ESH-EMS-980568

THE ENVIRONMENTAL PROTECTION DEPARTMENT
ENVIRONMENTAL MONITORING SECTION

The Savannah River Site's Groundwater Monitoring Program

FIRST QUARTER 1998 (U)
(January through March 1998)

Westinghouse Savannah River Company
Savannah River Site
Aiken, SC 29808

Prepared for the U.S. Department of Energy under Contract No. AB60294N

SAFETY • RESPONSIBILITY • SECURITY
SRS
SAVANNAH RIVER SITE

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This Quarter at a Glance . . .

Executive Summary—table of all analytes detected at or above Flag 2 criteria
Flagging Criteria—standards for flagging results
Sample Scheduling—description of the sampling schedule
Field Notes—comments from the field-data books
Analytical Data Review—discrepancies in each laboratory's analytical data; laboratory-specific methods and estimated quantitation limits
Quality Control Samples—discussion of the quality of the analytical data in terms of precision, accuracy, representativeness, comparability, and completeness
Site Index—table of the well series and their site locations; also discusses the history of the sites
Appendices:
A. Water-Level Data—tables listing field data obtained for hydrogeologic studies
B. Analytical Results—tables listing the quarter's analytical results and field data
C. Sampling Blanks Results—tables listing all analytical results for sampling blanks for the quarter

• • •

The following is a key to the numbered areas of the Savannah River Site.

Site

100 Areas—Reactors
200 Areas—Separations
300 Areas—Reactor Materials
400 Area—Heavy Water
600 Areas—General
700 Area—Administration

Function

To operate and support the reactors
To separate and purify the product from fuel and target assemblies; to process waste
To fabricate new fuel and target assemblies from raw materials
To produce steam and electrical power; to process heavy water
Other (general)
To provide administrative and support services

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FIRST QUARTER 1998 (U)
(January through March 1998)

Environmental Protection Department
Westinghouse Savannah River Company
Aiken, SC

and

Exploration Resources, Inc.
Athens, GA

Reviewed and approved by
Charles Dan Rogers
EPD/EMS Groundwater Coordinator

Cover graphic supplied by R.A. Hiergesell
Savannah River Technology Center
Environmental Sciences Section

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Westinghouse Savannah River Company
Savannah River Site
Aiken, SC 29808

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Executive Summary

The Environmental Protection Department/Environmental Monitoring Section (EPD/EMS) administers the Savannah River Site's (SRS) Groundwater Monitoring Program. During first quarter 1998, EPD/EMS conducted extensive sampling of monitoring wells.

EPD/EMS has established two sets of flagging criteria to assist in managing sample results. The flagging criteria do not define contamination levels; instead, they aid personnel in sample scheduling, data interpretation, and trend identification. Since 1991, the flagging criteria have been based on the U.S. Environmental Protection Agency (EPA) drinking water standards and on method detection limits. A detailed explanation of the flagging criteria is presented in the **Flagging Criteria** section of this document. Analytical results from first quarter 1998 are included in this report, which is distributed to all site custodians.

One or more analytes exceeded Flag 2 criteria during first quarter 1998 in 39 monitoring well series. Analytes exceeded the current Flag 2 criteria for the first time since 1984 in 12 of those 39 monitoring well series.

Table 1, organized alphabetically by well series, lists those well series with analytical results above Flag 2 criteria during first quarter 1998. Results from all laboratory analyses are used to generate this table. Specific conductance and pH data from field measurements also are included in this table.

Table 1. Analytes above Flag 2 Criteria

Site	*Well Series*	*Analytes above Flag 2 Criteria*
A-Area Metals Burning Pit	ABP	pH, tetrachloroethylene, trichloroethylene
Metallurgical Laboratory Seepage Basin	AMB	**Benzoic acid**, dichloromethane, iron, pH, silver, tetrachloroethylene, total organic halogens, trichloroethylene
Motor Shop Oil Basin	AOB	Tetrachloroethylene, trichloroethylene
Savannah River Laboratory (SRL) Seepage Basins	ASB	**Chloromethane**, dichloromethane, tetrachloroethylene, trichloroethylene
C-Area Burning/Rubble Pit	CRP	Tritium
C-Area Reactor Seepage Basins	CSB	Aluminum, **bis(2-ethylhexyl) phthalate**, iron, **manganese**, trichloroethylene, tritium
Fire Department Training Facility	CSO	Aluminum, **dichloromethane**, iron
F-Area Burning/Rubble Pits	FBP	Iron, nitrate as nitrogen, tetrachloroethylene, trichloroethylene, trichlorofluoromethane, **tritium**
F-Area Seepage Basins Remediation Extraction Well	FEX	Gross alpha, iodine-129, nonvolatile beta, radium-228, specific conductance, strontium-90
F-Area Seepage Basins Remediation Injection Tank	FIN	Gross alpha, iodine-129, nonvolatile beta, specific conductance, strontium-90, uranium-233/234, uranium-238

Site	Well Series	Analytes above Flag 2 Criteria
F-Area Seepage Basins	FSB	Americium-241, antimony, bis(2-ethylhexyl) phthalate, cadmium, cesium-137, cobalt, curium-243/244, dichloromethane, gross alpha, iodine-129, lead, mercury, nickel, nitrate-nitrite as nitrogen, nonvolatile beta, pH, radium-226, radium-228, specific conductance, strontium-90, tetrachloroethylene, thallium, trichloroethylene, tritium, uranium-233/234, uranium-235, uranium-238
F-Area Inactive Process Sewer Line	FSL	Gross alpha, iodine-129, nitrate-nitrite as nitrogen, nonvolatile beta, radium-228, strontium-90, technetium-99, tritium, uranium-233/234, uranium-238
F-Area Tank Farm	FTF	Gross alpha, nonvolatile beta, pH, specific conductance, tritium
H-Area Tank Farm Operable Unit	HAA	Aluminum, iron, manganese, pH, radium, total alpha-emitting, specific conductance, thallium, tritium
H-Area Canyon Building	HCA	Aluminum, pH, tetrachloroethylene, thallium, tritium
H-Area Seepage Basins Remediation Injection Tank	HIN	Iodine-129, nonvolatile beta, radium-228, strontium-90
H-Area Retention Basin	HR8	Aluminum, iron, lead, **radium-226**
H-Area Seepage Basins	HSB	Bis(2-ethylhexyl) phthalate, gross alpha, iodine-129, lead, mercury, nickel-63, nitrate-nitrite as nitrogen, nonvolatile beta, pH, radium-226, radium-228, specific conductance, strontium-90, tetrachloroethylene, trichloroethylene, tritium, uranium-233/234, uranium-238
H-Area Inactive Process Sewer Line	HSL	Aluminum, iron, manganese, pH, **radium-228**, specific conductance, strontium-90, thallium, tritium
H-Area Tank Farm	HTF	Nonvolatile beta, tritium
Ford Building Seepage Basin	HXB	Aluminum, iron, **specific conductance**
K-Area Disassembly Basin	KDB	Specific conductance, tritium
K-Area Burning/Rubble Pit	KRP	Aluminum, iron, tetrachloroethylene, trichloroethylene
K-Area Tritium Sump Monitoring Well	KSM	Tritium
L-Area Research Wells	LAW	Tritium
L-Area Disassembly Basin	LDB	Tritium
Interim Sanitary Landfill	LFW	benzene, chloroethene, dichlorodifluoromethane, 1,1-dichloroethane, 1,2-dichloroethane, dichloromethane, specific conductance, trichloroethylene, trichloro-fluoromethane, tritium
L-Area Burning/Rubble Pit	LRP	Aluminum, **antimony**, **bis(2-ethylhexyl) phthalate**, carbon tetrachloride, iron, lead
Miscellaneous Chemical Basin	MCB	pH, specific conductance, tetrachloroethylene, trichloroethylene

Site	*Well Series*	*Analytes above Flag 2 Criteria*
M-Area Hazardous Waste Management Facility (HWMF)	MSB	carbon tetrachloride, 1,1-dichloroethylene, dichloromethane, gross alpha, lead, pH, radium, total alpha-emitting, specific conductance, tetrachloroethylene, 1,1,2-trichloroethane, trichloroethylene
R-Area Reactor Seepage Basins	RPC	**Gross alpha, nonvolatile beta,** pH, **strontium-90**
Series E, R-Area Reactor Seepage Basins	RSE	Nonvolatile beta, strontium-90
A/M-Area Recovery Well Network	RWM	Dichloromethane, specific conductance, tetrachloroethylene, trichloroethylene
Silverton Road Waste Site	SRW	Trichloroethylene
TNX Burying Ground	TBG	Carbon tetrachloride, gross alpha, mercury, nitrate as nitrogen, tetrachloroethylene, trichloroethylene
TNX-Area Assessment Wells	TNX	Carbon tetrachloride, mercury, nitrate as nitrogen, tetrachloroethylene, trichloroethylene
TNX-Area Recovery Wells	TRW	Carbon tetrachloride, **mercury**, trichloroethylene
Old TNX Seepage Basin	XSB	Mercury, nitrate as nitrogen, trichloroethylene
Z-Area Saltstone Facility Background Wells	ZBG	**Gross alpha, nonvolatile beta, radium, total alpha-emitting**, radium-226, radium-228

Note: The groundwater samples are unfiltered. Therefore, the results for metals are for total recoverable metals. Analytes in bold were detected at levels above the current Flag 2 criteria for the first time since 1984.

NOTES

Introduction

This report summarizes the Groundwater Monitoring Program conducted by SRS during first quarter 1998. It includes the analytical data, field data, data review, quality control, and other documentation for this program; provides a record of the program's activities; and serves as an official record of the analytical results.

EPD/EMS is responsible for providing drilling, sampling, and analytical and data management support for the SRS Groundwater Monitoring Program at approximately 135 waste sites in 17 areas at SRS (see figures 1 and 2 at the end of this section). The majority of this monitoring is required by U.S. Department of Energy (DOE) orders and by federal and state regulations administered by the EPA and the South Carolina Department of Health and Environmental Control (SCDHEC). The Groundwater Monitoring Program includes the following activities:

- installation, maintenance, and abandonment of monitoring wells
- environmental soil borings
- development of sampling and analytical schedules
- collection and analysis of groundwater samples
- review of analytical and other data
- maintenance of the databases containing groundwater monitoring data
- quality assurance (QA) evaluations of laboratory performance
- reports of results to waste-site facility custodians and the Environmental Protection Department

The custodian of each waste site is responsible for informing EPD/EMS of sampling and analytical requirements and special requests for the sampling schedule, assisting in review of the data, and making any decisions regarding groundwater monitoring at the waste site.

Each custodian receives a copy of this report. Each custodian also receives site-specific data on request, including the following:

- a computer printout of the analytical data for the current quarter and for the previous seven quarters, designed to assist in identifying trends
- a computer printout of analytical results at or above Flag 1 and Flag 2 criteria for the quarter, designed to assist in identifying elevated constituents

ORGANIZATION OF THIS REPORT

This report is divided into sections that focus on specific aspects of the SRS Groundwater Monitoring Program. The **Executive Summary** section presents a listing by waste site and well series of all analytes detected at or above Flag 2 criteria during the quarter. Analytes detected at or above Flag 2 criteria for the first time since 1984 are indicated in bold type.

The **Flagging Criteria** section lists flagging criteria for analytes and provides a short description of how the criteria were derived. The **Sample Scheduling** section discusses the preparation of the sampling schedule and the criteria for analyte selection.

During sample collection, samplers write comments in the field logbooks that may be pertinent to the analysis of samples. Many of the comments concern wells that went dry during sampling or water that appeared colored, turbid, or aerated. These comments are included in the **Field Notes** section.

Samples are analyzed by the EPD/EMS (EM Lab or EM) Radiological Laboratory at SRS and by one or more off-site laboratories. During first quarter 1998, EMAX Laboratories, Inc. (EX), of Torrance, CA; General Engineering Laboratories (GE), of Charleston, SC; QST Environmental Inc. (ES), formerly Environmental Science and Engineering, Inc., of Gainesville, FL; and Recra LabNet Philadelphia (WA), of Lionville, PA, were the primary off-site laboratories. Radionuclide analyses were conducted by Environmental Physics, Inc. (GP), a subcontractor for GE, and Thermo NUtech (TM), a subcontractor for WA. The EM Lab at SRS conducted total-activity analyses of samples for shipping clearance. The **Analytical Data Review** section contains three subsections. The **GIMS Data Review Module** subsection discusses automated data management activities at EPD/EMS. The **Review of the Analytical Data** subsection includes a discussion of discrepancies in each laboratory's analytical data, including results that were considerably higher or lower than previous results. This subsection also includes information about the analytical narratives that were used as reference materials throughout the data validation process. The **Analytical Methods** subsection lists the methods the laboratories used for measuring concentrations of each analyte.

The **Quality Control Samples** section contains five subsections and discusses the analytical data in terms of the following indicators of data quality: precision, accuracy, representativeness, comparability, and completeness. The **Precision** subsection explains the replicate analysis program, gives the statistical methods used for comparison, and lists the results of the comparisons between the replicate and duplicate analyses. The **Accuracy** subsection examines the relationship between an observed value and an accepted reference value and/or the measure of the over- or underestimation of reported concentrations. The **Representativeness** subsection describes how groundwater samples can be affected to produce results that may be biased positively or negatively. The **Comparability** subsection discusses whether the laboratories use the same standardized procedures for sample preparation and analysis, whether the reporting units are the same, and whether similar quantitation limits were obtained. The **Completeness** section evaluates the amount of useable data that resulted from the data collection.

The **Site Index** section lists and gives a description of the sites associated with each well series, as well as historical information for the sites. A list of terms, abbreviations, and acronyms used in this report can be found in the **Glossary** section. References cited are included in the **References** section.

The **Water-Level Data** section (**Appendix A**) includes concurrent water elevations obtained in A/M and other areas; these data are used by SRS personnel in hydrogeologic studies. The **Analytical Results** section (**Appendix B**) includes tables listing the analytical results from all laboratories and field data for all wells sampled during the quarter. The tables appear in alphabetical order by well name. The **Sampling Blanks Results** section (**Appendix C**) contains tables listing the analytical results of laboratory tests on sampling blanks.

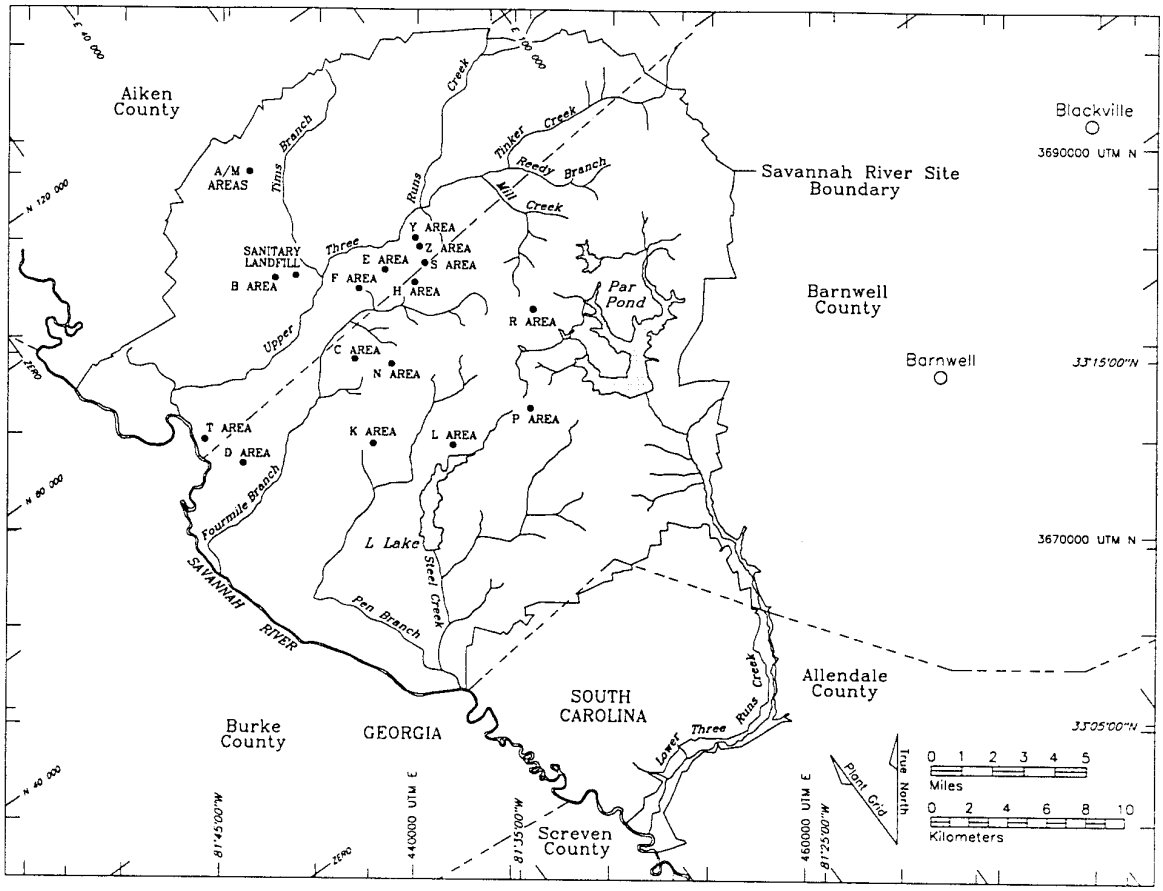


Figure 1. Areas and Locations Monitored for Groundwater Quality

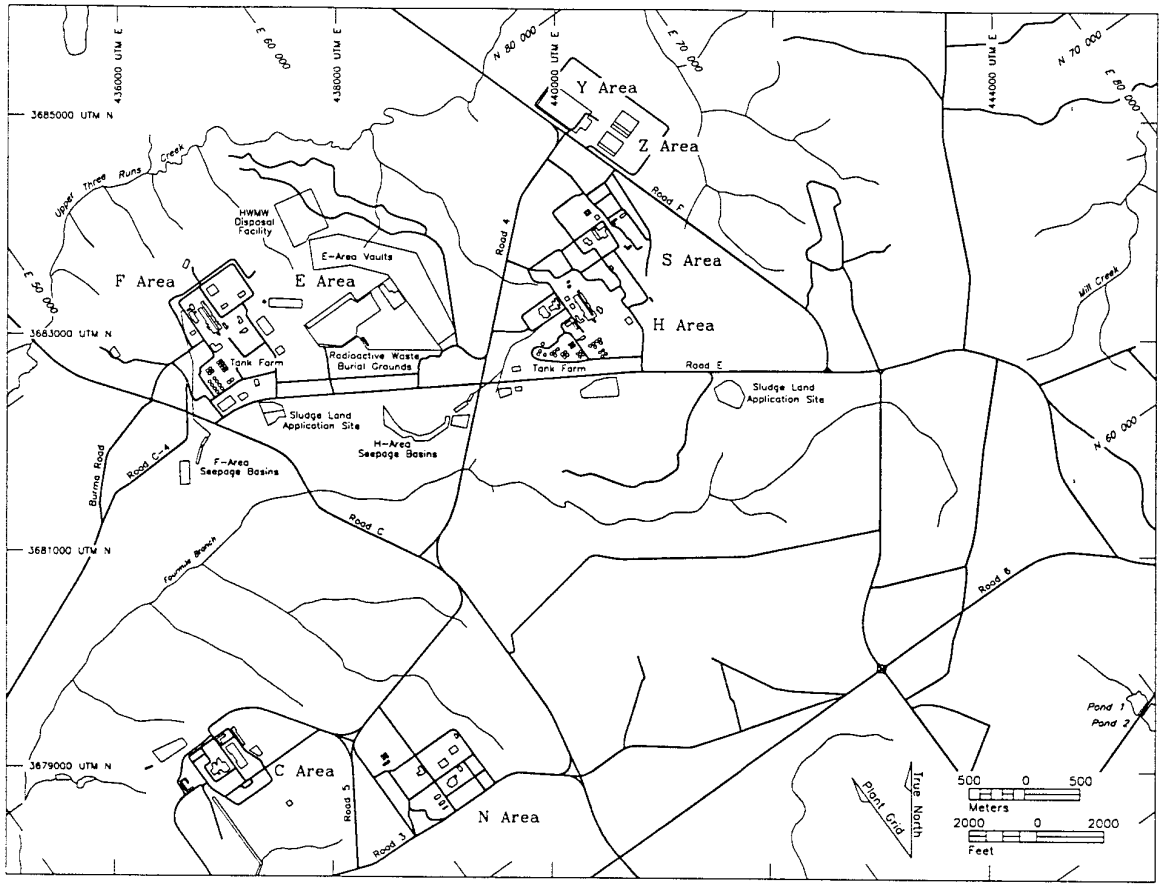


Figure 2. Separations and Waste Management Areas Monitored for Groundwater Quality

Flagging Criteria

Analytes in the data tables are assigned flagging levels (0, 1, or 2) depending on their concentrations in a groundwater sample. The flagging levels dictate the scheduling and frequency of groundwater sampling. Beginning first quarter 1992, flagging criteria were established for all of the constituents currently being analyzed as part of the EPD/EMS Groundwater Monitoring Program, except for certain aesthetic constituents, indicator parameters, major cations, and common laboratory contaminants and cleaners, which can be analyzed by special request. The flagging criteria in table 2 were determined as follows:

Flag 0: Analytical results below Flag 1 and constituents having no flagging criteria were classified as Flag 0.

Flag 1: The Flag 1 criterion for a constituent was set as one-half of the EPA final primary drinking water standard, the EPA proposed primary drinking water standard, or the EPA secondary drinking water standard for that constituent. If a constituent did not have an EPA drinking water standard, the Flag 1 criterion was set as five times a recently published 90th percentile detection limit obtained by one of the primary laboratories.

Flag 2: The Flag 2 criterion for a constituent was set as the EPA final primary drinking water standard, the EPA proposed primary drinking water standard, or the EPA secondary drinking water standard for that constituent. If a constituent did not have a drinking water standard, the Flag 2 criterion was set as 10 times a recently published 90th percentile detection limit obtained by one of the primary laboratories.

The following acronyms are used as abbreviated sources in the flagging criteria table. Complete information concerning documents cited can be found in the **References** section of this report.

APHA — American Public Health Association.

APHA Method — A specific analytical method for testing constituent levels in a sample as established by the APHA, American Water Works Association, and Water Pollution Control Federation. See American Public Health Association et al. in **References**.

EPA — U.S. Environmental Protection Agency.

EPA Method — A specific analytical method for testing constituent levels. Descriptions of these methods can be found in the EPA publications *Methods for Chemical Analysis of Water and Wastes* (1983) and *Test Methods for Evaluating Solid Waste* (1986b) and in the 1991 *Code of Federal Regulations*, Title 40, Part 136. See Environmental Protection Agency in **References**.

EPD/EMS — The Environmental Protection Department/Environmental Monitoring Section at the Savannah River Site.

PDWS — Primary Drinking Water Standards.

SCDHEC — South Carolina Department of Health and Environmental Control.

SDWS — Secondary Drinking Water Standards.

Table 2. Flagging Criteria

Analyte	*Unit*	*Flag 1*	*Flag 2*	*Source†*
Acenaphthene	µg/L	5.1	10.2	EPA Method 8270
Acenaphthylene	µg/L	5.1	10.2	EPA Method 8270
Acetone	µg/L	500	1,000	Set by EPD/EMS
Acetonitrile (Methyl cyanide)	µg/L	50	100	EPA Method 8240
Acetophenone	µg/L	85	170	EPA Method 8270
2-Acetylaminofluorene	µg/L	81	162	EPA Method 8270
Acrolein	µg/L	166.5	333	EPA Method 8240
Acrylonitrile	µg/L	250	500	EPA Method 8240
Actinium-228	µCi/mL	1.64E-06	3.27E-06	Proposed PDWS (EPA, 1991c)
Alachlor	µg/L	1.0	2.0	Final PDWS (EPA, 1996a)
Aldicarb	µg/L	1.5	3.0	Final PDWS (EPA, 1996a)
Aldicarb sulfone	µg/L	1.0	2.0	Final PDWS (EPA, 1996a)
Aldicarb sulfoxide	µg/L	2.0	4.0	Final PDWS (EPA, 1996a)
Aldrin	µg/L	0.4	0.8	EPA Method 8080
Alkalinity (as $CaCO_3$)		No flag	No flag	Set by EPD/EMS
Allyl chloride	µg/L	416.5	833	EPA Method 8240
Aluminum	µg/L	25	50	SDWS (EPA, 1996b)
Aluminum, dissolved	µg/L	25	50	SDWS (EPA, 1996b)
Aluminum, total recoverable	µg/L	25	50	SDWS (EPA, 1996b)
Americium-241	µCi/mL	3.17E-09	6.34E-09	Proposed PDWS (EPA, 1991c)
Americium-243	µCi/mL	3.19E-09	6.37E-09	Proposed PDWS (EPA, 1991c)
4-Aminobiphenyl	µg/L	81	162	EPA Method 8270
Ammonia	µg/L	250	500	APHA Method 417B
Ammonia nitrogen	µg/L	500	1,000	EPA Method 350.1
Aniline	µg/L	81	162	EPA Method 8270
Anthracene	µg/L	5.1	10.2	EPA Method 8270
Antimony	µg/L	3.0	6.0	Final PDWS (EPA, 1996a)
Antimony, dissolved	µg/L	3.0	6.0	Final PDWS (EPA, 1996a)
Antimony, total recoverable	µg/L	3.0	6.0	Final PDWS (EPA, 1996a)
Antimony-124	µCi/mL	3.0E-08	6.0E-08	Interim Final PDWS (EPA, 1977)
Antimony-125	µCi/mL	1.5E-07	3.0E-07	Interim Final PDWS (EPA, 1977)
Aramite	µg/L	81	162	EPA Method 8270
Arsenic	µg/L	25	50	Final PDWS (EPA, 1996a)
Arsenic, dissolved	µg/L	25	50	Final PDWS (EPA, 1996a)
Arsenic, total recoverable	µg/L	25	50	Final PDWS (EPA, 1996a)
Asbestos	Fibers/L	3,500,000	7,000,000	Final PDWS (EPA, 1996a)
Atrazine	µg/L	1.5	3.0	Final PDWS (EPA, 1996a)
Azobenzene	µg/L	50	100	EPA Method 625
Barium	µg/L	1,000	2,000	Final PDWS (EPA, 1996a)
Barium, dissolved	µg/L	1,000	2,000	Final PDWS (EPA, 1996a)
Barium, total recoverable	µg/L	1,000	2,000	Final PDWS (EPA, 1996a)
Barium-133	µCi/mL	7.60E-07	1.52E-06	Proposed PDWS (EPA, 1991c)
Barium-140▣	µCi/mL	4.5E-08	9.0E-08	Interim Final PDWS (EPA, 1977)
Benzene	µg/L	2.5	5.0	Final PDWS (EPA, 1996a)
alpha-Benzene hexachloride	µg/L	0.15	0.3	EPA Method 8080
beta-Benzene hexachloride	µg/L	0.25	0.5	EPA Method 8080
delta-Benzene hexachloride	µg/L	0.25	0.5	EPA Method 8080
Benzidine	µg/L	83.5	167	EPA Method 8270
Benzo[*a*]anthracene	µg/L	0.05	0.1	Proposed PDWS (EPA, 1990)
Benzo[*b*]fluoranthene	µg/L	0.1	0.2	Proposed PDWS (EPA, 1990)
Benzo[*k*]fluoranthene	µg/L	0.1	0.2	Proposed PDWS (EPA, 1990)
Benzoic acid	µg/L	5.0	10	EPA Method 8270
Benzo[*g,h,i*]perylene	µg/L	5.1	10.2	EPA Method 8270
Benzo[*a*]pyrene	µg/L	0.1	0.2	Final PDWS (EPA, 1996a)
1,4-Benzoquinone	µg/L	50	100	EPA Method 8270
Benzyl alcohol	µg/L	5.0	10	EPA Method 8270
Beryllium	µg/L	2.0	4.0	Final PDWS (EPA, 1996a)
Beryllium, dissolved	µg/L	2.0	4.0	Final PDWS (EPA, 1996a)
Beryllium, total recoverable	µg/L	2.0	4.0	Final PDWS (EPA, 1996a)

Analyte	Unit	Flag 1	Flag 2	Source†
Beryllium-7	µCi/mL	3.0E-06	6.0E-06	Interim Final PDWS (EPA, 1977)
5-day Biochemical oxygen demand		No flag	No flag	Set by EPD/EMS
Bis(2-chloroethoxy) methane	µg/L	5.1	10.2	EPA Method 8270
Bis(2-chloroethyl) ether	µg/L	5.1	10.2	EPA Method 8270
Bis(2-chloroisopropyl) ether	µg/L	100	200	EPA Method 8270
Bis(chloromethyl) ether	µg/L	50	100	EPA Method 8270
Bis(2-ethylhexyl) phthalate	µg/L	3.0	6.0	Final PDWS (EPA, 1996a)
Bismuth-214	µCi/mL	9.4E-06	1.89E-05	Proposed PDWS (EPA, 1991c)
Boron	µg/L	2,500	5,000	EPA Method 6010
Boron, dissolved	µg/L	2,500	5,000	EPA Method 6010
Boron, total recoverable	µg/L	2,500	5,000	EPA Method 6010
Bromide	µg/L	5,000	10,000	EPA Method 300.0
Bromobenzene	µg/L	25	50	EPA Method 8260
Bromochloromethane	µg/L	5	10	EPA Method 8260
Bromodichloromethane	µg/L	50	100	Final PDWS (EPA, 1996a)
Bromoform	µg/L	50	100	Final PDWS (EPA, 1996a)
Bromomethane	µg/L	10	20	EPA Method 8240
4-Bromophenyl phenyl ether	µg/L	5.1	10.2	EPA Method 8270
2-sec-Butyl-4,6-dinitrophenol	µg/L	3.5	7.0	Final PDWS (EPA, 1996a)
n-Butylbenzene	µg/L	5	10	EPA Method 8260
sec-Butylbenzene	µg/L	5	10	EPA Method 8260
tert-Butylbenzene	µg/L	5	10	EPA Method 8260
Butylbenzyl phthalate		No flag	No flag	Set by EPD/EMS
Cadmium	µg/L	2.5	5.0	Final PDWS (EPA, 1996a)
Cadmium, dissolved	µg/L	2.5	5.0	Final PDWS (EPA, 1996a)
Cadmium, total recoverable	µg/L	2.5	5.0	Final PDWS (EPA, 1996a)
Calcium		No flag	No flag	Set by EPD/EMS
Calcium, dissolved		No flag	No flag	Set by EPD/EMS
Calcium, total recoverable		No flag	No flag	Set by EPD/EMS
Carbofuran	µg/L	20	40	Final PDWS (EPA, 1996a)
Carbon disulfide	µg/L	25	50	EPA Method 8240
Carbon tetrachloride	µg/L	2.5	5.0	Final PDWS (EPA, 1996a)
Carbon-14	µCi/mL	1.0E-06	2.0E-06	Interim Final PDWS (EPA, 1977)
Carbonate		No flag	No flag	Set by EPD/EMS
Cerium-141▣	µCi/mL	1.5E-07	3.0E-07	Interim Final PDWS (EPA, 1977)
Cerium-144	µCi/mL	1.31E-07	2.61E-07	Proposed PDWS (EPA, 1991c)
Cesium-134❖	µCi/mL	4.07E-08	8.13E-08	Proposed PDWS (EPA, 1991c)
Cesium-137	µCi/mL	1.0E-07	2.0E-07	Interim Final PDWS (EPA, 1977)
Chemical Oxygen Demand		No flag	No flag	Set by EPD/EMS
Chlordane	µg/L	1.0	2.0	Final PDWS (EPA, 1996a)
alpha-Chlordane	µg/L	0.25	0.5	EPA Method 8080
gamma-Chlordane	µg/L	0.25	0.5	EPA Method 8080
Chloride	µg/L	125,000	250,000	SDWS (EPA, 1996b)
4-Chloroaniline	µg/L	5.0	10	EPA Method 8270
Chlorobenzene	µg/L	50	100	Final PDWS (EPA, 1996a)
Chlorobenzilate	µg/L	81	162	EPA Method 8270
Chloroethane	µg/L	10	20	EPA Method 8240
Chloroethene (Vinyl chloride)	µg/L	1.0	2.0	Final PDWS (EPA, 1996a)
Chloroethyl vinyl ether	µg/L	5.0	10	EPA Method 8240
2-Chloroethyl vinyl ether	µg/L	50	100	EPA Method 8240
Chloroform	µg/L	50	100	Final PDWS (EPA, 1996a)
4-Chloro-m-cresol	µg/L	5.1	10.2	EPA Method 8270
Chloromethane	µg/L	10	20	EPA Method 8240
2-Chloronaphthalene	µg/L	5.1	10.2	EPA Method 8240
2-Chlorophenol	µg/L	5.1	10.2	EPA Method 8270
4-Chlorophenyl phenyl ether	µg/L	5.1	10.2	EPA Method 8270
Chloroprene	µg/L	1,665	3,330	EPA Method 8240
2-Chlorotoluene	µg/L	25	50	EPA Method 8260
4-Chlorotoluene	µg/L	5	10	EPA Method 8260
Chromium	µg/L	50	100	Final PDWS (EPA, 1996a)
Chromium, dissolved	µg/L	50	100	Final PDWS (EPA, 1996a)
Chromium, total recoverable	µg/L	50	100	Final PDWS (EPA, 1996a)

Analyte	Unit	Flag 1	Flag 2	Source†
Chromium-51▣	µCi/mL	3.0E-06	6.0E-06	Interim Final PDWS (EPA, 1977)
Chrysene	µg/L	0.1	0.2	Proposed PDWS (EPA, 1990)
Cobalt	µg/L	50	100	EPA Method 6010
Cobalt, dissolved	µg/L	50	100	EPA Method 6010
Cobalt, total recoverable	µg/L	50	100	EPA Method 6010
Cobalt-57	µCi/mL	5.0E-07	1.0E-06	Interim Final PDWS (EPA, 1977)
Cobalt-58	µCi/mL	4.5E-06	9.0E-06	Interim Final PDWS (EPA, 1977)
Cobalt-60	µCi/mL	5.0E-08	1.0E-07	Interim Final PDWS (EPA, 1977)
Color		No flag	No flag	Set by EPD/EMS
Copper	µg/L	500	1,000	Final PDWS (SCDHEC, 1981)
Copper, dissolved	µg/L	500	1,000	Final PDWS (SCDHEC, 1981)
Copper, total recoverable	µg/L	500	1,000	Final PDWS (SCDHEC, 1981)
Corrosivity		No flag	No flag	Set by EPD/EMS
m-Cresol (3-Methylphenol)	µg/L	50	100	EPA Method 8270
o-Cresol (2-Methylphenol)	µg/L	5.0	10	EPA Method 8270
p-Cresol (4-Methylphenol)	µg/L	60	120	EPA Method 8270
Curium-242	µCi/mL	6.65E-08	1.33E-07	Proposed PDWS (EPA, 1991c)
Curium-243	µCi/mL	4.15E-09	8.30E-09	Proposed PDWS (EPA, 1991c)
Curium-243/244✪	µCi/mL	4.15E-09	8.30E-09	Proposed PDWS (EPA, 1991c)
Curium-244	µCi/mL	4.92E-09	9.84E-09	Proposed PDWS (EPA, 1991c)
Curium-245/246✪	µCi/mL	3.12E-09	6.23E-09	Proposed PDWS (EPA, 1991c)
Curium-246	µCi/mL	3.14E-09	6.27E-09	Proposed PDWS (EPA, 1991c)
Cyanide	µg/L	100	200	Final PDWS (EPA, 1996a)
Dalapon	µg/L	100	200	Final PDWS (EPA, 1996a)
p,p'-DDD	µg/L	0.55	1.1	EPA Method 8080
p,p'-DDE	µg/L	0.25	0.5	EPA Method 8080
p,p'-DDT	µg/L	0.85	1.7	EPA Method 8080
Diallate	µg/L	81	162	EPA Method 8270
Dibenz[*a,h*]anthracene	µg/L	0.15	0.3	Proposed PDWS (EPA, 1990)
Dibenzofuran	µg/L	5.0	10	EPA Method 8270
Dibromochloromethane	µg/L	50	100	Final PDWS (EPA, 1996a)
1,2-Dibromo-3-chloropropane	µg/L	0.1	0.2	Final PDWS (EPA, 1996a)
1,2-Dibromoethane	µg/L	0.025	0.05	Final PDWS (EPA, 1996a)
Dibromomethane	µg/L	10	20	EPA Method 8240
Di-n-butyl phthalate		No flag	No flag	Set by EPD/EMS
1,2-Dichlorobenzene	µg/L	300	600	Final PDWS (EPA, 1996a)
1,3-Dichlorobenzene	µg/L	81	162	EPA Method 8270
1,4-Dichlorobenzene	µg/L	37.5	75	Final PDWS (EPA, 1996a)
3,3'-Dichlorobenzidine	µg/L	5.1	10.2	EPA Method 8270
trans-1,4-Dichloro-2-butene	µg/L	250	500	EPA Method 8240
Dichlorodifluoromethane	µg/L	10	20	EPA Method 8240
1,1-Dichloroethane	µg/L	10	20	EPA Method 8240
1,2-Dichloroethane	µg/L	2.5	5.0	Final PDWS (EPA, 1996a)
cis-1,2-Dichloroethylene	µg/L	35	70	Final PDWS (EPA, 1996a)
1,1-Dichloroethylene	µg/L	3.5	7.0	Final PDWS (EPA, 1996a)
1,2-Dichloroethylene	µg/L	25	50	EPA Method 8240
trans-1,2-Dichloroethylene	µg/L	50	100	Final PDWS (EPA, 1996a)
Dichloromethane	µg/L	2.5	5.0	Final PDWS (EPA, 1996a)
2,4-Dichlorophenol	µg/L	5.1	10.2	EPA Method 8270
2,6-Dichlorophenol	µg/L	83.5	167	EPA Method 8270
2,4-Dichlorophenoxyacetic acid	µg/L	35	70	Final PDWS (EPA, 1996a)
1,2-Dichloropropane	µg/L	2.5	5.0	Final PDWS (EPA, 1996a)
2,2-Dichloropropane	µg/L	5	10	EPA Method 8260
cis-1,3-Dichloropropene	µg/L	10	20	EPA Method 8240
trans-1,3-Dichloropropene	µg/L	10	20	EPA Method 8240
Dieldrin	µg/L	4.15	8.3	EPA Method 8080
Di(2-ethylhexyl) adipate	µg/L	200	400	Final PDWS (EPA, 1996a)
Diethyl phthalate		No flag	No flag	Set by EPD/EMS
Dimethoate	µg/L	81	162	EPA Method 8270
2,4-Dimethyl phenol	µg/L	5.1	10.2	EPA Method 8270
Dimethyl phthalate		No flag	No flag	Set by EPD/EMS
p-Dimethylaminoazobenzene	µg/L	81	162	EPA Method 8270

Analyte	Unit	Flag 1	Flag 2	Source†
p-(Dimethylamino)ethylbenzene	µg/L	50	100	EPA Method 8270
7,12-Dimethylbenz[*a*]anthracene	µg/L	81	162	EPA Method 8270
3,3'-Dimethylbenzidine	µg/L	81	162	EPA Method 8270
a,a-Dimethylphenethylamine	µg/L	81	162	EPA Method 8270
1,3-Dinitrobenzene	µg/L	81	162	EPA Method 8270
2,4-Dinitrophenol	µg/L	51	102	EPA Method 8270
2,4-Dinitrotoluene	µg/L	0.5	1.0	EPA Method 8270
2,6-Dinitrotoluene	µg/L	0.5	1.0	EPA Method 8270
Di-n-octyl phthalate		No flag	No flag	Set by EPD/EMS
1,4-Dioxane	µg/L	500	1000	EPA Method 8270
Diphenylamine	µg/L	81	162	EPA Method 8270
1,2-Diphenylhydrazine	µg/L	83.5	167	EPA Method 8270
Diquat dibromide	µg/L	10	20	Final PDWS (EPA, 1996a)
Dissolved organic carbon	µg/L	10,500,000	21,000,000	EPA Method 9060
Disulfoton	µg/L	81	162	EPA Method 8270
Endosulfan I	µg/L	0.25	0.5	EPA Method 8080
Endosulfan II	µg/L	0.55	1.1	EPA Method 8080
Endosulfan sulfate	µg/L	0.55	1.1	EPA Method 8080
Endothall	µg/L	50	100	Final PDWS (EPA, 1996a)
Endrin	µg/L	1.0	2.0	Final PDWS (EPA, 1996a)
Endrin aldehyde	µg/L	0.85	1.7	EPA Method 8080
Endrin ketone		No flag	No flag	Set by EPD/EMS
Ethyl ether	µg/L	50	100	EPA Method 8260
Ethyl methacrylate	µg/L	2.5	5.0	EPA Method 8270
Ethyl methanesulfonate	µg/L	81	162	EPA Method 8270
Ethylbenzene	µg/L	350	700	Final PDWS (EPA, 1996a)
Europium-152	µCi/mL	3.0E-08	6.0E-08	Interim Final PDWS (EPA, 1977)
Europium-154	µCi/mL	1.0E-07	2.0E-07	Interim Final PDWS (EPA, 1977)
Europium-155	µCi/mL	3.0E-07	6.0E-07	Interim Final PDWS (EPA, 1977)
Famphur	µg/L	81	162	EPA Method 8270
Fluoranthene	µg/L	5.1	10.2	EPA Method 8270
Fluorene	µg/L	5.1	10.2	EPA Method 8270
Fluoride	µg/L	2,000	4,000	Final PDWS (EPA, 1996a)
Glyphosate	µg/L	350	700	Final PDWS (EPA, 1996a)
Gross alpha	µCi/mL	7.5E-09	1.5E-08	Final PDWS (EPA, 1996a)
Heptachlor	µg/L	0.2	0.4	Final PDWS (EPA, 1996a)
Heptachlor epoxide	µg/L	0.1	0.2	Final PDWS (EPA, 1996a)
Heptachlorodibenzo-p-dioxins	µg/L	0.007	0.014	EPA Method 8280
1,2,3,4,6,7,8-HPCDD	µg/L	0.007	0.014	EPA Method 8280
Heptachlorodibenzo-p-furans	µg/L	0.008	0.016	EPA Method 8280
1,2,3,4,6,7,8-HPCDF	µg/L	0.008	0.016	EPA Method 8280
Hexachlorobenzene	µg/L	0.5	1.0	Final PDWS (EPA, 1996a)
Hexachlorobutadiene	µg/L	5.0	10	EPA Method 8270
Hexachlorocyclopentadiene	µg/L	25	50	Final PDWS (EPA, 1996a)
Hexachlorodibenzo-p-dioxins	µg/L	0.008	0.016	EPA Method 8280
1,2,3,4,7,8-HXCDD	µg/L	0.0105	0.021	EPA Method 8280
Hexachlorodibenzo-p-furans	µg/L	0.006	0.012	EPA Method 8280
1,2,3,4,7,8-HXCDF	µg/L	0.0085	0.017	EPA Method 8280
Hexachloroethane	µg/L	0.5	1.0	EPA Method 8270
Hexachlorophene	µg/L	83.5	167	EPA Method 8270
Hexachloropropene	µg/L	81	162	EPA Method 8270
2-Hexanone	µg/L	50	100	EPA Method 8240
Indeno[1,2,3-*c,d*]pyrene	µg/L	0.5	1.0	EPA Method 8270
Iodine	µg/L	250	500	APHA Method 415A
Iodine-129	µCi/mL	5.0E-10	1.0E-09	Interim Final PDWS (EPA, 1977)
Iodine-131▣	µCi/mL	1.5E-09	3.0E-09	Interim Final PDWS (EPA, 1977)
Iodomethane (Methyl iodide)	µg/L	125	250	EPA Method 8240
Iron	µg/L	150	300	SDWS (EPA, 1996b)
Iron, dissolved	µg/L	150	300	SDWS (EPA, 1996b)
Iron, total recoverable	µg/L	150	300	SDWS (EPA, 1996b)
Iron-55▣	µCi/mL	1.0E-06	2.0E-06	Interim Final PDWS (EPA, 1977)
Iron-59▣	µCi/mL	1.0E-07	2.0E-07	Interim Final PDWS (EPA, 1977)

Analyte	Unit	Flag 1	Flag 2	Source†
Isobutyl alcohol	µg/L	834.5	1,669	EPA Method 8240
Isodrin	µg/L	81	162	EPA Method 8270
Isophorone	µg/L	5.1	10.2	EPA Method 8270
Isopropylbenzene	µg/L	5	10	EPA Method 8260
p-Isopropylbenzene	µg/L	5	10	EPA Method 8260
Isosafrole	µg/L	81	162	EPA Method 8270
Kepone	µg/L	81	162	EPA Method 8270
Lanthanum-140▣	µCi/mL	3.0E-08	6.0E-08	Interim Final PDWS (EPA, 1977)
Lead	µg/L	25	50	Final PDWS (SCDHEC, 1981)
Lead, dissolved	µg/L	25	50	Final PDWS (SCDHEC, 1981)
Lead, total recoverable	µg/L	25	50	Final PDWS (SCDHEC, 1981)
Lead-212	µCi/mL	6.20E-08	1.23E-07	Proposed PDWS (EPA, 1991c)
Lindane	µg/L	0.1	0.2	Final PDWS (EPA, 1996a)
Lithium	µg/L	125	250	EPA Method 6010
Lithium, dissolved	µg/L	125	250	EPA Method 6010
Lithium, total recoverable	µg/L	125	250	EPA Method 6010
Magnesium		No flag	No flag	Set by EPD/EMS
Magnesium, dissolved		No flag	No flag	Set by EPD/EMS
Magnesium, total recoverable		No flag	No flag	Set by EPD/EMS
Manganese	µg/L	25	50	SDWS (EPA, 1996b)
Manganese, dissolved	µg/L	25	50	SDWS (EPA, 1996b)
Manganese, total recoverable	µg/L	25	50	SDWS (EPA, 1996b)
Manganese-54	µCi/mL	1.5E-07	3.0E-07	Interim Final PDWS (EPA, 1977)
Mercury	µg/L	1.0	2.0	Final PDWS (EPA, 1996a)
Mercury, dissolved	µg/L	1.0	2.0	Final PDWS (EPA, 1996a)
Mercury, total recoverable	µg/L	1.0	2.0	Final PDWS (EPA, 1996a)
Methacrylonitrile	µg/L	416.5	833	EPA Method 8240
Methapyrilene	µg/L	81	162	EPA Method 8270
Methoxychlor	µg/L	20	40	Final PDWS (EPA, 1996a)
Methyl ethyl ketone		No flag	No flag	Set by EPD/EMS
Methyl isobutyl ketone		No flag	No flag	Set by EPD/EMS
Methyl methacrylate	µg/L	50	100	EPA Method 8270
Methyl methanesulfonate	µg/L	81	162	EPA Method 8270
Methyl tert-butyl ether	µg/L	5.0	10	EPA Method 8260
3-Methylcholanthrene	µg/L	81	162	EPA Method 8270
2-Methyl-4,6-dinitrophenol	µg/L	51	102	EPA Method 8270
2-Methylnaphthalene	µg/L	5.0	10	EPA Method 8270
Molybdenum	µg/L	250	500	EPA Method 6010
Molybdenum, dissolved	µg/L	250	500	EPA Method 6010
Molybdenum, total recoverable	µg/L	250	500	EPA Method 6010
Naphthalene	µg/L	83.5	167	EPA Method 8270
1,4-Naphthoquinone	µg/L	81	162	EPA Method 8270
1-Naphthylamine	µg/L	81	162	EPA Method 8270
2-Naphthylamine	µg/L	81	162	EPA Method 8270
Neptunium-237	µCi/mL	3.53E-09	7.06E-09	Proposed PDWS (EPA, 1991c)
Neptunium-239	µCi/mL	8.40E-07	1.68E-06	Proposed PDWS (EPA, 1991c)
Nickel	µg/L	50	100	Final PDWS (EPA, 1996a)
Nickel, dissolved	µg/L	50	100	Final PDWS (EPA, 1996a)
Nickel, total recoverable	µg/L	50	100	Final PDWS (EPA, 1996a)
Nickel-59	µCi/mL	1.5E-07	3.0E-07	Interim Final PDWS (EPA, 1977)
Nickel-63	µCi/mL	2.5E-08	5.0E-08	Interim Final PDWS (EPA, 1977)
Niobium-95▣	µCi/mL	1.5E-07	3.0E-07	Interim Final PDWS (EPA, 1977)
Nitrate as nitrogen	µg/L	5,000	10,000	Final PDWS (EPA, 1996a)
Nitrate-nitrite as nitrogen	µg/L	5,000	10,000	Final PDWS (EPA, 1996a)
Nitrite as nitrogen	µg/L	500	1,000	Final PDWS (EPA, 1996a)
m-Nitroaniline	µg/L	5.0	10	EPA Method 8270
o-Nitroaniline	µg/L	5.0	10	EPA Method 8270
p-Nitroaniline	µg/L	5.0	10	EPA Method 8270
Nitrobenzene	µg/L	5.1	10.2	EPA Method 8270
Nitrogen by Kjeldahl method	µg/L	500	1,000	EPA Method 351.2
2-Nitrophenol	µg/L	5.1	10.2	EPA Method 8270
4-Nitrophenol	µg/L	5.1	10.2	EPA Method 8270

Analyte	Unit	Flag 1	Flag 2	Source†
4-Nitroquinoline-1-oxide	µg/L	81	162	EPA Method 8270
N-Nitrosodi-n-butylamine	µg/L	81	162	EPA Method 8270
N-Nitrosodiethylamine	µg/L	81	162	EPA Method 8270
N-Nitrosodimethylamine	µg/L	83.5	167	EPA Method 8270
N-Nitrosodiphenylamine	µg/L	5.1	10.2	EPA Method 8270
N-Nitrosodipropylamine	µg/L	5.1	10.2	EPA Method 8270
N-Nitrosomethylethylamine	µg/L	81	162	EPA Method 8270
N-Nitrosomorpholine	µg/L	81	162	EPA Method 8270
N-Nitrosopiperidine	µg/L	81	162	EPA Method 8270
N-Nitrosopyrrolidine	µg/L	81	162	EPA Method 8270
5-Nitro-o-toluidine	µg/L	81	162	EPA Method 8270
Nonvolatile beta	µCi/mL	2.5E-08	5.0E-08	Interim Final PDWS (EPA, 1977)
Octachlorodibenzo-p-dioxins	µg/L	0.0085	0.017	EPA Method 8280
Octachlorodibenzo-p-furans	µg/L	0.0065	0.013	EPA Method 8280
Odor		No flag	No flag	Set by EPD/EMS
Oil & grease	µg/L	8,350	16,700	EPA Method 413.1
Oxamyl	µg/L	100	200	Final PDWS (EPA, 1996a)
Parathion	µg/L	0.4	0.8	EPA Method 8080
Parathion methyl	µg/L	0.4	0.8	EPA Method 8080
PCB 1016	µg/L	0.25	0.5	Final PDWS (EPA, 1996a)
PCB 1221	µg/L	0.25	0.5	Final PDWS (EPA, 1996a)
PCB 1232	µg/L	0.25	0.5	Final PDWS (EPA, 1996a)
PCB 1242	µg/L	0.25	0.5	Final PDWS (EPA, 1996a)
PCB 1248	µg/L	0.25	0.5	Final PDWS (EPA, 1996a)
PCB 1254	µg/L	0.25	0.5	Final PDWS (EPA, 1996a)
PCB 1260	µg/L	0.25	0.5	Final PDWS (EPA, 1996a)
PCB 1262	µg/L	0.25	0.5	Final PDWS (EPA, 1996a)
Pentachlorobenzene	µg/L	81	162	EPA Method 8270
Pentachlorodibenzo-p-dioxins	µg/L	0.008	0.016	EPA Method 8280
1,2,3,7,8-PCDD	µg/L	0.0075	0.015	EPA Method 8280
Pentachlorodibenzo-p-furans	µg/L	0.0085	0.017	EPA Method 8280
1,2,3,7,8-PCDF	µg/L	0.0085	0.017	EPA Method 8280
Pentachloroethane	µg/L	81	162	EPA Method 8270
Pentachloronitrobenzene	µg/L	81	162	EPA Method 8270
Pentachlorophenol	µg/L	0.5	1.0	Final PDWS (EPA, 1996a)
pH	pH	8.0	10	Set by EPD/EMS
pH	pH	4.0	3.0	Set by EPD/EMS
Phenacetin	µg/L	81	162	EPA Method 8270
Phenanthrene	µg/L	5.1	10.2	EPA Method 8270
Phenol	µg/L	83.5	167	EPA Method 8270
Phenols	µg/L	50	100	EPA Method 420.1
p-Phenylenediamine	µg/L	81	162	EPA Method 8270
Phorate	µg/L	0.85	1.7	EPA Method 8080
Picloram	µg/L	250	500	Final PDWS (EPA, 1996a)
2-Picoline	µg/L	81	162	EPA Method 8270
Plutonium-238	µCi/mL	3.51E-09	7.02E-09	Proposed PDWS (EPA, 1991c)
Plutonium-239	µCi/mL	3.11E-08	6.21E-08	Proposed PDWS (EPA, 1991c)
Plutonium-239/240✪	µCi/mL	3.11E-08	6.21E-08	Proposed PDWS (EPA, 1991c)
Plutonium-240	µCi/mL	3.11E-08	6.22E-08	Proposed PDWS (EPA, 1991c)
Plutonium-241▣	µCi/mL	3.13E-08	6.26E-08	Proposed PDWS (EPA, 1991c)
Plutonium-242▣	µCi/mL	3.27E-08	6.54E-08	Proposed PDWS (EPA, 1991c)
Potassium		No flag	No flag	Set by EPD/EMS
Potassium, dissolved		No flag	No flag	Set by EPD/EMS
Potassium, total recoverable		No flag	No flag	Set by EPD/EMS
Potassium-40	µCi/mL	1.5E-07	3.0E-07	Proposed PDWS (EPA, 1986a)
Promethium-144	µCi/mL	5.0E-08	1.0E-07	EPA Method 901.1
Promethium-146	µCi/mL	5.0E-08	1.0E-07	EPA Method 901.1
Promethium-147	µCi/mL	2.62E-06	5.24E-06	Proposed PDWS (EPA, 1991c)
Pronamid	µg/L	81	162	EPA Method 8270
Propionitrile	µg/L	1,665	3,330	EPA Method 8240
n-Propylbenzene	µg/L	5	10	EPA Method 8260
Pyrene	µg/L	5.1	10.2	EPA Method 8270

Analyte	Unit	Flag 1	Flag 2	Source†
Pyridine	µg/L	81	162	EPA Method 8270
Radium, total alpha-emitting	µCi/mL	2.5E-09	5.0E-09	Interim Final PDWS (EPA, 1977)
Radium-226	µCi/mL	2.5E-09	5.0E-09	Interim Final PDWS (EPA, 1977)
Radium-228	µCi/mL	2.5E-09	5.0E-09	Interim Final PDWS (EPA, 1977)
Radon-222	µCi/mL	1.5E-07	3.0E-07	Proposed PDWS (EPA, 1991c)
Ruthenium-103▣	µCi/mL	1.0E-07	2.0E-07	Interim Final PDWS (EPA, 1977)
Ruthenium-106	µCi/mL	1.5E-08	3.0E-08	Interim Final PDWS (EPA, 1977)
Safrole	µg/L	81	162	EPA Method 8270
Selenium	µg/L	25	50	Final PDWS (EPA, 1996a)
Selenium, dissolved	µg/L	25	50	Final PDWS (EPA, 1996a)
Selenium, total recoverable	µg/L	25	50	Final PDWS (EPA, 1996a)
Silica		No flag	No flag	Set by EPD/EMS
Silica, dissolved		No flag	No flag	Set by EPD/EMS
Silica, total recoverable		No flag	No flag	Set by EPD/EMS
Silver	µg/L	50	100	SDWS (EPA, 1996b)
Silver, dissolved	µg/L	50	100	SDWS (EPA, 1996b)
Silver, total recoverable	µg/L	50	100	SDWS (EPA, 1996b)
Simazine	µg/L	2.0	4.0	Final PDWS (EPA, 1996a)
Sodium		No flag	No flag	Set by EPD/EMS
Sodium, dissolved		No flag	No flag	Set by EPD/EMS
Sodium, total recoverable		No flag	No flag	Set by EPD/EMS
Sodium-22	µCi/mL	2.33E-07	4.66E-07	Proposed PDWS (EPA, 1991c)
Specific conductance	µS/cm	250	500	Set by EPD/EMS
Strontium-89	µCi/mL	1.0E-08	2.0E-08	Interim Final PDWS (EPA, 1977)
Strontium-89/90✪	µCi/mL	4.0E-09	8.0E-09	Final PDWS (EPA, 1996a)
Strontium-90	µCi/mL	4.0E-09	8.0E-09	Final PDWS (EPA, 1996a)
Styrene	µg/L	50	100	Final PDWS (EPA, 1996a)
Sulfate	µg/L	200,000	400,000	Proposed PDWS (EPA, 1990)
Sulfide	µg/L	8,350	16,700	EPA Method 9030
Sulfotepp	µg/L	81	162	EPA Method 8270
Surfactants		No flag	No flag	Set by EPD/EMS
2,3,7,8-TCDD	µg/L	0.007	0.014	Final PDWS (EPA, 1996a)
2,3,7,8-TCDF	µg/L	0.00425	0.0085	EPA Method 8280
Technetium-99	µCi/mL	4.5E-07	9.0E-07	Interim Final PDWS (EPA, 1977)
1,2,4,5-Tetrachlorobenzene	µg/L	81	162	EPA Method 8270
Tetrachlorodibenzo-p-dioxins	µg/L	0.007	0.014	EPA Method 8280
Tetrachlorodibenzo-p-furans	µg/L	0.0055	0.011	EPA Method 8280
1,1,1,2-Tetrachloroethane	µg/L	10	20	EPA Method 8240
1,1,2,2-Tetrachloroethane	µg/L	50	100	EPA Method 8240
Tetrachloroethylene	µg/L	2.5	5.0	Final PDWS (EPA, 1996a)
2,3,4,6-Tetrachlorophenol	µg/L	83.5	167	EPA Method 8270
Thallium	µg/L	1.0	2.0	Final PDWS (EPA, 1996a)
Thallium, dissolved	µg/L	1.0	2.0	Final PDWS (EPA, 1996a)
Thallium, total recoverable	µg/L	1.0	2.0	Final PDWS (EPA, 1996a)
Thionazin	µg/L	81	162	EPA Method 8270
Thorium-228	µCi/mL	6.25E-08	1.25E-07	Proposed PDWS (EPA, 1991c)
Thorium-230	µCi/mL	3.96E-08	7.92E-08	Proposed PDWS (EPA, 1991c)
Thorium-232	µCi/mL	4.4E-08	8.8E-08	Proposed PDWS (EPA, 1991c)
Thorium-234▣	µCi/mL	2.0E-07	4.01E-07	Proposed PDWS (EPA, 1991c)
Tin	µg/L	250	500	EPA Method 282.2
Tin, dissolved	µg/L	250	500	EPA Method 282.2
Tin, total recoverable	µg/L	250	500	EPA Method 282.2
Tin-113	µCi/mL	1.5E-07	3.0E-07	Interim Final PDWS (EPA, 1977)
Toluene	µg/L	500	1,000	Final PDWS (EPA, 1996a)
o-Toluidine	µg/L	81	162	EPA Method 8270
Total carbon	µg/L	5,000	10,000	EPA Method 9060
Total coliform	N/A	0	0	Final PDWS (EPA, 1996a)
Total dissolved solids		No flag	No flag	Set by EPD/EMS
Total hydrocarbons	µg/L	5,000	10,000	EPA Method 418.1
Total inorganic carbon	µg/L	8,350	16,700	EPA Method 9060
Total organic carbon	µg/L	500,000	1,000,000	EPA Method 9060
Total organic halogens	µg/L	50	100	EPA Method 9020

Analyte	Unit	Flag 1	Flag 2	Source†
Total organic nitrogen	µg/L	500	1,000	APHA Method 420
Total petroleum hydrocarbons	µg/L	8,350	16,700	EPA Method 418.1
Total phosphates (as P)		No flag	No flag	Set by EPD/EMS
Total phosphorus		No flag	No flag	Set by EPD/EMS
Toxaphene	µg/L	1.5	3.0	Final PDWS (EPA, 1996a)
2,4,5-TP (Silvex)	µg/L	25	50	Final PDWS (EPA, 1996a)
Tributyl phosphate	µg/L	86	172	EPA Method 8270
1,2,3-Trichlorobenzene	µg/L	5	10	EPA Method 8260
1,2,4-Trichlorobenzene	µg/L	35	70	Final PDWS (EPA, 1996a)
1,1,1-Trichloroethane	µg/L	100	200	Final PDWS (EPA, 1996a)
1,1,2-Trichloroethane	µg/L	2.5	5.0	Final PDWS (EPA, 1996a)
Trichloroethylene	µg/L	2.5	5.0	Final PDWS (EPA, 1996a)
Trichlorofluoromethane	µg/L	10	20	EPA Method 8240
2,4,5-Trichlorophenol	µg/L	5.0	10	EPA Method 8270
2,4,6-Trichlorophenol	µg/L	0.5	1.0	EPA Method 8270
2,4,5-Trichlorophenoxyacetic acid	µg/L	0.25	0.5	EPA Method 8150
1,2,3-Trichloropropane	µg/L	10	20	EPA Method 8240
Trichlorotrifluoroethane	µg/L	50	100	EPA Method 8260
O,O,O-Triethyl phosphorothioate	µg/L	81	162	EPA Method 8270
1,2,4-Trimethylbenzene	µg/L	5	10	EPA Method 8260
1,3,5- Trimethylbenzene	µg/L	5	10	EPA Method 8260
1,3,5-Trinitrobenzene	µg/L	81	162	EPA Method 8270
Tritium	µCi/mL	1.0E-05	2.0E-05	Final PDWS (EPA, 1996a)
Turbidity◈		No flag	No flag	Set by EPD/EMS
Uranium	µg/L	10	20	Proposed PDWS (EPA, 1991c)
Uranium alpha activity	µCi/mL	1.5E-08	3.0E-08	Proposed PDWS (EPA, 1991c)
Uranium, dissolved	µg/L	10	20	Proposed PDWS (EPA, 1991c)
Uranium, total recoverable	µg/L	10	20	Proposed PDWS (EPA, 1991c)
Uranium-233/234✪	µCi/mL	6.9E-09	1.38E-08	Proposed PDWS (EPA, 1991c)
Uranium-234	µCi/mL	6.95E-09	1.39E-08	Proposed PDWS (EPA, 1991c)
Uranium-235	µCi/mL	7.25E-09	1.45E-08	Proposed PDWS (EPA, 1991c)
Uranium-238	µCi/mL	7.3E-09	1.46E-08	Proposed PDWS (EPA, 1991c)
Vanadium	µg/L	66.5	133	EPA Method 6010
Vanadium, dissolved	µg/L	66.5	133	EPA Method 6010
Vanadium, total recoverable	µg/L	66.5	133	EPA Method 6010
Vinyl acetate	µg/L	50	100	EPA Method 8240
m/p-Xylene	µg/L	81	162	EPA Method 8260
o-Xylene	µg/L	5	10	EPA Method 8260
Xylenes	µg/L	5,000	10,000	Final PDWS (EPA, 1996a)
Yttrium-88	µCi/mL	5.0E-08	1.0E-07	EPA Method 901.1
Zinc	µg/L	2,500	5,000	SDWS (EPA, 1996b)
Zinc, dissolved	µg/L	2,500	5,000	SDWS (EPA, 1996b)
Zinc, total recoverable	µg/L	2,500	5,000	SDWS (EPA, 1996b)
Zinc-65	µCi/mL	1.5E-07	3.0E-07	Interim Final PDWS (EPA, 1977)
Zirconium-95	µCi/mL	1.0E-07	2.0E-07	Interim Final PDWS (EPA, 1977)
Zirconium/Niobium-95▣	µCi/mL	1.0E-07	2.0E-07	Interim Final PDWS (EPA, 1977)

† Analytical methods are discussed in the **Analytical Data Review** section of this document; references for dated sources are in the **References** section.

▣ EMS discontinued monitoring this radionuclide because it is inappropriate for the SRS Groundwater Monitoring Program.

❖ EPD/EMS set this flagging criterion using the 1991 proposed PDWS because the final PDWS in 1977 may have been in error.

✪ When radionuclide analyses are combined, the lower DWS of the two isotopes is used for flagging.

◈ The primary maximum contaminant level range for turbidity is 1–5 NTU, which is inappropriate for the SRS Groundwater Monitoring Program.

Note: Beginning fourth quarter 1992, samples were no longer filtered at the wells. Therefore, the methods for analyzing metals now include a digestion step. Beginning fourth quarter 1993, the laboratories were required to report all metals as total recoverable metals. Flagging criteria remain unchanged.

NOTES

Sample Scheduling

Scheduling of sampling and analyses for the SRS Groundwater Monitoring Program conducted by EPD/EMS is based on several factors. Environmental screening is scheduled on a regular basis. Additional scheduling is based on previous flagging levels, regulatory requirements, and special requests that fall within the scope of the Groundwater Monitoring Program. This information is used to generate *The Savannah River Site's Groundwater Monitoring Program 1998 Sampling Schedule.*

A breakdown by laboratory of the total number of analyses performed during first quarter 1998 follows:

Laboratory	*Number of Analyses*
EMAX Laboratories, Inc.	3,326
Environmental Physics	15,749
EPD/EMS Laboratory	198
General Engineering Laboratories	28,346
QST Environmental, Inc.	13,700
Recra LabNet Philadelphia	33,549
Thermo NUtech	2,977

ENVIRONMENTAL SCREENING

New wells designated as screening program wells are scheduled initially for four quarters of environmental screening. Environmental-screening constituents, which include indicator parameters, groundwater quality characteristics, and some drinking water characteristics, are listed below. After the initial four quarters of analyses for new wells, environmental screening is scheduled once every three years for wells identified as environmental-screening program wells. The wells are sampled only for the environmental screening that has not been analyzed within the past three years.

Beginning in 1996, EPD/EMS changed its policy concerning quarterly field measurements. Only wells scheduled by request or wells identified for environmental screening receive field measurements.

Environmental-Screening Constituents

Aluminum
Arsenic
Barium
Boron
Cadmium
Chloride
Chromium
Field measurements
- Air temperature
- Date
- Depth to water
- Flow rate
- pH
- Phenolphthalein alkalinity
- Program
- Sampling method
- Site code
- Specific conductance
- Stabilized (Yes or No)
- Time
- Total alkalinity
- Turbidity
- Volume purged
- Water temperature
- Well condition

Fluoride
Gross alpha
Iron
Lead
Lithium
Major ions
- Calcium
- Magnesium
- Potassium
- Silica

Manganese
Mercury
Nitrate-nitrite as nitrogen
Nonvolatile beta
Selenium
Silver
Sodium
Sulfate
Total dissolved solids
Total organic carbon
Total organic halogens
Total phosphates (as P)
Tritium

Scheduling Based on Flagging Levels

Only the flagging criteria for environmental screening and GC VOA (see **Glossary**) are used to trigger scheduling. Wells are grouped for scheduling by monitoring site or by the investigation for which they are sampled. Specific criteria for Flag 1 and Flag 2 designations are found in the **Flagging Criteria** section of this report.

Beginning in 1996, only wells in the environmental-screening program were scheduled by flagging criteria once a year. Constituents classified as Flag 0 in each well series are scheduled for analyses only by custodian request or as part of the triennial environmental-screening program. If an analytical result for an environmental-screening or GC VOA analysis in any well exceeds Flag 2 or Flag 1, the environmental-screening wells in the same monitoring series are sampled and analyzed for that constituent once a year. If a constituent falls below Flag 2 for three consecutive sampling events, the individual well's flag is reduced from Flag 2 status to Flag 1 or Flag 0 status, depending on the results, and the well is scheduled according to the lower flag. If a constituent falls below Flag 1 for three consecutive sampling events, the individual well's flag is reduced from Flag 1 status to Flag 0 status, and the flagging-based sampling ceases.

If an environmental-screening or GC VOA constituent has ever been flagged in a well series, it automatically is flagged for all new wells of that series that are designated as environmental-screening wells. The rules previously referred to also apply to removal of a flag from a new well.

When one or more of the five constituents in the GC VOA suite are flagged, the entire suite is scheduled for analysis. The GC VOA suite includes the following: carbon tetrachloride, chloroform, tetrachloroethylene, 1,1,1-trichloroethane, and trichloroethylene.

The following constituents are exceptions to the flagging rules but still receive analyses by custodian request or during triennial environmental-screening analyses:

- Specific conductance and pH, two indicator constituents, have flagging criteria but do not trigger the scheduling mechanism.

- No flags are set for the following indicator parameters and major cations: alkalinity, 5-day biochemical oxygen demand, calcium, carbonate, chemical oxygen demand, magnesium, potassium, silica, sodium, total dissolved solids, total phosphates (as P), and total phosphorus.

- Aesthetic analyses such as color, odor, corrosivity, Eh, turbidity, and surfactants will not be assigned flagging criteria but may be analyzed by special request.

- Common laboratory contaminants and cleaners including phthalates, dichloromethane (methylene chloride), ketones, and toluene are not assigned flagging criteria unless they have primary drinking water standards. These constituents may be analyzed by special request.

GCMS VOA ANALYSES

All wells are reviewed for total organic halogens (TOH) results twice a year. GCMS VOA (see **Glossary**) is scheduled once for individual wells that are designated as environmental-screening wells, have had two results for TOH greater than 10 µg/L (excluding the first TOH analysis), and have never received GCMS VOA analysis.

SAMPLING REQUESTS

Many analyses are scheduled at the request of various SRS groups. The person or group requesting an analysis must submit a formal sampling request form to EPD/EMS. If the request is within the scope of the Groundwater Monitoring Program, and if provision for the analysis has been made in the current laboratory contract, the analysis is added to the sampling schedule. Likewise, if a sampling request should be deleted, the originator of the request must submit a deletion form.

Regulatory Requirements

All regulatory sampling requirements, such as those mandated by the Resource Conservation and Recovery Act (RCRA), are scheduled by request.

Changes in Sampling

For changes in sampling for first quarter 1998, please refer to the *The Savannah River Site's Groundwater Monitoring Program 1998 Sampling Schedule.*

RFI/RI Projects

The following RCRA Facility Investigation/Remedial Investigation (RFI/RI) projects were either in process or new during first quarter 1998:

- A/M Area and MetLab
- F/H Area
- F-Area Water Treatment Unit
- H-Area Water Treatment Unit
- Interim Sanitary Landfill
- Sanitary Landfill
- TNX Area
- Z Area

CERCLA Projects

The following Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) projects were either in process or new during first quarter 1998:

- C-Area Burning/Rubble Pit
- C-Area Reactor Seepage Basin
- F-Area Burning/Rubble Pit
- Ford Building Seepage Basin
- H-Area Tank Farm Operable Unit
- K-Area Burning/Rubble Pit
- L-Area Burning/Rubble Pit
- R-Area Reactor Seepage Basin

Special Study

Pilot testing of the Purge Water Management System was a special study during first quarter 1998.

New Wells Scheduled for Sampling

The following new wells were scheduled for sampling for the first time during first quarter 1998: CSB 1C, 2C, 3C, and 7D; FBP 41C, 42C, 43C, 43DL, 43DU, 44D, 45D, 46D, 47D, and 48D; KRP 8 and 9; LFW 32C, 76, 77, and 78; LRP 5 and 6R; and RPC 6DL, 6DU, 7DL, 7DU, 8DL, 8DU, 10DL, 10DU, 11DL, and 11DU.

MAINTENANCE OR ACCESS PROBLEMS

The following wells had flowmeter problems during first quarter 1998: FBP 5D; FSB 77, 78, 116C, and 122D; FST 1D; LDB 1; MCB 5C; MSB 9B, 38C, and 65D; P 26A; RWM 8 and 12; TNX 10D; and ZBG 1A.

The following wells were scheduled for sampling during first quarter 1998, but sampling was incomplete: ABP 8C; AMB 14D and 15D; FBP 6D, 9D, 10D, and 11D; FSB111D, 114D, and 120D; HAA 3D, 6A, and 6D; HSB 68A, 147D, and 152D; HSL 3D and 7D; HXB 6D; LFW 43C, 63D, 65D, 77, and 78; MSB 1D, 39TA, 48D, and 55HC; QA 58A; and ZBG 1A.

Wells LWF 60D and 62D were resampled for volatiles in April because the volatile vials for the March sampling event were broken.

The following wells were resampled for volatiles in March because the original samples arrived at the lab out of temperature: AMB 4B, 4D, 5, 6, 11B, 11D, 12D, 13AR, 16D, 18A, 18C, and 4A and 17A with associated QA samples; and MSB 29B, 29C, 29D, 42C, 43A, 43B, and 43D.

Well MSB 74B was not sampled in March because a tracer test was run on the well.

Wells FSB106D; FSL 4D; FTF 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, and 14; and MSB 3B, 8A, 9C, 15C, 46C, and 87C were not sampled because they were dry.

Wells FSB 78A; KDB 1; LFW 58D and 65B; and MSB 6C, 15D, 16C, 27TA, 36D, and 47TA were not sampled because of mechanical problems.

Well RWM 10 was not in operation for the January and February sampling events; wells TRW 3 and 4, for the January, February and March events; and wells TRW 1 and 2, for the March event.

In February, wells TIR 3B and ZBG 1A and, in March, wells FST 1D and TNX 10D were sampled using hand-held pumps.

The following wells were not sampled because they were in a contamination area: ASB 1A, 2AR, 2CR, 3CR, 6A, and 10CR.

Wells HTF 2, 3, 5, and 6 did not have field readings because they were in a contaminated area.

R-Area Bingham Pump Outage Pits wells were scheduled for field measurements in March, but the event was not completed until second quarter 1998.

Wells FSB 87D, LRP 2, MSB 82A, RPC 6DU, and RWM 1 did not have water-level measurements registered, even though the wells could be sampled.

Wells BGO 2D, HIW 2MC, and HIW 4MC did not have synchronous water-level measurements because they were inaccessible.

PURGE-WATER CONTAINMENT PROGRAM

Beginning in 1991, a purge-water containment program was partially implemented to dispose properly of the water purged from certain wells before sampling. According to the *Investigation-Derived Waste Management Plan* (WSRC, 1995), additional wells were identified for purge-water treatment at the M-1 Air Stripper and F- and H-Area Effluent Treatment Facility. The program has been implemented, and no well that was scheduled for analysis as part of the Groundwater Monitoring Program during first quarter 1998 was not sampled.

Field Notes

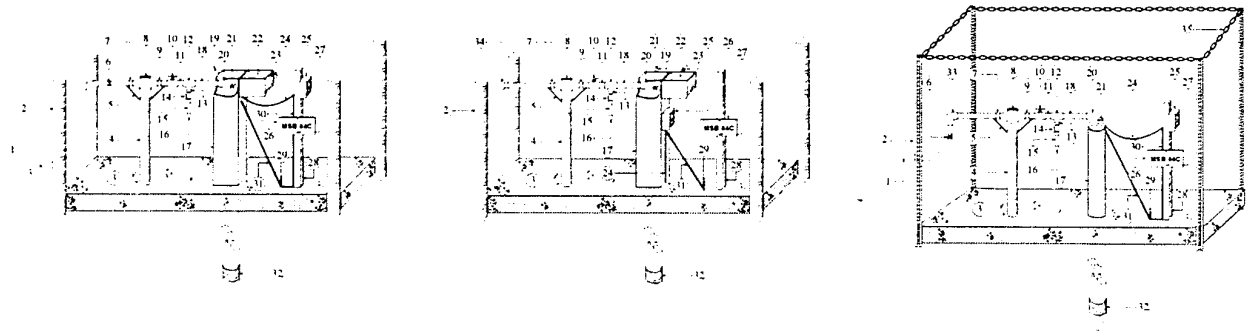
A sampler may visit a well to collect field data, collect samples, and/or measure depth to water. A well may be visited multiple times during a quarter for any combination of these reasons. Field measurements generally include air temperature, depth to water prior to pumping, dissolved oxygen, Eh (REDOX potential), flow rate, pH, phenolphthalein alkalinity, specific conductance, total alkalinity, turbidity, volume of water purged prior to sampling, and water temperature.

EPD/EMS personnel and RCS Corporation of Aiken, SC, performed well visitations during first quarter 1998. Each sampler maintained a field notebook. These notebooks are in the first quarter 1998 section of the EPD/EMS Groundwater Monitoring Library. All well visitations were routine during first quarter 1998, except as indicated in table 3. The table includes samplers' comments on conditions that may affect the samples or the data-collection process. The majority of wells sampled during first quarter 1998 were pumped. Bailed wells are listed in table 98 in the Quality Control Samples section.

Among Z series wells, only six of the 15 wells have casings large enough to allow sampling (Z 4, 7, 9, 19, 20, and 20B). All other Z wells have very narrow casings (~.75 in.), making bailing impractical. A bailer is stuck in well Z 3. Z wells are scheduled generally for water-level measurements only.

If a well pumps or is bailed dry during purging and is revisited and sampled within 24 hours, this is considered one sampling event yielding a single set of field and analytical data. For such wells, table 3 lists the volume purged before the well went dry during the first visitation. The **Analytical Results** section gives the total amount of water purged from each well in one sampling event.

Comments about dry wells and continuously pumping wells are in the **Analytical Results** section.



1. Water discharge hose
2. Protective or delineator post
3. Concrete pad
4. Flowmeter support post
5. Flowmeter tie down
6. Hose clamp
7. Flowmeter connector
8. Flowmeter
9. Flowmeter connector
10. Gate or ball valve
11. Nipple
12. Sampling tee
13. Bushing
14. Sample cock
15. Sample nipple
16. Sample nipple cap
17. Protective casing
18. Nipple
19. Hasp
20. Riser pipe elbow
21. Liquid level pipe cap
22. Protective casing lid
23. Lock
24. Electrical conduit
25. Electrical box
26. Well identification sign
27. Sign bolt
28. Mounting post
29. Grounding rod
30. Grounding wire
31. Security cable
32. Pump
33. Elbow
34. Quick disconnect
35. Yellow chain

Figure 3. Three Types of Groundwater Monitoring Wellheads

Table 3. Comments from the Field Data

Well	*Date*	*Comments*
ABP Series		
ABP 8C	02/20/98	Dry after 4 gal
	03/10/98	Dry after 5 gal
AMB Series		
AMB 6	03/23/98	Resampled for volatiles
AMB 7	03/05/98	Dry after 27 gal
	03/09/98	Dry after 5 gal; not sampled
AMB 10A	03/05/98	Dry after 69 gal; not sampled
AMB 13AR	03/23/98	Resampled for volatiles
AMB 14D	03/05/98	Dry after 1 gal
	03/09/98	Dry after 1 gal
	03/10/98	Dry after 3 gal
AMB 15D	03/05/98	Dry after 1 gal; not sampled
AMB 16D	03/23/98	Resampled for volatiles
AMB 18C	03/23/98	Resampled for volatiles
ASB Series		
ASB 1A	03/05/98	Located in contaminated area; not sampled
	03/23/98	Located in contaminated area; not sampled
ASB 2AR	03/05/98	Located in contaminated area; not sampled
ASB 2CR	03/04/98	Located in contaminated area; not sampled
ASB 3AR	03/05/98	Located in contaminated area; not sampled
ASB 3CR	03/04/98	Located in contaminated area; not sampled
ASB 5AR	03/03/98	Dry after 4 gal
ASB 6A	03/05/98	Located in contaminated area; not sampled
	03/23/98	Located in contaminated area; not sampled
ASB 6TA	03/04/98	Dry after 32 gal
ASB 10CR	03/02/98	Located in contaminated area; not sampled
BGO Series		
BGO 2D	03/23/98	Inaccessible
CMP Series		
CMP 31C	01/08/98	Well bailed after pump removed
CRP Series		
CRP 3D	02/09/98	Dry after 2 gal
CRP 5D	02/09/98	Dry after 3 gal
CSB Series		
CSB 7D	02/24/98	Water will not come to surface
FBP Series		
FBP 4	03/30/98	Flowmeter broken, estimated volume purged calculated using 2.5 gal buckets
FBP 6D	03/30/98	Dry after 2 gal
	03/31/98	Metals not collected because of high turbidity
FBP 7D	03/30/98	Dry after 3 gal
FBP 8D	03/30/98	Dry after 23 gal
FBP 9D	03/30/98	Dry after 5 gal
FBP 10D	03/30/98	Metals not collected because of high turbidity
FBP 11D	03/30/98	Dry after 1 gal
	03/31/98	Metals not collected because of high turbidity

Well	Date	Comments
FEX Series		
FEX 6	01/21/98	No water in standpipe
FEX 7	01/21/98	No water in standpipe
FEX 8	02/12/98	No water in standpipe
FEX 9	02/12/98	No water in standpipe
FEX 10	02/12/98	No water in standpipe
FEX 11	01/22/98	No water in standpipe
FIN Series		
FIN 2TK	02/12/98	No water in standpipe
FSB Series		
FSB 77	01/12/98	Flowmeter broken, estimated volume purged
FSB 78	01/13/98	Flowmeter broken, estimated volume purged
FSB 78A	01/26/98	Pump broken; not sampled
FSB 78C	01/13/98	Dry after 43 gal
FSB 87D	01/08/98	No water in standpipe, water level could not be determined
FSB 88D	01/05/98	Dry after 11 gal
FSB 90D	01/20/98	Dry after 4 gal
FSB 93D	01/12/98	Dry after 6 gal
FSB 94C	01/12/98	Dry after 25 gal
FSB 97D	01/14/98	Dry after 8 gal
	01/19/98	Dry after 8 gal
FSB 98D	01/19/98	Dry after 9 gal
FSB 99D	01/12/98	Dry after 39 gal
FSB106D	01/13/98	No water in standpipe, water level could not be determined
FSB107C	01/22/98	Well broken
FSB108D	01/22/98	Dry after 4 gal
	01/26/98	Dry after 5 gal
FSB109D	01/22/98	Dry after 3 gal
FSB111C	01/06/98	Unable to sample because of inclement weather
FSB113A	01/07/98	Dry after 39 gal
FSB113C	01/07/98	Dry after 26 gal
FSB115D	01/06/98	Turbidity meter failed to work
FSB116C	01/07/98	Flowmeter did not work, estimated volume purged calculated using 2.5 gal buckets
FSB116D	01/07/98	Dry after 3 gal
FSB119D	01/19/98	Dry after 7 gal
FSB120A	01/12/98	Dry after 34 gal
FSB120D	01/12/98	Dry after 6 gal
	01/13/98	Metals not collected because of high turbidity
FSB121DR	02/17/98	Dry after 1 gal
	02/19/98	Dry after 3 gal
FSB122D	01/09/98	Flowmeter broken, estimated volume purged
FSL Series		
FSL 1D	01/28/98	Dry after 1 gal
FSL 2D	01/26/98	Dry after 8 gal
FSL 7D	01/28/98	Dry after 1 gal
FST Series		
FST 1D	03/12/98	Flowmeter not present; used hand-held pump
FTF Series		
FTF 4	03/13/98	Pumped dry; not sampled
FTF 5	03/13/98	Pumped dry; not sampled
FTF 7	03/13/98	Pumped dry; not sampled

Well	Date	Comments
FTF 9	03/11/98	Pumped dry; not sampled
FTF 13	03/11/98	Pumped dry; not sampled
FTF 16	03/11/98	Muddy
FTF 18	03/11/98	Cloudy
FTF 22	03/11/98	Muddy
FTF 23	03/11/98	No sign
FTF 27	03/12/98	Turbidity >1000
HAA Series		
HAA 1TA	03/11/98	Flowmeter malfunctioned, estimated volume purged calculated using buckets
HAA 2B	01/30/98	Dry after 47 gal
HAA 3D	01/05/98	Dry after 10 gal
	01/06/98	Samples not collected because of high turbidity
	01/13/98	Dry after 3 gal
	01/14/98	Metals not collected because of high turbidity
	02/02/98	Dry after 6 gal
	02/06/98	Dry after 8 gal; metals not collected because of high turbidity
HAA 6A	01/30/98	Metals not collected because of high turbidity
HAA 6D	02/02/98	Dry after 3 gal; metals not collected because of high turbidity
HCA Series		
HCA 4	03/12/98	Dry after 20 gal
HIN Series		
HIN600TK	02/19/98	No water in standpipe
	03/17/98	No water in standpipe
HSB Series		
HSB 55A	01/12/98	Pumped slowly
HSB 65A	01/12/98	Pumped slowly
HSB 68C	01/28/98	Dry after 20 gal
HSB 70C	01/28/98	Dry after 26 gal
HSB 71C	01/26/98	Dry after 40 gal
HSB 84B	01/05/98	Dry after 51 gal
HSB 84C	01/05/98	Dry after 14 gal
HSB 85B	01/13/98	Dry after 35 gal
HSB102D	01/07/98	Dry after 11 gal
HSB110C	01/07/98	Dry after 19 gal
HSB112D	01/07/98	Dry after 11 gal
HSB112E	01/06/98	Dry after 7 gal
HSB115D	01/06/98	Dry after 2 gal
HSB123A	01/15/98	Dry after 32 gal
	01/19/98	Dry after 33 gal
HSB126D	01/13/98	Dry after 12 gal
HSB129C	01/28/98	Dry after 26 gal
HSB132C	01/20/98	Dry after 38 gal
HSB136D	01/13/98	Dry after 12 gal
HSB138D	01/21/98	Dry after 8 gal
HSB139C	01/26/98	Dry after 24 gal
	01/28/98	Dry after 27 gal
HSB142D	01/22/98	Dry after 4 gal
HSB147D	01/22/98	Dry after 18 gal
HSB148C	01/15/98	Dry after 24 gal
	01/19/98	Dry after 24 gal
HSB148D	01/15/98	Dry after 8 gal
	01/19/98	Dry after 5 gal

Well	Date	Comments
HSB152D	01/21/98	Dry after 12 gal
HSL Series		
HSL 3D	01/28/98	Dry after 13 gal
HSL 7D	01/30/98	Dry after 23 gal
HSL 8AA	01/29/98	Dry after 14 gal
	02/02/98	Dry after 15 gal
	02/06/98	Dry after 14 gal; not sampled
HTF Series		
HTF 2	03/25/98	Located in contaminated area
HTF 3	03/25/98	No field reading
HTF 5	03/25/98	No field reading
HTF 6	03/25/98	No field reading
HTF 10	03/24/98	No sign
HTF 12	03/25/98	Ball valve split; not sampled
HXB Series		
HXB 5D	01/19/98	Dry after 9 gal
HXB 6D	01/20/98	Dry after 5 gal
	03/26/98	Dry after 7 gal; water purged through sample port to lower turbidity, metals not collected because of high turbidity
KDB Series		
KDB 1	01/08/98	Dry after 5 gal; gate valve cracked
	02/25/98	Dry after 16 gal; pump will not start
	03/10/98	Dry after 17 gal
KDB 3	01/08/98	Dry after 15 gal
	02/25/98	Dry after 16 gal
	03/10/98	Dry after 17 gal
KDB 4	01/08/98	Dry after 6 gal
	02/25/98	Dry after 6 gal
	03/10/98	Dry after 7 gal
KDB 5	01/08/98	Dry after 5 gal
	02/25/98	Dry after 8 gal
	03/10/98	Dry after 9 gal
KRB Series		
KRB 16D	03/10/98	Dry after 16 gal
KRB 17D	03/10/98	Dry after 15 gal
KRB 18D	03/10/98	Dry after 14 gal
KRB 19D	03/10/98	Dry after 13 gal
KSM Series		
KSM 1D	03/10/98	Dry after 9 gal
LDB Series		
LDB 1	01/08/98	Dry after 15 gal; flowmeter broken, estimated volume purged
	02/25/98	Dry after 15 gal; flowmeter broken, estimated volume purged
	03/10/98	Dry after 15 gal
LDB 2	01/08/98	Dry after 20 gal
	02/25/98	Dry after 32 gal
	03/10/98	Dry after 14 gal

Well	Date	Comments
LDB 4	01/08/98	Dry after 10 gal; no sign
	02/25/98	Dry after 11 gal
	03/10/98	Dry after 8 gal
LDS Series		
LDS 1P	03/10/98	Dry after 7 gal
LFW Series		
LFW 58D	03/16/98	Water will not come to surface; not sampled
LFW 65B	02/05/98	Variable speed box overload; not sampled
LFW 76	02/17/98	Dry after 5 gal
LFW 77	02/06/98	Dry after 3 gal
LFW 78	02/17/98	Dry after 3 gal
LRP Series		
LRP 2	03/12/98	No water in standpipe, depth to water could not be determined
MCB Series		
MCB 5C	02/20/98	Flowmeter broken, estimated volume purged calculated using 5 gal buckets
MCB 7C	03/04/98	Dry after 23 gal
MSB Series		
MSB 1C	02/11/98	Dry after 36 gal
MSB 1CC	02/11/98	Dry after 13 gal
MSB 1D	02/11/98	Dry after 12 gal; missed two 950 amber bottles
MSB 2B	02/17/98	Dry after 22 gal
	02/18/98	Dry after 35 gal
MSB 2C	02/17/98	Dry after 10 gal
	02/18/98	Dry after 13 gal
MSB 3C	02/19/98	Dry after 13 gal
MSB 6C	02/02/98	Pump broken
	03/31/98	Well broken; not sampled
MSB 9B	03/05/98	Dry after 5 gal; flowmeter did not turn because flow was insufficient
MSB 11F	02/05/98	No water in standpipe
MSB 13CC	02/05/98	Dry after 13 gal
MSB 13D	02/05/98	Dry after 9 gal
MSB 15C	03/10/98	Dry after 1 gal; no water in standpipe
MSB 15D	02/10/98	Variable box shows overload
	03/31/98	Overload, well broken; not sampled
MSB 16C	02/09/98	Will not pump; no water in standpipe
	03/31/98	Well broken, water will not come to surface; not sampled
MSB 19B	02/06/98	Well broken
MSB 20C	02/26/98	Dry after 4 gal
MSB 24	02/09/98	Dry after 4 gal
MSB 27	03/03/98	Dry after 6 gal; no water in standpipe
MSB 27TA	03/03/98	Water will not come to the surface; not sampled
MSB 29B	03/24/98	Resampled for volatiles
MSB 29C	03/24/98	Resampled for volatiles
MSB 29D	03/24/98	Resampled for volatiles
MSB 30AA	02/06/98	Dry after 69 gal
MSB 36D	02/19/98	Pump not working
	03/31/98	Well broken, water will not come to surface; not sampled
MSB 38C	02/12/98	Flowmeter broken, estimated volume purged
MSB 39A	02/24/98	Dry after 111 gal
MSB 39D	02/25/98	Dry after 11 gal
MSB 42C	03/23/98	Resampled for volatiles

Well	Date	Comments
MSB 43A	03/23/98	Resampled for volatiles
MSB 43B	03/24/98	Resampled for volatiles
MSB 43D	03/09/98	Dry after 9 gal
	03/24/98	Dry after 5 gal; resampled for volatiles
MSB 46A	02/27/98	Dry after 43 gal
	03/02/98	Dry after 21 gal
MSB 47TA	02/23/98	Pumps too slowly; not sampled
MSB 48D	03/10/98	Dry after 6 gal
MSB 49D	02/24/98	Dry after 12 gal
MSB 55D	02/26/98	Water will not come to surface
MSB 55HC	02/26/98	Dry after 14 gal
	03/02/98	Dry after 9 gal
	03/03/98	Metals not collected
MSB 57D	02/19/98	Dry after 11 gal
MSB 58D	02/19/98	Dry after 8 gal
MSB 59D	02/19/98	Dry after 12 gal
MSB 60D	02/19/98	Dry after 11 gal
MSB 62D	02/18/98	Dry after 5 gal
MSB 63D	02/12/98	Dry after 7 gal
MSB 65D	02/24/98	Flowmeter not working, estimated volume purged calculated using 2.5 gal buckets
MSB 70D	02/19/98	Dry after 2 gal
	02/20/98	Dry after 3 gal
	02/23/98	Dry after 6 gal
	02/25/98	Dry after 5 gal
MSB 71B	03/03/98	Dry after 51 gal
MSB 74B	03/04/98	Tracer test being conducted on well; not sampled
MSB 74C	03/04/98	Dry after 18 gal
MSB 74D	03/04/98	Dry after 5 gal
MSB 75C	03/04/98	Dry after 6 gal
MSB 79B	02/19/98	Dry after 41 gal
MSB 82A	02/23/98	Dry after 53 gal
	02/25/98	Dry after 8 gal; no water in standpipe, depth to water could not be determined; not sampled
MSB 83D	02/26/98	Dry after 8 gal
MSB 84A	03/02/98	Dry after 29 gal
MSB 85D	03/02/98	Dry after 27 gal
MSB 85TA	03/02/98	Dry after 45 gal
P Series		
P 26A	03/02/98	Flowmeter not present, flowrate determined by using 2.5 gal buckets
P 26B	01/29/98	Flowmeter not present
P 26D	01/29/98	Flowmeter not present
RPC Series		
RPC 4DU	01/14/98	Dry after 25 gal
	01/19/98	Dry after 33 gal
RPC 5DU	01/14/98	Dry after 23 gal
RPC 6DU	01/14/98	No water in standpipe, water level could not be determined
	01/28/98	Water too dark to take turbidity reading; chocolate brown
RPC 8DU	01/19/98	Dry after 13 gal
	02/05/98	Dry after 15 gal
RPC 10DU	01/19/98	3 gal purged through sample port to lower turbidity
RSE Series		
RSE 10	01/14/98	Dry after 13 gal

Well	Date	Comments
RWM Series		
RWM 1	01/21/98	No water in standpipe, water level could not be determined
	02/04/98	No water in standpipe, depth to water could not be determined
	03/11/98	No water in standpipe
RWM 2	01/21/98	No water in standpipe, depth to water could not be determined
	03/11/98	No water in standpipe
RWM 8	01/23/98	Flowmeter not working, estimated volume purged
	02/04/98	Flowmeter broken
RWM 12	01/23/98	Flowmeter not working, estimated volume purged
RWM 13B	01/22/98	No water in standpipe
RWM 13C	01/22/98	No water in standpipe
RWM 14C	02/04/98	No water in standpipe
SRW Series		
SRW 16A	03/02/98	Dry after 29 gal
TIR Series		
TIR 3B	02/10/98	Used hand-held pump
TNX Series		
TNX 3D	03/05/98	Dry after 7 gal
TNX 6D	01/29/98	Dry after 3 gal
TNX 10D	03/02/98	Dry after 3 gal; flowmeter not present; used hand-held pump
	03/04/98	Hand-held pump stopped working; not sampled
TRW Series		
TRW 1	03/31/98	Well not operational
TRW 2	03/31/98	Well not operational
TRW 3	02/27/98	Well not operational; not sampled
	03/31/98	Well not operational; not sampled
TRW 4	02/27/98	Well not operational; not sampled
	03/31/98	Well not operational; not sampled
WTU Series		
WTU 1EX	01/21/98	No water in standpipe
	01/22/98	No water in standpipe
	02/12/98	No water in standpipe
WTU 2IN	01/21/98	No water in standpipe
	01/22/98	No water in standpipe
	02/12/98	No water in standpipe
ZBG Series		
ZBG 1A	01/30/98	Flowmeter not present
	02/02/98	Dry after 10 gal; flowmeter not present; used hand-held submersible pump; turbidity >1,000 NTU, some samples not sent because of high turbidity

Analytical Data Review

The SRS Groundwater Monitoring Program evaluates all data systematically to provide high-quality data for reporting on the environmental monitoring and cleanup efforts at SRS. Data verification and validation are continuous, interactive processes, usually completed within 60 days after the last data are received for a quarter.

ES, EX, GE, and WA, the primary contracting laboratories for sample analyses, performed all analyses with the following exceptions:

- The EM Lab at SRS conducted total-activity analyses of samples for shipping clearance. The EM Lab also conducted tritium analyses of samples from specified well series.

- GE subcontracted radionuclide analyses to GP, and WA subcontracted radionuclide analyses to TM. GP and TM conducted gross alpha, nonvolatile beta, tritium, and selected radionuclide analyses.

GIMS DATA REVIEW MODULE

The Geochemical Information Management System (GIMS) is a combination of hardware, software, data, and procedures that supports EPD/EMS' data management activities. The GIMS Data Review Module provides automated data loading, validation and verification functions, data editing, determination of data review status, report generation, and data review QA. The data editing program allows users to correct errors in loaded analytical, field, and shipping data. When the review process is complete, data are loaded into the permanent production database tables in GIMS and are available sitewide.

REVIEW OF THE ANALYTICAL DATA

EPD/EMS reviews analytical data from the laboratories for errors and unusual results before releasing the data for use. The laboratories are asked to review and comment on suspect data.

Typical errors identified during data loading into GIMS include incorrect sample dates, run dates, and sample identifications; incorrectly entered analytical units, methods, and corresponding detection limits; and incorrect dilution factor calculations.

Analytical results that appear different from historical data collected since 1991 are brought to the attention of the appropriate laboratory. Thus, the laboratory is able to identify problems with some of the analyses, including incorrect dilution factor calculations and data entry errors. EPD/EMS corrects data files after receiving written notification from the laboratory. Specific details concerning the corrections are entered in the *EMS Groundwater Monitoring Program Changes to the Database Logbook.*

Samples that exceeded holding times are indicated by an analysis qualifier of *Q* in the analytical results tables (see **Appendix B** for further information). The analysis qualifier *V* is used to indicate sample results associated with method laboratory blanks at the preparation step that are elevated above the instrument detection limit. Samples that were preserved incorrectly are marked with a *Y* analysis qualifier in the analytical results tables (see **Appendix B**). Usually, the *Y* indicates that the sample coolers were not cold enough. An *I* analysis qualifier indicates that a sample's matrix spike recovery was not within control limits.

To determine if a new analytical result for a sampling site is similar to or relatively higher or lower than historical results, new results for each well are compared to its historical results using the following procedure:

- GIMS calculates the mean of the historical results and the mean of the historical results above detection for all analytes in the wells being compared. The historical results that are below their detection limit value are considered at their detection limits for the purpose of the calculation. The process eliminates any false high values due to diluted samples.

- GIMS factors in trends in the data calculated from the previous eight sampling events. If no previous data are available for a particular well/analyte combination, the program includes previous results from other wells in the same vicinity.

- Results greater than 10 times the calculated mean of the previous results are marked as "high." Results (or their detection limits if the results are below detection) less than 10 percent of the calculated mean of the previous results are marked as "low."

GIMS flags the potentially anomalous results for review. The data reviewer examines the results and takes into account individual historical values, variations of certain values, general trends in the data, and data in the prep batch associated with the current result. The data reviewer eliminates results if anomalous historical results have skewed the calculated mean. Another data reviewer inspects and confirms that the results marked as anomalous are properly identified. Anomalous results are presented to the lab for review and comment. Results significantly high or low compared with historical data are rerun by the lab.

Review of the Analytical Narratives

EPD/EMS reviews the analytical narratives received from the laboratories, which are used as reference materials throughout the data validation process. Any discrepancies between the narratives and the analytical or chain-of-custody (COC) data must be resolved by the laboratories. The narratives include the following types of problems: QA samples that do not meet the criteria specified by the analytical method, problems with matrix interference, sample-specific adjustments to the method caused by high concentrations of some analytes, problems with sample preservation and holding time, instrument calibration problems, and contaminated blanks. The narratives also include additional information about COC and analytical data.

The four primary laboratories (ES, EX, GE, and WA) differ in their analytical suite assignments for certain constituents. Thus, some analytes may not be analyzed by all laboratories. See the **Sample Scheduling**, **Field Notes**, **Quality Control Samples**, and **Analytical Results** sections of this report for more information on wells scheduled but not sampled this quarter.

Review of ES's Analytical Data

A technical review of the quarter's analytical data identified at least one reported result for each of the analyses in table 4 as high compared with historical data. A review of the laboratory records did not reveal any problems with the analyses.

A technical review of the quarter's analytical data identified at least one reported result for each of the analyses in table 5 as low compared with historical data. A review of the laboratory records did not reveal any problems with the analyses.

Review of EX's Analytical Data

A technical review of the quarter's analytical data identified at least one reported result for each of the analyses in table 6 as high compared with historical data. A review of the laboratory records did not reveal any problems with the analyses.

A technical review of the quarter's analytical data identified no reported results as low compared with historical data.

Review of GE's Analytical Data

A technical review of the quarter's analytical data identified at least one reported result for each of the analyses in table 7 as high compared with historical data. A review of the laboratory records did not reveal any problems with the analyses.

A technical review of the quarter's analytical data identified at least one reported result for each of the analyses in table 8 as low compared with historical data. A review of the laboratory records did not reveal any problems with the analyses.

Review of GP's Analytical Data

A technical review of the quarter's analytical data identified at least one reported result for each of the GP analyses in tables 9 and 10 as being either high or low, respectively, compared with historical data.

The following isotopes were rejected for several wells because of low abundance: iodine-129, lead-212, actinium-228, europium-154, cesium-137, cobalt-60, promethium-144, promethium-146, potassium-40, europium-155 and yttrium-88.

The following isotopes were rejected for several wells because of low abundance: cerium-144, cesium-137, curium-244, lead-212, manganese-54, potassium-40, thorium-228, thorium-230, yttrium-88, and zinc-65.

Review of WA's Analytical Data

A technical review of the quarter's analytical data identified at least one reported result for each of the analyses in table 11 as high as compared with historical data. A review of the laboratory records did not reveal any problems, except as noted previously.

A technical review of the quarter's analytical data identified at least one reported result for each of the analyses in table 12 as low as compared with historical data. A review of the laboratory records did not reveal any problems.

Review of TM's Analytical Data

A technical review of the quarter's analytical data identified at least one reported result for each of the analyses in table 13 as high as compared with historical data. A review of the laboratory records did not reveal any problems.

A technical review of the quarter's analytical data identified at least one reported result for each of the analyses in table 14 as low as compared with historical data. A review of the laboratory records did not reveal any problems.

ANALYTICAL METHODS

Sample analyses performed for EPD/EMS during first quarter 1998 were conducted using EPA and other methods as noted in tables 15–21 at the end of this section. ES, EX, GE, and WA performed most of the analyses conducted during the quarter. Their methods and estimated quantitation limits (EQLs) are listed in table 15 for ES, table 16 for GE, table 17 for WA, and table 18 for EX.

GP and TM performed the radionuclide analyses during first quarter 1998. Radionuclide methods generally are modified by the laboratories performing the analyses. Their methods and EQLs are listed in table 19 for GP and table 20 for TM.

The EM Lab conducted selected radionuclide analyses of samples required by the Groundwater Monitoring Program. The total activity method used by the EM Lab is an in-house method based on applicable EPA, DOE, or other procedures. Methods used by EPD/EMS for testing other radioisotopes also are in-house analytical methods. The EM Lab radioactivity determinations are reported as the absolute concentrations calculated from the analytical tests. The EM Lab's method and EQL are listed in table 21.

If the laboratories used more than one analytical method for an analyte, the methods are listed in the tables in descending order according to frequency of use. Generally, the method listed first was used for at least half of the analyses.

Table 4. ES Samples with High Analytical Results as Compared to Historical Data

Analyte	*Well(s)*
Mercury	TRW 1
Nitrate	TNX 3D

† The questioned value was at least 10 times higher than historical data. Because holding time had been exceeded, the laboratory was not asked to reanalyze the sample.

Table 5. ES Samples with Low Analytical Results as Compared to Historical Data

Analyte	*Well(s)*
Gross alpha	LFW 63C
Lead	TBG 4†

† The questioned value was at least 10 times lower than historical data. Because holding time had been exceeded, the laboratory was not asked to reanalyze the sample.

Table 6. EX Samples with High Analytical Results as Compared to Historical Data

Analyte	*Well(s)*
Total organic carbon	AMB 7A†, AMB 17A

† The questioned value was at least 10 times higher than historical data. Because holding time had been exceeded, the laboratory was not asked to reanalyze the sample.

Table 7. GE Samples with High Analytical Results as Compared to Historical Data

Analyte	*Well(s)*
Aluminum	HAA 6A, HSL 8AA
Barium	FSB123D
Calcium	HAA 1AA, HAA 4B, HR8 14, HSL 4D, HSL 5D†, HSL 8C†
Chloromethane (methylene chloride)	FSB104C†
Copper	FSB 99D, FSL 7D†, HSB 86D
Lead	FSB105DR, HSB 86D▣
Magnesium	HAA 3A, HR8 14
Mercury	FSB112D
Nitrate-nitrite as nitrogen	FSB 78A, FSB 89C, FSB115D, HSB100C†, HSB124AR†, HSB132D†, HSL 6A†, HSL 8A
Sodium	HAA 5C, HAA 6D, HR8 14†
Specific conductance	FSB 76†, FSB 76C†, FSL 1D, HSB146D†
Tetrachloroethylene	HSB147D
Thallium	FSB 79C▣

Analyte	Well(s)
Trichloroethylene	FSB 92C, FSB 98C†, HSB145C
Zinc	FSB 77†, HSB139C†

† The questioned value was at least 10 times higher than historical data. Because holding time had been exceeded, the laboratory was not asked to reanalyze the sample.
▣ The questioned value was at least 10 times higher than historical data. Because holding time had not been exceeded, the laboratory was asked to reanalyze the sample.

Table 8. GE Samples with Low Analytical Results as Compared to Historical Data

Analyte	Well(s)
Benzene	HSB127C
Cadmium	HSB 65C†, HSB102D
Chromium	FSB 76C, HSB116D
1,1-Dichloroethane	HSB127C
trans-1,2,-Dichloroethylene	HSB127C
Iron	HSL 8B
Lead	HSB 65A†, HSB116D
Manganese	HSL 8B
Specific conductance	FSB 78A
Tetrachloroethylene	FSB 78, FSB106C
Total dissolved solids	HSL 8AA
1,1,2-Trichloroethane	HSB127C
Trichloroethylene	HSB 84C
Vanadium	FSB113D†, HSB 84C†

† The questioned value was at least 10 times lower than historical data. Because holding time had been exceeded, the laboratory was not asked to reanalyze the sample.

Table 9. GP Samples with High Analytical Results as Compared to Historical Data

Analyte	Well(s)
Cesium-137	HSB113C†
Gross alpha	FSB 78A▣, RPC 11DL
Iodine-129	HSB124AR
Nonvolatile beta	FSB 78A▣, HAA 3D, HSB 85B†, HSB121A†, HSB140C, RPC 3DU†, RPC 4DL
Plutonium-238	FSL 3D, HSB107C, HSB109C†, HSB110C, HSB112E
Plutonium-239/240	FSB120A, FSB120C, HSB109C, HSL 6D▣
Radium-228	FSB114C, FSB115C, HSB 68†, HSB103D†, HSB104D, ZBG 1
Strontium-90	FSB 78A▣, HSB104C†, HSB133C
Thorium-228	FSB 78B▣
Thorium-232	FSB107D
Tritium	FSB 88C, HAA 6D▣
Uranium-233/234	FSB 76, HSB106C, HSB110C, HSB112E
Uranium-235	FSB 98AR

† The questioned value was at least 10 times higher than historical data. Because holding time had been exceeded, the laboratory was not asked to reanalyze the sample.
▣ The questioned value was at least 10 times higher than historical data. Because holding time had not been exceeded, the laboratory was asked to reanalyze the sample.

Table 10. GP Samples with Low Analytical Results as Compared to Historical Data

Analyte	Well(s)
Radium-228	FSB105C
Total alpha-emitting radium	HSL 8AA
Tritium	HSB 84C†

† The questioned value was at least 10 times lower than historical data. Because holding time had been exceeded, the laboratory was not asked to reanalyze the sample.

Table 11. WA Samples with High Analytical Results as Compared to Historical Data

Analyte	Well(s)
Aluminum	LRP 3
Chromium	AMB 10A
Dichloromethane	AMB 7B, HXB 5
Iron	AMB 8D, LRP 3†
Lead	MSB 12TA†, MSB 43D†
Sodium	LRP 6
Specific conductance	HXB 5▣
Tetrachloroethylene	MSB 63C
Trichloroethylene	ABP 8C

† The questioned value was at least 10 times higher than historical data. Because holding time had not been exceeded, the laboratory was asked to reanalyze the sample.
▣ The questioned value was at least 10 times higher than historical data. Because holding time had been exceeded, the laboratory was not asked to reanalyze the sample.

Table 12. WA Samples with Low Analytical Results as Compared to Historical Data

Analyte	Well(s)
Barium	HCA 4C

Table 13. TM Samples with High Analytical Results as Compared to Historical Data

Analyte	Well(s)
Barium-133	FSB112C†
Carbon-14	HSB126C†
Cesium-134	FSB112C†
Gross alpha	AMB 8D, ZBG 1A†
Nonvolatile beta	HSB 83B, LRP 1, LRP 3, ZBG 1
Radium-228	FSB112C†
Total radium	ZBG 1A†, ZBG 2
Tritium	HSB 83B†, LDB 1†, LDB 2†, LDB 4†

† The questioned value was at least 10 times higher than historical data. Because holding time had not been exceeded, the laboratory was asked to reanalyze the sample.

Table 14. TM Samples with Low Analytical Results as Compared to Historical Data

Analyte	Well(s)
Tritium	KDB 1†, KDB 3†, KDB 5†

† The questioned value was at least 10 times lower than historical data. Because holding time had not been exceeded, the laboratory was asked to reanalyze the sample.

Table 15. Methods and Estimated Quantitation Limits Used by ES

Analyte	Unit	Method	Minimum/Maximum EQLs
Acenaphthene	µg/L	EPA8270	10.0/13.0
Acenaphthylene	µg/L	EPA8270	10.0/13.0
Acetone	µg/L	EPA8260	10.0/50.0
Acetonitrile	µg/L	EPA8260	20.0/100
Acrolein	µg/L	EPA8260	10.0/50.0
Acrylonitrile	µg/L	EPA8260	20.0/25.0
Actinium-228	µCi/mL	ESESOPM008	9.27E-09/2.0E-08
Aldrin	µg/L	EPA8081	0.015
Allyl chloride	µg/L	EPA8260	10.0/50.0
Aluminum	µg/L	EPA6010	20.0
Americium-241	µCi/mL	ESESOPM032	4.0E-11/1.8E-10
Ammonia nitrogen	µg/L	EPA350.1	50.0
Anthracene	µg/L	EPA8270	10.0/13.0
Antimony	µg/L	EPA6010	5.0
Antimony-125	µCi/mL	ESESOPM008	4.66E-09/9.45E-09
Arsenic	µg/L	EPA6010	8.0
Barium	µg/L	EPA6010	2.0
Benzene	µg/L	EPA8260	5.0/25.0
alpha-Benzene hexachloride	µg/L	EPA8081	0.015
beta-Benzene hexachloride	µg/L	EPA8081	0.015
delta-Benzene hexachloride	µg/L	EPA8081	0.015
Benzidine	µg/L	EPA8270	10.0/13.0
Benzo[*a*]anthracene	µg/L	EPA8270	10.0/13.0
Benzo[*b*]fluoranthene	µg/L	EPA8270	10.0/13.0
Benzo[*k*]fluoranthene	µg/L	EPA8270	10.0/13.0
Benzoic acid	µg/L	EPA8270	50.0/66.0
Benzo[*g,h,i*]perylene	µg/L	EPA8270	10.0/13.0
Benzo[*a*]pyrene	µg/L	EPA8270	10.0/13.0
Benzyl alcohol	µg/L	EPA8270	20.0/26.0
Beryllium	µg/L	EPA6010	1.0
Bis(2-chloroethoxy) methane	µg/L	EPA8270	10.0/13.0
Bis(2-chloroethyl) ether	µg/L	EPA8270	10.0/13.0
Bis(2-chloroisopropyl) ether	µg/L	EPA8270	10.0/13.0
Bis(2-ethylhexyl) phthalate	µg/L	EPA8270	10.0/13.0
Boron	µg/L	EPA6010	25.0
Bromochloromethane	µg/L	EPA8260	10.0
Bromodichloromethane	µg/L	EPA8260	5.0/25.0
Bromoform	µg/L	EPA8260	5.0/25.0
Bromomethane	µg/L	EPA8260	10.0/50.0
4-Bromophenyl phenyl ether	µg/L	EPA8270	10.0/13.0
Butylbenzyl phthalate	µg/L	EPA8270	10.0/13.0
Cadmium	µg/L	EPA6010	2.0
Calcium	µg/L	EPA6010	50.0
Carbon disulfide	µg/L	EPA8260	5.0/25.0
Carbon tetrachloride	µg/L	EPA8260	5.0/25.0
	µg/L	EPA8010	0.405/40.5
	µg/L	EPA8021	0.405/4.05

Analyte	Unit	Method	Minimum/Maximum EQLs
Carbon-14	µCi/mL	ESESOPM041	1.7E-08
Cerium-144	µCi/mL	ESESOPM008	8.18E-09/2.05E-08
Cesium-134	µCi/mL	ESESOPM008	1.76E-09/3.22E-09
Cesium-137	µCi/mL	ESESOPM008	1.91E-09/3.5E-09
Chlordane	µg/L	EPA8081	0.075
alpha-Chlordane	µg/L	EPA8081	0.015
gamma-Chlordane	µg/L	EPA8081	0.015
Chloride	µg/L	EPA9056	500
4-Chloroaniline	µg/L	EPA8270	20.0/26.0
Chlorobenzene	µg/L	EPA8260	5.0/25.0
4-Chloro-m-cresol	µg/L	EPA8270	20.0/26.0
Chloroethane	µg/L	EPA8260	10.0/50.0
Chloroethene	µg/L	EPA8260	10.0/50.0
2-Chloroethyl vinyl ether	µg/L	EPA8260	10.0
Chloroform	µg/L	EPA8260	5.0/25.0
	µg/L	EPA8010	0.428/42.8
	µg/L	EPA8021	0.428/4.28
Chloromethane	µg/L	EPA8260	10.0/50.0
2-Chloronaphthalene	µg/L	EPA8270	10.0/13.0
2-Chlorophenol	µg/L	EPA8270	10.0/13.0
4-Chlorophenyl phenyl ether	µg/L	EPA8270	10.0/13.0
Chloroprene	µg/L	EPA8260	5.0/25.0
Chromium	µg/L	EPA6010	3.0
Chrysene	µg/L	EPA8270	10.0/13.0
Cobalt	µg/L	EPA6010	5.0
Cobalt-57	µCi/mL	ESESOPM008	9.9E-10/2.7E-09
Cobalt-60	µCi/mL	ESESOPM008	1.93E-09/3.5E-09
Copper	µg/L	EPA6010	3.0
m/p-Cresol	µg/L	EPA8270	10.0/13.0
o-Cresol	µg/L	EPA8270	10.0/13.0
Curium-242	µCi/mL	ESESOPM032	1.0E-11/1.1E-10
Curium-243	µCi/mL	ESESOPM032	4.0E-11/2.2E-10
Curium-246	µCi/mL	ESESOPM032	4.0E-11/1.8E-10
Cyanide	µg/L	EPA9010A	5.0
p,p´-DDD	µg/L	EPA8081	0.015
p,p´-DDE	µg/L	EPA8081	0.015
p,p´-DDT	µg/L	EPA8081	0.015
Dibenz[*a,h*]anthracene	µg/L	EPA8270	10.0/13.0
Dibenzofuran	µg/L	EPA8270	10.0/13.0
Dibromochloromethane	µg/L	EPA8260	5.0/25.0
1,2-Dibromo-3-chloropropane	µg/L	EPA8260	5.0/25.0
1,2-Dibromoethane	µg/L	EPA8260	5.0/25.0
Dibromomethane	µg/L	EPA8260	5.0/25.0
Di-n-butyl phthalate	µg/L	EPA8270	10.0/13.0
1,2-Dichlorobenzene	µg/L	EPA8260	5.0
	µg/L	EPA8270	10.0/13.0
1,3-Dichlorobenzene	µg/L	EPA8270	10.0/13.0
1,4-Dichlorobenzene	µg/L	EPA8260	5.0/25.0
	µg/L	EPA8270	10.0/13.0
3,3´-Dichlorobenzidine	µg/L	EPA8270	20.0/26.0
trans-1,4-Dichloro-2-butene	µg/L	EPA8260	5.0/25.0
Dichlorodifluoromethane	µg/L	EPA8260	5.0/25.0
1,1-Dichloroethane	µg/L	EPA8260	5.0/25.0
1,2-Dichloroethane	µg/L	EPA8260	5.0/25.0
1,1-Dichloroethylene	µg/L	EPA8260	5.0/25.0
cis-1,2-Dichloroethylene	µg/L	EPA8260	5.0
trans-1,2-Dichloroethylene	µg/L	EPA8260	5.0
Dichloromethane	µg/L	EPA8260	5.0/25.0
2,4-Dichlorophenol	µg/L	EPA8270	10.0/13.0
1,2-Dichloropropane	µg/L	EPA8260	5.0/25.0
cis-1,3-Dichloropropene	µg/L	EPA8260	5.0/25.0

Analyte	Unit	Method	Minimum/Maximum EQLs
trans-1,3-Dichloropropene	µg/L	EPA8260	5.0/25.0
Dieldrin	µg/L	EPA8081	0.015
Diethyl phthalate	µg/L	EPA8270	10.0/13.0
2,4-Dimethyl phenol	µg/L	EPA8270	10.0/13.0
Dimethyl phthalate	µg/L	EPA8270	10.0/13.0
2,4-Dinitrophenol	µg/L	EPA8270	50.0/66.0
2,4-Dinitrotoluene	µg/L	EPA8270	10.0/13.0
2,6-Dinitrotoluene	µg/L	EPA8270	10.0/13.0
Di-n-octyl phthalate	µg/L	EPA8270	10.0/13.0
Endosulfan sulfate	µg/L	EPA8081	0.015
Endosulfan I	µg/L	EPA8081	0.015
Endosulfan II	µg/L	EPA8081	0.015
Endrin	µg/L	EPA8081	0.015
Endrin aldehyde	µg/L	EPA8081	0.015
Endrin ketone	µg/L	EPA8081	0.015
Ethylbenzene	µg/L	EPA8260	5.0/25.0
Europium-152	µCi/mL	ESESOPM008	8.65E-09/1.67E-08
Europium-154	µCi/mL	ESESOPM008	5.37E-09/9.19E-09
Europium-155	µCi/mL	ESESOPM008	3.9E-09/1.03E-08
Fluoranthene	µg/L	EPA8270	10.0/13.0
Fluorene	µg/L	EPA8270	10.0/13.0
Gross alpha	µCi/mL	ESESOPM017	6.2E-10/7.75E-09
Heptachlor	µg/L	EPA8081	0.015
Heptachlor epoxide	µg/L	EPA8081	0.015
Hexachlorobenzene	µg/L	EPA8270	10.0/13.0
Hexachlorobutadiene	µg/L	EPA8270	10.0/13.0
Hexachlorocyclopentadiene	µg/L	EPA8270	10.0/13.0
Hexachloroethane	µg/L	EPA8270	10.0/13.0
2-Hexanone	µg/L	EPA8260	10.0/50.0
Indeno[1,2,3-*c,d*]pyrene	µg/L	EPA8270	10.0/13.0
Iodine-129	µCi/mL	ESESOPM008	2.69E-09/5.01E-09
Iodomethane	µg/L	EPA8260	5.0/25.0
Iron	µg/L	EPA6010	20.0
Isobutyl alcohol	µg/L	EPA8260	100/500
Isophorone	µg/L	EPA8270	10.0/13.0
Lead	µg/L	EPA6010	5.0
Lead-212	µCi/mL	ESESOPM008	3.99E-09/9.75E-09
Lindane	µg/L	EPA8081	0.015
Magnesium	µg/L	EPA6010	50.0
Manganese	µg/L	EPA6010	3.0
Manganese-54	µCi/mL	ESESOPM008	1.8E-09/3.42E-09
Mercury	µg/L	EPA7470	0.2
Methacrylonitrile	µg/L	EPA8260	5.0/25.0
Methoxychlor	µg/L	EPA8081	0.015
2-Methyl-4,6-dinitrophenol	µg/L	EPA8270	50.0/66.0
Methyl ethyl ketone	µg/L	EPA8260	10.0/50.0
Methyl isobutyl ketone	µg/L	EPA8260	12.0/60.0
Methyl methacrylate	µg/L	EPA8260	5.0/25.0
2-Methylnaphthalene	µg/L	EPA8270	10.0/13.0
Naphthalene	µg/L	EPA8270	10.0/13.0
Neptunium-237	µCi/mL	ESESOPM032	1.1E-10/2.2E-10
Nickel	µg/L	EPA6010	5.0
Nitrate as nitrogen	µg/L	EPA9056	100/200
Nitrite as nitrogen	µg/L	EPA9056	100
m-Nitroaniline	µg/L	EPA8270	50.0/66.0
o-Nitroaniline	µg/L	EPA8270	50.0/66.0
p-Nitroaniline	µg/L	EPA8270	50.0/66.0
Nitrobenzene	µg/L	EPA8270	10.0/13.0
2-Nitrophenol	µg/L	EPA8270	10.0/13.0
4-Nitrophenol	µg/L	EPA8270	50.0/66.0
N-Nitrosodiphenylamine	µg/L	EPA8270	10.0/13.0

Analyte	Unit	Method	Minimum/Maximum EQLs
N-Nitrosodipropylamine	µg/L	EPA8270	10.0/13.0
Nonvolatile beta	µCi/mL	ESESOPM017	9.0E-10/6.6E-09
PCB 1016	µg/L	EPA8081	0.3
PCB 1221	µg/L	EPA8081	0.3
PCB 1232	µg/L	EPA8081	0.3
PCB 1242	µg/L	EPA8081	0.3
PCB 1248	µg/L	EPA8081	0.3
PCB 1254	µg/L	EPA8081	0.3
PCB 1260	µg/L	EPA8081	0.3
Pentachlorophenol	µg/L	EPA8270	50.0/66.0
pH	pH	EPA9040A	3.0
Phenanthrene	µg/L	EPA8270	10.0/13.0
Phenol	µg/L	EPA8270	10.0/13.0
Plutonium-238	µCi/mL	ESESOPM032	6.0E-11/2.6E-10
Plutonium-239/240	µCi/mL	ESESOPM032	4.0E-11/2.7E-10
Potassium	µg/L	EPA6010	400
Potassium-40	µCi/mL	ESESOPM008	3.08E-08/9.5E-08
Promethium-144	µCi/mL	ESESOPM008	1.78E-09/3.25E-09
Promethium-146	µCi/mL	ESESOPM008	2.13E-09/3.83E-09
Propionitrile	µg/L	EPA8260	5.0/25.0
Pyrene	µg/L	EPA8270	10.0/13.0
Radium-226	µCi/mL	ESESOPM030	1.06E-09/1.76E-09
Radium-228	µCi/mL	ESESOPM030	1.17E-09/2.47E-09
Ruthenium-106	µCi/mL	ESESOPM008	1.66E-08/3.01E-08
Selenium	µg/L	EPA6010	5.0
Silver	µg/L	EPA6010	2.0
Sodium	µg/L	EPA6010	100
Sodium-22	µCi/mL	ESESOPM008	1.91E-09/3.28E-09
Specific conductance	µS/cm	EPA120.1	1.0
Strontium-90	µCi/mL	ESESOPM031	1.46E-09/1.74E-09
Styrene	µg/L	EPA8260	5.0/25.0
Sulfate	µg/L	EPA9056	5,000
1,1,1,2-Tetrachloroethane	µg/L	EPA8260	5.0/25.0
1,1,2,2-Tetrachloroethane	µg/L	EPA8260	5.0/25.0
Tetrachloroethylene	µg/L	EPA8260	5.0/25.0
	µg/L	EPA8010	0.569/56.9
	µg/L	EPA8021	0.569/5.69
Thallium	µg/L	EPA6010	5.0
Thorium-228	µCi/mL	ESESOPM032	8.0E-11/7.4E-10
Thorium-230	µCi/mL	ESESOPM032	7.0E-11/1.16E-09
Thorium-232	µCi/mL	ESESOPM032	2.0E-11/4.1E-10
Thorium-234	µCi/mL	ESESOPM008	4.48E-08/2.41E-07
Toluene	µg/L	EPA8260	5.0/25.0
Total organic carbon	µg/L	EPA9060M	1,000
Total organic halogens	µg/L	EPA9020A	10.0
Total phosphates (as P)	µg/L	EPA365.1	10.0
Toxaphene	µg/L	EPA8081	1.5
1,2,4-Trichlorobenzene	µg/L	EPA8270	10.0/13.0
1,1,1-Trichloroethane	µg/L	EPA8260	5.0/25.0
	µg/L	EPA8010	0.462/46.2
	µg/L	EPA8021	0.462/4.62
1,1,2-Trichloroethane	µg/L	EPA8260	5.0/25.0
Trichloroethylene	µg/L	EPA8260	5.0/25.0
	µg/L	EPA8010	0.39/39.0
	µg/L	EPA8021	0.39/3.9
Trichlorofluoromethane	µg/L	EPA8260	5.0/25.0
2,4,5-Trichlorophenol	µg/L	EPA8270	10.0/13.0
2,4,6-Trichlorophenol	µg/L	EPA8270	10.0/13.0
1,2,3-Trichloropropane	µg/L	EPA8260	5.0/25.0
Tritium	µCi/mL	ESESOPM020	6.29E-07/8.4E-07

Analyte	Unit	Method	Minimum/Maximum EQLs
Uranium-234	µCi/mL	ESESOPM032	1.0E-11/6.0E-11
Uranium-235	µCi/mL	ESESOPM032	1.0E-11/4.0E-11
Uranium-238	µCi/mL	ESESOPM032	1.0E-11/5.0E-11
Vanadium	µg/L	EPA6010	2.0
Vinyl acetate	µg/L	EPA8260	5.0/25.0
Xylenes	µg/L	EPA8260	5.0/25.0
Yttrium-88	µCi/mL	ESESOPM008	1.98E-09/4.32E-09
Zinc	µg/L	EPA6010	10.0
Zinc-65	µCi/mL	ESESOPM008	3.83E-09/8.38E-09

Note: The groundwater samples are unfiltered; thus, the methods for metals are for total recoverable metals. Method 6010 is an inductively coupled plasma atomic emission spectroscopy method for metals determination and is published for RCRA determinations.

Table 16. Methods and Estimated Quantitation Limits Used by GE

Analyte	Unit	Method	Minimum/Maximum EQLs
Acenaphthene	µg/L	EPA8270B	10.0/11.0
Acenaphthylene	µg/L	EPA8270B	10.0/11.0
Acetone	µg/L	EPA8260A	5.0/50.0
Acetonitrile	µg/L	EPA8260A	10.0
Acetophenone	µg/L	EPA8270B	10.0
2-Acetylaminofluorene	µg/L	EPA8270B	10.0
Acrolein	µg/L	EPA8260A	20.0
Acrylonitrile	µg/L	EPA8260A	50.0
Aldrin	µg/L	EPA8081	0.02/0.024
Allyl chloride	µg/L	EPA8260A	10.0
Aluminum	µg/L	EPA6010A	50.0
4-Aminobiphenyl	µg/L	EPA8270B	10.0
Ammonia nitrogen	µg/L	EPA350.1	50.0
Aniline	µg/L	EPA8270B	10.0
Anthracene	µg/L	EPA8270B	10.0/11.0
Antimony	µg/L	EPA6010A	10.0/500
	µg/L	EPA7041	5.0
Aramite	µg/L	EPA8270B	10.0
Arsenic	µg/L	EPA6010A	5.0/250
	µg/L	EPA7060	5.0
Barium	µg/L	EPA6010A	5.0/250
Benzene	µg/L	EPA8260A	1.0/10.0
alpha-Benzene hexachloride	µg/L	EPA8081	0.02/0.024
beta-Benzene hexachloride	µg/L	EPA8081	0.02/0.024
delta-Benzene hexachloride	µg/L	EPA8081	0.02/0.024
Benzo[*a*]anthracene	µg/L	EPA8270B	10.0/11.0
Benzo[*b*]fluoranthene	µg/L	EPA8270B	10.0/11.0
Benzo[*k*]fluoranthene	µg/L	EPA8270B	10.0/11.0
Benzoic acid	µg/L	EPA8270B	20.0/21.0
Benzo[*g,h,i*]perylene	µg/L	EPA8270B	10.0/11.0
Benzo[*a*]pyrene	µg/L	EPA8270B	10.0/11.0
Benzyl alcohol	µg/L	EPA8270B	10.0/11.0
Beryllium	µg/L	EPA6010A	5.0
Bis(2-chloroethoxy) methane	µg/L	EPA8270B	10.0/11.0
Bis(2-chloroethyl) ether	µg/L	EPA8270B	10.0/11.0
Bis(2-chloroisopropyl) ether	µg/L	EPA8270B	10.0/11.0
	µg/L	EPA8260A	20.0
Bis(2-ethylhexyl) phthalate	µg/L	EPA8270B	10.0/13.0
	µg/L	EPA8270	10.0/14.0
Bromide	µg/L	EPA300.0	250
Bromodichloromethane	µg/L	EPA8260A	1.0/10.0

Analyte	Unit	Method	Minimum/Maximum EQLs
Bromoform	µg/L	EPA8260A	1.0/10.0
Bromomethane	µg/L	EPA8260A	1.0/10.0
4-Bromophenyl phenyl ether	µg/L	EPA8270B	10.0/11.0
Butylbenzyl phthalate	µg/L	EPA8270B	10.0/11.0
2-sec-Butyl-4,6-dinitrophenol	µg/L	EPA8151	0.1
	µg/L	EPA8270B	20.0
Cadmium	µg/L	EPA6010A	5.0/250
Calcium	µg/L	EPA6010A	100
Carbon disulfide	µg/L	EPA8260A	5.0/50.0
Carbon tetrachloride	µg/L	EPA8260A	1.0/10.0
alpha-Chlordane	µg/L	EPA8081	0.02/0.024
gamma-Chlordane	µg/L	EPA8081	0.02/0.024
Chloride	µg/L	EPA9056	100
	µg/L	EPA300.0	250
4-Chloroaniline	µg/L	EPA8270B	10.0/21.0
Chlorobenzene	µg/L	EPA8260A	1.0/10.0
Chlorobenzilate	µg/L	EPA8270B	10.0
4-Chloro-m-cresol	µg/L	EPA8270B	10.0/11.0
Chloroethane	µg/L	EPA8260A	1.0/10.0
Chloroethene	µg/L	EPA8260A	1.0/10.0
2-Chloroethyl vinyl ether	µg/L	EPA8260A	5.0/50.0
Chloroform	µg/L	EPA8260A	1.0/10.0
Chloromethane	µg/L	EPA8260A	1.0/10.0
2-Chloronaphthalene	µg/L	EPA8270B	10.0/11.0
2-Chlorophenol	µg/L	EPA8270B	10.0/11.0
4-Chlorophenyl phenyl ether	µg/L	EPA8270B	10.0/11.0
Chloroprene	µg/L	EPA8260A	2.0
Chromium	µg/L	EPA6010A	5.0/250
Chrysene	µg/L	EPA8270B	10.0/11.0
Cobalt	µg/L	EPA6010A	5.0/250
Copper	µg/L	EPA6010A	5.0/250
m/p-Cresol	µg/L	EPA8270B	10.0/11.0
o-Cresol	µg/L	EPA8270B	10.0/11.0
Cyanide	µg/L	EPA9012	10.0
p,p´-DDD	µg/L	EPA8081	0.039/0.049
p,p´-DDE	µg/L	EPA8081	0.039/0.049
p,p´-DDT	µg/L	EPA8081	0.039/0.049
Diallate	µg/L	EPA8270B	10.0
Dibenz[*a,h*]anthracene	µg/L	EPA8270B	10.0/11.0
Dibenzofuran	µg/L	EPA8270B	10.0/11.0
Dibromochloromethane	µg/L	EPA8260A	1.0/10.0
1,2-Dibromo-3-chloropropane	µg/L	EPA8260A	2.0
1,2-Dibromoethane	µg/L	EPA8260A	2.0
Dibromomethane	µg/L	EPA8260A	2.0
Di-n-butyl phthalate	µg/L	EPA8270B	10.0/11.0
1,2-Dichlorobenzene	µg/L	EPA8270B	10.0/11.0
	µg/L	EPA8260A	1.0
1,3-Dichlorobenzene	µg/L	EPA8270B	10.0/11.0
	µg/L	EPA8260A	1.0
1,4-Dichlorobenzene	µg/L	EPA8270B	10.0/11.0
	µg/L	EPA8260A	1.0
3,3´-Dichlorobenzidine	µg/L	EPA8270B	49.0/52.0
trans-1,4-Dichloro-2-butene	µg/L	EPA8260A	2.0
Dichlorodifluoromethane	µg/L	EPA8260A	2.0
1,1-Dichloroethane	µg/L	EPA8260A	1.0/10.0
1,2-Dichloroethane	µg/L	EPA8260A	1.0/10.0
1,1-Dichloroethylene	µg/L	EPA8260A	1.0/10.0
1,2-Dichloroethylene	µg/L	EPA8260A	1.0/10.0
trans-1,2-Dichloroethylene	µg/L	EPA8260A	1.0/10.0
Dichloromethane	µg/L	EPA8260A	1.0/10.0
2,4-Dichlorophenol	µg/L	EPA8270B	10.0/11.0
2,6-Dichlorophenol	µg/L	EPA8270B	10.0

Analyte	Unit	Method	Minimum/Maximum EQLs
2,4-Dichlorophenoxyacetic acid	µg/L	EPA8151	0.098/0.101
1,2-Dichloropropane	µg/L	EPA8260A	1.0/10.0
cis-1,3-Dichloropropene	µg/L	EPA8260A	1.0/10.0
trans-1,3-Dichloropropene	µg/L	EPA8260A	1.0/10.0
Dieldrin	µg/L	EPA8081	0.039/0.049
Diethyl phthalate	µg/L	EPA8270B	10.0/11.0
Dimethoate	µg/L	EPA8270B	10.0
2,4-Dimethyl phenol	µg/L	EPA8270B	10.0/11.0
Dimethyl phthalate	µg/L	EPA8270B	10.0/11.0
p-Dimethylaminoazobenzene	µg/L	EPA8270B	10.0
7,12-Dimethylbenz[*a*]anthracene	µg/L	EPA8270B	10.0
3,3´-Dimethylbenzidine	µg/L	EPA8270B	20.0
a,a-Dimethylphenethylamine	µg/L	EPA8270B	10.0
1,3-Dinitrobenzene	µg/L	EPA8270B	10.0
2,4-Dinitrophenol	µg/L	EPA8270B	10.0/21.0
2,4-Dinitrotoluene	µg/L	EPA8270B	10.0/11.0
2,6-Dinitrotoluene	µg/L	EPA8270B	10.0/11.0
Di-n-octyl phthalate	µg/L	EPA8270B	10.0/11.0
1,4-Dioxane	µg/L	EPA8270B	10.0
Diphenylamine	µg/L	EPA8270B	10.0
Disulfoton	µg/L	EPA8270B	10.0
Endosulfan sulfate	µg/L	EPA8081	0.02/0.049
Endosulfan I	µg/L	EPA8081	0.02/0.024
Endosulfan II	µg/L	EPA8081	0.039/0.049
Endrin	µg/L	EPA8081	0.039/0.049
Endrin ketone	µg/L	EPA8081	0.039/0.049
Ethyl methacrylate	µg/L	EPA8270B	10.0
Ethyl methanesulfonate	µg/L	EPA8270B	10.0
Ethylbenzene	µg/L	EPA8260A	1.0/10.0
Famphur	µg/L	EPA8270B	10.0
Fluoranthene	µg/L	EPA8270B	10.0/11.0
Fluorene	µg/L	EPA8270B	10.0/11.0
Fluoride	µg/L	EPA9056	50.0
Heptachlor	µg/L	EPA8081	0.02/0.024
Heptachlor epoxide	µg/L	EPA8081	0.02/0.024
Hexachlorobenzene	µg/L	EPA8270B	10.0/11.0
Hexachlorobutadiene	µg/L	EPA8270B	10.0/11.0
Hexachlorocyclopentadiene	µg/L	EPA8270B	10.0/11.0
Hexachloroethane	µg/L	EPA8270B	10.0/11.0
Hexachlorophene	µg/L	EPA8270B	500
Hexachloropropene	µg/L	EPA8270B	10.0
2-Hexanone	µg/L	EPA8260A	5.0/50.0
Indeno[1,2,3-*c,d*]pyrene	µg/L	EPA8270B	10.0/11.0
Iodomethane	µg/L	EPA8260A	10.0
Iron	µg/L	EPA6010A	50.0
Isobutyl alcohol	µg/L	EPA8260A	20.0
Isodrin	µg/L	EPA8270B	10.0
Isophorone	µg/L	EPA8270B	10.0/11.0
Isosafrole	µg/L	EPA8270B	10.0
Kepone	µg/L	EPA8270B	10.0
Lead	µg/L	EPA6010A	5.0/250
	µg/L	EPA7421	5.0
Lindane	µg/L	EPA8081	0.02/0.024
Lithium	µg/L	EPA6010A	25.0
Magnesium	µg/L	EPA6010A	10.0
Manganese	µg/L	EPA6010A	10.0
Mercury	µg/L	EPA7470	0.2
Methacrylonitrile	µg/L	EPA8260A	10.0
Methapyrilene	µg/L	EPA8270B	10.0
Methoxychlor	µg/L	EPA8081	0.196/0.244
2-Methyl-4,6-dinitrophenol	µg/L	EPA8270B	10.0/20.0
Methyl ethyl ketone	µg/L	EPA8260A	5.0/50.0

Analyte	Unit	Method	Minimum/Maximum EQLs
Methyl isobutyl ketone	µg/L	EPA8260A	5.0/50.0
Methyl methacrylate	µg/L	EPA8260A	10.0
Methyl methanesulfonate	µg/L	EPA8270B	10.0
3-Methylcholanthrene	µg/L	EPA8270B	10.0
2-Methylnaphthalene	µg/L	EPA8270B	10.0/11.0
Naphthalene	µg/L	EPA8270B	10.0/11.0
1,4-Naphthoquinone	µg/L	EPA8270B	10.0
1-Naphthylamine	µg/L	EPA8270B	10.0
2-Naphthylamine	µg/L	EPA8270B	10.0
Nickel	µg/L	EPA6010A	5.0/250
Nitrate as nitrogen	µg/L	EPA9056	50.0
Nitrate-nitrite as nitrogen	µg/L	EPA353.1	50.0/10,000
Nitrite as nitrogen	µg/L	EPA9056	50.0
m-Nitroaniline	µg/L	EPA8270B	10.0/11.0
o-Nitroaniline	µg/L	EPA8270B	10.0/11.0
p-Nitroaniline	µg/L	EPA8270B	10.0/11.0
Nitrobenzene	µg/L	EPA8270B	10.0/11.0
2-Nitrophenol	µg/L	EPA8270B	10.0/11.0
4-Nitrophenol	µg/L	EPA8270B	10.0/21.0
4-Nitroquinoline-1-oxide	µg/L	EPA8270B	10.0
N-Nitrosodi-n-butylamine	µg/L	EPA8270B	10.0
N-Nitrosodiethylamine	µg/L	EPA8270B	10.0
N-Nitrosodimethylamine	µg/L	EPA8270B	10.0
N-Nitrosodiphenylamine	µg/L	EPA8270B	10.0/11.0
N-Nitrosodipropylamine	µg/L	EPA8270B	10.0/11.0
N-Nitrosomethylethylamine	µg/L	EPA8270B	10.0
N-Nitrosomorpholine	µg/L	EPA8270B	10.0
N-Nitrosopiperidine	µg/L	EPA8270B	10.0
N-Nitrosopyrrolidine	µg/L	EPA8270B	10.0
5-Nitro-o-toluidine	µg/L	EPA8270B	10.0
Oil & grease	µg/L	EPA9070	2,000
PCB 1016	µg/L	EPA8081	0.123/0.152
PCB 1221	µg/L	EPA8081	0.1/0.152
PCB 1232	µg/L	EPA8081	0.123/0.152
PCB 1242	µg/L	EPA8081	0.123/0.152
PCB 1248	µg/L	EPA8081	0.123/0.152
PCB 1254	µg/L	EPA8081	0.123/0.152
PCB 1260	µg/L	EPA8081	0.123/0.152
Pentachlorobenzene	µg/L	EPA8270B	10.0
Pentachloroethane	µg/L	EPA8270B	10.0
Pentachloronitrobenzene	µg/L	EPA8270B	10.0
Pentachlorophenol	µg/L	EPA8270B	10.0/11.0
pH	pH	EPA9045C	0.0
Phenacetin	µg/L	EPA8270B	10.0
Phenanthrene	µg/L	EPA8270B	10.0/11.0
Phenol	µg/L	EPA8270B	10.0/11.0
Phenols	µg/L	EPA9066	5.0
p-Phenylenediamine	µg/L	EPA8270B	10.0
Phorate	µg/L	EPA8270B	10.0
2-Picoline	µg/L	EPA8270B	10.0
Potassium	µg/L	EPA6010A	100
Pronamid	µg/L	EPA8270B	10.0
Propionitrile	µg/L	EPA8260A	20.0
Pyrene	µg/L	EPA8270B	10.0/11.0
Pyridine	µg/L	EPA8270B	10.0
Safrole	µg/L	EPA8270B	10.0
Selenium	µg/L	EPA6010A	5.0/250
	µg/L	EPA7740	5.0
Silica	µg/L	EPA6010A	100
Silver	µg/L	EPA6010A	5.0/250
Sodium	µg/L	EPA6010A	100
Specific conductance	µS/cm	EPA9050	5.0

Analyte	Unit	Method	Minimum/Maximum EQLs
Styrene	µg/L	EPA8260A	1.0/10.0
Sulfate	µg/L	EPA9056	200
	µg/L	EPA300.0	1,000
Sulfotepp	µg/L	EPA8270B	10.0
2,4,5-T	µg/L	EPA8151	0.098/0.101
1,2,4,5-Tetrachlorobenzene	µg/L	EPA8270B	10.0
1,1,1,2-Tetrachloroethane	µg/L	EPA8260A	1.0
1,1,2,2-Tetrachloroethane	µg/L	EPA8260A	1.0/10.0
Tetrachloroethylene	µg/L	EPA8260A	1.0/10.0
2,3,4,6-Tetrachlorophenol	µg/L	EPA8270B	20.0
Thallium	µg/L	EPA6010A	5.0/250
	µg/L	EPA7841	5.0
Thionazin	µg/L	EPA8270B	10.0
Tin	µg/L	EPA6010A	10.0/50.0
Toluene	µg/L	EPA8260A	1.0/10.0
o-Toluidine	µg/L	EPA8270B	10.0
Total dissolved solids	µg/L	EPA160.1	10,000
Total organic carbon	µg/L	EPA9060	5,000
Total organic halogens	µg/L	EPA9020B	10.0
Total petroleum hydrocarbons	µg/L	EPA418.1	1,000
Total phosphates (as P)	µg/L	EPA365.4	50.0
Toxaphene	µg/L	EPA8081	0.98/1.22
2,4,5-TP (Silvex)	µg/L	EPA8151	0.098/0.101
1,2,4-Trichlorobenzene	µg/L	EPA8270B	10.0/11.0
1,1,1-Trichloroethane	µg/L	EPA8260A	1.0/10.0
1,1,2-Trichloroethane	µg/L	EPA8260A	1.0/10.0
Trichloroethylene	µg/L	EPA8260A	1.0/10.0
Trichlorofluoromethane	µg/L	EPA8260A	1.0/10.0
2,4,5-Trichlorophenol	µg/L	EPA8270B	10.0/11.0
2,4,6-Trichlorophenol	µg/L	EPA8270B	10.0/11.0
1,2,3-Trichloropropane	µg/L	EPA8260A	2.0
O,O,O-Triethyl phosphorothioate	µg/L	EPA8270B	10.0
1,3,5-Trinitrobenzene	µg/L	EPA8270B	20.0
Turbidity	NTU	EPA180.1	0.2/10.0
Vanadium	µg/L	EPA6010A	5.0/250
Vinyl acetate	µg/L	EPA8260A	5.0/50.0
m/p-Xylene	µg/L	EPA8260A	1.0
Xylenes	µg/L	EPA8260A	1.0/10.0
Zinc	µg/L	EPA6010A	5.0/250

Note: The groundwater samples are unfiltered; thus, the methods for metals are for total recoverable metals. Method 6010 is an inductively coupled plasma atomic emission spectroscopy method for metals determination and is published for RCRA determinations.

Table 17. Methods and Estimated Quantitation Limits Used by WA

Analyte	Unit	Method	Minimum/Maximum EQLs
Acenaphthene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	18.0/36.7
Acenaphthylene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	23.0/46.9
Acetone	µg/L	EPA8260	10.0/50.0
Acetonitrile	µg/L	EPA8260	20.0/100
Acetophenone	µg/L	EPA8270	10.0/20.0
2-Acetylaminofluorene	µg/L	EPA8270	10.0/20.0
Acrolein	µg/L	EPA8260	10.0/100
Acrylonitrile	µg/L	EPA8260	5.0/25.0
Aldrin	µg/L	EPA8081	0.05/0.111

Analyte	Unit	Method	Minimum/Maximum EQLs
Alkalinity (as $CaCO_3$)	meq/L	EPA310.1	6,700
Allyl chloride	µg/L	EPA8260	10.0/50.0
Aluminum	µg/L	EPA6010	146
4-Aminobiphenyl	µg/L	EPA8270	10.0/20.0
Ammonia	µg/L	EPA350.3	122
Aniline	µg/L	EPA8270	10.0/20.0
Anthracene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	6.6/13.5
Antimony	µg/L	EPA6010	19.0/32.0
Aramite	µg/L	EPA8270	20.0/40.0
Arsenic	µg/L	EPA6010	32.0/40.0
	µg/L	EPA7060	32.0
Barium	µg/L	EPA6010	1.8
Benzene	µg/L	EPA8260	5.0/2,500
	µg/L	EPA8020	1.0
alpha-Benzene hexachloride	µg/L	EPA8081	0.05/0.111
beta-Benzene hexachloride	µg/L	EPA8081	0.05/0.111
delta-Benzene hexachloride	µg/L	EPA8081	0.05/0.111
Benzidine	µg/L	EPA8270	50.0
Benzo[*a*]anthracene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	0.13/0.265
Benzo[*b*]fluoranthene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	0.18/0.367
Benzo[*k*]fluoranthene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	0.17/0.347
Benzoic acid	µg/L	EPA8270	25.0/55.0
Benzo[*g,h,i*]perylene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	0.76/1.55
Benzo[*a*]pyrene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	0.23/0.469
Benzyl alcohol	µg/L	EPA8270	10.0/20.0
Beryllium	µg/L	EPA6010	1.6
Bis(2-chloroethoxy) methane	µg/L	EPA8270	10.0/60.0
Bis(2-chloroethyl) ether	µg/L	EPA8270	10.0/60.0
Bis(2-chloroisopropyl) ether	µg/L	EPA8270	10.0/60.0
Bis(2-ethylhexyl) phthalate	µg/L	EPA8270	5.0/60.0
Boron	µg/L	EPA6010	266
Bromodichloromethane	µg/L	EPA8260	5.0/2,500
Bromoform	µg/L	EPA8260	5.0/2,500
Bromomethane	µg/L	EPA8260	10.0/5,000
4-Bromophenyl phenyl ether	µg/L	EPA8270	5.0/60.0
Butylbenzyl phthalate	µg/L	EPA8270	10.0/60.0
2-sec-Butyl-4,6-dinitrophenol	µg/L	EPA8270	50.0/100
Cadmium	µg/L	EPA6010	4.7
Calcium	µg/L	EPA6010	471
Carbazole	µg/L	EPA8270	10.0/60.0
Carbon disulfide	µg/L	EPA8260	5.0/25.0
Carbon tetrachloride	µg/L	EPA8260	5.0/2,500
	µg/L	EPA8010	1.0
Carbonate	µg/L	EPA310.1	6,700
alpha-Chlordane	µg/L	EPA8081	0.05/0.111
gamma-Chlordane	µg/L	EPA8081	0.05/0.111
Chloride	µg/L	EPA9056	210/420
	µg/L	EPA300.0	210
4-Chloroaniline	µg/L	EPA8270	10.0/60.0
Chlorobenzene	µg/L	EPA8260	5.0/2,500
Chlorobenzilate	µg/L	EPA8270	10.0/20.0
4-Chloro-m-cresol	µg/L	EPA8270	10.0/60.0
Chloroethane	µg/L	EPA8260	10.0/5,000
Chloroethene	µg/L	EPA8260	10.0/5,000
2-Chloroethyl vinyl ether	µg/L	EPA8260	10.0/5,000
Chloroform	µg/L	EPA8260	5.0/2,500

Analyte	Unit	Method	Minimum/Maximum EQLs
	µg/L	EPA8010	1.0
Chloromethane	µg/L	EPA8260	10.0/5,000
2-Chloronaphthalene	µg/L	EPA8270	10.0/60.0
2-Chlorophenol	µg/L	EPA8270	10.0/60.0
4-Chlorophenyl phenyl ether	µg/L	EPA8270	10.0/60.0
Chloroprene	µg/L	EPA8260	5.0/25.0
Chromium	µg/L	EPA6010	7.0
Chrysene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	1.5/3.06
Cobalt	µg/L	EPA6010	4.5
Copper	µg/L	EPA6010	15.0
m-Cresol	µg/L	EPA8270	10.0/20.0
m/p-Cresol	µg/L	EPA8270	10.0/60.0
o-Cresol	µg/L	EPA8270	10.0/60.0
p-Cresol	µg/L	EPA8270	10.2
Cyanide	µg/L	EPA9010A	15.0/30.4
p,p´-DDD	µg/L	EPA8081	0.1/0.222
p,p´-DDE	µg/L	EPA8081	0.1/0.222
p,p´-DDT	µg/L	EPA8081	0.1/0.222
Diallate	µg/L	EPA8270	10.0/20.0
Dibenz[*a,h*]anthracene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	0.3/0.612
Dibenzofuran	µg/L	EPA8270	10.0/60.0
Dibromochloromethane	µg/L	EPA8260	5.0/2,500
1,2-Dibromo-3-chloropropane	µg/L	EPA8260	5.0/25.0
1,2-Dibromoethane	µg/L	EPA8260	5.0/25.0
Dibromomethane	µg/L	EPA8260	5.0/25.0
Di-n-butyl phthalate	µg/L	EPA8270	10.0/60.0
1,2-Dichlorobenzene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8260	5.0
1,3-Dichlorobenzene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8260	5.0
1,4-Dichlorobenzene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8260	5.0
3,3´-Dichlorobenzidine	µg/L	EPA8270	10.0/60.0
trans-1,4-Dichloro-2-butene	µg/L	EPA8260	20.0/100
Dichlorodifluoromethane	µg/L	EPA8260	10.0/50.0
1,1-Dichloroethane	µg/L	EPA8260	5.0/2,500
1,2-Dichloroethane	µg/L	EPA8260	5.0/2,500
1,1-Dichloroethylene	µg/L	EPA8260	5.0/2,500
1,2-Dichloroethylene	µg/L	EPA8260	5.0/2,500
cis-1,2-Dichloroethylene	µg/L	EPA8260	5.0/25.0
trans-1,2-Dichloroethylene	µg/L	EPA8260	5.0
Dichloromethane	µg/L	EPA8260	5.0/2,500
2,4-Dichlorophenol	µg/L	EPA8270	10.0/60.0
2,6-Dichlorophenol	µg/L	EPA8270	10.0/20.0
2,4-Dichlorophenoxyacetic acid	µg/L	EPA8151	1.0/2.0
1,2-Dichloropropane	µg/L	EPA8260	5.0/2,500
cis-1,3-Dichloropropene	µg/L	EPA8260	5.0/2,500
trans-1,3-Dichloropropene	µg/L	EPA8260	5.0/2,500
Dieldrin	µg/L	EPA8081	0.1/0.222
Diethyl phthalate	µg/L	EPA8270	10.0/60.0
Dimethoate	µg/L	EPA8141	0.2/0.408
2,4-Dimethyl phenol	µg/L	EPA8270	10.0/60.0
Dimethyl phthalate	µg/L	EPA8270	10.0/60.0
p-Dimethylaminoazobenzene	µg/L	EPA8270	10.0/20.0
7,12-Dimethylbenz[*a*]anthracene	µg/L	EPA8270	10.0/20.0
3,3´-Dimethylbenzidine	µg/L	EPA8270	10.0/20.0
a,a-Dimethylphenethylamine	µg/L	EPA8270	10.0/20.0
1,3-Dinitrobenzene	µg/L	EPA8270	10.0/20.0
2,4-Dinitrophenol	µg/L	EPA8270	25.0/150
2,4-Dinitrotoluene	µg/L	EPA8270	10.0/60.0

Analyte	Unit	Method	Minimum/Maximum EQLs
2,6-Dinitrotoluene	µg/L	EPA8270	10.0/60.0
Di-n-octyl phthalate	µg/L	EPA8270	10.0/60.0
1,4-Dioxane	µg/L	EPA8270	10.0/20.0
Diphenylamine	µg/L	EPA8270	10.0/20.0
1,2-Diphenylhydrazine	µg/L	EPA8270	10.0
Disulfoton	µg/L	EPA8141	0.2/0.408
Endosulfan sulfate	µg/L	EPA8081	0.1/0.222
Endosulfan I	µg/L	EPA8081	0.05/0.111
Endosulfan II	µg/L	EPA8081	0.1/0.222
Endrin	µg/L	EPA8081	0.1/0.222
Endrin aldehyde	µg/L	EPA8081	0.1/0.204
Endrin ketone	µg/L	EPA8081	0.1/0.222
Ethyl methacrylate	µg/L	EPA8270	10.0/20.0
Ethyl methanesulfonate	µg/L	EPA8270	10.0/20.0
Ethylbenzene	µg/L	EPA8260	5.0/2,500
	µg/L	EPA8020	1.0
Famphur	µg/L	EPA8141	1.0/2.04
Fluoranthene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	2.1/4.28
Fluorene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	2.1/4.28
Fluoride	µg/L	EPA340.2	40.0
Heptachlor	µg/L	EPA8081	0.05/0.111
Heptachlor epoxide	µg/L	EPA8081	0.05/0.111
Hexachlorobenzene	µg/L	EPA8270	5.0/60.0
Hexachlorobutadiene	µg/L	EPA8270	10.0/60.0
Hexachlorocyclopentadiene	µg/L	EPA8270	10.0/60.0
Hexachlorodibenzo-p-dioxins	µg/L	EPA8280	0.00036/0.0093
Hexachlorodibenzo-p-furans	µg/L	EPA8280	0.00028/0.0089
Hexachloroethane	µg/L	EPA8270	10.0/60.0
Hexachlorophene	µg/L	EPA8270	100/200
Hexachloropropene	µg/L	EPA8270	10.0/20.0
2-Hexanone	µg/L	EPA8260	10.0/50.0
Indeno[1,2,3-*c,d*]pyrene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	0.43/0.877
Iodomethane	µg/L	EPA8260	5.0/25.0
Iron	µg/L	EPA6010	74.0
Isobutyl alcohol	µg/L	EPA8260	100/500
Isodrin	µg/L	EPA8081	0.1/0.204
Isophorone	µg/L	EPA8270	10.0/60.0
Isosafrole	µg/L	EPA8270	10.0/20.0
Kepone	µg/L	EPA8081	0.5/1.02
Lead	µg/L	EPA6010	47.0
	µg/L	EPA7421	47.0
Lindane	µg/L	EPA8081	0.05/0.111
Lithium	µg/L	EPA6010	2.7
Magnesium	µg/L	EPA6010	74.0
Manganese	µg/L	EPA6010	7.8
Mercury	µg/L	EPA7470	0.7
Methacrylonitrile	µg/L	EPA8260	10.0/50.0
Methapyrilene	µg/L	EPA8270	10.0/20.0
Methoxychlor	µg/L	EPA8081	0.5/1.11
2-Methyl-4,6-dinitrophenol	µg/L	EPA8270	25.0/150
Methyl ethyl ketone	µg/L	EPA8260	10.0/50.0
Methyl isobutyl ketone	µg/L	EPA8260	10.0/50.0
Methyl methacrylate	µg/L	EPA8270	10.0/20.0
Methyl methanesulfonate	µg/L	EPA8270	10.0/20.0
3-Methylcholanthrene	µg/L	EPA8270	10.0/20.0
2-Methylnaphthalene	µg/L	EPA8270	10.0/60.0
Naphthalene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	18.0/36.7
1,4-Naphthoquinone	µg/L	EPA8270	10.0/20.0

Analyte	Unit	Method	Minimum/Maximum EQLs
1-Naphthylamine	µg/L	EPA8270	10.0/20.0
2-Naphthylamine	µg/L	EPA8270	10.0/20.0
Nickel	µg/L	EPA6010	26.0
Nitrate as nitrogen	µg/L	EPA353.2	20.0/4,000
Nitrate-nitrite as nitrogen	µg/L	EPA353.2	20.0/10,000
Nitrite as nitrogen	µg/L	EPA353.2	20.0
m-Nitroaniline	µg/L	EPA8270	25.0/150
o-Nitroaniline	µg/L	EPA8270	25.0/150
p-Nitroaniline	µg/L	EPA8270	25.0/150
Nitrobenzene	µg/L	EPA8270	10.0/60.0
2-Nitrophenol	µg/L	EPA8270	10.0/60.0
4-Nitrophenol	µg/L	EPA8270	25.0/150
4-Nitroquinoline-1-oxide	µg/L	EPA8270	20.0/40.0
N-Nitrosodi-n-butylamine	µg/L	EPA8270	10.0/20.0
N-Nitrosodiethylamine	µg/L	EPA8270	10.0/20.0
N-Nitrosodimethylamine	µg/L	EPA8270	10.0/20.0
N-Nitrosodiphenylamine	µg/L	EPA8270	5.0/60.0
N-Nitrosodipropylamine	µg/L	EPA8270	10.0/60.0
N-Nitrosomethylethylamine	µg/L	EPA8270	10.0/20.0
N-Nitrosomorpholine	µg/L	EPA8270	10.0/20.0
N-Nitrosopiperidine	µg/L	EPA8270	50.0/100
N-Nitrosopyrrolidine	µg/L	EPA8270	10.0/20.0
5-Nitro-o-toluidine	µg/L	EPA8270	10.0/20.0
Parathion ethyl	µg/L	EPA8141	0.2/0.408
Parathion methyl	µg/L	EPA8141	0.2/0.408
PCB 1016	µg/L	EPA8081	1.0/2.22
PCB 1221	µg/L	EPA8081	2.0/4.44
PCB 1232	µg/L	EPA8081	1.0/2.22
PCB 1242	µg/L	EPA8081	1.0/2.22
PCB 1248	µg/L	EPA8081	1.0/2.22
PCB 1254	µg/L	EPA8081	1.0/2.22
PCB 1260	µg/L	EPA8081	1.0/2.22
Pentachlorobenzene	µg/L	EPA8270	10.0/20.0
Pentachlorodibenzo-p-dioxins	µg/L	EPA8280	0.00025/0.005
	µg/L	EPA8280	0.00029/0.0055
Pentachloroethane	µg/L	EPA8270	10.0/20.0
Pentachloronitrobenzene	µg/L	EPA8270	50.0/100
Pentachlorophenol	µg/L	EPA8270	25.0/150
pH	pH	EPA9040A	0.1
Phenacetin	µg/L	EPA8270	10.0/20.0
Phenanthrene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	6.4/13.1
Phenol	µg/L	EPA8270	10.0/60.0
Phenols	µg/L	EPA9066	36.2
p-Phenylenediamine	µg/L	EPA8270	10.0/20.0
Phorate	µg/L	EPA8141	0.2/0.408
Phosphate	µg/L	EPA365.2	67.0
2-Picoline	µg/L	EPA8270	10.0/20.0
Potassium	µg/L	EPA6010	187
Pronamid	µg/L	EPA8270	10.0/20.0
Propionitrile	µg/L	EPA8260	50.0/250
Pyrene	µg/L	EPA8270	10.0/60.0
	µg/L	EPA8310	2.7/5.51
Pyridine	µg/L	EPA8270	10.0/20.0
Safrole	µg/L	EPA8270	10.0/20.0
Selenium	µg/L	EPA6010	66.0
	µg/L	EPA7740	16.0
Silica	µg/L	EPA6010	1,350
Silver	µg/L	EPA6010	5.0
Sodium	µg/L	EPA6010	285
Specific conductance	µS/cm	EPA9050	8.9/10.0
Styrene	µg/L	EPA8260	5.0/25.0

Analyte	Unit	Method	Minimum/Maximum EQLs
Sulfate	µg/L	EPA9056	340/680
	µg/L	EPA375.4	340
Sulfide	µg/L	EPA376.2	6,010/12,000
Sulfotepp	µg/L	EPA8141	0.2/0.408
2,4,5-T	µg/L	EPA8150	0.5/0.51
2,3,7,8-TCDD	µg/L	EPA8280	0.00017/0.0034
1,2,4,5-Tetrachlorobenzene	µg/L	EPA8270	10.0/20.0
Tetrachlorodibenzo-p-dioxins	µg/L	EPA8280	0.00017/0.0034
Tetrachlorodibenzo-p-furans	µg/L	EPA8280	0.00012/0.0015
1,1,1,2-Tetrachloroethane	µg/L	EPA8260	5.0/25.0
1,1,2,2-Tetrachloroethane	µg/L	EPA8260	5.0/2,500
Tetrachloroethylene	µg/L	EPA8260	5.0/2,500
	µg/L	EPA8010	1.0
2,3,4,6-Tetrachlorophenol	µg/L	EPA8270	10.0/20.0
Thallium	µg/L	EPA6010	55.0
	µg/L	EPA7841	25.0
Thionazin	µg/L	EPA8141	0.2/0.408
Tin	µg/L	EPA6010	70.0
Toluene	µg/L	EPA8260	5.0/2,500
	µg/L	EPA8020	1.0
o-Toluidine	µg/L	EPA8270	10.0/20.0
Total dissolved solids	µg/L	EPA160.1	47,000
Total organic carbon	µg/L	EPA9060	1,000/1,800
Total organic halogens	µg/L	EPA9020B	120/480
Total petroleum hydrocarbons	µg/L	EPA418.1	3,210
Total phosphates (as P)	µg/L	EPA365.2	67.0/134
Toxaphene	µg/L	EPA8081	5.0/11.1
2,4,5-TP (Silvex)	µg/L	EPA8150	0.5/1.0
1,2,4-Trichlorobenzene	µg/L	EPA8270	10.0/60.0
1,1,1-Trichloroethane	µg/L	EPA8260	5.0/2,500
	µg/L	EPA8010	1.0
1,1,2-Trichloroethane	µg/L	EPA8260	5.0/2,500
Trichloroethylene	µg/L	EPA8260	5.0/2,500
	µg/L	EPA8010	1.0
Trichlorofluoromethane	µg/L	EPA8260	5.0/2,500
2,4,5-Trichlorophenol	µg/L	EPA8270	25.0/150
2,4,6-Trichlorophenol	µg/L	EPA8270	10.0/60.0
1,2,3-Trichloropropane	µg/L	EPA8260	5.0/25.0
O,O,O-Triethyl phosphorothioate	µg/L	EPA8141	0.2/0.408
1,3,5-Trinitrobenzene	µg/L	EPA8270	10.0/20.0
Turbidity	NTU	EPA180.1	0.4/0.41
Vanadium	µg/L	EPA6010	6.9
Vinyl acetate	µg/L	EPA8260	10.0/50.0
Xylenes	µg/L	EPA8260	5.0/2,500
	µg/L	EPA8020	1.0
Zinc	µg/L	EPA6010	53.0

Note: The groundwater samples are unfiltered; thus, the methods for metals are for total recoverable metals. Method 200.7 is an inductively coupled plasma atomic emission spectroscopy method for metals determination and is published for Safe Drinking Water Act investigations.

Table 18. Methods and Estimated Quantitation Limits Used by EX

Analyte	Unit	Method	Minimum/Maximum EQLs
Acetone	µg/L	EPA8260A	5.0/500
Acetonitrile	µg/L	EPA8260A	200/10,000
Acrolein	µg/L	EPA8260A	10.0/500
Acrylonitrile	µg/L	EPA8260A	10.0/500

Analyte	Unit	Method	Minimum/Maximum EQLs
Allyl chloride	µg/L	EPA8260A	20.0/1,000
Aluminum	µg/L	EPA6010A	100
Antimony	µg/L	EPA6010A	100
Arsenic	µg/L	EPA6010A	10.0/100
Barium	µg/L	EPA6010A	5.0/25.0
Benzene	µg/L	EPA8260A	1.0/250
beta-Benzene hexachloride	µg/L	EPA8081	0.05
Beryllium	µg/L	EPA6010A	5.0
Bromochloromethane	µg/L	EPA8260A	5.0
Bromodichloromethane	µg/L	EPA8260A	1.0/250
Bromoform	µg/L	EPA8260A	1.0/250
Bromomethane	µg/L	EPA8260A	2.0/250
Cadmium	µg/L	EPA6010A	5.0
Calcium	µg/L	EPA6010A	1,000
Carbon disulfide	µg/L	EPA8260A	1.0/250
Carbon tetrachloride	µg/L	EPA8260A	1.0/250
	µg/L	EPA8010A	1.0
Chloride	µg/L	EPA300.0	200
Chlorobenzene	µg/L	EPA8260A	1.0/250
Chloroethane	µg/L	EPA8260A	2.0/250
Chloroethene	µg/L	EPA8260A	1.0/250
2-Chloroethyl vinyl ether	µg/L	EPA8260A	5.0/250
Chloroform	µg/L	EPA8260A	1.0/250
	µg/L	EPA8010A	1.0
Chloromethane	µg/L	EPA8260A	2.0/250
Chloroprene	µg/L	EPA8260A	20.0/1,000
Chromium	µg/L	EPA6010A	10.0
Cobalt	µg/L	EPA6010A	20.0
Copper	µg/L	EPA6010A	10.0
Cyanide	µg/L	EPA9010A	10.0
Dibromochloromethane	µg/L	EPA8260A	1.0/250
1,2-Dibromo-3-chloropropane	µg/L	EPA8260A	10.0/500
1,2-Dibromoethane	µg/L	EPA8260A	5.0/250
Dibromomethane	µg/L	EPA8260A	5.0/250
Di-n-butyl phthalate	µg/L	EPA8270B	10.0
1,2-Dichlorobenzene	µg/L	EPA8260A	5.0/250
1,3-Dichlorobenzene	µg/L	EPA8260A	5.0/250
1,4-Dichlorobenzene	µg/L	EPA8260A	5.0/250
trans-1,4-Dichloro-2-butene	µg/L	EPA8260A	20.0/1,000
Dichlorodifluoromethane	µg/L	EPA8260A	5.0/250
1,1-Dichloroethane	µg/L	EPA8260A	1.0/250
1,2-Dichloroethane	µg/L	EPA8260A	1.0/250
1,1-Dichloroethylene	µg/L	EPA8260A	1.0/250
1,2-Dichloroethylene	µg/L	EPA8260A	5.0/10.0
cis-1,2-Dichloroethylene	µg/L	EPA8260A	5.0/25.0
trans-1,2-Dichloroethylene	µg/L	EPA8260A	5.0/250
Dichloromethane	µg/L	EPA8260A	1.0/500
2,4-Dichlorophenoxyacetic acid	µg/L	EPA8151	0.5
1,2-Dichloropropane	µg/L	EPA8260A	1.0/250
cis-1,3-Dichloropropene	µg/L	EPA8260A	1.0/250
trans-1,3-Dichloropropene	µg/L	EPA8260A	1.0/250
1,4-Dioxane	µg/L	EPA8260A	1,000/50,000
Ethyl methacrylate	µg/L	EPA8260A	10.0/500
Ethylbenzene	µg/L	EPA8260A	1.0/250
Fluoride	µg/L	EPA300.0	200/400
2-Hexanone	µg/L	EPA8260A	1.0/500
Iodomethane	µg/L	EPA8260A	5.0/250
Iron	µg/L	EPA6010A	100
Isobutyl alcohol	µg/L	EPA8260A	1,000/50,000
Lead	µg/L	EPA6010A	5.0/100
Lindane	µg/L	EPA8081	0.05
Magnesium	µg/L	EPA6010A	500

Analyte	Unit	Method	Minimum/Maximum EQLs
Manganese	µg/L	EPA6010A	10.0
Mercury	µg/L	EPA7470A	0.2
Methacrylonitrile	µg/L	EPA8260A	500/25,000
Methyl ethyl ketone	µg/L	EPA8260A	5.0/500
Methyl isobutyl ketone	µg/L	EPA8260A	5.0/500
Methyl methacrylate	µg/L	EPA8260A	50.0/2,500
Nickel	µg/L	EPA6010A	20.0
Nitrate as nitrogen	µg/L	EPA300.0	100
Nitrate-nitrite as nitrogen	µg/L	EPA300.0	200/1,000
Pentachloroethane	µg/L	EPA8260A	20.0/1,000
pH	pH	EPA150.1	0.0
Phenol	µg/L	EPA8270B	10.0
Potassium	µg/L	EPA6010A	1,000
Propionitrile	µg/L	EPA8260A	500/25,000
Selenium	µg/L	EPA6010A	10.0/200
Silver	µg/L	EPA6010A	20.0
Sodium	µg/L	EPA6010A	100/1,000
Specific conductance	µS/cm	EPA120.1	1.0
Styrene	µg/L	EPA8260A	1.0/250
Sulfate	µg/L	EPA300.0	200
1,1,1,2-Tetrachloroethane	µg/L	EPA8260A	5.0/250
1,1,2,2-Tetrachloroethane	µg/L	EPA8260A	1.0/250
Tetrachloroethylene	µg/L	EPA8260A	1.0/250
	µg/L	EPA8010A	1.0
Thallium	µg/L	EPA6010A	500
Toluene	µg/L	EPA8260A	1.0/250
Total organic carbon	µg/L	EPA415.1	5,000
Total phosphates (as P)	µg/L	EPA365.2	50.0
1,1,1-Trichloroethane	µg/L	EPA8260A	1.0/250
	µg/L	EPA8010A	1.0
1,1,2-Trichloroethane	µg/L	EPA8260A	1.0/250
Trichloroethylene	µg/L	EPA8260A	1.0/250
	µg/L	EPA8010A	1.0
Trichlorofluoromethane	µg/L	EPA8260A	5.0/250
1,2,3-Trichloropropane	µg/L	EPA8260A	5.0/250
Vanadium	µg/L	EPA6010A	10.0
Vinyl acetate	µg/L	EPA8260A	1.0/500
Xylenes	µg/L	EPA8260A	10.0/500
Zinc	µg/L	EPA6010A	10.0

Note: The groundwater samples are unfiltered; thus, the methods for metals are for total recoverable metals. Method 6010 is an inductively coupled plasma atomic emission spectroscopy method for metals determination and is published for RCRA determinations.

Table 19. Methods and Estimated Quantitation Limits Used by GP

Analyte	Unit	Method	Minimum/Maximum EQLs
Actinium-228	µCi/mL	EPIA-013	3.24E-09/4.04E-08
Americium-241	µCi/mL	EPIA-011	3.9E-11/1.41E-09
Antimony-125	µCi/mL	EPIA-013	2.07E-09/2.4E-08
Carbon-14	µCi/mL	EPIA-003	7.48E-09/4.35E-08
Cerium-144	µCi/mL	EPIA-013	4.72E-09/5.7E-08
Cesium-134	µCi/mL	EPIA-013	6.55E-10/8.65E-09
Cesium-137	µCi/mL	EPIA-013	6.98E-10/8.71E-09
Cobalt-57	µCi/mL	EPIA-013	5.94E-10/7.99E-09
Cobalt-60	µCi/mL	EPIA-013	8.78E-10/9.14E-09
Curium-242	µCi/mL	EPIA-011	2.1E-11/1.18E-09
Curium-243/244	µCi/mL	EPIA-011	4.8E-11/1.48E-09

Analyte	Unit	Method	Minimum/Maximum EQLs
Curium-245/246	µCi/mL	EPIA-011	1.7E-11/8.47E-10
Europium-152	µCi/mL	EPIA-013	2.09E-09/2.46E-08
Europium-154	µCi/mL	EPIA-013	2.33E-09/2.54E-08
Europium-155	µCi/mL	EPIA-013	2.33E-09/3.3E-08
Gross alpha	µCi/mL	EPIA-001	1.66E-10/3.21E-07
Iodine-129	µCi/mL	EPIA-006	3.21E-10/5.46E-09
Lead-212	µCi/mL	EPIA-013	1.41E-09/1.69E-08
Manganese-54	µCi/mL	EPIA-013	7.18E-10/9.21E-09
Neptunium-237	µCi/mL	EPIA-032	3.6E-11/9.64E-10
Nickel-63	µCi/mL	EPIA-022	1.45E-07/3.24E-07
Nonvolatile beta	µCi/mL	EPIA-001	4.56E-10/3.83E-07
Plutonium-238	µCi/mL	EPIA-011	5.76E-13/1.57E-09
Plutonium-239/240	µCi/mL	EPIA-011	3.79E-13/1.0E-09
Potassium-40	µCi/mL	EPIA-013	7.91E-09/1.25E-07
Promethium-144	µCi/mL	EPIA-013	6.85E-10/8.37E-09
Promethium-146	µCi/mL	EPIA-013	9.39E-10/1.17E-08
Promethium-147	µCi/mL	EPIA-020	8.51E-10/1.44E-09
Radium, total alpha-emitting	µCi/mL	EPIA-010	2.44E-10/6.15E-10
Radium-226	µCi/mL	EPIA-008	1.05E-10/1.01E-09
Radium-228	µCi/mL	EPIA-009	5.63E-10/8.5E-09
Ruthenium-106	µCi/mL	EPIA-013	6.1E-09/8.65E-08
Sodium-22	µCi/mL	EPIA-013	8.39E-10/9.21E-09
Strontium-90	µCi/mL	EPIA-004	5.21E-10/2.27E-08
Technetium-99	µCi/mL	EPIA-005	3.24E-09/3.3E-08
Thorium-228	µCi/mL	EPIA-012	3.6E-11/1.44E-09
Thorium-230	µCi/mL	EPIA-012	1.5E-11/9.56E-10
Thorium-232	µCi/mL	EPIA-012	1.5E-11/9.65E-10
Tritium	µCi/mL	EPIA-002	4.19E-07/9.89E-06
Uranium-233/234	µCi/mL	EPIA-011	2.0E-11/2.24E-09
Uranium-235	µCi/mL	EPIA-011	1.8E-11/1.37E-09
Uranium-238	µCi/mL	EPIA-011	1.2E-11/1.98E-09
Yttrium-88	µCi/mL	EPIA-013	9.59E-10/1.36E-08
Zinc-65	µCi/mL	EPIA-013	8.34E-10/1.96E-08

Table 20. Methods and Estimated Quantitation Limits Used by TM

Analyte	Unit	Method	Minimum/Maximum EQLs
Actinium-228	µCi/mL	EPA901.1MOD	1.062E-08/2.815E-08
Americium-241	µCi/mL	EMLAM01MOD	1.7E-10/1.3E-09
Americium-241/Curium-246	µCi/mL	EMLAM01MOD	9.0E-11/9.3E-10
Antimony-124	µCi/mL	EPA901.1MOD	4.24E-09/1.122E-08
Antimony-125	µCi/mL	EPA901.1MOD	8.23E-09/1.967E-08
Barium-133	µCi/mL	EPA901.1MOD	4.14E-09/1.309E-08
Carbon-14	µCi/mL	ENICMOD	1.64E-09/1.9881E-07
Cerium-144	µCi/mL	EPA901.1MOD	1.772E-08/4.719E-08
Cesium-134	µCi/mL	EPA901.1MOD	3.53E-09/1.084E-08
Cesium-137	µCi/mL	EPA901.1MOD	3.29E-09/7.3E-09
Cobalt-57	µCi/mL	EPA901.1MOD	2.1E-09/6.08E-09
Cobalt-58	µCi/mL	EPA901.1MOD	3.24E-09/8.45E-09
Cobalt-60	µCi/mL	EPA901.1MOD	3.26E-09/7.73E-09
Curium-242	µCi/mL	EMLAM01MOD	1.2E-10/6.6E-10
Curium-243/244	µCi/mL	EMLAM01MOD	1.5E-10/1.11E-09
Europium-152	µCi/mL	EPA901.1MOD	1.903E-08/5.304E-08
Europium-154	µCi/mL	EPA901.1MOD	8.31E-09/2.181E-08
Europium-155	µCi/mL	EPA901.1MOD	5.71E-09/2.656E-08
Gross alpha	µCi/mL	EPA900.0MOD	1.3E-10/8.152E-08
Iodine-129	µCi/mL	EPA902.0MOD	1.7E-10/1.298E-08
Lead-212	µCi/mL	EPA901.1MOD	5.03E-09/1.067E-08

Analyte	Unit	Method	Minimum/Maximum EQLs
Manganese-54	µCi/mL	EPA901.1MOD	3.11E-09/6.97E-09
Neptunium-237	µCi/mL	EMLPU02MOD	8.0E-11/3.5E-10
Neptunium-239	µCi/mL	EPA901.1MOD	1.844E-08/3.456E-06
Nickel-63	µCi/mL	3500NIEMOD	2.53E-09/1.8E-08
Nonvolatile beta	µCi/mL	EPA900.0MOD	2.5E-10/7.815E-08
Plutonium-238	µCi/mL	EMLPU02MOD	9.0E-11/4.9E-10
Plutonium-239	µCi/mL	EMLPU02MOD	1.9E-10/2.5E-10
Plutonium-239/240	µCi/mL	EMLPU02MOD	1.0E-10/4.5E-10
Potassium-40	µCi/mL	EPA901.1MOD	3.02E-08/9.284E-08
Promethium-144	µCi/mL	EPA901.1MOD	3.33E-09/7.77E-09
Promethium-146	µCi/mL	EPA901.1MOD	6.36E-09/1.444E-08
Promethium-147	µCi/mL	EMLPM01MOD	2.6E-09/6.2E-09
Radium, total alpha-emitting	µCi/mL	EPA903.0MOD	3.0E-11/2.53E-09
Radium-226	µCi/mL	EPA903.0MOD	1.0E-10/1.54E-09
Radium-228	µCi/mL	EPA904.0MOD	1.05E-09/5.39E-09
Ruthenium-106	µCi/mL	EPA901.1MOD	3.163E-08/6.712E-08
Sodium-22	µCi/mL	EPA901.1MOD	2.98E-09/7.85E-09
Strontium-90	µCi/mL	EMLSR02MOD	5.8E-10/2.3E-09
Technetium-99	µCi/mL	EICHROMTC1MOD	1.34E-09/2.547E-08
Thorium-228	µCi/mL	EMLTH01MOD	8.0E-11/5.0E-10
Thorium-230	µCi/mL	EMLTH01MOD	4.0E-11/3.9E-10
Thorium-232	µCi/mL	EMLTH01MOD	6.0E-11/3.8E-10
Tin-113	µCi/mL	EPA901.1MOD	3.75E-09/9.93E-09
Tritium	µCi/mL	EPA906.0MOD	3.5E-07/3.775E-05
Uranium-234	µCi/mL	EMLU02MOD	6.0E-11/5.7E-10
Uranium-235	µCi/mL	EMLU02MOD	9.0E-11/6.4E-10
Uranium-238	µCi/mL	EMLU02MOD	1.0E-10/5.6E-10
Yttrium-88	µCi/mL	EPA901.1MOD	3.48E-09/8.04E-09
Zinc-65	µCi/mL	EPA901.1MOD	7.05E-09/1.805E-08
Zirconium-95	µCi/mL	EPA901.1MOD	5.5E-09/1.453E-08

Table 21. Method and Estimated Quantitation Limit Used by EM

Analyte	Unit	Method	Minimum/Maximum EQL
Total activity	µCi/mL	3Q1-6-1420	1.5E-06
Tritium	µCi/mL	3Q1-6-1420	1.5E-06

Quality Control Samples

This section discusses the analytical data in terms of the following indicators of data quality: precision, accuracy, representativeness, comparability, and completeness. Precision is determined from the field and laboratory duplicate or replicate analyses and indicates the consistency of field and laboratory techniques. Accuracy is determined from the quality control standards, laboratory control samples or blank spikes, surrogates, matrix spikes, and the results of method, field, and trip blanks and indicates the ability of the laboratory to generate correct results. (Equipment blanks are used to evaluate the effectiveness of the cleaning procedures used in the field.) Representativeness is the determination of how well the sample reflects the site's characteristics. Comparability expresses the confidence with which data from different laboratories are considered to be equivalent. Completeness measures the amount of useable data resulting from the data collection activity.

PRECISION

Precision is a measure of the repeatability of a measurement and is evaluated from the results of duplicate samples and splits. Blind replicates, or field replicates, measure the repeatability of the sampling and analytical techniques, and laboratory duplicates measure the ability of the laboratory to reproduce a result. Split samples measure whether two laboratories using comparable procedures obtain equivalent results. Low precision can be caused by poor instrument performance, poor operator technique, inconsistent application of method protocols, laboratory environment, time between analyses, or by a difficult, heterogeneous sample matrix.

Replicate and Duplicate Analyses of Samples

Blind replicate and duplicate samples are analyzed to establish the precision of scheduled analyses. The replicate and duplicate analytical results are used to generate Mean Relative Difference (MRD) indices, which are used to evaluate the laboratories' performances.

The primary laboratories, ES, EX, GE, and WA, performed all analyses with the following exceptions: GP and TM performed radionuclide analyses for EX, GE, and WA.

For intralaboratory comparisons, generally 10% of the samples are analyzed in duplicate. In addition, EPD/EMS sends blind replicates of approximately 5% of the total samples to the laboratories for analysis. The results of the blind replicate analyses are used for both intralaboratory and interlaboratory comparisons.

All these results are included in the **Analytical Results** section (**Appendix B**) of this report. Results from duplicate samples are included in the main table for a given well and sample date. Results from analyses of replicate samples and duplicate analyses of the replicates are reported in a second table for the same well and sample date.

Table 25 lists the well names, sample dates, and associated blanks for wells used as blind replicates for ES, EX, GE, and WA.

Certain analytes were not present in concentrations above estimated quantitation limits in any well samples having replicates or duplicates. These analytes are not considered in further evaluation of replicate and duplicate analyses and are listed in tables 26 and 27. See tables 15–21 for the estimated quantitation limits that are applicable this quarter.

Intralaboratory Comparisons

Intralaboratory comparisons are of two types: in-house duplicates and blind replicates. The MRD was developed by R.C. Tuckfield of the Applied Statistics Group at the Savannah River Technology Center, in conjunction with M.M. Khalil of EPD/EMS, to assess the reproducibility of identical chemical analyses. For both intralaboratory comparisons, the MRD is defined as the average absolute difference between an original sample and its duplicate or blind replicate, expressed as a percentage of the mean of those two values. It is calculated as

$$MRD = \left\{ \frac{\sum_{i=1}^{n} \left(|x_i - y_i| \; / \; [(x_i + y_i) \; / \; 2] \right)}{n} \right\} \times 100,$$

where

x_i = an analyte's mean concentration in a water sample for the i^{th} well,

y_i = the analyte's mean concentration in the replicate or duplicate, and

n = the number of pairs of observations.

For the in-house duplicate comparisons, the quantities x_i and y_i represent the results for the original sample and the in-house duplicate, respectively. For the blind replicate comparisons, x_i and y_i represent the results for the known sample and the EPD blind replicate, respectively. Generally, the closer the original results and their replicate or duplicate results are to each other, the lower the MRD.

An Adjusted Mean Relative Difference

A drawback to the MRD statistic occurs when x_i and y_i are close to zero. This drawback can be illustrated by determining the relative difference (RD) for the ith well or sample as follows:

$$RD_i = \frac{|x_i - y_i|}{z_i}$$

$$\text{where} \quad z_i = \left(\frac{x_i + y_i}{2} \right).$$

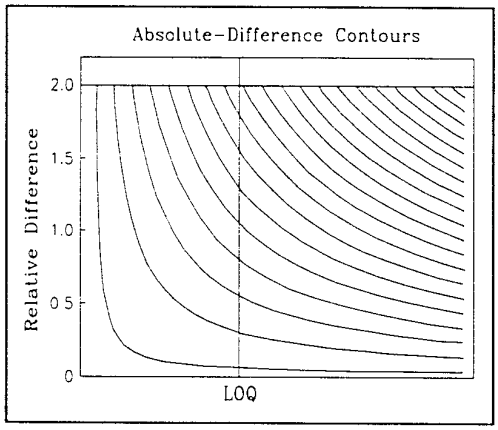


Figure 4. Relative Difference vs. the Mean

The RD_i is an individual term in the MRD calculation for the ith replicated sample. For example, if x_i = 99 and y_i = 101, then RD_i = 2%. However, if x_i = 3 and y_i = 1, then RD_i = 100%. Both situations have the same absolute difference, but the latter situation has a much larger relative difference. The effect can be shown by graphing the relative difference vs. the mean (z_i) and marking contours for constant levels of absolute difference (figure 4). The first contour, in the lower left corner of the figure, represents the smallest absolute difference. The last contour, in the upper right corner of the figure, represents the largest absolute difference.

The inordinate inflation of the MRD when x_i and y_i are near zero is of particular concern when the results are below the limit of quantitation (LOQ). Briefly, the LOQ is defined by L.H. Keith (1991) as 10 times the instrument signal standard deviation (σ) for blank samples. For perspective, the limit of detection is defined as 3σ.

The reproducibility of analytical results less than the LOQ is considered by environmental chemists to be questionable. In this situation, the RD_i may reflect variation more in the measuring device itself than in the measuring process. However, the MRD can be a useful statistic if adjusted so that results below the LOQ have less influence than more reproducible results above the LOQ.

The simplest adjustment to the MRD to reduce the influence of analyte concentrations near zero is to weight each RD_i in the calculation by an amount, w_i, that reflects its proximity to the LOQ value. Figure 5 shows the relationship between w_i and analyte concentration. This relationship is a linear-weight function.

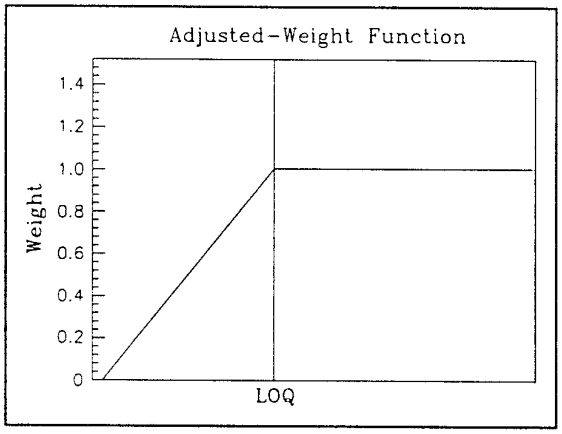


Figure 5. Relationship between w_i and Analyte Concentration

Figure 6 shows the computer simulation results for the effect of a linear-weight function on the now-adjusted MRD (MRDadj), developed by Tuckfield and Khalil, again by determining constant contours of absolute difference. Below the LOQ, all samples with the same absolute difference are given the same adjusted RD value. Above the LOQ, the unadjusted RD is preserved because the weight function is unity when z_i is greater than the LOQ.

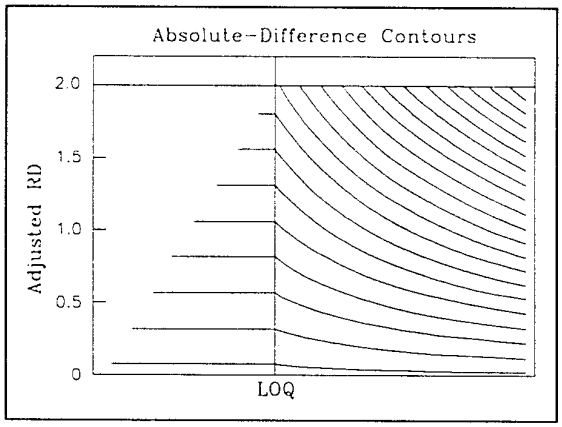


Figure 6. Effect of a Linear-Weight Function on the MRDadj

The MRDadj, then, has the following form:

$$\text{MRDadj} = \frac{\sum_{i=1}^{n} w_i \, RD_i}{n},$$

$$\text{where } w_i = \begin{cases} \dfrac{z_i}{\text{LOQ}} & ; \text{if } z_i < \text{LOQ} \\ 1 & ; \text{otherwise.} \end{cases}$$

This adjustment has several advantages. For example, the weight function reflects the chemist's view of the reliability of the measurement. If analyses are conducted on different equipment (i.e., with different LOQs), the precision of the equipment is included automatically in the MRD. Data from more precise equipment are given more influence. Also, no data are removed from the computation completely, so the sample size (n) is not affected.

Normalizing Data to the Reference Detection Limit

Because some detection limits may be anomalously high (because of dilution or other effects, for example), it is necessary to use a reference detection limit (RDL) in the MRD calculations. This is set as the 90th percentile value of the detection limits of the not-detected samples. All the results less than the RDL are adjusted up to that value. Results that are detection limit values above the RDL are eliminated from the MRD index calculations. By definition, fewer than 10% of the detection limit values are above the RDL. The intralaboratory MRD indices are listed in tables 28–34.

Interlaboratory Comparisons

For interlaboratory comparisons, the MRD is calculated as the average absolute difference between the laboratories for the ith well expressed as a percentage of the mean of both laboratories. For these comparisons, x_i and y_i represent the mean analyte concentrations for the ith well; x_i represents the mean from one laboratory, and y_i represents the mean from the other. The means are calculated from the known sample results and the EPD blind replicate results.

Choosing an RDL

For interlaboratory comparisons, a new RDL must be established for calculation of the MRD. The interlaboratory RDL is chosen as the 90th percentile value from the combined array of non-detected sample results from both laboratories.

Normalizing Data to the RDL

All results less than the RDL are adjusted to the new RDL value. Detection limit values above the RDL are eliminated from the MRD index comparison and from the t-tests. By definition, fewer than 10% of the detection limit values are above the RDL. In addition to the interlaboratory MRD calculations, paired t-tests are performed to see if the difference between the mean concentrations of an analyte from the same well reported by each laboratory is significant. The t-test tests the null hypothesis that there is no significant difference in the concentrations reported by the two laboratories. The MRD and the t-test results for analytes with at least one pair of results above the interlaboratory RDL are listed in tables 35–42. No result pairs were above the RDL for ES and GE.

Analytes with significance-of-probability values less than .050 (tables 35–42) indicate a probability of less than 5% that the results for that analyte are the same from both laboratories.

Presentation of the Replicate and Duplicate Analyses

In tables 28–34, high MRDs (greater than or equal to 20) appear in bold type. Low MRDs (less than or equal to .050) appear in bold italic type.

Table 43 lists analytes and wells for which samples and blind replicates analyzed by ES yielded results where one was more than twice another.

Table 44 lists analytes and wells for which samples and laboratory duplicates analyzed by ES yielded results where one was more than twice another.

Table 45 lists analytes and wells for which samples and laboratory duplicates analyzed by EX yielded results where one was more than twice another.

Table 46 lists analytes and wells for which samples and blind replicates analyzed by GE yielded results where one was more than twice another.

Table 47 lists analytes and wells for which matrix spikes and matrix spike duplicates analyzed by GE yielded results where one was more than twice another.

Table 48 lists analytes and wells for which samples and blind replicates analyzed by GP yielded results where one was more than twice another.

Table 49 lists analytes and wells for which samples and laboratory duplicates analyzed by GP yielded results where one was more than twice another.

Table 50 lists analytes and wells for which samples and blind replicates analyzed by TM yielded results where one was more than twice another.

Table 51 lists analytes and wells for which samples and laboratory duplicates analyzed by TM yielded results where one was more than twice another.

Table 52 lists analytes and wells for which samples and blind replicates analyzed by WA yielded results where one was more than twice another.

Table 53 lists analytes and wells for which samples and laboratory duplicates analyzed by WA yielded results where one was more than twice another.

Tables 54–60 list analytes and wells where a result from one laboratory was more than twice the corresponding result from the other laboratory.

See the **Analytical Methods** subsection of the **Analytical Data Review** section of this report for more information.

ACCURACY

Accuracy is defined as the closeness of agreement between an observed value and an accepted reference value or as a measure of the over- or underestimation of reported concentrations. Accuracy is especially important when the concentration of concern approaches the detection limit and/or the action limit. When the concentration is underestimated near the detection limit, the analyte may be present but reported as not detected; near the action limit, the analyte may be at a concentration that would require remediation, but the remediation would not be performed. When the concentration is overestimated near the detection limit, the analyte may not be present but reported as detected; near the action limit, the analyte may not be at a concentration that would require remediation, but the remediation would be performed. Quality control standards, performance evaluation studies, laboratory data records reviews, laboratory control samples and blank spikes, surrogate and matrix spikes, and method blanks are used to evaluate accuracy.

Quality Control Standards

During first quarter 1998, EPD/EMS conducted quality assessments of ES, EX, GE, and WA laboratories. Each laboratory received a set of certified environmental quality control standards from Environmental Resource Associates (ERA) of Arvada, CO (lot numbers 436, 581, 3223, 3423, 8915, and 9981). Each laboratory's results were compared with the ERA-certified values and performance acceptance limits (PALs). The PALs are listed as guidelines for acceptable analytical results given the limitations of the EPA methods used to determine these parameters. The PALs closely approximate the 95% confidence interval. The laboratories' results and the certified values and limits are listed in tables 61–64.

ES, EX, GE, and WA analyzed total petroleum hydrocarbons by the infrared method.

Of the 106 analyses reported by EX, 96, or 90.1%, were within the PALs. Of the 106 analyses reported by ES, 103, or 97.2%, were within the PALs. Of 106 analyses reported by GE, 102, or 96.2%, were within the PALs. Of 106 analyses reported by WA, 105, or 99.1%, were within the PALs.

Performance Evaluation Studies

ES, EX, and WA participated in EPA's Laboratory Performance Evaluation Water Pollution Study WP037, for which results were reported in May 1997. ES, EX and GE participated in Water Supply Study WS038, for which results were reported in April 1997; ES and EX participated in WS039, reported in September 1997. EPA conducts the studies biannually to certify laboratories for specific analyses. EPA's Environmental Monitoring Systems Laboratory (EMSL) of Cincinnati, OH, prepares water samples spiked with known concentrations of constituents found in polluted waters and submits them to all laboratories seeking certification to analyze wastewater. EMSL evaluates the results, using limits statistically based on the performance of approximately 100 top-rated laboratories that analyze each constituent by the same procedure as the laboratory being evaluated.

Table 65 contains results for WP037. In study WP037, the ES results for beryllium and total phenolics were outside the acceptance limits. The result for carbonaceous biochemical oxygen demand was acceptable but near the acceptance limits; ES was instructed to check for error. The EX results for fluoride, total phosphorus, and total phenolics were outside the acceptance limits. The WA results for calcium, total organic carbon, and nonfilterable residue were outside the acceptance limits. The results for magnesium and sodium were acceptable but near the acceptance limits; WA was instructed to check for error.

Table 66 contains results for WS038. In study WS038, the ES results for 2,4-D, cis-1,2-dichloroethylene, and orthophosphate were outside the acceptance limits. The EX results for 2,4-D, propachlor, tetrachloroethylene, and total organic carbon were outside the acceptance limits. The GE results for dicamba and zinc were outside the acceptance limits.

Table 67 contains results for WS039. In study WS039, the ES results for beryllium, fluoride, total cyanide, and turbidity were outside the acceptance limits. The EX results for 2,4-D, cis-1,2-dichloroethylene, ethylene dibromide, and nitrate were outside the acceptance limits.

Laboratory Data Records Review

Reviewers visited ES, EX, GE, GP, TM, and WA during June 1998 to determine if the laboratories' practices and recordkeeping conformed with the standards of SW-846 for definitive data (EPA, 1986b). The reviewers examined SRS Groundwater Monitoring Program records for samples collected during first quarter 1998. Reviews were not conducted for the other off-site laboratories.

The purpose of the reviews was to investigate technical validation issues that are not adequately addressed by computer review of electronic data deliverables, review of analytical narratives, or review of COC forms. These technical issues included instrument calibration and performance, analyte identification, and analyte quantitation. The issues were addressed by comparing the instrument printouts associated with particular analyses to validation checklists. These method-specific checklists consisted of approximately 8 to 20 questions and were compiled from discussions with laboratory personnel and both laboratory-specific and standard operating procedures.

First Quarter 1998 Records Review of ES

During June 1998, laboratory data records were reviewed for inorganic, and organic analyses conducted by ES during first quarter 1998. Approximately 3% of the samples analyzed for each analytical method were chosen for review.

Major Issues

No technical issues of concern were identified during the review.

First Quarter 1998 Records Review of EX

During June 1998, laboratory data records were reviewed for inorganic, and organic analyses conducted by EX during first quarter 1998. Approximately 3% of the samples analyzed for each analytical method were chosen for review.

Major Issues

No technical issues of concern were identified during the review.

First Quarter 1998 Records Review of GE

During June 1998, laboratory data records were reviewed for inorganic and organic analyses conducted by GE during first quarter 1998. A representative cross section of the preparation batches and samples analyzed for each analytical method was chosen for review.

Major Issues

No technical issues of concern were identified during the review.

First Quarter 1998 Records Review of GP

During June 1998, laboratory data records were reviewed for radiochemical analyses conducted by GP during first quarter 1998. A representative cross section of the samples analyzed for each analytical method was chosen for review.

Major Issues

No technical issues of concern were identified during the review.

First Quarter 1998 Records Review of TM

During June 1998, laboratory data records were reviewed for radiochemical analyses conducted by TM during first quarter 1998. A representative cross section (approximately 3%) of the preparation batches and samples analyzed for each analytical method was chosen for review.

Major Issues

No technical issues of concern were identified during the review.

First Quarter 1998 Records Review of WA

During June 1998, laboratory data records were reviewed for inorganic and organic analyses conducted by WA during first quarter 1998. Approximately 3% of the samples analyzed for each analytical method were chosen for review.

Major Issues

No technical issues of concern were identified during the review.

Laboratory Control Samples and Blank Spikes

Laboratory control samples and blank spikes are used to monitor the performance of all steps in the analysis process, including sample preparation, and are used to identify problems with the analytical procedure. Laboratory control samples are deionized water that is spiked with the target analyte, digested, and analyzed with the regular samples for inorganic parameters. Blank spikes are organic-free water that is spiked with selected target analytes, extracted, and analyzed with the regular samples for organic parameters. The spiking solutions for laboratory control samples and blank spikes are obtained from the EPA or a third party supplier, or they are prepared in the laboratory with chemicals from a different source than the calibration standards. Table 22 lists the quality control limits for each analyte type.

The percent recovery (% R) for laboratory control samples or blank spikes is calculated as

$$\% R = \frac{\text{Observed concentration}}{\text{Known concentration}} \times 100.$$

Table 22. Quality Control Limits for Selected Laboratory Control Samples and Blank Spikes

Analyte	*EPA % Recovery*	*ES % Recovery*	*EX % Recovery*	*GE % Recovery*	*WA % Recovery*
Dioxins/Furans†					
Heptachlorodibenzo-p-dioxin isomers	40–120	–▣	–	*❖	50–150
Hexachlorodibenzo-p-dioxin isomers	40–120	–	–	*	75–123
Hexachlorodibenzo-p-furan isomers	40–120	–	–	*	61–150
Pentachlorodibenzo-p-dioxin isomers	40–120	–	–	*	68–142
Pentachlorodibenzo-p-furan isomers	40–120	–	–	*	64–137
Tetrachlorodibenzo-p-dioxin isomers	40–120	–	–	*	71–123
Tetrachlorodibenzo-p-furan isomers	40–120	–	–	*	73–114
Herbicides					
2,4-D	–	9–119	15–134	75–125	28–154
Silvex	–	33–135	54–107	75–125	54–134
Inorganics	80–120	Vary	75–125	80–120	80–120
Inorganics (misc.)					
Chromium, hexavalent	–	83–113	85–115	80–120	80–120
Cyanide	80–120	71–123	85–115	80–120	80–120
Pesticides✪					
Aldrin	40–120	37–127	45–132	75–125	48–133
gamma-Benzene hexachloride (Lindane)	56–123	43–145	56–132	75–125	56–127
4,4´-DDT	38–127	46–152	52–136	75–125	38–138
Dieldrin	52–126	56–142	58–126	75–125	57–131
Endrin	56–121	35–155	54–145	75–125	46–150
Radionuclides⌘	80–120	75–125	*	80–120	80–120
Technetium-99	–	70–130	*	–	–
Semivolatiles◈					
Acenaphthene	46–118	46–118	27–106	75–125	46–118
4-Chloro-3-methylphenol	23–97	23–97	21–110	75–125	23–97
2-Chlorophenol	27–123	27–123	24–99	75–125	27–123
1,4-Dichlorobenzene	36–97	36–97	24–97	75–125	36–97
2,4-Dinitrotoluene	24–96	24–96	23–113	75–125	24–96
4-Nitrophenol	10–80	10–80	0–143	75–125	10–80
N-Nitrosodi-n-propylamine	41–116	41–116	24–112	75–125	41–116

Analyte	EPA % Recovery	ES % Recovery	EX % Recovery	GE % Recovery	WA % Recovery
Pentachlorophenol	9–103	9–103	0–169	75–125	9–103
Phenol	12–110	12–110	25–94	75–125	12–110
Pyrene	26–127	26–127	36–104	75–125	26–127
1,2,4-Trichlorobenzene	39–98	39–98	24–100	75–125	39–98
Volatiles◈					
Benzene	76–127	76–127	75–123	75–125	76–127
Chlorobenzene	75–130	75–130	76–122	75–125	75–130
1,1-Dichloroethane	61–145	–	–	75–125	61–145
1,1-Dichloroethylene	–	61–145	68–133	–	–
Toluene	76–125	76–125	77–123	75–125	76–125
Trichloroethylene	71–120	71–120	75–122	75–125	71–120

† These limits are from SW-846 method EPA8280 for EPA and GE; WA uses laboratory-determined limits.
▣ – Not available.
❖ * Not analyzed.
✪ GE and WA use laboratory-determined limits.
⌘ GE and WA develop their own methods based on EPA, DOE, and other methods.
◈ GE uses laboratory-determined limits.

Note: TM analyzes WA's radionuclides; GP analyzes GE's radionuclides.

Tables 68–73 list the statistical information for the percent recovery for laboratory control samples and blank spikes by analyte for ES, EX, GE, WA, GP, and TM. The *Qualified Out of Range* column provides the number of laboratory control samples or blank spikes that had percent recoveries outside the acceptance limits compared to the total number analyzed; the other columns provide the mean recovery, standard deviation, and the minimum and maximum recoveries.

Surrogates

Surrogates are analytes not normally found in environmental samples that are used to spike all samples, QC samples, and calibration standards for organic analyses. Surrogates are added prior to analysis for VOAs (volatile organic analyses) and prior to extraction for semivolatiles, pesticides, and herbicides. Low surrogate recovery is a measure of the effect of the sample matrix, high analyte concentration, or laboratory error. High surrogate recovery usually indicates instrument or sample preparation errors. Table 23 lists the recovery limits for each surrogate.

Table 23. Surrogate Recovery Limits

Analyte	EPA % Recovery	ES % Recovery	EX % Recovery	GE % Recovery	WA % Recovery
Herbicides†					
4-(2,4-Dichlorophenoxy)butyric acid	–▣	–	–	50–150	–
2,4-Dichlorophenylacetic acid	–	28–112	–	50–150	40–150
Pesticides					
Decachlorobiphenyl	30–150	31–145	–	–	22–126
Dibutylchlorendate	–	–	–	40–127	–
Tetrachloro-m-xylene	30–150	23–109	–	40–156	27–129
Semivolatiles❖					
2-Chlorophenol-d4	33–110 (advisory)	–	–	48.5–112	27–123
1,2-Dichlorobenzene-d4	16–110 (advisory)	–	–	43.2–144	–

Analyte	*EPA % Recovery*	*ES % Recovery*	*EX % Recovery*	*GE % Recovery*	*WA % Recovery*
2-Fluorobiphenyl	43–116	43–116	43–116	43–108.3	43–116
2-Fluorophenol	21–110	21–100	27–89	21–100	21–100
Nitrobenzene-d5	35–114	35–114	35–114	35–114	35–114
Phenol-d5 (used by ES, EX, and WA)	10–94	10–94	28–91	–	10–94
Phenol-d6 (used by GE)	10–94	–	–	18.9–94	–
Terphenyl-d14	33–141	33–141	33–141	33–125.5	33–141
2,4,6-Tribromophenol	10–123	10–123	36–103	26.9–123	10–123
Volatiles (8240)❖					
p-Bromofluorobenzene	86–115	–	–	86–115	86–155
1,2-Dichloroethane-d4	76–114	–	–	76–114	76–114
Toluene-d8	88–110	–	–	78.1–115.6	88–110
Volatiles (8260)❖					
p-Bromofluorobenzene	86–115	86–115	86–115	80–128	86–115
Dibromofluoromethane-d4	86–118	86–118	86–118	67.7–135	86–118
1,2-Dichloroethane-d4	–	80–120	76–114	86–118	76-114
Toluene-d8	88–110	88–110	88–110	76.8–121.9	88–110

† There are no established limits for herbicide surrogate recoveries.
▣ – Not available.
❖ GE uses laboratory-determined limits.

Tables 74–77 list the statistical information for the percent recovery for the surrogates by analyte for ES, EX, GE, and WA. The *Qualified Out of Range* column gives the number of surrogates that had percent recoveries outside the acceptance limits compared to the total number analyzed; the other columns provide the mean recovery, standard deviation, and the minimum and maximum recoveries.

Matrix Spikes

Matrix spikes are used to evaluate the effect of the sample matrix on the analytical procedure. Matrix spikes are prepared by adding a known quantity of the target analyte to at least 5% of the samples prior to sample preparation. For the inorganic analyses, all target analytes are spiked. For the organic analyses, selected target analytes are used in the spiking solution. Results from the matrix spike are used to evaluate the extent of matrix interference and to determine the bias of the procedure for the sample matrix. Table 24 lists the quality control limits for each analyte type.

The percent recovery for matrix spikes is calculated as

$$\%\ R = \frac{SSR - SR}{SA} \times 100,$$

where

% R = percent recovery

SSR = spiked sample result

SR = sample result

SA = spike added.

Table 24. Quality Control Limits for Selected Matrix Spike Samples

Analyte	*ES % Recovery*	*EX % Recovery*	*GE % Recovery*	*WA % Recovery*
Dioxins/Furans				
Heptachlorodibenzo-p-dioxin isomers	–†	–	*▣	50–150
Hexachlorodibenzo-p-dioxin isomers	–	–	*	75–123
Hexachlorodibenzo-p-furan isomers	–	–	*	61–150
Pentachlorodibenzo-p-dioxin isomers	–	–	*	68–142
Pentachlorodibenzo-p-furan isomers	–	–	*	64–137
Tetrachlorodibenzo-p-dioxin isomers	–	–	*	71–123
Tetrachlorodibenzo-p-furan isomers	–	–	*	73–114
Inorganics	Varies with analyte	75–125	75–125	75–125
Inorganics (misc.)				
Chromium, hexavalent	34–148	85–115	75–125	96–109
Cyanide	65–133	85–115	75–125	83–112
Herbicides				
2,4-D	9–119	15–134	50–150	28–154
Silvex	33–135	54–107	50–150	30–150
Pesticides				
Aldrin	19–145	45–132	29.5–147	48–133
gamma-Benzene hexachloride (Lindane)	19–137	56–132	39.5–148.2	56–127
4,4´-DDT	14–152	52–136	23.2–146	38–138
Dieldrin	29–135	58–126	30.1–155	57–131
Endrin	35–155	54–145	39.2–161.4	46–150
Heptachlor	38–130	57–116	43.4–158	50–129
Oil and Grease	79–119	70–130	75–125	75–125
Radionuclides	75–125	–	75–125	75–125
Semivolatiles				
Acenaphthene	46–118	27–106	50.2–133	46–118
4-Chloro-3-methylphenol	23–97	21–110	52.4–134	23–97
2-Chlorophenol	27–123	24–99	48.5–112	27–123
1,4-Dichlorobenzene	36–97	24–97	40.2–120	36–97
2,4-Dinitrotoluene	24–96	23–112	56–132	24–96
4-Nitrophenol	10–80	0–143	1–91	10–80
N-Nitrosodi-n-propylamine	41–116	24–112	35-111.4	41–116
Pentachlorophenol	9–103	0–169	14–176	9–103
Phenol	12–110	25–94	20.4–74	12–110
Pyrene	26–127	36–104	52–115	26–127
1,2,4-Trichlorobenzene	39–98	24–100	44–142	39–98
Total Petroleum Hydrocarbons	43–139	70–130	75–125	75–125
Volatiles				
Benzene	76–127	75–123	76–127	76–127
Chlorobenzene	75–130	76–122	75–130	75–130

Analyte	*ES % Recovery*	*EX % Recovery*	*GE % Recovery*	*WA % Recovery*
1,1-Dichloroethane	61–145	68–133	61–145	61–145
Toluene	76–125	77–123	76–125	76–125
Trichloroethylene	71–120	75–122	35–146	71–130

† – Not available.
▣ * Not analyzed.

Note: TM analyzes WA's radionuclides; GP analyzes GE's radionuclides.

Percent bias in tables 78–82 is the difference between 100% and the mean recovery; a negative value indicates that the mean recovery was below 100%. If the bias is consistently positive, the laboratory may be overestimating the concentration of the analyte, and if the bias is consistently negative, the laboratory may be underestimating the concentration of the analyte. Results close to the quantitation and action limits should be closely examined, and their use in decision-making should be carefully considered.

Matrix spikes are rejected if the concentration of the analyte in the sample is more than four times the amount of the spike. Results for matrix spikes are provided in tables 78–82 for ES, EX, GE, WA, and GP. The *Qualified Out of Range* column provides the number of matrix spikes that had percent recoveries outside the acceptance limits compared to the total number analyzed; the other columns provide the mean recovery, standard deviation, percent bias, and the minimum and maximum recoveries.

Method Blanks

Method blanks, or laboratory blanks, are used to determine the existence and magnitude of contamination problems resulting from the analytical process. Method blanks are deionized water to which all reagents are added in the same proportions used in sample processing. When method blanks have detectable concentrations of the analytes, the laboratory must determine the cause and take corrective action to eliminate the contamination.

Tables 83–88 list the statistical information for analytes detected in method blanks for ES, EX, GE, WA, GP, and TM. The *Frequency of Detection* column provides the number of method blanks analyzed for each analyte during the quarter that had detectable concentrations compared to the total number that were analyzed. The other columns list the mean result, standard deviation, and minimum and maximum results.

Field Blanks

Field blanks (called QA blanks in the tables) are used to identify possible sources of contamination from the processing and shipping of samples. Field blanks are sample bottles filled with deionized water prior to well sampling; the bottles are not opened at the sampling site. The field blanks are sent along with, and analyzed in the same manner as, the samples. Positive results from field blanks can result from analytical bias, contaminated sample bottles, contaminated deionized water, or contamination during shipping or analysis. The results from all samples in the sample delivery group are evaluated by the laboratory and data validators to determine the cause of the contamination and the corrective action to be taken.

Tables 89–93 list the statistical information for the field blanks by analyte for ES, GE, WA, GP, and TM. The *Frequency of Detection* column gives the number of field blanks analyzed for each analyte during the quarter that had detectable concentrations compared to the total number analyzed. The other columns list the mean result, standard deviation, and minimum and maximum results.

Trip Blanks

Trip blanks are vials of deionized water sent to the laboratory for volatiles analysis with each shipping cooler containing volatiles samples. Trip blanks are used to check for contamination resulting from shipping, primarily due to the breaking of the vial's seal because of depressurization during air transport. Trip blanks are used also to test the laboratories' reliability. The blanks are prepared by adding preservative to a 40 mL vial, filling it

completely with deionized water, and sealing the top with a teflon-lined septum cap. The results from all samples in the sample delivery group are evaluated by the laboratory and data validators to determine the cause of the contamination and the corrective action to be taken.

Tables 94–97 list the statistical information for the analytes detected in trip blanks by ES, EX, GE, and WA. The *Frequency of Detection* column gives the number of trip blanks analyzed for each analyte during the quarter that had detectable concentrations compared to the total number analyzed. The other columns list the mean result, standard deviation, and minimum and maximum results.

Equipment Blanks or Rinsates

Equipment blanks (called EPT blanks in the tables) or rinsates are used to determine if sampling equipment that has been cleaned in the field is contaminated. Prior to sampling, deionized water is poured over or pumped through portions of the sampling equipment that come in contact with the sample. If the equipment blank is contaminated, the field cleaning procedure must be evaluated to determine the cause of the contamination. Results for all samples collected with equipment cleaned in the field must be evaluated to determine whether the contamination is isolated or generalized.

No information about equipment blanks was provided for first quarter 1998.

Blanks Results

The blanks results tables in **Appendix C** list the dates, field measurements, and analytical results for the sampling blanks. See **Appendix B** for a key to the abbreviations used in the tables.

REPRESENTATIVENESS

A representative sample is a sample that can be expected to exhibit the average properties of the population being sampled. Representativeness for groundwater samples can be affected by using a bailer to collect the sample from the well, metal casings in the well, and turbidity (suspended particulates) in the sample. The results may be biased positively or negatively.

If a well is bailed, VOAs are biased negatively due to aeration of the sample in the sampling process. Table 98 lists the wells that were bailed during first quarter 1998.

For metal casings, the bias for metals can be positive or negative depending on whether the casing is releasing or absorbing metals. Table 99 lists the wells with metal casings that were sampled during first quarter 1998.

If turbidity is greater than 15 NTU, the metals can be biased positively or negatively, and the radionuclides—particularly those that are determined by gamma spectroscopy—can be masked due to self-absorption. Table 100 lists the wells that had turbidity results greater than 15 NTU during first quarter 1998.

COMPARABILITY

Comparability is evaluated by confirming that the laboratories used the same standardized procedures for sample preparation and analysis, that the reporting units are the same, and that similar quantitation limits were obtained. The analytical methods, reporting units, and estimated quantitation limits (EQLs) reported by each laboratory are given in tables 15–21 in the **Analytical Data Review** section. Tables 54–60 list the analytes and wells where a result from one laboratory was more than twice the corresponding result from the other laboratory.

COMPLETENESS

Completeness is evaluated by comparing the wells scheduled for sampling with the wells sampled and comparing the requested analyses with the analytical data received. The number of wells sampled and the requested analyses are determined from the chains of custody. Table 101 lists the reasons the laboratories did not perform certain analyses on samples from wells that could be sampled. See the **Sample Scheduling**, **Field**

Notes, and **Analytical Results** sections of this report for more information on wells scheduled but not sampled this quarter.

Table 25. Wells Providing Blind Replicate Samples and Associated Blanks

Well	Sample Date	Replicate	Associated Blank
AMB 4A	03/09/98	QA 1A	QA 2A
AMB 7A	03/06/98	QA 3A	QA 4A
AMB 17A	03/09/98	QA 5A	QA 6A
ASB 5C	03/04/98	QA 7A	QA 8A
ASB 6AA	03/04/98	QA 9A	QA 10A
ASB 6C	03/04/98	QA 11A	QA 12A
CSB 1C	02/24/98	QA 87A	QA 88A
CSO 1	01/19/98	QA 65A	QA 66A
FSB 78A	02/19/98	QA 29A	QA 30A
FSB 78B	01/26/98	QA 31A	QA 32A
FSB 99A	01/28/98	QA 33A	QA 34A
FSB112C	01/21/98	QA 35A	QA 36A
FSB120C	01/13/98	QA 37A	QA 38A
HAA 1B	03/10/98	QA 53A	QA 54A
HCA 4AA	03/12/98	QA 55A	QA 56A
HCA 4C	03/12/98	QA 57A	QA 58A
HR8 11	01/05/98	QA 67D	QA 68D
HSB 68A	01/22/98	QA 39A	QA 40A
HSB 83B	01/29/98	QA 41A	QA 42A
HSB107C	01/23/98	QA 43A	QA 44A
HSB126C	01/29/98	QA 45A	QA 46A
HSB130C	01/29/98	QA 47A	QA 48A
HSB143D	01/28/98	QA 49A	QA 50A
HSB146C	01/26/98	QA 51A	QA 52A
HXB 5D	03/26/98	QA 99A	QA 100A
KRP 8	01/29/98	QA 79A	QA 80A
KRP 9	02/23/98	Not applicable	QA 82A
LFW 43C	03/16/98	QA 61A	QA 62A
LFW 59D	03/16/98	QA 63A	QA 64A
LFW 74C	02/02/98	QA 77A	QA 78A
LRP 3	03/09/98	QA 89A	QA 90A
LRP 4	03/24/98	QA 91A	QA 92A
MSB 1B	02/11/98	QA 13A	QA 14A
MSB 23TA	03/04/98	QA 19A	QA 20A
MSB 29A	03/05/98	QA 21A	QA 22A
MSB 35B	03/04/98	QA 23A	QA 24A
MSB 4B	02/12/98	QA 15A	QA 16A
MSB 9A	02/18/98	QA 17A	QA 18A
RGW 17A	01/22/98	QA 83A	QA 84A
RGW 21	01/21/98	QA 89D	QA 90D
RPC 8D	02/05/98	QA 69A	QA 70A
SRW 14A	03/02/98	QA 25A	QA 26A
TBG 5B	03/03/98	QA 75A	QA 76A
TNX 9D	03/03/98	QA 73A	QA 74A
ZBG 1	01/30/98	QA 59A	QA 60A

Table 26. Analytes Not Showing Measurable Concentrations above Estimated Quantitation Limits in Any Replicated or Duplicated Samples for GE, WA, ES, and EX

Analyte	Number of Analyses GE	WA	ES	EX
Acenaphthene	8	27	7	–
Acenaphthylene	8	37	7	–
Acetonitrile	–	9	17	22
Acetophenone	–	9	–	–
2-Acetylaminofluorene	–	9	–	–
Acrolein	–	9	17	22
Acrylonitrile	–	9	17	22
Aldrin	8	17	7	–
Allyl chloride	–	9	17	13
4-Aminobiphenyl	–	9	–	–
Ammonia	–	2	–	–
Ammonia nitrogen	–	–	2	–
Aniline	–	9	–	–
Anthracene	8	37	7	–
Aramite	–	9	–	–
Arsenic	112	44	11	8
Benzene	37	99	23	26
alpha-Benzene hexachloride	8	23	7	–
beta-Benzene hexachloride	8	23	9	2
delta-Benzene hexachloride	8	23	7	–
Benzidine	–	–	6	–
Benzo[*a*]anthracene	8	37	7	–
Benzo[*b*]fluoranthene	8	37	7	–
Benzo[*k*]fluoranthene	8	37	7	–
Benzoic acid	8	25	6	–
Benzo[*g,h,i*]perylene	8	37	7	–
Benzo[*a*]pyrene	8	37	7	–
Benzyl alcohol	8	25	6	–
Beryllium	14	20	7	2
Bis(2-chloroethoxy) methane	8	35	7	–
Bis(2-chloroethyl) ether	8	35	7	–
Bis(2-chloroisopropyl) ether	8	35	7	–
Boron	–	2	2	–
Bromochloromethane	–	–	8	1
Bromodichloromethane	31	119	23	26
Bromoform	31	119	23	26
Bromomethane	31	119	23	26
4-Bromophenyl phenyl ether	8	35	7	–
Butylbenzyl phthalate	8	35	7	–
2-sec-Butyl-4,6-dinitrophenol	–	9	–	–
Carbazole	–	26	–	–
Carbon disulfide	7	25	23	22
Carbonate	–	2	–	–
Chlordane	–	–	6	–
alpha-Chlordane	8	23	7	–
gamma-Chlordane	8	23	7	–
4-Chloroaniline	8	35	7	–
Chlorobenzene	37	97	23	26
Chlorobenzilate	–	9	–	–
4-Chloro-m-cresol	8	25	7	–
Chloroethane	31	119	23	26
Chloroethene	31	119	23	26
2-Chloroethyl vinyl ether	24	94	–	19
Chloromethane	31	119	23	26
2-Chloronaphthalene	8	35	7	–
2-Chlorophenol	8	25	7	–
4-Chlorophenyl phenyl ether	8	35	7	–

Analyte	Number of Analyses GE	WA	ES	EX
Chloroprene	–	9	17	13
Chrysene	8	37	7	–
m-Cresol	–	9	–	–
m/p-Cresol	8	31	7	–
o-Cresol	8	35	7	–
Cyanide	135	82	5	13
p,p´-DDD	8	23	7	–
p,p´-DDE	8	23	7	–
p,p´-DDT	8	17	7	–
Diallate	–	9	–	–
Dibenz[*a,h*]anthracene	8	37	7	–
Dibenzofuran	8	35	7	–
Dibromochloromethane	31	119	23	26
1,2-Dibromo-3-chloropropane	–	9	17	13
1,2-Dibromoethane	–	9	17	13
Dibromomethane	–	9	17	13
Di-n-butyl phthalate	8	35	9	2
1,2-Dichlorobenzene	8	35	15	13
1,3-Dichlorobenzene	8	35	7	12
1,4-Dichlorobenzene	8	25	24	15
3,3´-Dichlorobenzidine	8	35	7	–
trans-1,4-Dichloro-2-butene	–	9	17	13
Dichlorodifluoromethane	–	9	17	20
1,1-Dichloroethane	31	119	23	26
1,1-Dichloroethylene	37	97	23	26
1,2-Dichloroethylene	7	105	–	–
2,4-Dichlorophenol	8	35	7	–
2,6-Dichlorophenol	–	9	–	–
2,4-Dichlorophenoxyacetic acid	4	15	–	3
1,2-Dichloropropane	31	119	23	26
cis-1,3-Dichloropropene	31	119	23	26
trans-1,3-Dichloropropene	31	119	23	26
Dieldrin	8	17	7	–
Diethyl phthalate	8	35	7	–
Dimethoate	–	4	–	–
2,4-Dimethyl phenol	8	35	7	–
Dimethyl phthalate	8	35	7	–
p-Dimethylaminoazobenzene	–	9	–	–
7,12-Dimethylbenz[*a*]anthracene	–	9	–	–
3,3´-Dimethylbenzidine	–	9	–	–
a,a-Dimethylphenethylamine	–	9	–	–
1,3-Dinitrobenzene	–	9	–	–
2,4-Dinitrophenol	8	35	7	–
2,4-Dinitrotoluene	8	25	7	–
2,6-Dinitrotoluene	8	35	7	–
Di-n-octyl phthalate	8	35	7	–
1,4-Dioxane	–	9	–	12
Diphenylamine	–	9	–	–
Disulfoton	–	4	–	–
Endosulfan sulfate	8	23	7	–
Endosulfan I	8	23	7	–
Endosulfan II	8	23	7	–
Endrin	8	17	7	–
Endrin aldehyde	–	8	6	–
Endrin ketone	8	20	7	–
Ethyl methacrylate	–	9	–	12
Ethyl methanesulfonate	–	9	–	–
Ethylbenzene	31	121	23	26
Famphur	–	4	–	–
Fluoranthene	8	37	7	–
Fluorene	8	37	7	–

Analyte	Number of Analyses GE	WA	ES	EX
Fluoride	6	15	–	4
Heptachlor	8	17	7	–
Heptachlor epoxide	8	23	7	–
Hexachlorobenzene	8	35	7	–
Hexachlorobutadiene	8	35	7	–
Hexachlorocyclopentadiene	8	35	7	–
Hexachlorodibenzo-p-dioxins	–	2	–	–
Hexachlorodibenzo-p-furans	–	2	–	–
Hexachloroethane	8	35	7	–
Hexachlorophene	–	9	–	–
Hexachloropropene	–	9	–	–
2-Hexanone	7	25	23	22
Indeno[1,2,3-*c,d*]pyrene	8	37	7	–
Iodomethane	–	9	17	13
Isobutyl alcohol	–	9	17	13
Isodrin	–	3	–	–
Isophorone	8	35	7	–
Isosafrole	–	9	–	–
Kepone	–	3	–	–
Lindane	8	29	7	3
Methacrylonitrile	–	9	17	13
Methapyrilene	–	9	–	–
Methoxychlor	8	23	7	–
2-Methyl-4,6-dinitrophenol	8	35	7	–
Methyl ethyl ketone	7	25	23	22
Methyl isobutyl ketone	7	25	23	22
Methyl methacrylate	–	9	17	13
Methyl methanesulfonate	–	9	–	–
3-Methylcholanthrene	–	9	–	–
2-Methylnaphthalene	8	35	7	–
Naphthalene	8	37	7	–
1,4-Naphthoquinone	–	9	–	–
1-Naphthylamine	–	9	–	–
2-Naphthylamine	–	9	–	–
Nitrite as nitrogen	2	5	3	–
m-Nitroaniline	8	35	7	–
o-Nitroaniline	8	35	7	–
p-Nitroaniline	8	35	7	–
Nitrobenzene	8	35	7	–
2-Nitrophenol	8	35	7	–
4-Nitrophenol	8	25	7	–
4-Nitroquinoline-1-oxide	–	9	–	–
N-Nitrosodi-n-butylamine	–	9	–	–
N-Nitrosodiethylamine	–	9	–	–
N-Nitrosodimethylamine	–	9	–	–
N-Nitrosodiphenylamine	8	35	7	–
N-Nitrosodipropylamine	8	25	7	–
N-Nitrosomethylethylamine	–	9	–	–
N-Nitrosomorpholine	–	9	–	–
N-Nitrosopiperidine	–	9	–	–
N-Nitrosopyrrolidine	–	9	–	–
5-Nitro-o-toluidine	–	9	–	–
Parathion ethyl	–	4	–	–
Parathion methyl	–	4	–	–
PCB 1016	8	38	7	–
PCB 1221	8	38	7	–
PCB 1232	8	38	7	–
PCB 1242	8	38	7	–
PCB 1248	8	38	7	–
PCB 1254	8	33	7	–
PCB 1260	8	38	7	–

Analyte	Number of Analyses GE	WA	ES	EX
Pentachlorobenzene	–	9	–	–
Pentachlorodibenzo-p-dioxins	–	2	–	–
Pentachlorodibenzo-p-furans	–	2	–	–
Pentachloroethane	–	9	–	12
Pentachloronitrobenzene	–	9	–	–
Pentachlorophenol	8	25	7	–
Phenacetin	–	9	–	–
Phenanthrene	8	37	7	–
Phenol	8	36	7	3
Phenols	33	10	–	–
p-Phenylenediamine	–	9	–	–
Phorate	–	4	–	–
2-Picoline	–	9	–	–
Pronamid	–	9	–	–
Propionitrile	–	9	17	13
Pyrene	8	27	7	–
Pyridine	–	9	–	–
Safrole	–	9	–	–
Selenium	112	86	11	20
Styrene	7	25	23	22
Sulfide	–	2	–	–
Sulfotepp	–	4	–	–
2,4,5-T	2	–	–	–
2,3,7,8-TCDD	–	2	–	–
1,2,4,5-Tetrachlorobenzene	–	9	–	–
Tetrachlorodibenzo-p-dioxins	–	2	–	–
Tetrachlorodibenzo-p-furans	–	2	–	–
1,1,1,2-Tetrachloroethane	–	9	17	13
1,1,2,2-Tetrachloroethane	31	119	23	26
2,3,4,6-Tetrachlorophenol	–	9	–	–
Thionazin	–	4	–	–
Tin	14	10	–	–
o-Toluidine	–	9	–	–
Toxaphene	8	23	7	–
2,4,5-TP (Silvex)	4	2	–	–
1,2,4-Trichlorobenzene	8	25	7	–
1,1,1-Trichloroethane	37	123	27	28
1,1,2-Trichloroethane	31	119	23	26
2,4,5-Trichlorophenol	8	35	7	–
2,4,6-Trichlorophenol	8	35	7	–
1,2,3-Trichloropropane	–	9	17	13
O,O,O-Triethyl phosphorothioate	–	4	–	–
1,3,5-Trinitrobenzene	–	9	–	–
Vinyl acetate	7	25	23	22

– No replicate or duplicate analyses were performed.

Table 27. Analytes Not Showing Measurable Concentrations above Estimated Quantitation Limits in Any Replicated or Duplicated Samples for GP, TM, and ES

Analyte	Number of Analyses GP	TM	ES
Antimony-124	–	39	–
Barium-133	–	39	–
Cerium-144	81	43	8
Cesium-134	81	43	8
Cobalt-58	–	41	–

Analyte	Number of Analyses GP	TM	ES
Curium-246	–	–	6
Europium-155	81	43	8
Neptunium-239	–	18	–
Nickel-63	41	14	–
Plutonium-239	–	2	–
Promethium-144	81	43	8
Promethium-146	81	43	8
Promethium-147	13	6	–
Ruthenium-106	81	43	8
Tin-113	–	39	–
Zirconium-95	–	39	–

– No replicate or duplicate analyses were performed.

Table 28. Intralaboratory MRD Indices for ES

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj	Blind Replicates Number of Dup. Pairs	MRD	MRDadj
Acetone	1.0E+01 µg/L	7	6.59	2.57	5	**28.72**	15.00
Actinium-228	1.13E-08 µCi/mL	3	0.00	0.00	1	0.00	0.00
Aluminum	†	0	-	-	2	**57.27**	57.27
Americium-241	1.3E-10 µCi/mL	2	0.00	0.00	2	0.00	0.00
Antimony	5.0E+00 µg/L	0	-	-	3	0.00	0.00
Antimony-125	9.45E-09 µCi/mL	3	0.00	0.00	1	0.00	0.00
Barium	†	0	-	-	5	5.43	5.43
Bis(2-ethylhexyl) phthalate	1.3E+01 µg/L	1	**107.14**	69.23	2	0.00	0.00
Cadmium	2.0E+00 µg/L	0	-	-	5	0.00	0.00
Calcium	†	0	-	-	2	12.28	12.28
Carbon tetrachloride	5.0E+00 µg/L	7	0.00	0.00	7	0.00	0.00
Carbon-14	1.7E-08 µCi/mL	1	0.00	0.00	1	0.00	0.00
Cesium-137	3.17E-09 µCi/mL	3	0.00	0.00	1	0.00	0.00
Chloride	†	1	2.25	2.25	1	2.98	2.98
Chloroform	5.0E+00 µg/L	7	0.00	0.00	7	0.00	0.00
Chromium	3.0E+00 µg/L	0	-	-	5	3.24	1.20
Cobalt	5.0E+00 µg/L	0	-	-	3	0.00	0.00
Cobalt-57	2.0E-09 µCi/mL	3	0.00	0.00	1	0.00	0.00
Cobalt-60	3.44E-09 µCi/mL	3	0.00	0.00	1	0.00	0.00
Copper	3.0E+00 µg/L	0	-	-	3	**41.34**	28.00
Curium-242	1.1E-10 µCi/mL	2	0.00	0.00	2	0.00	0.00
Curium-243	2.2E-10 µCi/mL	2	0.00	0.00	2	0.00	0.00
1,2-Dichloroethane	5.0E+00 µg/L	7	0.00	0.00	5	0.00	0.00
cis-1,2-Dichloroethylene	5.0E+00 µg/L	4	0.00	0.00	3	0.00	0.00
trans-1,2-Dichloroethylene	5.0E+00 µg/L	1	0.00	0.00	2	0.00	0.00
Dichloromethane	5.0E+00 µg/L	7	0.00	0.00	5	0.00	0.00
Europium-152	1.67E-08 µCi/mL	3	0.00	0.00	1	0.00	0.00

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj	Blind Replicates Number of Dup. Pairs	MRD	MRDadj
Europium-154	9.19E-09 µCi/mL	3	0.00	0.00	1	0.00	0.00
Gross alpha	2.23E-09 µCi/mL	8	5.12	3.92	6	0.00	0.00
Iodine-129	5.01E-09 µCi/mL	1	0.00	0.00	1	0.00	0.00
Iron	†	0	-	-	2	**69.60**	69.60
Lead	5.0E+00 µg/L	0	-	-	7	6.08	4.82
Lead-212	8.61E-09 µCi/mL	3	0.00	0.00	1	0.00	0.00
Magnesium	5.0E+01 µg/L	0	-	-	2	1.26	1.26
Manganese	†	0	-	-	2	7.53	7.53
Manganese-54	3.38E-09 µCi/mL	3	0.00	0.00	1	0.00	0.00
Mercury	2.0E-01 µg/L	0	-	-	6	0.00	0.00
Neptunium-237	†	0	-	-	2	**76.35**	76.35
Nickel	5.0E+00 µg/L	0	-	-	3	0.00	0.00
Nitrate as nitrogen	1.3E+02 µg/L	6	1.21	1.21	3	**28.99**	15.38
Nonvolatile beta	2.22E-09 µCi/mL	6	**26.81**	24.52	2	0.22	0.07
pH	†	18	0.34	0.34	1	1.91	1.91
Plutonium-238	1.0E-10 µCi/mL	1	0.00	0.00	2	0.00	0.00
Plutonium-239/240	8.0E-11 µCi/mL	1	0.00	0.00	2	0.00	0.00
Potassium	4.0E+02 µg/L	0	-	-	2	9.69	3.30
Potassium-40	9.5E-08 µCi/mL	3	0.00	0.00	1	0.00	0.00
Radium-226	1.6E-09 µCi/mL	1	**55.53**	23.06	1	0.00	0.00
Radium-228	2.07E-09 µCi/mL	2	0.00	0.00	1	0.00	0.00
Silver	2.0E+00 µg/L	0	-	-	5	0.00	0.00
Sodium	†	0	-	-	2	4.23	4.23
Sodium-22	3.28E-09 µCi/mL	3	0.00	0.00	1	0.00	0.00
Specific conductance	†	1	2.17	2.17	1	1.58	1.58
Strontium-90	1.46E-09 µCi/mL	0	-	-	1	**55.45**	23.01
Sulfate	5.0E+03 µg/L	1	0.00	0.00	1	0.00	0.00
Tetrachloroethylene	5.0E+00 µg/L	7	0.92	0.86	7	0.00	0.00
Thallium	5.0E+00 µg/L	0	-	-	3	0.00	0.00
Thorium-228	1.8E-10 µCi/mL	2	0.00	0.00	2	0.00	0.00
Thorium-230	2.7E-10 µCi/mL	2	0.00	0.00	2	0.00	0.00
Thorium-232	1.0E-10 µCi/mL	2	0.00	0.00	2	0.00	0.00
Thorium-234	2.06E-07 µCi/mL	3	0.00	0.00	1	**45.98**	17.91
Toluene	5.0E+00 µg/L	7	0.00	0.00	5	0.00	0.00
Total organic carbon	1.0E+03 µg/L	1	**40.00**	15.00	1	**104.76**	66.00
Total organic halogens	1.0E+01 µg/L	0	-	-	1	0.00	0.00
Total phosphates (as P)	1.0E+01 µg/L	1	0.00	0.00	1	**24.54**	24.54
Trichloroethylene	5.0E+00 µg/L	7	0.00	0.00	7	0.36	0.36
Trichlorofluoromethane	5.0E+00 µg/L	6	1.33	1.00	3	0.00	0.00
Tritium	8.4E-07 µCi/mL	14	3.95	2.81	5	**22.18**	11.21
Unknown	†	0	-	-	1	**44.50**	44.50

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj	Blind Replicates Number of Dup. Pairs	MRD	MRDadj
Uranium-234	6.0E-11 µCi/mL	3	6.03	6.03	2	0.00	0.00
Uranium-235	3.0E-11 µCi/mL	3	2.90	2.90	2	0.00	0.00
Uranium-238	5.0E-11 µCi/mL	3	5.96	5.96	2	0.00	0.00
Vanadium	2.0E+00 µg/L	0	-	-	3	0.00	0.00
Xylenes	5.0E+00 µg/L	7	0.00	0.00	5	0.00	0.00
Yttrium-88	3.56E-09 µCi/mL	3	0.00	0.00	1	0.00	0.00
Zinc	1.0E+01 µg/L	0	-	-	3	12.94	6.30
Zinc-65	7.29E-09 µCi/mL	3	0.00	0.00	1	0.00	0.00

† No detection limit, or no replicate or duplicate results below detection limit.
- No replicate or duplicate analyses could be calculated.

Note: An MRD of 0.00 indicates no difference between any of the pairs of results used in calculating the MRD. MRD results greater than or equal to 20 appear in **bold**.

Table 29. Intralaboratory MRD Indices for EX

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj	Blind Replicates Number of Dup. Pairs	MRD	MRDadj
Acetone	5.0E+02 µg/L	1	0.00	0.00	0	-	-
Aluminum	1.0E+02 µg/L	1	0.00	0.00	0	-	-
Antimony	1.0E+02 µg/L	1	0.00	0.00	0	-	-
Barium	2.5E+01 µg/L	4	0.00	0.00	0	-	-
Cadmium	5.0E+00 µg/L	1	0.00	0.00	0	-	-
Calcium	†	1	3.48	3.48	0	-	-
Carbon tetrachloride	2.5E+02 µg/L	1	0.00	0.00	0	-	-
Chloride	†	1	0.00	0.00	0	-	-
Chloroform	2.5E+02 µg/L	1	0.00	0.00	0	-	-
Chromium	1.0E+01 µg/L	2	0.00	0.00	0	-	-
Cobalt	2.0E+01 µg/L	1	0.00	0.00	0	-	-
Copper	1.0E+01 µg/L	1	0.00	0.00	0	-	-
1,2-Dichloroethane	2.5E+02 µg/L	1	0.00	0.00	0	-	-
cis-1,2-Dichloroethylene	2.5E+01 µg/L	0	-	-	0	-	-
trans-1,2-Dichloroethylene	2.5E+02 µg/L	1	0.00	0.00	0	-	-
Dichloromethane	5.0E+02 µg/L	1	0.00	0.00	0	-	-
Iron	1.0E+02 µg/L	2	0.00	0.00	0	-	-
Lead	5.0E+00 µg/L	3	0.00	0.00	0	-	-
Magnesium	†	1	7.20	7.20	0	-	-
Manganese	1.0E+01 µg/L	2	0.00	0.00	0	-	-
Mercury	2.0E-01 µg/L	1	0.00	0.00	0	-	-
Nickel	2.0E+01 µg/L	4	0.00	0.00	0	-	-
Nitrate as nitrogen	1.0E+02 µg/L	1	0.00	0.00	0	-	-
Nitrate-nitrite as nitrogen	1.0E+03 µg/L	1	0.00	0.00	0	-	-
pH	†	1	0.00	0.00	0	-	-
Potassium	1.0E+03 µg/L	1	0.00	0.00	0	-	-
Silver	2.0E+01 µg/L	2	**86.84**	86.84	0	-	-
Sodium	1.0E+02 µg/L	2	**92.01**	92.01	0	-	-
Specific conductance	†	1	0.00	0.00	0	-	-
Sulfate	†	1	5.41	5.41	0	-	-
Tetrachloroethylene	2.5E+02 µg/L	1	0.00	0.00	0	-	-

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj	Blind Replicates Number of Dup. Pairs	MRD	MRDadj
Thallium	5.0E+02 µg/L	1	0.00	0.00	0	-	-
Toluene	2.5E+02 µg/L	1	0.00	0.00	0	-	-
Total organic carbon	5.0E+03 µg/L	1	18.18	6.00	0	-	-
Total phosphates (as P)	5.0E+01 µg/L	1	0.00	0.00	0	-	-
Trichloroethylene	5.0E+00 µg/L	1	12.53	12.53	0	-	-
Trichlorofluoromethane	2.5E+02 µg/L	1	0.00	0.00	0	-	-
Vanadium	1.0E+01 µg/L	1	0.00	0.00	0	-	-
Xylenes	5.0E+02 µg/L	1	0.00	0.00	0	-	-
Zinc	1.0E+01 µg/L	1	0.00	0.00	0	-	-

† No detection limit, or no replicate or duplicate results below detection limit.
- No replicate or duplicate analyses could be calculated.

Note: An MRD of 0.00 indicates no difference between any of the pairs of results used in calculating the MRD. MRD results greater than or equal to 20 appear in **bold**.

Table 30. Intralaboratory MRD Indices for GE

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj	Blind Replicates Number of Dup. Pairs	MRD	MRDadj
Acetone	5.0 µg/L	0	-	-	3	0.00	0.00
Aluminum	50.0 µg/L	0	-	-	6	6.15	4.87
Antimony	10.0 µg/L	0	-	-	16	0.00	0.00
Barium	5.0 µg/L	0	-	-	17	4.84	4.69
Bis(2-ethylhexyl) phthalate	10.0 µg/L	0	-	-	13	0.00	0.00
Cadmium	5.0 µg/L	0	-	-	16	0.00	0.00
Calcium	†	0	-	-	6	4.96	4.96
Carbon tetrachloride	1.0 µg/L	0	-	-	17	0.00	0.00
Chloride	†	2	4.65	4.65	2	8.79	8.79
Chloroform	1.0 µg/L	0	-	-	17	0.00	0.00
Chromium	5.0 µg/L	0	-	-	16	2.91	0.99
Cobalt	5.0 µg/L	0	-	-	17	0.28	0.28
Copper	5.0 µg/L	0	-	-	16	6.83	6.34
1,2-Dichloroethane	1.0 µg/L	0	-	-	14	0.55	0.17
trans-1,2-Dichloroethylene	1.0 µg/L	0	-	-	11	0.00	0.00
Dichloromethane	3.6 µg/L	0	-	-	12	0.00	0.00
Iron	55.8 µg/L	0	-	-	6	**33.26**	24.97
Lead	5.0 µg/L	0	-	-	16	2.56	0.92
Lithium	25.0 µg/L	0	-	-	2	0.00	0.00
Magnesium	†	0	-	-	6	2.31	2.31
Manganese	10.0 µg/L	0	-	-	6	0.00	0.00
Mercury	0.2 µg/L	0	-	-	16	19.27	11.65
Nickel	5.0 µg/L	0	-	-	17	5.09	3.07
Nitrate-nitrite as nitrogen	50.0 µg/L	34	1.25	0.89	16	16.39	11.27
pH	†	45	0.60	0.60	16	4.93	4.93
Potassium	†	0	-	-	6	4.88	4.88
Silica	†	0	-	-	2	2.30	2.30
Silver	5.0 µg/L	0	-	-	16	0.00	0.00
Sodium	†	0	-	-	6	3.07	3.07
Specific conductance	†	28	1.03	1.03	13	2.27	2.27
Sulfate	†	2	2.71	2.71	2	19.10	19.10
Tetrachloroethylene	1.0 µg/L	0	-	-	17	10.70	10.56
Thallium	5.0 µg/L	0	-	-	9	0.00	0.00
Toluene	1.0 µg/L	0	-	-	17	0.00	0.00
Total dissolved solids	10,000 µg/L	7	8.20	8.20	5	13.29	13.29

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj	Blind Replicates Number of Dup. Pairs	MRD	MRDadj
Total organic carbon	5,000 µg/L	11	0.00	0.00	5	0.00	0.00
Total organic halogens	10.0 µg/L	3	0.00	0.00	2	0.00	0.00
Total phosphates (as P)	50.0 µg/L	1	0.00	0.00	2	0.00	0.00
Trichloroethylene	1.0 µg/L	0	-	-	17	3.89	1.55
Trichlorofluoromethane	1.0 µg/L	0	-	-	11	0.00	0.00
Turbidity	0.4 NTU	9	3.47	3.47	3	**50.79**	31.25
Vanadium	5.0 µg/L	0	-	-	16	0.00	0.00
Xylenes	1.0 µg/L	0	-	-	3	0.00	0.00
Zinc	10.6 µg/L	0	-	-	15	4.33	2.21

† No detection limit, or no replicate or duplicate results below detection limit.
- No replicate or duplicate analyses could be calculated.

Note: An MRD of 0.00 indicates no difference between any of the pairs of results used in calculating the MRD. MRD results greater than or equal to 20 appear in **bold**.

Table 31. Intralaboratory MRD Matrix Spike Indices for GE

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj
Acenaphthene	†	6	11.55	11.55
Aldrin	†	4	**48.74**	48.74
Benzene	†	38	6.97	6.97
Chlorobenzene	†	38	6.90	6.90
4-Chloro-m-cresol	†	6	**27.63**	27.63
2-Chlorophenol	†	6	**41.07**	41.07
p,p´-DDT	†	4	**39.98**	39.98
1,4-Dichlorobenzene	†	6	10.94	10.94
1,1-Dichloroethylene	†	38	12.90	12.90
2,4-Dichlorophenoxyacetic acid	†	2	13.40	13.40
Dieldrin	†	4	**44.77**	44.77
2,4-Dinitrotoluene	†	6	12.27	12.27
Endrin	†	4	**42.34**	42.34
Heptachlor	†	4	**44.75**	44.75
Lindane	†	4	**42.51**	42.51
4-Nitrophenol	†	4	**27.51**	27.51
N-Nitrosodipropylamine	†	6	11.14	11.14
Pentachlorophenol	0.011 mg/L	6	11.43	11.43
Phenol	†	6	**35.29**	35.29
Pyrene	†	6	10.41	10.41
2,4,5-T	†	2	16.25	16.25
Toluene	†	38	7.34	7.34
2,4,5-TP (Silvex)	†	2	14.88	14.88
1,2,4-Trichlorobenzene	†	6	8.86	8.86
Trichloroethylene	†	38	9.01	9.01

† No detection limit, or no replicate or duplicate results below detection limit.

Note: An MRD of 0.00 indicates no difference between any of the pairs of results used in calculating the MRD. MRD results greater than or equal to 20 appear in **bold**.

Table 32. Intralaboratory MRD Indices for WA

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj	Blind Replicates Number of Dup. Pairs	MRD	MRDadj
Acetone	20.0 µg/L	3	0.00	0.00	4	0.00	0.00
Alkalinity (as CaCO3)	†	1	1.58	1.58	0	-	-
Aluminum	181 µg/L	4	0.00	0.00	2	**30.12**	12.93
Antimony	27.0 µg/L	8	0.00	0.00	3	12.94	4.81
Barium	1.8 µg/L	22	3.06	2.51	16	17.34	16.48
Bis(2-ethylhexyl) phthalate	21.0 µg/L	10	0.00	0.00	2	0.00	0.00
Cadmium	4.7 µg/L	9	0.00	0.00	3	0.00	0.00
Calcium	471 µg/L	5	0.27	0.27	2	9.87	4.55
Carbon tetrachloride	50.0 µg/L	19	0.00	0.00	15	0.00	0.00
Chloride	†	7	3.38	3.38	3	**52.70**	52.70
Chloroform	50.0 µg/L	19	0.00	0.00	15	0.00	0.00
Chromium	7.0 µg/L	10	0.00	0.00	6	0.00	0.00
Cobalt	4.5 µg/L	9	0.00	0.00	2	**34.31**	15.67
Copper	15.0 µg/L	9	0.31	0.17	2	11.25	11.25
1,2-Dichloroethane	50.0 µg/L	18	0.00	0.00	15	0.00	0.00
cis-1,2-Dichloroethylene	25.0 µg/L	1	0.00	0.00	3	0.00	0.00
trans-1,2-Dichloroethylene	5.0 µg/L	0	-	-	1	0.00	0.00
Dichloromethane	22.7 µg/L	17	0.00	0.00	12	9.10	9.10
Iron	74.0 µg/L	7	**27.97**	16.35	5	**26.88**	24.55
Lead	47.0 µg/L	22	0.00	0.00	16	0.00	0.00
Lithium	†	1	1.36	1.36	0	-	-
Magnesium	74.0 µg/L	5	1.49	1.49	2	6.91	6.91
Manganese	7.8 µg/L	7	1.82	1.04	5	8.13	3.69
Mercury	0.7 µg/L	12	0.00	0.00	5	0.00	0.00
Nickel	26.0 µg/L	22	0.00	0.00	15	0.00	0.00
Nitrate as nitrogen	†	1	1.63	1.63	0	-	-
Nitrate-nitrite as nitrogen	20.0 µg/L	6	1.50	1.50	4	5.89	5.89
pH	†	6	0.35	0.35	1	6.47	6.47
Potassium	426 µg/L	5	1.72	0.74	2	0.00	0.00
Silica	†	1	1.19	1.19	0	-	-
Silver	5.0 µg/L	10	1.82	0.60	6	0.00	0.00
Sodium	†	7	1.27	1.27	5	5.46	5.46
Specific conductance	†	3	1.10	1.10	0	-	-
Sulfate	340 µg/L	7	1.08	1.08	3	**31.79**	16.03
Tetrachloroethylene	5.0 µg/L	20	3.51	3.25	14	3.07	3.07
Thallium	55.0 µg/L	8	0.00	0.00	2	0.00	0.00
Toluene	50.0 µg/L	19	0.00	0.00	15	0.00	0.00
Total dissolved solids	47,000 µg/L	2	0.00	0.00	0	-	-
Total organic carbon	1,000 µg/L	5	1.75	0.66	3	0.00	0.00
Total organic halogens	120 µg/L	6	0.38	0.13	3	**21.86**	18.76
Total phosphates (as P)	67.0 µg/L	7	0.40	0.19	3	0.00	0.00
Trichloroethylene	5.0 µg/L	20	2.01	1.36	16	4.66	4.66
Trichlorofluoromethane	50.0 µg/L	16	0.00	0.00	13	0.00	0.00
Turbidity	0.41 NTU	2	0.00	0.00	0	-	-
Vanadium	6.9 µg/L	9	0.00	0.00	2	0.00	0.00
Xylenes	50.0 µg/L	19	0.00	0.00	15	0.00	0.00
Zinc	53.0 µg/L	9	0.00	0.00	2	0.00	0.00

† No detection limit, or no replicate or duplicate results below detection limit.
- No replicate or duplicate analyses could be calculated.

Note: An MRD of 0.00 indicates no difference between any of the pairs of results used in calculating the MRD. MRD results greater than or equal to 20 appear in **bold**.

Table 33. Intralaboratory MRD Indices for GP

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj	Blind Replicates Number of Dup. Pairs	MRD	MRDadj
Actinium-228	1.77E-08 µCi/mL	20	4.19	1.75	13	0.42	0.13
Americium-241	8.05E-10 µCi/mL	27	3.00	2.60	12	18.04	8.49
Antimony-125	1.02E-08 µCi/mL	21	0.00	0.00	12	0.00	0.00
Carbon-14	1.01E-08 µCi/mL	16	9.03	6.85	8	6.83	2.82
Cesium-137	4.2E-09 µCi/mL	21	8.54	3.70	14	10.18	4.58
Cobalt-57	3.43E-09 µCi/mL	20	0.00	0.00	15	0.00	0.00
Cobalt-60	4.71E-09 µCi/mL	21	1.19	0.69	14	0.00	0.00
Curium-242	6.08E-10 µCi/mL	21	0.00	0.00	11	0.00	0.00
Curium-243/244	9.59E-10 µCi/mL	21	1.85	1.64	11	0.00	0.00
Curium-245/246	4.39E-10 µCi/mL	20	10.76	4.54	12	0.00	0.00
Europium-152	1.08E-08 µCi/mL	20	0.00	0.00	14	0.00	0.00
Europium-154	1.21E-08 µCi/mL	19	0.00	0.00	14	0.00	0.00
Gross alpha	9.94E-10 µCi/mL	25	14.27	11.58	17	9.22	5.03
Iodine-129	1.31E-09 µCi/mL	22	17.39	12.72	13	3.58	1.69
Lead-212	7.38E-09 µCi/mL	20	1.31	0.41	14	5.84	2.22
Manganese-54	4.09E-09 µCi/mL	20	3.50	1.62	14	0.00	0.00
Neptunium-237	7.2E-10 µCi/mL	4	0.00	0.00	2	0.00	0.00
Nonvolatile beta	1.67E-09 µCi/mL	27	10.07	7.39	17	8.71	4.99
Plutonium-238	8.01E-10 µCi/mL	18	0.00	0.00	13	0.63	0.20
Plutonium-239/240	6.59E-10 µCi/mL	22	0.00	0.00	14	0.92	0.30
Potassium-40	5.14E-08 µCi/mL	19	1.44	0.50	15	3.04	1.07
Radium, total alpha-emitting	5.26E-10 µCi/mL	3	9.57	6.35	0	-	-
Radium-226	7.44E-10 µCi/mL	25	6.15	4.40	12	17.15	10.96
Radium-228	1.13E-09 µCi/mL	24	19.28	15.03	13	**37.16**	30.96
Sodium-22	4.33E-09 µCi/mL	20	0.00	0.00	13	0.00	0.00
Strontium-90	1.67E-09 µCi/mL	24	4.40	4.40	15	5.42	4.51
Technetium-99	2.28E-08 µCi/mL	24	3.67	3.01	14	1.79	1.25

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj	Blind Replicates Number of Dup. Pairs	MRD	MRDadj
Thorium-228	1.12E-09 µCi/mL	21	1.83	0.63	9	5.67	2.08
Thorium-230	5.99E-10 µCi/mL	20	1.84	0.61	11	0.00	0.00
Thorium-232	5.07E-10 µCi/mL	18	0.00	0.00	12	0.00	0.00
Tritium	7.11E-07 µCi/mL	25	2.37	2.35	16	4.46	3.89
Uranium-233/234	4.94E-10 µCi/mL	22	4.42	3.79	10	0.50	0.50
Uranium-235	4.18E-10 µCi/mL	22	2.36	2.36	10	5.38	2.21
Uranium-238	4.36E-10 µCi/mL	22	1.91	1.91	10	1.29	1.29
Yttrium-88	5.41E-09 µCi/mL	18	0.00	0.00	14	1.06	0.34
Zinc-65	8.53E-09 µCi/mL	20	0.00	0.00	14	0.00	0.00

- No replicate or duplicate analyses could be calculated.

Note: An MRD of 0.00 indicates no difference between any of the pairs of results used in calculating the MRD. MRD results greater than or equal to 20 appear in **bold**.

Table 34. Intralaboratory MRD Indices for TM

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	MRD	MRDadj	Blind Replicates Number of Dup. Pairs	MRD	MRDadj
Actinium-228	2.534E-08 µCi/mL	15	0.00	0.00	1	0.00	0.00
Americium-241	4.5E-10 µCi/mL	3	19.69	19.69	0	-	-
Americium-241/Curium-246	4.4E-10 µCi/mL	10	5.33	2.18	0	-	-
Antimony-125	1.652E-08 µCi/mL	16	0.00	0.00	1	0.00	0.00
Carbon-14	1.9613E-07 µCi/mL	7	1.50	0.48	0	-	-
Cesium-137	6.71E-09 µCi/mL	17	0.00	0.00	1	0.00	0.00
Cobalt-57	3.9E-09 µCi/mL	17	0.00	0.00	1	0.00	0.00
Cobalt-60	7.27E-09 µCi/mL	17	0.00	0.00	1	0.00	0.00
Curium-242	4.2E-10 µCi/mL	11	0.00	0.00	0	-	-
Curium-243/244	5.8E-10 µCi/mL	11	0.00	0.00	0	-	-
Europium-152	4.602E-08 µCi/mL	16	0.00	0.00	0	-	-
Europium-154	1.888E-08 µCi/mL	16	0.00	0.00	0	-	-

Analyte	RDL	In-house Duplicates Number of Dup. Pairs	In-house Duplicates MRD	In-house Duplicates MRDadj	Blind Replicates Number of Dup. Pairs	Blind Replicates MRD	Blind Replicates MRDadj
Gross alpha	1.41E-09 µCi/mL	33	12.15	8.48	6	14.72	11.06
Iodine-129	1.248E-08 µCi/mL	11	0.00	0.00	0	-	-
Lead-212	8.75E-09 µCi/mL	16	0.00	0.00	1	0.00	0.00
Manganese-54	6.44E-09 µCi/mL	17	0.00	0.00	1	0.00	0.00
Neptunium-237	3.5E-10 µCi/mL	4	0.00	0.00	0	-	-
Nonvolatile beta	3.61E-09 µCi/mL	31	16.02	11.55	6	**34.10**	27.85
Plutonium-238	4.2E-10 µCi/mL	11	5.02	2.08	0	-	-
Plutonium-239/240	3.3E-10 µCi/mL	10	0.00	0.00	0	-	-
Potassium-40	7.275E-08 µCi/mL	17	2.25	0.84	1	0.00	0.00
Radium, total alpha-emitting	5.9E-10 µCi/mL	9	12.25	6.61	4	0.00	0.00
Radium-226	9.7E-10 µCi/mL	14	3.95	2.32	1	0.00	0.00
Radium-228	3.47E-09 µCi/mL	13	2.62	1.37	1	0.00	0.00
Sodium-22	6.9E-09 µCi/mL	17	0.00	0.00	1	0.00	0.00
Strontium-90	1.93E-09 µCi/mL	14	2.73	1.85	0	-	-
Technetium-99	2.254E-08 µCi/mL	13	0.16	0.11	1	0.00	0.00
Thorium-228	4.6E-10 µCi/mL	11	0.00	0.00	0	-	-
Thorium-230	3.7E-10 µCi/mL	12	7.42	7.26	0	-	-
Thorium-232	3.5E-10 µCi/mL	12	0.00	0.00	0	-	-
Tritium	8.4E-07 µCi/mL	31	17.71	16.62	4	**23.54**	17.98
Uranium-234	4.5E-10 µCi/mL	11	5.66	3.39	0	-	-
Uranium-235	4.2E-10 µCi/mL	11	0.00	0.00	0	-	-
Uranium-238	4.1E-10 µCi/mL	12	0.56	0.37	0	-	-
Yttrium-88	7.27E-09 µCi/mL	16	0.00	0.00	0	-	-
Zinc-65	1.436E-08 µCi/mL	17	0.00	0.00	1	0.00	0.00

- No replicate or duplicate analyses could be calculated.

Note: An MRD of 0.00 indicates no difference between any of the pairs of results used in calculating the MRD. MRD results greater than or equal to 20 appear in **bold**.

Table 35. Interlaboratory MRD and t-test Results for Analytes with at Least One Pair of Results above the RDL for GE and WA

Analyte	RDL	Unit	MRD	t-test Probability
Acetone	20.0	µg/L	0.00	-
Aluminum	146	µg/L	8.40	.380
Antimony	27.0	µg/L	1.13	.331
Barium	5.0	µg/L	15.85	.762
Bis(2-ethylhexyl) phthalate	20.0	µg/L	0.00	-
Cadmium	5.0	µg/L	0.00	-
Calcium	471	µg/L	**33.27**	.966
Carbon tetrachloride	25.0	µg/L	0.00	-
Chloroform	25.0	µg/L	0.00	-
Chromium	7.0	µg/L	0.00	-
Cobalt	5.0	µg/L	2.90	.354
Copper	15.0	µg/L	3.85	.207
1,2-Dichloroethane	25.0	µg/L	0.00	-
Dichloromethane	17.2	µg/L	0.00	-
Iron	74.0	µg/L	**29.98**	.362
Lead	47.0	µg/L	0.00	-
Lithium	25.0	µg/L	0.00	-
Magnesium	74.0	µg/L	17.71	.788
Manganese	10.0	µg/L	1.98	.356
Mercury	0.7	µg/L	0.00	-
Nickel	26.0	µg/L	0.33	.331
Nitrate-nitrite as nitrogen	50.0	µg/L	**40.45**	.303
Potassium	426	µg/L	**25.46**	.880
Silver	5.0	µg/L	0.00	-
Sulfate	340	µg/L	14.27	-
Tetrachloroethylene	5.0	µg/L	0.88	.491
Thallium	55.0	µg/L	0.00	-
Toluene	25.0	µg/L	0.00	-
Total dissolved solids	47,000	µg/L	**44.83**	.994
Total organic carbon	5,000	µg/L	0.00	-
Total organic halogens	120	µg/L	0.00	-
Total phosphates (as P)	67.0	µg/L	0.00	-
Trichloroethylene	5.0	µg/L	0.00	-
Trichlorofluoromethane	50.0	µg/L	0.00	-
Turbidity	0.41	NTU	**32.62**	.333
Xylenes	50.0	µg/L	0.00	-
Zinc	53.0	µg/L	0.53	.331

- Could not calculate because there are no differences between pairs.

Note: Values less than .050 indicate a probability of less than 1 in 20 that the results for that analyte are the same from both laboratories. MRD results greater than or equal to 20 appear in **bold**.

Table 36. Interlaboratory MRD and t-test Results for Analytes with at Least One Pair of Results above the RDL for ES and EX

Analyte	RDL	Unit	MRD	t-test Probability
Acetone	13.0	µg/L	**23.53**	.500
Aluminum	181	µg/L	0.76	.500
Antimony	27.0	µg/L	0.00	-
Barium	1.8	µg/L	6.25	.874

Analyte	RDL	Unit	MRD	t-test Probability
Bis(2-ethylhexyl) phthalate	22.0	µg/L	**86.10**	.500
Calcium	471	µg/L	4.31	.027
Carbon tetrachloride	50.0	µg/L	0.00	-
Chloroform	50.0	µg/L	0.00	-
Chromium	7.0	µg/L	0.00	-
Cobalt	5.0	µg/L	0.00	-
Copper	15.0	µg/L	0.00	-
Dichloromethane	19.2	µg/L	0.00	-
Iron	74.0	µg/L	**50.14**	.344
Lead	47.0	µg/L	0.00	-
Magnesium	74.0	µg/L	0.28	.500
Manganese	7.8	µg/L	0.95	.500
Potassium	426	µg/L	11.67	.212
Silver	5.0	µg/L	4.76	.500
Sulfate	5,000	µg/L	0.00	-
Tetrachloroethylene	5.0	µg/L	7.46	.500
Toluene	50.0	µg/L	0.00	-
Total organic carbon	1,000	µg/L	**70.97**	-
Total organic halogens	120	µg/L	0.00	-
Trichloroethylene	5.0	µg/L	7.17	.500
Vanadium	6.9	µg/L	2.06	.500
Zinc	53.0	µg/L	0.00	-

- Could not calculate because there are no differences between pairs.

Note: Values less than .050 indicate a probability of less than 1 in 20 that the results for that analyte are the same from both laboratories. MRD results greater than or equal to 20 appear in **bold**.

Table 37. Interlaboratory MRD and t-test Results for Analytes with at Least One Pair of Results above the RDL for ES and WA

Analyte	RDL	Unit	MRD	t-test Probability
Acetone	13.0	µg/L	**23.53**	.500
Aluminum	181	µg/L	0.76	.500
Antimony	27.0	µg/L	0.00	-
Barium	1.8	µg/L	6.25	.874
Bis(2-ethylhexyl) phthalate	22.0	µg/L	**86.10**	.500
Calcium	471	µg/L	4.31	.027
Carbon tetrachloride	50.0	µg/L	0.00	-
Chloroform	50.0	µg/L	0.00	-
Chromium	7.0	µg/L	0.00	-
Cobalt	5.0	µg/L	0.00	-
Copper	15.0	µg/L	0.00	-
Dichloromethane	19.2	µg/L	0.00	-
Iron	74.0	µg/L	**50.14**	.344
Lead	47.0	µg/L	0.00	-
Magnesium	74.0	µg/L	0.28	.500
Manganese	7.8	µg/L	0.95	.500
Potassium	426	µg/L	11.67	.212
Silver	5.0	µg/L	4.76	.500
Sulfate	5,000	µg/L	0.00	-
Tetrachloroethylene	5.0	µg/L	7.46	.500
Toluene	50.0	µg/L	0.00	-
Total organic carbon	1,000	µg/L	**70.97**	-
Total organic halogens	120	µg/L	0.00	-

Analyte	RDL	Unit	MRD	t-test Probability
Trichloroethylene	5.0	µg/L	7.17	.500
Vanadium	6.9	µg/L	2.06	.500
Zinc	53.0	µg/L	0.00	-

- Could not calculate because there are no differences between pairs.

Note: Values less than .050 indicate a probability of less than 1 in 20 that the results for that analyte are the same from both laboratories. MRD results greater than or equal to 20 appear in **bold**.

Table 38. Interlaboratory MRD and t-test Results for Analytes with at Least One Pair of Results above the RDL for EX and WA

Analyte	RDL	Unit	MRD	t-test Probability
Acetone	500	µg/L	0.00	-
Barium	25.0	µg/L	0.00	-
Carbon tetrachloride	50.0	µg/L	0.00	-
Chloroform	50.0	µg/L	0.00	-
cis-1,2-Dichloroethylene	25.0	µg/L	0.00	-
trans-1,2-Dichloroethylene	250	µg/L	0.00	-
Dichloromethane	50.0	µg/L	**20.65**	.068
Iron	100	µg/L	0.00	-
Lead	47.0	µg/L	0.00	-
Manganese	10.0	µg/L	1.15	.423
Nitrate-nitrite as nitrogen	1,000	µg/L	0.00	-
Silver	20.0	µg/L	**51.16**	.423
Sodium	100	µg/L	**30.32**	.822
Sulfate	340	µg/L	**21.87**	.655
Tetrachloroethylene	50.0	µg/L	0.42	.250
Toluene	50.0	µg/L	0.00	-
Total organic carbon	5,000	µg/L	**25.40**	**.368**
Total phosphates (as P)	67.0	µg/L	0.00	-
Trichloroethylene	5.0	µg/L	8.46	.439
Trichlorofluoromethane	50.0	µg/L	0.00	-

- Could not calculate because there are no differences between pairs.

Note: Values less than .050 indicate a probability of less than 1 in 20 that the results for that analyte are the same from both laboratories. MRD results greater than or equal to 20 appear in **bold**.

Table 39. Interlaboratory MRD and t-test Results for Analytes with at Least One Pair of Results above the RDL for ES and EX

Analyte	RDL	Unit	MRD	t-test Probability
Antimony-125	1.652E-08	µCi/mL	0.00	-
Carbon-14	1.9613E-07	µCi/mL	0.00	-
Cesium-137	6.64E-09	µCi/mL	0.00	-
Chloride	†		3.91	-
Curium-242	4.1E-10	µCi/mL	0.00	-
Europium-152	4.602E-08	µCi/mL	0.00	-
Gross alpha	1.79E-09	µCi/mL	18.20	.371

Analyte	RDL	Unit	MRD	t-test Probability
Iodine-129	1.248E-08	µCi/mL	0.00	-
Neptunium-237	3.5E-10	µCi/mL	**23.90**	-
Nonvolatile beta	3.03E-09	µCi/mL	0.00	-
Plutonium-238	3.8E-10	µCi/mL	0.00	-
Potassium-40	7.275E-08	µCi/mL	0.00	-
Radium-226	1.09E-09	µCi/mL	0.00	-
Radium-228	3.44E-09	µCi/mL	0.00	-
Sodium	†		5.65	.751
Strontium-90	1.93E-09	µCi/mL	15.53	-
Thorium-230	3.7E-10	µCi/mL	0.00	-
Thorium-232	3.0E-10	µCi/mL	0.00	-
Tritium	8.4E-07	µCi/mL	**30.52**	.212
Uranium-234	4.5E-10	µCi/mL	0.00	-
Uranium-235	3.9E-10	µCi/mL	0.00	-
Uranium-238	4.1E-10	µCi/mL	0.00	-

† No detection limit, or no replicate or duplicate results below detection limit.
- Could not calculate because there are no differences between pairs.

Note: Values less than .050 indicate a probability of less than 1 in 20 that the results for that analyte are the same from both laboratories. MRD results greater than or equal to 20 appear in **bold**.

Table 40. Interlaboratory MRD and t-test Results for Analytes with at Least One Pair of Results above the RDL for ES and TM

Analyte	RDL	Unit	MRD	t-test Probability
Antimony-125	1.652E-08	µCi/mL	0.00	-
Carbon-14	1.9613E-07	µCi/mL	0.00	-
Cesium-137	6.64E-09	µCi/mL	0.00	-
Chloride	†		3.91	-
Curium-242	4.1E-10	µCi/mL	0.00	-
Europium-152	4.602E-08	µCi/mL	0.00	-
Gross alpha	1.79E-09	µCi/mL	18.20	.371
Iodine-129	1.248E-08	µCi/mL	0.00	-
Neptunium-237	3.5E-10	µCi/mL	**23.90**	-
Nonvolatile beta	3.03E-09	µCi/mL	0.00	-
Plutonium-238	3.8E-10	µCi/mL	0.00	-
Potassium-40	7.275E-08	µCi/mL	0.00	-
Radium-226	1.09E-09	µCi/mL	0.00	-
Radium-228	3.44E-09	µCi/mL	0.00	-
Sodium	†		5.65	.751
Strontium-90	1.93E-09	µCi/mL	15.53	-
Thorium-230	3.7E-10	µCi/mL	0.00	-
Thorium-232	3.0E-10	µCi/mL	0.00	-
Tritium	8.4E-07	µCi/mL	**30.52**	.212
Uranium-234	4.5E-10	µCi/mL	0.00	-
Uranium-235	3.9E-10	µCi/mL	0.00	-
Uranium-238	4.1E-10	µCi/mL	0.00	-

† No detection limit, or no replicate or duplicate results below detection limit.
- Could not calculate because there are no differences between pairs.

Note: Values less than .050 indicate a probability of less than 1 in 20 that the results for that analyte are the same from both laboratories. MRD results greater than or equal to 20 appear in **bold**.

Table 41. Interlaboratory MRD and t-test Results for Analytes with at Least One Pair of Results above the RDL for EX and TM

Analyte	RDL	Unit	MRD	t-test Probability
Chloride	†		19.68	.624

† No detection limit, or no replicate or duplicate results below detection limit.

Note: Values less than .050 indicate a probability of less than 1 in 20 that the results for that analyte are the same from both laboratories. MRD results greater than or equal to 20 appear in **bold**.

Table 42. Interlaboratory MRD and t-test Results for Analytes with at Least One Pair of Results above the RDL for GP and TM

Analyte	RDL	Unit	MRD	t-test Probability
Actinium-228	2.438E-08	µCi/mL	0.00	-
Americium-241	8.05E-10	µCi/mL	**74.32**	.500
Antimony-125	1.514E-08	µCi/mL	0.00	-
Carbon-14	1.7788E-07	µCi/mL	6.95	.246
Cesium-137	6.47E-09	µCi/mL	2.09	.130
Chloride	†		7.43	-
Cobalt-57	3.82E-09	µCi/mL	0.00	-
Cobalt-60	6.81E-09	µCi/mL	0.00	-
Curium-242	5.44E-10	µCi/mL	3.37	.339
Curium-243/244	9.21E-10	µCi/mL	3.23	.337
Europium-152	4.251E-08	µCi/mL	0.00	-
Europium-154	1.79E-08	µCi/mL	0.00	-
Gross alpha	1.13E-09	µCi/mL	**26.25**	.519
Iodine-129	1.121E-08	µCi/mL	1.13	.363
Lead-212	8.45E-09	µCi/mL	1.28	.322
Manganese-54	6.19E-09	µCi/mL	0.00	-
Nonvolatile beta	2.56E-09	µCi/mL	**32.72**	.407
pH	†		5.43	.773
Plutonium-238	7.61E-10	µCi/mL	0.95	.336
Plutonium-239/240	6.55E-10	µCi/mL	0.50	.336
Potassium-40	6.285E-08	µCi/mL	2.36	.472
Radium, total alpha-emitting	5.9E-10	µCi/mL	9.68	-
Radium-226	8.2E-10	µCi/mL	16.30	.209
Radium-228	3.44E-09	µCi/mL	**28.18**	.331
Sodium	†		12.56	.435
Sodium-22	6.42E-09	µCi/mL	0.00	-
Specific conductance	†		19.97	.337
Strontium-90	1.89E-09	µCi/mL	17.00	.318
Technetium-99	2.27E-08	µCi/mL	1.14	.237
Thorium-228	1.01E-09	µCi/mL	2.85	.222
Thorium-230	5.89E-10	µCi/mL	5.88	.389
Thorium-232	4.83E-10	µCi/mL	0.00	-
Tritium	7.11E-07	µCi/mL	**28.61**	.134
Uranium-235	4.18E-10	µCi/mL	3.43	.336
Uranium-238	4.2E-10	µCi/mL	4.16	.183

Analyte	RDL	Unit	MRD	t-test Probability
Yttrium-88	6.66E-09	µCi/mL	0.00	-
Zinc-65	1.33E-08	µCi/mL	0.00	-

† No detection limit, or no replicate or duplicate results below detection limit.
- Could not calculate because there are no differences between pairs.

Note: Values less than .050 indicate a probability of less than 1 in 20 that the results for that analyte are the same from both laboratories. MRD results greater than or equal to 20 appear in **bold**.

Table 43. ES Samples and Blind Replicates Yielding Results Where One Is More Than Twice Another

Analyte	Wells
Acetone	CSB 1C
Aluminum	KRP 8
Copper	LFW 74C
Iron	KRP 8
Neptunium-237	KRP 8
Nitrate as nitrogen	TNX 9D
Total organic carbon	CSB 1C

Table 44. ES Samples and Laboratory Duplicates Yielding Results Where One Is More Than Twice Another

Analyte	Wells
Bis(2-ethylhexyl) phthalate	CSB 2C

Table 45. EX Samples and Laboratory Duplicates Yielding Results Where One Is More Than Twice Another

Analyte	Wells
Silver	AMB 17A
Sodium	AMB 17A

Table 46. GE Samples and Blind Replicates Yielding Results Where One Is More Than Twice Another

Analyte	Wells
Iron	CSO 1, HAA 1B
Mercury	HSB 83B, HSB126C, HSB143D
Nitrate-nitrite as nitrogen	HCA 4AA
Tetrachloroethylene	HSB107C
Turbidity	HAA 1B

Table 47. GE Matrix Spikes and Matrix Spike Duplicates Yielding Results Where One Is More Than Twice Another

Analyte	Wells
Aldrin	QA 100A
2-Chlorophenol	HAA 3D
p,p´-DDT	QA 100A
1,1-Dichloroethylene	HSB133C
Dieldrin	QA 100A
Endrin	QA 100A
Lindane	QA 100A
Phenol	HAA 3D

Note: Results for blind blanks are given in Appendix B.

Table 48. GP Samples and Blind Replicates Yielding Results Where One Is More Than Twice Another

Analyte	Wells
Americium-241	HSB 83B, HSB126C
Cesium-137	HR8 11
Nonvolatile beta	HSB126C
Radium-226	HXB 5D

Table 49. GP Samples and Laboratory Duplicates Yielding Results Where One Is More Than Twice Another

Analyte	Wells
Gross alpha	HAA 3AA
Iodine-129	FSB114A
Manganese-54	HSB145D
Nonvolatile beta	HSB118A
Radium-228	FSB105C, HXB 6D

Table 50. TM Samples and Blind Replicates Yielding Results Where One Is More Than Twice Another

Analyte	Wells
Nonvolatile beta	LRP 3

Table 51. TM Samples and Laboratory Duplicates Yielding Results Where One Is More Than Twice Another

Analyte	Wells
Nonvolatile beta	LRP 1, ZBG 1
Radium, total alpha-emitting	AMB 14D
Thorium-230	HSB 68A
Tritium	CSB 1C, FSB121DR

Table 52. WA Samples and Blind Replicates Yielding Results Where One Is More Than Twice Another

Analyte	Wells
Barium	MSB 35B
Chloride	AMB 4A
Cobalt	LRP 3
Iron	LRP 3
Sulfate	AMB 4A

Table 53. WA Samples and Laboratory Duplicates Yielding Results Where One Is More Than Twice Another

Analyte	Wells
Iron	CSB 1C

Table 54. Analytes with One Laboratory's Result Greater Than Twice the Result from the Other Laboratory between ES and EX

Analyte	Wells
Bis(2-ethylhexyl) phthalate	CSB 1C
Iron	CSB 1C
Total organic carbon	CSB 1C

Table 55. Analytes with One Laboratory's Result Greater Than Twice the Result from the Other Laboratory between ES and WA

Analyte	Wells
Bis(2-ethylhexyl) phthalate	CSB 1C
Iron	CSB 1C
Total organic carbon	CSB 1C

Table 56. Analytes with One Laboratory's Result Greater Than Twice the Result from the Other Laboratory between EX and WA

Analyte	Wells
Dichloromethane	ASB 6AA, MSB 4B
Silver	AMB 17A
Total organic carbon	AMB 7A

Table 57. Analytes with One Laboratory's Result Greater Than Twice the Result from the Other Laboratory between GE and WA

Analyte	Wells
Barium	HCA 4AA, HCA 4C
Calcium	HCA 4AA, HCA 4C
Iron	LRP 3
Nitrate-nitrite as nitrogen	HAA 1B, HCA 4AA, HSB143D, ZBG 1
Potassium	HCA 4AA, HCA 4C
Total dissolved solids	HCA 4AA, HCA 4C
Turbidity	HAA 1B

Table 58. Analytes with One Laboratory's Result Greater Than Twice the Result from the Other Laboratory between ES and EX

Analyte	Wells
Gross alpha	LFW 43C
Tritium	CSB 1C

Table 59. Analytes with One Laboratory's Result Greater Than Twice the Result from the Other Laboratory between ES and TM

Analyte	Wells
Gross alpha	LFW 43C
Tritium	CSB 1C

Table 60. Analytes with One Laboratory's Result Greater Than Twice the Result from the Other Laboratory between GP and TM

Analyte	Wells
Americium-241	RGW 21
Gross alpha	FSB 78B, FSB112C, RGW 21, ZBG 1
Nonvolatile beta	FSB 78B, HSB 83B, LRP 3
Radium-226	FSB121DR
Radium-228	FSB112C, FSB121DR
Specific conductance	HXB 5D
Strontium-90	RGW 21, RPC 8DU
Thorium-230	HSB 68A
Tritium	HSB 83B

Table 61. Quality Control Standards for Selected Analyses for GE

Analyte	Certified Value	Performance Acceptance Limits	GE Result	Result Qualifier
Acids (Lot 581)				
2,4-Dichlorophenol (µg/L)	121	51.3–133	84.0	
o-Cresol (2-methyphenol) (µg/L)	35.2	11.2–40.7	23.4	
Pentachlorophenol (µg/L)	50.8	15.8–63.8	33.3	
Phenol (µg/L)	140	56.8–173	46.7†	J
2,4,5-Trichlorophenol (µg/L)	41.2	16.2–47.6	32.3	
2,4,6-Trichlorophenol (µg/L)	63.4	27.4–72.7	47.1	
Base/Neutrals (Lot 581)				
Acenaphthylene (µg/L)	39.6	17.0–46.6	32.4	J
Anthracene (µg/L)	99.6	47.0–116	78.8	J
Benzo[a]anthracene (µg/L)	74.4	31.2–88.4	58.8	J
Bis(2-ethylhexyl) phthalate (µg/L)	28.5	11.5–36.4	33.5	J
4-Bromophenyl phenyl ether (µg/L)	109	53.9–130	80.1	J
Chrysene (µg/L)	14.9	6.89–18.3	15.0	J
Dibenzofuran (µg/L)	109	51.9–121	76.3	J
1,2-Dichlorobenzene (µg/L)	92.5	21.7–106	57.6	J
1,4-Dichlorobenzene(µg/L)	48.3	10.6–57.0	30.7	J
2,4-Dinitrotoluene (µg/L)	59.5	24.9–68.6	44.4	J
2,6-Dinitrotoluene (µg/L)	60.8	31.2–68.9	42.1	J
Fluorene (µg/L)	72.8	35.8–87.4	55.0	J
Naphthalene (µg/L)	111	39.4–127	72.0	J
Pyrene (µg/L)	40.8	19.1–49.6	36.7	J
1,2,4-Trichlorobenzene (µg/L)	87.7	25.6–99.6	51.0	J
Cations (Lot 436)				
Calcium (µg/L)	67,900	61,100–74,700	70,400	
Magnesium (µg/L)	45,500	40,500–50,500	45,500	
Potassium (µg/L)	86,900	79,100–94,700	88,200	
Sodium (µg/L)	75,800	66,700–84,900	77,000	
Cyanide and Phenol (Lot 9981)				
Cyanide, total (µg/L)	111	81.0–141	116	
Phenols (µg/L)	335	255–415	297	
Grease and Oil (Lot 9981)				
Grease and oil (gravimetric) (mg/bottle)	47.8	28.7–59.8	37.5	

Analyte	Certified Value	Performance Acceptance Limits	GE Result	Result Qualifier
Inorganics (Lot 3423)				
Alkalinity (as $CaCO_3$) (µg/L)	142,000	132,000–160,000	138,000	
Chloride (µg/L)	70,000	62,200–78,900	76,400	J
Fluoride (µg/L)	3,340	3,010–3,670	2,870†	
Nitrate as nitrogen (µg/L)	7,500	6,750–8,250	7,600	J
pH (pH units)	9.04	8.84–9.24	9.02	
Potassium (µg/L)	27,800	23,900–32,400	28,800	
Sodium (µg/L)	155,000	140,000–172,000	158,000	
Specific conductance (µS/cm)	783	655–891	785	
Sulfate (µg/L)	93,600	80,200–106,000	96,100	
Total dissolved solids (µg/L)	655,000	537,000–733,000	640,000	
Nutrients (Lot 9981)				
Ammonia as nitrogen (µg/L)	5,830	4,900–6,760	5,500	
Nitrate-nitrite as nitrogen (µg/L)	7,320	6,510–8,130	7,550	
Total phosphates (as P) (µg/L)	8,870	7,540–10,200	9,200	
PCBs (Lot 581)				
PCB 1254 (µg/L)	2.61	1.56–3.28	1.67	
Pesticides (Lot 581)				
Aldrin (µg/L)	2.19	1.14–2.70	1.81	
alpha-Benzene hexachloride (µg/L)	3.92	2.18–4.99	3.35	
beta-Benzene hexachloride (µg/L)	1.32	0.704–1.67	0.84	
delta-Benzene hexachloride (µg/L)	4.99	2.20–6.41	1.94†	
alpha-Chlordane (µg/L)	2.61	1.58–3.23	2.33	
4,4'-DDD (µg/L)	6.98	4.29–9.06	6.46	
4,4'-DDE (µg/L)	3.09	1.80–3.87	2.98	
4,4'-DDT (µg/L)	9.19	5.34–11.5	8.00	
Dieldrin (µg/L)	2.12	1.31–2.74	1.79	
Endrin (µg/L)	0.885	0.554–1.14	0.835	J
Heptachlor (µg/L)	5.02	2.27–6.22	4.14	
Heptachlor epoxide (µg/L)	1.80	1.11–2.20	1.68	
Lindane (µg/L)	5.20	2.93–6.76	4.35	
Methoxychlor (µg/L)	5.85	3.34–7.89	6.78	
Pesticides/Herbicides (Lot 3223)				
2-sec-Butyl-4,6-dinitrophenol (µg/L)	8.08	2.65–10.5	5.11	
2,4-Dichlorophenoxyacetic acid (µg/L)	9.96	4.98–14.9	6.69	
2,4,5-TP (Silvex) (µg/L)	8.86	4.43–13.3	5.56	J
Total Petroleum Hydrocarbons (Lot 8915)				
Total petroleum hydrocarbons, standard 1, infrared (mg/bottle)	44.4	28.4–58.5	31.2	J
Toxaphene (Lot 3223)				
Toxaphene (µg/L)	1.43	0.787–2.07	0.843	J
Trace Metals (Lot 9981)				
Aluminum (µg/L)	613	503–723	648	
Antimony (µg/L)	98.9	74.2–124	103	
Arsenic (µg/L)	133	99.8–157	137	
Barium (µg/L)	433	355–511	431	
Beryllium (µg/L)	112	91.8–132	113	
Boron (µg/L)	486	399–608	533	
Cadmium (µg/L)	92.2	75.6–109	94.9	
Chromium (µg/L)	422	346–498	426	

Analyte	Certified Value	Performance Acceptance Limits	GE Result	Result Qualifier
Cobalt (µg/L)	101	82.8–119	105	
Copper (µg/L)	113	92.7–133	112	
Iron (µg/L)	506	415–597	523	
Lead (µg/L)	189	155–223	194	
Manganese (µg/L)	408	335–481	410	
Mercury (µg/L)	11.1	8.33–13.9	11.3	
Molybdenum (µg/L)	444	364–524	437	
Nickel (µg/L)	389	319–459	406	
Selenium (µg/L)	122	91.5–144	128	
Silver (µg/L)	116	95.1–137	106	
Strontium (µg/L)	321	263–379	314	
Thallium (µg/L)	95.6	71.7–120	96.2	
Vanadium (µg/L)	304	249–359	300	
Zinc (µg/L)	611	501–721	625	
Turbidity (Lot 3423)				
Turbidity (NTU)	5.20	4.42–6.08	5.36	
Volatiles (Lot 581)				
Acetone (µg/L)	150	75.2–233	182	
Benzene (µg/L)	50.0	38.7–62.3	51.8	
Bromodichloromethane (µg/L)	60.0	46.1–74.8	52.2	
Bromoform (µg/L)	85.1	62.2–110	95.7	
Carbon tetrachloride (µg/L)	94.5	69.4–118	75.4	
Chlorobenzene (µg/L)	20.1	15.7–24.1	19.0	
Chloroform (µg/L)	75.5	58.0–92.3	62.2	
Dibromochloromethane (µg/L)	67.3	52.4–83.0	64.8	
1,2-Dichlorobenzene (µg/L)	21.5	16.3–26.4	21.7	
1,3-Dichlorobenzene (µg/L)	119	91.0–143	111	
1,4-Dichlorobenzene (µg/L)	41.8	31.4–50.9	45.1	
1,2-Dichloroethane (µg/L)	47.9	37.4–60.2	41.6	
1,1-Dichloroethylene (µg/L)	100	65.5–127	92.0	
Dichloromethane (methylene chloride) (µg/L)	65.3	46.2–85.1	61.8	
Ethylbenzene (µg/L)	15.3	11.4–17.9	12.3	
Methyl isobutyl ketone (µg/L)	89.9	52.0–123	127†	
Styrene (µg/L)	24.9	17.3–30.3	23.2	
Tetrachloroethylene (µg/L)	110	81.2–133	118	
Toluene (µg/L)	62.8	48.4–75.8	54.6	
1,1,1-Trichloroethane (µg/L)	40.0	28.9–47.7	31.7	
Trichloroethylene (µg/L)	19.4	14.4–23.5	16.2	
m/p-Xylene (µg/L)	36.6	23.7–46.1	34.6	

† Result is out of range.
J The analytical result is an estimated quantity.

Table 62. Quality Control Standards for Selected Analyses for WA

Analyte	Certified Value	Performance Acceptance Limits	WA Result	Result Qualifier
Acids (Lot 581)				
2,4-Dichlorophenol (µg/L)	121	51.3–133	94.0	
o-Cresol (2-methyphenol) (µg/L)	35.2	11.2–40.7	29.4	
Pentachlorophenol (µg/L)	50.8	15.8–63.8	34.2	J
Phenol (µg/L)	140	56.8–173	128	
2,4,5-Trichlorophenol (µg/L)	41.2	16.2–47.6	31.8	J
2,4,6-Trichlorophenol (µg/L)	63.4	27.4–72.7	54.7	
Base/Neutrals (Lot 581)				
Acenaphthylene (µg/L)	39.6	17.0–46.6	28.6	
Anthracene (µg/L)	99.6	47.0–116	74.9	
Benzo[a]anthracene (µg/L)	74.4	31.2–88.4	61.2	
Bis(2-ethylhexyl) phthalate (µg/L)	28.5	11.5–36.4	24.7	
4-Bromophenyl phenyl ether (µg/L)	109	53.9–130	88.5	
Chrysene (µg/L)	14.9	6.89–18.3	12.8	J
Dibenzofuran (µg/L)	109	51.9–121	89.8	
1,2-Dichlorobenzene (µg/L)	92.5	21.7–106	71.0	
1,4-Dichlorobenzene(µg/L)	48.3	10.6–57.0	37.7	
2,4-Dinitrotoluene (µg/L)	59.5	24.9–68.6	46.6	
2,6-Dinitrotoluene (µg/L)	60.8	31.2–68.9	46.3	
Fluorene (µg/L)	72.8	35.8–87.4	60.6	
Naphthalene (µg/L)	111	39.4–127	88.4	
Pyrene (µg/L)	40.8	19.1–49.6	36.8	
1,2,4-Trichlorobenzene (µg/L)	87.7	25.6–99.6	67.6	
Cations (Lot 436)				
Calcium (µg/L)	67,900	61,100–74,700	66,800	
Magnesium (µg/L)	45,500	40,500–50,500	45,800	
Potassium (µg/L)	86,900	79,100–94,700	85,800	
Sodium (µg/L)	75,800	66,700–84,900	77,200	
Cyanide and Phenol (Lot 9981)				
Cyanide, total (µg/L)	111	81.0–141	120	J
Phenols (µg/L)	335	255–415	331	
Grease and Oil (Lot 9981)				
Grease and oil (gravimetric) (mg/bottle)	47.8	28.7–59.8	36.2	J
Inorganics (Lot 3423)				
Alkalinity (as $CaCO_3$) (µg/L)	142,000	132,000–160,000	141,000	
Chloride (µg/L)	70,000	62,200–78,900	64,900	J
Fluoride (µg/L)	3,340	3,010–3,670	3,270	
Nitrate as nitrogen (µg/L)	7,500	6,750–8,250	7,660	J
pH (pH units)	9.04	8.84–9.24	9.15	J
Potassium (µg/L)	27,800	23,900–32,400	29,200	
Sodium (µg/L)	155,000	140,000–172,000	160,000	
Specific conductance (µS/cm)	783	655–891	768	
Sulfate (µg/L)	93,600	80,200–106,000	87,600	J
Total dissolved solids (µg/L)	655,000	537,000–733,000	615,000	J
Nutrients (Lot 9981)				
Ammonia as nitrogen (µg/L)	5,830	4,900–6,760	5,790	J
Nitrate-nitrite as nitrogen (µg/L)	7,320	6,510–8,130	7,500	J

Analyte	Certified Value	Performance Acceptance Limits	WA Result	Result Qualifier
Total phosphates (as P) (µg/L)	8,870	7,540–10,200	9,010	J
PCBs (Lot 581)				
PCB 1254 (µg/L)	2.61	1.56–3.28	2.14	J
Pesticides (Lot 581)				
Aldrin (µg/L)	2.19	1.14–2.70	1.9	J
alpha-Benzene hexachloride (µg/L)	3.92	2.18–4.99	3.57	J
beta-Benzene hexachloride (µg/L)	1.32	0.704–1.67	1.22	J
delta-Benzene hexachloride (µg/L)	4.99	2.20–6.41	4.86	J
alpha-Chlordane (µg/L)	2.61	1.58–3.23	2.46	J
4,4'-DDD (µg/L)	6.98	4.29–9.06	6.72	J
4,4'-DDE (µg/L)	3.09	1.80–3.87	2.98	J
4,4'-DDT (µg/L)	9.19	5.34–11.5	8.87	J
Dieldrin (µg/L)	2.12	1.31–2.74	1.93	J
Endrin (µg/L)	0.885	0.554–1.14	0.90	J
Heptachlor (µg/L)	5.02	2.27–6.22	4.23	J
Heptachlor epoxide (µg/L)	1.80	1.11–2.20	1.72	J
Lindane (µg/L)	5.20	2.93–6.76	4.85	J
Methoxychlor (µg/L)	5.85	3.34–7.89	6.21	J
Pesticides/Herbicides (Lot 3223)				
2-sec-Butyl-4,6-dinitrophenol (µg/L)	8.08	2.65–10.5	0.65†	J
2,4-Dichlorophenoxyacetic acid (µg/L)	9.96	4.98–14.9	9.23	J
2,4,5-TP (Silvex) (µg/L)	8.86	4.43–13.3	7.29	J
Total Petroleum Hydrocarbons (Lot 8915)				
Total petroleum hydrocarbons, standard 1, infrared (mg/bottle)	44.4	28.4–58.5	36.7	J
Toxaphene (Lot 3223)				
Toxaphene (µg/L)	1.43	0.787–2.07	0.89	J
Trace Metals (Lot 9981)				
Aluminum (µg/L)	613	503–723	639	
Antimony (µg/L)	98.9	74.2–124	98.2	
Arsenic (µg/L)	133	99.8–157	135	
Barium (µg/L)	433	355–511	429	
Beryllium (µg/L)	112	91.8–132	112	
Boron (µg/L)	486	399–608	485	
Cadmium (µg/L)	92.2	75.6–109	92.8	
Chromium (µg/L)	422	346–498	418	
Cobalt (µg/L)	101	82.8–119	104	
Copper (µg/L)	113	92.7–133	112	
Iron (µg/L)	506	415–597	494	
Lead (µg/L)	189	155–223	192	
Manganese (µg/L)	408	335–481	414	
Mercury (µg/L)	11.1	8.33–13.9	9.67	
Molybdenum (µg/L)	444	364–524	446	
Nickel (µg/L)	389	319–459	390	
Selenium (µg/L)	122	91.5–144	125	
Silver (µg/L)	116	95.1–137	116	
Strontium (µg/L)	321	263–379	311	
Thallium (µg/L)	95.6	71.7–120	97.8	
Vanadium (µg/L)	304	249–359	313	
Zinc (µg/L)	611	501–721	624	

Analyte	Certified Value	Performance Acceptance Limits	WA Result	Result Qualifier
Turbidity (Lot 3423)				
Turbidity (NTU)	5.20	4.42–6.08	4.98	J
Volatiles (Lot 581)				
Acetone (µg/L)	150	75.2–233	187	
Benzene (µg/L)	50.0	38.7–62.3	48.1	
Bromodichloromethane (µg/L)	60.0	46.1–74.8	58.2	
Bromoform (µg/L)	85.1	62.2–110	96.3	
Carbon tetrachloride (µg/L)	94.5	69.4–118	82.4	
Chlorobenzene (µg/L)	20.1	15.7–24.1	19.8	
Chloroform (µg/L)	75.5	58.0–92.3	70.2	
Dibromochloromethane (µg/L)	67.3	52.4–83.0	68.0	
1,2-Dichlorobenzene (µg/L)	21.5	16.3–26.4	21.1	
1,3-Dichlorobenzene (µg/L)	119	91.0–143	108	
1,4-Dichlorobenzene (µg/L)	41.8	31.4–50.9	45.2	
1,2-Dichloroethane (µg/L)	47.9	37.4–60.2	51.8	
1,1-Dichloroethylene (µg/L)	100	65.5–127	91.1	
Dichloromethane (methylene chloride) (µg/L)	65.3	46.2–85.1	52.5	
Ethylbenzene (µg/L)	15.3	11.4–17.9	14.2	
Methyl isobutyl ketone (µg/L)	89.9	52.0–123	102	
Styrene (µg/L)	24.9	17.3–30.3	22.3	
Tetrachloroethylene (µg/L)	110	81.2–133	96.7	
Toluene (µg/L)	62.8	48.4–75.8	58.6	
1,1,1-Trichloroethane (µg/L)	40.0	28.9–47.7	36.5	
Trichloroethylene (µg/L)	19.4	14.4–23.5	16.6	
m/p-Xylene (µg/L)	36.6	23.7–46.1	34.2	

† Result is out of range.
J The analytical result is an estimated quantity.

Table 63. Quality Control Standards for Selected Analyses for ES

Analyte	Certified Value	Performance Acceptance Limits	ES Result	Result Qualifier
Acids (Lot 581)				
2,4-Dichlorophenol (µg/L)	121	51.3–133	64.0	
o-Cresol (2-methyphenol) (µg/L)	35.2	11.2–40.7	21.0	
Pentachlorophenol (µg/L)	50.8	15.8–63.8	22.0	J
Phenol (µg/L)	140	56.8–173	68.0	
2,4,5-Trichlorophenol (µg/L)	41.2	16.2–47.6	27.0	
2,4,6-Trichlorophenol (µg/L)	63.4	27.4–72.7	36.0	
Base/Neutrals (Lot 581)				
Acenaphthylene (µg/L)	39.6	17.0–46.6	25.0	
Anthracene (µg/L)	99.6	47.0–116	60.0	
Benzo[a]anthracene (µg/L)	74.4	31.2–88.4	44.0	
Bis(2-ethylhexyl) phthalate (µg/L)	28.5	11.5–36.4	22.0	
4-Bromophenyl phenyl ether (µg/L)	109	53.9–130	69.0	
Chrysene (µg/L)	14.9	6.89–18.3	9.9	J
Dibenzofuran (µg/L)	109	51.9–121	61.0	
1,2-Dichlorobenzene (µg/L)	92.5	21.7–106	31.0	
1,4-Dichlorobenzene(µg/L)	48.3	10.6–57.0	14.0	
2,4-Dinitrotoluene (µg/L)	59.5	24.9–68.6	42.0	
2,6-Dinitrotoluene (µg/L)	60.8	31.2–68.9	41.0	
Fluorene (µg/L)	72.8	35.8–87.4	42.0	

Analyte	Certified Value	Performance Acceptance Limits	ES Result	Result Qualifier
Naphthalene (µg/L)	111	39.4–127	42.0	
Pyrene (µg/L)	40.8	19.1–49.6	26.0	
1,2,4-Trichlorobenzene (µg/L)	87.7	25.6–99.6	27.0	
Cations (Lot 436)				
Calcium (µg/L)	67,900	61,100–74,700	66,300	
Magnesium (µg/L)	45,500	40,500–50,500	43,900	
Potassium (µg/L)	86,900	79,100–94,700	94,600	
Sodium (µg/L)	75,800	66,700–84,900	75,900	
Cyanide and Phenol (Lot 9981)				
Cyanide, total (µg/L)	111	81.0–141	113	J
Phenols (µg/L)	335	255–415	283	
Grease and Oil (Lot 9981)				
Grease and oil (gravimetric) (mg/bottle)	47.8	28.7–59.8	43.6	
Inorganics (Lot 3423)				
Alkalinity (as $CaCO_3$) (µg/L)	142,000	132,000–160,000	130,000†	J
Chloride (µg/L)	70,000	62,200–78,900	75,000	J
Fluoride (µg/L)	3,340	3,010–3,670	3,230	
Nitrate as nitrogen (µg/L)	7,500	6,750–8,250	7,530	J
pH (pH units)	9.04	8.84–9.24	9.16	J
Potassium (µg/L)	27,800	23,900–32,400	31,000	
Sodium (µg/L)	155,000	140,000–172,000	153,000	
Specific conductance (µS/cm)	783	655–891	781	
Sulfate (µg/L)	93,600	80,200–106,000	94,040	
Total dissolved solids (µg/L)	655,000	537,000–733,000	615,000	J
Nutrients (Lot 9981)				
Ammonia as nitrogen (µg/L)	5,830	4,900–6,760	6,050	
Nitrate-nitrite as nitrogen (µg/L)	7,320	6,510–8,130	7,210	
Total phosphates (as P) (µg/L)	8,870	7,540–10,200	8,350	
PCBs (Lot 581)				
PCB 1254 (µg/L)	2.61	1.56–3.28	2.39	
Pesticides (Lot 581)				
Aldrin (µg/L)	2.19	1.14–2.70	1.64	
alpha-Benzene hexachloride (µg/L)	3.92	2.18–4.99	3.52	
beta-Benzene hexachloride (µg/L)	1.32	0.704–1.67	1.24	
delta-Benzene hexachloride (µg/L)	4.99	2.20–6.41	4.51	
alpha-Chlordane (µg/L)	2.61	1.58–3.23	2.22	
4,4'-DDD (µg/L)	6.98	4.29–9.06	6.59	
4,4'-DDE (µg/L)	3.09	1.80–3.87	2.75	
4,4'-DDT (µg/L)	9.19	5.34–11.5	7.87	
Dieldrin (µg/L)	2.12	1.31–2.74	1.88	
Endrin (µg/L)	0.885	0.554–1.14	0.764	
Heptachlor (µg/L)	5.02	2.27–6.22	4.22	
Heptachlor epoxide (µg/L)	1.80	1.11–2.20	1.81	
Lindane (µg/L)	5.20	2.93–6.76	3.97	
Methoxychlor (µg/L)	5.85	3.34–7.89	5.29	
Pesticides/Herbicides (Lot 3223)				
2-sec-Butyl-4,6-dinitrophenol (µg/L)	8.08	2.65–10.5	3.38	
2,4-Dichlorophenoxyacetic acid (µg/L)	9.96	4.98–14.9	7.96	

Analyte	Certified Value	Performance Acceptance Limits	ES Result	Result Qualifier
Total Petroleum Hydrocarbons (Lot 8915)				
Total petroleum hydrocarbons, standard 1, infrared (mg/bottle)	44.4	28.4–58.5	364†	
Toxaphene (Lot 3223)				
Toxaphene (µg/L)	1.43	0.787–2.07	1.14	J
Trace Metals (Lot 9981)				
Aluminum (µg/L)	613	503–723	649	
Antimony (µg/L)	98.9	74.2–124	101	
Arsenic (µg/L)	133	99.8–157	136	
Barium (µg/L)	433	355–511	436	
Beryllium (µg/L)	112	91.8–132	113	
Boron (µg/L)	486	399–608	502	
Cadmium (µg/L)	92.2	75.6–109	90.5	
Chromium (µg/L)	422	346–498	423	
Cobalt (µg/L)	101	82.8–119	102	
Copper (µg/L)	113	92.7–133	116	
Iron (µg/L)	506	415–597	501	
Lead (µg/L)	189	155–223	191	
Manganese (µg/L)	408	335–481	407	
Mercury (µg/L)	11.1	8.33–13.9	10.9	
Molybdenum (µg/L)	444	364–524	444	
Nickel (µg/L)	389	319–459	390	
Selenium (µg/L)	122	91.5–144	116	
Silver (µg/L)	116	95.1–137	110	
Strontium (µg/L)	321	263–379	318	
Thallium (µg/L)	95.6	71.7–120	91.8	
Vanadium (µg/L)	304	249–359	311	
Zinc (µg/L)	611	501–721	605	
Turbidity (Lot 3423)				
Turbidity (NTU)	5.20	4.42–6.08	14.0†	J
Volatiles (Lot 581)				
Acetone (µg/L)	150	75.2–233	140	J
Benzene (µg/L)	50.0	38.7–62.3	48.0	J
Bromodichloromethane (µg/L)	60.0	46.1–74.8	63.0	J
Bromoform (µg/L)	85.1	62.2–110	100	J
Carbon tetrachloride (µg/L)	94.5	69.4–118	89.0	J
Chlorobenzene (µg/L)	20.1	15.7–24.1	20.0	J
Chloroform (µg/L)	75.5	58.0–92.3	74.0	J
Dibromochloromethane (µg/L)	67.3	52.4–83.0	71.0	J
1,2-Dichlorobenzene (µg/L)	21.5	16.3–26.4	24.0	J
1,3-Dichlorobenzene (µg/L)	119	91.0–143	120	J
1,4-Dichlorobenzene (µg/L)	41.8	31.4–50.9	41.0	J
1,2-Dichloroethane (µg/L)	47.9	37.4–60.2	48.0	J
1,1-Dichloroethylene (µg/L)	100	65.5–127	100	J
Dichloromethane (methylene chloride) (µg/L)	65.3	46.2–85.1	69.0	J
Ethylbenzene (µg/L)	15.3	11.4–17.9	15.0	J
Methyl isobutyl ketone (µg/L)	89.9	52.0–123	80.0	J
Styrene (µg/L)	24.9	17.3–30.3	22.0	J
Tetrachloroethylene (µg/L)	110	81.2–133	84.0	J
Toluene (µg/L)	62.8	48.4–75.8	58.0	J

Analyte	Certified Value	Performance Acceptance Limits	ES Result	Result Qualifier
1,1,1-Trichloroethane (µg/L)	40.0	28.9–47.7	39.0	J
Trichloroethylene (µg/L)	19.4	14.4–23.5	18.0	J
m/p-Xylene (µg/L)	36.6	23.7–46.1	34.0	J

† Result is out of range.
J The analytical result is an estimated quantity.

Table 64. Quality Control Standards for Selected Analyses for EX

Analyte	Certified Value	Performance Acceptance Limits	EX Result	Result Qualifier
Acids (Lot 581)				
2,4-Dichlorophenol (µg/L)	121	51.3–133	85.2	
o-Cresol (2-methyphenol) (µg/L)	35.2	11.2–40.7	25.8	
Pentachlorophenol (µg/L)	50.8	15.8–63.8	40.0	J
Phenol (µg/L)	140	56.8–173	96.8	
2,4,5-Trichlorophenol (µg/L)	41.2	16.2–47.6	34.5	J
2,4,6-Trichlorophenol (µg/L)	63.4	27.4–72.7	49.0	
Base/Neutrals (Lot 581)				
Acenaphthylene (µg/L)	39.6	17.0–46.6	37.7	
Anthracene (µg/L)	99.6	47.0–116	83.8	
Benzo[a]anthracene (µg/L)	74.4	31.2–88.4	71.0	
Bis(2-ethylhexyl) phthalate (µg/L)	28.5	11.5–36.4	33.0	
4-Bromophenyl phenyl ether (µg/L)	109	53.9–130	94.8	
Chrysene (µg/L)	14.9	6.89–18.3	15.4	
Dibenzofuran (µg/L)	109	51.9–121	90.8	
1,2-Dichlorobenzene (µg/L)	92.5	21.7–106	65.6	
1,4-Dichlorobenzene(µg/L)	48.3	10.6–57.0	35.7	
2,4-Dinitrotoluene (µg/L)	59.5	24.9–68.6	48.1	
2,6-Dinitrotoluene (µg/L)	60.8	31.2–68.9	50.2	
Fluorene (µg/L)	72.8	35.8–87.4	73.1	
Naphthalene (µg/L)	111	39.4–127	87.1	
Pyrene (µg/L)	40.8	19.1–49.6	43.4	
1,2,4-Trichlorobenzene (µg/L)	87.7	25.6–99.6	66.1	
Cations (Lot 436)				
Calcium (µg/L)	67,900	61,100–74,700	66,500	
Magnesium (µg/L)	45,500	40,500–50,500	43,900	
Potassium (µg/L)	86,900	79,100–94,700	89,300	
Sodium (µg/L)	75,800	66,700–84,900	75,700	
Cyanide and Phenol (Lot 9981)				
Cyanide, total (µg/L)	111	81.0–141	102	
Phenols (µg/L)	335	255–415	284	
Grease and Oil (Lot 9981)				
Grease and oil (gravimetric) (mg/bottle)	47.8	28.7–59.8	43.0	
Inorganics (Lot 3423)				
Alkalinity (as $CaCO_3$) (µg/L)	142,000	132,000–160,000	148,000	
Chloride (µg/L)	70,000	62,200–78,900	74,900	
Fluoride (µg/L)	3,340	3,010–3,670	2,970†	
Nitrate as nitrogen (µg/L)	7,500	6,750–8,250	6,920	

Analyte	Certified Value	Performance Acceptance Limits	EX Result	Result Qualifier
pH (pH units)	9.04	8.84–9.24	9.06	
Potassium (µg/L)	27,800	23,900–32,400	30,300	
Sodium (µg/L)	155,000	140,000–172,000	164,000	
Specific conductance (µS/cm)	783	655–891	776	
Sulfate (µg/L)	93,600	80,200–106,000	88,600	
Total dissolved solids (µg/L)	655,000	537,000–733,000	635,000	
Nutrients (Lot 9981)				
Ammonia as nitrogen (µg/L)	5,830	4,900–6,760	5,490	
Nitrate-nitrite as nitrogen (µg/L)	7,320	6,510–8,130	6,950	
Total phosphates (as P) (µg/L)	8,870	7,540–10,200	9,090	
PCBs (Lot 581)				
PCB 1254 (µg/L)	2.61	1.56–3.28	3.42†	
Pesticides (Lot 581)				
Aldrin (µg/L)	2.19	1.14–2.70	2.46	
alpha-Benzene hexachloride (µg/L)	3.92	2.18–4.99	4.83	
beta-Benzene hexachloride (µg/L)	1.32	0.704–1.67	1.95†	
delta-Benzene hexachloride (µg/L)	4.99	2.20–6.41	6.62†	
alpha-Chlordane (µg/L)	2.61	1.58–3.23	3.32†	
4,4'-DDD (µg/L)	6.98	4.29–9.06	9.71†	
4,4'-DDE (µg/L)	3.09	1.80–3.87	4.23†	
4,4'-DDT (µg/L)	9.19	5.34–11.5	14.0†	
Dieldrin (µg/L)	2.12	1.31–2.74	2.8†	
Endrin (µg/L)	0.885	0.554–1.14	1.13	
Heptachlor (µg/L)	5.02	2.27–6.22	5.48	
Heptachlor epoxide (µg/L)	1.80	1.11–2.20	2.16	
Lindane (µg/L)	5.20	2.93–6.76	6.35	
Methoxychlor (µg/L)	5.85	3.34–7.89	10.1†	
Pesticides/Herbicides (Lot 3223)				
2-sec-Butyl-4,6-dinitrophenol (µg/L)	8.08	2.65–10.5	7.04	
2,4-Dichlorophenoxyacetic acid (µg/L)	9.96	4.98–14.9	9.98	
2,4,5-TP (Silvex) (µg/L)	8.86	4.43–13.3	8.72	
Total Petroleum Hydrocarbons (Lot 8915)				
Total petroleum hydrocarbons, standard 1, infrared (mg/bottle)	44.4	28.4–58.5	56.8	
Toxaphene (Lot 3223)				
Toxaphene (µg/L)	1.43	0.787–2.07	1.76	
Trace Metals (Lot 9981)				
Aluminum (µg/L)	613	503–723	637	
Antimony (µg/L)	98.9	74.2–124	98.6	J
Arsenic (µg/L)	133	99.8–157	128	
Barium (µg/L)	433	355–511	446	
Beryllium (µg/L)	112	91.8–132	112	
Boron (µg/L)	486	399–608	568	
Cadmium (µg/L)	92.2	75.6–109	90.4	
Chromium (µg/L)	422	346–498	424	
Cobalt (µg/L)	101	82.8–119	104	
Copper (µg/L)	113	92.7–133	113	
Iron (µg/L)	506	415–597	511	
Lead (µg/L)	189	155–223	183	
Manganese (µg/L)	408	335–481	408	
Mercury (µg/L)	11.1	8.33–13.9	9.6	

Analyte	Certified Value	Performance Acceptance Limits	EX Result	Result Qualifier
Molybdenum (µg/L)	444	364–524	417	
Nickel (µg/L)	389	319–459	405	
Selenium (µg/L)	122	91.5–144	115	
Silver (µg/L)	116	95.1–137	115	
Strontium (µg/L)	321	263–379	322	
Thallium (µg/L)	95.6	71.7–120	91.0	
Vanadium (µg/L)	304	249–359	308	
Zinc (µg/L)	611	501–721	607	
Turbidity (Lot 3423)				
Turbidity (NTU)	5.20	4.42–6.08	4.95	
Volatiles (Lot 581)				
Acetone (µg/L)	150	75.2–233	171.16	
Benzene (µg/L)	50.0	38.7–62.3	53.56	
Bromodichloromethane (µg/L)	60.0	46.1–74.8	68.22	
Bromoform (µg/L)	85.1	62.2–110	99.74	
Carbon tetrachloride (µg/L)	94.5	69.4–118	104.44	
Chlorobenzene (µg/L)	20.1	15.7–24.1	21.16	
Chloroform (µg/L)	75.5	58.0–92.3	79.35	
Dibromochloromethane (µg/L)	67.3	52.4–83.0	73.92	
1,2-Dichlorobenzene (µg/L)	21.5	16.3–26.4	23.48	
1,3-Dichlorobenzene (µg/L)	119	91.0–143	127.05	
1,4-Dichlorobenzene (µg/L)	41.8	31.4–50.9	46.18	
1,2-Dichloroethane (µg/L)	47.9	37.4–60.2	52.48	
1,1-Dichloroethylene (µg/L)	100	65.5–127	125.82	
Dichloromethane (methylene chloride) (µg/L)	65.3	46.2–85.1	70.12	
Ethylbenzene (µg/L)	15.3	11.4–17.9	16.32	
Methyl isobutyl ketone (µg/L)	89.9	52.0–123	101.28	
Styrene (µg/L)	24.9	17.3–30.3	25.94	
Tetrachloroethylene (µg/L)	110	81.2–133	116.21	
Toluene (µg/L)	62.8	48.4–75.8	67.63	
1,1,1-Trichloroethane (µg/L)	40.0	28.9–47.7	41.96	
Trichloroethylene (µg/L)	19.4	14.4–23.5	19.61	
m/p-Xylene (µg/L)	36.6	23.7–46.1	38.64	

† Result is out of range.
J The analytical result is an estimated quantity.

Table 65. ES, EX, and WA Performance Evaluation, Water Pollution Study WP037

Analyte	ES Result	EX Result	WA Result	True Value	Performance Acceptance Limits
Trace Metals (µg/L)					
Aluminum	1210	1100	1190	1203	1030–1360
Antimony	813	750	797	779	606–928
Arsenic	88.4	86.2	84.4	88.0	69.6–107
Beryllium	**<4.0**	696	667	675	601–750
Cadmium	22.4	21.5	21.3	22.2	18.3–26.4
Chromium	141	137	135	137	120–156
Cobalt	221	212	216	220	196–244
Copper	118	116	109	115	102–128
Iron	407	407	384	393	350–445
Lead	134	131	129	130	109–147
Manganese	147	140	149	144	129–158
Mercury	0.55	0.398	0.480	0.494	0.266–0.729

Analyte	ES Result	EX Result	WA Result	True Value	Performance Acceptance Limits
Molybdenum	204	210	196	190	174–220
Nickel	427	419	412	417	376–463
Selenium	141	139	133	150	113–160
Silver	507	491	520	490	455–557
Strontium	149	153	147	144	129–168
Thallium	493	471	472	471	390–563
Titanium	233	235	229	226	195–253
Vanadium	3380	3240	3280	3300	2990–3600
Zinc	300	285	286	296	263–332
Minerals (mg/L, except as noted)					
Alkalinity (as $CaCO_3$), total	91.0	93.7	91.4	91.0	82.2–99.0
Calcium	64.3	67.6	**60.6**	66.0	61.0–73.2
Chloride	224	220	235	226	207–250
Fluoride	2.48	**2.11**	2.54	2.60	2.25–2.92
Hardness (as $CaCO_3$), total	326	320	327	317	294–344
Magnesium	36.0	37.0	***39.9***	37.0	33.7–40.0
Potassium	17.1	17.1	18.4	17.0	14.6–19.8
Sodium	92.5	91.9	***86.8***	92.2	85.1–101
Specific conductance (µS/cm)	1145	1160	1110	1132	1050–1230
Sulfate	124	114	113	118	99.9–138
Total dissolved solids at 180° C	618	657	643	685	461–932
Nutrients (mg/L)					
Ammonia nitrogen	0.250	0.202	0.296	0.261	0.120–0.444
Nitrate nitrogen	0.591	0.608	0.677	0.620	0.470–0.756
Nitrogen by Kjeldahl method	2.47	3.02	2.55	2.60	1.72–3.53
Orthophosphate	5.62	5.75	5.60	5.50	4.84–6.25
Total phosphorus	7.38	**2.77**	7.26	7.00	5.99–8.24
Demands (mg/L)					
5-day Biochemical oxygen demand	116	†	84.3	93.1	49.4–137
Carbonaceous BOD	***119***	†	84.9	80.0	36.4–124
Chemical oxygen demand	150	143	159	152	117–177
Total organic carbon	61.5	63.0	**74.4**	60.0	50.1–69.4
PCBs (µg/L)					
PCB 1254	1.74	2.45	1.90	2.33	1.04–3.29
PCB 1260	3.65	4.74	4.00	4.60	2.71–5.70
PCBs in Oil (mg/kg)					
PCB 1016/1242	25.0	30.8	17.2	27.2	4.83–38.3
PCB 1260	24.0	24.7	19.4	28.5	4.17–41.5
Pesticides (µg/L)					
Aldrin	1.28	2.22	2.29	2.54	0.714–3.51
Chlordane	7.01	7.82	8.22	8.85	4.18–12.1
p,p´-DDD	5.43	6.87	5.97	6.42	2.68–9.42
p,p´-DDE	2.53	3.43	3.18	3.34	1.33–4.67
p,p´-DDT	5.07	5.67	5.27	5.86	2.22–8.33
Dieldrin	3.58	4.01	3.66	3.87	2.06–5.39
Heptachlor	2.33	2.98	3.21	3.42	0.918–4.80
Heptachlor epoxide	2.26	2.27	2.42	2.84	1.48–3.40
Volatile Halocarbons (µg/L)					
Bromodichloromethane	54.1	52.5	45.5	48.7	34.9–63.1
Bromoform	45.7	48.0	37.1	42.8	27.1–61.4

Analyte	ES Result	EX Result	WA Result	True Value	Performance Acceptance Limits
Carbon tetrachloride	50.0	55.3	51.3	51.3	32.7–71.0
Chlorobenzene	59.0	64.0	53.7	57.3	42.6–76.9
Chloroform	58.0	65.4	59.0	59.4	42.3–75.1
Dibromochloromethane	81.5	96.7	77.3	85.4	67.5–103
1,2-Dichloroethane	49.6	54.5	51.7	47.4	37.4–63.5
Methylene chloride	51.0	56.0	53.7	53.5	35.2–72.4
Tetrachloroethylene	41.7	49.0	37.0	44.3	31.1–56.0
1,1,1-Trichloroethane	50.8	51.3	53.2	54.2	36.1–69.5
Trichloroethylene	61.8	67.5	54.0	64.2	42.2–82.0
Volatile Aromatics (µg/L)					
Benzene	68.2	66.5	66.6	72.6	54.1–91.9
1,2-Dichlorobenzene	42.3	45.4	39.4	47.4	33.8–59.9
1,3-Dichlorobenzene	44.4	48.5	41.9	50.4	36.5–62.1
1,4-Dichlorobenzene	46.6	50.0	44.9	53.2	37.0–68.5
Ethylbenzene	54.9	56.9	53.6	63.3	42.7–81.7
Toluene	48.8	50.8	49.6	56.1	40.7–69.3
Miscellaneous Parameters (mg/L)					
Cyanide, total	0.075	0.066	0.081	0.080	0.0522–0.107
Nonfilterable residue	74.0	65.0	**53.2**	77.0	59.9–82.6
Oil and grease	27.1	29.8	26.3	32.0	20.7–33.0
pH (pH units)	9.30	9.20	9.38	9.30	9.05–9.56
Phenolics, total	**0.218**	**3.02**	2.44	2.08	1.25–2.91
Residual chlorine, total	†	2.85	3.04	2.63	2.38–3.22

† Result was not reported.

Note: The true value is based on gravimetric calculations or a reference value when necessary. Reported values that were out of range appear in **bold**. In cases where the laboratory was asked to check for error, the reported values appear in ***bold italic***.

Table 66. ES, EX, and GE Performance Evaluation, Water Supply Study WS038

Analyte	*ES Result*	*EX Result*	*GE Result*	*True Value*	*Performance Acceptance Limits*
Trace Metals (µg/L)					
Antimony	5.90	†	6.37	6.48	4.54–8.42
Arsenic	78.2	74.6	82.8	83.1	71.7–88.4
Barium	1970	2010	1940	2002	1700–2300
Beryllium	10.0	9.98	10.0	10.1	8.59–11.6
Boron	1920	1890	1920	1898	1680–2110
Cadmium	2.00	1.82	2.02	2.12	1.70–2.54
Chromium	140	145	141	148	126–170
Copper	1260	1190	1200	1203	1080–1320
Lead	52.2	50.3	55.4	56.2	39.3–73.1
Manganese	400	385	395	411	372–420
Mercury	5.60	5.16	5.42	6.39	4.47–8.31
Molybdenum	15.6	16.2	16.2	16.2	13.0–19.5
Nickel	235	239	239	240	204–276
Selenium	78.1	75.5	86.3	89.3	71.4–107
Thallium	8.90	7.33	9.28	8.91	6.24–11.6
Zinc	2990	2820	**88.4**	2914	2620–3080

Analyte	ES Result	EX Result	GE Result	True Value	Performance Acceptance Limits
Fluoride/Nitrate/Nitrite (mg/L)					
Fluoride	4.88	4.84	4.27	4.70	4.23–5.17
Nitrate as N	4.10	4.05	3.98	4.10	3.69–4.51
Nitrite as N	1.58	1.59	1.52	1.60	1.36–1.84
Orthophosphate as P	**0.419**	0.500	0.503	0.530	0.462–0.675
Insecticides (µg/L)					
Alachlor	9.32	†	†	9.52	5.24–13.8
Aldrin	0.294	0.378	0.257	0.358	0.164–0.450
Atrazine	12.4	†	†	12.8	7.04–18.6
Butachlor	27.9	†	†	27.9	7.59–44.5
Chlordane, total	8.07	9.38	6.50	8.20	4.51–11.9
Dieldrin	0.648	0.796	0.550	0.683	0.466–0.896
Endrin	0.445	0.506	0.332	0.467	0.327–0.607
Heptachlor	1.06	1.10	0.856	1.20	0.660–1.74
Heptachlor epoxide	0.671	0.703	0.975	0.742	0.408–1.08
Hexachlorocyclopentadiene	1.06	0.209	†	1.47	0.0583–2.01
Hexachlorobenzene	0.430	0.494	†	0.538	0.213–0.683
Lindane	0.552	0.574	0.478	0.621	0.342–0.900
Methoxychlor	29.1	35.4	32.2	34.8	19.1–50.5
Metolachlor	23.9	†	†	24.8	11.2–36.6
Metribuzin	16.5	†	†	16.9	DL–26
Prometon	12.4	†	†	12.5	4–18.1
Propachlor	1.64	**2.58**	†	1.46	0.823–2.19
Simazine	7.82	†	†	8.77	1.87–14.2
Toxaphene	11.3	†	9.80	12.7	6.99–18.4
Trifluralin	1.75	1.77	†	1.76	0.691–2.31
Herbicides (µg/L)					
Acifluorfen	†	13.9	†	28.2	11.5–41.7
2,4-D	**14.1**	**11.2**	43.5	35.9	18.0–53.9
Dalapon	60.8	11.7	72.9	87.2	DL–129
Dinoseb	19.8	14.0	29.8	32.6	DL–51.5
Dicamba	33.7	25.9	**120**	62.7	9.66–92.1
Pentachlorophenol	9.31	7.63	†	14.7	7.35–22.1
Picloram	47.8	5.39	†	56.4	DL–82.5
2,4,5-TP (Silvex)	12.7	10.6	26.0	19.5	9.75–29.3
Polynuclear Aromatic Hydrocarbons (µg/L)					
Benzo[*a*]pyrene	†	0.391	0.516	0.527	0.127–0.737
Trihalomethanes (µg/L)					
Bromodichloromethane	35.6	30.5	32.0	32.2	25.8–38.6
Bromoform	25.0	25.3	25.9	26.5	21.2–31.8
Chlorodibromomethane	14.2	13.8	14.7	14.7	11.8–17.6
Chloroform	39.4	34.1	37.0	36.5	29.2–43.8
Trihalomethane, total	114.2	103.7	110	109.9	87.0–132
Volatile Organic Compounds (µg/L)					
Benzene	14.1	15.4	16.3	15.3	12.2–18.4
Carbon tetrachloride	13.9	14.8	15.5	16.6	12.5–18.7
Chlorobenzene	24.1	20.9	25.7	24.2	19.4–29.0
1,2-Dibromo-3-chloropropane	0.505	0.416	†	0.429	0.257–0.601
1,2-Dichlorobenzene	15.4	13.5	18.0	16.6	13.3–19.9
1,2-Dichloroethane	15.3	15.6	17.2	15.6	12.5–18.7
cis-1,2-Dichloroethylene	**17.4**	18.0	23.0	22.3	17.8–26.8
trans-1,2-Dichloroethylene	19.9	17.7	22.2	20.6	16.5–24.7

Analyte	ES Result	EX Result	GE Result	True Value	Performance Acceptance Limits
Dichloromethane	13.6	14.2	16.8	14.7	11.8–17.6
1,2-Dichloropropane	16.6	15.6	18.3	18.3	14.6–22.0
2,2-Dichloropropane	12.1	10.4	14.1	14.7	10.2–17.7
cis-1,3-Dichloropropene	7.54	7.42	9.31	9.40	6.85–11.9
trans-1,3-Dichloropropene	10.3	9.58	10.4	12.5	7.75–14.3
Ethylbenzene	14.2	13.2	17.1	15.7	12.6–18.8
Ethylene dibromide (EDB)	0.372	0.338	†	0.336	0.202–0.470
Hexachlorobutadiene	18.9	18.4	27.1	18.4	14.1–34.7
Styrene	13.2	11.9	19.9	14.2	11.4–17.0
1,1,1,2-Tetrachloroethane	7.91	7.69	8.40	8.40	6.16–9.66
Tetrachloroethylene	13.0	**11.2**	14.6	14.1	11.3–16.9
Toluene	15.4	14.0	17.7	16.2	13.0–19.4
1,2,4-Trichlorobenzene	7.56	7.00	10.4	8.30	4.98–11.6
1,3,5-Trimethylbenzene	15.7	15.2	18.5	16.4	13.0–19.6
1,1,1-Trichloroethane	15.2	16.2	17.0	17.2	13.8–20.6
1,1,2-Trichloroethane	15.9	15.5	16.5	16.3	13.0–19.6
Trichloroethylene	11.2	12.2	12.6	12.4	9.92–14.9
1,2,3-Trichloropropane	17.6	15.5	13.2	16.9	10.1–21.4
Vinyl chloride	17.1	19.6	19.6	17.9	10.7–25.1
Xylenes, total	22.3	20.1	25.1	22.9	18.3–27.5
Miscellaneous Analytes (mg/L, except as noted)					
Alkalinity (as $CaCO_3$)	45.0	47.4	46.1	43.5	42.4–49.9
Chlorine, residual free	†	0.940	0.850	0.820	0.662–0.963
Cyanide, total	0.113	0.120	0.107	0.120	0.090–0.150
Hardness, calcium as $CaCO_3$	237	228	240	240	221–252
pH (pH units)	9.10	9.15	9.11	9.13	8.89–9.31
Residue, total filterable	421.5	448	478	419	249–622
Sodium	21.6	22.2	21.9	20.0	19.1–22.2
Sulfate	16.0	18.6	17.0	17.0	14.5–19.0
Total organic carbon	5.10	**5.60**	5.34	4.90	4.39–5.41
Turbidity (NTU)	5.80	5.57	5.44	5.89	4.72–6.77

† Result was not reported.

Note: The true value is based on gravimetric calculations or a reference value when necessary. Reported values that were out of range appear in **bold**. In cases where the laboratory was asked to check for error, the reported values appear in ***bold italic***. "DL" stands for detection limit.

Table 67. ES and EX Performance Evaluation, Water Supply Study WS039

Analyte	ES Result	EX Result	True Value	Performance Acceptance Limits
Trace Metals (µg/L)				
Antimony	38.7	36.5	38.0	26.6–49.4
Arsenic	26.2	26.9	27.0	22.8–30.9
Barium	1140	1150	1100	935–1270
Beryllium	**1.40**	1.20	1.20	1.02–1.38
Boron	636	657	599	573–670
Cadmium	30.0	28.5	28.5	22.8–34.2
Chromium	23.2	24.9	23.9	20.3–27.5
Copper	505	515	490	441–539
Lead	14.8	16.5	16.0	11.2–20.8
Manganese	84.2	86.3	82.0	74.6–89.8
Mercury	3.35	3.41	3.80	2.66–4.94
Molybdenum	152	153	150	121–178

Analyte	ES Result	EX Result	True Value	Performance Acceptance Limits
Nickel	127	132	120	102–138
Selenium	32.1	30.8	37.0	29.6–44.4
Thallium	5.50	5.65	5.60	3.92–7.28
Zinc	781	799	760	706–824
Fluoride/Nitrate/Nitrite (mg/L)				
Fluoride	**2.30**	2.78	2.90	2.61–3.19
Nitrate as N	8.56	**10.7**	9.50	8.55–10.5
Nitrite as N	0.824	0.833	0.820	0.697–0.943
Orthophosphate as P	1.55	1.58	1.60	1.43–1.77
Insecticides (µg/L)				
Alachlor	15.2	†	14.8	8.14–21.5
Aldrin	0.576	0.710	0.723	0.250–0.891
Atrazine	9.18	†	9.62	5.29–13.9
Chlordane, total	4.48	4.18	3.57	1.96–5.18
Dieldrin	1.33	1.36	1.28	0.819–1.60
Endrin	1.45	1.43	1.54	1.08–2.00
Heptachlor	0.601	0.645	0.687	0.378–0.996
Heptachlor epoxide	0.308	0.286	0.340	0.187–0.493
Hexachlorocyclopentadiene	2.56	2.77	3.26	DL–4.34
Hexachlorobenzene	1.56	1.45	1.68	0.800–2.21
Lindane	0.781	0.813	0.855	0.470–1.24
Methoxychlor	49.6	53.7	53.8	29.6–78.0
Propachlor	2.03	2.66	2.18	1.18–3.38
Simazine	11.6	†	23.6	8.51–30.6
Toxaphene	3.95	4.16	3.65	2.01–5.29
Trifluralin	3.04	3.15	3.46	1.07–4.54
Herbicides (µg/L)				
Acifluorfen	†	28.1	38.6	14.6–55.4
2,4-D	48.2	**12.5**	56.1	28.1–84.2
Dalapon	54.2	36.9	63.0	DL–111
Dinoseb	31.8	25.9	41.3	DL–62.6
Dicamba	55.1	40.3	54.9	17.5–76.0
Pentachlorophenol	40.3	35.5	43.7	21.9–65.6
Picloram	70.1	14.7	74.9	DL–112
2,4,5-TP (Silvex)	31.5	27.7	32.3	16.2–48.5
Polynuclear Aromatic Hydrocarbons (µg/L)				
Benzo[a]pyrene	†	2.21	2.37	DL–3.44
Trihalomethanes (µg/L)				
Bromodichloromethane	22.7	20.7	22.8	18.2–27.4
Bromoform	19.7	21.9	20.2	16.2–24.2
Chlorodibromomethane	25.9	29.4	28.6	22.9–34.3
Chloroform	15.7	14.2	16.2	13.0–19.4
Trihalomethane, total	84.0	86.2	87.8	70.2–105
Volatile Organic Compounds (µg/L)				
Benzene	9.42	8.71	9.39	5.63–13.1
Bromobenzene	18.2	16.8	17.7	13.6–20.9
Carbon tetrachloride	18.2	16.5	19.2	15.4–23.0
Chlorobenzene	14.6	14.9	15.2	12.2–18.2
1,2-Dibromo-3-chloropropane	0.230	0.283	0.246	0.148–0.344
Dibromomethane	13.1	11.1	12.3	9.51–14.0
1,2-Dichlorobenzene	13.6	13.5	13.4	10.7–16.1

Analyte	ES Result	EX Result	True Value	Performance Acceptance Limits
1,4-Dichlorobenzene	18.5	16.8	17.8	14.2–21.4
1,2-Dichloroethane	18.6	16.2	17.6	14.1–21.1
1,1-Dichloroethylene	12.4	10.4	12.4	9.92–14.9
cis-1,2-Dichloroethylene	14.1	**13.1**	16.5	13.2–19.8
trans-1,2-Dichloroethylene	13.2	12.4	13.8	11.0–16.6
Dichloromethane	7.58	6.54	7.31	4.39–10.2
1,2-Dichloropropane	12.7	10.7	12.2	9.76–14.6
trans-1,3-Dichloropropene	12.6	12.5	14.8	8.91–15.4
Ethylbenzene	11.0	10.7	11.6	9.28–13.9
Ethylene dibromide (EDB)	0.208	**0.643**	0.227	0.136–0.318
Hexachlorobutadiene	12.5	14.2	13.2	9.51–17.5
Styrene	13.8	13.8	14.2	11.4–17.0
1,1,1,2-Tetrachloroethane	16.4	15.3	16.6	13.2–19.5
Tetrachloroethylene	7.16	6.52	7.60	4.56–10.6
Toluene	7.36	6.78	7.31	4.39–10.2
1,2,4-Trichlorobenzene	21.4	25.5	23.6	18.9–28.3
1,1,1-Trichloroethane	10.3	9.42	11.2	8.96–13.4
1,1,2-Trichloroethane	12.4	10.5	12.3	9.84–14.8
Trichloroethylene	15.5	14.1	16.4	13.1–19.7
1,2,3-Trichloropropane	14.7	12.3	12.8	8.16–16.1
Vinyl chloride	7.82	5.57	6.19	3.71–8.67
Xylenes, total	24.0	23.2	24.4	19.5–29.3
Miscellaneous Analytes (mg/L, except as noted)				
Alkalinity (as $CaCO_3$)	36.0	34.4	31.0	30.7–36.5
Cyanide, total	**0.733**	0.339	0.445	0.334–0.556
Hardness, calcium as $CaCO_3$	162	165	170	157–184
pH (pH units)	9.07	9.00	9.13	8.86–9.32
Residue, total filterable	425	410	306	199–574
Sodium	14.8	15.1	14.2	13.6–16.4
Sulfate	475	515	490	440–538
Total organic carbon	1.10	†	0.930	0.669–1.29
Turbidity (NTU)	**1.20**	0.61	0.550	0.446–0.897

† Result was not reported.

Note: The true value is based on gravimetric calculations or a reference value when necessary. Reported values that were out of range appear in **bold**. In cases where the laboratory was asked to check for error, the reported values appear in ***bold italic***. "DL" stands for detection limit.

Table 68. Laboratory Control Sample and Blank Spike Recoveries for ES

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA120.1					
Specific conductance	0/1	101	—	101	101
EPA350.1					
Ammonia nitrogen	0/1	100	—	100	100
EPA365.1					
Total phosphates (as P)	0/2	98.0	0.99	97.3	98.7
EPA6010					
Aluminum	0/4	98.0	2.92	94.0	101
Antimony	0/7	96.7	1.46	94.6	97.8

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
Arsenic	0/8	96.1	4.22	92.1	101
Barium	0/8	96.9	2.41	94.0	99.5
Beryllium	0/7	98.7	1.06	97.4	100
Boron	0/1	95.4	—	95.4	95.4
Cadmium	0/8	95.2	3.67	91.0	99.4
Calcium	0/4	98.3	3.49	93.7	101
Chromium	0/8	96.6	2.33	94.0	99.0
Cobalt	0/7	97.4	2.06	94.6	99.2
Copper	0/7	98.3	3.56	94.4	102
Iron	0/4	104	6.37	96.5	109
Lead	0/12	97.1	2.67	93.8	101
Magnesium	0/4	98.1	1.71	95.5	99.0
Manganese	0/4	97.2	1.90	94.4	98.4
Nickel	0/7	96.0	1.88	93.4	97.6
Potassium	0/4	90.4	3.12	86.7	93.0
Selenium	0/8	95.3	1.01	93.2	96.0
Silver	0/8	99.4	6.92	92.0	107
Sodium	0/4	89.3	3.75	84.9	92.4
Thallium	0/7	92.4	8.07	84.9	101
Vanadium	0/7	97.5	2.69	94.0	100
Zinc	0/7	96.8	1.66	94.4	97.8
EPA7470					
Mercury	0/10	94.7	3.22	91.8	99.6
EPA8010					
Carbon tetrachloride	0/2	104	16.7	92.4	116
Chloroform	0/2	107	18.1	94.4	120
Tetrachloroethylene	0/2	102	16.4	90.8	114
1,1,1-Trichloroethane	0/2	103	17.8	90.8	116
Trichloroethylene	0/2	104	20.1	89.6	118
EPA8021					
Carbon tetrachloride	0/2	89.2	4.53	86.0	92.4
Chloroform	0/2	91.0	4.81	87.6	94.4
Tetrachloroethylene	0/2	90.4	0.57	90.0	90.8
1,1,1-Trichloroethane	0/2	89.4	1.98	88.0	90.8
Trichloroethylene	0/2	87.8	2.55	86.0	89.6
EPA8081					
Aldrin	0/4	75.0	2.35	73.5	78.5
alpha-Benzene hexachloride	0/4	101	5.19	95.5	108
beta-Benzene hexachloride	0/7	99.9	2.39	96.5	104
delta-Benzene hexachloride	0/4	70.1	2.90	67.0	74.0
alpha-Chlordane	0/4	87.0	2.35	83.5	88.5
gamma-Chlordane	0/4	91.5	2.08	89.0	94.0
p,p´-DDD	0/4	102	3.50	98.0	106
p,p´-DDE	0/4	99.4	2.72	96.5	103
p,p´-DDT	0/4	95.9	3.12	92.5	100
Dieldrin	0/4	108	3.59	105	113
Endosulfan sulfate	0/4	86.4	12.5	79.0	105
Endosulfan I	0/4	118	6.18	113	127
Endosulfan II	0/4	104	2.52	101	107
Endrin	0/4	97.6	3.77	95.0	103
Endrin aldehyde	0/4	110	31.4	63.0	129
Endrin ketone	0/4	82.9	4.42	77.0	87.5
Heptachlor	0/4	96.3	3.52	92.5	99.5
Heptachlor epoxide	0/4	106	3.37	104	111
Lindane	0/4	85.5	3.08	82.0	89.5
Methoxychlor	0/4	99.6	5.56	91.5	104

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA8260					
Acetone	0/15	106	48.1	55.0	250
Benzene	0/15	98.3	3.62	90.0	105
Bromodichloromethane	0/15	103	6.78	90.0	110
Bromoform	0/15	99.0	5.73	90.0	105
Bromomethane	0/15	85.3	17.8	60.0	115
Carbon disulfide	5/15	106	6.87	95.0	115
Carbon tetrachloride	2/15	91.3	15.1	60.0	115
Chlorobenzene	0/15	99.3	3.72	95.0	105
Chloroethane	2/15	115	27.7	90.0	180
Chloroethene	0/15	98.3	6.99	80.0	110
2-Chloroethyl vinyl ether	0/1	100	—	100	100
Chloroform	0/15	96.3	8.34	85.0	110
Chloromethane	0/15	104	9.35	80.0	115
Dibromochloromethane	0/15	95.3	5.50	85.0	105
1,1-Dichloroethane	0/15	97.0	8.62	85.0	110
1,2-Dichloroethane	0/15	93.0	9.22	80.0	105
1,1-Dichloroethylene	0/15	103	8.21	90.0	115
cis-1,2-Dichloroethylene	0/9	94.4	5.83	85.0	105
trans-1,2-Dichloroethylene	0/10	98.0	3.50	95.0	105
Dichloromethane	0/15	89.7	8.12	75.0	100
1,2-Dichloropropane	0/15	91.7	4.88	80.0	100
cis-1,3-Dichloropropene	0/15	96.3	5.50	85.0	105
trans-1,3-Dichloropropene	0/15	99.3	5.94	90.0	110
Ethylbenzene	0/15	98.7	5.16	90.0	105
2-Hexanone	0/15	92.0	5.61	85.0	100
Methyl ethyl ketone	0/15	100	9.06	85.0	115
Methyl isobutyl ketone	0/15	91.7	6.17	80.0	100
Styrene	4/15	93.7	5.50	85.0	100
1,1,2,2-Tetrachloroethane	0/15	94.0	6.87	85.0	110
Tetrachloroethylene	2/15	79.3	11.2	60.0	95.0
Toluene	0/15	99.0	3.87	90.0	105
1,1,1-Trichloroethane	0/15	95.7	9.42	85.0	110
1,1,2-Trichloroethane	0/15	100	5.35	90.0	110
Trichloroethylene	0/15	95.3	7.67	85.0	110
Trichlorofluoromethane	0/11	116	20.5	70.0	145
Vinyl acetate	1/15	107	53.2	60.0	290
Xylenes	2/16	91.9	13.7	60.0	105
EPA8270					
Acenaphthene	0/4	70.3	9.74	57.0	80.0
Acenaphthylene	0/3	72.3	9.07	62.0	79.0
Anthracene	0/3	75.7	4.04	71.0	78.0
Benzidine	0/3	45.3	10.6	34.0	55.0
Benzo[*a*]anthracene	0/3	77.7	5.03	73.0	83.0
Benzo[*b*]fluoranthene	0/3	73.3	2.31	72.0	76.0
Benzo[*k*]fluoranthene	0/3	77.3	3.06	74.0	80.0
Benzoic acid	0/3	37.0	1.73	35.0	38.0
Benzo[*g,h,i*]perylene	0/3	72.3	6.51	66.0	79.0
Benzo[*a*]pyrene	0/3	76.3	2.31	75.0	79.0
Benzyl alcohol	0/3	70.3	5.77	67.0	77.0
Bis(2-chloroethoxy) methane	0/3	83.3	6.81	78.0	91.0
Bis(2-chloroethyl) ether	0/3	59.3	6.03	53.0	65.0
Bis(2-chloroisopropyl) ether	0/3	43.7	5.03	39.0	49.0
Bis(2-ethylhexyl) phthalate	0/3	85.7	7.23	81.0	94.0
4-Bromophenyl phenyl ether	0/3	69.7	5.03	65.0	75.0
Butylbenzyl phthalate	0/3	84.3	6.11	79.0	91.0
4-Chloroaniline	0/3	94.0	2.65	91.0	96.0
4-Chloro-m-cresol	0/4	80.8	4.11	77.0	86.0
2-Chloronaphthalene	1/3	68.7	12.1	56.0	80.0
2-Chlorophenol	0/4	69.5	5.57	64.0	77.0

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
4-Chlorophenyl phenyl ether	0/3	79.3	6.11	74.0	86.0
Chrysene	0/3	75.0	5.29	71.0	81.0
m/p-Cresol	0/3	71.7	3.79	69.0	76.0
o-Cresol	0/3	71.7	3.06	69.0	75.0
Dibenz[*a,h*]anthracene	0/3	59.3	2.52	57.0	62.0
Dibenzofuran	0/3	76.0	7.0	69.0	83.0
Di-n-butyl phthalate	0/7	86.0	4.69	78.0	91.0
1,2-Dichlorobenzene	0/3	48.0	9.54	42.0	59.0
1,3-Dichlorobenzene	0/3	46.0	8.72	40.0	56.0
1,4-Dichlorobenzene	0/4	52.0	12.0	42.0	66.0
3,3´-Dichlorobenzidine	0/3	82.7	6.11	76.0	88.0
2,4-Dichlorophenol	0/3	78.7	3.21	75.0	81.0
Diethyl phthalate	0/3	84.0	1.73	83.0	86.0
2,4-Dimethyl phenol	0/3	65.3	8.50	57.0	74.0
Dimethyl phthalate	0/3	82.0	1.0	81.0	83.0
2,4-Dinitrophenol	0/3	59.0	1.73	58.0	61.0
2,4-Dinitrotoluene	3/4	98.8	9.84	86.0	110
2,6-Dinitrotoluene	0/3	87.3	5.69	81.0	92.0
Di-n-octyl phthalate	0/3	87.0	4.36	84.0	92.0
Fluoranthene	0/3	80.3	3.06	77.0	83.0
Fluorene	0/3	75.3	4.51	71.0	80.0
Hexachlorobenzene	0/3	89.0	6.08	85.0	96.0
Hexachlorobutadiene	0/3	55.3	17.2	43.0	75.0
Hexachlorocyclopentadiene	0/3	20.1	14.3	8.30	36.0
Hexachloroethane	0/3	48.3	11.2	40.0	61.0
Indeno[1,2,3-*c,d*]pyrene	0/3	70.0	2.65	68.0	73.0
Isophorone	0/3	72.7	2.08	71.0	75.0
2-Methyl-4,6-dinitrophenol	0/3	76.0	4.58	71.0	80.0
2-Methylnaphthalene	0/3	66.3	13.3	55.0	81.0
Naphthalene	0/3	55.0	9.0	46.0	64.0
m-Nitroaniline	0/3	89.0	3.61	86.0	93.0
o-Nitroaniline	0/3	80.3	3.06	77.0	83.0
p-Nitroaniline	0/3	90.3	2.31	89.0	93.0
Nitrobenzene	0/3	72.7	4.16	68.0	76.0
2-Nitrophenol	0/3	63.3	2.52	61.0	66.0
4-Nitrophenol	1/4	69.0	11.8	53.0	81.0
N-Nitrosodiphenylamine	0/3	81.0	8.0	73.0	89.0
N-Nitrosodipropylamine	0/4	69.5	4.43	66.0	76.0
Pentachlorophenol	0/4	76.0	8.87	63.0	83.0
Phenanthrene	0/3	73.7	4.04	69.0	76.0
Phenol	0/4	65.8	5.91	60.0	74.0
Pyrene	0/4	79.0	9.49	71.0	92.0
1,2,4-Trichlorobenzene	0/4	61.3	15.6	47.0	78.0
2,4,5-Trichlorophenol	0/3	84.3	5.69	78.0	89.0
2,4,6-Trichlorophenol	0/3	79.3	4.04	75.0	83.0
EPA9010A					
Cyanide	0/3	103	1.73	101	104
EPA9020A					
Total organic halogens	0/2	97.0	2.83	95.0	99.0
EPA9056					
Chloride	1/2	98.2	0.42	97.9	98.5
Nitrate as nitrogen	0/9	100	1.47	98.8	103
Nitrite as nitrogen	0/2	101	0.0	101	101
Sulfate	1/2	98.3	0.57	97.9	98.7
EPA9060M					
Total organic carbon	2/4	106	2.31	104	108

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
ESESOPM008					
Cesium-137	0/4	103	0.0	103	103
Cobalt-57	0/4	101	1.15	100	102
Cobalt-60	0/4	99.2	0.92	98.4	100
Yttrium-88	0/4	96.9	0.58	96.4	97.4
ESESOPM017					
Gross alpha	0/23	93.1	5.92	87.3	112
Nonvolatile beta	0/9	108	5.49	100	114
ESESOPM020					
Tritium	0/22	97.0	4.97	85.1	104
ESESOPM030					
Radium-226	0/1	86.8	—	86.8	86.8
Radium-228	0/2	109	7.78	103	114
ESESOPM031					
Strontium-90	0/2	110	0.0	110	110
ESESOPM032					
Americium-241	0/5	99.8	5.0	92.6	104
Neptunium-237	0/3	88.8	9.70	83.2	100
Plutonium-238	0/6	93.1	5.65	83.5	99.1
Plutonium-239/240	0/3	95.8	6.35	88.5	99.5
Thorium-230	0/8	95.4	11.7	82.4	107
Uranium-234	0/7	94.9	3.50	89.0	98.3
Uranium-238	0/7	96.8	3.20	93.6	100
ESESOPM041					
Carbon-14	0/1	86.5	—	86.5	86.5

† Number of laboratory control samples and blank spikes qualified due to poor recovery compared with the total number of laboratory control samples and blank spikes.
— Standard deviation cannot be determined.

Note: A value of 0 is reported as 0.0.

Table 69. Laboratory Control Sample and Blank Spike Recoveries for EX

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA120.1					
Specific conductance	0/2	100	0.0	100	100
EPA300.0					
Chloride	0/2	98.5	0.71	98.0	99.0
Fluoride	0/2	92.5	0.71	92.0	93.0
Nitrate as nitrogen	0/2	94.0	0.0	94.0	94.0
Nitrate-nitrite as nitrogen	0/2	94.0	0.0	94.0	94.0
Sulfate	0/2	91.0	0.0	91.0	91.0
EPA365.2					
Total phosphates (as P)	0/2	97.0	1.41	96.0	98.0
EPA415.1					
Total organic carbon	0/4	101	1.15	100	102

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA6010A					
Aluminum	0/2	110	5.66	106	114
Antimony	0/2	107	5.66	103	111
Arsenic	0/6	103	2.88	100	107
Barium	0/12	105	4.71	94.0	113
Beryllium	0/2	109	6.36	104	113
Cadmium	0/4	109	3.42	105	113
Calcium	0/2	108	5.66	104	112
Chromium	0/4	108	3.59	105	113
Cobalt	0/2	112	6.36	107	116
Copper	0/2	109	6.36	104	113
Iron	0/4	108	3.50	104	112
Lead	0/14	101	6.90	87.0	113
Magnesium	0/2	107	6.36	102	111
Manganese	0/4	108	3.86	104	113
Nickel	0/10	105	5.51	93.0	112
Potassium	0/2	108	4.24	105	111
Selenium	0/12	105	5.82	88.0	110
Silver	0/4	109	3.77	106	114
Sodium	0/4	108	4.08	105	114
Thallium	0/2	113	4.95	109	116
Vanadium	0/2	108	5.66	104	112
Zinc	0/2	109	5.66	105	113
EPA7470A					
Mercury	0/6	89.0	2.19	87.0	91.0
EPA8010A					
Carbon tetrachloride	0/2	99.0	4.24	96.0	102
Chloroform	0/2	100	7.07	95.0	105
Tetrachloroethylene	0/2	99.0	4.24	96.0	102
1,1,1-Trichloroethane	0/2	109	1.41	108	110
Trichloroethylene	0/2	99.0	4.24	96.0	102
EPA8081					
beta-Benzene hexachloride	0/2	91.5	2.12	90.0	93.0
Lindane	0/2	69.0	2.83	67.0	71.0
EPA8151					
2,4-Dichlorophenoxyacetic acid	0/4	73.0	2.31	71.0	75.0
EPA8260A					
Benzene	0/16	94.1	5.86	85.0	108
Chlorobenzene	0/16	95.9	6.28	86.0	108
1,1-Dichloroethylene	0/16	96.3	8.32	76.0	110
Toluene	0/16	92.6	7.38	78.0	108
Trichloroethylene	0/16	95.1	5.67	85.0	106
EPA8270B					
Acenaphthene	0/2	65.0	0.0	65.0	65.0
4-Chloro-m-cresol	0/2	60.5	0.71	60.0	61.0
2-Chlorophenol	0/2	61.0	0.0	61.0	61.0
1,4-Dichlorobenzene	0/2	61.0	0.0	61.0	61.0
2,4-Dinitrotoluene	0/2	76.0	1.41	75.0	77.0
4-Nitrophenol	0/2	36.0	1.41	35.0	37.0
N-Nitrosodipropylamine	0/2	68.0	1.41	67.0	69.0
Pentachlorophenol	0/2	70.5	0.71	70.0	71.0
Phenol	0/4	56.3	1.50	55.0	58.0
Pyrene	0/2	64.5	3.54	62.0	67.0
1,2,4-Trichlorobenzene	0/2	62.0	0.0	62.0	62.0

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA9010A					
Cyanide	0/6	97.8	4.36	92.0	102

† Number of laboratory control samples and blank spikes qualified due to poor recovery compared with the total number of laboratory control samples and blank spikes.

Note: A value of 0 is reported as 0.0.

Table 70. Laboratory Control Sample and Blank Spike Recoveries for GE

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA160.1					
Total dissolved solids	0/17	101	3.45	96.6	108
EPA180.1					
Turbidity	0/10	95.2	4.42	88.4	101
EPA300.0					
Bromide	0/1	104	—	104	104
Chloride	0/2	103	0.71	102	103
Sulfate	0/2	104	0.71	103	104
EPA310.1					
Alkalinity (as $CaCO_3$)	0/1	99.3	—	99.3	99.3
EPA350.1					
Ammonia nitrogen	0/1	94.9	—	94.9	94.9
EPA353.1					
Nitrate-nitrite as nitrogen	0/22	99.7	2.85	94.0	106
EPA365.4					
Total phosphates (as P)	0/2	94.0	4.17	91.0	96.9
EPA418.1					
Total petroleum hydrocarbons	3/3	72.2	3.58	70.1	76.3
EPA6010A					
Aluminum	0/20	101	3.68	94.7	106
Antimony	0/45	101	3.34	95.1	110
Arsenic	0/45	101	3.03	95.6	107
Barium	0/45	100	3.50	91.5	107
Beryllium	0/20	100	3.47	95.8	107
Cadmium	0/45	102	3.60	94.5	110
Calcium	0/20	102	3.89	96.5	110
Chromium	0/45	101	3.37	95.2	108
Cobalt	0/44	101	3.14	96.2	107
Copper	0/44	101	3.44	92.5	106
Iron	0/21	102	3.66	96.2	109
Lead	0/45	102	3.55	95.9	109
Lithium	0/5	99.4	5.30	93.6	107
Magnesium	0/20	99.0	3.91	92.9	107
Manganese	0/20	98.1	3.29	92.4	105
Nickel	0/46	101	3.31	94.2	108
Potassium	0/20	98.6	3.49	94.3	106
Selenium	0/45	99.8	3.14	93.9	108

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
Silica	0/5	101	2.51	97.8	104
Silver	0/45	104	4.11	90.1	112
Sodium	0/20	104	3.83	96.7	110
Thallium	0/41	100	3.02	94.2	107
Tin	0/29	103	3.46	96.2	109
Vanadium	0/45	101	3.02	94.2	106
Zinc	0/45	102	3.12	95.4	108
EPA7041					
Antimony	0/3	103	2.31	100	104
EPA7060					
Arsenic	0/3	96.8	0.72	96.3	97.6
EPA7421					
Lead	0/3	98.5	4.44	93.5	102
EPA7470					
Mercury	0/38	101	9.79	81.5	116
EPA7740					
Selenium	0/3	104	5.20	101	110
EPA7841					
Thallium	0/3	96.1	1.13	94.8	96.8
EPA8081					
Aldrin	0/7	93.9	15.9	67.0	116
p,p´-DDT	0/7	87.5	20.0	44.0	102
Dieldrin	0/7	90.8	16.2	56.0	104
Endrin	0/7	91.1	19.0	56.0	110
Heptachlor	0/7	97.4	16.6	64.0	115
Lindane	0/7	90.4	12.4	64.0	103
EPA8151					
2,4-Dichlorophenoxyacetic acid	1/1	6.18	—	6.18	6.18
2,4,5-T	1/1	5.59	—	5.59	5.59
2,4,5-TP (Silvex)	1/1	5.53	—	5.53	5.53
EPA8260A					
Benzene	0/54	101	9.38	82.8	124
Chlorobenzene	2/54	102	10.6	83.1	133
1,1-Dichloroethylene	0/54	99.3	12.6	77.2	126
Toluene	0/54	97.5	8.35	78.6	114
Trichloroethylene	3/54	103	8.67	87.0	128
EPA8270B					
Acenaphthene	1/13	80.1	6.08	72.2	90.8
4-Chloro-m-cresol	2/13	82.5	10.4	68.5	105
2-Chlorophenol	5/13	74.4	7.69	66.2	91.8
1,4-Dichlorobenzene	8/13	68.9	6.15	61.4	81.8
2,4-Dinitrotoluene	2/13	77.3	4.18	70.7	82.7
4-Nitrophenol	10/13	32.2	5.95	24.4	45.1
N-Nitrosodipropylamine	4/13	83.3	14.5	66.7	119
Pentachlorophenol	1/13	82.6	8.55	66.6	95.5
Phenol	10/13	30.9	5.25	26.3	45.6
Pyrene	0/13	92.2	12.0	76.3	115
1,2,4-Trichlorobenzene	7/13	70.4	4.93	65.2	82.4

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA9012					
Cyanide	0/36	102	10.0	86.3	119
EPA9020B					
Total organic halogens	0/2	92.1	10.5	84.6	99.5
EPA9045C					
pH	0/34	99.8	0.41	98.8	101
EPA9050					
Specific conductance	0/20	99.8	0.49	98.8	101
EPA9056					
Chloride	0/4	100	3.90	96.4	104
Fluoride	0/4	105	0.50	104	105
Nitrate as nitrogen	0/2	102	2.12	100	103
Nitrite as nitrogen	0/1	105	—	105	105
Sulfate	0/6	103	2.19	100	106
EPA9060					
Total organic carbon	0/5	103	5.24	95.2	109
EPA9066					
Phenols	1/12	104	8.98	86.4	124
EPA9070					
Oil & grease	0/3	99.6	3.21	96.6	103

† Number of laboratory control samples and blank spikes qualified due to poor recovery compared with the total number of laboratory control samples and blank spikes.
— Standard deviation cannot be determined.

Note: A value of 0 is reported as 0.0.

Table 71. Laboratory Control Sample and Blank Spike Recoveries for WA

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA160.1					
Total dissolved solids	0/4	101	4.03	97.0	106
EPA180.1					
Turbidity	0/4	102	6.89	92.7	107
EPA300.0					
Chloride	0/1	93.5	—	93.5	93.5
EPA340.2					
Fluoride	0/11	101	1.10	99.2	102
EPA350.3					
Ammonia	0/2	101	1.91	99.3	102
EPA353.2					
Nitrate as nitrogen	0/1	102	—	102	102
Nitrate-nitrite as nitrogen	0/9	102	2.55	98.0	106
Nitrite as nitrogen	0/3	101	0.0	101	101

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA365.2					
Phosphate	0/2	101	1.56	99.8	102
Total phosphates (as P)	0/1	103	—	103	103
EPA375.4					
Sulfate	0/1	96.5	—	96.5	96.5
EPA376.2					
Sulfide	0/2	102	1.41	101	103
EPA418.1					
Total petroleum hydrocarbons	0/2	85.9	3.61	83.3	88.4
EPA6010					
Aluminum	0/4	101	1.51	99.3	103
Antimony	0/5	101	6.06	97.4	112
Arsenic	0/5	99.7	1.34	97.8	101
Barium	0/13	98.8	1.95	94.5	102
Beryllium	0/5	102	3.04	96.8	104
Boron	0/1	100	—	100	100
Cadmium	0/6	101	1.37	100	104
Calcium	0/3	101	1.27	99.8	102
Chromium	0/6	101	1.63	98.3	103
Cobalt	0/6	99.0	3.51	95.2	103
Copper	0/5	100	1.51	97.7	101
Iron	0/3	101	2.87	97.6	103
Lead	0/12	100	2.08	96.9	104
Magnesium	0/3	101	2.46	98.1	103
Manganese	0/3	103	2.54	99.6	104
Nickel	0/13	98.7	2.75	92.7	103
Potassium	0/4	102	0.0	102	102
Selenium	0/12	98.8	2.25	95.1	103
Silver	0/6	100	1.23	98.5	102
Sodium	0/4	101	1.56	99.3	102
Thallium	0/4	99.6	1.80	98.0	102
Tin	0/1	99.4	—	99.4	99.4
Vanadium	0/5	101	3.24	98.0	105
Zinc	0/5	102	1.64	101	105
EPA7060					
Arsenic	0/1	103	—	103	103
EPA7421					
Lead	0/1	104	—	104	104
EPA7470					
Mercury	0/14	102	4.49	96.3	112
EPA7740					
Selenium	0/1	109	—	109	109
EPA7841					
Thallium	0/1	104	—	104	104
EPA8010					
Carbon tetrachloride	0/3	102	7.75	94.5	110
Chloroform	0/3	106	7.40	98.2	113
Tetrachloroethylene	0/3	103	3.21	101	107
1,1,1-Trichloroethane	0/1	101	—	101	101
Trichloroethylene	0/3	101	7.71	92.4	107

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA8020					
Benzene	0/1	93.2	—	93.2	93.2
Ethylbenzene	0/1	94.2	—	94.2	94.2
Toluene	0/1	92.0	—	92.0	92.0
Xylenes	0/1	95.0	—	95.0	95.0
EPA8081					
Aldrin	1/10	62.0	16.9	35.0	90.0
p,p´-DDT	0/10	99.6	6.38	90.0	110
Dieldrin	0/10	94.8	5.59	86.0	104
Endrin	0/10	95.4	8.33	76.0	106
Heptachlor	0/11	70.0	20.2	40.0	110
Lindane	0/11	90.5	7.23	80.0	100
PCB 1254	0/6	86.9	6.42	80.0	94.7
EPA8141					
Dimethoate	0/2	79.0	26.2	60.5	97.5
Disulfoton	0/2	91.5	6.36	87.0	96.0
Famphur	0/2	75.8	14.5	65.5	86.0
Parathion ethyl	0/2	96.3	8.13	90.5	102
Parathion methyl	0/2	92.0	9.19	85.5	98.5
Phorate	0/2	105	7.42	99.5	110
Sulfotepp	0/2	105	7.42	99.5	110
Thionazin	0/2	106	11.0	98.5	114
O,O,O-Triethyl phosphorothioate	1/2	141	0.71	140	141
EPA8150					
2,4,5-T	1/1	63.0	—	63.0	63.0
2,4,5-TP (Silvex)	3/3	61.1	10.0	49.6	68.0
EPA8151					
2,4-Dichlorophenoxyacetic acid	2/6	76.6	20.6	55.0	114
EPA8260					
Benzene	0/39	103	4.97	89.2	112
Chlorobenzene	0/39	102	5.39	90.4	114
1,1-Dichloroethylene	0/39	105	8.40	90.0	127
Toluene	0/39	102	5.21	89.0	114
Trichloroethylene	0/39	98.8	7.21	84.8	113
EPA8270					
Acenaphthene	1/12	67.7	11.7	42.2	81.4
Bis(2-ethylhexyl) phthalate	0/3	86.6	33.9	60.8	125
4-Chloro-m-cresol	0/12	71.5	14.9	49.2	94.3
2-Chlorophenol	0/12	73.1	12.5	46.4	90.8
1,4-Dichlorobenzene	1/12	48.2	11.1	28.1	69.3
2,4-Dinitrotoluene	0/12	82.1	21.2	39.2	126
4-Nitrophenol	5/12	76.0	20.3	46.7	104
N-Nitrosodipropylamine	0/12	74.2	18.5	40.7	98.7
Pentachlorophenol	1/12	75.0	22.4	43.9	110
Phenol	0/15	72.9	11.8	44.7	92.2
Pyrene	0/12	79.0	18.0	36.5	98.0
1,2,4-Trichlorobenzene	1/12	52.7	11.5	30.8	70.5
EPA8280					
Hexachlorodibenzo-p-dioxins	0/1	100	—	100	100
Hexachlorodibenzo-p-furans	0/1	94.0	—	94.0	94.0
Pentachlorodibenzo-p-furans	0/2	110	2.12	108	111

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
2,3,7,8-TCDD	0/3	112	2.0	110	114
Tetrachlorodibenzo-p-dioxins	0/1	112	—	112	112
Tetrachlorodibenzo-p-furans	0/1	98.0	—	98.0	98.0
EPA8310					
Acenaphthene	0/2	86.6	0.71	86.1	87.1
Acenaphthylene	0/2	82.9	0.14	82.8	83.0
Anthracene	0/2	86.5	2.05	85.0	87.9
Benzo[*a*]anthracene	0/2	91.5	3.25	89.2	93.8
Benzo[*b*]fluoranthene	0/2	88.4	2.33	86.7	90.0
Benzo[*k*]fluoranthene	0/2	89.5	3.32	87.1	91.8
Benzo[*g,h,i*]perylene	0/2	83.0	2.40	81.3	84.7
Benzo[*a*]pyrene	0/2	84.8	4.74	81.4	88.1
Chrysene	0/2	89.4	2.69	87.5	91.3
Dibenz[*a,h*]anthracene	0/2	83.7	2.33	82.0	85.3
Fluoranthene	0/2	88.9	1.98	87.5	90.3
Fluorene	0/2	85.0	0.0	85.0	85.0
Indeno[1,2,3-*c,d*]pyrene	0/2	85.6	3.96	82.8	88.4
Naphthalene	0/2	74.0	1.13	73.2	74.8
Phenanthrene	0/2	85.3	0.92	84.6	85.9
Pyrene	0/2	87.5	1.34	86.5	88.4
EPA9010A					
Cyanide	0/60	96.9	3.71	87.0	105
EPA9020B					
Total organic halogens	0/16	101	3.93	94.6	107
EPA9050					
Specific conductance	0/10	101	1.95	98.4	104
EPA9056					
Chloride	0/3	94.8	2.84	92.9	98.1
Sulfate	0/3	96.5	0.20	96.3	96.7
EPA9060					
Total organic carbon	0/6	102	1.54	99.3	104
EPA9066					
Phenols	0/10	96.5	2.45	92.2	99.7

† Number of laboratory control samples and blank spikes qualified due to poor recovery compared with the total number of laboratory control samples and blank spikes.
— Standard deviation cannot be determined.

Note: A value of 0 is reported as 0.0.

Table 72. Laboratory Control Sample and Blank Spike Recoveries for GP

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPIA-001					
Gross alpha	0/30	106	7.29	92.6	120
Nonvolatile beta	1/30	104	6.75	91.8	121
EPIA-002					
Tritium	0/24	96.4	5.15	82.6	106

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPIA-003					
Carbon-14	0/18	95.9	6.20	82.9	106
EPIA-004					
Strontium-90	5/29	95.3	13.9	74.6	117
EPIA-005					
Technetium-99	0/26	97.5	5.20	84.0	113
EPIA-006					
Iodine-129	2/24	88.4	9.54	79.2	116
EPIA-008					
Radium-226	0/26	96.7	8.52	84.6	112
EPIA-009					
Radium-228	5/26	103	14.2	78.7	125
EPIA-010					
Radium, total alpha-emitting	0/2	91.9	1.56	90.8	93.0
EPIA-011					
Americium-241	3/32	99.7	12.0	74.6	123
Curium-243/244	4/25	94.6	12.7	77.6	123
Plutonium-239/240	2/25	97.8	10.7	78.2	123
Uranium-238	1/25	89.7	6.47	76.7	105
EPIA-012					
Thorium-232	4/23	100	13.4	74.6	123
EPIA-013					
Cesium-137	0/25	99.3	5.23	89.2	113
EPIA-020					
Promethium-147	1/4	89.1	8.48	78.5	96.5
EPIA-022					
Nickel-63	0/13	92.0	5.47	82.9	101
EPIA-032					
Neptunium-237	0/4	92.2	10.1	82.4	106

† Number of laboratory control samples and blank spikes qualified due to poor recovery compared with the total number of laboratory control samples and blank spikes.

Table 73. Laboratory Control Sample and Blank Spike Recoveries for TM

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
3500NIEMOD					
Nickel-63	3/6	96.2	20.8	72.9	121
EICHROMTC1MOD					
Technetium-99	0/15	102	8.40	84.6	120

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EMLAM01MOD					
Americium-241	0/5	93.0	5.65	84.7	99.4
Americium-241/Curium-246	0/13	99.7	4.03	91.0	106
Curium-243/244	0/13	95.9	4.25	90.5	105
EMLPM01MOD					
Promethium-147	1/3	111	18.2	91.1	127
EMLPU02MOD					
Neptunium-237	3/4	74.3	18.8	55.2	100
Plutonium-238	0/13	96.9	5.79	89.6	109
Plutonium-239	0/1	98.7	—	98.7	98.7
Plutonium-239/240	0/12	102	5.30	90.7	111
EMLSR02MOD					
Strontium-90	0/18	91.2	4.81	84.5	98.9
EMLTH01MOD					
Thorium-228	0/13	98.8	5.49	87.8	105
Thorium-230	0/13	104	5.29	89.7	113
Thorium-232	0/13	101	3.90	93.8	106
EMLU02MOD					
Uranium-234	0/14	103	4.48	96.9	111
Uranium-235	5/14	94.8	32.4	52.8	169
Uranium-238	0/14	106	5.34	96.2	114
ENICMOD					
Carbon-14	0/8	101	2.24	98.7	106
EPA900.0MOD					
Gross alpha	0/39	105	6.46	87.9	119
Nonvolatile beta	0/37	101	5.19	87.3	112
EPA901.1MOD					
Cesium-137	0/20	103	3.15	96.2	108
Cobalt-60	0/19	98.1	2.85	93.9	108
EPA902.0MOD					
Iodine-129	1/13	103	11.1	88.2	121
EPA903.0MOD					
Radium, total alpha-emitting	0/11	104	1.60	101	107
Radium-226	0/16	99.6	5.85	91.7	111
EPA904.0MOD					
Radium-228	5/16	111	15.5	89.1	141
EPA906.0MOD					
Tritium	0/29	98.9	5.71	88.1	111

† Number of laboratory control samples and blank spikes qualified due to poor recovery compared with the total number of laboratory control samples and blank spikes.
— Standard deviation cannot be determined.

Note: A value of 0 is reported as 0.0.

Table 74. Surrogate Recoveries for ES

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA8010					
Dibromofluoromethane	3/39	94.3	7.38	82.5	113
X13CFB	0/39	92.8	8.29	73.5	111
EPA8021					
Dibromofluoromethane	0/5	94.6	2.58	92.0	98.0
X13CFB	0/5	96.9	2.48	95.0	101
EPA8081					
Decachlorobiphenyl	0/65	84.2	14.7	48.3	105
Tetrachloro-m-xylene	0/65	89.2	8.57	71.4	114
EPA8260					
p-Bromofluorobenzene	1/145	98.2	5.07	82.0	112
Dibromofluoromethane	0/145	99.1	3.66	88.0	110
1,2-Dichloroethane-d4	0/145	94.8	6.90	82.0	118
Toluene-d8	0/145	100	3.58	88.0	110
EPA8270					
2-Fluorobiphenyl	1/56	66.3	13.8	7.60	90.0
2-Fluorophenol	1/56	67.7	14.9	9.40	88.0
Nitrobenzene-d5	1/56	71.1	12.9	7.80	88.0
Phenol-d5	1/56	72.0	15.1	9.20	94.0
p-Terphenyl-d14	1/56	102	16.6	11.0	120
2,4,6-Tribromophenol (surr)	1/56	70.5	14.1	6.30	100

† Number of surrogates qualified due to poor recovery compared with the total number of surrogates.

Table 75. Surrogate Recoveries for EX

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA8010A					
p-Bromofluorobenzene	0/7	112	12.7	96.0	131
EPA8081					
Decachlorobiphenyl	0/11	99.0	14.4	79.0	117
Tetrachloro-m-xylene	0/11	57.1	10.3	45.0	78.0
EPA8151					
2,4-Dichlorophenylacetic acid	0/9	99.6	3.75	95.0	103
EPA8260A					
p-Bromofluorobenzene	18/77	90.0	9.84	73.0	120
1,2-Dichloroethane-d4	18/77	101	13.4	78.0	124
Toluene-d8	4/77	96.4	6.83	81.0	121
EPA8270B					
2-Fluorobiphenyl	0/11	63.2	8.58	47.0	72.0
2-Fluorophenol	0/8	51.0	7.25	41.0	60.0
Nitrobenzene-d5	0/11	58.0	8.93	43.0	67.0

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
Phenol-d5	0/8	54.1	7.83	43.0	63.0
p-Terphenyl-d14	0/11	74.7	4.94	66.0	82.0
2,4,6-Tribromophenol (surr)	0/8	62.4	15.2	38.0	77.0

† Number of surrogates qualified due to poor recovery compared with the total number of surrogates.

Table 76. Surrogate Recoveries for GE

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA8081					
Decachlorobiphenyl	0/8	80.2	8.93	70.7	95.0
Dibutylchlorendate	0/26	83.5	15.7	55.7	130
Tetrachloro-m-xylene	0/38	74.7	13.8	47.3	111
EPA8151					
2,4-Dichlorophenylacetic acid	13/15	89.9	50.4	5.13	167
EPA8260A					
p-Bromofluorobenzene	192/491	96.0	9.24	68.4	133
Dibromofluoromethane	195/491	103	13.5	42.6	151
Toluene-d8	202/491	95.6	9.87	76.2	141
EPA8270					
2-Fluorobiphenyl	0/18	76.1	7.30	63.1	87.0
Nitrobenzene-d5	0/18	72.8	9.77	56.8	98.1
p-Terphenyl-d14	0/18	61.4	21.2	34.9	110
EPA8270B					
2-Fluorobiphenyl	5/365	80.2	39.2	13.3	804
2-Fluorophenol	3/47	43.7	11.4	0.0	65.5
Nitrobenzene-d5	5/365	76.6	33.7	11.6	684
Phenol-d6	2/47	29.8	7.77	0.0	47.3
p-Terphenyl-d14	6/364	66.0	36.2	14.9	626
2,4,6-Tribromophenol (surr)	2/47	71.8	22.4	0.0	122

† Number of surrogates qualified due to poor recovery compared with the total number of surrogates.

Note: A value of 0 is reported as 0.0.

Table 77. Surrogate Recoveries for WA

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA8010					
Bromochloromethane	0/9	102	7.89	83.6	111
EPA8020					
Fluorobenzene	0/5	95.4	2.24	92.2	97.8
EPA8081					
Decachlorobiphenyl	3/137	81.9	14.5	22.5	117
Tetrachloro-m-xylene	4/126	57.2	17.7	17.5	108

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Minimum Recovery (%)	Maximum Recovery (%)
EPA8141					
TPP	0/7	102	10.2	91.0	116
Tributyl phosphate	1/14	115	41.5	75.0	248
EPA8151					
2,4-Dichlorophenylacetic acid	41/58	69.6	8.15	44.0	81.8
EPA8260					
p-Bromofluorobenzene	5/593	98.7	5.73	75.0	118
1,2-Dichloroethane-d4	18/593	100	7.07	54.0	123
Toluene-d8	10/593	102	4.59	88.0	119
EPA8270					
2-Fluorobiphenyl	3/97	61.1	9.60	17.7	78.6
2-Fluorophenol	6/109	61.8	17.6	0.46	108
Nitrobenzene-d5	1/97	64.2	11.4	17.7	90.4
Phenol-d5	6/109	57.0	21.4	3.56	112
p-Terphenyl-d14	1/97	76.6	12.8	23.5	100
2,4,6-Tribromophenol (surr)	3/109	68.5	21.5	0.0	113
EPA8280					
Carbon 13-labeled 1,2,3,6,7,8-HXCDD	1/12	75.5	22.1	6.0	87.0
Carbon 13-labeled 2,3,7,8-TCDD	1/13	71.0	20.0	6.0	81.0
Carbon 13-labeled 2,3,7,8-TCDF	1/10	68.0	21.9	6.0	79.0
Carbon 13-labeled HPCDF	1/12	80.5	24.0	6.0	95.0
EPA8310					
Triphenylene	0/6	79.9	6.88	71.4	91.0

† Number of surrogates qualified due to poor recovery compared with the total number of surrogates.

Note: A value of 0 is reported as 0.0.

Table 78. Matrix Spike Recoveries for ES

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
EPA350.1						
Ammonia nitrogen	0/2	96.1	0.42	-3.90	95.8	96.4
EPA365.1						
Total phosphates (as P)	0/2	94.2	0.92	-5.80	93.5	94.8
EPA6010						
Aluminum	0/4	101	3.94	1.0	97.0	106
Antimony	0/6	97.5	1.44	-2.50	95.8	99.6
Arsenic	0/10	95.4	2.98	-4.60	90.8	99.5
Barium	0/10	96.2	1.80	-3.80	93.0	98.5
Beryllium	0/6	98.9	2.26	-1.10	95.2	101
Boron	0/2	94.1	0.50	-5.90	93.7	94.4
Cadmium	0/10	94.7	2.07	-5.30	92.0	98.2
Calcium	0/4	99.3	1.49	-0.70	97.8	101
Chromium	0/10	96.2	2.49	-3.80	91.5	99.0
Cobalt	0/6	97.9	0.89	-2.10	96.4	98.8

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
Copper	0/6	98.4	1.92	-1.60	96.0	101
Iron	0/4	103	2.38	3.0	100	105
Lead	0/16	96.1	3.77	-3.90	88.7	102
Magnesium	0/4	98.9	1.17	-1.10	97.4	100
Manganese	0/4	97.8	0.70	-2.20	97.0	98.6
Nickel	0/6	96.4	1.02	-3.60	94.8	97.6
Potassium	0/4	93.0	3.38	-7.0	90.2	97.9
Selenium	0/10	94.3	2.71	-5.70	90.5	97.5
Silver	0/10	97.4	5.40	-2.60	92.0	107
Sodium	0/4	91.8	1.56	-8.20	90.2	93.7
Thallium	0/6	93.3	4.94	-6.70	88.1	99.5
Vanadium	0/6	97.7	1.16	-2.30	96.0	98.8
Zinc	0/6	98.0	1.60	-2.0	96.0	100
EPA7470						
Mercury	3/16	84.0	22.5	-16.0	32.8	106
EPA8010						
Carbon tetrachloride	0/4	105	3.30	5.0	101	109
Chloroform	0/4	108	5.06	8.0	102	114
Tetrachloroethylene	0/4	102	2.82	2.0	98.8	105
1,1,1-Trichloroethane	0/4	103	4.33	3.0	97.6	108
Trichloroethylene	0/4	101	4.72	1.0	95.2	105
EPA8081						
Aldrin	0/5	77.6	3.13	-22.4	72.5	80.3
alpha-Benzene hexachloride	0/5	106	4.32	6.0	101	112
beta-Benzene hexachloride	0/11	99.7	6.44	-0.30	88.0	106
delta-Benzene hexachloride	0/5	74.1	2.01	-25.9	71.5	76.8
alpha-Chlordane	0/5	87.2	0.65	-12.8	86.5	88.0
gamma-Chlordane	0/5	94.3	2.26	-5.70	91.3	96.5
p,p´-DDD	0/5	103	1.52	3.0	101	104
p,p´-DDE	0/5	100	0.78	0.0	99.3	101
p,p´-DDT	0/5	98.1	1.18	-1.90	96.5	99.3
Dieldrin	0/5	109	1.48	9.0	107	111
Endosulfan sulfate	0/5	86.5	1.70	-13.5	84.0	88.5
Endosulfan I	0/5	120	1.92	20.0	118	123
Endosulfan II	0/5	106	1.48	6.0	104	108
Endrin	0/5	99.4	1.95	-0.60	98.0	102
Endrin aldehyde	0/5	110	33.6	10.0	56.5	134
Endrin ketone	0/5	85.6	1.59	-14.4	83.0	86.8
Heptachlor	0/5	100	2.70	0.0	95.5	102
Heptachlor epoxide	0/5	108	1.10	8.0	106	109
Lindane	0/5	87.1	2.16	-12.9	85.0	90.0
Methoxychlor	0/5	104	1.92	4.0	101	106
EPA8260						
Benzene	0/20	98.6	4.31	-1.40	92.0	108
Chlorobenzene	0/20	99.1	4.02	-0.90	92.0	108
1,1-Dichloroethylene	0/20	94.9	5.09	-5.10	88.0	102
Toluene	0/20	99.4	5.43	-0.60	92.0	110
Trichloroethylene	0/20	92.6	3.19	-7.40	86.0	100
EPA8270						
Acenaphthene	0/5	66.2	6.72	-33.8	57.7	76.0
4-Chloro-m-cresol	0/5	67.8	1.92	-32.2	65.0	70.0
2-Chlorophenol	0/5	64.8	10.4	-35.2	50.0	78.0
1,4-Dichlorobenzene	1/5	46.9	8.31	-53.1	34.6	55.8

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
2,4-Dinitrotoluene	2/5	94.6	8.01	-5.40	84.6	104
4-Nitrophenol	0/5	53.0	6.44	-47.0	46.0	63.0
N-Nitrosodipropylamine	0/5	67.2	3.25	-32.8	63.5	72.0
Pentachlorophenol	0/5	58.6	3.21	-41.4	55.0	63.0
Phenol	0/5	55.8	9.23	-44.2	43.0	69.0
Pyrene	0/5	80.9	3.66	-19.1	76.9	86.0
1,2,4-Trichlorobenzene	1/5	55.6	8.17	-44.4	42.3	63.5
EPA9010A						
Cyanide	0/6	96.7	4.40	-3.30	90.9	102
EPA9020A						
Total organic halogens	0/2	101	2.83	1.0	99.0	103
EPA9056						
Chloride	0/2	97.0	1.77	-3.0	95.7	98.2
Nitrate as nitrogen	0/12	100	2.82	0.0	95.7	104
Nitrite as nitrogen	0/2	102	0.71	2.0	101	102
Sulfate	0/2	98.5	0.21	-1.50	98.3	98.6
EPA9060M						
Total organic carbon	0/1	95.8	—	-4.20	95.8	95.8
ESESOPM017						
Gross alpha	1/8	93.1	24.2	-6.90	39.7	120
Nonvolatile beta	1/6	89.0	19.9	-11.0	49.8	105
ESESOPM020						
Tritium	0/16	97.9	4.30	-2.10	91.0	103
ESESOPM041						
Carbon-14	0/2	87.3	5.66	-12.7	83.3	91.3

† Number of matrix spikes qualified due to poor recovery compared with the total number of matrix spikes.
— Standard deviation cannot be determined.

Note: A value of 0 is reported as 0.0.

Table 79. Matrix Spike Recoveries for EX

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
EPA300.0						
Chloride	0/1	92.0	—	-8.0	92.0	92.0
Fluoride	0/1	90.0	—	-10.0	90.0	90.0
Nitrate as nitrogen	0/1	96.0	—	-4.0	96.0	96.0
Nitrate-nitrite as nitrogen	0/1	103	—	3.0	103	103
EPA365.2						
Total phosphates (as P)	0/1	94.0	—	-6.0	94.0	94.0
EPA415.1						
Total organic carbon	0/1	114	—	14.0	114	114
EPA6010A						
Aluminum	0/1	95.0	—	-5.0	95.0	95.0
Antimony	0/1	94.0	—	-6.0	94.0	94.0

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
Arsenic	0/2	93.5	3.54	-6.50	91.0	96.0
Barium	0/4	102	6.35	2.0	93.0	108
Beryllium	0/1	94.0	—	-6.0	94.0	94.0
Cadmium	0/1	95.0	—	-5.0	95.0	95.0
Calcium	0/1	95.0	—	-5.0	95.0	95.0
Chromium	0/2	100	5.66	0.0	96.0	104
Cobalt	0/1	98.0	—	-2.0	98.0	98.0
Copper	0/1	94.0	—	-6.0	94.0	94.0
Iron	0/2	99.5	6.36	-0.50	95.0	104
Lead	0/4	96.5	1.29	-3.50	95.0	98.0
Magnesium	0/1	93.0	—	-7.0	93.0	93.0
Manganese	0/2	99.0	5.66	-1.0	95.0	103
Nickel	0/4	100	7.35	0.0	94.0	109
Potassium	0/1	97.0	—	-3.0	97.0	97.0
Selenium	0/4	94.0	5.60	-6.0	87.0	99.0
Silver	0/2	100	7.07	0.0	95.0	105
Sodium	0/2	98.0	7.07	-2.0	93.0	103
Thallium	0/1	100	—	0.0	100	100
Vanadium	0/1	94.0	—	-6.0	94.0	94.0
Zinc	0/1	95.0	—	-5.0	95.0	95.0
EPA7470A						
Mercury	0/1	95.0	—	-5.0	95.0	95.0
EPA8010A						
Carbon tetrachloride	0/2	105	5.66	5.0	101	109
Chloroform	0/2	93.5	4.95	-6.50	90.0	97.0
Tetrachloroethylene	0/2	105	5.66	5.0	101	109
1,1,1-Trichloroethane	1/2	121	7.78	21.0	115	126
Trichloroethylene	0/2	105	5.66	5.0	101	109
EPA8260A						
Benzene	0/14	95.2	4.58	-4.80	88.0	103
Chlorobenzene	0/14	97.6	4.78	-2.40	90.0	107
1,1-Dichloroethylene	0/14	91.9	5.52	-8.10	81.0	101
Toluene	0/14	95.9	3.79	-4.10	90.0	103
Trichloroethylene	0/14	92.4	8.44	-7.60	76.0	107

† Number of matrix spikes qualified due to poor recovery compared with the total number of matrix spikes.
— Standard deviation cannot be determined.

Note: A value of 0 is reported as 0.0.

Table 80. Matrix Spike Recoveries for GE

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
EPA353.1						
Nitrate-nitrite as nitrogen	3/34	91.6	13.0	-8.40	40.0	108
EPA365.4						
Total phosphates (as P)	0/2	85.0	2.83	-15.0	83.0	87.0
EPA6010A						
Aluminum	0/12	102	3.06	2.0	97.4	108
Antimony	0/38	102	3.60	2.0	92.2	109
Arsenic	0/38	101	3.53	1.0	93.0	107

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
Barium	0/38	102	2.73	2.0	97.0	107
Beryllium	0/14	102	4.06	2.0	93.9	107
Cadmium	0/38	102	4.37	2.0	91.0	110
Calcium	0/10	103	2.91	3.0	100	109
Chromium	0/38	102	3.11	2.0	93.1	107
Cobalt	0/38	102	3.55	2.0	92.2	107
Copper	0/38	102	3.02	2.0	94.2	109
Iron	0/12	105	2.27	5.0	101	109
Lead	0/38	102	4.20	2.0	90.9	110
Lithium	0/4	102	3.11	2.0	97.7	105
Magnesium	0/12	102	4.49	2.0	98.1	110
Manganese	0/14	97.6	8.36	-2.40	77.2	106
Nickel	0/38	102	4.08	2.0	91.7	109
Potassium	0/14	97.7	6.19	-2.30	82.0	107
Selenium	0/38	101	3.97	1.0	91.5	108
Silica	0/4	103	1.41	3.0	101	104
Silver	0/38	105	2.70	5.0	98.8	111
Sodium	0/14	101	6.21	1.0	92.2	110
Thallium	0/21	86.2	36.2	-13.8	0.0	106
Tin	0/20	105	3.24	5.0	97.8	109
Vanadium	0/38	102	2.95	2.0	94.3	108
Zinc	0/38	102	3.34	2.0	94.3	109
EPA7041						
Antimony	0/6	97.3	2.79	-2.70	94.3	101
EPA7060						
Arsenic	0/6	94.7	1.59	-5.30	91.6	96.0
EPA7421						
Lead	0/6	97.6	2.70	-2.40	95.0	101
EPA7470						
Mercury	0/32	102	13.2	2.0	78.0	122
EPA7740						
Selenium	0/6	90.1	4.21	-9.90	84.8	94.2
EPA7841						
Thallium	2/6	86.5	15.4	-13.5	67.4	104
EPA8081						
Aldrin	1/4	103	39.4	3.0	76.0	160
p,p´-DDT	1/4	105	37.6	5.0	76.0	160
Dieldrin	1/4	103	39.0	3.0	76.0	160
Endrin	1/4	115	44.1	15.0	84.0	180
Heptachlor	1/4	110	35.8	10.0	83.0	160
Lindane	1/4	119	37.1	19.0	85.0	170
EPA8151						
2,4-Dichlorophenoxyacetic acid	2/2	61.2	5.80	-38.8	57.1	65.3
2,4,5-T	2/2	67.7	7.78	-32.3	62.2	73.2
2,4,5-TP (Silvex)	1/2	73.9	7.78	-26.1	68.4	79.4
EPA8260A						
Benzene	2/50	102	13.7	2.0	77.2	144
Chlorobenzene	6/50	103	15.2	3.0	72.4	134
1,1-Dichloroethylene	1/50	109	17.4	9.0	59.4	132

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
Toluene	2/50	98.4	13.3	-1.60	73.6	117
Trichloroethylene	6/50	104	15.9	4.0	75.2	143
EPA8270B						
Acenaphthene	0/6	76.6	12.6	-23.4	63.0	94.5
4-Chloro-m-cresol	0/6	65.2	11.9	-34.8	43.5	76.2
2-Chlorophenol	2/6	48.8	23.5	-51.2	11.2	73.0
1,4-Dichlorobenzene	0/6	65.5	14.2	-34.5	47.8	83.5
2,4-Dinitrotoluene	0/6	74.0	8.19	-26.0	62.2	81.6
4-Nitrophenol	2/6	26.7	21.3	-73.3	0.0	46.0
N-Nitrosodipropylamine	2/6	85.8	27.3	-14.2	57.9	124
Pentachlorophenol	2/6	45.1	32.0	-54.9	0.0	75.6
Phenol	0/6	33.0	11.4	-67.0	12.7	45.5
Pyrene	0/6	85.2	15.3	-14.8	67.5	109
1,2,4-Trichlorobenzene	0/6	66.2	11.5	-33.8	53.6	81.6
EPA9012						
Cyanide	4/45	94.2	20.6	-5.80	0.0	131
EPA9020B						
Total organic halogens	1/3	117	14.5	17.0	103	132
EPA9056						
Chloride	0/2	102	10.7	2.0	94.9	110
Fluoride	0/2	97.7	2.83	-2.30	95.7	99.7
Nitrite as nitrogen	0/1	105	—	5.0	105	105
Sulfate	0/2	100	3.82	0.0	97.6	103
EPA9060						
Total organic carbon	0/11	104	8.04	4.0	85.3	114
EPA9066						
Phenols	0/11	101	7.40	1.0	92.5	118

† Number of matrix spikes qualified due to poor recovery compared with the total number of matrix spikes.
— Standard deviation cannot be determined.

Note: A value of 0 is reported as 0.0.

Table 81. Matrix Spike Recoveries for WA

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
EPA310.1						
Alkalinity (as $CaCO_3$)	0/1	99.0	—	-1.0	99.0	99.0
EPA340.2						
Fluoride	0/6	94.8	2.86	-5.20	90.0	98.5
EPA350.3						
Ammonia	0/1	96.6	—	-3.40	96.6	96.6
EPA353.2						
Nitrate as nitrogen	0/2	103	0.71	3.0	102	103
Nitrate-nitrite as nitrogen	0/8	100	2.81	0.0	95.5	105
Nitrite as nitrogen	0/4	102	2.89	2.0	99.1	105

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
EPA365.2						
Total phosphates (as P)	0/9	103	13.6	3.0	75.2	118
EPA376.2						
Sulfide	0/1	143	—	43.0	143	143
EPA6010						
Aluminum	0/10	102	4.50	2.0	95.6	109
Antimony	0/18	101	5.69	1.0	95.9	119
Arsenic	0/18	100	3.12	0.0	95.2	106
Barium	0/44	98.4	3.91	-1.60	92.3	110
Beryllium	0/12	102	1.32	2.0	99.0	103
Boron	0/2	99.1	0.64	-0.90	98.6	99.5
Cadmium	0/18	99.7	2.16	-0.30	95.6	103
Calcium	0/10	100	1.60	0.0	97.6	102
Chromium	0/20	99.2	1.26	-0.80	97.1	102
Cobalt	0/18	98.3	3.68	-1.70	93.7	107
Copper	0/18	98.4	1.33	-1.60	95.3	100
Iron	0/14	99.4	3.94	-0.60	95.2	108
Lead	0/44	98.9	2.83	-1.10	92.0	105
Lithium	0/2	105	0.71	5.0	104	105
Magnesium	0/10	99.5	4.46	-0.50	95.1	107
Manganese	0/14	102	1.63	2.0	99.4	104
Nickel	0/44	98.3	2.96	-1.70	90.2	104
Potassium	0/10	100	1.25	0.0	97.5	102
Selenium	0/42	99.3	2.87	-0.70	92.1	105
Silica	0/2	120	0.0	20.0	120	120
Silver	0/20	98.8	3.04	-1.20	95.4	110
Sodium	0/14	96.6	2.35	-3.40	92.4	101
Thallium	0/14	99.2	2.07	-0.80	96.8	104
Tin	0/4	97.3	1.20	-2.70	96.1	98.5
Vanadium	0/18	99.8	2.96	-0.20	95.9	106
Zinc	0/18	99.6	1.77	-0.40	97.0	103
EPA7470						
Mercury	0/26	97.4	3.43	-2.60	91.7	105
EPA7740						
Selenium	0/2	97.0	4.24	-3.0	94.0	100
EPA7841						
Thallium	0/2	115	0.0	15.0	115	115
EPA8010						
Carbon tetrachloride	0/1	96.4	—	-3.60	96.4	96.4
Chloroform	0/1	100	—	0.0	100	100
Tetrachloroethylene	0/1	90.9	—	-9.10	90.9	90.9
1,1,1-Trichloroethane	0/1	96.2	—	-3.80	96.2	96.2
Trichloroethylene	0/1	92.4	—	-7.60	92.4	92.4
EPA8020						
Benzene	0/1	91.6	—	-8.40	91.6	91.6
Ethylbenzene	0/1	98.1	—	-1.90	98.1	98.1
Toluene	0/1	86.6	—	-13.4	86.6	86.6
Xylenes	0/1	93.9	—	-6.10	93.9	93.9
EPA8081						
Aldrin	0/6	73.4	21.4	-26.6	40.0	95.0
p,p´-DDT	0/6	98.0	9.12	-2.0	88.0	112
Dieldrin	0/6	93.0	5.48	-7.0	84.0	98.0

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
Endrin	0/6	91.0	8.74	-9.0	80.0	100
Heptachlor	1/6	78.3	22.5	-21.7	40.0	110
Lindane	0/10	97.0	11.1	-3.0	85.0	120
PCB 1254	0/5	82.0	1.98	-18.0	78.6	83.7
EPA8141						
Dimethoate	1/2	123	62.9	23.0	78.0	167
Disulfoton	1/2	135	74.2	35.0	82.0	187
Famphur	1/2	103	40.0	3.0	74.5	131
Parathion ethyl	1/2	133	68.9	33.0	84.5	182
Parathion methyl	1/2	127	65.4	27.0	80.5	173
Phorate	1/2	159	104	59.0	85.5	233
Sulfotepp	1/2	159	104	59.0	85.5	233
Thionazin	1/2	160	101	60.0	88.5	232
O,O,O-Triethyl phosphorothioate	1/2	168	150	68.0	62.5	274
EPA8150						
2,4,5-TP (Silvex)	1/1	58.0	—	-42.0	58.0	58.0
EPA8151						
2,4-Dichlorophenoxyacetic acid	2/5	73.3	9.85	-26.7	58.6	82.6
EPA8260						
Benzene	0/20	103	6.59	3.0	85.8	110
Chlorobenzene	0/20	102	6.38	2.0	87.0	112
1,1-Dichloroethylene	0/20	105	12.6	5.0	75.8	141
Toluene	0/20	102	5.59	2.0	88.2	110
Trichloroethylene	2/20	95.7	14.4	-4.30	65.0	133
EPA8270						
Acenaphthene	1/9	62.5	12.9	-37.5	36.6	76.4
Bis(2-ethylhexyl) phthalate	0/1	62.8	—	-37.2	62.8	62.8
4-Chloro-m-cresol	0/9	58.4	13.0	-41.6	41.1	81.3
2-Chlorophenol	0/9	60.9	13.1	-39.1	40.7	76.2
1,4-Dichlorobenzene	1/9	46.8	6.82	-53.2	34.0	52.6
2,4-Dinitrotoluene	1/9	72.9	19.5	-27.1	37.6	103
4-Nitrophenol	1/9	61.3	27.0	-38.7	20.7	115
N-Nitrosodipropylamine	1/9	61.8	15.2	-38.2	37.5	81.1
Pentachlorophenol	0/9	51.6	26.2	-48.4	14.3	89.0
Phenol	0/12	57.9	15.2	-42.1	27.1	72.7
Pyrene	0/9	73.3	14.2	-26.7	49.7	99.1
1,2,4-Trichlorobenzene	1/9	51.0	7.22	-49.0	35.9	56.5
EPA8280						
Hexachlorodibenzo-p-dioxins	0/1	89.0	—	-11.0	89.0	89.0
Hexachlorodibenzo-p-furans	0/1	92.0	—	-8.0	92.0	92.0
Pentachlorodibenzo-p-furans	0/2	104	7.07	4.0	99.0	109
2,3,7,8-TCDD	0/1	110	—	10.0	110	110
Tetrachlorodibenzo-p-dioxins	0/1	110	—	10.0	110	110
Tetrachlorodibenzo-p-furans	0/1	94.0	—	-6.0	94.0	94.0
EPA8310						
Acenaphthene	0/1	95.7	—	-4.30	95.7	95.7
Acenaphthylene	0/1	89.7	—	-10.3	89.7	89.7

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
Anthracene	0/1	83.3	—	-16.7	83.3	83.3
Benzo[*a*]anthracene	0/1	92.3	—	-7.70	92.3	92.3
Benzo[*b*]fluoranthene	0/1	87.8	—	-12.2	87.8	87.8
Benzo[*k*]fluoranthene	0/1	89.4	—	-10.6	89.4	89.4
Benzo[*g,h,i*]perylene	0/1	70.8	—	-29.2	70.8	70.8
Benzo[*a*]pyrene	0/1	74.6	—	-25.4	74.6	74.6
Chrysene	0/1	89.9	—	-10.1	89.9	89.9
Dibenz[*a,h*]anthracene	0/1	69.3	—	-30.7	69.3	69.3
Fluoranthene	0/1	94.3	—	-5.70	94.3	94.3
Fluorene	0/1	92.6	—	-7.40	92.6	92.6
Indeno[1,2,3-*c,d*]pyrene	0/1	80.5	—	-19.5	80.5	80.5
Naphthalene	0/1	89.0	—	-11.0	89.0	89.0
Phenanthrene	0/1	92.0	—	-8.0	92.0	92.0
Pyrene	0/1	90.7	—	-9.30	90.7	90.7
EPA9010A						
Cyanide	0/20	93.5	7.91	-6.50	78.4	106
EPA9020B						
Total organic halogens	1/4	110	17.8	10.0	94.6	134
EPA9056						
Chloride	0/6	98.0	4.09	-2.0	90.9	102
Sulfate	0/6	94.8	6.27	-5.20	82.5	100
EPA9060						
Total organic carbon	1/5	115	12.4	15.0	100	130
EPA9066						
Phenols	0/5	98.6	6.39	-1.40	95.2	110

† Number of matrix spikes qualified due to poor recovery compared with the total number of matrix spikes.
— Standard deviation cannot be determined.

Note: A value of 0 is reported as 0.0.

Table 82. Matrix Spike Recoveries for GP

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
EPIA-001						
Gross alpha	0/28	105	11.1	5.0	75.3	122
Nonvolatile beta	0/27	102	8.70	2.0	82.3	117
EPIA-002						
Tritium	0/17	95.1	7.96	-4.90	77.7	111
EPIA-003						
Carbon-14	0/17	94.9	6.10	-5.10	81.8	102
EPIA-004						
Strontium-90	1/27	96.7	14.9	-3.30	63.0	124
EPIA-005						
Technetium-99	0/26	99.1	4.89	-0.90	88.0	112

Analyte	Qualified Out of Range†	Mean Recovery (%)	Standard Deviation	Bias (%)	Minimum Recovery (%)	Maximum Recovery (%)
EPIA-006						
Iodine-129	2/23	85.6	11.6	-14.4	72.4	123
EPIA-008						
Radium-226	0/27	94.2	9.99	-5.80	79.2	114
EPIA-009						
Radium-228	0/25	105	11.8	5.0	78.5	122
EPIA-010						
Radium, total alpha-emitting	0/3	89.5	4.24	-10.5	86.4	94.3
EPIA-011						
Americium-241	0/29	98.1	13.7	-1.90	79.7	123
Curium-243/244	0/23	92.8	12.0	-7.20	76.7	120
Plutonium-238	1/11	93.7	9.86	-6.30	74.7	112
Plutonium-239/240	0/12	95.7	10.7	-4.30	83.4	116
Uranium-238	0/22	92.0	10.9	-8.0	78.0	120
EPIA-012						
Thorium-232	0/23	98.4	13.0	-1.60	75.5	121
EPIA-013						
Cesium-137	0/24	95.3	8.42	-4.70	78.7	110
EPIA-020						
Promethium-147	0/5	94.0	9.95	-6.0	81.5	104
EPIA-022						
Nickel-63	0/13	91.4	6.04	-8.60	81.2	100
EPIA-032						
Neptunium-237	0/4	91.1	6.21	-8.90	85.5	100

† Number of matrix spikes qualified due to poor recovery compared with the total number of matrix spikes.

Table 83. Analytes Detected in Method Blanks for ES

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA120.1				
Specific conductance	0/2	1.0	0.0	1.0/1.0 µS/cm
EPA350.1				
Ammonia nitrogen	0/1	50.0	—	50.0/50.0 µg/L
EPA365.1				
Total phosphates (as P)	0/2	10.0	0.0	10.0/10.0 µg/L
EPA6010				
Aluminum	0/4	20.0	0.0	20.0/20.0 µg/L
Antimony	0/7	5.0	0.0	5.0/5.0 µg/L
Arsenic	0/8	8.0	0.0	8.0/8.0 µg/L
Barium	0/8	2.0	0.0	2.0/2.0 µg/L
Beryllium	0/7	1.0	0.0	1.0/1.0 µg/L
Boron	0/1	25.0	—	25.0/25.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Cadmium	0/8	2.0	0.0	2.0/2.0 µg/L
Calcium	0/4	50.0	0.0	50.0/50.0 µg/L
Chromium	0/8	3.0	0.0	3.0/3.0 µg/L
Cobalt	0/7	5.0	0.0	5.0/5.0 µg/L
Copper	0/7	3.0	0.0	3.0/3.0 µg/L
Iron	0/4	20.0	0.0	20.0/20.0 µg/L
Lead	0/12	5.0	0.0	5.0/5.0 µg/L
Magnesium	0/4	50.0	0.0	50.0/50.0 µg/L
Manganese	0/4	3.0	0.0	3.0/3.0 µg/L
Nickel	0/7	5.0	0.0	5.0/5.0 µg/L
Potassium	0/4	400	0.0	400/400 µg/L
Selenium	0/8	5.0	0.0	5.0/5.0 µg/L
Silver	0/8	2.0	0.0	2.0/2.0 µg/L
Sodium	0/4	100	0.0	100/100 µg/L
Thallium	0/7	5.0	0.0	5.0/5.0 µg/L
Vanadium	0/7	2.0	0.0	2.0/2.0 µg/L
Zinc	0/7	10.0	0.0	10.0/10.0 µg/L
EPA7470				
Mercury	0/7	0.20	0.0	0.20/0.20 µg/L
EPA8010				
Carbon tetrachloride	0/2	0.41	0.0	0.41/0.41 µg/L
Chloroform	0/2	0.43	0.0	0.43/0.43 µg/L
Tetrachloroethylene	0/2	0.57	0.0	0.57/0.57 µg/L
1,1,1-Trichloroethane	0/2	0.46	0.0	0.46/0.46 µg/L
Trichloroethylene	0/2	0.39	0.0	0.39/0.39 µg/L
EPA8021				
Carbon tetrachloride	0/3	0.41	0.0	0.41/0.41 µg/L
Chloroform	0/3	0.43	0.0	0.43/0.43 µg/L
Tetrachloroethylene	0/2	0.57	0.0	0.57/0.57 µg/L
1,1,1-Trichloroethane	0/3	0.46	0.0	0.46/0.46 µg/L
Trichloroethylene	0/2	0.39	0.0	0.39/0.39 µg/L
EPA8081				
Aldrin	0/3	0.02	0.0	0.02/0.02 µg/L
alpha-Benzene hexachloride	0/3	0.02	0.0	0.02/0.02 µg/L
beta-Benzene hexachloride	0/6	0.02	0.0	0.02/0.02 µg/L
delta-Benzene hexachloride	0/3	0.02	0.0	0.02/0.02 µg/L
Chlordane	0/3	0.07	0.0	0.07/0.07 µg/L
alpha-Chlordane	0/3	0.02	0.0	0.02/0.02 µg/L
gamma-Chlordane	0/3	0.02	0.0	0.02/0.02 µg/L
p,p´-DDD	0/3	0.02	0.0	0.02/0.02 µg/L
p,p´-DDE	0/3	0.02	0.0	0.02/0.02 µg/L
p,p´-DDT	0/3	0.02	0.0	0.02/0.02 µg/L
Dieldrin	0/3	0.02	0.0	0.02/0.02 µg/L
Endosulfan sulfate	0/3	0.02	0.0	0.02/0.02 µg/L
Endosulfan I	0/3	0.02	0.0	0.02/0.02 µg/L
Endosulfan II	0/3	0.02	0.0	0.02/0.02 µg/L
Endrin	0/3	0.02	0.0	0.02/0.02 µg/L
Endrin aldehyde	0/3	0.02	0.0	0.02/0.02 µg/L
Endrin ketone	0/3	0.02	0.0	0.02/0.02 µg/L
Heptachlor	0/3	0.02	0.0	0.02/0.02 µg/L
Heptachlor epoxide	0/3	0.02	0.0	0.02/0.02 µg/L
Lindane	0/3	0.02	0.0	0.02/0.02 µg/L
Methoxychlor	0/3	0.02	0.0	0.02/0.02 µg/L
PCB 1016	0/3	0.30	0.0	0.30/0.30 µg/L
PCB 1221	0/3	0.30	0.0	0.30/0.30 µg/L
PCB 1232	0/3	0.30	0.0	0.30/0.30 µg/L
PCB 1242	0/3	0.30	0.0	0.30/0.30 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
PCB 1248	0/3	0.30	0.0	0.30/0.30 µg/L
PCB 1254	0/3	0.30	0.0	0.30/0.30 µg/L
PCB 1260	0/3	0.30	0.0	0.30/0.30 µg/L
Toxaphene	0/3	1.50	0.0	1.50/1.50 µg/L
EPA8260				
Acetone	17/21	7.11	2.20	3.70/10.0 µg/L
Acetonitrile	0/17	20.0	0.0	20.0/20.0 µg/L
Acrolein	0/17	10.0	0.0	10.0/10.0 µg/L
Acrylonitrile	0/17	20.0	0.0	20.0/20.0 µg/L
Allyl chloride	0/17	10.0	0.0	10.0/10.0 µg/L
Benzene	0/21	5.0	0.0	5.0/5.0 µg/L
Bromochloromethane	0/6	10.0	0.0	10.0/10.0 µg/L
Bromodichloromethane	0/21	5.0	0.0	5.0/5.0 µg/L
Bromoform	0/21	5.0	0.0	5.0/5.0 µg/L
Bromomethane	0/21	10.0	0.0	10.0/10.0 µg/L
Carbon disulfide	0/21	5.0	0.0	5.0/5.0 µg/L
Carbon tetrachloride	0/21	5.0	0.0	5.0/5.0 µg/L
Chlorobenzene	0/21	5.0	0.0	5.0/5.0 µg/L
Chloroethane	0/21	10.0	0.0	10.0/10.0 µg/L
Chloroethene	0/21	10.0	0.0	10.0/10.0 µg/L
2-Chloroethyl vinyl ether	0/1	10.0	—	10.0/10.0 µg/L
Chloroform	0/21	5.0	0.0	5.0/5.0 µg/L
Chloromethane	0/21	10.0	0.0	10.0/10.0 µg/L
Chloroprene	0/17	5.0	0.0	5.0/5.0 µg/L
Dibromochloromethane	0/21	5.0	0.0	5.0/5.0 µg/L
1,2-Dibromo-3-chloropropane	0/17	5.0	0.0	5.0/5.0 µg/L
1,2-Dibromoethane	0/17	5.0	0.0	5.0/5.0 µg/L
Dibromomethane	0/17	5.0	0.0	5.0/5.0 µg/L
1,2-Dichlorobenzene	0/6	5.0	0.0	5.0/5.0 µg/L
1,4-Dichlorobenzene	0/16	5.0	0.0	5.0/5.0 µg/L
trans-1,4-Dichloro-2-butene	0/17	5.0	0.0	5.0/5.0 µg/L
Dichlorodifluoromethane	0/17	5.0	0.0	5.0/5.0 µg/L
1,1-Dichloroethane	0/21	5.0	0.0	5.0/5.0 µg/L
1,2-Dichloroethane	0/21	5.0	0.0	5.0/5.0 µg/L
1,1-Dichloroethylene	0/21	5.0	0.0	5.0/5.0 µg/L
cis-1,2-Dichloroethylene	0/13	5.0	0.0	5.0/5.0 µg/L
trans-1,2-Dichloroethylene	0/14	5.0	0.0	5.0/5.0 µg/L
Dichloromethane	21/21	2.73	1.53	1.70/7.10 µg/L
1,2-Dichloropropane	0/21	5.0	0.0	5.0/5.0 µg/L
cis-1,3-Dichloropropene	0/21	5.0	0.0	5.0/5.0 µg/L
trans-1,3-Dichloropropene	0/21	5.0	0.0	5.0/5.0 µg/L
Ethylbenzene	0/21	5.0	0.0	5.0/5.0 µg/L
2-Hexanone	0/21	10.0	0.0	10.0/10.0 µg/L
Iodomethane	0/17	5.0	0.0	5.0/5.0 µg/L
Isobutyl alcohol	0/17	100	0.0	100/100 µg/L
Methacrylonitrile	1/17	4.84	0.66	2.30/5.0 µg/L
Methyl ethyl ketone	0/21	10.0	0.0	10.0/10.0 µg/L
Methyl isobutyl ketone	0/21	12.0	0.0	12.0/12.0 µg/L
Methyl methacrylate	0/17	5.0	0.0	5.0/5.0 µg/L
Propionitrile	0/17	5.0	0.0	5.0/5.0 µg/L
Styrene	0/21	5.0	0.0	5.0/5.0 µg/L
1,1,1,2-Tetrachloroethane	0/17	5.0	0.0	5.0/5.0 µg/L
1,1,2,2-Tetrachloroethane	0/21	5.0	0.0	5.0/5.0 µg/L
Tetrachloroethylene	0/21	5.0	0.0	5.0/5.0 µg/L
Toluene	0/21	5.0	0.0	5.0/5.0 µg/L
1,1,1-Trichloroethane	0/21	5.0	0.0	5.0/5.0 µg/L
1,1,2-Trichloroethane	0/21	5.0	0.0	5.0/5.0 µg/L
Trichloroethylene	0/21	5.0	0.0	5.0/5.0 µg/L
Trichlorofluoromethane	0/17	5.0	0.0	5.0/5.0 µg/L
1,2,3-Trichloropropane	0/17	5.0	0.0	5.0/5.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Vinyl acetate	0/21	5.0	0.0	5.0/5.0 µg/L
Xylenes	0/22	5.0	0.0	5.0/5.0 µg/L
EPA8270				
Acenaphthene	0/3	10.0	0.0	10.0/10.0 µg/L
Acenaphthylene	0/3	10.0	0.0	10.0/10.0 µg/L
Anthracene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzidine	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*a*]anthracene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*b*]fluoranthene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*k*]fluoranthene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzoic acid	0/3	50.0	0.0	50.0/50.0 µg/L
Benzo[*g,h,i*]perylene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*a*]pyrene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzyl alcohol	0/3	20.0	0.0	20.0/20.0 µg/L
Bis(2-chloroethoxy) methane	0/3	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroethyl) ether	0/3	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroisopropyl) ether	0/3	10.0	0.0	10.0/10.0 µg/L
Bis(2-ethylhexyl) phthalate	2/3	5.20	4.33	1.60/10.0 µg/L
4-Bromophenyl phenyl ether	0/3	10.0	0.0	10.0/10.0 µg/L
Butylbenzyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
4-Chloroaniline	0/3	20.0	0.0	20.0/20.0 µg/L
4-Chloro-m-cresol	0/3	20.0	0.0	20.0/20.0 µg/L
2-Chloronaphthalene	0/3	10.0	0.0	10.0/10.0 µg/L
2-Chlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
4-Chlorophenyl phenyl ether	0/3	10.0	0.0	10.0/10.0 µg/L
Chrysene	0/3	10.0	0.0	10.0/10.0 µg/L
m/p-Cresol	0/3	10.0	0.0	10.0/10.0 µg/L
o-Cresol	0/3	10.0	0.0	10.0/10.0 µg/L
Dibenz[*a,h*]anthracene	0/3	10.0	0.0	10.0/10.0 µg/L
Dibenzofuran	0/3	10.0	0.0	10.0/10.0 µg/L
Di-n-butyl phthalate	2/7	7.40	4.45	0.87/10.0 µg/L
1,2-Dichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
1,3-Dichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
1,4-Dichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
3,3´-Dichlorobenzidine	0/3	20.0	0.0	20.0/20.0 µg/L
2,4-Dichlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
Diethyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
2,4-Dimethyl phenol	0/3	10.0	0.0	10.0/10.0 µg/L
Dimethyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
2,4-Dinitrophenol	0/3	50.0	0.0	50.0/50.0 µg/L
2,4-Dinitrotoluene	0/3	10.0	0.0	10.0/10.0 µg/L
2,6-Dinitrotoluene	0/3	10.0	0.0	10.0/10.0 µg/L
Di-n-octyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
Fluoranthene	0/3	10.0	0.0	10.0/10.0 µg/L
Fluorene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachlorobutadiene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachlorocyclopentadiene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachloroethane	0/3	10.0	0.0	10.0/10.0 µg/L
Indeno[1,2,3-*c,d*]pyrene	0/3	10.0	0.0	10.0/10.0 µg/L
Isophorone	0/3	10.0	0.0	10.0/10.0 µg/L
2-Methyl-4,6-dinitrophenol	0/3	50.0	0.0	50.0/50.0 µg/L
2-Methylnaphthalene	0/3	10.0	0.0	10.0/10.0 µg/L
Naphthalene	0/3	10.0	0.0	10.0/10.0 µg/L
m-Nitroaniline	0/3	50.0	0.0	50.0/50.0 µg/L
o-Nitroaniline	0/3	50.0	0.0	50.0/50.0 µg/L
p-Nitroaniline	0/3	50.0	0.0	50.0/50.0 µg/L
Nitrobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
2-Nitrophenol	0/3	10.0	0.0	10.0/10.0 µg/L
4-Nitrophenol	0/3	50.0	0.0	50.0/50.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
N-Nitrosodiphenylamine	0/3	10.0	0.0	10.0/10.0 µg/L
N-Nitrosodipropylamine	0/3	10.0	0.0	10.0/10.0 µg/L
Pentachlorophenol	0/3	50.0	0.0	50.0/50.0 µg/L
Phenanthrene	0/3	10.0	0.0	10.0/10.0 µg/L
Phenol	0/3	10.0	0.0	10.0/10.0 µg/L
Pyrene	0/3	10.0	0.0	10.0/10.0 µg/L
1,2,4-Trichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
2,4,5-Trichlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
2,4,6-Trichlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
EPA9010A				
Cyanide	0/3	5.0	0.0	5.0/5.0 µg/L
EPA9020A				
Total organic halogens	1/2	9.19	1.15	8.37/10.0 µg/L
EPA9040A				
pH	4/4	5.69	0.06	5.64/5.77 pH
EPA9056				
Chloride	0/1	500	—	500/500 µg/L
Nitrate as nitrogen	6/7	64.3	19.9	50.0/100 µg/L
Nitrite as nitrogen	1/1	50.0	—	50.0/50.0 µg/L
Sulfate	0/1	5,000	—	5,000/5,000 µg/L
EPA9060M				
Total organic carbon	0/2	1,000	0.0	1,000/1,000 µg/L
ESESOPM008				
Actinium-228	2/2	-2.72E-09	2.23E-09	-4.30E-09/-1.14E-09 µCi/mL
Antimony-125	2/2	-1.30E-10	5.52E-10	-5.20E-10/2.60E-10 µCi/mL
Cerium-144	2/2	-5.25E-10	1.34E-10	-6.20E-10/-4.30E-10 µCi/mL
Cesium-134	2/2	-4.65E-10	7.07E-12	-4.70E-10/-4.60E-10 µCi/mL
Cesium-137	2/2	1.30E-10	4.81E-10	-2.10E-10/4.70E-10 µCi/mL
Cobalt-57	2/2	-3.65E-10	2.76E-10	-5.60E-10/-1.70E-10 µCi/mL
Cobalt-60	2/2	6.25E-10	8.13E-10	5.00E-11/1.20E-09 µCi/mL
Europium-152	2/2	-1.04E-09	3.55E-09	-3.55E-09/1.47E-09 µCi/mL
Europium-154	2/2	-1.16E-09	3.47E-09	-3.61E-09/1.30E-09 µCi/mL
Europium-155	2/2	1.81E-09	1.20E-10	1.72E-09/1.89E-09 µCi/mL
Iodine-129	1/1	1.60E-10	—	1.60E-10/1.60E-10 µCi/mL
Lead-212	1/2	1.31E-09	2.18E-09	-2.30E-10/2.85E-09 µCi/mL
Manganese-54	2/2	-8.35E-10	6.36E-11	-8.80E-10/-7.90E-10 µCi/mL
Potassium-40	2/2	-8.40E-10	1.39E-08	-1.07E-08/9.02E-09 µCi/mL
Promethium-144	2/2	1.35E-10	5.30E-10	-2.40E-10/5.10E-10 µCi/mL
Promethium-146	2/2	9.60E-10	4.24E-10	6.60E-10/1.26E-09 µCi/mL
Ruthenium-106	2/2	-3.24E-09	1.07E-08	-1.08E-08/4.33E-09 µCi/mL
Sodium-22	2/2	-5.35E-10	1.42E-09	-1.54E-09/4.70E-10 µCi/mL
Thorium-234	2/2	-6.20E-09	2.43E-08	-2.34E-08/1.10E-08 µCi/mL
Yttrium-88	2/2	-5.00E-12	6.15E-10	-4.40E-10/4.30E-10 µCi/mL
Zinc-65	2/2	1.85E-09	6.29E-10	1.40E-09/2.29E-09 µCi/mL
ESESOPM017				
Gross alpha	0/15	-3.84E-10	4.31E-10	-1.20E-09/1.00E-10 µCi/mL
Nonvolatile beta	0/6	2.50E-10	1.02E-09	-1.08E-09/1.75E-09 µCi/mL
ESESOPM020				
Tritium	0/47	-3.00E-08	3.20E-07	-8.55E-07/5.97E-07 µCi/mL

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
ESESOPM030				
Radium-226	0/1	-1.30E-10	—	-1.30E-10/-1.30E-10 µCi/mL
Radium-228	0/2	-6.50E-10	2.55E-10	-8.30E-10/-4.70E-10 µCi/mL
ESESOPM031				
Strontium-90	0/1	9.00E-11	—	9.00E-11/9.00E-11 µCi/mL
ESESOPM032				
Americium-241	4/6	1.03E-10	4.63E-11	5.00E-11/1.60E-10 µCi/mL
Curium-242	0/6	1.17E-11	4.36E-11	-3.00E-11/7.00E-11 µCi/mL
Curium-243	2/6	1.02E-10	1.45E-10	-2.00E-11/3.00E-10 µCi/mL
Curium-246	4/6	1.03E-10	4.63E-11	5.00E-11/1.60E-10 µCi/mL
Neptunium-237	0/3	7.00E-11	1.73E-11	6.00E-11/9.00E-11 µCi/mL
Plutonium-238	0/5	3.42E-11	2.84E-11	-9.00E-12/6.00E-11 µCi/mL
Plutonium-239/240	0/5	4.18E-11	2.09E-11	9.00E-12/6.00E-11 µCi/mL
Thorium-228	2/5	9.80E-11	3.70E-11	6.00E-11/1.60E-10 µCi/mL
Thorium-230	5/5	3.94E-10	2.86E-10	1.00E-10/7.00E-10 µCi/mL
Thorium-232	0/5	2.68E-11	3.05E-11	0.0/6.00E-11 µCi/mL
Uranium-234	3/7	3.00E-11	1.98E-11	5.00E-12/6.00E-11 µCi/mL
Uranium-235	0/7	1.29E-11	1.61E-11	-9.00E-12/3.00E-11 µCi/mL
Uranium-238	0/7	6.29E-12	6.82E-12	0.0/2.00E-11 µCi/mL
ESESOPM041				
Carbon-14	0/1	0.0	—	0.0/0.0 µCi/mL

† Number of times analyte was detected compared to the total number of method blanks for the analyte.
— Standard deviation cannot be determined.

Note: If the analyte was not detected in the method blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 84. Analytes Detected in Method Blanks for EX

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA120.1				
Specific conductance	0/1	1.0	—	1.0/1.0 µS/cm
EPA300.0				
Chloride	0/1	200	—	200/200 µg/L
Fluoride	0/1	200	—	200/200 µg/L
Nitrate as nitrogen	0/1	100	—	100/100 µg/L
Nitrate-nitrite as nitrogen	0/1	200	—	200/200 µg/L
Sulfate	0/1	200	—	200/200 µg/L
EPA365.2				
Total phosphates (as P)	0/1	50.0	—	50.0/50.0 µg/L
EPA415.1				
Total organic carbon	0/2	5,000	0.0	5,000/5,000 µg/L
EPA6010A				
Aluminum	1/1	50.3	—	50.3/50.3 µg/L
Antimony	0/1	100	—	100/100 µg/L
Arsenic	0/3	40.0	52.0	10.0/100 µg/L
Barium	2/6	3.64	2.11	0.84/5.0 µg/L
Beryllium	0/1	5.0	—	5.0/5.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Cadmium	0/2	5.0	0.0	5.0/5.0 µg/L
Calcium	0/1	1,000	—	1,000/1,000 µg/L
Chromium	0/2	10.0	0.0	10.0/10.0 µg/L
Cobalt	0/1	20.0	—	20.0/20.0 µg/L
Copper	0/1	10.0	—	10.0/10.0 µg/L
Iron	1/2	56.7	61.3	13.3/100 µg/L
Lead	3/7	18.0	36.2	3.55/100 µg/L
Magnesium	0/1	500	—	500/500 µg/L
Manganese	0/2	10.0	0.0	10.0/10.0 µg/L
Nickel	0/5	20.0	0.0	20.0/20.0 µg/L
Potassium	0/1	1,000	—	1,000/1,000 µg/L
Selenium	0/6	41.7	77.6	10.0/200 µg/L
Silver	0/2	20.0	0.0	20.0/20.0 µg/L
Sodium	0/2	1,000	0.0	1,000/1,000 µg/L
Thallium	0/1	500	—	500/500 µg/L
Vanadium	0/1	10.0	—	10.0/10.0 µg/L
Zinc	0/1	10.0	—	10.0/10.0 µg/L
EPA7470A				
Mercury	0/3	0.20	0.0	0.20/0.20 µg/L
EPA8010A				
Carbon tetrachloride	0/1	1.0	—	1.0/1.0 µg/L
Chloroform	0/1	1.0	—	1.0/1.0 µg/L
Tetrachloroethylene	0/1	1.0	—	1.0/1.0 µg/L
1,1,1-Trichloroethane	0/1	1.0	—	1.0/1.0 µg/L
Trichloroethylene	0/1	1.0	—	1.0/1.0 µg/L
EPA8081				
beta-Benzene hexachloride	0/1	0.05	—	0.05/0.05 µg/L
Lindane	0/1	0.05	—	0.05/0.05 µg/L
EPA8151				
2,4-Dichlorophenoxyacetic acid	0/2	0.50	0.0	0.50/0.50 µg/L
EPA8260A				
Acetone	0/9	8.89	2.20	5.0/10.0 µg/L
Acetonitrile	0/7	200	0.0	200/200 µg/L
Acrolein	0/7	10.0	0.0	10.0/10.0 µg/L
Acrylonitrile	0/7	10.0	0.0	10.0/10.0 µg/L
Allyl chloride	0/5	20.0	0.0	20.0/20.0 µg/L
Benzene	0/8	4.0	1.85	1.0/5.0 µg/L
Bromochloromethane	0/1	5.0	—	5.0/5.0 µg/L
Bromodichloromethane	0/8	4.0	1.85	1.0/5.0 µg/L
Bromoform	0/8	4.0	1.85	1.0/5.0 µg/L
Bromomethane	0/8	4.25	1.39	2.0/5.0 µg/L
Carbon disulfide	0/9	4.11	1.76	1.0/5.0 µg/L
Carbon tetrachloride	0/8	4.0	1.85	1.0/5.0 µg/L
Chlorobenzene	0/8	4.0	1.85	1.0/5.0 µg/L
Chloroethane	0/8	4.25	1.39	2.0/5.0 µg/L
Chloroethene	0/8	4.0	1.85	1.0/5.0 µg/L
2-Chloroethyl vinyl ether	0/6	5.0	0.0	5.0/5.0 µg/L
Chloroform	0/8	4.0	1.85	1.0/5.0 µg/L
Chloromethane	0/8	4.25	1.39	2.0/5.0 µg/L
Chloroprene	0/5	20.0	0.0	20.0/20.0 µg/L
Dibromochloromethane	0/8	4.0	1.85	1.0/5.0 µg/L
1,2-Dibromo-3-chloropropane	0/5	10.0	0.0	10.0/10.0 µg/L
1,2-Dibromoethane	0/5	5.0	0.0	5.0/5.0 µg/L
Dibromomethane	0/5	5.0	0.0	5.0/5.0 µg/L
1,2-Dichlorobenzene	0/5	5.0	0.0	5.0/5.0 µg/L
1,3-Dichlorobenzene	0/5	5.0	0.0	5.0/5.0 µg/L

Analyte	*Frequency of Detection†*	*Mean Result*	*Standard Deviation*	*Minimum/Maximum Results*
1,4-Dichlorobenzene	0/6	5.0	0.0	5.0/5.0 µg/L
trans-1,4-Dichloro-2-butene	0/5	20.0	0.0	20.0/20.0 µg/L
Dichlorodifluoromethane	0/7	5.0	0.0	5.0/5.0 µg/L
1,1-Dichloroethane	0/8	4.0	1.85	1.0/5.0 µg/L
1,2-Dichloroethane	0/8	4.0	1.85	1.0/5.0 µg/L
1,1-Dichloroethylene	0/8	4.0	1.85	1.0/5.0 µg/L
1,2-Dichloroethylene	0/8	6.25	2.31	5.0/10.0 µg/L
cis-1,2-Dichloroethylene	0/4	5.0	0.0	5.0/5.0 µg/L
trans-1,2-Dichloroethylene	0/6	5.0	0.0	5.0/5.0 µg/L
Dichloromethane	0/8	7.75	4.17	1.0/10.0 µg/L
1,2-Dichloropropane	0/8	4.0	1.85	1.0/5.0 µg/L
cis-1,3-Dichloropropene	0/8	4.0	1.85	1.0/5.0 µg/L
trans-1,3-Dichloropropene	0/8	4.0	1.85	1.0/5.0 µg/L
1,4-Dioxane	0/5	1,000	0.0	1,000/1,000 µg/L
Ethyl methacrylate	0/5	10.0	0.0	10.0/10.0 µg/L
Ethylbenzene	0/8	4.0	1.85	1.0/5.0 µg/L
2-Hexanone	0/9	8.0	3.97	1.0/10.0 µg/L
Iodomethane	0/5	5.0	0.0	5.0/5.0 µg/L
Isobutyl alcohol	0/5	1,000	0.0	1,000/1,000 µg/L
Methacrylonitrile	0/5	500	0.0	500/500 µg/L
Methyl ethyl ketone	0/9	8.89	2.20	5.0/10.0 µg/L
Methyl isobutyl ketone	0/9	8.89	2.20	5.0/10.0 µg/L
Methyl methacrylate	0/5	50.0	0.0	50.0/50.0 µg/L
Pentachloroethane	0/5	20.0	0.0	20.0/20.0 µg/L
Propionitrile	0/5	500	0.0	500/500 µg/L
Styrene	0/9	4.11	1.76	1.0/5.0 µg/L
1,1,1,2-Tetrachloroethane	0/5	5.0	0.0	5.0/5.0 µg/L
1,1,2,2-Tetrachloroethane	0/8	4.0	1.85	1.0/5.0 µg/L
Tetrachloroethylene	0/8	4.0	1.85	1.0/5.0 µg/L
Toluene	0/8	4.0	1.85	1.0/5.0 µg/L
1,1,1-Trichloroethane	0/8	4.0	1.85	1.0/5.0 µg/L
1,1,2-Trichloroethane	0/8	4.0	1.85	1.0/5.0 µg/L
Trichloroethylene	0/8	4.0	1.85	1.0/5.0 µg/L
Trichlorofluoromethane	0/6	5.0	0.0	5.0/5.0 µg/L
1,2,3-Trichloropropane	0/5	5.0	0.0	5.0/5.0 µg/L
Vinyl acetate	0/9	8.0	3.97	1.0/10.0 µg/L
Xylenes	0/9	10.0	0.0	10.0/10.0 µg/L
EPA8270B				
Di-n-butyl phthalate	0/1	10.0	—	10.0/10.0 µg/L
Phenol	0/1	10.0	—	10.0/10.0 µg/L
EPA9010A				
Cyanide	0/3	10.0	0.0	10.0/10.0 µg/L

† Number of times analyte was detected compared to the total number of method blanks for the analyte.
— Standard deviation cannot be determined.

Note: If the analyte was not detected in the method blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 85. Analytes Detected in Method Blanks for GE

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA160.1				
Total dissolved solids	2/13	10,700	2,210	10,000/18,000 µg/L
EPA180.1				
Turbidity	0/10	0.38	0.06	0.20/0.40 NTU
EPA300.0				
Bromide	0/1	250	—	250/250 µg/L
Chloride	0/1	250	—	250/250 µg/L
Sulfate	0/1	1,000	—	1,000/1,000 µg/L
EPA350.1				
Ammonia nitrogen	0/1	50.0	—	50.0/50.0 µg/L
EPA353.1				
Nitrate-nitrite as nitrogen	11/20	28.0	20.4	10.0/50.0 µg/L
EPA365.4				
Total phosphates (as P)	0/2	50.0	0.0	50.0/50.0 µg/L
EPA418.1				
Total petroleum hydrocarbons	0/1	1,000	—	1,000/1,000 µg/L
EPA6010A				
Aluminum	0/16	50.0	0.0	50.0/50.0 µg/L
Antimony	4/38	9.24	2.24	2.14/10.0 µg/L
Arsenic	0/38	5.0	0.0	5.0/5.0 µg/L
Barium	0/38	5.0	0.0	5.0/5.0 µg/L
Beryllium	0/16	5.0	0.0	5.0/5.0 µg/L
Cadmium	2/38	4.75	1.06	0.25/5.0 µg/L
Calcium	9/16	63.3	36.3	16.3/100 µg/L
Chromium	2/38	4.81	0.81	0.99/5.0 µg/L
Cobalt	0/37	5.0	0.0	5.0/5.0 µg/L
Copper	0/37	5.0	0.0	5.0/5.0 µg/L
Iron	2/17	45.5	12.8	10.5/50.0 µg/L
Lead	9/38	4.11	1.63	0.82/5.0 µg/L
Lithium	0/4	25.0	0.0	25.0/25.0 µg/L
Magnesium	10/16	8.42	2.49	3.55/12.0 µg/L
Manganese	1/16	10.2	0.70	10.0/12.8 µg/L
Nickel	1/39	4.93	0.43	2.31/5.0 µg/L
Potassium	9/16	56.0	40.8	8.60/100 µg/L
Selenium	7/38	4.44	1.22	1.41/5.0 µg/L
Silica	4/4	78.7	28.3	54.1/108 µg/L
Silver	11/38	3.84	1.85	0.65/5.0 µg/L
Sodium	7/16	82.0	24.7	31.7/100 µg/L
Thallium	3/34	5.31	1.56	2.87/10.0 µg/L
Tin	1/25	9.72	1.41	2.95/10.0 µg/L
Vanadium	1/38	4.88	0.74	0.46/5.0 µg/L
Zinc	29/38	2.95	1.47	1.09/5.0 µg/L
EPA7041				
Antimony	0/3	5.0	0.0	5.0/5.0 µg/L
EPA7060				
Arsenic	0/3	5.0	0.0	5.0/5.0 µg/L
EPA7421				
Lead	0/3	5.0	0.0	5.0/5.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA7470				
Mercury	3/32	0.19	0.02	0.11/0.20 µg/L
EPA7740				
Selenium	2/3	2.98	1.77	1.67/5.0 µg/L
EPA7841				
Thallium	0/3	5.0	0.0	5.0/5.0 µg/L
EPA8081				
Aldrin	0/6	0.02	0.0	0.02/0.02 µg/L
alpha-Benzene hexachloride	0/6	0.02	0.0	0.02/0.02 µg/L
beta-Benzene hexachloride	0/6	0.02	0.0	0.02/0.02 µg/L
delta-Benzene hexachloride	0/6	0.02	0.0	0.02/0.02 µg/L
alpha-Chlordane	0/6	0.02	0.0	0.02/0.02 µg/L
gamma-Chlordane	0/6	0.02	0.0	0.02/0.02 µg/L
p,p´-DDD	0/6	0.04	0.0	0.04/0.04 µg/L
p,p´-DDE	0/6	0.04	0.0	0.04/0.04 µg/L
p,p´-DDT	0/6	0.04	0.0	0.04/0.04 µg/L
Dieldrin	0/6	0.04	0.0	0.04/0.04 µg/L
Endosulfan sulfate	0/6	0.04	0.01	0.02/0.04 µg/L
Endosulfan I	0/6	0.02	0.0	0.02/0.02 µg/L
Endosulfan II	0/6	0.04	0.0	0.04/0.04 µg/L
Endrin	0/6	0.04	0.0	0.04/0.04 µg/L
Endrin ketone	0/6	0.04	0.0	0.04/0.04 µg/L
Heptachlor	0/6	0.02	0.0	0.02/0.02 µg/L
Heptachlor epoxide	0/6	0.02	0.0	0.02/0.02 µg/L
Lindane	0/6	0.02	0.0	0.02/0.02 µg/L
Methoxychlor	0/6	0.20	0.0	0.20/0.20 µg/L
PCB 1016	0/6	0.13	0.0	0.13/0.13 µg/L
PCB 1221	0/7	0.12	0.01	0.10/0.13 µg/L
PCB 1232	0/6	0.13	0.0	0.13/0.13 µg/L
PCB 1242	0/6	0.13	0.0	0.13/0.13 µg/L
PCB 1248	0/6	0.13	0.0	0.13/0.13 µg/L
PCB 1254	0/6	0.13	0.0	0.13/0.13 µg/L
PCB 1260	0/6	0.13	0.0	0.13/0.13 µg/L
Toxaphene	0/6	1.0	0.0	1.0/1.0 µg/L
EPA8151				
2-sec-Butyl-4,6-dinitrophenol	0/1	0.10	—	0.10/0.10 µg/L
2,4-Dichlorophenoxyacetic acid	0/1	0.10	—	0.10/0.10 µg/L
2,4,5-T	0/1	0.10	—	0.10/0.10 µg/L
2,4,5-TP (Silvex)	0/1	0.10	—	0.10/0.10 µg/L
EPA8260A				
Acetone	5/41	6.25	7.08	2.70/50.0 µg/L
Acetonitrile	0/1	10.0	—	10.0/10.0 µg/L
Acrolein	0/1	20.0	—	20.0/20.0 µg/L
Acrylonitrile	0/1	50.0	—	50.0/50.0 µg/L
Allyl chloride	0/1	10.0	—	10.0/10.0 µg/L
Benzene	3/70	1.65	3.83	0.56/23.8 µg/L
Bis(2-chloroisopropyl) ether	0/1	20.0	—	20.0/20.0 µg/L
Bromodichloromethane	0/68	1.26	1.53	1.0/10.0 µg/L
Bromoform	0/68	1.26	1.53	1.0/10.0 µg/L
Bromomethane	3/68	1.30	1.54	0.89/10.0 µg/L
Carbon disulfide	0/41	6.10	7.03	5.0/50.0 µg/L
Carbon tetrachloride	1/70	1.25	1.51	0.31/10.0 µg/L
Chlorobenzene	0/70	1.26	1.51	1.0/10.0 µg/L
Chloroethane	0/68	1.28	1.53	1.0/10.0 µg/L
Chloroethene	0/68	1.28	1.53	1.0/10.0 µg/L
2-Chloroethyl vinyl ether	0/46	5.98	6.63	5.0/50.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Chloroform	1/70	1.25	1.51	0.67/10.0 µg/L
Chloromethane	3/68	1.29	1.54	0.48/10.0 µg/L
Chloroprene	0/1	2.0	—	2.0/2.0 µg/L
Dibromochloromethane	0/68	1.26	1.53	1.0/10.0 µg/L
1,2-Dibromo-3-chloropropane	0/1	2.0	—	2.0/2.0 µg/L
1,2-Dibromoethane	0/1	2.0	—	2.0/2.0 µg/L
Dibromomethane	0/1	2.0	—	2.0/2.0 µg/L
1,2-Dichlorobenzene	0/1	1.0	—	1.0/1.0 µg/L
1,3-Dichlorobenzene	0/1	1.0	—	1.0/1.0 µg/L
1,4-Dichlorobenzene	0/1	1.0	—	1.0/1.0 µg/L
trans-1,4-Dichloro-2-butene	0/1	2.0	—	2.0/2.0 µg/L
Dichlorodifluoromethane	0/1	2.0	—	2.0/2.0 µg/L
1,1-Dichloroethane	0/68	1.28	1.53	1.0/10.0 µg/L
1,2-Dichloroethane	0/68	1.26	1.53	1.0/10.0 µg/L
1,1-Dichloroethylene	1/70	1.26	1.51	0.54/10.0 µg/L
1,2-Dichloroethylene	0/40	1.23	1.42	1.0/10.0 µg/L
trans-1,2-Dichloroethylene	0/46	1.22	1.33	1.0/10.0 µg/L
Dichloromethane	46/68	3.26	7.0	0.41/55.0 µg/L
1,2-Dichloropropane	0/68	1.28	1.53	1.0/10.0 µg/L
cis-1,3-Dichloropropene	0/68	1.28	1.53	1.0/10.0 µg/L
trans-1,3-Dichloropropene	1/68	1.27	1.54	0.27/10.0 µg/L
Ethylbenzene	0/68	1.26	1.53	1.0/10.0 µg/L
2-Hexanone	0/41	6.10	7.03	5.0/50.0 µg/L
Iodomethane	0/1	10.0	—	10.0/10.0 µg/L
Isobutyl alcohol	0/1	20.0	—	20.0/20.0 µg/L
Methacrylonitrile	0/1	10.0	—	10.0/10.0 µg/L
Methyl ethyl ketone	0/41	6.10	7.03	5.0/50.0 µg/L
Methyl isobutyl ketone	0/41	6.10	7.03	5.0/50.0 µg/L
Methyl methacrylate	0/1	10.0	—	10.0/10.0 µg/L
Propionitrile	0/1	20.0	—	20.0/20.0 µg/L
Styrene	0/41	1.24	1.41	1.0/10.0 µg/L
1,1,1,2-Tetrachloroethane	0/1	1.0	—	1.0/1.0 µg/L
1,1,2,2-Tetrachloroethane	0/68	1.28	1.53	1.0/10.0 µg/L
Tetrachloroethylene	1/70	1.25	1.51	0.67/10.0 µg/L
Toluene	4/70	1.25	1.51	0.60/10.0 µg/L
1,1,1-Trichloroethane	1/70	1.25	1.51	0.58/10.0 µg/L
1,1,2-Trichloroethane	1/68	1.27	1.54	0.27/10.0 µg/L
Trichloroethylene	3/70	1.32	1.93	0.65/12.5 µg/L
Trichlorofluoromethane	0/46	1.22	1.33	1.0/10.0 µg/L
1,2,3-Trichloropropane	0/1	2.0	—	2.0/2.0 µg/L
Vinyl acetate	0/41	6.10	7.03	5.0/50.0 µg/L
m/p-Xylene	0/1	1.0	—	1.0/1.0 µg/L
Xylenes	1/41	1.24	1.41	0.88/10.0 µg/L
EPA8270				
Bis(2-ethylhexyl) phthalate	0/1	10.0	—	10.0/10.0 µg/L
EPA8270B				
Acenaphthene	0/10	10.0	0.0	10.0/10.0 µg/L
Acenaphthylene	0/10	10.0	0.0	10.0/10.0 µg/L
Acetophenone	0/1	10.0	—	10.0/10.0 µg/L
2-Acetylaminofluorene	0/1	10.0	—	10.0/10.0 µg/L
4-Aminobiphenyl	0/1	10.0	—	10.0/10.0 µg/L
Aniline	0/1	10.0	—	10.0/10.0 µg/L
Anthracene	0/10	10.0	0.0	10.0/10.0 µg/L
Aramite	0/1	10.0	—	10.0/10.0 µg/L
Benzo[*a*]anthracene	0/10	10.0	0.0	10.0/10.0 µg/L
Benzo[*b*]fluoranthene	0/10	10.0	0.0	10.0/10.0 µg/L
Benzo[*k*]fluoranthene	0/10	10.0	0.0	10.0/10.0 µg/L
Benzoic acid	0/9	20.0	0.0	20.0/20.0 µg/L
Benzo[*g,h,i*]perylene	0/10	10.0	0.0	10.0/10.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Benzo[*a*]pyrene	0/10	10.0	0.0	10.0/10.0 µg/L
Benzyl alcohol	0/10	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroethoxy) methane	0/10	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroethyl) ether	0/10	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroisopropyl) ether	0/10	10.0	0.0	10.0/10.0 µg/L
Bis(2-ethylhexyl) phthalate	1/37	14.1	25.0	10.0/162 µg/L
4-Bromophenyl phenyl ether	0/10	10.0	0.0	10.0/10.0 µg/L
Butylbenzyl phthalate	0/10	10.0	0.0	10.0/10.0 µg/L
2-sec-Butyl-4,6-dinitrophenol	0/1	20.0	—	20.0/20.0 µg/L
4-Chloroaniline	0/10	19.0	3.16	10.0/20.0 µg/L
Chlorobenzilate	0/1	10.0	—	10.0/10.0 µg/L
4-Chloro-m-cresol	0/10	10.0	0.0	10.0/10.0 µg/L
2-Chloronaphthalene	0/10	10.0	0.0	10.0/10.0 µg/L
2-Chlorophenol	0/10	10.0	0.0	10.0/10.0 µg/L
4-Chlorophenyl phenyl ether	0/10	10.0	0.0	10.0/10.0 µg/L
Chrysene	0/10	10.0	0.0	10.0/10.0 µg/L
m/p-Cresol	0/10	10.0	0.0	10.0/10.0 µg/L
o-Cresol	0/10	10.0	0.0	10.0/10.0 µg/L
Diallate	0/1	10.0	—	10.0/10.0 µg/L
Dibenz[*a,h*]anthracene	0/10	10.0	0.0	10.0/10.0 µg/L
Dibenzofuran	0/10	10.0	0.0	10.0/10.0 µg/L
Di-n-butyl phthalate	0/10	10.0	0.0	10.0/10.0 µg/L
1,2-Dichlorobenzene	0/10	10.0	0.0	10.0/10.0 µg/L
1,3-Dichlorobenzene	0/10	10.0	0.0	10.0/10.0 µg/L
1,4-Dichlorobenzene	0/10	10.0	0.0	10.0/10.0 µg/L
3,3´-Dichlorobenzidine	0/10	50.0	0.0	50.0/50.0 µg/L
2,4-Dichlorophenol	0/10	10.0	0.0	10.0/10.0 µg/L
2,6-Dichlorophenol	0/1	10.0	—	10.0/10.0 µg/L
Diethyl phthalate	0/10	10.0	0.0	10.0/10.0 µg/L
Dimethoate	0/1	10.0	—	10.0/10.0 µg/L
2,4-Dimethyl phenol	0/10	10.0	0.0	10.0/10.0 µg/L
Dimethyl phthalate	0/10	10.0	0.0	10.0/10.0 µg/L
p-Dimethylaminoazobenzene	0/1	10.0	—	10.0/10.0 µg/L
7,12-Dimethylbenz[*a*]anthracene	0/1	10.0	—	10.0/10.0 µg/L
3,3´-Dimethylbenzidine	0/1	20.0	—	20.0/20.0 µg/L
a,a-Dimethylphenethylamine	0/1	10.0	—	10.0/10.0 µg/L
1,3-Dinitrobenzene	0/1	10.0	—	10.0/10.0 µg/L
2,4-Dinitrophenol	0/10	19.0	3.16	10.0/20.0 µg/L
2,4-Dinitrotoluene	0/10	10.0	0.0	10.0/10.0 µg/L
2,6-Dinitrotoluene	0/10	10.0	0.0	10.0/10.0 µg/L
Di-n-octyl phthalate	0/10	10.0	0.0	10.0/10.0 µg/L
1,4-Dioxane	0/1	10.0	—	10.0/10.0 µg/L
Diphenylamine	0/1	10.0	—	10.0/10.0 µg/L
Disulfoton	0/1	10.0	—	10.0/10.0 µg/L
Ethyl methacrylate	0/1	10.0	—	10.0/10.0 µg/L
Ethyl methanesulfonate	0/1	10.0	—	10.0/10.0 µg/L
Famphur	0/1	10.0	—	10.0/10.0 µg/L
Fluoranthene	0/10	10.0	0.0	10.0/10.0 µg/L
Fluorene	0/10	10.0	0.0	10.0/10.0 µg/L
Hexachlorobenzene	0/10	10.0	0.0	10.0/10.0 µg/L
Hexachlorobutadiene	0/10	10.0	0.0	10.0/10.0 µg/L
Hexachlorocyclopentadiene	0/10	10.0	0.0	10.0/10.0 µg/L
Hexachloroethane	0/10	10.0	0.0	10.0/10.0 µg/L
Hexachlorophene	0/1	500	—	500/500 µg/L
Hexachloropropene	0/1	10.0	—	10.0/10.0 µg/L
Indeno[1,2,3-*c,d*]pyrene	0/10	10.0	0.0	10.0/10.0 µg/L
Isodrin	0/1	10.0	—	10.0/10.0 µg/L
Isophorone	0/10	10.0	0.0	10.0/10.0 µg/L
Isosafrole	0/1	10.0	—	10.0/10.0 µg/L
Kepone	0/1	10.0	—	10.0/10.0 µg/L
Methapyrilene	0/1	10.0	—	10.0/10.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
2-Methyl-4,6-dinitrophenol	0/10	11.0	3.16	10.0/20.0 µg/L
Methyl methanesulfonate	0/1	10.0	—	10.0/10.0 µg/L
3-Methylcholanthrene	0/1	10.0	—	10.0/10.0 µg/L
2-Methylnaphthalene	0/10	10.0	0.0	10.0/10.0 µg/L
Naphthalene	0/10	10.0	0.0	10.0/10.0 µg/L
1,4-Naphthoquinone	0/1	10.0	—	10.0/10.0 µg/L
1-Naphthylamine	0/1	10.0	—	10.0/10.0 µg/L
2-Naphthylamine	0/1	10.0	—	10.0/10.0 µg/L
m-Nitroaniline	0/10	10.0	0.0	10.0/10.0 µg/L
o-Nitroaniline	0/10	10.0	0.0	10.0/10.0 µg/L
p-Nitroaniline	0/10	10.0	0.0	10.0/10.0 µg/L
Nitrobenzene	0/10	10.0	0.0	10.0/10.0 µg/L
2-Nitrophenol	0/10	10.0	0.0	10.0/10.0 µg/L
4-Nitrophenol	0/10	19.0	3.16	10.0/20.0 µg/L
4-Nitroquinoline-1-oxide	0/1	10.0	—	10.0/10.0 µg/L
N-Nitrosodi-n-butylamine	0/1	10.0	—	10.0/10.0 µg/L
N-Nitrosodiethylamine	0/1	10.0	—	10.0/10.0 µg/L
N-Nitrosodimethylamine	0/1	10.0	—	10.0/10.0 µg/L
N-Nitrosodiphenylamine	0/10	10.0	0.0	10.0/10.0 µg/L
N-Nitrosodipropylamine	0/10	10.0	0.0	10.0/10.0 µg/L
N-Nitrosomethylethylamine	0/1	10.0	—	10.0/10.0 µg/L
N-Nitrosomorpholine	0/1	10.0	—	10.0/10.0 µg/L
N-Nitrosopiperidine	0/1	10.0	—	10.0/10.0 µg/L
N-Nitrosopyrrolidine	0/1	10.0	—	10.0/10.0 µg/L
5-Nitro-o-toluidine	0/1	10.0	—	10.0/10.0 µg/L
Pentachlorobenzene	0/1	10.0	—	10.0/10.0 µg/L
Pentachloroethane	0/1	10.0	—	10.0/10.0 µg/L
Pentachloronitrobenzene	0/1	10.0	—	10.0/10.0 µg/L
Pentachlorophenol	0/10	10.0	0.0	10.0/10.0 µg/L
Phenacetin	0/1	10.0	—	10.0/10.0 µg/L
Phenanthrene	0/10	10.0	0.0	10.0/10.0 µg/L
Phenol	0/10	10.0	0.0	10.0/10.0 µg/L
p-Phenylenediamine	0/1	10.0	—	10.0/10.0 µg/L
Phorate	0/1	10.0	—	10.0/10.0 µg/L
2-Picoline	0/1	10.0	—	10.0/10.0 µg/L
Pronamid	0/1	10.0	—	10.0/10.0 µg/L
Pyrene	0/10	10.0	0.0	10.0/10.0 µg/L
Pyridine	0/1	10.0	—	10.0/10.0 µg/L
Safrole	0/1	10.0	—	10.0/10.0 µg/L
Sulfotepp	0/1	10.0	—	10.0/10.0 µg/L
1,2,4,5-Tetrachlorobenzene	0/1	10.0	—	10.0/10.0 µg/L
2,3,4,6-Tetrachlorophenol	0/1	20.0	—	20.0/20.0 µg/L
Thionazin	0/1	10.0	—	10.0/10.0 µg/L
o-Toluidine	0/1	10.0	—	10.0/10.0 µg/L
1,2,4-Trichlorobenzene	0/10	10.0	0.0	10.0/10.0 µg/L
2,4,5-Trichlorophenol	0/10	10.0	0.0	10.0/10.0 µg/L
2,4,6-Trichlorophenol	0/10	10.0	0.0	10.0/10.0 µg/L
O,O,O-Triethyl phosphorothioate	0/1	10.0	—	10.0/10.0 µg/L
1,3,5-Trinitrobenzene	0/1	20.0	—	20.0/20.0 µg/L
EPA9012				
Cyanide	0/34	10.0	0.0	10.0/10.0 µg/L
EPA9020B				
Total organic halogens	0/2	10.0	0.0	10.0/10.0 µg/L
EPA9056				
Chloride	1/4	84.0	32.0	36.0/100 µg/L
Fluoride	0/4	50.0	0.0	50.0/50.0 µg/L
Nitrate as nitrogen	0/2	50.0	0.0	50.0/50.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Nitrite as nitrogen	0/1	50.0	—	50.0/50.0 µg/L
Sulfate	0/5	200	0.0	200/200 µg/L
EPA9060				
Total organic carbon	2/6	3,480	2,360	214/5,000 µg/L
EPA9066				
Phenols	0/10	5.0	0.0	5.0/5.0 µg/L
EPA9070				
Oil & grease	0/1	2,000	—	2,000/2,000 µg/L

† Number of times analyte was detected compared to the total number of method blanks for the analyte.
— Standard deviation cannot be determined.

Note: If the analyte was not detected in the method blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 86. Analytes Detected in Method Blanks for WA

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA160.1				
Total dissolved solids	0/2	47,000	0.0	47,000/47,000 µg/L
EPA180.1				
Turbidity	0/2	0.41	0.01	0.40/0.41 NTU
EPA300.0				
Chloride	0/1	210	—	210/210 µg/L
EPA340.2				
Fluoride	5/5	25.5	5.74	19.3/30.5 µg/L
EPA350.3				
Ammonia	1/1	37.0	—	37.0/37.0 µg/L
EPA353.2				
Nitrate as nitrogen	0/1	20.0	—	20.0/20.0 µg/L
Nitrate-nitrite as nitrogen	2/7	15.4	7.81	4.0/20.0 µg/L
Nitrite as nitrogen	1/3	14.0	10.4	2.0/20.0 µg/L
EPA365.2				
Phosphate	0/1	67.0	—	67.0/67.0 µg/L
Total phosphates (as P)	0/1	67.0	—	67.0/67.0 µg/L
EPA375.4				
Sulfate	0/1	340	—	340/340 µg/L
EPA376.2				
Sulfide	0/1	6,010	—	6,010/6,010 µg/L
EPA418.1				
Total petroleum hydrocarbons	0/2	3,210	0.0	3,210/3,210 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA6010				
Aluminum	0/4	146	0.0	146/146 µg/L
Antimony	0/5	25.4	3.58	19.0/27.0 µg/L
Arsenic	0/5	40.0	0.0	40.0/40.0 µg/L
Barium	3/13	1.43	0.70	0.20/1.80 µg/L
Beryllium	0/5	1.60	0.0	1.60/1.60 µg/L
Boron	0/1	266	—	266/266 µg/L
Cadmium	0/6	4.70	0.0	4.70/4.70 µg/L
Calcium	0/3	471	0.0	471/471 µg/L
Chromium	4/6	3.13	3.0	1.0/7.0 µg/L
Cobalt	1/5	5.10	1.34	4.50/7.50 µg/L
Copper	3/5	7.12	7.20	1.50/15.0 µg/L
Iron	3/4	57.6	57.5	11.2/132 µg/L
Lead	0/13	47.0	0.0	47.0/47.0 µg/L
Magnesium	1/3	52.6	37.1	9.70/74.0 µg/L
Manganese	0/3	7.80	0.0	7.80/7.80 µg/L
Nickel	0/12	26.0	0.0	26.0/26.0 µg/L
Potassium	2/4	138	56.2	87.6/187 µg/L
Selenium	0/12	66.0	0.0	66.0/66.0 µg/L
Silver	1/6	4.43	1.39	1.60/5.0 µg/L
Sodium	3/3	126	38.3	81.8/153 µg/L
Thallium	0/4	55.0	0.0	55.0/55.0 µg/L
Tin	0/1	70.0	—	70.0/70.0 µg/L
Vanadium	1/5	5.78	2.50	1.30/6.90 µg/L
Zinc	0/5	53.0	0.0	53.0/53.0 µg/L
EPA7060				
Arsenic	0/1	32.0	—	32.0/32.0 µg/L
EPA7421				
Lead	0/1	47.0	—	47.0/47.0 µg/L
EPA7470				
Mercury	3/13	0.56	0.26	0.11/0.70 µg/L
EPA7740				
Selenium	0/1	16.0	—	16.0/16.0 µg/L
EPA7841				
Thallium	0/1	25.0	—	25.0/25.0 µg/L
EPA8010				
Carbon tetrachloride	0/3	1.0	0.0	1.0/1.0 µg/L
Chloroform	0/3	1.0	0.0	1.0/1.0 µg/L
Tetrachloroethylene	0/3	1.0	0.0	1.0/1.0 µg/L
1,1,1-Trichloroethane	0/3	1.0	0.0	1.0/1.0 µg/L
Trichloroethylene	0/2	1.0	0.0	1.0/1.0 µg/L
EPA8020				
Benzene	0/1	1.0	—	1.0/1.0 µg/L
Ethylbenzene	0/1	1.0	—	1.0/1.0 µg/L
Toluene	0/1	1.0	—	1.0/1.0 µg/L
Xylenes	0/1	1.0	—	1.0/1.0 µg/L
EPA8081				
Aldrin	0/9	0.05	0.0	0.05/0.05 µg/L
alpha-Benzene hexachloride	0/9	0.05	0.0	0.05/0.05 µg/L
beta-Benzene hexachloride	0/9	0.05	0.0	0.05/0.05 µg/L
delta-Benzene hexachloride	0/9	0.05	0.0	0.05/0.05 µg/L
alpha-Chlordane	0/9	0.05	0.0	0.05/0.05 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
gamma-Chlordane	0/9	0.05	0.0	0.05/0.05 µg/L
p,p´-DDD	0/9	0.10	0.0	0.10/0.10 µg/L
p,p´-DDE	0/9	0.10	0.0	0.10/0.10 µg/L
p,p´-DDT	0/9	0.10	0.0	0.10/0.10 µg/L
Dieldrin	0/9	0.10	0.0	0.10/0.10 µg/L
Endosulfan sulfate	0/9	0.10	0.0	0.10/0.10 µg/L
Endosulfan I	0/9	0.05	0.0	0.05/0.05 µg/L
Endosulfan II	0/9	0.10	0.0	0.10/0.10 µg/L
Endrin	0/9	0.10	0.0	0.10/0.10 µg/L
Endrin aldehyde	0/5	0.10	0.0	0.10/0.10 µg/L
Endrin ketone	0/6	0.10	0.0	0.10/0.10 µg/L
Heptachlor	0/9	0.05	0.0	0.05/0.05 µg/L
Heptachlor epoxide	0/9	0.05	0.0	0.05/0.05 µg/L
Isodrin	0/2	0.10	0.0	0.10/0.10 µg/L
Kepone	0/2	0.50	0.0	0.50/0.50 µg/L
Lindane	0/10	0.05	0.0	0.05/0.05 µg/L
Methoxychlor	0/9	0.50	0.0	0.50/0.50 µg/L
PCB 1016	0/14	1.0	0.0	1.0/1.0 µg/L
PCB 1221	0/14	2.0	0.0	2.0/2.0 µg/L
PCB 1232	0/14	1.0	0.0	1.0/1.0 µg/L
PCB 1242	0/14	1.0	0.0	1.0/1.0 µg/L
PCB 1248	0/14	1.0	0.0	1.0/1.0 µg/L
PCB 1254	0/14	1.0	0.0	1.0/1.0 µg/L
PCB 1260	0/14	1.0	0.0	1.0/1.0 µg/L
Toxaphene	0/9	5.0	0.0	5.0/5.0 µg/L
EPA8141				
Dimethoate	0/2	0.20	0.0	0.20/0.20 µg/L
Disulfoton	0/2	0.20	0.0	0.20/0.20 µg/L
Famphur	0/2	1.0	0.0	1.0/1.0 µg/L
Parathion ethyl	0/2	0.20	0.0	0.20/0.20 µg/L
Parathion methyl	0/2	0.20	0.0	0.20/0.20 µg/L
Phorate	0/2	0.20	0.0	0.20/0.20 µg/L
Sulfotepp	0/2	0.20	0.0	0.20/0.20 µg/L
Thionazin	0/2	0.20	0.0	0.20/0.20 µg/L
O,O,O-Triethyl phosphorothioate	0/2	0.20	0.0	0.20/0.20 µg/L
EPA8150				
2,4,5-T	0/1	0.50	—	0.50/0.50 µg/L
2,4,5-TP (Silvex)	0/3	0.50	0.0	0.50/0.50 µg/L
EPA8151				
2,4-Dichlorophenoxyacetic acid	1/6	1.0	0.0	1.0/1.0 µg/L
EPA8260				
Acetone	42/45	3.62	2.36	1.15/10.0 µg/L
Acetonitrile	0/6	20.0	0.0	20.0/20.0 µg/L
Acrolein	0/8	17.5	4.63	10.0/20.0 µg/L
Acrylonitrile	0/8	6.25	2.31	5.0/10.0 µg/L
Allyl chloride	0/6	10.0	0.0	10.0/10.0 µg/L
Benzene	0/96	5.0	0.0	5.0/5.0 µg/L
Bromodichloromethane	0/96	5.0	0.0	5.0/5.0 µg/L
Bromoform	0/96	5.0	0.0	5.0/5.0 µg/L
Bromomethane	7/99	9.57	1.81	1.13/10.0 µg/L
Carbon disulfide	1/42	4.93	0.45	2.10/5.0 µg/L
Carbon tetrachloride	0/96	5.0	0.0	5.0/5.0 µg/L
Chlorobenzene	0/96	5.0	0.0	5.0/5.0 µg/L
Chloroethane	0/96	10.0	0.0	10.0/10.0 µg/L
Chloroethene	0/95	10.0	0.0	10.0/10.0 µg/L
2-Chloroethyl vinyl ether	0/76	10.0	0.0	10.0/10.0 µg/L
Chloroform	0/95	5.0	0.0	5.0/5.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Chloromethane	15/99	8.80	2.88	0.76/10.0 µg/L
Chloroprene	0/6	5.0	0.0	5.0/5.0 µg/L
Dibromochloromethane	0/96	5.0	0.0	5.0/5.0 µg/L
1,2-Dibromo-3-chloropropane	0/6	5.0	0.0	5.0/5.0 µg/L
1,2-Dibromoethane	0/5	5.0	0.0	5.0/5.0 µg/L
Dibromomethane	0/6	5.0	0.0	5.0/5.0 µg/L
1,2-Dichlorobenzene	0/2	5.0	0.0	5.0/5.0 µg/L
1,3-Dichlorobenzene	0/2	5.0	0.0	5.0/5.0 µg/L
1,4-Dichlorobenzene	0/2	5.0	0.0	5.0/5.0 µg/L
trans-1,4-Dichloro-2-butene	0/5	20.0	0.0	20.0/20.0 µg/L
Dichlorodifluoromethane	0/6	10.0	0.0	10.0/10.0 µg/L
1,1-Dichloroethane	0/96	5.0	0.0	5.0/5.0 µg/L
1,2-Dichloroethane	0/96	5.0	0.0	5.0/5.0 µg/L
1,1-Dichloroethylene	0/96	5.0	0.0	5.0/5.0 µg/L
1,2-Dichloroethylene	0/91	5.0	0.0	5.0/5.0 µg/L
cis-1,2-Dichloroethylene	0/6	5.0	0.0	5.0/5.0 µg/L
trans-1,2-Dichloroethylene	0/6	5.0	0.0	5.0/5.0 µg/L
Dichloromethane	102/103	6.69	4.81	0.95/22.7 µg/L
1,2-Dichloropropane	0/96	5.0	0.0	5.0/5.0 µg/L
cis-1,3-Dichloropropene	0/96	5.0	0.0	5.0/5.0 µg/L
trans-1,3-Dichloropropene	0/96	5.0	0.0	5.0/5.0 µg/L
Ethylbenzene	0/96	5.0	0.0	5.0/5.0 µg/L
2-Hexanone	1/43	9.79	1.36	1.06/10.0 µg/L
Iodomethane	0/6	5.0	0.0	5.0/5.0 µg/L
Isobutyl alcohol	0/6	100	0.0	100/100 µg/L
Methacrylonitrile	0/6	10.0	0.0	10.0/10.0 µg/L
Methyl ethyl ketone	0/43	10.0	0.0	10.0/10.0 µg/L
Methyl isobutyl ketone	0/43	10.0	0.0	10.0/10.0 µg/L
Propionitrile	0/6	50.0	0.0	50.0/50.0 µg/L
Styrene	0/43	5.0	0.0	5.0/5.0 µg/L
1,1,1,2-Tetrachloroethane	0/6	5.0	0.0	5.0/5.0 µg/L
1,1,2,2-Tetrachloroethane	0/96	5.0	0.0	5.0/5.0 µg/L
Tetrachloroethylene	1/96	4.96	0.41	1.03/5.0 µg/L
Toluene	0/96	5.0	0.0	5.0/5.0 µg/L
1,1,1-Trichloroethane	0/96	5.0	0.0	5.0/5.0 µg/L
1,1,2-Trichloroethane	0/96	5.0	0.0	5.0/5.0 µg/L
Trichloroethylene	0/96	5.0	0.0	5.0/5.0 µg/L
Trichlorofluoromethane	0/78	5.0	0.0	5.0/5.0 µg/L
1,2,3-Trichloropropane	0/6	5.0	0.0	5.0/5.0 µg/L
Vinyl acetate	0/40	10.0	0.0	10.0/10.0 µg/L
Xylenes	2/94	4.92	0.53	1.28/5.0 µg/L
EPA8270				
Acenaphthene	0/10	10.0	0.0	10.0/10.0 µg/L
Acenaphthylene	0/10	10.0	0.0	10.0/10.0 µg/L
Acetophenone	0/2	10.0	0.0	10.0/10.0 µg/L
2-Acetylaminofluorene	0/2	10.0	0.0	10.0/10.0 µg/L
4-Aminobiphenyl	0/2	10.0	0.0	10.0/10.0 µg/L
Aniline	0/2	10.0	0.0	10.0/10.0 µg/L
Anthracene	0/10	10.0	0.0	10.0/10.0 µg/L
Aramite	0/2	20.0	0.0	20.0/20.0 µg/L
Benzidine	0/1	50.0	—	50.0/50.0 µg/L
Benzo[*a*]anthracene	0/10	10.0	0.0	10.0/10.0 µg/L
Benzo[*b*]fluoranthene	0/10	10.0	0.0	10.0/10.0 µg/L
Benzo[*k*]fluoranthene	0/10	10.0	0.0	10.0/10.0 µg/L
Benzoic acid	0/7	32.1	12.2	25.0/50.0 µg/L
Benzo[*g,h,i*]perylene	0/10	10.0	0.0	10.0/10.0 µg/L
Benzo[*a*]pyrene	0/10	10.0	0.0	10.0/10.0 µg/L
Benzyl alcohol	0/7	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroethoxy) methane	0/10	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroethyl) ether	0/10	10.0	0.0	10.0/10.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Bis(2-chloroisopropyl) ether	0/10	10.0	0.0	10.0/10.0 µg/L
Bis(2-ethylhexyl) phthalate	8/15	10.3	6.93	1.08/26.9 µg/L
4-Bromophenyl phenyl ether	0/10	9.0	2.11	5.0/10.0 µg/L
Butylbenzyl phthalate	0/10	10.0	0.0	10.0/10.0 µg/L
2-sec-Butyl-4,6-dinitrophenol	0/2	50.0	0.0	50.0/50.0 µg/L
Carbazole	0/7	10.0	0.0	10.0/10.0 µg/L
4-Chloroaniline	0/9	10.0	0.0	10.0/10.0 µg/L
Chlorobenzilate	0/2	10.0	0.0	10.0/10.0 µg/L
4-Chloro-m-cresol	0/10	10.0	0.0	10.0/10.0 µg/L
2-Chloronaphthalene	0/10	10.0	0.0	10.0/10.0 µg/L
2-Chlorophenol	0/10	10.0	0.0	10.0/10.0 µg/L
4-Chlorophenyl phenyl ether	0/10	10.0	0.0	10.0/10.0 µg/L
Chrysene	0/10	10.0	0.0	10.0/10.0 µg/L
m-Cresol	0/2	10.0	0.0	10.0/10.0 µg/L
m/p-Cresol	0/10	10.0	0.0	10.0/10.0 µg/L
o-Cresol	0/9	10.0	0.0	10.0/10.0 µg/L
Diallate	0/2	10.0	0.0	10.0/10.0 µg/L
Dibenz[*a,h*]anthracene	0/10	10.0	0.0	10.0/10.0 µg/L
Dibenzofuran	0/9	10.0	0.0	10.0/10.0 µg/L
Di-n-butyl phthalate	6/10	4.91	4.42	0.52/10.0 µg/L
1,2-Dichlorobenzene	0/10	10.0	0.0	10.0/10.0 µg/L
1,3-Dichlorobenzene	0/10	10.0	0.0	10.0/10.0 µg/L
1,4-Dichlorobenzene	0/10	10.0	0.0	10.0/10.0 µg/L
3,3´-Dichlorobenzidine	0/10	13.0	4.83	10.0/20.0 µg/L
2,4-Dichlorophenol	0/10	10.0	0.0	10.0/10.0 µg/L
2,6-Dichlorophenol	0/2	10.0	0.0	10.0/10.0 µg/L
Diethyl phthalate	0/10	10.0	0.0	10.0/10.0 µg/L
2,4-Dimethyl phenol	0/10	10.0	0.0	10.0/10.0 µg/L
Dimethyl phthalate	0/10	10.0	0.0	10.0/10.0 µg/L
p-Dimethylaminoazobenzene	0/2	10.0	0.0	10.0/10.0 µg/L
7,12-Dimethylbenz[*a*]anthracene	0/2	10.0	0.0	10.0/10.0 µg/L
3,3´-Dimethylbenzidine	0/2	10.0	0.0	10.0/10.0 µg/L
a,a-Dimethylphenethylamine	0/2	10.0	0.0	10.0/10.0 µg/L
1,3-Dinitrobenzene	0/2	10.0	0.0	10.0/10.0 µg/L
2,4-Dinitrophenol	0/10	32.5	12.1	25.0/50.0 µg/L
2,4-Dinitrotoluene	0/10	10.0	0.0	10.0/10.0 µg/L
2,6-Dinitrotoluene	0/10	10.0	0.0	10.0/10.0 µg/L
Di-n-octyl phthalate	0/10	10.0	0.0	10.0/10.0 µg/L
1,4-Dioxane	0/2	10.0	0.0	10.0/10.0 µg/L
Diphenylamine	0/2	10.0	0.0	10.0/10.0 µg/L
1,2-Diphenylhydrazine	0/1	10.0	—	10.0/10.0 µg/L
Ethyl methacrylate	0/2	10.0	0.0	10.0/10.0 µg/L
Ethyl methanesulfonate	0/2	10.0	0.0	10.0/10.0 µg/L
Fluoranthene	0/10	10.0	0.0	10.0/10.0 µg/L
Fluorene	0/10	10.0	0.0	10.0/10.0 µg/L
Hexachlorobenzene	0/10	9.0	2.11	5.0/10.0 µg/L
Hexachlorobutadiene	0/10	10.0	0.0	10.0/10.0 µg/L
Hexachlorocyclopentadiene	0/10	10.0	0.0	10.0/10.0 µg/L
Hexachloroethane	0/10	10.0	0.0	10.0/10.0 µg/L
Hexachlorophene	0/2	100	0.0	100/100 µg/L
Hexachloropropene	0/2	10.0	0.0	10.0/10.0 µg/L
Indeno[1,2,3-*c,d*]pyrene	0/10	10.0	0.0	10.0/10.0 µg/L
Isophorone	0/10	10.0	0.0	10.0/10.0 µg/L
Isosafrole	0/2	10.0	0.0	10.0/10.0 µg/L
Methapyrilene	0/2	10.0	0.0	10.0/10.0 µg/L
2-Methyl-4,6-dinitrophenol	0/10	32.5	12.1	25.0/50.0 µg/L
Methyl methacrylate	0/2	10.0	0.0	10.0/10.0 µg/L
Methyl methanesulfonate	0/2	10.0	0.0	10.0/10.0 µg/L
3-Methylcholanthrene	0/2	10.0	0.0	10.0/10.0 µg/L
2-Methylnaphthalene	0/9	10.0	0.0	10.0/10.0 µg/L
Naphthalene	0/10	10.0	0.0	10.0/10.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
1,4-Naphthoquinone	0/2	10.0	0.0	10.0/10.0 µg/L
1-Naphthylamine	0/2	10.0	0.0	10.0/10.0 µg/L
2-Naphthylamine	0/2	10.0	0.0	10.0/10.0 µg/L
m-Nitroaniline	0/9	30.6	11.0	25.0/50.0 µg/L
o-Nitroaniline	0/9	30.6	11.0	25.0/50.0 µg/L
p-Nitroaniline	0/9	30.6	11.0	25.0/50.0 µg/L
Nitrobenzene	0/10	10.0	0.0	10.0/10.0 µg/L
2-Nitrophenol	0/10	10.0	0.0	10.0/10.0 µg/L
4-Nitrophenol	0/10	32.5	12.1	25.0/50.0 µg/L
4-Nitroquinoline-1-oxide	0/2	20.0	0.0	20.0/20.0 µg/L
N-Nitrosodi-n-butylamine	0/2	10.0	0.0	10.0/10.0 µg/L
N-Nitrosodiethylamine	0/2	10.0	0.0	10.0/10.0 µg/L
N-Nitrosodimethylamine	0/3	10.0	0.0	10.0/10.0 µg/L
N-Nitrosodiphenylamine	0/10	9.0	2.11	5.0/10.0 µg/L
N-Nitrosodipropylamine	0/10	10.0	0.0	10.0/10.0 µg/L
N-Nitrosomethylethylamine	0/2	10.0	0.0	10.0/10.0 µg/L
N-Nitrosomorpholine	0/2	10.0	0.0	10.0/10.0 µg/L
N-Nitrosopiperidine	0/2	50.0	0.0	50.0/50.0 µg/L
N-Nitrosopyrrolidine	0/2	10.0	0.0	10.0/10.0 µg/L
5-Nitro-o-toluidine	0/2	10.0	0.0	10.0/10.0 µg/L
Pentachlorobenzene	0/2	10.0	0.0	10.0/10.0 µg/L
Pentachloroethane	0/2	10.0	0.0	10.0/10.0 µg/L
Pentachloronitrobenzene	0/2	50.0	0.0	50.0/50.0 µg/L
Pentachlorophenol	0/10	32.5	12.1	25.0/50.0 µg/L
Phenacetin	0/2	10.0	0.0	10.0/10.0 µg/L
Phenanthrene	0/10	10.0	0.0	10.0/10.0 µg/L
Phenol	0/13	10.0	0.0	10.0/10.0 µg/L
p-Phenylenediamine	0/2	10.0	0.0	10.0/10.0 µg/L
2-Picoline	0/2	10.0	0.0	10.0/10.0 µg/L
Pronamid	0/2	10.0	0.0	10.0/10.0 µg/L
Pyrene	0/10	10.0	0.0	10.0/10.0 µg/L
Pyridine	0/2	10.0	0.0	10.0/10.0 µg/L
Safrole	0/2	10.0	0.0	10.0/10.0 µg/L
1,2,4,5-Tetrachlorobenzene	0/2	10.0	0.0	10.0/10.0 µg/L
2,3,4,6-Tetrachlorophenol	0/2	10.0	0.0	10.0/10.0 µg/L
o-Toluidine	0/2	10.0	0.0	10.0/10.0 µg/L
1,2,4-Trichlorobenzene	0/10	10.0	0.0	10.0/10.0 µg/L
2,4,5-Trichlorophenol	0/9	30.6	11.0	25.0/50.0 µg/L
2,4,6-Trichlorophenol	0/10	10.0	0.0	10.0/10.0 µg/L
1,3,5-Trinitrobenzene	0/2	10.0	0.0	10.0/10.0 µg/L
EPA8280				
Hexachlorodibenzo-p-dioxins	0/1	0.00	—	0.00/0.00 µg/L
Hexachlorodibenzo-p-furans	0/1	0.00	—	0.00/0.00 µg/L
Pentachlorodibenzo-p-furans	0/2	0.00	0.00	0.00/0.00 µg/L
2,3,7,8-TCDD	0/2	0.00	0.0	0.00/0.00 µg/L
Tetrachlorodibenzo-p-dioxins	0/1	0.00	—	0.00/0.00 µg/L
Tetrachlorodibenzo-p-furans	0/1	0.00	—	0.00/0.00 µg/L
EPA8310				
Acenaphthene	0/1	18.0	—	18.0/18.0 µg/L
Acenaphthylene	0/1	23.0	—	23.0/23.0 µg/L
Anthracene	0/1	6.60	—	6.60/6.60 µg/L
Benzo[*a*]anthracene	0/1	0.13	—	0.13/0.13 µg/L
Benzo[*b*]fluoranthene	0/1	0.18	—	0.18/0.18 µg/L
Benzo[*k*]fluoranthene	0/1	0.17	—	0.17/0.17 µg/L
Benzo[*g,h,i*]perylene	0/1	0.76	—	0.76/0.76 µg/L
Benzo[*a*]pyrene	0/1	0.23	—	0.23/0.23 µg/L
Chrysene	0/1	1.50	—	1.50/1.50 µg/L
Dibenz[*a,h*]anthracene	0/1	0.30	—	0.30/0.30 µg/L
Fluoranthene	0/1	2.10	—	2.10/2.10 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Fluorene	0/1	2.10	—	2.10/2.10 µg/L
Indeno[1,2,3-*c,d*]pyrene	0/1	0.43	—	0.43/0.43 µg/L
Naphthalene	0/1	18.0	—	18.0/18.0 µg/L
Phenanthrene	0/1	6.40	—	6.40/6.40 µg/L
Pyrene	0/1	2.70	—	2.70/2.70 µg/L
EPA9010A				
Cyanide	0/30	15.2	0.04	15.0/15.2 µg/L
EPA9020B				
Total organic halogens	0/8	120	0.0	120/120 µg/L
EPA9050				
Specific conductance	1/5	7.54	3.68	1.01/10.0 µS/cm
EPA9056				
Chloride	0/3	210	0.0	210/210 µg/L
Sulfate	0/3	340	0.0	340/340 µg/L
EPA9060				
Total organic carbon	0/3	1,270	462	1,000/1,800 µg/L
EPA9066				
Phenols	0/5	36.2	0.0	36.2/36.2 µg/L

† Number of times analyte was detected compared to the total number of method blanks for the analyte.
— Standard deviation cannot be determined.

Notes: A value of 0 is reported as 0.0.
Numbers less than 0.004 are reported as 0.00.
If the analyte was not detected in the method blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 87. Analytes Detected in Method Blanks for GP

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPIA-001				
Gross alpha	3/30	1.38E-10	2.57E-10	-1.79E-10/1.00E-09 µCi/mL
Nonvolatile beta	1/30	2.96E-10	4.58E-10	-4.57E-10/1.47E-09 µCi/mL
EPIA-002				
Tritium	0/24	-2.45E-08	2.38E-07	-6.32E-07/3.75E-07 µCi/mL
EPIA-003				
Carbon-14	1/20	1.87E-09	5.86E-09	-1.08E-08/1.45E-08 µCi/mL
EPIA-004				
Strontium-90	1/29	2.83E-10	6.11E-10	-9.71E-10/1.87E-09 µCi/mL
EPIA-005				
Technetium-99	0/28	-9.50E-09	1.28E-08	-4.20E-08/6.28E-09 µCi/mL
EPIA-006				
Iodine-129	0/24	1.91E-10	3.16E-10	-4.03E-10/8.67E-10 µCi/mL

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPIA-008				
Radium-226	1/26	1.44E-10	5.73E-11	4.90E-11/2.95E-10 µCi/mL
EPIA-009				
Radium-228	3/26	4.54E-10	4.30E-10	-2.76E-10/1.21E-09 µCi/mL
EPIA-010				
Radium, total alpha-emitting	0/2	-1.00E-10	1.41E-10	-2.00E-10/0.0 µCi/mL
EPIA-011				
Americium-241	6/32	9.45E-11	1.96E-10	-8.40E-11/8.23E-10 µCi/mL
Curium-242	0/25	6.05E-12	5.23E-11	-1.72E-10/1.32E-10 µCi/mL
Curium-243/244	2/25	5.66E-11	9.89E-11	-3.50E-11/3.65E-10 µCi/mL
Curium-245/246	0/25	2.26E-11	5.59E-11	-9.00E-11/2.07E-10 µCi/mL
Plutonium-238	6/25	1.59E-10	1.82E-10	-3.00E-12/6.68E-10 µCi/mL
Plutonium-239/240	1/25	1.47E-11	2.82E-11	-4.10E-11/9.50E-11 µCi/mL
Uranium-233/234	2/25	5.81E-11	1.00E-10	-8.00E-12/4.45E-10 µCi/mL
Uranium-235	0/25	1.66E-11	2.98E-11	-2.00E-12/1.33E-10 µCi/mL
Uranium-238	3/25	5.66E-11	1.59E-10	-1.70E-11/7.66E-10 µCi/mL
EPIA-012				
Thorium-228	0/23	-1.04E-11	1.13E-10	-4.37E-10/1.63E-10 µCi/mL
Thorium-230	4/23	6.94E-11	8.08E-11	-1.10E-11/2.91E-10 µCi/mL
Thorium-232	0/23	6.78E-12	2.15E-11	-2.30E-11/6.40E-11 µCi/mL
EPIA-013				
Actinium-228	1/25	4.48E-09	4.89E-09	-5.34E-09/1.94E-08 µCi/mL
Antimony-125	0/25	-3.06E-10	2.09E-09	-4.31E-09/3.56E-09 µCi/mL
Cerium-144	0/25	5.84E-10	6.64E-09	-8.95E-09/1.65E-08 µCi/mL
Cesium-134	0/25	-2.05E-10	7.91E-10	-1.92E-09/1.42E-09 µCi/mL
Cesium-137	0/25	3.76E-10	9.98E-10	-1.19E-09/2.31E-09 µCi/mL
Cobalt-57	0/25	1.81E-10	8.19E-10	-1.45E-09/1.34E-09 µCi/mL
Cobalt-60	0/25	1.81E-10	9.69E-10	-1.39E-09/2.76E-09 µCi/mL
Europium-152	0/25	-2.05E-10	3.28E-09	-6.04E-09/5.29E-09 µCi/mL
Europium-154	0/25	3.12E-10	2.92E-09	-5.25E-09/7.80E-09 µCi/mL
Europium-155	0/25	9.26E-10	2.69E-09	-4.21E-09/6.16E-09 µCi/mL
Lead-212	5/25	4.16E-09	1.99E-09	8.68E-10/9.06E-09 µCi/mL
Manganese-54	0/25	7.04E-11	8.03E-10	-1.57E-09/2.04E-09 µCi/mL
Potassium-40	2/25	2.49E-08	1.53E-08	2.64E-09/6.85E-08 µCi/mL
Promethium-144	0/25	-2.93E-11	7.52E-10	-1.81E-09/1.55E-09 µCi/mL
Promethium-146	1/25	-6.66E-11	1.55E-09	-2.28E-09/5.92E-09 µCi/mL
Ruthenium-106	0/25	-9.96E-10	6.04E-09	-9.48E-09/1.76E-08 µCi/mL
Sodium-22	0/25	1.23E-10	1.06E-09	-1.86E-09/2.80E-09 µCi/mL
Yttrium-88	0/25	2.40E-10	8.70E-10	-1.53E-09/1.76E-09 µCi/mL
Zinc-65	0/25	-3.96E-10	2.14E-09	-4.29E-09/3.60E-09 µCi/mL
EPIA-020				
Promethium-147	0/4	2.55E-11	2.24E-10	-1.33E-10/3.44E-10 µCi/mL
EPIA-022				
Nickel-63	0/13	-1.07E-09	6.12E-08	-8.23E-08/1.46E-07 µCi/mL
EPIA-032				
Neptunium-237	0/4	6.79E-12	6.54E-12	0.0/1.40E-11 µCi/mL

† Number of times analyte was detected compared to the total number of method blanks for the analyte.

Note: If the analyte was not detected in the method blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 88. Analytes Detected in Method Blanks for TM

Analyte	*Frequency of Detection†*	*Mean Result*	*Standard Deviation*	*Minimum/Maximum Results*
3500NIEMOD				
Nickel-63	0/6	-5.58E-09	1.08E-08	-2.30E-08/8.58E-09 µCi/mL
EICHROMTC1MOD				
Technetium-99	1/15	1.94E-09	7.26E-09	-7.91E-09/2.01E-08 µCi/mL
EMLAM01MOD				
Americium-241	3/5	2.38E-10	2.15E-10	-1.00E-11/5.10E-10 µCi/mL
Americium-241/Curium-246	8/13	1.86E-10	1.10E-10	2.00E-11/3.30E-10 µCi/mL
Curium-242	0/13	2.00E-11	1.96E-11	0.0/5.00E-11 µCi/mL
Curium-243/244	0/13	4.23E-11	3.61E-11	0.0/1.00E-10 µCi/mL
EMLPM01MOD				
Promethium-147	2/3	4.82E-09	2.52E-09	1.94E-09/6.61E-09 µCi/mL
EMLPU02MOD				
Neptunium-237	1/4	7.50E-11	4.80E-11	2.00E-11/1.20E-10 µCi/mL
Plutonium-238	0/13	1.08E-11	2.66E-11	0.0/8.00E-11 µCi/mL
Plutonium-239	0/1	3.00E-11	—	3.00E-11/3.00E-11 µCi/mL
Plutonium-239/240	1/12	3.58E-11	3.40E-11	0.0/1.20E-10 µCi/mL
EMLSR02MOD				
Strontium-90	3/18	3.37E-10	3.83E-10	0.0/1.31E-09 µCi/mL
EMLTH01MOD				
Thorium-228	0/13	6.15E-11	4.39E-11	2.00E-11/1.70E-10 µCi/mL
Thorium-230	9/13	2.68E-10	2.47E-10	1.00E-11/8.00E-10 µCi/mL
Thorium-232	1/13	4.85E-11	4.83E-11	0.0/1.70E-10 µCi/mL
EMLU02MOD				
Uranium-234	2/14	5.43E-11	7.12E-11	0.0/2.70E-10 µCi/mL
Uranium-235	0/14	2.21E-11	2.64E-11	-1.00E-11/7.00E-11 µCi/mL
Uranium-238	1/14	4.57E-11	5.36E-11	0.0/2.00E-10 µCi/mL
ENICMOD				
Carbon-14	0/8	-3.51E-08	9.93E-08	-2.67E-07/6.05E-08 µCi/mL
EPA900.0MOD				
Gross alpha	2/39	1.35E-10	1.59E-10	-2.20E-10/5.30E-10 µCi/mL
Nonvolatile beta	0/37	-2.34E-10	4.98E-10	-1.40E-09/6.40E-10 µCi/mL
EPA901.1MOD				
Cesium-137	0/20	4.88E-10	1.83E-09	-3.78E-09/5.25E-09 µCi/mL
Cobalt-60	0/20	8.45E-10	1.08E-09	-1.76E-09/3.43E-09 µCi/mL
EPA902.0MOD				
Iodine-129	1/13	9.78E-10	7.91E-10	-1.90E-10/2.63E-09 µCi/mL
EPA903.0MOD				
Radium, total alpha-emitting	7/11	3.50E-10	4.68E-10	-2.00E-11/1.58E-09 µCi/mL
Radium-226	6/16	1.89E-10	9.89E-11	6.00E-11/4.30E-10 µCi/mL
EPA904.0MOD				
Radium-228	2/16	5.16E-10	6.27E-10	-4.20E-10/1.77E-09 µCi/mL

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA906.0MOD				
Tritium	3/30	1.20E-07	7.13E-07	-7.30E-07/3.56E-06 µCi/mL

† Number of times analyte was detected compared to the total number of method blanks for the analyte.
— Standard deviation cannot be determined.

Table 89. Analytes Detected in Field Blanks for ES

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA120.1				
Specific conductance	0/1	1.0	—	1.0/1.0 µS/cm
EPA350.1				
Ammonia nitrogen	1/1	29.0	—	29.0/29.0 µg/L
EPA365.1				
Total phosphates (as P)	0/2	10.0	0.0	10.0/10.0 µg/L
EPA6010				
Aluminum	0/3	20.0	0.0	20.0/20.0 µg/L
Antimony	0/4	5.0	0.0	5.0/5.0 µg/L
Arsenic	0/6	8.0	0.0	8.0/8.0 µg/L
Barium	0/6	2.0	0.0	2.0/2.0 µg/L
Beryllium	0/4	1.0	0.0	1.0/1.0 µg/L
Boron	0/1	25.0	—	25.0/25.0 µg/L
Cadmium	0/6	2.0	0.0	2.0/2.0 µg/L
Calcium	1/3	52.3	4.04	50.0/57.0 µg/L
Chromium	0/6	3.0	0.0	3.0/3.0 µg/L
Cobalt	0/4	5.0	0.0	5.0/5.0 µg/L
Copper	0/4	3.0	0.0	3.0/3.0 µg/L
Iron	1/3	14.7	9.12	4.20/20.0 µg/L
Lead	0/8	5.0	0.0	5.0/5.0 µg/L
Magnesium	0/3	50.0	0.0	50.0/50.0 µg/L
Manganese	0/3	3.0	0.0	3.0/3.0 µg/L
Nickel	0/4	5.0	0.0	5.0/5.0 µg/L
Potassium	0/3	400	0.0	400/400 µg/L
Selenium	0/6	5.0	0.0	5.0/5.0 µg/L
Silver	0/6	2.0	0.0	2.0/2.0 µg/L
Sodium	1/3	139	68.1	100/218 µg/L
Thallium	0/4	5.0	0.0	5.0/5.0 µg/L
Vanadium	0/4	2.0	0.0	2.0/2.0 µg/L
Zinc	2/4	9.73	1.30	7.90/11.0 µg/L
EPA7470				
Mercury	1/7	0.18	0.05	0.06/0.20 µg/L
EPA8081				
Aldrin	0/3	0.02	0.0	0.02/0.02 µg/L
alpha-Benzene hexachloride	0/3	0.02	0.0	0.02/0.02 µg/L
beta-Benzene hexachloride	0/4	0.02	0.0	0.02/0.02 µg/L
delta-Benzene hexachloride	0/3	0.02	0.0	0.02/0.02 µg/L
Chlordane	0/3	0.07	0.0	0.07/0.07 µg/L
alpha-Chlordane	0/3	0.02	0.0	0.02/0.02 µg/L
gamma-Chlordane	0/3	0.02	0.0	0.02/0.02 µg/L
p,p´-DDD	0/3	0.02	0.0	0.02/0.02 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
p,p´-DDE	0/3	0.02	0.0	0.02/0.02 µg/L
p,p´-DDT	0/3	0.02	0.0	0.02/0.02 µg/L
Dieldrin	0/3	0.02	0.0	0.02/0.02 µg/L
Endosulfan sulfate	0/3	0.02	0.0	0.02/0.02 µg/L
Endosulfan I	0/3	0.02	0.0	0.02/0.02 µg/L
Endosulfan II	0/3	0.02	0.0	0.02/0.02 µg/L
Endrin	0/3	0.02	0.0	0.02/0.02 µg/L
Endrin aldehyde	0/3	0.02	0.0	0.02/0.02 µg/L
Endrin ketone	0/3	0.02	0.0	0.02/0.02 µg/L
Heptachlor	0/3	0.02	0.0	0.02/0.02 µg/L
Heptachlor epoxide	0/3	0.02	0.0	0.02/0.02 µg/L
Lindane	0/3	0.02	0.0	0.02/0.02 µg/L
Methoxychlor	0/3	0.02	0.0	0.02/0.02 µg/L
PCB 1016	0/3	0.30	0.0	0.30/0.30 µg/L
PCB 1221	0/3	0.30	0.0	0.30/0.30 µg/L
PCB 1232	0/3	0.30	0.0	0.30/0.30 µg/L
PCB 1242	0/3	0.30	0.0	0.30/0.30 µg/L
PCB 1248	0/3	0.30	0.0	0.30/0.30 µg/L
PCB 1254	0/3	0.30	0.0	0.30/0.30 µg/L
PCB 1260	0/3	0.30	0.0	0.30/0.30 µg/L
Toxaphene	0/3	1.50	0.0	1.50/1.50 µg/L
EPA8270				
Acenaphthene	0/3	10.0	0.0	10.0/10.0 µg/L
Acenaphthylene	0/3	10.0	0.0	10.0/10.0 µg/L
Anthracene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzidine	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*a*]anthracene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*b*]fluoranthene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*k*]fluoranthene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzoic acid	0/3	50.0	0.0	50.0/50.0 µg/L
Benzo[*g,h,i*]perylene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*a*]pyrene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzyl alcohol	0/3	20.0	0.0	20.0/20.0 µg/L
Bis(2-chloroethoxy) methane	0/3	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroethyl) ether	0/3	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroisopropyl) ether	0/3	10.0	0.0	10.0/10.0 µg/L
Bis(2-ethylhexyl) phthalate	1/3	23.3	17.4	10.0/43.0 µg/L
4-Bromophenyl phenyl ether	0/3	10.0	0.0	10.0/10.0 µg/L
Butylbenzyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
4-Chloroaniline	0/3	20.0	0.0	20.0/20.0 µg/L
4-Chloro-m-cresol	0/3	20.0	0.0	20.0/20.0 µg/L
2-Chloronaphthalene	0/3	10.0	0.0	10.0/10.0 µg/L
2-Chlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
4-Chlorophenyl phenyl ether	0/3	10.0	0.0	10.0/10.0 µg/L
Chrysene	0/3	10.0	0.0	10.0/10.0 µg/L
m/p-Cresol	0/3	10.0	0.0	10.0/10.0 µg/L
o-Cresol	0/3	10.0	0.0	10.0/10.0 µg/L
Dibenz[*a,h*]anthracene	0/3	10.0	0.0	10.0/10.0 µg/L
Dibenzofuran	0/3	10.0	0.0	10.0/10.0 µg/L
Di-n-butyl phthalate	0/4	5.36	5.36	0.63/10.0 µg/L
1,2-Dichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
1,3-Dichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
1,4-Dichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
3,3´-Dichlorobenzidine	0/3	20.0	0.0	20.0/20.0 µg/L
2,4-Dichlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
Diethyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
2,4-Dimethyl phenol	0/3	10.0	0.0	10.0/10.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Dimethyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
2,4-Dinitrophenol	0/3	50.0	0.0	50.0/50.0 µg/L
2,4-Dinitrotoluene	0/3	10.0	0.0	10.0/10.0 µg/L
2,6-Dinitrotoluene	0/3	10.0	0.0	10.0/10.0 µg/L
Di-n-octyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
Fluoranthene	0/3	10.0	0.0	10.0/10.0 µg/L
Fluorene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachlorobutadiene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachlorocyclopentadiene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachloroethane	0/3	10.0	0.0	10.0/10.0 µg/L
Indeno[1,2,3-*c,d*]pyrene	0/3	10.0	0.0	10.0/10.0 µg/L
Isophorone	0/3	10.0	0.0	10.0/10.0 µg/L
2-Methyl-4,6-dinitrophenol	0/3	50.0	0.0	50.0/50.0 µg/L
2-Methylnaphthalene	0/3	10.0	0.0	10.0/10.0 µg/L
Naphthalene	0/3	10.0	0.0	10.0/10.0 µg/L
m-Nitroaniline	0/3	50.0	0.0	50.0/50.0 µg/L
o-Nitroaniline	0/3	50.0	0.0	50.0/50.0 µg/L
p-Nitroaniline	0/3	50.0	0.0	50.0/50.0 µg/L
Nitrobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
2-Nitrophenol	0/3	10.0	0.0	10.0/10.0 µg/L
4-Nitrophenol	0/3	50.0	0.0	50.0/50.0 µg/L
N-Nitrosodiphenylamine	0/3	10.0	0.0	10.0/10.0 µg/L
N-Nitrosodipropylamine	0/3	10.0	0.0	10.0/10.0 µg/L
Pentachlorophenol	0/3	50.0	0.0	50.0/50.0 µg/L
Phenanthrene	0/3	10.0	0.0	10.0/10.0 µg/L
Phenol	0/3	10.0	0.0	10.0/10.0 µg/L
Pyrene	0/3	10.0	0.0	10.0/10.0 µg/L
1,2,4-Trichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
2,4,5-Trichlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
2,4,6-Trichlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
EPA9010A				
Cyanide	0/3	5.0	0.0	5.0/5.0 µg/L
EPA9020A				
Total organic halogens	0/1	10.0	—	10.0/10.0 µg/L
EPA9040A				
pH	2/2	5.67	0.01	5.66/5.67 pH
EPA9056				
Chloride	0/1	500	—	500/500 µg/L
Nitrate as nitrogen	0/3	73.3	40.4	50.0/120 µg/L
Nitrite as nitrogen	1/1	50.0	—	50.0/50.0 µg/L
Sulfate	0/1	5,000	—	5,000/5,000 µg/L
EPA9060M				
Total organic carbon	2/2	1,100	566	700/1,500 µg/L
ESESOPM008				
Actinium-228	2/2	2.34E-09	2.50E-09	5.70E-10/4.11E-09 µCi/mL
Antimony-125	2/2	-9.00E-10	2.55E-10	-1.08E-09/-7.20E-10 µCi/mL
Cerium-144	2/2	-2.87E-09	2.98E-09	-4.97E-09/-7.60E-10 µCi/mL
Cesium-134	2/2	-2.40E-10	4.38E-10	-5.50E-10/7.00E-11 µCi/mL
Cesium-137	2/2	-1.85E-10	4.95E-11	-2.20E-10/-1.50E-10 µCi/mL
Cobalt-57	2/2	-5.10E-10	5.09E-10	-8.70E-10/-1.50E-10 µCi/mL
Cobalt-60	2/2	-2.35E-10	4.74E-10	-5.70E-10/1.00E-10 µCi/mL
Europium-152	2/2	4.88E-09	1.90E-09	3.53E-09/6.22E-09 µCi/mL
Europium-154	2/2	2.36E-09	1.41E-10	2.26E-09/2.46E-09 µCi/mL
Europium-155	2/2	-3.50E-11	1.07E-09	-7.90E-10/7.20E-10 µCi/mL

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Iodine-129	2/2	-1.65E-09	2.37E-09	-3.32E-09/3.00E-11 µCi/mL
Lead-212	2/2	-1.30E-09	2.83E-10	-1.50E-09/-1.10E-09 µCi/mL
Manganese-54	2/2	-3.05E-10	7.28E-10	-8.20E-10/2.10E-10 µCi/mL
Potassium-40	2/2	8.15E-09	3.61E-09	5.59E-09/1.07E-08 µCi/mL
Promethium-144	2/2	-8.00E-11	3.11E-10	-3.00E-10/1.40E-10 µCi/mL
Promethium-146	2/2	-5.90E-10	2.83E-10	-7.90E-10/-3.90E-10 µCi/mL
Ruthenium-106	2/2	-2.86E-09	3.17E-09	-5.10E-09/-6.10E-10 µCi/mL
Sodium-22	2/2	9.25E-10	1.63E-10	8.10E-10/1.04E-09 µCi/mL
Thorium-234	2/2	2.51E-08	2.22E-08	9.45E-09/4.08E-08 µCi/mL
Yttrium-88	2/2	1.77E-10	2.60E-10	-7.00E-12/3.60E-10 µCi/mL
Zinc-65	2/2	1.14E-09	4.17E-10	8.40E-10/1.43E-09 µCi/mL
ESESOPM017				
Gross alpha	0/9	-5.14E-10	5.45E-10	-1.04E-09/3.90E-10 µCi/mL
Nonvolatile beta	1/4	1.47E-09	2.77E-09	-1.40E-10/5.62E-09 µCi/mL
ESESOPM020				
Tritium	0/6	7.46E-08	2.47E-07	-2.22E-07/3.99E-07 µCi/mL
ESESOPM030				
Radium-226	0/1	-2.20E-10	—	-2.20E-10/-2.20E-10 µCi/mL
Radium-228	0/1	1.80E-10	—	1.80E-10/1.80E-10 µCi/mL
ESESOPM031				
Strontium-90	1/1	5.37E-09	—	5.37E-09/5.37E-09 µCi/mL
ESESOPM032				
Americium-241	0/3	4.67E-11	2.08E-11	3.00E-11/7.00E-11 µCi/mL
Curium-242	0/3	-1.67E-12	2.57E-11	-3.00E-11/2.00E-11 µCi/mL
Curium-243	0/3	9.00E-11	1.18E-10	-1.00E-11/2.20E-10 µCi/mL
Curium-246	0/3	4.67E-11	2.08E-11	3.00E-11/7.00E-11 µCi/mL
Neptunium-237	2/3	2.47E-10	1.80E-10	6.00E-11/4.20E-10 µCi/mL
Plutonium-238	0/3	2.67E-11	2.52E-11	0.0/5.00E-11 µCi/mL
Plutonium-239/240	0/3	2.00E-11	3.61E-11	-2.00E-11/5.00E-11 µCi/mL
Thorium-228	0/3	2.33E-11	8.62E-11	-7.00E-11/1.00E-10 µCi/mL
Thorium-230	0/3	4.83E-10	2.11E-10	2.60E-10/6.80E-10 µCi/mL
Thorium-232	1/3	2.00E-11	2.00E-11	0.0/4.00E-11 µCi/mL
Uranium-234	0/3	4.67E-11	2.08E-11	3.00E-11/7.00E-11 µCi/mL
Uranium-235	0/3	0.0	5.00E-12	-5.00E-12/5.00E-12 µCi/mL
Uranium-238	1/3	1.67E-11	5.77E-12	1.00E-11/2.00E-11 µCi/mL
ESESOPM041				
Carbon-14	0/1	-1.11E-08	—	-1.11E-08/-1.11E-08 µCi/mL

† Number of times analyte was detected compared to the total number of field blanks for the analyte.
— Standard deviation cannot be determined.

Note: If the analyte was not detected in the field blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 90. Analytes Detected in Field Blanks for GE

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA160.1				
Total dissolved solids	2/6	9,330	1,030	8,000/10,000 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA180.1				
Turbidity	0/5	0.40	0.0	0.40/0.40 NTU
EPA353.1				
Nitrate-nitrite as nitrogen	2/17	47.1	56.1	10.0/210 µg/L
EPA365.4				
Total phosphates (as P)	0/2	50.0	0.0	50.0/50.0 µg/L
EPA6010A				
Aluminum	1/6	48.4	3.92	40.4/50.0 µg/L
Antimony	1/17	9.51	2.02	1.66/10.0 µg/L
Arsenic	0/17	5.0	0.0	5.0/5.0 µg/L
Barium	2/17	4.46	1.53	0.38/5.0 µg/L
Beryllium	1/6	4.21	1.94	0.25/5.0 µg/L
Cadmium	2/17	4.17	1.85	0.24/5.0 µg/L
Calcium	2/6	54.4	36.1	22.1/100 µg/L
Chromium	1/17	4.98	0.78	2.66/7.06 µg/L
Cobalt	2/17	4.50	1.42	0.69/5.0 µg/L
Copper	3/17	4.53	1.18	1.41/5.0 µg/L
Iron	1/6	38.2	18.3	13.0/50.0 µg/L
Lead	3/17	3.95	1.74	0.69/5.0 µg/L
Lithium	0/2	25.0	0.0	25.0/25.0 µg/L
Magnesium	1/6	6.50	2.35	3.81/10.0 µg/L
Manganese	1/6	8.49	3.70	0.93/10.0 µg/L
Nickel	1/17	5.74	3.06	5.0/17.6 µg/L
Potassium	1/6	73.1	42.4	7.35/100 µg/L
Selenium	1/17	4.83	0.71	2.07/5.0 µg/L
Silica	0/2	164	46.0	131/196 µg/L
Silver	2/17	3.29	1.78	0.74/5.0 µg/L
Sodium	1/6	104	9.80	100/124 µg/L
Thallium	0/10	4.78	0.71	2.75/5.0 µg/L
Tin	0/7	10.0	0.0	10.0/10.0 µg/L
Vanadium	3/17	4.24	1.70	0.47/5.0 µg/L
Zinc	3/17	2.79	1.44	1.12/5.60 µg/L
EPA7041				
Antimony	0/1	5.0	—	5.0/5.0 µg/L
EPA7060				
Arsenic	0/1	5.0	—	5.0/5.0 µg/L
EPA7421				
Lead	0/1	5.0	—	5.0/5.0 µg/L
EPA7470				
Mercury	3/17	0.27	0.16	0.20/0.64 µg/L
EPA7740				
Selenium	0/1	5.0	—	5.0/5.0 µg/L
EPA7841				
Thallium	0/1	5.0	—	5.0/5.0 µg/L
EPA8081				
Aldrin	0/3	0.02	0.0	0.02/0.02 µg/L
alpha-Benzene hexachloride	0/3	0.02	0.0	0.02/0.02 µg/L
beta-Benzene hexachloride	0/3	0.02	0.0	0.02/0.02 µg/L
delta-Benzene hexachloride	0/3	0.02	0.0	0.02/0.02 µg/L
alpha-Chlordane	0/3	0.02	0.0	0.02/0.02 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
gamma-Chlordane	0/3	0.02	0.0	0.02/0.02 µg/L
p,p´-DDD	0/3	0.04	0.0	0.04/0.04 µg/L
p,p´-DDE	0/3	0.04	0.0	0.04/0.04 µg/L
p,p´-DDT	0/3	0.04	0.0	0.04/0.04 µg/L
Dieldrin	0/3	0.04	0.0	0.04/0.04 µg/L
Endosulfan sulfate	0/3	0.04	0.0	0.04/0.04 µg/L
Endosulfan I	0/3	0.02	0.0	0.02/0.02 µg/L
Endosulfan II	0/3	0.04	0.0	0.04/0.04 µg/L
Endrin	0/3	0.04	0.0	0.04/0.04 µg/L
Endrin ketone	0/3	0.04	0.0	0.04/0.04 µg/L
Heptachlor	0/3	0.02	0.0	0.02/0.02 µg/L
Heptachlor epoxide	0/3	0.02	0.0	0.02/0.02 µg/L
Lindane	0/3	0.02	0.0	0.02/0.02 µg/L
Methoxychlor	0/3	0.20	0.00	0.20/0.20 µg/L
PCB 1016	0/3	0.13	0.00	0.12/0.13 µg/L
PCB 1221	0/3	0.13	0.00	0.12/0.13 µg/L
PCB 1232	0/3	0.13	0.00	0.12/0.13 µg/L
PCB 1242	0/3	0.13	0.00	0.12/0.13 µg/L
PCB 1248	0/3	0.13	0.00	0.12/0.13 µg/L
PCB 1254	0/3	0.13	0.00	0.12/0.13 µg/L
PCB 1260	0/3	0.13	0.00	0.12/0.13 µg/L
Toxaphene	0/3	1.0	0.01	0.99/1.01 µg/L
EPA8151				
2,4-Dichlorophenoxyacetic acid	0/2	0.10	0.00	0.10/0.10 µg/L
2,4,5-T	0/1	0.10	—	0.10/0.10 µg/L
2,4,5-TP (Silvex)	0/2	0.10	0.00	0.10/0.10 µg/L
EPA8270B				
Acenaphthene	0/3	10.0	0.0	10.0/10.0 µg/L
Acenaphthylene	0/3	10.0	0.0	10.0/10.0 µg/L
Anthracene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*a*]anthracene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*b*]fluoranthene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*k*]fluoranthene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzoic acid	0/3	20.0	0.0	20.0/20.0 µg/L
Benzo[*g,h,i*]perylene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzo[*a*]pyrene	0/3	10.0	0.0	10.0/10.0 µg/L
Benzyl alcohol	0/3	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroethoxy) methane	0/3	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroethyl) ether	0/3	10.0	0.0	10.0/10.0 µg/L
Bis(2-chloroisopropyl) ether	0/3	10.0	0.0	10.0/10.0 µg/L
Bis(2-ethylhexyl) phthalate	13/14	19.9	14.2	6.0/54.0 µg/L
4-Bromophenyl phenyl ether	0/3	10.0	0.0	10.0/10.0 µg/L
Butylbenzyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
4-Chloroaniline	0/3	20.0	0.0	20.0/20.0 µg/L
4-Chloro-m-cresol	0/3	10.0	0.0	10.0/10.0 µg/L
2-Chloronaphthalene	0/3	10.0	0.0	10.0/10.0 µg/L
2-Chlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
4-Chlorophenyl phenyl ether	0/3	10.0	0.0	10.0/10.0 µg/L
Chrysene	0/3	10.0	0.0	10.0/10.0 µg/L
m/p-Cresol	0/3	10.0	0.0	10.0/10.0 µg/L
o-Cresol	0/3	10.0	0.0	10.0/10.0 µg/L
Dibenz[*a,h*]anthracene	0/3	10.0	0.0	10.0/10.0 µg/L
Dibenzofuran	0/3	10.0	0.0	10.0/10.0 µg/L
Di-n-butyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
1,2-Dichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
1,3-Dichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
1,4-Dichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
3,3´-Dichlorobenzidine	0/3	49.0	0.0	49.0/49.0 µg/L
2,4-Dichlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Diethyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
2,4-Dimethyl phenol	0/3	10.0	0.0	10.0/10.0 µg/L
Dimethyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
2,4-Dinitrophenol	0/3	20.0	0.0	20.0/20.0 µg/L
2,4-Dinitrotoluene	0/3	10.0	0.0	10.0/10.0 µg/L
2,6-Dinitrotoluene	0/3	10.0	0.0	10.0/10.0 µg/L
Di-n-octyl phthalate	0/3	10.0	0.0	10.0/10.0 µg/L
Fluoranthene	0/3	10.0	0.0	10.0/10.0 µg/L
Fluorene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachlorobutadiene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachlorocyclopentadiene	0/3	10.0	0.0	10.0/10.0 µg/L
Hexachloroethane	0/3	10.0	0.0	10.0/10.0 µg/L
Indeno[1,2,3-*c,d*]pyrene	0/3	10.0	0.0	10.0/10.0 µg/L
Isophorone	0/3	10.0	0.0	10.0/10.0 µg/L
2-Methyl-4,6-dinitrophenol	0/3	10.0	0.0	10.0/10.0 µg/L
2-Methylnaphthalene	0/3	10.0	0.0	10.0/10.0 µg/L
Naphthalene	0/3	10.0	0.0	10.0/10.0 µg/L
m-Nitroaniline	0/3	10.0	0.0	10.0/10.0 µg/L
o-Nitroaniline	0/3	10.0	0.0	10.0/10.0 µg/L
p-Nitroaniline	0/3	10.0	0.0	10.0/10.0 µg/L
Nitrobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
2-Nitrophenol	0/3	10.0	0.0	10.0/10.0 µg/L
4-Nitrophenol	0/3	20.0	0.0	20.0/20.0 µg/L
N-Nitrosodiphenylamine	0/3	10.0	0.0	10.0/10.0 µg/L
N-Nitrosodipropylamine	0/3	10.0	0.0	10.0/10.0 µg/L
Pentachlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
Phenanthrene	0/3	10.0	0.0	10.0/10.0 µg/L
Phenol	0/3	10.0	0.0	10.0/10.0 µg/L
Pyrene	0/3	10.0	0.0	10.0/10.0 µg/L
1,2,4-Trichlorobenzene	0/3	10.0	0.0	10.0/10.0 µg/L
2,4,5-Trichlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
2,4,6-Trichlorophenol	0/3	10.0	0.0	10.0/10.0 µg/L
EPA9012				
Cyanide	1/21	10.0	0.01	9.97/10.0 µg/L
EPA9020B				
Total organic halogens	0/2	10.0	0.0	10.0/10.0 µg/L
EPA9045C				
pH	22/22	6.75	2.04	5.66/12.7 pH
EPA9050				
Specific conductance	13/13	1.84	0.54	1.20/2.63 µS/cm
EPA9056				
Chloride	0/2	86.0	19.8	72.0/100 µg/L
Fluoride	0/2	50.0	0.0	50.0/50.0 µg/L
Sulfate	0/2	141	83.4	82.0/200 µg/L
EPA9060				
Total organic carbon	1/7	4,310	1,820	172/5,000 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA9066				
Phenols	0/6	5.0	0.0	5.0/5.0 µg/L

† Number of times analyte was detected compared to the total number of field blanks for the analyte.
— Standard deviation cannot be determined.

Notes: A value of 0 is reported as 0.0.
Numbers less than 0.004 are reported as 0.00.
If the analyte was not detected in the field blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 91. Analytes Detected in Field Blanks for WA

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA340.2				
Fluoride	0/4	19.3	4.51	13.4/24.0 µg/L
EPA353.2				
Nitrate-nitrite as nitrogen	0/5	20.0	0.0	20.0/20.0 µg/L
Nitrite as nitrogen	0/1	20.0	—	20.0/20.0 µg/L
EPA365.2				
Total phosphates (as P)	3/4	30.4	24.7	13.7/67.0 µg/L
EPA6010				
Aluminum	1/2	84.8	86.5	23.6/146 µg/L
Antimony	0/3	27.0	0.0	27.0/27.0 µg/L
Arsenic	0/6	40.0	0.0	40.0/40.0 µg/L
Barium	1/16	1.67	0.42	0.18/1.80 µg/L
Beryllium	0/2	1.60	0.0	1.60/1.60 µg/L
Cadmium	0/3	4.70	0.0	4.70/4.70 µg/L
Calcium	0/2	260	298	49.9/471 µg/L
Chromium	3/6	3.31	2.91	0.82/7.0 µg/L
Cobalt	0/2	4.50	0.0	4.50/4.50 µg/L
Copper	1/2	3.10	2.12	1.60/4.60 µg/L
Iron	3/5	49.9	35.2	10.4/78.9 µg/L
Lead	0/16	47.0	0.0	47.0/47.0 µg/L
Magnesium	1/2	27.7	18.1	14.9/40.5 µg/L
Manganese	0/5	7.80	0.0	7.80/7.80 µg/L
Nickel	0/15	26.0	0.0	26.0/26.0 µg/L
Potassium	0/2	149	54.4	110/187 µg/L
Selenium	0/16	66.0	0.0	66.0/66.0 µg/L
Silver	0/6	4.29	1.73	0.76/5.0 µg/L
Sodium	0/5	81.1	37.1	42.1/137 µg/L
Thallium	0/2	55.0	0.0	55.0/55.0 µg/L
Vanadium	0/2	6.90	0.0	6.90/6.90 µg/L
Zinc	0/2	53.0	0.0	53.0/53.0 µg/L
EPA7470				
Mercury	0/6	0.70	0.0	0.70/0.70 µg/L
EPA8081				
Aldrin	0/2	0.05	0.00	0.05/0.05 µg/L
alpha-Benzene hexachloride	0/2	0.05	0.00	0.05/0.05 µg/L
beta-Benzene hexachloride	0/2	0.05	0.00	0.05/0.05 µg/L
delta-Benzene hexachloride	0/2	0.05	0.00	0.05/0.05 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
alpha-Chlordane	0/2	0.05	0.00	0.05/0.05 µg/L
gamma-Chlordane	0/2	0.05	0.00	0.05/0.05 µg/L
p,p´-DDD	0/2	0.11	0.00	0.10/0.11 µg/L
p,p´-DDE	0/2	0.11	0.00	0.10/0.11 µg/L
p,p´-DDT	0/2	0.11	0.00	0.10/0.11 µg/L
Dieldrin	0/2	0.11	0.00	0.10/0.11 µg/L
Endosulfan sulfate	0/2	0.11	0.00	0.10/0.11 µg/L
Endosulfan I	0/2	0.05	0.00	0.05/0.05 µg/L
Endosulfan II	0/2	0.11	0.00	0.10/0.11 µg/L
Endrin	0/2	0.11	0.00	0.10/0.11 µg/L
Endrin aldehyde	0/1	0.11	—	0.11/0.11 µg/L
Endrin ketone	0/2	0.11	0.00	0.10/0.11 µg/L
Heptachlor	0/2	0.05	0.00	0.05/0.05 µg/L
Heptachlor epoxide	0/2	0.05	0.00	0.05/0.05 µg/L
Lindane	0/5	0.05	0.00	0.05/0.05 µg/L
Methoxychlor	0/2	0.53	0.02	0.51/0.54 µg/L
PCB 1016	0/2	1.05	0.04	1.02/1.08 µg/L
PCB 1221	0/2	2.10	0.08	2.04/2.16 µg/L
PCB 1232	0/2	1.05	0.04	1.02/1.08 µg/L
PCB 1242	0/2	1.05	0.04	1.02/1.08 µg/L
PCB 1248	0/2	1.05	0.04	1.02/1.08 µg/L
PCB 1254	0/2	1.05	0.04	1.02/1.08 µg/L
PCB 1260	0/2	1.05	0.04	1.02/1.08 µg/L
Toxaphene	0/2	5.25	0.21	5.10/5.40 µg/L
EPA8151				
2,4-Dichlorophenoxyacetic acid	0/4	1.03	0.01	1.02/1.04 µg/L
EPA8260				
Benzene	0/1	5.0	—	5.0/5.0 µg/L
Bromodichloromethane	0/1	5.0	—	5.0/5.0 µg/L
Bromoform	0/1	5.0	—	5.0/5.0 µg/L
Bromomethane	0/1	10.0	—	10.0/10.0 µg/L
Carbon tetrachloride	0/1	5.0	—	5.0/5.0 µg/L
Chlorobenzene	0/1	5.0	—	5.0/5.0 µg/L
Chloroethane	0/1	10.0	—	10.0/10.0 µg/L
Chloroethene	0/1	10.0	—	10.0/10.0 µg/L
2-Chloroethyl vinyl ether	0/1	10.0	—	10.0/10.0 µg/L
Chloroform	0/1	5.0	—	5.0/5.0 µg/L
Chloromethane	0/1	10.0	—	10.0/10.0 µg/L
Dibromochloromethane	0/1	5.0	—	5.0/5.0 µg/L
1,1-Dichloroethane	0/1	5.0	—	5.0/5.0 µg/L
1,2-Dichloroethane	0/1	5.0	—	5.0/5.0 µg/L
1,1-Dichloroethylene	0/1	5.0	—	5.0/5.0 µg/L
1,2-Dichloroethylene	0/1	5.0	—	5.0/5.0 µg/L
Dichloromethane	0/1	9.98	—	9.98/9.98 µg/L
1,2-Dichloropropane	0/1	5.0	—	5.0/5.0 µg/L
cis-1,3-Dichloropropene	0/1	5.0	—	5.0/5.0 µg/L
trans-1,3-Dichloropropene	0/1	5.0	—	5.0/5.0 µg/L
Ethylbenzene	0/1	5.0	—	5.0/5.0 µg/L
1,1,2,2-Tetrachloroethane	0/1	5.0	—	5.0/5.0 µg/L
Tetrachloroethylene	0/1	5.0	—	5.0/5.0 µg/L
Toluene	0/1	5.0	—	5.0/5.0 µg/L
1,1,1-Trichloroethane	0/1	5.0	—	5.0/5.0 µg/L
1,1,2-Trichloroethane	0/1	5.0	—	5.0/5.0 µg/L
Trichloroethylene	0/1	5.0	—	5.0/5.0 µg/L
Trichlorofluoromethane	0/1	5.0	—	5.0/5.0 µg/L
Xylenes	0/1	5.0	—	5.0/5.0 µg/L
EPA8270				
Acenaphthene	0/2	10.4	0.28	10.2/10.6 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Acenaphthylene	0/2	10.4	0.28	10.2/10.6 µg/L
Anthracene	0/2	10.4	0.28	10.2/10.6 µg/L
Benzo[*a*]anthracene	0/2	10.4	0.28	10.2/10.6 µg/L
Benzo[*b*]fluoranthene	0/2	10.4	0.28	10.2/10.6 µg/L
Benzo[*k*]fluoranthene	0/2	10.4	0.28	10.2/10.6 µg/L
Benzoic acid	0/2	26.0	0.71	25.5/26.5 µg/L
Benzo[*g,h,i*]perylene	0/2	10.4	0.28	10.2/10.6 µg/L
Benzo[*a*]pyrene	0/2	10.4	0.28	10.2/10.6 µg/L
Benzyl alcohol	0/2	10.4	0.28	10.2/10.6 µg/L
Bis(2-chloroethoxy) methane	0/2	10.4	0.28	10.2/10.6 µg/L
Bis(2-chloroethyl) ether	0/2	10.4	0.28	10.2/10.6 µg/L
Bis(2-chloroisopropyl) ether	0/2	10.4	0.28	10.2/10.6 µg/L
Bis(2-ethylhexyl) phthalate	1/2	26.2	10.9	18.5/33.9 µg/L
4-Bromophenyl phenyl ether	0/2	10.4	0.28	10.2/10.6 µg/L
Butylbenzyl phthalate	0/2	10.4	0.28	10.2/10.6 µg/L
Carbazole	0/2	10.4	0.28	10.2/10.6 µg/L
4-Chloroaniline	0/2	10.4	0.28	10.2/10.6 µg/L
4-Chloro-m-cresol	0/2	10.4	0.28	10.2/10.6 µg/L
2-Chloronaphthalene	0/2	10.4	0.28	10.2/10.6 µg/L
2-Chlorophenol	0/2	10.4	0.28	10.2/10.6 µg/L
4-Chlorophenyl phenyl ether	0/2	10.4	0.28	10.2/10.6 µg/L
Chrysene	0/2	10.4	0.28	10.2/10.6 µg/L
m/p-Cresol	0/2	10.4	0.28	10.2/10.6 µg/L
o-Cresol	0/2	10.4	0.28	10.2/10.6 µg/L
Dibenz[*a,h*]anthracene	0/2	10.4	0.28	10.2/10.6 µg/L
Dibenzofuran	0/2	10.4	0.28	10.2/10.6 µg/L
Di-n-butyl phthalate	0/2	10.4	0.28	10.2/10.6 µg/L
1,2-Dichlorobenzene	0/2	10.4	0.28	10.2/10.6 µg/L
1,3-Dichlorobenzene	0/2	10.4	0.28	10.2/10.6 µg/L
1,4-Dichlorobenzene	0/2	10.4	0.28	10.2/10.6 µg/L
3,3´-Dichlorobenzidine	0/2	10.4	0.28	10.2/10.6 µg/L
2,4-Dichlorophenol	0/2	10.4	0.28	10.2/10.6 µg/L
Diethyl phthalate	0/2	10.4	0.28	10.2/10.6 µg/L
2,4-Dimethyl phenol	0/2	10.4	0.28	10.2/10.6 µg/L
Dimethyl phthalate	0/2	10.4	0.28	10.2/10.6 µg/L
2,4-Dinitrophenol	0/2	26.0	0.71	25.5/26.5 µg/L
2,4-Dinitrotoluene	0/2	10.4	0.28	10.2/10.6 µg/L
2,6-Dinitrotoluene	0/2	10.4	0.28	10.2/10.6 µg/L
Di-n-octyl phthalate	0/2	10.4	0.28	10.2/10.6 µg/L
Fluoranthene	0/2	10.4	0.28	10.2/10.6 µg/L
Fluorene	0/2	10.4	0.28	10.2/10.6 µg/L
Hexachlorobenzene	0/2	10.4	0.28	10.2/10.6 µg/L
Hexachlorobutadiene	0/2	10.4	0.28	10.2/10.6 µg/L
Hexachlorocyclopentadiene	0/2	10.4	0.28	10.2/10.6 µg/L
Hexachloroethane	0/2	10.4	0.28	10.2/10.6 µg/L
Indeno[1,2,3-*c,d*]pyrene	0/2	10.4	0.28	10.2/10.6 µg/L
Isophorone	0/2	10.4	0.28	10.2/10.6 µg/L
2-Methyl-4,6-dinitrophenol	0/2	26.0	0.71	25.5/26.5 µg/L
2-Methylnaphthalene	0/2	10.4	0.28	10.2/10.6 µg/L
Naphthalene	0/2	10.4	0.28	10.2/10.6 µg/L
m-Nitroaniline	0/2	26.0	0.71	25.5/26.5 µg/L
o-Nitroaniline	0/2	26.0	0.71	25.5/26.5 µg/L
p-Nitroaniline	0/2	26.0	0.71	25.5/26.5 µg/L
Nitrobenzene	0/2	10.4	0.28	10.2/10.6 µg/L
2-Nitrophenol	0/2	10.4	0.28	10.2/10.6 µg/L
4-Nitrophenol	0/2	26.0	0.71	25.5/26.5 µg/L
N-Nitrosodiphenylamine	0/2	10.4	0.28	10.2/10.6 µg/L
N-Nitrosodipropylamine	0/2	10.4	0.28	10.2/10.6 µg/L
Pentachlorophenol	0/2	26.0	0.71	25.5/26.5 µg/L
Phenanthrene	0/2	10.4	0.28	10.2/10.6 µg/L
Phenol	0/5	10.4	0.22	10.2/10.6 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Pyrene	0/2	10.4	0.28	10.2/10.6 µg/L
1,2,4-Trichlorobenzene	0/2	10.4	0.28	10.2/10.6 µg/L
2,4,5-Trichlorophenol	0/2	26.0	0.71	25.5/26.5 µg/L
2,4,6-Trichlorophenol	0/2	10.4	0.28	10.2/10.6 µg/L
EPA9010A				
Cyanide	1/15	14.5	2.81	4.33/15.2 µg/L
EPA9020B				
Total organic halogens	1/4	94.2	51.6	16.9/120 µg/L
EPA9040A				
pH	1/1	5.78	—	5.78/5.78 pH
EPA9056				
Chloride	3/3	183	8.08	174/190 µg/L
Sulfate	0/3	340	0.0	340/340 µg/L
EPA9060				
Total organic carbon	2/4	563	505	125/1,000 µg/L

† Number of times analyte was detected compared to the total number of field blanks for the analyte.
— Standard deviation cannot be determined.

Notes: A value of 0 is reported as 0.0.
Numbers less than 0.004 are reported as 0.00.
If the analyte was not detected in the field blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 92. Analytes Detected in Field Blanks for GP

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPIA-001				
Gross alpha	2/21	7.63E-11	2.86E-10	-1.82E-10/9.07E-10 µCi/mL
Nonvolatile beta	1/21	2.53E-10	4.71E-10	-2.14E-10/1.88E-09 µCi/mL
EPIA-002				
Tritium	0/18	-1.86E-07	2.64E-07	-6.07E-07/2.64E-07 µCi/mL
EPIA-003				
Carbon-14	0/10	5.51E-10	3.01E-09	-4.23E-09/4.40E-09 µCi/mL
EPIA-004				
Strontium-90	0/16	-4.30E-11	2.56E-10	-5.44E-10/3.28E-10 µCi/mL
EPIA-005				
Technetium-99	0/17	-3.40E-09	5.01E-09	-1.21E-08/7.02E-09 µCi/mL
EPIA-006				
Iodine-129	0/15	3.41E-10	3.54E-10	-1.75E-10/9.33E-10 µCi/mL
EPIA-008				
Radium-226	4/14	4.17E-10	2.87E-10	5.90E-11/1.04E-09 µCi/mL

Analyte	*Frequency of Detection†*	*Mean Result*	*Standard Deviation*	*Minimum/Maximum Results*
EPIA-009				
Radium-228	12/15	2.76E-09	1.30E-09	7.29E-10/5.83E-09 µCi/mL
EPIA-011				
Americium-241	0/16	1.63E-10	2.25E-10	-2.30E-11/8.59E-10 µCi/mL
Curium-242	0/16	2.94E-12	8.12E-11	-2.65E-10/1.15E-10 µCi/mL
Curium-243/244	0/16	9.43E-11	1.02E-10	-1.02E-10/3.49E-10 µCi/mL
Curium-245/246	1/16	5.64E-11	5.56E-11	-2.00E-11/1.83E-10 µCi/mL
Plutonium-238	4/16	3.55E-10	3.16E-10	3.70E-11/1.04E-09 µCi/mL
Plutonium-239/240	1/16	3.53E-11	5.30E-11	-2.10E-11/2.14E-10 µCi/mL
Uranium-233/234	0/16	9.53E-11	1.12E-10	-2.40E-11/3.66E-10 µCi/mL
Uranium-235	0/16	-2.31E-12	4.54E-11	-8.00E-11/1.40E-10 µCi/mL
Uranium-238	0/16	1.46E-11	6.28E-11	-2.50E-11/1.91E-10 µCi/mL
EPIA-012				
Thorium-228	0/15	8.45E-11	1.78E-10	-1.64E-10/4.26E-10 µCi/mL
Thorium-230	2/15	1.59E-10	1.05E-10	3.90E-11/3.75E-10 µCi/mL
Thorium-232	0/15	0.0	3.29E-11	-3.40E-11/1.03E-10 µCi/mL
EPIA-013				
Actinium-228	1/18	7.74E-09	9.95E-09	4.40E-11/3.99E-08 µCi/mL
Antimony-125	0/18	-1.23E-10	2.78E-09	-4.55E-09/5.07E-09 µCi/mL
Cerium-144	0/18	-1.42E-10	5.56E-09	-1.20E-08/9.78E-09 µCi/mL
Cesium-134	0/18	-5.46E-10	1.14E-09	-3.74E-09/1.33E-09 µCi/mL
Cesium-137	1/18	7.32E-10	1.86E-09	-3.22E-09/5.32E-09 µCi/mL
Cobalt-57	1/18	4.68E-10	1.00E-09	-7.63E-10/2.98E-09 µCi/mL
Cobalt-60	1/18	2.80E-10	1.00E-09	-1.58E-09/2.96E-09 µCi/mL
Europium-152	0/18	-5.61E-10	2.98E-09	-5.60E-09/4.56E-09 µCi/mL
Europium-154	0/18	-4.61E-10	3.07E-09	-5.05E-09/6.60E-09 µCi/mL
Europium-155	0/18	4.86E-10	3.35E-09	-7.96E-09/5.19E-09 µCi/mL
Lead-212	2/18	3.97E-09	3.75E-09	3.50E-11/1.68E-08 µCi/mL
Manganese-54	0/18	2.35E-10	8.92E-10	-1.27E-09/1.81E-09 µCi/mL
Potassium-40	2/18	1.77E-08	1.28E-08	3.35E-09/4.45E-08 µCi/mL
Promethium-144	0/18	-2.08E-10	1.03E-09	-2.21E-09/1.90E-09 µCi/mL
Promethium-146	0/18	-2.21E-10	1.72E-09	-2.09E-09/5.50E-09 µCi/mL
Ruthenium-106	0/18	6.62E-11	8.56E-09	-2.37E-08/1.48E-08 µCi/mL
Sodium-22	0/18	-1.84E-10	1.11E-09	-1.82E-09/2.37E-09 µCi/mL
Yttrium-88	1/18	1.31E-10	1.72E-09	-2.00E-09/4.47E-09 µCi/mL
Zinc-65	0/18	-9.72E-10	2.61E-09	-5.84E-09/6.68E-09 µCi/mL
EPIA-020				
Promethium-147	0/4	5.98E-11	6.77E-10	-5.18E-10/9.98E-10 µCi/mL
EPIA-022				
Nickel-63	0/8	-2.56E-08	7.87E-08	-1.23E-07/7.97E-08 µCi/mL
EPIA-032				
Neptunium-237	0/4	6.50E-12	1.63E-11	-1.60E-11/2.30E-11 µCi/mL

† Number of times analyte was detected compared to the total number of field blanks for the analyte.

Note: If the analyte was not detected in the field blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 93. Analytes Detected in Field Blanks for TM

Analyte	*Frequency of Detection†*	*Mean Result*	*Standard Deviation*	*Minimum/Maximum Results*
EICHROMTC1MOD				
Technetium-99	0/1	7.40E-10	—	7.40E-10/7.40E-10 µCi/mL
EPA900.0MOD				
Gross alpha	1/8	2.84E-10	3.90E-10	-2.70E-10/1.04E-09 µCi/mL
Nonvolatile beta	0/7	-7.41E-10	1.36E-09	-2.91E-09/5.10E-10 µCi/mL
EPA901.1MOD				
Actinium-228	0/1	2.08E-09	—	2.08E-09/2.08E-09 µCi/mL
Antimony-124	0/1	7.80E-09	—	7.80E-09/7.80E-09 µCi/mL
Antimony-125	0/1	-4.28E-09	—	-4.28E-09/-4.28E-09 µCi/mL
Barium-133	0/1	1.44E-09	—	1.44E-09/1.44E-09 µCi/mL
Cerium-144	0/1	-2.09E-08	—	-2.09E-08/-2.09E-08 µCi/mL
Cesium-134	0/1	6.24E-09	—	6.24E-09/6.24E-09 µCi/mL
Cesium-137	0/1	1.70E-10	—	1.70E-10/1.70E-10 µCi/mL
Cobalt-57	0/1	-1.12E-09	—	-1.12E-09/-1.12E-09 µCi/mL
Cobalt-58	0/1	2.90E-09	—	2.90E-09/2.90E-09 µCi/mL
Cobalt-60	0/1	-2.34E-09	—	-2.34E-09/-2.34E-09 µCi/mL
Europium-152	0/1	-1.24E-08	—	-1.24E-08/-1.24E-08 µCi/mL
Europium-154	0/1	-3.72E-09	—	-3.72E-09/-3.72E-09 µCi/mL
Europium-155	0/1	-2.33E-09	—	-2.33E-09/-2.33E-09 µCi/mL
Lead-212	0/1	1.62E-09	—	1.62E-09/1.62E-09 µCi/mL
Manganese-54	0/1	-4.37E-09	—	-4.37E-09/-4.37E-09 µCi/mL
Potassium-40	0/1	3.05E-08	—	3.05E-08/3.05E-08 µCi/mL
Promethium-144	0/1	-2.27E-09	—	-2.27E-09/-2.27E-09 µCi/mL
Promethium-146	0/1	1.00E-11	—	1.00E-11/1.00E-11 µCi/mL
Ruthenium-106	0/1	-1.55E-08	—	-1.55E-08/-1.55E-08 µCi/mL
Sodium-22	0/1	-5.50E-10	—	-5.50E-10/-5.50E-10 µCi/mL
Tin-113	0/1	-4.60E-09	—	-4.60E-09/-4.60E-09 µCi/mL
Yttrium-88	0/1	7.10E-10	—	7.10E-10/7.10E-10 µCi/mL
Zinc-65	0/1	-1.32E-09	—	-1.32E-09/-1.32E-09 µCi/mL
Zirconium-95	0/1	-3.20E-09	—	-3.20E-09/-3.20E-09 µCi/mL
EPA903.0MOD				
Radium, total alpha-emitting	0/4	8.00E-11	3.27E-11	4.00E-11/1.20E-10 µCi/mL
Radium-226	1/2	5.35E-10	6.15E-10	1.00E-10/9.70E-10 µCi/mL
EPA904.0MOD				
Radium-228	0/2	8.55E-10	2.81E-09	-1.13E-09/2.84E-09 µCi/mL
EPA906.0MOD				
Tritium	0/3	-2.87E-07	3.25E-07	-5.40E-07/8.00E-08 µCi/mL

† Number of times analyte was detected compared to the total number of field blanks for the analyte.
— Standard deviation cannot be determined.

Note: If the analyte was not detected in the field blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 94. Analytes Detected in Trip Blanks for ES

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA8260				
Acetone	1/19	8.31	7.90	3.0/39.0 µg/L
Benzene	0/19	5.0	0.0	5.0/5.0 µg/L
Bromodichloromethane	0/19	5.0	0.0	5.0/5.0 µg/L
Bromoform	0/19	5.0	0.0	5.0/5.0 µg/L
Bromomethane	0/19	10.0	0.0	10.0/10.0 µg/L
Carbon disulfide	0/19	5.0	0.0	5.0/5.0 µg/L
Carbon tetrachloride	0/19	5.0	0.0	5.0/5.0 µg/L
Chlorobenzene	0/19	5.0	0.0	5.0/5.0 µg/L
Chloroethane	0/19	10.0	0.0	10.0/10.0 µg/L
Chloroethene	0/19	10.0	0.0	10.0/10.0 µg/L
Chloroform	0/18	5.0	0.0	5.0/5.0 µg/L
Chloromethane	0/19	10.0	0.0	10.0/10.0 µg/L
Dibromochloromethane	0/19	5.0	0.0	5.0/5.0 µg/L
1,1-Dichloroethane	0/19	5.0	0.0	5.0/5.0 µg/L
1,2-Dichloroethane	0/19	5.0	0.0	5.0/5.0 µg/L
1,1-Dichloroethylene	0/19	5.0	0.0	5.0/5.0 µg/L
cis-1,2-Dichloroethylene	0/19	5.0	0.0	5.0/5.0 µg/L
trans-1,2-Dichloroethylene	0/19	5.0	0.0	5.0/5.0 µg/L
Dichloromethane	0/19	2.43	0.34	2.0/3.50 µg/L
1,2-Dichloropropane	0/19	5.0	0.0	5.0/5.0 µg/L
cis-1,3-Dichloropropene	0/19	5.0	0.0	5.0/5.0 µg/L
trans-1,3-Dichloropropene	0/19	5.0	0.0	5.0/5.0 µg/L
Ethylbenzene	0/19	5.0	0.0	5.0/5.0 µg/L
2-Hexanone	0/19	10.0	0.0	10.0/10.0 µg/L
Methyl ethyl ketone	0/19	10.0	0.0	10.0/10.0 µg/L
Methyl isobutyl ketone	0/19	12.0	0.0	12.0/12.0 µg/L
Styrene	0/19	5.0	0.0	5.0/5.0 µg/L
1,1,2,2-Tetrachloroethane	0/19	5.0	0.0	5.0/5.0 µg/L
Tetrachloroethylene	0/19	5.0	0.0	5.0/5.0 µg/L
Toluene	0/19	5.0	0.0	5.0/5.0 µg/L
1,1,1-Trichloroethane	0/19	5.0	0.0	5.0/5.0 µg/L
1,1,2-Trichloroethane	0/19	5.0	0.0	5.0/5.0 µg/L
Trichloroethylene	1/19	4.79	0.90	1.10/5.0 µg/L
Vinyl acetate	0/19	5.0	0.0	5.0/5.0 µg/L
Xylenes	0/19	5.0	0.0	5.0/5.0 µg/L

† Number of times analyte was detected compared to the total number of trip blanks for the analyte.
— Standard deviation cannot be determined.

Note: If the analyte was not detected in the trip blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 95. Analytes Detected in Trip Blanks for EX

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA8260A				
Acetone	0/15	10.0	0.0	10.0/10.0 µg/L
Benzene	0/15	5.0	0.0	5.0/5.0 µg/L
Bromodichloromethane	0/15	5.0	0.0	5.0/5.0 µg/L
Bromoform	0/15	5.0	0.0	5.0/5.0 µg/L
Bromomethane	0/15	5.0	0.0	5.0/5.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Carbon disulfide	0/15	5.0	0.0	5.0/5.0 µg/L
Carbon tetrachloride	0/15	5.0	0.0	5.0/5.0 µg/L
Chlorobenzene	0/15	5.0	0.0	5.0/5.0 µg/L
Chloroethane	0/15	5.0	0.0	5.0/5.0 µg/L
Chloroethene	0/15	5.0	0.0	5.0/5.0 µg/L
Chloroform	0/15	5.0	0.0	5.0/5.0 µg/L
Chloromethane	0/15	5.0	0.0	5.0/5.0 µg/L
Dibromochloromethane	0/15	5.0	0.0	5.0/5.0 µg/L
1,1-Dichloroethane	0/15	5.0	0.0	5.0/5.0 µg/L
1,2-Dichloroethane	0/15	5.0	0.0	5.0/5.0 µg/L
1,1-Dichloroethylene	0/15	5.0	0.0	5.0/5.0 µg/L
1,2-Dichloroethylene	0/15	5.0	0.0	5.0/5.0 µg/L
Dichloromethane	0/15	10.0	0.0	10.0/10.0 µg/L
1,2-Dichloropropane	0/15	5.0	0.0	5.0/5.0 µg/L
cis-1,3-Dichloropropene	0/15	5.0	0.0	5.0/5.0 µg/L
trans-1,3-Dichloropropene	0/15	5.0	0.0	5.0/5.0 µg/L
Ethylbenzene	0/15	5.0	0.0	5.0/5.0 µg/L
2-Hexanone	0/15	10.0	0.0	10.0/10.0 µg/L
Methyl ethyl ketone	0/15	10.0	0.0	10.0/10.0 µg/L
Methyl isobutyl ketone	0/15	10.0	0.0	10.0/10.0 µg/L
Styrene	0/15	5.0	0.0	5.0/5.0 µg/L
1,1,2,2-Tetrachloroethane	0/15	5.0	0.0	5.0/5.0 µg/L
Tetrachloroethylene	0/15	5.0	0.0	5.0/5.0 µg/L
Toluene	0/15	5.0	0.0	5.0/5.0 µg/L
1,1,1-Trichloroethane	0/15	5.0	0.0	5.0/5.0 µg/L
1,1,2-Trichloroethane	0/15	5.0	0.0	5.0/5.0 µg/L
Trichloroethylene	0/15	5.0	0.0	5.0/5.0 µg/L
Vinyl acetate	0/15	10.0	0.0	10.0/10.0 µg/L
Xylenes	0/15	10.0	0.0	10.0/10.0 µg/L

† Number of times analyte was detected compared to the total number of trip blanks for the analyte.

Note: If the analyte was not detected in the trip blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 96. Analytes Detected in Trip Blanks for GE

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA8260A				
Acetone	5/42	4.79	0.76	2.33/6.67 µg/L
Benzene	0/42	1.0	0.0	1.0/1.0 µg/L
Bromodichloromethane	0/42	1.0	0.0	1.0/1.0 µg/L
Bromoform	0/42	1.0	0.0	1.0/1.0 µg/L
Bromomethane	0/42	1.0	0.0	1.0/1.0 µg/L
Carbon disulfide	0/42	5.0	0.0	5.0/5.0 µg/L
Carbon tetrachloride	0/42	1.0	0.0	1.0/1.0 µg/L
Chlorobenzene	1/42	0.99	0.06	0.59/1.0 µg/L
Chloroethane	0/42	1.0	0.0	1.0/1.0 µg/L
Chloroethene	0/42	1.0	0.0	1.0/1.0 µg/L
Chloroform	0/42	1.0	0.0	1.0/1.0 µg/L
Chloromethane	0/42	1.0	0.0	1.0/1.0 µg/L
Dibromochloromethane	0/42	1.0	0.0	1.0/1.0 µg/L
1,1-Dichloroethane	0/42	1.0	0.0	1.0/1.0 µg/L
1,2-Dichloroethane	0/42	1.0	0.0	1.0/1.0 µg/L
1,1-Dichloroethylene	1/42	1.02	0.14	1.0/1.90 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
1,2-Dichloroethylene	0/42	1.0	0.0	1.0/1.0 µg/L
Dichloromethane	3/42	2.33	1.59	1.0/10.1 µg/L
1,2-Dichloropropane	0/42	1.0	0.0	1.0/1.0 µg/L
cis-1,3-Dichloropropene	0/42	1.0	0.0	1.0/1.0 µg/L
trans-1,3-Dichloropropene	0/42	1.0	0.0	1.0/1.0 µg/L
Ethylbenzene	0/42	1.0	0.0	1.0/1.0 µg/L
2-Hexanone	0/42	5.0	0.0	5.0/5.0 µg/L
Methyl ethyl ketone	0/42	5.0	0.0	5.0/5.0 µg/L
Methyl isobutyl ketone	0/42	5.0	0.0	5.0/5.0 µg/L
Styrene	0/42	1.0	0.0	1.0/1.0 µg/L
1,1,2,2-Tetrachloroethane	0/42	1.0	0.0	1.0/1.0 µg/L
Tetrachloroethylene	0/42	1.0	0.0	1.0/1.0 µg/L
Toluene	1/42	1.02	0.10	1.0/1.64 µg/L
1,1,1-Trichloroethane	0/42	1.0	0.0	1.0/1.0 µg/L
1,1,2-Trichloroethane	0/42	1.0	0.0	1.0/1.0 µg/L
Trichloroethylene	0/42	1.0	0.0	1.0/1.0 µg/L
Vinyl acetate	0/42	5.0	0.0	5.0/5.0 µg/L
Xylenes	0/42	1.0	0.0	1.0/1.0 µg/L

† Number of times analyte was detected compared to the total number of trip blanks for the analyte.

Note: If the analyte was not detected in the trip blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 97. Analytes Detected in Trip Blanks for WA

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
EPA8260				
Acetone	0/42	7.14	3.17	1.87/12.5 µg/L
Benzene	0/42	5.0	0.0	5.0/5.0 µg/L
Bromodichloromethane	0/42	5.0	0.0	5.0/5.0 µg/L
Bromoform	0/42	5.0	0.0	5.0/5.0 µg/L
Bromomethane	0/42	10.0	0.0	10.0/10.0 µg/L
Carbon disulfide	7/42	4.40	1.36	1.11/5.0 µg/L
Carbon tetrachloride	0/42	5.0	0.0	5.0/5.0 µg/L
Chlorobenzene	0/42	5.0	0.0	5.0/5.0 µg/L
Chloroethane	0/42	10.0	0.0	10.0/10.0 µg/L
Chloroethene	0/42	10.0	0.0	10.0/10.0 µg/L
Chloroform	0/42	5.0	0.0	5.0/5.0 µg/L
Chloromethane	0/42	10.0	0.0	10.0/10.0 µg/L
Dibromochloromethane	0/42	5.0	0.0	5.0/5.0 µg/L
1,1-Dichloroethane	0/42	5.0	0.0	5.0/5.0 µg/L
1,2-Dichloroethane	0/42	5.0	0.0	5.0/5.0 µg/L
1,1-Dichloroethylene	0/42	5.0	0.0	5.0/5.0 µg/L
1,2-Dichloroethylene	0/42	5.0	0.0	5.0/5.0 µg/L
Dichloromethane	3/42	8.54	5.06	1.52/22.1 µg/L
1,2-Dichloropropane	0/42	5.0	0.0	5.0/5.0 µg/L
cis-1,3-Dichloropropene	0/42	5.0	0.0	5.0/5.0 µg/L
trans-1,3-Dichloropropene	0/42	5.0	0.0	5.0/5.0 µg/L
Ethylbenzene	0/42	5.0	0.0	5.0/5.0 µg/L
2-Hexanone	0/42	10.0	0.0	10.0/10.0 µg/L
Methyl ethyl ketone	2/42	9.58	1.88	1.06/10.0 µg/L
Methyl isobutyl ketone	0/42	10.0	0.0	10.0/10.0 µg/L
Styrene	0/42	5.0	0.0	5.0/5.0 µg/L
1,1,2,2-Tetrachloroethane	0/42	5.0	0.0	5.0/5.0 µg/L
Tetrachloroethylene	0/42	5.0	0.0	5.0/5.0 µg/L

Analyte	Frequency of Detection†	Mean Result	Standard Deviation	Minimum/Maximum Results
Toluene	0/42	5.0	0.0	5.0/5.0 µg/L
1,1,1-Trichloroethane	0/42	5.0	0.0	5.0/5.0 µg/L
1,1,2-Trichloroethane	0/42	5.0	0.0	5.0/5.0 µg/L
Trichloroethylene	0/42	5.0	0.0	5.0/5.0 µg/L
Vinyl acetate	0/42	10.0	0.0	10.0/10.0 µg/L
Xylenes	0/42	5.0	0.0	5.0/5.0 µg/L

† Number of times analyte was detected compared to the total number of trip blanks for the analyte.

Note: If the analyte was not detected in the trip blank(s), detection limit information appears in the *Mean Result* and *Minimum/Maximum Results* columns.

Table 98. Bailed Wells

Well	Date	Well	Date
FTF 3	03/12/98	HTF 5	03/25/98
FTF 12	03/11/98	HTF 6	03/25/98
FTF 15	03/11/98	HTF 10	03/24/98
FTF 16	03/11/98	HTF 11	03/24/98
FTF 17	03/11/98	HTF 17	03/19/98
FTF 18	03/11/98	HTF 18	03/24/98
FTF 19	03/11/98	HTF 19	03/24/98
FTF 20	03/11/98	HTF 20	03/24/98
FTF 21	03/11/98	HTF 21	03/24/98
FTF 22	03/11/98	HTF 25	03/19/98
FTF 23	03/11/98	HTF 26	03/19/98
FTF 24A	03/12/98	HTF 27	03/19/98
FTF 25A	03/12/98	HTF 28	03/19/98
FTF 26	03/12/98	HTF 31	03/19/98
FTF 27	03/12/98	HTF 32	03/19/98
HTF 2	03/25/98	HTF 34	03/19/98
HTF 3	03/25/98	MSB 48D	03/11/98

Table 99. Sampled Wells with Metal Casings

Well	Casing	Well	Casing
AC 1A	Steel	MSB 42TA	Carbon steel
AC 1B	Steel	MSB 43TA	Carbon steel
ASB 8TA	Carbon steel	MSB 48TA	Carbon steel
FTF 3	Steel	MSB 54TA	Carbon steel
FTF 12	Steel	MSB 55TA	Carbon steel
HTF 1	Steel	MSB 82TA	Carbon steel
HTF 2	Steel	MSB 85TA	Steel
HTF 3	Steel	RWM 1	Carbon steel
HTF 5	Steel	RWM 3	Carbon steel
HTF 6	Steel	RWM 4	Carbon steel
HTF 10	Steel	RWM 5	Carbon steel
HTF 11	Steel	RWM 6	Carbon steel
HTF 15	Steel	RWM 7	Carbon steel
MSB 12TA	Steel	RWM 8	Carbon steel
MSB 23TA	Steel	RWM 9	Carbon steel
MSB 29TA	Carbon steel	RWM 10	Carbon steel
MSB 34TA	Steel	RWM 11	Carbon steel

Well	Casing	Well	Casing
MSB 35TA	Carbon steel	RWM 13B	Carbon steel
MSB 36TA	Carbon steel	RWM 13C	Carbon steel
MSB 37TA	Carbon steel	RWM 14B	Carbon steel
MSB 39TA	Carbon steel	RWM 14C	Carbon steel
MSB 41TA	Carbon steel	RWM 15B	Carbon steel

Table 100. Wells That Had Turbidity Greater Than 15 NTU

Well	Date	Results (in NTU)
ABP 8C	03/11/98	24.6
AMB 14D	03/11/98	72.6
AMB 15D	03/06/98	150
FBP 6D	03/31/98	189
FBP 9D	03/31/98	49.2
FBP 10D	03/30/98	73.1
FBP 11D	03/31/98	24.9
FSB 94C	01/13/98	17.3
FSB116D	01/07/98	40.6
FSB119D	01/20/98	44.5
FSB120D	01/13/98	22.5
FTF 3	03/12/98	241
FTF 12	03/11/98	72.2
FTF 15	03/11/98	170
FTF 16	03/11/98	71.5
FTF 17	03/11/98	175
FTF 18	03/11/98	283
FTF 20	03/11/98	221
FTF 21	03/11/98	81.4
FTF 22	03/11/98	74.5
FTF 23	03/11/98	47.4
FTF 24A	03/12/98	874
FTF 25A	03/12/98	428
FTF 26	03/12/98	415
FTF 27	03/12/98	>1,000
HAA 3D	01/14/98	188
HAA 3D	02/06/98	29.0
HAA 6A	01/30/98	56.6
HAA 6D	02/02/98	153
HSB115D	01/07/98	21.9
HSB147D	01/23/98	19.8
HSB152D	01/21/98	97.2
HSL 3D	01/28/98	41.6
HSL 7D	01/30/98	81.0
HTF 10	03/24/98	95.8
HTF 15	03/25/98	181
HTF 17	03/19/98	42.7
HTF 28	03/19/98	165
HXB 6D	01/21/98	25.0
KDB 1	01/08/98	19.5
KDB 4	01/08/98	24.6
KDB 5	01/08/98	71.3
LFW 77	02/06/98	205
MSB 39TA	02/25/98	25.2
MSB 48D	03/11/98	677
MSB 55HC	03/03/98	364
MSB 70D	02/25/98	15.2
RPC 5DL	01/15/98	39.6
RPC 6DL	01/14/98	23.9

Well	Date	Results (in NTU)
RPC 6DU	01/14/98	83.0
RPC 6DU	01/28/98	505
RPC 10DL	01/19/98	58.8
RPC 10DL	02/05/98	23.8
RPC 11DL	01/26/98	44.1
RPC 11DL	02/11/98	230
RWM 14C	01/23/98	23.0
RWM 14C	02/04/98	38.1
ZBG 1A	02/02/98	1,000

Table 101. Analyses Not Performed by ES

Well	Analyte	Reason
KRP 8	Gamma PHA	Not reported by laboratory
KRP 8	Gamma PHA	Not reported by laboratory
KRP 9	Gamma PHA	Not reported by laboratory
KRP 9	Gamma PHA	Not reported by laboratory
LFW 6R	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 28	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 30	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 32	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 32C	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 34	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 41R	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 45D	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 47D	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 56D	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 63B	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 63C	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 64C	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 64D	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 65C	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 65D	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 67B	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 67C	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 67D	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 68D	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 69C	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 69D	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 71B	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 71C	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 71D	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 74C	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 74D	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 75C	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 75D	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 76	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 77	trans-1,2-Dichloroethylene	Not reported by laboratory
LFW 78	trans-1,2-Dichloroethylene	Not reported by laboratory
QA 77A	trans-1,2-Dichloroethylene	Not reported by laboratory
QA 79A	Gamma PHA	Not reported by laboratory
QA 80A	Gamma PHA	Not reported by laboratory
QA 82A	Gamma PHA	Not reported by laboratory

Site Index

Table 102 provides information about sites, locations, and well series. Some site names and locations were not available.

Table 102. Sites and Locations by Well Series

Well Series	*Site*	*Location*
ABP	A-Area Metals Burning Pit	South of the burning/rubble pits
ABW	A Area near Firing Range	North of Road D-1 and east of Road 1-7
AC	A-Area Cluster Perimeter Wells and M-Area Plume Definition Wells	
ACB	A-Area Coal Pile Runoff Containment Basin	Southeast of A Area
AMB	Metallurgical Laboratory Seepage Basin	At the eastern edge of A Area
AOB	Motor Shop Oil Basin	At the south edge of A Area near NPDES Outfall A-14
ARP	A-Area Burning/Rubble Pits and A-Area Ash Pile	West of Road D, south of A Area
ASB	Savannah River Laboratory Seepage Basins	Across the road from the Savannah River Technology Center (formerly the Savannah River Laboratory)
BGO	Burial Grounds Perimeter	Southern E Area
BGX	E-Area Vaults/Burial Ground Expansion	Northern E Area
BRD	Road A Chemical Basin (Baxley Road)	East of D Area
BRR	Burma Road Rubble Pit	Southwest of F Area
CBR	N-Area (Central Shops) Burning/Rubble Pit south of the Ford Building Seepage Basin	Southeast of N Area
CCB	C-Area Coal Pile Runoff Containment Basin	Southeast of C Area
CDB	C-Area Disassembly Basin	
CDS	108-3C Bioremediation Facility	Near the C-Area reactor building
CMP	Chemicals, Metals, and Pesticides Pits	West of Road C, approximately two miles southeast of N Area
CRP	C-Area Burning/Rubble Pit	
CSB	C-Area Reactor Seepage Basins	Southern C Area, west of the reactor building
CSO	Fire Department Training Facility	Southeast portion of N Area
DCB	D-Area Coal Pile Runoff Containment Basin and Ash Basins	South (containment basin) and southwest (ash basins) of D Area
DIW	D-Area Coal Pile Runoff Containment Basin and Ash Basins	
DOB	D-Area Oil Seepage Basin	North of D Area
DOL	D-Area Oil Seepage Basin	North of D Area
FAB	F-Area Ash Basin 288-1 Groundwater Quality Assessment	East of F Area and south of the F-Area acid/caustic basin
FAL	F-Area A Line	Adjacent to the F-Area canyon building
FBP	F-Area Burning/Rubble Pits	North of Road C and west of F Area
FCA	F-Area Canyon Building	
FCB	F-Area Coal Pile Runoff Containment Basin	Southeast of F Area
FET	F-Area Effluent Treatment Cooling Water Basin	South of F Area
FEX	F-Area Seepage Basins Remediation Extraction Wells	
FIN	F-Area Seepage Basins Remediation Injection Wells	South of Road C
FNB	Old F-Area Seepage Basin	North of F Area
FRB	F-Area Retention Basin	
FSB	F-Area Seepage Basins	
FSL	F-Area Inactive Process Sewer Line	
FSS	F-Area Sludge Land Application Site	
FST	Savannah River Ecology Laboratory Flowing Springs Site	
FTF	F-Area Tank Farm	

Well Series	Site	Location
GBW	Background Well near Hawthorne Fire Tower	West of Road 2-1.1F
HAA	H-Area Tank Farm Groundwater Operable Unit	
HAP	H-Area Auxiliary Pump Pit	At the east end of H Area near the coal pile runoff containment basin
HCA	H-Area Canyon Building	
HCB	H-Area Coal Pile Runoff Containment Basin	East of H Area
HET	H-Area Effluent Treatment Cooling Water Basin	Southwest of H Area
HEX	H-Area Seepage Basins Remediation Extraction Wells	East of Road 4
HHP	HP-52 Outfall Area	
HIN	H-Area Injection Tank	South of Road E
HIW	H-Area Injection Wells	Near the H-Area seepage basins
HMD	Hazardous Waste/Mixed Waste Disposal Facility	Northwest of the burial ground expansion
HR3	Old H-Area Retention Basin	Southeast of the intersection of Roads 4 and E
HR8	H-Area Retention Basin	Southeast of the intersection of Roads 4 and E
HSB	H-Area Seepage Basins	Southwest of H Area and the intersection of Roads 4 and E
HSL	H-Area Inactive Process Sewer Line	Extends from the southwest portion of H Area to north of the H-Area seepage basins
HSS	H-Area Sludge Land Application Site	Southeast of H Area
HTF	H-Area Tank Farm	At the south end of H Area
HWP	Warner's Pond Outfall Area	
HWS	Hazardous Waste Storage Facility	Northwest of N Area
HXB	Ford Building Seepage Basin	In the southeast portion of N Area
IDB	Interim Waste Technology Site Characterization Wells, Site B	Two miles northeast of H Area
IDP	Interim Waste Technology Site Characterization Wells, Site P	South of B Area
IDQ	Interim Waste Technology Site Characterization Wells, Site Q	North of Highway 125
KAB	K-Area Ash Basin	Southwest of K Area
KBP	K-Area Bingham Pump Outage Pit	
KCB	K-Area Coal Pile Runoff Containment Basin	West of K Area, between the K-Area ash basin and reactor seepage basin
KDB	K-Area Disassembly Basin	
KDT	K-Area Diesel Tank	Central K Area, north of the disassembly basin
KRB	K-Area Retention Basin	Northwest of K Area
KRP	K-Area Burning/Rubble Pit	
KSB	K-Area Reactor Seepage Basin	West of K Area
KSM	K-Area Tritium Sump	Near the K-Area process water storage tank
KSS	K-Area Sludge Land Application Site	Southeast of K Area
LAC	L-Area Acid/Caustic Basin	
LAW	L-Area Research Wells	North of Road B and east of Road B-2.13
LBP	L-Area Bingham Pump Outage Pit	
LCO	L-Area Oil and Chemical Basin	South of L Area
LDB	L-Area Disassembly Basin	
LDS	108-3L Bioremediation Facility	
LFW	Sanitary Landfill	South of Road C
LRP	L-Area Burning/Rubble Pit	Northwest of L Area
LSB	L-Area Reactor Seepage Basin	Southeast of L Area, adjacent to the L-Area oil and chemical basin
MCB	Miscellaneous Chemical Basin	West of Road D near the A-Area metals burning pit
MSB	M-Area Hazardous Waste Management Facility (HWMF) and M-Area Plume Definition Wells	South of A Area and M Area and west of Road D (HWMF)
NBG	Wells between the F-Area Canyon Building and the Naval Fuel Material Facility	Between the canyon building and the Naval Fuel Material Facility

Well Series	Site	Location
P	SRS Baseline Hydrogeologic Investigation: Observation Well Clusters B-Area Microbiology Wells (P 29 Cluster) East of H-Area Perimeter Fence (P 27 Cluster) R-Area Bedrock Exploration Hydrology Wells (P 20 Cluster) T-Area (TNX) Background Wells (P 26 Cluster)	East of the H-Area perimeter fence
PB	L-Area Cooling Pond Dam Piezometers	
PBP	P-Area Bingham Pump Outage Pit	
PCB	P-Area Coal Pile Runoff Containment Basin	Southeast of the coal pile and south of P Area
PDB	P-Area Disassembly Basin	
PRP	P-Area Burning/Rubble Pit	West of P Area
PSB	P-Area Reactor Seepage Basins	Southwest of the reactor building
PSS	Par Pond Sludge Land Application Site	South of Par Pond
PW	Production Wells	
RAC	R-Area Acid/Caustic Basin	South of R Area, just south of Road G
RBP	R-Area Bingham Pump Outage Pit	
RBW	R-Area Reactor Seepage Basins	Northwest of R Area
RCP	R-Area Coal Pile	West of the R-Area reactor building
RDB	R-Area Disassembly Basin	
RGW	Cone Penetration at R-Area Reactor Seepage Basins	Northwest of R Area
RPC	R-Area Reactor Seepage Basins	Northwest of R Area
RRP	R-Area Burning/Rubble Pits	Southeast of R Area and Road G
RSA	Series A, R-Area Reactor Seepage Basins	Northwest of R Area
RSB	Series B, R-Area Reactor Seepage Basins	Northwest of R Area
RSC	Series C, R-Area Reactor Seepage Basins	Northwest of R Area
RSD	Series D, between R-Area Reactor Seepage Basins and R-Area Disassembly Basin	Northwest of R Area
RSE	Series E, R-Area Reactor Seepage Basins	Northwest of R Area
RSF	Series F, R-Area Reactor Seepage Basins	Northwest of R Area
RSL	R-Area Reactor Seepage Basins	Northwest of R Area
RSP	R-Area Reactor Seepage Basins	Northwest of R Area
RWM	M-Area Recovery Wells	
SBG	S-Area Defense Waste Processing Facility	
SCA	S-Area Vitrification Building	
SLP	S-Area Low-Point Pump Pit	At the south end of S Area
SRW	Silverton Road Waste Site	South of Silverton Road
TBG	T-Area (TNX) Burying Ground	Within the T-Area fence
TCM	TNX-Area Operable Unit	
TIR	TNX Intrinsic Remediation Piezometers	
TNX	T-Area (TNX) Assessment Wells	
TRW	T-Area (TNX) Test Recovery Wells	
WTU	Waste Treatment Unit	
XSB	Old T-Area (TNX) Seepage Basin	In the southwest corner of T Area
YSB	New T-Area (TNX) Seepage Basin	In the east section of T Area, across Road A-4.7 miles from the TNX process area
YSC	Y-Area Waste Solidification and Disposal Facility	North of the intersection of Roads F and 4
ZBG	Z-Area Saltstone Facility	
ZDT	Z-Area Low-Point Drain Tank	Southeastern S Area

SITE HISTORY

Geographical descriptions in the text are based on true north rather than SRS grid coordinates.

The following sections describe facilities at approximately 100 locations within designated areas at SRS. The sections are arranged in the following order:

- acid/caustic basins
- burning/rubble, rubble, and metals burning pits
- coal pile runoff containment basins, ash basins, and coal piles
- disassembly basins
- seepage and retention basins
- operating buildings and facilities
- plume monitoring
- radioactive waste storage and disposal facilities
- sanitary landfill and interim sanitary landfill
- sludge application sites
- other sites

Acid/Caustic Basins

The acid/caustic basins in F Area, H Area, K Area, L Area, P Area, and R Area are unlined earthen pits (approximately 50 by 50 by 7 feet deep). These pits received dilute sulfuric acid and sodium hydroxide solutions used to regenerate ion-exchange units in power plant water purification processes at the reactor and separations areas in the center of SRS. The basins allowed mixing and neutralization of the dilute solutions before their discharge to nearby streams.

The basins were constructed between 1952 and 1955. They are uncovered, and most are dry except during periods of prolonged precipitation. The R-Area and L-Area basins were abandoned in 1964 and 1968, respectively. The other basins remained in service until 1982, when the water purification systems either were shut down or modernized. However, the H-Area basin continued to receive steam condensate from a hose box and drainage from a chemical pad until the basin was abandoned in 1985. During July through September 1993, the F-, H-, K-, and P-Area basins were dewatered, vegetation was removed and disposed of, the basins were filled with compacted soil from the Burma Road clay pit, a grass cover was established, and the fences were reinstalled.

Burning/Rubble, Rubble, and Metals Burning Pits

From 1951 to 1973, burnable wastes—such as paper, wood, plastics, rubber, oil, degreasers, and drummed solvents—were received and burned monthly in one or more of the burning/rubble pits in the following areas: A, C, D, F, K, L, N, P, and R. In 1973, waste no longer was burned at the pits, which were covered with a layer of soil. Rubble wastes—including paper, wood, cans, concrete, and empty galvanized-steel barrels and drums—then were disposed of in the pits until they reached capacity and were covered with soil. All burning/rubble pits were inactive by 1981, and all are covered except the R-Area pit, which has not been backfilled. Lithium-aluminum alloy, aluminum pieces, metal drums, other metal scraps, and plastic pipe were deposited and burned periodically in the A-Area metals burning pit, beginning about 1952. In 1974, the solid materials remaining on the site were covered with soil, and the pit was regraded. The site is inactive.

The Burma Road rubble pit consists of two excavated earthen pits that may contain paint cans, fluorescent light fixtures, metal, concrete, lumber, poles, and glass. Unknown quantities of refuse were deposited here from approximately 1973 through 1983. The pit is inactive and has been covered with soil.

Coal Pile Runoff Containment Basins, Ash Basins, and Coal Piles

Electricity and steam at SRS are generated by burning coal. Coal piles originally existed in the following areas: A, C, D, F, H, K, L, P, and R. The facilities generally contained a 90-day reserve of coal that was not rotated. During long-term exposure to the environment, chemical and biological oxidation of sulfur compounds in coal resulted in the formation of sulfuric acid.

The R-Area coal pile was removed in 1964, and the L-Area coal pile was removed in 1968. To achieve compliance with the National Pollutant Discharge Elimination System (NPDES) permit issued in 1977, coal pile runoff containment basins in A Area and D Area were completed in October 1978, and basins in C Area, F Area, H Area, K Area, and P Area were completed in March 1981. The coal piles in C Area and F Area were removed in 1985. In 1991, the K-Area coal pile was reduced to a 2-inch base, and 75 percent of the P-Area coal pile was removed.

Currently, rainwater runoff from the remaining coal piles in A, D, H, K, and P Areas flows into the coal pile runoff containment basins via gravity flow ditches and sewers. The basins allow mixing of the runoff and its seepage into the subsurface, thus preventing the entry of large surges of low-pH runoff into surface streams. The basins in C and F Areas also still collect runoff, although no coal remains at either location. Ash sluice water from the D-Area and K-Area powerhouses has been discharged to the D-Area ash basins and the K-Area ash basin, respectively, since 1951.

F-Area Ash Basin

The F-Area ash basin was monitored for the first time during second quarter 1994.

R-Area Coal Pile

Two wells were installed in 1990 inside the boundaries of the former coal storage area, originally for groundwater assessment in relation to the R-Area coal pile.

Disassembly Basins

The disassembly basins, also called fuel and target storage basins, are concrete-lined, open tanks of water next to the reactor rooms inside the reactor buildings in C, K, L, P, and R Areas. Irradiated assemblies (reactor fuel and target rods) were rinsed and stored in the basins prior to their shipment to the separations areas. Some radioactivity was transferred to the basin water from leaks in porous components and as a liquid or oxide corrosion film on the irradiated components.

Sand filters were used to remove radioactive particulates from the disassembly basin water. The filtered water was circulated through deionizers to remove additional constituents and was purged periodically through regenerated deionizers to the reactor seepage basins.

Seepage and Retention Basins

Seepage, retention, and settling basins have been used at SRS to store or dispose of wastewater from various operations. Seepage and retention basins in the following areas are monitored: A, C, F, H, K, L, M, N, P, R, T, and the Savannah River Laboratory.

C-Area Reactor Seepage Basins

These basins have received low-level radioactive purge water from the disassembly basin since 1957.

F-Area Seepage Basins and Inactive Process Sewer Line

Beginning in 1955, the F-Area seepage basins received F-Area wastewater containing low-level radioactivity and chemicals, including chromium, mercury, nitric acid, and sodium hydroxide. Clay caps were completed in 1991 when the basins were closed.

Ford Building Seepage Basin

The Ford Building seepage basin received low-level radioactive wastewater from Ford Building operations (repairing heat exchangers) from 1964 to January 1984.

H-Area Retention Basins

A small, unlined earthen retention basin (the old H-Area retention basin) was used from 1955 to 1973 to provide temporary emergency storage for cooling water from the chemical separations process that contained radionuclides and possible trace quantities of chemicals.

A larger, rubber-lined retention basin replaced the original basin in 1973 and still is in use for receipt of diverted cooling water or tank farm stormwater runoff.

H-Area Seepage Basins and Inactive Process Sewer Line

Starting in 1955, the H-Area seepage basins received wastewater from H Area containing low-level radioactivity and chemicals, including nitric acid, mercury, and sodium hydroxide. Basin 3 has been inactive since 1962. Basins 1, 2, and 4 operated from 1980 until they were taken out of service in the fourth quarter of 1988. Clay caps were completed early in 1991 when the basins were closed.

K-Area Reactor Seepage Basin

This basin has received low-level radioactive purge water from the disassembly basin since 1957.

L-Area Reactor Seepage Basin

This basin has received low-level radioactive purge water from the disassembly basin since 1957.

M-Area Hazardous Waste Management Facility

The unlined M-Area settling basin, in operation from 1958 until 1985, received wastewater containing metal-cleaning solvents, depleted uranium, and other chemicals and metals from fuel fabrication processes in M Area. Because surface water flowed from this basin, it is classified as a settling basin rather than a seepage basin. Water from the basin flowed through an overflow ditch to Lost Lake, a shallow upland depression. A seepage area formed adjacent to the ditch and Lost Lake. The M-Area hazardous waste management facility comprises the settling basin, overflow ditch, seepage area, and Lost Lake. A closure cap was completed on the basin during 1989/1990.

Since the beginning of a full-scale recovery system for groundwater remediation in April 1985, groundwater flow has changed markedly near this facility, and changes over time in concentrations of analytes are difficult to interpret. See the **Plume Monitoring** section of this chapter for more information on remediation.

Metallurgical Laboratory Seepage Basin

The Metallurgical Laboratory seepage basin received wastewater effluent from the Metallurgical Laboratory building from 1956 until 1985. Wastewater released to the basin consisted of small quantities (5 to 10 gallons per day) of laboratory wastes—mostly rinse water—from metallographic sample preparation (degreasing, cleaning, etching) and corrosion testing of stainless steel and nickel-based alloys. Noncontact cooling water (approximately 900 gallons per day) also was discharged. The basin has been dewatered, backfilled, and capped with low-permeability clay.

New T-Area (TNX) Seepage Basin

The new TNX seepage basin replaced the old TNX seepage basin and operated from 1980 to 1988.

Old F-Area Seepage Basin

The old F-Area seepage basin, the first seepage basin constructed in F Area, was used for disposal of wastewater from the canyon building from November 1954 until May 1955, when it was abandoned. During operation, the seepage basin received a variety of wastewaters, including evaporator overheads, laundry wastewater, and an unknown amount of chemicals. For three months in 1969, spent nitric acid solutions used to etch depleted uranium were discharged to the basin. In 1984, low-level contaminated water was released to the basin.

Old T-Area (TNX) Seepage Basin

The old TNX seepage basin received waste from pilot-scale tests conducted at TNX from 1958 to 1980. In 1981, the basin wall was breached and the impounded water was drained into the adjacent wetlands. The basin then was backfilled with a sand and clay mixture, and the top was capped with clay.

P-Area Reactor Seepage Basins

These basins have received low-level radioactive purge water from the P-Area disassembly basin since 1957.

R-Area Reactor Seepage Basins

On November 8, 1957, an experimental fuel element failed during a calorimeter test in the emergency section of the R-Area disassembly basin. Following this incident, the original seepage basin received approximately 2,700 Ci of nonvolatile beta activity, including strontium-90 and cesium-137, each of which has a half-life of about 30 years. Much of the released radioactivity was contained in that basin, which was backfilled in December 1957. Five more basins were put into operation in 1957 and 1958 to assist in containing the radioactivity.

In 1960, Basins 2 through 5 were closed and backfilled. The ground surface above Basins 1 through 5 was treated with herbicide and covered with asphalt. In addition, a kaolinite cap and dike were constructed over and around Basin 1 and the northwest end of Basin 3 to minimize lateral movement of the radioactive contamination. Basin 6, which received water directly from the disassembly basin from 1960 until 1964, was backfilled in 1977.

Savannah River Laboratory Seepage Basins

The Savannah River Laboratory seepage basins received low-level radioactive laboratory wastewater through underground drains until they were taken out of service in October 1982. Two basins were put into operation in 1954; one more was added in 1958 and another in 1960 to provide additional holding capacity.

An exception to the practice of discharging only low-level alpha or beta-gamma wastewater was made in 1971, when 0.68 Ci of curium from a leaking separator pit in the Savannah River Laboratory radioactive waste tanks was disposed of in the basins. Approximately 34 million gallons of wastewater were discharged to the basins during their operating life.

Operating Buildings and Facilities

Defense Waste Processing Facility (S-Area Vitrification Building)

The DWPF, also known as the S-Area vitrification building or S-Area canyon, contains the process and auxiliary equipment to incorporate high-level radioactive waste into leach-resistant glass. The facility began radioactive operations in 1996.

F-Area Canyon Building and A-Line Uranium Recovery Facility

At the canyon building, irradiated product from the reactors is dissolved using nitric acid, and the desired radionuclides are separated from fission products. At the A-Line uranium recovery facility, adjacent to the canyon building, uranium oxide is produced from uranyl nitrate.

F-Area Effluent Treatment Cooling Water Basin

The F-Area effluent treatment cooling water basin receives diverted cooling water from the separations processes. The cooling water is sent from the basin to the F-Area and H-Area effluent treatment facility (ETF) if contaminated or to a permitted outfall if uncontaminated. The ETF, on the south side of H Area, was placed in service in 1988 to treat wastewater formerly sent to the F-Area and H-Area seepage basins. In addition to cooling water, it also receives separations area stormwater runoff and condensed overheads from the evaporators in the tank farms. The treatment facility removes hazardous and radioactive contaminants from these low-level liquid wastes and concentrates them for immobilization as saltstone.

H-Area Auxiliary Pump Pit

The H-Area auxiliary pump pit facility will pump high-level radioactive sludge and precipitate from the H-Area tank farm to the S-Area low-point pump pit en route to the vitrification facility. When the pumps are shut down, this facility will collect the solution in a temporary holding tank via gravity flow lines.

H-Area Canyon Building

As in F Area, materials from the reactors are dissolved at the canyon building, and the desired radionuclides are separated from waste products.

H-Area Effluent Treatment Cooling Water Basin

For more information, see the **F-Area Effluent Treatment Cooling Water Basin** section.

K-Area Tritium Sump

A single well, installed in 1992, monitors the water table just west of the K-Area reactor. The well was placed near the K-Area process water storage tank, which stores water collected in sumps within the K-Area reactor building. Tritium activity in this sump water has been reported at greater than 5 Ci/mL.

N-Area Hazardous Waste Storage Facility

Building 645-N of the hazardous waste storage facility has been in service since 1983, 645-2N since 1987, and 645-4N since 1984. Buildings 645-N and 645-4N contain hazardous waste, and building 645-2N contains mixed waste (a mixture of low-level radioactive waste and hazardous waste). Wastes are stored inside the buildings in drums placed on diked concrete floors designed to contain liquid spills.

Naval Fuel Material Facility

The Naval Fuel Material Facility was used to produce HEU (highly enriched uranium) for naval reactors until shutdown in 1989. Monitoring wells in the NBG series are located between the canyon building and the Naval Fuel Material Facility.

S-Area Facilities

S-Area contains several facilities for processing high-level radioactive waste from the F-Area and H-Area tank farms into borosilicate glass solidified within stainless steel canisters. The glass is stored temporarily in specially designed storage buildings within S Area. Eventual permanent disposal is expected to be in an offsite federal geologic repository.

S-Area Low-Point Pump Pit

The S-Area low-point pump pit receives high-level radioactive sludge and precipitate from the H-Area tank farm and pumps it to the defense waste processing facility (DWPF) vitrification building; it also receives waste being recycled from the vitrification building back to the tank farm. As at the H-Area auxiliary pump pit, when the pumps are shut down, the sludge and precipitate remaining in the line drain back into a temporary holding tank via gravity flow lines.

Z-Area Low-Point Drain Tank

The Z-Area low-point drain tank facility receives low-level radioactive salt solution from the H-Area tank farm and pumps it to the Z-Area salt solution holding tank. When the H-Area pump is shut down, the low-point drain tank can collect the solution remaining in the lines via gravity flow.

Z-Area Saltstone Manufacturing and Disposal Facility

The Z-Area saltstone manufacturing and disposal facility processes and permanently disposes of low-level radioactive salt solution supernatant from the underground storage tanks at F Area and H Area and from ETF concentrate.

The facility began radioactive operations in June 1990. In November 1992, a tank in the Z-Area saltstone manufacturing and disposal facility overflowed, and a portion of the liquid leaked from the building into a storm drain. Approximately 2 gallons of solution reached a drainage pipe that flows into a series of sedimentation basins and eventually into McQueen Branch. Sediment samples showed small amounts of cesium-137 exceeding those amounts observed in the Savannah River, but within the activity ranges in site streams.

Plume Monitoring

A Area and M Area

In addition to the groundwater monitoring conducted at specific locations in A Area and M Area, numerous plume definition wells also monitor a 5-square-mile area to assess the extent of volatile organic contamination. The first plume definition wells were installed soon after discovery of the contamination in June 1981.

The plume definition well network extends from the region north of SRTC, between Road 1 and the SRS boundary, south to wells near the miscellaneous chemical basin and the metals burning pit, and from Tims Branch in the east toward the Silverton Road waste site in the west. The plume encompasses approximately three square miles and consists primarily of trichloroethylene, tetrachloroethylene, and 1,1,1-trichloroethane.

Separations and Waste Management Areas

A number of wells were installed in the separations areas in 1951 and 1952. These wells, which range from approximately 15 to 90 feet in depth, are used to measure water table elevations and monitor for radioactive constituents (gross alpha, nonvolatile beta, and tritium) in the groundwater in and around F Area and H Area. They have steel casings that could affect the metal concentrations in the water.

Radioactive Waste Storage and Disposal Facilities

Burial Grounds

The burial grounds have been used for storage and disposal of radioactive solid waste produced at SRS or shipped from other facilities since 1952. The original area, known as the old burial ground, contains low-level alpha and beta-gamma trenches, intermediate-level beta-gamma trenches, and alpha waste trenches. As the trenches were filled, they were covered with soil. When the old burial ground was filled in 1974, operations moved to the adjacent low-level radioactive waste disposal facility (LLRWDF).

The sections of the LLRWDF currently being operated, known as the Solid Waste Disposal Facility (SWDF), contain trenches for only radioactive waste. Concrete vaults, known as the E-Area vaults, have been constructed east and north of the LLRWDF for disposal of solid radioactive waste. The first waste was placed there in September 1994.

Mixed waste storage building 643/29E, within the boundaries of the LLRWDF, has been in use since March 1987. The adjacent mixed waste storage building, 643/43E, was completed in July 1995, and the facility began receiving waste later that same month.

Until 1965, transuranic (TRU) waste was placed in plastic bags and cardboard boxes and buried in earthen trenches. Between 1965 and 1974, lower level TRU waste was buried unencapsulated in trenches, and higher level TRU waste was buried in retrievable concrete containers or encapsulated in concrete. Since 1974, TRU

wastes contaminated with greater than 0.01 Ci/g have been stored in watertight containers on concrete pads with monitoring sumps. TRU waste storage pads 1–19 are on the FFA's list of RCRA-regulated units.

Since mid-1984, newly generated low-level beta-gamma waste has been placed in metal boxes or metal drums. Currently, it is disposed of in engineered trenches and covered with at least 4 feet of soil. Some wastes that do not have forms that are easily placed in containers are disposed of in shallow land-burial slit trenches.

Mixed wastes stored or disposed of within the old burial ground and portions of the LLRWDF include cadmium, lead, mercury, and tritiated pump oil. Some of the waste is contained in welded stainless steel containers or metal drums and stored within concrete cylinders. Degraded radioactive organic solvents and tritiated pump oil have been stored in 22 underground storage tanks in the old burial ground. In addition, two areas of the old burial ground were used for incineration of solvents.

The burial ground complex, comprising the old burial ground, solvent storage tanks S01–S22, and portions of the LLRWDF, is monitored by the following:

Burial Ground Expansion (E-Area Vaults)—This site is located in the northern section of E Area and is monitored by the BGX well series.

Hazardous Waste/Mixed Waste Disposal Facility—This site is northwest of the burial ground expansion and is monitored by the HMD well series.

Old Burial Ground—The old burial ground is in the southern portion of E Area and is monitored by wells in the BG and BGO well series.

Radioactive Waste Burial Ground—The LLRWDF, which includes the mixed waste management facility (MWMF), is monitored by wells in the BGO well series.

Tank Farms

Liquid radioactive wastes are stored and processed at the tank farms, which comprise subsurface tanks containing high-level aqueous radioactive wastes in the form of sludges, supernatant liquid of varying salt concentrations, and saltcake. Approximately 129 million liters of waste are stored in the tanks.

The high-level liquid waste volume is reduced in the tank farm evaporators. Certain tanks are used for pretreatment of the wastes before they are processed at the DWPF into saltstone (low-level waste) or a glass form (high-level waste). As described earlier, saltstone manufacturing and disposal is ongoing; vitrification was tested during 1995, and the DWPF began production operations in 1996. Pretreatment processes at the tank farms include in-tank precipitation and extended sludge processing.

More information about the function of the tank farms may be found in previous sections of this chapter, including the discussions of the F-Area effluent treatment cooling water basin, the H-Area auxiliary pump pit, S Area, the S-Area low-point pump pit, the DWPF, the Z-Area low-point drain tank, and the Z-Area saltstone manufacturing and disposal facility.

Because of restrictions on the disposal of purge water, monitoring wells at the tank farms are bailed and not purged.

F-Area Tank Farm—The F-Area tank farm comprises 22 subsurface tanks. In 1961, Tank 8 was overfilled, causing soil and possible groundwater contamination.

H-Area Tank Farm—The H-Area tank farm comprises 29 subsurface tanks. In 1960, Tank 16 leaked an unknown quantity (a few tens of gallons to a few hundred gallons) of waste into the soil. The tank's remaining waste was removed by 1972.

Several other releases of waste from H-Area tanks have occurred, including a spill of approximately 100 gallons at Tank 13 in 1983. In 1989, approximately 500 pounds of volume-reduced waste leaked from a transfer line at

Tank 37. The leak sites have been cleaned up or stabilized to prevent the spread of contamination. Both the F-Area and H-Area sites are being monitored for gross alpha, nonvolatile beta, and tritium.

Sanitary Landfill and Interim Sanitary Landfill

The sanitary landfill began receiving waste from office, cafeteria, and industrial activities during 1974. Materials such as paper, plastics, rubber, wood, cardboard, rags, metal debris, pesticide bags, empty cans, carcasses, asbestos in bags, and sludge from the site's wastewater treatment plant are placed in unlined trenches and covered daily with soil or a fabric substitute. The original section of the landfill and its southern expansion, with a total area of approximately 54 acres, have been filled. Operations at the portion of approximately 16 acres known as the northern expansion, or the interim sanitary landfill, were discontinued in November 1994.

Sanitary landfills are intended to receive only nonradioactive, nonhazardous waste. However, until October 1992, some hazardous wastes (specifically, solvent-laden rags and wipes used for cleaning, decontamination, and instrument calibration) were buried in portions of the original 32-acre landfill and its southern expansion.

Sludge Application Sites

These sites originally were the subject of a research program using domestic sewage sludge to reclaim borrow pits and to enhance forest productivity at SRS. In 1980, sludge was applied to the following application sites: K Area, Kato Road, Lower Kato Road, Orangeburg, PAR Pond, Road F, Sandy (Lucy), Second PAR Pond Borrow Pit, and 40-Acre Hardwood. After sludge was applied to the sites, hardwoods and pines were planted to quantify the effectiveness of the sludge as a fertilizer and soil conditioner.

Sludge from Aiken and Augusta municipal wastewater treatment plants was applied to the following sites: F Area, H Area, Kato Road, Lower Kato Road, Orangeburg, Road F, Sandy (Lucy), Second PAR Pond Borrow Pit, and 40-Acre Hardwood. Wastewater sludge was applied to the K Area and PAR Pond sites in 1981 and 1988. Revegetating of the sites is continuing.

In November 1993, groundwater monitoring was discontinued at the Kato Road, Lower Kato Road, Orangeburg, Road F, Sandy (Lucy), and 40-Acre Hardwood sites because they have not received applications of sewage sludge since 1981, and historical monitoring results show no impact from sludge applications. Monitoring was canceled after first quarter 1994.

H-Area Sanitary Sludge Land Application Site

Sewage sludge from SRS sanitary wastewater treatment plants was disposed of at this 13-acre site southeast of H Area from November 1990 to May 1992.

K-Area and PAR Pond Sludge Land Application Sites (Formerly K-Area Borrow Pit and PAR Pond Borrow Pit Sites)

In 1981, sludge from Aiken and Augusta municipal wastewater treatment plants was applied to the K-Area and PAR Pond borrow pits. In 1988, the N-Area sanitary sewage sludge lagoon was closed, and the lagoon sludge was applied to the K Area and PAR Pond borrow pits. In 1989, the K-Area location (now called the K-Area sludge land application site) was declared a RCRA/CERCLA unit because of the presence of chlordane in the lagoon sludge applied to the site.

Other Sites

B-Area Gas Station

Elevated benzene, which could be the result of old underground gasoline or diesel storage tanks, has been detected near B Area. EMS has inspected the area and believes there may be two underground storage tanks southeast of B Area. The first suspected tank appears to be at an abandoned gas station between Kato Road and Road C-2. The second appears to be an old diesel tank in front of a storage and laboratory facility.

Baseline Hydrogeologic Investigation Observation Well Clusters

Wells in the P series that provide baseline hydrogeologic investigation data are located in numerous locations across SRS.

Chemicals, Metals, and Pesticides Pits

The chemicals, metals, and pesticides pits were used from 1971 to 1979 to dispose of oil in drums, organic solvents, and small amounts of pesticides and metals. In 1984, the pits were excavated to form two trenches, backfilled, and capped. During excavation, most of the contaminated material (liquid in original drums, free liquid placed in drums during excavation, and contaminated soil) was moved to the hazardous waste storage facility.

D-Area Oil Disposal Basin

The D-Area oil disposal basin was constructed in 1952 and received waste oil products from D Area that were unacceptable for incineration in the powerhouse boilers. These waste oils may have contained hydrogen sulfide, chlorinated organics, or other chemicals. In 1975, the oil basin was removed from service and backfilled with soil.

Interim Waste Technology Site Characterization Wells

Characterization wells monitor interim waste technology sites B, L, Q, and P.

K-Area Diesel Tank Spill

Following the discovery in 1989 of a leaking buried diesel supply line, most of the diesel-contaminated soil was removed from this area except where continued excavation would have jeopardized the structural integrity of an underground storage tank.

L-Area Acid/Caustic Basin and L-Area Oil and Chemical Basin

From 1961 to 1979, the L-Area oil and chemical basin received small quantities of radioactive oil and chemical waste that could not be discharged to effluent streams, regular seepage basins, or the 200 Areas' waste management systems. The waste came from throughout SRS, primarily from the reactor areas and the contaminated-equipment workshop through a pipeline known to have leaked. The basin has been inactive since 1979.

M-Area Recovery Wells

The RWM well series identifies the M-Area recovery wells. The first wells were installed in 1982 and 1983, with pumps added in 1985. Additional wells were installed in 1985, 1990, 1993, and 1996. The RWM wells pump contaminated groundwater to air strippers, which remove volatile organic compounds from the water before it is returned to the ground.

Miscellaneous Chemical Basin

The miscellaneous chemical basin, in operation by 1956, was closed and graded in 1974. No records document the materials disposed of at this location. However, soil gas investigations revealed volatile organics in the near-surface soils at the basin. It is assumed that the site was used for disposal of waste solvents, liquid chemical wastes, and possibly waste oil. The basin is inactive.

Motor Shop Oil Basin

This unlined basin was placed in service in 1977 to receive liquid effluent from the Motor Shop, including trace quantities of engine oil, grease, kerosene, ethylene glycol, and soap. All waste passed through an oil skimmer prior to discharge into the basin. All discharges to the basin were terminated in August 1983. The basin is inactive but collects rainwater during periods of heavy precipitation.

N-Area Diesel Spill Hazardous Waste Storage Facility

The tanks have been filled with inert material, and the pipelines have been disconnected at this site.

N-Area Fire Department Training Facility

The fire department training facility, also known as the N-Area burnable-oil basin, is a shallow pit surrounded by an 18-inch-high asphalt dike. It was used from 1979 to 1982 by the SRS Fire Department to train personnel in the use of firefighting equipment. After this time, the area was excavated and backfilled.

N-Area Hydrofluoric Acid Spill

It is uncertain whether a spill occurred at the hydrofluoric acid spill area or if contaminated soil or containers were buried there. The spill or burial occurred prior to 1970, and an identification sign is the only evidence that material was released.

Production Wells

The PW series wells are production wells scattered across SRS.

Road A (Baxley Road) Chemical Basin

The Road A chemical basin is reported to have received miscellaneous radioactive and chemical aqueous waste, but no records of the materials disposed of at the basin are available. The basin was closed and backfilled in 1973. The BRD well series is being monitored for environmental-screening constituents only.

Silverton Road Waste Site

The Silverton Road waste site, south of Silverton Road, was used for disposal of metal shavings, construction debris, tires, drums, tanks, and miscellaneous other items. The startup date is unknown, and no records of waste disposal activities were kept. Operations at this location ended in 1974, and the waste material is covered with soil and vegetation.

TNX Burying Ground

The TNX burying ground was created to dispose of debris from an experimental evaporator that exploded at T Area in 1953. The buried material included contaminated conduit, tin, drums, structural steel, and depleted uranium. Although most of this material was excavated and sent to the LLRWDF between 1980 and 1984, an estimated 27 kg of uranyl nitrate remains buried at this location. See the **New TNX Seepage Basin** section for more information on the unit.

NOTES

Glossary

Also see p. B-1 for abbreviations and qualifiers used in the results tables in ***Appendix B.***

2,4-D. 2,4-Dichlorophenoxyacetic acid.

absolute difference. The unsigned result of the subtraction of any two numbers.

accuracy. The degree of agreement between an observed value and an accepted reference value or a measure of the over- or underestimation of reported concentrations.

advisory range. A range of acceptable analytical results established by the provider of known samples.

aerated sample. Groundwater sample supplied or charged with air. Aeration can occur naturally or during well pumping.

aliquot. A portion of a sample being used for analysis.

analysis qualifier. See **qualifier**.

analyte. Analyzed constituent.

analytical detection limit. The lowest reasonably accurate concentration of an analyte that can be detected. This value varies depending on the method, instrument, and dilution used.

APHA. American Public Health Association.

Appendix IX. A list of constituents specified by Appendix IX in the *Code of Federal Regulations*, Title 40, Part 264 (EPA, 1991d). Analysis for Appendix IX constituents is required by the Resource Conservation and Recovery Act (RCRA) under specified conditions.

associated samples. Samples analyzed by a laboratory in the same batch with field or laboratory blanks.

ASTM. American Society for Testing and Materials.

bail. To remove water from a well by lowering a container into the water, allowing it to fill with water, and removing it from the well.

bias qualifier. See **qualifier**.

blank. Aliquot of deionized water generated by laboratory or sampling personnel and analyzed like a groundwater sample. See **equipment blank**, **field blank**, **laboratory blank**, and **trip blank**.

blank spike. An organic-free water sample spiked with target analytes, extracted, and analyzed with the regular samples for organic parameters to monitor the performance of all steps in the analysis process.

blind replicate. A second sample taken from a well at the same time as the primary sample and sent to the laboratory for analysis as an unknown.

BNA. Base/neutral and acid extractables. Groups of organic compounds analyzed as part of the Appendix IX and Priority Pollutants suites; also, a group of compounds that can be analyzed by EPA Method 8270.

Bq/L. Becquerels per liter. A measurement of radioactivity.

cation. Positively charged ion.

CERCLA. Comprehensive Environmental Response, Compensation, and Liability Act, commonly known as Superfund.

certified value. The known concentration of an analyte in a referenced sample.

CFR. *Code of Federal Regulations*. Sections of this annual document contain EPA standards and regulations for environmental monitoring.

chain-of-custody record. A form that documents the collection, transport, analysis, and disposal of well samples.

common analyses. Common parameters tested for, and generally found, in drinking water.

comparability. An evaluation made by confirming that the laboratories used the same standardized procedures for sample preparation and analysis, that the reporting units are the same, and that similar detection and quantitation limits were obtained.

completeness. An evaluation based on a comparison of the wells scheduled for sampling to the wells sampled, also a comparison of the requested analyses to the analytical data received.

deionized water. Water from which all charged species or ionizable organic and inorganic salts have been removed.

detection limit. See **analytical detection limit**.

dilution factor. The mathematical factor by which a sample is diluted to bring the concentration of an analyte in the sample within the analytical range of an instrument (e.g., 1 mL sample + 9 mL solvent = 1:10 dilution, or a dilution factor of 10).

DL. See **analytical detection limit**.

DNAPL. Dense nonaqueous phase liquid.

DOE. U.S. Department of Energy.

drinking water standards. Federal primary and secondary drinking water standards, as set forth by the EPA.

duplicate. Duplicate sample; an aliquot of a primary sample.

duplicate result. A result obtained from identical analyses performed on more than one aliquot of a primary sample.

DWS. See **drinking water standards**.

E. A code letter used in the analytical data tables that signifies exponential notation (e.g., 3.4E+03 = 3.4×10^3 = 3,400).

EM. EPD/EMS Laboratory at SRS.

EMAX Laboratories. EMAX Laboratories, Inc., of Torrance, CA.

EMS. The Environmental Monitoring Section of the Environmental Protection Department at SRS.

Environmental Physics. Environmental Physics, Inc., of Charleston, SC (subcontractor for General Engineering).

environmental-screening analyses. A group of analyses that forms the core of the EPD/EMS Groundwater Monitoring Program each quarter. See the **Sample Scheduling** section of this report for a complete list of constituents.

EPA. U.S. Environmental Protection Agency.

EPD. Environmental Protection Department at SRS.

EPD/EMS. Environmental Protection Department's Environmental Monitoring Section at SRS.

EQL. See **estimated quantitation limit**.

equipment blank. A sample of deionized water that is opened at the sampling location and poured or pumped through the sampling device. Equipment blanks are used to identify possible contaminants in the sampling equipment.

ES. See **QST Environmental**.

estimated quantitation limit (EQL). The lowest concentration reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. The EQL is generally 5× to 10× the method detection limit (MDL); however, it may be nominally chosen within these guidelines to simplify data reporting. For many analytes, the EQL analyte concentration is selected as the lowest nonzero standard in the calibration curve.

EX. See **EMAX Laboratories**.

Fibers/L. Fibers per liter. A unit of measurement for asbestos.

field blank. A sample container of deionized water sent to a laboratory under an alias as a quality control check.

field qualifier. See **sample interference field qualifier**. Due to space limitations, sample interference field qualifiers are referred to as *field qualifiers* in the analytical results tables in **Appendix B**.

flagging criteria. Criteria established to help determine the relative concentration and testing frequency for analytes. See the **Flagging Criteria** section of this report for further information.

gamma PHA. A group of analyses performed to determine activities of gamma-emitting radionuclides.

GC VOA. Gas chromatographic volatile organics analyses. Also used to refer to a group of volatile organic compounds that can be analyzed by gas chromatography.

GCMS VOA. Gas chromatograph/mass spectrometer volatile organics analyses. Also used to refer to a group of volatile organic compounds analyzed by gas chromatography and mass spectrometry methods.

GE. See **General Engineering**.

General Engineering. General Engineering Laboratories of Charleston, SC.

GP. See **Environmental Physics**.

halogen. Any of the elements of the halogen family, which consists of fluorine, chlorine, bromine, iodine, and astatine.

herbicides/pesticides. A suite of analyses. See the **Sample Scheduling** section of this report for further information.

holding time. The length of time during which an analysis of a sample can be reliably performed. Holding times vary depending on which constituents are being analyzed.

interlaboratory comparisons. Comparisons conducted between two or more laboratories.

intralaboratory comparisons. Comparisons conducted within a single laboratory.

ion. An isolated electron or positron or an atom or molecule that has acquired a net electric charge by the loss or gain of one or more electrons.

laboratory blank. Deionized water or solvent sample generated by the laboratory. One blank is analyzed with each batch of samples as an in-house check of analytical procedures and equipment.

laboratory control sample. A deionized water sample that is spiked with the target analyte, digested, and analyzed with the regular samples for inorganic parameters to monitor the performance of all steps in the analysis process.

MA. See **Microanalytical Laboratories.**

major ions. A group of analyses performed in the EPD/EMS Groundwater Monitoring Program to determine the concentrations of calcium, magnesium, potassium, and silica ions and the alkalinity of a sample.

matrix spike. A known quantity of a target analyte added to at least 5% of the samples prior to sample preparation to evaluate the effect of the sample matrix on the analytical procedure.

MDL. See **method detection limit**.

mean. The arithmetic mean; a single number that typifies a set of numbers.

method detection limit (MDL). A reproducible analyte- and method-specific detection limit: the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.

mg/L. Milligrams per liter.

µCi. Microcurie; unit of radioactivity equivalent to 3.7×10^4 disintegrations per second.

µCi/mL. Microcuries per milliliter.

µg/L. Micrograms per liter.

µS/cm. Microsiemens per centimeter, equivalent to micromhos per centimeter. The unit of conductance across two points, used as the measure of specific conductance in analytical data tables.

Microanalytical Laboratories. Microanalytical Laboratories, Inc., of Gainesville, FL (subcontractor for QST Environmental).

modifier. See **qualifier**.

MRD. Mean relative difference. See the **Quality Control Samples** section of this report for further information.

msl. Mean sea level.

NTU. Nephelometric turbidity units. The standard unit of turbidity measurement.

null hypothesis. A statement, which can be tested statistically, of no difference in a characteristic of a population or distribution.

organic. A chemical compound based on carbon chains or rings and containing hydrogen with or without oxygen, nitrogen, or other elements.

PCB. Polychlorinated biphenyl.

pCi. Picocurie; a unit of radioactivity equivalent to 3.7×10^{-2} disintegrations per second.

pCi/L. Picocuries per liter.

pCi/mL. Picocuries per milliliter.

piezometer. An instrument used to measure the potentiometric surface of groundwater. Also, a well designed for this purpose.

plume. A volume of contaminated air or water originating at a point-source emission (e.g., a smokestack) or a waste source (e.g., a hazardous-waste disposal site).

potentiometric surface. The surface to which water in an aquifer would rise by hydrostatic pressure if unconfined.

precision. A measure of the repeatability of a measurement, evaluated from the results of duplicate samples and splits.

primary laboratory. A laboratory having a contract with EPD/EMS to perform a specific set of analyses; a primary laboratory may subcontract this work to other laboratories.

purge. To remove water from a well prior to sampling, generally by pumping or bailing. Under the EPD/EMS Groundwater Monitoring Program, two well volumes generally are purged before sampling.

QA. Quality assurance.

QC. Quality control.

QST Environmental. QST Environmental, of Gainesville, FL.

qualifier. A code used to convey additional information about an analytical result. Also called a modifier. Specific types include analysis, bias, and result qualifiers. See **Appendix B** for additional information.

radioisotopes. Radioactive isotopes.

radionuclide. A nuclide at an unstable, high-energy level that seeks a more stable, low-energy level by emitting particles of energy. Through these emissions, the nuclear configuration decays to simpler nuclides.

RCRA. See **Resource Conservation and Recovery Act**.

RCRA site. Solid-waste management unit under RCRA regulation.

RDL. See **reference detection limit**.

Recra LabNet Philadelphia. Recra LabNet Philadelphia, of Lionville, PA.

reference detection limit (RDL). The detection limit chosen to allow comparison of several analyses with different detection limits. For the purposes of this report, the individual detection limits of at least 90% of the analyses are

less than the reference detection limit. See the **Quality Control Samples** section of this report for further information.

relative percent difference (RPD). A commonly used estimate of precision when only two samples are available. Precision is the agreement among a set of replicate measurements without assumption of the true value. Precision is estimated by means of duplicate analyses.

replicate. Replicate sample. Used in this report to mean only those duplicate samples sent to the laboratory as unknowns. See **blind replicate.**

representativeness. The quality of exhibiting the average properties of the population being sampled.

Resource Conservation and Recovery Act (RCRA). Federal legislation that regulates the transport, treatment, and disposal of solid and hazardous wastes.

result qualifier. See **qualifier.**

RFI Program. RCRA Facility Investigation Program. EPA-regulated investigation of a solid-waste management unit with regard to its potential impact on the environment.

RFI/RI Program. RCRA Facility Investigation/Remedial Investigation Program. At SRS, an expansion of the RFI Program that includes CERCLA and hazardous-substance regulations.

RPD. See **relative percent difference.**

run date. The calendar date denoting when an analysis is performed.

sample interference field qualifier. See also **field qualifier.** This describes interferences encountered during sample collection that could affect analytical results. It is used to qualify analytical data based on field condition.

sample quantitation limit (SQL). The sample-specific EQL, which is the EQL multiplied by factors of concentration, dilution, aliquot size, and percent solids.

sample-specific EQL (ssEQL). The EQL multiplied by factors of concentration, dilution, aliquot size, and percent solids. Also called the **SQL**.

sample-specific MDL (ssMDL). The MDL multiplied by factors of concentration, dilution, aliquot size, and percent solids. For radiological analyses it is known as the sample-specific minimum detectable concentration.

sampling device. Anything used in sampling, especially portable (nondedicated) pumps and bailers. Possible source of sample contamination if not cleaned thoroughly between uses.

SCDHEC. South Carolina Department of Health and Environmental Control.

seepage basin. An excavation that receives wastewater. Designed to prevent overflow or surface runoff.

settling basin. A temporary holding basin (excavation) that receives wastewater.

significance of probability. The probability of observing a statistical value as significant as, or more significant than, the value actually observed.

site custodian. WSRC employee responsible for a site being monitored.

SQL. See **sample quantitation limit.**

SRL. Savannah River Laboratory at SRS; now Savannah River Technology Center (SRTC).

SRP. Savannah River Plant; now Savannah River Site (SRS).

SRS. Savannah River Site.

SRTC. Savannah River Technology Center.

STORET. EPA national database for storage and retrieval of water quality information and monitoring data; some of the qualifiers listed in the **Analytical Results** section of this report (**Appendix B**) are based on STORET codes.

surrogate. An organic compound similar in composition and test performance to one of the analytes of interest; known quantities are used in an analysis as a quality assurance measure.

tank farm. An installation of interconnected underground tanks used for storage of high-level radioactive liquid wastes.

Thermo NUtech. Thermo NUtech, of Oak Ridge, TN (subcontractor for Recra LabNet Philadelphia).

TL. See **Triangle Laboratories.**

TM. See Thermo NUtech.

TOC. Top of casing. The elevation of the casing at the top of a well; used as a reference for water-level measurements.

Triangle Laboratories. Triangle Laboratories, Inc., of Durham, NC (subcontractor for Environmental Science & Engineering).

trip blank. A sample container of deionized water that is transported to the well sample location, treated as a well sample, and sent to the laboratory for analysis; trip blanks are used to check for contamination resulting from transport, shipping, and site conditions.

***t*-test**. Statistical method used to determine if the means of groups of observations are equal.

turbidity. A measure of the concentration of sediment or suspended particles in solution.

U. Unclassified.

USDWS. U.S. Public Health Service drinking water standard.

volatile organic compounds. A broad range of organic compounds, commonly halogenated, that vaporize at ambient, or relatively low, temperatures (e.g., acetone, benzene, chloroform, and methyl alcohol).

WA. See **Recra LabNet Philadelphia**.

well volume. The volume of water between the well water surface and the bottom of the screen; the volume of water standing inside the well casing.

wellhead. The top of a well.

WSRC. Westinghouse Savannah River Company.

NOTES

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Appendix A. Water-Level Data

During first quarter 1998, water-level measurements were obtained for hydrogeologic projects. Most of the data presented on the following pages were obtained as concurrent data for hydrogeologic interpretation in the A/M and F/H areas. Only water levels were measured for this project; no field tests of water characteristics were conducted. RCS Corporation of Aiken, SC, collected the data.

NOTES

WELL ABP 1A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 140.1 ft (42.70m) below TOC
Water elevation: 219.8 ft (67.00m) msl
Time: 8:48

WELL ABP 1DD

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 138.9 ft (42.34m) below TOC
Water elevation: 221.2 ft (67.42m) msl
Time: 8:49

WELL ABP 2A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 152.88 ft (46.60m) below TOC
Water elevation: 219.02 ft (66.76m) msl
Time: 8:40

WELL ABP 2DD

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 151.6 ft (46.21m) below TOC
Water elevation: 219 ft (66.75m) msl
Time: 8:41

WELL ABP 3

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 140 ft (42.67m) below TOC
Water elevation: 213.7 ft (65.14m) msl
Time: 8:43

WELL ABP 3C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 159.3 ft (48.56m) below TOC
Water elevation: 195.2 ft (59.50m) msl
Time: 8:44

WELL ABP 4

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 145.95 ft (44.49m) below TOC
Water elevation: 218.35 ft (66.55m) msl
Time: 8:25

WELL ABP 4DD

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 145.2 ft (44.26m) below TOC
Water elevation: 219.8 ft (67.00m) msl
Time: 8:26

WELL ABP 6D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 146.3 ft (44.59m) below TOC
Water elevation: 219 ft (66.75m) msl
Time: 8:35

WELL ABP 7D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 144.35 ft (44.00m) below TOC
Water elevation: 219.85 ft (67.01m) msl
Time: 8:17

WELL ABP 8C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 177.4 ft (54.07m) below TOC
Water elevation: 194.7 ft (59.35m) msl
Time: 8:31

WELL ABP 8D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 152.3 ft (46.42m) below TOC
Water elevation: 218.6 ft (66.63m) msl
Time: 8:32

WELL ABP 9B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 161.15 ft (49.12m) below TOC
Water elevation: 191.05 ft (58.23m) msl
Time: 8:13

WELL ABP 9C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 161.32 ft (49.17m) below TOC
Water elevation: 191.08 ft (58.24m) msl
Time: 8:12

WELL ABP 9D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:11
Depth to water: 133.4 ft (40.66m) below TOC
Water elevation: 219.7 ft (66.97m) msl

WELL ABP 10D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:22
Depth to water: 139.35 ft (42.47m) below TOC
Water elevation: 214.05 ft (65.24m) msl

WELL ABW 1

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:46
Depth to water: 101.8 ft (31.03m) below TOC
Water elevation: 223 ft (67.97m) msl

WELL AC 1A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:22
Depth to water: 50.81 ft (15.49m) below TOC
Water elevation: 211.29 ft (64.40m) msl

WELL AC 1B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:21
Depth to water: 49.76 ft (15.17m) below TOC
Water elevation: 212.24 ft (64.69m) msl

WELL AC 2A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:45
Depth to water: 126.67 ft (38.61m) below TOC
Water elevation: 218.03 ft (66.46m) msl

WELL AC 2B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:46
Depth to water: 119.74 ft (36.50m) below TOC
Water elevation: 225.06 ft (68.60m) msl

WELL AC 3A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:11
Depth to water: 95.18 ft (29.01m) below TOC
Water elevation: 207.12 ft (63.13m) msl

WELL AC 3B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:12
Depth to water: 93.47 ft (28.49m) below TOC
Water elevation: 209.03 ft (63.71m) msl

WELL ACB 2A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:14
Depth to water: 117.1 ft (35.69m) below TOC
Water elevation: 232.7 ft (70.93m) msl

WELL ACB 3A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:11
Depth to water: 127.69 ft (38.92m) below TOC
Water elevation: 220.61 ft (67.24m) msl

WELL ACB 3A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:43
Depth to water: 115.2 ft (35.11m) below TOC
Water elevation: 233.1 ft (71.05m) msl

WELL ACB 4A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:45
Depth to water: 125.65 ft (38.30m) below TOC
Water elevation: 233.45 ft (71.16m) msl

WELL AMB 4A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:38
Depth to water: 164.2 ft (50.05m) below TOC
Water elevation: 216.3 ft (65.93m) msl

WELL AMB 4B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:37
Depth to water: 159.3 ft (48.56m) below TOC
Water elevation: 221.1 ft (67.39m) msl

WELL AMB 4D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:39
Depth to water: 150.55 ft (45.89m) below TOC
Water elevation: 229.75 ft (70.03m) msl

WELL AMB 5

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:40
Depth to water: 149.55 ft (45.58m) below TOC
Water elevation: 230.05 ft (70.12m) msl

WELL AMB 6

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:42
Depth to water: 147 ft (44.81m) below TOC
Water elevation: 230.2 ft (70.17m) msl

WELL AMB 7

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:17
Depth to water: 139.5 ft (42.52m) below TOC
Water elevation: 230.4 ft (70.23m) msl

WELL AMB 7A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:15
Depth to water: 157.35 ft (47.96m) below TOC
Water elevation: 216.25 ft (65.91m) msl

WELL AMB 7B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:16
Depth to water: 151.4 ft (46.15m) below TOC
Water elevation: 221.6 ft (67.54m) msl

WELL AMB 8D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:06
Depth to water: 139.6 ft (42.55m) below TOC
Water elevation: 230 ft (70.10m) msl

WELL AMB 9D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:04
Depth to water: 137.9 ft (42.03m) below TOC
Water elevation: 230 ft (70.10m) msl

WELL AMB 10A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:00
Depth to water: 150.9 ft (45.99m) below TOC
Water elevation: 215.6 ft (65.72m) msl

WELL AMB 10B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:01
Depth to water: 146.25 ft (44.58m) below TOC
Water elevation: 220.15 ft (67.10m) msl

WELL AMB 10D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:59
Depth to water: 134.65 ft (41.04m) below TOC
Water elevation: 230.85 ft (70.36m) msl

WELL AMB 10DD

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:58
Depth to water: 7.9 ft (2.41m) below TOC
Water elevation: 357.5 ft (108.97m) msl

WELL AMB 11B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:22
Depth to water: 144.1 ft (43.92m) below TOC
Water elevation: 220.5 ft (67.21m) msl

WELL AMB 11D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:21
Depth to water: 132.55 ft (40.40m) below TOC
Water elevation: 231.45 ft (70.55m) msl

WELL AMB 12D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:25
Depth to water: 138.95 ft (42.35m) below TOC
Water elevation: 230.85 ft (70.36m) msl

WELL AMB 13AR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:55
Depth to water: 148.7 ft (45.32m) below TOC
Water elevation: 216.4 ft (65.96m) msl

WELL AMB 14D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:40
Depth to water: 154.2 ft (47.00m) below TOC
Water elevation: 228.2 ft (69.56m) msl

WELL AMB 15D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:41
Depth to water: 153 ft (46.63m) below TOC
Water elevation: 230.4 ft (70.23m) msl

WELL AMB 16D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:38
Depth to water: 150.5 ft (45.87m) below TOC
Water elevation: 229.9 ft (70.07m) msl

WELL AMB 17A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:41
Depth to water: 162.8 ft (49.62m) below TOC
Water elevation: 216.3 ft (65.93m) msl

WELL AMB 18A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:10
Depth to water: 161.15 ft (49.12m) below TOC
Water elevation: 216.15 ft (65.88m) msl

WELL AMB 18C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:11
Depth to water: 146.25 ft (44.58m) below TOC
Water elevation: 229.75 ft (70.03m) msl

WELL AMB 19C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:49
Depth to water: 136.45 ft (41.59m) below TOC
Water elevation: 227.25 ft (69.27m) msl

WELL AOB 1

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:54
Depth to water: 109 ft (33.22m) below TOC
Water elevation: 232.1 ft (70.74m) msl

WELL AOB 2

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:58
Depth to water: 113.65 ft (34.64m) below TOC
Water elevation: 231.75 ft (70.64m) msl

WELL AOB 3

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:07
Depth to water: 119.3 ft (36.36m) below TOC
Water elevation: 233.3 ft (71.11m) msl

WELL ARP 1A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:51
Depth to water: Not available
Water elevation: Not available

WELL ARP 2

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:49
Depth to water: 122 ft (37.19m) below TOC
Water elevation: 215.3 ft (65.62m) msl

WELL ARP 3

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:47
Depth to water: 121.95 ft (37.17m) below TOC
Water elevation: 217.85 ft (66.40m) msl

WELL ARP 4

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:54
Depth to water: 133.36 ft (40.65m) below TOC
Water elevation: 215.04 ft (65.54m) msl

WELL ASB 1A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 14:46
Depth to water: Not available
Water elevation: Not available

WELL ASB 2AR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:44
Depth to water: 119 ft (36.27m) below TOC
Water elevation: 236.6 ft (72.12m) msl

WELL ASB 2CR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:43
Depth to water: 136.2 ft (41.51m) below TOC
Water elevation: 219.4 ft (66.87m) msl

WELL ASB 3AR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:48
Depth to water: 104.15 ft (31.75m) below TOC
Water elevation: 237.45 ft (72.38m) msl

WELL ASB 3CR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:49
Depth to water: 122.75 ft (37.41m) below TOC
Water elevation: 218.75 ft (66.68m) msl

WELL ASB 4

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:58
Depth to water: 99.25 ft (30.25m) below TOC
Water elevation: 236.35 ft (72.04m) msl

WELL ASB 5AR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:35
Depth to water: 112.2 ft (34.20m) below TOC
Water elevation: 234.8 ft (71.57m) msl

WELL ASB 5C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:36
Depth to water: 128.2 ft (39.08m) below TOC
Water elevation: 219.1 ft (66.78m) msl

WELL ASB 6AA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:40
Depth to water: 139 ft (42.37m) below TOC
Water elevation: 215.2 ft (65.59m) msl

WELL ASB 6C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:39
Depth to water: 133.2 ft (40.60m) below TOC
Water elevation: 220.4 ft (67.18m) msl

WELL ASB 6TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:38
Depth to water: 141.6 ft (43.16m) below TOC
Water elevation: 211.3 ft (64.41m) msl

WELL ASB 8

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:26
Depth to water: 117.9 ft (35.94m) below TOC
Water elevation: 231.1 ft (70.44m) msl

WELL ASB 8A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:29
Depth to water: 134.15 ft (40.89m) below TOC
Water elevation: 215.15 ft (65.58m) msl

WELL ASB 8B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:30
Depth to water: 135.8 ft (41.39m) below TOC
Water elevation: 214 ft (65.23m) msl

WELL ASB 8C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:30
Depth to water: 132.9 ft (40.51m) below TOC
Water elevation: 216.8 ft (66.08m) msl

WELL ASB 8TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:28
Depth to water: 137.62 ft (41.95m) below TOC
Water elevation: 211.98 ft (64.61m) msl

WELL ASB 9

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:04
Depth to water: 68.95 ft (21.02m) below TOC
Water elevation: 240.05 ft (73.17m) msl

WELL ASB 9B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:06
Depth to water: 91.5 ft (27.89m) below TOC
Water elevation: 217.5 ft (66.29m) msl

WELL ASB 9C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:07
Depth to water: 92.2 ft (28.10m) below TOC
Water elevation: 217.7 ft (66.36m) msl

WELL ASB 10CR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:46
Depth to water: 130.1 ft (39.65m) below TOC
Water elevation: 219.1 ft (66.78m) msl

WELL BGO 1D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:12
Depth to water: 54.7 ft (16.67m) below TOC
Water elevation: 240.4 ft (73.27m) msl

WELL BGO 2D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 15:40
Depth to water: Not available
Water elevation: Not available

WELL BGO 3A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 11:19
Depth to water: 127.95 ft (39.00m) below TOC
Water elevation: 163.95 ft (49.97m) msl

WELL BGO 3C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 11:20
Depth to water: 65.7 ft (20.03m) below TOC
Water elevation: 226.2 ft (68.95m) msl

WELL BGO 3DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 11:21
Depth to water: 60 ft (18.29m) below TOC
Water elevation: 231.5 ft (70.56m) msl

WELL BGO 4D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 66.85 ft (20.38m) below TOC
Water elevation: 230.65 ft (70.30m) msl
Time: 11:22

WELL BGO 5C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 79.4 ft (24.20m) below TOC
Water elevation: 216.7 ft (66.05m) msl
Time: 11:29

WELL BGO 5D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 66.6 ft (20.30m) below TOC
Water elevation: 229.7 ft (70.01m) msl
Time: 11:28

WELL BGO 6A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 125.6 ft (38.28m) below TOC
Water elevation: 160 ft (48.77m) msl
Time: 14:00

WELL BGO 6B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 68.18 ft (20.78m) below TOC
Water elevation: 218.62 ft (66.64m) msl
Time: 13:53

WELL BGO 6C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 65.98 ft (20.11m) below TOC
Water elevation: 219.62 ft (66.94m) msl
Time: 13:57

WELL BGO 6D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 55.65 ft (16.96m) below TOC
Water elevation: 229.85 ft (70.06m) msl
Time: 13:55

WELL BGO 7D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 56.6 ft (17.25m) below TOC
Water elevation: 230.4 ft (70.23m) msl
Time: 14:01

WELL BGO 8AR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 126.19 ft (38.46m) below TOC
Water elevation: 160.41 ft (48.89m) msl
Time: 14:12

WELL BGO 8C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 65.55 ft (19.98m) below TOC
Water elevation: 222.35 ft (67.77m) msl
Time: 14:10

WELL BGO 8D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 57.24 ft (17.45m) below TOC
Water elevation: 230.56 ft (70.28m) msl
Time: 14:11

WELL BGO 9AA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 126.3 ft (38.50m) below TOC
Water elevation: 158.5 ft (48.31m) msl
Time: 8:05

WELL BGO 9D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 56.45 ft (17.21m) below TOC
Water elevation: 228.65 ft (69.69m) msl
Time: 14:21

WELL BGO 10A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 130.08 ft (39.65m) below TOC
Water elevation: 170.82 ft (52.07m) msl
Time: 14:50

WELL BGO 10AA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:12
Depth to water: 159.19 ft (48.52m) below TOC
Water elevation: 141.51 ft (43.13m) msl

WELL BGO 10AR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:47
Depth to water: 141.55 ft (43.14m) below TOC
Water elevation: 158.95 ft (48.45m) msl

WELL BGO 10B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:10
Depth to water: 109.26 ft (33.30m) below TOC
Water elevation: 191.74 ft (58.44m) msl

WELL BGO 10C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:51
Depth to water: 81.99 ft (24.99m) below TOC
Water elevation: 219.31 ft (66.85m) msl

WELL BGO 10D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:55
Depth to water: 71.38 ft (21.76m) below TOC
Water elevation: 230.12 ft (70.14m) msl

WELL BGO 10DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:45
Depth to water: 70.2 ft (21.40m) below TOC
Water elevation: 230.2 ft (70.17m) msl

WELL BGO 11DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 7:55
Depth to water: 76.2 ft (23.23m) below TOC
Water elevation: 229 ft (69.80m) msl

WELL BGO 12AX

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:55
Depth to water: 154.91 ft (47.22m) below TOC
Water elevation: 157.89 ft (48.13m) msl

WELL BGO 12CX

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:50
Depth to water: 84.06 ft (25.62m) below TOC
Water elevation: 229.24 ft (69.87m) msl

WELL BGO 12DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:45
Depth to water: 94.14 ft (28.69m) below TOC
Water elevation: 219.46 ft (66.89m) msl

WELL BGO 13DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:00
Depth to water: 90.11 ft (27.47m) below TOC
Water elevation: 229.19 ft (69.86m) msl

WELL BGO 14AR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:05
Depth to water: 140.92 ft (42.95m) below TOC
Water elevation: 159.78 ft (48.70m) msl

WELL BGO 14CR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:10
Depth to water: 78.09 ft (23.80m) below TOC
Water elevation: 222.41 ft (67.79m) msl

WELL BGO 14DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:15
Depth to water: 71.22 ft (21.71m) below TOC
Water elevation: 229.08 ft (69.82m) msl

WELL BGO 21D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 11:08
Depth to water: 51.06 ft (15.56m) below TOC
Water elevation: 234.34 ft (71.43m) msl

WELL BGO 22DX

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 11:05
Depth to water: 51.65 ft (15.74m) below TOC
Water elevation: 234.05 ft (71.34m) msl

WELL BGO 23D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 11:07
Depth to water: 53.72 ft (16.37m) below TOC
Water elevation: 235.48 ft (71.78m) msl

WELL BGO 24D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 11:10
Depth to water: 56.05 ft (17.08m) below TOC
Water elevation: 237.15 ft (72.28m) msl

WELL BGO 25A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:28
Depth to water: 134.72 ft (41.06m) below TOC
Water elevation: 161.78 ft (49.31m) msl

WELL BGO 26A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:58
Depth to water: 127.1 ft (38.74m) below TOC
Water elevation: 160.1 ft (48.80m) msl

WELL BGO 26D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:50
Depth to water: 58.8 ft (17.92m) below TOC
Water elevation: 226.7 ft (69.10m) msl

WELL BGO 27C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:59
Depth to water: 55.76 ft (17.00m) below TOC
Water elevation: 220.24 ft (67.13m) msl

WELL BGO 27D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:02
Depth to water: 49.15 ft (14.98m) below TOC
Water elevation: 227.15 ft (69.24m) msl

WELL BGO 28D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:05
Depth to water: 50.76 ft (15.47m) below TOC
Water elevation: 226.64 ft (69.08m) msl

WELL BGO 29A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:45
Depth to water: 103.8 ft (31.64m) below TOC
Water elevation: 160.4 ft (48.89m) msl

WELL BGO 29C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:47
Depth to water: 42.15 ft (12.85m) below TOC
Water elevation: 222.65 ft (67.86m) msl

WELL BGO 29D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:50
Depth to water: 39 ft (11.89m) below TOC
Water elevation: 226.5 ft (69.04m) msl

WELL BGO 30C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:10
Depth to water: 55.05 ft (16.78m) below TOC
Water elevation: 219.45 ft (66.89m) msl

WELL BGO 45A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:36
Depth to water: 117.75 ft (35.89m) below TOC
Water elevation: 161.15 ft (49.12m) msl

WELL BGO 45B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:38
Depth to water: 60.35 ft (18.39m) below TOC
Water elevation: 218.25 ft (66.52m) msl

WELL BGO 45C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:41
Depth to water: 56.65 ft (17.27m) below TOC
Water elevation: 221.95 ft (67.65m) msl

WELL BGO 45D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:43
Depth to water: 51.41 ft (15.67m) below TOC
Water elevation: 227.19 ft (69.25m) msl

WELL BGO 46B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:12
Depth to water: 47.4 ft (14.45m) below TOC
Water elevation: 218 ft (66.45m) msl

WELL BGO 46C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:13
Depth to water: 45.42 ft (13.84m) below TOC
Water elevation: 219.68 ft (66.96m) msl

WELL BGO 46D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:14
Depth to water: 38.69 ft (11.79m) below TOC
Water elevation: 226.41 ft (69.01m) msl

WELL BGO 47A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:22
Depth to water: 103.85 ft (31.65m) below TOC
Water elevation: 163.05 ft (49.70m) msl

WELL BGO 47C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:18
Depth to water: 44.45 ft (13.55m) below TOC
Water elevation: 223.15 ft (68.02m) msl

WELL BGO 47D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:19
Depth to water: 40.23 ft (12.26m) below TOC
Water elevation: 227.17 ft (69.24m) msl

WELL BGO 48C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:28
Depth to water: 52.81 ft (16.10m) below TOC
Water elevation: 223.79 ft (68.21m) msl

WELL BGO 48D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:30
Depth to water: 49.45 ft (15.07m) below TOC
Water elevation: 227.45 ft (69.33m) msl

WELL BGO 49A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:42
Depth to water: Not available
Water elevation: Not available

WELL BGO 49C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:45
Depth to water: 41.4 ft (12.62m) below TOC
Water elevation: 229.7 ft (70.01m) msl

WELL BGO 49D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:49
Depth to water: 37.5 ft (11.43m) below TOC
Water elevation: 234 ft (71.32m) msl

WELL BGO 50A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:10
Depth to water: 94.3 ft (28.74m) below TOC
Water elevation: 161.1 ft (49.10m) msl

WELL BGO 50C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:06
Depth to water: 37 ft (11.28m) below TOC
Water elevation: 218.5 ft (66.60m) msl

WELL BGO 50D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:03
Depth to water: 29.8 ft (9.08m) below TOC
Water elevation: 226.2 ft (68.95m) msl

WELL BGO 51A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:20
Depth to water: 122.85 ft (37.45m) below TOC
Water elevation: 166.45 ft (50.73m) msl

WELL BGO 51AA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:15
Depth to water: 120.15 ft (36.62m) below TOC
Water elevation: 169.05 ft (51.53m) msl

WELL BGO 51B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:19
Depth to water: 57.58 ft (17.55m) below TOC
Water elevation: 231.52 ft (70.57m) msl

WELL BGO 51C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:18
Depth to water: 56.7 ft (17.28m) below TOC
Water elevation: 232.4 ft (70.84m) msl

WELL BGO 51D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:17
Depth to water: 53.7 ft (16.37m) below TOC
Water elevation: 235.6 ft (71.81m) msl

WELL BGO 52A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:15
Depth to water: 119.65 ft (36.47m) below TOC
Water elevation: 164.75 ft (50.22m) msl

WELL BGO 52AA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:17
Depth to water: 120.52 ft (36.73m) below TOC
Water elevation: 163.98 ft (49.98m) msl

WELL BGO 52B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:14
Depth to water: 54.9 ft (16.73m) below TOC
Water elevation: 229.5 ft (69.95m) msl

WELL BGO 52C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:12
Depth to water: 53.86 ft (16.42m) below TOC
Water elevation: 230.64 ft (70.30m) msl

WELL BGO 52D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:11
Depth to water: 51.32 ft (15.64m) below TOC
Water elevation: 233.48 ft (71.17m) msl

WELL BGO 53A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:02
Depth to water: 131.5 ft (40.08m) below TOC
Water elevation: Not available

WELL BGO 53AA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:00
Depth to water: 132.35 ft (40.34m) below TOC
Water elevation: Not available

WELL BGO 53B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:04
Depth to water: 70.3 ft (21.43m) below TOC
Water elevation: 220.8 ft (67.30m) msl

WELL BGO 53C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:05
Depth to water: 68.7 ft (20.94m) below TOC
Water elevation: 222.2 ft (67.73m) msl

WELL BGO 53D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:08
Depth to water: 62.9 ft (19.17m) below TOC
Water elevation: 228.7 ft (69.71m) msl

WELL BGX 1A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:51
Depth to water: 132.49 ft (40.38m) below TOC
Water elevation: 158.71 ft (48.38m) msl

WELL BGX 1C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:48
Depth to water: 75.28 ft (22.95m) below TOC
Water elevation: 216.02 ft (65.84m) msl

WELL BGX 1D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:45
Depth to water: 62.74 ft (19.12m) below TOC
Water elevation: 228.56 ft (69.67m) msl

WELL BGX 2B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:40
Depth to water: 79.39 ft (24.20m) below TOC
Water elevation: 211.91 ft (64.59m) msl

WELL BGX 2D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:42
Depth to water: 76.64 ft (23.36m) below TOC
Water elevation: 214.46 ft (65.37m) msl

WELL BGX 3D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:26
Depth to water: 77.5 ft (23.62m) below TOC
Water elevation: 213.7 ft (65.14m) msl

WELL BGX 4A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:25
Depth to water: 135.1 ft (41.18m) below TOC
Water elevation: 155.8 ft (47.49m) msl

WELL BGX 4C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:21
Depth to water: 77.56 ft (23.64m) below TOC
Water elevation: 213.24 ft (65.00m) msl

WELL BGX 4D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:18
Depth to water: 76.68 ft (23.37m) below TOC
Water elevation: 214.22 ft (65.30m) msl

WELL BGX 5D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:15
Depth to water: 76.79 ft (23.41m) below TOC
Water elevation: 208.21 ft (63.46m) msl

WELL BGX 6D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 11:34
Depth to water: 71.1 ft (21.67m) below TOC
Water elevation: 205.9 ft (62.76m) msl

WELL BGX 7D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 11:39
Depth to water: 73.65 ft (22.45m) below TOC
Water elevation: 205.55 ft (62.65m) msl

WELL BGX 8DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 11:50
Depth to water: 70.35 ft (21.44m) below TOC
Water elevation: 207.85 ft (63.35m) msl

WELL BGX 9D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 11:55
Depth to water: 51.75 ft (15.77m) below TOC
Water elevation: 227.65 ft (69.39m) msl

WELL BGX 10D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:00
Depth to water: 50.98 ft (15.54m) below TOC
Water elevation: 225.92 ft (68.86m) msl

WELL BGX 11D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:02
Depth to water: 39.75 ft (12.12m) below TOC
Water elevation: 236.55 ft (72.10m) msl

WELL BGX 12C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:05
Depth to water: 37.87 ft (11.54m) below TOC
Water elevation: 237.23 ft (72.31m) msl

WELL BGX 12D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:10
Depth to water: 31.76 ft (9.68m) below TOC
Water elevation: 243.44 ft (74.20m) msl

WELL FIW 1ID

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:49
Depth to water: 76.15 ft (23.21m) below TOC
Water elevation: 217.75 ft (66.37m) msl

WELL FIW 1MC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:45
Depth to water: 80.35 ft (24.49m) below TOC
Water elevation: 213.35 ft (65.03m) msl

WELL FIW 2IC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 7:24
Depth to water: 77.6 ft (23.65m) below TOC
Water elevation: 212.9 ft (64.89m) msl

WELL FIW 2MA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 7:20
Depth to water: 140.05 ft (42.69m) below TOC
Water elevation: 152.65 ft (46.53m) msl

WELL FIW 2MC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 15:02
Depth to water: 73.15 ft (22.30m) below TOC
Water elevation: 212.65 ft (64.82m) msl

WELL FIW 2MD

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 7:22
Depth to water: 73.88 ft (22.52m) below TOC
Water elevation: 216.92 ft (66.12m) msl

WELL FOB 1D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:28
Depth to water: 18.95 ft (5.78m) below TOC
Water elevation: 206.45 ft (62.93m) msl

WELL FOB 2D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 11:05
Depth to water: 20.5 ft (6.25m) below TOC
Water elevation: 208.1 ft (63.43m) msl

WELL FOB 3D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:45
Depth to water: 18.41 ft (5.61m) below TOC
Water elevation: 208.59 ft (63.58m) msl

WELL FOB 4D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:40
Depth to water: 43.05 ft (13.12m) below TOC
Water elevation: 209.15 ft (63.75m) msl

WELL FOB 5C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:08
Depth to water: 52.56 ft (16.02m) below TOC
Water elevation: 205.94 ft (62.77m) msl

WELL FOB 7A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:00
Depth to water: 145.89 ft (44.47m) below TOC
Water elevation: 151.61 ft (46.21m) msl

WELL FOB 7C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:55
Depth to water: 88.22 ft (26.89m) below TOC
Water elevation: 209.68 ft (63.91m) msl

WELL FOB 7D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:52
Depth to water: 84.7 ft (25.82m) below TOC
Water elevation: 213.2 ft (64.98m) msl

WELL FOB 8D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:18
Depth to water: 75.98 ft (23.16m) below TOC
Water elevation: 212.42 ft (64.75m) msl

WELL FOB 9C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:27
Depth to water: 82.9 ft (25.27m) below TOC
Water elevation: 211.9 ft (64.59m) msl

WELL FOB 9D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:29
Depth to water: 79.7 ft (24.29m) below TOC
Water elevation: 215 ft (65.53m) msl

WELL FOB 10D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 7:54
Depth to water: 71.69 ft (21.85m) below TOC
Water elevation: 216.01 ft (65.84m) msl

WELL FOB 11C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:10
Depth to water: 48.9 ft (14.90m) below TOC
Water elevation: 214.8 ft (65.47m) msl

WELL FOB 11D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:12
Depth to water: 44.4 ft (13.53m) below TOC
Water elevation: 219 ft (66.75m) msl

WELL FOB 12D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:21
Depth to water: 66.58 ft (20.29m) below TOC
Water elevation: 211.82 ft (64.56m) msl

WELL FSB 50PD

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:03
Depth to water: 47.58 ft (14.50m) below TOC
Water elevation: 210.42 ft (64.14m) msl

WELL FSB 76

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:36
Depth to water: 76.6 ft (23.35m) below TOC
Water elevation: 217.6 ft (66.33m) msl

WELL FSB 76A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:38
Depth to water: 137.6 ft (41.94m) below TOC
Water elevation: 156.3 ft (47.64m) msl

WELL FSB 76B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:39
Depth to water: 141.25 ft (43.05m) below TOC
Water elevation: 152.55 ft (46.50m) msl

WELL FSB 76C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:42
Depth to water: 80.35 ft (24.49m) below TOC
Water elevation: 213.25 ft (65.00m) msl

WELL FSB 77

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:10
Depth to water: 59.16 ft (18.03m) below TOC
Water elevation: 214.14 ft (65.27m) msl

WELL FSB 78

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:00
Depth to water: 61.3 ft (18.68m) below TOC
Water elevation: 211.3 ft (64.41m) msl

WELL FSB 78A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:02
Depth to water: 115.35 ft (35.16m) below TOC
Water elevation: 157.25 ft (47.93m) msl

WELL FSB 78B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:04
Depth to water: 117.25 ft (35.74m) below TOC
Water elevation: 155.55 ft (47.41m) msl

WELL FSB 78C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:06
Depth to water: 63.81 ft (19.45m) below TOC
Water elevation: 209.69 ft (63.91m) msl

WELL FSB 79

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:34
Depth to water: 16.25 ft (4.95m) below TOC
Water elevation: 201.55 ft (61.43m) msl

WELL FSB 79A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:31
Depth to water: 58.9 ft (17.95m) below TOC
Water elevation: 159.2 ft (48.52m) msl

WELL FSB 79B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:32
Depth to water: 58.8 ft (17.92m) below TOC
Water elevation: 159.4 ft (48.59m) msl

WELL FSB 79C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:33
Depth to water: 20.08 ft (6.12m) below TOC
Water elevation: 198.32 ft (60.45m) msl

WELL FSB 87A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:34
Depth to water: 132.85 ft (40.49m) below TOC
Water elevation: 154.95 ft (47.23m) msl

WELL FSB 87B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:36
Depth to water: 135.77 ft (41.38m) below TOC
Water elevation: 151.73 ft (46.25m) msl

WELL FSB 87C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:38
Depth to water: 77.85 ft (23.73m) below TOC
Water elevation: 209.65 ft (63.90m) msl

WELL FSB 87D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:40
Depth to water: Not available
Water elevation: Not available

WELL FSB 88C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:00
Depth to water: 69.75 ft (21.26m) below TOC
Water elevation: 213.25 ft (65.00m) msl

WELL FSB 88D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:02
Depth to water: 64.9 ft (19.78m) below TOC
Water elevation: 217.5 ft (66.29m) msl

WELL FSB 89C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:42
Depth to water: 68.58 ft (20.90m) below TOC
Water elevation: 212.72 ft (64.84m) msl

WELL FSB 89D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:40
Depth to water: 64.3 ft (19.60m) below TOC
Water elevation: 216.9 ft (66.11m) msl

WELL FSB 90C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:04
Depth to water: 66.8 ft (20.36m) below TOC
Water elevation: 211.6 ft (64.50m) msl

WELL FSB 90D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:05
Depth to water: 62.6 ft (19.08m) below TOC
Water elevation: 216 ft (65.84m) msl

WELL FSB 91C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:07
Depth to water: 67.2 ft (20.48m) below TOC
Water elevation: 212.1 ft (64.65m) msl

WELL FSB 91D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:08
Depth to water: 64.15 ft (19.55m) below TOC
Water elevation: 215.05 ft (65.55m) msl

WELL FSB 92C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:15
Depth to water: 64.9 ft (19.78m) below TOC
Water elevation: 210.8 ft (64.25m) msl

WELL FSB 92D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:20
Depth to water: 62.35 ft (19.00m) below TOC
Water elevation: 213.55 ft (65.09m) msl

WELL FSB 93C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:35
Depth to water: 65.3 ft (19.90m) below TOC
Water elevation: 210.9 ft (64.28m) msl

WELL FSB 93D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:37
Depth to water: 63.4 ft (19.32m) below TOC
Water elevation: 212.7 ft (64.83m) msl

WELL FSB 94C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:53
Depth to water: 71.81 ft (21.89m) below TOC
Water elevation: 209.29 ft (63.79m) msl

WELL FSB 94DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:55
Depth to water: 68.7 ft (20.94m) below TOC
Water elevation: 211.8 ft (64.56m) msl

WELL FSB 95CR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:44
Depth to water: 75.61 ft (23.05m) below TOC
Water elevation: 208.39 ft (63.52m) msl

WELL FSB 95DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:46
Depth to water: 72.8 ft (22.19m) below TOC
Water elevation: 211.3 ft (64.41m) msl

WELL FSB 96AR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:11
Depth to water: 127.08 ft (38.73m) below TOC
Water elevation: 154.12 ft (46.98m) msl

WELL FSB 97A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:26
Depth to water: 132.98 ft (40.53m) below TOC
Water elevation: 153.12 ft (46.67m) msl

WELL FSB 97C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:28
Depth to water: 76.99 ft (23.47m) below TOC
Water elevation: 209.11 ft (63.74m) msl

WELL FSB 97D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:30
Depth to water: 74.28 ft (22.64m) below TOC
Water elevation: 211.72 ft (64.53m) msl

WELL FSB 98AR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:34
Depth to water: 131.5 ft (40.08m) below TOC
Water elevation: 152.5 ft (46.48m) msl

WELL FSB 98C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:38
Depth to water: 74.7 ft (22.77m) below TOC
Water elevation: 209.8 ft (63.95m) msl

WELL FSB 98D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:36
Depth to water: 72.06 ft (21.96m) below TOC
Water elevation: 212.44 ft (64.75m) msl

WELL FSB 99A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:10
Depth to water: 136 ft (41.45m) below TOC
Water elevation: 151.6 ft (46.21m) msl

WELL FSB 99C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:12
Depth to water: 77.4 ft (23.59m) below TOC
Water elevation: 210.3 ft (64.10m) msl

WELL FSB 99D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:14
Depth to water: 74.47 ft (22.70m) below TOC
Water elevation: 213.13 ft (64.96m) msl

WELL FSB100A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:57
Depth to water: 133.55 ft (40.71m) below TOC
Water elevation: 152.45 ft (46.47m) msl

WELL FSB101A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:59
Depth to water: 132.5 ft (40.39m) below TOC
Water elevation: 152.7 ft (46.54m) msl

WELL FSB102C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:52
Depth to water: 4.75 ft (1.45m) below TOC
Water elevation: 196.35 ft (59.85m) msl

WELL FSB103C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:43
Depth to water: 38 ft (11.58m) below TOC
Water elevation: 204.4 ft (62.30m) msl

WELL FSB104C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:46
Depth to water: 15.95 ft (4.86m) below TOC
Water elevation: 203.15 ft (61.92m) msl

WELL FSB104D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:49
Depth to water: 11.27 ft (3.44m) below TOC
Water elevation: 207.93 ft (63.38m) msl

WELL FSB105C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:15
Depth to water: 77.3 ft (23.56m) below TOC
Water elevation: 208.5 ft (63.55m) msl

WELL FSB105DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:17
Depth to water: 74.19 ft (22.61m) below TOC
Water elevation: 211.41 ft (64.44m) msl

WELL FSB106C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:00
Depth to water: 31.7 ft (9.66m) below TOC
Water elevation: 203.4 ft (62.00m) msl

WELL FSB106D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:55
Depth to water: 25.8 ft (7.86m) below TOC
Water elevation: 209.1 ft (63.73m) msl

WELL FSB107C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:30
Depth to water: 59.5 ft (18.14m) below TOC
Water elevation: 211.4 ft (64.44m) msl

WELL FSB107D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:31
Depth to water: 55.3 ft (16.86m) below TOC
Water elevation: 215.7 ft (65.75m) msl

WELL FSB108D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:50
Depth to water: 81.17 ft (24.74m) below TOC
Water elevation: 216.83 ft (66.09m) msl

WELL FSB109D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:23
Depth to water: 79.47 ft (24.22m) below TOC
Water elevation: 213.63 ft (65.12m) msl

WELL FSB110C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:42
Depth to water: 31.59 ft (9.63m) below TOC
Water elevation: 202.91 ft (61.85m) msl

WELL FSB110D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:40
Depth to water: 26.16 ft (7.97m) below TOC
Water elevation: 208.34 ft (63.50m) msl

WELL FSB111C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:25
Depth to water: 63.5 ft (19.36m) below TOC
Water elevation: 212.8 ft (64.86m) msl

WELL FSB111D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:26
Depth to water: 59.5 ft (18.14m) below TOC
Water elevation: 217.1 ft (66.17m) msl

WELL FSB112A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:35
Depth to water: 74.98 ft (22.85m) below TOC
Water elevation: 154.12 ft (46.98m) msl

WELL FSB112C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:40
Depth to water: 24.75 ft (7.54m) below TOC
Water elevation: 204.35 ft (62.29m) msl

WELL FSB112D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:41
Depth to water: 20.95 ft (6.39m) below TOC
Water elevation: 208.65 ft (63.60m) msl

WELL FSB113A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:14
Depth to water: 62.5 ft (19.05m) below TOC
Water elevation: 160.7 ft (48.98m) msl

WELL FSB113C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:12
Depth to water: 18.1 ft (5.52m) below TOC
Water elevation: 204.8 ft (62.42m) msl

WELL FSB113D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:10
Depth to water: 11.7 ft (3.57m) below TOC
Water elevation: 210.8 ft (64.25m) msl

WELL FSB114A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:19
Depth to water: 95.75 ft (29.18m) below TOC
Water elevation: 156.25 ft (47.63m) msl

WELL FSB114C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:20
Depth to water: 38.4 ft (11.70m) below TOC
Water elevation: 213.8 ft (65.17m) msl

WELL FSB114D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:21
Depth to water: 33.2 ft (10.12m) below TOC
Water elevation: 219 ft (66.75m) msl

WELL FSB115C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:30
Depth to water: 22.35 ft (6.81m) below TOC
Water elevation: 185.45 ft (56.53m) msl

WELL FSB115D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:32
Depth to water: 14.15 ft (4.31m) below TOC
Water elevation: 194.35 ft (59.24m) msl

WELL FSB116C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:42
Depth to water: 11.76 ft (3.58m) below TOC
Water elevation: 190.74 ft (58.14m) msl

WELL FSB116D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:40
Depth to water: 9.04 ft (2.76m) below TOC
Water elevation: 193.86 ft (59.09m) msl

WELL FSB117D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:46
Depth to water: 22.95 ft (7.00m) below TOC
Water elevation: 207.75 ft (63.32m) msl

WELL FSB118D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:17
Depth to water: 28.65 ft (8.73m) below TOC
Water elevation: 214.65 ft (65.43m) msl

WELL FSB119D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:05
Depth to water: 42.9 ft (13.08m) below TOC
Water elevation: 211.2 ft (64.37m) msl

WELL FSB120A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:10
Depth to water: 108.8 ft (33.16m) below TOC
Water elevation: 171.3 ft (52.21m) msl

WELL FSB120C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:13
Depth to water: 73.7 ft (22.46m) below TOC
Water elevation: 206 ft (62.79m) msl

WELL FSB120D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:16
Depth to water: 71.4 ft (21.76m) below TOC
Water elevation: 209.1 ft (63.73m) msl

WELL FSB121C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:23
Depth to water: 51.76 ft (15.78m) below TOC
Water elevation: 204.74 ft (62.41m) msl

WELL FSB121DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:19
Depth to water: 48.3 ft (14.72m) below TOC
Water elevation: 207.2 ft (63.16m) msl

WELL FSB122C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:52
Depth to water: 15.85 ft (4.83m) below TOC
Water elevation: 202.15 ft (61.62m) msl

WELL FSB122D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:55
Depth to water: 10.4 ft (3.17m) below TOC
Water elevation: 207.2 ft (63.16m) msl

WELL FSB123C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:20
Depth to water: 26.58 ft (8.10m) below TOC
Water elevation: 211.52 ft (64.47m) msl

WELL FSB123D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:25
Depth to water: 22.8 ft (6.95m) below TOC
Water elevation: 215.3 ft (65.62m) msl

WELL FSB150PC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:37
Depth to water: 36.35 ft (11.08m) below TOC
Water elevation: 200.45 ft (61.10m) msl

WELL FSB150PD

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:06
Depth to water: 49.24 ft (15.01m) below TOC
Water elevation: 210.16 ft (64.06m) msl

WELL FSL 1D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/24/98 Time: 13:40
Depth to water: 88 ft (26.82m) below TOC
Water elevation: 222.8 ft (67.91m) msl

WELL FSL 2D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:04
Depth to water: 82.26 ft (25.07m) below TOC
Water elevation: 223.54 ft (68.14m) msl

WELL FSL 3D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:56
Depth to water: 81.5 ft (24.84m) below TOC
Water elevation: 220.5 ft (67.21m) msl

WELL FSL 4D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 9:54
Depth to water: 78.04 ft (23.79m) below TOC
Water elevation: 216.06 ft (65.86m) msl

WELL FSL 5D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:11
Depth to water: 72.87 ft (22.21m) below TOC
Water elevation: 218.93 ft (66.73m) msl

WELL FSL 6D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:57
Depth to water: 67.69 ft (20.63m) below TOC
Water elevation: 218.51 ft (66.60m) msl

WELL FSL 7D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:35
Depth to water: 69.95 ft (21.32m) below TOC
Water elevation: 217.65 ft (66.34m) msl

WELL FSL 8D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:52
Depth to water: 73.4 ft (22.37m) below TOC
Water elevation: 217.4 ft (66.26m) msl

WELL FSL 9D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:57
Depth to water: 68.75 ft (20.96m) below TOC
Water elevation: 217.15 ft (66.19m) msl

WELL FSS 1D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:24
Depth to water: 40.9 ft (12.47m) below TOC
Water elevation: 225.1 ft (68.61m) msl

WELL FSS 2D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:26
Depth to water: 44.08 ft (13.44m) below TOC
Water elevation: 217.52 ft (66.30m) msl

WELL FSS 3D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:29
Depth to water: 40.15 ft (12.24m) below TOC
Water elevation: 218.05 ft (66.46m) msl

WELL FSS 4D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 10:37
Depth to water: 72.3 ft (22.04m) below TOC
Water elevation: 219.5 ft (66.90m) msl

WELL HIW 2A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 7:43
Depth to water: 109.77 ft (33.46m) below TOC
Water elevation: 168.23 ft (51.28m) msl

WELL HIW 2D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 7:44
Depth to water: 43.38 ft (13.22m) below TOC
Water elevation: 234.42 ft (71.45m) msl

WELL HIW 2IC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 7:45
Depth to water: 40.63 ft (12.38m) below TOC
Water elevation: 236.37 ft (72.05m) msl

WELL HIW 2MC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 11:45
Depth to water: Not available
Water elevation: Not available

WELL HIW 3MC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 7:41
Depth to water: 37.32 ft (11.38m) below TOC
Water elevation: 236.68 ft (72.14m) msl

WELL HIW 4MC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 11:48
Depth to water: Not available
Water elevation: Not available

WELL HIW 5MC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:14
Depth to water: 36.73 ft (11.20m) below TOC
Water elevation: 231.47 ft (70.55m) msl

WELL HMD 1D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 13:02
Depth to water: 54.66 ft (16.66m) below TOC
Water elevation: 209.84 ft (63.96m) msl

WELL HMD 2D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 13:10
Depth to water: 57.62 ft (17.56m) below TOC
Water elevation: 203.48 ft (62.02m) msl

WELL HMD 3D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 12:43
Depth to water: 56.58 ft (17.25m) below TOC
Water elevation: 202.92 ft (61.85m) msl

WELL HMD 4D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 12:49
Depth to water: 48.66 ft (14.83m) below TOC
Water elevation: 202.24 ft (61.64m) msl

WELL HOB 1D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:54
Depth to water: 51.52 ft (15.70m) below TOC
Water elevation: 234.78 ft (71.56m) msl

WELL HOB 2D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:48
Depth to water: 55.44 ft (16.90m) below TOC
Water elevation: 232.36 ft (70.82m) msl

WELL HOB 3D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:06
Depth to water: 36.17 ft (11.02m) below TOC
Water elevation: 233.63 ft (71.21m) msl

WELL HOB 5D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:41
Depth to water: 29.28 ft (8.92m) below TOC
Water elevation: 239.82 ft (73.10m) msl

WELL HOB 6D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:46
Depth to water: 4.92 ft (1.50m) below TOC
Water elevation: 209.08 ft (63.73m) msl

WELL HOB 7D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:30
Depth to water: 15.5 ft (4.72m) below TOC
Water elevation: 224 ft (68.28m) msl

WELL HSB 50PC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:28
Depth to water: 10.3 ft (3.14m) below TOC
Water elevation: 221.4 ft (67.48m) msl

WELL HSB 66

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:00
Depth to water: 52.65 ft (16.05m) below TOC
Water elevation: 227.55 ft (69.36m) msl

WELL HSB 67

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:31
Depth to water: 11.41 ft (3.48m) below TOC
Water elevation: 226.39 ft (69.00m) msl

WELL HSB 68

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:19
Depth to water: 25.83 ft (7.87m) below TOC
Water elevation: 224.27 ft (68.36m) msl

WELL HSB 68A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:18
Depth to water: 76.47 ft (23.31m) below TOC
Water elevation: 172.93 ft (52.71m) msl

WELL HSB 68B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:17
Depth to water: 30.91 ft (9.42m) below TOC
Water elevation: 219.09 ft (66.78m) msl

WELL HSB 68C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:16
Depth to water: 30.07 ft (9.17m) below TOC
Water elevation: 220.03 ft (67.07m) msl

WELL HSB 71

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:45
Depth to water: 12.37 ft (3.77m) below TOC
Water elevation: 229.03 ft (69.81m) msl

WELL HSB 71C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:46
Depth to water: 14.91 ft (4.54m) below TOC
Water elevation: 226.69 ft (69.10m) msl

WELL HSB 83A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:22
Depth to water: 63.83 ft (19.46m) below TOC
Water elevation: 173.47 ft (52.87m) msl

WELL HSB 83B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:23
Depth to water: 11.29 ft (3.44m) below TOC
Water elevation: 225.71 ft (68.80m) msl

WELL HSB 83C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:24
Depth to water: 9.38 ft (2.86m) below TOC
Water elevation: 227.72 ft (69.41m) msl

WELL HSB 83D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:25
Depth to water: 9.32 ft (2.84m) below TOC
Water elevation: 227.68 ft (69.40m) msl

WELL HSB 85A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:45
Depth to water: 124.51 ft (37.95m) below TOC
Water elevation: 169.89 ft (51.78m) msl

WELL HSB 85B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:40
Depth to water: 59.6 ft (18.17m) below TOC
Water elevation: 234.9 ft (71.60m) msl

WELL HSB 85C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:41
Depth to water: 53.28 ft (16.24m) below TOC
Water elevation: 240.82 ft (73.40m) msl

WELL HSB 86A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:24
Depth to water: 92.78 ft (28.28m) below TOC
Water elevation: 169.62 ft (51.70m) msl

WELL HSB 86B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:23
Depth to water: 37.43 ft (11.41m) below TOC
Water elevation: 224.47 ft (68.42m) msl

WELL HSB 86C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:21
Depth to water: 36.64 ft (11.17m) below TOC
Water elevation: 226.26 ft (68.96m) msl

WELL HSB 86D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:22
Depth to water: 36.81 ft (11.22m) below TOC
Water elevation: 226.19 ft (68.94m) msl

WELL HSB100C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 15:15
Depth to water: 30.5 ft (9.30m) below TOC
Water elevation: 229.7 ft (70.01m) msl

WELL HSB100D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 15:16
Depth to water: 20.84 ft (6.35m) below TOC
Water elevation: 239.26 ft (72.93m) msl

WELL HSB100PC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:46
Depth to water: 9.57 ft (2.92m) below TOC
Water elevation: 220.43 ft (67.19m) msl

WELL HSB100PD

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:34
Depth to water: 6.81 ft (2.08m) below TOC
Water elevation: 219.19 ft (66.81m) msl

WELL HSB101C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 15:12
Depth to water: 30.07 ft (9.17m) below TOC
Water elevation: 228.43 ft (69.63m) msl

WELL HSB101D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 15:13
Depth to water: 22.96 ft (7.00m) below TOC
Water elevation: 235.74 ft (71.85m) msl

WELL HSB102C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 15:08
Depth to water: 31.53 ft (9.61m) below TOC
Water elevation: 227.47 ft (69.33m) msl

WELL HSB102D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 15:09
Depth to water: 25.92 ft (7.90m) below TOC
Water elevation: 232.68 ft (70.92m) msl

WELL HSB103C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 15:05
Depth to water: 21.02 ft (6.41m) below TOC
Water elevation: 226.38 ft (69.00m) msl

WELL HSB103D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 15:06
Depth to water: 18.66 ft (5.69m) below TOC
Water elevation: 228.94 ft (69.78m) msl

WELL HSB104C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 15:02
Depth to water: 24.63 ft (7.51m) below TOC
Water elevation: 223.27 ft (68.05m) msl

WELL HSB104D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 15:01
Depth to water: 19.25 ft (5.87m) below TOC
Water elevation: 228.55 ft (69.66m) msl

WELL HSB105C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:58
Depth to water: 27.32 ft (8.33m) below TOC
Water elevation: 222.18 ft (67.72m) msl

WELL HSB105D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:59
Depth to water: 20.58 ft (6.27m) below TOC
Water elevation: 228.92 ft (69.78m) msl

WELL HSB106C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:57
Depth to water: 28.62 ft (8.72m) below TOC
Water elevation: 224.28 ft (68.36m) msl

WELL HSB106D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:56
Depth to water: 23.74 ft (7.24m) below TOC
Water elevation: 229.16 ft (69.85m) msl

WELL HSB107C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:53
Depth to water: 35.85 ft (10.93m) below TOC
Water elevation: 225.75 ft (68.81m) msl

WELL HSB107D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:54
Depth to water: 34.38 ft (10.48m) below TOC
Water elevation: 227.92 ft (69.47m) msl

WELL HSB108C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:47
Depth to water: 45.43 ft (13.85m) below TOC
Water elevation: 220.77 ft (67.29m) msl

WELL HSB108D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:48
Depth to water: 40.13 ft (12.23m) below TOC
Water elevation: 226.17 ft (68.94m) msl

WELL HSB109C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:43
Depth to water: 40.49 ft (12.34m) below TOC
Water elevation: 221.11 ft (67.40m) msl

WELL HSB109D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:44
Depth to water: 36.23 ft (11.04m) below TOC
Water elevation: 224.97 ft (68.57m) msl

WELL HSB110C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:40
Depth to water: 34.29 ft (10.45m) below TOC
Water elevation: 221.41 ft (67.49m) msl

WELL HSB110D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:41
Depth to water: 31.51 ft (9.60m) below TOC
Water elevation: 224.09 ft (68.30m) msl

WELL HSB111C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:36
Depth to water: 33.41 ft (10.18m) below TOC
Water elevation: 222.59 ft (67.85m) msl

WELL HSB111D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:37
Depth to water: 32.33 ft (9.85m) below TOC
Water elevation: 223.67 ft (68.18m) msl

WELL HSB111E

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:39
Depth to water: 32.26 ft (9.83m) below TOC
Water elevation: 223.64 ft (68.17m) msl

WELL HSB112C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:34
Depth to water: 30.88 ft (9.41m) below TOC
Water elevation: 224.02 ft (68.28m) msl

WELL HSB112D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:33
Depth to water: 30.57 ft (9.32m) below TOC
Water elevation: 224.53 ft (68.44m) msl

WELL HSB112E

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:32
Depth to water: 30.62 ft (9.33m) below TOC
Water elevation: 224.48 ft (68.42m) msl

WELL HSB113D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:29
Depth to water: 36.14 ft (11.02m) below TOC
Water elevation: 224.76 ft (68.51m) msl

WELL HSB114C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:27
Depth to water: 38.18 ft (11.64m) below TOC
Water elevation: 225.62 ft (68.77m) msl

WELL HSB114D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:28
Depth to water: 38.33 ft (11.68m) below TOC
Water elevation: 225.67 ft (68.79m) msl

WELL HSB115D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:19
Depth to water: 42.4 ft (12.92m) below TOC
Water elevation: 226.7 ft (69.10m) msl

WELL HSB117A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:37
Depth to water: 69.98 ft (21.33m) below TOC
Water elevation: 167.32 ft (51.00m) msl

WELL HSB117C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:38
Depth to water: 12.29 ft (3.75m) below TOC
Water elevation: 225.11 ft (68.61m) msl

WELL HSB117D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:39
Depth to water: 9.6 ft (2.93m) below TOC
Water elevation: 228 ft (69.50m) msl

WELL HSB125C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:28
Depth to water: 5.75 ft (1.75m) below TOC
Water elevation: 226.15 ft (68.93m) msl

WELL HSB125D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:29
Depth to water: 9.41 ft (2.87m) below TOC
Water elevation: 222.29 ft (67.75m) msl

WELL HSB126C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:02
Depth to water: 7.52 ft (2.29m) below TOC
Water elevation: 205.08 ft (62.51m) msl

WELL HSB126D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:03
Depth to water: 7.05 ft (2.15m) below TOC
Water elevation: 205.65 ft (62.68m) msl

WELL HSB127C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:13
Depth to water: 13.87 ft (4.23m) below TOC
Water elevation: 211.83 ft (64.57m) msl

WELL HSB127D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:14
Depth to water: 7.92 ft (2.41m) below TOC
Water elevation: 218.18 ft (66.50m) msl

WELL HSB129C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:30
Depth to water: 7.98 ft (2.43m) below TOC
Water elevation: 207.12 ft (63.13m) msl

WELL HSB129D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:31
Depth to water: 5.25 ft (1.60m) below TOC
Water elevation: 209.45 ft (63.84m) msl

WELL HSB130C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:09
Depth to water: 17.13 ft (5.22m) below TOC
Water elevation: 201.17 ft (61.32m) msl

WELL HSB130D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:10
Depth to water: 15.83 ft (4.83m) below TOC
Water elevation: 202.77 ft (61.81m) msl

WELL HSB131C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:53
Depth to water: 6.76 ft (2.06m) below TOC
Water elevation: 204.94 ft (62.47m) msl

WELL HSB131D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:54
Depth to water: 4.87 ft (1.48m) below TOC
Water elevation: 207.23 ft (63.16m) msl

WELL HSB132C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:21
Depth to water: 17.67 ft (5.39m) below TOC
Water elevation: 222.83 ft (67.92m) msl

WELL HSB132D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:20
Depth to water: 17.89 ft (5.45m) below TOC
Water elevation: 222.81 ft (67.91m) msl

WELL HSB133C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:14
Depth to water: 21.71 ft (6.62m) below TOC
Water elevation: 233.89 ft (71.29m) msl

WELL HSB133D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:15
Depth to water: 15.08 ft (4.60m) below TOC
Water elevation: 240.22 ft (73.22m) msl

WELL HSB134C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:35
Depth to water: 14.91 ft (4.54m) below TOC
Water elevation: 223.49 ft (68.12m) msl

WELL HSB134D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:34
Depth to water: 12.55 ft (3.83m) below TOC
Water elevation: 225.55 ft (68.75m) msl

WELL HSB136C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:39
Depth to water: 8.34 ft (2.54m) below TOC
Water elevation: 219.56 ft (66.92m) msl

WELL HSB136D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:40
Depth to water: 4.93 ft (1.50m) below TOC
Water elevation: 223.07 ft (67.99m) msl

WELL HSB137C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:25
Depth to water: 13 ft (3.96m) below TOC
Water elevation: 223 ft (67.97m) msl

WELL HSB137D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:26
Depth to water: 11.78 ft (3.59m) below TOC
Water elevation: 224.82 ft (68.53m) msl

WELL HSB138D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:58
Depth to water: 24.3 ft (7.41m) below TOC
Water elevation: 228.1 ft (69.53m) msl

WELL HSB139A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:08
Depth to water: 58.89 ft (17.95m) below TOC
Water elevation: 174.81 ft (53.28m) msl

WELL HSB139C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:07
Depth to water: 17.3 ft (5.27m) below TOC
Water elevation: 216.5 ft (65.99m) msl

WELL HSB139D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:06
Depth to water: 8.12 ft (2.48m) below TOC
Water elevation: 225.68 ft (68.79m) msl

WELL HSB140A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:56
Depth to water: 59.23 ft (18.05m) below TOC
Water elevation: 176.67 ft (53.85m) msl

WELL HSB140C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:57
Depth to water: 27.28 ft (8.32m) below TOC
Water elevation: 208.32 ft (63.50m) msl

WELL HSB140D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:58
Depth to water: 14.93 ft (4.55m) below TOC
Water elevation: 221.27 ft (67.44m) msl

WELL HSB141A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:17
Depth to water: 76.35 ft (23.27m) below TOC
Water elevation: 178.25 ft (54.33m) msl

WELL HSB141CR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:18
Depth to water: 22.16 ft (6.75m) below TOC
Water elevation: 232.14 ft (70.76m) msl

WELL HSB141D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:15
Depth to water: 5.71 ft (1.74m) below TOC
Water elevation: 249.09 ft (75.92m) msl

WELL HSB142C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:09
Depth to water: 4.75 ft (1.45m) below TOC
Water elevation: 199.25 ft (60.73m) msl

WELL HSB142D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:08
Depth to water: 4.93 ft (1.50m) below TOC
Water elevation: 199.27 ft (60.74m) msl

WELL HSB143C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 10:57
Depth to water: 10.67 ft (3.25m) below TOC
Water elevation: 211.53 ft (64.48m) msl

WELL HSB143D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 10:58
Depth to water: 6.97 ft (2.12m) below TOC
Water elevation: 215.93 ft (65.82m) msl

WELL HSB145C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 7:58
Depth to water: 20.14 ft (6.14m) below TOC
Water elevation: 215.56 ft (65.70m) msl

WELL HSB145D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 7:59
Depth to water: 12.75 ft (3.89m) below TOC
Water elevation: 223.45 ft (68.11m) msl

WELL HSB146A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 15:01
Depth to water: 74.55 ft (22.72m) below TOC
Water elevation: 177.05 ft (53.97m) msl

WELL HSB146C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 15:00
Depth to water: 40.37 ft (12.30m) below TOC
Water elevation: 211.93 ft (64.60m) msl

WELL HSB146D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 14:59
Depth to water: 21.28 ft (6.49m) below TOC
Water elevation: 231.82 ft (70.66m) msl

WELL HSB147D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 15:13
Depth to water: 33.74 ft (10.28m) below TOC
Water elevation: 233.56 ft (71.19m) msl

WELL HSB148C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:18
Depth to water: 47.94 ft (14.61m) below TOC
Water elevation: 202.96 ft (61.86m) msl

WELL HSB148D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:19
Depth to water: 32.81 ft (10.00m) below TOC
Water elevation: 218.29 ft (66.54m) msl

WELL HSB149D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:10
Depth to water: 13.58 ft (4.14m) below TOC
Water elevation: 226.42 ft (69.01m) msl

WELL HSB150D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:20
Depth to water: 6.64 ft (2.02m) below TOC
Water elevation: 232.36 ft (70.82m) msl

WELL HSB150PC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:34
Depth to water: 9.83 ft (3.00m) below TOC
Water elevation: 221.87 ft (67.63m) msl

WELL HSB151C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:06
Depth to water: 3.92 ft (1.19m) below TOC
Water elevation: 209.68 ft (63.91m) msl

WELL HSB151D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:05
Depth to water: 4.25 ft (1.30m) below TOC
Water elevation: 209.35 ft (63.81m) msl

WELL HSB152C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 15:00
Depth to water: 14.31 ft (4.36m) below TOC
Water elevation: 199.79 ft (60.90m) msl

WELL HSB152D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 15:01
Depth to water: 7.43 ft (2.26m) below TOC
Water elevation: 206.67 ft (62.99m) msl

WELL HSL 1D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 15:18
Depth to water: 23.62 ft (7.20m) below TOC
Water elevation: 240.38 ft (73.27m) msl

WELL HSL 2D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:17
Depth to water: 19.09 ft (5.82m) below TOC
Water elevation: 246.41 ft (75.11m) msl

WELL HSL 3D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 11:35
Depth to water: 13.42 ft (4.09m) below TOC
Water elevation: 254.18 ft (77.48m) msl

WELL HSL 4D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 11:26
Depth to water: 8.18 ft (2.49m) below TOC
Water elevation: 265.02 ft (80.78m) msl

WELL HSL 5D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 11:21
Depth to water: 7.46 ft (2.27m) below TOC
Water elevation: 269.14 ft (82.03m) msl

WELL HSL 6D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 11:17
Depth to water: 14.32 ft (4.36m) below TOC
Water elevation: 265.68 ft (80.98m) msl

WELL HSL 7D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/23/98 Time: 11:13
Depth to water: 19.19 ft (5.85m) below TOC
Water elevation: 264.61 ft (80.65m) msl

WELL HSL 8D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 15:27
Depth to water: 24.5 ft (7.47m) below TOC
Water elevation: 264.2 ft (80.53m) msl

WELL MCB 2

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:01
Depth to water: 107.3 ft (32.71m) below TOC
Water elevation: 221.1 ft (67.39m) msl

WELL MCB 4

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:15
Depth to water: 139.6 ft (42.55m) below TOC
Water elevation: 210.8 ft (64.25m) msl

WELL MCB 5

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:58
Depth to water: 118.2 ft (36.03m) below TOC
Water elevation: 221.4 ft (67.48m) msl

WELL MCB 5C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:59
Depth to water: 145.8 ft (44.44m) below TOC
Water elevation: 193.3 ft (58.92m) msl

WELL MCB 6

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:06
Depth to water: 118.8 ft (36.21m) below TOC
Water elevation: 213.3 ft (65.01m) msl

WELL MCB 6C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:05
Depth to water: 138.25 ft (42.14m) below TOC
Water elevation: 193.85 ft (59.09m) msl

WELL MCB 7C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:55
Depth to water: 145.2 ft (44.26m) below TOC
Water elevation: 192.5 ft (58.67m) msl

WELL MCB 8D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:52
Depth to water: 130.6 ft (39.81m) below TOC
Water elevation: 210.1 ft (64.04m) msl

WELL MCB 9D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:10
Depth to water: 123.42 ft (37.62m) below TOC
Water elevation: 219.48 ft (66.90m) msl

WELL MSB 1B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:40
Depth to water: 144.5 ft (44.04m) below TOC
Water elevation: 210.3 ft (64.10m) msl

WELL MSB 1C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:42
Depth to water: 140.3 ft (42.76m) below TOC
Water elevation: 214.8 ft (65.47m) msl

WELL MSB 1CC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:41
Depth to water: 138.4 ft (42.18m) below TOC
Water elevation: 216.5 ft (65.99m) msl

WELL MSB 1D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:38
Depth to water: 126.6 ft (38.59m) below TOC
Water elevation: 228.2 ft (69.56m) msl

WELL MSB 2B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:48
Depth to water: 143.8 ft (43.83m) below TOC
Water elevation: 210.8 ft (64.25m) msl

WELL MSB 2C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:47
Depth to water: 139 ft (42.37m) below TOC
Water elevation: 215.7 ft (65.75m) msl

WELL MSB 2D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 125.15 ft (38.15m) below TOC
Water elevation: 228.65 ft (69.69m) msl
Time: 8:49

WELL MSB 3B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: Not available
Water elevation: Not available
Time: 8:53

WELL MSB 3C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 143.7 ft (43.80m) below TOC
Water elevation: 217.1 ft (66.17m) msl
Time: 8:54

WELL MSB 4B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 144.95 ft (44.18m) below TOC
Water elevation: 210.35 ft (64.12m) msl
Time: 9:00

WELL MSB 4C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 140.4 ft (42.79m) below TOC
Water elevation: 214.8 ft (65.47m) msl
Time: 9:01

WELL MSB 4D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 128.15 ft (39.06m) below TOC
Water elevation: 227.35 ft (69.30m) msl
Time: 8:59

WELL MSB 5A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: Not available
Water elevation: Not available
Time: 9:14

WELL MSB 5B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 139.3 ft (42.46m) below TOC
Water elevation: 205.7 ft (62.70m) msl
Time: 9:15

WELL MSB 5C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 124.9 ft (38.07m) below TOC
Water elevation: 220.3 ft (67.15m) msl
Time: 9:16

WELL MSB 6A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 119.85 ft (36.53m) below TOC
Water elevation: 223.95 ft (68.26m) msl
Time: 9:24

WELL MSB 6B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 139.75 ft (42.60m) below TOC
Water elevation: 204.15 ft (62.23m) msl
Time: 9:25

WELL MSB 6C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 122.75 ft (37.41m) below TOC
Water elevation: 221.05 ft (67.38m) msl
Time: 9:26

WELL MSB 7A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 119.1 ft (36.30m) below TOC
Water elevation: 225.2 ft (68.64m) msl
Time: 9:28

WELL MSB 7B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98
Depth to water: 139.2 ft (42.43m) below TOC
Water elevation: 204.9 ft (62.45m) msl
Time: 9:29

WELL MSB 7C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:30
Depth to water: 124.72 ft (38.02m) below TOC
Water elevation: 219.78 ft (66.99m) msl

WELL MSB 8A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:26
Depth to water: Not available
Water elevation: Not available

WELL MSB 8B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:27
Depth to water: 137.65 ft (41.96m) below TOC
Water elevation: 206.25 ft (62.87m) msl

WELL MSB 8C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:28
Depth to water: 126.65 ft (38.60m) below TOC
Water elevation: 217.35 ft (66.25m) msl

WELL MSB 9A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:04
Depth to water: 149.1 ft (45.45m) below TOC
Water elevation: 210 ft (64.01m) msl

WELL MSB 9B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:05
Depth to water: 132 ft (40.23m) below TOC
Water elevation: 227.3 ft (69.28m) msl

WELL MSB 9C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:06
Depth to water: Not available
Water elevation: Not available

WELL MSB 10A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:23
Depth to water: 147.7 ft (45.02m) below TOC
Water elevation: 209.5 ft (63.86m) msl

WELL MSB 10B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:26
Depth to water: 145.7 ft (44.41m) below TOC
Water elevation: 211.9 ft (64.59m) msl

WELL MSB 10C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:24
Depth to water: 130.6 ft (39.81m) below TOC
Water elevation: 226.5 ft (69.04m) msl

WELL MSB 10D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:25
Depth to water: Not available
Water elevation: Not available

WELL MSB 11A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:16
Depth to water: 155 ft (47.24m) below TOC
Water elevation: 210.4 ft (64.13m) msl

WELL MSB 11B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:17
Depth to water: 150.95 ft (46.01m) below TOC
Water elevation: 214.45 ft (65.37m) msl

WELL MSB 11C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:18
Depth to water: 148.5 ft (45.26m) below TOC
Water elevation: 217 ft (66.14m) msl

WELL MSB 11D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:19
Depth to water: 138.6 ft (42.25m) below TOC
Water elevation: 227.2 ft (69.25m) msl

WELL MSB 11E

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:20
Depth to water: Not available
Water elevation: Not available

WELL MSB 11F

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:15
Depth to water: Not available
Water elevation: Not available

WELL MSB 12A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:29
Depth to water: 142.77 ft (43.52m) below TOC
Water elevation: 206.13 ft (62.83m) msl

WELL MSB 12B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:32
Depth to water: 134.42 ft (40.97m) below TOC
Water elevation: 215.08 ft (65.56m) msl

WELL MSB 12C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:30
Depth to water: 128.75 ft (39.24m) below TOC
Water elevation: 220.25 ft (67.13m) msl

WELL MSB 12D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:31
Depth to water: Not available
Water elevation: Not available

WELL MSB 12TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:33
Depth to water: 158.5 ft (48.31m) below TOC
Water elevation: 190.4 ft (58.03m) msl

WELL MSB 12TB

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:32
Depth to water: 158.75 ft (48.39m) below TOC
Water elevation: 190.55 ft (58.08m) msl

WELL MSB 13A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:11
Depth to water: 141.1 ft (43.01m) below TOC
Water elevation: 205.6 ft (62.67m) msl

WELL MSB 13B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:11
Depth to water: 128.1 ft (39.05m) below TOC
Water elevation: 219 ft (66.75m) msl

WELL MSB 13C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:10
Depth to water: Not available
Water elevation: Not available

WELL MSB 13CC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:12
Depth to water: 124.85 ft (38.05m) below TOC
Water elevation: 222.05 ft (67.68m) msl

WELL MSB 13D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:09
Depth to water: 122 ft (37.19m) below TOC
Water elevation: 225.6 ft (68.76m) msl

WELL MSB 14A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:32
Depth to water: 134.6 ft (41.03m) below TOC
Water elevation: 214.1 ft (65.26m) msl

WELL MSB 14B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:33
Depth to water: 133.25 ft (40.62m) below TOC
Water elevation: 215.65 ft (65.73m) msl

WELL MSB 14C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:34
Depth to water: 117.3 ft (35.75m) below TOC
Water elevation: 231.9 ft (70.68m) msl

WELL MSB 15A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:38
Depth to water: 150.65 ft (45.92m) below TOC
Water elevation: 217.05 ft (66.16m) msl

WELL MSB 15AA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:40
Depth to water: 158.35 ft (48.27m) below TOC
Water elevation: 210.85 ft (64.27m) msl

WELL MSB 15C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:37
Depth to water: 120.9 ft (36.85m) below TOC
Water elevation: 245.8 ft (74.92m) msl

WELL MSB 15D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:39
Depth to water: 130.35 ft (39.73m) below TOC
Water elevation: 238.15 ft (72.59m) msl

WELL MSB 16A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:34
Depth to water: 151.86 ft (46.29m) below TOC
Water elevation: 215.64 ft (65.73m) msl

WELL MSB 16C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:33
Depth to water: 139.8 ft (42.61m) below TOC
Water elevation: 227.8 ft (69.43m) msl

WELL MSB 17A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:40
Depth to water: 145.45 ft (44.33m) below TOC
Water elevation: 213.85 ft (65.18m) msl

WELL MSB 17B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:43
Depth to water: 136.6 ft (41.64m) below TOC
Water elevation: 222.6 ft (67.85m) msl

WELL MSB 17BB

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:45
Depth to water: 149.1 ft (45.45m) below TOC
Water elevation: 209.9 ft (63.98m) msl

WELL MSB 17C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:42
Depth to water: Not available
Water elevation: Not available

WELL MSB 17D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:43
Depth to water: 136 ft (41.45m) below TOC
Water elevation: 223.9 ft (68.25m) msl

WELL MSB 18A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:21
Depth to water: 132.3 ft (40.33m) below TOC
Water elevation: 209.6 ft (63.89m) msl

WELL MSB 18B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:22
Depth to water: 123.5 ft (37.64m) below TOC
Water elevation: 218.6 ft (66.63m) msl

WELL MSB 18C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:23
Depth to water: 118.45 ft (36.10m) below TOC
Water elevation: 224.05 ft (68.29m) msl

WELL MSB 19A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:25
Depth to water: 87.9 ft (26.79m) below TOC
Water elevation: 212.4 ft (64.74m) msl

WELL MSB 19B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:26
Depth to water: 85.8 ft (26.15m) below TOC
Water elevation: 214.6 ft (65.41m) msl

WELL MSB 19C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:27
Depth to water: 66.65 ft (20.32m) below TOC
Water elevation: 234.15 ft (71.37m) msl

WELL MSB 20A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 15:08
Depth to water: 139.62 ft (42.56m) below TOC
Water elevation: 215.68 ft (65.74m) msl

WELL MSB 20C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 15:10
Depth to water: 130.01 ft (39.63m) below TOC
Water elevation: 224.69 ft (68.49m) msl

WELL MSB 21A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:55
Depth to water: 136.62 ft (41.64m) below TOC
Water elevation: 218.18 ft (66.50m) msl

WELL MSB 21B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:57
Depth to water: 137.7 ft (41.97m) below TOC
Water elevation: 217.3 ft (66.23m) msl

WELL MSB 21C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:56
Depth to water: 128.55 ft (39.18m) below TOC
Water elevation: 226.25 ft (68.96m) msl

WELL MSB 21TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:54
Depth to water: 162.7 ft (49.59m) below TOC
Water elevation: 191.9 ft (58.49m) msl

WELL MSB 23

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:45
Depth to water: Not available
Water elevation: Not available

WELL MSB 23B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:44
Depth to water: 152.29 ft (46.42m) below TOC
Water elevation: 219.31 ft (66.85m) msl

WELL MSB 23TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:43
Depth to water: 175 ft (53.34m) below TOC
Water elevation: 197.9 ft (60.32m) msl

WELL MSB 23TR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:30
Depth to water: 176.8 ft (53.89m) below TOC
Water elevation: 195.9 ft (59.71m) msl

WELL MSB 24

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:59
Depth to water: 146.55 ft (44.67m) below TOC
Water elevation: 233.65 ft (71.22m) msl

WELL MSB 24A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:58
Depth to water: 159.7 ft (48.68m) below TOC
Water elevation: 221.9 ft (67.64m) msl

WELL MSB 25

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:23
Depth to water: Not available
Water elevation: Not available

WELL MSB 25A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 13:24
Depth to water: 153.85 ft (46.89m) below TOC
Water elevation: 212.55 ft (64.79m) msl

WELL MSB 26

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:26
Depth to water: Not available
Water elevation: Not available

WELL MSB 26A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:25
Depth to water: 149.95 ft (45.71m) below TOC
Water elevation: 211.85 ft (64.57m) msl

WELL MSB 26B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:27
Depth to water: 147.55 ft (44.97m) below TOC
Water elevation: 215.25 ft (65.61m) msl

WELL MSB 27

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:50
Depth to water: Not available
Water elevation: Not available

WELL MSB 27A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:51
Depth to water: 149 ft (45.42m) below TOC
Water elevation: 226.2 ft (68.95m) msl

WELL MSB 27B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:53
Depth to water: 154.8 ft (47.18m) below TOC
Water elevation: 222 ft (67.67m) msl

WELL MSB 27TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 12:52
Depth to water: 178.85 ft (54.51m) below TOC
Water elevation: 197.75 ft (60.27m) msl

WELL MSB 28

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 15:02
Depth to water: 127.32 ft (38.81m) below TOC
Water elevation: 227.48 ft (69.34m) msl

WELL MSB 28A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 15:01
Depth to water: 134.38 ft (40.96m) below TOC
Water elevation: 220.62 ft (67.25m) msl

WELL MSB 29A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:15
Depth to water: 148.2 ft (45.17m) below TOC
Water elevation: 217 ft (66.14m) msl

WELL MSB 29B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:14
Depth to water: 143.4 ft (43.71m) below TOC
Water elevation: 221.6 ft (67.54m) msl

WELL MSB 29C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:12
Depth to water: 137 ft (41.76m) below TOC
Water elevation: 228 ft (69.50m) msl

WELL MSB 29D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:14
Depth to water: 134.9 ft (41.12m) below TOC
Water elevation: 230 ft (70.10m) msl

WELL MSB 29DD

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:11
Depth to water: 134.2 ft (40.90m) below TOC
Water elevation: 230.2 ft (70.17m) msl

WELL MSB 29TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:16
Depth to water: 155.1 ft (47.28m) below TOC
Water elevation: 209.9 ft (63.98m) msl

WELL MSB 30A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:57
Depth to water: 159.4 ft (48.59m) below TOC
Water elevation: 195.6 ft (59.62m) msl

WELL MSB 30AA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:51
Depth to water: 131.55 ft (40.10m) below TOC
Water elevation: 221.45 ft (67.50m) msl

WELL MSB 30B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:52
Depth to water: 130.87 ft (39.89m) below TOC
Water elevation: 222.63 ft (67.86m) msl

WELL MSB 30C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:55
Depth to water: 126.65 ft (38.60m) below TOC
Water elevation: 227.95 ft (69.48m) msl

WELL MSB 30CC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:53
Depth to water: 131.6 ft (40.11m) below TOC
Water elevation: 222.4 ft (67.79m) msl

WELL MSB 31A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:47
Depth to water: 154.4 ft (47.06m) below TOC
Water elevation: 193.7 ft (59.04m) msl

WELL MSB 31B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:48
Depth to water: 138.6 ft (42.25m) below TOC
Water elevation: 209.7 ft (63.92m) msl

WELL MSB 31C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:47
Depth to water: 117.3 ft (35.75m) below TOC
Water elevation: 230.8 ft (70.35m) msl

WELL MSB 31CC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:49
Depth to water: 127.86 ft (38.97m) below TOC
Water elevation: 220.74 ft (67.28m) msl

WELL MSB 32

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:34
Depth to water: 31.54 ft (9.61m) below TOC
Water elevation: 223.56 ft (68.14m) msl

WELL MSB 32B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:37
Depth to water: 45.44 ft (13.85m) below TOC
Water elevation: 209.96 ft (64.00m) msl

WELL MSB 32C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:38
Depth to water: 40.15 ft (12.24m) below TOC
Water elevation: 215.55 ft (65.70m) msl

WELL MSB 33

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:18
Depth to water: 37 ft (11.28m) below TOC
Water elevation: 218.9 ft (66.72m) msl

WELL MSB 33A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:20
Depth to water: 50.6 ft (15.42m) below TOC
Water elevation: 204.8 ft (62.42m) msl

WELL MSB 33B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:20
Depth to water: 47.45 ft (14.46m) below TOC
Water elevation: 207.55 ft (63.26m) msl

WELL MSB 33C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:21
Depth to water: 44.2 ft (13.47m) below TOC
Water elevation: 211.1 ft (64.34m) msl

WELL MSB 33TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:19
Depth to water: 61.85 ft (18.85m) below TOC
Water elevation: 193.65 ft (59.03m) msl

WELL MSB 34A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:57
Depth to water: 169.45 ft (51.65m) below TOC
Water elevation: 214.55 ft (65.40m) msl

WELL MSB 34B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:56
Depth to water: 160.65 ft (48.97m) below TOC
Water elevation: 223.35 ft (68.08m) msl

WELL MSB 34C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:55
Depth to water: 155.15 ft (47.29m) below TOC
Water elevation: 228.75 ft (69.72m) msl

WELL MSB 34TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:54
Depth to water: 186.25 ft (56.77m) below TOC
Water elevation: 197.15 ft (60.09m) msl

WELL MSB 34TB

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:53
Depth to water: 186.3 ft (56.78m) below TOC
Water elevation: 197.3 ft (60.14m) msl

WELL MSB 35A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:02
Depth to water: 136.75 ft (41.68m) below TOC
Water elevation: 214.15 ft (65.27m) msl

WELL MSB 35B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:04
Depth to water: 134.9 ft (41.12m) below TOC
Water elevation: 216.7 ft (66.05m) msl

WELL MSB 35D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:06
Depth to water: Not available
Water elevation: Not available

WELL MSB 35TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 14:01
Depth to water: 154.75 ft (47.17m) below TOC
Water elevation: 195.55 ft (59.60m) msl

WELL MSB 36A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:06
Depth to water: 132.6 ft (40.42m) below TOC
Water elevation: 208 ft (63.40m) msl

WELL MSB 36B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:07
Depth to water: 128.4 ft (39.14m) below TOC
Water elevation: 212.4 ft (64.74m) msl

WELL MSB 36C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:08
Depth to water: 128.5 ft (39.17m) below TOC
Water elevation: 212.4 ft (64.74m) msl

WELL MSB 36D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:09
Depth to water: 109.75 ft (33.45m) below TOC
Water elevation: 231.85 ft (70.67m) msl

WELL MSB 36TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:04
Depth to water: 148.35 ft (45.22m) below TOC
Water elevation: 192.25 ft (58.60m) msl

WELL MSB 37A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:07
Depth to water: 180.65 ft (55.06m) below TOC
Water elevation: 202.35 ft (61.68m) msl

WELL MSB 37B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:04
Depth to water: 167.25 ft (50.98m) below TOC
Water elevation: 215.45 ft (65.67m) msl

WELL MSB 37C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:08
Depth to water: 158.25 ft (48.24m) below TOC
Water elevation: 224.75 ft (68.50m) msl

WELL MSB 37D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:09
Depth to water: 154 ft (46.94m) below TOC
Water elevation: 228.7 ft (69.71m) msl

WELL MSB 37TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 180 ft (54.86m) below TOC
Water elevation: 202.3 ft (61.66m) msl
Time: 13:06

WELL MSB 38B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 147 ft (44.81m) below TOC
Water elevation: 212 ft (64.62m) msl
Time: 13:40

WELL MSB 38C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 143.64 ft (43.78m) below TOC
Water elevation: 215.16 ft (65.58m) msl
Time: 13:39

WELL MSB 38D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: Not available
Water elevation: Not available
Time: 13:38

WELL MSB 38TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 164.73 ft (50.21m) below TOC
Water elevation: 194.37 ft (59.24m) msl
Time: 13:37

WELL MSB 39A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 134.6 ft (41.03m) below TOC
Water elevation: 207 ft (63.09m) msl
Time: 10:53

WELL MSB 39B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 132 ft (40.23m) below TOC
Water elevation: 209.8 ft (63.95m) msl
Time: 10:54

WELL MSB 39C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 128.25 ft (39.09m) below TOC
Water elevation: 213.25 ft (65.00m) msl
Time: 10:55

WELL MSB 39D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 112.65 ft (34.34m) below TOC
Water elevation: 229.15 ft (69.85m) msl
Time: 10:56

WELL MSB 39TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 151.6 ft (46.21m) below TOC
Water elevation: 190.2 ft (57.97m) msl
Time: 10:52

WELL MSB 40A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 119.55 ft (36.44m) below TOC
Water elevation: 201.65 ft (61.46m) msl
Time: 10:43

WELL MSB 40B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 118.4 ft (36.09m) below TOC
Water elevation: 203.3 ft (61.97m) msl
Time: 10:43

WELL MSB 40C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 118.7 ft (36.18m) below TOC
Water elevation: 203.3 ft (61.97m) msl
Time: 10:42

WELL MSB 40D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 99.3 ft (30.27m) below TOC
Water elevation: 223.6 ft (68.15m) msl
Time: 10:41

WELL MSB 40TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 132.75 ft (40.46m) below TOC
Water elevation: 188.15 ft (57.35m) msl
Time: 10:44

WELL MSB 41A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 108.7 ft (33.13m) below TOC
Water elevation: 215.1 ft (65.56m) msl
Time: 8:58

WELL MSB 41B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 108.7 ft (33.13m) below TOC
Water elevation: 215.3 ft (65.62m) msl
Time: 8:58

WELL MSB 41C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 108.8 ft (33.16m) below TOC
Water elevation: 215.8 ft (65.78m) msl
Time: 8:56

WELL MSB 41D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 84.1 ft (25.63m) below TOC
Water elevation: 240.9 ft (73.43m) msl
Time: 8:56

WELL MSB 41TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 119.75 ft (36.50m) below TOC
Water elevation: 203.95 ft (62.16m) msl
Time: 8:59

WELL MSB 42A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 160.75 ft (49.00m) below TOC
Water elevation: 215.75 ft (65.76m) msl
Time: 13:17

WELL MSB 42B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 154.2 ft (47.00m) below TOC
Water elevation: 222.2 ft (67.73m) msl
Time: 13:16

WELL MSB 42C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 148.3 ft (45.20m) below TOC
Water elevation: 228.1 ft (69.53m) msl
Time: 13:15

WELL MSB 42D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 146.86 ft (44.76m) below TOC
Water elevation: 229.54 ft (69.96m) msl
Time: 13:14

WELL MSB 42TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 176.2 ft (53.71m) below TOC
Water elevation: 200.4 ft (61.08m) msl
Time: 13:18

WELL MSB 43A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98
Depth to water: 130.55 ft (39.79m) below TOC
Water elevation: 227.15 ft (69.24m) msl
Time: 8:04

WELL MSB 43B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98
Depth to water: 130.5 ft (39.78m) below TOC
Water elevation: 227.3 ft (69.28m) msl
Time: 8:04

WELL MSB 43D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98
Depth to water: 128.25 ft (39.09m) below TOC
Water elevation: 229.75 ft (70.03m) msl
Time: 8:05

WELL MSB 43DD

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:06
Depth to water: 128.4 ft (39.14m) below TOC
Water elevation: 229.5 ft (69.95m) msl

WELL MSB 43TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:03
Depth to water: 156.52 ft (47.71m) below TOC
Water elevation: 200.98 ft (61.26m) msl

WELL MSB 44A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:23
Depth to water: 162.5 ft (49.53m) below TOC
Water elevation: 214.4 ft (65.35m) msl

WELL MSB 44B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:25
Depth to water: 156.1 ft (47.58m) below TOC
Water elevation: 220.9 ft (67.33m) msl

WELL MSB 44C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:24
Depth to water: 146.4 ft (44.62m) below TOC
Water elevation: 230.4 ft (70.23m) msl

WELL MSB 45A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:34
Depth to water: 168.9 ft (51.48m) below TOC
Water elevation: 211.9 ft (64.59m) msl

WELL MSB 45B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:36
Depth to water: 159.15 ft (48.51m) below TOC
Water elevation: 221.75 ft (67.59m) msl

WELL MSB 45C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:35
Depth to water: Not available
Water elevation: Not available

WELL MSB 46A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:28
Depth to water: 164.75 ft (50.22m) below TOC
Water elevation: 207.85 ft (63.35m) msl

WELL MSB 46B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:31
Depth to water: 148.75 ft (45.34m) below TOC
Water elevation: 224.85 ft (68.54m) msl

WELL MSB 46C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 13:29
Depth to water: Not available
Water elevation: Not available

WELL MSB 47B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:37
Depth to water: 147.2 ft (44.87m) below TOC
Water elevation: 221.5 ft (67.51m) msl

WELL MSB 47BB

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:34
Depth to water: 153.15 ft (46.68m) below TOC
Water elevation: 215.65 ft (65.73m) msl

WELL MSB 47C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:38
Depth to water: 139.7 ft (42.58m) below TOC
Water elevation: 229.3 ft (69.89m) msl

WELL MSB 47D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:39
Depth to water: 138.3 ft (42.15m) below TOC
Water elevation: 230.5 ft (70.26m) msl

WELL MSB 47TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:36
Depth to water: 155.95 ft (47.53m) below TOC
Water elevation: 212.75 ft (64.85m) msl

WELL MSB 48A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:20
Depth to water: 142.5 ft (43.43m) below TOC
Water elevation: 219.1 ft (66.78m) msl

WELL MSB 48B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:19
Depth to water: 140.6 ft (42.86m) below TOC
Water elevation: 220.8 ft (67.30m) msl

WELL MSB 48C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:22
Depth to water: 141.15 ft (43.02m) below TOC
Water elevation: 221.15 ft (67.41m) msl

WELL MSB 48D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:23
Depth to water: 132.8 ft (40.48m) below TOC
Water elevation: 229.8 ft (70.04m) msl

WELL MSB 48TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:21
Depth to water: 142.8 ft (43.53m) below TOC
Water elevation: 219.1 ft (66.78m) msl

WELL MSB 49A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:13
Depth to water: 139.45 ft (42.50m) below TOC
Water elevation: 195.25 ft (59.51m) msl

WELL MSB 49B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:14
Depth to water: 133.6 ft (40.72m) below TOC
Water elevation: 200.5 ft (61.11m) msl

WELL MSB 49D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:15
Depth to water: 108 ft (32.92m) below TOC
Water elevation: 226.3 ft (68.98m) msl

WELL MSB 50B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:50
Depth to water: 20.24 ft (6.17m) below TOC
Water elevation: 203.46 ft (62.02m) msl

WELL MSB 50D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 12:51
Depth to water: 19.33 ft (5.89m) below TOC
Water elevation: 203.87 ft (62.14m) msl

WELL MSB 51B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:20
Depth to water: 57.92 ft (17.65m) below TOC
Water elevation: 205.28 ft (62.57m) msl

WELL MSB 51D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:20
Depth to water: 51.13 ft (15.58m) below TOC
Water elevation: 211.07 ft (64.33m) msl

WELL MSB 51DD

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:19
Depth to water: Not available
Water elevation: Not available

WELL MSB 52B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:50
Depth to water: 104.9 ft (31.97m) below TOC
Water elevation: 216.8 ft (66.08m) msl

WELL MSB 52D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:51
Depth to water: 85 ft (25.91m) below TOC
Water elevation: 236.6 ft (72.12m) msl

WELL MSB 53B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:39
Depth to water: 125.3 ft (38.19m) below TOC
Water elevation: 219 ft (66.75m) msl

WELL MSB 53C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:37
Depth to water: 125.2 ft (38.16m) below TOC
Water elevation: 220 ft (67.06m) msl

WELL MSB 53D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:38
Depth to water: 114.1 ft (34.78m) below TOC
Water elevation: 230.7 ft (70.32m) msl

WELL MSB 54B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:59
Depth to water: 154.36 ft (47.05m) below TOC
Water elevation: 219.04 ft (66.76m) msl

WELL MSB 54C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:00
Depth to water: 149.85 ft (45.67m) below TOC
Water elevation: 223.55 ft (68.14m) msl

WELL MSB 54D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:57
Depth to water: 143.35 ft (43.69m) below TOC
Water elevation: 230.25 ft (70.18m) msl

WELL MSB 54TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:58
Depth to water: 157 ft (47.85m) below TOC
Water elevation: 216.5 ft (65.99m) msl

WELL MSB 55B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:50
Depth to water: 150.1 ft (45.75m) below TOC
Water elevation: 218.6 ft (66.63m) msl

WELL MSB 55C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:47
Depth to water: 143.2 ft (43.65m) below TOC
Water elevation: 226.2 ft (68.95m) msl

WELL MSB 55D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:52
Depth to water: 135 ft (41.15m) below TOC
Water elevation: 232.7 ft (70.93m) msl

WELL MSB 55HC

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:49
Depth to water: 138.75 ft (42.29m) below TOC
Water elevation: 229.95 ft (70.09m) msl

WELL MSB 55TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:48
Depth to water: 157.6 ft (48.04m) below TOC
Water elevation: 211.1 ft (64.34m) msl

WELL MSB 56D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:21
Depth to water: 59.8 ft (18.23m) below TOC
Water elevation: 219.7 ft (66.97m) msl

WELL MSB 57D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:45
Depth to water: 127.4 ft (38.83m) below TOC
Water elevation: 228.8 ft (69.74m) msl

WELL MSB 58D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:51
Depth to water: 129.5 ft (39.47m) below TOC
Water elevation: 228.4 ft (69.62m) msl

WELL MSB 59D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:57
Depth to water: 131.72 ft (40.15m) below TOC
Water elevation: 227.58 ft (69.37m) msl

WELL MSB 60D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 8:36
Depth to water: 126.55 ft (38.57m) below TOC
Water elevation: 227.95 ft (69.48m) msl

WELL MSB 61C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:43
Depth to water: 96.3 ft (29.35m) below TOC
Water elevation: 221 ft (67.36m) msl

WELL MSB 61D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 9:42
Depth to water: 94.85 ft (28.91m) below TOC
Water elevation: 222.95 ft (67.96m) msl

WELL MSB 62B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:36
Depth to water: 141.1 ft (43.01m) below TOC
Water elevation: 208 ft (63.40m) msl

WELL MSB 62C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:37
Depth to water: 128.3 ft (39.11m) below TOC
Water elevation: 220.8 ft (67.30m) msl

WELL MSB 62D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:38
Depth to water: 122.55 ft (37.35m) below TOC
Water elevation: 226.95 ft (69.18m) msl

WELL MSB 63B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:31
Depth to water: 139.9 ft (42.64m) below TOC
Water elevation: 207 ft (63.09m) msl

WELL MSB 63C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:32
Depth to water: 129.1 ft (39.35m) below TOC
Water elevation: 217.9 ft (66.42m) msl

WELL MSB 63D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:33
Depth to water: 119.95 ft (36.56m) below TOC
Water elevation: 226.85 ft (69.14m) msl

WELL MSB 64B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:19
Depth to water: 142.95 ft (43.57m) below TOC
Water elevation: 205.35 ft (62.59m) msl

WELL MSB 64C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:20
Depth to water: 128.65 ft (39.21m) below TOC
Water elevation: 219.75 ft (66.98m) msl

WELL MSB 64D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 9:22
Depth to water: 124.5 ft (37.95m) below TOC
Water elevation: 224.1 ft (68.31m) msl

WELL MSB 65D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 13:50
Depth to water: 118.37 ft (36.08m) below TOC
Water elevation: 230.83 ft (70.36m) msl

WELL MSB 66B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:45
Depth to water: 168.15 ft (51.25m) below TOC
Water elevation: 215.25 ft (65.61m) msl

WELL MSB 66C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:44
Depth to water: 158.26 ft (48.24m) below TOC
Water elevation: 225.14 ft (68.62m) msl

WELL MSB 66D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:43
Depth to water: 155.15 ft (47.29m) below TOC
Water elevation: 228.05 ft (69.51m) msl

WELL MSB 66TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 12:47
Depth to water: 180.55 ft (55.03m) below TOC
Water elevation: 202.15 ft (61.62m) msl

WELL MSB 67B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:29
Depth to water: 149.3 ft (45.51m) below TOC
Water elevation: 215.8 ft (65.78m) msl

WELL MSB 67C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:26
Depth to water: 141.4 ft (43.10m) below TOC
Water elevation: 223.4 ft (68.09m) msl

WELL MSB 67D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:28
Depth to water: 134.35 ft (40.95m) below TOC
Water elevation: 230.65 ft (70.30m) msl

WELL MSB 68B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:22
Depth to water: 141 ft (42.98m) below TOC
Water elevation: 215.9 ft (65.81m) msl

WELL MSB 68C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:23
Depth to water: 135 ft (41.15m) below TOC
Water elevation: 221.7 ft (67.57m) msl

WELL MSB 68D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/20/98 Time: 8:24
Depth to water: 125.7 ft (38.31m) below TOC
Water elevation: 231.3 ft (70.50m) msl

WELL MSB 69B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:11
Depth to water: 164.26 ft (50.07m) below TOC
Water elevation: 217.24 ft (66.22m) msl

WELL MSB 69C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:12
Depth to water: 157.6 ft (48.04m) below TOC
Water elevation: 224 ft (68.28m) msl

WELL MSB 69D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:13
Depth to water: 151.6 ft (46.21m) below TOC
Water elevation: 230.4 ft (70.23m) msl

WELL MSB 69TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:10
Depth to water: 169.5 ft (51.66m) below TOC
Water elevation: 211.9 ft (64.59m) msl

WELL MSB 70C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:48
Depth to water: 147.1 ft (44.84m) below TOC
Water elevation: 214.7 ft (65.44m) msl

WELL MSB 70D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/19/98 Time: 10:49
Depth to water: 143.8 ft (43.83m) below TOC
Water elevation: 218.4 ft (66.57m) msl

WELL MSB 71B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 14:29
Depth to water: 130.66 ft (39.83m) below TOC
Water elevation: 214.04 ft (65.24m) msl

WELL MSB 72B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:35
Depth to water: 129.5 ft (39.47m) below TOC
Water elevation: 198.7 ft (60.56m) msl

WELL MSB 73B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:09
Depth to water: 140.3 ft (42.76m) below TOC
Water elevation: 199.3 ft (60.75m) msl

WELL MSB 74B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:14
Depth to water: 104.9 ft (31.97m) below TOC
Water elevation: 209.6 ft (63.89m) msl

WELL MSB 74C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:13
Depth to water: 104.9 ft (31.97m) below TOC
Water elevation: 210.1 ft (64.04m) msl

WELL MSB 74D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:12
Depth to water: 84.8 ft (25.85m) below TOC
Water elevation: 230.3 ft (70.20m) msl

WELL MSB 75B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:48
Depth to water: 118.45 ft (36.10m) below TOC
Water elevation: 208.25 ft (63.48m) msl

WELL MSB 75C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:49
Depth to water: 119.35 ft (36.38m) below TOC
Water elevation: 208.15 ft (63.44m) msl

WELL MSB 76C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 134.66 ft (41.04m) below TOC
Water elevation: 217.74 ft (66.37m) msl
Time: 14:35

WELL MSB 77B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 138.95 ft (42.35m) below TOC
Water elevation: 218.25 ft (66.52m) msl
Time: 9:18

WELL MSB 77C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 136.45 ft (41.59m) below TOC
Water elevation: 220.75 ft (67.29m) msl
Time: 9:17

WELL MSB 77D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 126.45 ft (38.54m) below TOC
Water elevation: 230.95 ft (70.39m) msl
Time: 9:16

WELL MSB 77TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 138.75 ft (42.29m) below TOC
Water elevation: 218.15 ft (66.49m) msl
Time: 9:19

WELL MSB 78DR

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 143.16 ft (43.64m) below TOC
Water elevation: 220.54 ft (67.22m) msl
Time: 14:38

WELL MSB 79B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 142.55 ft (43.45m) below TOC
Water elevation: 205.35 ft (62.59m) msl
Time: 11:04

WELL MSB 79C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 140 ft (42.67m) below TOC
Water elevation: 207.8 ft (63.34m) msl
Time: 11:05

WELL MSB 81B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98
Depth to water: 49.2 ft (15.00m) below TOC
Water elevation: 217.8 ft (66.39m) msl
Time: 9:12

WELL MSB 82A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 174.7 ft (53.25m) below TOC
Water elevation: 199.6 ft (60.84m) msl
Time: 10:38

WELL MSB 82B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 157.85 ft (48.11m) below TOC
Water elevation: 216.35 ft (65.94m) msl
Time: 10:39

WELL MSB 82C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 149.2 ft (45.48m) below TOC
Water elevation: 224.7 ft (68.49m) msl
Time: 10:36

WELL MSB 82D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 143.4 ft (43.71m) below TOC
Water elevation: 230.2 ft (70.17m) msl
Time: 10:35

WELL MSB 82TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98
Depth to water: 162.8 ft (49.62m) below TOC
Water elevation: 210.9 ft (64.28m) msl
Time: 10:37

WELL MSB 83B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:04
Depth to water: 153.25 ft (46.71m) below TOC
Water elevation: 218.55 ft (66.61m) msl

WELL MSB 83C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:07
Depth to water: 146.75 ft (44.73m) below TOC
Water elevation: 225.25 ft (68.66m) msl

WELL MSB 83D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:06
Depth to water: 141.2 ft (43.04m) below TOC
Water elevation: 230.4 ft (70.23m) msl

WELL MSB 83TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:05
Depth to water: 159.15 ft (48.51m) below TOC
Water elevation: 212.55 ft (64.79m) msl

WELL MSB 84A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:43
Depth to water: 195.4 ft (59.56m) below TOC
Water elevation: 166.1 ft (50.63m) msl

WELL MSB 84C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:44
Depth to water: 134.9 ft (41.12m) below TOC
Water elevation: 227 ft (69.19m) msl

WELL MSB 85B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:18
Depth to water: 162.3 ft (49.47m) below TOC
Water elevation: 218 ft (66.45m) msl

WELL MSB 85C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:21
Depth to water: 159.6 ft (48.65m) below TOC
Water elevation: 221.3 ft (67.45m) msl

WELL MSB 85D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:17
Depth to water: 150.8 ft (45.96m) below TOC
Water elevation: 230 ft (70.10m) msl

WELL MSB 85TA

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:19
Depth to water: 162.8 ft (49.62m) below TOC
Water elevation: 217.6 ft (66.33m) msl

WELL MSB 86C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 11:24
Depth to water: 134.95 ft (41.13m) below TOC
Water elevation: 222.05 ft (67.68m) msl

WELL MSB 87B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:20
Depth to water: 119.95 ft (36.56m) below TOC
Water elevation: 216.05 ft (65.85m) msl

WELL MSB 87C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 8:18
Depth to water: Not available
Water elevation: Not available

WELL MSB 88B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:28
Depth to water: 36.95 ft (11.26m) below TOC
Water elevation: 201.15 ft (61.31m) msl

WELL MSB 88C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:29
Depth to water: 32.75 ft (9.98m) below TOC
Water elevation: 204.45 ft (62.32m) msl

WELL MSB 88D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 10:30
Depth to water: 30.7 ft (9.36m) below TOC
Water elevation: 206.2 ft (62.85m) msl

WELL MSB 89B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:01
Depth to water: 134.15 ft (40.89m) below TOC
Water elevation: 205.25 ft (62.56m) msl

WELL MSB 89C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/18/98 Time: 11:00
Depth to water: 113.75 ft (34.67m) below TOC
Water elevation: 226.05 ft (68.90m) msl

WELL SRW 1

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:45
Depth to water: 106.1 ft (32.34m) below TOC
Water elevation: 209.1 ft (63.73m) msl

WELL SRW 1BB

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:41
Depth to water: 110.25 ft (33.60m) below TOC
Water elevation: 206.05 ft (62.80m) msl

WELL SRW 2

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:50
Depth to water: 109.95 ft (33.51m) below TOC
Water elevation: 210.65 ft (64.21m) msl

WELL SRW 2A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:52
Depth to water: 115.55 ft (35.22m) below TOC
Water elevation: 205.05 ft (62.50m) msl

WELL SRW 2B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:55
Depth to water: 114.5 ft (34.90m) below TOC
Water elevation: 206.1 ft (62.82m) msl

WELL SRW 3A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 7:58
Depth to water: 160.15 ft (48.81m) below TOC
Water elevation: 171.95 ft (52.41m) msl

WELL SRW 3BB

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 7:55
Depth to water: 125.49 ft (38.25m) below TOC
Water elevation: 206.81 ft (63.04m) msl

WELL SRW 4

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:00
Depth to water: 109.6 ft (33.41m) below TOC
Water elevation: 210.5 ft (64.16m) msl

WELL SRW 4BB

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:05
Depth to water: 114.86 ft (35.01m) below TOC
Water elevation: 205.74 ft (62.71m) msl

WELL SRW 5

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:12
Depth to water: 106.77 ft (32.54m) below TOC
Water elevation: 202.63 ft (61.76m) msl

WELL SRW 6

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:35
Depth to water: 99.8 ft (30.42m) below TOC
Water elevation: 207.9 ft (63.37m) msl

WELL SRW 7

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:25
Depth to water: 93.25 ft (28.42m) below TOC
Water elevation: 205.85 ft (62.74m) msl

WELL SRW 8

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:15
Depth to water: Not available
Water elevation: Not available

WELL SRW 8BB

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:18
Depth to water: 79.69 ft (24.29m) below TOC
Water elevation: 209.81 ft (63.95m) msl

WELL SRW 9

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:45
Depth to water: Not available
Water elevation: Not available

WELL SRW 9A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:48
Depth to water: 54.55 ft (16.63m) below TOC
Water elevation: 198.75 ft (60.58m) msl

WELL SRW 9B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:52
Depth to water: 53.95 ft (16.44m) below TOC
Water elevation: 199.45 ft (60.79m) msl

WELL SRW 10

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:19
Depth to water: Not available
Water elevation: Not available

WELL SRW 10BB

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:18
Depth to water: 98.6 ft (30.05m) below TOC
Water elevation: 204.2 ft (62.24m) msl

WELL SRW 11

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:29
Depth to water: Not available
Water elevation: Not available

WELL SRW 11BB

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 8:27
Depth to water: 91.89 ft (28.01m) below TOC
Water elevation: 204.61 ft (62.37m) msl

WELL SRW 12A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:30
Depth to water: 40.75 ft (12.42m) below TOC
Water elevation: 195.55 ft (59.60m) msl

WELL SRW 12B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:35
Depth to water: 43.8 ft (13.35m) below TOC
Water elevation: 192.5 ft (58.67m) msl

WELL SRW 12C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:40
Depth to water: 36.65 ft (11.17m) below TOC
Water elevation: 199.65 ft (60.85m) msl

WELL SRW 13A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:00
Depth to water: 96.91 ft (29.54m) below TOC
Water elevation: 200.79 ft (61.20m) msl

WELL SRW 13B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:03
Depth to water: 95.1 ft (28.99m) below TOC
Water elevation: 202.6 ft (61.75m) msl

WELL SRW 13C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:10
Depth to water: 92.32 ft (28.14m) below TOC
Water elevation: 205.38 ft (62.60m) msl

WELL SRW 14A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:00
Depth to water: 124.9 ft (38.07m) below TOC
Water elevation: 202.1 ft (61.60m) msl

WELL SRW 14B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:11
Depth to water: 123.16 ft (37.54m) below TOC
Water elevation: 203.74 ft (62.10m) msl

WELL SRW 14C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 9:05
Depth to water: 109.85 ft (33.48m) below TOC
Water elevation: 217.05 ft (66.16m) msl

WELL SRW 15A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 7:42
Depth to water: 111.42 ft (33.96m) below TOC
Water elevation: 207.68 ft (63.30m) msl

WELL SRW 15B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 7:48
Depth to water: 111.25 ft (33.91m) below TOC
Water elevation: 207.85 ft (63.35m) msl

WELL SRW 15C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 7:45
Depth to water: 109.8 ft (33.47m) below TOC
Water elevation: 209.3 ft (63.80m) msl

WELL SRW 16A

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:20
Depth to water: 136.25 ft (41.53m) below TOC
Water elevation: 210.55 ft (64.18m) msl

WELL SRW 16B

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:15
Depth to water: 135.4 ft (41.27m) below TOC
Water elevation: 211.4 ft (64.44m) msl

WELL SRW 16C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:23
Depth to water: 135.1 ft (41.18m) below TOC
Water elevation: 211.5 ft (64.47m) msl

WELL SRW 17BB

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:28
Depth to water: 123.7 ft (37.70m) below TOC
Water elevation: 209.7 ft (63.92m) msl

WELL SRW 17C

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:35
Depth to water: 123.8 ft (37.73m) below TOC
Water elevation: 209.8 ft (63.95m) msl

WELL SRW 17D

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date: 03/17/98 Time: 10:38
Depth to water: Not available
Water elevation: Not available