

# **NATIONAL WATER QUALITY LABORATORY 1995 SERVICES CATALOG**

**By Patricia J. Timme**

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**U.S. GEOLOGICAL SURVEY**

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1995**



**U.S. DEPARTMENT OF THE INTERIOR**  
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**U.S. GEOLOGICAL SURVEY**  
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## CONVERSION FACTORS

Multiply	By	To obtain
micrometer ( $\mu\text{m}$ )	$3.94 \times 10^{-5}$	inch
millimeter (mm)	$3.94 \times 10^{-2}$	inch
liter (L)	$2.65 \times 10^{-1}$	gallon
microliter ( $\mu\text{L}$ )	$2.65 \times 10^{-7}$	gallon
milliliter (mL)	$2.65 \times 10^{-4}$	gallon
gram (g)	$3.53 \times 10^{-2}$	ounce, avoirdupois
milligram (mg)	$3.53 \times 10^{-5}$	ounce
picocurie (pCi)	$3.7 \times 10^{-2}$	becquerel

Temperature in degrees Celsius ( $^{\circ}\text{C}$ ) can be converted to degrees Fahrenheit ( $^{\circ}\text{F}$ ) by using the following equation:

$$^{\circ}\text{F} = 9/5 (^{\circ}\text{C}) + 32$$

## **ABSTRACT**

This Services Catalog is intended for the internal use of U.S. Geological Survey personnel and contains information about field supplies and analytical services available from the National Water Quality Laboratory. To assist personnel in the selection of analytical services, this catalog lists sample volume, applicable concentration range, detection level, precision of analysis, and preservation requirements for samples.

## **INTRODUCTION**

Three Water Resources Division Technical Memoranda, 92.35--Use of Laboratories, 92.36--Use of Laboratories by National Water Quality Programs, and 92.37--Laboratory Methods, stated that all U. S. Geological Survey (USGS) programs having national impact would use the services provided by the National Water Quality Laboratory (NWQL), whether in its own Laboratory, through contracted services, or by interagency agreements. Thus, all USGS offices and National Water-Quality Assessment (NAWQA) study units need to be familiar with the contents of this catalog. Copies of the aforementioned memoranda are available by contacting the NWQL.

This catalog is distributed annually but is continually updated to reflect new parameters, schedules, and analytical details. New methods of chemical analysis are constantly being researched, approved, and added at the NWQL. Parameters are deleted when they become obsolete. Customers who own schedules might change their schedule contents, leaving other users with unwanted analytical work. To keep informed of these changes, readers of the catalog are urged to use a program on the NWQL partition of DCOLKA--Schedules, Parameters and Network (SPN). SPN contains the latest version of the information shown in this catalog, as well as historical information from the two previous fiscal years. SPN is a menu-driven search and display program, containing information about laboratory codes and schedule contents.

The Services Catalog consists of three sections: the first section lists containers, solutions, and miscellaneous items that are available through the NWQL; the second section describes sample processing; and the third section includes available analytical services. In addition, a Glossary and an Index are provided.

Laboratory codes and schedules are grouped by parameters that are measured together in the NWQL. In cases where more than one analytical method is offered for a single element or compound, different laboratory codes are given.

For information about the methods used for the analytical services offered in this catalog, refer to the section entitled "Selected References."

For more detailed information or discussion, contact the NWQL. Laboratory contacts are listed in table 1; abbreviations, classifications, and units for all tables are listed in table 2 in place of head-notes. This catalog supersedes the National Water Quality Laboratory 1994 Services Catalog (Timme, 1994).

## **ACKNOWLEDGMENTS**

Thanks are extended to the authors, editors, and reviewers of all previous editions of the National Water Quality Laboratory Services Catalog. Appreciation and thanks are extended to the reviewers of the 1995 catalog. Many suggestions made the catalog more comprehensive and “user friendly.”

**Table 1.--National Water Quality Laboratory contacts**

Contact	Title (EDOC/e-mail address)
<b>NWQL management staff</b>	
Pete Rogerson	Chief, Branch of Analytical Services (ROGERSON)
Vacant	Assistant Branch Chief
Tom Maloney	Chief, Quality Management Program (TMALONEY)
Merle Shockey	Chief, Inorganic Program (MSHOCKEY)
Merle Shockey	Acting Chief, Organic Program (MSHOCKEY)
Mark Sandstrom	Chief, Methods Research and Development Program (SANDSTRO)
Debbie Treseder	Chief, Administrative Services Unit (TRESEDER)
Carlos Arozarena	Safety Officer, NWQL and Central Region (CARLOS)
Linda Pratt	Chief, Laboratory Operations Program (LKPRATT)
<b>Contacts for specific questions</b>	
Department of Defense Environmental Chemistry (DODEC) and Organic Contracts	Dorothy Walker (DMWALKER)
Computer Services Unit updates, communications, and reloads	Wayne Nitta (WNITTA or DENADP)
Bottles/ampules from NWQL	Will Lanier (WDLANIER or DENSUPPL) John McKenzie (JCMCKENZ or OCALAMAN)
Field quality-assurance/quality-control materials (blank water and spikes)	Andy Martinez (JOSEM) Mark Sandstrom (SANDSTRO)
Inorganic production and program activities	Merle Shockey (DENINORG) Harold Ardourel (ARDOUREL)
Inorganic quality-control activities	Merle Shockey (MSHOCKEY or DENQC)
Laboratory catalog	Linda Pratt (LKPRATT) Pat Timme (PTTIMME)
Log-in	Will Lanier (WDLANIER or DENLOG) Phil Grano (PWGRANO)
Methods development and special activities	Mark Sandstrom (SANDSTRO)

**Table 1.--National Water Quality Laboratory contacts--Continued**

Contact	Title (EDOC/e-mail address)
<b>Contacts for specific questions</b>	
National Water-Quality Assessment Program	Steve Glodt (SRGLODT or NAWQADAT) Kim Pirkey (KDPIRKEY)
New schedules/parameter codes	Steve Glodt (SRGLODT)
Organic production and program activities	Ralph White (WRWHITE) Merle Shockey (MSHOCKEY or DENORG)
Organic quality-control activities	Merle Shockey (MSHOCKEY)
Priority and custom/ specific constituent	Merle Shockey--Inorganic and Organics (MSHOCKEY) Mark Sandstrom--Methods Research and Development (SANDSTRO)
Quality-control reanalysis requests for districts	Kathy Bryant (DENQC)
Radiochemical and stable isotope contracts	Ann Mullin (AHMULLIN)
Biological quality assurance/quality control	Allison Brigham (ABRIGHAM)
General assistance	(LABHELP)



**Table 2.--Abbreviations, classifications, and units**

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**Abbreviations**

2SPE	2 sigma precision estimate
AA	Atomic absorption
AMS	Accelerator mass spectrometry
ASF	Automated-segmented flow, colorimetric
auto.	Automated
BNA	Base neutral acid
BTM	Bottom material
calc.	Calculated
CAS	Chemical Abstract Service
chel.	Chelation extraction
CL	Classifications
CVAA	Cold vapor atomic absorption
DCP	Direct-current plasma
DNAA	Delayed neutron activation analysis
DIC	Dissolved inorganic carbon
Div.	Division
elec.	Electrometric
USEPA	U.S. Environmental Protection Agency
ET	Electrometric titration
EXT	Extracted
FIL	Filtered--field filtered
FY	Fiscal year
GC/ECD	Gas chromatography/electron capture detector
GC/FID	Gas chromatography/flame ionization detector
GC/FPD	Gas chromatography/flame photometric detector
GC/NPD	Gas chromatography/nitrogen phosphorus detector
GC/MS	Gas chromatography/mass spectrometric detector
GFAA	Graphite furnace atomic absorption
GR	Gravimetric analysis
HA	Hydride analysis
HDPE	High density polyethylene
HPLC	High-performance liquid chromatography
HS	Total dissolved solids greater than 250 mg/L
IBW	Inorganic-free blank water
IC	Ion chromatography
ICP	Inductively coupled plasma
ICP/MS	Inductively coupled plasma/mass spectrometry
ID	Identification
IR	Infrared
ISE	Ion selective electrode
lab.	Laboratory
LC	Laboratory code
LF	Laboratory filtered
LIS	Low-ionic strength
LL	Low-level analysis
LLD	Lower limit of determination
MBAS	Methylene blue active substances
MC	Method code
MN	Method number
MRL	Minimum-reporting level
N	Normal
NASQAN	National Stream Quality Accounting Network
NAWQA	National Water-Quality Assessment Program
No.	Number

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**Abbreviations--Continued**

NPD	Nitrogen-phosphorous detector
NPDES	National Pollution Discharge Elimination System
NTU	Nephelometric turbidity unit
NWQL	National Water Quality Laboratory
OD	Outside diameter
OFR	Open-file report
oz	ounce
PBW	Pesticide-free blank water
PC	Parameter code
PCB	Polychlorinated biphenyl
PCN	Polychlorinated naphthalene
PDB	Pee Dee Belemnite
PPMB	Phosphomolybdate
Pub.	Publication
RCRA	Resource Conservation & Recovery Act
Ref. No.	Reference number
ROE	Residue on evaporation
SC	Schedule number
SDWA	Safe Drinking Water Act
SMOW	Standard Mean Ocean Water
SEC	Specific electrical conductance
SPE	Solid-phase extraction
SV&BT	Sample volume and bottle type
SUS	Suspended
TIC	Total inorganic carbon
TOT	Total
TWRI	Techniques of Water-Resources Investigations
USGS	U.S. Geological Survey
VOC	Volatile organic compounds
VOI	Volatile-on-ignition
VPBW	Volatile-and-pesticide-free blank water
wt	Weight
WWR	Whole water, recoverable
YBP	Years before present

**Table 2.--Abbreviations, classifications, and units--Continued**

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**Signs and symbols**

--	Information not available
@	At
±	Plus or minus
>	Greater than
<	Less than
≥	Greater than or equal to
≤	Less than or equal to

**Units of measurement**

%	percent
deg C	degree Celsius
g	gram
gal	gallon
g/kg	gram per kilogram
g/m <sup>2</sup>	gram per square meter
g/mL	gram per milliliter
in.	inch
L	liter
mg	milligram
mg/kg	milligram per kilogram
mg/L	milligram per liter
mg/m <sup>2</sup>	milligram per square meter
mL	milliliter
mm	millimeter
pt	pint
pCi/g	picocurie per gram
pCi/L	picocurie per liter
µg/g	microgram per gram
µg/kg	microgram per kilogram
µg/L	microgram per liter
µL	microliter
µm	micrometer
µmol	micromole
µS/cm	microsiemens per centimeter

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## CONTAINERS, SOLUTIONS, AND MISCELLANEOUS ITEMS

Various containers, solutions, and supplies used in collecting, processing, and preserving samples for subsequent chemical analysis in the NWQL are available from either the NWQL or the Quality Water Service Unit (QWSU) in Ocala, Fla. Orders may be placed with the NWQL (DENSUPPL) or QWSU (OCALAMAN). These supplies need to be used to ensure the integrity of samples submitted for analysis to the NWQL. Considerable effort goes into ensuring the quality of the supplies through various quality-control (QC) steps in monitoring the contractors' products.

Many customers wish to use these supplies for samples that will not be analyzed by the NWQL. The cost of supplies is not included in the price of the analysis since it would raise the overall cost for those requesting analyses from the Laboratory. Supply prices are based on the cost of purchase, cleaning, and quality assurance, and are billed upon ordering. Because of the high cost of Teflon<sup>1</sup> containers, these containers remain the property of the NWQL and are loaned to the requester. Field supplies available from the NWQL and QWSU are listed in table 3.

To order containers and supplies from the NWQL or the QWSU, send an EDOC or e-mail message to DENSUPPL or OCALAMAN containing the following information:

1. List each item ordered exactly as described in table 3.
2. State the number of units ordered (for example, 5 packs of 25).
3. Give the account number to be charged.
4. Give the name and shipping address.

If this information is not complete, the order will be delayed while the information is gathered by return EDOC or telephone call. The order will be filled as quickly as possible. However, because of circumstances beyond the control of the NWQL and QWSU, some items may be temporarily out of stock, and partial orders may have to be shipped.

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<sup>1</sup>Use of trade and brand names in this report is for identification purposes only and does not constitute endorsement by the U.S. Geological Survey.

**Table 3.--Field supplies**

[Obtain from: D, National Water Quality Laboratory, Denver, Colo.; O, Quality Water Service Unit, Ocala, Fla.]

Containers, solutions, and miscellaneous items	Obtain from	Bottle type/sample designation <sup>1</sup>	Unit supplied
Ampule, phosphoric acid/cupric sulfate, 4 mL	O	LCO052	24 /pack
Ampule, nitric acid, 1 mL	O	FA, RA, RAE, RAH	24 /pack
Ampule, nitric acid, 2 mL	O	FAR	24 /pack
Ampule, nitric acid, ultrapure, 1 mL	O	FAB, RAB, FA, RA, RAE, RAH	24 /pack
Ampule, nitric acid, ultrapure, 1 mL packaged in 3 mL Teflon vial <sup>2</sup>	O	FAB, RAB, FA, RA	24 /pack
Ampule, nitric acid, ultrapure, 1 mL packaged in 3 mL Teflon vial <sup>2</sup>	O	FAB, RAB, FA, RA	5 /pack
Ampule, nitric acid/potassium dichromate, 10 mL	O	FAM, RAM	24 /pack
Ampule, sodium hydroxide, 5N, 5 mL	O	LCO880, LCO023	24 /pack
Ampule, sulfuric acid, 1 mL	O	LCO076	24 /pack
Ampule, sulfuric acid, 2 mL	O	LCO127	24 /pack
Analytical service request forms (ASRs)	D	All codes	1 each
Ascorbic acid (VOC), 5 g, includes measuring scoop	D		1 each
Bag, bubble, 1 L 6 in. x 9 in.	O		1 each
Bag, mesh, 14 in. x 16 in.	O		1 each
Bag, mesh, 16 in. x 24 in.	O		1 each
Blank water, inorganic (IBW)	O		1 gal
Blank water, pesticide (PBW)	D		1 gal
Blank water, pesticide (PBW)	D		4 /case
Blank water, VOC (VPBW)	D		1 gal
Blank water, VOC (VPBW)	D		4 /case
Bottle, glass, amber, 1 L, 33-mm neck, baked	O	GCC, LC0052, LC0127	12 /case
Bottle, glass, amber, 1L, 33-mm neck, baked (Poly-Seal caps to be ordered separately)	O	LC1043, LC1565, LC0440, LC1717, LC1718	12 /case
Bottle, glass, amber, 125 mL, 22-mm neck, baked, with caps	O	LC0019, LCO076, LC0113, LC0114, LC0306, SC1379	24 /case
Bottle, glass, amber, 125 mL, 22-mm neck, baked (Poly-Seal caps to be ordered separately)	O		24 /case
Bottle, glass, clear, 1 L, 63-mm neck, baked	O	Fits auto sampler	12 /case

Table 3.--Field supplies--Continued

Containers, solutions, and miscellaneous items	Obtain from	Bottle type/sample designation <sup>1</sup>	Unit supplied
Bottle, glass, clear, 1 L, 89-mm neck, baked	O	LC1199	12 /case
Bottle, glass, clear, 250 mL, 24-mm neck, acid-rinsed	O	FAM, RAM	24 /case
Bottle, glass, clear, 250 mL, 24-mm neck, baked	O	--	24 /case
Bottle, glass, clear, 500 mL, 89-mm neck, baked	O	BGC	12 /case
Bottle, glass, clear, 60 mL, 20-mm neck (Poly-Seal cap included)	O		24 /case
Bottle, polyethylene, brown, 125 mL, 28-mm neck, raw (caps to be ordered separately)	O	FCC, RCC	100 /repack
Bottle, polyethylene, brown, 125 mL, 28-mm neck (caps to be ordered separately)	O	FCC, RCC	550 /case
Bottle, polyethylene, natural, 1 L, 28-mm neck, acid-rinsed with clear cap	O	FAR, RUR	108 /case
Bottle, polyethylene, natural, 1 L, 28-mm neck, raw	O	FU, RU	108 /case
Bottle, polyethylene, natural, 125 mL, 28-mm neck, acid-rinsed with clear cap	O	--	550 /case
Bottle, polyethylene, natural, 125 mL, 28-mm neck, raw (caps to be ordered separately)	O	--	100 /repack
Bottle, polyethylene, natural 125 mL, 28-mm neck, raw (caps to be ordered separately)	O	LC0050, LC0452, LC1567 (LC0452 and LC1567 must have Poly-Seal cap)	550 /case
Bottle, polyethylene, natural, 250 mL, 28-mm neck, acid-rinsed with clear cap	O	FA, RA, RAE, RAH	15 /case (with Ziploc bag)
Bottle, polyethylene, natural, 250 mL, 28-mm neck, acid-rinsed with clear cap	O	FA, RA, RAE, RAH	225 /case (15 per Ziploc bag)
Bottle, polyethylene, natural, 250 mL 28-mm neck (caps to be ordered separately)	O	FU, RCB, RU, LC0023 LC0089, LC0880, LC0460 (LC0460 must have Poly-Seal cap)	297 /case
Bottle, polyethylene, natural, 500 mL, 28-mm neck, acid-rinsed with clear cap	O	FA, RA	256 /case
Bottle, polyethylene, natural, 500 mL, 28-mm neck (caps to be ordered separately)	O	FU, RU, LC0169, LC0624	256 /case

**Table 3.--Field supplies--Continued**

Containers, solutions, and miscellaneous items	Obtain from	Bottle type/sample designation <sup>1</sup>	Unit supplied
Bottle, polypropylene, natural, 500 mL, 89-mm neck, acid-rinsed	O	NAWQA	1 each
Bottle, polypropylene, natural, 500 mL, 89-mm neck (caps to be ordered separately)	O	CC, CU	1 each
Bottle, Teflon, natural, 250 mL, rental, usage and cleaning fee, acid-rinsed with cap (bottle is to be returned to NWQL)	D	FAB, RAB	1 each
Caps, melamine, green, 89 mm	O	Bottle, polyethylene, wide-mouth, sediment	12 /pack
Caps, metal, size 22	O	Bottle, glass, 125 mL	12 /pack
Caps, metal, size 33	O	Bottle, glass, 1 L	12 /pack
Caps, plastic, black, 28-mm	O	Bottle, polyethylene,	900 /case
Caps, plastic, black, 28-mm	O	Bottle, polyethylene,	100 /repack
Caps, plastic, Poly-Seal, 22-mm	O	Bottle, glass, 125 mL	100 /pack
Caps, plastic, Poly-Seal, 28-mm	O	Bottle, polyethylene, 125, 250, 500, 1L	100 /pack
Caps, plastic, Poly-Seal, 33-mm	O	Bottle, glass, 1L	100 /pack
Cartridge, SPE, C-18	D	SC 2010	1 each
Cartridge, SPE, Caropak-B	D	SC 2051	1 each
Cartridge, SPE, Adapter Kit	D	SC 2051	1 each
Cartridge, SPE, flow-control valve	D		1 each
Filters, silver or biological, or both	O	--	1 each
Filters, glass fiber, GF/F, 142-mm diameter	O	SC 2001/2010/2050/2051	5 /pack
Hydrochloric acid, concentrated, 30-ml Teflon bottle for NAWQA VOC preservation	D		1 each
Hydrochloric acid, diluted 1:4 with water, 30-mL Teflon bottle for acrolein/acrlonitrile VOC preservation	D		1 each
Kit, media, agar, fecal coliform	O	--	15 /kit
Kit, media, agar, fecal streptococci	O	--	15 /kit
Kit, media, agar, total coliform	O	--	15 /kit
Kit, organic field spiking (mixtures extra) <sup>3</sup>	D		1 each
Kit, capillary glass bores,baked replacement, 100 µL	D	--	30 /kit
Kit, periphyton, chlorophyll and biomass	O	CHE	1 kit

**Table 3.--Field supplies--Continued**

Containers, solutions, and miscellaneous items	Obtain from	Bottle type/sample designation <sup>1</sup>	Unit supplied
Kit, phytoplankton, chlorophyll	O	CHY	1 kit
Labels, MRM (merchandise return mail) 1st or 4th class	D		25 /pack
Labels, SMS (sample management system)	D	--	5,000 /box
pH Buffers (4.0, 7.0, 10.0), 1 L	O	--	1 each
pH Buffers (4.0, 7.0, 10.0), 5 gal	O	--	1 each
Radon kits	D	--	1 each
Sleeve, foam, 3-1/2 in. x 6 in., (small--125 mL bottle)	O	--	1 each
Sleeve, foam, 4-1/2 in. x 7-1/2 in., (medium--250 mL bottle)	O	--	1 each
Sleeve, foam, 6-1/2 in. x 10 in., (large--1,000 mL bottle)	O	--	1 each
Solution, field spike, NAWQA VOC	D	SC 2090	1 ampule
Solution, field spike, NAWQA SC 2001/2010	D	SC 2001/2010	1 ampule
Solution, field spike, NPDES BNA	D	SC 1383/1385	1 ampule
Solution, field spike, NPDES OCP	D	SC 1608	1 ampule
Solution, field spike, NPDES VOC	D	SC 1380	1 ampule
Solution, field spike (2050/2051)	D	SC 2050//2051	1 ampule
Solution, field spike, triazine (125 mL)	D	SC 1379	1 ampule
Solution, sodium thiosulfate, 0.025 N	O		1 L
Solution, specific conductance (50 µS/cm)	O		1 L
Solution, specific conductance (100 µS/cm)	O		1 L
Solution, specific conductance (180 µS/cm)	O		1 L
Solution, specific conductance (250 µS/cm)	O		1 L
Solution, specific conductance (500 µS/cm)	O		1 L
Solution, specific conductance (750) µS/cm)	O		1 L
Solution, specific conductance (1,000 µS/cm)	O		1 L
Solution, specific conductance (1,800 µS/cm)	O		1 L
Solution, specific conductance (2,500 µS/cm)	O		1 L

Table 3.--Field supplies--Continued

Containers, solutions, and miscellaneous items	Obtain from	Bottle type/sample designation <sup>1</sup>	Unit supplied
Solution, specific conductance (5,000 $\mu\text{S}/\text{cm}$ )	O		1 L
Solution, specific conductance (7,500 $\mu\text{S}/\text{cm}$ )	O		1 L
Solution, specific conductance (10,000 $\mu\text{S}/\text{cm}$ )	O		1 L
Solution, specific conductance (18,000 $\mu\text{S}/\text{cm}$ )	O		1 L
Solution, specific conductance (25,000 $\mu\text{S}/\text{cm}$ )	O		1 L
Solution, specific conductance (50,000 $\mu\text{S}/\text{cm}$ )	O		1 L
Solution, sulfuric acid, 0.0164 <i>N</i> (approximate)	O		1 L
Surrogate mixture <sup>4</sup>	D	SC 2010	2 mL
Surrogate mixture <sup>4</sup>	D	SC 2051	3 mL
Trip blanks (VOC)	D	8 filled vials added to a case of ordered VOC vials	1 each
Vial, glass, amber septum, 40 mL	D	VOC	72 /box
Water, dilution, buffered, sterile, bacteriological samples, 99 mL	O	--	12 /box
Water, rinse, buffered, sterile, bacteriological samples, 250 mL	O	--	8 /pack
Zinc acetate, 25 g	O	LC0089	1 jar

<sup>1</sup>See table 4.<sup>2</sup>Recommended for blank analysis (SC 172). See Office of Water Quality Technical Memorandum 94.06, entitled "New Custom Analysis Schedule 172 for Blanks (Jan. 3, 1994). Readers and customers in need of a copy of this unpublished memo may contact NWQL for a copy.<sup>3</sup>Return of kits will result in credit for account.<sup>4</sup>Surrogate mixtures have a shelf-life of six months and should not be ordered more than two months prior to intended use.



## SAMPLE PROCESSING

To ensure the quality of data produced by the NWQL, follow sampling protocols and ship samples as expeditiously as possible so that samples arrive at the NWQL during regular workdays. In addition, preserve and store samples in appropriate containers. To ensure sample integrity, submit samples using quality-assured containers and preservatives supplied by the NWQL or QWSU. Containers available from the NWQL or QWSU, the recommended sample treatment prior to packing, and the preferred sample preservation technique are listed in table 4.

USGS personnel are urged to review Office of Water Quality (OWQ) Technical Memoranda 92.01, "Distilled/Deionized Water for District Operations," and 92.02, "Field Preparation of Containers for Aqueous Samples;" Horowitz and others (1994); and table 4 of this report. (Contact the NWQL for copies of memoranda.)

Any bottom-material samples received for inorganic analysis need to be presieved through a 2.0-mm sieve using a minimal volume of native water. Unsieved samples will be sieved by the NWQL (using deionized water), and an additional \$55.00 charge will be assessed by the Laboratory. Samples will be sieved as time permits; therefore, turnaround time will increase.

All samples submitted to the NWQL for analysis must be accompanied by an Analytical Services Request (ASR) form. To ensure correct processing of samples, all shipments should include ASR forms that refer only to the samples in that shipment. Fill out the ASR forms completely, and include information on project chief, current telephone numbers, and the number and type of bottles sent, as well as the data and time assigned to sample collection. To expedite data review, inorganic samples should also include information on pH, specific conductance, and, when available, field alkalinity. For more information on shipping to NWQL, customers are encouraged to review NWQL Technical Memorandum 95-04, "Shipping Samples to the National Water Quality Laboratory" (available on request).

NOTE: The protocols outlined in this report should be considered standard operating procedure for all USGS samples submitted to the NWQL, except where alternative protocols have been established and prearranged with the NWQL that serve specific objectives required for a national program or project. For example, inorganic analysis of sediments for NAWQA require on-site sieving of the sample through 63- $\mu$ m mesh.

Table 4.--Sample designations, containers, and treatments

Sample designation	Container size	Container type	Treatment and preservation
<b>Biological determinations</b>			
CHE		Glass jar, wide-mouth	Place strip in jar and cap. Wrap jar in aluminum foil, freeze with dry ice and ship expeditiously.
CHY		Glass vial	Collect on glass filter. Record volume filtered. Place filter in vial, cap, and wrap vial in aluminum foil. Freeze with dry ice and ship expeditiously.
<b>Inorganic determinations: Water, water-sediment and bottom-material samples</b>			
CC	1 pt	Polypropylene bottle, wide-mouth	Field sieve through 2-mm plastic sieve using native water.
CU	1 pt	Polyethylene bottle, wide-mouth	Field sieve through 2-mm plastic sieve using native water.
FA	250 or 500 mL	Polyethylene bottle, acid-rinsed	Filter through 0.45- $\mu$ m filter; use filtered sample to rinse containers and acidify sample with $\text{HNO}_3$ to pH < 2; container size dependent on laboratory schedule.
FAB	250 mL	Teflon bottle, acid-rinsed	Filter through 0.45- $\mu$ m filter; use filtered sample to rinse containers and acidify collected sample with ultrapure $\text{HNO}_3$ to pH < 2.
FAM	250 mL	Glass bottle, acid-rinsed	Filter through 0.45- $\mu$ m filter; use filtered sample to rinse containers and acidify collected sample with 1 ampule of $\text{HNO}_3/\text{K}_2\text{Cr}_2\text{O}_7$ .
FCA	125 mL	Brown polyethylene bottle	Filter through 0.45- $\mu$ m filter; use filtered sample to rinse containers, acidify with $\text{H}_2\text{SO}_4$ , chill and maintain at 4 deg C, ship immediately.
FCC	125 mL	Brown polyethylene bottle	Filter through 0.45- $\mu$ m filter; use filtered sample to rinse containers, chill and maintain at 4 deg C, ship immediately.
FU	250 or 500 mL	Polyethylene bottle	Filter through 0.45- $\mu$ m filter; using filtered sample to rinse containers; container size dependent on laboratory schedule.
RA	250 or 500 mL	Polyethylene bottle, acid-rinsed	Use unfiltered sample to rinse bottles, then acidify collected sample with $\text{HNO}_3$ to pH < 2; container size dependent on laboratory schedule.
RAE	250 mL	Polyethylene bottle, acid-rinsed	Not a valid substitute for RAH. Use unfiltered sample to rinse bottles, then acidify collected sample with $\text{HNO}_3$ to pH < 2.
RAH	250 mL	Polyethylene bottle, acid-rinsed	Not a valid substitute for RA or RAH. Use unfiltered sample to rinse bottles, then acidify collected sample with $\text{HNO}_3$ to pH < 2.
RAM	250 mL	Glass bottle, acid-rinsed	Not a valid substitute for RA. Use unfiltered sample to rinse bottles, then acidify collected sample with 1 ampule of $\text{HNO}_3/\text{K}_2\text{Cr}_2\text{O}_7$ .
RCA	125 mL	Brown polyethylene bottle	Use unfiltered sample to rinse bottles, acidify with $\text{H}_2\text{SO}_4$ , chill and maintain at 4 deg C; ship immediately.
RCC	125 mL	Brown polyethylene bottle	Use unfiltered sample to rinse bottles, chill and maintain at 4 deg C; ship immediately.
RCB	250 mL	Polyethylene bottle	Use unfiltered sample to rinse bottles, then chill collected sample and maintain at 4 deg C; ship immediately.
RU	250 or 500 mL	Polyethylene bottle	Use unfiltered sample to rinse bottles; container size dependent on laboratory schedule.
LC0023	250 mL	Polyethylene bottle	Use unfiltered sample to rinse bottles; then add NaOH to pH > 12 to collected sample, chill and maintain at 4 deg C; ship immediately.
LC0050	125 mL	Polyethylene bottle	Use unfiltered sample to rinse bottles.
LC0076	125 mL	Glass bottle	Bottle baked at 450 deg C by laboratory. Prepare each sample to pH < 2 with $\text{H}_2\text{SO}_4$ ; chill and maintain at 4 deg C. DO NOT RINSE BOTTLE.

**Table 4.--Sample designations, containers, and treatments--Continued**

Sample designation	Container size	Container type	Treatment and preservation
<b>Inorganic determinations: Water, water-sediment and bottom-material samples--Continued</b>			
LC0089	250 mL	Polyethylene bottle	Use unfiltered sample to rinse bottles; then add 0.5 g zinc acetate to the collected sample.
LC0169	500 mL	Polyethylene bottle	Use unfiltered sample to rinse bottles.
LC0880	250 mL	Polyethylene bottle	Filter through 0.45-µm filter, using filtered sample to rinse bottles; then add NaOH to pH>12 to collected sample, chill and maintain at 4 deg C; ship immediately.
<b>Organic determinations: Water, water-sediment and bottom-material samples</b>			
CC	1 pt	Polyethylene bottle, wide-mouth	Field sieve through 2-mm plastic sieve using native water.
BGC	1 L	Glass bottle, wide-mouth	Bottle baked at 450 deg C by laboratory. DO NOT RINSE BOTTLE. Chill and maintain at 4 deg C; ship immediately.
DOC (LC0113)	125 mL	Glass bottle, amber	Bottle baked at 450 deg C by laboratory. DO NOT RINSE BOTTLE BUT RINSE FILTER WITH ORGANIC-FREE WATER. Filter sample using silver filter, chill and maintain at 4 deg C; ship immediately. Filter may be retained for LC0305.
GCC	1 L	Glass bottle, amber	Bottle baked at 450 deg C by laboratory. DO NOT RINSE BOTTLE. Do not fill bottle beyond shoulder, reagents must be added to the sample at the NWQL before analyses. Chill sample and maintain at 4 deg C; ship immediately.
RCB	250 mL	Polyethylene bottle	Use unfiltered sample to rinse bottles, then chill collected sample and maintain at 4 deg C; ship immediately.
SOC (LC0305)		Petri dish	RINSE FILTER WITH ORGANIC-FREE WATER. Retain sample on silver filter, chill and maintain at 4 deg C; ship immediately. Record volume filtered on Analytical Services Request form and on Petri dish.
TOC (LC0114)	125 mL	Glass bottle, amber	Bottle baked at 450 deg C by laboratory. DO NOT RINSE BOTTLE. Chill sample and maintain at 4 deg C; ship immediately.
VOC	40 mL	Glass septum vial, amber	DO NOT RINSE BOTTLE. Exclude air bubbles by completely filling vial. Protect sample from sunlight, chill and maintain at 4 deg C; ship immediately. For SC 1306 no preservative is required. For SC 1378 each vial is prepared to pH <2 with two drops of 1:1 HCl:H <sub>2</sub> O. NPDES sampling, preserve to pH <2 with two drops of 1:1 HCl:H <sub>2</sub> O in each vial. If free chlorine is present, add 25 mg of ascorbic acid to each vial in addition to the HCl (for drinking-water or wastewater treatment).
LC0019	125 mL	Glass bottle, amber	Bottle baked at 450 deg C by laboratory. DO NOT RINSE BOTTLE. Chill sample and maintain at 4 deg C; ship immediately.
LC0127	1 L	Oil and grease bottle, amber	Bottle baked. DO NOT RINSE BOTTLE. Leave small air space. Add 2.0 mL H <sub>2</sub> SO <sub>4</sub> to 1 L (to <pH 2). Chill and maintain at 4 deg C; ship immediately.
SC1379	125 mL	Glass bottle, amber	Bottle baked at 450 deg C by laboratory. DO NOT RINSE BOTTLE. Field filter through 0.7-µm disposable in-line filter. Do not fill bottle beyond shoulder, reagents must be added to the sample at the NWQL before analyses. Chill and maintain at 4 deg C; ship immediately.

Table 4.--Sample designations, containers, and treatments--Continued

Sample designation	Container size	Container type	Treatment and preservation
<b>Radiochemical: Water, water-sediment and bottom-material samples</b>			
CUR	1 pt	Polyethylene bottle, wide-mouth	Untreated.
FAR	1 L	Polyethylene bottle, acid-rinsed	Filter through 0.45- $\mu$ m filter and acidify with HNO <sub>3</sub> to pH < 2.
RUR	1 L	Polyethylene bottle, acid-rinsed	Untreated.
SUR		Petri dish or centrifuge tube	Field filter or centrifuge until required sediment is achieved.
LC0452	125 mL	Polyethylene bottle; must have polyethylene seal cap	Untreated.
LC1567	125 mL	Polyethylene bottle; must have polyethylene seal cap	Untreated.
LC0460	250 mL	Polyethylene bottle; must have polyethylene seal cap	Untreated.
LC0490	50 mL	Glass bubbler	Contact NWQL.
LC0624	500 mL	Polyethylene bottle; must have polyethylene seal cap	Untreated.
LC1043	1 L	Glass or high-density polyethylene bottle; must have polyethylene seal cap	Untreated
LC1565	1 L	Glass or high-density polyethylene bottle; must have polyethylene seal cap	Untreated.
<b>Stable isotope: Water, water-sediment and bottom-material samples</b>			
LC1951	1 L	Glass or untreated high-density polyethylene bottle, narrow neck, field-rinsed; must have polyethylene seal cap	
LC1574	125 or 60 mL	Glass or polyethylene bottle, field-rinsed; must have polyethylene seal cap	Samples can be filtered or unfiltered. Headspace should be allowed to prevent problems if sample freezes. Seal with wax or plastic tape. Contact Ty Coplen, Reston, Virginia, (703) 648-5862, for bottles.
LC0440	1 L	Glass bottle, narrow neck, field-rinsed; must have polyethylene seal cap	Do not filter, add 50 mL SrCl <sub>2</sub> , seal with plastic tape.
LC0489	125 or 60 mL	Glass or Polyethylene bottle; must have polyethylene seal cap	Samples can be filtered or unfiltered. Headspace should be allowed to prevent problems if sample freezes. Seal with wax or plastic tape. Contact Ty Coplen, Reston, Virginia, (703) 648-5862, for bottles.
LC1199	1 L	Polyethylene, wide-mouth, high-density field-rinsed, Teflon coated or polyethylene seal cap	Contact NWQL.
LC1717	1 L	Amber glass or high-density polyethylene bottle, narrow neck, field-rinsed; must have polyethylene seal cap	Wrap high-density polyethylene bottle in aluminum foil; chill and maintain at 4 deg C; ship immediately.
LC1718	1 L	Amber glass or high-density polyethylene bottle, narrow neck, field-rinsed; must have polyethylene seal cap	Wrap high-density polyethylene bottle in aluminum foil; chill and maintain at 4 deg C; ship immediately.
LC1949		Resin column	Contact Ty Coplen, Reston, Virginia, (703) 648-5862, for resin columns.

## ANALYTICAL SERVICES

The Analytical Services section of this catalog contains tables 5 through 16, listing the chemical and biological services offered at the NWQL. Appendix A describes the Schedules, Parameters, and Network (SPN) program. Appendix B lists method codes and references for individual constituents and analytical schedules analyzed at the NWQL. Many of the methods used at the NWQL were initially published as part of the Techniques of Water-Resources Investigations (TWRI) series. Several of the more recently developed methods are Open-File Reports (OFR). Methods listed as unapproved may have been given provisional status, but as yet remain unapproved and unpublished. Specific information on the status of these methods is available from the Methods Research and Development Program at the NWQL. Method codes used by the Geologic Division are prefaced with a "G". Although these methods are approved, they are unpublished; however, information on the specific analytical technique is available through Geologic Division. Radiochemistry and stable isotope samples are typically analyzed by the National Research Program (NRP) at the USGS, or by private contract laboratories. Specific information on these methods can be obtained by contacting the Radiochemical/Stable Isotope Unit at the NWQL. Information on USEPA approval for methods accepted under the Safe Drinking Water Act is available at the U.S. Environmental Protection Agency (1993, p. 596). Note: All abbreviations, classifications, and units for these tables are listed in table 2; bottle types are defined in table 4.

### Requests for Services

The services listed in this subsection are available to all USGS personnel requiring chemical or biological analyses of samples. However, not all services are available to the same extent or at the same turnaround time. The USGS has established the NWQL to provide chemical and biological analyses. The NWQL has been designed to support the historical level of requests, plus additional expected needs. However, customers should be aware that the capacity of the Laboratory is limited and the NWQL may become backlogged at certain times of the year. Also, the Laboratory workload reflects USGS field activity--it is busier at the end of the water year than at other times, to the extent that 2.5 times more work arrives in August than in February.

Sometimes projects require specialized analyses or handling. Additional analytes, low-detection limits, unusual matrices, or perhaps new analytical methods characterize these needs. Lab codes listed under Organic Analyses are seldom available individually, and must typically be requested as part of a schedule. The NWQL welcomes these nonroutine requests, but cannot promise as fast a response as that given to routine work listed in this catalog. Special requests can be processed at the NWQL as custom samples. Moreover, requests for analyses can be identified for priority handling in emergencies. Contact personnel listed in table 1 to arrange for custom analyses or priority handling.

The majority of radiochemical and stable isotope samples handled by the NWQL are at present (1995) sent to contractor or National Research Program (NRP) laboratories for analysis. Most of these analyses are performed in research environments, and many of the laboratories are protective about sharing the technologies or techniques used in the analyses of samples. Customers requiring specific reference information on these methods are encouraged to contact the NWQL. The laboratories used by the NWQL for radiochemical and stable isotope determinations have been reviewed by NWQL and the Branch of Technical Development and Quality Services. Regulatory samples also may be processed through the Laboratory. The NWQL's main

assignment is analysis of samples from hydrologic investigations where constituent concentrations are lower than those required for regulatory purposes. To avoid contamination of the laboratory environment, instrumentation, and staff, many regulatory samples are analyzed off-site by a contractor. Contact the NWQL to use this additional service.

### Selection of Analyses

Analyses are requested by selecting laboratory codes or schedules. Laboratory codes are to be chosen primarily for the minimum-reporting level desired, but precision and project requirements should not be overlooked. However, Laboratory personnel might choose another code under several circumstances.

For example, if minimum-reporting levels are comparable, one laboratory code might be substituted for another to increase laboratory efficiency. Some code substitutions represent methods that would avoid interferences caused by the customer's particular chemical matrix. In other cases, method reporting limits and interference references of the substituted code may be more in keeping with the customer's matrix. In a few cases, the method requested may have been developed for a higher purity water than the sample proves to be, and more appropriate methods might be substituted. In all cases, the laboratory code actually used will be shown in the results and the customer notified.

If a procedure with a higher detection level is requested, and the concentration of the constituent being determined is less than the stated detection level, a method with a lower detection limit (and usually greater cost) will not be substituted without the customer's specific authorization. The Laboratory assumes responsibility for meeting method reporting limits implied by the customer's choice of laboratory code or schedule, including the cost of analysis.

### Laboratory Schedules

A schedule is a collection of laboratory codes (parameters), which are associated for one of two reasons: (1) convenience to the customer (for example, asking for the major cations schedule is more convenient than asking for the list of all 20 parameters), and (2) laboratory instrumentation (the instrument used to determine the seven Aroclor compounds in SC 1364 is automated to produce only those seven determinations as a unit). Many more schedules exist for inorganic analyses, some created for the laboratory's convenience, others created for programs that are specific to individual customers. They can be accessed on the SPN program described in Appendix A. Schedules may be custom-designed for individual use, but are restricted to include laboratory codes of only one analysis type. Current (1995) types are as follows:

WI	Water, inorganic	BO	Bottom material, organic
WL	Water, low-level	BO	Bottom material, organic
WN	Water, major nutrient	BR	Bottom material, radiochemical
WO	Water, organic	BL	Biological
WR	Radiochemical or stable isotope ratios	BG	Geologic Division
BI	Bottom material, inorganic	TO	Tissue, organic
		TI	Tissue, inorganic

EDOC or e-mail DENADP for assistance in designing nonstandard analysis schedules.

Calculated parameters should not be requested separately unless listed separately in the 1995 Services Catalog, since all calculated values that can be produced from the data are calculated during data retrieval and are listed in the sample analytical report.

### Provisional Methods

This catalog of analytical services also contains new methods developed for the NAWQA program. Some of these methods currently (1995) produce provisional data that may or may not be comparable to data produced by other analysis methods for the same analytes. Provisional data are defined as data produced by a method that currently does NOT have a citable reference (TWRI or OFR). Technical memoranda are not citable in reports. For information concerning data comparability, contact the Organic Chemistry Program Chief at the NWQL. For additional information on method references, see Appendix B.

### Quality Control and Inorganic Data Review

Inorganic data review ensures the release of quality data by the NWQL. Once all of the inorganic analyses for a given subsample are completed, they are evaluated by a quality-control (QC) program that resides in the Laboratory Information Management System. Algorithms are built into this program to check and compare the data. Precision information on available analytical services can be obtained by contacting the Quality Assurance Unit. Additionally, the NWQL has developed and published an extensive manual detailing specific quality-assurance policies at the NWQL.

The following checks are used for individual analyses: USEPA Primary Drinking-Water Regulations, cation and anion balance, partial cation or anion sum ratios [specific conductance (SPC)/100], residue-on-evaporation (ROE at 180°C)/SPC ratio, pH, less than zero values, and fields with delete codes. The following parameters are compared: field and laboratory pH, field and laboratory specific conductance, and dissolved and total analyte concentration. If the results of any one of these checks fall outside the prescribed limits for any given analysis, the sample analysis is not accepted by the QC program. The analysis results are then passed to a data-review chemist with a flag identifying the discrepancy. Sample analyses are not released to the customer until they have passed the QC program checks or have been approved by a data-review chemist in the Quality Assurance Unit.

The data-review chemist reviews the unapproved sample analysis results and makes decisions as mandated by two standard operating procedures (SOP)--the Data Review SOP and the Bottle Mix-up SOP. A historical data base--consisting of all parameters that have been analyzed for that corresponding station ID, the number of analyses for each corresponding parameter, the average of all the values for each parameter, the standard deviation of all parameter values, and the high and low values of each parameter--is also used by the data-review chemist and the USGS reanalysis program as an aid to pinpoint questionable analyses.

In summary, inorganic sample analyses that pass the NWQL's QC protocols are released to the customer.

The prescribed limits for evaluating inorganic sample analyses are listed as follows:

<u>Quality assurance checks</u>	<u>Prescribed limit</u>
USEPA Primary Drinking-Water Regulations (analyte levels)	Inorganic analysis of all identified drinking-water samples, as designated on the Analytical Services Request form exceeding the maximum contaminant level defined by USEPA Primary Drinking-Water Regulations, are reanalyzed (U.S. Environmental Protection Agency, 1993, p. 596).
Cation and anion balance	Friedman and Erdmann (1982, fig. 15, p. 104).
Cation or anion partial sum SPC/100	Must fall between 0.92 and 1.24.
ROE at 180°C/SPC	Must fall between 0.55 and 0.86.
pH	Must fall between 4.00 and 9.00.
Less than 0 values	Any negative value will fail the check.
Fields containing delete codes	All subsamples with fields containing delete codes fail the check. For further explanation of delete codes, refer to the Laboratory Delete Code list below.
Difference between lab and onsite pH	Must be less than 1 pH.
Difference between lab and onsite SPC	This difference must be less than 10 percent.
Dissolved and total analytes	Dissolved analytes must be less than or equal to the total analytes of the same element or compound



### Delete Codes

Delete codes are messages to the districts from the NWQL explaining why results for some parameter codes are not available.

"A"	The samples were analyzed by an alternate method
"B"	The sample was broken or spilled in shipment
"C"	The sample was lost in the laboratory
"D"	A delete was requested by the customer
"F"	An improper filter was used
"I"	The required sample type was not received
"M"	The results will be sent by a separate memo
"O"	There was an insufficient amount of water to complete the analysis
"P"	The sample was discarded because of improper preservation
"Q"	Deleted at request of Quality Assurance Unit
"R"	The sample was ruined during analysis
"U"	The sample data were not determined because of interference
"W"	The sample was warm when it was received. It was therefore discarded
"X"	Lab code 586 was reported as 0
"Z"	Lab code 588 was reported as 0

Tables 5 through 16, which are summarized as follows, appear at the end of this section:

Table 5. Biological determinations, listed by laboratory schedule. Determinations are arranged into schedules pertaining to periphyton and phytoplankton in ascending order of schedule number. Chlorophyll a and chlorophyll b cannot be ordered separately.

Table 6. Inorganic determinations in sediment, listed alphabetically. Includes those determinations found only in schedules.

Table 7. Inorganic determinations in water, listed alphabetically. Includes those determinations found only in schedules.

Table 8. Inorganic determinations in sediment, listed by laboratory schedule. Descriptive titles include limitations on the methods.

Table 9. Inorganic determinations in water, listed by selected laboratory schedule. Descriptive titles include limitations on the methods.

Table 10. Inorganic determinations in tissue, listed by laboratory schedule. Descriptive titles include limitations on the methods.

Table 11. Gross organic determinations, listed alphabetically. Organic parameters that can be requested individually are listed. These characteristics also may be combined to form customized schedules.

Table 12. Organic determinations in sediment, listed by laboratory schedule. These schedules may not be broken into smaller schedules, combined with other laboratory codes to form customized District-owned schedules, or added to in any way except by requesting a custom analysis.

Table 13. Organic determinations in water, listed by laboratory schedule. These schedules may not be broken into smaller schedules, combined with other laboratory codes into customized District-owned schedules, or added to in any way except by requesting a custom analysis.

Table 14. Organic determinations in tissue, listed by laboratory schedule.

Table 15. Radiochemical determinations, listed by laboratory code and schedule. Listed by radiochemical analysis type, and, within each type, determinations are listed numerically by laboratory code or schedule number. Schedule information includes the associated laboratory codes. The types of radiochemical services available are as follows: gamma scans, gross alpha and gross beta, lead, polonium, radium, radon, strontium, thorium, tritium, uranium, carbon-14 dating, and miscellaneous services.

Table 16. Stable isotope ratios, listed by laboratory code and schedule. Ratios may be requested for carbon-13/carbon-12, sulfur-34/sulfur-32, deuterium, oxygen-18/oxygen-16, and nitrogen-15/nitrogen-14.

NOTE: Shaded laboratory codes in tables 5, 15 and 16 may not be requested individually. They are only available as a unit in the indicated schedules because of the radiochemical techniques used. Unshaded laboratory codes may be requested individually.

Table 5.--Biological determinations, listed by laboratory schedule

Schedule number	Lab. code <sup>1</sup>	Parameter code	Method code	Parameter name	Sample volume and bottle designation (see table 4)	MRL
<b>Periphyton</b>						
671				Biomass, gravimetric	1 filter CHE	
	611	00572	A	Biomass, ash weight		0.001 g/m <sup>2</sup>
	603	00573	A	Biomass, dry weight		.001 g/m <sup>2</sup>
1507				Chlorophyll, chromatography and fluorometry	1 filter CHE	
	588	70957	A	Chlorophyll a		.1 mg/m <sup>2</sup>
	589	70958	A	Chlorophyll b		.1 mg/m <sup>2</sup>
1708				Combined biomass and chlorophyll	2 filters CHE	
	611	00572	A	Biomass, ash weight		.001 g/m <sup>2</sup>
	603	00573	A	Biomass, dry weight		.001 g/m <sup>2</sup>
	588	70957	A	Chlorophyll a		.1 mg/m <sup>2</sup>
	589	70958	A	Chlorophyll b		.1 mg/m <sup>2</sup>
<b>Phytoplankton</b>						
666				Biomass, gravimetric	1 filter CHY	
	621	81353	A	Biomass, ash weight		.1 mg/L
	620	81354	A	Biomass, dry weight		.1 mg/L
1508				Chlorophyll, chromatography and fluorometry	1 filter CHY	
	586	70953	A	Chlorophyll a		.1 µg/L
	587	70954	A	Chlorophyll b		.1 µg/L
1509				Combined biomass and chlorophyll	2 filters CHY	
	621	81353	A	Biomass, ash weight		.1 mg/L
	620	81354	A	Biomass, dry weight		.1 mg/L
	586	70953	A	Chlorophyll a		.1 µg/L
	587	70954	A	Chlorophyll b		.1 µg/L

<sup>1</sup>Shaded laboratory codes may not be ordered individually.

**Table 6.--Inorganic determinations in sediment, listed alphabetically**

Lab. code	Parameter code	Name, phase and method	Call in LC <sup>2</sup>	Volume needed	Sample designation <sup>1</sup>	MRL
1282	01108 C	Aluminum, BTM, DCP	647, 1184	10 g	CU	10 µg/g
534	01098 A	Antimony, BTM, AA, hydride,	1184	10 g	CU	1 µg/g
597	01003 C	Arsenic, BTM, AA, hydride	1184	10 g	CU	1 µg/g
521	01008 A	Barium, BTM, AA	647, 1184	10 g	CU	10 µg/g
522	01013 A	Beryllium, BTM, AA	647, 1184	10 g	CU	1 µg/g
1285	01023 C	Boron, BTM, DCP	647, 1184	10 g	CU	10 µg/g
502	01028 B	Cadmium, BTM, AA	647,1184	10 g	CU	1 µg/g
696	00917 A	Calcium, BTM, AA	647, 1184	10 g	CU	10 mg/kg
505	01029 B	Chromium, BTM, AA	647, 1184	10 g	CU	1 µg/g
506	01038 B	Cobalt, BTM, AA	647, 1184	10 g	CU	5 µg/g
507	01043 B	Copper, BTM, AA	647, 1184	10 g	CU	1 µg/g
1235	00721 B	Cyanide, BTM, barbituric acid, ASF		10 g	CC	.5 mg/kg
647	LC0647 A	Digestion for trace metals, BTM		10 g	CU	-- --
190	01170 B	Iron, BTM, AA	647, 1184	10 g	CU	1 µg/g
510	01052 B	Lead, BTM, AA	647, 1184	10 g	CU	10 µg/g
541	01133 A	Lithium, BTM, AA	647, 1184	10 g	CU	1 µg/g
697	00924 A	Magnesium, BTM, AA	647, 1184	10 g	CU	10 mg/kg
512	01053 A	Manganese, BTM, AA	647, 1184	10 g	CU	.1 µg/g
511	71921 A	Mercury, BTM, CVAA	1184	10 g	CU	.01 µg/g
523	01063 A	Molybdenum, BTM, AA	647, 1184	10 g	CU	.1 µg/g
524	00611 A	N, Ammonia as N, BTM, colorimetric, salicylate-hypochlorite, ASF		10 g	CC	.2 mg/kg
1211	00626 C	N, Ammonia plus organic nitrogen as N, BTM, colorimetric, salicylate-hypochlorite, ASF	904	10 g	CC	20 mg/kg
301	00608 B	N, Ammonia as N, FIL, colorimetric, salicylate-hypochlorite, ASF		125 mL	FC	.01 mg/L
513	00633 A	N, Nitrite plus nitrate as N, BTM, cadmium reduction, diazotization, ASF		10 g	CC	2 mg/kg
519	01068 B	Nickel, BTM, AA	647, 1184	10 g	CU	10 µg/g
532	00339 A	Oxygen demand, chemical, BTM, calc. on dry weight	904	10 g	CC	100 mg/kg
515	00668 B	P, Phosphorus as P, BTM, PPMB, ASF	1184	10 g	CC	40 mg/kg
698	00938 A	Potassium, BTM, AA	647, 1184	10 g	CU	10 mg/kg
1184	01184 A	Preparation for BTM		10 g	CU	--
517	01148 A	Selenium, BTM, hydride	1184	10 g	CU	1 µg/g

**Table 6.--Inorganic determinations in sediment, listed alphabetically--Continued**

Lab. code	Parameter code	Name, phase and method	Call in LC <sup>2</sup>	Volume needed	Sample designation <sup>1</sup>	MRL
699	00934 A	Sodium, BTM, AA	647, 1184	10 g	CU	10 mg/kg
516	00496 A	Solids, VOI, BTM, GR	1184	10 g	CC	1 mg/kg
530	01083 A	Strontium, BTM, AA	647, 1184	10 g	CU	1 µg/g
518	01093 A	Zinc, BTM, AA	647, 1184	10 g	CU	1 µg/g

<sup>1</sup>See table 4.

<sup>2</sup>LC 647 (bottom material digestion) may be called in automatically, in addition to lab code 1184, for those bottom material analyses requiring a specific digestion prior to metals analysis.

LC 1184 (bottom material preparation) is required prior to any analyses requested for bottom material samples. It is called in automatically by those analyses. Only one bottom material preparation charge will be added since all bottom materials go through the same preparation step.

**Table 7.--Inorganic determinations in water, listed alphabetically**

Lab. code	Parameter code	Name, phase, and method	Call in LC <sup>1</sup>	Volume needed (mL) <sup>2</sup>	Sample designa- tion <sup>3</sup>	MRL	Units
1266	71825 B	Acidity as H, lab., LIS, WWR, ET, 2nd derivative		75	RU	0.01	mg/L
1	71825 A	Acidity as H, lab., WWR, ET		50	RU	.1	mg/L
1270	90410 B	Alkalinity as CaCO <sub>3</sub> , lab., LIS, WWR, ET, 2nd derivative		75	RU	.5	mg/L
70	90410 A	Alkalinity as CaCO <sub>3</sub> , lab., WWR, ET		100	RU	1	mg/L
1284	01106 E	Aluminum, FIL, DCP		50	FA	10	µg/L
1283	01105 C	Aluminum, WWR, DCP	1735	50	RA	10	µg/L
77	01095 A	Antimony, FIL, AA, hydride		50	FA	1	µg/L
80	01097 A	Antimony, WWR, AA, hydride		50	RAH	1	µg/L
112	01000 B	Arsenic, FIL, AA, hydride		50	FA	1	µg/L
118	01002 B	Arsenic, WWR, AA, hydride		50	RAH	1	µg/L
1584	01002 C	Arsenic, WWR, GFAA, USEPA (drinking water only)	1586	250	RAH	1	µg/L
7	01005 B	Barium, FIL, AA		25	FA	100	µg/L
641	01005 C	Barium, FIL, ICP		100	FA	1	µg/L
234	01007 A	Barium, WWR, AA	1735	25	RA	100	µg/L
170	01010 A	Beryllium, FIL, AA		25	FA	10	µg/L
655	01010 B	Beryllium, FIL, ICP		100	FA	.5	µg/L
236	01012 A	Beryllium, WWR, AA	1735	25	RA	10	µg/L
1183	01020 B	Boron, FIL, DCP		50	FU	10	µg/L
1286	01022 B	Boron, WWR, DCP	1735	50	RA	10	µg/L
1246	71870 E	Bromide, FIL, fluorescein, ASF		250	FU	.01	mg/L
1258	71870 F	Bromide, LIS, FIL, IC		50	FU	.01	mg/L
126	01025 A	Cadmium, FIL, AA		25	FA	10	µg/L
1554	01025 F	Cadmium, FIL, GFAA		50	FA	1	µg/L
673	01025 D	Cadmium, FIL, ICP		100	FA	1	µg/L
1250	01025 E	Cadmium, LL, FIL, GFAA		250	FAB	.1	µg/L
131	01027 A	Cadmium, WWR, AA	1735	25	RA	10	µg/L
1555	01027 F	Cadmium, WWR, GFAA	1735	50	RA	1	µg/L
12	0915 C	Calcium, FIL, AA		50	FA	.1	mg/L
659	0915 D	Calcium, FIL, ICP		100	FA	.02	mg/L
831	0915 B	Calcium, LIS, FIL, AA		50	FA	.01	mg/L
1273	0915 E	Calcium, LIS, FIL, ICP		50	FA	.02	mg/L
324	0916 A	Calcium, WWR, AA, USEPA	124	50	RAE	.1	mg/L
244	0916 B	Calcium, WWR, AA, USGS	1735	50	RA	.1	mg/L
1571	0940 J	Chloride, FIL, IC		50	FU	.1	mg/L
1259	0940 I	Chloride, LIS, FIL, IC		50	FU	.01	mg/L

**Table 7.--Inorganic determinations in water, listed alphabetically--Continued**

Lab. code	Parameter code	Name, phase, and method	Call in LC <sup>1</sup>	Volume needed (mL) <sup>2</sup>	Sample designation <sup>3</sup>	MRL	Units
722	01030 E	Chromium, FIL, ICP		100	FA	5	µg/L
16	01032 A	Chromium, hexavalent, FIL, chel., AA		250	FA	1	µg/L
1251	01030 D	Chromium, LL, FIL, GFAA		250	FAB	.5	µg/L
1936	01030 I	Chromium, FIL, GFAA		50	FA	1	µg/L
246	01034 B	Chromium, WWR, AA	1735	25	RA	10	µg/L
1937	01034 E	Chromium, WWR, GFAA	1735	50	RA	1	µg/L
148	01035 A	Cobalt, FIL, AA		25	FA	50	µg/L
1556	01035 F	Cobalt, FIL, GFAA		50	FA	1	µg/L
644	01035 C	Cobalt, FIL, ICP		100	FA	3	µg/L
1252	01035 E	Cobalt, LL, FIL, GFAA		250	FAB	.5	µg/L
149	01037 A	Cobalt, WWR, AA	1735	25	RA	50	µg/L
1557	01037 F	Cobalt, WWR, GFAA	1735	50	RA	1	µg/L
20	00080 A	Color reported in Pt-Co units		100	RCB	1	Units
151	01040 A	Copper, FIL, AA		25	FA	10	µg/L
1558	01040 F	Copper, FIL, GFAA		50	FA	1	µg/L
657	01040 C	Copper, FIL, ICP		100	FA	10	µg/L
1253	01040 E	Copper, LL, FIL, GFAA		250	FAB	.5	µg/L
156	01042 A	Copper, WWR, AA	1735	25	RA	10	µg/L
1559	01042 F	Copper, WWR, GFAA	1735	50	RA	1	µg/L
880	00723 A	Cyanide, FIL, barbituric acid, ASF		100	LCO880	.01	mg/L
23	00720 A	Cyanide, WWR, barbituric acid, ASF		50	LCO023	.01	mg/L
24	71820 A	Density @ 20 degrees C, filtered, GR		100	FU	.99	g/mL
1586	-- B	Digestion for As and Se, USEPA		250	RAH	--	--
124	99447 A	Digestion for trace metals, USEPA		250	RAE	--	--
1735	99870 B	Digestion for trace metals, USGS		250	RA	--	--
31	00950 B	Fluoride, FIL, ISE		50	FU	.1	mg/L
1260	00950 D	Fluoride, LIS, FIL, IC		50	FU	.01	mg/L
1202	71865 D	Iodide, FIL, ceric-arsenious oxidation, ASF		50	FU	.001	mg/L
172	01046 C	Iron, FIL, AA		25	FA	10	µg/L
645	01046 D	Iron, FIL, ICP		100	FA	3	µg/L
1271	01046 E	Iron, LIS, FIL, ICP		50	FA	3	µg/L
189	01045 B	Iron, WWR, AA	1735	50	RA	10	µg/L
191	01049 A	Lead, FIL, AA		25	FA	100	µg/L
1560	01049 F	Lead, FIL, GFAA		50	FA	1	µg/L
646	01049 C	Lead, FIL, ICP		100	FA	10	µg/L
1254	01049 E	Lead, LL, FIL, GFAA		250	FAB	.5	µg/L
192	01051 A	Lead, WWR, AA	1735	25	RA	100	µg/L
1561	01051 F	Lead, WWR, GFAA	1735	50	RA	1	µg/L
39	01130 A	Lithium, FIL, AA		25	FA	10	µg/L
664	01130 B	Lithium, FIL, ICP		100	FA	4	µg/L
277	01132 A	Lithium, WWR, AA	1735	50	RA	10	µg/L

**Table 7.--Inorganic determinations in water, listed alphabetically--Continued**

Lab. code	Parameter code	Name, phase, and method	Call in LC <sup>1</sup>	Volume needed (mL) <sup>2</sup>	Sample designation <sup>3</sup>	MRL	Units
40	00925 B	Magnesium, FIL, AA		50	FA	.1	mg/L
663	00925 C	Magnesium, FIL, ICP		100	FA	.01	mg/L
832	00925 A	Magnesium, LIS, FIL, AA		50	FA	.01	mg/L
1274	00925 D	Magnesium, LIS, FIL, ICP		50	FA	.01	mg/L
325	00927 A	Magnesium, WWR, USEPA, AA	124	50	RAE	.1	mg/L
261	00927 B	Magnesium, WWR, USGS, AA	1735	50	RA	.1	mg/L
42	01056 A	Manganese, FIL, AA		25	FA	10	µg/L
648	01056 C	Manganese, FIL, ICP		100	FA	1	µg/L
1272	01056 E	Manganese, LIS, FIL, ICP		50	FA	1	µg/L
1255	01056 D	Manganese, LL, FIL, GFAA		250	FAB	.2	µg/L
41	01055 A	Manganese, WWR, AA	1735	50	RA	10	µg/L
226	71890 B	Mercury, FIL, CVAA, auto.		200	FAM	.1	µg/L
227	71900 B	Mercury, WWR, CVAA		250	RAM	.1	µg/L
904	00495 B	Moisture content by weight		1 g	CU	.1	%
649	01060 A	Molybdenum, FIL, ICP		100	FA	10	µg/L
1998	01060 B	Molybdenum, FIL, GFAA		250	FA	1	µg/L
1999	01062 A	Molybdenum, WWR, GFAA	1735	250	RA	1	µg/L
830	00608 A	N, Ammonia as N, LL, FIL, colorimetric, salicylate-hypochlorite, ASF		125	FC	.002	mg/L
1985	00623 C	N, Ammonia plus organic nitrogen as N, FIL, colorimetric, salicylate-hypochlorite, ASF		125	FC	.2	mg/L
1986	00625 C	N, Ammonia plus organic nitrogen as N, WWR, colorimetric, salicylate-hypochlorite, ASF		125	RC	.2	mg/L
1261	00618 D	N, Nitrate as N, LL, FIL, IC		250	FU	.01	mg/L
1973	00613 B	N, Nitrite as N, FIL, diazotization, ASF		125	FC	.01	mg/L
827	00613 A	N, Nitrite as N, LL, FIL, diazotization, ASF		125	FC	.001	mg/L
1975	00631 B	N, Nitrite plus Nitrate as N, FIL, cadmium reduction, diazotization, ASF		125	FC	.05	mg/L
826	00631 A	N, Nitrite plus Nitrate as N, LL, FIL, cadmium reduction, diazotization, ASF		125	FC	.005	mg/L
1570	00602 B	N, Total nitrogen as N, FIL, Antek		125	FC	.1	mg/L
197	01065 A	Nickel, FIL, AA		25	FA	100	µg/L
1562	01065 F	Nickel, FIL, GFAA		50	FA	1	µg/L
721	01065 E	Nickel, FIL, ICP		100	FA	10	µg/L
1256	01065 D	Nickel, LL, FIL, GFAA		250	FAB	1	µg/L
1563	01067 F	Nickel, WWR, GFAA	1735	50	RA	1	µg/L
198	01067 A	Nickel, WWR, AA	1735	25	RA	100	µg/L
76	00340 B	Oxygen demand, chemical, water		100	LC0076	10	mg/L
1974	00671 B	P, Phosphate as P, ortho, FIL, PPMB, ASF		125	FC	.01	mg/L



**Table 7.--Inorganic determinations in water, listed alphabetically--Continued**

Lab. code	Parameter code	Name, phase, and method	Call in LC <sup>1</sup>	Volume needed (mL) <sup>2</sup>	Sample designation <sup>3</sup>	MRL	Units
1262	00671 G	P, Phosphate as P, ortho, LIS, IC		50	FU	.01	mg/L
828	00671 A	P, Phosphate as P, ortho, LL, FIL, PPMB, ASF		125	FC	.001	mg/L
279	00677 A	P, Phosphate, ortho plus hydrolyzable as P, FIL, PPMB, ASF		125	FC	.01	mg/L
282	00678 A	P, Phosphate, ortho plus hydrolyzable as WWR, PPMB, ASF		125	RC	.01	mg/L
1983	00666 C	P, Phosphorus as P, FIL, PPMB, ASF		125	FC	.01	mg/L
829	00666 A	P, Phosphorus as P, LL, FIL, PPMB, ASF		125	FC	.001	mg/L
837	00665 A	P, Phosphorus as P, LL, WWR, PPMB, ASF		125	RC	.001	mg/L
1984	00665 C	P, Phosphorus as P, WWR, PPMB, ASF		125	RC	.01	mg/L
68	00403 A	pH, lab., elec.		50	RU	.1	Units
1268	00403 B	pH, lab., LIS, elec.		75	RU	.1	Units
52	32730 A	Phenols, total				.1	µg/L
54	00935 B	Potassium, FIL, AA		50	FA	.1	mg/L
833	00935 A	Potassium, LL, FIL, AA		50	FA	.01	mg/L
327	00937 A	Potassium, WWR, USEPA, AA	124	50	RAE	.1	mg/L
321	00937 B	Potassium, WWR, USGS, AA	1735	50	RA	.1	mg/L
87	01145 A	Selenium, FIL, hydride, auto.		50	FA	1	µg/L
1585	01147 B	Selenium, WWR, GFAA, USEPA (drinking water only)	1586	250	RAH	1	µg/L
286	01147 A	Selenium, WWR, hydride, auto.		50	RAH	1	µg/L
667	00955 D	Silica as SiO <sub>2</sub> , FIL, ICP		100	FA	.01	mg/L
56	00955 C	Silica as SiO <sub>2</sub> , FIL, molybdate blue, ASF		25	FU	.1	mg/L
1275	00955 E	Silica as SiO <sub>2</sub> , LIS, FIL, ICP		100	FA	.01	mg/L
1552	01075 F	Silver, FIL, GFAA		50	FA	1	µg/L
723	01075 C	Silver, FIL, ICP		100	FA	1	µg/L
1553	01077 F	Silver, WWR, GFAA	1735	50	RA	1	µg/L
1276	00930 D	Sodium, FIL, LIS, ICP		50	FA	.2	mg/L
59	00930 B	Sodium, FIL, AA		50	FA	.1	mg/L
675	00930 C	Sodium, FIL, ICP		100	FA	.2	mg/L
834	00930 A	Sodium, LIS, FIL, AA		50	FA	0.01	mg/L
326	00929 A	Sodium, WWR, AA, USEPA	124	50	RAE	.1	mg/L
320	00929 B	Sodium, WWR, AA, USGS	1735	50	RA	.1	mg/L
159	00515 B	Solids, ROE @ 105 deg C, FIL, GR		250	FU	1	mg/L
169	00530 B	Solids, ROE @ 105 deg C, SUS, GR		250	LCO169	1	mg/L
165	00500 A	Solids, ROE @ 105 deg C, total, GR		250	RU	1	mg/L
27	70300 A	Solids, ROE @ 180 deg C, FIL, GR		250	FU	1	mg/L
229	00520 A	Solids, VOI, FIL, GR		250	FU	1	mg/L
49	00535 A	Solids, VOI, SUS, GR		250	LCO169	1	mg/L

**Table 7.--Inorganic determinations in water, listed alphabetically--Continued**

Lab. code	Parameter code	Name, phase, and method	Call in LC <sup>1</sup>	Volume needed (mL) <sup>2</sup>	Sample designation <sup>3</sup>	MRL	Units
85	00505 A	Solids, VOI, total, GR		250	RU	1	mg/L
69	90095 A	Specific conductance, lab., elec.		25	RU	1	µS/cm
1269	90095 B	Specific conductance, lab., LIS, elec.		50	RU	.5	µS/cm
62	01080 A	Strontium, FIL, AA		25	FA	10	µg/L
652	01080 B	Strontium, FIL, ICP		100	FA	.5	µg/L
290	01082 A	Strontium, WWR, AA	1735	25	RA	10	µg/L
1572	00945 G	Sulfate, FIL, IC		50	FU	.1	mg/L
1263	00945 E	Sulfate, LIS, FIL, IC		50	FU	.01	mg/L
89	00745 A	Sulfide, WWR iodometric		250	LC0089	.5	mg/L
492	01057 A	Thallium, FIL, GFAA		50	FAB	.5	µg/L
50	00076 A	Turbidity as NTU, nephelometric		100	LC0050	.1	Units
1210	01085 D	Vanadium, FIL, catalytic oxidation, ASF		50	FU	1	µg/L
653	01085 B	Vanadium, FIL, ICP		100	FA	6	µg/L
67	01090 A	Zinc, FIL, AA		25	FA	10	µg/L
1257	01090 D	Zinc, FIL, GFAA		250	FAB	.5	µg/L
671	01090 B	Zinc, FIL, ICP		100	FA	3	µg/L
296	01092 A	Zinc, WWR, AA	1735	50	RA	10	µg/L

<sup>1</sup>LC 1735, in-bottle digestion, is automatically called in for those samples requiring digestion prior to analysis for whole-water recoverable parameters.

LC 124, USEPA digestion, is automatically called in as a sample preparation for lab codes 324 (Ca total USEPA), 325 (Mg total USEPA), 326 (Na total USEPA), and 327 (K total USEPA). Only one digestion charge will be added, since all four labcodes use the same digested sample.

LC 1586, a specific digestion, is required prior to analysis of As or Se by GFAA for USEPA drinking water. This lab code is called in automatically by LC 1584 (As, USEPA total GFAA) and LC 1585 (Se, USEPA total GFAA).

<sup>2</sup>When more than one determination is requested, volume or weight may be different from the sum of weights or volumes needed for each constituent because many NWQL techniques yield multiple determinations simultaneously. When sample amount is limited and a schedule is not used in the request for analytical services, the NWQL needs to be consulted about the actual quantity needed.

<sup>3</sup>See table 4.

**Table 8.--Inorganic determinations in sediment, listed by laboratory schedule**

**SCHEDULE 2400**

Schedule Description: Trace elements in bed sediments by Geologic

Division, Branch of Geochemistry, sieved to <63 µm

Sample Requirements: 40-g sample

Container Requirements: Carton

Lab. code	Parameter code	CAS number	Compound name, analysis method	LLD (dry wt)
1736	34790 A	7429905	Aluminum, ICP	0.005 %
1737	34830 A	7440702	Calcium, ICP	.005 %
1738	34880 A	7439896	Iron, ICP	.005 %
1739	34940 A	7440097	Potassium, ICP	.05 %
1740	34900 A	7439954	Magnesium, ICP	.005 %
1741	34960 A	7440235	Sodium, ICP	.005 %
1742	34935 A	7723140	Phosphorus, ICP	.005 %
1743	00000 A	7440326	Titanium, ICP	.005 %
1744	34870 A	7440575	Gold, ICP	8 µg/g
1745	34850 A	7440508	Barium, ICP	1 µg/g
1746	34810 A	7440417	Beryllium, ICP	1 µg/g
1747	34816 A	7440699	Bismuth, ICP	10 µg/g
1748	34835 A	7440451	Cerium, ICP	4 µg/g
1749	34845 A	7440473	Cobalt, ICP	1 µg/g
1750	34840 A	7440484	Chromium, ICP	1 µg/g
1751	34850 B	7440508	Copper, ICP	1 µg/g
1752	34855 A	7440531	Europium, ICP	2 µg/g
1753	34860 A	7440553	Gallium, ICP	4 µg/g
1754	34875 A	7440600	Holmium, ICP	4 µg/g
1755	34855 B	7440531	Lanthanum, ICP	2 µg/g
1756	34895 A	7439932	Lithium, ICP	2 µg/g
1757	34905 A	7439965	Manganese, ICP	4 µg/g
1758	34915 A	7439987	Molybdenum, ICP	2 µg/g
1759	34930 A	7440031	Niobium, ICP	4 µg/g
1760	34920 A	7440008	Neodymium, ICP	4 µg/g
1761	34925 A	7440020	Nickel, ICP	2 µg/g
1762	34890 A	7439921	Lead, ICP	4 µg/g
1763	34945 A	7440202	Scandium, ICP	2 µg/g
1764	34985 A	7440315	Tin, ICP	10 µg/g
1765	34965 A	7440246	Strontium, ICP	2 µg/g
1766	34975 A	7440257	Tantalum, ICP	40 µg/g
1767	34980 A	7440291	Thorium, ICP	4 µg/g
1768	35005 A	7440622	Vanadium, ICP	2 µg/g
1769	35010 A	7440655	Yttrium, ICP	2 µg/g
1770	35015 A	7440644	Ytterbium, ICP	1 µg/g
1771	35020 A	7440666	Zinc, ICP	4 µg/g
1772	34955 B	7440224	Silver, GFAA	.1 µg/g
1773	34825 B	7440439	Cadmium, GFAA	.1 µg/g
1774	34910 C	7439976	Mercury, CVAA	.02 µg/g
1775	34800 D	7440382	Arsenic, HA	.1 µg/g
1776	34795 D	7440360	Antimony, HA	.1 µg/g
1777	34950 D	7782492	Selenium, HA	.1 µg/g
1778	35000 E	7440611	Uranium, DNAA	.05 µg/g
1779	34980 E	7440291	Thorium, DNAA	1 µg/g
1780	34970 F	7704349	Sulfur, IR	.05 %
1781	49267 F	7440440	Carbon, total	.01 %
1782	49269 G	7440440	Carbon, carbonate (inorganic)	.01 %
1783	49266 G	7440440	Carbon, organic	.01 %

**Table 9.--Inorganic determinations in water, listed by selected laboratory schedule**

**SCHEDULE 146**

Schedule Description: Major cations plus iron and manganese, inductively coupled plasma, abbreviated list. Specific conductance needs to be less than 6,000 µS/cm

Sample Requirements: 250 FA; 250 RU

Container Requirements: 250-mL polyethylene bottle, acid-rinsed; 250-mL polyethylene bottle, field-rinsed

Para-meter code	Name, phase, and method	MRL SPC ≤2,000	MRL SPC ≥2,000	Units
915 D	Calcium, FIL, ICP	0.02	0.06	mg/L
1046 D	Iron, FIL, ICP	3	9	µg/L
925 C	Magnesium, FIL, ICP	.01	.03	mg/L
1056 C	Manganese, FIL, ICP	1	3	µg/L
403 A	pH lab.	.1	.1	Units
955 D	Silica as SiO <sub>2</sub> , FIL, ICP	.01	.03	mg/L
930 C	Sodium, FIL, ICP	.2	.6	mg/L
90095 A	SEC, lab.	1		µS/cm

**SCHEDULE 1043**

Schedule Description: Major cations plus trace metals, inductively coupled plasma. Specific conductance needs to be less than 6,000 µS/cm

Sample Requirements: 250 FA; 250 RU

Container Requirements: 250-mL polyethylene bottle, acid-rinsed; 250-mL polyethylene bottle, field-rinsed

Para-meter code	Name, phase, and method	MRL SPC ≤2,000	MRL SPC ≥2,000	Units
1005 C	Barium, FIL, ICP	1	3	µg/L
1010 B	Beryllium, FIL, ICP	.5	1.5	µg/L
1025 D	Cadmium, FIL, ICP	1	3	µg/L
915 D	Calcium, FIL, ICP	.02	.06	mg/L
1030 E	Chromium, FIL, ICP	5	15	µg/L
1035 C	Cobalt, FIL, ICP	3	9	µg/L
1040 C	Copper, FIL, ICP	10	30	µg/L
1046 D	Iron, FIL, ICP	3	9	µg/L
1049 C	Lead, FIL, ICP	10	30	µg/L
1130 B	Lithium, FIL, ICP	4	12	µg/L
925 C	Magnesium, FIL, ICP	.01	.03	mg/L
1056 C	Manganese, FIL, ICP	1	3	µg/L
1060 A	Molybdenum, FIL, ICP	10	30	µg/L
1065 E	Nickel, FIL, ICP	10	30	µg/L
403 A	pH lab., elec.	.1	.1	Units
955 D	Silica as SiO <sub>2</sub> , FIL, ICP	.01	.03	µg/L
1075 C	Silver, FIL, ICP	1	3	
930 C	Sodium, FIL, ICP	.2	.6	mg/L
90095 A	SEC, lab.	1		µS/cm
1080 B	Strontium, FIL, ICP	.5	1.5	µg/L
1085 B	Vanadium, FIL, ICP	6	18	µg/L
1090 B	Zinc, FIL, ICP	3	9	µg/L

**SCHEDULE 1050**

Schedule Description: Major cations plus trace metals, inductively coupled plasma/mass spectrometry. Specific conductance needs to be less than 6,000 µS/cm

Sample Requirements: 250 FA; 250 RU

Container Requirements: 250-mL polyethylene bottle, acid-rinsed; 250-mL polyethylene bottle, field-rinsed

Lab-code	Para-meter code	CAS number	Compound name, phase	MRL
0068	00403 A		pH, laboratory	0.1
0069	90095 A		SEC, lab.	1 µS/cm
1784	01106 G	7429905	Aluminum, FIL, ICP/MS	1 µg/L
1785	01095 G	7440360	Antimony, FIL, ICP/MS	1 µg/L
1786	01005 G	7440393	Barium, FIL, ICP/MS	1 µg/L
1787	01010 G	7440417	Beryllium, FIL, ICP/MS	1 µg/L
1788	01025 G	7440439	Cadmium, FIL, ICP/MS	1 µg/L
1789	01030 G	7440473	Chromium, FIL, ICP/MS	1 µg/L
1790	01035 G	7440484	Cobalt, FIL, ICP/MS	1 µg/L
1791	01040 G	7440508	Copper, FIL, ICP/MS	1 µg/L
1792	01049 G	7439921	Lead, FIL, ICP/MS	1 µg/L
1793	01056 G	7439965	Manganese, FIL, ICP/MS	1 µg/L
1794	01060 G	7439987	Molybdenum, FIL, ICP/MS	1 µg/L
1795	01065 G	7440020	Nickel, FIL, ICP/MS	1 µg/L
1796	01075 G	7440224	Silver, FIL, ICP/MS	1 µg/L
1797	22703 G	7440611	Uranium, FIL, ICP/MS	1 µg/L
1798	01090 G	7440666	Zinc, FIL, ICP/MS	1 µg/L

**SCHEDULE 2701**

Schedule Description: Major inorganics in surface water for NAWQA

Sample Requirements: 250 mL, filtered acidified (FA) with HNO<sub>3</sub> to pH <2

250 mL, unfiltered nonacidified (RU)

500 mL, filtered nonacidified (FU)

Container Requirements: 250-mL polyethylene bottle, acid-rinsed  
500-mL polyethylene bottle, field-rinsed

Lab-code	Para-meter code	CAS number	Compound name, phase	MRL
1571	00940 E		Chloride, FIL	0.1 mg/L
27	70300 A		ROE FIL @ 180° C	1.0 mg/L
54	00935 A		Potassium, FIL	.1 mg/L
68	00403 A		pH, Laboratory	.1
69	90095 A		SEC, lab.	1.0 µS/cm
70	90410 A		Alkalinity, as CaCO <sub>3</sub> , lab.	1.0 mg/L
645	01046 D		Iron, FIL	3.0 µg/L
648	01056 C		Manganese, FIL	1.0 µg/L
659	00915 D		Calcium, FIL	.02 mg/L
663	00925 C		Magnesium, FIL	.01 mg/L
667	00955 D		Silica, FIL	.01 mg/L
675	00930 C		Sodium, FIL	.2 mg/L
1572	00945 G		Sulfate, FIL	.1 mg/L
31	00950 E		Fluoride, FIL	.1 mg/L

**Table 9.--Inorganic determinations in water, listed by selected laboratory schedule--Continued**

**SCHEDULE 2702**

Schedule Description: Nutrients in surface water for NAWQA

Sample Requirements: 125 mL water passed through 0.45-µm filter, chilled (FC) @ 4 deg. C (packed in ice), w/HgCl<sub>2</sub> ampule added, 125 mL unfiltered chilled (RC) @ 4 deg. C (packed in ice) w/HgCl<sub>2</sub> ampule added

Container Requirements: 125-mL brown polyethylene bottle, field-rinsed

Lab code	Para-meter code	Compound name, phase	MRL (mg/L)
1973	00613 B	Nitrogen, nitrite, as N, FIL	0.01
1974	00671 B	Phosphorus, orthophosphate, as P, FIL	.01
1975	00631 B	Nitrogen, nitrate + nitrite, as N, FIL	.05
1976	00608 B	Nitrogen, ammonia, as N, FIL	.01
1983	00666 C	Phosphorus, as P, FIL	.01
1985	00623 C	Nitrogen, ammonia + organic, as N, FIL	.20
1986	00625 C	Nitrogen, ammonia + organic, as N, total	.20
1984	00665 C	Phosphorus, as P, total	.01

**SCHEDULE 2703**

Schedule Description: Trace elements in ground water filtered through a 0.45-µm filter for NAWQA (Protocol Memo 7-9-93, Ver 1.3)

Sample Requirements: 250 mL unfiltered ground water, nonacidified (RU) 250 mL, filtered (0.45-µm), acidified with nitric acid to pH of <2 (FA)

Container Requirements: 250-mL polyethylene bottle, field-rinsed, 250-mL polyethylene bottle, acid-rinsed

Lab code	Para-meter code	CAS number	Compound name, phase	MRL
0068	00403 A		pH, laboratory	0.1
0069	90095 A		SEC, lab.	1 µS/cm
0112	01000 B	7440382	Arsenic, FIL, AA, hydride	1 µg/L
1784	01106 G	7429905	Aluminum, FIL, ICP/MS	1 µg/L
1785	01095 G	7440360	Antimony, FIL, ICP/MS	1 µg/L
1786	01005 G	7440393	Barium, FIL, ICP/MS	1 µg/L
1787	01010 G	7440417	Beryllium, FIL, ICP/MS	1 µg/L
1788	01025 G	7440439	Cadmium, FIL, ICP/MS	1 µg/L
1789	01030 G	7440473	Chromium, FIL, ICP/MS	1 µg/L
1790	01035 G	7440484	Cobalt, FIL, ICP/MS	1 µg/L
1791	01040 G	7440508	Copper, FIL, ICP/MS	1 µg/L
1792	01049 G	7439921	Lead, FIL, ICP/MS	1 µg/L
1793	01056 G	7439965	Manganese, FIL, ICP/MS	1 µg/L
1794	01060 G	7439987	Molybdenum, FIL, ICP/MS	1 µg/L
1795	01065 G	7440020	Nickel, FIL, ICP/MS	1 µg/L
0087	01145 A	7782492	Selenium, FIL, AA, hydride	1 µg/L
1796	01075 G	7440224	Silver, FIL, ICP/MS	1 µg/L
1797	22703 G	7440611	Uranium, FIL, ICP/MS	1 µg/L
1798	01090 G	7440666	Zinc, FIL, ICP/MS	1 µg/L

**SCHEDULE 2750**

Schedule Description: Major inorganics in ground water for NAWQA

Sample Requirements: 250 mL, filtered acidified (FA) w/HNO<sub>3</sub> to pH <2 250 mL, unfiltered nonacidified (RU) 500 mL, filtered nonacidified (FU)

Container Requirements: 250- and 500-mL polyethylene bottles, field-rinsed 250-mL polyethylene bottle, acid-rinsed

Lab code	Para-meter code	CAS number	Compound name, phase	MRL
1571	00940 E		Chloride, FIL	0.1 mg/L
27	70300 A		ROE FIL @ 180°C	1 mg/L
54	00935 A		Potassium, FIL	.1 mg/L
68	00403 A		pH, laboratory	.1
69	90095 A		SEC, lab.	1 µS/cm
70	90410 A		Alkalinity, as CaCO <sub>3</sub> , lab.	1 mg/L
645	01046 D		Iron, FIL	3 µg/L
648	01056 C		Manganese, FIL	1 µg/L
659	00915 D		Calcium, FIL	.02 mg/L
663	00925 C		Magnesium, FIL	.01 mg/L
667	00955 D		Silica, FIL	.01 mg/L
675	00930 C		Sodium, FIL	.20 mg/L
1246	71870 E		Bromide, FIL	.01 mg/L
1572	00945 G		Sulfate, FIL	.10 mg/L
31	00950 E		Fluoride, FIL	.10 mg/L
2002	-- A		ICP set up	

**SCHEDULE 2752**

Schedule Description: Nutrients in ground water for NAWQA

Sample Requirements: 125 mL water passed through 0.45-µm filter, chilled, (FC) @ 4 deg. C (packed in ice)

Container Requirements: 125-mL brown polyethylene bottle, field-rinsed

Lab code	Para-meter code	Compound name, phase	MRL (mg/L)
1973	00613 B	Nitrogen, nitrite, as N, FIL	0.01
1974	00671 B	Phosphorus, orthophosphate, as P, FIL	.01
1975	00631 B	Nitrogen, nitrate + nitrite, as N, FIL	.05
1976	00608 B	Nitrogen, ammonia, as N, FIL	.01
1983	00666 C	Phosphorus, as P, FIL	.01
1985	00623 C	Nitrogen, ammonia + organic, as N, FIL	.20

**Table 10.--Inorganic determinations in tissue, listed by laboratory schedule**

**SCHEDULE 2200**

Schedule Description: Trace elements in tissue samples (fish, liver, or corbicula)

Sample Requirements: 20 g of sample, frozen, shipped @ 4 deg. C  
(packed in ice)

Container Requirements: Ziploc bag

Lab. code	Parameter code		CAS number	Compound name	MRL (µg/g) dry
6000	49237	A	7229-90-5	Aluminum, ICP	1.0
6001	49238	A	7440-39-3	Barium, ICP	.1
6003	49239	A	7440-42-8	Boron, ICP	.2
6005	49240	A	7440-47-3	Chromium, ICP	.5
6007	49241	A	7440-50-8	Copper, ICP	.5
6008	49242	A	7439-89-6	Iron, ICP	1
6010	49243	A	7439-96-5	Manganese, ICP	.1
6014	49244	A	7440-24-6	Strontium, ICP	.1
6016	49245	A	7440-66-6	Zinc, ICP	.5
6018	49246	A	7440-36-0	Antimony, ICP/MS	.1
6019	49247	A	7440-38-2	Arsenic, ICP/MS	.1
6021	49248	A	7440-41-7	Beryllium, ICP/MS	.1
6023	49249	A	7440-43-9	Cadmium, ICP/MS	.1
6025	49250	A	7440-48-4	Cobalt, ICP/MS	.1
6028	49251	A	7439-92-1	Lead, ICP/MS	.1
6030	49252	A	7439-98-7	Molybdenum, ICP/MS	.1
6031	49253	A	7440-02-0	Nickel, ICP/MS	.1
6032	49254	A	7782-49-2	Selenium, ICP/MS	.1
6033	49255	A	7440-22-4	Silver, ICP/MS	.1
6036	49257	A	7440-64-1	Uranium, ICP/MS	.1
6037	49465	A	7440-62-2	Vanadium, ICP/MS	.1
6046	49258	A	7439-97-6	Mercury, CVAA	.1
6047	49273	A	- -	Water, percent	0
6048	- -	A	- -	Digestion, inorganic tissue	0

Table 11.--Gross organic determinations, listed alphabetically

Lab. code	Parameter code	Name and phase	Volume needed	Sample designation <sup>1</sup>	MRL	Units
<b>Sediment</b>						
503	00686 C	Carbon, inorganic, BTM, modified Van Slyke	10 g	CC	0.1	g/kg
1914	00000 A	Set number, inorganic carbon, BTM	10 g	CC	--	
133	00693 A	Carbon, total, inorganic + organic, BTM, induction furnace	10 g	CC	.1	g/kg
1913	00000 A	Set number, total carbon, BTM	10 g	CC	--	
531	00557 A	Oil & grease, BTM, extraction gravimetric	10 g	CC	1,000	mg/kg
<b>Water</b>						
306	00691 A	Carbon, inorganic, FIL	100 mL	DIC	.1	mg/L
1909	00000 A	Set number, inorganic carbon, FIL				
113	00681 A	Carbon, organic, FIL	100 mL	DOC	.1	mg/L
1907	00000 A	Set number, organic carbon, FIL				
305	00689 A	Carbon, organic, SUS, wet oxidation	1 Filter	SOC	.1	mg/L
1912	00000 A	Set number, organic carbon, SUS				
114	00680 A	Carbon, organic, total, wet oxidation	100 mL	TOC	.1	mg/L
1910	00000 A	Set number, organic carbon, total				
1834	49221 A	Glyphosphate	40 mL	VOA	5	µg/L
96	38260 A	MBAS, WWR, colorimetric	250 mL	RCB	.02	mg/L
1918	00000 A	Set number, MBAS				
127	00556 A	Oil & grease, total, extraction gravimetric	1 L	LC0127	1	mg/L
1916	00000 A	Set number, oil and grease, total				
52	32730 A	Phenols, total, colorimetric	1 L	LC0052	1	µg/L
1917	00000 A	Set number, phenols, total				

<sup>1</sup>See table 4.

**Table 12.--Organic determinations in sediment, listed by laboratory schedule**

**SCHEDULE 80**

Schedule Description: Organochlorine herbicides, recoverable from bed material analyzed by GC/ECD  
 Sample Requirements: 200 g, BGC, chilled & maintained @ 4 deg. C  
 Container Requirement: 1-L, amber, 33-mm neck, pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/kg)
0375	39731 A	94757	2,4-D	0.1
0376	39741 A	93765	2,4,5-T	.1
0377	39761 A	93721	Silvex	.1
0403	34609 A	105679	2,4-DP	.1
0750	38930 A	918021	Picloram	.1
0751	38931 A	918009	Dicamba	.1
1945	00000 A	--	Sample weight, g	
1900	00000 A	--	Set number, SC 80	

**SCHEDULE 1305**

Schedule Description: Chlorophenoxy acid herbicides, recoverable from bottom material, analyzed by GC/ECD  
 Sample Requirements: 200 g, BGC, chilled & maintained @ 4 deg. C  
 Container Requirement: 1-L, amber, 33-mm neck, pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/kg)
0375	39731 A	94757	2,4-D	0.1
0376	39741 A	93765	2,4,5-T	.1
0377	39761 A	93721	Silvex	.1
0403	34609 A	105679	2,4-DP	.1
1941	00000 A	--	Sample weight, g	
1901	00000 A	--	Set number, SC 1350	

**SCHEDULE 1320**

Schedule Description: Organophosphate pesticides, recoverable from bottom material, analyzed by GC/FPD  
 Sample Requirements: 200 g, BGC, chilled & maintained @ 4 deg. C  
 Container Requirement: 1-L, amber, 33-mm neck, pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/kg)
0385	39571 A	333415	Diazinon	0.2
0386	39399 A	563122	Ethion	.2
0387	39531 A	121755	Malathion	.2
0388	39601 A	298000	Methylparathion	.2
0390	39541 A	56382	Parathion	.2
0391	39787 A	786196	Trithion	.2
1943	00000 A	--	Sample weight, g	
1902	00000 A	--	Set number, SC 1320	

**SCHEDULE 1325**

Schedule Description: Organochlorine pesticides with PCB's and PCN's, recoverable from bottom material, analyzed by GC/ECD  
 Sample Requirements: 200 g, BGC, chilled & maintained at 4 deg. C  
 Container Requirement: 500 mL, wide-mouthed glass jars

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/kg)
0342	81886 A	72560	Perthane	1
0346	39389 A	15297	Endosulfan I	.1
0361	39333 A	309002	Aldrin	.1
0362	39351 A	57749	Technical chlordane	1
0363	39363 A	72548	DDD, <i>p,p'</i> -	.1
0364	39368 A	72559	DDE, <i>p,p'</i> -	.1
0365	39373 A	50293	DDT, <i>p,p'</i> -	.1
0366	39383 A	60571	Dieldrin	.1
0367	39393 A	72208	Endrin	.1
0368	39413 A	76448	Heptachlor	.1
0369	39423 A	1024573	Heptachlor epoxide	.1
0370	39343 A	58899	Lindane	.1
0371	39403 A	8001352	Toxaphene	10
0394	39519 A	12767792	PCB's, gross	1
0395	39251 A	25104556	PCN's, gross	1
0401	39481 A	72435	Methoxychlor, <i>p,p'</i> -	.1
0545	39758 A	2385855	Mirex	.1
1942	00000 A	--	Sample weight, g	
1903	00000 A	--	Set number, SC 1325	

**SCHEDULE 1335**

Schedule Description: (Combination of schedules 1325 and 1320)  
 Organochlorine and organophosphate pesticides, with PCB's and PCN's recoverable from bottom material, analyzed by GC/FPD  
 Sample Requirements: 200 g, BGC, chilled & maintained @ 4 deg. C  
 Container Requirement: 500 mL, wide-mouthed glass jars

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/kg)
0342	81886 A	72560	Perthane	1
0346	39389 A	115297	Endosulfan I	.1
0361	39333 A	309002	Aldrin	.1
0362	39351 A	57749	Chlordane	1
0363	39363 A	72548	DDD, <i>p,p'</i> -	.1
0364	39368 A	72559	DDE, <i>p,p'</i> -	.1
0365	39373 A	50293	DDT, <i>p,p'</i> -	.1
0366	39383 A	60571	Dieldrin	.1
0367	39393 A	72208	Endrin	.1
0368	39413 A	76448	Heptachlor	.1
0369	39423 A	1024573	Heptachlor epoxide	.1
0370	39343 A	58899	Lindane	.1
0371	39403 A	8001352	Toxaphene	10
0385	39571 A	333415	Diazinon	.2
0386	39399 A	563122	Ethion	.2
0387	39531 A	121755	Malathion	.2
0388	39601 A	298000	Methylparathion	.2
0390	39541 A	56382	Parathion	.2
0391	39787 A	786196	Trithion	.2
0394	39519 A	12767792	PCB's, gross	1
0395	39251 A	25104556	PCN's, gross	1
0401	39481 A	72435	Methoxychlor, <i>p,p'</i> -	.1
0545	39758 A	2385855	Mirex	.1



Table 12.--Organic determinations in sediment, listed by laboratory schedule--Continued

**SCHEDULE 1382**

Schedule Description: Organic compound profile, recoverable from bottom material, as determined from a methylene chloride extraction and analyzed by GC/FID

Sample Requirements: 200 g, BGC, chilled & maintained @ 4 deg. C

Container Requirement: 1-L, amber, 33-mm neck, pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/kg)
1236	99475 A	--	BTM GC/FID profile	N/A

**SCHEDULE 1384**

Schedule Description: Organic compounds, acid and base/neutral, recoverable from bottom material using methylene chloride and GC/MS technology

Sample Requirements: 200 g, BGC, chilled & maintained @ 4 deg. C

Container Requirement: 1-L, amber, 33-mm neck, pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/kg)
1044	34455 A	59507	4-Chloro-3-methylphenol	600
1045	34589 A	95578	2-Chlorophenol	200
1046	34604 A	120832	2,4-Dichlorophenol	200
1047	34609 B	105679	2,4-Dimethylphenol	200
1048	34660 A	534521	2-Methyl-4,6-dinitrophenol	600
1049	34619 A	51285	2,4-Dinitrophenol	600
1050	34594 A	88755	2-Nitrophenol	200
1051	34649 A	100027	4-Nitrophenol	600
1052	39061 A	87865	Pentachlorophenol	600
1053	34695 A	108952	Phenol	200
1054	34624 A	88062	2,4,6-Trichlorophenol	600
1112	34208 A	83329	Acenaphthene	200
1113	34203 A	208968	Acenaphthylene	200
1114	34223 A	120127	Anthracene	200
1116	34529 A	56553	Benz[a]anthracene	400
1117	34233 A	205992	Benzo[b]fluoranthene	400
1118	34245 A	207089	Benzo[k]fluoranthene	400
1119	34250 A	50328	Benzo[a]pyrene	400
1120	34524 A	191242	Benzo[ghi]perylene	400
1121	34295 A	85687	Butylbenzylphthalate	200
1122	34281 A	111911	Bis(2-chloroethoxy)methane	200
1123	34276 A	111444	Bis(2-chloroethyl)ether	200
1124	34286 A	108601	Bis(2-chloroisopropyl)ether	200
1125	34639 A	101553	4-Bromophenyl-phenylether	200
1126	34584 A	91587	2-Chloronaphthalene	200
1127	34644 A	7005723	4-Chlorophenyl-phenylether	200
1128	34323 A	218019	Chrysene	400
1129	34559 A	53703	Dibenz[a,h]anthracene	400
1130	39112 A	84742	Di-n-butylphthalate	200
1140	34539 A	95501	1,2-Dichlorobenzene	200
1141	34569 A	541731	1,3-Dichlorobenzene	200
1142	34574 A	106467	1,4-Dichlorobenzene	200
1144	34339 A	84662	Diethylphthalate	200
1145	34344 A	131113	Dimethylphthalate	200
1146	34614 A	121142	2,4-Dinitrotoluene	200
1147	34629 A	606202	2,6-Dinitrotoluene	200
1148	34599 A	117840	Di-n-octylphthalate	400
1149	39102 A	117817	Bis(2-Ethylhexyl)phthalate	200
1150	34384 A	86737	9H-Fluorene	200

**SCHEDULE 1384--Continued**

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/kg)
1151	34379 A	206440	Fluoranthene	200
1152	39701 A	118741	Hexachlorobenzene	200
1153	39705 A	87683	Hexachlorobutadiene	200
1154	34389 A	77474	Hexachlorocyclopentadiene	200
1155	34399 A	67721	Hexachloroethane	200
1156	34406 A	193395	Indeno[1,2,3-cd]pyrene	400
1157	34411 A	78591	Isophorone	200
1158	34445 A	91203	Naphthalene	200
1159	34450 A	98953	Nitrobenzene	200
1160	34441 A	62759	N-Nitrosodimethylamine	200
1161	34436 A	86306	N-Nitrosodiphenylamine	200
1162	34431 A	621647	N-Nitrosodi-n-propylamine	200
1163	34464 A	85018	Phenanthrene	200
1164	34472 A	129000	Pyrene	200
1166	34554 A	120821	1,2,4-Trichlorobenzene	200
1946	00000 A	--	Sample weight, g	
1905	00000 A	--	Set number, SC 1384	

Table 12.--Organic determinations in sediment, listed by laboratory schedule--Continued

## SCHEDULE 1386

Schedule Description: Organic compounds, acid and base/neutral, recoverable from bottom material using methylene chloride and GC/MS technology with unknowns tentatively identified  
 Sample Requirements: 200 g, BGC, chilled & maintained @ 4 deg. C  
 Container Requirement: 1-L, amber, 33-mm neck, pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/kg)
1044	34455 A	59507	4-Chloro-3-methylphenol	600
1045	34589 A	95578	2-Chlorophenol	200
1046	34604 A	120832	2,4-Dichlorophenol	200
1047	34609 B	105679	2,4-Dimethylphenol	200
1048	34660 A	534521	2-Methyl-4,6-dinitrophenol	600
1049	34619 A	51285	2,4-Dinitrophenol	600
1050	34594 A	88755	2-Nitrophenol	200
1051	34649 A	100027	4-Nitrophenol	600
1052	39061 A	87865	Pentachlorophenol	600
1053	34695 A	108952	Phenol	200
1054	34624 A	88062	2,4,6-Trichlorophenol	600
1112	34208 A	83329	Acenaphthene	200
1113	34203 A	208968	Acenaphthylene	200
1114	34223 A	120127	Anthracene	200
1116	34529 A	56553	Benz[a]anthracene	400
1117	34233 A	205992	Benzo[b]fluoranthene	400
1118	34245 A	207089	Benzo[k]fluoranthene	400
1119	34250 A	50328	Benzo[a]pyrene	400
1120	34524 A	191242	Benzo[ghi]perylene	400
1121	34295 A	85687	Butylbenzylphthalate	200
1122	34281 A	111911	Bis(2-chloroethoxy)methane	200
1123	34276 A	111444	Bis(2-chloroethyl)ether	200
1124	34286 A	108601	Bis(2-chloroisopropyl)ether	200
1125	34639 A	101553	4-Bromophenyl-phenylether	200
1126	34584 A	91587	2-Chloronaphthalene	200
1127	34644 A	7005723	4-Chlorophenyl-phenylether	200
1128	34323 A	218019	Chrysene	400
1129	34559 A	53703	Dibenz[a,h]anthracene	400
1130	39112 A	84742	Di-n-butylphthalate	200
1140	34539 A	95501	1,2-Dichlorobenzene	200
1141	34569 A	541731	1,3-Dichlorobenzene	200
1142	34574 A	106467	1,4-Dichlorobenzene	200
1144	34339 A	84662	Diethylphthalate	200
1145	34344 A	131113	Dimethylphthalate	200
1146	34614 A	121142	2,4-Dinitrotoluene	200
1147	34629 A	606202	2,6-Dinitrotoluene	200
1148	34599 A	117840	Di-n-octylphthalate	400
1149	39102 A	117817	Bis(2-ethylhexyl)phthalate	200
1150	34384 A	86737	9H-Fluorene	200
1151	34379 A	206440	Fluoranthene	200
1152	39701 A	118741	Hexachlorobenzene	200
1153	39705 A	87683	Hexachlorobutadiene	200
1154	34389 A	77474	Hexachlorocyclopentadiene	200
1155	34399 A	67721	Hexachloroethane	200
1156	34406 A	193395	Indeno[1,2,3-cd]pyrene	400
1157	34411 A	78591	Isophorone	200
1158	34445 A	91203	Naphthalene	200
1159	34450 A	98953	Nitrobenzene	200
1160	34441 A	62759	N-Nitrosodimethylamine	200
1161	34436 A	86306	N-Nitrosodiphenylamine	200
1162	34431 A	621647	N-Nitrosodi-n-propylamine	200
1163	34464 A	85018	Phenanthrene	200
1164	34472 A	129000	Pyrene	200
1166	34554 A	120821	1,2,4-Trichlorobenzene	200
1946	00000 A	--	Sample weight, g	
1906	00000 A	--	Set number, SC 1386	

## SCHEDULE 2501

Schedule Description: Chlorinated organic compounds in bed sediments analyzed by the NWQL using gas chromatography  
 Sample Requirements: 500 g of bed sediment chilled @ 4 deg. C (packed in ice), fill container no more than two-thirds full to minimize breakage

Container Requirements: 500-mL wide-mouth glass container

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/kg)
5001	49319 B	309002	Aldrin	1
5002	49320 B	5103719	Chlordane, cis-	1
5003	49321 B	5103742	Chlordane, trans-	1
5054	49322 B	2675776	Chloroneb	5
5036	49324 B	1861321	DCPA (Dacthal)	5
5008	49325 B	53190	DDD, o,p'-	1
5009	49326 B	72548	DDD, p,p'-	1
5010	49327 B	3424846	DDE, o,p'-	1
5011	49328 B	72559	DDE, p,p'-	1
5012	49329 B	789026	DDT, o,p'-	2
5013	49330 B	50293	DDT, p,p'-	2
5014	49331 B	60571	Dieldrin	1
5015	49332 B	959988	Endosulfan I	1
5018	49335 B	72208	Endrin	2
5020	49341 B	76448	Heptachlor	1
5021	49342 B	1024573	Heptachlor epoxide	1
5006	49343 B	118741	Hexachlorobenzene	1
5026	49338 B	319846	BCH, alpha-	1
5027	49339 B	319857	BCH, beta-	1
5022	49345 B	58899	BCH, gamma- (Lindane)	1
5037	49344 B	465736	Isodrin	1
5042	49347 B	30667993	Methoxychlor, o,p'-	5
5044	49346 B	72435	Methoxychlor, p,p'-	5
5023	49348 B	2385855	Mirex	1
5041	49316 B	5103731	Nonachlor, cis-	1
5039	49317 B	39765805	Nonachlor, trans-	1
5038	49318 B	27304138	Oxychlordane	1
5033	49460 A	1825214	Pentachloroanisole	1
5055	49349 B	61949766	Permethrin, cis-	5
5056	49350 B	61949777	Permethrin, trans-	5
5024	49459 B	--	PCB's, total	50
5025	49351 B	8001352	Toxaphene	200
5034	49277 B	34883415	Biphenyl, 3,5-dichloro surrogate%	
5032	49275 B	--	HCH, alpha, d <sub>6</sub> -surrogate%	
5048	49276 B	74472529	Octachlorobiphenyl surrogate %	
5057	99853 A	--	Sample weight, g	
5053	99824 A	--	Set number, SC 2501	
5058	99850 A	--	Analytical ref. number	

Table 12.--Organic determinations in sediment, listed by laboratory schedule--Continued

## SCHEDULE 2502

Schedule Description: Base-Neutral-Acid (BNA) semivolatile  
organic compounds in bed sediment analyzed by NWQL using  
Gas Chromatography/Mass Spectrometry (GC/MS).

Sample Requirements: 500 g of bed sediment, chilled @ 4 deg. C  
(packed in ice)

Container Requirements: 500-mL wide-mouth glass container

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/Kg)
5211	49429 B	83329	Acenaphthene	50
5212	49428 B	208968	Acenaphthylene	50
5276	49430 B	260946	Acridine	50
5256	49424 B	--	C <sub>8</sub> -Alkylphenol	50
5213	49434 B	120127	Anthracene	50
5283	49437 B	84651	Anthraquinone	50
5272	49443 B	10333	Azobenzene	50
5217	49436 B	218009	Benz[a]anthracene	50
5280	49468 B	229878	Benzo[c]quinoline	50
5218	49458 B	205992	Benzo[b]fluoranthene	50
5220	49397 B	207089	Benzo[k]fluoranthene	50
5219	49408 B	191242	Benzo[ghi]perylene	50
5221	49389 B	5028	Benzo[a]pyrene	50
5285	49391 B	119915	2,2-Biquinoline	50
5214	49401 B	111911	Bis(2-Chloroethoxy)methane	50
5215	49456 B	111444	Bis(2-Chloroethyl)ether	50
5216	49457 B	108601	Bis(2-Chloroisopropyl)ether	M-Del
5223	49426 B	117817	Bis(2-Ethylhexyl)phthalate	50
5208	49454 B	101533	4-Bromophenyl-phenylether	50
5224	49427 B	85687	Butylbenzylphthalate	50
5278	49449 B	86748	9H-Carbazole	50
5262	49422 B	59507	4-Chloro-3-Methylphenol	50
5207	49407 B	91587	2-Chloronaphthalene	50
5289	49467 B	95578	2-Chlorophenol	50
5209	49455 B	7005723	4-Chlorophenyl-phenylether	50
5225	49450 B	218009	Chrysene	50
5254	49451 B	106445	p-Cresol	50
5232	49461 B	53703	Dibenz[a,h]anthracene	50
5275	49452 B	132650	Dibenzothiophene	50
5235	49381 B	84742	Di-n-butylphthalate	50
5234	49439 B	95501	1,2-Dichlorobenzene	50
5222	49441 B	541731	1,3-Dichlorobenzene	50
5233	49442 B	106467	1,4-Dichlorobenzene	50
5257	49417 B	120832	2,4-Dichlorophenol	M-Del
5237	49383 B	84662	Diethylphthalate	50
5267	49403 B	573988	1,2-Dimethylnaphthalene	50
5266	49404 B	575439	1,6-Dimethylnaphthalene	50
5265	49406 B	581420	2,6-Dimethylnaphthalene	50
5258	49421 B	108689	3,5-Dimethylphenol	50
5238	49384 B	131113	Dimethylphthalate	50
5271	49419 B	534561	4,6-Dinitro-2-methylphenol	M-Del
5268	49481 B	51285	2,4-Dinitrophenol	M-Del
5203	49395 B	121142	2,4-Dinitrotoluene	50
5205	49396 B	606202	2,6-Dinitrotoluene	50
5239	49382 B	117840	Di-n-octylphthalate	50
5264	49490 B	939275	2-Ethyl-naphthalene	50
5240	49466 B	206440	Fluoranthene	50
5210	49399 B	86737	9H-Fluorene	50
5228	49343 B	118741	Hexachlorobenzene	50
5229	49448 B	87683	Hexachlorobutadiene	M-Del
5230	49489 B	77474	Hexachlorocyclopentadiene	M-Del
5231	49453 B	67721	Hexachloroethane	M-Del
5241	49390 B	193415	Indeno[1,2,3-cd]pyrene	50
5242	49400 B	78791	Isophorone	50
5261	49394 B	119653	Isoquinoline	50

## SCHEDULE 2502--Continued

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/Kg)
5279	49435 B	613127	2-Methylanthracene	50
5273	49398 B	1730376	1-Methyl-9H-fluorene	50
5282	49410 B	832699	1-Methylphenanthrene	50
5284	49388 B	2381217	1-Methylpyrene	50
5281	49411 B	--	4,5-Methylenephenanthrene	50
5246	49402 B	91203	Naphthalene	50
5247	49444 B	98953	Nitrobenzene	50
5255	49420 B	88755	2-Nitrophenol	M-Del
5269	49423 B	100027	4-Nitrophenol	M-Del
5245	49431 B	621647	N-nitrosodi-n-propylamine	50
5244	49433 B	156105	N-nitrosodiphenylamine	50
5274	49460 B	1827214	Pentachloroanisole	50
5226	49446 B	82688	Pentachloronitrobenzene	50
5227	49425 B	87865	Pentachlorophenol	M-Del
5248	49409 B	85018	Phenanthrene	50
5277	49393 B	229878	Phenanthridine	50
5249	49413 B	108952	Phenol	50
5252	49387 B	129000	Pyrene	50
5260	49392 B	91225	Quinoline	50
5263	49414 B	527375	2,3,5,6-Tetramethylphenol	M-Del
5201	49438 B	120821	1,2,4-Trichlorobenzene	50
5204	49415 B	88062	2,4,6-Trichlorophenol	M-Del
5270	49405 B	--	2,3,6-Trimethylnaphthalene	50
5259	49416 B	527606	2,4,6-Trimethylphenol	M-Del
5288	49279 B	321608	2-Fluorobiphenyl, surrogate	%
5287	49280 B	--	Nitrobenzene-d <sub>5</sub> , surrogate	%
5286	49278 B	--	Terphenyl-d <sub>14</sub> , surrogate	%
5290	99825 B	--	Set number	
2060	99854 A	--	Sample weight, g	

## SCHEDULE 2503

Schedule Description: Gross organic determinations of carbon in  
bed sediment, analyzed by induction furnace and modified  
Van Slyke.

Sample Requirements: 10 g of bed sediment, chilled @ 4 deg. C  
(packed in ice)

Container Requirements: 500-mL wide-mouth glass container

Lab. code	Parameter code	CAS number	Compound name	MRL (g/Kg)
5049	00000 A	--	Moisture %	0.1
5050	49272 B	--	Carbon, total	.1
5051	49270 D	--	Carbon, inorganic	.1
5052	49271 B	--	Carbon, organic	.1
5059	00000 A	--	Set number, total carbon, BTM, NAWQA	
5060	00000 A	--	Set number, inorganic carbon, BTM, NAWQA	
5061	00000 A	--	Set number, organic carbon, BTM, NAWQA	

Table 13.--Organic determinations in water, listed by laboratory schedule

**SCHEDULE 79**

Schedule Description: Organochlorine herbicides recoverable from whole water by GC/ECD

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled & maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
0372	39730 B	94757	2,4-D	0.01
0373	39740 B	93765	2,4,5-T	.01
0374	39760 B	93721	Silvex	.01
0402	82183 A	120365	2,4-DP	.01
0748	39720 A	1918021	Picloram	.01
0749	82052 A	1918009	Dicamba	.01
1803	99859 A	--	Sample volume, mL, SC 79	
1836	99826 A	--	Set number SC 79	

**SCHEDULE 1301**

Schedule Description: Chlorophenoxy acid herbicides, recoverable from filtered water, analyzed by GC/ECD

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled & maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
0477	39732 A	94757	2,4-D	0.01
0478	39742 A	93765	2,4,5-T	.01
0479	39762 A	93721	Silvex	.01
0487	82356 A	120365	2,4-DP	.01
1816	00000 A	--	Sample volume, mL, SC 1301	1
1864	99800 A	--	Set number SC 1301	

**SCHEDULE 1304**

Schedule Description: Chlorophenoxy acid herbicides recoverable from whole-water, analyzed by GC/ECD

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled & maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
0372	39730 B	94757	2,4-D	0.01
0373	39740 B	93765	2,4,5-T	.01
0374	39760 B	93721	Silvex	.01
0402	82183 A	120365	2,4-DP	.01
1800	00000 A	--	Sample volume, mL, SC 1304	1
1839	99801 A	--	Set number SC 1304	

**SCHEDULE 1306**

Schedule Description: DBCP & EDB recoverable from whole water using hexane, analyzed by GC/ECD

Sample Requirements: 3x40-mL volatile organic vials (GCV), unfiltered, filled to top and capped without bubbles, put into "poly" sleeves or wrapped in bubble wrap, chilled & maintained @ 4 deg. C

Container Requirement: 3x40-mL VOA vials, with Teflon-lined caps, quality-control checked and obtained from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
1576	82625 D	96128	1,2-Dibromo-3-chloropropane	0.03
1577	77651 D	106934	1,2-Dibromoethane	.04
2008	00000 A	--	Sample volume, mL, SC 1306	
2009	00000 A	--	Set number SC 1306	

**SCHEDULE 1307**

Schedule Description: Regulatory volatile compounds, recoverable from whole-water, using the purge and trap technique and GC/MS

Sample Requirements: 3x40-mL volatile organic vials (GCV), unfiltered, filled to top and capped without bubbles, put into "poly" sleeves or wrapped in bubble wrap, chilled & maintained @ 4 deg. C

Container Requirement: 3x40-mL VOA vials, with Teflon-lined caps, quality-control checked and obtained from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
1287	34030 B	71432	Benzene	0.2
1288	32104 B	75252	Bromoform	.2
1289	32102 B	56235	Carbontetrachloride	.2
1290	34301 B	108907	Chlorobenzene	.2
1291	32105 B	124481	Chlorodibromomethane	.2
1294	32106 B	67663	Chloroform	.2
1295	32101 B	75274	Dichlorobromomethane	.2
1296	34668 B	75718	Dichlorodifluoromethane	.2
1297	34496 B	75343	1,1-Dichloroethane	.2
1298	32103 B	107062	1,2-Dichloroethane	.2
1299	34501 B	75354	1,1-Dichloroethylene	.2
1300	34546 B	156605	1,2-Transdichloroethene	.2
1301	34541 B	78875	1,2-Dichloropropane	.2
1303	34371 B	100414	Ethylbenzene	.2
1305	34423 B	75092	Methylene chloride	.2
1307	34475 B	127184	Tetrachloroethylene	.2
1308	34010 B	108883	Toluene	.2
1309	34506 B	71556	1,1,1-Trichloroethane	.2
1311	39180 B	79016	Trichloroethylene	.2
1312	34488 B	75694	Trichlorofluoromethane	.2
1313	39175 B	75014	Vinyl chloride	.2
1314	34536 B	95501	1,2-Dichlorobenzene	.2
1315	34566 B	541731	1,3-Dichlorobenzene	.2
1316	34571 B	106467	1,4-Dichlorobenzene	.2
1328	77128 B	100425	Styrene	.2
1330	81551 B	1330207	Xylene	.2
1652	78032 A	1634044	Methyltertbutylether	.2
1656	77093 A	156592	cis-1,2-Dichloroethene	.2
1681	77652 A	76131	Trichlorotrifluoroethane	.2
1938	00000 A	--	Set number SC 1307	

Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

**SCHEDULE 1316**

Schedule Description: Organophosphate pesticides, recoverable from filtered water, analyzed by GC/FPD

Sample Requirements: 800-1,000 mL, GCC, collected unfiltered, but filtered in the lab using precleaned glass-fiber filter, chilled &amp; maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0423	39572 A	333415	Diazinon	0.01
0424	82346 A	563122	Ethion	.01
0425	39532 A	121755	Malathion	.01
0426	39602 A	298000	Methylparathion	.01
0427	39542 A	56382	Parathion	.01
0428	82342 A	786196	Trithion	.01
1811	99867 A	--	Sample volume, mL, SC 1316	1
1866	99802 A	--	Set number SC 1316	

**SCHEDULE 1317**

Schedule Description: Organophosphate pesticides, suspended, recoverable from suspended material, analyzed by GC/FPD

Sample Requirements: 800-1,000 mL, GCC, collected unfiltered, but filtered in the lab using precleaned glass-fiber filter, chilled &amp; maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0417	39573 A	333415	Diazinon	0.01
0418	82347 A	563122	Ethion	.01
0419	39533 A	121755	Malathion	.01
0420	39603 A	298000	Methylparathion	.01
0421	39543 A	56382	Parathion	.01
0422	82343 A	786196	Trithion	.01

**SCHEDULE 1319**

Schedule Description: Organophosphate pesticides (total recoverable), where recoverable from whole water, analyzed by GC/FPD

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled &amp; maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0378	39570 B	333415	Diazinon	0.01
0379	39398 B	563122	Ethion	.01
0380	39530 B	121755	Malathion	.01
0381	39600 B	298000	Methylparathion	.01
0383	39540 B	56382	Parathion	.01
0384	39786 B	786196	Trithion	.01
0592	39011 A	298044	Di-syston (disulfoton)	.01
0593	39023 A	298022	Phorate	.01
0753	38932 A	2921882	Chlorpyrifos	.01
0802	39040 A	78488	DEF	.01
1336	82614 C	944229	Fonofos	.01
1812	99868 A	--	Sample volume, mL, SC 1319	1
1837	99804 A	--	Set number SC 1319	

**SCHEDULE 1321**

Schedule Description: Organochlorine pesticides with PCB's and PCN's, recoverable from filtered water, analyzed by GC/ECD

Sample Requirements: 800-1,000 mL, GCC, collected unfiltered, but filtered in the lab using precleaned glass-fiber filter, chilled &amp; maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0344	82348 A	72560	Perthane	0.1
0345	82354 A	959988	Endosulfan I	.01
0463	39331 A	309002	Aldrin	.01
0464	39352 A	57749	Chlordane, technical	.1
0465	39361 A	72548	DDD, <i>p,p'</i> -	.01
0466	39366 A	72559	DDE, <i>p,p'</i> -	.01
0467	39371 A	50293	DDT, <i>p,p'</i> -	.01
0468	39381 A	60571	Dieldrin	.01
0469	39391 A	72208	Endrin	.01
0470	39411 A	76448	Heptachlor	.01
0471	39421 A	1024573	Heptachlor epoxide	.01
0472	39341 A	58899	Lindane	.01
0473	39401 A	8001352	Toxaphene	1
0474	39517 A	12767792	PCB's, gross	.1
0475	82360 A	25104556	PCN's, gross	.1
0476	82350 A	72435	Methoxychlor, <i>p,p'</i> -	.01
0542	39756 A	2385855	Mirex	.01
1810	99863 A	--	Sample volume, mL, SC 1321	1
1868	99805 A	--	Set number SC 1321	

**SCHEDULE 1324**

Schedule Description: Organochlorine pesticides with PCB's and PCN's, total recoverable, and recoverable from whole water, analyzed by GC/ECD

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled &amp; maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0348	39034 A	72560	Perthane	0.1
0349	39388 C	959988	Endosulfan I	.01
0350	39330 C	309002	Aldrin	.01
0351	39350 B	57749	Chlordane, technical	.1
0352	39360 C	72548	DDD, <i>p,p'</i> -	.01
0353	39365 C	72559	DDE, <i>p,p'</i> -	.01
0354	39370 C	50293	DDT, <i>p,p'</i> -	.01
0355	39380 C	60571	Dieldrin	.01
0356	39390 C	72208	Endrin	.01
0357	39410 C	76448	Heptachlor	.01
0358	39420 C	1024573	Heptachlor epoxide	.01
0359	39340 C	58899	Lindane	.01
0360	39400 B	8001352	Toxaphene	1
0392	39516 B	12767792	PCB's, gross	.1
0393	39250 B	25104556	PCN's, gross	.1
0400	39480 B	72435	Methoxychlor, <i>p,p'</i> -	.01
0544	39755 B	2385855	Mirex	.01
1808	99865 A	--	Sample volume, mL, SC 1324	1
1840	99806 A	--	Set number SC 1324	

Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

**SCHEDULE 1331**

Schedule Description: (Combination of schedules 1321 and 1316)  
Organochlorine pesticides with PCB's and PCN's, recoverable  
from filtered water, analyzed by GC/ECD

Sample Requirements: 800-1,000 mL, GCC, collected unfiltered, but  
filtered in the lab using precleaned glass-fiber filter, chilled &  
maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bot-  
tle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0344	82348 A	72560	Perthane	0.1
0345	82354 A	959988	Endosulfan I	.01
0423	39572 A	333415	Diazinon	.01
0424	82346 A	563122	Ethion	.01
0425	39532 A	121755	Malathion	.01
0426	39602 A	298000	Methylparathion	.01
0427	39542 A	56382	Parathion	.01
0428	82342 A	786196	Trithion	.01
0463	39331 A	309002	Aldrin	.01
0464	39352 A	57749	Chlordane, technical	.1
0465	39361 A	72548	DDD, <i>p,p'</i> -	.01
0466	39366 A	72559	DDE, <i>p,p'</i> -	.01
0467	39371 A	50293	DDT, <i>p,p'</i> -	.01
0468	39381 A	60571	Dieldrin	.01
0469	39391 A	72208	Endrin	.01
0470	39411 A	76448	Heptachlor	.01
0471	39421 A	1024573	Heptachlor epoxide	.01
0472	39341 A	58899	Lindane	.01
0473	39401 A	8001352	Toxaphene	1
0474	39517 A	12767792	PCB's, gross	.1
0475	82360 A	25104556	PCN's, gross	.1
0476	82350 A	72435	Methoxychlor, <i>p,p'</i> -	.01
0542	39756 A	2385855	Mirex	.01

**SCHEDULE 1334**

Schedule Description: (Combination of schedules 1324 and 11319)  
Organochlorine and organophosphate pesticides, recoverable  
from whole water, analyzed by GC/ECD and GC/FPD

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled &  
maintained @ 4 deg. C

Container Requirement: 2x1-L amber, Boston-round pesticide glass  
bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0348	39034 A	72560	Perthane	0.10
0349	39388 C	959988	Endosulfan I	.01
0350	39330 C	309002	Aldrin	.01
0351	39350 B	57749	Chlordane, technical	.10
0352	39360 C	72548	DDD, <i>p,p'</i> -	.01
0353	39365 C	72559	DDE, <i>p,p'</i> -	.01
0354	39370 C	50293	DDT, <i>p,p'</i> -	.01
0355	39380 C	60571	Dieldrin	.01
0356	39390 C	72208	Endrin	.01
0357	39410 C	76448	Heptachlor	.01
0358	39420 C	1024573	Heptachlor epoxide	.01
0359	39340 C	58899	Lindane	.01
0360	39400 B	8001352	Toxaphene	1
0378	39570 B	333415	Diazinon	.01
0379	39398 B	563122	Ethion	.01
0380	39530 B	121755	Malathion	.01
0381	39600 B	298000	Methylparathion	.01
0383	39540 B	56382	Parathion	.01
0384	39786 B	786196	Trithion	.01
0392	39516 B	12767792	PCB's, gross	.10
0393	39250 B	25104556	PCN's, gross	.10
0400	39480 B	72435	Methoxychlor, <i>p,p'</i> -	.01
0544	39755 B	2385855	Mirex	.01
0592	39011 A	298044	Di-syston (disulfoton)	.01
0593	39023 A	298022	Phorate	.01
0753	38932 A	2921882	Chlorpyrifos	.01
0802	39040 A	78488	DEF	.01
1336	82614 C	944229	Fonofos	.01

**SCHEDULE 1359**

Schedule Description: Carbamate pesticides, recoverable, whole water  
Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled &  
maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bot-  
tle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0636	39750 A	63252	Carbaryl	0.5
0637	39052 A	122429	Propham	.5
0638	39051 A	16752775	Methomyl	.5
1337	82615 C	1563662	Carbofuran	.5
1338	82619 C	116063	Aldicarb	.5
1351	77441 A	90153	1-Naphthol	.5
1448	30296 A	114261	Propoxur	.5
1449	30282 A	2032657	Methiocarb	.5
1813	99869 A	--	Sample volume, mL, SC 1359	1
1838	99808 A	--	Set number SC 1359	

Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

**SCHEDULE 1361**

Schedule Description: Individual Aroclor PCB's, recoverable from filtered water, analyzed by GC/ECD

Sample Requirements: 800-1,000 mL, GCC, collected unfiltered, but filtered in the lab using precleaned glass-fiber filter, chilled & maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0763	39509 A	11096825	Aroclor 1260	0.1
0767	39505 A	11097691	Aroclor 1254	.1
0771	39501 A	12672296	Aroclor 1248	.1
0775	34457 A	53469219	Aroclor 1242	.1
0779	34665 A	11141165	Aroclor 1232	.1
0783	34662 A	11104282	Aroclor 1221	.1
0787	34672 A	12674112	Aroclor 1016	.1
1802	00000 A	--	Sample volume, mL, SC 1361	1
1870	99809 A	--	Set number SC 1361	

**SCHEDULE 1364**

Schedule Description: Individual Aroclor PCB's, total recoverable, whole water, analyzed by GC/ECD

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled & maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0809	34671 B	12674112	Aroclor 1016	0.1
0810	39488 B	11104282	Aroclor 1221	.1
0811	39492 B	11141165	Aroclor 1232	.1
0812	39496 B	53469219	Aroclor 1242	.1
0813	39500 B	12672296	Aroclor 1248	.1
0814	39504 B	11097691	Aroclor 1254	.1
0815	39508 B	11096825	Aroclor 1260	.1
1801	00000 A	--	Sample volume, mL, SC 1364	1
1871	99810 A	--	Set number SC 1364	

**SCHEDULE 1377**

Schedule Description: Explosives, recoverable from filtered water, analyzed by HPLC/UV

Sample Requirements: 800-1,000, GCC, filtered, chilled & maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1702	49234 A	2691-41-0	HMX-Cy-4-methylene	0.12
1703	49233 A	121-82-4	RDX-C1,3,5-3M2,4,6	.14
1704	49232 A	99-35-4	1,3,5-Trinitrobenzene	.19
1705	49230 A	99-65-0	<i>m</i> -Dinitrobenzene	.18
1706	49229 A	98-95-3	Nitrobenzene	.18
1707	49225 A	118-96-7	2-Amino-4 6-dinitrotoluene	.26
1708	49224 A	1946-51-0	4-Amino-2 6-dinitrotoluene	.13
1714	49226 A	118-96-7	2,4,6-Trinitrotoluene	.11
1715	49227 A	06-20-2	2,6-Dinitrotoluene	.21
1716	49228 A	121-14-2	2,4-Dinitrotoluene	.18
1817	00000 A	88-72-2	1-Nitrotoluene	.24
1818	49223 A	99-99-0	4-Nitrotoluene	.29
1819	49222 A	99-08-1	3-Nitrotoluene	.13
1835	39941 A	618-87-1	3,5-Dinitroaniline	.18
1960	00000 A	--	Set number SC 1377	
2061	00000 A	--	Sample volume, mL, SC 1377	

**SCHEDULE 1378**

Schedule Description: BETX compounds, recoverable from whole water

Sample Requirements: 3x40-mL volatile organic vials (GCV), unfiltered, filled to top and capped without bubbles, put into "poly" sleeves or wrapped in bubble wrap, chilled & maintained @ 4 deg. C

Container Requirement: 3x40-mL VOA vials, with Teflon-lined caps, quality-control checked and obtained from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1287	34030 B	71432	Benzene	0.2
1303	34371 B	100414	Ethylbenzene	.2
1308	34010 B	108883	Toluene	.2
1330	81551 B	1330207	Xylenes ( <i>o,m,p</i> )	.2
1709	77135 B	95476	<i>ortho</i> -Xylene	.2
1712	85795 B	108383	<i>meta</i> -Xylene	.2
		106423	<i>para</i> -Xylene	
1933	00000 A	--	Set number SC 1378	

Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

**SCHEDULE 1379**

Schedule Description: Organonitrogen pesticides, total recoverable, using SPE technology and GC/MS

Sample Requirements: 125 mL, GCC, filtered

Container Requirement: 1x125-mL amber, glass bottle from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1587	46342 A	15972608	Alachlor	.05
1588	38401 A	834128	Ametryn	.05
1589	39632 A	1912249	Atrazine	.05
1590	04041 A	21725462	Cyanazine	.20
1591	04040 A	6190654	Deethylatrazine	.05
1592	04038 A	1007289	Deisopropylatrazine	.05
1593	39415 A	51218452	Metolachlor	.05
1594	82630 A	21087649	Metribuzin	.05
1595	38535 A	139402	Propazine	.05
1596	04035 A	122349	Simazine	.05
1597	04037 A	1610180	Prometon	.05
1598	04036 A	7287196	Prometryn	.05
1804	99860 A	--	Sample volume, mL, SC 1379	1
1841	99811 A	--	Set number SC 1379	

**SCHEDULE 1380**

Schedule Description: VOC, total recoverable, using purge and trap and GC/MS

Sample Requirements: 3x40-mL volatile organic vials (GCV), unfiltered, filled to top and capped without bubbles, put into "poly" sleeves or wrapped in bubble wrap, chilled & maintained @ 4 deg. C

Container Requirement: 3x40-mL VOA vials, with Teflon-lined caps, quality-control checked and obtained from NWQL

NOTE: For NPDES, BTEX, and EPA samples, we recommend adding 2 drops 1:1 HCl per vial to acidify to pH2. If free chlorine is present add 25 mg ascorbic acid to each vial in addition to the HCL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1009	30217 B	74953	Dibromomethane	.02
1287	34030 B	71432	Benzene	.2
1288	32104 B	75252	Bromoform	.2
1289	32102 B	56235	Carbon tetrachloride	.2
1290	34301 B	108907	Chlorobenzene	.2
1291	32105 B	124481	Dibromochloromethane	.2
1292	34311 B	75003	Chloroethane	.2
1294	32106 B	67663	Chloroform	.2
1295	32101 B	75274	Bromodichloromethane	.2
1296	34668 B	75718	Dichlorodifluoromethane	.2
1297	34496 B	75343	1,1-Dichloroethane	.2
1298	32103 B	107062	1,2-Dichloroethane	.2
1299	34501 B	75354	1,1-Dichloroethene	.2
1300	34546 B	156605	trans-1,2-Dichloroethene	.2
1301	34541 B	78875	1,2-Dichloropropane	.2
1303	34371 B	100414	Ethylbenzene	.2
1304	34413 B	74839	Bromomethane	.2
1305	34423 B	75092	Methylene chloride	.2
1306	34516 B	79345	1,1,2,2-Tetrachloroethane	.2
1307	34475 B	127184	Tetrachloroethylene	.2
1308	34010 B	108883	Toluene	.2
1309	34506 B	71556	1,1,1-Trichloroethane	.2
1310	34511 B	79005	1,1,2-Trichloroethane	.2

**SCHEDULE 1380--Continued**

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1311	39180 B	79016	Trichloroethene	.2
1312	34488 B	75694	Trichlorofluoromethane	.2
1313	39175 B	75014	Vinyl chloride	.2
1315	34566 B	541731	1,3-Dichlorobenzene	0.2
1316	34571 B	106467	1,4-Dichlorobenzene	.2
1317	77651 B	106934	1,2-Dibromoethane	.2
1318	34418 B	74873	Chloromethane	.2
1320	34536 C	95501	1,2-Dichlorobenzene	.2
1326	34704 B	10061015	cis-1,3-Dichloropropene	.2
1327	34699 B	10061026	trans-1,3-Dichloropropene	.2
1328	77128 B	100425	Styrene	.2
1330	81551 B	1330207	Xylenes (o,m,p)	.2
1354	82625 B	96128	1,2-Dibromo-3-chloropropane	1
1478	77168 B	563586	1,1-Dichloropropene	.2
1479	77170 B	594207	2,2-Dichloropropane	.2
1480	77173 B	142289	1,3-Dichloropropane	.2
1481	77275 B	95498	2-Chlorotoluene	.2
1482	77277 B	106434	4-Chlorotoluene	.2
1483	77443 B	96184	1,2,3-Trichloropropane	.2
1484	77562 B	630206	1,1,1,2-Tetrachloroethane	.2
1652	78032 A	1634044	Methyl tert-butylether	.2
1654	77297 A	74975	Bromochloromethane	.2
1656	77093 A	156592	cis-1,2-Dichloroethene	.2
1658	34576 C	110758	2-Chloroethylvinylether	1
1659	77223 A	98828	Isopropylbenzene	.2
1661	77224 A	103651	n-Propylbenzene	.2
1663	77353 A	98066	tert-Butylbenzene	.2
1665	77222 A	95636	1,2,4-Trimethylbenzene	.2
1667	77350 A	135988	sec-Butylbenzene	.2
1669	77356 A	99876	p-Isopropyltoluene	.2
1671	77342 A	104518	n-Butylbenzene	.2
1673	34551 C	120821	1,2,4-Trichlorobenzene	.2
1675	39702 C	87683	Hexachlorobutadiene	.2
1677	34696 C	91203	Naphthalene	.2
1679	77613 A	87616	1,2,3-Trichlorobenzene	.2
1681	77652 A	76131	1,1,2-Trichloro 1,2,2-tri-fluoroethane	.2
1683	77226 A	108678	1,3,5-Trimethylbenzene	.2
1698	81555 A	108861	Bromobenzene	.2
1934	00000 A	--	Set number SC 1380	

**SCHEDULE 1381**

Schedule Description: Organic compound profile, total recoverable, methylene chloride extraction, analyzed by GC/FID

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled & maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1240	99478 A	--	H <sub>2</sub> O GC/FID profile	



Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

## SCHEDULE 1383

Schedule Description: Organic compounds, acid and base/neutral, total recoverable, whole water, methylene chloride and GC/MS

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled &amp; maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1055	34452 A	59507	4-Chloro-3-methylphenol	30
1056	34586 A	95578	2-Chlorophenol	5
1057	34601 A	120832	2,4-Dichlorophenol	5
1058	34621 A	88062	2,4,6-Trichlorophenol	20
1059	34606 A	105679	2,4-Dimethylphenol	5
1060	34657 A	534521	4,6-Dinitro-2-methylphenol	30
1061	34616 A	51285	2,4-Dinitrophenol	20
1062	34591 A	88755	2-Nitrophenol	5
1063	34646 A	100027	4-Nitrophenol	30
1064	39032 A	87865	Pentachlorophenol	30
1065	34694 A	108952	Phenol	5
1066	34205 A	83329	Acenaphthene	5
1067	34200 A	208968	Acenaphthylene	5
1068	34220 A	120127	Anthracene	5
1069	39120 A	92875	Benzidine	40
1070	34526 A	56553	Benz[a]anthracene	10
1071	34230 A	205992	Benzo[b]fluoranthene	10
1072	34242 A	207089	Benzo[k]fluoranthene	10
1073	34247 A	50328	Benzo[a]pyrene	10
1074	34521 A	191242	Benzo[ghi]perylene	10
1075	34292 A	85687	Butylbenzylphthalate	5
1076	34278 A	111911	Bis-(2-Chloroethoxy)methane	5
1077	34273 A	111444	Bis-(2-Chlorethyl)ether	5
1078	34283 A	108601	Bis-(2-Chlorisopropyl)ether	5
1079	34636 A	101553	4-Bromophenylphenylether	5
1080	34581 A	91587	2-Chloronaphthalene	5
1081	34641 B	7005723	4-Chlorophenylphenylether	5
1082	34320 A	218019	Chrysene	10
1083	34556 A	53703	1,2,5,6-Dibenz[a,h]anthracene	10
1084	39110 A	84742	Di-n-butylphthalate	5
1085	34536 A	95501	1,2-Dichlorobenzene	5
1086	34566 A	541731	1,3-Dichlorobenzene	5
1087	34571 A	106467	1,4-Dichlorobenzene	5
1088	34631 A	91941	3,3-Dichlorobenzidine	20
1089	34336 A	84662	Diethylphthalate	5
1090	34341 A	131113	Dimethylphthalate	5
1091	34611 A	121142	2,4-Dinitrotoluene	5
1092	34626 A	606202	2,6-Dinitrotoluene	5
1093	34596 A	117840	Di-n-octylphthalate	10
1094	39100 A	117817	Bis-(2-Ethylhexyl)phthalate	5
1095	34381 A	86737	Fluorene	5
1096	34376 A	206440	Fluoranthene	5
1097	39700 A	118741	Hexachlorobenzene	5
1098	39702 A	87683	Hexachlorobutadiene	5
1099	34386 A	77474	Hexachlorocyclopentadiene	5
1100	34396 A	67721	Hexachloroethane	5
1101	34403 A	193395	Indeno[1,2,3-cd]pyrene	10
1102	34408 A	78591	Isophorone	5
1103	34696 A	91203	Naphthalene	5
1104	34447 A	98953	Nitrobenzene	5
1105	34438 A	62759	N-Nitrosodimethylamine	5
1106	34433 A	86306	N-Nitrosodiphenylamine	5
1107	34428 A	621647	N-Nitrosodi-n-propylamine	5
1108	34461 A	85018	Phenanthrene	5

## SCHEDULE 1383--Continued

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1109	34469 A	129000	Pyrene	5
1111	34551 A	120821	1,2,4-Trichlorobenzene	5
1697	82626 A	122667	1 2-Diphenylhydrazine	5
1814	99855 A	--	Sample volume 1383	1
1874	99813 A	--	Set number SC 1383	

Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

**SCHEDULE 1385**

Schedule Description: Organic compounds, acid and base/neutral, total recoverable, whole water, methylene chloride and GC/MS, with unknowns tentatively identified

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled & maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1055	34452 A	59507	4-Chloro-3-methylphenol	30
1056	34586 A	95578	2-Chlorophenol	5
1057	34601 A	120832	2,4-Dichlorophenol	5
1058	34621 A	88062	2,4,6-Trichlorophenol	20
1059	34606 A	105679	2,4-Dimethylphenol	5
1060	34657 A	534521	4,6-Dinitro-2-methylphenol	30
1061	34616 A	51285	2,4-Dinitrophenol	20
1062	34591 A	88755	2-Nitrophenol	5
1063	34646 A	100027	4-Nitrophenol	30
1064	39032 A	87865	Pentachlorophenol	30
1065	34694 A	108952	Phenol	5
1066	34205 A	83329	Acenaphthene	5
1067	34200 A	208968	Acenaphthylene	5
1068	34220 A	120127	Anthracene	5
1069	39120 A	92875	Benzidine	40
1070	34526 A	56553	Benz[a]anthracene	10
1071	34230 A	205992	Benzo[b]fluoranthene	10
1072	34242 A	207089	Benzo[k]fluoranthene	10
1073	34247 A	50328	Benzo[a]pyrene	10
1074	34521 A	191242	Benzo[ghi]perylene	10
1075	34292 A	85687	Butylbenzylphthalate	5
1076	34278 A	111911	Bis-(2-chloroethoxy)methane	5
1077	34273 A	111444	Bis-(2-chlorethyl)ether	5
1078	34283 A	108601	Bis-(2-chlorisopropyl)ether	5
1079	34636 A	101553	4-Bromophenyl-phenylether	5
1080	34581 A	91587	2-Chloronaphthalene	5
1081	34641 B	7005723	4-Chlorophenyl-phenylether	5
1082	34320 A	218019	Chrysene	10
1083	34556 A	53703	1,2,5,6-Dibenz[a,h]anthracene	10
1084	39110 A	84742	Di-n-butylphthalate	5
1085	34536 A	95501	1,2-Dichlorobenzene	5
1086	34566 A	541731	1,3-Dichlorobenzene	5
1087	34571 A	106467	1,4-Dichlorobenzene	5
1088	34631 A	91941	3,3-Dichlorobenzidine	20
1089	34336 A	84662	Diethylphthalate	5
1090	34341 A	131113	Dimethylphthalate	5
1091	34611 A	121142	2,4-Dinitrotoluene	5
1092	34626 A	606202	2,6-Dinitrotoluene	5
1093	34596 A	117840	Di-n-octylphthalate	10
1094	39100 A	117817	Bis-(2-ethylhexyl) phthalate	5
1095	34381 A	86737	Fluorene	5
1096	34376 A	206440	Fluoranthene	5
1097	39700 A	118741	Hexachlorobenzene	5
1098	39702 A	87683	Hexachlorobutadiene	5
1099	34386 A	77474	Hexachlorocyclopentadiene	5
1100	34396 A	67721	Hexachloroethane	5
1101	34403 A	193395	Indeno[1,2,3-cd]pyrene	10
1102	34408 A	78591	Isophorone	5
1103	34696 A	91203	Naphthalene	5
1104	34447 A	98953	Nitrobenzene	5
1105	34438 A	62759	N-Nitrosodimethylamine	5
1106	34433 A	86306	N-Nitrosodiphenylamine	5

**SCHEDULE 1385--Continued**

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1107	34428 A	621647	N-Nitrosodi-n-propylamine	5
1108	34461 A	85018	Phenanthrene	5
1109	34469 A	129000	Pyrene	5
1111	34551 A	120821	1,2,4-Trichlorobenzene	5
1697	82626 A	122667	1 2-Diphenylhydrazine	5
1815	99858 A	--	Sample volume, mL, SC 1385	1
1873	99814 A	--	Set number SC 1385	

**SCHEDULE 1389**

Schedule Description: Organonitrogen compounds, total recoverable, whole water, analyzed by GC/NPD

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled & maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0631	39057 A	7287196	Prometryne	0.1
0717	39630 A	1912249	Atrazine	.1
0718	39056 A	1610180	Prometone	.2
0719	39055 A	122349	Simazine	.1
0720	39054 A	1014706	Simetryn	.1
0844	39024 A	139402	Propazine	.1
0846	81757 A	21725462	Cyanazine	.2
0848	82184 A	834128	Ametryn	.1
1331	77825 C	15972608	Alachlor	.1
1332	39030 C	1582098	Trifluralin	.1
1333	82611 C	21087649	Metribuzin	.1
1334	82612 C	51218452	Metolachlor	.2
1462	30311 A	5902512	Terbacil	.2
1463	30234 A	314409	Bromacil	.2
1464	30245 A	5234684	Carboxin	.2
1465	30255 A	957517	Diphenamide	.1
1466	30264 A	51235042	Hexazinone	.2
1467	30324 A	1929777	Vernolate	.1
1468	30235 A	23184669	Butachlor	.1
1469	30254 A	1134232	Cycloate	.1
1470	30236 A	2008415	Butylate	.1
1471	30295 A	1918167	Propachlor	.1
1612	75981 A	6190654	De-ethylatrazine	.2
1613	75980 A	1007289	De-isopropylatrazine	.2
1805	99861 A	--	Sample volume, mL, SC 1389	1
1865	99815 A	--	Set number SC 1389	

Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

## SCHEDULE 1390

Schedule Description: VOC's total recoverable, using purge and trap and GC/MS

Sample Requirements: 3x40-mL volatile organic vials (GCV), unfiltered, filled to top and capped without bubbles, put into "poly" sleeves or wrapped in bubble wrap, chilled &amp; maintained @ 4 deg. C

Container Requirement: 3x40-mL VOA vials, with Teflon-lined caps, quality-control checked and obtained from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1011	34030 A	71432	Benzene	3
1012	32104 A	75252	Bromoform	3
1013	32102 A	56235	Carbon tetrachloride	3
1014	34301 A	108907	Chlorobenzene	3
1015	32105 A	124481	Dibromochloromethane	3
1016	34311 A	75003	Chloroethane	3
1017	34576 A	110758	2-Chloroethylvinylether	3
1018	32106 A	67663	Chloroform	3
1019	32101 A	75274	Bromodichloromethane	3
1020	34668 A	75718	Dichlorodifluoromethane	3
1021	34496 A	75343	1,1-Dichloroethane	3
1022	32103 A	107062	1,2-Dichloroethane	3
1023	34501 A	75354	1,1-Dichloroethene	3
1024	34546 A	156605	<i>trans</i> -1,2-Dichloroethene	3
1025	34541 A	78875	1,2-Dichloropropane	3
1027	34371 A	100414	Ethylbenzene	3
1028	34413 A	74839	Bromomethane	3
1029	34423 A	75092	Methylene chloride	3
1030	34516 A	79345	1,1,2,2-Tetrachloroethane	3
1031	34475 A	127184	Tetrachloroethene	3
1032	34010 A	108883	Toluene	3
1033	34506 A	71556	1,1,1-Trichloroethane	3
1034	34511 A	79005	1,1,2-Trichloroethane	3
1035	39180 A	79016	Trichloroethylene	3
1036	34488 A	75694	Trichlorofluoromethane	3
1037	39175 A	75014	Vinylchloride	1
1281	34418 A	74873	Chloromethane	3
1319	77651 C	106934	1,2-Dibromoethane	3
1320	34536 C	95501	1,2-Dichlorobenzene	3
1321	34566 C	541731	1,3-Dichlorobenzene	3
1322	34571 C	106467	1,4-Dichlorobenzene	3
1323	34704 A	10061015	<i>cis</i> -1,3-Dichloropropene	3
1324	34699 A	10061026	<i>trans</i> -1,3-Dichloropropene	3
1325	77128 A	100425	Styrene	3
1329	81551 A	1330207	Xylenes ( <i>o,m,p</i> )	3
1349	82625 A	96128	1,2-Dibromo-3-chloropropane	3
1485	81555 B	108861	Bromobenzene	3
1653	78032 B	1634044	Methyl tert-butylether	3
1655	77297 B	74975	Bromochloromethane	3
1657	77093 B	156592	<i>cis</i> -1,2-Dichloroethene	3
1660	77223 B	98828	Isopropylbenzene	3
1662	77224 B	103651	<i>n</i> -Propylbenzene	3
1664	77353 B	98066	<i>tert</i> -Butylbenzene	3
1666	77222 B	95636	1,2,4-Trimethylbenzene	3
1668	77350 B	135988	<i>sec</i> -Butylbenzene	3
1670	77356 B	99876	<i>p</i> -Isopropyltoluene	3
1672	77342 B	104518	<i>n</i> -Butylbenzene	3
1674	34551 B	120821	1,2,4-Trichlorobenzene	3
1676	39702 B	87683	Hexachlorobutadiene	3
1678	34696 B	91203	Naphthalene	3

## SCHEDULE 1390--Continued

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1680	77613 B	87616	1,2,3-Trichlorobenzene	3
1682	77652 B	76131	1,1,2-Trichloro 1,2,2-trifluoroethane	3
1684	77226 B	108678	1,3,5-Trimethylbenzene	3
1689	77168 A	563586	1,1-Dichloropropene	3
1690	30217 A	74953	Dibromomethane	3
1691	77170 A	594207	2,2-Dichloropropane	3
1692	77173 A	142289	1,3-Dichloropropane	3
1693	77562 A	630206	1,1,1,2-Tetrachloroethane	3
1694	77275 A	95498	2-Chlorotoluene	3
1695	77443 A	96184	1,2,3-Trichloropropane	3
1696	77277 A	106434	4-Chlorotoluene	3
1934	00000 A	--	Set number SC 1390	

Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

## SCHEDULE 1392

Schedule Description: VOC, total recoverable, using purge and trap and GC/MS with unknowns tentatively identified

Sample Requirements: 3x40-mL volatile organic vials (GCV), unfiltered, filled to top and capped without bubbles, put into "poly" sleeves or wrapped in bubble wrap, chilled & maintained @ 4 deg. C

Container Requirement: 3x40-mL VOA vials, with Teflon-lined caps, quality-control checked and obtained from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1009	30217 B	74953	Dibromomethane	0.2
1287	34030 B	71432	Benzene	.2
1288	32104 B	75252	Bromoform	.2
1289	32102 B	56235	Carbon tetrachloride	.2
1290	34301 B	108907	Chlorobenzene	.2
1291	32105 B	124481	Dibromochloromethane	.2
1292	34311 B	75003	Chloroethane	.2
1294	32106 B	67663	Chloroform	.2
1295	32101 B	75274	Bromodichloromethane	.2
1296	34668 B	75718	Dichlorodifluoromethane	.2
1297	34496 B	75343	1,1-Dichloroethane	.2
1298	32103 B	107062	1,2-Dichloroethane	.2
1299	34501 B	75354	1,1-Dichloroethene	.2
1300	34546 B	156605	trans-1,2-Dichloroethene	.2
1301	34541 B	78875	1,2-Dichloropropane	.2
1303	34371 B	100414	Ethylbenzene	.2
1304	34413 B	74839	Bromomethane	.2
1305	34423 B	75092	Methylene chloride	.2
1306	34516 B	79345	1,1,2,2-Tetrachloroethane	.2
1307	34475 B	127184	Tetrachloroethylene	.2
1308	34010 B	108883	Toluene	.2
1309	34506 B	71556	1,1,1-Trichloroethane	.2
1310	34511 B	79005	1,1,2-Trichloroethane	.2
1311	39180 B	79016	Trichloroethene	.2
1312	34488 B	75694	Trichlorofluoromethane	.2
1313	39175 B	75014	Vinylchloride	.2
1315	34566 B	541731	1,3-Dichlorobenzene	.2
1316	34571 B	106467	1,4-Dichlorobenzene	.2
1317	77651 B	106934	1,2-Dibromoethane	.2
1318	34418 B	74873	Chloromethane	.2
1320	34536 B	95501	1,2-Dichlorobenzene	.2
1326	34704 B	10061015	cis-1,3-Dichloropropene	.2
1327	34699 B	10061026	trans-1,3-Dichloropropene	.2
1328	77128 B	100425	Styrene	.2
1330	81551 B	1330207	Xylenes (o,m,p)	.2
1354	82625 B	96128	1,2-Dibromo-3-chloropropane	1
1478	77168 B	563586	1,1-Dichloropropene	.2
1479	77170 B	594207	2,2-Dichloropropane	.2
1480	77173 B	142289	1,3-Dichloropropane	.2
1481	77275 B	95498	2-Chlorotoluene	.2
1482	77277 B	106434	4-Chlorotoluene	.2
1483	77443 B	96184	1,2,3-Trichloropropane	.2
1484	77562 B	630206	1,1,1,2-Tetrachloroethane	.2
1652	78032 A	1634044	Methyltertbutylether	.2
1654	77297 A	74975	Bromochloromethane	.2
1656	77093 A	156592	cis-1,2-Dichloroethene	.2
1658	34576 C	110758	Chloroethylvinylether	1
1659	77223 A	98828	Isopropylbenzene	.2
1661	77224 A	103651	n-Propylbenzene	.2

## SCHEDULE 1392--continued

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1663	77353 A	98066	tert-Butylbenzene	0.2
1665	77222 A	95636	1,2,4-Trimethylbenzene	.2
1667	77350 A	135988	sec-Butylbenzene	.2
1669	77356 A	99876	p-Isopropyltoluene	.2
1671	77342 A	104518	n-Butylbenzene	.2
1673	34551 C	120821	1,2,4-Trichlorobenzene	.2
1675	39702 C	87683	Hexachlorobutadiene	.2
1677	34696 C	91203	Naphthalene	.2
1679	77613 A	87616	1,2,3-Trichlorobenzene	.2
1681	77652 A	76131	1,1,2-Trichloro 1,2,2-trifluoroethane	.5
1683	77226 A	108678	1,3,5-Trimethylbenzene	.2
1698	81555 A	108861	Bromobenzene	.2
1934	00000 A	--	Set number SC 1392	

## SCHEDULE 1393

Schedule Description: Acid organic compounds, total recoverable from whole water, using methylene chloride and GC/MS

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled & maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1055	34452 A	59507	Chloromethylphenol	30
1056	34586 A	95578	2-Chlorophenol	5
1057	34601 A	120832	2,4-Dichlorophenol	5
1058	34621 A	88062	2,4,6-Trichlorophenol	20
1059	34606 A	105679	2,4-Dimethylphenol	5
1060	34657 A	534521	4,6-Dinitro-2-methylphenol	30
1061	34616 A	51285	2,4-Dinitrophenol	20
1062	34591 A	88755	2-Nitrophenol	5
1063	34646 A	100027	4-Nitrophenol	30
1064	39032 A	87865	Pentachlorophenol	30
1065	34694 A	108952	Phenol	5

Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

**SCHEDULE 1394**

Schedule Description: Base/neutral organic compounds, total recoverable from whole water, using methylene chloride and GC/MS

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled &amp; maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1066	34205 A	83329	Acenaphthene	5
1067	34200 A	208968	Acenaphthylene	5
1068	34220 A	120127	Anthracene	5
1070	34526 A	56553	Benz[ <i>a</i> ]anthracene	10
1071	34230 A	205992	Benzo[ <i>b</i> ]fluoranthene	10
1072	34242 A	207089	Benzo[ <i>k</i> ]fluoranthene	10
1073	34247 A	50328	Benzo[ <i>a</i> ]pyrene	10
1074	34521 A	191242	Benzo[ <i>ghi</i> ] perylene	10
1075	34292 A	85687	Butylbenzylphthalate	5
1076	34278 A	111911	Bis-(2-chloroethoxy) methane	5
1077	34273 A	111444	Bis-(2-chlorethy) ether	5
1078	34283 A	108601	Bis-(2-chlorisopropyl) ether	5
1079	34636 A	101553	4-Bromophenyl phenylether	5
1080	34581 A	91587	2-Chloronaphthalene	5
1081	34641 B	7005723	4-Chlorophenyl phenylether	5
1082	34320 A	218019	Chrysene	10
1083	34556 A	53703	1,2,5,6-Dibenz[ <i>a,h</i> ] anthracene	10
1084	39110 A	84742	Di- <i>n</i> -butylphthalate	5
1085	34536 A	95501	1,2-Dichlorobenzene	5
1086	34566 A	541731	1,3-Dichlorobenzene	5
1087	34571 A	106467	1,4-Dichlorobenzene	5
1089	34336 A	84662	Diethylphthalate	5
1090	34341 A	131113	Dimethylphthalate	5
1091	34611 A	121142	2,4-Dinitrotoluene	5
1092	34626 A	606202	2,6-Dinitrotoluene	5
1093	34596 A	117840	Di- <i>n</i> -octylphthalate	10
1094	39100 A	117817	Bis-(2-ethylhexyl) phthalate	5
1095	34381 A	86737	Fluorene	5
1096	34376 A	206440	Fluoranthene	5
1097	39700 A	118741	Hexachlorobenzene	5
1098	39702 A	87683	Hexachlorobutadiene	5
1099	34386 A	77474	Hexachlorocyclopentadiene	5
1100	34396 A	67721	Hexachloroethane	5
1101	34403 A	193395	Indeno[1,2,3- <i>cd</i> ] pyrene	10
1102	34408 A	78591	Isophorone	5
1103	34696 A	91203	Naphthalene	5
1104	34447 A	98953	Nitrobenzene	5
1105	34438 A	62759	N-Nitrosodimethylamine	5
1106	34433 A	86306	N-Nitrosodiphenylamine	5
1107	34428 A	621647	N-Nitrosodi- <i>n</i> -propylamine	5
1108	34461 A	85018	Phenanthrene	5
1109	34469 A	129000	Pyrene	5
1111	34551 A	120821	1,2,4-Trichlorobenzene	5
1997	00000 A	--	Sample volume, mL	
1996	00000 A	--	Set number SC 1394	

**SCHEDULE 1398**

Schedule Description: Organochloride pesticides with PCB's and PCN's, total recoverable from whole water, analyzed by GC/ECD

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled &amp; maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0348	39034 A	72560	Perthane	0.1
0351	39350 B	57749	Chlordane, technical	.1
0360	39400 B	8001352	Toxaphene	1
0392	39516 B	12767792	PCB's, gross	.1
0393	39250 B	25104556	PCN's, gross	.1
0400	39480 B	72435	Methoxychlor	.01
0544	39755 B	2385855	Mirex	.01
0737	39388 B	959988	Endosulfan I	.001
0738	39330 B	309002	Aldrin	.001
0739	39360 B	72548	DDD, <i>p,p'</i> -	.001
0740	39365 B	72559	DDE, <i>p,p'</i> -	.001
0741	39370 B	50293	DDT, <i>p,p'</i> -	.001
0742	39380 B	60571	Dieldrin	.001
0743	39390 B	72208	Endrin	.001
0744	39410 B	76448	Heptachlor	.001
0745	39420 B	1024573	Haptachlor epoxide	.001
0746	39340 B	58899	Lindane	.001
1807	99864 A	--	Sample volume, mL, SC 1398	1
1869	99816 A	--	Set number SC 1398	

**SCHEDULE 1399**

Schedule Description: (Combination of schedules 1398 and 1319)

Organochlorine and organophosphate pesticides with PCB's and PCN's, total recoverable from whole water, analyzed by GC/ECD

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled &amp; maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0348	39034 A	72560	Perthane	0.1
0351	39350 B	57749	Chlordane, technical	.1
0360	39400 B	8001352	Toxaphene	1
0378	39570 B	333415	Diazinon	.01
0379	39398 B	563122	Ethion	.01
0380	39530 B	121755	Malathion	.01
0381	39600 B	298000	Methylparathion	.01
0383	39540 B	56382	Parathion	.01
0384	39786 B	786196	Trithion	.01
0392	39516 B	12767792	PCB's, gross	.1
0393	39250 B	25104556	PCN's, gross	.1
0400	39480 B	72435	Methoxychlor, <i>p,p'</i> -	.01
0544	39755 B	2385855	Mirex	.01
0737	39388 B	959988	Endosulfan I	.001
0738	39330 B	309002	Aldrin	.001
0739	39360 B	72548	DDD, <i>p,p'</i> -	.001
0740	39365 B	72559	DDE, <i>p,p'</i> -	.001
0741	39370 B	50293	DDT, <i>p,p'</i> -	.001
0742	39380 B	60571	Dieldrin	.001
0743	39390 B	72208	Endrin	.001
0744	39410 B	76448	Heptachlor	.001
0745	39420 B	1024573	Heptachlor epoxide	.001
0746	39340 B	58899	Lindane	.001

Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

**SCHEDULE 1401**

Schedule Description: Acrolein, acrylonitrile, and 2-chloroethylvinylether total recoverable, from whole water using purge and trap and GC/MS

Sample Requirements: 3x40-mL volatile organic vials (GCV), unfiltered, filled to top and capped without bubbles, put into "poly" sleeves or wrapped in bubble wrap, chilled & maintained @ 4 deg. C; pH adjusted between 4 to 5 with 1:4 HCl:water

Container Requirement: 3x40-mL VOA vials, with Teflon-lined caps, quality-control checked and obtained from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1599	99832 A	--	1,2-Dichloroethane- <i>d</i> <sub>4</sub>	--
1600	99833 A	2037265	Toluene- <i>d</i> <sub>8</sub>	--
1601	99834 A	460004	1-Bromo-4-fluorobenzene	--
1650	34210 A	107028	Acrolein	20
1651	34215 A	107131	Acrylonitrile	20
1934	00000 A	--	Set number SC 1401	

**SCHEDULE 1474**

Schedule Description: Organochlorine and organophosphate pesticides with PCB's and PCN's, total recoverable from whole water, analyzed by GC/ECD and GC/FPD

Sample Requirements: 1,650-2,000 mL, GCC, collected unfiltered, chilled & maintained @ 4 deg. C

Container Requirement: 2-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
0348	39034 A	72560	Perthane	0.1
0349	39388 C	959988	Endosulfan I	.01
0350	39330 C	309002	Aldrin	.01
0351	39350 B	57749	Chlordane, technical	.1
0352	39360 C	72548	DDD, <i>p,p'</i> -	.01
0353	39365 C	72559	DDE, <i>p,p'</i> -	.01
0354	39370 C	50293	DDT, <i>p,p'</i> -	.01
0355	39380 C	60571	Dieldrin	.01
0356	39390 C	72208	Endrin	.01
0357	39410 C	76448	Heptachlor	.01
0358	39420 C	1024573	Heptachlor epoxide	.01
0359	39340 C	58899	Lindane	.01
0360	39400 B	8001352	Toxaphene	1
0372	39730 B	94757	2,4-D	.01
0373	39740 B	93765	2,4,5-T	.01
0374	39760 B	93721	Silvex	.01
0378	39570 B	333415	Diazinon	.01
0379	39398 B	563122	Ethion	.01
0380	39530 B	121755	Malathion	.01
0381	39600 B	298000	Methylparathion	.01
0383	39540 B	56382	Parathion	.01
0384	39786 B	786196	Trithion	.01
0392	39516 B	12767792	Gross PCB	.1
0393	39250 B	25104556	Gross PCN	.1
0400	39480 B	72435	Methoxychlor, <i>p,p'</i> -	.01
0402	82183 A	120365	2,4-DP	.01
0544	39755 B	2385855	Mirex	.01
0592	39011 A	298044	Di-syston (disulfoton)	.01
0593	39023 A	298022	Phorate	.01
0753	38932 A	2921882	Chlorpyrifos	.01
0802	39040 A	78488	DEF	.01
1336	82614 C	944229	Fonofos	.01

**SCHEDULE 1608**

Schedule Description: Organochlorine pesticides with individual Aroclor PCB's (USEPA-608), total recoverable from whole water, analyzed by GC/ECD

Sample Requirements: 800-1,000 mL, GCC, unfiltered, chilled & maintained @ 4 deg. C

Container Requirement: 1-L amber, Boston-round pesticide glass bottle, cleaned and burned from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (ug/L)
1619	39337 D	319846	<i>alpha</i> -BHC ( <i>alpha</i> -HCH)	0.03
1620	39338 D	319857	<i>beta</i> -BHC ( <i>beta</i> -HCH)	.03
1621	39340 D	58899	<i>gamma</i> -BHC (Lindane)	.03
1622	34259 D	319868	<i>delta</i> -BHC ( <i>delta</i> -HCH)	.09
1623	39410 D	76448	Heptachlor	.03
1624	39330 D	309002	Aldrin	.04
1625	39420 D	1024573	Heptachlor epoxide	.8
1626	39065 D	5103742	Chlordane, <i>trans</i> -	.1
1627	34361 D	959988	Endosulfan I ( <i>alpha</i> )	.1
1628	39062 D	5103719	Chlordane, <i>cis</i> -	.1
1629	39380 D	60571	Dieldrin	.02
1630	39320 D	725594	DDE, <i>p,p'</i> -	.04
1631	39390 D	72208	Endrin	.06
1632	34356 D	33213659	Endosulfan II ( <i>beta</i> )	.04
1633	39310 D	72548	DDD, <i>p,p'</i> -	.1
1634	34366 D	7421934	Endrin aldehyde	.2
1635	34351 D	1031078	Endosulfan sulfate	.6
1636	39300 D	50293	DDT, <i>p,p'</i> -	.1
1637	39350 D	57749	Chlordane, technical	.1
1638	39400 D	8001352	Toxaphene	2
1639	39488 D	11104282	Aroclor 1221	1
1640	39492 D	11141165	Aroclor 1232	.1
1641	34671 D	12674112	Aroclor 1016	.1
1642	39496 D	53469219	Aroclor 1242	.1
1643	39500 D	12672296	Aroclor 1248	.1
1644	39504 D	11097691	Aroclor 1254	.1
1645	39508 D	11096825	Aroclor 1260	.1
1809	99866 A	--	Sample volume SC 1608	1
1843	99817 A	--	Set number SC 1608	--

Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

## SCHEDULE 2001

Schedule Description: Pesticides in filtered water extracted by NWQL on C-18 SPE cartridge and analyzed by GC/MS

Sample Requirements: 1 L of water filtered through 0.7-µm glass fiber depth filter, chilled at 4 deg. C (packed in ice)

Container Requirements: 1-L baked amber glass bottle, GCC, from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
4001	46342 D	15972608	Alachlor	0.009
4003	39632 D	1912249	Atrazine	.017
4005	82673 D	1861401	Benfluralin	.013
4006	04028 D	2008415	Butylate	.008
4009	38933 D	2921882	Chlorpyrifos	.005
4010	04041 D	21725462	Cyanazine	.013
4011	82682 D	1861321	DCPA(Dacthal)	.004
4012	34653 D	72559	DDE, <i>p,p'</i> -	.01
4013	39572 D	333415	Diazinon	.008
4015	39381 D	60571	Dieldrin	.008
4016	82660 D	579668	Diethylaniline	.006
4018	82677 D	298044	Disulfoton	.028
4019	82668 D	759944	EPTC(Eptam)	.005
4020	82663 D	55283686	Ethalfuralin	.013
4021	82672 D	13194484	Ethoprop	.012
4022	04095 D	944229	Fonofos	.008
4023	34253 D	319846	HCH, <i>alpha</i> -	.007
4025	39341 D	58899	HCH, <i>gamma</i> -(Lindane)	.011
4026	82666 D	330552	Linuron	.039
4027	39532 D	21755	Malathion	.01
4029	39415 D	51218452	Metolachlor	.009
4030	82630 D	21087649	Metribuzin	.012
4031	82671 D	2212671	Molinate	.007
4032	82684 D	15299997	Napropamide	.01
4033	39542 D	56382	Parathion, ethyl-	.022
4028	82667 D	298000	Parathion, methyl-	.035
4034	82669 D	1114712	Pebulate	.009
4035	82683 D	40487421	Pendimethalin	.018
4036	82687 D	52645531	Permethrin, <i>cis</i> -	.019
4037	82664 D	298022	Phorate	.011
4038	82676 D	23950585	Pronamide	.009
4039	04037 D	1610180	Prometon	.008
4040	04024 D	1918167	Propachlor	.015
4041	82679 D	709988	Propanil	.016
4042	82685 D	2312358	Propargite I & II	.006
4043	04035 D	122349	Simazine	.008
4044	82681 D	28249776	Thiobencarb	.008
4045	82670 D	34014181	Tebuthiuron	.015
4047	82675 D	13071799	Terbufos	.012
4049	82678 D	2303175	Triallate	.008
4050	82661 D	1582098	Trifluralin	.012
4002	04040 D	6190654	Atrazine, desethyl-	.007
4004	82686 D	86500	Azinphos, methyl-	.038
4007	82680 D	63252	Carbaryl (Sevin)	.046
4008	82674 D	1563662	Carbofuran	.013
4046	82665 D	5902512	Terbacil	.03
4053	49260 D	34256821	Acetochlor	.009
4014	91063 D	--	Diazinon, <i>d</i> <sub>10</sub> -surrogate %	
4024	91065 D	--	HCH, <i>alpha</i> , <i>d</i> <sub>6</sub> -surrogate %	
4048	91064 D	5915413	Terbutylazine surrogate %	
4051	99856 D	--	Sample volume in mL	
4052	99818 A	--	Set number SC 2001	

## SCHEDULE 2010

Schedule Description: Pesticides in filtered water field extracted on C-18 SPE cartridge and analyzed by GC/MS

Sample Requirements: 1 C-18 SPE cartridge through which approximately 1 L of water filtered through a 0.7-µm glass fiber depth filter was processed, annotate actual volume on cartridge form, chilled @ 4 deg. C (packed in ice)

Container Requirements: 40-mL amber glass septum cap vial

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
4201	46342 E	15972608	Alachlor	0.009
4203	39632 E	1912249	Atrazine	.017
4205	82673 E	1861401	Benfluralin	.013
4206	04028 E	2008415	Butylate	.008
4209	38933 E	2921882	Chlorpyrifos	.005
4210	04041 E	21725462	Cyanazine	.013
4211	82682 E	1861321	DCPA(Dacthal)	.004
4212	34653 E	72559	DDE, <i>p,p'</i> -	.01
4213	39572 E	333415	Diazinon	.008
4215	39381 E	60571	Dieldrin	.008
4216	82660 E	579668	Diethylaniline	.006
4218	82677 E	298044	Disulfoton	.028
4219	82668 E	759944	EPTC (Eptam)	.005
4220	82663 E	55283686	Ethalfuralin	.013
4221	82672 E	13194484	Ethoprop	.012
4222	04095 E	944229	Fonofos	.008
4223	34253 E	319846	HCH, <i>alpha</i> -	.007
4225	39341 E	58899	HCH, <i>gamma</i> -(Lindane)	.011
4226	82666 E	330552	Linuron	.039
4227	39532 E	121755	Malathion	.01
4229	39415 E	51218452	Metolachlor	.009
4230	82630 E	21087649	Metribuzin	.012
4231	82671 E	2212671	Molinate	.007
4232	82684 E	15299997	Napropamide	.01
4233	39542 E	56382	Parathion, ethyl-	.022
4228	82667 E	298000	Parathion, methyl-	.035
4234	82669 E	1114712	Pebulate	.009
4235	82683 E	40487421	Pendimethalin	.018
4236	82687 E	52645531	Permethrin, <i>cis</i> -	.019
4237	82664 E	298022	Phorate	.011
4238	04037 E	1910180	Prometon	.018
4239	82676 E	23950585	Pronamide	.003
4240	04024 E	1918167	Propachlor	.015
4241	82679 E	709988	Propanil	.016
4242	82685 E	2312358	Propargite I & II	.006
4243	04035 E	122349	Simazine	.008
4244	82670 E	28249776	Thiobencarb	.008
4245	82665 E	34014181	Tebuthiuron	.015
4248	82681 E	13071799	Terbufos	.012
4249	82678 E	2303175	Triallate	.008
4250	82661 E	1582098	Trifluralin	.012
4202	04040 E	6190654	Atrazine, desethyl-	.007
4204	82686 E	86500	Azinphos, methyl-	.038
4207	82680 E	63252	Carbaryl (Sevin)	.046
4208	82674 E	1563662	Carbofuran	.013
4246	82675 E	5902512	Terbacil	.03
4253	49260 E	34256821	Acetochlor	.009
4214	91063 E	--	Diazinon, <i>d</i> <sub>10</sub> -surrogate %	
4224	91065 E	--	HCH, <i>alpha</i> , <i>d</i> <sub>6</sub> -surrogate %	
4247	91064 E	5915413	Terbutylazine surrogate %	
4251	99857 E	--	Sample volume in mL	
4252	99819 A	--	Set number SC 2010	

Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

## SCHEDULE 2050

Schedule Description: Pesticides in filtered water extracted by NWQL  
on Carbopak B SPE cartridge and analyzed by HPLC/UV

Sample Requirements: 1 L of water filtered through 0.7- $\mu$ m  
glass fiber depth filter, chilled at 4 deg. C (packed in ice)

Container Requirements: 1-L baked amber glass bottle, GCC, from  
NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL ( $\mu$ g/L)
5409	39742 B	93765	2,4,5-T	0.05
5408	39732 B	94757	2,4-D	.05
5407	38746 A	94826	2,4-DB	.05
5410	49315 A	50594666	Acifluorfen (Blazer)	.05
5411	49312 A	116063	Aldicarb	.05
5413	49313 A	1646884	Aldicarb sulfone	.05
5412	49314 A	1646873	Aldicarb sulfoxide	.05
5414	38711 A	25057890	Bentazon	.05
5415	04029 A	314409	Bromacil	.05
5416	49311 A	1689845	Bromoxynil	.05
5417	49310 A	63252	Carbaryl(Sevin)	.05
5418	49309 A	1563662	Carbofuran	.05
5449	49308 A	16655826	Carbofuran, 3-hydroxy-	.05
5419	49307 A	133904	Chloramben (Amiben)	.05
5421	49306 A	1897456	Chlorothalonil	.05
5423	49305 A	57754855	Clopyralid	.05
5447	49304 A	887547	Dacthal, mono-acid-	.05
5426	38442 A	1918009	Dicamba	.05
5404	49303 A	1194656	Dichlobenil	.05
5401	49302 A	120365	Dichlorprop (2,4-DP)	.05
5400	49301 A	88857	Dinoseb (DNBP)	.05
5427	49300 A	330561	Diuron	.05
5402	49299 A	534521	DNOC	.05
5429	49298 A	66230044	Esfenvalerate (Asana XL)	.05
5405	49297 A	101428	Fenuron	.05
5430	38811 A	2164172	Fluometuron	.05
5432	38478 A	330552	Linuron	.05
5433	38482 A	94746	MCPA	.05
5434	38487 A	94815	MCPB	.05
5436	38501 A	2032657	Methiocarb	.05
5437	49296 A	16752775	Methomyl	.05
5438	49295 A	90153	1-Naphthol	.05
5403	49294 A	555373	Neburon	.05
5439	49293 A	27314132	Norflurazon	.05
5440	49292 A	19044883	Oryzalin (Surflan)	.05
5441	38866 A	23135220	Oxamyl	.05
5442	49291 A	1918021	Picloram	.05
5443	49236 A	122429	Propham (IPC)	.05
5450	38538 A	114261	Propoxur	.05
5444	39762 B	93721	Silvex (2,4,5-TP)	.05
5446	49235 A	55335063	Triclopyr	.05
5452	99835 A	--	BDMC surrogate %	
5454	99848 A	--	Sample volume, mL	
5451	99820	--	Set number SC 2050	

## SCHEDULE 2051

Schedule Description: Pesticides in filtered water extracted in field on  
Carbopak B SPE cartridge and analyzed by HPLC/UV

Sample Requirements: 1 Carbopak B SPE cartridge through which  
approximately 1 L of water filtered through a 0.7- $\mu$ m glass  
fiber depth filter was processed, annotate actual volume on  
cartridge form, chilled @ 4 deg. C (packed in ice)

Container Requirements: Original plastic container in which  
cartridge was shipped

Lab. code	Parameter code	CAS number	Compound name	MRL ( $\mu$ g/L)
5609	39742 C	93765	2,4,5-T	0.05
5608	39732 C	94757	2,4-D	.05
5607	38746 B	94826	2,4-DB	.05
5610	49315 B	50594666	Acifluorfen (Blazer)	.05
5611	49312 B	116063	Aldicarb	.05
5613	49313 B	1646884	Aldicarb sulfone	.05
5612	49314 B	1646873	Aldicarb sulfoxide	.05
5614	38711 B	25057890	Bentazon	.05
5615	04029 B	314409	Bromacil	.05
5616	49311 B	1689845	Bromoxynil	.05
5617	49310 B	63252	Carbaryl(Sevin)	.05
5618	49309 B	1563662	Carbofuran	.05
5649	49308 B	16655826	Carbofuran, 3-hydroxy-	.05
5619	49307 B	133904	Chloramben(Amiben)	.05
5621	49306 B	1897456	Chlorothalonil	.05
5623	49305 B	57756855	Clopyralid	.05
5647	49304 B	887547	Dacthal, mono-acid-	.05
5626	38442 B	1918009	Dicamba	.05
5604	49303 B	1194656	Dichlobenil	.05
5601	49302 B	120365	Dichlorprop (2,4-DP)	.05
5600	49301 B	88857	Dinoseb (DNBP)	.05
5627	49300 B	330561	Diuron	.05
5602	49299 B	534521	DNOC	.05
5629	49298 B	66230044	Esfenvalerate (Asana XL)	.05
5605	49297 B	101428	Fenuron	.05
5630	38811 B	2164172	Fluometuron	.05
5632	38478 B	330552	Linuron	.05
5633	38482 B	94746	MCPA	.05
5634	38487 B	94815	MCPB	.05
5636	38501 B	2032657	Methiocarb	.05
5637	49296 B	16752775	Methomyl	.05
5638	49295 B	90153	1-Naphthol	.05
5603	49294 B	555373	Neburon	.05
5639	49293 B	27314132	Norflurazon	.05
5640	49292 B	19044883	Oryzalin (Surflan)	.05
5641	38866 B	23135220	Oxamyl	.05
5642	49291 B	1918021	Picloram	.05
5643	49236 B	122429	Propham(IPC)	.05
5650	38538 B	114261	Propoxur	.05
5644	39762 C	93721	Silvex (2,4,5-TP)	.05
5646	49235 B	55335063	Triclopyr	.05
5652	99835 B	--	BDMC surrogate %	
5654	99847 B	--	Sample volume, mL	
5651	99821	--	Set number SC 2051	



Table 13.--Organic determinations in water, listed by laboratory schedule--Continued

**SCHEDULE 2075**

Schedule Description: Gross organics in surface water for NAWQA  
 Sample Requirements: 100 mL, LC0113 and 1 filter, LC0305, chilled @ 4 deg. C (packed in ice)  
 Container Requirements: 125-mL amber glass bottle (LC0113), from NWQL. Petri dish (LC0305)

Lab. code	Parameter code	CAS number	Compound name	MRL (mg/L)
113	00681 A		Carbon, organic, FIL (DOC)	0.1
305	00689 A		Carbon, organic, suspended (SOC)	.1

**SCHEDULE 2085**

Schedule Description: Gross organics in ground water for NAWQA  
 Sample Requirements: 100 mL, LC0113, chilled @ 4 deg. C (packed in ice)  
 Container Requirements: 125-mL amber glass bottle (LC0113), from NWQL

Lab. code	Parameter code	CAS number	Compound name	MRL (mg/L)
113	00681 A		Carbon, organic, FIL (DOC)	0.1

**SCHEDULE 2090**

Schedule Description: Volatile organic compounds at 0.2 µg/L by purge and trap GC/MS plus library search of nontarget constituents  
 Sample Requirements: 3x40-mL vials completely filled to exclude air bubbles, acidified to pH <2 with 2 drops of 1:1 HCl per vial, and chilled at 4 deg. C (packed in ice). If free chlorine is present, add 25 mg of ascorbic acid to each vial in addition to the HCl.  
 Container Requirements: 40-mL amber glass septum cap vial (VOC)

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
5819	34030 C	71432	Benzene	0.2
5857	77613 C	87616	Benzene, 1,2,3-trichloro-	.2
5854	34551 D	120821	Benzene, 1,2,4-trichloro-	.2
5846	77222 C	95636	Benzene, 1,2,4-trimethyl-	.2
5852	34536 D	95501	Benzene, 1,2-dichloro-	.2
5860	77226 C	108678	Benzene, 1,3,5-trimethyl-	.2
5849	34566 D	541731	Benzene, 1,3-dichloro-	.2
5850	34571 D	106467	Benzene, 1,4-dichloro-	.2
5844	77275 C	95498	Benzene, 1-chloro-2-methyl-	.2
5858	77277 C	106434	Benzene, 1-chloro-4-methyl-	.2
5839	77223 C	98828	Benzene, isopropyl-	.2
5841	81555 C	108861	Benzene, bromo-	.2
5833	34301 C	108907	Benzene, chloro-	.2
5836	81551 C	1330207	Benzene, dimethyl-(Xylene)	.2
5835	34371 C	100414	Benzene, ethyl-	.2
5848	77356 B	99876	Benzene, 1-methyl-4-isopropyl-	.2
5826	34010 C	108883	Benzene, methyl-(Toluene)	.2
5851	77342 C	104518	Benzene, <i>n</i> -butyl-	.2
5843	77224 C	103651	Benzene, <i>n</i> -propyl-	.2
5847	77350 C	135988	Benzene, <i>sec</i> -butyl-	.2
5845	77353 C	98066	Benzene, <i>tert</i> -butyl-	.2
5834	77562 C	630206	Ethane, 1,1,1,2-tetrachloro-	.2
5816	34506 C	71556	Ethane, 1,1,1-trichloro-	.2
5840	34516 C	79345	Ethane, 1,1,2,2-tetrachloro-	.2

**SCHEDULE 2090--Continued**

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
5828	34511 C	79005	Ethane, 1,1,2-trichloro-	0.2
5811	34496 C	75343	Ethane, 1,1-dichloro	.2
5832	77651 E	106934	Ethane, 1,2-dibromo-(EDB)	.2
5820	32103 C	107062	Ethane, 1,2-dichloro-	.2
5805	34311 C	75003	Ethane, chloro-	.2
5859	77652 C	76131	Ethane, trichlorotrifluoro-	.2
5807	34501 C	75354	Ethylene, 1,1-dichloro	.2
5803	39175 C	75014	Ethylene, chloro- (vinyl chloride)	.2
5814	77093 C	156592	Ethylene, <i>cis</i> -1,2-dichloro-	.2
5829	34475 C	127184	Ethylene, tetrachloro-	.2
5809	34546 C	156605	Ethylene, <i>trans</i> -1,2-dichloro-	.2
5821	39180 C	79016	Ethylene, trichloro-	.2
5855	39702 D	87683	Hexachlorobutadiene	.2
5804	34413 C	74839	Methane, bromo	.2
5813	377297 C	74975	Methane, bromochloro-	.2
5802	34418 C	74873	Methane, chloro	.2
5824	30217 C	74953	Methane, dibromo-	.2
5831	32105 C	124481	Methane, dibromochloro-	.2
5808	34423 C	75092	Methane, dichloro-	.2
5823	32101 C	75274	Methane, dichlorobromo-	.2
5801	34668 C	75718	Methane, dichlorodifluoro-	.2
5817	32102 C	56235	Methane, tetrachloro-	.2
5838	32104 C	75252	Methane, tribromo- (bromofom)	.2
5815	32106 C	67663	Methane, trichloro- (chlorofom)	.2
5806	34488 C	75694	Methane, trichlorofluoro-	.2
5810	78032 C	1634044	Propene, 2-methoxy-2-methyl	.2
5856	34696 D	91203	Naphthalene	.2
5842	77443 C	96184	Propane, 1,2,3-trichloro-	.2
5853	82625 C	96128	Propane, 1,2-dibromo-3- chloro-(DBCP)	1
5822	34541 C	78875	Propane, 1,2-dichloro-	.2
5830	77173 C	142289	Propane, 1,3-dichloro-	.2
5812	77170 C	594207	Propane, 2,2-dichloro-	.2
5818	77168 C	563586	Propene, 1,1-dichloro-	.2
5825	34704 C	10061015	Propene, <i>cis</i> -1,3-dichloro-	.2
5827	34699 C	10061026	Propene, <i>trans</i> -1,3-dichloro-	.2
5837	77128 C	100425	Styrene	.2
5861	99827	--	Set number SC 2090	

Table 13.--Organic determinations in water, listed by laboratory schedule

**SCHEDULE 2091**

Schedule Description: Volatile organic compounds at 0.2 µg/L by  
purge and trap GC/MS

Sample Requirements: 3x40-mL vials completely filled to exclude air  
bubbles, acidified to pH <2 with 2 drops of 1:1 HCl per vial, and  
chilled at 4 deg. C (packed in ice). If free chlorine is present,  
add 25 mg of ascorbic acid to each vial in addition to the HCl.

Container Requirements: 40-mL amber glass septum cap vial (VOC)

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
5819	34030 C	71432	Benzene	0.2
5857	77613 C	87616	Benzene, 1,2,3-trichloro-	.2
5854	34551 D	120821	Benzene, 1,2,4-trichloro-	.2
5846	77222 C	95636	Benzene, 1,2,4-trimethyl-	.2
5852	34536 D	95501	Benzene, 1,2-dichloro-	.2
5860	77226 C	108678	Benzene, 1,3,5-trimethyl-	.2
5849	34566 D	541731	Benzene, 1,3-dichloro-	.2
5850	34571 D	106467	Benzene, 1,4-dichloro-	.2
5844	77275 C	95498	Benzene, 1-chloro-2-methyl-	.2
5858	77277 C	106434	Benzene, 1-chloro-4-methyl-	.2
5839	77223 C	98828	Benzene, isopropyl-	.2
5841	81555 C	108861	Benzene, bromo-	.2
5833	34301 C	108907	Benzene, chloro-	.2
5836	81551 C	1330207	Benzene, dimethyl-(xylene)	.2
5835	34371 C	100414	Benzene, ethyl-	.2
5848	77356 B	99876	Benzene, 1-methyl-4-isopropyl-	.2
5826	34010 C	108883	Benzene, methyl-(toluene)	.2
5851	77342 C	104518	Benzene, <i>n</i> -butyl-	.2
5843	77224 C	103651	Benzene, <i>n</i> -propyl-	.2
5847	77350 C	135988	Benzene, <i>sec</i> -butyl-	.2
5845	77353 C	98066	Benzene, <i>tert</i> -butyl-	.2
5834	77562 C	630206	Ethane, 1,1,1,2-tetrachloro-	.2
5816	34506 C	71556	Ethane, 1,1,1-trichloro-	.2
5840	34516 C	79345	Ethane, 1,1,2,2-tetrachloro-	.2
5828	34511 C	79005	Ethane, 1,1,2-trichloro-	.2
5811	34496 C	75343	Ethane, 1,1-dichloro	.2
5832	77651 E	106934	Ethane, 1,2-dibromo-(EDB)	.2
5820	32103 C	107062	Ethane, 1,2-dichloro-	.2
5805	34311 C	75003	Ethane, chloro-	.2
5859	77652 C	76131	Ethane, trichlorotrifluoro-	.2
5807	34501 C	75354	Ethylene, 1,1-dichloro	.2
5803	39175 C	75014	Ethylene, chloro- (vinyl chloride)	.2
5814	77093 C	156592	Ethylene, <i>cis</i> -1,2-dichloro-	.2
5829	34475 C	127184	Ethylene, tetrachloro-	.2
5809	34546 C	156605	Ethylene, <i>trans</i> -1,2-dichloro-	.2
5821	39180 C	79016	Ethylene, trichloro-	.2
5855	39702 D	87683	Hexachlorobutadiene	.2
5804	34413 C	74839	Methane, bromo	.2
5813	377297 C	74975	Methane, bromochloro-	.2
5802	34418 C	74873	Methane, chloro	.2
5824	30217 C	74953	Methane, dibromo-	.2
5831	32105 C	124481	Methane, dibromochloro-	.2
5808	34423 C	75092	Methane, dichloro-	.2
5823	32101 C	75274	Methane, dichlorobromo-	.2
5801	34668 C	75718	Methane, dichlorodifluoro-	.2
5817	32102 C	56235	Methane, tetrachloro-	.2
5838	32104 C	75252	Methane, tribromo- (bromoform)	.2
5815	32106 C	67663	Methane, trichloro- (chloroform)	.2
5806	34488 C	75694	Methane, trichlorofluoro-	.2

**SCHEDULE 2091--Continued**

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
5810	78032 C	1634044	Propene, 2-methoxy-2-methyl	0.2
5856	34696 D	91203	Naphthalene	.2
5842	77443 C	96184	Propane, 1,2,3-trichloro-	.2
5853	82625 C	96128	Propane, 1,2-dibromo-3- chloro-(DBCP)	1
5822	34541 C	78875	Propane, 1,2-dichloro-	.2
5830	77173 C	142289	Propane, 1,3-dichloro-	.2
5812	77170 C	594207	Propane, 2,2-dichloro-	.2
5818	77168 C	563586	Propene, 1,1-dichloro-	.2
5825	34704 C	10061015	Propene, <i>cis</i> -1,3-dichloro-	.2
5827	34699 C	10061026	Propene, <i>trans</i> -1,3-dichloro-	.2
5837	77128 C	100425	Styrene	.2
5862	00000 A	--	Set number SC 2091	

Table 13.--Organic determinations in water, listed by laboratory schedule

## SCHEDULE 2092

Schedule Description: Volatile organic compounds at 0.2 µg/L by  
purge and trap GC/MS

Sample Requirements: 3x40-mL vials completely filled to exclude air  
bubbles, acidified to pH <2 with 2 drops of 1:1 HCl per vial, and  
chilled at 4 deg. C (packed in ice). If free chlorine is present,  
add 25 mg of ascorbic acid to each vial in addition to the HCl.

Container Requirements: 40-mL amber glass septum cap vial (VOC)

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
5819	34030 C	71432	Benzene	0.2
5857	77613 C	87616	Benzene, 1,2,3-trichloro-	.2
5854	34551 D	120821	Benzene, 1,2,4-trichloro-	.2
5846	77222 C	95636	Benzene, 1,2,4-trimethyl-	.2
5852	34536 D	95501	Benzene, 1,2-dichloro-	.2
5860	77226 C	108678	Benzene, 1,3,5-trimethyl-	.2
5849	34566 D	541731	Benzene, 1,3-dichloro-	.2
5850	34571 D	106467	Benzene, 1,4-dichloro-	.2
5844	77275 C	95498	Benzene, 1-chloro-2-methyl-	.2
5858	77277 C	106434	Benzene, 1-chloro-4-methyl-	.2
5839	77223 C	98828	Benzene, isopropyl-	.2
5841	81555 C	108861	Benzene, bromo-	.2
5833	34301 C	108907	Benzene, chloro-	.2
5836	81551 C	1330207	Benzene, dimethyl-(xylene)	.2
5835	34371 C	100414	Benzene, ethyl-	.2
5848	77356 B	99876	Benzene, 1-methyl-4-isopropyl-	.2
5826	34010 C	108883	Benzene, methyl-(Toluene)	.2
5851	77342 C	104518	Benzene, <i>n</i> -butyl-	.2
5843	77224 C	103651	Benzene, <i>n</i> -propyl-	.2
5847	77350 C	135988	Benzene, <i>sec</i> -butyl-	.2
5845	77353 C	98066	Benzene, <i>tert</i> -butyl-	.2
5834	77562 C	630206	Ethane, 1,1,1,2-tetrachloro-	.2
5816	34506 C	71556	Ethane, 1,1,1-trichloro-	.2
5840	34516 C	79345	Ethane, 1,1,2,2-tetrachloro-	.2
5828	34511 C	79005	Ethane, 1,1,2-trichloro-	.2
5811	34496 C	75343	Ethane, 1,1-dichloro	.2
5820	32103 C	107062	Ethane, 1,2-dichloro-	.2
5805	34311 C	75003	Ethane, chloro-	.2
5859	77652 C	76131	Ethane, trichlorotrifluoro-	.2
5807	34501 C	75354	Ethylene, 1,1-dichloro	.2
5803	39175 C	75014	Ethylene, chloro- (vinyl chloride)	.2
5814	77093 C	156592	Ethylene, <i>cis</i> -1,2-dichloro-	.2
5829	34475 C	127184	Ethylene, tetrachloro-	.2
5809	34546 C	156605	Ethylene, <i>trans</i> -1,2-dichloro-	.2
5821	39180 C	79016	Ethylene, trichloro-	.2
5855	39702 D	87683	Hexachlorobutadiene	.2
5804	34413 C	74839	Methane, bromo	.2
5813	377297 C	74975	Methane, bromochloro-	.2
5802	34418 C	74873	Methane, chloro	.2
5824	30217 C	74953	Methane, dibromo-	.2
5831	32105 C	124481	Methane, dibromochloro-	.2
5808	34423 C	75092	Methane, dichloro-	.2
5823	32101 C	75274	Methane, dichlorobromo-	.2
5801	34668 C	75718	Methane, dichlorodifluoro-	.2
5817	32102 C	56235	Methane, tetrachloro-	.2
5838	32104 C	75252	Methane, tribromo- (bromoform)	.2
5815	32106 C	67663	Methane, trichloro- (chloroform)	.2
5806	34488 C	75694	Methane, trichlorofluoro-	.2
5810	78032 C	1634044	Propene, 2-methoxy-2-methyl	.2

## SCHEDULE 2092--Continued

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/L)
5856	34696 D	91203	Naphthalene	0.2
5842	77443 C	96184	Propane, 1,2,3-trichloro-	.2
5822	34541 C	78875	Propane, 1,2-dichloro-	.2
5830	77173 C	142289	Propane, 1,3-dichloro-	.2
5812	77170 C	594207	Propane, 2,2-dichloro-	.2
5818	77168 C	563586	Propene, 1,1-dichloro-	.2
5825	34704 C	10061015	Propene, <i>cis</i> -1,3-dichloro-	.2
5827	34699 C	10061026	Propene, <i>trans</i> -1,3-dichloro-	.2
5837	77128 C	100425	Styrene	.2
5861	00000 A	--	Set number SC 2092	

Table 14.--Organic determinations in tissue listed by laboratory schedule

## SCHEDULE 2101

Schedule Description: Organochlorine compounds in biological tissue,  
analyzed by GC/ECD

Sample Requirements: 500 g of frozen whole-body biological  
sample wrapped in aluminum foil and shipped @ 4 deg. C  
(packed in ice)

Container Requirements: Aluminum foil

Lab. code	Parameter code	CAS number	Compound name	MRL (µg/kg)
7001	49380 A	5103719	Chlordane, <i>cis</i> -	5
7002	49379 A	5103732	Chlordane, <i>trans</i> -	5
7003	49378 A	1861321	Dacthal (DCPA)	5
7004	49346 A	789026	DDT, <i>o,p'</i> -	5
7005	49375 A	50293	DDT, <i>p,p'</i> -	5
7006	49375 A	72548	DDD, <i>p,p'</i> -	5
7007	49374 A	53190	DDD, <i>o,p'</i> -	5
7008	49373 A	3424826	DDE, <i>o,p'</i> -	5
7009	49372 A	72559	DDE, <i>p,p'</i> -	5
7010	49371 A	60571	Dieldrin	5
7011	49370 A	72208	Endrin	5
7012	49369 A	76448	Heptachlor	5
7013	49368 A	1024573	Heptachlor epoxide	5
7014	49367 A	118741	Hexachlorobenzene	5
7016	49366 A	319846	<i>alpha</i> -HCH	5
7017	49365 A	319857	<i>beta</i> -HCH	5
7018	49364 A	319868	<i>delta</i> -HCH	5
7019	49363 A	58899	<i>gamma</i> -HCH	5
7020	49362 A	30667993	Methoxychlor, <i>o,p'</i> -	5
7021	49361 A	72435	Methoxychlor, <i>p,p'</i> -	5
7022	49360 A	2385855	Mirex	5
7023	49359 A	5103731	Nonachlor, <i>cis</i> -	5
7024	49358 A	39765805	Nonachlor, <i>trans</i> -	5
7025	49357 A	27304138	Oxychlordane	5
7027	49356 A	1825214	Pentachloroanisole	5
7028	49355 A	8001352	Toxaphene	200
7029	49354 A	--	PCB (total)	50
7030	49353 A	309002	Aldrin	5
7031	49289 A	--	Lipids % in tissue	--
7034	49261 A	--	<i>alpha-d<sub>6</sub></i> HCH	--
7035	49264 A	34883415	3,5-Dichlorobiphenyl	--
7036	99852 A	--	Sample weight, SC 2101	--
7037	99849 A	--	Analytical ref. number	--
7033	99822 A	--	Set number SC 2101	--

Table 15.--Radiochemical determinations, listed by laboratory code and schedule

LC <sup>1</sup>	Parameter code	Name, phase, and method	Reported as	Mass/volume needed	Sample designation <sup>2</sup>	MRL	Units	2SPE LC	2SPE PC	2SPE MC
<b>Gamma scans (2)</b>										
212	99451 A	Gamma scan, BTM, dry wt, gamma spectroscopy	--	100 g	CUR	--	pCi/g	875	--	--
443	99452 A	Gamma scan, FIL, gamma spectrometry	--	7 L	FAR	--	pCi/L	877	--	--
1861	--	Gamma scan, SUS, gamma spectrometry	--		Filter	--	pCi/g	1862	--	--
<b>Gross alpha and gross beta</b>										
<b>Schedule 1131 - Gross alpha and gross beta, bottom material</b>				1 g	CUR					
1518	-- A	Gross alpha, BTM, residue procedure	Nat. U			6	µg/g	1519	75965	A
1520	4125 A	Gross alpha, BTM, residue procedure	Th-230			6	pCi/g	1521	75955	A
1522	-- A	Gross beta, BTM, residue procedure	Cs-137			3	pCi/g	1523	--	
1524	4102 A	Gross beta, BTM, residue procedure	Sr-90/ Y-90			3	pCi/g	1525	75966	A
<b>Schedule 456 - Gross alpha and gross beta, FIL, field filtered</b>				2 L	FAR					
800	80030 B	Gross alpha, FIL, residue procedure	Nat. U			3	µg/L	853	75986	B
1397	4126 B	Gross alpha, FIL, residue procedure	Th-230			3	pCi/L	1398	75987	B
793	80050 B	Gross beta, FIL, residue procedure	Sr-90/ Y-90			3	pCi/L	855	75988	B
798	3515 B	Gross beta, FIL, residue procedure	Cs-137			3	pCi/L	854	75989	B
<b>Schedule 458 - Gross alpha and gross beta, field filtered to be used if solids are higher than 250 mg/L</b>				2 L	FAR					
1445	4126 D	Gross alpha, FIL, HS, co-precipitation	Th-230			3	pCi/L	1446	75987	D
1358	80030 D	Gross alpha, FIL, HS, co-precipitation	Nat. U			3	µg/L	1373	75986	D
1360	3515 D	Gross beta, FIL, HS, co-precipitation	Cs-137			3	pCi/L	1375	75989	D
1359	80050 D	Gross beta, FIL, HS, co-precipitation	Sr-90/ Y-90			3	pCi/L	1374	75988	D
<b>Schedule 165 - Gross alpha and gross beta, suspended</b>				1 g	SUR					
1852	--	Gross alpha, SUS, residue procedure	Nat. U			6	µg/g	1853	--	--
1854	--	Gross alpha, SUS, residue procedure	Th-230			6	pCi/g	1855	--	--
1856	--	Gross beta, SUS, residue procedure	Cs-137			3	pCi/g	1857	--	--
1858	--	Gross beta, SUS, residue procedure	Sr-89/90			3	pCi/g	1859	--	--
<b>Schedule 948 - Dating</b>				100 g	CUR					
1182	17507 B	Lead-210, BTM, gamma counting	Pb-210			.1	pCi/g	876	75868	B
2004	-- --	Cs-137, BTM, gamma counting	CS-137			.02	pCi/g	2005	--	--
2006	-- --	Ra-226, BTM, gamma counting	RA-22			.04	pCi/g	2007	--	--
<b>Americium</b>										
1961	-- --	Americium-241, FIL	Am-241	2 L	FAR	.1	pCi/L	1967	--	--
1962	-- --	Americium-241, SUS	Am-241	2 L	SUR	.1	pCi/g	1968	--	--
<b>Lead</b>										
1549	17507 C	Lead-210, BTM, gamma counting	Pb-210	100 g	CUR	2	pCi/g	1550	75968	C
1503	17503 B	Lead-210, FIL, beta counting	Pb-210	1 L	FAR	1.5	pCi/L	1504	75995	B
1547	75946 A	Lead-210, SUS, beta counting	Pb-210	1 g	SUR	.15	pCi/g	1548	75949	A

**Table 15.--Radiochemical determinations, listed by laboratory code and schedule--Continued**

LC <sup>1</sup>	Parameter code	Name, phase, and method	Reported as	Mass/ volume needed	Sample designation <sup>2</sup>	MRL	Units	2SPE LC	2SPE PC	2SPE MC
<b>Plutonium</b>										
1963	--	--	Plutonium-238, FIL	Pu-238	2 L	FAR	0.1 pCi/L	1969	--	--
1964	--	--	Plutonium-238, SUS	Pu-238	2 L	SUR	.1 pCi/g	1970	--	--
1965	--	--	Plutonium-239/240, FIL	Pu-239/240	2 L	FAR	.1 pCi/L	1971	--	--
1966	--	--	Plutonium-239/240, SUS	Pu-239/240	2 L	SUR	.1 pCi/g	1972	--	--
<b>Polonium</b>										
1545	19507	A	Polonium-210, BTM, alpha spectrometry	Po-210	10 g	CUR	.1 pCi/g	1546	4105	A
1505	19503	B	Polonium-210, FIL, alpha spectrometry	Po-210	1 L	FAR	1 pCi/L	1506	75998	A
1543	75938	A	Polonium-210, SUS, alpha spectrometry	Po-210	1 g	SUR	.1 pCi/g	1544	75945	A
<b>Radium</b>										
1531	75944	A	Radium-226, SUS, radon emanation	Ra-226	1 g	SUR	.1 pCi/g	1532	75943	A
794	9511	B	Radium-226, FIL, radon emanation	Ra-226	1 L	FAR	.02 pCi/L	861	76001	A
799	9510	B	Radium-226, FIL, precipitation, planchet counting	Ra-226	1 L	FAR	.4 pCi/L	864	76001	B
850	81366	A	Radium-228, FIL, gamma spectrometry	Ra-228	7 L	FAR	1 pCi/L	866	76000	A
1364	81366	C	Radium-228, FIL, radiochemical separation and beta counting	Ra-228	2 L	FAR	1 pCi/L	1379	76000	C
1533	75937	A	Radium-228, SUS, beta counting	Ra-228	1 g	SUR	.1 pCi/g	1534	75948	A
<b>Schedule 1136 - Radium, bottom material</b>				100 g	CUR					
1528	9507	B	Radium-226, BTM, gamma counting	Ra-226			.4 pCi/g	1529	4107	B
1526	75977	A	Radium-228, BTM, gamma counting	Ra-228			.8 pCi/g	1527	4106	A
<b>Radon</b>										
490	82305	A	Radon-222, FIL, radon emanation	Rn-222	50 mL	Bubbler	.2 pCi/L	865	76002	A
1369	82303	B	Radon-222, FIL, liquid scintillation	Rn-222		Cal lab.	24 pCi/L	1384	76002	B
<b>Strontium</b>										
795	13503	B	Strontium-90, FIL, chemical separation and beta counting	Sr-90	1 L	FAR	.5 pCi/L	873	76003	B
<b>Thorium</b>										
<b>Schedule 1141 - Thorium, bottom material</b>				10 g	CUR					
1537	26507	A	Thorium-230, BTM, alpha spectrometry	Th-230			.1 pCi/g	1538	4108	A
1535	26631	A	Thorium-232, BTM, alpha spectrometry	Th-232			.1 pCi/g	1536	4110	A
<b>Schedule 1139 - Thorium, filtered</b>				1 L	FAR					
1472	26503	B	Thorium-230, FIL, alpha spectrometry	Th-230			1 pCi/L	1473	75997	B
1501	75976	A	Thorium-232, FIL, alpha spectrometry	Th-232			1 pCi/L	1502	75999	A
<b>Schedule 1140 - Thorium, suspended</b>				1 g	SUR					
1541	75939	A	Thorium-230, SUS, alpha spectrometry	Th-230			.1 pCi/g	1542	75952	A
1539	75953	A	Thorium-232, SUS, alpha spectrometry	Th-232			.1 pCi/g	1540	75936	A

**Table 15.--Radiochemical determinations, listed by laboratory code and schedule--Continued**

LC <sup>1</sup>	Parameter code	Name, phase, and method	Reported as	Mass/volume needed	Sample designation <sup>2</sup>	MRL	Units	2SPE LC	2SPE PC	2SPE MC
<b>Tritium</b>										
452	7000 D	Tritium, WWR, liquid scintillation	H-3	25 mL	LC0452	26	pCi/L	879	75985	D
460	7000 A	Tritium, WWR, electrolytic enrichment, liquid scintillation	H-3	250 mL	LC0460	5.7	pCi/L	882	75985	A
1043	7000 B	Tritium, WWR, electrolytic enrichment, gas counting	H-3	1 L	LC1043	.3	pCi/L	883	75985	B
624	7000 E	Tritium, WWR, electrolytic enrichment, liquid scintillation	H-3	500 mL	LC0624	2.5	pCi/L	1000	75985	E
1565	7000 F	Tritium, WWR, electrolytic enrichment, liquid scintillation	H-3	1 L	LC1565	1	pCi/L	1566	75985	F
1567	7000 G	Tritium, WWR, direct gas counting	H-3	1 L	LC 1567	15	pCi/L	1568	--	G
<b>Uranium</b>										
1006	22703 H	Uranium, FIL, fluorometry	U	1 L	FAR	1	µg/L	1007	75990H	H
1386	22703 E	Uranium, FIL, laser phosphorescence	U	1 L	FAR	.01	µg/L	1390	75990E	E
1385	22703 C	Uranium, FIL, laser phosphorescence	U	1 L	FAR	.4	µg/L	1389	75990C	C
<b>Schedule 1138 - Uranium, BTM</b>				100 g	CUR					
1509	28014 A	Uranium-234, BTM, alpha spectrometry	U-234			.1	pCi/g	1510	4111	A
1515	22612 A	Uranium-235, BTM, alpha spectrometry	U-235			.1	pCi/g	1516	4112	A
1511	28016 A	Uranium-238, BTM, alpha spectrometry	U-238			.1	pCi/g	1517	75962	A
<b>Schedule 1130 - Uranium, FIL, field filtered</b>				2 L	FAR					
1366	22610 A	Uranium-234, FIL, alpha spectrometry	U-234			.1	pCi/L	1381	75992	A
1367	22620 A	Uranium-235, FIL, alpha spectrometry	U-235			.1	pCi/L	1382	75994	A
1368	22603 A	Uranium-238, FIL, alpha spectrometry	U-238			.1	pCi/L	1383	75991	A
<b>Schedule 1137 - Uranium, suspended</b>				1 g	SUR					
1474	75942 A	Uranium-234, SUS, alpha spectrometry	U-234			.1	pCi/g	1475	75941	A
1476	75975 A	Uranium-235, SUS, alpha spectrometry	U-235			.1	pCi/g	1450	75947	A
1507	75940 A	Uranium-238, SUS, alpha spectrometry	U-238			.1	pCi/g	1508	4113	A
<b>Schedules containing various radiochemical determinations</b>										
<b>Schedule 473 - Radium-226 and Uranium, field filtered</b>				1 L	FAR					
794	9511 B	Radium-226, FIL, radon emanation	Ra-226			.02	pCi/L	861	76001	A
1385	22703 C	Uranium, FIL, laser phosphorescence	U			.4	µg/L	1389	75990	C
<b>Schedule 308 - Gross alpha and gross beta plus radium and uranium; FIL, field filtered</b>				4 L	FAR					
800	80030 B	Gross alpha, FIL, residue procedure	Nat. U			3	µg/L	853	75986B	B
1397	4126 B	Gross alpha, FIL, residue procedure	Th-230			3	pCi/L	1398	75987B	B
793	80050 B	Gross beta, FIL, residue procedure	Sr-90/ Y-90			3	pCi/L	854	75988B	B
798	3515 B	Gross beta, FIL, residue procedure	Cs-137			3	pCi/L	854	75989B	B
794	9511 B	Radium-226, FIL, radon emanation	Ra-226			.02	pCi/L	861	76001A	A
1386	22703 E	Uranium, FIL, laser phosphorescence	U			.01	µg/L	1390	75990E	E
<b>Schedule 1703 - Radium-226 and Uranium, field filtered (NASQAN)</b>				2 L	FAR					
794	9511 B	Radium-226, FIL, radon emanation	Ra-226			.02	pCi/L	861	76001	A
1386	22703 E	Uranium, FIL, laser phosphorescence	U			.01	µg/L	1390	75990	E

**Table 15.--Radiochemical determinations, listed by laboratory code and schedule--Continued**

LC <sup>1</sup>	Parameter code	Name, phase, and method	Reported as	Mass/volume needed	Sample designation <sup>2</sup>	MRL	Units	2SPE LC	2SPE PC	2SPE MC
<b>Schedule 214 - Gross alpha and gross beta, field filtered;</b>				4 L	FAR					
<b>Radium and uranium, field filtered</b>										
800	80030 B	Gross alpha, FIL, residue procedure	Nat. U			3	µg/L	853	75986	B
1397	4126 B	Gross alpha, FIL, residue procedure	Th-230			3	pCi/L	1398	75987	B
793	80050 B	Gross beta, FIL, residue procedure	Sr-90/ Y-90			3	pCi/L	855	75988	B
798	3515 B	Gross beta, FIL, residue procedure	Cs-137			3	pCi/L	854	75989	B
799	9510 B	Radium-226, FIL, precipitation, planchet counting	Ra-226			.4	pCi/L	864	76001	B
1006	22703 H	Uranium, FIL, fluorometry	U			1	µg/L	1007	75990	H
<b>Schedule 623 - Gross alpha, gross beta, and others, bottom material</b>				325 g	CUR					
1518	-- A	Gross alpha, BTM, residue procedure	Nat. U			6	µg/g	1519	75965	A
1520	4125 A	Gross alpha, BTM, residue procedure	Th-230			6	pCi/g	1521	75955	A
1522	-- A	Gross beta, BTM, residue procedure	Cs-137			3	pCi/g	1523	--	A
1524	4102 A	Gross beta, BTM, residue procedure	Sr-90/ Y-90			3	pCi/g	1525	75966	A
1549	17507 C	Lead-210, BTM, gamma spectrometry	Pb-210			2	pCi/g	1550	75968	C
1545	19507 A	Polonium-210, BTM, alpha spectrometry	Po-210			.1	pCi/g	1546	4105	A
1528	9507 B	Radium-226, BTM, gamma counting	Ra-226			.4	pCi/g	1529	4107	B
1526	75977 A	Radium-228, BTM, gamma counting	Ra-228			.8	pCi/g	1527	4106	A
1537	26507 A	Thorium-230, BTM, alpha spectrometry	Th-230			.1	pCi/g	1538	4108	A
1535	26631 A	Thorium-232, BTM, alpha spectrometry	Th-232			.1	pCi/g	1536	4110	A
1509	28014 A	Uranium-234, BTM, alpha spectrometry	U-234			.1	pCi/g	1510	4111	A
1515	22612 A	Uranium-235, BTM, alpha spectrometry	U-235			.1	pCi/g	1516	4112	A
1511	28016 A	Uranium-238, BTM, alpha spectrometry	U-238			.1	pCi/g	1517	75962	A
<b>Schedule 617 - Various isotopes, field filtered</b>				5 L	FAR					
1503	17503 B	Lead-210, FIL, beta counting	Pb-210			1.5	pCi/L	1504	75995	B
1505	19503 B	Polonium-210, FIL, alpha spectrometry	Po-210			1	pCi/L	1506	75998	A
794	9511 B	Radium-226, FIL, radon emanation	Ra-226			.02	pCi/L	861	76001	A
1364	81366 C	Radium-228, FIL, radiochemical separation and beta counting	Ra-228			1	pCi/L	1379	76000	C
1472	26503 B	Thorium-230, FIL, alpha spectrometry	Th-230			1	pCi/L	1473	75997	B
1501	75976 A	Thorium-232, FIL, alpha spectrometry	Th-232			1	pCi/L	1502	75999	A
1366	22610 A	Uranium-234, FIL, alpha spectrometry	U-234			.1	pCi/L	1381	75992	A
1367	22620 A	Uranium-235, FIL, alpha spectrometry	U-235			.1	pCi/L	1382	75994	A
1368	22603 A	Uranium-238, FIL, alpha spectrometry	U-238			.1	pCi/L	1383	75991	A
<b>Schedule 1810 - Radium-226 and uranium, field filtered</b>				2 L	FAR					
799	9510 B	Radium-226, FIL, precipitation, planchet counting	Ra-226			.4	pCi/L	864	76001	B
1385	22703 C	Uranium, FIL, laser phosphorescence	U			.4	µg/L	1389	75990	C

<sup>1</sup>Shaded laboratory codes may not be ordered individually.

<sup>2</sup>See table 4.



**Table 16.--Stable isotope ratios, listed by laboratory code and schedule**

Lab. code <sup>1</sup>	Para- meter code	Compound name	Unit of measure- ment	Preferred sample requirements	Minimum sample requirements	Label sample	Pre- cision ±
<b>Carbon</b>							
1243	99481 A	Carbon-13/Carbon-12 and Oxygen-18/Oxygen-16	Per mil relative to PDB	100 µmol	40 µmol	LC1243	0.2
1135	82339 A	Carbon-13/Carbon-12, carbonate rock	Per mil relative to PDB	1 g pure calcite	4 mg pure calcite	LC1135	.3
1205	--	A Carbon-13/Carbon-12, organic soil or rock material	Per mil relative to PDB	1 g carbon	0.5 mg carbon	LC1205	.3
440	82081 A	Carbon-13/Carbon-12, whole water, 1-L glass bottle	Per mil relative to PDB	250 mg of SrCO <sub>3</sub> precipitate	50 mg of SrCO <sub>3</sub> precipitate	LC440	.3
1244	--	Carbon-13/Carbon-12, gaseous CO <sub>2</sub> . Use 6 or 9-mm OD Pyrex tubes	Per mil relative to PDB	100 µmol	40 µmol	LC1244	.3
2016	--	Carbon-13/Carbon-12, solid	Per mil relative to PDB	Sufficient sample to yield 5 mg C	Sufficient sample to yield 5 mg C	LC 2016	.3
1199	82172 B	Carbon-14 (Field precipitated with carbon free reagents)	Percent	5 g elemental C	2 g elemental C	LC1199	--
2012	--	Carbon-14 by beta counting, solid	Percent	Sufficient sample to yield 5 g C	Sufficient sample to yield 5 g C	LC 2012	--
<b>Deuterium</b>							
1574	82082 B	Deuterium/protium, aqueous	Per mil relative to SMOW	60 mL	5 mL	LC1574	2
<b>Nitrogen</b>							
1717	82691 A	Nitrogen-15/Nitrogen-14 ratio, FIL as ammonia	Per mil rela- tive to air	Sufficient sample to yield 0.2 mg N in a volume of 1 L	Sufficient sample to yield 0.2 mg N in a maximum volume of 3 L	LC1717	.2
1718	82690 A	Nitrogen-15/Nitrogen-14 ratio, FIL as nitrate	Per mil rela- tive to air	Sufficient sample to yield 0.2 mg N in a volume of 1 L	Sufficient sample to yield 0.2 mg N in a maximum volume of 3 L	LC1718	.2
1719	82688 A	Nitrogen-15/Nitrogen-14 ratio, solid as nitrate	Per mil rela- tive to air	Sufficient sample to yield 0.2 mg N	Sufficient sample to yield 0.2 mg N	LC1719	.2
1720	82689 A	Nitrogen-15/Nitrogen-14 ratio, solid as ammonia	Per mil rela- tive to air	Sufficient sample to yield 0.2 mg N	Sufficient sample to yield 0.2 mg N	LC1720	.2
1921		Nitrogen-15/Nitrogen-14 ratio, FIL as nitrate and ammonia combined	Per mil rela- tive to air	Sufficient sample to yield 0.2 mg N in a volume of 1 L	Sufficient sample to yield 0.2 mg N in a maximum volume of 3 L	LC1921	.2

**Table 16.--Stable isotope ratios, listed by laboratory code and schedule--Continued**

Lab. code <sup>1</sup>	Parameter code	Compound name	Unit of measurement	Preferred sample requirements	Minimum sample requirements	Label sample	Precision ±
<b>Oxygen</b>							
489	82085 A	Oxygen-18/Oxygen-16, aqueous	Per mil relative to SMOW	60 mL	5 mL	LC0489	.2
1137	82337 A	Oxygen-18/Oxygen-16, rock	Per mil relative to SMOW	1 g pure calcite	4 mg pure calcite	LC1137	.2
<b>Sulfur</b>							
1951	--	Sulfur-34/Sulfur-32, as sulfate, aqueous (high concentration)	Per mil	--	30 mg SO <sub>4</sub>	--	0.5
1949 <sup>2</sup>	--	Sulfur-34/Sulfur-32, as sulfate, aqueous (low concentration)	Per mil	--	30 mg SO <sub>4</sub> on resin	--	.5
1948	--	Sulfur-34/Sulfur-32, as sulfide, aqueous	Per mil	--	30 mg Ag <sub>2</sub> S	--	.5
1950	--	Sulfur-34/Sulfur-32, as sulfate, rock	Per mil	--	30 mg SO <sub>4</sub>	--	.5
1947	--	Sulfur-34/Sulfur-32, as sulfide, rock	Per mil	--	30 mg Ag <sub>2</sub> S	--	.5
<b>Schedule 921</b>							
1952	--	Sulfur-34/Sulfur-32, as sulfate, rock	Per mil	--	30 mg SO <sub>4</sub>	--	.5
1953	--	Sulfur-34/Sulfur-32, as disulfide, rock	Per mil	--	30 mg Ag <sub>2</sub> S	--	.5
1954	--	Sulfur-34/Sulfur-32, as monosulfide, rock	Per mil	--	30 mg Ag <sub>2</sub> S	--	.5
<b>Schedule 960</b>							
2014	--	Carbon-14 by AMS, solid	Percent	Sufficient sample to yield 10 mg C	Sufficient sample to yield 10 mg C	SC 960	--
2016	--	Carbon-13/Carbon-12, solid	Per mil relative to PDB				.3
<b>Schedule 1000</b>							
2010	--	Carbon-14 by AMS	Percent	Sufficient sample to yield 10 mg C	Sufficient sample to yield 10 mg C	SC1000	--
440	82081 A	Carbon-13/Carbon-12	Per mil relative to PDB				.3
<b>Schedule 1142<sup>3</sup></b>							
489	82085 A	Oxygen-18/Oxygen-16 ratio, aqueous	Per mil relative to SMOW	60 mL	5 mL	SC1142	.2
1574	82082 B	Deuterium/protium, aqueous	Per mil relative to SMOW				2

<sup>1</sup>Shaded laboratory codes may not be ordered individually.

<sup>2</sup>Contact Tyler Coplen at Reston, Virginia, (703) 648-5862, for resin columns.

<sup>3</sup>Contact Tyler Coplen in Reston, Virginia, (703) 648-5862, for sample bottles.

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## Appendix A--Description of schedules, parameters, and network program

USGS districts and NAWQA study units are urged to have at least one of their members at each site maintain guest privileges on the NWQL partition in order to have access to the Schedules, Parameters, and Network (SPN) program. Guest privileges can be arranged by request to DENADP by means of EDOC.

SPN is invoked by typing "SPN" at the "OK" prompt on the Prime: OK, SPN

```
*****Welcome to the SPN Menu*****
Which year would you like to work in:
1. 1993
2. 1994
3. 1995
4. EXIT the SPN Menu
Please enter your selection:
```

Previous year's entries (1993 and 1994) offer a computer-accessible, historical record of the final disposition of the catalog's contents for those fiscal years. No addendum to the printed catalog will be offered to supply this information. The current fiscal year's entries are always up-to-date as to availability and price. Entering "3" brings up this screen:

```
This will show the 1995 files
Denver Central Lab File retrieval
Do you want to
DISPLAY
1      Parameter records (Lab Codes)
2      Schedules
3      Network Records (NASQAN, BENCHMARK, etc.)
PRINT
4      Parameter records (Lab Codes)[or METHOD list]
5      Schedules
6      Network Records (NASQAN, BENCHMARK, etc.)
Select one: ("return" to end)
```

Options 1 and 4, respectively, will display on the screen or print results of the following retrievals based on the options of the following screen:

```
Denver Central Lab Parameter Code Dictionary
Do you want to retrieve by:
1      Lab Code
2      Watstore Code
3      Name Fragment
Select one: ("return" to end)
```

These retrievals will list short and long names, present price, WATSTORE (Water Data Storage and Retrieval System) code, reporting units, and minimum reporting limits. Also, method code, container and volume requirements, and other details are reported. Selecting option 4 will print to the Laboratory printer or to a file in a depot. Consult your local system manager for information on the use and retrieval of results from your local Prime depot.

NOTE: Custom analyses or schedules under development will appear as laboratory codes, usually in the 8000 series. Since a schedule is a collection of laboratory codes, most of the information (except price) will be blank or meaningless.

## Appendix A--Description of schedules, parameters, and network program--Continued

Options 2 or 5 will present information on laboratory schedules based on the following retrieval criteria:

Denver Central Lab Schedule File	
Do you want to retrieve by:	
1.	Schedule number
2.	Schedule category (type)
3.	Owner of schedule
4.	Find a schedule with certain lab-codes ("best match")
5.	Schedule number--print only lab-codes
6.	Schedule number--print only bottle types
Select one: ("return" to end)	
In the information about each schedule is listed an "owner". CL and WB schedules belong to the laboratory, and will only have minor changes. NQ and BM belong to NASQAN and BENCHMARK and will reflect program changes. All Schedules may be used by anyone, but the possibility exists that a district-owned schedule may be changed at any time by its owner.	
***NOTE***A cost of 0.00 (ZERO) on a schedule does not mean that it is free--it means that the cost has not been determined. Please call the laboratory for further information.	

Suboption 1, by following subsequent menus, will retrieve information about a specific schedule such as owner, cost, and the constituent laboratory codes along with WATSTORE codes and the long name of the parameters. A second "page" will list bottle types and sample volumes.

Suboption 2 will list schedule types, useful in shortening searches performed with suboption 3.

Suboption 3 will list all schedules "owned" by any customer, using that customer's number.

Suboption 4 will search each (or all) schedule types for schedules that best match with the entered laboratory codes. This search is useful in determining if a schedule already exists with the desired parameters. Suboption 4 will list all schedules using a "score" based on the number of parameters matched, minus those not matched, and minus those in the schedule not requested. Many lower scoring schedules should be examined for applicability to the user's hydrologic problems, especially if there are "not requested" parameters. The Laboratory often includes parameters it needs for quality-control procedures (pH, specific electrical conductance), or will include "free" parameters from procedures determining a number of constituents together, as for example, many organic analyses and some inorganic procedures such as metals by inductively coupled plasma.

Options 3 or 6 will allow several retrievals by showing the following screen:

Central Lab Network File	
Do you want to retrieve by:	
1.	Unique number
2.	Station-id
3.	Unique number--Bottle types only
Select one: ("return" to end)	

**Appendix B--Methods**  
**Schedules in alphabetical order by Program**

SC	Schedules	Method identification number	Pub. Year
<b>Biological Schedules</b>			
671	Periphyton, biomass, gravimetry (Britton and Greeson, 1989)	B-3520-85	1989
1507	Periphyton, chlorophyll, HPLC (Britton and Greeson, 1989)	B-6630-85	1989
1708	Periphyton, combined biomass and chlorophyll (Britton and Greeson, 1989)	B-6630-85 and Not yet an approved USGS method	1989
666	Phytoplankton, biomass, gravimetry (Britton and Greeson, 1989)	B-6530-85	1989
1508	Phytoplankton, chlorophyll, HPLC (Britton and Greeson, 1989)	B-6530-85	1989
1509	Phytoplankton, combined biomass and chlorophyll (Britton and Greeson, 1989)	B-6530-85 and Not yet an approved USGS method	1989
<b>Inorganic Schedules</b>			
146	Major cations plus iron and manganese, inductively coupled plasma, abbreviated list. Specific electrical conductance needs to be less than 6,000 $\mu$ S/cm	Reference unavailable	
1043	Major cations plus trace metals, inductively coupled plasma. Specific electrical conductance needs to be less than 6,000 $\mu$ S/cm	Reference unavailable	
2400	Trace elements in bed sediments by Geologic Division, sieved to <63 $\mu$ m	Reference unavailable	
2703	Trace elements in ground water filtered through a 0.45- $\mu$ m filter for NAWQA	Reference unavailable	
2200	Trace elements in tissue samples (liver)	Reference unavailable	
<b>Organic Schedules</b>			
1401	Acrolein acrylonitrile and 2-chlorethylvinylether total: WWR by GC/MS	Not yet an approved USGS method	
1364	Aroclors (polychlorinated biphenyls): WWR, by GC/ECD (Wershaw and others, 1987)	O-3104-83	1987
1361	Aroclors (polychlorinated biphenyls): FIL, by GC/ECD (Wershaw and others, 1987)	O-1104-83	1987
1377	Explosives, nitroaromatics, recoverable from filtered water (Lindley and others, 1994)	O-1124-94	1994
2085	Gross organics in ground water for NAWQA (Brenton and Arnett, 1993)	O-1122-92	1993
2075	Gross organics in surface water for NAWQA (Brenton and Arnett, 1993) (Wershaw and others, 1987)	O-1122-92 O-7100-83	1993 1987
1474	Herbicides and insecticides: Combined schedule of Chlorophenoxy-acid, Organochlorine, with gross PCBs and gross PCNS, and organo phosphates, WWR, by GC/ECD and GC/FPD (Wershaw and others, 1987)	O-3104-83	1987
1305	Herbicides: Chlorophenoxy-acid, BTM, by GC/ECD	Reference unavailable	
1301	Herbicides: Chlorophenoxy-acid, FIL, by GC/ECD	Reference unavailable	
80	Herbicides: Chlorophenoxy-acid, with dicamba and picloram, BTM, by GC/ECD	Reference unavailable	
79	Herbicides: Chlorophenoxy-acid, with dicamba and picloram, WWR, by GC/ECD	Reference unavailable	
1304	Herbicides: Chlorophenoxy-acid, WWR, by GC/ECD	Reference unavailable	
1379	Herbicides: Triazines, FIL, by GC/MS (Sandstrom and others, 1994)	O-1121-91	1992
1389	Herbicides: Triazines, WWR, by GC/NPD (Markovchick and others, 1994)	O-3106-83	1994
1359	Insecticides: Carbamate, WWR, by HPLC (Werner and Johnson, 1994)	O-3123-93	1994
1321	Insecticides: Organochlorine, with gross PCBs and gross PCNs, FIL, GC/ECD (Wershaw and others, 1987)	O-1104-83	1987
1335	Insecticides: Organochlorine, with gross PCBs and gross PCNs, and organophosphates, BTM, GC/ECD and GC/FPD	Reference unavailable	
1331	Insecticides: Organochlorine, with gross PCBs and gross PCNs, and organophosphates, FIL, by GC/ECD and GC/FPD (Wershaw and others, 1987)	O-1104-83	1987
1399	Insecticides: Organochlorine, with gross PCBs and gross PCNs, and organophosphates, LL, WWR, by GC/ECD and GC/FPD (Wershaw and others, 1987)	O-3104-83	1987
1334	Insecticides: Organochlorine, with gross PCBs and gross PCNs, and organophosphates, WWR, by GC/ECD and GC/FPD (Wershaw and others, 1987)	O-3104-83	1987
1325	Insecticides: Organochlorine, with gross PCBs and gross PCNs, BTM, by GC/ECD	Reference unavailable	
1398	Insecticides: Organochlorine, with gross PCBs and gross PCNs LL, WWR, by GC/ECD (Wershaw and others, 1987)	O-3104-83	1987



**Appendix B--Methods**  
**Schedules in alphabetical order by Program--Continued**

SC	Schedules	Method identification number	Pub. Year
<b>Organic schedules--continued</b>			
1324	Insecticides: Organochlorine, with gross PCBs and gross PCNs, WWR, by GC/ECD (Wershaw and others, 1987)	O-3104-83	1987
1608	Insecticides: Organochlorine, with specific Aroclors, NPDES, WWR, by GC/ECD (U.S. Environmental Protection Agency, 1988)	EPA 608	1988
1320	Insecticides: Organophosphates, BTM, by GC/FPD	Reference unavailable	
1316	Insecticides: Organophosphates, FIL, by GC/FPD (Wershaw and others, 1987)	O-1104-83	1987
1317	Insecticides: Organophosphates, SUS, by GC/FPD	Reference unavailable	
1319	Insecticides: Organophosphates, WWR, by GC/FPD (Wershaw and others, 1987)	O-3104-83	1987
2500	NAWQA OC, BNA, and carbon (Wershaw and others, 1987)	O-5101-83	1992 1987
2501	NAWQA, chlorinated organic compounds in bed sediments analyzed by GC/ECD (Foreman and others, 1995)	O-5129-95	1995
2502	NAWQA, Base-Neutral-Acid (BNA) semivolatile organic compounds in bed sediment by GC/MS (Foreman and others, 1995)	Reference unavailable	1995
2503	NAWQA, carbon only (Wershaw and others, 1987)	O-5102-83	1987
2101	Organochlorine compounds (OCs) in biological tissue (Leiker and others, 1995)	O-9125-94	1995
2010	Pesticides in filtered water field extraction C-18 SPE cartridge, analyzed by GC/MS (Zaugg and others, in press)	O-1126-95	1995
2051	Pesticides in filtered water field extracted on Carbowpak B SPE cartridge, analyzed by HPLC	Not yet an approved USGS method	
2001	Pesticides in filtered water NWQL extracted on C-18 SPE cartridge, analyzed by GC/MS (Zaugg and others, in press)	O-1126-95	1995
2050	Pesticides in filtered water, NWQL extracted on Carbowpak B SPE cartridge analyzed by HPLC	Not yet an approved USGS method	
1386	Semivolatiles listed plus a tentative identification of all other compounds possible: BTM; acidic, basic and neutral methylene chloride extractable compounds, by GC/MS. Letter report sent to requester.	Not yet an approved USGS method	
1385	Semivolatiles listed plus a tentative identification of most other compounds possible: WWR; acidic, basic and neutral methylene chloride extractable compounds, by GC/MS. Letter report sent to requester. (Fishman, 1993)	O-3116-87	1993
1382	Semivolatiles scan: BTM, methylene chloride extractable compounds, by GC/FID. Data and chromatogram are mailed to requester. No specific compounds are identified.	Not yet an approved USGS method	
1381	Semivolatiles scan: WWR, methylene chloride extractable compounds, by GC/FID. Data and chromatogram are mailed to requester. No specific compounds are identified.	Not yet an approved USGS method	
1384	Semivolatiles: BTM, methylene chloride extractable compounds, by GC/MS (Fishman, 1993)	O-3116-87	1993
1394	Semivolatiles: WWR, basic and neutral methylene chloride extractable compounds, by GC/MS (Fishman, 1993)	O-3116-87	1993
1393	Semivolatiles: WWR; acidic methylene chloride extractable compounds, by GC/MS	O-3116-87	1993
1383	Semivolatiles: WWR; acidic, basic and neutral methylene chloride extractable 40 compounds, by GC/MS (Fishman, 1993)	O-3116-87	1993
1307	Volatile organic compounds, SDWA regulated compounds, WWR, by purge and trap GC/MS (Rose and Schroeder, 1995)	O-3127-94	1994
1380	Volatile organic compounds, SDWA regulated and unregulated compounds. Also covers NPDES. WWR, by purge and trap GC/MS (Rose and Schroeder, 1995)	O-3127-94	1994
2091	Volatile organic compounds at 0.2 µg/L by purge and trap (GC/MS) (Rose and Schroeder, 1995)	O-3127-94	1994
2090	Volatile organic compounds at 0.2 µg/L by purge and trap (GC/MS) plus library search of non-target constituents (Rose and Schroeder, 1995)	O-3127-94	1994
2092	Volatile organic compounds at 0.2 µg/L by purge and trap (GC/MS) plus library search of non-target constituents; less EDB and DBCP (Rose and Schroeder, 1995)	O-3127-94	1994
1306	Volatile organic compounds: Soil fumigants, EDB & DBCP, WWR, by hexane micro-extraction, GC/ECD (Fishman, 1993)	O-3120-90	1993
1378	Volatile organic compounds: BTX (benzene, toluene, and xylenes), WWR, by purge and trap GC/MS (Rose and Schroeder, 1995)	O-3127-94	1994

**Appendix B--Methods**  
**Schedules in alphabetical order by Program--Continued**

SC	Schedules	Method identification number	Pub. Year
<b>Organic schedules--continued</b>			
1390	Volatile organic compounds: WWR, by purge and trap GC/MS (Same as schedule 1380, except for higher reporting levels.) (Rose and Schroeder, 1995)	O-3127-94	1994
1392	Volatiles organic compounds listed plus a tentative identification of all other compounds possible: WWR, by purge and trap GC/MS. Letter report sent to requester. (Rose and Schroeder, 1995)	O-3127-94	1994
<b>Radiochemical Schedules</b>			
473	Radium-226 and uranium, FIL (U.S. Environmental Protection Agency, 1980; American Society for Testing and Materials, 1994)		1994 1995
1703	Radium-226 and uranium, FIL (NASQAN) (U.S. Environmental Protection Agency, 1980; American Society for Testing and Materials, 1994)		1994 1995
1131	Gross alpha and gross beta, BTM	Not available from contractor	1994
456	Gross alpha and gross beta, FIL (U.S. Environmental Protection Agency, 1980)		1994
458	Gross alpha and gross beta, FIL, to be used if solids are greater than 250 mg/L	Not available from contractor	1994
214	Gross alpha and gross beta, FIL; radium and uranium (U.S. Environmental Protection Agency, 1980; American Society for Testing and Materials, 1994)		1994 1994
308	Gross alpha and gross beta plus radium and uranium, FIL (U.S. Environmental Protection Agency, 1980; American Society for Testing and Materials, 1994)		1994 1995
165	Gross alpha and gross beta, SUS	Not available from contractor	1994
623	Gross alpha, gross beta, and others, BTM	Not available from contractor	1994
948	Lead-210, Cesium-137, Radium-226	Not available from contractor	1994
1136	Radium, BTM	Not available from contractor	1994
1810	Radium-226 and uranium, FIL (U.S. Environmental Protection Agency, 1980; American Society for Testing and Materials, 1994)		1994 1995
1141	Thorium, BTM	Not available from contractor	1994
1139	Thorium, FIL	Not available from contractor	1994
1140	Thorium, SUS	Not available from contractor	1994
1138	Uranium, isotopic, BTM	Not available from contractor	1994
1130	Uranium, isotopic, FIL	Not available from contractor	1994
1137	Uranium, isotopic, SUS	Not available from contractor	1994
617	Various isotopes, FIL	Not available from contractor	1994
<b>Stable isotopes</b>			
1142	Oxygen-18/Oxygen-16 ratio; deuterium/protium, aqueous (Fishman and Friedman, 1989)	Not available from contractor	1979 1991
921	Sulfur-34/sulfur-32, rock; sulfate, disulfide, monosulfide	Not available from contractor	1994
1000	Carbon-14 by AMS/carbon-13, water		
960	Carbon-14 by AMS/carbon-13, solid		

**Appendix B--Methods**  
**Constituents in alphabetical order by Program**

Inorganic parameters	Lab. code	Method ID number	Pub. Year
Acidity as H, lab., LIS, W" (Fishman, 1993)	1266	I-2022-90	1990
Acidity as H, lab., WWR (Fishman and Friedman, 1989)	1	I-1020-85	1985
Alkalinity as CaCO <sub>3</sub> , lab., W" (Fishman and Friedman, 1989)	70	I-2030-85	1985
Alkalinity as CaCO <sub>3</sub> , lab., LIS, WWR (Fishman, 1993)	1270	I-2034-86	1986
Aluminum, BTM, DCP (Fishman, 1993)	1282	I-5054-86	1986
Aluminum, FIL, DCP (Fishman, 1993)	1284	I-1054-86	1986
Aluminum, FIL, ICP/MS (Faires, 1993)	1784	I-2477-92	1992
Aluminum, ICP	1736	GEO1090	
Aluminum, BIO, ICP	6000	Unapproved	
Aluminum, WWR, DCP (Fishman, 1993)	1283	I-3054-86	1986
Antimony, FIL, AA, hydride (Brown and McLain, 1994)	77	I-2055	1993
Antimony, FIL, ICP/MS (Faires, 1993)	1785	I-2477	1993
Antimony, ICP/MS (Faires, 1993)	6018	I-2477-92	1992
Antimony, HA	1776	GD	
Antimony, WWR, AA, hydride (Brown and McLain, 1994)	80	I-4055	93
Arsenic, BTM, AA, hydride (Fishman and Friedman, 1989)	597	I-6062-85	1985
Arsenic, FIL, AA, hydride (Fishman and Friedman, 1989)	112	I-2062-85	1985
Arsenic, HA	1775	GAO2090	
Arsenic, ICP/MS	6019	Unapproved	
Arsenic, WWR, AA, hydride (Fishman and Friedman, 1989)	118	I-4062-85	1985
Arsenic, WWR, GFAA, USEPA	1584	EPA 306-2	1992
Barium, BTM, AA (Fishman and Friedman, 1989)	521	I-5084-85	1985
Barium, FIL, AA (Fishman and Friedman, 1989)	7	I-1084-85	1985
Barium, FIL, ICP (Fishman, 1993)	641	I-1472-87	1987
Barium, FIL, ICP/MS (Faires, 1993)	1786	I-2477-92	1992
Barium, ICP	1745	GEO1090	
Barium, BIO, ICP	6001	Unapproved	
Barium, WWR, AA (Fishman and Friedman, 1989)	234	I-3084-85	1985
Beryllium, BTM, AA (Fishman and Friedman, 1989)	522	I-5095-85	1985
Beryllium, FIL, AA (Fishman and Friedman, 1989)	170	I-1095-85	1985

Inorganic parameters--Continued	Lab. code	Method ID number	Pub. Year
Beryllium, FIL, ICP (Fishman, 1993)	655	I-1472-87	1987
Beryllium, FIL, ICP/MS (Faires, 1993)	1787	I-247792	1992
Beryllium, ICP	1746	GEO1090	
Beryllium, BIO, ICP/MS	6021	Unapproved	
Beryllium, WWR, AA (Fishman and Friedman, 1989)	236	I-3095-85	1985
Bismuth, ICP	1747	GEO1090	
Boron, BTM, DCP (Fishman, 1993)	1285	I-5114-86	1986
Boron, FIL, DCP (Fishman, 1993)	1183	I-1114-86	1986
Boron, BIO, ICP	6003	Unapproved	
Boron, WWR, DCP (Fishman, 1993)	1286	I-3114-86	1986
Bromide, FIL, fluorescein, ASF (Fishman and Friedman, 1989)	1246	I-2129-85	1985
Bromide, LIS, FIL, IC (Fishman and Friedman, 1989)	1258	I-2058-85	1985
Cadmium, BTM, AA (Fishman and Friedman, 1989)	502	I-5135-85	1985
Cadmium, FIL, AA (Fishman and Friedman, 1989)	126	I-1135-85	1985
Cadmium, FIL, GFAA (Fishman, 1993)	1554	I-2138-89	1989
Cadmium, FIL, ICP (Fishman, 1993)	673	I-1472-87	1987
Cadmium, FIL, ICP/MS (Faires, 1993)	1788	I-2477-92	1992
Cadmium, FIL, GFAA	1773	GD	
Cadmium, BIO, ICPC/MS	6023	Unapproved	
Cadmium, LL, FIL, GFAA (Fishman and Friedman, 1989)	1250	I-1137-85	1985
Cadmium, WWR, AA (Fishman and Friedman, 1989)	131	I-3135-85	1985
Cadmium, WWR, GFAA (Fishman, 1993)	1555	I-4138-89	1989
Calcium, BTM, AA (Fishman and Friedman, 1989)	696	I-5152-85	1985
Calcium, FIL, AA (Fishman and Friedman, 1989)	12	I-1152-85	1985
Calcium, FIL, ICP (Fishman, 1993)	659	I-1472-85	1985
Calcium, ICP	1737	GEO1090	
Calcium, LIS, FIL, AA (Fishman and Friedman, 1989)	831	I-1152-87	1987
Calcium, LL, FIL, ICP (Fishman, 1993)	1273	I-1472-87	1987

**Appendix B--Methods**  
**Constituents in alphabetical order by Program--Continued**

Inorganic parameters--Continued	Lab. code	Method ID number	Pub. Year
Calcium, WWR, AA, USEPA (Fishman and Friedman, 1989)	324	I-3153-85	1985
Calcium, WWR, AA, USGS (Fishman and Friedman, 1989)	224	I-3152-85	1985
Carbon, total	1781	Unapproved	
Carbon, carbonate (inorganic)	1782	Unapproved	
Carbon, organic	1783	Unapproved	
Cerium, ICP	1748	GEO1090	
Chloride, FIL (Fishman and Friedman, 1989)	15	I-2187-85	1985
Chloride, FIL, IC (Fishman and Friedman, 1989)	1571	I-2057-85	1985
Chloride, LIS, FIL, IC (Fishman and Friedman, 1989)	1259	I-2058-85	1985
Chromium, BTM, AA (Fishman and Friedman, 1989)	505	I-5236-85	1985
Chromium, FIL, GFAA (McLain, 1993)	1936	I-1233-93	1993
Chromium, FIL, ICP/MS (Faires, 1993)	1789	I-2477-92	1992
Chromium, FIL, ICP (Fishman, 1993)	722	I-1472-87	1987
Chromium, Hexavalent, FIL, chel. (Fishman and Friedman, 1989)	16	I-1232-85	1985
Chromium, ICP	1750	GEO1090	
Chromium, BIO, ICP	6005	Unapproved	
Chromium, LL, FIL, GFAA (Fishman and Friedman, 1989)	1251	I-1235-85	1985
Chromium, total, AA (Fishman and Friedman, 1989)	246	I-3236-85	1985
Chromium, WWR, GFAA (McLain, 1993)	1937	I-3233-93	1993
Cobalt, BTM, AA (Fishman and Friedman, 1989)	506	I-5239-85	1985
Cobalt, FIL, AA (Fishman and Friedman, 1989)	148	I-1239-85	1985
Cobalt, FIL, GFAA (Fishman, 1993)	1556	I-2243-89	1989
Cobalt, FIL, ICP (Fishman, 1993)	644	I-1472-87	1987
Cobalt, FIL, ICP/MS (Faires, 1993)	1790	I-2477-92	1992
Cobalt, BIO, ICP/MS	6025	Unapproved	
Cobalt, ICP	1749	GEO1090	
Cobalt, LL, FIL, GFAA (Fishman and Friedman, 1989)	1252	I-1241-85	1985
Cobalt, WWR, AA (Fishman and Friedman, 1989)	149	I-3239-85	1985
Cobalt, WWR, GFAA (Fishman, 1993)	1557	I-4243-89	1989

Inorganic parameters--Continued	Lab. code	Method ID number	Pub. Year
Color reported in Pt-Co Units (Fishman and Friedman, 1989)	20	I-1250-85	1985
Copper, BTM, AA (Fishman and Friedman, 1989)	507	I-5270-85	1985
Copper, FIL, AA (Fishman and Friedman, 1989)	151	I-1270-85	1985
Copper, FIL, GFAA (Fishman, 1993)	1558	I-2274-89	1989
Copper, FIL, ICP (Fishman, 1993)	657	I-1472-87	1987
Copper, FIL, ICP/MS (Faires, 1993)	1791	I-2477-92	1992
Copper, ICP	1751	GEO1090	
Copper, BIO, ICP	6007	Unapproved	
Copper, LL, FIL, GFAA (Fishman and Friedman, 1989)	1253	I-1272-85	1985
Copper, WWR, AA (Fishman and Friedman, 1989)	156	I-3270-85	1985
Copper, WWR, GFAA (Fishman, 1993)	1559	I-4274-89	1989
Cyanide, BTM, barbituric acid, ASF (Fishman and Friedman, 1989)	1235	I-6302-85	1985
Cyanide, FIL, barbituric acid, ASF (Fishman and Friedman, 1989)	880	I-2302-85	1985
Cyanide, WWR, barbituric acid, ASF (Fishman and Friedman, 1989)	23	I-4302-85	1985
Density @ 20 degrees C, filtered, GR (Fishman and Friedman, 1989)	24	I-1312-85	1985
Digestion for As and Se, USEPA	1586	EPA 206.2 EPA 270.2	1992
Digestion for trace metals, BTM (Fishman and Friedman, 1989)	647	I-5488-85	1985
Digestion for trace metals, USEPA (Fishman and Friedman, 1989)	124	I-3736-85	1985
Digestion for trace metals, USGS	1735	Unapproved	
Digestion for tissue	6048	Unapproved	
Europium, ICP	1752	GEO1090	
Fluoride, FIL (Fishman and Friedman, 1989)	1573	I-2057-85	1985
Fluoride, FIL, ISE (Fishman and Friedman, 1989)	31	I-1327-85	1985
Fluoride, LIS, FIL, IC (Fishman and Friedman, 1989)	1260	I-2058-85	85
Gallium, ICP	1753	GEO1090	
Gold, ICP	1744	GEO1090	
Holmium, ICP	1754	GEO1090	
Iodide, FIL, ceric-arsenious (Fishman and Friedman, 1989)	1202	I-2371-85	1985
Iron, BTM, AA (Fishman and Friedman, 1989)	190	I-5381-85	1985

**Appendix B--Methods**  
**Constituents in alphabetical order by Program-- Continued**

Inorganic parameters--Continued	Lab. code	Method ID number	Pub. Year
Iron, FIL, AA (Fishman and Friedman, 1989)	172	I-1381-85	1985
Iron, FIL, ICP (Fishman, 1993)	645	I-1472-87	1987
Iron, BIO, ICP	6008	Unapproved	
Iron, LL, FIL, ICP (Fishman, 1993)	1271	I-1472-87	1987
Iron, WWR, AA (Fishman and Friedman, 1989)	189	I-3381-85	1985
Iron, ICP	1738	GEO1090	
Lanthanum, ICP	1755	GEO1090	
Lead, BTM, AA (Fishman and Friedman, 1989)	510	I-5399-85	1985
Lead, FIL, AA (Fishman and Friedman, 1989)	191	I-1399-85	1985
Lead, FIL, GFAA (Fishman, 1993)	1560	I-2403-89	1989
Lead, FIL, ICP (Fishman, 1993)	646	I-1472-87	1987
Lead, FIL, ICP/MS (Faires, 1993)	1792	I-2477-92	1992
Lead, ICP	1762	GEO1090	
Lead, BIO, ICP/MS	6028	Unapproved	
Lead, LL, FIL, GFAA (Fishman and Friedman, 1989)	1254	I-1401-85	1985
Lead, WWR, AA (Fishman and Friedman, 1989)	192	I-3399-85	1985
Lead, WWR, GFAA (Fishman, 1993)	1561	I-4403-89	1989
Lithium, BTM, AA (Fishman and Friedman, 1989)	541	I-5425-85	1985
Lithium, FIL, AA (Fishman and Friedman, 1989)	39	I-1425-85	1985
Lithium, FIL, ICP (Fishman, 1993)	664	I-1472-87	1987
Lithium, ICP	1756	GEO1090	
Lithium, WWR, AA (Fishman and Friedman, 1989)	277	I-3425-85	1985
Magnesium, BTM, AA (Fishman and Friedman, 1989)	697	I-5447-85	1985
Magnesium, FIL, AA (Fishman and Friedman, 1989)	40	I-1447-85	1985
Magnesium, FIL, ICP (Fishman, 1993)	663	I-1472-87	1987
Magnesium, ICP	1740	GEO1090	
Magnesium, LIS, FIL, AA (Fishman and Friedman, 1989)	832	I-1447-85	1985
Magnesium, LL, FIL, ICP (Fishman, 1993)	1274	I-1472-87	1987

Inorganic parameters--Continued	Lab. code	Method ID number	Pub. Year
Magnesium, WWR, USEPA, AA (Fishman and Friedman, 1989)	325	I-3448-85	1985
Magnesium, WWR, USGS, AA (Fishman and Friedman, 1989)	261	I-3447-85	1985
Manganese, BTM, AA (Fishman and Friedman, 1989)	512	I-5454-85	1985
Manganese, FIL, AA (Fishman and Friedman, 1989)	42	I-1454-85	1985
Manganese, FIL, ICP (Fishman, 1993)	648	I-1472-87	1987
Manganese, FIL, ICP/MS (Faires, 1993)	1793	I-2477-92	1992
Manganese, ICP	1757	GEO1090	
Manganese, BIO, ICP	6010	Unapproved	
Manganese, LL, FIL, ICP (Fishman, 1993)	1272	I-1472-87	1987
Manganese, LL, FIL, GFAA (Fishman and Friedman, 1989)	1255	I-1455-85	1985
Manganese, WWR, AA (Fishman and Friedman, 1989)	41	I-3454-85	1985
Mercury, BIO	1774	Unapproved	
Mercury, BTM, CVAA (Fishman and Friedman, 1989)	511	I-5462-85	1985
Mercury, FIL, CVAA, auto. (Fishman and Friedman, 1989)	226	I-2462-85	1985
Mercury, WWR, CVAA (Fishman and Friedman, 1989)	227	I-3462-85	1985
Moisture content by weight (Fishman and Friedman, 1989)	904	P-0520-85	1989
Molybdenum, FIL, GFAA	1998	Unapproved	
Molybdenum, FIL, ICP (Fishman, 1993)	649	I-1472-87	1987
Molybdenum, FIL, ICP/MS (Faires, 1993)	1794	I-2477-92	1992
Molybdenum, ICP	1758	GEO1090	
Molybdenum, BIO, ICP/MS	6030	Unapproved	
Molybdenum, WWR, GFAA	1999	Unapproved	
N, Ammonia as N, BTM (Fishman, 1993)	524	I-6522-90	1990
N, Ammonia as N, FIL, ASF (Fishman, 1993)	1976	I-2522-90	1990
N, Ammonia as N, LL, FIL, ASF (Fishman, 1993)	1980	I-2025	1989
N, NH3+organic N as N, FIL	1985	Unapproved	
N, NH3+organic N as N, BTM (Fishman, 1993)	1211	I-5553-91	1991
N, NH3+organic N as N, WWR	1986	Unapproved	
N, Nitrate as N, LIS, FIL, IC (Fishman and Friedman, 1989)	1261	I-2058-85	1985

**Appendix B--Methods**  
**Constituents in alphabetical order by Program--Continued**

Inorganic parameters--Continued	Lab. code	Method ID number	Pub. Year
N, Nitrite as N, FIL, diazotization (Fishman, 1993)	1973	I-2540-90	1990
N, Nitrite as N, LL, FIL, ASF (Fishman, 1993)	1977	I-2542-89	1989
N, Nitrite plus nitrate as N, BTM (Fishman, 1993)	513	I-6545-90	1990
N, Nitrite plus Nitrate as N, FIL (Fishman, 1993)	1975	I-2544-90	1990
N, Nitrite plus Nitrate as N, LL, FIL (Fishman, 1993)	1979	I-2545-85	1985
N, Total nitrogen as N, FIL, Antek (Fishman, 1993)	1989	I-2511-90	1990
Neodymium, ICP	1760	GEO1090	
Nickel, BTM, AA (Fishman, 1993)	519	I-5499-85	1985
Nickel, FIL, AA (Fishman, 1993)	197	I-1499-85	1985
Nickel, FIL, GFAA (Fishman, 1993)	1562	I-2503-89	1989
Nickel, FIL, ICP (Fishman, 1993)	721	I-1472-87	1987
Nickel, FIL, ICP/MS (Faires, 1993)	1795	I-2477-92	1992
Nickel, ICP	1761	GEO1090	
Nickel, BIO, ICP/MS	6031	Unapproved	
Nickel, LL, FIL, GFAA (Fishman and Friedman, 1989)	1256	I-1501-85	1985
Nickel, WWR, GFAA (Fishman, 1993)	1563	I-4503-89	1989
Nickel, WWR, AA (Fishman and Friedman, 1989)	198	I-3499-85	1985
Niobium, ICP	1759	GEO1090	
Nitrogen, Ammonia, as N, FIL (Fishman, 1993)	1976	I-2522-90	1990
Nitrogen, Ammonia+Organic, as N, FIL	1985	Unapproved	
Nitrogen, Ammonia+Organic, as N, Total	1986	Unapproved	
Nitrogen, Nitrite, as N, FIL (Fishman, 1993)	1973	I-2540-90	1990
Nitrogen, Nitrate+Nitrate, as N, FIL (Fishman, 1993)	1975	I-2545-90	1990
Oxygen demand, chemical, BTM (Fishman and Friedman, 1989)	532	I-2556-85	1985
Oxygen demand, chemical, water	76	Unapproved	
P, Phosphate as P, ortho, FIL, PPMB (Fishman, 1993)	1974	I-2601-90	1990
P, Phosphate as P, ortho, LIS, FIL, IC (Fishman and Friedman, 1989)	1262	I-2058-85	85
P, Phosphate as P, ortho, LL, FIL (Fishman, 1993)	1978	I-2606-89	1989
P, Phosphate, ortho plus hydratable (Fishman and Friedman, 1989)	1987	I-4602-85	1985

Inorganic parameters--Continued	Lab. code	Method ID number	Pub. Year
P, Phosphate, ortho plus hydratable (Fishman and Friedman, 1989)	1988	I-2602-85	1985
P, Phosphorus as P, BTM, PPMB (Fishman, 1993)	515	I-6600-88	1988
P, Phosphorus as P, FIL, PPMB, ASF (Fishman and Friedman, 1989)	1983	I-2610-91	1991
P, Phosphorus as P, LL, FIL, PPMB (Fishman, 1993)	1981	I-2607-90	1990
P, Phosphorus as P, LL, WWR (Fishman, 1993)	1982	I-4607-90	1990
P, Phosphorus as P, WWR, PPMB (Fishman and Friedman, 1989)	1984	I-4610-91	1991
pH, lab., elec. (Fishman and Friedman, 1989)	68	I-2587-85	1985
pH, lab., LIS, elec. (Fishman, 1993)	1268	I-2588-90	1990
Phosphorus, as P, FIL (Fishman and Friedman, 1989)	1983	I-2610-91	1991
Phosphorus, as P Total (Fishman and Friedman, 1989)	1984	I-4610-91	1991
Phosphorus, ICP	1742	GEO1090	
Phosphorus, Orthophosphate, as P, FIL (Fishman, 1993)	1974	I-2601-90	1990
Potassium, BTM, AA (Fishman and Friedman, 1989)	698	I-5630-85	1985
Potassium, FIL, AA (Fishman and Friedman, 1989)	54	I-1630-85	1985
Potassium, LIS, FIL, AA (Fishman and Friedman, 1989)	833	I-1630-85	1985
Potassium, ICP	1739	GEO1090	
Potassium, WWR, USEPA, AA (Fishman and Friedman, 1989)	327	I-3631-85	1985
Potassium, WWR, USGS, AA (Fishman and Friedman, 1989)	321	I-3630-85	1985
Preparation for BTM (Fishman and Friedman, 1989)	1184	I-0520-85	1985
ROE, FIL @ 180C (Fishman and Friedman, 1989)	27	I-1750-85	1985
Scandium, ICP	1763	GEO1090	
Selenium, BTM, hydride, auto. (Fishman and Friedman, 1989)	517	I-6667-85	1985
Selenium, FIL, hydride, auto. (Fishman and Friedman, 1989)	87	I-2667-85	1985
Selenium, HA	1777	GEO1090	
Selenium, BIO, ICP/MS	6032	Unapproved	
Selenium, WWR, GFAA, USEPA	1585	EPA 270.2	1992
Selenium, WWR, hydride, auto. (Fishman and Friedman, 1989)	286	I-4667-85	1985
Silica as SiO <sub>2</sub> , FIL, ICP (Fishman, 1993)	667	I-1472-87	1987

**Appendix B--Methods**  
**Constituents in alphabetical order by Program--Continued**

Inorganic parameters--Continued	Lab. code	Method ID number	Pub. Year
Silica as SiO <sub>2</sub> , FIL, molybdate blue (Fishman and Friedman, 1989)	56	I-2700-85	1985
Silica as SiO <sub>2</sub> , LL, FIL, ICP (Fishman, 1993)	1275	I-1472-87	1987
Silver, FIL, GFAA (Fishman, 1993)	1552	I-2724-89	1989
Silver, FIL, ICP (Fishman, 1993)	723	I-1472-87	1987
Silver, FIL, ICP/MS (Faires, 1993)	1796	I-2477-92	1992
Silver, GFAA	1772	Unapproved	
Silver, LIS, GFAA (Damrau, 1993)	1863	I-2725-93	1993
Silver, BIO, ICP/MS (Faires, 1993)	6033	I-2477-92	1992
Silver, WWR, GFAA (Fishman, 1993)	1553	I-4724-89	1989
Sodium, BTM, AA (Fishman and Friedman, 1989)	699	I-3736-85	1985
Sodium, FIL, AA (Fishman and Friedman, 1989)	59	I-1735-85	1985
Sodium, FIL, ICP (Fishman, 1993)	675	I-1472-87	1987
Sodium, ICP	1741	GEO1090	
Sodium, LIS, FIL, AA (Fishman and Friedman, 1989)	834	I-1735-85	1985
Sodium, LL, FIL, ICP (Fishman, 1993)	1276	I-1472-87	1987
Sodium, WWR, AA, USEPA (Fishman and Friedman, 1989)	326	I-3736-85	1985
Sodium, WWR, AA, USGS (Fishman and Friedman, 1989)	320	I-3735-85	1985
Solids, ROE @ 105 deg C, FIL, GR (Fishman and Friedman, 1989)	159	I-1749-85	1985
Solids, ROE @ 105 deg C, SUS, GR (Fishman and Friedman, 1989)	169	I-3765-85	1985
Solids, ROE @ 105 deg C, total, GR (Fishman and Friedman, 1989)	165	I-3750-85	1985
Solids, ROE @ 180 deg C, FIL, GR (Fishman and Friedman, 1989)	27	I-1750-85	1985
Solids, VOI, BTM, GR (Fishman and Friedman, 1989)	516	I-5753-85	1985
Solids, VOI, FIL, GR (Fishman and Friedman, 1989)	229	I-1753-85	1985
Solids, VOI, SUS, GR (Fishman and Friedman, 1989)	49	I-3767-85	1985
Solids, VOI, total, GR (Fishman and Friedman, 1989)	85	I-3753-85	1985
Specific electrical conductance, lab. (Fishman and Friedman, 1989)	69	I-2781-85	1985

Inorganic parameters--Continued	Lab. code	Method ID number	Pub. Year
Specific electrical conductance, lab., LIS (Fishman and Friedman, 1989)	1269	I-1780-85	1985
Strontium, BTM, AA (Fishman and Friedman, 1989)	530	I-5800-85	1985
Strontium, FIL, AA (Fishman and Friedman, 1989)	62	I-1800-85	1985
Strontium, FIL, ICP (Fishman, 1993)	652	I-1472-87	1987
Strontium, ICP	1765	GEO1090	
Strontium, BIO, ICP/MS	6014	Unapproved	
Strontium, WWR, AA (Fishman and Friedman, 1989)	290	I-3800-85	1985
Sulfate, FIL, IC (Fishman and Friedman, 1989)	1572	I-2057-85	1985
Sulfate, LIS, FIL, IC (Fishman and Friedman, 1989)	1263	I-2058-85	85
Sulfide, WWR Iodometric (Fishman and Friedman, 1989)	89	I-3840-85	1985
Sulfur, IR	1780	Unapproved	
Tantalum, ICP	1766	GEO1090	
Thallium, FIL, GFAA (Fishman and Friedman, 1989)	492	I-1866-85	1985
Thorium, DNAA	1779	GD	
Thorium, ICP	1767	GEO1090	
Thorium, BIO, ICP/MS	6035	Unapproved	
Tin, ICP	1764	GEO1090	
Titanium, ICP	1743	GEO1090	
Turbidity as NTU, nephelometric (Fishman and Friedman, 1989)	50	I-3860-85	1985
Uranium, DNAA	1778	GD	
Uranium, FIL, ICP/MS (Faires, 1993)	1797	I-2477-92	1992
Uranium, ICP/MS	6036	Unapproved	
Vanadium, FIL, catalytic (Fishman and Friedman, 1989)	1210	I-2880-85	1985
Vanadium, FIL, ICP (Fishman, 1993)	653	I-1472-877	1987
Vanadium, ICP	1768	GEO1090	
Vanadium, ICP/MS	6037	Unapproved	
Water, percent, tissue	6047	Unapproved	
Ytterbium, ICP	1770	GEO1090	
Yttrium, ICP	1769	GEO1090	
Zinc, BTM, AA (Fishman and Friedman, 1989)	518	I-5900-85	1985
Zinc, FIL, AA (Fishman and Friedman, 1989)	67	I-1900-85	1985
Zinc, FIL, GFAA (Fishman and Friedman, 1989)	1257	I-1901-85	1985

**Appendix B--Methods**  
**Constituents in alphabetical order by Program-- Continued**

Inorganic parameters--Continued	Lab. code	Method ID number	Pub. Year
Zinc, FIL, ICP (Fishman, 1993)	671	I-1472-87	1987
Zinc, FIL, ICP/MS (Faires, 1993)	1798	I-2477-92	1992
Zinc, ICP	1771	GEO1090	
Zinc, BIO, ICP	6016	Unapproved	
Zinc, WWR, AA (Fishman and Friedman, 1989)	296	I-3900-85	1985

Radiochemical parameters	Reported as	Lab code	Method ID number	Pub. Year
Americium-241, FIL	Am-241	1961	Contract <sup>1</sup>	1994
Americium-241, SUS	Am-241	1962	Contract <sup>1</sup>	1994
Gamma counting, BTM	Cs-137 Ra-226	2004 2006	Contract <sup>1</sup>	1994
Gamma scan, BTM		212	Contract <sup>1</sup>	1994
Gamma scan, FIL (U.S. Environmental Protection Agency, 1980)		443	Contract <sup>1</sup>	1994
Gamma scan, SUS		1861	Contract <sup>1</sup>	1994
Gross alpha, BTM	Nat. U	1518	Contract <sup>1</sup>	1994
Gross alpha, BTM	Th-230	1520	Contract <sup>1</sup>	1994
Gross alpha, FIL (U.S. Environmental Protection Agency, 1980)	Th-230	1397	NWQL <sup>2</sup>	1994
Gross alpha, FIL (U.S. Environmental Protection Agency, 1980)	Nat. U	800	NWQL <sup>2</sup>	1994
Gross alpha, FIL, HS	Nat. U	1358	NWQL <sup>2</sup>	1994
Gross alpha, FIL, HS	Th-230	1445	NWQL <sup>2</sup>	1994
Gross alpha, SUS	Nat. U	1852	Contract <sup>1</sup>	1994
Gross alpha, SUS	Th-230	1854	Contract <sup>1</sup>	1994
Gross beta, BTM	Cs-137	1522	Contract <sup>1</sup>	1994
Gross beta, BTM	Cs-137	1522	Contract <sup>1</sup>	1994
Gross beta, BTM	Sr-90/ Y-90	1524	Contract <sup>1</sup>	1994
Gross beta, FIL (U.S. Environmental Protection Agency, 1980)	Cs-137	798	NWQL <sup>2</sup>	1994
Gross beta, FIL (U.S. Environmental Protection Agency, 1980)	Sr-90/ Y-90	793	NWQL <sup>2</sup>	1994
Gross beta, FIL, HS	Sr-90/	1359	NWQL <sup>2</sup>	1994
Gross beta, FIL, HS	Cs-137	1360	NWQL <sup>2</sup>	1994
Gross beta, SUS	Cs-137	1856	Contract <sup>1</sup>	1994
Gross beta, SUS	S4-89/ Y-90	1858	Contract <sup>1</sup>	1994
Lead-210, BIM	Pb-210	1182	Contract <sup>1</sup>	1994
Lead-210, BTM, gamma	Pb-210	1549	Contract <sup>1</sup>	1994
Lead-210, FIL	Pb-210	1503	Contract <sup>1</sup>	1994
Lead-210, SUS	Pb-210	1547	Contract <sup>1</sup>	1994
Plutonium-238, FIL	Pu-238	1963	Contract <sup>1</sup>	1994
Plutonium-238, SUS	Pu-238	1964	Contract <sup>1</sup>	1994

Radiochemical parameters--Continued	Reported as	Lab code	Method ID number	Pub. Year
Plutonium-239/240, FIL	Pu-239/ 240	1965	Contract <sup>1</sup>	1994
Plutonium-239/240, SUS	Pu-239/ 240	1966	Contract <sup>1</sup>	1994
Polonium-210, BTM	Po-210	1545	Contract <sup>1</sup>	1994
Polonium-210, FIL	Po-210	1505	Contract <sup>1</sup>	1994
Polonium-210, SUS	Po-210	1543	Contract <sup>1</sup>	1994
Radium-226, BTM	Ra-226	2006	Contract <sup>1</sup>	1994
Radium-226, BTM, gamma	Ra-226	1528	Contract <sup>1</sup>	1994
Radium-226, SUS	Ra-226	1531	Contract <sup>1</sup>	1994
Radium-226, FIL (U.S. Environmental Protection Agency, 1980)	Ra-226	794	Contract <sup>1</sup>	1994
Radium-226, FIL (U.S. Environmental Protection Agency, 1980)	Ra-226	799	Contract <sup>1</sup>	1994
Radium-228, BTM	Ra-228	1526	Contract <sup>1</sup>	1994
Radium-228, FIL	Ra-228	850	Contract <sup>1</sup>	1994
Radium-228, FIL (U.S. Environmental Protection Agency, 1980)	Ra-228	1364	Contract <sup>1</sup>	1994
Radium-228, SUS	Ra-228	1533	Contract <sup>1</sup>	1994
Radon-222, FIL	Rn-222	490	Contract <sup>1</sup>	1994
Radon-222, FIL	Rn-222	1369	NWQL <sup>2</sup>	1988
Strontium-90 FIL (U.S. Environmental Protection Agency, 1980)	Sr-90	795	Contract <sup>1</sup>	1994
Thorium-230, BTM	Th-230	1537	Contract <sup>1</sup>	1994
Thorium-230, FIL	Th-230	1472	Contract <sup>1</sup>	1994
Thorium-230, SUS	Th-230	1541	Contract <sup>1</sup>	1994
Thorium-232, BTM	Th-232	1535	Contract <sup>1</sup>	1994
Thorium-232, FIL	Th-232	1501	Contract <sup>1</sup>	1994
Thorium-232, SUS	Th-232	1539	Contract <sup>1</sup>	1994
Tritium (Thatcher and others, 1977)	H-3	452	R-1173-76 <sup>3</sup>	1976
Tritium, WWR (Thatcher and others, 1977)	H-3	1567	R-1174-76 <sup>3</sup>	1976
Tritium, WWR (Thatcher and others, 1977)	H-3	460	R-1174-76 <sup>3</sup>	1976
Tritium, WWR (Thatcher and others, 1977)	H-3	624	R-1174-76 <sup>3</sup>	1976
Tritium, WWR	H-3	1043	Contract <sup>1</sup>	1994
Tritium, WWR (Thatcher and others, 1977)	H-3	1565	R-1174-76 <sup>3</sup>	1976
Uranium, FIL	U	1006	Contract <sup>1</sup>	1994
Uranium, FIL (American Society for Testing and Materials, 1994)	U	1385	NWQL <sup>2</sup>	1995
Uranium, FIL (American Society for Testing and Materials, 1994)	U	1386	NWQL <sup>2</sup>	1995
Uranium-234, BTM	U-234	1509	Contract <sup>1</sup>	1994
Uranium-234, FIL	U-234	1366	Contract <sup>1</sup>	1994
Uranium-234, SUS	U-234	1474	Contract <sup>1</sup>	1994



**Appendix B--Methods**  
**Constituents in alphabetical order by Program-- Continued**

Radiochemical parameters--Continued	Reported as	Lab code	Method ID number	Pub. Year
Uranium-235, BTM	U-235	1515	Contract <sup>1</sup>	1994
Uranium-235, FIL	U-235	1367	Contract <sup>1</sup>	1994
Uranium-235, SUS	U-235	1476	Contract <sup>1</sup>	1994
Uranium-238, BTM	U-238	1511	Contract <sup>1</sup>	1994
Uranium-238, FIL	U-238	1368	Contract <sup>1</sup>	1994
Uranium-238, SUS	U-238	1507	Contract <sup>1</sup>	1994
<b>Stable Isotopes</b>				
Carbon-13/Carbon-12, whole water		440	Contract <sup>1</sup>	1995
C-13/C-12 and O-18/O-16		1243	NRP <sup>3</sup>	1987
Carbon-13/Carbon-12, carbonate rock		1135	Contract <sup>1</sup>	1995
Carbon-13/Carbon-12, gaseous CO <sub>2</sub>		1244	Contract <sup>1</sup>	1995
Carbon-13/Carbon-12, organic soil or rock material		1205	Contract <sup>1</sup>	1995
Carbon-14 (field precipitated)		1199	Contract <sup>1</sup>	1995
Carbon-14, AMS, AR		2010	Contract <sup>1</sup>	1995
Carbon-14, AMS, solid		2014	Contract <sup>1</sup>	1995
Carbon-14, beta, solid		2012	Contract <sup>1</sup>	1995
Carbon-13, rock		2016	Contract <sup>1</sup>	1995
Deuterium/protium, aq.		1574	NRP <sup>3</sup>	1991
Nitrogen-15/Nitrogen-14 ratio, solid as ammonia		1719	Contract <sup>1</sup>	1994
Nitrogen-15/Nitrogen-14 ratio, FIL as ammonia		1717	Contract <sup>1</sup>	1994
Nitrogen-15/Nitrogen-14 ratio, FIL as nitrate and ammonia		1921	Contract <sup>1</sup>	1994
Nitrogen-15/Nitrogen-14 ratio, FIL as nitrate		1718	Contract <sup>1</sup>	1994
Nitrogen-15/Nitrogen-14 ratio, solid as nitrate		1720	Contract <sup>1</sup>	1994
Oxygen-18/Oxygen-16, rock		1137	NRP <sup>3</sup>	1979
Oxygen-18/Oxygen-16 ratio, aqueous (Epstein and Maydea)		489	NRP <sup>3</sup>	1979
Sulfur-34/Sulfur-32, as sulfate (high concentration), aqueous		1951	NRP <sup>3</sup>	1994
Sulfur-34/Sulfur-32, as sulfate (low concentration) aqueous		1949	NRP <sup>3</sup>	1994
Sulfur-34/Sulfur-32, as sulfide, aqueous		1948	NRP <sup>3</sup>	1994
Sulfur-34/Sulfur-32, as sulfate, rock		1950	NRP <sup>3</sup>	1994
Sulfur-34/Sulfur-32, as sulfide, rock		1947	NRP <sup>3</sup>	1994
Sulfur-34/Sulfur-32, as sulfate		1952	NRP <sup>3</sup>	1994
Sulfur-34/Sulfur-32, as disulfide		1953	NRP <sup>3</sup>	1994
Sulfur-34/Sulfur-32, as monosulfide		1954	NRP <sup>3</sup>	1994

<sup>1</sup> These constituents are being analyzed at contract laboratories. The year listed is the beginning year for the current contract. Most references for private laboratories are not published due to proprietary information.

<sup>2</sup> These constituents are being analyzed at the NWQL. The year listed is when in-house work started.

<sup>3</sup> These constituents are being analyzed at National Research Program (NRP) laboratories in either Reston, Virginia, or Menlo Park, California.

NOTE: Specific information on these methods can be obtained by contacting the Radiochemical/Stable Isotope Unit at the NWQL.

## GLOSSARY

**2SPE.** The two-sigma precision estimate of a radiochemical measurement.

**Accuracy.** A measure of the degree of conformity of the values generated by a specific method or procedure with the true value. The concept of accuracy includes both bias (systematic error) and precision (random error) (Fishman and Friedman, 1989, p. 5).

**Acid extraction.** A procedure in which organic compounds are extracted from water samples with a solvent under acidic conditions.

**Acid neutralizing capacity (ANC).** The equivalent sum of all bases or base-producing materials in an aqueous system that can be titrated with a strong acid to an equivalence point.

**Alkalinity.** Represents the capacity of solutes in an aqueous system to neutralize acid.

**Analyte.** A substance being determined in an analysis.

**Atomic absorption (AA).** A technique of chemical analysis used mainly for determination of metallic elements. A water sample is aspirated into a laminar-flow flame which dries, desolvates, and atomizes the analyte(s). Light from a hollow cathode lamp of the element of interest is simultaneously shone through the flame, and its absorption by the analyte's vapor is measured. A comparison is made to absorption by standards treated in the same manner, and concentration is calculated.

**Automated (auto.).** Use of mechanical or computer modules to replace manual steps in chemical analysis procedures.

**Automated-segmented flow spectrophotometry (ASF).** A type of colorimetric analysis in which sample handling, reagent additions, mixing, and the colorimetric measurement itself all take place in small diameter tubes. The flow of fluids in the tubes is maintained by a peristaltic pump, and the reacting samples' volume is segmented by periodic introduction of air bubbles.

**Base/neutral acid extraction (BNA).** A procedure in which organic compounds are extracted from water samples with methylene chloride under basic conditions for later analysis by gas chromatography using a mass spectrometer as a detector.

**Bias.** Systematic error that is manifested as a consistent positive or negative deviation from the known or true value. It differs from random error which shows no such consistent or systematic deviation.

**Brine.** Water that contains dissolved solids at an approximate concentration of 30,000 mg/L or more (American Society for Testing and Materials, 1993, p. 5).

**Chain-of-custody (COC).** A system in which the person-to-person custody of samples is documented from the time of collection until the samples are introduced as evidence in legal proceedings. The NWQL offers three levels of COC (with added charges commensurate with the level of security), covering the time of receipt of the samples at NWQL to the time of their disposal. These three levels are routine (from residence in a secured facility to full COC in which the samples are kept under lock and key) with a completely documented paper trail of all contacts within the NWQL.

## GLOSSARY--Continued

**Chelation extraction (chel.).** A preparation and preconcentration method used prior to determination of a metal by atomic absorption (AA). A chemical complex of the metal to be determined is formed in the sample by reacting it with a chelating agent. The complex then is extracted into a smaller volume of organic solvent which then is determined by AA.

**Chemical waste.** Unusable by-products from many chemical and metal-processing operations that can contain toxic or hazardous materials that may become environmental contaminants if disposed of improperly.

**Cold vapor atomic absorption (CVAA).** A variation of atomic absorption in which the vapor of mercury is produced by chemical reduction and introduced into the photoabsorption area by a room-temperature carrier gas.

**Colorimetry.** A technique of chemical analysis in which a sample of water is mixed with a reagent known to form a colored complex or reaction product with the analyte of interest. The light absorbed by the sample in a broad band near the wavelength of interest is measured and compared to standards, from which a concentration is calculated. Compared to spectrophotometry, detection limits are usually lower, but interferences are more pronounced.

**Custom analysis (CA).** An analysis involving constituents, sample matrices, or concentration levels for which the NWQL does not have established procedures or thoroughly tested prospective methods. Custom analyses normally would involve extensive methods adaptation, new method development, or purchase of new equipment of a type not in use at the NWQL. It will require, by its pioneering nature, a more intensive expenditure of personnel than routine service. Such work, if not disruptive of the routine operations of the NWQL, will be scheduled upon request to, and approval from, the NWQL Chief. Charges to the requester will be on a cost basis: \$76 per hour for FY 1995, plus costs of any purchased equipment and supplies. Analytical results will be reported by formal memorandum from the analyst, documenting the method, the result, and all available quality-assurance data, which characterize the precision and accuracy of the method, plus any available information on interferences.

**Direct current plasma (DCP).** A technique for chemical analysis of the metallic elements in which a plasma of argon gas is generated by a direct current discharge. A sample is aspirated into the plasma, and a characteristic atomic emission is observed. The emission spectrum is compared to standards treated in the same manner, and concentrations are calculated.

**Dissolved (DIS).** Refers to constituents that exist in true chemical solution in a water sample; as a convenient operational definition used by agencies that collect water data, the term "dissolved" commonly is used to refer to constituents in a representative water sample passed through a 0.45-micrometer filter membrane for inorganic analysis or a 0.7-micrometer glass fiber filter for organic analysis.

**Electrometric (elec.).** Measurement of a physical or chemical property by the flow of electricity (for example, specific conductance).

**Electrometric titration (ET).** Potentiometric titration performed on a water sample to a fixed end point or to a stoichiometric equivalence point using a standard solution as a titrant.

**Filtered (FIL).** Pertains to constituents in a water sample passed through a filter membrane of specified pore diameter, most commonly 0.45 micrometer or less for inorganic analytes and 0.7 micrometer for organic analytes.

**Gas chromatography (GC).** A method of chemical analysis used for organic compounds. The sample, or an extract of it, is injected into a heated port through which a carrier gas flows. The volatilized sample is swept into a long heated tube coated with a material (the stationary phase) that has varied affinities for the compounds of interest. These compounds are retarded in their passage by characteristic times. The exiting carrier gas then is analyzed by detectors sensitive to various physical/chemical properties (electron capture - ECD, flame ionization - FID, flame photometry-FPD, the presence of nitrogen or phosphorus - NPD, mass spectrometer - MS), and responses generated by standard materials are compared.

**Gas chromatography/mass spectrometry (GC/MS).** A combination chemical analysis technique in which a mass spectrometer is used as a detector for a GC.

**Graphite furnace atomic absorption (GFAA).** A variation on atomic absorption (AA) in which a sample is injected into an electrically heated graphite tube placed in the area of photon absorption. Desolvation and vaporization occur separately under controlled conditions, and many interferences can be differentially vaporized. GFAA usually results in lower detection limits than AA.

**Gravimetric analysis (GR).** A method of chemical analysis in which the weight of a constituent is measured on a calibrated analytical balance.

**Hazardous analysis (HA).** Any material requiring special handling that otherwise could damage the health or well-being of humans or the ecosystem. These materials include corrosives, flammables, and toxic agents such as drugs, chemicals and natural or synthetic products that are harmful, whose effects range from skin irritations to death. Arrangements with the NWQL must be made in advance for special laboratory handling techniques to be used.

**High-performance liquid chromatography (HPLC).** A technique of chemical analysis often used to determine organic compounds not amenable to GC analysis because of low volatility, thermal instability, or polarity. The mobile phase is a mixture of solvents, sometimes dynamically varying throughout the analysis; the stationary phase resembles that of GC in having varying chemical affinities for the analytes; and detection is accomplished by a variety of techniques, including ultraviolet light absorption and fluorescence.

**High solids (HS).** A sample having solids or particulates greater than 250 mg/L. Used in distinguishing between radiochemical methods of analysis.

**Hydride generation (hyd).** A chemical technique that forms gaseous hydrides of an element prior to its determination by AA. By forming a gaseous compound, the constituent can be removed from an aqueous matrix that might otherwise interfere with its determination.

**Inductively coupled plasma (ICP).** An optical emission method of analysis in which elements in samples are desolvated, atomized, and excited in an argon plasma. A sample is aspirated into the plasma, and characteristic atomic emissions are observed. The emission spectrum is compared to standards treated in the same manner, and concentrations are calculated. At the NWQL, up to 20 elements can be determined simultaneously by this method.

**Ion chromatography (IC).** A technique for chemical analysis of inorganic ions. With reference to GC, the mobile phase is aqueous, the stationary phase is a special ion-exchange resin of very low-ionic capacity, and the detection system is usually based on specific conductance.

**Laboratory code (LC).** A 1- to 4-digit code in the Services Catalog, always preceded by the letters "LC," which uniquely represents a parameter determined by a particular method of chemical analysis. For example, iron by AA and iron by ICP have different LC's.

## GLOSSARY--Continued

**Limited analysis (L).** An analysis performed using an approved method but for which the Laboratory has only a limited capacity because of staffing level, space, equipment, or other considerations. As demand increases, the NWQL will try to budget for the necessary expansion, but meanwhile, time delays in reporting results can be expected if demand exceeds capacity. An arrangement for more than a few limited analyses requires considerable advanced planning for removal of the constraints. Project Chiefs requiring unusual numbers of limited analyses need to provide advance notice to the appropriate Program Chief of the NWQL as soon as the need becomes apparent, that is, during the early stages of project planning. In the case of large national programs, this lead time has been in the 2- to 4-year range and has included funding for expansion.

**Low-ionic strength (LIS).** Sample with a low dissolved-salt content (less than 100  $\mu\text{S}/\text{cm}$  specific conductance). This is a criterion for accepting requests for specialized inorganic analyses. The LIS samples undergo specialized determinations developed specifically for these relatively pure samples.

**Low-level analysis (LL).** A type of inorganic analysis characterized by low levels of dissolved analytes. The criterion for this type of analysis varies for each specific constituent. Samples for LL determinations need not be LIS samples.

**Mass spectrometry (MS).** A technique of chemical analysis usually determining trace elements. A sample or its extract is volatilized in a vacuum, and ions are produced. The analyte's ions usually break into smaller ions, and each mass is detected electronically. By the pattern of ions detected, the original (parent) compound's structure can be deduced. Alternately, the ions may come from the plasma of an ICP, and the analytically useful ones are atomic ions, which are determined without structural interpretation.

**Method code (MC).** A letter code associated with a parameter code that uniquely identifies the analytical method used to determine a constituent.

**Method detection limit (MDL).** The minimum concentration of a substance that can be identified, measured, and reported with 99-percent confidence that the analyte concentration is greater than zero; determined from analysis of a sample in a given matrix containing analyte.

**Methylene blue active substances (MBAS).** A method of determining detergent-like compounds using colorimetry to detect their reaction product with methylene blue.

**Minimum-reporting level (MRL).** The smallest measured concentration of a constituent that may be reliably reported using a given analytical method. In many cases, the MRL is used when documentation for the method detection limit is not available.

**Periphyton.** The assemblage of microorganisms attached to and living upon submerged-solid surfaces.

**pH.** Represents the negative base-ten logarithm of hydrogen ion activity of a solution in moles per liter.

**Phytoplankton.** The community of suspended or floating plants that drift passively with water currents.

**Precision.** The degree of similarity among independent measurements of the same quantity, without reference to the known or true value (V.R. Schneider, U.S. Geological Survey, written commun., 1990).

## GLOSSARY--Continued

**Priority analysis.** The priority assigned to an analysis that will result in an expedited analysis. Arrangements for these priorities need to be made with the appropriate Program Chief(s) prior to submitting samples. Requests are submitted in writing, and confirmation from the Chief(s) will be in writing. If the requested turnaround time cannot be established, the Chief, NWQL, should be contacted to reconcile the request. If the priority work cannot be accommodated without disrupting the flow of work, a surcharge may be incurred.

**Reanalysis.** Reanalyzing a sample for the analyte in question. Reanalysis is requested when there is a discrepancy between the value in question and historical data, or when there is knowledge, such as site characteristics, that leads the project chief to believe the value is out of an expected range.

**Recoverable bottom material.** The amount of a given constituent that is in solution after a bottom-material sample has been extracted or digested by a method that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not commonly achieved by these treatments, and there is reason to believe that the determination represents less than the total amount (less than 95 percent) of the constituent sought in the sample. To ensure comparability of analytical data, equivalent digestion procedures (identical reagent strengths and volumes, identical digestion or extraction times, and identical temperatures) need to be used by all laboratories performing such analyses.

**Regular analysis.** An analysis that is performed routinely by the laboratory in which the concentration of the constituent of interest and the analytical interferences are within the limits specified in approved methods for that constituent, or need little additional work beyond simple dilution. Regular samples will be accepted by the NWQL without advance notice. Samples not meeting these criteria are classified as custom or special analyses.

**Residue on evaporation (ROE).** A gravimetric measure of volatile and nonvolatile substances in a water sample by evaporation and drying to 105°C, then weighing the remaining substances. ROE also may be performed at 180° and 550°C.

**Sample designation.** Symbols that specify the type of container and pre-treatment of the sample. These symbols must be marked on the sample container.

**Schedule number (SC).** A one- to four-digit number which denotes a group of laboratory codes determined as a unit. Schedules may be formulated by the NWQL, by a national program, or by a USGS district. Schedules not formulated by the NWQL need to be submitted to the NWQL first to be checked for chemical rationality, length of parameter list, and price. Schedules must contain parameters of one type only (for example, "WO" organic may not be mixed with "WI" inorganic). Any non-NWQL owner may change or delete their schedule contents at any time.

**Solid phase extraction (SPE).** Solid phase extraction is analogous to liquid/liquid extraction. As a liquid sample is passed through the SPE column, compounds are extracted from the samples onto the sorbent material in the column.

**Special analysis.** An analysis not routinely performed in the NWQL. These analyses usually do not involve major efforts of development as do custom analyses, but may involve modifications for special matrix or concentration effects. However, they may involve timing or pricing considerations, such as request for a priority status, or special pricing for unusually large batches of samples. Requests for special analyses follow the form for custom analyses: a written request to, and reply from, the Chief, NWQL, an agreement on price and turnaround time, and an agreement on technical approach to the problem.

## GLOSSARY--Continued

**Spectrophotometry.** A technique of chemical analysis in which a sample of water is mixed with a reagent known to form a colored complex or reaction product with the parameter of interest. The light absorbed by the sample at a specific wavelength is measured and compared to standards. Compared to colorimetry, this technique is less prone to interferences from other reaction products or from colored constituents in the sample.

**Specific electrical conductance (SEC).** A measure of the electrical conductance of a substance normalized to unit length and unit cross-section at a specified temperature.

**Spike.** An addition of a known quantity of one or more compounds of interest to the sample prior to analysis. This analysis yields data on the results that can be expected from a suite of similar samples (accuracy) when used with a synthetic matrix, and on the influence of matrix effects (recovery data) when used with the sample's matrix.

**Surrogate.** A compound similar in physical and chemical properties to the analytes of interest, which is added to the sample upon receipt in the laboratory (or ideally, at the time of field sampling). A surrogate is not used as an internal standard for quantitative measurement purposes. Surrogates may be added to every sample to provide quality control by monitoring for matrix effects and gross sample-processing errors. They should not occur naturally or be present in polluted samples. Also called "surrogate spike."

**Suspended, recoverable.** Pertains to the constituents extracted from suspended sediment retained on a filter. Complete extraction generally is not achieved, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the suspended phase of the sample. To achieve comparability of analytical data, laboratories performing such analyses would have to use equivalent-extraction procedures because different extraction procedures are likely to produce different analytical results. Determination of "suspended, recoverable" constituents is made either by analyzing portions of the material collected on the filter or, more commonly, by computing the difference between (1) dissolved and (2) total recoverable concentrations of the constituent.

**Suspended, total.** Pertains to the constituents of the suspended materials that are retained on a filter. This term is used only when the analytical procedure ensures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as of the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by computing the difference between (1) dissolved and (2) total concentrations of the constituent.

**Titrimetry.** A technique of chemical analysis in which an accurately measured volume of solution of known concentration reacts with an exact quantity of the substance being determined.

**Total.** Pertains to the constituents in an unfiltered, representative water-suspended-sediment sample. This term is used only when the analytical procedure ensures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. Knowledge of the expected form of the constituent in the sample, as well as of the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating that the sample consists of a water-suspended-sediment mixture and that the analytical method determines all of the constituents in the sample.)

**Total in bottom material.** Pertains to constituents in a representative sample of bottom material. This term is used only when the analytical procedure ensures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as of the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

## GLOSSARY--Continued

**Verification.** Analysts verify analytical results by reviewing paperwork or computer files that reflect the analysis that the sample in question is a part of. Any discrepancies are corrected and the customer notified of results.

**Volatile on ignition (VOI).** A gravimetric measure of the matter leaving a sample between the temperatures of 105 and 600°C. Oxidation as well as true evaporation may be involved.

**Volatile organic compounds (VOC).** A compound having high-vapor pressure and low-water solubility. VOC are typically industrial solvents, constituents in petroleum-fuel products, or by-products produced by chlorination in water treatment.

**Volume or weight needed.** The volume or weight of sample necessary for analysis. When more than one determination is requested, it may be different from the sum of weights or volumes needed for each constituent because many NWQL techniques yield multiple determinations simultaneously. When sample amount is limited and a schedule is not used in the request for analytical services, the NWQL needs to be consulted about the actual quantity needed.

**Whole water, recoverable (WWR).** Pertains to the constituents in solution after an unfiltered representative water-suspended-sediment sample is digested (usually using a dilute acid solution). Complete dissolution of particulate matter often is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. For inorganic determinations, digestions are performed in the original sample container to ensure digestion of material absorbed on the container walls. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.



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Periphyton, biomass, ash weight	611	572	A	671 27 1708 27	Barium, FIL, ICP/MS	1786	01005	G	1050 39 2703 40
Periphyton, biomass, dry weight	603	573	A	671 27 1708 27	Barium, ICP	1745	34850	A	2400 37
Periphyton, chlorophyll a	588	70957	A	1507 27 1708 27	Barium, WWR, AA	234	01007	A	-- 31
Periphyton, chlorophyll b	589	70958	A	1507 27 1708 27	Beryllium, BTM, AA	522	01013	A	-- 29
Phytoplankton, biomass, ash weight	621	81353	A	666 27 1509 27	Beryllium, FIL, AA	170	01010	A	-- 31
Phytoplankton, biomass, dry weight	620	81354	A	666 27 1509 27	Beryllium, FIL, ICP	655	01010	B	-- 31 1043 39
Phytoplankton, chlorophyll a	586	70953	A	1508 27 1509 27	Beryllium, FIL, ICP/MS	1787	01010	G	1050 39 2703 40
Phytoplankton, chlorophyll b	587	70954	A	1508 27 1509 27	Beryllium, ICP	1746	34810	A	2400 37
					Beryllium, ICP/MS	6021	00000	B	2200 41
					Beryllium, WWR, AA	236	01012	A	-- 31
					Bismuth, ICP	1747	34816	A	2400 37
					Boron, BTM, DCP	1285	1023	C	-- 29
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					Boron, ICP	6003	00000	A	2200 41
					Boron, WWR, DCP	1286	01022	B	-- 31
					Bromide, FIL	1246	71870	E	2750 40
					Bromide, FIL, fluorescein, ASF	1246	71870	E	-- 31
					Bromide, LIS, FIL, IC	1258	71870	F	-- 31
					Cadmium, BTM, AA	502	01028	B	-- 29
					Cadmium, FIL, AA	126	01025	A	-- 31
					Cadmium, FIL, GFAA	1554	01025	F	-- 31
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					Cadmium, FIL, GFAA	1773	34825	B	2400 37
					Cadmium, ICPC/MS	6023	00000	B	2200 41
					Cadmium, LL, FIL, GFAA	1250	01025	E	-- 31
					Cadmium, WWR, AA	131	01027	A	-- 31
					Cadmium, WWR, GFAA	1555	01027	F	-- 31
					Calcium, BTM, AA	696	917	A	-- 29
					Calcium, FIL	659	00915	D	2701 39 2750 40
					Calcium, FIL, AA	12	00915	C	-- 31
					Calcium, FIL, ICP	659	00915	D	-- 31 146 39 1043 39
					Calcium, ICP	1737	43830	A	2400 37
					Calcium, LIS, FIL, AA	831	00915	B	-- 31
					Calcium, LIS, FIL, ICP	1273	00915	E	-- 31
					Calcium, WWR, AA, USEPA	324	00916	A	-- 31
					Calcium, WWR, AA, USGS	224	00916	B	-- 31
					Carbon, total	1781	00000	F	2400 37
					Carbon, carbonate (inorganic)	1782	00000	G	2400 37
					Carbon, organic	1783	00000	G	2400 37
					Cerium, ICP	1748	34835	A	2400 37
					Chloride, FIL	1571	00940	E	2701 39 2750 40
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Acidity as H, lab., LIS, W"	1266	71825	B	-- 31					
Acidity as H, lab., WWR	1	71825	A	-- 31					
Alkalinity as CaCO <sub>3</sub> , lab.	70	90410	A	-- 31 2701 39 2750 40					
Alkalinity as CaCO <sub>3</sub> , lab., LIS, WWR	1270	90410	B	-- 31					
Aluminum, BTM, DCP	1282	01108	C	-- 29					
Aluminum, FIL, DCP	1284	01106	E	-- 31					
Aluminum, FIL, ICP/MS	1784	01106	G	1050 39 2703 40					
Aluminum, ICP	1736	34790	A	2400 37					
	6000	00000	A	2200 41					
Aluminum, WWR, DCP	1283	01105	C	-- 31					
Antimony, BTM, AA, hydride	534	01098	A	-- 29					
Antimony, FIL, AA, hydride	77	01095	A	-- 31					
Antimony, FIL, ICP/MS	1785	01095	G	1050 39 2703 40					
Antimony, ICP/MS	6018	00000	B	2200 41					
Antimony, HA	1776	34795	D	2400 37					
Antimony, WWR, AA, hydride	80	1097	A	-- 31					
Arsenic, BTM, AA, hydride	597	1003	C	-- 29					
Arsenic, FIL	112	01000	B	2703 40					
Arsenic, FIL, AA, hydride	112	01000	B	-- 31					
Arsenic, HA	1775	34800	D	2400 37					
Arsenic, ICP/MS	6019	00000	B	2200 41					
Arsenic, WWR, AA, hydride	118	01002	B	-- 31					
Arsenic, WWR, GFAA, USEPA	1584	01002	C	-- 31					
Barium, BTM, AA	521	01008	A	-- 29					
Barium, FIL, AA	7	01005	B	-- 31					
Barium, FIL, ICP	641	01005	C	-- 31 1043 39					

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Chloride, LIS, FIL, IC	1259	00940	I	-- 31	Gallium, ICP	1753	34860	A	2400 37
Chromium, BTM, AA	505	1029	B	-- 29	Gold, ICP	1744	34870	A	2400 37
Chromium, FIL, GFAA	1936	01030	I	-- 32	Holmium, ICP	1754	34875	A	2400 37
Chromium, FIL, ICP/MS	1789	01030	G	1050 39 2703 40	ICP set up	2002		A	2750 40
Chromium, FIL, ICP	722	01030	E	-- 32 1043 39	Iodide, FIL, ceric-arsenious	1202	71865	D	-- 32
Chromium, Hexavalent, FIL, chel.	16	01032	A	-- 32	Iron, BTM, AA	190	1170	B	-- 29
Chromium, ICP	1750	34840	A	2400 37	Iron, FIL	645	01046	D	2701 39 2750 40
	6005	00000	A	2200 41	Iron, FIL, AA	172	01046	C	-- 32
Chromium, LL, FIL, GFAA	1251	01030	D	-- 32	Iron, FIL, ICP	645	01046	D	-- 32 146 39 1043 39
Chromium, WWR, AA	246	01034	B	-- 32	Iron, ICP	1738	34880	A	2400 37
Chromium, WWR, GFAA	1937	01034	E	-- 32		6008	00000		2200 41
Cobalt, BTM, AA	506	01038	B	-- 29	Iron, LIS, FIL, ICP	1271	01046	E	-- 32
Cobalt, FIL, AA	148	01035	A	-- 32	Iron, WWR, AA	189	01045	B	-- 32
Cobalt, FIL, GFAA	1556	01035	F	-- 32	Lanthanum, ICP	1755	34855	B	2400 37
Cobalt, FIL, ICP	644	01035	C	-- 32 1043 39	Lead, BTM, AA	510	01052	B	-- 29
Cobalt, FIL, ICP/MS	1790	1035	G	1050 39 2703 40	Lead, FIL, AA	191	01049	A	-- 32
Cobalt, ICP/MS	6025	00000	B	2200 41	Lead, FIL, GFAA	1560	01049	F	-- 32
Cobalt, ICP	1749	34845	A	2400 37	Lead, FIL, ICP	646	01049	C	-- 32 1043 39
Cobalt, LL, FIL, GFAA	1252	01035	E	-- 32	Lead, FIL, ICP/MS	1792	01049	G	1050 39 2703 40
Cobalt, WWR, AA	149	01037	A	-- 32	Lead, ICP	1762	34890	A	2400 37
Cobalt, WWR, GFAA	1557	01037	F	-- 32	Lead, ICP/MS	6028	00000	B	2200 41
Color reported in Pt-Co Units	20	00080	A	-- 32	Lead, LL, FIL, GFAA	1254	01049	E	-- 32
Copper, BTM, AA	507	01043	B	-- 29	Lead, WWR, AA	192	01051	A	-- 32
Copper, FIL, AA	151	01040	A	-- 32	Lead, WWR, GFAA	1561	01051	F	-- 32
Copper, FIL, GFAA	1558	01040	F	-- 32	Lithium, BTM, AA	541	01133	A	-- 29
Copper, FIL, ICP	657	01040	C	-- 32 1043 39	Lithium, FIL, AA	39	01130	A	-- 32
Copper, FIL, ICP/MS	1791	1040	G	1050 39 2703 40	Lithium, FIL, ICP	664	01130	B	-- 32 1043 39
Copper, ICP	1751	34850	B	2400 37	Lithium, ICP	1756	34895	A	2400 37
	6007	00000	A	2200 41	Lithium, WWR, AA	277	01132	A	-- 32
Copper, LL, FIL, GFAA	1253	01040	E	-- 32	Magnesium, BTM, AA	697	924	A	-- 29
Copper, WWR, AA	156	01042	A	-- 32	Magnesium, FIL	663	00925	C	2701 39 2750 40
Copper, WWR, GFAA	1559	01042	F	-- 32	Magnesium, FIL, AA	40	00925	B	-- 33
Cyanide, BTM, barbituric acid, ASF	1235	00721	B	-- 29	Magnesium, FIL, ICP	663	00925	C	-- 33 146 39 1043 39
Cyanide, FIL, barbituric acid, ASF	880	00723	A	-- 32	Magnesium, ICP	1740	34900	A	2400 37
Cyanide, WWR, barbituric acid, ASF	23	00720	A	-- 32	Magnesium, LIS, FIL, AA	832	00925	A	-- 33
Density @ 20 degrees C, FIL, GR	24	71820	A	-- 32	Magnesium, LIS, FIL, ICP	1274	00925	D	-- 33
Digestion for As and Se, USEPA	1586	00000	B	-- 32	Magnesium, WWR, USEPA, AA	325	00927	A	-- 33
Digestion for trace metals, BTM	647	LC647	A	-- 29	Magnesium, WWR, USGS, AA	261	00927	B	-- 33
Digestion for trace metals, USEPA	124	99447	A	-- 32	Manganese, BTM, AA	512	1053	A	-- 29
Digestion for trace metals, USGS	1735	99870	B	-- 32	Manganese, FIL	648	01056	C	2701 39 2750 40
Digestion, inorganic tissue	6048		A	2200 41	Manganese, FIL, AA	42	01056	A	-- 33
Europium, ICP	1752	34855	A	2400 37					
Fluoride, FIL	31	00950	E	2701 39 2750 40					
Fluoride, FIL, ISE	31	00950	B	-- 32					



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Manganese, FIL, ICP	648	01056	C	-- 33	Nitrogen, Ammonia, as N, FIL	1976	00608	B	2702 40
				146 39					2752 40
				1043 39	Nitrogen, Ammonia+Organic, as N, FIL	1985	00623	C	2702 40
Manganese, FIL, ICP/MS	1793	1056	G	1050 39					2752 40
				2703 40	Nitrogen, Ammonia+Organic, as N, Total	1986	00625	C	2702 40
Manganese, ICP	1757	34905	A	2400 37	Nitrogen, Nitrite, as N, FIL	1973	00613	B	2702 40
	6010	00000	A	2200 41					2752 40
Manganese, LIS, FIL, ICP	1272	01056	E	-- 33	Nitrogen, Nitrate+Nitrate, as N, FIL	1975	00631	B	2702 40
Manganese, LL, FIL, GFAA	1255	01056	D	-- 33					2752 40
Manganese, WWR, AA	41	01055	A	-- 33	Oxygen demand, chemical, BTM	532	00339	A	-- 29
Mercury, BTM, CVAA	511	71921	A	-- 29	Oxygen demand, chemical, water	76	00340	B	-- 33
Mercury, CVAA	1774	34910	C	2400 37	P, Phosphate as P, ortho, FIL, PPMB	1974	00671	B	-- 33
	6046	00000	A	2200 41	P, Phosphate as P, ortho, LIS, FIL, IC	1262	00671	6	-- 34
Mercury, FIL, CVAA, auto.	226	71890	B	-- 33	P, Phosphate as P, ortho, LL, FIL	828	00671	A	-- 34
Mercury, WWR, CVAA	227	71900	B	-- 33	P, Phosphate, ortho plus hydratable	282	00678	A	-- 34
Moisture content by weight	904	00495	B	-- 33	P, Phosphate, ortho plus hydratable	279	00677	A	-- 34
Molybdenum, BTM, AA	523	01063	A	-- 29	P, Phosphorus as P, BTM, PPMB	515	00668	B	-- 29
Molybdenum, FIL, GFAA	1998	01060	B	-- 33	P, Phosphorus as P, FIL, PPMB, ASF	1983	00666	C	-- 34
Molybdenum, FIL, ICP	649	01060	A	33	P, Phosphorus as P, LL, FIL, PPMB	829	00666	A	-- 34
				1043 39	P, Phosphorus as P, LL, WWR	837	00665	A	-- 34
Molybdenum, FIL, ICP/MS	1794	01060	G	1050 39	P, Phosphorus as P, WWR, PPMB	1984	00665	C	-- 34
				2703 40	pH, lab.	68	00403	A	-- 34
Molybdenum, ICP	1758	34915	A	2400 37					146 39
Molybdenum, ICP/MS	6030	00000	B	2200 41					1043 39
Molybdenum, WWR, GFAA	1999	01062	A	-- 33					1050 39
N, Ammonia as N, BTM	524	00611	A	-- 29					2701 39
N, Ammonia as N, FIL, colorimetric	301	00608	B	-- 29					2703 40
N, Ammonia as N, LL, FIL	830	00608	A	-- 33					2750 40
N, NH3+organic N as N, FIL	1985	00623	C	-- 33	pH, lab., LIS, elec.	1268	00403	B	-- 34
N, NH3+organic N as N, BTM	1211	00626	C	-- 29	Phenols, total	52	32730	A	-- 34
N, NH3+organic N as N, WWR	1986	00625	C	-- 33	Phosphorus, as P, FIL	1983	00666	C	2702 40
N, Nitrate as N, LIS, FIL, IC	1261	00618	D	-- 33					2752 40
N, Nitrite as N, FIL, diazotization	1973	00613	B	-- 33	Phosphorus, as P Total	1984	00665	C	2702 40
N, Nitrite as N, LL, FIL, ASF	827	00613	A	-- 33	Phosphorus, ICP	1742	34935	A	2400 37
N, Nitrite plus nitrate as N, BTM	513	00633	A	-- 29	Phosphorus, Orthophosphate, as P, FIL	1974	00671	B	2702 40
N, Nitrite plus Nitrate as N, FIL	1975	00631	B	-- 33					2752 40
N, Nitrite plus Nitrate as N, LL, FIL	826	00631	A	-- 33	Potassium, BTM, AA	698	00938	A	-- 29
N, Total nitrogen as N, FIL, Antek	1570	00602	B	-- 33	Potassium, FIL	54	00935	A	2701 39
Neodymium, ICP	1760	34920	A	2400 37					2750 40
Nickel, BTM, AA	519	01068	B	-- 29	Potassium, FIL, AA	54	00935	B	-- 34
Nickel, FIL, AA	197	01065	A	-- 33	Potassium, LIS, FIL, AA	833	00935	A	-- 34
Nickel, FIL, GFAA	1562	01065	F	-- 33	Potassium, ICP	1739	34790	A	2400 37
Nickel, FIL, ICP	721	01065	E	-- 33	Potassium, WWR, USEPA, AA	327	00937	A	-- 34
				1043 39	Potassium, WWR, USGS, AA	321	00937	B	-- 34
Nickel, FIL, ICP/MS	1795	1065	G	1050 39	Preparation for BTM	1184	LC	A	-- 29
				2703 40					1184
Nickel, ICP	1761	34925	A	2400 37	ROE, FIL @ 180C	27	70300	A	2701 39
Nickel, ICP/MS	6031	00000	B	2200 41					2750 40
Nickel, LL, FIL, GFAA	1256	01065	D	-- 33	Scandium, ICP	1763	34945	A	2400 37
Nickel, WWR, GFAA	1563	01067	F	-- 33	Selenium, BTM, hydride	517	01148	A	-- 29
Nickel, WWR, AA	198	01067	A	-- 33	Selenium, FIL, hydride, auto.	87	01145	A	-- 34
Niobium, ICP	1759	34930	A	2400 37					2703 40
					Selenium, HA	1777	34950	D	2400 37

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Inorganic parameters--Continued	Lab. code	Para- meter code	Sche- dule	Pg.	Inorganic parameters--Continued	Lab. code	Para- meter code	Sche- dule	Pg.		
Selenium, ICP/MS	6032	00000	B	2200	41	Strontium, WWR, AA	290	01082	A	--	35
Selenium, WWR, GFAA, USEPA	1585	01147	B	--	34	Sulfate, FIL	1572	00945	G	2701	39
Selenium, WWR, hydride, auto.	286	01147	A	--	34					2750	40
Silica as SiO <sub>2</sub> , FIL, ICP	667	00955	D	--	34	Sulfate, FIL, IC	1572	00945	G	--	35
				146	39	Sulfate, LIS, FIL, IC	1263	00945	E	--	35
				1403	39	Sulfide, WWR Iodometric	89	00745	A	--	35
				2701	39	Sulfur, IR	1780	34970	F	2400	37
				2750	40	Tantalum, ICP	1766	34975	A	2400	37
Silica as SiO <sub>2</sub> , FIL, molybdate blue	56	00955	C	--	34	Thallium, FIL, GFAA	492	01057	A	--	35
Silica as SiO <sub>2</sub> , LIS, FIL, ICP	1275	00955	E	--	34	Thorium, DNAA	1779	34980	E	2400	37
Silver, FIL, GFAA	1552	01075	F	--	34	Thorium, ICP	1767	34980	A	2400	37
Silver, FIL, ICP	723	01075	C	--	34	Tin, ICP	1764	34985	A	2400	37
				1043	39	Titanium, ICP	1743	00000	A	2400	37
Silver, FIL, ICP/MS	1796	1075	G	1050	39	Turbidity as NTU, nephelometric	50	00076	A	--	35
				2703	40	Uranium, DNAA	1778	35000	E	2400	37
Silver, GFAA	1772	34955	B	2400	37	Uranium, FIL, ICP/MS	1797	22703	G	1050	39
Silver, ICP/MS	6033	00000	B	2200	41					2703	40
Silver, WWR, GFAA	1553	01077	F	--	34	Uranium, ICP/MS	6036	00000	B	2200	41
Sodium, BTM, AA	699	00934	A	--	30	Vanadium, FIL, catalytic	1210	01085	D	--	35
Sodium, FIL	675	00930	C	2701	39	Vanadium, FIL, ICP	653	01085	B	--	35
				2750	40					1043	39
Sodium, FIL, AA	59	00930	B	--	34	Vanadium, ICP	1768	35005	A	2400	37
Sodium, FIL, ICP	675	00930	C	--	34	Vanadium, ICP/MS	6037	00000	B	2200	41
				1043	39	Water, percent, tissue	6047	00000	A	2200	41
				146	39	Ytterbium, ICP	1770	35015	A	2400	37
Sodium, ICP	1741	34960	A	2400	37	Yttrium, ICP	1769	35010	A	2400	37
Sodium, LIS, FIL, AA	834	00930	A	--	34	Zinc, BTM, AA	518	01093	A	--	30
Sodium, LIS, FIL, ICP	1276	00930	D	--	34	Zinc, FIL, AA	67	01090	A	--	35
Sodium, WWR, AA, USEPA	326	00929	A	--	34	Zinc, FIL, GFAA	1257	01090	D	--	35
Sodium, WWR, AA, USGS	320	00929	B	--	34	Zinc, FIL, ICP	671	01090	B	--	35
Solids, ROE @ 105 deg C, FIL, GR	159	00515	B	--	34					1043	39
Solids, ROE @ 105 deg C, SUS, GR	169	00530	B	--	34	Zinc, FIL, ICP/MS	1798	1090	G	1050	39
Solids, ROE @ 105 deg C, total, GR	165	00500	A	--	34					2703	40
Solids, ROE @ 180 deg C, FIL, GR	27	70300	A	--	34	Zinc, ICP	1771	35020	A	2400	37
Solids, VOI, BTM, GR	516	00496	A	--	30		6016	00000	A	2200	41
Solids, VOI, FIL, GR	229	00520	A	--	34	Zinc, WWR, AA	296	01092	A	--	35
Solids, VOI, SUS, GR	49	00535	A	--	34						
Solids, VOI, total, GR	85	00505	A	--	35						
Specific electrical conductance, lab.	69	90095	A	--	35						
				146	39						
				1043	39						
				1050	39						
				2701	39						
				2703	40						
				2750	40						
Specific electrical conductance, lab., LIS	1269	90095	B	--	35						
Strontium, BTM, AA	530	01083	A	--	30						
Strontium, FIL, AA	62	01080	A	--	35						
Strontium, FIL, ICP	652	01080	B	--	35						
				1043	39						
Strontium, ICP	1765	34965	A	2400	37						
Strontium, ICP	6014	00000	A	2200	41						

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Organic parameters--Continued	Lab. code	Parameter	Schedule	Pg.
<b>BOTTOM MATERIAL</b>				
Acenaphthene	1112	34208 A	1384	46
			1386	47
	5211	49429 B	2502	48
Acenaphthylene	113	34203 A	1384	46
			1386	47
	5212	49428 B	2502	48
Acridine	5276	49430 B	2502	48
Aldrin	361	39333 A	1325	45
			1335	45
	5001	48318 B	2501	47
C8-Alkylphenol	5256	49424 B	2502	48
Anthracene	1114	34223 A	1384	46
			1386	47
	5213	49434 B	2502	48
Anthraquinone	5283	49437 B	2502	48
Azobenzene	5272	49443 B	2502	48
Benz[a]anthracene	1116	34529 A	1384	46
			1386	47
	5217	49436 B	2502	48
Benzo[b]fluoranthene	1117	34233 A	1384	46
			1386	47
	5218	49458 B	2502	48
Benzo[k]fluoranthene	1118	34245 A	1384	46
			1386	47
	5220	48386 B	2502	48
Benzo[ghi]perylene	1120	34524 A	1384	46
			1386	47
	5219	49408 B	2502	48
Benzo[a]pyrene	1119	34250 A	1384	46
			1386	47
	5221	49389 B	2502	48
Benzo[c]quinoline	5280	49468 B	2502	48
BCH <i>alpha</i>	5026	49338 B	2501	47
BCH <i>alpha</i> d <sub>6</sub> , surrogate %	5032	49275 B	2501	47
BCH <i>beta</i>	5027	49339 B	2501	47
BCH <i>gamma</i> (Lindane)	5022	49345 B	2501	47
Biphenyl, 3,5,-dichloro, surrogate %	5034	49277 B	2501	47
2,2'-Biquinoline	5285	49391 B	2502	48
bis (2-Chloroethoxy) methane	1122	34281 A	1386	47
			1384	46
	5214	49401 B	2502	48
Bis (2-chloroethyl) ether	1123	34276 A	1386	47
			1384	46
	5215	49456 B	2502	48
Bis (2-chloroisopropyl) ether	1124	34286 A	1386	47
			1384	46
	5216	49457 B	2502	48
Bis (2-ethylhexyl)phthalate	1149	39102 A	1386	47
			1384	46
	5223	49426 B	2502	48
4-Bromophenylphenylether	1125	34639 A	1384	46
	5208	49454 B	1386	47
			2502	48
Butyl benzylphthalate	1121	34295 A	1384	46
			1386	47
	5224	49427 B	2502	48
9H-Carbazole	528	49449 B	2502	48
Carbon in BN	5051	49270 D	2503	48
Carbon, inorganic	503	686 C	--	39

Organic parameters--Continued	Lab. code	Parameter	Schedule	Pg.
<b>BOTTOM MATERIAL--Continued</b>				
Carbon, organic, BN	5052	49271 B	2503	48
Carbon, organic, BN	5052	49271 B	2503	48
Carbon, total	133	693 A	--	39
Carbon, total, BN	5050	49272 B	2503	48
Chlordane, technical	362	39351 A	1335	45
			1325	45
Chlordane, <i>cis</i>	5002	49320 B	2501	47
Chlordane, <i>trans</i>	5003	49321 B	2501	47
3-Chloro-3-methylphenol	1044	34455 A	1386	47
			1384	46
	5262	49422 B	2502	48
2-Chloronaphthalene	1126	34584 A	1384	46
			1386	47
	5207	49407 B	2502	48
Chloroneb	5054	49322 B	2501	47
2-Chlorophenol	1045	34589 A	1384	46
		34589 A	1386	47
	5289	49467 B	2502	48
4-Chlorophenyl-phenylether	1127	34644 A	1384	46
			1386	47
	5209	49455 B	2502	48
Chrysene	1128	34323 A	1384	46
	5225	49450 B	2502	48
p-Cresol	5254	49451 B	2502	48
2,4-D	375	39731 A	1305	45
			80	45
DCPA (Dacthal)	5036	49324 B	2501	47
DDD, <i>o,p'</i> -	5008	49325 B	2501	47
DDD, <i>p,p'</i> -	363	39363 A	1325	45
			1335	45
	5009	49326 A	2501	47
DDE, <i>o,p'</i> -	5010	49327 B	2501	47
DDE, <i>p,p'</i> -	364	39368 A	1325	45
			1335	45
	5011	49328 A	2501	47
DDT, <i>o,p'</i> -	5012	49329 B	2501	47
DDT, <i>p,p'</i> -	365	39373 A	1325	45
			1335	45
	5013	49330 A	2501	47
Di- <i>n</i> -butylphthalate	1130	39112 A	1384	46
			1386	47
	5235	49381 B	2502	48
Di- <i>n</i> -octylphthalate	1149	34599 A	1384	46
			1386	47
	5239	49382 B	2502	48
Diazinon	385	39571 A	1335	45
			1320	45
Dibenz[a,h]anthracene	5232	49461 B	2502	48
	1129	34559 A	1386	47
			1384	46
Dibenzothiophene	5275	49452 B	2502	48
Dicamba	751	38931 A	80	45
1,2-Dichlorobenzene	1140	34539 A	1384	46
			1386	47
	5234	49439 B	2502	48
1,2,4-Dichlorobenzene	5201	49438 B	2502	48
1,3-Dichlorobenzene	1141	34569 A	1384	46
			1386	47
	5222	49441 B	2502	48

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1,4-Dichlorobenzene	1142	34574 A	1384	46
			1386	47
	5233	49442 B	2502	48
2,4-Dichlorophenol	1046	34604 A	1384	46
			1386	47
	5257	49417 B	2502	48
Dieldrin	366	39383 A	1325	45
			1335	45
	5014	49331 B	2501	47
Diethylphthalate	1144	34339 A	1384	46
			1386	47
	5237	49383 B	2502	48
1,2-Dimethylnaphthalene	5267	49403 B	2502	48
1,6-Dimethylnaphthalene	5266	49404 B	2502	48
2,6-Dimethylnaphthalene	5265	49406 B	2502	48
2,4-Dimethylphenol	1047	34609 B	1386	47
			1384	46
3,5-Dimethylphenol	5258	49421 B	2502	48
Dimethylphthalate	1145	34344 A	1384	46
			1386	47
	5238	49384 B	2502	48
4,6-Dinitro-2-methylphenol	5271	49419 B	2502	48
2,4-Dinitrophenol	1049	34619 A	1384	46
			1386	47
	5268	49481 B	2502	48
2,4-Dinitrotoluene	1146	34614 A	1384	46
			1386	47
	5203	49395 B	2502	48
2,6-Dinitrotoluene	1147	34629 A	1384	46
			1386	47
	5205	49396 B	2502	48
2,4-DP	403	-- A	1305	45
			80	45
Endosulfan I	346	39389 A	1335	45
			1325	45
	5015	49332 B	2501	47
Endrin	367	39393 A	1325	45
			1335	45
	5018	49335 B	2501	47
Ethion	386	39399 A	1335	45
			1320	45
2-Ethyl-naphthalene	5264	49490 B	2502	48
Fluoranthene	1151	34379 A	1384	46
			1386	47
	5240	49466 B	2502	48
Fluorene	1150	34384 A	1386	47
			1384	46
9H-Fluorene	5210	49399 B	2502	48
2-Fluorobiphenyl, surrogate %	5288	49279 B	2502	48
GC/FID	1236	99475 A	1382	46
Heptachlor	368	39413 A	1325	45
			1335	45
	5020	49345 B	2501	47
Heptachlor epoxide	369	39423 A	1325	45
			1335	45
	5021	49342 B	2501	47

Organic parameters--Continued	Lab. code	Para- meter	Sche- dule	Pg.
<b>BOTTOM MATERIAL--Continued</b>				
Hexachlorobenzene	1152	39701 A	1384	46
			1386	47
	5006	49343 B	2501	47
	5228		2502	48
Hexachlorobutadiene	1153	39705 A	1384	46
			1386	47
	5229	49448 B	2502	48
Hexachlorocyclopentadiene	1154	34389 A	1384	46
			1386	47
	5203	49489 B	2502	48
Hexachloroethane	5231	49453 B	2502	48
	1155	34399 A	1384	46
			1386	47
Indeno[1,2,3-cd]pyrene	1156	34406 A	1384	46
			1386	47
	5241	49390 B	2502	48
Isodrin	5037	49344 B	2501	47
Isophorone	1157	34411 A	1384	46
			1386	47
	5242	49400 B	2502	48
Isoquinoline	5261	49394 B	2502	48
Lindane	370	39343 A	1325	45
			1335	45
Malathion	387	39531 A	1320	45
			1335	45
Methoxychlor, o,p'-	5042	49347 B	2501	47
Methoxychlor, p,p'-	401	39481 A	1325	45
			1335	45
	5044	49346 B	2501	47
1-Methyl-9H-fluorene	5273	49398 B	2502	48
2-Methyl-4,6-dinitrophenol	1048	34660 A	1384	46
			1386	47
	5271	49419 B	2502	48
2-Methylantracene	5279	49435 B	2502	48
4,5-Methylenephenanthrene	5281	49411 B	2502	48
Methylparathion	388	39601 A	1320	45
			1335	45
1-Methylphenanthrene	5282	49410 B	2502	48
1-Methylpyrene	5284	49388 B	2502	48
Mirex	545	39758 A	1325	45
			1335	45
	5023	49348 B	2501	47
Mostiure %, BTM, NQ	5049	A	2503	48
N-nitrosodimethylamine	1160	34441 A	1384	46
			1386	47
N-nitrosodi-n-propylamine	1162	34431 A	1384	46
			1386	47
	5245	49431 B	2502	48
N-nitrosodiphenylamine	1161	34436 A	1384	46
			1386	47
	5244	49433 B	2502	48
Naphthalene	1158	34445 A	1384	46
			1386	47
	5246	49402 B	2502	48
Nitrobenzene	1159	34450 A	1384	46
			1386	47
	5247	49444 B	2502	48
Nitrobenzene- d <sub>5</sub> , surrogate %	5287	49280 B	2502	48

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2-Nitrophenol	1050	34594 A	1384	46
			1386	47
	5255	49420 B	2502	48
4-Nitrophenol	1051	34649 A	1384	46
			1386	47
	5269	49423 B	2502	48
Nonachlor, <i>cis</i>	5041	49316 B	2501	47
Nonachlor, <i>trans</i>	5034	49317 B	2501	47
Octachlorobiphenyl, surrogate %	5048	49276 B	2501	47
Oil and grease	531	557 A	--	39
Oxychlordane	5038	49318 B	2501	47
PCB's, gross	394	39519 A	1325	45
			1335	45
PCN's, gross	395	39251 A	1325	45
			1335	45
PCBs, total	5024	49459 B	2501	47
Parathion	390	39541 A	1320	45
			1335	45
Pentachloroanisole	5274	49460 B	2501	47
	5033		2502	48
Pentachloronitrobenzene	5226	49446 B	2502	48
Pentachlorophenol	1052	39061 A	1384	46
			1386	47
	5227	49425 B	2502	48
Permethrin, <i>cis</i> isomer	5055	49349 B	2501	47
Permethrin, <i>trans</i> isomer	5056	49350 B	2501	47
Perthane	342	81886 A	1335	45
			1325	45
Phenanthrene	1163	34464 A	1384	46
			1386	47
	5248	49409 B	2502	48
Phenanthridine	5277	49393 B	2502	48
Phenol	1053	34695 A	1384	46
			1386	47
	5249	49413 B	2502	48
Picloram	750	38930 A	80	45
Pyrene	1164	34472 A	1384	46
			1386	47
	5252	49387 B	2502	48
Quinoline	5260	49392 B	2502	48
Silvex	377	39761 A	1305	45
			80	45
2,4,5-T	376	39741 A	1305	45
			80	45
Terphenyl, $d_{14}$ , surrogate %	5286	49278 B	2502	48
2,3,5,6-Tetramethylphenol	5263	49414 B	2502	48
Toxaphene	371	39403 A	1325	45
			1335	45
	5025	49351 B	2501	47
1,2,4-Trichlorobenzene	1166	34554 A	1386	47
			1384	46
	5201	49438 B	2502	48
2,3,6-Trichlorophenol	5204	49415 B	2502	48
2,4,6-Trichlorophenol	1054	34624 A	1386	47
			1384	46
2,3,6-Trimethylnaphthalene	5270	49405 B	2502	48
2,4,6-Trimethylphenol	5259	49416 B	2502	48
Trithion	391	39787 A	1335	45
			1320	45

Organic parameters--Continued	Lab. code	Para- meter	Sche- dule	Pg.
<b>TISSUE</b>				
Aldrin	7030	49353 A	2101	65
Chlordane- <i>cis</i>	7001	49380 A	2101	65
Chlordane- <i>trans</i>	7002	49379 A	2101	65
DDD, <i>o,p'</i> -	7007	49374 A	2101	65
DDD, <i>p,p'</i> -	7006	49375 A	2101	65
DDE, <i>o,p'</i> -	7008	49373 A	2101	65
DDE, <i>p,p'</i> -	7009	48362 A	2191	65
DDT, <i>o,p'</i> -	7004	49346 A	2101	65
DDT, <i>p,p'</i> -	7005	49375 A	2101	65
Dacthal	7003	49378 A	2101	65
3,5-Dichlorobiphenyl	7035	49264 A	2101	65
Dieldrin	7010	49371 A	2101	65
Endrin	7011	49370 A	2101	65
HCH <i>alpha</i>	7016	49366 A	2101	65
HCH <i>alpha-d</i> <sub>6</sub>	7034	49261 A	2101	65
HCH <i>beta</i>	7017	49365 A	2101	65
HCH <i>delta</i>	7018	49364 A	2101	65
HCH <i>gamma</i>	7019	49363 A	2101	65
Heptachlor	7012	49369 A	2101	65
Heptachlor epoxide	7013	49368 A	2101	65
Hexachlorobenzene	7014	49367 A	2101	65
Lipids, percent	7031	49289 A	2101	65
Methoxychlor, <i>o,p'</i> -	7020	49362 A	2101	65
Methoxychlor, <i>p,p'</i> -	7021	49361 A	2101	65
Mirex	7022	49360 A	2101	65
Nonachlor, <i>cis</i>	7023	49359 A	2101	65
Nonachlor, <i>trans</i>	7024	49358 A	2101	65
Oxychlordane	7025	49357 A	2101	65
PCBs, total	7029	49354 A	2101	65
Pentachloroanisole	7027	49356 A	2101	65
Toxaphene	7028	49355 A	2101	65
<b>WATER, FILTERED</b>				
Acetochlor	4053	49260 D	2001	60
	4253	49260 E	2010	60
Acifluorfen (Blazer)	5410	49315 A	2050	61
	5610	49315 A	2051	61
Alachlor	1587	46342 A	1379	53
	4001	46342 D	2001	60
	4201	46342 E	2010	60
Aldicarb	5411	49312 A	2050	61
	5611	49312 A	2051	61
Aldicarb sulfone	5413	49313 A	2050	61
	5613	49313 A	2051	61
Aldicarb sulfoxide	5412	49314 A	2050	61
	5612	49314 A	2051	61
Aldrin	463	39331 A	1331	51
			1321	50
Ametryn	1588	38401 A	1379	53
2-Amino-4 6-2-nitrotoluene	1707	49225 A	1377	52
4-Amino-2 6-2-nitrotoluene	1708	49224 A	1377	52
Aroclor 1016	787	34672 A	1361	52
Aroclor 1221	783	34662 A	1361	52
Aroclor 1232	779	34665 A	1361	52
Aroclor 1242	775	34457 A	1361	52
Aroclor 1248	771	39501 A	1361	52
Aroclor 1254	767	39505 A	1361	52
Aroclor 1260	763	39509 A	1361	52

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Organic parameters--Continued	Lab. code	Para-meter	Sche-dule	Pg.
<b>WATER, FILTERED--Continued</b>				
Atrazine	1589	39632 A	1379	53
	4003	39632 D	2001	60
	4203	39632 E	2010	60
Atrazine, desethyl-	4002	04040 D	2001	60
	4202	04040 E	2010	60
Azinphos, methyl-	4004	82686 D	2001	60
	4204	82686 E	2010	60
BDMC, surrogate %	5452	99835 A	2050	61
	5652	99835 B	2051	61
Benfluralin	4005	82673 D	2001	60
	4205	82673 E	2010	60
Bentazon	5414	38711 A	2050	61
	5614	38711 A	2051	61
Bromacil	5415	04029 A	2050	61
	5615	04029 A	2051	61
Bromoxynil	5416	49311 A	2050	61
	5616	49311 B	2051	61
Butylate	4006	04028 D	2001	60
	4206	04028 E	2010	60
Carbaryl (Sevin)	4007	82680 D	2001	60
	4207	82680 E	2010	60
Carbaryl (Sevin)	5417	49310 A	2050	61
	5617	49310 B	2051	61
Carbofuran	4008	82674 D	2001	60
	4208	82674 E	2010	60
Carbofuran	5418	49309 A	2050	61
	5618	49309 B	2051	61
Carbofuran, 3-hydroxy-	5449	49308 A	2050	61
	5649	49308 B	2051	61
Carbon, inorganic	306	691 A	--	39
Carbon, organic	113	681 A	--	39
			2085	62
			2075	62
Chloramben (Amiben)	5419	49307 A	2050	61
	5619	49307 B	2051	61
Chlordane	464	39352 A	1331	51
			1321	50
Chlorpyrifos	4009	38933 D	2001	60
	4209	38933 E	2010	60
Chlorothalonil	5421	49306 A	2050	61
	5621	49306 B	2051	61
Clopyralid	5423	49305 A	2050	61
	5623	49305 B	2051	61
Cyanazine	1590	04041 A	1379	53
	4010	04041 D	2001	60
	4210	04041 E	2010	60
DCPA (Dacthal)	4011	82682 D	2001	60
	4211	82682 E	2010	60
2,4-D	477	39732 A	1301	49
	5408	39732 B	2050	61
	5608	39732 C	2051	61
2,4-DB	5407	38746 A	2050	61
	5607	38746 B	2051	61
DDD	465	39361 A	1331	51
			1321	50
DDE	466	39366 A	1331	51
			1321	50
DDE, <i>p,p'</i> -	4012	34653 D	2001	60
	4212	34653 E	2010	60

Organic parameters--Continued	Lab. code	Para-meter	Sche-dule	Pg.
<b>WATER, FILTERED--Continued</b>				
DDT	467	39371 A	1331	51
			1321	50
2,4-DP	487	82356 A	1301	49
DNOC	5402	49299 A	2050	61
	5602	49299 B	2051	61
Dacthal, mono-acid-	5447	49304 A	2050	61
	5647	49304 B	2051	61
Deethylatrazine	1519	04040 A	1379	53
Deisopropylatrazine	1592	04038 A	1379	53
Diazinon	423	39572 A	1331	51
			1316	50
Diazinon	4013	39572 D	2001	60
	4213	39572 E	2010	60
Diazinon, <i>d</i> <sub>10</sub> -surrogate%	4014	91063 D	2001	60
	4214	91063 E	2010	60
Dicamba	5426	38442 A	2050	61
	5626	38442 A	2051	61
Dichlobenil	5404	49303 A	2050	61
	5604	49303 B	2051	61
Dichlorprop (2,4-DP)	5401	49302 A	2050	61
	5601	49302 B	2051	61
Dieldrin	468	39381 A	1331	51
			1321	50
Dieldrin	4015	39381 D	2001	60
	4215	39381 D	2010	60
Diethylaniline	4016	82660 D	2001	60
	4216	82660 E	2010	60
3,5-Dinitroaniline	1835	39941 A	1377	52
<i>m</i> -Dinitrobenzene	1705	49230 A	1377	52
2,4-Dinitrotoluene	1716	49228 A	1377	52
2,6-Dinitrotoluene	1715	49227 A	1337	52
Dinoseb (DNBP)	5400	49301 A	2050	61
	5600	49301 B	2051	61
Disulfoton	4018	82677 D	2001	60
	4218	82677 E	2010	60
Diuron	5427	49300 A	2050	61
	5627	49300 B	2051	61
Endosulfan I	345	82354 A	1331	51
			1321	50
Endrin	469	39391 A	1331	51
			1321	50
EPTC (Eptam)	4019	82668 D	2001	60
	4219	82668 E	2010	60
Esfenvalerate (Asana XL)	5429	49298 A	2050	61
	5629	49298 B	2051	61
Ethalfuralin	4020	82663 D	2001	60
	4220	82663 E	2010	60
Ethion	424	82346 A	1331	51
			1316	50
Ethoprop	4021	82672 D	2001	60
	4221	82672 E	2010	60
Fenuron	5406	49297 A	2050	61
	5606	49297 A	2051	61
Fluormeturon	5430	38811 A	2050	61
	5630	38811 A	2051	61
Fonofos	4022	04095 D	2001	60
	4222	04095 E	2010	60
HCH, <i>alpha</i>	4023	34253 D	2001	60
	4223	34253 E	2010	60

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<b>WATER, FILTERED--Continued</b>				
HCH, <i>alpha</i> , <i>d<sub>g</sub></i> , surrogate%	4024	91065 D	2001	60
	4224	91065 E	2010	60
HCH, <i>gamma</i> (Lindane)	4025	39341 D	2001	60
	4225	39341 E	2010	60
Heptachlor	470	39411 A	1331	51
			1321	50
Heptachlor epoxide	471	39421 A	1331	51
			1321	50
HMX-Cy-4-methylene	1702	49234 A	1377	52
Lindane	472	39341 A	1331	51
			1321	50
Linuron	4026	82666 D	2001	60
	4226	82666 E	2010	60
Linuron	5432	38478 A	2050	61
	5632	38478 A	2051	61
MCPA	5433	38482 A	2050	61
	5633	38482 A	2051	61
MCPB	5434	38487 A	2050	61
	5634	38487 A	2051	61
Malathion	0425	39532 A	1331	51
			1316	50
Malathion	4027	39532 D	2001	60
	4227	39532 E	2010	60
Methiocarb	5436	38501 A	2050	61
	5636	38501 A	2051	61
Methomyl	5437	49296 A	2050	61
	5637	49296 A	2051	61
Methoxychlor	0476	82350 A	1331	51
			1321	50
Methylparathion	0426	39602 A	1331	51
			1316	50
Metolachlor	1593	39415 A	1379	53
	4029	39415 D	2001	60
	4229	39415 E	2010	60
Metribuzin	1594	82630 A	1379	53
	4030	82630 D	2001	60
	4230	82630 E	2010	60
Mirex	542	39756 A	1331	51
			1321	50
Molinate	4031	82671 D	2001	60
	4231	82671 E	2010	60
1-Naphthol	5438	49295 A	2050	61
	5638	49295 A	2051	61
Napropamide	4033	82667 D	2001	60
	4233	82667 E	2010	60
Neburon	5403	49294 A	2050	61
	5603	49294 A	2051	61
Nitrobenzene	1706	49229 A	1377	52
1-Nitrotoluene	1817	-- A	1377	52
3-Nitrotoluene	1819	49222 A	1377	52
4-Nitrotoluene	1818	49223 A	1377	52
Norflurazon	5439	49293 A	2050	61
	5639	49293 A	2051	61
Oryzalin (Surflan)	5440	49292 A	2050	61
	5640	49292 A	2051	61
Oxamyl	5441	38866 A	2050	61
	5641	38866 A	2051	61
PCB's, gross	474	39517 A	1331	51
			1321	50

Organic parameters--Continued	Lab. code	Para- meter	Sche- dule	Pg.
<b>WATER, FILTERED--Continued</b>				
PCN's, gross	475	82360 A	1331	51
			1321	50
Parathion	427	39542 A	1331	51
			1316	50
Parathion, ethyl-	4033	39542 D	2001	60
	4233	39542 D	2010	60
Parathion, methyl-	4028	82667 D	2001	60
	4228	82667 E	2010	60
Pebulate	4034	82669 D	2001	60
	4234	82669 E	2010	60
Pendimethalin	4035	82683 D	2001	60
	4235	82683 E	2010	60
Permethrin, <i>cis</i> -	4036	82687 D	2001	60
	4236	82687 E	2010	60
Perthane	0344	82348 A	1331	51
			1321	50
Phorate	4037	82664 D	2001	60
	4237	82664 E	2010	60
Picloram	5442	49291 A	2050	61
	5642	49291 A	2051	61
Prometon	1597	04037 A	1379	53
Prometon	4038	82676 D	2001	60
	4239	82676 E	2010	60
Prometryn	1598	04036 A	1379	53
Pronamide	4038	82676 D	2001	60
	4238	82676 E	2010	60
Propachlor	4040	04024 D	2001	60
	4240	04024 E	2010	60
Propanil	4041	82679 D	2001	60
	4241	82679 E	2010	60
Propargite, I and II	4042	82685 D	2001	60
	4242	82685 E	2010	60
Propazine	1595	38535 A	1379	53
Propham (IPC)	5443	49236 A	2050	61
	5643	49236 A	2051	61
Propoxur	5450	38538 A	2050	61
	5650	38538 A	2051	61
RDX-C1,3,5-3M2,4,6	1703	49233 A	1377	52
Silvex	479	39762 A	1301	49
Silvex (2,4,5-TP)	5444	39762 B	2050	61
	5644	39762 B	2051	61
Simazine	1596	04035 A	1379	53
Simazine	4043	04035 D	2001	60
	4243	04035 E	2010	60
2,4,5-T	0478	39742 A	1301	49
2,4,5-T	5409	39742 B	2050	61
	5609	39742 B	2051	61
Tebuthiuron	4045	82670 D	2001	60
	4245	82670 E	2010	60
Terbacil	4046	82665 D	2001	60
	4246	82665 E	2010	60
Terbuthylazine	4047	91064 D	2001	60
	4247	91064 E	2010	60
Thiobencarb	4044	82681 D	2001	60
	4244	82681 E	2010	60
Toxaphene	473	39401 A	1331	51
			1321	50
Triallate	4049	82678 D	2001	60
	4249	82678 E	2010	60

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Organic parameters--Continued	Lab. code	Para-meter	Sche-dule	Pg.
<b>WATER, FILTERED--Continued</b>				
Triclopyr	5446	49235 A	2050	61
	5646	49235 A	2051	61
Trifluralin	4050	82661 D	2001	60
	4250	82661 E	2010	60
2,4,6-Trinitrotoluene	1714	49226 A	1377	52
Trithion	428	82342 A	1331	51
			1316	50
<b>WATER, SUSPENDED</b>				
Diazinon	0417	39573 A	1317	50
Ethion	0418	82347 A	1317	50
Malathion	0419	39533 A	1317	50
Methylparathion	0420	39603 A	1317	50
Parathion	0421	39543 A	1317	50
Trithion	0422	82343 A	1317	50
<b>WATER, WHOLE, RECOVERABLE</b>				
Acenaphthene	1066	34205 A	1394	58
			1385	55
			1383	54
Acenaphthylene	1067	34200 A	1394	58
			1385	55
			1383	54
Acrolein	1650	34210 A	1401	59
Acrylonitrile	1651	34215 A	1401	59
Alachlor	1331	77825 C	1389	55
Aldicarb	1338	82619 C	1359	51
Aldicarb sulfone	1344	82587 C	1359	51
Aldicarb sulfoxide	1343	82586 C	1359	51
Aldrin	738	39330 B	1399	58
			1398	58
	350	39330 C	1474	59
			1334	51
			1324	50
	1624	39330 D	1608	59
<i>alpha</i> -BHC	1619	39337 D	1608	59
Ametryn	848	82184 A	1389	55
Anthracene	1068	34220 A	1385	55
			1383	54
			1394	58
Aroclor 1016	809	34671 B	1364	52
	1641	34671 D	1608	59
Aroclor 1221	810	39488 B	1364	52
	1639	39488 D	1608	59
Aroclor 1232	811	39492 B	1364	52
	1640	39492 D	1608	59
Aroclor 1242	812	39496 B	1364	52
	1642	39496 D	1608	59
Aroclor 1248	813	39500 B	1364	52
	1643	39500 D	1608	59
Aroclor 1254	814	39504 B	1364	52
	1644	39504 D	1608	59
Aroclor 1260	815	39508 B	1364	52
	1645	39508 D	1608	59
Atrazine	717	39630 A	1389	55

Organic parameters--Continued	Lab. code	Para-meter	Sche-dule	Pg.
<b>WATER, WHOLE, RECOVERABLE--Continued</b>				
Benzene	1011	34030 A	1390	56
	1287	34030 B	1307	49
			1378	52
			1380	53
			1392	57
	5819	34030 C	2090	62
			2091	63
			2092	64
Benzene, 1-chloro-2-methyl-	5844	77275 C	2090	62
			2091	63
			2092	64
Benzene, 1-chloro-4-methyl-	5858	77277 C	2090	62
			2091	63
			2092	64
Benzene, 1-methyl-4-isopropyl-	5848	7356 B	2090	62
			2091	63
			2092	64
Benzene, 1,2-dichloro-	5852	34536 D	2090	62
			2091	63
			2092	64
Benzene, 1,2,3-trichloro-	5857	77613 C	2090	62
			2091	63
			2092	64
Benzene, 1,2,4-trichloro-	5854	34551 D	2090	62
			2091	63
			2092	64
Benzene, 1,2,4-trimethyl-	5846	77222 C	2090	62
			2091	63
			2092	64
Benzene, 1,3-trimethyl-	5849	34586 C	2090	62
			2091	63
			2092	64
Benzene, 1,3,5-trimethyl-	5860	77226 C	2090	62
			2091	63
			2092	64
Benzene, 1,4-dichloro-	5850	34571 D	2090	62
			2091	63
			2092	64
Benzene, bromo-	5841	81555 C	2090	62
			2091	63
			2092	64
Benzene, chloro-	5833	34301 C	2090	62
			2091	63
			2092	64
Benzene, dimethyl- (Xylene)	5836	81551 C	2090	62
			2091	63
			2092	64
Benzene, ethyl-	5835	34371 C	2090	62
			2091	63
			2092	64
Benzene, isopropyl-	5839	7223 C	2090	62
			2091	63
			2092	64
Benzene, methyl (Toluene)	5826	34010 C	2090	62
			2091	63
			2092	64
Benzene, <i>n</i> -butyl-	5851	77342 C	2090	62
			2091	63
			2092	64



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Organic parameters--Continued	Lab. code	Para- meter	Sche- dule	Pg.
<b>WATER, WHOLE, RECOVERABLE--Continued</b>				
Benzene, <i>n</i> -propyl	5843	77224 C	2090	62
			2091	63
			2092	64
Benzene, <i>sec</i> -butyl	5847	77350 C	2090	62
			2091	63
			2092	64
Benzene, <i>tert</i> -butyl	5845	77353 C	2090	62
			2091	63
			2092	64
Benzidine	1069	39120 A	1385	55
			1383	54
Benzo[a]pyrene	1073	34247 A	1394	58
			1385	55
			1383	54
Benzo[b]fluoranthene	1071	34230 A	1385	55
			1383	54
			1394	58
Benzo[k]fluoranthene	1072	34242 A	1394	58
			1385	55
			1383	54
Benz[a]anthracene	1070	34526 A	1385	55
			1383	54
			1394	58
Benzo[ghi]perylene	1074	34521 A	1385	55
			1383	54
			1394	58
<i>beta</i> -BHC	1620	39338 D	1608	59
Bis (2-chloroethoxy)methane	1076	34278 A	1385	55
			1383	54
			1394	58
Bis (2-chloroethyl) ether	1077	34273 A	1385	55
			1383	54
			1394	58
Bis (2-chloroisopropyl) ether	1078	34283 A	1385	55
			1383	54
			1394	58
Bis (2-ethylhexyl) phthalate	1094	39100 A	1385	55
			1383	54
			1394	58
Bromacil	1463	30234 A	1389	55
Bromobenzene	1698	81555 A	1380	53
			1392	57
	1485	81555 B	1390	56
Bromochloromethane	1654	77297 A	1380	53
			1392	57
Bromochloromethane	1655	77297 B	1390	56
1,4-Bromofluorobenzene	1601	99834 A	1401	59
Bromoform	1012	32104 A	1390	56
	1288	32104 B	1307	49
			1380	53
			1392	57
4-Bromophenylphenylether	1079	34636 A	1394	58
		A	1385	55
		A	1383	54
Bromomethane	1028	34413 A	1390	56
	1304	34413 B	1380	53
			1392	57
Butachlor	1468	30235 A	1389	55

Organic parameters--Continued	Lab. code	Para- meter	Sche- dule	Pg.
<b>WATER, WHOLE, RECOVERABLE--Continued</b>				
Butyl benzyl phthalate	1075	34292 A	1394	58
			1385	55
			1383	54
Butylate	1470	30236 A	1389	55
Carbaryl (Sevin)	636	39750 A	1359	51
Carbofuran	1337	82615 C	1359	51
Carbon, organic	114	680 A	--	39
Carbon tetrachloride	1013	32102 A	1390	56
	1289	32102 B	1307	49
			1380	53
			1392	57
Carboxin	1464	30245 A	1389	55
Chlordane, technical	351	39350 B	1474	59
			1399	58
			1334	51
			1398	58
			1324	50
	1637	39350 D	1608	59
Chlordane, <i>cis</i> -	1628	39065 D	1608	59
Chlordane, <i>trans</i> -	1626	39062 D	1608	59
4-Chloro-3-methylphenol	1055	34452 A	1393	57
			1383	54
Chlorobenzene	1014	34301 A	1390	56
	1290	34301 B	1307	49
			1380	53
			1392	57
Chloroethane	1016	34311 A	1390	56
	1292	34311 B	1380	53
			1392	57
2-Chloroethylvinylether	1017	34576 A	1390	56
	1658	34576 C	1380	53
			1392	57
Chloroform	1018	32106 A	1390	56
	1294	32106 B	1307	49
			1380	53
			1392	57
Chloromethane	1281	34418 A	1390	56
	1318	34418 B	1380	53
			1392	57
2-Chloronaphthalene	1080	34581 A	1394	58
			1385	55
			1383	54
2-Chlorophenol	1056	34586 A	1385	59
			1393	57
			1383	54
4-Chlorophenylphenylether	1081	34641 B	1394	58
			1385	55
			1383	54
Chloropyrifos	753	38932 A	1474	59
			1334	51
			1319	50
			1386	58
2-Chlorotoluene	1694	77275 A	1390	56
	1481	77275 B	1380	53
			1392	57
4-Chlorotoluene	1696	77277 A	1390	56
	1482	77277 B	1380	53
			1392	57

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<b>WATER, WHOLE, RECOVERABLE--Continued</b>					<b>WATER, WHOLE, RECOVERABLE--Continued</b>				
Chrysene	1082	34320 A	1394	58	1,2-Dibromo-3-chloro- propane (DBCP)	1576	82625 D	1306	49
			1385	55	Dibromochloromethane	1015	32105 A	1390	56
<i>cis</i> -1,2-Dichloroethene	1657	77093 B	1390	56	Dibromochloromethane	1291	32105 B	1307	49
<i>cis</i> -1,2-Dichloroethylene	1656	77093 A	1307	49				1380	53
			1380	53				1392	57
			1392	57	1,2-Dibromoethane	1319	77651 C	1390	56
<i>cis</i> -1,3-Dichloropropene	1323	34704 A	1390	56				1380	53
	1326	34704 B	1380	53	1,2-Dibromoethane	1317	77651 B	1392	57
			1392	57	1,2-Dibromoethane (EDB)	1577	77651 D	1306	49
Cyanazine	846	81757 A	1389	55	Dibromomethane	1690	30217 A	1390	56
Cycloate	1469	30254 A	1389	55		1009	30217 B	1380	53
2,4-D	372	39730 B	1474	59				1392	57
			79	49	Dicamba	0749	82052 A	79	49
			1304	49	1,2-Dichlorobenzene	1085	34536 A	1385	55
DDD, <i>p,p'</i> -	739	39361 B	1398	58				1383	54
			1399	58				1394	58
	352	39360 C	1474	59		1314	34536 B	1307	49
			1334	51				1380	53
			1324	50		1320	34536 C	1390	56
4,4' DDD	1633	39390 D	1608	59				1392	57
DDE, <i>p,p'</i> -	740	39365 B	1399	58	1,3-Dichlorobenzene	1086	34566 A	1394	58
			1398	58				1385	55
	353	39365 C	1474	59				1383	54
			1334	51		1315	34566 B	1307	49
			1324	50				1380	53
4,4' DDE	1630	39320 D	1608	59				1392	57
DDT, <i>p,p'</i> -	741	39370 B	1399	58		1321	34566 C	1390	56
			1398	58	1,4-Dichlorobenzene	1087	34571 A	1385	55
	354	39370 C	1474	59				1383	54
			1334	51				1394	57
			1324	50		1316	34571 B	1307	49
	1636	39300 D	1608	59				1380	53
2,4-DP	402	82183 A	1474	59				1392	57
			79	49		1322	34571 C	1390	56
			1304	49	3,3'-Dichlorobenzidine	1088	34631 A	1385	55
Deethylatrazine	1612	75981 A	1389	55				1383	54
Deisopropylatrazine	1613	75980 A	1389	55	Dichlorobromomethane	1019	32101 A	1390	56
DEF	802	39040 A	1474	59		1295	32101 B	1307	49
			1334	51				1392	57
			1319	50	Dichlorodifluoromethane	1020	34668 A	1390	56
<i>delta</i> -BHC	1622	34259 D	1608	59		1296	34668 B	1307	49
Di- <i>n</i> -butyl phthalate	1084	39110 A	1385	55				1380	53
			1383	54				1392	57
			1394	58	D4-1,2-Dichloroethane	1599	99832 A	1401	59
	1093	34596 A	1385	55	1,1-Dichloroethane	1297	34496 B	1307	49
			1383	54		1021	34496 A	1390	56
			1394	58		1297	34496 B	1380	53
Di-Syston (disulfoton)	592	39011 A	1319	50				1392	57
			1334	51	1,2-Dichloroethane	1022	32103 A	1390	56
			1474	59		1298	32103 B	1307	49
Diazinon	378	39570 B	1474	59				1380	53
			1399	58				1392	57
			1334	51	<i>trans</i> -1,2-Dichloroethene	1024	34546 A	1390	56
Diazinon	0378	39570 B	1319	50		1300	34546 B	1380	53
1,2,5,6-Dibenz[ <i>a,h</i> ]anthracene	1083	34556 A	1394	58				1392	57
			1385	55				1307	49
			1383	54	1,1-Dichloroethylene	1023	34501 A	1390	56
1,2-Dibromo-3-Chloropropane	1349	82625 A	1390	56		1299	34501 B	1380	53
1,2-Dibromo-3-Chloropropane	1354	82625 B	1380	53				1392	57
			1392	57				1307	49

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2,4-Dichlorophenol	1057	34601 A	1385	55	Ethion	379	39398 B	1474	59
			1393	57				1399	58
1,2-Dichloropropane	1025	34541 A	1309	56				1334	51
	1301	34541 B	1307	49				1319	50
			1380	53	Ethane, 1,1-dichloro-	5811	34496 C	2090	62
			1392	57				2091	63
1,3-Dichloropropane	1692	77173 A	1390	56				2092	64
	1480	77173 B	1380	53	Ethane, 1,1,1-trichloro-	5816	34506 C	2090	62
			1392	57				2091	63
2,2-Dichloropropane	1691	77170 A	1390	56				2092	64
	1479	77170 B	1380	53	Ethane, 1,1,1,2-tetrachloro-	5834	77562 C	2090	62
			1392	57				2091	63
1,1-Dichloropropene	1689	77168 A	1390	56				2092	64
	1478	77168 B	1380	53	Ethane, 1,1,2-trichloro-	5828	34511 C	2090	62
			1392	57				2091	63
<i>trans</i> -1,3-Dichloropropene	1324	34699 A	1390	56				2092	64
	1327	34699 B	1380	53	Ethane, 1,1,2,2-tetrachloro-	5840	34516 C	2090	62
			1392	57				2091	63
Dieldrin	0742	39380 B	1399	58				2092	64
			1398	58	Ethane, 1,2-dibromo-(EDB)	5832	77651 E	2090	62
	0355	39380 C	1474	59				2091	63
		C	1334	51				2092	64
		C	1324	50	Ethane, 1,2-dichloro	5820	32103 C	2090	62
	1629	39380 D	1608	59				2091	63
Diethylphthalate	1089	34336 A	1394	58				2092	64
	1089	34336 A	1385	55	Ethane, chloro	5805	34311 C	2090	62
			1383	54				2091	63
2,4-Dimethylphenol	1059	34606 A	1385	55				2092	64
			1393	57	Ethane, trichlorotrifluoro-	5859	77652 C	2090	62
			1383	54				2091	63
Dimethylphthalate	1090	34341 A	1394	58				2092	64
			1385	55	Ether, methyl tert-butyl (MTBE)	5810	78032 C	2090	62
			1383	54				2091	63
4,6-Dinitro-2-methylphenol	1060	34657 A	1393	57				2092	64
			1383	54	Ethoprop	4021	82672 D	2001	60
2,4-Dinitrophenol	1061	34616 A	1385	55		4221	82672 E	2010	60
			1393	57	Ethylene, 1,1-dichloro	5807	34501 C	2090	62
			1383	54				2091	63
2,4-Dinitrotoluene	1091	34611 A	1394	58				2092	64
			1385	55	Ethylene, chloro-(vinyl)	5803	39175 C	2090	62
			1383	54				2091	63
2,6-Dinitrotoluene	1092	34626 A	1394	58				2092	64
			1385	55	Ethylbenzene	1027	34371 A	1390	56
			1383	54		1303	34371 B	1307	49
Diphenamide	1476	30255 A	1389	55				1378	52
1,2-Diphenylhydrazine	1697	82626 A	1383	54				1380	53
Endosulfan I	737	39388 B	1399	58				1392	57
			1398	58	Ethylene, <i>cis</i> -1,2-dichloro	5814	77093 C	2090	62
Endosulfan I	349	39388 C	1474	59				2091	63
			1334	51				2092	64
			1324	50	Ethylene, tetrachloro	5829	34475 C	2090	62
Endosulfan, <i>alpha</i> (I)	1627	34361 D	1608	59				2091	63
Endosulfan, <i>beta</i> (II)	1632	34356 D	1608	59				2092	64
Endosulfan sulfate	1635	34351 D	1608	59	Ethylene, <i>trans</i> -1,2-dichloro	5809	34546 C	2090	62
Endrin	743	39390 B	1399	58				2091	63
			1398	58				2092	64
	356	29290 C	1474	59	Ethylene, trichloro	5821	39180 C	2090	62
			1334	51				2091	63
			1324	50				2092	64
	1631	39390 D	1608	59					
Endrin aldehyde	1634	34366 D	1608	59					

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Fluoranthene	1096	34376	A	1394 58	Malathion	380	39530	B	1474 59
				1385 55					1399 58
				1383 54					1334 51
Fluorene	1095	34381	A	1394 58					1319 50
				1385 55	Methane, bromo-	5804	34413	C	2090 62
				1383 54					2091 63
Fonofos	1336	82614	C	1474 59					2092 64
				1334 51	Methane, bromochloro-	5801	37297	C	2090 62
				1319 50					2091 63
GC/FID profile	1240	99478	A	1381 53					2092 64
Glyphosphate	1834	49221	A	43	Methane, chloro-	5802	34418	C	2090 62
Heptachlor	357	39410	C	1474 59					2091 63
				1334 51					2092 64
				1324 50	Methane, dibromo-	5824	30217	C	2090 62
	744	39410	B	1399 58					2091 63
				1398 58					2092 64
	1623	39410	D	1608 59	Methane, dibromochloro-	5831	32105	C	2090 62
Heptachlor epoxide	358	39420	C	1474 59					2091 63
				1334 51					2092 64
				1324 50	Methane, dichloro-	5808	34423	C	2090 62
	745	39420	B	1399 58					2091 63
				1398 58					2092 64
	1625	39420	D	1608 59	Methane, dichlorobromo-	5823	32101	C	2090 62
Hexachlorobenzene	1097	39700	A	1385 55					2091 63
				1383 54					2092 64
				1394 58	Methane, dichlorodifluoro-	5801	34668	C	2090 62
Hexachlorobutadiene	1098	39702	A	1394 58					2091 63
				1385 55					2092 64
				1383 54	Methane, tetrachloro-	5817	32102	C	2090 62
	1675	39702	C	1380 53					2091 63
				1392 57					2092 64
	1676	39702	B	1390 56	Methane, tribromo (bromo)	5838	32104	C	2090 62
	5855	39702	D	2090 62					2091 63
				2091 63					2092 64
				2092 64	Methane, trichloro (chloro)	5815	32106	C	2090 62
Hexachlorocyclopentadiene	1099	34386	A	1385 55					2091 63
				1383 54					2092 64
				1394 58	Methane, trichlorofluoro-	5806	34488	C	2090 62
Hexachloroethane	1100	34396	A	1394 58					2091 63
				1385 55					2092 64
				1383 54	Methiocarb	1449	30282	A	1359 51
Hexazinone	1466	30264	A	1389 55		638	39051	A	1359 51
3-Hydrocarbofuran	1353	82584	A	1359 51	Methoxychlor, <i>p,p'</i> -	400	39480	B	1474 59
Indeno[1,2,3- <i>cd</i> ]pyrene	1101	34403	A	1394 58					1399 58
				1385 55					1334 51
				1383 54					1398 58
Isophorone	1102	34408	A	1394 58					1324 50
				1385 55	Methyl parathion	381	39600	B	1474 59
				1383 54					1399 58
Isopropylbenzene	1659	77223	A	1380 53					1334 51
				1392 57					1319 50
	1660	77223	B	1390 56	2-Methyl-4,6-dinitrophenol	1060	34657	A	1385 55
Lindane (HCH, gamma)	359	39340	C	1474 59					1393 57
				1334 51					1383 54
				1324 50	Methylene chloride	1029	34423	A	1390 56
	746	39340	B	1399 58		1305	34423	B	1307 49
				1398 58					1380 53
	1621	39340	D	1608 59					1392 57
MBAS	96	38260	A	-- 47	Methyl tert-butylether	1652	78032	A	1380 53
									1392 57
									1307 49
						1653	78032	B	1390 53

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Metolachlor	1334	82612 C	1389	55	Pentachlorophenol	1064	39032 A	1385	55
Metribuzin	1333	82611 C	1389	55				1393	57
Mirex	544	39755 B	1474	59				1383	54
			1399	58	Perthane	348	39034 A	1474	62
			1334	51				1399	58
			1398	58				1334	51
			1324	50				1398	58
<i>n</i> -Butylbenzene	1671	77342 A	1380	53				1324	50
			1392	57	Phenanthrene	1108	34461 A	1383	54
	1672	77342 B	1390	56				1394	58
N-Nitrosodi- <i>n</i> -propylamine	1107	34428 A	1394	58				1385	55
			1385	55	Phenol	1065	34694 A	1383	54
			1383	54				1385	55
<i>n</i> -Nitrosodimethylamine	1105	34438 A	1394	58				1393	57
			1385	55	Phenols, total, colorimetric	52	32730 A	--	39
			1383	54	Phorate	593	39023 A	1474	59
<i>n</i> -Nitrosodiphenylamine	1106	34433 A	1394	58				1334	51
			1385	55				1319	50
			1383	54	Picloram	748	39720 A	79	49
<i>n</i> -Propylbenzene	1661	77224 A	1380	53	Prometon	718	39056 A	1389	55
			1392	57	Prometryn	631	39057 A	1389	55
	1662	77224 B	1390	56	Propachlor	1471	30295 A	1389	55
Naphthalene	1103	34696 A	1385	55	Propane, 1,2-dibromo-3-chloro-	5853	77443 C	2090	62
		34696 A	1383	54				2091	63
		34696 A	1394	58	Propane, 1,2-dichloro-	5822	34541 C	2090	62
	1677	34696 C	1380	53				2091	63
			1392	57				2092	64
	1678	34696 B	1390	56	Propane, 1,2,3-trichloro-	5842	77443 C	2090	62
	5856	34696 D	2090	62				2091	63
			2091	63				2092	64
			2092	64	Propane, 1,3-dichloro-	5830	77173 C	2090	62
1-Naphthol	1351	77441 A	1359	51				2091	63
Nitrobenzene	1104	34447 A	1385	55				2092	64
			1383	54	Propane, 2,2-dichloro-	5812	77170 C	2090	62
			1394	58				2091	63
2-Nitrophenol	1062	34591 A	1385	55				2092	64
			1393	57	Propazine	844	39024 A	1389	55
			1383	54	Propene, 1,1-dichloro-	5818	77168 C	2090	62
4-Nitrophenol	1063	34646 A	1385	55				2091	63
			1393	57				2092	64
			1383	54	Propene, <i>cis</i> , 1,3-dichloro-	5825	34704 C	2090	62
Oil and grease	127	556 A	--	39				2091	63
Oxamyl	1335	82613 C	1359	5				2092	64
PCB's, gross	392	39516 B	1474	59	Propene, <i>trans</i> , 1,3-dichloro-	5827	34699 C	2090	62
			1399	58				2091	63
			1334	51				2092	64
			1398	58	Propham	637	39052 A	1359	51
			1324	50		1448	30296 A	1359	51
PCN's, gross	393	39250 B	1474	59	Pyrene	1109	34469 A	1385	55
			1399	58				1383	54
			1334	51				1394	58
			1398	58	<i>sec</i> -Butylbenzene	1667	77350 A	1380	53
			1324	50				1392	57
<i>p</i> -Isopropyltoluene	1669	77356 A	1380	53		668	77350 B	1390	56
			1392	57	Silvex	374	39760 B	1474	59
<i>p</i> -Isopropyltoluene	1670	77356 B	1390	56				79	49
Parathion, ethyl-	383	39540 B	1474	59				1304	49
			1399	58	Simazine	719	39055 A	1389	55
			1334	51	Simetryn	720	39054 A	1389	55
			1319	50					

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Styrene	1325	77128 A	1390	56
	1328	77128 B	1307	49
			1380	53
			1392	57
	5837	77128 C	2090	62
			2091	63
			2092	64
2,4,5-T	373	39740 B	1474	59
			79	49
			1304	49
Terbacil	1462	30311 A	1389	55
	1663	77353 A	1380	53
			1392	57
	1664	77353 B	1390	56
1,1,1,2-Tetrachloroethane	1693	77562 A	1390	56
	1484	77562 B	1380	53
			1392	57
1,1,1-Trichloroethane	1309	34506 B	1307	49
	1033	34506 A	1390	56
	1309	34506 B	1380	53
			1392	57
1,1,2,2-Tetrachloroethane	1030	34516 A	1390	56
	1306	34516 B	1380	53
	1306	34516 B	1392	57
Tetrachloroethylene	1031	34475 A	1390	56
	1307	34475 B	1307	49
			1380	53
			1392	57
Toluene	1032	34010 A	1390	56
	1308	34010 B	1307	49
			1378	52
	1308	34010 B	1380	53
			1392	57
D-8-Toluene	1600	99833 A	1401	59
Toxaphene	360	39400 B	1474	59
			1399	58
			1334	51
			1398	58
			1324	50
	1638	39400 D	1608	59
1,1,2-Trichloro-1,2,2-tri- fluoroethane	1681	77652 A	1307	49
			1380	53
			1392	57
			1390	5
1,2,3-Trichlorobenzene	1680	77613 B	1390	56
	1679	77613 A	1380	53
			1392	57
1,2,4-Trichlorobenzene	1111	34551 A	1394	58
	1674	34551 B	1390	56
	1673	34551 C	1380	53
			1392	57
	1111	34551 A	1385	55
			1383	54
1,1,2-Trichloroethane	1034	34511 A	1390	56
	1310	34511 B	1380	53
			1392	57
Trichloroethene	1311	39180 B	1307	49
			1380	53
			1392	57
Trichloroethylene	1035	39180 A	1390	56

Organic parameters--Continued	Lab. code	Para- meter	Sche- dule	Pg.
<b>WATER, WHOLE, RECOVERABLE--Continued</b>				
Trichlorofluoromethane	1036	34488 A	1390	56
	1312	34488 B	1307	49
			1380	53
	1312	34488 B	1392	57
2,4,6-Trichlorophenol	1058	34621 A	1385	55
			1393	57
			1383	54
1,2,3-Trichloropropane	1695	77443 A	1390	56
	1483	77443 B	1380	53
			1392	57
Trifluralin	1332	39030 C	1389	55
1,2,4-Trimethylbenzene	1666	77222 B	1390	56
	1665	77222 A	1380	53
			1392	57
1,3,5-Trimethylbenzene	1683	77226 A	1380	53
			1392	57
	1684	77226 B	1390	56
Trithion	394	39786 B	1474	59
			1399	58
			1334	51
			1319	50
Vernolate	1467	30324 A	1389	55
Vinyl chloride	1037	39175 A	1390	56
	1313	39175 B	1307	49
			1380	53
			1392	57
Xylenes, <i>meta</i> - and <i>para</i> -	1712	85795 B	1307	49
			1378	52
Xylenes, <i>ortho</i> -	1709	77135 B	1307	49
			1378	52
Xylenes, total ( <i>o,m,p</i> )	1329	81551 A	1390	56
	1330	81551 B	1307	49
			1378	52
			1380	53
			1392	57

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Radiochemical/Stable Isotope parameters	Reported as	Lab code	Parameter code	Schedule code	Pg.	Radiochemical/Stable Isotope parameters--Continued	Reported as	Lab code	Parameter code	Schedule code	Pg.
<b>RADIOCHEMICAL</b>						<b>RADIOCHEMICAL--Continued</b>					
Americium-241, FIL	Am-241	1961	--	--	67	Polonium-210, BTM	Po-210	1545	19507 A	--	68
Americium-241, SUS	Am-241	1962	--	--	67					623	70
Gamma counting, BTM	Cs-137	2004	--	948	67	Polonium-210, FIL	Po-210	1505	19503 B	--	68
	Ra-226	2006	--	948	67					617	70
Gamma scan, BTM		212	99451 A	--	67	Polonium-210, SUS	Po-210	1543	75938 A	--	68
Gamma scan, FIL		443	99452 A	--	67	Radium-226, BTM, gamma	Ra-226	1528	9507 B	1136	68
Gamma scan, SUS		1861	--	--	67					623	70
Gross alpha, BTM	Nat. U	1518	A	1131	67	Radium-226, SUS	Ra-226	1531	75944 A	--	68
				623	70	Radium-226, FIL	Ra-226	794	9511 B	--	68
Gross alpha, BTM	Th-230	1520	4125	1131	67					473	69
				623	70	Radium-226, FIL	Ra-226	794	9511 B	308	67
Gross alpha, FIL	Nat. U	800	80030 B	456	67					1703	69
				308	69					617	70
				214	70	Radium-226, FIL	Ra-226	799	9510 B	--	68
Gross alpha, FIL	Th-230	1397	4126 B	456	67					214	70
				308	69					1810	70
				214	70	Radium-226, SUS	Ra-226	1531	75944 A	--	69
Gross alpha, FIL, HS	Nat. U	1358	80030 D	458	67	Radium-228, BTM	Ra-228	1526	75977 A	1136	68
Gross alpha, FIL, HS	Th-230	1445	4126 D	458	67					623	70
Gross alpha, SUS	Nat. U	1852	--	165	67	Radium-228, FIL	Rn-228	850	81366 A	--	68
Gross alpha, SUS	Th-230	1854	--	165	67	Radium-228, FIL	Ra-228	1364	81366 C	--	68
Gross beta, BTM	Cs-137	1522	-- A	1131	67					617	70
				623	70	Radium-228, SUS	Ra-228	1533	75937 A	--	68
Gross beta, BTM	Sr-90/	1524	4102 A	1131	67	Radon-222, FIL	Rn-222	490	82305 A	--	68
	Y-90			623	70	Radon-222, FIL	Rn-222	1369	82303 B	--	68
Gross beta, FIL	Cs-137	798	3515 B	456	67	Strontium-90 FIL	Sr-90	795	13503 B	--	68
				308	67	Thorium-230, BTM	Th-230	1537	26507 A	1141	68
				214	70					623	70
Gross beta, FIL	Sr-90/	793	80050 B	456	67	Thorium-230, FIL	Th-230	1472	26503 B	1139	68
	Y-90			308	67					617	70
				214	70	Thorium-230, SUS	Th-230	1541	75939 A	1140	68
Gross beta, FIL, HS	Sr-90/	1359	80050 D	458	67	Thorium-232, BTM	Th-232	1535	26631 A	1141	68
Gross beta, FIL, HS	Cs-137	1360	3515 D	458	67					623	70
Gross beta, SUS	Cs-137	1856	--	165	67	Thorium-232, FIL	Th-232	1501	75976 A	1139	68
Gross beta, SUS	S4-89/	1858	--	165	67					617	70
	Y-90					Thorium-232, SUS	Th-232	1539	75953 A	1140	68
Lead-210, BIM	Pb-210	1182	17507 B	948	67	Tritium	H-3	452	7000 D	--	69
Lead-210, BTM, gamma	Pb-210	1549	17507 C	--	67	Tritium, WWR	H-3	460	7000 A	--	69
				623	70	Tritium, WWR	H-3	624	7000 E	--	69
Lead-210, FIL	Pb-210	1503	17503 B	--	67	Tritium, WWR	H-3	1043	7000 B	--	69
				617	70	Tritium, WWR	H-3	1565	7000 F	--	69
Lead-210, SUS	Pb-210	1547	75946 A	--	67	Tritium, WWR	H-3	1567	7000 G	--	69
Plutonium-238, FIL	Pu-238	1963	--	--	68	Uranium, FIL	U	1006	22703 H	--	69
Plutonium-238, SUS	Pu-238	1964	--	--	68					214	70
Plutonium-239/240, FIL	Pu-239/	1965	--	--	68	Uranium, FIL	U	1385	22703 C	--	69
	240									473	69
Plutonium-239/240, SUS	Pu-239/	1966	--	--	68					1810	70
	240										

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Radiochemical/Stable Isotope parameters--Continued	Reported as	Lab code	Para- meter code	Sche- dule code	Pg.	Radiochemical/Stable Isotope parameters--Continued	Reported as	Lab code	Para- meter code	Sche- dule code	Pg.
<b>RADIOCHEMICAL--Continued</b>						<b>STABLE ISOTOPES--Continued</b>					
Uranium, FIL	U	1386	22703 E	--	69	Oxygen-18/Oxygen-16		489	82085 A		72
				308	69	ratio, aqueous				1142	70
Uranium-234, BTM	U-234	1509	28014 A	623	70	Sulfur-34/Sulfur-32, as sulfate		1951	--	--	72
				1138	69	(high concentration), aqueous					
Uranium-234, FIL	U-234	1366	22610 A	1130	69	Sulfur-34/Sulfur-32, as sulfate		1949	--	--	72
				617	70	(low concentration) aqueous					
Uranium-234, SUS	U-234	1474	75942 A	1137	69	Sulfur-34/Sulfur-32, as sulfide,		1948	--	--	72
Uranium-235, BTM	U-235	1515	22612 A	623	70	aqueous					
				1138	69	Sulfur-34/Sulfur-32, as sulfate,		1950	--	--	72
Uranium-235, FIL	U-235	1367	22620 A	1130	69	rock					
				617	70	Sulfur-34/Sulfur-32, as sulfide,		1947	--	--	72
Uranium-235, SUS	U-235	1476	75975 A	1137	69	rock					
						Sulfur-34/Sulfur-32, as sulfate		1952	--	921	72
Uranium-238, BTM	U-238	1511	28016 A	1138	69	Sulfur-34/Sulfur-32, as disulfide		1953	--	921	72
				623	70	Sulfur-34/Sulfur-32,		1954	--	921	72
Uranium-238, FIL	U-238	1368	22603 A	1130	69	as monosulfide					
				617	70						
Uranium-238, SUS	U-238	1507	75940 A	1137	69						
<b>STABLE ISOTOPES</b>											
Carbon-13/Carbon-12,		440	82081 A	1000	71						
Carbon-13/Carbon-12 and		1243	99481 A		71						
Oxygen-18/Oxygen-16											
Carbon-13/Carbon-12,		1135	82339 A		71						
carbonate rock											
Carbon-13/Carbon-12,		1244	-- --	--	71						
gaseous CO <sub>2</sub>											
Carbon-13/Carbon-12,		1205	-- --	--	71						
organic soil or rock material											
Carbon-13/Carbon-12, solid		2012	-- --	--	71						
Carbon 13, rock		2016	-- --	960	71						
Carbon-14 by AMS, solid		2014	-- --	960	72						
Carbon-14 by AMS, water		2010	-- --	1000	72						
Carbon-14 by beta, solid		2012	-- --								
Carbon-14 (field precipitated)		1199	82172 B		71						
Deuterium/protium, aq.		1574	82082 B	--	71						
Nitrogen-15/Nitrogen-14 ratio,		1719	-- A	--	71						
solid as ammonia											
Nitrogen-15/Nitrogen-14 ratio,		1717	-- A	--	71						
FIL as ammonia											
Nitrogen-15/Nitrogen-14 ration,		1921	-- A	--	71						
FIL as nitrate & ammonia											
Nitrogen- 15/Nitrogen-14 ratio,		1718	-- A	--	71						
FIL as nitrate											
Nitrogen- 15/Nitrogen-14 ratio,		1720	-- A	--	71						
solid as nitrate											
Oxygen-18/Oxygen-16, rock		1137	82337 A	--	72						