2	2	3	3
00000	B	CARBONATE ALK FLD IT	CO3-ALK.	1171		0000.000	0	0	1	2	2	3	3
00000	A	PREP FOR BTM	PREP BTM	1184		0000.000	0	0	0	1	2	3	6
00000		N-15/N-14 ORG SOIL	N15/14OR	1204		0000.000	0	0	1	2	3	3	3
00000		C-13/C-12 ORG SOIL	C13/12OR	1205		0000.000	0	0	1	2	3	3	3
00000	A	BTM GCMS PROFILE	BTM GCMS	1237		0000.000	0	0	0	1	2	2	2
00000		CARBON-13/12,GAS CO2	C-13/12G	1244		0000.000	0	0	1	2	3	3	3
00000	C	OXAMYL	OXAMYL	1335	0310783	0000.100	0	0	1	2	2	2	2
00000	C	FONOFOS	FONOFOS	1336	0310483	0000.010	0	2	2	2	2	2	2
00000	C	CARBOFURAN	CARBOFUR	1337	0310783	0000.100	0	0	1	2	2	2	2
00000	C	ALDICARB	ALDICARB	1338	0310783	0000.100	0	0	1	2	2	2	2
00000	C	ENDRIN ALDEHYDE	ENDRALDE	1339	0310483	0000.010	0	2	2	2	2	2	2
00000	C	ENDOSULFAN II	ENDOS II	1340	0310483	0000.010	0	2	2	2	2	2	2
00000	C	ENDOSULFAN SULFATE	ENDOFATE	1341	0310483	0000.010	0	2	2	2	2	2	2
00000	C	1,2-DIPHENYLHYDRAZIN	1,2-DPHZ	1342	0311583	0003.000	0	0	0	2	2	2	2
00000	C	ALDICARB SULFOXIDE	A-SULFOX	1343	0310783	0000.100	0	0	1	2	2	2	2
00000	C	ALDICARB SULFONE	A-SULFON	1344	0310783	0000.100	0	0	1	2	2	2	2
00000	C	ALDICARB NITRILE	A-NITRIL	1345	0310783	0000.100	0	0	1	2	2	2	2
00000	C	ALDICARB OXIME	A-OXIME	1346	0310783	0000.100	0	0	1	2	2	2	2

Parameter Methods

Parameter Code	MC	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
00000	C	1,2-DICHLOROPROPENE	1,2-DCPE	1350	O311583	0003.000	0	0	0	2	2	2	2
00000	A	1-NAPHTHOL	1-NAPHTH	1351	O310783	0000.100	0	0	1	2	2	2	2
00000	A	3-HYDROXYCARBOFURAN	3-HYCARB	1353	O310783	0000.100	0	0	1	2	2	2	2
00000	A	2SPE,GA,HS,U,LF	2SPE1355	1370		0000.000	0	0	1	2	2	2	2
00000	A	2SPE GB HS SR90 LF	2SPE1356	1371		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,GB HS,CS137,LF	2SPE1357	1372		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,GA,HS,U,FF	2SPE1358	1373		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,GB,HS,SR90,FF	2SPE1359	1374		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,GB,HS,CS137,FF	2SPE1360	1375		0000.000	0	0	1	2	2	2	2
00000	A	2SPE-RA228-RC226-LF	2SPE1361	1376		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,RA228,RC226,FF	2SPE1362	1377		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,RA228,RC,LF	2SPE1363	1378		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,RA228,RC,FF	2SPE1364	1379		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,U-234	2SPE1366	1381		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,U-235	2SPE1367	1382		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,U-238	2SPE1368	1383		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,RN222,H20,LIQSC	2SPE1369	1384		0000.000	0	0	0	0	2	2	2
00000	A	2SPE,U.DIR,LIP,FF	2SPE1385	1389		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,U,EXT,LIP,FF	2SPE1386	1390		0001.000	0	1	2	2	2	2	2
00000	A	2SPE,U,DIR,LIP,LF	2SPE1387	1391		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,U,EXT,LIP,LF	2SPE1388	1392		0000.000	0	1	2	2	2	2	2
00000	A	G.ALPHA,DIS,LF,TH230	GA,DT,LF	1393		0000.400	0	0	1	2	2	2	2
00000	A	2SPE,GA,DIS,LF,TH230	2SPE1393	1394		0000.000	0	0	1	2	2	2	2
00000	A	G.ALPHA,SUS,LF,TH230	GA,SS,LT	1395		0000.400	0	0	1	2	2	2	2
00000	A	2SPE,GA,SUS,LF,TH230	2SPE1395	1396		0000.000	0	0	1	2	2	2	2
00000	A	G.ALPHA-DS-TH-FF	GA,FF,TH	1397		0000.400	0	0	1	2	2	2	2
00000	A	2SPE,GA,D,FF,TH230	2SPE1397	1398		0000.000	0	0	1	2	2	2	2
00000	A	G.ALPHA,HS,DIS,T,LF	GA,ST,LF	1399		0000.400	0	0	1	2	2	2	2
00000	A	2SPE,GA,HA,DIS,T,LF	2SPE1399	1400		0000.000	0	0	1	2	2	2	2
00000	A	GD MIX ACID ICP AL	GEO-I-AL	1401	G5ICP87	0000.050	0	1	2	2	2	2	2
00000	A	GD MIX ACID ICP CA	GEO-I-CA	1402	G5ICP87	0000.050	0	1	2	2	2	2	2
00000	A	GD MIX ACID ICP FE	GEO-I-FE	1403	G5ICP87	0000.050	0	1	2	2	2	2	2
00000	A	GD MIX ACID ICP K	GEO-I-K	1404	G5ICP87	0000.050	0	1	2	2	2	2	2
00000	A	GD MIX ACID ICP MG	GEO-I-MG	1405	G5ICP87	0000.005	1	2	2	2	2	2	2
00000	A	GD MIX ACID ICP NA	GEO-I-NA	1406	G5ICP87	0000.005	1	2	2	2	2	2	2
00000	A	GD MIX ACID ICP P	GEO-I-P	1407	G5ICP87	0000.005	1	2	2	2	2	2	2
00000	A	GD MIX ACID ICP TI	GEO-I-TI	1408	G5ICP87	0000.005	1	2	2	2	2	2	2
00000	A	GD MIX ACID ICP AG	GEO-I-AG	1409	G5ICP87	0004.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP AS	GEO-I-AS	1410	G5ICP87	0010.000	0	0	0	0	2	2	2
00000	A	GD MIX ACID ICP AU	GEO-I-AU	1411	G5ICP87	0008.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP BA	GEO-I-BA	1412	G5ICP87	0001.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP BE	GEO-I-BE	1413	G5ICP87	0001.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP BI	GEO-I-BI	1414	G5ICP87	0010.000	0	0	0	0	2	2	2
00000	A	GD MIX ACID ICP CD	GEO-I-CD	1415	G5ICP87	0002.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP CE	GEO-I-CE	1416	G5ICP87	0004.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP CO	GEO-I-CO	1417	G5ICP87	0001.000	0	0	0	1	2	2	2

Parameter Methods

Parameter Code	MC	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
00000	A	GD MIX ACID ICP CR	GEO-I-CR	1418	G5ICP87	0001.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP CU	GEO-I-CU	1419	G5ICP87	0001.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP EU	GEO-I-EU	1420	G5ICP87	0002.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP GA	GEO-I-GA	1421	G5ICP87	0004.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP LA	GEO-I-LA	1422	G5ICP87	0002.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP GE	GEO-I-GE	1423	G5ICP87	0020.000	0	0	0	0	2	2	2
00000	A	GD MIX ACID ICP HO	GEO-I-HO	1424	G5ICP87	0004.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP LI	GEO-I-LI	1425	G5ICP87	0002.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP MN	GEO-I-MN	1426	G5ICP87	0004.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP MO	GEO-I-MO	1427	G5ICP87	0002.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP NB	GEO-I-NB	1428	G5ICP87	0004.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP ND	GEO-I-ND	1429	G5ICP87	0004.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP NI	GEO-I-NI	1430	G5ICP87	0002.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP PB	GEO-I-PB	1431	G5ICP87	0004.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP SB	GEO-I-SB	1432	G5ICP87	0020.000	0	0	0	0	2	2	2
00000	A	GD MIX ACID ICP SC	GEO-I-SC	1433	G5ICP87	0002.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP SN	GEO-I-SN	1434	G5ICP87	0004.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP SR	GEO-I-SR	1435	G5ICP87	0002.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP TA	GEO-I-TA	1436	G5ICP87	0040.000	0	0	0	0	2	2	2
00000	A	GD MIX ACID ICP TH	GEO-I-TH	1437	G5ICP87	0004.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP U	GEO-I-U	1438	G5ICP87	0100.000	0	0	0	0	0	2	2
00000	A	GD MIX ACID ICP V	GEO-I-V	1439	G5ICP87	0002.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP W	GEO-I-W	1440	G5ICP87	0010.000	0	0	0	0	2	2	2
00000	A	GD MIX ACID ICP Y	GEO-I-Y	1441	G5ICP87	0002.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP YB	GEO-I-YB	1442	G5ICP87	0001.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP ZN	GEO-I-ZN	1443	G5ICP87	0004.000	0	0	0	1	2	2	2
00000	A	GD MIX ACID ICP ZR	GEO-I-ZR	1444	G5ICP87	0002.000	0	0	0	1	2	2	2
00000	A	G.ALPHA,HS,TH,FF	GA,ST,FF	1445		0000.400	0	0	1	2	2	2	2
00000	A	2SPE,GA,HS,TH,FF	2SPE1445	1446		0000.000	0	0	1	2	2	2	2
00000	A	2SPE,U FLOURO	2SPE1365	1447		0000.000	0	0	1	2	2	2	2
00000		PROPOXUR	PROPOXUR	1448	0310783	0000.500	0	0	1	2	2	2	2
00000	A	METHIOCARB	METHIOCA	1449	0310783	0000.500	0	0	1	2	2	2	2
00000	A	2SPE-U-235-SUS	2SPE1476	1450		0000.000	0	0	1	2	2	2	2
00000	A	GD EXT B	GEO-X-B	1451	G5EXT87	0000.500	0	0	1	2	2	2	2
00000	A	GD AAS HYD AS	GEO-H-AS	1452	G5AAH87	0000.100	0	0	1	2	2	2	2
00000	A	GD AAS CV HG	GEO-V-HG	1453	G5AAV87	0000.020	0	1	2	2	2	2	2
00000	A	GD AAS HYD SB	GEO-H-SB	1454	G5AAH87	0000.100	0	0	1	2	2	2	2
00000	A	GD AAS HYD SE	GEO-H-SE	1455	G5AAH87	0000.100	0	0	1	2	2	2	2
00000	A	GD DNA TH	GEO-N-TH	1456	G5DNA87	0001.000	0	0	0	1	2	2	2
00000	A	GD DNA U	GEO-N-U	1457	G5DNA87	0000.100	0	0	1	2	2	2	2
00000	A	GD CARBON INORG	GEO-IC	1458	G5CAC87	0000.010	0	1	2	2	2	2	2
00000	A	GD CARBON ORG	GEO-OC	1459	G5CMB87	0000.010	0	1	2	2	2	2	2
00000	A	GD-SULFUR	GEO-S	1460	G5CMB87	0000.010	0	1	2	2	2	2	2
00000	A	GD-CARBON-TOTAL	C-GD	1461		0000.010	0	1	2	2	2	2	2
00000	A	TERBACIL	TERBACIL	1462	0310683	0000.100	0	0	1	2	2	2	2
00000	A	BROMACIL	BROMACIL	1463	0310683	0000.100	0	0	1	2	2	2	2

Parameter Methods

Parameter Code	MC	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
00000	A	CARBOXIN	CARBOXIN	1464	0310683	0000.100	0	0	1	2	2	2	2
00000	A	DIPHENAMID	DIPHENAM	1465	0310683	0000.100	0	0	1	2	2	2	2
00000	A	HEXAZINONE	HEXAZINO	1466	0310683	0000.100	0	0	1	2	2	2	2
00000	A	VERNOLATE	VERNOLAT	1467	0310683	0000.100	0	0	1	2	2	2	2
00000	A	BUTACHLOR	BUTACHLO	1468	0310683	0000.100	0	0	1	2	2	2	2
00000	A	CYCLOATE	CYCLOATE	1469	0310683	0000.100	0	0	1	2	2	2	2
00000	A	BUTYLATE	BUTYLATE	1470	0310683	0000.100	0	0	1	2	2	2	2
00000	A	PROPACHLOR	PROPACHL	1471	0310683	0000.100	0	0	1	2	2	2	2
00000	A	2SPE TH230 DIS	2SPE1472	1473		0000.00	0	0	0	2	2	2	2
00000	A	U-234 SUS H2O	U-234SUS	1474		0000.1	0	0	1	2	2	2	2
00000	A	2SPE U-234 SUS	2SPE1474	1475		0000.000	0	0	1	2	2	2	2
00000	A	U-235-SUS-H2O	U-235SUS	1476		0000.1	0	0	1	2	2	2	2
00000	A	S-2,4-DB	S-2,4-DB	1486		0000.000	2	2	2	2	2	2	2
00000	A	S-ISODRIN	S-ISODRI	1487		0000.000	2	2	2	2	2	2	2
00000	A	S-DEF	S-DEF	1488		0000.000	2	2	2	2	2	2	2
00000	A	S-TERBUTHYLAZINE	S-TERBUT	1489		0000.000	2	2	2	2	2	2	2
00000	A	S-D5-PHENOL	S-D5-PHE	1490		0000.000	2	2	2	2	2	2	2
00000	A	S-2,4-DIBROMOPHENOL	S-2,4-DI	1491		0000.000	2	2	2	2	2	2	2
00000	A	S-2,4,6-TRIBROMOPHEN	S-2,4,6T	1492		0000.000	2	2	2	2	2	2	2
00000	A	S-1,4-DIBROMOBENZENE	S-1,4-DI	1493		0000.000	2	2	2	2	2	2	2
00000	A	S-2,2-DIFLUOROBIPHEN	S-2,2-DI	1494		0000.000	2	2	2	2	2	2	2
00000	A	S-4,4-DIBROMOBIPHENY	S-4,4-DI	1495		0000.000	2	2	2	2	2	2	2
00000	A	S-BROMOCHLOROMETHANE	S-BROMOC	1496		0000.000	2	2	2	2	2	2	2
00000	A	S-1-BROMO-2-CHLOROET	S-1-BROM	1497		0000.000	2	2	2	2	2	2	2
00000	A	S-1,4-DICHLOROBUTANE	S-1,4-DI	1498		0000.000	2	2	2	2	2	2	2
00000	A	S-BROMOFLUOROBENZENE	S-BROMOF	1499		0000.000	2	2	2	2	2	2	2
00000	A	TH232DISH2O	TH232DIS	1501		1.0	0	0	0	2	2	2	2
00000	A	2SPETH230DISH2O	2SPE1501	1502		0	0	0	1	2	2	2	2
00000	A	2SPEPB210DISH2O	2SPE1503	1504		0	0	0	0	2	2	2	2
00000	A	2SPEPO210DISH2O	2SPE1505	1506		0	0	0	1	2	2	2	2
00000	A	U-238-SUS-H2O	U-238SUS	1507		0000.1	0	0	1	2	2	2	2
00000	A	2SPE-U-238-SUS	2SPE1507	1508		0000.000	0	0	1	2	2	2	2
00000	A	2SPE U-234 BIM	2SPE1509	1510		0000.000	0	0	0	0	2	2	2
00000	A	CALCIUM, DIS.	CA DISS.	1512		0000.100	0	0	1	2	2	2	2
00000	A	MAGNESIUM, DIS.	MG DISS.	1513	I144778	0000.100	0	0	1	2	2	2	2
00000	A	SODIUM, DISSOLV.	NA DISS.	1514	I173578	0000.100	0	0	1	2	2	2	2
00000	A	2SPE U-235 BIM	2SPE1515	1516		0000.00	0	0	0	2	2	2	2
00000	A	2SPE U-238 BIM	2SPE1511	1517		0000.00	0	0	0	2	2	2	2
00000	A	GROSS ALPHA-U-BIM	GA-U-BIM	1518		0006.000	0	0	0	2	2	2	2
00000	A	2SPE GA-U-BIM	2SPE1518	1519		0000.000	0	0	0	2	2	2	2
00000	A	GROSS ALPHA TH230BIM	GATHBIM	1520		0006.0	0	0	0	2	2	2	2
00000	A	2SPE G.S. TH BIM	2SPE1520	1521		0000.000	0	0	0	2	2	2	2
00000	A	GROSS BETA CS137-BIM	G.BCSBIM	1522		0003.00	0	0	0	2	2	2	2
00000	A	2SPE G.B-CS137 BIM	2SPE1522	1523		0000.	0	0	0	2	2	2	2
00000	A	GROSS BETA SR90-BIM	G.BSRBIM	1524		0003.00	0	0	0	2	2	2	2
00000	A	2SPE G.B. SR BIM	2SPE1524	1525		0000.000	0	0	0	2	2	2	2

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Parameter Code	M C	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
00000	A	RA-228 BTM GAMMA	RA228BTM	1526		0000.8	0	0	1	2	2	2	2
00000	A	2SPE RA-228 BTM	2SPE1526	1527		0000.251	0	0	1	2	2	2	2
00000	A	2SPE RA-226 BTM	2SPE1528	1529		0000.00	0	0	1	2	2	2	0
00000	A	RA-226 SUS H2O	RA226SUS	1531		0000.1	0	0	1	2	2	2	2
00000	A	2SPE RA226 SUS	2SPE1531	1532		0000.00	0	0	1	2	2	2	2
00000	A	RA-228 SUS H2O	RA228SUS	1533		0000.1	0	0	1	2	2	2	2
00000	A	2SPE RA-228 SUS	2SPE1533	1534		0000.00	0	0	1	2	2	2	2
00000	A	2SPE TH232 BTM	2SPE1535	1536			0	0	1	2	2	2	2
00000	A	2SPE TH230 BTM	2SPE1537	1538		0000.00	0	0	0	2	2	2	2
00000	A	TH 232 SUS H2O	TH232SUS	1539		0000.1	0	0	1	2	2	2	2
00000	A	TH 230 SUS H2O	TH230SUS	1541		0000.1	0	0	1	2	2	2	2
00000	A	2SPE TH230 SUS	2SPE1541	1542		0000.00	0	0	1	2	2	2	2
00000	A	PO210 SUS H2O	PO210SUS	1543		0000.1	0	0	1	2	2	2	2
00000	A	2SPE PO210 SUS	2SPE1543	1544		0000.00	0	0	1	2	2	2	2
00000	A	2SPE PO210 BTM	2SPE1545	1546		0000.00	0	0	0	2	2	2	2
00000	A	PB210 SUS H2O	PB21SUS	1547		0000.15	2	0	1		2	2	2
00000	A	2SPE PB210 SUS	2SPE1547	1548		0000.00	0	0	2	2	2	2	2
00000	A	2SPE PB210 BTM	2SPE1549	1550		0000.00	0	0	0	2	2	2	2
00076	A	TURBIDITY (NTU)	TURB	0050	I386078	0000.100	0	0	1	2	2	2	2
00080	A	COLOR PT-CO	COLOR	0020	I125078	0001.000	0	0	0	1	2	2	2
00339	A	COD, BTM MATERIAL	COD BTM	0532	I556078	0100.000	0	0	0	1	2	2	2
00339	B	COD, BOTTOM MATERIAL	COD BTM	1234		0010.000	0	0	0	0	2	2	2
00340	B	COD	COD	0076	I356178	0010.000	0	0	0	0	2	2	2
00403	A	PH (LABORATORY)	PH LAB	0068	I258781	0000.100	0	0	1	2	3	0	0
00403	B	PH LOW IONIC	PH LL	1268		0000.100	1	1	1	3	3	1	1
00480	A	SALINITY PPTH	SALINITY	0048		0000.000	0	0	0	1	2	2	2
00496	A	SOLIDS, VOL, BTM MAT	RESLOIBM	0516	I575378	0001.000	0	0	0	1	2	3	3
00500	A	ROE AT 105 DEG C TOT	RESTO105	0165	I375078	0001.000	0	0	0	1	2	3	3
00505	A	RESIDUE, VOLATILE, T	RESLOITS	0085	I375378	0001.000	0	0	0	1	2	3	3
00515	B	ROE AT 105 DEG C DIS	RESTO10C	0159	I174978	0001.000	0	0	0	1	2	3	3
00520	A	RESIDUE VOL DISS	RESVOL D	0229		0001.000	0	0	0	1	2	3	3
00530	B	ROE AT 105 DEG C SUS	RESTOTNO	0169	I376578	0001.000	0	0	0	1	2	3	3
00535	A	RESIDUE VOLAT. SUSP.	RESVOLNO	0049	I376778	0001.000	0	0	0	1	2	3	3
00556	A	OIL AND GREASE, TOT.	OIL&GREA	0127	O155574	0001.000	0	0	0	1	2	2	2
00557	A	OIL AND GREASE, BTM.	OIL&GR.B	0531	O555574	0001.000	0	0	0	1	2	2	2
00572	A	BIOMAS(PERI)ASH WT.	BMS(PE)A	0611	B352079	0000.001	1	2	2	2	2	2	2
00573	A	BIOMAS(PERI)DRY WT.	BMS(PE)D	0603	B352079	0000.001	1	2	2	2	2	2	2
00608	B	NITR DISS NH4 AS N	NH4-N D	0301	I252378	0000.010	0	1	2	2	2	2	2
00608	A	N,NH4 AS N DIS LOW L	NH4-NDLL	0830		0000.002	1	2	3	2	2	2	2
00608	C	NH4-LL-DIS	NH4-LL	1278		0000.001	1	2	2	2	2	2	2
00610	B	NITR TOT NH4 AS N	NH4 AS N	0123	I452378	0000.010	0	1	2	2	2	2	2
00610	A	N,NH4 AS N TOT LOW L	NH4-NTLL	0836		0000.002	1	2	3	2	2	2	2
00611	A	NITRO, NH4 AS N, BTM	N,NH4 BM	0524	I652378	0000.400	0	0	1	2	2	2	2
00613	B	NITR DIS NO2 AS N	NO2-N D	0160	I254078	0000.010	0	1	2	2	2	2	2
00613	A	N,NO2 DISS. LOWLVL	N,NO2DLL	0827		0000.001	1	2	3	2	2	2	2
00615	B	NITR TOT NO2 AS N	NO2-N T	0302	I454078	0000.010	0	1	2	2	2	2	2

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Parameter Code	M C	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
00615	A	N,NO2 TOTAL LOWLVL	N,NO2TLL	0840		0000.001	1	2	3	2	2	2	2
00618	B	NITR DIS NO3 AS N	NO3 AS N	0167	I153178	0000.000	2	2	2	2	2	2	2
00618	D	N,NITRATE-IC-LOW ION	NO3-ICLL	1261	I205884	0000.010	0	1	2	2	2	2	2
00623	A	NITR DISS NH4+ORG-N	N-DIS-KD	0268	I255278	0000.200	0	0	1	2	2	2	2
00625	A	NITR. NH4+ORG AS N T	TOT N KD	0084	I455278	0000.200	0	0	1	2	2	2	2
00626	C	NITR.NH4+ORG AS N.BT	N.KJD.BM	1211	I555378	0020.000	0	0	0	0	1	2	2
00630	B	NITR TOT NO2+NO3 -N	NO2+NO3T	0304	I454578	0000.100	0	0	1	2	2	2	2
00630	A	N,NO2+NO3 TOT.LOWLVL	NO2+3TLL	0839		0000.010	1	2	3	2	2	2	2
00631	B	NITR DIS NO2+NO3 -N	NO2+NO3D	0228	I254578	0000.100	0	2	2	2	2	2	2
00631	A	N,NO2+NO3 DIS LOWLVL	NO2+3DLL	0826		0000.010	1	2	3	2	2	2	2
00633	A	NITR,NO2+NO3 AS N,BT	NO2NO3BM	0513	I654578	0002.000	0	0	0	1	2	2	2
00665	B	PHOSPHORUS, TOTAL	P TOTAL	0129	I460078	0000.010	0	1	2	2	2	2	2
00665	A	PHOS. TOTAL LOWLVL	P TOT LL	0837		0000.001	1	2	3	2	2	2	2
00666	B	PHOSPHORUS, DIS.	P DIS	0128	I260078	0000.010	0	1	2	2	2	2	2
00666	A	PHOS. DISS. LOWLVL	P DIS LL	0829		0000.001	1	2	3	2	2	2	2
00668	B	PHOSPHORUS AS P, BTM	PHOS BM	0515	I660078	0040.000	0	0	0	1	2	2	2
00671	B	PHOS DIS ORTHO AS P	PO4-P D	0162	I260178	0000.010	0	1	2	2	2	2	2
00671	A	PHOS ORTHO-P DIS LL	PO4-PDLL	0828		0000.001	1	2	3	2	2	2	2
00671	G	P,ORTHO-PO4-IC-L ION	PO4PICLL	1262	I205884	0000.010	0	1	2	2	2	2	2
00671	D	PO4-P LL, DIS	PO4-LL	1277		0000.001	1	2	2	2	2	2	2
00677	A	PHOS DIS ORTH+HYD -P	HP+PO4 D	0279	I260278	0000.010	0	1	2	2	2	2	2
00678	A	PHOS TOT ORTH+HYD -P	HP+PO4 T	0282	I460278	0000.010	0	1	2	2	2	2	2
00680	A	CARBON, ORGANIC, TOT	C TOT OR	0114	O000178	0000.100	0	0	1	2	2	2	2
00681	A	CARBON, ORGANIC, DIS	C DIS OR	0113	O000278	0000.100	0	0	1	2	2	2	2
00685	A	CARBON, INORG. TOTAL	C TOT IN	0019	O000478	0000.100	0	0	1	2	2	2	2
00686	C	CARBON IN BTM. MAT.	C.I.B.M.	0503	O000	0000.100	0	0	1	2	2	2	2
00689	A	CARBON, ORGANIC, SUS	C.ORG S	0305	O000378	0000.100	0	0	1	2	2	2	2
00691	A	CARBON, INORGANIC, D	C.INORG.	0306	O000478	0000.100	0	0	1	2	2	3	3
00693	A	CARBON TOT BTM. MAT.	C.T.B.M.	0133	O000778	0000.100	0	0	1	2	2	2	2
00720	A	CYANIDE, TOTAL	CN	0023	I430278	0000.010	0	1	2	2	2	2	2
00721	B	CYANIDE, BTM. MAT.	CN B.M.	1235		0000.500	0	0	1	2	2	2	2
00723	A	CYANIDE, DISSOLVED	CN- DISS	0880	I230278	0000.010	0	1	2	2	2	2	2
00745	A	SULFIDE, TOTAL	S	0089	I384078	0000.500	0	0	1	2	2	2	2
00915	C	CALCIUM, DISSOLV.	CA DISS	0012	I115278	0000.100	0	0	1	2	2	2	2
00915	D	CALCIUM, DISSOLVED	CA-ICP	0659	I147279	0000.020	0	1	2	2	2	2	2
00915	B	CALCIUM, DIS. LOWLVL	CA DISLL	0831		0000.010	0	1	2	2	2	2	2
00915	E	CA ICP LL	CA LL	1273		0000.005	1	2	2	2	2	2	2
00916	B	CALCIUM, TOTAL USGS	CA TOTAL	0244	I315278	0000.100	0	0	1	2	2	2	2
00916	A	CALCIUM, TOTAL EPA	CA T EPA	0324	I315378	0000.100	0	0	1	2	2	2	2
00917	A	CALCIUM, BTM MAT	CA B.M.	0696	I515278	0010.000	0	0	0	0	1	2	2
00924	A	MAGNESIUM, BTM MAT	MG B.M.	0697	I544778	0010.000	0	0	0	0	1	2	2
00925	B	MAGNESIUM, DISSOLV.	MG DISS	0040	I144778	0000.100	0	0	1	2	2	2	2
00925	C	MAGNESIUM, DISSOLVED	MG-ICP	0663	I147279	0000.010	0	1	2	2	2	2	2
00925	A	MAGNESIUM, DIS LWLVL	MG DISLL	0832		0000.010	0	1	2	2	2	2	2
00925	D	MG ICP LL	MG LL	1274		0000.005	1	2	2	2	2	2	2
00927	B	MAGNESIUM, TOT. USGS	MG TOTAL	0261	I344778	0000.100	0	0	1	2	2	2	2

Parameter Methods

Parameter Code	MC	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
00927	A	MAGNESIUM, TOTAL EPA	MG T EPA	0325	I344878	0000.100	0	0	1	2	2	2	2
00929	B	SODIUM, TOTAL USGS	NA TOTAL	0320	I373578	0000.100	0	0	1	2	2	2	2
00929	A	SODIUM, TOTAL EPA	NA T EPA	0326	I373678	0000.100	0	0	1	2	2	2	2
00930	B	SODIUM, DIS.	NA DISS.	0059	I173578	0000.100	0	0	1	2	2	2	2
00930	C	SODIUM, DISSOLVED	NA-ICP	0675	I147279	0000.200	0	0	1	2	2	2	2
00930	A	SODIUM, DISS. LOWLVL	NA DISLL	0834		0000.010	0	1	2	2	2	2	2
00930	D	NA ICP LL	NA LL	1276		0000.050	0	1	2	2	2	2	2
00934	A	SODIUM, BTM MAT	NA B.M.	0699	I573578	0010.000	0	0	0	0	1	2	2
00935	B	POTASSIUM, DISSOLVED	K DISS.	0054	I163078	0000.100	0	0	1	2	2	2	2
00935	A	POTASSIUM, DIS LWLVL	K DIS LL	0833		0000.010	0	1	2	2	2	2	2
00937	B	POTASSIUM, TOT. USGS	K TOTAL	0321	I363078	0000.100	0	0	1	2	2	2	2
00937	A	POTASSIUM, TOTAL EPA	K T EPA	0327	I363178	0000.100	0	0	1	2	2	2	2
00938	A	POTASSIUM, BTM MAT	K B.M.	0698	I563078	0010.000	0	0	0	0	1	2	2
00940	E	CHLORIDE DISSOLVED	CL DISS.	0015	I218778	0000.100	0	0	1	2	2	2	2
00940	I	CHLORIDE-IC-LOW ION	CL-IC-LL	1259	I205884	0000.010	0	1	2	2	2	2	2
00945	D	SULFATE, TURB. DIS.	SO4 TURB	1200		0000.200	0	0	1	2	2	2	2
00945	E	SULFATE-IC-LOW ION	SO4ICLL	1263	I205884	0000.010	0	1	2	2	2	2	2
00950	B	FLUORIDE, DISSOLVED	F DISS	0031	I232778	0000.100	0	0	1	2	2	2	2
00950	D	FLUORIDE-IC-LOW ION	F-IC-LL	1260	I205884	0000.010	0	1	2	2	2	2	2
00955	C	SILICA, DIS.	SIO2 DIS	0056	I270078	0000.100	0	0	1	2	2	2	2
00955	D	SILICA, DISSOLVED	SIO2-ICP	0667	I147279	0000.010	0	1	2	2	2	2	2
00955	E	SIO2 ICP LL	SIO2 LL	1275		0000.010	0	1	2	2	2	2	2
01000	B	ARSENIC, DISSOLVED	AS DISS	0112	I206278	0001.000	0	0	0	1	2	2	2
01002	B	ARSENIC, TOTAL	AS TOTAL	0118	I406278	0001.000	0	0	0	1	2	2	2
01003	C	ARSENIC, BTM. MAT.	AS B.M.	0597	I606278	0001.000	0	0	0	1	2	2	2
01005	B	BARIUM, DIS.	BA DISS	0007	I108478	0100.000	0	0	0	0	0	1	2
01005	C	BARIUM, DISSOLVED	BA-ICP	0641	I147279	0002.000	0	0	0	1	2	2	2
01007	A	BARIUM, TOTAL	BA TOTAL	0234	I308478	0100.000	0	0	0	0	0	1	2
01008	A	BARIUM, BTM MAT	BA B.M.	0521	I508478	0010.000	0	0	0	0	1	2	2
01010	A	BERYLLIUM, DIS.	BE DISS	0170	I109578	0010.000	0	0	0	0	1	2	2
01010	B	BERYLLIUM, DISSOLVED	BE-ICP	0655	I147281	0000.500	0	0	1	2	2	2	2
01012	A	BERYLLIUM, TOTAL	BE TOTAL	0236	I309579	0010.000	0	0	0	0	1	2	2
01013	A	BERYLLIUM, BTM MAT	BE B.M.	0522	I509578	0001.000	0	0	0	1	2	2	2
01020	B	BORON, DISSOLV.	BORON D	1183	I111482	0010.000	0	0	0	0	1	2	2
01022	B	BORON, TOT-REC.	B TOTAL	1286	I311485	0010.000	0	0	0	0	1	2	2
01023	C	BORON,REC. FROM B.M.	B B.M.	1285	I511485	0010.000	0	0	0	0	1	2	2
01025	B	CADMIUM, DIS.	CD DISS	0073	I113678	0001.000	0	0	0	1	2	2	2
01025	A	CADMIUM, DISSOLV.	CD DISS	0126	I113578	0010.000	0	0	0	0	1	2	2
01025	D	CADMIUM, DISSOLVED	CD-ICP	0673	I147279	0001.000	0	0	0	1	2	2	2
01025	E	CADMIUM, DISS, GF	CD D GF	1250	I113784	0000.100	0	0	1	2	2	2	2
01027	A	CADMIUM, TOTAL	CD TOTAL	0131	I313578	0010.000	0	0	0	0	1	2	2
01027	B	CADMIUM, TOT.	CD TOTAL	0242	I313678	0001.000	0	0	0	1	2	2	2
01028	B	CADMIUM, BTM MAT	CD B.M.	0502	I513578	0001.000	0	0	0	1	2	2	2
01029	B	CHROMIUM, BTM MAT	CR B.M.	0505	I523678	0001.000	0	0	0	1	1	2	2
01030	E	CHROMIUM, DISSOLVED	CR ICP	0722	I147287	0005.000	0	0	0	1	2	2	2
01030	F	CHROMIUM, DIS DCP	CR D DCP	0727	I122987	0001.000	0	0	0	1	2	2	2

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Parameter Code	M C	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
01030	D	CHROMIUM, DISS, GF	CH D GF	1251	I123584	0000.500	0	0	1	2	2	2	2
01032	A	CHROMIUM HEX., DIS.	CR HEX	0016	I123278	0001.000	0	0	0	1	2	2	2
01034	D	CHROMIUM TOT DCP	CR T DCP	0726	I322987	0001.000	0	0	0	1	2	2	2
01035	B	COBALT, DISSOLVED	CO DISS	0018	I124078	0001.000	0	0	0	1	2	2	2
01035	A	COBALT, DIS.	CO DISS	0148	I123978	0050.000	0	0	0	0	1	2	2
01035	C	COBALT, DISSOLV.	CO-ICP	0644	I147279	0003.000	0	0	0	1	2	2	2
01035	E	COBALT, DISS, GF	CO D GF	1252	I124184	0000.500	0	0	1	2	2	2	2
01037	A	COBALT, TOT.	CO TOTAL	0149	I323978	0050.000	0	0	0	0	1	2	2
01037	B	COBALT, TOTAL	CO TOTAL	0248	I324078	0001.000	0	0	0	1	2	2	2
01038	B	COBALT, BTM MATERIAL	CO B.M.	0506	I523978	0005.000	0	0	0	0	1	2	2
01040	B	COPPER, DIS.	CU DISS	0022	I127178	0001.000	0	0	0	1	2	2	2
01040	A	COPPER, DISSOLV.	CU DISS	0151	I127078	0010.000	0	0	0	0	1	2	2
01040	C	COPPER, DISSOLVED	CU-ICP	0657	I147279	0010.000	0	0	0	0	1	2	2
01040	E	COPPER, DISS, GF	CU D GF	1253	I127284	0000.500	0	0	1	2	2	2	2
01042	A	COPPER, TOTAL	CU TOTAL	0156	I327078	0010.000	0	0	0	0	1	2	2
01042	B	COPPER, TOT.	CU TOTAL	0250	I327178	0001.000	0	0	0	1	2	2	2
01043	B	COPPER, BTM MATERIAL	CU B.M.	0507	I527078	0001.000	0	0	0	1	2	2	2
01045	B	IRON, TOTAL	TOT FE	0189	I338178	0010.000	0	0	0	0	1	2	2
01046	C	IRON, DIS.	DIS FE	0172	I138178	0010.000	0	0	0	0	1	2	2
01046	D	IRON, DISSOLV.	FE-ICP	0645	I147279	0003.000	0	0	0	1	2	2	2
01046	E	FE ICP LL	FE LL	1271		0002.000	0	0	0	2	2	2	2
01049	B	LEAD, DIS.	PB DISS	0038	I140078	0005.000	0	0	0	1	2	2	2
01049	A	LEAD, DISSOLV.	PB DISS	0191	I139978	0100.000	0	0	0	0	0	1	2
01049	C	LEAD, DISSOLVED	PB-ICP	0646	I147279	0010.000	0	0	0	0	1	2	2
01049	E	LEAD, DISS, GF	PB D GF	1254	I140184	0000.500	0	0	1	2	2	2	2
01051	A	LEAD, TOT.	PB TOTAL	0192	I339978	0100.000	0	0	0	0	0	1	2
01051	B	LEAD, TOTAL	PB TOTAL	0257	I340078	0005.000	0	0	0	1	2	2	2
01052	B	LEAD, BTM. MATERIAL	PB B.M.	0510	I539978	0010.000	0	0	0	0	1	2	2
01053	A	MANGANESE, BTM MAT	MN B.M.	0512	I545478	0001.000	0	0	0	1	2	2	2
01055	A	MANGANESE, TOTAL	MN TOT	0041	I345478	0010.000	0	0	0	0	1	2	2
01056	A	MANGANESE, DISSOLV.	MN DISS	0042	I145478	0010.000	0	0	0	0	1	2	2
01056	C	MANGANESE, DISSOLVED	MN-ICP	0648	I147279	0001.000	0	0	0	1	2	2	2
01056	D	MANGANESE, DISS, GF	MN D GF	1255	I145584	0000.200	0	0	1	2	2	2	2
01056	E	MN ICP LL	MN LL	1272		0001.000	0	0	0	2	2	2	2
01057	A	THALLIUM, DIS AAGF	TL DIS G	0492	I186681	0001.000	0	0	0	1	2	2	2
01060	B	MOLYBDENUM, DISSOLV.	MO DISS	0110	I149078	0001.000	0	0	0	1	2	2	2
01060	A	MOLYBDENUM, DISS.	MO-ICP	0649	I147279	0010.000	0	0	0	0	1	2	2
01062	A	MOLYBDENUM, TOTAL	MO TOTAL	0265	I349078	0001.000	0	0	0	1	2	2	2
01063	A	MOLYBDENUM, BTM MAT	MO B.M.	0523	I549078	0000.100	0	0	1	2	2	2	2
01065	B	NICKEL, DIS.	NI DISS	0044	I150078	0001.000	0	0	0	1	2	2	2
01065	A	NICKEL, DISSOLVED	NI DISS	0197	I149978	0100.000	0	0	0	0	0	1	2
01065	E	NICKEL,DISSOLVED	NI ICP	0721	I147287	0010.000	0	0	0	1	1	2	2
01065	D	NICKEL, DISS, GF	NI D GF	1256	I113784	0001.000	0	0	0	1	2	2	2
01067	A	NICKEL, TOTAL	NI TOTAL	0198	I349978	0100.000	0	0	0	0	0	1	2
01067	B	NICKEL, TOTAL	NI TOTAL	0267	I350078	0001.000	0	0	0	1	2	2	2
01068	B	NICKEL, BTM MATERIAL	NI B.M.	0519	I549978	0010.000	0	0	0	0	1	2	2

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01075	A	SILVER, DISSOLVED	AG DISS	0166	I172078	0001.000	0	0	0	1	2	2	2
01075	B	SILVER, DISS. AAGF	AG DIS G	0708	I172178	0000.030	0	1	2	2	2	2	2
01075	C	SILVER, DISSOLVED	AG ICP	0723	I147287	0001.000	0	0	1	1	2	2	2
01077	B	SILVER, TOTAL.	AG TOTAL	0288	I372078	0001.000	0	0	0	1	2	2	2
01080	A	STRONTIUM, DIS.	SR DISS	0062	I180078	0010.000	0	0	0	0	1	2	2
01080	B	STRONTIUM, DISSOLVED	SR-ICP	0652	I147279	0000.500	0	0	1	1	2	2	2
01082	A	STRONTIUM, TOTAL	SR TOTAL	0290	I380078	0010.000	0	0	0	0	1	2	2
01083	A	STRONTIUM, BTM MAT	SR B.M.	0530	I580078	0001.000	0	0	0	1	2	2	2
01085	B	VANADIUM, DISSOLVED	V-ICP	0653	I147279	0006.000	0	0	0	1	2	2	2
01085	D	VANADIUM, DIS. AUTO.	V DIS. A	1210	I288078	0001.000	0	0	1	2	2	2	2
01090	A	ZINC, DIS.	ZN DISS	0067	I190078	0010.000	0	0	0	0	1	2	2
01090	B	ZINC, DISSOLVED	ZN-ICP	0671	I147279	0003.000	0	0	0	1	2	2	2
01090	D	ZINC, DISS, GF	ZN, D GF	1257	I190184	0000.500	0	0	1	2	2	2	2
01092	A	ZINC, TOTAL	ZN TOTAL	0296	I390078	0010.000	0	0	0	0	1	2	2
01093	A	ZINC, BTM. MATERIAL	ZN B.M.	0518	I590078	0001.000	0	0	0	1	2	2	2
01095	A	ANTIMONY, DISSOLVED	ANTIM.DS	0077	I105578	0001.000	0	0	0	1	2	2	2
01097	A	ANTIMONY, TOTAL	SB TOT	0080	I305578	0001.000	0	0	0	1	2	2	2
01098	A	ANTIMONY, BTM MAT	SB B.M.	0534	I505578	0001.000	0	0	0	1	2	2	2
01105	C	ALUMINUM-TOTAL-DCP	AL TOT	1283	I305485	0010.000	0	0	0	0	1	2	2
01106	D	ALUMINUM DCP LL, DIS	AL LL	1267		0001.000	0	0	0	1	2	2	2
01106	E	ALUMINUM-DIS-DCP	AL DIS	1284	I105485	0010.000	0	0	0	0	1	2	2
01108	C	ALUMINUM-BTM-DCP	AL-BTM	1282	I505485	0010.000	0	0	0	0	1	2	2
01130	A	LITHIUM, DISSOLV.	LI DISS	0039	I142578	0010.000	0	0	0	0	1	2	2
01130	B	LITHIUM, DISSOLVED	LI-ICP	0664	I147279	0004.000	0	0	0	1	2	2	2
01132	A	LITHIUM, TOTAL	LI TOTAL	0277	I342578	0010.000	0	0	0	0	1	2	2
01133	A	LITHIUM, BTM. MAT.	LI B.M.	0541	I542578	0001.000	0	0	0	1	2	2	2
01145	A	SELENIUM, DISSOLVED	SE DISS	0087	I266781	0001.000	0	0	0	1	2	2	2
01147	A	SELENIUM, TOTAL	SE TOTAL	0286	I466781	0001.000	0	0	0	1	2	2	2
01148	A	SELENIUM, BTM MAT	SE B.M.	0517	I666781	0001.000	0	0	0	1	2	2	2
01170	B	IRON, BOTTOM MAT.	FE BTM	0190	I538178	0001.000	0	0	0	1	2	2	2
01501	A	RADIUM-228, TOTAL	RA-228,T	0851	R114276	0002.000	0	0	0	1	2	2	2
01524	A	G ALPHA,DISS,ERR	G.AL,D,E	0549		0000.000	0	0	1	2	2	2	2
01525	A	G ALPHA,SUS,ERR	G.AL,S,E	0555		0000.000	0	0	1	2	2	2	2
03515	A	GROSS-B, DIS CS137	G.BE.137	0455	R112076	0000.400	0	0	1	2	2	2	2
03515	B	G.BETA-DS-CS137-FF	G.BE.137	0798	R112076	0000.400	0	0	1	2	2	2	2
03515	C	G.BETA,HS,CS137,LF	GB,S,LF	1357		0000.400	0	0	1	2	2	2	2
03515	D	G.BETA,HS,CS137,FF	GB,S,FF	1360		0000.400	0	0	1	2	2	2	2
03516	A	GROSS-B, SUSP. CS137	G.BES137	0456	R712079	0000.400	0	0	1	2	2	2	2
03519	A	GROSS-B, TOT.(CS137)	GROS-B,T	0210	R312079	0000.400	0	0	1	2	2	2	2
03526	A	G BETA,CS-137,DISS,E	BE137D,E	0217		0000.000	0	0	1	2	2	2	2
03527	A	G BETA,CS-137,SUS,ER	BE137S,E	0218		0000.000	0	0	1	2	2	2	2
03528	A	G BETA,SR-90,DISS,ER	BE90,D,E	0556		0000.000	0	0	1	2	2	2	2
03529	A	G BETA,SR-90,SUS,ERR	BE90,S,E	0557		0000.000	0	0	1	2	2	2	2
05501	A	STRONTIUM-89, TOTAL	SR89,TOT	1196		0000.500	0	0	1	2	3	3	3
05504	A	G GAMMA SCAN,DISS,ER	GAMSC,DE	0623		0000.000	0	0	0	1	2	3	3
05515	A	G GAMMA SCAN,BTM M,E	GAMSC,BE	0595		0000.000	0	0	1	2	3	3	3

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05516	A	G GAMMA SCAN,SUS,ERR	GAMSC,SE	0560		0000.000	0	0	1	2	3	3	3
07000	D	TRITIUM, TOT. IN H2O	T.LIQ.SC	0452	R117176	0026.000	0	0	0	0	0	2	3
07000	A	TRITIUM (IN H2O) TOT	H-3,EGAS	0460		0005.700	0	0	0	1	2	3	3
07000	E	TRIT,ENR,LL,LIQ SCIN	H3,EN,LS	0624		0000.800	0	0	0	2	2	2	2
07000	C	TRITIUM, TOT.	TRIT, T	0881	R117276	0010.000	0	0	0	0	2	2	2
07000	B	TRITIUM, TOTAL	H3 TOTAL	1043		0000.300	0	0	1	2	2	2	2
07001	A	TRITIUM,E-GASS,ERR	T,E-GA,E	0232		0000.000	0	0	0	1	2	3	3
07001	B	TRITIUM,LIQ SCIN,ERR	T,LQS,ER	0255		0000.000	0	0	0	0	0	2	3
08010	A	RADIORU. (RU-106), T	RAD-RU-T	0939	R315079	0001.000	0	0	0	1	2	3	3
09507	B	RA-226 BIM GAMMA	RA226BIM	1528		0000.4	0	0	1	2	2	2	2
09510	A	RADIUM-226, DISSOLV.	R.226-PL	0458	R114076	0000.400	0	0	1	2	2	2	2
09510	B	RADIUM-226, DISS. PC	R.226-PL	0799	R114076	0000.100	0	0	1	2	2	2	2
09511	A	RADIUM-226, DIS. RN	R.226-BR	0449	R114176	0000.020	0	1	2	2	2	3	3
09511	B	RADIUM-226, DISS. RN	R.226-BR	0794	R114176	0000.020	0	1	2	2	2	3	3
11502	A	RADIUM-228, TOT. ERR	RA228,ER	1190	R114276	0001.000	0	0	0	1	2	3	3
13503	A	STRONTIUM-90, DISS.	SR-90,D.	0450	R116076	0000.500	0	0	1	2	2	3	3
13503	B	SSTRONTIUM-90, DISS.	SR-90,D.	0795	R116076	0000.500	0	0	1	2	2	3	3
13507	A	SR-90,DISS,ERR	SR-90,ER	0006		0000.000	0	0	1	2	2	3	3
15502	A	STRONTIUM-89,TOT.ERR	SR89,ERR	1197		0000.500	0	0	1	2	3	3	3
15504	A	STRONTIUM-89,DIS.ERR	SR89,ERR	1195		0000.500	0	0	1	2	3	3	3
17503	A	LEAD-210, DISSOLVED	LEAD-210	0448	R113076	0002.000	0	0	1	2	2	2	2
17503	B	PB210DISH2O	PB210DIS	1503		1.5	0	0	0	2	2	2	2
17507	B	LEAD 210 BOTTOM MAT.	PB210BIM	1182		0000.100	0	0	1	2	3	3	3
17507	C	PB210 BIM GAMMA	PB210BIM	1549		0002.00	0	0	0	2	2	2	2
17508	B	PB-210,BIM MAT,ERR	PB210BER	0075		0000.000	0	0	1	2	3	3	3
19503	B	PO210DISH2O	PO210DIS	1505		1	0	0	0	2	2	2	2
19507	A	PO210 BIM	PO210BIM	1545		0000.1	0	0	1	2	2	2	2
22603	A	U-238,ALPHA SPEC	U-238	1368	R118276	0000.100	0	0	1	2	2	2	2
22610	A	U-234,ALPHA SPEC	U-234	1366	R118276	0000.100	0	0	1	2	2	2	2
22612	A	U-235U-235 BIM GAMMA	U-235BIM	1515		0000.000	0	0	0	2	2	2	2
22620	A	U-235,ALPHA SPEC	U-235	1367	R118276	0000.100	0	0	1	2	2	2	2
22624	A	URANIUM,TOT,ERR	U,TOT,ER	0215		0000.000	0	0	1	2	3	3	2
22703	G	U DIS,FLUOR,LF	U,D,F,LF	1004		0001.000	0	0	1	2	2	2	2
22703	H	U DIS,FLUOR,FF	U,D,F,FF	1006		0001.000	0	0	1	2	2	2	2
22703	C	U.DIS,DIR,LIP,FF	U,D,P,FF	1385		0000.400	0	0	1	2	2	2	2
22703	E	U.DIS,EXT,LIP,FF	U,E,P,FF	1386		0000.010	0	1	2	2	2	2	2
22703	D	U.DIS,DIR,LIP,LF	U,D,P,LF	1387		0000.400	0	0	1	2	2	2	2
22703	F	U,DIS,EXT,LIP,LF	U,E,P,LF	1388		0000.010	0	1	2	2	2	2	2
26503	B	TH230 DIS H2O	TH230DIS	1472		0001.00	0	0	0	2	2	2	2
26507	A	TH230 BIM	TH230BM	1537		0000.1	0	0	1	2	2	2	2
26631	A	TH-232 BIM	TH232BIM	1535		0000.1	0	0	1	2	2	2	2
28007	A	RADIO-CES. AS 137 T.	RAD-CS-T	0936	R311176	0001.000	0	0	0	1	2	3	3
28011	A	URANIUM, TOTAL	U TOT	0618		0000.400	0	0	1	2	3	3	2
28011	B	U,FLUOROMETRIC,T	U,FLUORO	1365		0001.000	0	0	1	2	2	2	2
28014	A	U-234 BIM GAMMA	U-234BIM	1509		0001.000	0	0		2	2	2	2
28403	A	CESIUM 137, DISSOLV.	CS-137 D	0442	076	0000.000	0	0	0	1	2	3	3

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28403	B	CESIUM-137 GAMMASCAN	CS137-G	0960	R111076	0001.000	0	0	0	1	2	3	3
28406	A	CS-137,G SCAN,DIS,ER	CS137G,E	0216		0000.000	0	0	0	1	2	3	3
29601	A	COBALT 60, TOTAL	CO60,TOT	1188		0001.000	0	0	0	1	2	3	3
29602	A	COBALT 60, TOT. ERR.	CO60,ERR	1189		0001.000	0	0	0	1	2	3	3
30217	B	DIBROMOMETHANE	DIBROMOM	1009	O311583	0000.200	0	0	1	2	2	2	2
31361	A	TNT, BTM. MAT.	TNT BTM	0399		0000.100	0	0	1	2	2	2	2
32101	X	DICHLOROBROMO - THM	DICB-THM	0950		0000.000	0	0	0	2	2	2	2
32101	A	DICHLOROBROMOMETHA,T	CHCL2BR	1019	O301180	0003.000	0	0	0	2	2	2	2
32101	B	DICHLOROBROMOMETHA,T	CHCL2BR	1295		0000.200	0	0	1	2	2	2	2
32102	A	CARBON TETRA., TOT.	CCL4	1013	O301180	0003.000	0	0	0	2	2	2	2
32102	B	CARBON TETRA., TOT.	CCL4	1289		0000.200	0	0	1	2	2	2	2
32103	A	1,2-DICHLOROETHANE,T	CLC-CCL	1022	O301180	0003.000	0	0	0	2	2	2	2
32103	B	1,2-DICHLOROETHANE,T	CLC-CCL	1298		0000.200	0	0	1	2	2	2	2
32104	X	BROMOFORM - THM	BROM-THM	0948		0000.000	0	0	0	2	2	2	2
32104	A	BROMOFORM, TOTAL	CHBR3	1012	O301180	0003.000	0	0	0	2	2	2	2
32104	B	BROMOFORM, TOTAL	CHBR3	1288		0000.200	0	0	1	2	2	2	2
32105	X	CHLORODIBROMO - THM	CDIB-THM	0949		0000.000	0	0	0	2	2	2	2
32105	A	CHLORODIBROMO., TOT.	CHCLBR2	1015	O301180	0003.000	0	0	0	2	2	2	2
32105	B	CHLORODIBROMO., TOT.	CHCLBR2	1291		0000.200	0	0	1	2	2	2	2
32106	X	CHLOROFORM - THM	CHLORTHM	0947		0000.000	0	0	0	2	2	2	2
32106	A	CHLOROFORM, TOTAL	CHCL3	1018	O301180	0003.000	0	0	0	2	2	2	2
32106	B	CHLOROFORM, TOTAL	CHCL3	1294		0000.200	0	0	1	2	2	2	2
32240	A	TANNIN & LIGNIN, TOT	TANNINLG	0138		0000.100	0	0	1	2	2	2	2
32730	A	PHENOLS, TOTAL	PHENOL	0052		0001.000	0	0	0	1	2	2	2
34010	A	TOLUENE, TOTAL	TOLUENE	1032	O301180	0003.000	0	0	0	2	2	2	2
34010	B	TOLUENE, TOTAL	TOLUENE	1308		0000.200	0	0	1	2	2	2	2
34030	A	BENZENE, TOTAL	BENZENE	1011	O301180	0003.000	0	0	0	2	2	2	2
34030	B	BENZENE, TOTAL	BENZENE	1287		0000.200	0	0	1	2	2	2	2
34200	A	ACENAPHTHYLENE, TOT.	ACPHTYL	1067	O302180	0005.000	0	0	0	1	2	2	2
34203	A	ACENAPHTHYLENE, BTM	B-ACNTYN	1113	O520180	0200.000	0	0	0	0	2	2	2
34205	A	ACENAPHTHENE, TOTAL	AC NENE	1066	O302180	0005.000	0	0	0	1	2	2	2
34208	A	ACENAPHTHENE, BTM	B-ACNENE	1112	O502180	0200.000	0	0	0	0	2	2	2
34220	A	ANTHRACENE, TOTAL	ANTHRA	1068	O302180	0005.000	0	0	0	1	2	2	2
34223	A	ANTHRACENE, BTM	B-ANTHRA	1114	O502180	0200.000	0	0	0	0	2	2	2
34230	A	BENZO(B)FLUORANTHE,T	BZFL-B	1071	O302180	0010.000	0	0	0	1	2	2	2
34233	A	BENZOFLUORAN B BTM	B-BZFL-B	1117	O502180	0400.000	0	0	0	0	2	2	2
34242	A	BENZO(K)FLUORANTHE,T	BZ FL-K	1072	O302180	0010.000	0	0	0	1	2	2	2
34245	A	BENZOFLUORAN K BTM	B-BZFL-K	1118	O502180	0400.000	0	0	0	0	2	2	2
34247	A	BENZO(A)PYRENE, TOT.	BZPY	1073	O302180	0010.000	0	0	0	1	2	2	2
34250	A	BENZOPYRENE, BTM	B-BZPY	1119	O502180	0400.000	0	0	0	0	2	2	2
34257	A	BETA BHC, BTM. MAT.	B BHCBTM	0824		0000.100	0	0	1	2	2	2	2
34259	A	DELTA BHC, TOTAL	D BHCWAT	0808	O320180	0000.010	0	1	2	2	2	2	2
34262	A	DELTA BHC, BTM. MAT.	D BHCBTM	0825		0000.100	0	0	1	2	2	2	2
34273	A	2-CHLORETHYL ETHER,T	CLETET	1077	O302180	0005.000	0	0	0	1	2	2	2
34276	A	B-CHLORETYL ET BTM	B-CLETET	1123	O502180	0200.000	0	0	0	0	2	2	2
34278	A	2-CHLORETH METHANE,T	CLETMT	1076	O302180	0005.000	0	0	0	1	2	2	2

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Parameter Code	M C	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
34281	A	B-CHLORETXYMET, BTM	B-CLETMT	1122	O502180	0200.000	0	0	0	0	2	2	2
34283	A	2-CHLORISOPR ETHER,T	CLIPET	1078	O302180	0005.000	0	0	0	1	2	2	2
34286	A	B-CHLISOPRO ET BTM	B-CLIPET	1124	O502180	0200.000	0	0	0	0	2	2	2
34292	A	BUTYL BENZYL PHTHA,T	BU BZPT	1075	O302180	0005.000	0	0	0	1	2	2	2
34295	A	BUTYLBENPHTH, BTM	B-BUBZPT	1121	O502180	0200.000	0	0	0	0	2	2	2
34301	A	CHLOROBENZENE, TOTAL	CL-BENZ	1014	O301180	0003.000	0	0	0	2	2	2	2
34301	B	CHLOROBENZENE, TOTAL	CL-BENZ	1290		0000.200	0	0	1	2	2	2	2
34311	A	CHLOROETHANE, TOTAL	CH2CLCH3	1016	O301180	0003.000	0	0	0	2	2	2	2
34311	B	CHLOROETHANE, TOTAL	CH2CLCH3	1292		0000.200	0	0	1	2	2	2	2
34320	A	CHRYSENE, TOTAL	CHRY	1082	O302180	0010.000	0	0	0	1	2	2	2
34323	A	CHRYSENE, BTM	B-CHRY	1128	O502180	0400.000	0	0	0	0	2	2	2
34336	A	DIETHYL PHTHALATE, T	DIETPT	1089	O302180	0005.000	0	0	0	1	2	2	2
34339	A	DIETPHTH, BTM	B-DIETPT	1144	O502180	0200.000	0	0	0	0	2	2	2
34341	A	DIMETHYL PHTHALATE,T	DIMEPT	1090	O302180	0005.000	0	0	0	1	2	2	2
34344	A	DIMETPHTH, BTM	B-DIMEPT	1145	O502180	0200.000	0	0	0	0	2	2	2
34371	A	ETHYLBENZENE, TOTAL	ETH-BENZ	1027	O301180	0003.000	0	0	0	2	2	2	2
34371	B	ETHYLBENZENE, TOTAL	ETH-BENZ	1303		0000.200	0	0	1	2	2	2	2
34376	A	FLUORANTHENE, TOTAL	FLANTE	1096	O302180	0005.000	0	0	0	1	2	2	2
34379	A	FLUORANTHENE, BTM	B-FLANTE	1151	O502180	0200.000	0	0	0	0	2	2	2
34381	A	FLUORENE, TOTAL	FLUO	1095	O302180	0005.000	0	0	0	1	2	2	2
34384	A	FLUORENE, BTM	B-FLUO	1150	O502180	0200.000	0	0	0	0	2	2	2
34386	A	HEXACHLOROCYCLOPEN,T	HXCPED	1099	O302180	0005.000	0	0	0	1	2	2	2
34389	A	HEXCLPENTDI, BTM	B-HXCPED	1154	O502180	0200.000	0	0	0	0	2	2	2
34396	A	HEXACHLOROETHANE, T.	HXCLET	1100	O302180	0005.000	0	0	0	1	2	2	2
34399	A	HEXCLETHANE, BTM	B-HXCLET	1155	O502180	0200.000	0	0	0	0	2	2	2
34403	A	INDENO(1,2,3)PYREN,T	INDPYR	1101	O302180	0010.000	0	0	0	1	2	2	2
34406	A	INDENOPYRENE, BTM	B-INDPYR	1156	O502180	0400.000	0	0	0	0	2	2	2
34408	A	ISOPHORONE, TOTAL	ISOPHO	1102	O302180	0005.000	0	0	0	1	2	2	2
34411	A	ISOPHORONE, BTM	B-ISOPHO	1157	O502180	0200.000	0	0	0	0	2	2	2
34413	A	METHYLBROMIDE, TOTAL	CH3-BR	1028	O301180	0003.000	0	0	0	2	2	2	2
34413	B	METHYLBROMIDE, TOTAL	CH3-BR	1304		0000.200	0	0	1	2	2	2	2
34418	A	CHLOROMETHANE	CHLOMETH	1281	0311583	0003.000	0	0	0	2	2	2	2
34418	B	CHLOROMETHANE, TOT	CHLOMETH	1318		0000.200	0	0	1	2	2	2	2
34423	A	METHYLENE CHLORIDE,T	CH2CL	1029	O301180	0003.000	0	0	0	2	2	2	2
34423	B	METHYLENE CHLORIDE,T	CH2CL	1305		0000.200	0	0	1	2	2	2	2
34428	A	N-NITROSODI-N-PROP,T	NIPRAM	1107	O302180	0005.000	0	0	0	1	2	2	2
34431	A	NITDIPROPAMINE, BTM	B-DIPRAM	1162	O502180	0200.000	0	0	0	0	2	2	2
34433	A	N-NITROSODIPHENYLA,T	NIPHAM	1106	O302180	0005.000	0	0	0	1	2	2	2
34436	A	NITDIPHENAMINE, BTM	B-NIPHAM	1161	O502180	0200.000	0	0	0	0	2	2	2
34438	A	NITROSODIMETHLYAMI,T	NIMEAM	1105	O302180	0005.000	0	0	0	1	2	2	2
34441	A	NITDIMETAMINE, BTM	B-NIMEAM	1160	O502180	0200.000	0	0	0	0	2	2	2
34445	A	NAPHTHALENE, BTM	B-NAPHT	1158	O502180	0200.000	0	0	0	0	2	2	2
34447	A	NITROBENZENE, TOTAL	NIBZ	1104	O302180	0005.000	0	0	0	1	2	2	2
34450	A	NITROBENZENE, BTM	B-NIBZ	1159	O502180	0200.000	0	0	0	0	2	2	2
34452	A	CHLORO-METHYLPHENO,T	CH-ME-PH	1055	O303180	0030.000	0	0	0	1	2	2	2
34455	A	CHLO-METH PHEN T-BTM	B-CHMEPH	1044		0600.000	0	0	0	0	2	2	2

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Parameter Code	MC	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
34457	A	AROCHLOR 1242, DIS,	PCB1242D	0775	O150180	0000.100	0	0	1	2	2	2	2
34458	A	AROCHLOR 1242, SUS.	PCB1242S	0776	O250180	0000.100	0	0	1	2	2	2	2
34461	A	PHENANTHRENE, TOTAL	PHANTE	1108	O302180	0005.000	0	0	0	1	2	2	2
34464	A	PHENANTHRENE, BTM	B-PHANTE	1163	O502180	0200.000	0	0	0	0	2	2	2
34469	A	PYRENE, TOTAL	PYRE	1109	O302180	0005.000	0	0	0	1	2	2	2
34472	A	PYRENE, BTM	B-PYRE	1164	O502180	0200.000	0	0	0	0	2	2	2
34475	A	TETRACHLOROETHYLEN,T	C2CL4	1031	O301180	0003.000	0	0	0	2	2	2	2
34475	B	TETRACHLOROETHYLEN,T	C2CL4	1307		0000.200	0	0	1	2	2	2	2
34488	A	TRICHLOROFLUOROMET,T	CCL3F	1036	O301180	0003.000	0	0	0	2	2	2	2
34488	B	TRICHLOROFLUOROMET,T	CCL3F	1312		0000.200	0	0	1	2	2	2	2
34496	A	1,1-DICHLOROETHANE,T	CL2C-C	1021	O301180	0003.000	0	0	0	2	2	2	2
34496	B	1,1-DICHLOROETHANE,T	CL2C-C	1297		0000.200	0	0	1	2	2	2	2
34501	A	1,1-DICHLORETHYLEN,T	CL2C=C	1023	O301180	0003.000	0	0	0	2	2	2	2
34501	B	1,1-DICHLORETHYLEN,T	CL2C=C	1299		0000.200	0	0	1	2	2	2	2
34506	A	1,1,1-TRICHLOROETH,T	CCL3-CH3	1033	O301180	0003.000	0	0	0	2	2	2	2
34506	B	1,1,1-TRICHLOROETH,T	CCL3-CH3	1309		0000.200	0	0	1	2	2	2	2
34511	A	1,1,2-TRICHLOROETH,T	CCL2-CCL	1034	O301180	0003.000	0	0	0	2	2	2	2
34511	B	1,1,2-TRICHLOROETH,T	CCL2-CCL	1310		0000.200	0	0	1	2	2	2	2
34516	A	1,1,2,2-TETRCHLORO,T	(CCL2H)2	1030	O301180	0003.000	0	0	0	2	2	2	2
34516	B	1,1,2,2-TETRCHLORO,T	(CCL2H)2	1306		0000.200	0	0	1	2	2	2	2
34521	A	BENZO(GHI)PERYLENE,T	BZPRY	1074	O302180	0010.000	0	0	0	1	2	2	2
34524	A	BENZOPERYLENE, BTM	B-BZPRY	1120	O502180	0400.000	0	0	0	0	2	2	2
34526	A	BENZO(A)ANTHRACENE,T	BZ ANTR	1070	O302180	0005.000	0	0	0	1	2	2	2
34529	A	BENZOANTHRACEN, BTM	B-BZANTR	1116	O502180	0400.000	0	0	0	0	2	2	2
34536	A	1,2-DICHLOROBENZEN,T	12DCBZ	1085	O302180	0005.000	0	0	0	1	2	2	2
34536	B	1,2-DICHLOROBENZEN,T	12DCBZ	1314		0000.200	0	0	1	2	2	2	2
34536	C	1,2-DICHLOROBENZEN,T	12DCBZ	1320		0003.000	0	0	1	2	2	2	2
34539	A	1-2 DICHLORBZ, BTM	B-12DCBZ	1140	O502180	0200.000	0	0	0	0	2	2	2
34541	A	1,2-DICHLOROPROPAN,T	CLCCCL-C	1025	O301180	0003.000	0	0	0	2	2	2	2
34541	B	1,2-DICHLOROPROPAN,T	CLCCCL-C	1301		0000.200	0	0	1	2	2	2	2
34546	A	12TRANSDICL-ETHYLENE	CLC=CCL	1024	O301180	0003.000	0	0	0	2	2	2	2
34546	B	12TRANSDICL-ETHYLENE	CLC=CCL	1300		0000.200	0	0	1	2	2	2	2
34551	A	1,2,4-TRICHLOROBEN,T	TRIBZ	1111	O302180	0005.000	0	0	0	1	2	2	2
34554	A	TRICLBENZENE, BTM	B-TRIBZ	1166	O502180	0200.000	0	0	0	0	2	2	2
34556	A	DIBENZANTHRACENE, T	DIBZAN	1083	O302180	0010.000	0	0	0	1	2	2	2
34559	A	DIBENZANTHRA, BTM	B-DIBZAN	1129	O502180	0400.000	0	0	0	0	2	2	2
34561	A	1,3-DICHLOROPROPEN,T	CLCC-CCL	1026	O301180	0003.000	0	0	0	2	2	2	2
34561	B	1,3-DICHLOROPROPEN,T	CLCC-CCL	1302		0000.200	0	0	1	2	2	2	2
34566	A	1,3-DICHLOROBENZEN,T	13DCBZ	1086	O302180	0005.000	0	0	0	1	2	2	2
34566	B	1,3-DICHLOROBENZEN,T	13DCBZ	1315		0000.200	0	0	1	2	2	2	2
34566	C	1,3-DICHLOROBENZEN,T	13DCBZ	1321		0003.000	0	0	1	2	2	2	2
34569	A	1-3 DICHLORBZ, BTM	B-13DCBZ	1141	O502180	0200.000	0	0	0	0	2	2	2
34571	A	1,4-DICHLOROBENZEN,T	14DCBZ	1087	O302180	0005.000	0	0	0	1	2	2	2
34571	B	1,4-DICHLOROBENZEN,T	14DCBZ	1316		0000.200	0	0	1	2	2	2	2
34571	C	1,4-DICHLOROBENZEN,T	14DCBZ	1322		0003.000	0	0	1	2	2	2	2
34574	A	1-4 DICHLORBZ, BTM	B-14DCBZ	1142	O502180	0200.000	0	0	0	0	2	2	2

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Parameter Code	MC	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
34576	A	2-CL-ETHYLVINYLETHER	CL-E-V-E	1017	O301180	0003.000	0	0	0	2	2	2	2
34576	B	2-CL-ETHYLVINYLETHER	CL-E-V-E	1293		0000.200	0	0	1	2	2	2	2
34581	A	2-CHLORONAPHTHALEN,T	CLNPH	1080	O302180	0005.000	0	0	0	1	2	2	2
34584	A	CHLORONAPHTH, BTM	B-CLNPH	1126	O502180	0200.000	0	0	0	0	2	2	2
34586	A	2-CHLOROPHENOL, TOT.	CH-PH	1056	O303180	0005.000	0	0	0	1	2	2	2
34589	A	CHLOR-PHENO, T-BTM	B-CH-PH	1045		0200.000	0	0	0	0	2	2	2
34591	A	2-NITROPHENOL, TOTAL	2-N-PH	1062	O303180	0005.000	0	0	0	1	2	2	2
34594	A	2-NITROPHEN, T-BTM	B-2NPH	1050		0200.000	0	0	0	0	2	2	2
34596	A	DI-N-OCTYLPHTHALAT,T	OCTPT	1093	O302180	0010.000	0	0	0	1	2	2	2
34599	A	DI-N-OCTYLPHTH, BTM	B-OCTPT	1148	O502180	0400.000	0	0	0	0	2	2	2
34601	A	2,4-DICHLOROPHENOL,T	DI-CH-PH	1057	O303180	0005.000	0	0	0	1	2	2	2
34604	A	DICHPHENOL, T-BTM	B-DICHPH	1046		0200.000	0	0	0	0	2	2	2
34606	A	2,4-DIMETHYLPHENOL,T	DI-ME-PH	1059	O303180	0005.000	0	0	0	1	2	2	2
34608	A	2,4-DP, SUSPENDED	2,4-DP S	0486	O240180	0000.010	0	1	2	2	2	2	2
34609	A	2,4-DP, BTM MATERIAL	24DP BTM	0403	O510180	0000.100	0	0	1	2	2	2	2
34609	B	DIMET PHENOL, T-BTM	B-DIMEPH	1047		0200.000	0	0	0	0	2	2	2
34611	A	2,4-DINITROTOLUENE,T	24DNT	1091	O302180	0005.000	0	0	0	1	2	2	2
34614	A	2-4 DINITTOL, BTM	B-24DNT	1146	O502180	0200.000	0	0	0	0	2	2	2
34616	A	2,4-DINITROPHENOL, T	DI-N-PH	1061	O303180	0020.000	0	0	0	1	2	2	2
34619	A	DIN PHENOL, T-BTM	B-DINPH	1049		0600.000	0	0	0	0	2	2	2
34621	A	2,4,6-TRICHLOROPHE,T	TRICHPH	1058	O303180	0020.000	0	0	0	1	2	2	2
34624	A	TRICHLROPHENOL T-BTM	B-TRICPH	1054		0600.000	0	0	0	0	2	2	2
34626	A	2,6-DINITROTOLUENE,T	26DNT	1092	O302180	0005.000	0	0	0	1	2	2	2
34629	A	2-6 DINITTOL, BTM	B-26DNT	1147	O502180	0200.000	0	0	0	0	2	2	2
34631	A	3,3-DICHLOROBENZID,T	33DCBZ	1088	O302180	0001.000	0	0	0	1	2	2	2
34634	A	3-3 DICHLBZID, BTM	B-33DCBZ	1143	O502180	0010.000	0	0	0	0	2	2	2
34636	A	4-BROMOPHENYL PHEN,T	BRPHPH	1079	O302180	0005.000	0	0	0	1	2	2	2
34639	A	BROMOPHENPHEN, BTM	B-BRPHPH	1125	O502180	0200.000	0	0	0	0	2	2	2
34641	B	4-CHLOROPHENYL ETH,T	CLPHPH	1081	O302180	0005.000	0	0	0	1	2	2	2
34641	A	CHLORPHENPHEN, BTM	B-CLPHPH	1127	O502180	0200.000	0	0	0	0	2	2	2
34646	A	4-NITROPHENOL, TOTAL	4-N-PH	1063	O303180	0030.000	0	0	0	1	2	2	2
34649	A	4-NITROPHEN, T-BTM	B-4NPH	1051		0600.000	0	0	0	0	2	2	2
34657	A	DINITROMETHYLPHENO,T	DI-N-MEP	1060	O303180	0030.000	0	0	0	1	2	2	2
34660	A	DIN MET PHEN, T-BTM	B-DINMEP	1048		0600.000	0	0	0	0	2	2	2
34662	A	AROCHLOR 1221, DIS.	PCB1221D	0783	O150180	0000.100	0	0	1	2	2	2	2
34663	A	AROCHLOR 1221, SUS.	PCB1221S	0784	O250180	0000.100	0	0	1	2	2	2	2
34665	A	AROCHLOR 1232, DIS.	PCB1232D	0779	O150180	0000.100	0	0	1	2	2	2	2
34666	A	AROCHLOR 1232, SUS.	PCB1232S	0780	O250180	0000.100	0	0	1	2	2	2	2
34668	A	DICHLORODIFLUOROME,T	CCL2F2	1020	O301180	0003.000	0	0	0	2	2	2	2
34668	B	DICHLORODIFLUOROME,T	CCL2F2	1296		0000.200	0	0	1	2	2	2	2
34671	A	AROCHLOR 1016, TOT	PCB1016C	0789	O350180	0000.100	0	0	1	2	2	2	2
34671	B	AROCHLOR 1016, TOT.	PCB1016T	0809	O350180	0000.100	0	0	1	2	2	2	2
34672	A	AROCHLOR 1016, DIS.	PCB1016D	0787	O150180	0000.100	0	0	1	2	2	2	2
34673	A	AROCHLOR 1016, SUS.	PCB1016S	0788	O250180	0000.100	0	0	1	2	2	2	2
34675	A	2,3,7,8-TETRACHLOR,T	CLBZDX	1110	O302180	0001.000	0	0	0	1	2	2	2
34678	A	TETCLBENZDIOXN, BTM	B-CLBZDX	1165	O502180	0010.000	0	0	0	0	2	2	2

Parameter Methods

Parameter Code	M C	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
34694	A	PHENOL, TOTAL	PHENOL T	1065	O303180	0005.000	0	0	0	1	2	2	2
34695	A	PHENOL, T-BTM	B-PHENOL	1053		0200.000	0	0	0	0	2	2	2
34696	A	NAPHTHALENE, TOTAL	NAPHT	1103	O302180	0005.000	0	0	0	1	2	2	2
34699	A	TRANS13DICHLOROPROPE	CLCC-CCL	1324		0003.000	0	0	1	2	2	2	2
34699	B	TRANS13DICHLOROPROPE	CLCC-CCL	1327		0000.200	0	0	1	2	2	2	2
34704	A	CIS13DICHLOROPROPENT	CLCC-CCL	1323		0003.000	0	0	1	2	2	2	2
34704	B	CIS13DICHLOROPROPENT	CLCC-CCL	1326		0000.200	0	0	1	2	2	2	2
38260	A	MBAS, TOTAL	DETRGNTS	0096		0000.010	0	1	2	2	2	2	2
38930	A	PICLORAM, BTM. MAT.	PICLOBTM	0750		0000.100	0	0	1	2	2	2	2
38931	A	DICAMBA, BTM. MAT.	DICAMBTM	0751		0000.100	0	0	1	2	2	2	2
39011	A	DISULFOTON	DISULFOT	0592	O330180	0000.010	0	1	2	2	2	2	2
39023	A	PHORATE, TOTAL	PHORAT-T	0593	O330180	0000.010	0	1	2	2	2	2	2
39024	A	PROPAZINE, TOTAL	PRPZ TOT	0844	O370180	0000.100	0	0	1	2	2	2	2
39030	C	TRIFLURALIN	TRIFLURA	1332	O310683	0000.100	0	0	1	2	2	2	2
39032	A	PENTACHLOROPHENOL, T	PENCH PH	1064	O303180	0030.000	0	0	0	1	2	2	2
39034	A	PERTHANE, TOT.	PERTHN T	0348	O320180	0000.100	0	0	1	2	2	2	2
39034	B	PERTHANE, TOT (COMB)	PERTHN C	0761	O420180	0000.100	0	0	1	2	2	2	2
39040	A	DEF, TOTAL	DEF	0802	O330180	0000.010	0	1	2	2	2	2	2
39050	A	DEF IN BOTTOM	DEF BTM	0816		0000.100	0	0	1	2	2	2	2
39051	A	METHOMYL, TOTAL	METMYL-T	0638	O310783	0000.500	0	0	1	2	2	2	2
39052	A	PROPHAM, TOTAL	PROPHM-T	0637	O310783	0000.500	0	0	1	2	2	2	2
39054	A	SIMETRYN, TOTAL	STYN TOT	0720	O370180	0000.100	0	0	1	2	2	2	2
39055	A	SIMAZINE, TOTAL	SMZN TOT	0719	O370180	0000.100	0	0	1	2	2	2	2
39056	A	PROMETONE, TOTAL	PTON TOT	0718	O370180	0000.100	0	0	1	2	2	2	2
39057	A	PROMETRYNE, TOTAL	PTYN TOT	0631	O370180	0000.100	0	0	1	2	2	2	2
39061	A	PENTCH PHEN, T-BTM	B-PECHPH	1052		0600.000	0	0	0	0	2	2	2
39076	A	ALPHA BHC ISOMER BTM	A BHCBTM	0823		0000.100	0	0	1	2	2	2	2
39100	A	2-ETHLYHEXYL PHTHA,T	ETHEPT	1094	O302180	0005.000	0	0	0	1	2	2	2
39102	A	B-ETHHEXPHTH, BTM	B-ETHEPT	1149	O502180	0200.000	0	0	0	0	2	2	2
39110	A	DI-N-BUTYL PHTHALA,T	DIBU PT	1084	O302180	0005.000	0	0	0	1	2	2	2
39112	A	DINBUTPHTHA, BTM	B-DIBUPT	1130	O502180	0200.000	0	0	0	0	2	2	2
39120	A	BENZIDINE, TOTAL	BENZID	1069	O302180	0001.000	0	0	0	1	2	2	2
39121	A	BENZIDINE, BTM	B-BENZID	1115	O502180	0010.000	0	0	0	0	2	2	2
39175	A	VINYL CHLORIDE, TOTA	CH2=CHCL	1037	O301180	0001.000	0	0	0	2	2	2	2
39175	B	VINYL CHLORIDE, TOTA	CH2=CHCL	1313		0000.200	0	0	1	2	2	2	2
39180	A	TRICHLOROETHYLENE,T	CL2=CCL	1035	O301180	0003.000	0	0	0	2	2	2	2
39180	B	TRICHLOROETHYLENE,T	CL2=CCL	1311		0000.200	0	0	1	2	2	2	2
39250	A	GROSS PCNS T. (COMB)	PCN CMB	0187	O420180	0000.100	0	0	1	2	2	2	2
39250	B	GROSS PCNS T (WATER)	PCN TOT	0393	O320180	0000.100	0	0	1	2	2	2	2
39251	A	GROSS PCN, BTM MAT	PCN BTM	0395	O520180	0001.000	0	0	0	1	2	2	2
39330	A	ALDRIN, TOTAL (COMB)	ALD CMB	0175	O420180	0000.010	0	1	2	2	2	2	2
39330	C	ALDRIN, TOT (WATER)	ALD TOT	0350	O320180	0000.010	0	1	2	2	2	2	2
39330	B	ALDRIN, TOTAL(WATER)	ALD TOT	0738	0320280	0000.001	1	2	2	2	2	2	2
39331	A	ALDRIN, DISSOLVED	ALD DISS	0463	O120180	0000.010	0	1	2	2	2	2	2
39332	A	ALDRIN, SUSPENDED	ALD SUS	0404	O220180	0000.010	0	1	2	2	2	2	2
39333	A	ALDRIN, BTM. MAT.	ALD BTM	0361	O520180	0000.100	0	0	1	2	2	2	2

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Parameter Code	M C	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
39337	A	ALPHA BHC, TOT (H2O)	ABHC WAT	0806	O320180	0000.010	0	1	2	2	2	2	2
39338	A	BETA BHC, TOTAL	B BHCWAT	0807	O320180	0000.010	0	1	2	2	2	2	2
39340	A	LINDANE, TOT. (COMB)	LIND CMB	0184	O420180	0000.010	0	1	2	2	2	2	2
39340	C	LINDANE, TOT (WATER)	LIND TOT	0359	O320180	0000.010	0	1	2	2	2	2	2
39340	B	LINDANE, TOT.(WATER)	LIND TOT	0746	O320280	0000.001	1	2	2	2	2	2	2
39341	A	LINDANE, DISSOLVED	LIND DIS	0472	O120180	0000.010	0	1	2	2	2	2	2
39342	A	LINDANE, SUSPENDED	LIND SUS	0412	O220180	0000.010	0	1	2	2	2	2	2
39343	A	LINDANE, BTM MAT	LIND BTM	0370	O520180	0000.100	0	0	1	2	2	2	2
39350	A	CHLORDANE, T. (COMB)	CHL CMB	0176	O420180	0000.100	0	0	1	2	2	2	2
39350	B	CHLORDANE, T (WATER)	CHL TOT	0351	O320180	0000.100	0	0	1	2	2	2	2
39351	A	CHLORDANE, BTM MAT	CHL BTM	0362	O520180	0001.000	0	0	0	1	2	2	2
39352	A	CHLORDANE, DISSOLVED	CHL DISS	0464	O120180	0000.100	0	0	1	2	2	2	2
39353	A	CHLORDANE, SUSPENDED	CHL SUS	0405	O220180	0000.100	0	0	1	2	2	2	2
39357	A	RONNEL, TOTAL	RONN WAT	0804	O330180	0000.010	0	1	2	2	2	2	2
39360	A	DDD, TOTAL (COMB)	DDD CMB	0177	O420180	0000.010	0	1	2	2	2	2	2
39360	C	DDD, TOTAL (WATER)	DDD TOT	0352	O320180	0000.010	0	1	2	2	2	2	2
39360	B	DDD, TOTAL. (WATER)	DDD TOT	0739	O320280	0000.001	1	2	2	2	2	2	2
39361	A	DDD, DISSOLVED	DDD DISS	0465	O120180	0000.010	0	1	2	2	2	2	2
39362	A	DDD, SUSPENDED	DDD SUS	0406	O220180	0000.010	0	1	2	2	2	2	2
39363	A	DDD, BTM. MATERIAL	DDD BTM	0363	O520180	0000.100	0	0	1	2	2	2	2
39365	A	DDE, TOTAL (COMB)	DDE CMB	0178	O420180	0000.010	0	1	2	2	2	2	2
39365	C	DDE, TOTAL (WATER)	DDE TOT	0353	O320180	0000.010	0	1	2	2	2	2	2
39365	B	DDE, TOTAL. (WATER)	DDE TOT	0740	O320280	0000.001	1	2	2	2	2	2	2
39366	A	DDE, DISSOLVED	DDE DISS	0466	O120180	0000.010	0	1	2	2	2	2	2
39367	A	DDE, SUSPENDED	DDE SUS	0407	O220180	0000.010	0	1	2	2	2	2	2
39368	A	DDE, BTM. MATERIAL	DDE BTM	0364	O520180	0000.100	0	0	1	2	2	2	2
39370	A	DDT, TOTAL (COMB)	DDT CMB	0179	O420180	0000.010	0	1	2	2	2	2	2
39370	C	DDT, TOTAL. (WATER)	DDT TOT	0354	O320180	0000.010	0	1	2	2	2	2	2
39370	B	DDT, TOT. (WATER)	DDT TOT	0741	O320280	0000.001	1	2	2	2	2	2	2
39371	A	DDT, DISSOLVED	DDT DISS	0467	O120180	0000.010	0	1	2	2	2	2	2
39372	A	DDT, SUSPENDED	DDT SUS	0408	O220180	0000.010	0	1	2	2	2	2	2
39373	A	DDT, BTM. MATERIAL	DDT BTM	0365	O520180	0000.100	0	0	1	2	2	2	2
39380	A	DIELDRIN, T. (COMB)	DIEL CMB	0180	O420180	0000.010	0	1	2	2	2	2	2
39380	C	DIELDRIN, T. (WATER)	DIEL TOT	0355	O320180	0000.010	0	1	2	2	2	2	2
39380	B	DIELDRIN,TOT.(WATER)	DIEL TOT	0742	O320280	0000.001	1	2	2	2	2	2	2
39381	A	DIELDRIN, DISSOLVED	DIEL DIS	0468	O120180	0000.010	0	1	2	2	2	2	2
39382	A	DIELDRIN, SUSPENDED	DIEL SUS	0409	O220180	0000.010	0	1	2	2	2	2	2
39383	A	DIELDRIN, BTM MAT	DIEL BTM	0366	O520180	0000.100	0	0	1	2	2	2	2
39388	C	ENDOSULFAN I TOTAL	ENDOS T	0349	O320180	0000.010	0	1	2	2	2	2	2
39388	B	ENDOSULFAN, TOT.	ENDOS T	0737	O320280	0000.001	1	2	2	2	2	2	2
39388	A	ENDOSULFAN, T (COMB)	ENDOS CM	0762	O420180	0000.010	0	1	2	2	2	2	2
39389	A	ENDOSULFAN IN BOTTOM	ENDOS B	0346	O520180	0000.100	0	0	1	2	2	2	2
39390	A	ENDRIN, TOTAL (COMB)	END CMB	0181	O420180	0000.010	0	1	2	2	2	2	2
39390	C	ENDRIN, TOTAL(WATER)	END TOT	0356	O320180	0000.010	0	1	2	2	2	2	2
39390	B	ENDRIN, TOT. (WATER)	END TOT	0743	O320280	0000.001	1	2	2	2	2	2	2
39391	A	ENDRIN, DISSOLVED	END DISS	0469	O120180	0000.010	0	1	2	2	2	2	2

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Parameter Code	MC	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
39392	A	ENDRIN, SUSPENDED	END SUSP	0483	O220180	0000.010	0	1	2	2	2	2	2
39393	A	ENDRIN, BTM MAT	END BTM	0367	O520180	0000.100	0	0	1	2	2	2	2
39398	A	ETHION, TOT. (COMB)	ETHI CMB	0140	O430180	0000.010	0	1	2	2	2	2	2
39398	B	ETHION, TOTAL(WATER)	ETHI TOT	0379	O330180	0000.010	0	1	2	2	2	2	2
39399	A	ETHION, BTM MATERIAL	ETHI BTM	0386	O530180	0000.100	0	0	1	2	2	2	2
39400	A	TOXAPHENE, T. (COMB)	TOX CMB	0185	O420180	0001.000	0	0	0	1	2	2	2
39400	B	TOXAPHENE, T (WATER)	TOX TOT	0360	O320180	0001.000	0	0	0	1	2	2	2
39401	A	TOXAPHENE, DISSOLVED	TOX DISS	0473	O120180	0001.000	0	0	0	1	2	2	2
39402	A	TOXAPHENE, SUSPENDED	TOX SUS	0413	O220180	0001.000	0	0	0	1	2	2	2
39403	A	TOXAPHENE, BTM MAT	TOX BTM	0371	O520180	0010.000	0	0	0	0	1	2	2
39410	A	HEPTACHLOR, T (COMB)	HEPT CMB	0182	O420180	0000.010	0	1	2	2	2	2	2
39410	C	HEPTACHLOR T.(WATER)	HEPT TOT	0357	O320180	0000.010	0	1	2	2	2	2	2
39410	B	HEPTACHLOR T (WATER)	HEPT TOT	0744	O320280	0000.001	1	2	2	2	2	2	2
39411	A	HEPTACHLOR, DISS.	HEPT DIS	0470	O120180	0000.010	0	1	2	2	2	2	2
39412	A	HEPTACHLOR, SUSPENDE	HEPT SUS	0410	O220180	0000.010	0	1	2	2	2	2	2
39413	A	HEPTACHLOR, BTM MAT	HEPT BTM	0368	O520180	0000.100	0	0	1	2	2	2	2
39420	A	HEPT EPOX, T. (COMB)	HEOX CMB	0183	O420180	0000.010	0	1	2	2	2	2	2
39420	C	HEPT EPOX, T (WATER)	HEOX TOT	0358	O320180	0000.010	0	1	2	2	2	2	2
39420	B	HEPT EPOX, TO(WATER)	HEOX TOT	0745	O320280	0000.001	1	2	2	2	2	2	2
39421	A	HEPT EPOX, DIS.	HEOX DIS	0471	O120180	0000.010	0	1	2	2	2	2	2
39422	A	HEPT EPOX, SUSP.	HEOX SUS	0411	O220180	0000.010	0	1	2	2	2	2	2
39423	A	HEPT EPOX, BTM MAT	HEOX BTM	0369	O520180	0000.100	0	0	1	2	2	2	2
39480	A	METHOXYCHLOR T(COMB)	METH CMB	0107	O420180	0000.010	0	1	2	2	2	2	2
39480	B	METHOXYCHLOR T.(WAT)	METH TOT	0400	O320180	0000.010	0	1	2	2	2	2	2
39481	A	METHOXYCHLOR, BTM	METH BOT	0401	O520180	0000.100	0	0	1	2	2	2	2
39488	A	AROCHLOR 1221, TOT	PCB1221C	0785	O350180	0000.100	0	0	1	2	2	2	2
39488	B	AROCHLOR 1221, TOT.	PCB1221T	0810	O350180	0000.100	0	0	1	2	2	2	2
39491	A	AROCHLOR 1221, BTM.	PCB1221B	0786	O520180	0001.000	0	0	0	1	2	2	2
39492	A	AROCHLOR 1232, TOT	PCB1232C	0781	O350180	0000.100	0	0	1	2	2	2	2
39492	B	AROCHLOR 1232, TOT.	PCB1232T	0811	O350180	0000.100	0	0	1	2	2	2	2
39495	A	AROCHLOR 1232, BTM.	PCB1232B	0782	O520180	0001.000	0	0	0	1	2	2	2
39496	A	AROCHLOR 1242, TOT	PCB1242C	0777	O350180	0000.100	0	0	1	2	2	2	2
39496	B	AROCHLOR 1242, TOT.	PCB1242T	0812	O350180	0000.100	0	0	1	2	2	2	2
39499	A	AROCHLOR 1242, BTM.	PCB1242B	0778	O520180	0001.000	0	0	0	1	2	2	2
39500	A	AROCHLOR 1248, TOT	PCB1248C	0773	O350180	0000.100	0	0	1	2	2	2	2
39500	B	AROCHLOR 1248, TOT.	PCB1248T	0813	O350180	0000.100	0	0	1	2	2	2	2
39501	A	AROCHLOR 1248, DIS.	PCB1248D	0771	O150180	0000.100	0	0	1	2	2	2	2
39502	A	AROCHLOR 1248, SUS.	PCB1248S	0772	O250180	0000.100	0	0	1	2	2	2	2
39503	A	AROCHLOR 1248, BTM.	PCB1248B	0774	O520180	0001.000	0	0	0	1	2	2	2
39504	A	AROCHLOR 1254, TOT	PCB1254C	0769	O350180	0000.100	0	0	1	2	2	2	2
39504	B	AROCHLOR 1254, TOT.	PCB1254T	0814	O350180	0000.100	0	0	1	2	2	2	2
39505	A	AROCHLOR 1254, DIS.	PCB1254D	0767	O150180	0000.100	0	0	1	2	2	2	2
39506	A	AROCHLOR 1254, SUS.	PCB1254S	0768	O250180	0000.100	0	0	1	2	2	2	2
39507	A	AROCHLOR 1254, BTM.	PCB1254B	0770	O520180	0001.000	0	0	0	1	2	2	2
39508	A	AROCHLOR 1260, TOT	PCB1260C	0765	O350180	0000.100	0	0	1	2	2	2	2
39508	B	AROCHLOR 1260, TOT.	PCB1260T	0815	O350180	0000.100	0	0	1	2	2	2	2

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Parameter Code	M C	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
39509	A	AROCHLOR 1260, DIS.	PCB1260D	0763	O150180	0000.100	0	0	1	2	2	2	2
39510	A	AROCHLOR 1260, SUS.	PCB1260S	0764	O250180	0000.100	0	0	1	2	2	2	2
39511	A	AROCHLOR 1260, BTM.	PCB1260B	0766	O520180	0001.000	0	0	0	1	2	2	2
39514	A	AROCHLOR 1016, BTM.	PCB1016B	0790	O520180	0001.000	0	0	0	1	2	2	2
39516	A	GROSS PCBS T. (COMB)	PCB CMB	0186	O420180	0000.100	0	0	1	2	2	2	2
39516	B	GROSS PCBS T (WATER)	PCB TOT	0392	O320180	0000.100	0	0	1	2	2	2	2
39517	A	GROSS PCB, DISS	PCB DISS	0474	O120180	0000.100	0	0	1	2	2	2	2
39518	A	GROSS PCBS, SUSPENDE	PCB SUS	0414	O220180	0000.100	0	0	1	2	2	2	2
39519	A	GROSS PCB, BTM MAT	PCB BTM	0394	O520180	0001.000	0	0	0	1	2	2	2
39530	A	MALATHION, TOT(COMB)	MALA CMB	0141	O430180	0000.010	0	1	2	2	2	2	2
39530	B	MALATHION, T (WATER)	MALA TOT	0380	O330180	0000.010	0	1	2	2	2	2	2
39531	A	MALATHION, BTM MAT	MALA BTM	0387	O530180	0000.100	0	0	1	2	2	2	2
39532	A	MALATHION, DISSOLVED	MALA DIS	0425	O130180	0000.010	0	1	2	2	2	2	2
39533	A	MALATHION, SUSPENDED	MALA SUS	0419	O230180	0000.010	0	1	2	2	2	2	2
39540	A	PARATHION, TOT(COMB)	EPAR CMB	0144	O430180	0000.010	0	1	2	2	2	2	2
39540	B	PARATHION, TOT.	EPAR TOT	0383	O330180	0000.010	0	1	2	2	2	2	2
39541	A	PARATHION, BTM. MAT.	EPAR BTM	0390	O530180	0000.100	0	0	1	2	2	2	2
39542	A	PARATHION, DISSOLVED	PARA DIS	0427	O130180	0000.010	0	1	2	2	2	2	2
39543	A	PARATHION, SUSPENDED	PARA SUS	0421	O230180	0000.010	0	1	2	2	2	2	2
39570	A	DIAZINON, TOT (COMB)	DIAZ CMB	0139	O430180	0000.010	0	1	2	2	2	2	2
39570	B	DIAZINON, TOT(WATER)	DIAZ TOT	0378	O330180	0000.010	0	1	2	2	2	2	2
39571	A	DIAZINON, BTM MAT	DIAZ BTM	0385	O530180	0000.100	0	0	1	2	2	2	2
39572	A	DIAZINON, DISSOLVED	DIAZ DIS	0423	O130180	0000.010	0	1	2	2	2	2	2
39573	A	DIAZINON, SUSPENDED	DIAZ SUS	0417	O230180	0000.010	0	1	2	2	2	2	2
39580	A	AZINPHOS-METHYL	AZINPHOS	0805	O330180	0000.100	0	0	1	2	2	2	2
39581	A	AZINPHOS-METHYL	AZINPHOS	0819		0000.100	0	0	1	2	2	2	2
39600	A	METHYLPAR TOT (COMB)	MPAR CMB	0142	O430180	0000.010	0	1	2	2	2	2	2
39600	B	METHYLPARATHION TOT.	MPAR TOT	0381	O330180	0000.010	0	1	2	2	2	2	2
39601	A	METHYLPARATHION, BTM	MPAR BTM	0388	O530180	0000.100	0	0	1	2	2	2	2
39602	A	METHYLPARATHION, DIS	MPAR DIS	0426	O130180	0000.010	0	1	2	2	2	2	2
39603	A	METHYLPARATHION, SUS	MPAR SUS	0420	O230180	0000.010	0	1	2	2	2	2	2
39610	A	PHOSDRIN, TOTAL	PHOSDR-T	0594	O330180	0000.010	0	1	2	2	2	2	2
39630	A	ATRAZINE, TOTAL	ATRZ TOT	0717	O370180	0000.100	0	0	1	2	2	2	2
39700	A	HEXACHLOROBENZENE,T	HXCLBZ	1097	O302180	0005.000	0	0	0	1	2	2	2
39701	A	HEX CL BZ, BTM	B-HXCLBZ	1152	O502180	0200.000	0	0	0	0	2	2	2
39702	A	HEXACHLOROBUTADIEN,T	HXCBUD	1098	O302180	0005.000	0	0	0	1	2	2	2
39705	A	HEXCLBUTDIENE, BTM	B-HXCBUD	1153	O502180	0200.000	0	0	0	0	2	2	2
39720	A	PICLORAM, TOTAL	PICLOTOT	0748		0000.010	0	1	2	2	2	2	2
39730	A	2,4-D, TOTAL (COMB)	2,4-D C	0101	O440180	0000.010	0	1	2	2	2	2	2
39730	B	2,4-D, TOT. (WATER)	24D TOT	0372	O340180	0000.010	0	1	2	2	2	2	2
39731	A	2,4-D, BTM. MATERIAL	24D BTM	0375	O510180	0000.100	0	0	1	2	2	2	2
39732	A	2,4-D, DISSOLVED	24D DISS	0477	O140180	0000.010	0	1	2	2	2	2	2
39733	A	2,4-D, SUSPENDED	24D SUS	0480	O240180	0000.010	0	1	2	2	2	2	2
39740	A	2,4,5-T, TOT (COMB)	245-T C	0102	O440180	0000.010	0	1	2	2	2	2	2
39740	B	2,4,5-T TOT. (WATER)	245T TOT	0373	O340180	0000.010	0	1	2	2	2	2	2
39741	A	2,4,5-T, BTM MAT	245T BTM	0376	O510180	0000.100	0	0	1	2	2	2	2

Parameter Methods

Parameter Code	MC	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
39742	A	2,4,5-T DISSOLVED	245T DIS	0478	O140180	0000.010	0	1	2	2	2	2	2
39743	A	2,4,5-T, SUSPENDED	245T SUS	0481	O240180	0000.010	0	1	2	2	2	2	2
39750	A	CARBARYL	CARBARYL	0636	O310783	0000.500	0	0	1	2	2	2	2
39755	A	MIREX, TOTAL (COMB)	MIRX CMB	0188	O420180	0000.010	0	1	2	2	2	2	2
39755	B	MIREX, TOT.	MIRX TOT	0544	O320180	0000.010	0	1	2	2	2	2	2
39756	A	MIREX, DISSOLVED	MIRX DIS	0542	O120180	0000.010	0	1	2	2	2	2	2
39757	A	MIREX, SUSPENDED	MIRX SUS	0543	O220180	0000.010	0	1	2	2	2	2	2
39758	A	MIREX, BTM MAT	MIRX BTM	0545	O520180	0000.100	0	0	1	2	2	2	2
39760	A	SILVEX, TOTAL (COMB)	SILV T C	0103	O440180	0000.010	0	1	2	2	2	2	2
39760	B	SILVEX, TOTAL(WATER)	SILV TOT	0374	O340180	0000.010	0	1	2	2	2	2	2
39761	A	SILVEX, BTM MAT	SILV BTM	0377	O510180	0000.100	0	0	1	2	2	2	2
39762	A	SILVEX, DISSOLVED	SILV DIS	0479	O140180	0000.010	0	1	2	2	2	2	2
39763	A	SILVEX, SUSPENDED	SILV SUS	0482	O240180	0000.010	0	1	2	2	2	2	2
39786	A	TRITHION TOT. (COMB)	ETRI CMB	0145	O430180	0000.010	0	1	2	2	2	2	2
39786	B	TRITHION, TOT.	ETRI TOT	0384	O330180	0000.010	0	1	2	2	2	2	2
39787	A	TRITHION, BTM. MAT.	ETRI BTM	0391	O530180	0000.100	0	0	1	2	2	2	2
39790	A	METHYLTRITH T (COMB)	MTRI CMB	0143	O430180	0000.010	0	1	2	2	2	2	2
39790	B	METHYLTRITHION, T.	MTRI TOT	0382	O330180	0000.010	0	1	2	2	2	2	2
39791	A	METHYL TRITHION, BTM	MTRI BTM	0389	O530180	0000.100	0	0	1	2	2	2	2
45617	B	12-CT-DICHLOROETHENE	12-CT-DI	1008	O311583	0000.200	0	0	1	2	2	2	2
70300	A	ROE, DISS. AT 180 C	DS 180C	0027	I175078	0001.000	0	0	0	1	2	3	3
70507	A	PHOS TOT ORTHO AS P	PO4 AS P	0297	I460178	0000.010	0	1	2	2	2	2	2
70507	B	PHOS ORTHO-P TOT LOW	PO4-PTLL	0838		0000.001	1	2	3	2	2	2	2
70953	A	CHLOROPHYLL-A PHY	C A PHCF	0586	B653079	0000.100	0	0	1	2	2	2	2
70954	A	CHLOROPHYLL-B PHY	C B PHCF	0587	B653079	0000.100	0	0	1	2	2	2	2
70957	A	CHLOROPHYLL-A PER	C A PECF	0588	B663079	0000.100	0	0	1	2	2	2	2
70958	A	CHLOROPHYLL-B PER	C B PECF	0589	B663079	0000.100	0	0	1	2	2	2	2
71820	A	DENSITY (20 DEG C)	DENSITY	0024	I131278	0000.990	0	0	3	4	0	0	0
71825	A	ACIDITY AS H	H+	0001	I102078	0000.100	0	0	1	2	2	3	3
71825	B	ACIDITY 2ND DVT AS H	H+LL	1266		0000.010	0	2	3	3	3	3	3
71865	D	IODIDE, DISSOLV. AUT	I. DIS.	1202	I237178	0000.001	1	2	2	2	2	2	2
71870	E	BROMIDE-AUTO-FLUOR	BR-AUTO	1246		0000.010	0	2	2	2	2	2	2
71870	F	BROMIDE-IC-LOW ION	BR-IC-LL	1258	I205884	0000.010	0	1	2	2	2	2	2
71890	B	MERCURY, DISSOLVED	HG DIS	0226	I246278	0000.100	0	0	1	2	2	2	2
71900	B	MERCURY, TOTAL	HG TOT	0227	I346278	0000.100	0	0	1	2	2	2	2
71921	A	MERCURY, BTM MAT	HG B.M.	0511	I546278	0000.010	0	1	2	2	2	2	2
77128	A	STYRENE	STYRENE	1325		0003.000	0	0	1	2	2	2	2
77128	B	STYRENE	STYRENE	1328		0000.200	0	0	1	2	2	2	2
77168	B	11DICHLORO1PROPENE	11DICHLO	1478	D311583	.2	0	0	1	2	2	2	2
77170	B	22DICHLOROPROPANE	22DICHLO	1479	D311583	.2	0	0	1	2	2	2	2
77173	B	13DICHLOROPROPANE	13DICHLO	1480	D311583	.2	0	0	1	2	2	2	2
77275	B	12CHLOROTOLUENE	12CHLORO	1481	D311583	.2	0	0	1	2	2	2	2
77277	B	14CHLOROTOLUENE	14CHLORO	1482	D311583	.2	0	0	1	2	2	2	2
77443	B	123TRICHLOROPROPRANE	123TRICH	1483	D311583	.2	0	0	1	2	2	2	2
77562	B	1112TETRACHLOROETHAN	1112TETR	1484	D311583	.2	0	0	1	2	2	2	2
77651	B	1,2-DIBROMOETHANE,T	12DBRCL	1317		0000.200	0	0	1	2	2	2	2

Parameter Methods

Parameter Code	M C	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
77651	C	1,2-DIBROMOETHANE,T	12DBRCL	1319		0003.000	0	0	1	2	2	2	2
77825	C	ALACHLOR	ALACHLOR	1331	O310683	0000.100	0	0	1	2	2	2	2
80029	A	GROSS ALPHA TOT U-NA	GROS-A,T	0209	R312079	0000.400	0	0	1	2	2	2	2
80030	A	GROSS ALPHA DIS U-NA	G.AL.DIS	0444	R112076	0000.400	0	0	1	2	2	2	2
80030	B	G.ALPHA-DS-DS-U-FF	G.AL.DIS	0800	R112076	0000.400	0	0	1	2	2	2	2
80030	C	G.ALPHA,HS,DIS,U,LF	GA,SU,LF	1355	D	0000.400	0	0	1	2	2	2	2
80030	D	G.ALPHA,HS,U,FF	GA,US,FF	1358		0000.400	0	0	1	2	2	2	2
80040	A	GROSS ALPHA SUS.U-NA	G.AL.SUS	0446	R712079	0000.400	0	0	1	2	2	2	2
80049	A	GROS-B, TOT. (SR-90)	GROS-B,T	0213		0000.400	0	0	1	2	2	2	2
80050	A	GROSS-B, DIS SR-90	G.BE.S90	0445	R112076	0000.400	0	0	1	2	2	2	2
80050	B	G.BETA-DS-SR90-FF	G.BE.S90	0793	R112076	0000.400	0	0	1	2	2	2	2
80050	C	G.BETA HS SR90 LF	GB,S,LF	1356		0000.400	0	0	1	2	2	2	2
80050	D	G.BETA,HS,SR90,FF	GB,S,FF	1359		0000.400	0	0	1	2	2	2	2
80060	A	GROSS-B, SUSP. SR-90	G.BESS90	0447	R112076	0000.400	0	0	1	2	2	2	2
81281	A	KEPONE, TOTAL	KEPONE T	0563	O320580	0000.100	0	0	1	2	2	2	2
81353	A	BIOMASS ASH WT (PHY)	BI AH PH	0621	B656079	0000.100	0	0	1	2	3	3	3
81354	A	BIOMASS DRY WT (PHY)	BI DY PH	0620	B656079	0000.100	0	0	1	2	3	3	3
81358	A	TNT, DISSOLVED	TNT DISS	0551	O160180	0000.010	0	1	2	2	2	2	2
81359	A	TNT, SUSPENDED	TNT SUSP	0552	O260180	0000.010	0	1	2	2	2	2	2
81360	A	TNT, TOTAL (COMB)	TNT T C	0106	O360180	0000.010	0	1	2	2	2	2	2
81360	B	TNT, TOTAL, (WATER)	TNT TOT	0397	O360180	0000.010	0	1	2	2	2	2	2
81360	C	TNT, TOTAL	TNT,TOT.	1041	O360580	0002.000	0	0	0	1	2	2	2
81362	A	RDX, DISSOLVED	RDX DISS	0553	O160180	0000.010	0	1	2	2	2	2	2
81363	A	RDX, SUSPENDED	RDX SUSP	0554	O260180	0000.010	0	1	2	2	2	2	2
81364	A	RDX, TOTAL (COMB)	RDX T C	0105	O360180	0000.010	0	1	2	2	2	2	2
81364	C	RDX TOTAL, (WATER)	RDX TOT	0396	O360180	0000.010	0	1	2	2	2	2	2
81364	B	RDX, TOTAL	RDX,TOT	1042	O360580	0002.000	0	0	0	1	2	2	2
81365	A	RDX, BTM. MAT.	RDX BTM	0398		0000.100	0	0	1	2	2	2	2
81366	A	RADIUM-228, DISSOLV.	RA-228,D	0850	R114276	0001.000	0	0	0	1	2	2	2
81366	D	RA-228,RC,WITH226,LF	RA228,R6	1361		0001.000	0	0	1	2	2	2	2
81366	E	RA-228,RC,WITH226,FF	RA228,R6	1362		0001.000	0	0	1	2	2	2	2
81366	B	RA-228,RC,NOT226,LF	RA228,R	1363		0001.000	0	0	1	2	2	2	2
81366	C	RA-228,RC,NOT226,FF	RA228,R	1364		0001.000	0	0	1	2	2	2	2
81367	A	RADIUM-228, DIS. ERR	RA228,ER	1191	R114276	0001.000	0	0	0	1	2	3	3
81551	A	XYLENE, TOTAL	XYLENE,T	1329		0003.000	0	0	1	2	2	2	2
81551	B	XYLENE, TOTAL	XYLENE,T	1330		0000.200	0	0	1	2	2	2	2
81555	B	BROMOBENZENE	BROMOBEN	1485	D311583	.2	0	0	1	2	2	2	2
81757	A	CYANAZINE, TOTAL	CYNZ TOT	0846	O370180	0000.100	0	0	1	2	2	2	2
81857	A	KEPONE BTM	KEPONE B	0564	O520180	0001.000	0	0	0	1	2	2	2
81886	A	PERTHANE, BTM MAT	PERTHN B	0342	O520180	0001.000	0	0	0	1	2	2	2
82052	A	DICAMBA, TOTAL	DICAMTOT	0749		0000.010	0	1	2	2	2	2	2
82081	A	CARBON-13/12 (RATIO)	C-13/12R	0440		0000.000	0	0	1	2	3	3	3
82082	A	DEUTERIUM/H RAT. D/H	D/H	0300		0000.000	0	0	1	2	3	4	4
82084	A	NITROGEN-15/14 RATIO	N15/N14	0995		0000.000	0	0	1	2	3	3	3
82085	A	O 18/16 SIRA PER MIL	OXY18/16	0489		0000.000	1	1	2	3	4	5	5
82086	A	S-34/S-32 RATIO	SIRA SO4	0298		0000.000	0	0	1	2	3	3	3

Parameter Methods

Parameter Code	M C	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
82172	A	CARBON-14 % MODERN	C-14 %	1198	R110076	0000.700	0	0	1	2	3	4	4
82172	B	CARBON-14 (FLD PPT)	C-14 PPT	1199	R110076	0000.000	0	0	1	2	3	4	4
82183	B	2,4-DP, TOTAL (COMB)	24DP T C	0104	O440180	0000.010	0	1	2	2	2	2	2
82183	A	2,4-DP, TOT. (WATER)	24DP TOT	0402	O340180	0000.010	0	1	2	2	2	2	2
82184	A	AMETRYNE, TOTAL	ATYN TOT	0848	O370180	0000.100	0	0	1	2	2	2	2
82185	A	ATRATONE, TOTAL	ATON TOT	0847	O370180	0000.100	0	0	1	2	2	2	2
82186	A	AZODRIN TOTAL	AZODRN-T	0591	O330180	0000.100	0	0	1	2	2	2	2
82187	A	CYPRAZINE, TOTAL	CYPZ TOT	0845	O370180	0000.100	0	0	1	2	2	2	2
82188	A	SIMETONE, TOTAL	STON TOT	0843	O370180	0000.100	0	0	1	2	2	2	2
82302	A	RADON-222, TOT. ERR.	RN222,ER	1194	R114679	0001.000	0	0	0	1	2	3	3
82303	A	RADON-222, TOTAL	RN222,TO	1193	R114679	0001.000	0	0	0	1	2	3	3
82303	B	RN222,DIS H20,LIQ SC	RN222,LS	1369		0080.000	0	0	0	0	2	2	2
82304	A	RADON-222, DIS. ERR.	RN222,ER	1192	R114679	0001.000	0	0	0	1	2	3	3
82305	A	RADON-222 DIS. WATER	RN-222-W	0490	R114679	0000.200	0	0	0	1	2	3	3
82306	A	COBALT 60, DIS. ERR.	CO60,ERR	1187		0001.000	0	0	0	1	2	3	3
82307	A	COBALT-60, DISSOLVED	CO-60 D.	0461		0000.200	0	0	0	1	2	3	3
82336	A	S-34/S-32, PPT	S-34/32P	1138		0000.000	0	0	1	2	3	3	3
82337	A	O-18/O-16, ROCK	O-18/16R	1137		0000.000	0	0	1	2	3	3	3
82338	A	N-15/N-14, SOIL	N-15/14S	1136		0000.000	0	0	1	2	3	3	3
82339	A	C-13/C-12 CO3 ROCK	C-13/12R	1135		0000.000	0	0	1	2	3	3	3
82340	A	PICRIC ACID, TOTAL	PICRIC A	1040	O360580	0002.000	0	0	0	1	2	2	2
82342	A	TRITHION, DISSOLVED	TRIT DIS	0428	O130180	0000.010	0	1	2	2	2	2	2
82343	A	TRITHION, SUSPENDED	TRIT SUS	0422	O230180	0000.010	0	1	2	2	2	2	2
82344	A	METHYLTRITHION, DISS	ME.TR. D	0484	O130180	0000.010	0	1	2	2	2	2	2
82345	A	METHYLTRITHION, SUS.	ME.TR.S.	0485	O230180	0000.010	0	1	2	2	2	2	2
82346	A	ETHION, DISSOLVED	ETHI DIS	0424	O130180	0000.010	0	1	2	2	2	2	2
82347	A	ETHION, SUSPENDED	ETHI SUS	0418	O230180	0000.010	0	1	2	2	2	2	2
82348	A	PERTHANE, DISSOLVED	PERTHN D	0344	O120180	0000.100	0	0	1	2	2	2	2
82349	A	PERTHANE, SUSPENDED	PERTHN S	0343	O220180	0000.100	0	0	1	2	2	2	2
82350	A	METHOXYCHLOR, DIS.	METH DIS	0476	O120180	0000.010	0	1	2	2	2	2	2
82351	A	METHOXYCHLOR, SUSPEN	METH SUS	0416	O220380	0000.010	0	1	2	2	2	2	2
82352	A	KEPONE, DISSOLVED	KEPONE D	0561	O120580	0000.100	0	0	1	2	2	2	2
82353	A	KEPONE, SUSPENDED	KEPONE S	0562	O220580	0000.100	0	0	1	2	2	2	2
82354	A	ENDOSULFAN, DISSOLV.	ENDOS D	0345	O120180	0000.010	0	1	2	2	2	2	2
82355	A	ENDOSULFAN, SUS.	ENDOS S	0347	O220180	0000.010	0	1	2	2	2	2	2
82356	A	2,4-DP, DISSOLVED	2,4-DP D	0487	O140180	0000.010	0	1	2	2	2	2	2
82357	A	ETHYLENE, TOTAL	ETHYLENE	0609		0000.100	0	0	1	2	2	2	2
82358	A	PROPANE, TOTAL	PROPANE	0610		0000.100	0	0	1	2	2	2	2
82360	A	GROSS PCNS, DISSOLV.	PCN DISS	0475	O120180	0000.100	0	0	1	2	2	2	2
82361	A	GROSS PCNS, SUSPENDE	PCN SUS	0415	O220180	0000.100	0	0	1	2	2	2	2
82611	C	METRIBUZIN	METRIBUZ	1333	O310683	0000.100	0	0	1	2	2	2	2
82612	C	METOLACHLOR	METOLACH	1334	O310683	0000.100	0	0	1	2	2	2	2
82621	A	HEXACHLOROBENZENE	HEXABENZ	1347	O310483	0000.010	0	2	2	2	2	2	2
82625	A	DIBROMOCHLOROPROPANE	DBCP	1349	O311583	0003.000	0	0	0	2	2	2	2
82625	B	DIBROMOCHLOROPROPANE	DBCP	1354	0311583	0001.000	0	0	0	2	2	2	2
82628	A	OCTACHLOROSTYRENE	OCTASTYR	1348	O310483	0000.010	0	2	2	2	2	2	2

Parameter Methods

Parameter Code	M C	20-Character Name	8-Char Name	Lab Code	TWRI Method	Minimum Report	A	B	C	D	E	F	G
90095	A	SP. CONDUCTANCE LAB	COND LAB	0069	I278181	0001.000	0	0	0	1	2	3	3
90095	B	SP. CONDUCTANCE LIS	COND LL	1269		0000.100	0	0	1	2	3	3	3
90410	A	ALK TOT LAB. CACO3	TOT ALK	0070	I203078	0001.000	0	0	1	2	2	3	3
90410	B	ALK 2ND DVT AS CACO3	ALK LL	1270		0000.500	0	0	2	3	3	3	3
99446	A	SECTION 1 DOES THIS	SECTN-1	0100		0000.000	0	1	2	3	4	5	6
99447	A	DIGESTION PROC. EPA	EPA WAT	0124		0000.000	0	0	0	1	1	1	1
99450	A	GAMMA-SCAN SUSPENDED	G.SCAN S	0211		0000.000	0	0	1	2	3	3	3
99451	A	GAMMA-SCAN BOT.MATR.	G.SCAN B	0212		0000.000	0	0	1	2	3	3	3
99452	A	GAMMA-SCAN DISSOLVED	G.SCAN D	0443		0000.000	0	0	0	1	2	3	3
99454	A	CARBON-14 % ERR +/-	C-14 ERR	0640		0000.000	0	0	1	2	3	3	3
99463	A	SECTION 2 DOES THIS	SECTION2	0755		0000.000	0	1	2	3	4	5	6
99464	A	SECTION 3 DOES THIS	SECTION3	0756		0000.000	0	1	2	3	4	5	6
99465	A	SECTION 4 DOES THIS	SECTION4	0757		0000.000	0	1	2	3	4	5	6
99466	A	SECTION 5 DOES THIS	SECTION5	0758		0000.000	0	1	2	3	4	5	6
99467	A	SECTION 6 DOES THIS	SECTION6	0759		0000.000	0	1	2	3	4	5	6
99468	A	SECTION 7 DOES THIS	SECTION7	0760		0000.000	0	1	2	3	4	5	6
99469	A	AAGF DOES THIS	AAGF	0733		0000.000	0	1	2	3	4	5	6
99470	A	LIS DOES THIS	LIS	0734		0000.000	0	1	2	3	4	5	6
99471	A	QC DOES THIS	QC	0735		0000.000	0	1	2	3	4	5	6
99472	A	CONFIRMATION ABOVE 2	CONFIRM	1001		0000.000	0	0	0	1	2	3	4
99475	A	BTM GCFID PROFILE	BTMGCFID	1236		0000.000	0	0	0	1	2	2	2
99476	A	H2O GC/MS ALL	GCMS ALL	1238	O311783	0000.000	0	0	0	1	2	2	2
99477	A	H2O GC/MS PP	GC/MS PP	1239	0311783	0000.000	0	0	0	1	2	2	2
99478	A	H2O GC/FID PP	GCFID PP	1240		0000.000	0	0	0	1	2	2	2
99479	A	BTM GC/MS ALL	BTMS ALL	1241	O511683	0000.000	0	0	0	1	2	2	2
99480	A	DIG. FOR CYANIDE BTM	DIG C BM	1242		0000.000	0	0	0	1	1	1	1
99481	A	C-13/12 AND O-18/16	C13/O-18	1243		0000.000	0	0	1	2	3	3	3
99998	A	CENTRAL LAB-ID-#	LAB-ID-#	1500		0000.000	0	0	0	1	2	3	7

APPENDIX D. SAMPLE OUTPUT

The section numbers listed below correspond to the same section numbers in the QW-USER.DOC.

2.3 Option 2.3.2 -- QWLOGLIST -- Sample LOGLIST Output

DATA IN WATER-QUALITY FILE
MON, FEB 08 1988

RECORD NUMBER	STATION NUMBER	BEGIN DATE	BEGIN TIME	END DATE	END TIME	M	ANALYSIS CODES	STAT.	PROJECT	LAST UPDATE	NO OF PARMS	TYPES OF ANALYSES CH NU ME BI PE RA SE BE	AGENCY	LAB-ID
98600002	01094344	12-28-85	1103	- -		9	AA999	FD+LB		870224	3		USGS	
C8600003	01094344	11-30-85	1003	- -		9	AA999	FD+LB		870224	2		USGS	
98600005	01111230	11-30-85	1003	- -		9	A999A	FD+LB		870604	2		USGS	
98600006	01111230	12-28-85	1103	- -		9	AA999	FD+LB		870224	3		USGS	
98600007	01111231	11-30-85	1003	- -		9	A999A	FD+LB		870604	2		USGS	
98600008	01111231	12-28-85	1103	- -		9	AA999	FD+LB		870224	3		USGS	
98600010	01094340	03-13-86	0001	- -		9	79A99	FD+LB	222222222	870622	7		USGS	
98600011	01094340	03-13-86	0003	- -		9	79A99	FD+LB	111111111	870622	6		USGS	
98600012	01094340	03-13-86	0004	- -		9	79A99	FD+LB	444444444	870622	6		USGS	
98600013	01111230	03-13-86	0000	- -		9	79A99	FD+LB	111111111	870622	6		USGS	
98600014	01111230	03-13-86	0001	- -		9	79A99	FD+LB	222222222	870622	6		USGS	
98600015	01111230	03-13-86	0003	- -		9	79A99	FD+LB	111111111	870622	6		USGS	
98600016	01111230	03-13-86	0004	- -		9	79A99	FD+LB	444444444	870622	6		USGS	
98600017	01094340	10-16-85	1530	- -		9	AAA99	FD+LB		870818	6		USGS	
98600018	01094340	10-16-85	1535	- -		9	AAA99	FD+LB		870818	4		USGS	
98600019	01094340	10-16-85	1540	- -		9	AAA99	FD+LB		870818	6		USGS	
98600020	01094340	10-16-85	1545	- -		9	AAA99	FD+LB		870818	4		USGS	
98600021	01094340	10-16-85	1550	- -		9	AAA99	FD+LB		870818	6		USGS	
98600022	01094340	10-16-85	1555	- -		9	AAA99	FD+LB		870818	6		USGS	
98600023	01094340	10-16-85	1600	- -		9	AAA99	FD+LB		870818	4		USGS	
98600024	01094340	10-16-85	1605	- -		9	AAA99	FD+LB		870818	6		USGS	
98600025	01094340	10-16-85	1630	- -		9	79599	FD+LB		870818	71		USGS	5305703
98600026	01094340	02-11-86	1500	- -		9	7999B	FD+LB		870818	64		USGS	6045113
98600027	01094340	05-20-86	1345	- -		9	79999	FD+LB		870818	65		USGS	6147123
98600028	01094340	08-05-86	1300	- -		9	79999	FD+LB		870818	21		USGS	6223003
98600029	01097000	10-22-85	1430	- -		9	79999	FD+LB		870818	63		USGS	5299009
98600030	01097000	01-13-86	1115	- -		9	AAA99	FD+LB		870818	17		USGS	
98600031	01097000	01-13-86	1445	- -		9	7999B	FD+LB		870818	49		USGS	7020008
98600032	01097000	01-31-86	1115	- -		0	79A99	FD+LB		870818	13		USGS	6034072
98600033	01097000	01-31-86	1115	- -		9	7999B	FD+LB		870818	47		USGS	6034069
98600034	01097000	04-24-86	1145	- -		9	79999	FD+LB		870818	63		USGS	6118046

DATA IN WATER-QUALITY FILE
MON, FEB 08 1988

RECORD NUMBER	STATION NUMBER	BEGIN DATE	BEGIN TIME	END DATE	END TIME	M	ANALYSIS CODES	STAT.	PROJECT	LAST UPDATE	NO OF PARMS	TYPES OF ANALYSES CH NU ME BI PE RA SE BE	AGENCY	LAB-ID
98600035	01097000	07-16-86	1330	- -		9	79999	FD+LB		870818	27		USGS	6203067
98600036	01105730	10-23-85	1300	- -		9	79999	FD+LB		870818	65		USGS	5299010
98600037	01105730	01-30-86	1230	- -		9	7999B	FD+LB		870818	63		USGS	6034073
98600038	01105730	04-23-86	1100	- -		9	79999	FD+LB		870818	61		USGS	6118047
98600039	01105730	07-17-86	1230	- -		9	79999	FD+LB		870818	25		USGS	6203066
98600040	01094500	10-16-85	1355	- -		9	79999	FD+LB		870818	66		USGS	5294001
98600041	01094500	01-07-86	1515	- -		9	79999	FD+LB		870818	67		USGS	6010058
98600042	01094500	04-16-86	1215	- -		9	79999	FD+LB		870818	67		USGS	6111069
98600043	01094500	07-15-86	1245	- -		9	79999	FD+LB		870818	28		USGS	6202163
98600044	01094340	04-15-86	1010	- -		9	HH499	FD+LB		870909	67		USGS	
98600045	01094340	06-17-86	1230	- -		9	H3499	FD+LB		870909	190		USGS	
98600046	01111230	10-16-85	1140	85-10-17	1145	9	7GA99	APPRO		880114	59		USGS	

SURFACE WATER	43
GROUND WATER	0
TOTAL	43

PROJECT	COUNT
	36
222222222	2
111111111	3
444444444	2

2.3 Option 2.3.4 -- SAMPLE LIST AND/OR BALANCE -- Sample Output

WATER QUALITY ANALYSIS - MON, FEB 08 1988

RECORD NUMBER ------- 97900025
STATION NUMBER ------ 01096550
STATION NAME -------- MERRIMACK RIVER ABOVE LOWELL, MA
DATE OF COLLECTION -- 03-09-1979 0800 - -

PARAMETERS INCLUDED IN THIS RECORD ARE--

NO.	CODE.	REMARK	VALUE.....	DESCRIPTION.....
1	00010		0.5	WATER TEMPERATURE, DEGREES
2	00020		6.5	TEMPERATURE, AIR, DEGREES
3	00028		80010	AGENCY ANALYZING SAMPLE (CODE N
4	00061		40600	DISCHARGE INSTANTANEOUS STREAM CUBIC (FEET/SECOND)
5	00070		15	TURBIDITY (JACK
6	00076		15	TURBIDITY (FTU)
7	00095		52	SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGR
8	00300		14.2	OXYGEN DISSOLVED (MG/L)
9	00301		98	OXYGEN DISSOLVED (% OF SATURATION)
10	00340		16	CHEMICAL OXYGEN DEMAND, HIGH LEVEL, (MG/L)
11	00400		5.20	PH (STANDARD UNITS)
12	00410		1	ALKALINITY WATER WHOLE TOTAL, FIELD, (MG/L AS CACO3)
13	00500		96	SOLIDS, RESIDUE ON TOTAL EVAPORATION AT 105 DEGREES CELCI
14	00530		41	RESIDUE, TOTAL NON FILTERABLE (MG/L)
15	00556		0	OIL AND GREASE TOTAL RECOVERABLE, GRAVIMETRIC FREON EXTRACTABLE (MG/
16	00600		0.84	NITROGEN TOTAL (MG/L AS N)
17	00605		0.60	NITROGEN ORGANIC TOTAL (MG/L AS N)
18	00610		0.080	NITROGEN AMMONIA TOTAL (MG/L AS N)
19	00615		0.010	NITROGEN, NITRITE, TOTAL, MG/L AS N
20	00620		0.150	NITROGEN NITRATE TOTAL (MG/L AS N)
21	00623		0	NITROGEN AMMONIA PLUS ORGANIC DISSOLVED (MG/L AS N)
22	00624		0.64	NITROGEN AMMONIA PLUS ORGANIC SUSPENDED TOTAL (MG/L AS N)
23	00625		0.68	NITROGEN AMMONIA PLUS ORGANIC TOTAL (MG/L AS N)
24	00630		0.160	NITROGEN NITRITE PLUS NITRATE TOTAL (MG/L AS N)
25	00665		0.150	PHOSPHOROUS TOTAL (MG/L AS P)
26	00666		0.020	PHOSPHOROUS DISSOLVED (MG/L AS P)
27	00681		5.7	CARBON ORGANIC DISSOLVED (MG/L AS C)
28	00689		1.5	CARBON ORGANIC SUSPENDED TOTAL (MG/
29	00900		10	HARDNESS TOTAL (MG/L AS CA03)
30	00902		9	NONCARBONATE HARDNESS WATER WHOLE TOTAL, FIELD, (MG/L AS CA CO3)
31	00915		2.9	CALCIUM DISSOLVED (MG/L AS CA)
32	00925		0.60	MAGNESIUM DISSOLVED (MG/L AS MG)
33	00930		5.4	SODIUM DISSOLVED (MG/L AS NA)

NO.	CODE.	REMARK	VALUE.....	DESCRIPTION.....
34	00931		0.8	SODIUM ABSORPTION RATIO
35	00932		52	SODIUM PERCENT
36	00935		0.80	POTASSIUM DISSOLVED (MG/L AS K)
37	00940		9.0	CHLORIDE DISSOLVED (MG/L AS CL)
38	00945		7.0	SULFATE DISSOLVED (MG/L AS SO4)
39	00950		0.10	FLUORIDE DISSOLVED (MG/L AS F)
40	00955		4.7	SILICA DISSOLVED (MG/L AS SIO2)
41	01000		1	ARSENIC DISSOLVED (UG/L AS AS)
42	01002		1	ARSENIC TOTAL (UG/L AS AS)
43	01005		200	BARIUM DISSOLVED (UG/L AS BA)
44	01006		0	BARIUM SUSPENDED RECOVERABLE (UG/L AS BA)
45	01007		200	BARIUM TOTAL (UG/L AS BA)
46	01025		7	CADMIUM DISSOLVED (UG/L AS CD)
47	01026		1	CADMIUM SUSPENDED (UG/L AS CD)
48	01027		8	CADMIUM TOTAL (UG/L AS CD)
49	01030	1	2	CHROMIUM DISSOLVED (UG/L AS CR)
50	01031		29	CHROMIUM SUSPENDED (UG/L AS CR)
51	01034		30	CHROMIUM TOTAL (UG/L AS CR)
52	01035	1	2	COBALT DISSOLVED (UG/L AS CO)
53	01036		0	COBALT SUSPENDED (UG/L AS CO)
54	01037	1	2	COBALT TOTAL (UG/L AS CO)
55	01040	1	2	COPPER DISSOLVED (UG/L AS CU)
56	01041		6	COPPER SUSPENDED (UG/L AS CU)
57	01042		7	COPPER TOTAL (UG/L AS CU)
58	01044		1800	IRON SUSPENDED (UG/L AS FE)
59	01045		1900	IRON TOTAL (UG/L AS FE)
60	01046		140	IRON DISSOLVED (UG/L AS FE)
61	01049		36	LEAD DISSOLVED (UG/L AS PB)
62	01050		9	LEAD SUSPENDED (UG/L AS PB)
63	01051		45	LEAD TOTAL (UG/L AS PB)
64	01054		60	MANGANESE SUSPENDED (UG/L AS MN)
65	01055		170	MANGANESE TOTAL (UG/L AS MN)
66	01056		109	MANGANESE DISSOLVED (UG/L AS MN)
67	01075	U	0	SILVER DISSOLVED (UG/L AS AG)
68	01076		0	SILVER SUSPENDED (UG/L AS AG)
69	01077	U	0	SILVER TOTAL (UG/L AS AG)
70	01090	1	20	ZINC DISSOLVED (UG/L AS ZN)
71	01091		10	ZINC SUSPENDED (UG/L AS ZN)
72	01092	2	20	ZINC TOTAL (UG/L AS ZN)
73	01145	1	1	SELENIUM DISSOLVED (UG/L AS SE)
74	01146		0	SELENIUM SUSPENDED (UG/L AS SE)
75	01147	1	1	SELENIUM TOTAL (UG/L AS SE)
76	31501		8800	COLIFORM, MEMBRANE FILTER, IMMEDIATE M-ENDO MEDIUM (COLONIES/100 ML)
77	31616		630	COLIFORM, FECAL, MEMBRANE FILTER M-FC MEDIA AT 44.5 DEG. C (COLONIES/100 ML)
78	31673		450	STREPTOCOCCI, FECAL, MEMBRANE FILTER, KF AGAR (COLONIES/100 ML)

NO.	CODE.	REMARK	VALUE.....	DESCRIPTION.....
79	60050		1600	PHYTOPLANKTON, TOTAL (CELLS/ML)
80	70300		40	SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED (MG/L)
81	70301		32	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
82	70302		4390	SOLIDS, DISSOLVED (TONS PER DAY)
83	70303		0.05	SOLIDS, DISSOLVED (TONS PER ACRE-FOOT)
84	70331		63	SEDIMENT, SUSPENDED, SIEVE DIAMETER, PERCENT FINER THAN .062 MM
85	70953		5.83	CHLOROPHYLL-A, PHYTOPLANKTON, CHROMOTOGRAPHIC- FLUOROMETRIC (UG/L)
86	70954		0.000	CHLOROPHYLL-B, PHYTOPLANKTON, CHROMOTOGRAPHIC- FLUOROMETRIC (UG/L)
87	71887		3.7	NITROGEN, TOTAL (MG/L AS NO3)
88	71890	1	0.5	MERCURY, DISSOLVED (UG/L AS HG)
89	71895		0	MERCURY, SUSPENDED HG)RECOVERABLE (UG/L AS HG)
90	71900	1	0.50	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)
91	80154		85	SEDIMENT, SUSPENDED CONCENTRATION (MG/L)
92	80155	1	9320	SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)

RECORD NUMBER ------- 97900025
STATION NUMBER ------ 01096550
STATION NAME -------- MERRIMACK RIVER ABOVE LOWELL, MA
DATE OF COLLECTION -- 03-09-1979 0800 - -

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
CALCIUM, DISS. MG/L	2.900	0.145	CHLORIDE, DISS. MG/L	9.000	0.254
MAGNESIUM, DISS. MG/L	0.600	0.050	SULFATE, DISS. MG/L	7.000	0.146
SODIUM, DISS. MG/L	5.400	0.235	FLUORIDE, DISS. MG/L	0.100	0.006
POTASSIUM, DISS. MG/L	0.800	0.021	ALKALINITY, FET, FLD	1.000	0.020
IRON, DISS. UG/L	140.000	0.008			
MANGANESE, DISS. UG/L	110.000	0.005			
TOTAL		0.461	TOTAL		0.425

PERCENT DIFFERENCE = 4.08

2.3 Option 2.3.6 -- QWTABLE -- Sample QW Tables Output

Single-Station format (Table type 1), No folding (All table types)

DISTRICT CODE 32 UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 10-23-89

10312274 - TJ DRAIN at WILDLIFE ENTRANCE nr STILLWATER, NV

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	TEMPERATURE WATER (DEG C) (00010)	TEMPERATURE AIR (DEG C) (00020)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH (STANDARD UNITS) (00400)	PH LAB (STANDARD UNITS) (00403)
OCT												
14...	0815	8.0	--	663	1028	1028	--	--	31700	6.3	8.40	--
NOV												
15...	1100	4.0	--	662	1028	1028	--	--	30600	10.6	8.47	--
DEC												
13...	1030	0.5	5.5	665	1028	80020	E0.10	15.66	32900	10.4	8.35	8.00
13...	1100	0.5	--	665	1028	1028	--	--	32900	10.4	8.35	--
JAN												
12...	1100	--	--	--	1028	80020	--	--	--	--	--	--
12...	1100	0.0	--	674	1028	80020	--	--	33500	12.9	--	--
FEB												
15...	1200	0.0	--	--	1028	80020	0.0	--	--	--	--	--
MAR												
14...	1215	14.5	10.5	663	1028	80020	<0.10	--	32000	11.5	8.44	8.10
APR												
28...	1130	20.5	--	661	1028	1028	0.70	15.60	8610	11.3	8.53	--
MAY												
15...	1400	27.0	--	--	1028	80020	>3.0	15.58	11200	--	--	--
19...	1500	0.0	20.0	--	1028	80020	>1.0	15.54	15500	--	--	--
JUN												
12...	1100	23.5	27.0	663	1028	80020	0.60	15.62	11400	15.4	8.81	8.30

Single-Station format (Table type 1), Horizontally folded, 24-100 parameters per page (Type 1 tables only)

DISTRICT CODE 32 UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 10-23-89
10351700 - TRUCKEE R NR NIXON, NV

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPERATURE WATER (DEG C) (00010)	TEMPERATURE AIR (DEG C) (00020)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	TURBIDITY (NTU) (00076)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)
NOV											
13...	1120	10.0	14.0	655	1028	80020	46	2.64	0.60	736	9.8
MAR											
10...	1135	5.0	4.0	665	1028	80020	38	2.56	1.2	879	12.8
MAY											
25...	1135	19.5	26.0	660	1028	80020	32	2.56	1.6	764	9.2
AUG											
22...	1345	22.5	32.5	665	1028	80020	34	2.53	2.2	869	10.6

DATE	PH (STANDARD UNITS) (00400)	PH LAB (STANDARD UNITS) (00403)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	CARBONATE WATER WH IT FIELD MG/L AS CO3 (00447)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS TOTAL (MG/L AS P) (00665)
NOV											
13...	8.70	8.50	118	5	133	<0.010	0.010	<0.010	0.50	<0.100	0.010
MAR											
10...	8.40	8.10	126	--	--	0.010	<0.010	<0.010	0.30	<0.100	0.020
MAY											
25...	8.80	8.50	111	8	119	0.010	<0.010	<0.010	0.30	<0.100	0.030
AUG											
22...	8.60	8.60	124	4	142	<0.010	<0.010	<0.010	0.60	<0.100	0.030

DATE	PHOSPHOROUS DISSOLVED (MG/L AS P) (00666)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P) (00671)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)
NOV										
13...	0.010	<0.010	45	18	75	6.6	100	100	0.10	14
MAR										
10...	0.010	0.010	52	22	88	7.6	110	110	0.20	16
MAY										
25...	0.030	<0.010	41	18	79	7.2	120	92	0.30	16
AUG										
22...	0.020	<0.010	46	22	93	9.1	130	110	0.20	18

DATE	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
NOV										
13...	6	65	<0.5	<1	<1	<3	1	11	8	42
MAR										
10...	6	69	<0.5	<1	<1	<3	2	22	<5	95
MAY										
25...	12	51	<0.5	<1	<1	<3	2	29	7	50
AUG										
22...	10	69	<0.5	<1	<1	<3	3	15	<5	25

Single-Station format (Table type 1), Horizontally folded, 11-100 parameters per page (Type 1 and 3 tables only)

DISTRICT CODE 32 UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 10-23-89
10351700 - TRUCKEE R NR NIXON, NV

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPERATURE WATER (DEG C) (00010)	TEMPERATURE AIR (DEG C) (00020)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	TURBIDITY (NTU) (00076)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)
NOV 13...	1120	10.0	14.0	655	1028	80020	46	2.64	0.60	736	9.8
MAR 10...	1135	5.0	4.0	665	1028	80020	38	2.56	1.2	879	12.8
MAY 25...	1135	19.5	26.0	660	1028	80020	32	2.56	1.6	764	9.2
AUG 22...	1345	22.5	32.5	665	1028	80020	34	2.53	2.2	869	10.6

DATE	PH (STANDARD UNITS) (00400)	PH LAB (STANDARD UNITS) (00403)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	CARBONATE WATER WH IT FIELD MG/L AS CO3 (00447)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS TOTAL (MG/L AS P) (00665)
NOV 13...	8.70	8.50	118	5	133	<0.010	0.010	<0.010	0.50	<0.100	0.010
MAR 10...	8.40	8.10	126	--	--	0.010	<0.010	<0.010	0.30	<0.100	0.020
MAY 25...	8.80	8.50	111	8	119	0.010	<0.010	<0.010	0.30	<0.100	0.030
AUG 22...	8.60	8.60	124	4	142	<0.010	<0.010	<0.010	0.60	<0.100	0.030

DATE	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
NOV										
13...	0.010	<0.010	45	18	75	6.6	100	100	0.10	14
MAR										
10...	0.010	0.010	52	22	88	7.6	110	110	0.20	16
MAY										
25...	0.030	<0.010	41	18	79	7.2	120	92	0.30	16
AUG										
22...	0.020	<0.010	46	22	93	9.1	130	110	0.20	18

DATE	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV										
13...	6	65	<0.5	<1	<1	<3	1	11	8	42
MAR										
10...	6	69	<0.5	<1	<1	<3	2	22	<5	95
MAY										
25...	12	51	<0.5	<1	<1	<3	2	29	7	50
AUG										
22...	10	69	<0.5	<1	<1	<3	3	15	<5	25

Single-station format (Table type 1), Vertically folded, maximum of 5 parameters (including date) (Type 1 and 2 Tables)

DISTRICT CODE 32 UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 10-23-89
10351700 - TRUCKEE R NR NIXON, NV

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)
NOV 13...	1120	46	736	9.8	MAY 25...	1135	32	764	9.2
MAR 10...	1135	38	879	12.8	AUG 22...	1345	34	869	10.6

Miscellaneous-station format (Table type 2), No folding (All table types)

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 10-24-89
MISCELLANEOUS STATION ANALYSES

DATE	TIME	TEMPERATURE WATER (DEG C) (00010)	TEMPERATURE AIR (DEG C) (00020)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH (STANDARD UNITS) (00400)	PH LAB (STANDARD UNITS) (00403)
10336730		90	N14 E18 10DAC 1		GLENBROOK C GLENBROOK NV (LAT 39 05 15N LONG 119 56 20W)							
OCT 1988												
12...	1502	9.0	-	--	1028	80020	0.20	1.29	539	--	--	--
25...	1050	6.5	8.	611	1028	80020	0.28	1.27	550	9.2	8.00	--
NOV												
13...	1050	5.0	6.	--	1028	80020	0.54	1.32	622	--	--	--
13...	1400	4.5	4.	--	1028	80020	0.62	1.35	662	--	--	--
JAN 1989												
06...	0947	0.5	-6.	--	1028	80670	0.61	1.36	510	--	--	--
20...	1035	1.0	-0.	612	1028	80670	0.46	1.35	495	11.5	8.05	--
FEB												
22...	1040	2.0	8.	610	1028	80670	1.0	1.42	490	11.4	7.93	--
22...	1705	--	-	--	1028	80670	1.5	1.49	--	--	--	--
22...	2025	--	-	--	1028	80670	1.4	1.48	--	--	--	--
APR												
06...	1020	4.5	10.	--	1028	1028	2.3	1.51	452	--	--	--
06...	1915	8.5	12.	--	1028	1028	2.6	1.53	435	--	--	--
AUG												
07...	1330	14.0	17.	--	1028	1028	0.48	1.32	545	--	--	--
08...	1300	12.5	15.	--	1028	1028	1.3	1.42	548	--	--	--
30...	1350	11.5	24.	606	1028	1028	0.14	1.17	550	7.8	8.20	--

10336765 EDGEWOOD CREEK AT LAKE TAHOE NR STATELINE, NV (LAT 38 58 05N LONG 119 56 54W)

DEC 1988												
20...	1020	2.0	3.	603	1028	1028	2.3	--	92	10.2	7.60	--
JAN 1989												
06...	1115	1.0	-1.	--	1028	1028	3.3	--	118	--	--	--
20...	1015	3.0	4.	612	1028	1028	2.9	--	120	10.1	7.70	--
FEB												
10...	1245	1.5	8.	--	1028	1028	3.2	4.43	239	--	--	--
22...	1220	3.0	5.	610	1028	80020	5.8	4.46	186	8.8	7.30	--
APR												
06...	1230	15.0	14.	--	1028	1028	3.2	4.88	121	--	--	--
06...	1315	13.0	17.	--	1028	1028	4.5	4.47	139	--	--	--
06...	1740	12.0	15.	--	1028	1028	4.3	4.45	147	--	--	--
13...	1105	10.5	10.	--	1028	1028	5.0	4.68	119	--	--	--
13...	1400	13.0	13.	--	1028	1028	4.1	4.64	122	--	--	--
13...	1650	13.5	17.	--	1028	1028	2.2	4.43	135	--	--	--
14...	0710	9.0	3.	--	1028	1028	3.6	4.59	122	--	--	--
20...	0740	13.0	8.	605	1028	1028	4.3	4.58	119	8.1	8.70	--
20...	1500	15.5	17.	--	1028	1028	3.2	4.52	116	--	--	--
20...	1920	13.5	12.	--	1028	1028	2.1	4.44	127	--	--	--
21...	0515	10.0	9.	--	1028	1028	3.9	4.56	120	--	--	--

Multiple-station format (Table type 3, first page), No folding (All table types)

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 10-23-89
MULTIPLE STATION ANALYSES

STATION NUMBER	DATE	TIME	SAMPLING DEPTH (FEET) (00003)	TEMPERATURE WATER (DEG C) (00010)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH (STANDARD UNITS) (00400)
393923119170601	02-19-70	--	--	--	1028	1028	--	--	--	--
393949119084601	11-18-87	0800	--	14.0	1028	80020	--	24300	0.7	7.50
394144119144901	02-20-70	--	--	--	1028	1028	--	--	--	--
394426118594401	02-16-81	0952	134	20.0	--	80020	0.0	12000	--	8.25
394556119023001	03-16-81	1017	59.4	15.5	--	80020	0.0	5600	--	8.33
394621119011301	03-17-81	1113	88.0	110.5	--	80020	0.0	3800	--	7.92
394627119012301	03-10-81	0925	114	36.0	--	80020	0.0	3600	--	9.20
394640119134701	02-18-70	--	--	19.5	1028	1D28	--	--	--	--
394656119011301	03-12-81	0935	141	80.0	--	80020	0.0	3700	--	7.71
394708119012001	03-11-81	0950	70.8	94.5	--	80020	0.0	3600	--	8.20
394718119012401	02-20-81	1018	147	58.0	--	80020	0.0	4000	--	8.01
394720119004901	06-02-60	--	--	--	1028	1028	--	--	--	--
394722119001501	09-08-60	--	--	--	--	--	--	6240	--	7.30
394726119001601	07-06-79	--	--	24.0	--	--	--	--	--	6.78
394733119020701	03-14-81	1030	69.8	20.5	--	80020	0.0	3600	--	9.79
394738119004801	04-02-81	1037	58.8	116.5	--	80020	0.0	3600	--	8.51
394741119173101	02-18-70	--	--	19.5	1028	1028	--	--	--	--
394820119001101	09-08-60	--	--	--	--	--	--	7290	--	4.70
394833119011901	03-19-81	0947	100	26.5	--	80020	0.0	3400	--	10.20
394905119040001	11-13-69	--	--	13.0	1028	1028	--	--	--	--

Multiple-station format -- Continued (Second page)

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 10-23-89
MULTIPLE STATION ANALYSES

DATE	PH LAB (STAND-ARD UNITS) (00403)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	BICAR-BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
02-19-70	7.40	--	--	--	--	--	--	--	--	--	160
11-18-87	7.30	186	230	0.420	<0.010	--	0.60	<0.100	0.140	2.2	1400
02-20-70	7.90	--	--	--	--	--	--	--	--	--	360
02-16-81	7.70	--	--	--	--	--	--	--	--	--	370
03-16-81	7.60	--	--	--	--	--	--	--	--	--	170
03-17-81	7.10	--	--	--	--	--	--	--	--	--	120
03-10-81	7.40	--	--	--	--	--	--	--	--	--	110
02-18-70	8.10	--	--	--	--	--	--	--	--	--	130
03-12-81	7.50	--	--	--	--	--	--	--	--	--	130
03-11-81	7.50	--	--	--	--	--	--	--	--	--	130
02-20-81	7.60	--	--	--	--	--	--	--	--	--	150
06-02-60	7.30	--	--	0.00	0.00	0.090	--	--	--	--	140
09-08-60	--	--	--	--	--	0.00	--	--	--	--	300
07-06-79	--	--	--	0.430	--	--	--	--	--	--	120
03-14-81	8.70	--	--	--	--	--	--	--	--	--	94
04-02-81	7.10	--	--	--	--	--	--	--	--	--	52
02-18-70	8.60	--	--	--	--	--	--	--	--	--	32
09-08-60	--	--	--	--	--	0.070	--	--	--	--	1100
03-19-81	8.90	--	--	--	--	--	--	--	--	--	65
11-13-69	8.00	--	--	--	--	--	--	--	--	--	58

Multiple-station format (Table type 3), Horizontally folded 11-100 parameters per page (Type 1 and 3 tables only)

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 10-23-89
MULTIPLE STATION ANALYSES

STATION NUMBER	DATE	TIME	SAMPLING DEPTH (FEET) (00003)	TEMPERATURE WATER (DEG C) (00010)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH (STANDARD UNITS) (00400)
393923119170601	02-19-70	--	--	--	1028	1028	--	--	--	--
393949119084601	11-18-87	0800	--	14.0	1028	80020	--	24300	0.7	7.50
394144119144901	02-20-70	--	--	--	1028	1028	--	--	--	--
394426118594401	02-16-81	0952	134	20.0	--	80020	0.0	12000	--	8.25
394556119023001	03-16-81	1017	59.4	15.5	--	80020	0.0	5600	--	8.33
394621119011301	03-17-81	1113	88.0	110.5	--	80020	0.0	3800	--	7.92
394627119012301	03-10-81	0925	114	36.0	--	80020	0.0	3600	--	9.20
394640119134701	02-18-70	--	--	19.5	1028	1028	--	--	--	--
394656119011301	03-12-81	0935	141	80.0	--	80020	0.0	3700	--	7.71
394708119012001	03-11-81	0950	70.8	94.5	--	80020	0.0	3600	--	8.20
394718119012401	02-20-81	1018	147	58.0	--	80020	0.0	4000	--	8.01
394720119004901	06-02-60	--	--	--	1028	1028	--	--	--	--
394722119001501	09-08-60	--	--	--	--	--	--	6240	--	7.30
394726119001601	07-06-79	--	--	24.0	--	--	--	--	--	6.78
394733119020701	03-14-81	1030	69.8	20.5	--	80020	0.0	3600	--	9.79
394738119004801	04-02-81	1037	58.8	116.5	--	80020	0.0	3600	--	8.51
394741119173101	02-18-70	--	--	19.5	1028	1028	--	--	--	--
394820119001101	09-08-60	--	--	--	--	--	--	7290	--	4.70
394833119011901	03-19-81	0947	100	26.5	--	80020	0.0	3400	--	10.20
394905119040001	11-13-69	--	--	13.0	1028	1028	--	--	--	--

DATE	PH LAB (STAND-ARD UNITS) (00403)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	BICAR-BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
02-19-70	7.40	--	--	--	--	--	--	--	--	--	160
11-18-87	7.30	186	230	0.420	<0.010	--	0.60	<0.100	0.140	2.2	1400
02-20-70	7.90	--	--	--	--	--	--	--	--	--	360
02-16-81	7.70	--	--	--	--	--	--	--	--	--	370
03-16-81	7.60	--	--	--	--	--	--	--	--	--	170
03-17-81	7.10	--	--	--	--	--	--	--	--	--	120
03-10-81	7.40	--	--	--	--	--	--	--	--	--	110
02-18-70	8.10	--	--	--	--	--	--	--	--	--	130
03-12-81	7.50	--	--	--	--	--	--	--	--	--	130
03-11-81	7.50	--	--	--	--	--	--	--	--	--	130
02-20-81	7.60	--	--	--	--	--	--	--	--	--	150
06-02-60	7.30	--	--	0.00	0.00	0.090	--	--	--	--	140
09-08-60	--	--	--	--	--	0.00	--	--	--	--	300
07-06-79	--	--	--	0.430	--	--	--	--	--	--	120
03-14-81	8.70	--	--	--	--	--	--	--	--	--	94
04-02-81	7.10	--	--	--	--	--	--	--	--	--	52
02-18-70	8.60	--	--	--	--	--	--	--	--	--	32
09-08-60	--	--	--	--	--	0.070	--	--	--	--	1100
03-19-81	8.90	--	--	--	--	--	--	--	--	--	65
11-13-69	8.00	--	--	--	--	--	--	--	--	--	58

Biological Table (Table Type 4)

DISTRICT CODE 32 UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 10-24-89
10351700 - TRUCKEE R NR NIXON, NV

PHYTOPLANKTON ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	OCT 21, 76	SET: 1
TIME	1200	PAGE: 1
TOTAL CELLS/ML	700	

	CELLS /ML	PER-CENT
CHRYSOPHYTA (YELLOW-GREEN ALGAE)		
.BACILLARIOPHYCEAE		
..PENNALES		
...ACHNANTHACEAE		
....COCCONEIS	25	4
...CYMBELLACEAE		
....CYMBELLA	17	2
...DIATOMACEAE		
....DIATOMA	29	4
...FRAGILARIACEAE		
....FRAGILARIA	25	4
....SYNEDRA	12	2
...GOMPHONEMATACEAE		
....GOMPHONEMA	4	<1
...NAVICULACEAE		
....NAVICULA	87	12

2.3 Option 2.3.7 -- EDIT VALIDATION PROGRAM -- Sample Output

QW RECORD VALIDATION PROGRAM

MON, FEB 08 1988

RECORD NUMBER: 97900025 STATION NUMBER: 01096550 COLLECTED: 03-09-1979 AT: 0800 - - AT:
STATION NAME: MERRIMACK RIVER ABOVE LOWELL, MA COUNTY: 017 LAB-ID:
MEDIUM: 0 STATUS: 7 SOURCE: 9 HYD. CONDITION: A SAMPLE TYPE: 9 HYD. EVENT: 9 92 PARAMETERS

CATION/CONDUCTANCE RATIO OUTSIDE LIMITS .92 TO 1.24

DISSOLVED SOLIDS/CALCULATED SOLIDS RATIO OUTSIDE LIMITS .9 TO 1.12

70302 STORED VALUE (4390) DOES NOT AGREE WITH COMPUTED VALUE (4380)

CODE	PARAMETER NAME	UNITS	VALUE	R	Q	M	P
00010	WATER TEMPERATURE	(DEGREES)	0.5			3	A 1
00020	AIR TEMPERATURE	DEGREES	6.5			3	A 2
00028	ANALYZING AGENCY	(CODE NUMBER)	80010			3	A 5
00061	DISCHARGE INS. (F/S)	(FEET/SECOND)	40600			3	A 2
00070	TURBIDITY	(JCU)	15			3	A 2
00076	TURBIDITY	(FTU)	15			3	A 2
00095	SPECIFIC CONDUCTANCE	US/CM @ 25C	52			3	A 2
00300	OXYGEN DISSOLVED	(MG/L)	14.2			3	A 3
00301	OXYGEN DIS. PERCENT	% OF SATURATION	98			3	A 2
00340	COD HIGH LEVEL MG/L	(MG/L)	16			3	A 2
00400	PH	(STANDARD UNITS)	5.20			3	A 2
00410	ALKALINITY TOTAL	(MG/L AS CACO3)	1			3	A 2
00500	RESIDUE SOLIDS	(MG/L)	96			3	A 2
00530	RESIDUE TOTAL	(MG/L)	41			3	A 2
00556	OIL AND GREASE REC.	(MG/L)	0			3	A 0
00600	NITROGEN TOTAL	(MG/L AS N)	0.84			3	A 2
00605	NITROGEN ORGANIC T.	(MG/L AS N)	0.60			3	A 2
00610	NITROGEN AMMONIA T.	(MG/L AS N)	0.080			3	A 3
00615	NITROGEN,NITRITE T.	MG/L AS N	0.010			3	A 3
00620	NITROGEN NITRATE T.	MG/L AS N	0.150			3	A 2
00623	NITROGEN DISSOLVED	(MG/L AS N)	0			3	2
00624	NITROGEN SUSPENDED	(MG/L AS N)	0.64			3	A 2
00625	NITROGEN AMMONIA T.	(MG/L AS N)	0.68			3	A 2
00630	NO2 + NO3 TOTAL	(MG/L AS N)	0.160			3	A 2
00665	PHOSPHOROUS TOTAL	(MG/L AS P)	0.150			3	A 3

RECORD NUMBER: 97900025 -- CONTINUED

CODE	PARAMETER NAME	UNITS	VALUE	R	Q	M	P	
00666	PHOSPHOROUS DISS.	(MG/L AS P)	0.021			3	A	3
00681	CARBON ORGANIC DIS.	(MG/L AS C)	5.7			3	A	2
00689	CARBON ORGANIC S.	(MG/L AS C)	1.5			3	A	2
00900	HARDNESS TOTAL	(MG/L AS CAO3)	10			3	A	1
00902	NONCARBONATE HARD. F	(MG/L AS CACO3)	9			3	A	1
00915	CALCIUM DISSOLVED	(MG/L AS CA)	2.9			3	A	2
00925	MAGNESIUM DISSOLVED	(MG/L AS MG)	0.60			3	A	1
00930	SODIUM DISSOLVED	(MG/L AS NA)	5.4			3	A	2
00931	SODIUM ADSORPTION R.	(RATIO)	0.8			3	A	1
00932	SODIUM PERCENT	(PERCENT)	52			3	A	2
00935	POTASSIUM DISSOLVED	(MG/L AS K)	0.80			3	A	1
00940	CHLORIDE DISSOLVED	(MG/L AS CL)	9.0			3	A	2
00945	SULFATE DISSOLVED	(MG/L AS SO4)	7.0			3	A	2
00950	FLUORIDE DISSOLVED	(MG/L AS F)	0.10			3	A	1
00955	SILICA DISSOLVED	(MG/L AS SIO2)	4.7			3	A	2
01000	ARSENIC DISSOLVED	(UG/L AS AS)	1			3	A	1
01002	ARSENIC TOTAL	(UG/L AS AS)	1			3	A	1
01005	BARIUM DISSOLVED	(UG/L AS BA)	200			3	A	2
01006	BARIUM SUSPENDED	(UG/L AS BA)	0			3	A	0
01007	BARIUM TOTAL	(UG/L AS BA)	200			3	A	2
01025	CADMIUM DISSOLVED	(UG/L AS CD)	7			3	A	1
01026	CADMIUM SUSPENDED	(UG/L AS CD)	1			3	A	1
01027	CADMIUM TOTAL	(UG/L AS CD)	8			3	A	1
01030	CHROMIUM DISSOLVED	(UG/L AS CR)	2		1	3	A	1
01031	CHROMIUM SUSPENDED	(UG/L AS CR)	29			3	A	1
01034	CHROMIUM TOTAL	(UG/L AS CR)	30			3	A	1
01035	COBALT DISSOLVED	(UG/L AS CO)	2		1	3	A	1
01036	COBALT SUSPENDED	(UG/L AS CO)	0			3	A	0
01037	COBALT TOTAL	(UG/L AS CO)	2		1	3	A	1
01040	COPPER DISSOLVED	(UG/L AS CU)	2		1	3	A	1
01041	COPPER SUSPENDED	(UG/L AS CU)	6			3	A	1
01042	COPPER TOTAL	(UG/L AS CU)	7			3	A	1
01044	IRON SUSPENDED	(UG/L AS FE)	1800			3	A	2
01045	IRON TOTAL	(UG/L AS FE)	1900			3	A	2
01046	IRON DISSOLVED	(UG/L AS FE)	140			3	A	2
01049	LEAD DISSOLVED	(UG/L AS PB)	36			3		2
01050	LEAD SUSPENDED	(UG/L AS PB)	9			3	A	1
01051	LEAD TOTAL	(UG/L AS PB)	45			3		1
01054	MANGANESE SUSPENDED	(UG/L AS MN)	60			3	A	2
01055	MANGANESE TOTAL	(UG/L AS MN)	170			3	A	2
01056	MANGANESE DISSOLVED	(UG/L AS MN)	110			3	A	2
01075	SILVER DISSOLVED	(UG/L AS AG)	0		U	3	A	0

RECORD NUMBER: 97900025 -- CONTINUED

CODE	PARAMETER NAME	UNITS	VALUE	R	Q	M	P	
01076	SILVER SUSPENDED	(UG/L AS AG)	0			3	A	0
01077	SILVER TOTAL	(UG/L AS AG)	0		U	3	A	0
01090	ZINC DISSOLVED	(UG/L AS ZN)	20		1	3	A	1
01091	ZINC SUSPENDED	(UG/L AS ZN)	10			3	A	1
01092	ZINC TOTAL	(UG/L AS ZN)	20		2	3	A	1
01145	SELENIUM DISSOLVED	(UG/L AS SE)	1		1	3	A	1
01146	SELENIUM SUSPENDED	(UG/L AS SE)	0			3	A	0
01147	SELENIUM TOTAL	(UG/L AS SE)	1		1	3	A	1
31501	COLIFORM, TOTAL	COLS./100 ML	8800			3	A	2
31616	COLIFORM, FECAL	COLS./100 ML	630			3	A	2
31673	FECAL STRPT KF AGAR	COLS./100 ML	450			3	A	2
60050	PHYTO TYPE-I C/ML	CELLS/ML	1600			3	A	2
70300	RESIDUE DIS 180C	MG/L	40			3	A	2
70301	DISSOLVED SOLIDS SUM	MG/L	32			3	A	2
70302	DISSOLVED SOLIDS	TONS/DAY	4390			D	A	3
70303	RESIDUE DIS TON/ACFT	T/AC-FT	0.05			3	A	2
70331	SED-SUSP-SIEVE-.062	%	63			3	A	2
70953	CHL-A PHY CHROMA FL	UG/L	5.83			3	A	3
70954	CHLOROPHYLL-B, PHYT.	UG/L	0.000			3	A	3
71887	NITROGEN, TOTAL -NO3	MG/L AS NO3	3.7			3	A	2
71890	MERCURY DISSOLVED	UG/L AS HG	0.5		1	3	A	1
71895	MERCURY SUSPENDED	UG/L AS HG	0			3	A	0
71900	MERCURY, TOT.REC.	UG/L AS HG	0.50		1	3	A	1
80154	CONCENTRATION,S.SED.	MG/L	85			3	A	2
80155	DISCHARGE,SUSP.SED.	T/DAY	9320		1	3	A	3

RECORD NUMBER: 97900025

STATION ID: USGS 01096550

STATION NAME: MERRIMACK RIVER ABOVE LOWELL, MA

COLLECTION DATE: 03-09-1979 0800 - -

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
CALCIUM, DISS. MG/L	2.900	0.145	CHLORIDE, DISS. MG/L	9.000	0.254
MAGNESIUM, DISS. MG/L	0.600	0.050	SULFATE, DISS. MG/L	7.000	0.146
SODIUM, DISS. MG/L	5.401	0.235	FLUORIDE, DISS. MG/L	0.101	0.006
POTASSIUM, DISS. MG/L	0.801	0.021	ALKALINITY, FET, FLD	1.000	0.020
IRON, DISS. UG/L	140.000	0.008			
MANGANESE, DISS. UG/L	110.001	0.005			
TOTAL		0.462	TOTAL		0.425

PERCENT DIFFERENCE = 4.08

2.4 Option 2.4.1 -- LIST STATION RECORDS -- Sample Output

DISTRICT SITE FILE CONTENTS - RETRIEVED ON TUE, 09 FEB 1988 @ 09:33:29

STATION NAME:	WHITMAN RIVER NEAR WESTMINSTER, MA			STATION NUMBER:	01094340
STATE:	25	COUNTY:	027	DISTRICT:	25
LATITUDE / LONGITUDE :	200000 / 0715202	LATITUDE ACCURACY:		UPDATED:	19861230
RECORD CREATED:	19850606	GAGE/SURFACE DATUM:	5000	BASIN CODE:	1
SITE USE CODE:	ACTIVE	HYDROLOGIC UNIT:	01070002		
LAND NET LOCATION:		ALTITUDE METHOD:		ALTITUDE ACCURACY:	
NAME OF LOCATION MAP:		MAP SCALE:	1:	SOURCE AGENCY:	USGS
DATE SITE ESTAB. OR INVENT.:		REMARKS:	TWEEDLE AND TWEEDLDUM		
GAGE HEIGHT AT NO-FLOW:	27	CONTRIB. DRAIN AREA:		DRAINAGE AREA:	23.231
CREST-STAGE UPSTREAM ELEVATION:					
CREST-STAGE DOWNSTRM ELEVATION:		BASE DISCHARGE:			

TYPE OF SITE	TYPE OF DATA COLLECTED AT SITE: STATUS	INSTRUMENTATION AT SITE: STAT
STREAM	WATER QUALITY - INTERMITTENT: ACTIVE	
METEORLOGICAL		

US

2.4 Option 2.4.3 LIST PARAMETER CODE DICTIONARY -- Sample Output

PARAMETER CODE LIST

CODE	SHORT NAME	ORDER	LONG NAME
00001	CROSS-SECTION (FEET)	02900	CROSS-SECTION LOCATION FEET FROM RIGHT B
00002	CROSS-SECTION (%)	03000	CROSS-SECTION LOCATION PERCENT FROM RIGH
00003	SAMPLING DEPTH (FT.)	07300	SAMPLING DEPTH (FEET)
00004	STREAM WIDTH (FEET)	01600	STREAM WIDTH (FEET)
00005	CROSS-SECTION (%)	03100	CROSS-SECTION LOCATION VERTICAL (PERCENT
00008	SAMPLE ACCT. NUMBER	01000	SAMPLE ACCOUNTING NUMBER
00009	CROSS-SECTION (FT.)	02700	CROSS-SECTION LOCATION FEET FROM LEFT BA
00010	WATER TEMPERATURE	20000	WATER TEMPERATURE, DEGREES CENTIGRADE
00011	WATER TEMP. DEG. F.		WATER TEMPERATURE, (DEGREES) FARENHEIT
00012	EVAP TEMP (48" PAN)	19700	EVAPORATION TEMPERATURE 48" PAN (DEGREES
00013	EVAP TEMP (24" PAN)	19600	EVAPORATION TEMPERATURE 24" PAN (DEGREES
00014	WET BULB TEMP. DEG.	19500	WET BULB TEMPERATURE (DEGREES) CENTIGRAD
00020	AIR TEMPERATURE	19400	TEMPERATURE, AIR, DEGREES CENTIGRADE
00021	TEMPERATURE DEG. F		TEMPERATURE, AIR, DEGREES FAHRENHEIT
00022	LENGTH OF EXPOSURE	18000	LENGTH OF EXPOSURE (DAYS)
00023	SAMPLE WEIGHT (LBS)	18100	SAMPLE WEIGHT (POUNDS)
00024	SAMPLE LENGTH (IN)	18200	SAMPLE LENGTH (INCHES)

2.4 Option 2.4.6 -- LIST STATE/COUNTY DATA -- Sample Output

```
  STATE NAME: FLORIDA                    MIN LAT: 242500
  STATE ABBR: FL                         MAX LAT: 310036   MIN ALT: 00000
  STATE CODE: 12                        MIN LONG: 0800238  MAX ALT: 00345
  LAST UPDAT: 19831116                  MAX LONG: 0873824


 COUNTY NAME: ALACHUA                     MIN LAT: 292510
 COUNTY CODE: 001                         MAX LAT: 295625
  STATE CODE: 12                         MIN LONG: 0820117
  LAST UPDAT: 19831108                   MAX LONG: 0823949


 COUNTY NAME: BAKER                       MIN LAT: 300808
 COUNTY CODE: 003                         MAX LAT: 303438
  STATE CODE: 12                         MIN LONG: 0820219
  LAST UPDAT: 19831108                   MAX LONG: 0822732
```

2.4 Option 2.4.7 -- DUMP PARAMETER CODE DICTIONARY -- Sample Output

PARAMETER CODE LIST

CODE	SHORT NAME	ORDER	LONG NAME	UNITS	MEQ F	ROUNDING
00001	CROSS-SECTION (FEET)	02900	CROSS-SECTION LOCATION FEET FROM RIGHT B	(FEET)	00000	02233333 2
00002	CROSS-SECTION (%)	03000	CROSS-SECTION LOCATION PERCENT FROM RIGH	(PERCENT)	00000	0223333332
00003	SAMPLING DEPTH (FT.)	07300	SAMPLING DEPTH (FEET)	FEET	00000	0223333332
00004	STREAM WIDTH (FEET)	01600	STREAM WIDTH (FEET)	(FEET)	00000	0223333332
00005	CROSS-SECTION (%)	03100	CROSS-SECTION LOCATION VERTICAL (PERCENT	(PERCENT)	00000	0223313332
00008	SAMPLE ACCT. NUMBER	01000	SAMPLE ACCOUNTING NUMBER	(NUMBER)	00000	0001234562
00009	CROSS-SECTION (FT.)	02700	CROSS-SECTION LOCATION FEET FROM LEFT BA	(FEET)	00000	0223333332
00010	WATER TEMPERATURE	20000	WATER TEMPERATURE, DEGREES CENTIGRADE	(DEGREES)	00000	0012333331
00011	WATER TEMP. DEG. F.		WATER TEMPERATURE, (DEGREES) FARENHEIT	(DEGREES)		012333331
00012	EVAP TEMP (48" PAN)	19700	EVAPORATION TEMPERATURE 48" PAN (DEGREES	(DEGREES)	00000	0012333331
00013	EVAP TEMP (24" PAN)	19600	EVAPORATION TEMPERATURE 24" PAN (DEGREES	(DEGREES)	00000	0012333331
00014	WET BULB TEMP. DEG.	19500	WET BULB TEMPERATURE (DEGREES) CENTIGRAD	(DEGREES)	00000	0012333331
00020	AIR TEMPERATURE	19400	TEMPERATURE, AIR, DEGREES CENTIGRADE	DEGREES	00000	0012333331
00021	TEMPERATURE DEG. F		TEMPERATURE, AIR, DEGREES FAHRENHEIT	DEGREES		12333331
00022	LENGTH OF EXPOSURE	18000	LENGTH OF EXPOSURE (DAYS)	(DAYS)	00000	0001234562

3.1 Option 1 -- GETLAB.CPL -- Sample LAB$COMO output

```
GETLAB.CPL initiated  on 'August 20, 1986' at 18:16:52.
[FTR Rev. 2.1 Copyright (c) Prime Computer, Inc. 1985]
Request LAB.DATA.INDICATOR (115) submitted.
**** STOP  DELAY PROGRAM ENDED

[FTR Rev. 2.1 Copyright (c) Prime Computer, Inc. 1985]
Request DENVER.DATA (115) submitted.
**** STOP  DELAY PROGRAM ENDED



LAB DATA RECEIVED

**** STOP TEST.FILE PROGRAM STOPPING
```

4 Option 4.1 -- QWCARDSIN -- Sample WATLIST Output

QW DATA BASE PATHNAME IS : WATDATA>QW>QWFILE

** FEB 08 1988 AT 1741 NWIS 88.1 PROGRAM QWCARDSIN TRANSACTION NO.: 1

United States Department of the Interior
U.S. Geological Survey
Water Resources Division
National Laboratory
Arvada, Colorado

RECORD NO.: 97900025
SITE ID: 01096550 LAB ID NO.: PROJECT:
STATION NAME: MERRIMACK RIVER ABOVE LOWELL, MA STATE: 25
BEGIN DATE: 03-09-1979 AT 0800 END DATE: - - AT COUNTY: 017
GEOLOGIC UNIT: DATA TYPES:
STATUS: 7 SOURCE: 9 HYD. CONDITION: A TYPE: 9 HYD. EVENT: 9
MEDIUM: 0 REMARKS TO LAB:
SAMPLE COST: $ REMARKS FROM LAB:
SCHEDULES USED:
NO. PARAMETERS: 92 PROCESSING STATUS: R

	CODE	PARAMETER NAME	UNITS	VALUE	REM	QA	MET	SIG
UPDATE	00010	WATER TEMPERATURE	(DEGREES)	0.5		3	A	1
UPDATE	00020	AIR TEMPERATURE	DEGREES	6.5		3	A	2
UPDATE	00028	ANALYZING AGENCY	(CODE NUMBER)	80010		3	A	5
UPDATE	00061	DISCHARGE INS. (F/S)	(FEET/SECOND)	40600		3	A	2
UPDATE	00070	TURBIDITY	(JCU)	15		3	A	2
UPDATE	00076	TURBIDITY	(FTU)	15		3	A	2
UPDATE	00095	SPECIFIC CONDUCTANCE	US/CM @ 25C	52		3	A	2
UPDATE	00300	OXYGEN DISSOLVED	(MG/L)	14.2		3	A	3
UPDATE	00301	OXYGEN DIS. PERCENT	% OF SATURATION	98		3	A	2
UPDATE	00340	COD HIGH LEVEL MG/L	(MG/L)	16		3	A	2
UPDATE	00400	PH	(STANDARD UNITS)	5.20		3	A	2
UPDATE	00410	ALKALINITY TOTAL	(MG/L AS CACO3)	1		3	A	2
UPDATE	00500	RESIDUE SOLIDS	(MG/L)	96		3	A	2
UPDATE	00530	RESIDUE TOTAL	(MG/L)	41		3	A	2
UPDATE	00556	OIL AND GREASE REC.	(MG/L)	0		3	A	0
UPDATE	00600	NITROGEN TOTAL	(MG/L AS N)	0.84		3	A	2
UPDATE	00605	NITROGEN ORGANIC T.	(MG/L AS N)	0.60		3	A	2

FEB 08 1988 SAMPLE NUMBER: 97900025 -- CONTINUED

	CODE	PARAMETER NAME	UNITS	VALUE	REM	QA	MET	SIG
UPDATE	00610	NITROGEN AMMONIA T.	(MG/L AS N)	0.080		3	A	3
UPDATE	00615	NITROGEN,NITRITE T.	MG/L AS N	0.010		3	A	3
UPDATE	00620	NITROGEN NITRATE T.	MG/L AS N	0.150		3	A	2
UPDATE	00623	NITROGEN DISSOLVED	(MG/L AS N)	0		3		2
UPDATE	00624	NITROGEN SUSPENDED	(MG/L AS N)	0.64		3	A	2
UPDATE	00625	NITROGEN AMMONIA T.	(MG/L AS N)	0.68		3	A	2
UPDATE	00630	NO2 + NO3 TOTAL	(MG/L AS N)	0.160		3	A	2
UPDATE	00665	PHOSPHOROUS TOTAL	(MG/L AS P)	0.150		3	A	3
UPDATE	00666	PHOSPHOROUS DISS.	(MG/L AS P)	0.021		3	A	3
UPDATE	00681	CARBON ORGANIC DIS.	(MG/L AS C)	5.7		3	A	2
UPDATE	00689	CARBON ORGANIC S.	(MG/L AS C)	1.5		3	A	2
UPDATE	00900	HARDNESS TOTAL	(MG/L AS CA03)	10		3	A	1
UPDATE	00902	NONCARBONATE HARD. F	(MG/L AS CAC03)	9		3	A	1
UPDATE	00915	CALCIUM DISSOLVED	(MG/L AS CA)	2.9		3	A	2
UPDATE	00925	MAGNESIUM DISSOLVED	(MG/L AS MG)	0.60		3	A	1
UPDATE	00930	SODIUM DISSOLVED	(MG/L AS NA)	5.4		3	A	2
UPDATE	00931	SODIUM ADSORPTION R.	(RATIO)	0.8		3	A	1
UPDATE	00932	SODIUM PERCENT	(PERCENT)	52		3	A	2
UPDATE	00935	POTASSIUM DISSOLVED	(MG/L AS K)	0.80		3	A	1
UPDATE	00940	CHLORIDE DISSOLVED	(MG/L AS CL)	9.0		3	A	2
UPDATE	00945	SULFATE DISSOLVED	(MG/L AS S04)	7.0		3	A	2
UPDATE	00950	FLUORIDE DISSOLVED	(MG/L AS F)	0.10		3	A	1
UPDATE	00955	SILICA DISSOLVED	(MG/L AS SI02)	4.7		3	A	2
UPDATE	01000	ARSENIC DISSOLVED	(UG/L AS AS)	1		3	A	1
UPDATE	01002	ARSENIC TOTAL	(UG/L AS AS)	1		3	A	1
UPDATE	01005	BARIUM DISSOLVED	(UG/L AS BA)	200		3	A	2
UPDATE	01006	BARIUM SUSPENDED	(UG/L AS BA)	0		3	A	0
UPDATE	01007	BARIUM TOTAL	(UG/L AS BA)	200		3	A	2
UPDATE	01025	CADMIUM DISSOLVED	(UG/L AS CD)	7		3	A	1
UPDATE	01026	CADMIUM SUSPENDED	(UG/L AS CD)	1		3	A	1
UPDATE	01027	CADMIUM TOTAL	(UG/L AS CD)	8		3	A	1
UPDATE	01030	CHROMIUM DISSOLVED	(UG/L AS CR)	2	1	3	A	1
UPDATE	01031	CHROMIUM SUSPENDED	(UG/L AS CR)	29		3	A	1
UPDATE	01034	CHROMIUM TOTAL	(UG/L AS CR)	30		3	A	1
UPDATE	01035	COBALT DISSOLVED	(UG/L AS CO)	2	1	3	A	1
UPDATE	01036	COBALT SUSPENDED	(UG/L AS CO)	0		3	A	0
UPDATE	01037	COBALT TOTAL	(UG/L AS CO)	2	1	3	A	1
UPDATE	01040	COPPER DISSOLVED	(UG/L AS CU)	2	1	3	A	1
UPDATE	01041	COPPER SUSPENDED	(UG/L AS CU)	6		3	A	1
UPDATE	01042	COPPER TOTAL	(UG/L AS CU)	7		3	A	1
UPDATE	01044	IRON SUSPENDED	(UG/L AS FE)	1800		3	A	2
UPDATE	01045	IRON TOTAL	(UG/L AS FE)	1900		3	A	2

FEB 08 1988 SAMPLE NUMBER: 97900025 -- CONTINUED

	CODE	PARAMETER NAME	UNITS	VALUE	REM	QA	MET	SIG
UPDATE	01046	IRON DISSOLVED	(UG/L AS FE)	140		3	A	2
UPDATE	01049	LEAD DISSOLVED	(UG/L AS PB)	36		3		2
UPDATE	01050	LEAD SUSPENDED	(UG/L AS PB)	9		3	A	1
UPDATE	01051	LEAD TOTAL	(UG/L AS PB)	45		3		1
UPDATE	01054	MANGANESE SUSPENDED	(UG/L AS MN)	60		3	A	2
UPDATE	01055	MANGANESE TOTAL	(UG/L AS MN)	170		3	A	2
UPDATE	01056	MANGANESE DISSOLVED	(UG/L AS MN)	110		3	A	2
UPDATE	01075	SILVER DISSOLVED	(UG/L AS AG)	0	U	3	A	0
UPDATE	01076	SILVER SUSPENDED	(UG/L AS AG)	0		3	A	0
UPDATE	01077	SILVER TOTAL	(UG/L AS AG)	0	U	3	A	0
UPDATE	01090	ZINC DISSOLVED	(UG/L AS ZN)	20	1	3	A	1
UPDATE	01091	ZINC SUSPENDED	(UG/L AS ZN)	10		3	A	1
UPDATE	01092	ZINC TOTAL	(UG/L AS ZN)	20	2	3	A	1
UPDATE	01145	SELENIUM DISSOLVED	(UG/L AS SE)	1	1	3	A	1
UPDATE	01146	SELENIUM SUSPENDED	(UG/L AS SE)	0		3	A	0
UPDATE	01147	SELENIUM TOTAL	(UG/L AS SE)	1	1	3	A	1
UPDATE	31501	COLIFORM, TOTAL	COLS./100 ML	8800		3	A	2
UPDATE	31616	COLIFORM, FECAL	COLS./100 ML	630		3	A	2
UPDATE	31673	FECAL STRPT KF AGAR	COLS./100 ML	450		3	A	2
UPDATE	60050	PHYTO TYPE-I C/ML	CELLS/ML	1600		3	A	2
UPDATE	70300	RESIDUE DIS 180C	MG/L	40		3	A	2
UPDATE	70301	DISSOLVED SOLIDS SUM	MG/L	32		3	A	2
UPDATE	70302	DISSOLVED SOLIDS	TONS/DAY	4390		D	A	3
UPDATE	70303	RESIDUE DIS TON/ACFT	T/AC-FT	0.05		3	A	2
UPDATE	70331	SED-SUSP-SIEVE-.062	%	63		3	A	2
UPDATE	70953	CHL-A PHY CHROMA FL	UG/L	5.83		3	A	3
UPDATE	70954	CHLOROPHYLL-B, PHYT.	UG/L	0.000		3	A	3
UPDATE	71887	NITROGEN, TOTAL -NO3	MG/L AS NO3	3.7		3	A	2
UPDATE	71890	MERCURY DISSOLVED	UG/L AS HG	0.5	1	3	A	1
UPDATE	71895	MERCURY SUSPENDED	UG/L AS HG	0		3	A	0
UPDATE	71900	MERCURY, TOT.REC.	UG/L AS HG	0.50	1	3	A	1
UPDATE	80154	CONCENTRATION,S.SED.	MG/L	85		3	A	2
UPDATE	80155	DISCHARGE,SUSP.SED.	T/DAY	9320	1	3	A	3

********** ERROR REPORT FOR TRANSACTION NO. 1 **********

CATION/CONDUCTANCE RATIO OUTSIDE LIMITS .92 TO 1.24

DISSOLVED SOLIDS/CALCULATED SOLIDS RATIO OUTSIDE LIMITS .9 TO 1.12

70302 STORED VALUE (4390) DOES NOT AGREE WITH COMPUTED VALUE (4380)

RECORD NUMBER: 97900025
STAION ID: USGS 01096550
STATION NAME: MERRIMACK RIVER ABOVE LOWELL, MA
COLLECTION DATE: 03-09-1979 0800 - -

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
CALCIUM, DISS. MG/L	2.900	0.145	CHLORIDE, DISS. MG/L	9.000	0.254
MAGNESIUM, DISS. MG/L	0.600	0.050	SULFATE, DISS. MG/L	7.000	0.146
SODIUM, DISS. MG/L	5.401	0.235	FLUORIDE, DISS. MG/L	0.101	0.006
POTASSIUM, DISS. MG/L	0.801	0.021	ALKALINITY, FET, FLD	1.000	0.020
IRON, DISS. UG/L	140.000	0.008			
MANGANESE, DISS. UG/L	110.001	0.005			
TOTAL		0.462	TOTAL		0.425

PERCENT DIFFERENCE = 4.08

4 Option 4.2 -- QWENTER -- Update Water-Quality File

QW DATA BASE PATHNAME IS : WATDATA>QW>QWFILE

** FEB 08 1988 AT 1739 NWIS 88.1 PROGRAM QWENTER TRANSACTION NO.: 1

RECORD NO.: 97900025
SITE ID: 01096550 LAB ID NO.: PROJECT:
STATION NAME: MERRIMACK RIVER ABOVE LOWELL, MA STATE: 25
BEGIN DATE: 03-09-1979 AT 0800 END DATE: - - AT COUNTY: 017
GEOLOGIC UNIT: DATA TYPES:
STATUS: 7 SOURCE: 9 HYD. CONDITION: A TYPE: 9 HYD. EVENT: 9
MEDIUM: 0 REMARKS TO LAB:
SAMPLE COST: $ REMARKS FROM LAB:
SCHEDULES USED:
NO. PARAMETERS: 92 PROCESSING STATUS: R

	CODE	PARAMETER NAME	UNITS	VALUE	REM	QA	MET	SIG
UPDATE	00010	WATER TEMPERATURE	(DEGREES)	0.5		3	A	1
UPDATE	00020	AIR TEMPERATURE	DEGREES	6.5		3	A	2
UPDATE	00028	ANALYZING AGENCY	(CODE NUMBER)	80010		3	A	5
UPDATE	00061	DISCHARGE INS. (F/S)	(FEET/SECOND)	40600		3	A	2
UPDATE	00070	TURBIDITY	(JCU)	15		3	A	2
UPDATE	00076	TURBIDITY	(FTU)	15		3	A	2
UPDATE	00095	SPECIFIC CONDUCTANCE	US/CM @ 25C	52		3	A	2
UPDATE	00300	OXYGEN DISSOLVED	(MG/L)	14.2		3	A	3
UPDATE	00301	OXYGEN DIS. PERCENT	% OF SATURATION	98		3	A	2
UPDATE	00340	COD HIGH LEVEL MG/L	(MG/L)	16		3	A	2
UPDATE	00400	PH	(STANDARD UNITS)	5.20		3	A	2
UPDATE	00410	ALKALINITY TOTAL	(MG/L AS CACO3)	1		3	A	2
UPDATE	00500	RESIDUE SOLIDS	(MG/L)	96		3	A	2
UPDATE	00530	RESIDUE TOTAL	(MG/L)	41		3	A	2
UPDATE	00556	OIL AND GREASE REC.	(MG/L)	0		3	A	0
UPDATE	00600	NITROGEN TOTAL	(MG/L AS N)	0.84		3	A	2
UPDATE	00605	NITROGEN ORGANIC T.	(MG/L AS N)	0.60		3	A	2
UPDATE	00610	NITROGEN AMMONIA T.	(MG/L AS N)	0.080		3	A	3
UPDATE	00615	NITROGEN,NITRITE T.	MG/L AS N	0.010		3	A	3
UPDATE	00620	NITROGEN NITRATE T.	MG/L AS N	0.150		3	A	2
UPDATE	00623	NITROGEN DISSOLVED	(MG/L AS N)	0		3		2
UPDATE	00624	NITROGEN SUSPENDED	(MG/L AS N)	0.64		3	A	2
UPDATE	00625	NITROGEN AMMONIA T.	(MG/L AS N)	0.68		3	A	2

FEB 08 1988 SAMPLE NUMBER: 97900025 -- CONTINUED

	CODE	PARAMETER NAME	UNITS	VALUE	REM	QA	MET	SIG
UPDATE	00630	NO2 + NO3 TOTAL	(MG/L AS N)	0.160		3	A	2
UPDATE	00665	PHOSPHOROUS TOTAL	(MG/L AS P)	0.150		3	A	3
UPDATE	00666	PHOSPHOROUS DISS.	(MG/L AS P)	0.021		3	A	3
UPDATE	00681	CARBON ORGANIC DIS.	(MG/L AS C)	5.7		3	A	2
UPDATE	00689	CARBON ORGANIC S.	(MG/L AS C)	1.5		3	A	2
UPDATE	00900	HARDNESS TOTAL	(MG/L AS CA03)	10		3	A	1
UPDATE	00902	NONCARBONATE HARD. F	(MG/L AS CACO3)	9		3	A	1
UPDATE	00915	CALCIUM DISSOLVED	(MG/L AS CA)	2.9		3	A	2
UPDATE	00925	MAGNESIUM DISSOLVED	(MG/L AS MG)	0.60		3	A	1
UPDATE	00930	SODIUM DISSOLVED	(MG/L AS NA)	5.4		3	A	2
UPDATE	00931	SODIUM ADSORPTION R.	(RATIO)	0.8		3	A	1
UPDATE	00932	SODIUM PERCENT	(PERCENT)	52		3	A	2
UPDATE	00935	POTASSIUM DISSOLVED	(MG/L AS K)	0.80		3	A	1
UPDATE	00940	CHLORIDE DISSOLVED	(MG/L AS CL)	9.0		3	A	2
UPDATE	00945	SULFATE DISSOLVED	(MG/L AS SO4)	7.0		3	A	2
UPDATE	00950	FLUORIDE DISSOLVED	(MG/L AS F)	0.10		3	A	1
UPDATE	00955	SILICA DISSOLVED	(MG/L AS SIO2)	4.7		3	A	2
UPDATE	01000	ARSENIC DISSOLVED	(UG/L AS AS)	1		3	A	1
UPDATE	01002	ARSENIC TOTAL	(UG/L AS AS)	1		3	A	1
UPDATE	01005	BARIUM DISSOLVED	(UG/L AS BA)	200		3	A	2
UPDATE	01006	BARIUM SUSPENDED	(UG/L AS BA)	0		3	A	0
UPDATE	01007	BARIUM TOTAL	(UG/L AS BA)	200		3	A	2
UPDATE	01025	CADMIUM DISSOLVED	(UG/L AS CD)	7		3	A	1
UPDATE	01026	CADMIUM SUSPENDED	(UG/L AS CD)	1		3	A	1
UPDATE	01027	CADMIUM TOTAL	(UG/L AS CD)	8		3	A	1
UPDATE	01030	CHROMIUM DISSOLVED	(UG/L AS CR)	2	1	3	A	1
UPDATE	01031	CHROMIUM SUSPENDED	(UG/L AS CR)	29		3	A	1
UPDATE	01034	CHROMIUM TOTAL	(UG/L AS CR)	30		3	A	1
UPDATE	01035	COBALT DISSOLVED	(UG/L AS CO)	2	1	3	A	1
UPDATE	01036	COBALT SUSPENDED	(UG/L AS CO)	0		3	A	0
UPDATE	01037	COBALT TOTAL	(UG/L AS CO)	2	1	3	A	1
UPDATE	01040	COPPER DISSOLVED	(UG/L AS CU)	2	1	3	A	1
UPDATE	01041	COPPER SUSPENDED	(UG/L AS CU)	6		3	A	1
UPDATE	01042	COPPER TOTAL	(UG/L AS CU)	7		3	A	1
UPDATE	01044	IRON SUSPENDED	(UG/L AS FE)	1800		3	A	2
UPDATE	01045	IRON TOTAL	(UG/L AS FE)	1900		3	A	2
UPDATE	01046	IRON DISSOLVED	(UG/L AS FE)	140		3	A	2
UPDATE	01049	LEAD DISSOLVED	(UG/L AS PB)	36		3		2
UPDATE	01050	LEAD SUSPENDED	(UG/L AS PB)	9		3	A	1
UPDATE	01051	LEAD TOTAL	(UG/L AS PB)	45		3		1
UPDATE	01054	MANGANESE SUSPENDED	(UG/L AS MN)	60		3	A	2

FEB 08 1988 SAMPLE NUMBER: 97900025 -- CONTINUED

	CODE	PARAMETER NAME	UNITS	VALUE	REM	QA	MET	SIG
UPDATE	01055	MANGANESE TOTAL	(UG/L AS MN)	170		3	A	2
UPDATE	01056	MANGANESE DISSOLVED	(UG/L AS MN)	110		3	A	2
UPDATE	01075	SILVER DISSOLVED	(UG/L AS AG)	0	U	3	A	0
UPDATE	01076	SILVER SUSPENDED	(UG/L AS AG)	0		3	A	0
UPDATE	01077	SILVER TOTAL	(UG/L AS AG)	0	U	3	A	0
UPDATE	01090	ZINC DISSOLVED	(UG/L AS ZN)	20	1	3	A	1
UPDATE	01091	ZINC SUSPENDED	(UG/L AS ZN)	10		3	A	1
UPDATE	01092	ZINC TOTAL	(UG/L AS ZN)	20	2	3	A	1
UPDATE	01145	SELENIUM DISSOLVED	(UG/L AS SE)	1	1	3	A	1
UPDATE	01146	SELENIUM SUSPENDED	(UG/L AS SE)	0		3	A	0
UPDATE	01147	SELENIUM TOTAL	(UG/L AS SE)	1	1	3	A	1
UPDATE	31501	COLIFORM, TOTAL	COLS./100 ML	8800		3	A	2
UPDATE	31616	COLIFORM, FECAL	COLS./100 ML	630		3	A	2
UPDATE	31673	FECAL STRPT KF AGAR	COLS./100 ML	450		3	A	2
UPDATE	60050	PHYTO TYPE-I C/ML	CELLS/ML	1600		3	A	2
UPDATE	70300	RESIDUE DIS 180C	MG/L	40		3	A	2
UPDATE	70301	DISSOLVED SOLIDS SUM	MG/L	32		3	A	2
UPDATE	70302	DISSOLVED SOLIDS	TONS/DAY	4390		D	A	3
UPDATE	70303	RESIDUE DIS TON/ACFT	T/AC-FT	0.05		3	A	2
UPDATE	70331	SED-SUSP-SIEVE-.062	%	63		3	A	2
UPDATE	70953	CHL-A PHY CHROMA FL	UG/L	5.83		3	A	3
UPDATE	70954	CHLOROPHYLL-B, PHYT.	UG/L	0.000		3	A	3
UPDATE	71887	NITROGEN, TOTAL -NO3	MG/L AS NO3	3.7		3	A	2
UPDATE	71890	MERCURY DISSOLVED	UG/L AS HG	0.5	1	3	A	1
UPDATE	71895	MERCURY SUSPENDED	UG/L AS HG	0		3	A	0
UPDATE	71900	MERCURY, TOT.REC.	UG/L AS HG	0.50	1	3	A	1
UPDATE	80154	CONCENTRATION,S.SED.	MG/L	85		3	A	2
UPDATE	80155	DISCHARGE,SUSP.SED.	T/DAY	9320	1	3	A	3

********** ERROR REPORT FOR TRANSACTION NO. 1 **********

CATION/CONDUCTANCE RATIO OUTSIDE LIMITS .92 TO 1.24

DISSOLVED SOLIDS/CALCULATED SOLIDS RATIO OUTSIDE LIMITS .9 TO 1.12

70302 STORED VALUE (4390) DOES NOT AGREE WITH COMPUTED VALUE (4380)

RECORD NUMBER: 97900025
STAION ID: USGS 01096550
STATION NAME: MERRIMACK RIVER ABOVE LOWELL, MA
COLLECTION DATE: 03-09-1979 0800 - -

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
CALCIUM, DISS. MG/L	2.900	0.145	CHLORIDE, DISS. MG/L	9.000	0.254
MAGNESIUM, DISS. MG/L	0.600	0.050	SULFATE, DISS. MG/L	7.000	0.146
SODIUM, DISS. MG/L	5.401	0.235	FLUORIDE, DISS. MG/L	0.101	0.006
POTASSIUM, DISS. MG/L	0.801	0.021	ALKALINITY, FET, FLD	1.000	0.020
IRON, DISS. UG/L	140.000	0.008			
MANGANESE, DISS. UG/L	110.001	0.005			
TOTAL		0.462	TOTAL		0.425

PERCENT DIFFERENCE = 4.08