DATA MANAGEMENT PLAN

WEST LAKE LANDFILL SUPERFUND SITE OPERABLE UNIT 1

Prepared For:

The United States Environmental Protection Agency Region VII

Prepared on Behalf of:

The West Lake Landfill OU-1 Respondents

Prepared By:

PARSONS

301 Plainfield Road, Suite 330
Syracuse, New York 13212

In Association With:

Engineering for a Better World
FEEZOR ENGINEERING, INC.

3377 Hollenberg Drive
Bridgeton, Missouri 63044

And

AMERIPHYSICS

9111 Cross Park Drive, Suite D200
Knoxville, TN 37923

DRAFT: MARCH 2020

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ACRONYMS AND DEFINITIONS

Acronym	Definition
3D	three-dimensional
COC	chain of custody
DM	Data Manager
DMP	Data Management Plan
DV	Data Validation
EDD	Electronic Data Deliverable
EPA	U.S. Environmental Protection Agency
EVS	Earth Volumetric Studio
FSP	Field Sampling Plan
GC/GCMS	Gas Chromatography/Gas Chromatography Mass Spectrometer
GIS	Geographic Information System
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NPL	National Priority List
PM	Project Manager
QAPP	Quality Assurance Plan
QC	Quality Control
R5	Region 5
R7	Region 7
SOP	Standard Operating Procedure

Term	Definition
Environmental Site Investigation:	Activities conducted to identify, characterize, and remediate sites subject to environmental regulations.
Environmental Data:	Can include a wide variety of information, such as analytical chemistry data, field-collected data, geologic characterizations, hydrologic data and characterizations, survey and global positioning system locations, well and sampling locations, well construction diagrams, aerial and site-specific photographs, and documents, figures, maps and other analysis materials created from environmental investigation data.
Field Parameter Group:	A grouping of parameters collected during field sampling activities for example; turbidity and pH.
Location Group:	A grouping of sample locations
Parameter Codes:	Codes or abbreviations used as the standard descriptor for a parameter entered into the database.
Parameter Groups:	A grouping of analytical parameters
Project:	The Scope of Work performed within the constraints defined by a set of Contract Documents.
QA/QC Activities:	The process for ensuring the quality of the data and information used as part of the environmental site investigation.
Valid Values:	Values that the EQuIS system considers acceptable or "valid" and thus will allow to be uploaded or inserted into the database. For example, if the valid value for the compound name abbreviation for calcium is "CA" and the data contain the abbreviation "CAL", EQuIS will consider the data field "not valid" and will flag the result for user attention. On the other hand, if the data contain the abbreviation "CA", EQuIS will consider the abbreviation "valid" and allow insertion of the record into the database.

SECTION 1.0 PLAN PURPOSE AND OBJECTIVES

Parsons has been contracted by the West Lake Landfill National Priority List (NPL) Site Trust to provide program management and technical support for the Operable Unit 1 (OU-1) West Lake Remedial Design (the Project), including data management. This Data Management Plan (DMP) has been prepared to support the investigation and sampling program for the Project. This DMP is intended to serve as a standard for all Project-related data management activities.

The Project will generate analytical and field data, which will require both storage and accessibility for the Project team. Data management systems will be implemented to effectively process the information without loss or alteration. The approach outlined in this DMP is designed to provide an organized method of data management for the data that will be generated during the Program.

The objectives of this DMP are to define:

- Tools that will be used to collect, store, manage, and display the data;
- Data types that will be collected;
- Requirements for data documentation, deliverables, and presentation;
- How the data will be used;
- Data management team organization;
- Technical resource requirements;
- The work flow process of how the data will be managed and submitted; and
- Data management standard procedures that will be implemented.

SECTION 2.0 DATA MANAGEMENT SYSTEMS

Parsons has selected EQuIS as the environmental data management system. EQuIS was developed by Earthsoft, which has an extensive background in environmental remediation projects and the associated data collection and processing requirements.

EQuIS is designed to manage the following data types:

- Chain of Custody (COC) and Field Sample Data;
- Laboratory analytical data for various media such as soil, water, and air;
- Field measurement data such as pH, dissolved oxygen, turbidity, water levels, etc.;
- Geotechnical data such as surface or subsurface soil geologic characterizations/lithology; and
- Survey Data, such as geographic or location data.

Additional data types may be added to EQuIS as appropriate. In addition to EQuIS, Microsoft Access field databases will be utilized to capture field data electronically for incorporation into EQuIS or the existing Access soft database. Historical data related to West Lake will be integrated into EQuIS as needed based on Project needs.

2.1 EQuIS

2.1.1 EQuIS Database Setup

Database settings control how information is stored in EQuIS. Configuration of the settings for the Project database will be limited to the Parsons Data Manager (DM). Changes to the Project database settings will be reviewed by members of the Project management team before implementation.

The Project database will be set up before field activities begin. Database settings that will be established in EQuIS include:

- Valid Values List
- Location Groups
- Parameter and Field Parameter Groups
- Action Limits

United States Environmental Protection Agency (EPA) Region 5's (R5) standard list of valid values are provided in Appendix F and will be used for the Project database setup. EPA R5's format will be used due to the lack of availability of a Region 7 (R7) format. Once these setup tasks have been accomplished, the database will be ready for data input.

2.2 Database User Access

Access to EQuIS is restricted and a username and password will be required. The DM will be granted privileges to add and edit data in EQuIS and will be the only one with direct access to the database. All other project team members may request data per procedures described in Section 5.4.1.

2.3 Data Input

Data will be loaded to EQuIS by the DM. Access to the input module will be restricted to the Project DM.

Data input to EQuIS will include:

- COC and field sample data
- Geotechnical data
- Survey data
- Field measurements
- Waste characterization data
- Groundwater levels
- Radiological data
- Laboratory analytical data

A complete list of data types and the tools used to manage these data types is provided in Appendix C.

2.4 Data Output

In general, the DM will provide a single point of contact for team members to obtain data outputs on an as-needed basis. Requests for data from EQuIS will be made using the data request form provided in Appendix D.

SECTION 3.0 DATA MANAGEMENT TEAM ORGANIZATION

This section presents a directory of key organizations and personnel involved in data management for the Project. The management, technical staff, and subcontractors executing data management for the Project, and their areas of responsibility, are identified in Figure 3.1. The responsibilities of selected personnel are further described in Sections 3.1.1 through 3.1.6. Table 3.1 presents the contact information.

3.1 Engineering Contractors

The responsibilities of key personnel from Parsons and Ameriphysics are further described below.

3.1.1 Project Manager (PM)

The PM is Ray D'Hollander from Parsons.

The PM will oversee the Project activities and the DM, Data Validator (DV), and the GIS Leader will report to the PM.

3.1.2 Technical Director and Technical Lead

Ray D'Hollander from Parsons will be the Technical Director for the Project data management activities.

Pete Scharfschwerdt will act as the Technical Lead for field programs in the Project. The Technical Lead will provide the necessary communication link between the DM and the field sampling team.

3.1.3 Data Manager (DM)

The West Lake Project DM will be Laura Drachenberg from Parsons.

The data gathered over the course of the Project will be submitted to the DM. The DM will execute data management activities for the Project such as requests for data output, data edits, and changes to database settings.

3.1.4 Geographic Information System (GIS) Leader

Tayler Schweigel will be the GIS Leader for GIS activities related to the Project. The GIS Leader will coordinate the GIS needs for the Project and synchronize consistent use of base maps and spatial data. The GIS Leader will coordinate with the DM for Project-specific requirements.

3.1.5 Data Validator (DV)

Data validation will be performed by Maryanne Kosciewicz from Parsons. She will provide the validated data to the DM for database entry.

Tom Hansen (Ameriphysics) will perform/assist in validation for radiological parameters.

3.1.6 Laboratories

The primary analytical laboratory used for the Project will be GEL. Other laboratories may be used on an as-needed basis.

SECTION 4.0 DATA TYPES AND PROCEDURES

4.1 Data Flow Process

Figure 4-1 depicts the work flow process of how the data will be managed, beginning with sample planning and the collection of field data, or the collection of a field sample and completion of a COC. A copy of the COC will be sent to the laboratory and the DM. Upon receipt of the COC, the DM will be able to track that the data is received from the laboratory on time. The DM will also verify the sample confirmation from the lab against the COC to ensure the lab has logged in the samples for the correct analyses. The DM will QC the field sample information in the electronic data deliverable (EDD) received from the lab prior to database entry. The EQuIS software will perform automated checks on the EDD for formatting errors before uploading the file. If there are no formatting errors, the data will be loaded into the database. A data validation file will be provided to the chemist who will apply any changes identified during validation. The validated data will be loaded to the database and then be available for output into reports for data analysis and mapping. Other field data, including field parameter measurements, soil boring and well log information, can be uploaded to EQuIS with the use of EPA R5 EQuIS excel templates.

4.2 Data Types

EQuIS is designed to manage the following data types:

- COC and field sample data;
- Laboratory analytical data for various media such as soil, water, and air;
- Field measurement data such as pH, dissolved oxygen, turbidity, water levels, etc.;
- Geotechnical data such as surface or subsurface soil, geologic characterizations and lithology; and
- Survey data such as geographic coordinates or location data.

Additional data types may be added to EQuIS as appropriate. Historical data related to West Lake will be integrated into EQuIS as needed.

The data types are defined in Appendix C. Each data type associated with a sampling program is provided along with the tools that will be used to collect, store, manage, and display the data.

SECTION 5.0 DATA MANAGEMENT PROCEDURES

This section will detail the Project data management procedures:

- Sample planning;
- Management of sample and COC data;
- Management of laboratory analytical data;
- Field measurement data - Groundwater purge readings, groundwater levels;
- Survey data – Location and geographic data;
- Geotechnical data - Soil boring logs, waste characterization, radiological data; and
- Data output procedures.

5.1 Sample Planning Procedures

Before data collection activities begin, the Field Sampling Plan (FSP or other similar work plan) will be provided to the DM. The DM will evaluate the FSP and identify:

- The type(s) of data to be collected and the appropriate data management system for the data type(s);
- Data validation requirements;
- Coordination with the analytical laboratory;
- Data output needs; and
- The support required from the data management team.

The data types provided in the FSP will be reviewed against the list of compatible data types in EQuIS. The DM will assess the need for possible modifications to EQuIS to accommodate new data types. If new data types are identified, and cannot be incorporated into EQuIS, then alternative storage methods will be explored.

The new data types, if identified as appropriate for EQuIS, will be assessed for potential changes needed to database settings, with particular attention to changes to standardized values. Data input forms will also be assessed, and the DM will evaluate if new data input interfaces will be required for entry of the new data types.

If a Quality Assurance Project Plan (QAPP) is associated with the FSP, it will be reviewed by the DM in conjunction with the FSP. Data validation requirements will be communicated to the Data Validator. The consultant's Technical Lead for the Project will be consulted to decide on the prioritization for data validation.

The selected analytical laboratory will be notified of planned samples, analyses, and turnaround times. If preliminary data is required, this will be communicated to the laboratory and a format agreed upon for delivery of preliminary data.

The DM will also review the FSP for data output requirements. This review, in consultation with the Technical Lead, will consist of scheduling, budgeting, and the nature of the required outputs.

Existing output formats will be assessed for changes as needed. If required, new output templates will be created by the DM.

5.2 Management of COC and Laboratory Analytical Data

The management of COC and laboratory analytical data by Parsons is depicted in Figure 5.1.

5.2.1 Management of COC Data

5.2.1.1 Sample Nomenclature System

A sample nomenclature system has been developed to ensure consistency in field sample ID assignment and compatibility with EQuIS. Three identification labels will be associated with field samples: the COC #, Location ID, and Field Sample ID. This sample nomenclature system has been put in place for establishment of new sampling locations. Sampling of historical pre-existing locations will use the location ID assigned during the previous investigation.

COC #

The COC # will be a numeric designation assigned by the DM.

Location ID

The Location ID will represent the physical location where samples are collected, such as a monitoring well or a soil boring. Each unique field sample will be associated with a Location ID, which will be identified on the COC at the time of sample collection, and entered into EQuIS prior to field sample information input. The Location ID will consist of a description of the area (Area ID), the sample location type (such as a well or boring), and a three-digit sample location number:

A # - * * # # #

Area ID - Location type Location number

For Buffer Zone locations, instead of an Area ID, a survey unit number will be assigned (1,2,3 etc.).

For groundwater locations (if collected under the OU-1 sampling scope), an aquifer code (A for Alluvial, S for St Louis Bedrock) and an "S" (for shallow), an "I" (for intermediate), or a "D" (for deep) will be added to the end of the Location ID.

A # - * * # # # - * *

Area ID - Location type Location number

For example: An alluvial shallow well located on A1 = A1-MW001-AS. A soil boring located on A1 = A1-SB014. A list of valid Area IDs, Location Types, and Location Numbers will be available to the field team from the DM. Location types are also listed in Table 5.2.

Field Sample ID

The Field Sample ID is the unique label assigned to each individual sample. For groundwater samples, the Field Sample ID will consist of the Location ID, 6 digit date (MMDDYY), and an N or D added to the end for normal or field dup sample.

A # - * * # # # - * * - M M D D Y Y *

Location ID- Date sample type

For soil samples, the Field Sample ID will consist of the Location ID, sample depth interval (d1-d2) and an N or D added to the end for normal or field dup sample.

A # - * * # # # - d 1 - d 2 *

Location ID- Depth sample type

For blanks, the Field Sample ID will consist of the sample type (TB, EB, FB), 6 digit date, and a cooler number. For example, a trip blank collected on 02/26/2020 for cooler 1 would be TB-022620-1.

Upon collection of the sample(s), a field team member will affix an identification label to the sample container(s). A label provided by the laboratory may be used or any other label that includes the information provided herein.

An example of a label is located in the Appendix B. This label will contain the following information:

- Site Name - West Lake;
- Location ID - The unique identifier that defines the location;
- Sample Type – indicates if the sample is normal, field dup, or blank;
- Field Sample ID - The unique identifier that defines the sample;
- Date of sample collection – use six digit date (mm/dd/yy);
- Time of sample collection - use 24-hour format (hh:mm);
- Sample Medium - Water, soil, sediment, sludge, leachate, etc.;
- Preservation - Type of preservation added;
- Analyses - use the method reference from the COC; and
- Initials - The initials of the sample collector.

The field team leader will create the COC using the approved format provided in Appendix A. The field team leader will be responsible for verifying that information on the COC is consistent with the information recorded in the field book, on the sample log sheets, and on the bottle labels.

The field team leader will transmit the electronic COC to the DM within 24 hours of COC completion. The DM will enter the field sample information into the system and create COC data for that sampling event in EQuIS.

Within 24 hours of receipt of the samples, the laboratory will send an acknowledgement to the DM indicating the sample identification numbers and the analyses to be conducted on each sample. The DM will review the acknowledgement and confirm that no errors have been made. If errors are detected, the DM will coordinate with the laboratory to resolve the issue.

The DM will track receipt of preliminary data and EDDs against the sample receipt date indicated by the laboratory for compliance with the turnaround time requested on the COC. The DM will issue weekly reports to the PM of any data not received within the requested turnaround time and elevate any occurrence of non-compliance to the attention of the PM.

5.2.2 Management of Laboratory Analytical Data

The laboratory must transmit to the DM all preliminary and final data in an EDD that meets the EPA R5 EDD format requirements. The EPA R5 EDD format requirements are provided in Appendix G. As mentioned, R5 format will be used due to the lack of availability of a R7 format. The DM will track the date the EDD is received against the sample receipt date indicated by the lab to record compliance with the requested turnaround time.

The DM will load the EDD into EQuIS. Errors identified during data loading will be reviewed by the DM. Errors associated with database settings will be addressed by the DM. Laboratory errors will be communicated to the laboratory by the DM. Pervasive issues will be elevated to the attention of the PM.

The laboratory will deliver preliminary EDDs to meet the turn-around time on the COC. This data will not be subject to data validation. The DM will load preliminary EDDs, where the data will be made available to the Project team. The laboratory will deliver final EDDs within requested turnaround time. The DM will verify that final EDDs are accurate and when loaded in EQuIS will overwrite preliminary EDDs.

5.2.2.1 Data Validation (DV)

The data received from the laboratory in the final EDD will be uploaded into EQuIS. The DM will then provide the DV a file to update with changes identified during validation of the data. The priority for data validation for individual samples will be defined by the DM, and this schedule will be communicated to the DV. The DV will conduct data validation as defined in the QAPP.

5.2.2.2 Quality Assurance Process

Once the laboratory data are received by the DV, EDDs marked for further quality assurance testing will be compared to the laboratory reports to check for consistency. The DV will conduct this quality check on 10% of the data received.

If the results of this additional quality testing indicate that an error has occurred, the DM will immediately notify the PM, laboratory, and DV for resolution.

5.3 Management of Field Data

All data collected in the field will be provided to the DM by the leader of the field team. The DM will incorporate the data into the appropriate data management system. The field data will be delivered to the DM on at least a weekly basis, depending on the length and complexity of the sampling program. Location data will be collected and submitted in accordance with EPA R7 Geospatial Data Deliverables Standard Operating Procedure (SOP 2341.01A) provided in Appendix H. Spatial data in a projected coordinate system, like Missouri State Plane East, may be collected, but only as a supplement to latitude and longitude and must be documented. Elevations will be recorded in feet using the NAVD 1988 vertical datum.

Field data may include, but is not limited to:

- Boring logs (including alpha, beta, and gamma scan data);
- Well construction (if needed);
- Survey data; and
- Well purge data and field readings.

For data that is collected but not stored in EQuIS, please refer to Appendix C for the data output procedures.

5.4 Data Output Procedure

5.4.1 General Data Output

Data can be a requested through the DM. Requests for data must be made to the DM via the Request for Data Management Services form in Appendix D. All requests require a completed form. The DM will fulfill the request and provide a schedule for completion. All request forms will be stored in a secure location by the DM.

Individuals who download data sets for engineering calculations must date and store the files on the Project Document Management System for others to access and as a permanent secure archive.

If Project team members review the data and identify that a change is required, a Change Request form must be completed and submitted to the DM. All changes to existing information will be reviewed by the DM and completed in coordination with the PM, and other data management team members as required. A copy of the Change Request form is located in Appendix E.

5.4.2 Data Submittals

There are two categories of data submittals; data tables, and EPA electronic deliverables.

5.4.2.1 Data Tables

Data tables will be generated using EQuIS. Output options provide the capability to generate cross-tab data tables for analytical data and field measurements. The output from EQuIS can be exported into Excel. The DM can set up conditional formatting of exceedances in tables within an EQuIS crosstab configuration file. Data tables can be formatted, complete with headers and footers, by using an Excel template.

5.4.2.2 Regulatory Electronic Deliverables

The requirements for electronic data submittal to the EPA will be met by the DM. The DM will submit the electronic data and validation reports to the government agency. EDDs will be prepared in the format requested by the EPA.

5.4.3 Spatial Data Output

The GIS module within EQuIS allows users to interact directly with the database. The module installs a toolbar within ArcGIS that can be used to query the database and add the results of those queries to a map as layers.

An overview map will be created for the Project. The base map will be identified as OU-1_WestLake_Basemap. Location groups within EQuIS will need to be maintained to ensure accurate and most up to date display of data. Some general guidelines have been outlined in Table 5.1 to standardize the appearance of the figures. Layer properties are provided in Table 5.2 will be set as the default, and Table 5.3 displays the various location symbol types.

Mapping requests will be directed to the GIS Leader. The GIS Leader will assess whether the request should be directed to the CAD or GIS teams, and then forward the request to the appropriate team. The GIS Leader will be responsible for:

- Ensuring the team is using the most current source of spatial data;
- Standardizing all the spatial data sources into the Project coordinate system:
  - Data from previous sampling programs utilized the NAD1927 datum, (a locally based coordinate system). Data will be converted to NAD1983 in order to be compared with new data, and for incorporation with future sample data.
- Assigning colors, titles, symbols, fonts and sizes to each theme to ensure consistency of views and themes within the GIS: and
- Organizing files stored within the GIS to ensure that they are in the correct folders.

Using analytical data in conjunction with the GIS will be coordinated with the DM. The GIS leader will then report back to the requestor.

Completed maps will be stored and catalogued by the GIS Leader. Electronic copies of completed maps will be stored in the secure Project document control system as PDFs.

Three-Dimensional (3D) spatial data outputs will include down hole natural gamma readings which will be created and visualized with C Tech Development Corporation's Earth Volumetric Studio (EVS) (2019.9.0). In an effort to model in 3D, the anticipated pdf deliverable of natural gamma ray logs two methods for visualization may be employed as detailed in Appendix I.

SECTION 6.0 LABORATORY

6.1 Required EDD Formats

The contract laboratories are required to submit all data, preliminary and final, in EQuIS EPA R5 formatted EDDs. The DM will submit written requests dictating the requirements and appropriate files to be supplied by the laboratory prior to collection/submittal of samples to the laboratory. Furthermore, the contract laboratories are required to submit a Level 4 data package report.

6.2 Quality Assurance and Control

All EDDs will be required to contain the applicable quality control (QC) information to validate the electronic dataset. The contract laboratory will be required to adhere to the valid values provided. Analytical laboratories will be required to report QC parameters both electronically and in hardcopy.

The analytical report results must be identical with the EDD for Level 1 - 3 deliverables. The Level 4 deliverable is defined as that level requiring calibration data, method detection limit (MDL) studies, and raw data such as lab notebooks evidencing standard validity and gas chromatography/gas chromatography mass spectrometer (GC/GCMS) chromatograms. EQUIS does not incorporate Level 4 items.

Data will be batched for analytical preparation in groups of no more than 20 field samples. The laboratory will be required to have the entire Project-required QC for each batch – even if the batch consists of one sample. The only permitted exception will be the matrix spike (MS) and matrix spike duplicate (MSD) if sufficient sample is not available for the analysis. However, if sufficient sample is available, this analysis must also be performed.

If it is determined that the laboratory is not meeting agreed upon delivery dates or there are inconsistencies with the data, the DM will coordinate with the PM to address and remedy any issues. The DM will provide weekly reports to the PM indicating any EDDs that are overdue in accordance with the requested turnaround time.

TABLES

TABLE 3.1 CONTACT INFORMATION

Name	Title/Function	Address	Phone	Email
Ray D'Hollander	Project Manager/Technical Director	301 Plainfield Rd Suite 350 Syracuse, NY 13212	315.552.9683	Ray.dhollander@parsons.com
Laura Drachenberg	Data Manager	301 Plainfield Rd Suite 350 Syracuse, NY 13212	315.552.9687	Laura.drachenberg@parsons.com
Peter Scharfschwerdt	Field Team Lead	301 Plainfield Rd Suite 350 Syracuse, NY 13212	315.552.9741	Peter.scharfschwerdt@parsons.com
Tayler Schweigel	GIS Leader	40 La Riviere Dr, Suite 350 Buffalo, NY 14202	716.480.9403	Tayler.Schweigel@parsons.com
Maryanne Kosciewicz	Data Validator	301 Plainfield Rd Suite 350 Syracuse, NY 13212	315.552.9703	Maryanne.kosciewicz@parsons.com

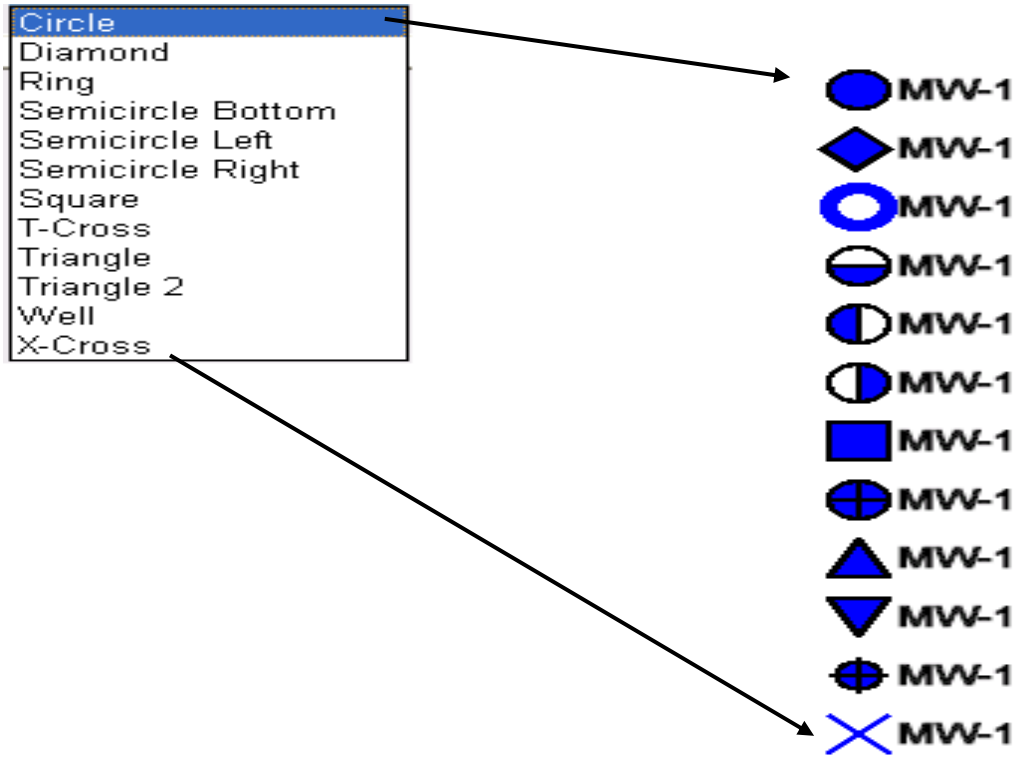
TABLE 5.1 GENERAL LAYER PROPERTY GUIDELINES FOR FIGURES

Layer	Layer Color
Outline	White
Water	Blue
Text Labels	Black
Buildings	Black
Roads	Red
Railroads	Purple
Utilities	Maroon
Vegetation	Green
Fence	Yellow
Fire Hydrant	Red
Wall	Gray

TABLE 5.2 LAYER PROPERTY GUIDELINES FOR FIGURES

Location Type	Symbol Type	Description	Symbol Color	Outline Color	Text Color
CPT	Ring	Cone Penetrometer Test	Orange	Orange	Black
MW	Well	Monitor Well	Blue	Blue	Black
PZ	T-cross	Piezometer	Navy	Navy	Black
SB	Circle	Soil Boring	Brown	Brown	Black
TH	Ring	Thorium Boring	Brown	Brown	Black
PB	Triangle2	Perimeter Boring	Brown	Brown	Black
SED	Triangle	Sediment	Brown	Brown	Black
SS	Square	Surface Soil	Brown	Brown	Black
WL	X-cross	Leachate	Maroon	Maroon	Black
WC	Diamond	Waste Characterization	Brown	Brown	Black

TABLE 5.3 LOCATION SYMBOL TYPES



FIGURES

FIGURE 3.1 DATA MANAGEMENT ORGANIZATION CHART

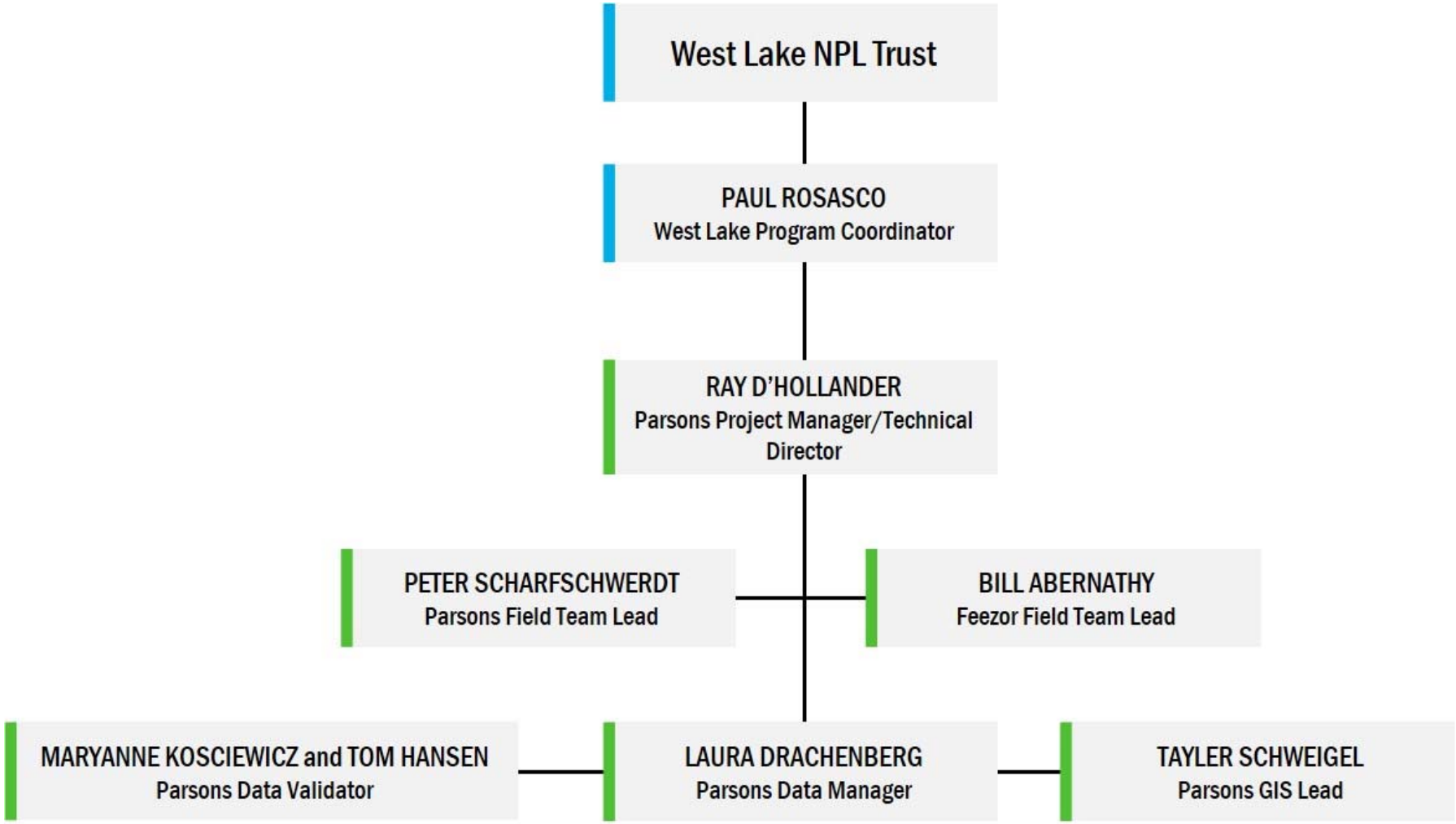


FIGURE 4.1 DATA FLOW MODEL

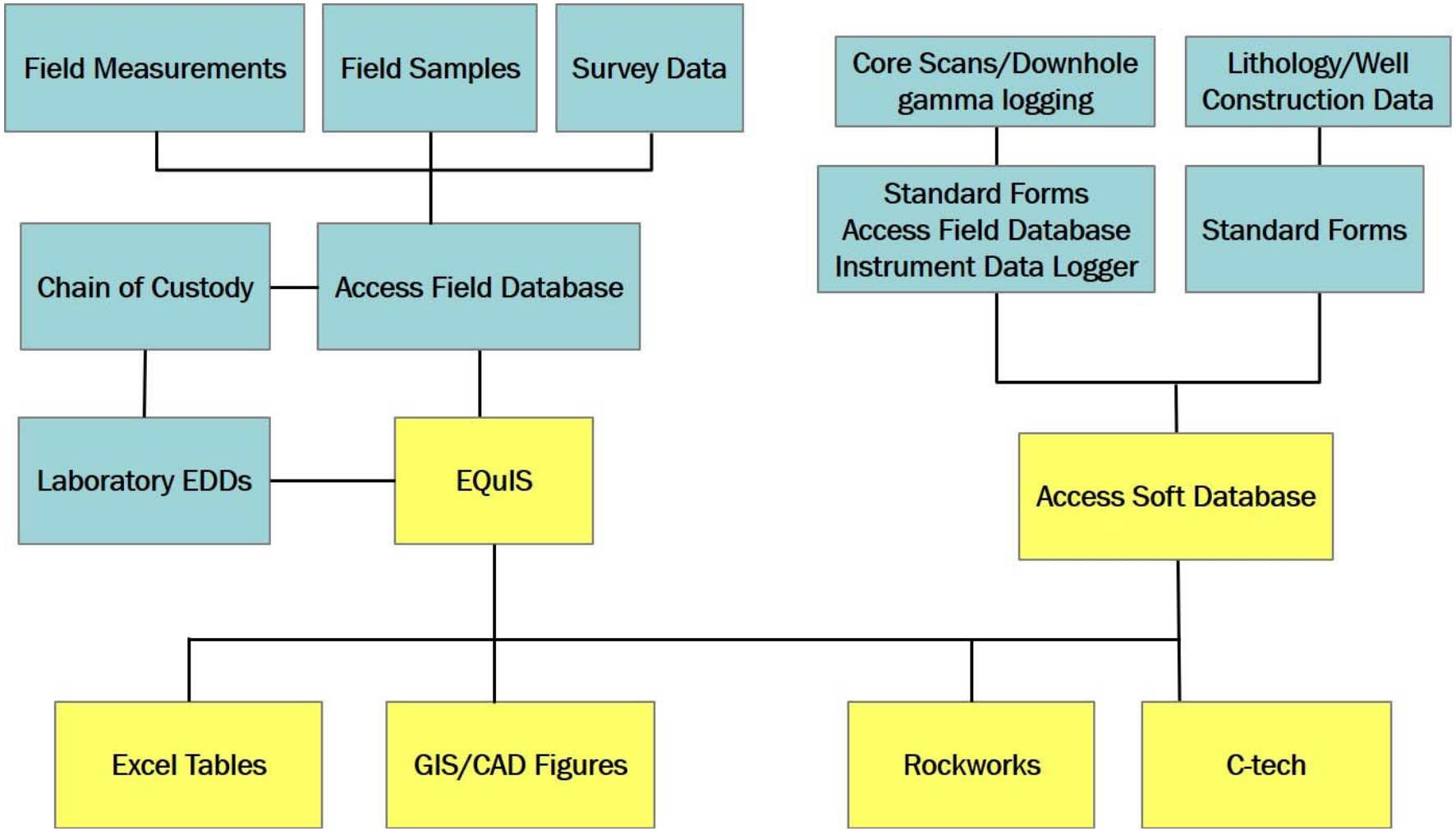
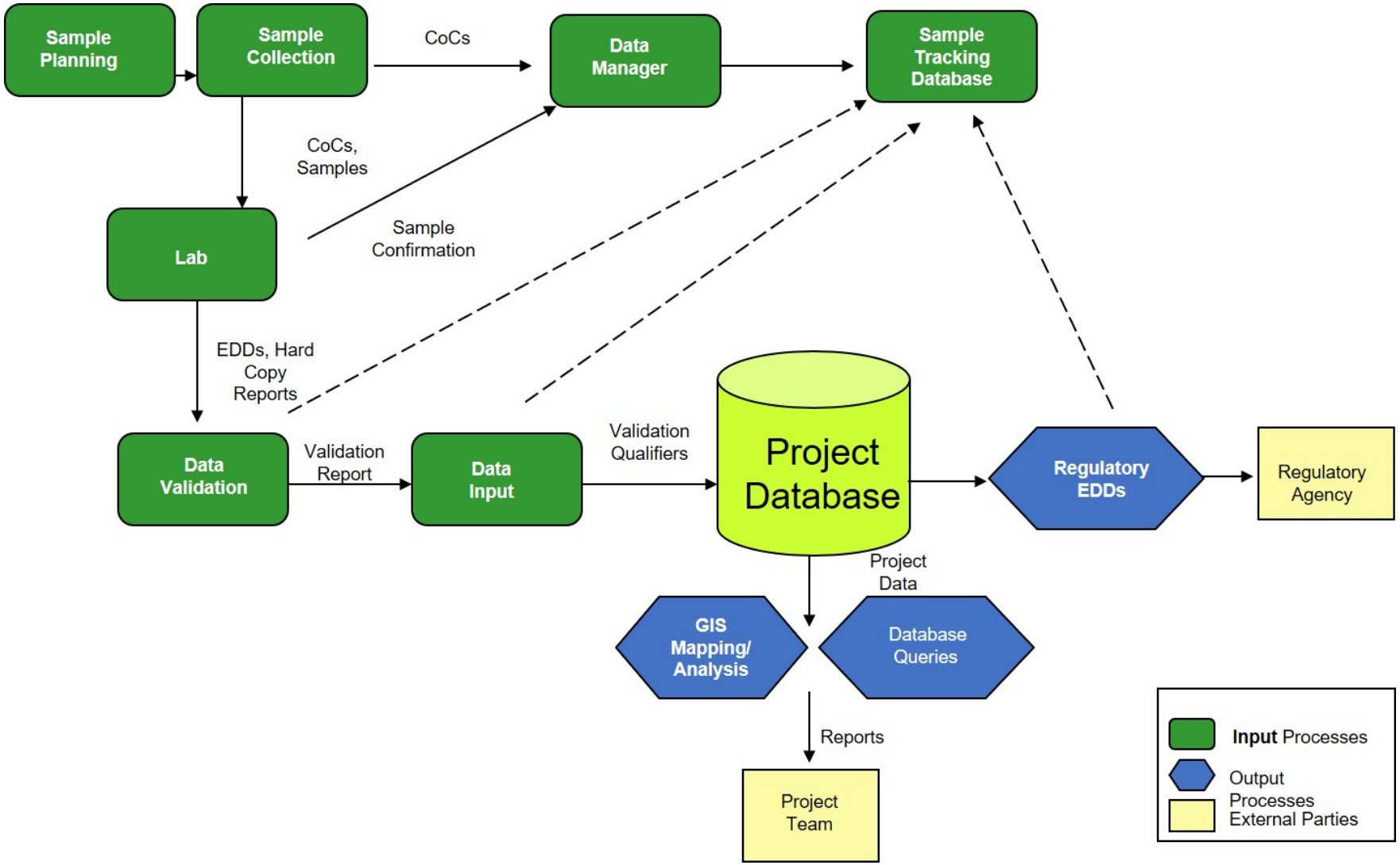


FIGURE 5.1 DATA MANAGEMENT FLOW DIAGRAM FOR LABORATORY ANALYTICAL DATA



APPENDIX A CHAIN OF CUSTODY

CHAIN-OF-CUSTODY / Analytical Request Document

Section A Laboratory Information	Section B Client Information	COC #:	
Lab Name:	Company: Parsons	Project Name:	
Attention:	Attention:		
Address:	Address: 301 Plainfield Road, Suite 350 Syracuse, NY 13212	Project Site:	
Phone:	Phone:	Project Number:	
Email:	Email:		
Section C Deliverable Requirements	Purchase Order No:		
Report To:	TAT -		
Copy To:	**Section D Additional Information**		
Deliverables:			

	Location ID	Field Sample ID MUST BE UNIQUE	Sample Date	Sample Time	Sample Matrix	Sample Type	# of Cont.	MS/MSD	Composite (Y/N)	Preservative codes (for water only): 8	10,1	2	9,1	9,7	0			3	
								#Bottles											Comments
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Special Instructions:

Samplers Name:		Company:	Relinquished By:	Company:	Cooler Temp.:	Custody Seals Intact: Yes o No o
		Date/Time:		Date/Time:	Rec'd on Ice: Yes o No o	Samples Intact : Yes o No o
Shipment Method:		Shipment Tracking No:	Accepted By:	Company:	Cooler Temp.:	Custody Seals Intact: Yes o No o
		Date/Time:		Date/Time:	Rec'd on Ice: Yes o No o	Samples Intact: Yes o No o

Preservatives: 0 = None; [1 = HCL]; [2 = HN03]; [3 = H2S04]; [4 = NaOH]; [5 = Zn Acetate]; [6 = MeOH]; [7 = NaHS04]; 8 = Other [Trizma]; 9 = [Na2S03]; 10 = [C6H806]

APPENDIX B SAMPLE BOTTLE LABELS

Site Name			
Location ID:		Type:	
Field Sample ID:			
Date Collected:		Time:	
Sample Medium:			
Analysis:			
Preservative:			
Sampler:			

APPENDIX C DATA TYPES

DMP DATA TYPE OUTLINE

Monitoring Program	Data Types	Tools to collect	Tools to store/manage	Tools to display	Reporting requirements
Air Monitoring (continuous)	Air (monthly/quarterly)	Automated logging	Access Database	Access Database	Quarterly Tables/Report
	Air (Design Investigation)	Automated logging	Access Database	Access Database	Quarterly Tables/Report
Groundwater	Field readings	Access Field Database	EQuIS	Excel	Tables
	Lab Chemistry	Access Field database	EQuIS	Excel/GIS	Tables/Figures
Soil	Field Readings	Access Field Database	EQuIS	Excel	Tables
	Survey data (X,Y,Z of boreholes)	Access Field Database	EQuIS	Excel/GIS	Tables/Figures
	Lab Chemistry	Access Field Database	EQuIS	Excel/GIS	Tables/Figures
	Core scans (alpha, beta, gamma)	Standard Form/Access Field Database	Access Soft Database	Earth Volumetric Studio (EVS)	Tables/Figures
	Downhole gamma logging	Digital (.csv)	Access Soft Database	Earth Volumetric Studio (EVS)	Tables/Figures
	Lithology	Standard form	Access Soft Database	Rockworks	Boring logs
Geotechnical	Lab Geotechnical (grain size, atteburg, density, moisture content, index testing, SPT)	Access Field Database	EQuIS	Excel	Tables
Leachate	Lab Chemistry (radionuclide and wet chem)	Access Field database	EQuIS	Excel	Tables
	Field readings (downhole hydro)	Access Field database	EQuIS	Excel	Tables
	Piezometer construction log	Standard form	EQuIS	Rockworks	Construction logs

hard data
soft data

APPENDIX D DATA REQUEST FORM

DATA REQUEST FORM FOR DATA MANAGEMENT

Requestor	Work Requested	Date Requested	Completed By	Completion Date

APPENDIX E CHANGE REQUEST FORM

CHANGE REQUEST FORM FOR DATA MANAGEMENT

Requestor	Change Requested	Date Requested	Completed By	Completion Date

APPENDIX F EPA REGION 5 VALID VALUES

ENVIRONMENTAL PROTECTION AGENCY
REGION 5

ELECTRONIC DATA DELIVERABLE VALID VALUES REFERENCE MANUAL

Appendix to EPA Electronic Data Deliverable (EDD) Comprehensive Specification Manual

March, 2019

TABLE OF CONTENTS

LIST OF FIGURES

All tables presented within this Manual are also located in the EDD .pdf file available on the EPA Region 5 EDD website: https://www.epa.gov/superfund/region-5-superfund-electronic-data-submission

Table A-1 Matrix

Matrix_Code	Descriptions
AA	AMBIENT AIR
AC	CRAWLSPACE (AIR)
AD	DRILLING AIR
AE	AIR, VAPOR EXTRACTION WELL EFFLUENT
AI	Indoor Air
AO	OUTDOOR AIR
AO	AIR QUALITY CONTROL MATRIX
AS	SUB-SLAB (AIR)
CA	CINDER-ASH
CF	FLY ASH CINDER
DC	DRILL CUTTINGS
GE	GASEOUS EFFLUENT (STACK GAS)
GL	HEADSPACE OF LIQUID SAMPLE
GS	SOIL GAS
LA	AQUEOUS PHASE OF A MULTIPLE PHASE LIQUID OR SOLID SAMPLE
LC	LIQUID CONDENSATE
LD	DRILLING FLUID
LE	LIQUID EMULSION
LF	FLOATING/FREE PRODUCT ON GROUNDWATER TABLE
LH	FREE-FLOWING, OR LIQUID WASTE CONTAINING LESS THAN 0.5% DRY SOLIDS
LM	MULTIPLE PHASE LIQUID WASTE SAMPLE
LO	ORGANIC LIQUID
LV	LIQUID FROM VADOSE ZONE
MH	HAZARDOUS MULTIPLE PHASE WASTE
OIL	OIL
SB	BENTONITE
SC	CEMENT
SD	DRILL CUTTINGS, SOLID MATRIX
SE	SEDIMENT (ASSOCIATED WITH SURFACE WATER)
SF	FILTER SANDPACK
SH	SOLID WASTE CONTAINING GREATER THAN OR EQUAL TO 0.5% DRY SOLIDS
SL	SLUDGE
SM	WATER FILTER (SOLID MATERIAL USED TO FILTER WATER)
SN	MISCELLANEOUS SOLID MATERIALS - BUILDING MATERIALS
SO	SOIL
SP	CASING (PVC, STAINLESS STEEL, CAST IRON, IRON PIPING, ETC.)
SQ	SOIL/SOLID QUALITY CONTROL MATRIX
SR	WATER FILTER RESIDUE (SOLID THAT GETS FILTERED OUT OF WATER)
SS	SCRAPINGS
ST	SOLID WASTE
SW	SWAB OR WIPE
TA	ANIMAL TISSUE
TP	PLANT TISSUE
TQ	TISSUE QUALITY CONTROL MATRIX
U	UNKNOWN
VW	WATER VAPOR

Table A-1 Matrix

Matrix_Code	Descriptions
W	WATER
WA	DRILL CUTTINGS, AQUEOUS MATRIX
WC	DRILLING WATER (USED FOR WELL CONSTRUCTION)
WD	WELL DEVELOPMENT WATER
WE	ESTUARY
WG	GROUND WATER
WH	EQUIPMENT WASH WATER, I.E., WATER USED FOR WASHING
WL	LEACHATE
WO	OCEAN WATER
WP	DRINKING WATER
WPO	POREWATER
WQ	WATER QUALITY CONTROL MATRIX
WS	SURFACE WATER
WV	WATER FROM VADOSE ZONE
WW	WASTE WATER
WZ	SPECIAL WATER QUALITY CONTROL MATRIX

Table A-2 Coord Geometric type

Geometric_type_code	Description
POINT	GEOMETRIC TYPE

Table A-3 Horizontal Collection Method

Horiz_Collect_Method_Code	Description
A1	ADDRESS MATCHING-HOUSE NUMBER
A2	ADDRESS MATCHING-BLOCK FACE
A3	ADDRESS MATCHING-STREET CENTERLINE
A4	ADDRESS MATCHING-NEAREST INTERSECTION
A5	ADDRESS MATCHING-PRIMARY NAME
A6	ADDRESS MATCHING-DIGITIZED
AO	ADDRESS MATCHING-OTHER
C1	CENSUS BLOCK-1990-CENTROID
C2	CENSUS BLOCK/GROUP-1990-CENTROID
C3	CENSUS BLOCK TRACT-1990-CENTROID
CO	CENSUS OTHER
G0	GPS UNSPECIFIED
G1	GPS CARRIER PHASE STATIC RELATIVE – POSITIONING TECHNIQUE
G2	GPS CARRIER PHASE KINEMATIC RELATIVE – POSITIONING TECHNIQUE
G3	GPS CODE MEASUREMENTS (PSUEDO RANGE) – DIFFERENTIAL (DGPS)
G4	GPS CODE MEASUREMENTS (PSUEDO RANGE) – PRECISE POSITIONING SERVICE
G5	GPS CODE MEASUREMENTS (PSUEDO RANGE) – STANDARD POSITIONING SERVICE SA OFF
G6	GPS CODE MEASUREMENTS (PSUEDO RANGE) – STANDARD POSITIONING SERVICE SA ON
I1	INTERPOLATION-MAP
I2	INTERPOLATION-PHOTO
I3	INTERPOLATION-SATELLITE
IO	INTERPOLATION-OTHER
L1	LORAN
P1	PUBLIC-LAND-SURVEY-QUARTERING
P2	PUBLIC-LAND-SURVEY-FOOTING
S1	CLASSICAL SURVEYING TECHNIQUES
UN	UNKNOWN
Z1	ZIPCODE-CENTROID

Table A-4 Horizontal Accuracy Units

Horiz_Accuracy_Unit	**Description**
1	DEGREES - HORZ ACCURACY UNIT, EPA MAD CODE
2	MINUTES - HORZ ACCURACY UNIT, EPA MAD CODE
3	SECONDS - HORZ ACCURACY UNIT, EPA MAD CODE
4	METERS - HORZ ACCURACY UNIT, EPA MAD CODE
5	FEET - HORZ ACCURACY UNIT, EPA MAD CODE
6	KILOMETERS - HORZ ACCURACY UNIT, EPA MAD CODE
7	MILES - HORZ ACCURACY UNIT, EPA MAD CODE

Table A-5 Horizontal Datum

Horiz_Datum_Code	**Description**
1	NAD27
2	NAD83
O	OTHER
U	UNKNOWN

Table A-6 Elevation Collection Method

Elev_Collect_Method_Code	**Description**
A1	ALTIMETRY
G1	GPS CARRIER PHASE STATIC RELATIVE POSITIONING TECHNIQUE
G2	GPS CARRIER PHASE KINEMATIC RELATIVE POSITIONING TECHNIQUE
G3	GPS CODE MEASUREMENTS (PSEUDO RANGE) – DIFFERENTIAL (DGPS)
G4	GPS CODE MEASUREMENTS (PSEUDO RANGE) – PRECISE POSITIONING SERVICE
G5	GPS CODE MEASUREMENTS (PSEUDO RANGE) – STANDARD POSITIONING SERVICE SA OFF
G6	GPS CODE MEASUREMENTS (PSEUDO RANGE) – STANDARD POSITIONING SERVICE SA ON
L1	PRECISE LEVELING FROM A BENCH MARK
L2	LEVELING BETWEEN NON BENCH MARK CONTROL POINTS
L3	TRIGONOMETRIC LEVELING
OT	OTHER
P1	PHOTOGRAMMETRIC
S1	CLASSICAL SURVEYING TECHNIQUES
T1	TOPOGRAPHIC MAP INTERPOLATION
ZZ-1.04	REFTBLE VERSION
ZZ-V2.1	REFTBLVERSION

Table A-7 Elevation Datum

Elev_Datum_Code	Description
1	NAVD88
2	NGVD29
3	ELEVATION FROM MEAN SEA LEVEL
4	LOCAL TIDAL DATUM
N	NOT APPLICABLE
O	OTHER
S1	CLASSICAL SURVEYING TECHNIQUES
U	UNKNOWN

Table A-8 Material

Material_name	Description
, FILL	
, FINE-GRAINED/ORGANIC	
, GRAVELS	
, SANDS	
A-1-A	Well-graded gravel (< 31% passing No. 40 sieve).
A-1-B	Well-graded coarse sand (< 51% passing No. 40 sieve).
A-2-4	Gravel, coarse sand w/ silt (LL <= 40; PI <= 10).
A-2-5	Gravel, coarse sand w/ silt (LL >= 41; PI <= 10).
A-2-6	Gravel, coarse sand w/ clay (LL <= 40; PI >= 11).
A-2-7	Gravel, coarse sand w/ clay (LL >= 41; PI >= 11).
A-3	Fine sand (> 50% passing No. 40 sieve).
A-4	Silts; > 75% passes No. 200 sieve.
A-5	Elastic silts, usually diatomaceous or micaceous.
A-6	Clays, plastic clays; > 75% passes No. 200 sieve.
A-7-5	Clays w/ moderate plasticity; highly elastic; subject to considerable volume change.
A-7-6	Clays w/ moderate plasticity; highly elastic; subject to extreme volume change.
ALBITIZED	ALBITIZED
ALLUVIUM	ALLUVIUM
ANDESITE	ANDESITE
ANHYDRITE	OTHER
ANHYDRITIC DOLOSTONE	ANHYDRITIC DOLOSTONE
ARCHIMEDES	ARCHIMEDES
ARENACEOUS DOLOSTONE	ARENACEOUS DOLOSTONE
ARENACEOUS LIMESTONE	ARENACEOUS LIMESTONE
ARENACEOUS SHALE	ARENACEOUS SHALE
ARGILLACEOUS	ARGILLACEOUS
ARGILLACEOUS DOLOSTONE	ARGILLACEOUS DOLOSTONE
ARGILLACEOUS LIMESTONE	ARGILLACEOUS LIMESTONE
ARGILLACEOUS SANDSTONE	ARGILLACEOUS SANDSTONE
ARGILLIC	ARGILLIC

Table A-8 Material

Material_name	Description
ARGILLITE	ARGILLITE
ARGILLIZED	ARGILLIZED
ASPHALT	ASPHALT
BASEMENT	BASEMENT
BEDROCK	BEDROCK
BENTONITE	BENTONITE
BIOTITE HORNFELS	BIOTITE HORNFELS
BLANK	BLANK
BONY	BONY
BRECCIA	BRECCIA
BRYOZOAN LIMESTONE	BRYOZOAN LIMESTONE
CALCAREOUS DOLOMITE	CALCAREOUS DOLOMITE
CALCAREOUS DOLOSTONE	CALCAREOUS DOLOSTONE
CALCAREOUS MUDSTONE	CALCAREOUS MUDSTONE
CALCAREOUS SANDSTONE	CALCAREOUS SANDSTONE
CALCAREOUS SILTSTONE	CALCAREOUS SILTSTONE
CALCIFIED	CALCIFIED
CALCITE	CALCITE
CALCITE VEINING	CALCITE VEINING
CAP	cap
CARBONATE	CARBONATE
CEMENT	CEMENT
CH	Inorganic clays of high plasiticity, fat clays.
CH, FILL	
CH, FINE-GRAINED/NOT ORGANIC	
CHALCOPYRITE	CHALCOPYRITE
CHERT	CHERT
CHERTY LIMESTONE	CHERTY LIMESTONE
CHLORITIZED	CHLORITIZED
CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
CL, FILL	
CL, FINE-GRAINED/NON-ORGANIC	
CL, FINE-GRAINED/NOT ORGANIC	
CL, GRAVELS	
CL, SANDS	
CL-ML	Inorganic clayey silts of low plasticity.
CL-SC	
CLAY	CLAY
CLAY LOAM	CLAY LOAM
CLAYSTONE	CLAYSTONE
COAL	COAL
COLLUVIUM	COLLUVIUM
CONCRETE	
CONGLOMERATE	CONGLOMERATE

Table A-8 Material

Material_name	Description
DEVITRIFIED	DEVITRIFIED
DIABASE	DIABASE
DOLOMITE	DOLOMITE
DOLOMITIC LIMESTONE	DOLOMITIC LIMESTONE
DOLOMITIC MUDSTONE	DOLOMITIC MUDSTONE
DOLOSTONE	DOLOSTONE
ENDOSKARN	ENDOSKARN
FAULT	FAULT
FINE SAND	FINE SAND
FINE/INORGANIC,CL	
FINE/INORGANIC,ML	
FOLDED SCHIST	FOLDED SCHIST
G	
GALENA	GALENA
GARBAGE	
GARNET SKARN	GARNET SKARN
GC	Clayey gravels, gravel-sand-clay mixture.
GC, GRAVELS	
GC-GM	Clayey silty gravels.
GM	Silty gravels, gravel-sand-silt mixture.
GM, GRAVELS	
GM, SANDS	
GNEISS	GNEISS
GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
GP, GRAVELS	
GP-GC	Poorly graded clayey gravels.
GP-GC, GRAVELS	
GP-GM	Poorly graded silty gravels.
GRANITE	GRANITE
GRANODIORITE	GRANODIORITE
GRAVEL	GRAVEL
GRAVELLY SAND	GRAVELLY SAND
GRAVELS,GW	
GS	
GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
GW, GRAVELS	
GW, SANDS	
GW-GC	Well-graded clayey gravels.
GW-GM	Well-graded silty gravels.
GYPSUM	GYPSUM
JASPEROID	JASPEROID
KAOLINIZED	KAOLINIZED
LATITE	LATITE
LIMESTONE	LIMESTONE
LIMESTONE MUDSTONE	LIMESTONE MUDSTONE
LIMESTONE WITH SHALE INTERBEDS	LIMESTONE WITH SHALE INTERBEDS

Table A-8 Material

Material_name	Description
LIMESTONE WITH SHALE STRINGERS	LIMESTONE WITH SHALE STRINGERS
LOAM	LOAM
LOAMY SAND	LOAMY SAND
LOST CIRCULATION	LOST CIRCULATION
MAFIC INTRUSIVE	MAFIC INTRUSIVE
MARBLE	MARBLE
METADOLOMITE	METADOLOMITE
MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
MH, FINE-GRAINED/NOT ORGANIC	
ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
ML, FILL	
ML, FINE-GRAINED/NON-ORGANIC	
ML, FINE-GRAINED/NOT ORGANIC	
ML, FINE-GRAINED/ORGANIC	
ML, FINE/INORGANIC	
ML, SANDS	
ML-CL	
ML-PT	
ML-SM	
ML/CL	
ML/CL, FINE-GRAINED/NON-ORGANIC	
ML/CL, FINE-GRAINED/NOT ORGANIC	
ML/CL, FINE/INORGANIC	
MLSM	
NO CIRCULATION	No Circulation
NULL	NULL
OH	Organic clays of medium to high plasticity, organic silts.
OIL SHALE	OIL SHALE
OL	Organic silts and organic silty clays of low plasticity.
OL, FINE-GRAINED/ORGANIC	
OOLITIC LIMESTONE	OOLITIC LIMESTONE
OXIDIZED	OXIDIZED
PEBBLES	PEBBLES
PHYLLIC	PHYLLIC
PT	Peat and other highly organic soils.
PT, HIGHLY ORGANIC	
PYRITE	PYRITE
PYRITIC	PYRITIC
PYROXENE	PYROXENE
PYROXENE HORNFELS	PYROXENE HORNFELS
QUARTZ	QUARTZ

Table A-8 Material

Material_name	Description
QUARTZ LATITE	QUARTZ LATITE
QUARTZ VEIN	QUARTZ VEIN
QUARTZ VEINING	QUARTZ VEINING
QUARTZITE	QUARTZITE
RHYODACITE	RHYODACITE
RHYOLITE	RHYOLITE
RUBBER	
SALT	SALT
SAND	SAND
SAND PEBBLES	SAND PEBBLES
SAND/SILT	
SANDS,SC	
SANDS,SM	
SANDS,SP	
SANDS,SW	
SANDSTONE	SANDSTONE
SANDY CLAY	SANDY CLAY
SANDY CLAY LOAM	SANDY CLAY LOAM
SANDY GRAVEL	SANDY GRAVEL
SANDY LIMESTONE	SANDY LIMESTONE
SANDY LOAM	SANDY LOAM
SANDY SILT	SANDY SILT
SC	Clayey sands, sand-clay mixture.
SC, FINE-GRAINED/NOT ORGANIC	
SC, SANDS	
SC-CL	
SC-SM	Clayey silty sands.
SCHIST	SCHIST
SCREEN	screen
SERICITIZED	SERICITIZED
SERPENTINE	SERPENTINE
SERPENTINIZED	SERPENTINIZED
SHA	
SHALE	SHALE
SHALE AND LIMESTONE INTERBEDS	SHALE AND LIMESTONE INTERBEDS
SHALE WITH LIMESTONE INTERBEDS	SHALE WITH LIMESTONE INTERBEDS
SHALY LIMESTONE	ANHYDRITE
SHATTERED	SHATTERED
SHEARED	SHEARED
SILIFIED	SILIFIED
SILT	SILT
SILTACEOUS SHALE	SILTACEOUS SHALE
SILTSTONE	SILTSTONE
SILTY CLAY	SILTY CLAY
SILTY CLAY LOAM	SILTY CLAY LOAM

Table A-8 Material

Material_name	Description
SILTY LIMESTONE	SILTY LIMESTONE
SILTY LOAM	SILTY LOAM
SILTY SAND	SILTY SAND
SKARN	SKARN
SKARNED	SKARNED
SLAG	
SM	Silty sands, sand-silt mixture.
SM, FILL	
SM, FINE-GRAINED/NOT ORGANIC	
SM, SANDS	
SM-GM-ML	
SM-ML	
SMCL	
SNOWFLAKE OBSIDIAN	SNOWFLAKE OBSIDIAN
SP	Poorly graded sands or gravelly sands, little or no fines.
SP, FILL	
SP, FINE-GRAINED/NOT ORGANIC	
SP, SANDS	
SP-GP	
SP-SC	Poorly graded clayey sands.
SP-SC, SANDS	
SP-SM	Poorly graded silty sands.
SP-SM, SANDS	
SP-SM/GP-GM	poorly graded silty sand and gravel mix
SP/GP	Poorly graded Sand and Gravel Mix
STROMATOLITES	STROMATOLITES
SW	Well-graded sands, gravelly sands, little or no fines.
SW, FILL	
SW, GRAVELS	
SW, SANDS	
SW-GW	
SW-SC	Well-graded clayey sands.
SW-SC, SANDS	
SW-SM	Well-graded silty sands.
SW-SM, SANDS	
TALC	TALC
TAR SAND	TAR SAND
TILL	TILL
TILTED LIMESTONE	TILTED LIMESTONE
TOPSOIL	TOPSOIL
TREMOLITE	TREMOLITE
TREMOLITE HORNFELS	TREMOLITE HORNFELS
TREMOLITE MARBLE	TREMOLITE MARBLE
TUFF	TUFF
UNKNOWN	UNKNOWN

Table A-8 Material

Material_name	Description
UPPER BACKFILL	UPPER BACKFILL
UPPER SEAL	UPPER SEAL
VERY COARSE SANDSTONE	VERY COARSE SANDSTONE
VITROPHYRE	VITROPHYRE
WOOD	
ZZ-1.04	RefTble Version

Table A-9 Location Type

LOC_TYPE	DESCRIPTION
ARCGIS	ARCGIS
DIRPUSH	DIRECT PUSH
EXWELL	EXTRACTION WELL
GENLOC	GENERAL LOCATION
MW	MONITORING WELL
PROCESSWTR	PROCESS WATER
PVTWELL	PRIVATE RESIDENTIAL
RESIDENTL	RESIDENTIAL
SED	SEDIMENT
SOILBORE	SOIL BORING
SURFWTR	SURFACE WATER
SURSOIL	SURFACE SOIL

The EDMAN program will use EPA standard qualifiers. Definitions for these qualifiers are provided below.

Table A-10 Qualifier

Lab_Qualiferies	Description
*	DUPLICATE NOT WITHIN CONTROL LIMITS
::	TEMPORARY VALUE TO MEAN NONE QUALIFIER REPORTED
<	REPORTED VALUE LESS THAN NOTED DETECTION LIMIT
@	QUALIFIERS NEED REVIEWED
A	INDICATES TENTATIVELY IDENTIFIED COMPOUNDS THAT ARE SUSPECTED TO BE ALDOL CONDENSATION PRODUCTS.
B	INDICATES THE ANALYTE IS DETECTED IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.
C	INDICATES PESTICIDE RESULTS HAVE BEEN CONFIRMED BY GC/MS.
D	INDICATES AN IDENTIFIED COMPOUND IN AN ANALYSIS THAT HAS BEEN DILUTED. THIS FLAG ALERTS THE DATA USER TO ANY DIFFERENCES BETWEEN THE CONCENTRATIONS REPORTED IN THE TWO ANALYSES.
E	INDICATES COMPOUNDS WHOSE CONCENTRATIONS EXCEED THE CALIBRATION RANGE OF THE INSTRUMENT.
F	THE RESULT IS FAULTY DUE TO PROBLEMS OUTSIDE THE REALM OF TYPICAL VALIDATION RULES/FLAGS. THIS QUALIFIER MAY BE AFFIXED TO A RESULT WHEN THE DATA VALIDATOR HAS REASON TO CONSIDER THE RESULT SUSPECT, WARRANTING NOTIFICATION OF THE END USER
G	INDICATES THE TCLP MATRIX SPIKE RECOVERY WAS GREATER THAN THE UPPER LIMIT OF THE ANALYTICAL METHOD.
H	SAMPLE RESULT IS ESTIMATED AND BIASED HIGH.
I	MATRIX INTERFERANCE
J	INDICATES AN ESTIMATED VALUE. THIS FLAG IS USED EITHER WHEN ESTIMATING ACONCENTRATION FOR A TENTATIVELY IDENTIFIED COMPOUND OR WHEN THE DATA INDICATES THE PRESENCE OF A COMPOUND BUT THE RESULT IS LESS THAN THE SAMPLE QUANTITATION LIMIT, BUT GREATER
J+	ESTIMATED ON THE HIGH SIDE
J-	ESTIMATED ON THE LOW SIDE
K	REPORTED CONCENTRATION VALUE IS PROPORTIONAL TO DILUTION FACTOR AND MAY BE EXAGERATED
L	SAMPLE RESULT IS ESTIMATED AND BIASED LOW.
M	INDICATES THAT THE DUPLICATE INJECTION PRECISION WAS NOT MET.
N	INDICATES PRESUMPTIVE EVIDENCE OF A COMPOUND. THIS FLAG IS USUALLY USED FOR A TENTATIVELY IDENTIFIED COMPOUND, WHERE THE IDENTIFICATION IS BASED ON A MASS SPECTRAL LIBRARY SEARCH.
NJ	THE ANALYSIS INDICATES THE PRESENT OF AN ANALYTE FOR WHICH THERE IS PRESUMPTIVE EVIDENCE TO MAKE A TENTATIVE IDENTIFICATION AND THE ASSOCIATED NUMERICAL VALUE

Table A-10 Qualifier

Lab_Qualiferies	Description
	REPRESENTS ITS APPROXIMATE CONCENTRATION.
P	INDICATES A PESTICIDE/AROCLOR TARGET ANALYTE HAD A PERCENT DIFFERENCE GREATER THAN 25% BETWEEN THE TWO GC COLUMNS. THE LOWER OF THE TWO RESULTS IS REPORTED.
R	INDICATES THE DATA ARE UNUSABLE. (NOTE: THE ANALYTE MAY OR MAY NOT BE PRESENT.)
S	INDICATES THAT THE REPORTED VALUES WERE DETERMINED BY THE METHOD OF STANDARD ADDITIONS.
U	INDICATES THAT THE COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED. THE SAMPLE QUANTITATION LIMIT CORRECTED FOR DILUTION AND PERCENT MOISTURE IS REPORTED.
UJ	THE ANALYTE WAS NOT DETECTED AT A LEVEL GREATER THAN OR EQUAL TO THE ADJUSTED CRQL. HOWEVER, THE REPORTED ADJUSTED CRQL IS APPROXIMATE AND MAY BE INACCURATE OR IMPRECISE.
W	POST-DIGESTION SPIKE OUT OF CONTROL LIMITS ETC.
X	THIS QUALIFIER APPLIES TO PESTICIDE AND AROCLOR RESULTS WHEN GC/MS ANALYSIS WAS ATTEMPTED BUT WAS UNSUCCESSFUL.

Table A-11 Result Type

Result_Type_Code	Description
IS	INTERNAL STANDARDS
SC	SPIKED COMPOUNDS
SUR	SURROGATES
TIC	TENTATIVELY IDENTIFIED COMPOUND
TRG	TARGET, REGULAR RESULT

Table A-12 Sample Type

Sample_Type_Code	Description	Parent Sample Required
AB	AMBIENT CONDITIONS BLANK	N
BD	BLANK SPIKE DUPLICATE	Y
BS	BLANK SPIKE	N
EB	EQUIPMENT BLANK	N
FB	FIELD BLANK	N
FD	FIELD DUPLICATE SAMPLE	Y
FR	FIELD REPLICATE	Y
FS	FIELD SPIKE	Y
KD	KNOWN (EXTERNAL REFERENCE MATERIAL) DUPLICATE	N
LB	LAB BLANK	N
LC	LAB CONTROL SAMPLE	N
LCD	LAB CONTROL SAMPLE DUPLICATE	Y
LR	LAB REPLICATE	Y
MB	MATERIAL BLANK	N
ME	METHOD BLANK	N
MS	LAB MATRIX SPIKE	Y
MSD	LAB MATRIX SPIKE AND SPIKE DUPLICATE PAIR CONSIDERED AS ONE SAMPLE	Y
N	NORMAL ENVIRONMENTAL SAMPLE	N
NS	NORMAL SUBSAMPLE	Y
RB	MATERIAL RINSE BLANK	N
RD	REGULATORY DUPLICATE	N
RE	LAB RERUN	Y
RM	KNOWN (EXTERNAL REFERENCE MATERIAL) RINSATE	N
SB	STORAGE BLANK	N
SD	LAB MATRIX SPIKE DUPLICATE CONSIDERD AS SEPERATE FROM SPIKE	Y
TB	TRIP BLANK	N
UD	UNKNOWN DUPLICATE	N

Table A-13 Geologic Unit

Geologic Unit Code	Description
AQUIFER 1	EQ3 Lithology migration
AQUIFER 2	EQ3 Lithology migration
AQUITARD 1	EQ3 Lithology migration
AQUITARD 2	EQ3 Lithology migration
AQUITARD 3	EQ3 Lithology migration
AQUITARD 4	
AQUITARD2	
BEDROCK	EQ3 Lithology migration
BRWNOUTWSH	EQ3 Lithology migration
CAP	EQ3 Lithology migration
CL	
CLAY	EQ3 Lithology migration
CLAY & SAND	
CLAY & SILT	Clay &Silt
CLAY AND SAND	EQ3 Lithology migration
CLAYALLUV	EQ3 Lithology migration
CLAYFILL	
CONFINING	EQ3 Lithology migration
CONFINING UNIT	EQ3 Lithology migration
DEEP AQUIFER	EQ3 Lithology migration
DEEP UP AQ SANDS	
DEEP UPPER AQ	
DEEP UPPER AQ SANDS	EQ3 Lithology migration
DISCONTINUOUS	EQ3 Lithology migration
DOLOMITE	dolomite--bob kay
DRY WELL	EQ3 Lithology migration
FILL	EQ3 Lithology migration
FILL OR TOPSOIL	EQ3 Lithology migration
FILL, ASH &/OR WASTE	EQ3 Lithology migration
FILL-ML	
FILL-SM	
FINE GRAIN DEPOSIT	EQ3 Lithology migration
FINE SAND	EQ3 Lithology migration
FINE-GRAIN SILT AND	EQ3 Lithology migration
FT	
GRAVEL	EQ3 Lithology migration
GRAVEL & SAND	EQ3 Lithology migration
GRAVELLY SAND	EQ3 Lithology migration
GRAYOUTWSH	EQ3 Lithology migration

Table A-13 Geologic Unit

Geologic Unit Code	Description
INTERBEDS SAND	Fine ot Coarse Sand with Silty Fine Sand
L. AQUIFER	EQ3 Lithology migration
LOWER AQUIFER	lower aquifer
LOWER AQUIFER SANDS	EQ3 Lithology migration
ML	
ML-CL	
ML-SM	
NATIVE	EQ3 Lithology migration
SA	
SAND	EQ3 Lithology migration
SAND & GRAVEL	EQ3 Lithology migration
SAND AND GRAVEL	EQ3 Lithology migration
SAND&GRAVL	EQ3 Lithology migration
SAND, GRAVEL & CLAY	EQ3 Lithology migration
SANDSTONE	
SEAM	EQ3 Lithology migration
SHALE	EQ3 Lithology migration
SHALLOW AQUIFER	EQ3 Lithology migration
SHALLOW LO AQ SANDS	
SHALLOW UP AQ SANDS	EQ3 Lithology migration
SILT	EQ3 Lithology migration
SILT AND CLAY	EQ3 Lithology migration
SILTY CLAY	EQ3 Lithology migration
SILTY GRAVELLY SAND	EQ3 Lithology migration
SILTY SAND	EQ3 Lithology migration
SM	
SM-CL	
SM-ML	
SM-SP	
SP	
SP-SW	
SURF DEPO	EQ3 Lithology migration
SURFACE DEPOSITS	EQ3 Lithology migration
SURFICIAL AQUITARD	EQ3 Lithology migration
SW	
SW-CL	
SW-SM	
TEXT10	
TOP SOIL	

Table A-13 Geologic Unit

Geologic Unit Code	Description
top_basal_clay	
top_clay	
top_lower_ow	
top_upper_ow	
TOPSOIL	EQ3 Lithology migration
U. AQUIFER	EQ3 Lithology migration
UNCLASSIFIED	EQ3 Lithology migration
UPPER AQUIFER	upper aquifer

Table A-14 Standard Preparation Method

Prep_Method	Preferred_Name
7471B	SW-7471B MECURY IN SOLID OR SEMI SOLID WASTE
8151M	PENTACHLOROPHENOL AND TETRACHLOROPHENOLS BY GC
A412	CYANIDE
A412B	TOTAL CYANIDE AFTER DISTILLATION
A417A	NITROGEN (AMMONIA) PRELIMINARY DISTILLATION
A503D	SLUDGE SAMPLES (SOIL, SEDIMENT, SLUDGE)
A5520G	SM5520F-PETROLEUM HYDROCARBON FRACTION OF SM5520 OIL AND GREASE EXTRAC
A5520H	SM5520F-PETROLEUM HYDROCARBON FRACTION OF SM5520 OIL AND GREASE, EXTRA
AM19GA	MICROSEEPS METHOD FOR HYDROGEN IN GROUNDWATER
AS3332	ASA 33-3.2 EXTRACTION OF EXCHANGEABLE AMMONIUM, NITRATE AND NITRITE
AV3050	ACID VOLATILE METALS EXTRACT OF SOIL, SEDIMENT, OR SLUDGE SAMPLES FOLL
AVS	MODIFIED METHOD FOR THE SIMULTANEOUS EXTRACTION OF METALS AND ACID VOL
BNASIM	GC/MS-SIM ANALYSIS OF SELECTED BNA'S FROM SW8270
BP_SVOA	BP SVOA
CALC	CALCULATED ANALYTICAL PARAMETER
CS1	PREPARATION FOR THE MANUAL COLD VAPOR AA ANALYSIS OF SOIL SAMPLES
CW1	
D7262	STANDARD TEST METHOD FOR ESTIMATING THE PERMANGANATE NATURAL OXIDANT DEMAND OF SOIL AND AQUIFER SOLIDS-ASTM
DI	DIRECT INJECTION
DISWAT	LEACHING OF ANALYTE FROM SOIL SAMPLES USING DISTILLED WATER
DRO	DIESEL RANGE ORGANICS
DRY SOIL	DRY SOIL PREPARATION METHOD
DW2	
E1631	MERCURY IN WATER BY OXIDATION, PURGE & TRAP, AND COLD VAPOR ATOMIC FLO
E1664A	OIL & GREASE (HEM/SGT-HEM) BY EXTRACTION
E200.0	ATOMIC ABSORBTION METHODS
E200.2	SAMPLE PREPARATION PROCEDURE FOR SPECTROCHEMICAL DETERMINATION OF TOTAL RECOVERABLE ELEMENTS
E200.7	TRACE ELEMENTS IN WATER, SOLIDS, AND BIOSOLIDS BY INDUCTIVELY COUPLED PLASMA-ATOMIC EMISSION SPECTROMETRY
E200.8	METHOD 200.8 DETERMINATION OF TRACE ELEMENTS IN WATER AND WASTES
E245.2	MERCURY (COLD VAPOR, AUTOMATED)
E300.0	DETERMINATION OF INORGANIC ANIONS IN WATER BY ION CHROMATOGRAPHY
E335.2	CYANIDES, AMENABLE TO CHLORINATION (TITRIMETRIC; SPECTROPHOTOMETRIC)
E350.1	NITROGEN, AMMONIA AS N
E351.2	NITROGEN, KJELDAHL, TOTAL (COLORIMETRIC, SEMI-AUTOMATED BLOCK

Table A-14 Standard Preparation Method

Prep_Method	Preferred_Name
	DIGESTER
E3545_ASE	EPA 3545 ASE
E365.1	PHOSPHORUS, ALL FORMS (COLORIMETRIC, AUTOMATED, ASCORBIC ACID)
E821_R91100	SAMPLE PREPARATION ACCORDING TO ANALYTICAL METHOD REFERENCED BY RT_ANALYTIC_METHOD CODE E821_R91100
EH01	RADIOCHEMICAL DETERMINATION OF TRITIUM IN SOIL, VEGETATION AND OTHER B
FDA01	FOOD & DRUG ADMIN PREP METHOD FOR TISSUE PRIOR TO ORGAN. ANA
FDAPH	EXTRACTION AND CLEANUP OF ORGANOCHLORINE, ORGANOPHOSPHATE, ORGANONITRO
FLDFLT	FIELD FILTERING FOR DISSOLVED METALS
FLTRES	RESIDUE AFTER FILTERING (0.45 MICRON)
G9016	GEOCHEMICAL & ENVIRONMENTAL METHOD RESEARCH GROUP (GERG) EXTRACTION OF
GRO	GASOLINE RANGE ORGANICS
GST07	GEOCHEMICAL & ENVIRONMENTAL METHOD RESEARCH GROUP (GERG) DIGESTION OF
HLI2	DEPARTMENT OF ENERGY HALF LIFE METHOD
HOT_BLO	HOT BLOCK
HS1	CLP-SOW ILMO3.5 PREPARATION METHOD FOR INORGANICS
HS2	USEPA SW-846 METHOD 3050B
HW1	
HW3	
ITAS07	PREPARATION OF SAMPLES FOR THE SEQUENTIAL DETERMINATION OF ISOTOPIC PU
ITAS30	PREPARATION OF SAMPLES FOR GAMMA SPECTROSCOPY, ITAS 13030, HASL 300
LLE	LIQUID LIQUID EXTRACTION
LUFT	EXTRACTION METHOD SPECIFIED IN THE LUFT MANUAL FOR MODIFIED
M2510B	SAMPLE PREPARATION BY MODIFIED ANALYTICAL METHOD SM2510B
M3510	MODIFIED SW3510
M3540	MODIFIED SW3540
M3550	MODIFIED SW3550
M3810	HEADSPACE
METHOD	EXTRACTION METHOD SPECIFIED IN ANALYTICAL METHOD
MICRO_DIST	MICRO DISTILLATION FOR CYANIDE
MIDI_DIST	MIDI DISTILLATION FOR CYANIDE
NONE	NO EXTRACTION REQUIRED FOR THIS METHOD
OLC02.1	CLP-SOW, LOW CONCENTRATION ORGANICS ANALYSIS
RC5007	SEPARATION OF TRITIUM IN WATER AND AQUEOUS COMPONENTS OF WINE. QESR SO
RSK175	RS KERR ENVIRONMENTAL LABS METHOD FOR METHANE, ETHANE, ETHENE (IN WATER)
SAMOSA	METHOD OF SOIL ANALYSIS (MOSA)
SEP_FUNNEL	SEPERATION FUNNEL
SM4500-CN C	CYANIDE COLORIMETRIC

Table A-14 Standard Preparation Method

Prep_Method	Preferred_Name
SM4500-CN G	CYANIDE, AMENABLE (DISTILLATION)
SM4500-NH3-B	AMMONIA BY TITRATION (PRELIMINARY DISTILLATION)
SM4500-P B	PHOSPHORUS, SAMPLE PREPARATION METHOD
SOM01.2	VOLATILES
SW1310	EXTRACTION PROCEDURE (EP) TOXICITY TEST METHOD AND STRUCTURAL INTEGRIT
SW1311	TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP) REVISION
SW1320	MULTIPLE EXTRACTION PROCEDURE
SW1330	EXTRACTION PROCEDURE FOR OILY WASTES
SW2510C	CONDUCTIVITY- LABORATORY METHOD
SW3005	METHOD FOR TOTAL RECOVERABLE AND DISSOLVED METALS
SW3005A	ACID DIGESTION OF WATERS
SW3010	DIGESTION FOR TOTAL METALS FOR FLAME AA AND ICP
SW3010A	ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS FOR
SW3015	MICROWAVE ASSISTED ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS
SW3015B	MICROWAVE ASSISTED ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS
SW3020	DIGESTION FOR TOTAL METALS FOR FURNACE AA
SW3020A	ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS FOR ANALYSIS BY GFAA SPECTROSCOPY (REVISION A)
SW3020B	DIGESTION FOR TOTAL METALS FOR FURNACE AA (FIELD FILTERED)
SW3040	DISSOLUTION PROCEDURE FOR OILS, GREASES, OR WAXES
SW3050	ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS
SW3050B	ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS
SW3051	MICROWAVE ASSISTED ACID DIGESTION OF SOILS, SEDIMENTS, SLUDGES AND OIL
SW3060	ALKALINE DIGESTION OF SOIL AND SOLID WASTE FOR HEXAVENT CHROMIUM
SW3060A	ALKALINE DIGESTION OF SOIL AND SOLID WASTE FOR HEXAVENT CHROMIUM
SW3510	SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION
SW3510C	SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION
SW3520	CONTINUOUS LIQUID-LIQUID EXTRACTION
SW3520B	CONTINUOUS LIQUID-LIQUID EXTRACTION
SW3520C	CONTINUOUS LIQUID-LIQUID EXTRACTION
SW3535	SOLID-PHASE EXTRACTION
SW3535A	SOLID-PHASE EXTRACTION (SPE)-SW846
SW3540	SOXHLET EXTRACTION
SW3540C	SOXHLET EXTRACTION
SW3541	ORGANIC ANALYTES FROM SOIL/ WASTE SOLIDS BY AUTOMATED SOXHLET EXTRACT.
SW3545	PRESSURIZED FLUID EXTRACTION (PFE)
SW3546	MICROWAVE EXTRACTION
SW3550	SONICATION EXTRACTION
SW3550B	ULTRASONIC EXTRACTION

Table A-14 Standard Preparation Method

Prep_Method	Preferred_Name
SW3580	WASTE DILUTION
SW3610	ALUMINA COLUMN CLEANUP
SW3611	ALUMINA COLUMN CLEANUP AND SEPARATION OF PETROLEUM WASTES
SW3620	FLORISIL COLUMN CLEANUP
SW3630	SILICA GEL CLEANUP
SW3640	GEL-PERMEATION CLEANUP
SW3650	ACID-BASE PARTITION CLEANUP
SW3660	SULFUR CLEANUP
SW3810	HEADSPACE
SW5020	HEADSPACE METHOD
SW5021	VOCs IN SOILS/SOLID MATRICES BY EQUILIBRIUM HEAD
SW5030	PURGE-AND-TRAP
SW5030A	PURGE AND TRAP FOR AQUEOUS SAMPLES-ORGANIC
SW5030B	PURGE & TRAP PROCEDURE FOR ANALYSIS OF VOLITILE ORGANIC COMPOUNDS
SW5030C	PURGE AND TRAP FOR AQUEOUS SAMPLES
SW5035	CLOSED SYSTEM PURGE-AND-TRAP AND EXTRACTION FOR VOCS IN SOIL AND WASTE
SW5035/SW5030	COMBINED METHODS 5035 AND 5030
SW5035A	CLOSED SYSTEM PURGE AND TRAP AND EXTRACTION FOR VOLATILE ORGANICS IN SOIL AND WASTE SAMPLES
SW5040	PROTOCOL FOR ANALYSIS OF SORBENT CARTRIDGES FROM VOL ORGANIC
SW6020	INDUCTIVELY COUPLED PLASMA - MASS SPECTROMETRY (METALS)
SW7.33	REACTIVITY CN
SW7.34	REACTIVITY SULFIDE
SW7470	COLD VAPOR ATOMIC ABSORBTION FOR MERCURY
SW7470A	MERCURY IN LIQUID WASTE (COLD VAPOR TECHNIQUE)
SW7471	MERCURY IN SOLID OR SEMISOLID WASTE (MANUAL COLD-VAPOR TECHNIQUE)
SW7471A	MERCURY IN SOLID OR SEMISOLID WASTE (COLD VAPOR TECHNIQUE)
SW7471B	MERCURY IN SOLID OR SEMISOLID WASTE (MANUAL COLD-VAPOR TECHNIQUE)
SW8011	1,2-DIBROMOETHANE AND 1,2-DIBROMO-3-CHLOROPROPANE BY MICROEXT AND GC
SW8021	AROMATIC AND HALOGENATED VOLATILES BY GC
SW8150B	CHLORINATED HERBICIDES BY GAS CHROMATOGRAPHY
SW8151	GHLORINATED HERBICIDES BY GC USING METHYLATION OR PENTAFLUOROBENZYLATI
SW8151A	CHILORINATED HERBICIDES BY GAS CHROMATOGRAPHY (GC) USING METHYLATION OR PENTAFLUOROBENZYLATION DERIVATIZATION
SW824D	SW8240(B) DIRECT INJECTION TECHNIQUE
SW9010	TOTAL AND AMENABLE CYANIDE (COLORIMETRIC MANUAL)
SW9010B	TOTAL AND AMENABLE CYANIDE: DISTILLATION
SW9056	DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY
SW9071	OIL & GREASE EXTRACTION METHOD FOR SLUDGE SAMPLES
T3550	MODIFIED SW3550/GPC METHOD FOR THE EXTRACTION OF PCB'S AND PESTICIDES
TOTAL	HNO3 DIGESTION OF UNFILTERED WATER AND SOIL SAMPLES FOR TOTAL

Table A-14 Standard Preparation Method

Prep_Method	Preferred_Name
	METALS
TOTREC	TOTAL RECOVERABLE DIGESTION OF UNFILTERED SAMPLE FOR METALS
UNKNOWN	UNKNOWN
WET	WASTE EXTRACTION TEST (WET)
WI DRO	WDNR DIESEL RANGE ORGANICS
WI GRO	WDNR GASOLINE RANGE ORGANICS
WOS	WATER EXTRACTION OF SOILS FOR THE DETERMINATION OF ANIONS AND CATIONS

Table A-15 Analyte

Chemical_Name	Cas_rn
% GRAVEL	%GRAV
% SAND	%SND
% SATURATION	SATURATION
% SILT	%SILT
(1-ETHYLPROPYL) CYCLOHEXANE	EPRCYHX
(1-METHYLPROPYL)-CYCLOHEXANE	7058-01-7
(2-PHENYLETHYL)HYDRAZINE	51-71-8
(3.BETA)-ERGOST-5-EN-3-OL	474-62-4
(3-METHYLBUTYL)-CYCLOPENTANE	MB3CYC5N
(5.ALPHA.,13.ALPHA)-D-HOMOANDROSTANE	HMAOST
(6H)CYCLOBUTA[JK]PHENANTHRENE	CB6HJKPHAN
(E)-ALPHA,BETA,2,3,4,5,6-HEPTACHLORO STYRENE	29086-38-2
(E)-BETA-2,3,4,5,6-HEXACHLOROSTYRENE	90301-92-1
(S)-(+)-1,2-PROPANEDIOL	4254-15-3
(Z)6-PENTADECEN-1-OL	PTDC1OL6
(Z)-9-OCTADECANIMIDE	OCTDMD9Z
(Z)-alpha,beta-2,3,4,5,6-Heptachlorostyrene	29086-39-3
(Z)-BETA-2,3,4,5,6-HEXACHLOROSTYRENE	90301-93-2
(Z)CYCLODODECENE	1501-82-2
(Z)METHYL ESTER 9-HEXADECANOIC ACID	MEHXDCNA9
.ALPHA.,.ALPHA CYCLOHEXANEMETHANOL	AACYHXME
[:(HEXADECYCLOXY)METHYL]-OXIRANE	HXDMOX
[1,1':3',1"-Terphenyl]-2'-ol	3140-01-0
[R-(Z)]12-(ACETYLOXY)-METHYL ESTER-9-OCTADECANOIC	AC12MEOCDN9
0.0015 MM (HYDROMETER)	0.0015MMHYDRO
0.005 MM (HYDROMETER)	0.005MMHYDRO

Table A-15 Analyte

Chemical_Name	Cas_rn
0.030 MM (HYDROMETER)	0.030MMHYDRO
1- CHLORO-TETRADECANE	2425-54-9
1 INCH SIEVE (RETAINED)	SIEVE1INCH
1-(1,1-DIMETHYL ETHO PROPANE)	DMEPRN
1-(1-NAPHTHYL)-2-THIOUREA	86-88-4
1-(2-CHLOROETHOXY) BENZENE	622-86-6
1(2-CHLOROPHENYL)-2-THIOUREA	5344-82-1
1-(2-METHOXYPROPOXY)-2-PROPANOL	13429-07-7
1-(2-METHYLCYCLOHEXYL)-3-PHENYLUREA	1982-49-6
1-(2-PROPENYL)NAPHTHALENE	2489-86-3
1-(3-ETHYLOXIRANYL)ETHANONE	OXIRYLC2
1-(4-HYDROXY-3-METHOXYPHENYL)ETHANONE	498-02-2
1,1,1,2-TETRACHLOROETHANE	630-20-6
1,1,1-TRICHLORO-2,2,2-TRIFLUOROETHANE	354-58-5
1,1,1-TRICHLOROETHANE	71-55-6
1,1,1-Trifluoroethane	420-46-2
1,1,1-TRIFLUOROTOLUENE	98-08-8
1,1,2,2-TETRACHLOROETHANE	79-34-5
1,1,2,2-Tetrachloroethane-d2	33685-54-0
1,1,2,2-TETRAMETHYL CYCLOPROPANE	4127-47-3
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1
1,1,2-TRICHLORO-1-PROPENE	21400-25-9
1,1,2-TRICHLOROETHANE	79-00-5
1,1,2-TRIMETHYL CYCLOHEXANE	7094-26-0
1,1,3,3-Tetraphenyl-1,3-dimethyldisiloxa	807-28-3
1,1,3,5-TETRAMETHYL CYCLOHEXANE	TME1135CYHX
1,1,3-TRICHLOROPROPENE	2567-14-8
1,1,3-TRIETHOXYBUTANE	ETOX113BT

Table A-15 Analyte

Chemical_Name	Cas_rn
1,1,3-TRIMETHYL CYCLOHEXANE	3073-66-3
1,1,3-TRIMETHYL-2-(3-METHYLPENTYL)-CYCLOHEXANE	TM113MPCHX
1,1,DCA Reductase	75-34-3_REDC
1,1':4',1"-TERPHENYL-D14	1718-51-0
1,13-TETRADECADIENE	21964-49-8
1,1-Biphenyl-2-phenoxy	1767-13-5
1,1-Biphenyl-2-phenoxy	6738-04-1
1,1-Biphenyl-4-phenoxy	3933-94-6
1,1-DICHLORO-2-PROPANONE	513-88-2
1,1-DICHLOROETHANE	75-34-3
1,1-DICHLOROETHANE-D4	DCA11D4
1,1-DICHLOROETHENE	75-35-4
1,1-DICHLOROETHENE-D2	22280-73-5
1,1-DICHLOROPROPANE	78-99-9
1,1-DICHLOROPROPENE	563-58-6
1,1-DIMETHYL PROPYL BENZENE	DM11PRBZ
1,1-DIMETHYL-3-(A,A,A-TRIFLUORO-M-TOLYL)UREA	2164-17-2
1,1-DIMETHYL-3-PHENYLUREA TRICHLOROACETATE	4482-55-7
1,1-DIMETHYLCYCLOHEXANE	590-66-9
1,1-DIMETHYLETHYL HYDROPEROXIDE	75-91-2
1,1-DIMETHYLHYDRAZINE	57-14-7
1,1-DIPHENYLHYDRAZE	DPHY11
1,1'-OXYBIS(2-ETHOXY)ETHANE	112-36-7
1',1'-OXYBIS-1-PROPENE	OX11PR
1,1'-SULFONYLBIS[4-BENZENE	BZ4SB
1,2 AND 1,4-DICHLOROBENZENE	DBZ1214

Table A-15 Analyte

Chemical_Name	Cas_rn
1,2,3,4,5,6-hexathiane	13798-23-7
1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN-C13	D12346789C13
1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	67562-39-4
1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN-C13	DF1234678C13
1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN	35822-46-9
1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN-C13	DD1234678C13
1,2,3,4,6,7,8-HPCDD	35822-39-4
1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	55673-89-7
1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN-C13	DF1234789C13
1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	70648-26-9
1,2,3,4,7,8-Hexachlorodibenzofuran + 1,2,3,6,7,8-Hexachlorodibenzofuran	70648-57117
1,2,3,4,7,8-HEXACHLORODIBENZOFURAN-C13	DF123478C13
1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN	39227-28-6
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin + 1,2,3,6,7,8-Hexachlorodibenzofuran	HXCDD-HXCDF
1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN-C13	DD123478C13
1,2,3,4,7-PENTACHLORODIBENZO-P-DIOXIN	39227-61-7
1,2,3,4-TETRACHLOROBENZENE	634-66-2
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN	30746-58-8
1,2,3,4-TETRACHLORODIBENZO-P-DIOXIN-C13	TCDD1234C13
1,2,3,4-TETRAHYDRO-5-NAPHTHALENE	TH1234NPH5

Table A-15 Analyte

Chemical_Name	Cas_rn
1,2,3,4-TETRAMETHYLBENZENE	488-23-3
1,2,3,5-TETRACHLOROBENZENE	634-90-2
1,2,3,5-TETRAMETHYLBENZENE	527-53-7
1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	57117-44-9
1,2,3,6,7,8-HEXACHLORODIBENZOFURAN-C13	DF123678C13
1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN	57653-85-7
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	109719-81-5
1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN-C13	DD123678C13
1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	72918-21-9
1,2,3,7,8,9-HEXACHLORODIBENZOFURAN-C13	DF123789C13
1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN	19408-74-3
1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN-C13	DD123789C13
1,2,3,7,8-PENTACHLORODIBENZOFURAN	57117-41-6
1,2,3,7,8-Pentachlorodibenzofuran-C13	109719-77-9
1,2,3,7,8-PENTACHLORODIBENZOFURAN-C13	DF12378C13
1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN	40321-76-4
1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN-C13	DD12378C13
1,2,3-PROPANETRIOL MONOACETATE	26446-35-5
1,2,3-TRICHLOROBENZENE	87-61-6
1,2,3-TRICHLOROPROPANE	96-18-4
1,2,3-TRICHLOROPROPENE	96-19-5
1,2,3-TRIMETHYL BENZENE	526-73-8
1,2,4,5-TETRACHLOROBENZENE	95-94-3
1,2,4,5-TETRAMETHYLBENZENE	95-93-2
1,2,4-TRICHLOROBENZENE	120-82-1
1,2,4-TRIMETHYLBENZENE	95-63-6

Table A-15 Analyte

Chemical_Name	Cas_rn
1,2,4-TRIMETHYL-CYCLOHEXANE	2234-75-5
1,2,4-TRITHIOLANE	289-16-7
1,2,7,8-TETRACHLORODIBENZOFURAN	58802-20-3
1,2,7,8-TETRACHLORODIBENZO-P-DIOXIN	TCDD1278
1,2,8,9-TETRACHLORODIBENZO-P-DIOXIN	TCDD1289
1,2-1-PHENANTHRENE CARBOXYLIC ACID	PHAN12CA
1,2-BENZENE DICARBOXYLIC ACID,BUTYL 2-METHYL PRO	B2MP12BZDA
1,2-BENZENEDICARBOXYLIC ACID	88-99-3
1,2-BENZENEDICARBOXYLIC ACID, 3 NITR	N3BZDA
1,2-BENZENEDICARBOXYLIC ACID, BIS (4-)	BZDA12
1,2-BENZENEDICARBOXYLIC ACID, BUTYL	PHTAB
1,2-BENZENEDICARBOXYLIC ACID, DIHEPTYL ESTER	3648-21-3
1,2-BENZENEDICARBOXYLIC ACID, DIISOD	DISBZDA12
1,2-BENZENEDICARBOXYLIC ACID, DIISON	PHTAD
1,2-BENZENEDICARBOXYLIC ACID, ISODEE	ISBZDA12
1,2-BIS(2-CHLOROETHOXY)ETHANE	112-26-5
1,2-CYCLOHEXANEDIOL, TOTAL	931-17-9
1,2-DCA Reductase	107-06-2_REDC
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8
1,2-DIBROMO-DODECANE	DB12C12N
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	354-23-4
1,2-DICHLORO-4-ISOCYANATOBENZENE	102-36-3
1,2-DICHLOROBENZENE	95-50-1
1,2-DICHLOROBENZENE-D4	2199-69-1
1,2-DICHLOROCYCLOHEXANE	DCCYHX12

Table A-15 Analyte

Chemical_Name	Cas_rn
1,2-DICHLOROETHANE	107-06-2
1,2-DICHLOROETHANE-D4	17060-07-0
1,2-DICHLOROPROPANE	78-87-5
1,2-Dichloropropane Reductase	78-87-5_REDC
1,2-Dichloropropane-d6	93952-08-0
1,2-DICHLOROPROPYLENE	563-54-2
1,2-DICHLOROTETRAFLUOROETHANE	76-14-2
1,2-DIETHYL-3-METHYL-CYCLOHEXANE	61141-80-8
1,2-DIETHYL-3-METHYL-CYCLOHEXANE	61141808S
1,2-DIETHYLBENZENE	135-01-3
1,2-DIMETHYL-3-(1-METHYLETHYL)-CYCLOPENTANE	DM12ME3CYC5N
1,2-DIMETHYLHYDRAZINE	540-73-8
1,2-DIMETHYLNAPHTHALENE	573-98-8
1,2-DINITROBENZENE	528-29-0
1,2-DIPHENYLHYDRAZINE	122-66-7
1,2-NAPHTHOQUINONE	524-42-5
1,3,5,7-Cyclooctatetraene	629-20-9
1,3,5-CYCLOHEPTATRIENE	544-25-2
1,3,5-TRICHLOROBENZENE	108-70-3
1,3,5-TRIMETHYL DECANE	TM135C10N
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	108-67-8
1,3,5-TRIMETHYL-CYCLOHEXANE	1839-63-0
1,3,5-TRINITROBENZENE	99-35-4
1,3,6,8-TETRACHLORODIBENZO-P-DIOXIN	33423-92-6
1,3,6-Octatriene, 3,7-dimethyl-	3779-61-1
1,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	50585-46-1
1,3,7,9-TETRACHLORODIBENZO-P-DIOXIN	TCDD1379
1,3-BUTADIENE	106-99-0

Table A-15 Analyte

Chemical_Name	Cas_rn
1,3-BUTANEDIOL	107-88-0
1,3-CYCLOHEXADIEN-1-YL-BENZENE	CYH13YLBZ
1,3-DIBROMOPROPANE	109-64-8
1,3-DICHLORO-1,1,3,3-TETRAMETHYLDISILOXANE	2401-73-2
1,3-DICHLORO-2-PROPANOL	96-23-1
1,3-DICHLORO-3-PROPANOL	13DCPR3OH
1,3-DICHLOROBENZENE	541-73-1
1,3-DICHLOROPROPANE	142-28-9
1,3-DIETHYL BENZENE	141-93-5
1,3-DIHYDRO 2H-INDOL-2-ONE	59-48-3
1,3-DIIODOPENTANE	13DIIPTA
1,3-DIMETHYL-2-NITROBENZENE	81-20-9
1,3-DIMETHYLNAPHTHALENE	575-41-7
1,3-DINITROBENZENE	99-65-0
1,3-HEXADIEN-5-YNE	10420-90-3
1,3-PENTANEDIOL, 2,2,4-TRIME	144-19-4
1,4,6-TRIMETHYLNAPHTHALENE	2131-42-2
1,4,7,10,13,16-HEXAOXACYCLOOCTADECANE	17455-13-9
1,4-BENZENEDIOL	123-31-9
1,4-DICHLOR-2-ISCYANATOBENZENE	5392-82-5
1,4-DICHLOROBENZENE	106-46-7
1,4-DICHLOROBENZENE-D4	3855-82-1
1,4-DICHLOROBUTANE	110-56-5
1,4-DIETHYL BENZENE	105-05-5
1,4-DIFLUOROBENZENE	540-36-3
1,4-DIMETHYL CYCLO-OCTANE	PDMCYO
1,4-DIMETHYL-2-OCTADECYL-CYCLOHEXANE	DM14ODCYHX
1,4-DIMETHYLCYCLOHEXANE	589-90-2

Table A-15 Analyte

Chemical_Name	Cas_rn
1,4-DINITROBENZENE	100-25-4
1,4-DIOXANE (P-DIOXANE)	123-91-1
1,4-DIOXANE-D8	17647-74-4
1,4-DIOXASPIRO [4.5] DECANE	177-10-6
1,4-DITHIANE	505-29-3
1,4-HEXADIENE	592-45-0
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7
1,4-NAPHTHOQUINONE	130-15-4
1,4-OXATHIANE	15980-15-1
1,4-PENTADIEN-3-OL	922-65-6
1,5-DIMETHYL NAPHTHALENE	571-61-9
1,5-OCTADIENE,7-METHYL-3-(1	OCT15M7
1,6,7-TRIMETHYL-NAPTHALENE	2245-38-7
1,6-DIMETHYL-4-(1-METHYLETHYL)NAPHTHALENE	483-78-3
1,7-DIMETHYL NAPHTHALENE	575-37-1
1,8-DIHYDROXY-3-METHYL-9,10-ANTHRACENEDIONE	481-74-3
1,8-DIMETHYLNAPHTHALENE	569-41-5
1-[(4-NITROP 2-NAPHTHALENOL	1NTP4NAPHL2
10 SIEVE (RETAINED)	SIEVEUS10
10,18-Bisnorabieta-8,11,13-triene	32624-67-2
100 SIEVE (RETAINED)	SIEVEUS100
10-METHYL-EICOSANE	55193-56-1
11,14-EICOSADIENOIC ACID	EDNCA1114
11H-BENZOFLUORENE	BZFL11H
13C-1,2,3,4,6,7,8-HpCDD	109719-83-1
13C-1,2,3,4,6,7,8-HpCDD	109719-83-7
13C-1,2,3,4,6,7,8-HpCDF	109719-84-8

Table A-15 Analyte

Chemical_Name	Cas_rn
13C-1,2,3,4,7,8,9-HpCDF	109719-94-0
13C-1,2,3,4,7,8-HxCDD	109719-80-4
13C-1,2,3,4,7,8-HxCDF	114423-98-2
13C-1,2,3,6,7,8-HxCDF	116843-03-9
13C-1,2,3,7,8,9-HxCDD	109719-82-6
13C-1,2,3,7,8,9-HxCDF	116843-04-0
13C-1,2,3,7,8-PeCDD	109719-79-1
13C-1234678-HPCDD	13C-35822-39-4
13C-1234678-HPCDF	13C-67562-39-4
13C-1234789-HPCDF	13C-55673-89-7
13C-123478-HXCDD	13C-39227-28-6
13C-123478-HXCDF	13C-70648-26-9
13C-123678-HXCDD	13C-57653-85-7
13C-123678-HXCDF	13C-57117-44-9
13C-12378-PECDD	13C-40321-76-4
13C-12378-PECDF	13C-57117-41-6
13C-2,3,4,7,8-PeCDF	116843-02-8
13C-23478-PECDF	13C-57117-31-4
13C-2378-TCDD	13C-1746-01-6
13C-2378-TCDF	13C-51207-31-9
13C-OCDD	114423-97-1
13C-OCDD	13C-3268-87-9
13C-OCDF	109719-78-0
13C-PCB-1	234432-85-0
13C-PCB-104	234432-89-4
13C-PCB-105	208263-62-1
13C-PCB-114	208263-63-2
13C-PCB-123	208263-64-3
13C-PCB-126	206263-65-4

Table A-15 Analyte

Chemical_Name	Cas_rn
13C-PCB-126	208263-65-4
13C-PCB-153	13C-PCB-153
13C-PCB-155	234432-90-7
13C-PCB-156	208263-68-7
13C-PCB-157	235416-30-5
13C-PCB-167	208263-69-8
13C-PCB-169	208263-70-1
13C-PCB-170	13C-PCB-170
13C-PCB-178	232919-67-4
13C-PCB-180	13C-PCB-180
13C-PCB-188	234432-91-8
13C-PCB-189	208263-73-4
13C-PCB-19	234432-87-2
13C-PCB-194	208263-74-5
13C-PCB-202L	105600-26-8
13C-PCB-206	208263-75-6
13C-PCB-208	234432-92-9
13C-PCB-28	208263-76-7
13C-PCB-3	208263-77-8
13C-PCB-32	13C-PCB-32
13C-PCB-37	208263-79-0
13C-PCB-4	234432-86-1
13C-PCB-52	208263-80-3
13C-PCB-54	234432-88-3
13C-PCB-77	105600-23-5
13C-PCB-77	105600-25-3
13C-PCB-81	208461-24-9
13C-PCB-9	250694-89-4
13C-PCB-95	13C-PCB-95

Table A-15 Analyte

Chemical_Name	Cas_rn
16 SIEVE (RETAINED)	SIEVEUS16
1-ACETYL-2-THIOUREA	591-08-2
1-ACETYLPYRROLIDINE	4030-18-6
1-ADAMANTANOL	768-95-6
1-AZIDO-2-METHYLBENZENE	31656-92-5
1-BROMO-2-CHLOROETHANE	107-04-0
1-BROMO-3-CHLOROPROPANE	109-70-6
1-BROMO-4-FLUOROBENZENE BROMOFLUOROBENZENE)	460-00-4
1-BUTOXY-2-PROPANOL	5131-66-8
1-BUTYL-2-PROPYL-CYCLOPENTANE	BT2PRCYP
1-CHLORO-2-FLUOROBENZENE	348-51-6
1-CHLORO-2-ISOCYANATOBENZENE	3320-83-0
1-CHLORO-3-FLUOROBENZENE	625-98-9
1-CHLORO-3-NITROBENZENE	121-73-3
1-CHLORO-4-FLUOROBENZENE	352-33-0
1-CHLOROCYCLOHEXENE-1	CLCYHEX
1-CHLOROHEPTANE	629-06-1
1-CHLOROHEXANE	544-10-5
1-CHLORONAPHTHALENE	90-13-1
1-CHLOROOCTANE	111-85-3
1-CHLOROPROPANE	540-54-5
1-CYCLOPROPYL-2-PROPANONE	CYPRPRN2
1-CYCLOPROPYL-ETHANCONE	CYPRETC
1-DIMETHYLPHENYL-ETHANONES	DMPE
1-DOCOSANOL	661-19-8
1-DOTRIACONTANOL	DICETYL
1-Eicosanol	629-96-9
1-ETHENYL-2-METHYL-BENZENE	611-15-4

Table A-15 Analyte

Chemical_Name	Cas_rn
1-ETHENYL-3-ETHYL BENZENE	ENE3BZ
1-ETHYL NAPHTHALENE	1127-76-0
1-ETHYL-2,3-DIMETHYLBENZENE	933-98-2
1-ETHYL-2,4,5-TRIMETHYL BENZENE	ETMBZ245
1-ETHYL-3-METHYL BENZENE	620-14-4
1-ETHYL-3-METHYL CYCLOPENTANE	EM3CYP
1-ETHYLIDENE-1H-INDEN	EDIND
1-ETHYLTOLUENE	611-14-3
1-ETHYLTOLUENE	611-15-3
1-ETHYNYL-4-METHYLBENZENE	766-97-2
1-FLUORO-DECANE	334-56-5
1-FLUORONAPHTHALENE	321-38-0
1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2 FTS)	PFC82
1H,1H,2H,2H-PERFLUOROHEXANE SULFONATE (4:2 FTS)	PFC42
1H,1H,2H,2H-PERFLUOROOCTANE SULFONATE (6:2 FTS)	PFC62
1-HEPTADECANAL	HPDCA
1-HEPTADECANOL	1454-85-9
1-HEPTADECANONE	HPDCN
1-HEXACOSANOL	506-52-5
1-Hexacosene	18835-33-1
1-HEXADECANAL	629-80-1
1-HEXADECENE	629-73-2
1-HEXADECYNE	629-74-3
1-HEXANOL	111-27-3
1-HEXENE, 5,5-DIMETHYL	7116-86-1
1-HEXYL-3-METHYL-CYCLOPENTANE	HXM3CYP

Table A-15 Analyte

Chemical_Name	Cas_rn
1H-INDENE 2,3-DIHYDRO-5-METHYL-	874-35-1
1H-INDENE,2,3-DIHYDRO-1-MET	DH23MIN
1-ISOCYANATO-2-METHYL BENZENE	614-68-6
1-METHOXY-2-(METHOXY ETHANE	110-71-4
1-METHOXY-2-METHYL-2-PROPANOL	M2ME2P
1-METHYL ETHYL HYDROPEROXIDE	3031-75-2
1-METHYL-2(2-PROPENYL)-BENZENE	1587-04-8
1-METHYL-2(PROPENYL)BENZENE	MP2BZ
1-METHYL-2-PROP CYCLOHEXANE	ME2PCHX
1-METHYL-2-PROPYLBENZENE	1074-17-5
1-METHYL-2-PYRROLIDINE	1M2PYROLDINE
1-METHYL-2-PYRROLIDINONE	872-50-4
1-METHYL-3-(2-METHYL PROPYL)-CYCLOPENTANE	M32MPRCYC5N
1-METHYL-3-PROPYL-CYCLOHEXANE	MPR3CYHX
1-METHYL-4-(1-METHYLETHYL)-7-OXABICYCLO[2.2.1]H...	MME4OX7H
1-Methyl-4-(1-methylethyl)-cyclohexane	99-82-1
1-METHYL-4-(2-PROPENYL)BENZENE	3333-13-9
1-METHYLETHYL ESTER ACETIC ACID	METEAA
1-METHYLNAPHTHALENE	90-12-0
1-METHYL-PHENANTHRENE	832-69-9
1-METHYLPHENYL-ETHANONES	MPE
1-NAPHTHYLAMINE	134-32-7
1-N-BUTYL-3-(3,4-DICHLOROPHENYL)-1-METHYLUREA	555-37-3
1-Nitropyrene	5522-43-0
1-NONADECENE	18435-45-5
1-NONANAL	124-19-6

Table A-15 Analyte

Chemical_Name	Cas_rn
1-OCTADECANOL	112-92-5
1-Octyn-3-ol, 4-ethyl	5877-42-9
1-PENTADECANOL	629-76-5
1-PENTADECENE	13360-61-7
1-PENTENE	109-67-1
1-PENTENYLBENZENE	PTNLBZ
1-PHENANTHRENECARBOXYLIC ACID	5835-26-7
1-PROPENYL CYCLOHEXANE	PRCYC6N
1-TRIDECENE	2437-56-1
1-TRIDECYN-4-OL	TDCN4
1-Undecyne	2243-98-3
2 INCH SIEVE (RETAINED)	SIEVE2INCH
2-(1-METHYL 1,1-BICYCLOHEXYL)	MEBCYHX2
2-(1-METHYLETHOXY) PHENOL METHYLCARBAMATE	114-26-1
2-(2-BUTOXY)ETHOXYETHYL ACETATE	124-17-4
2-(2-BUTOXYETHOXY)ETHANOL	112-34-5
2-(2-METHOXY ETHOXY)-ETHANOL	111-77-3
2-(3H)-BENZOTHIAZOLONE	934-34-9
2-(9-OCTADECENYLOXY-,(Z)-ETHANOL	ODC9ET
2-(METHYLTHIO) BENZOTHIAZOLE	615-22-5
2,2,3,3,4,4,6-HEPTACHLOROBIPHENYL	HPCBP2233446
2,2,3,3,4,5,6,6-OCTACHLOROBIPHENYL	OCBP22334566
2,2,3,3-TETRAMETHYL BUTANE	594-82-1
2,2,3,3-TETRAMETHYL-HEXANE	13475-81-5
2,2,3,4,6-PENTACHLOROBIPHENYL	PECBPH22346
2,2,3,4-TETRAMETHYL PENTANE	1186-53-4
2,2,3-TRIMETHYL CYCLOBUTANONE	TM223CBT
2,2,3-TRIMETHYL PENTANE	564-02-3

Table A-15 Analyte

Chemical_Name	Cas_rn
2,2',4,4',5,5',-HEXABROMOBIPHENYL	59080-40-9
2,2,4,4,5,6-HEXACHLOROBIPHENYL	HXCBPH224456
2,2',4,4',6,6',-HEXABROMOBIPHENYL	59261-08-4
2,2,4,4-TETRACHLOROBIPHENYL	TECBPH2244
2,2,4,4-TETRAMETHYL PENTANE	1070-87-7
2,2',4,5,5'-PENTABROMOBIPHENYL	67888-96-4
2,2',4,5,5'-Pentachlorobiphenyl-C13	104130-39-4
2,2',4,5',6-PENTABROMOBIPHENYL	59080-39-6
2,2',4,5'-TETRABROMOBIPHENYL	60044-24-8
2,2,4,6,6-PENTAMETHYL HEPTANE	13475-82-6
2,2,4-TRIMETHYL DECANE	TM224C10N
2,2,4-TRIMETHYL HEPTANE	14720-74-2
2,2,4-TRIMETHYL OXEPANE	TM224OXP
2,2,4-TRIMETHYL-1,3-DIOXOLANE	1193-11-9
2,2,4-TRIMETHYLPENTANE	540-84-1
2,2,5,5-TETRA METHYL HEXANE	1071-81-4
2,2',5,5'-TETRABROMOBIPHENYL	59080-37-4
2,2',5,6'-TETRABROMOBIPHENYL	60044-25-9
2,2',5-TRIBROMOBIPHENYL	59080-34-1
2,2,5-TRIMETHYL HEXANE	3522-94-9
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5
2,2,6-TRIMETHYL OCTANE	TM226C8N
2,2,7,7-TETRAMETHYLOCTANE	1071-31-4
2,21-DIMETHYL DOCOSANE	DMC22N221
2,2'-Dichlorobiphenyl	13029-08-8
2,2-DICHLOROPROPANE	594-20-7
2,2-DIMETHYL HEXANE	590-73-8
2,2-DIMETHYL PROPANE	463-82-1
2,2-DIMETHYL UNDECANE	DM22C11N

Table A-15 Analyte

Chemical_Name	Cas_rn
2,2-DIMETHYL-,(E)3-HEXENE	DM22EHX3
2,2-DIMETHYL-1,3-PROPANEDIOL	126-30-7
2,2-DIMETHYL-3-PENTANONE	564-04-5
2,2-DIMETHYLBUTANE	75-83-2
2,2-OXYBIS(2-CHLOROPROPANE)	39638-32-9
2,3 AND 2,4-DIMETHYLANILINE	DMANIL2324
2,3,3-TRIMETHYL HEXANE	16747-28-7
2,3,3-TRIMETHYLPENTANE	560-21-4
2,3',4,4',5-Pentachlorobiphenyl-C13	104130-40-7
2,3,4,5,6-PENTACHLOROANISOLE	1825-21-4
2,3,4,5,6-Pentachlorostyrene	14992-81-5
2,3,4,6,7,8-Hexachlorodibenzofuran	116843-05-1
2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	60851-34-5
2,3,4,6,7,8-HEXACHLORODIBENZOFURAN-C13	DF234678C13
2,3,4,6-TETRACHLOROPHENOL	58-90-2
2,3,4,7,8-PENTACHLORODIBENZOFURAN	57117-31-4
2,3,4,7,8-PENTACHLORODIBENZOFURAN-C13	DF23478C13
2,3,4-TRIFLUOROTOLUENE	234TFBZME
2,3,4-TRIMETHYL HEPTANE	TM234C7N
2,3,4-TRIMETHYL HEXANE	921-47-1
2,3,4-TRIMETHYLPENTANE	565-75-3
2,3,4-TRIMETHYLPHENANTHRENE	TMPHAN234
2,3,5,6-TETRACHLOROPHENOL	935-95-5
2,3',5-TRIBROMOBIPHENYL	59080-35-2
2,3,5-TRIMETHYL HEPTANE	TMC7N235
2,3,5-TRIMETHYL HEXANE	1069-53-0
2,3,6-TRICHLOROPHENOL	933-75-5
2,3,6-TRIMETHYL HEPTANE	4032-93-3
2,3,6-TRIMETHYL PHENOL	2416-94-6

Table A-15 Analyte

Chemical_Name	Cas_rn
2,3,7,8-TETRACHLORODIBENZOFURAN	51207-31-9
2,3,7,8-Tetrachlorodibenzofuran-C13	89059-46-1
2,3,7,8-TETRACHLORODIBENZOFURAN-C13	TCDF2378C13
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	1746-01-6
2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	76523-40-5
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN-C13	TCDD2378C13
2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN-Cl37	85508-50-5
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN-CL37	TCDD2378CL37
2,3,7-TRIMETHYLOCTANE	TM237C8N
2,3,8-TRIMETHYL DECANE	TM238C10N
2,3-BENZOFURAN	271-89-6
2,3-BIS[1-METHYL ETHYL OXIRANE	MEOXR23
2,3-BUTANEDIOL	513-85-9
2,3-DECAHYDRO-1,2-DIMETHYL 1H-INDENE	DH23DM12IN1H
2,3-DICHLOROBIPHENYL	16605-91-7
2,3-DICHLOROPHENOL	576-24-9
2,3-DICHLOROPROPENE	78-88-6
2,3-DIHYDRO-1,6-DIMETHYL-1H-INDENE	DH23DM16IN
2,3-DIHYDRO-1H-INDEN-1-ONE	83-33-0
2,3-DIHYDRO-1H-INDENE	496-11-7
2,3-DIHYDRO-2-METHYL BENZOFURAN	1746-11-8
2,3-DIHYDRO-4,7-D 1H-INDENE	DH23IN47
2,3-DIHYDRO-4-METHYL 1H INDENE	DH23M4IN
2,3-DIMETHYL ANILENE	87-59-2
2,3-DIMETHYL BUTANE	79-29-8
2,3-DIMETHYL HEXANE	584-94-1

Table A-15 Analyte

Chemical_Name	Cas_rn
2,3-DIMETHYL NAPHTHALENE	581-40-8
2,3-DIMETHYL NONADECANE	DMC19N23
2,3-DIMETHYL NONANE	DM23C9N
2,3-DIMETHYL OCTANE	7146-60-3
2,3-DIMETHYL PENTANE	565-59-3
2,3-DIMETHYL PHENOL	526-75-0
2,3-DIMETHYL-1-PENTENE	3404-72-6
2,3-DIMETHYL-2-PENTENE	10574-37-5
2,3-PENTANEDIONE	600-14-6
2,4 DB	94-82-6
2,4,4-TRIMETHYL HEXANE	16747-30-1
2,4,5,6-TETRACHLORO-META-XYLENE	877-09-8
2,4,5-T (TRICHLOROPHENOXYACETIC ACID)	93-76-5
2,4',5-TRIBROMOBIPHENYL	59080-36-3
2,4,5-TRICHLOROBIPHENYL	15862-07-4
2,4',5-Trichlorobiphenyl	16606-02-3
2,4,5-TRICHLOROPHENOL	95-95-4
2,4,5-TRIMETHYLANILINE	137-17-7
2,4,6-TRIBROMOBIPHENYL	59080-33-0
2,4,6-TRIBROMOBIPHENYL	PHEN2BR246
2,4,6-TRIBROMOPHENOL	118-79-6
2,4,6-Trichlorobenzenamine	634-93-5
2,4,6-TRICHLOROPHENOL	88-06-2
2,4,6-TRICHLOROPHENYL ISOCYANATE	2505-31-9
2,4,6-TRIMETHYL BENZOIC ACID	480-63-7
2,4,6-TRIMETHYL OCTANE	TM246C8N
2,4,6-TRINITROTOLUENE	118-96-7
2,4-BIS(1,1-DIMETHYLETHYL) PHENOL	96-76-4
2,4-D (DICHLOROPHENOXYACETIC ACID)	94-75-7

Table A-15 Analyte

Chemical_Name	Cas_rn
2,4-DIAMINO-6-NITROTOLUENE	6629-29-4
2,4-DIAMINOTOLUENE	95-80-7
2,4-DIBROMOBIPHENYL	53592-10-2
2,4-DICHLOROBENZALDEHYDE	874-42-0
2,4-DICHLOROPHENOL	120-83-2
2,4-DICHLOROPHENYLACETIC ACID	19719-28-9
2,4-DIHYDROXY-6-METHYL METHYL BENZOIC ACID	DHYD24M6MBZA
2,4-DIMETHYL ANILENE	95-68-1
2,4-DIMETHYL DECANE	DM24C10N
2,4-DIMETHYL HEPTANE	2213-23-2
2,4-DIMETHYL PENTANE	108-08-7
2,4-DIMETHYL-1,3-DIOXOLANE	DM24DXL3
2,4-DIMETHYL-1-HEPTANOL	DM24HPT
2,4-DIMETHYL-3-HEPTANONE	18641-71-9
2,4-DIMETHYL-3-PENTANONE	565-80-0
2,4-DIMETHYLPHENOL	105-67-9
2,4-DINITROFLUOROBENZENE	70-34-8
2,4-DINITROPHENOL	51-28-5
2,4-DINITROTOLUENE	121-14-2
2,4-DIPHENYLHYDRAZINE	DPHY24
2,4-IMIDAZOLIDINEDIONE	461-72-3
2,4-PENTANEDIONE	123-54-6
2,5,6-TRIMETHYL DECANE	TM256C10N
2,5,9-TRIMETHYL DECANE	TM259C10N
2,5-DIBROMOBIPHENYL	57422-77-2
2,5-DICHLOROPHENOL	583-78-8
2,5-DIHYDRO-2,5-DIMETHOXY FURAN	332-77-4
2,5-DIMETHYL DECANE	17312-50-4

Table A-15 Analyte

Chemical_Name	Cas_rn
2,5-DIMETHYL DODECANE	DM25C12N
2,5-DIMETHYL HEPTANE	2216-30-0
2,5-DIMETHYL HEXANE	592-13-2
2,5-DIMETHYL NONANE	DM25C9N
2,5-DIMETHYL OCTANE	DM25C8N
2,5-DIMETHYL PHENOL	95-87-4
2,5-DIMETHYL-2-HEXENE	3404-78-2
2,5-DIMETHYLANILINE	95-78-3
2,5-DIMETHYLBENZALDEHYDE	5779-94-2
2,5-DIMETHYLFURAN	625-86-5
2,5-DINITROPHENOL	329-71-5
2,5-DI-TERT-PENTYLHYDROQUINONE	79-74-3
2,5-Heptadien-4-one, 2,6-dimethyl	504-20-1
2,5-PYRROLIDINEDIONE,3-[1-(	PYRL25D3
2,6,10,14-TETRAMETHYL HEPTADECANE	TMHPC10N
2,6,10,14-TETRAMETHYL PENTADECANE	1921-70-6
2,6,10,14-TETRAMETHYLHEXADECANE	638-36-8
2,6,10,15-HEPTADECANE	HD261015
2,6,10-TRIMETHYL TETRADECANE	TM2610C14N
2,6,10-TRIMETHYLDODECANE	3891-98-3
2,6,10-TRIMETHYLTRIDECANE	3891-99-4
2,6,6-TRIMETHYL DECANE	TM266C10N
2,6,6-TRIMETHYL OCTANE	TM266C8N
2,6,7-TRIMETHYL DECANE	TM267C10N
2,6,8-TRIMETHYL DECANE	TM268C10N
2,6-BIS(1,1-DIMETHYLETHYL)-4-METHYLPHENOL	128-37-0
2,6-D (DICHLOROPHENOXYACETIC ACID)	D26
2,6-DIAMINO-4-NITROTOLUENE	59229-75-3

Table A-15 Analyte

Chemical_Name	Cas_rn
2,6-DIBROMOBIPHENYL	59080-32-0
2,6-DICHLORO-4-NITROANILINE	99-30-9
2,6-DICHLOROBENZOIC ACID	50-30-6
2,6-DICHLOROBENZONITRILE	1194-65-6
2,6-DICHLOROPHENOL	87-65-0
2,6-DIMETHYL DODECANE	DM26C12N
2,6-DIMETHYL HEPTADECANE	26DMHD
2,6-DIMETHYL HEPTANE	1072-05-5
2,6-DIMETHYL NONANE	DM26C9N
2,6-DIMETHYL OCTANE	2051-30-1
2,6-DIMETHYL PHENOL	576-26-1
2,6-DIMETHYL UNDECANE	17301-23-4
2,6-DIMETHYL-6-NITRO-2-HEPTEN-4-ONE	73583-56-9
2,6-DIMETHYLANILINE	87-62-7
2,6-DIMETHYL-NAPTHALENE	581-42-0
2,6-DINITROFENOL	573-56-8
2,6-DINITROTOLUENE	606-20-2
2,6-TOLUENEDIAMINE	823-40-5
2,7,10-TRIMETHYL DODECANE	74645-98-0
2,7-DIMETHYL NAPHTHALENE	582-16-1
2,7-DIMETHYL-1-OCTANOL	DM27OCTOH
2,9-DIMETHYL DECANE	DM29C10N
2,9-DIMETHYL UNDECANE	DM29C11N
2.5 INCH SIEVE (RETAINED)	SIEVE2.5IN
2-[2-(2-ETHOXYETHOXY)ETHOXY]-ETHANOL	112-50-5
200 SIEVE (RETAINED)	SIEVEUS200
22'METHYLENE BIS[6(1,1-DIMETHYL-ETHYL)4	MB22DME6
2-ACETYLAMINOFLUORENE	53-96-3
2-AMINO-4,6-DINITROTOLUENE	35572-78-2

Table A-15 Analyte

Chemical_Name	Cas_rn
2-AMINOANTHRAQUINONE	117-79-3
2-AMINOETHANOL	141-43-5
2-AMINONAPHTHALENE (BETA NAPHTHYLAMINE)	91-59-8
2-AMINO-P-CRESOL	95-84-1
2-BROMO-1,3-CYCLOPENTANEDIONE	B2CYPE13
2-BROMO-1-CHLOROPROPANE	3017-95-6
2-BROMO-5-ETHYLNONANE	BR2E
2-BROMOBIPHENYL	2052-07-5
2-BROMOHEPTANE	1974-04-5
2-BROMONAPHTHALENE	580-13-2
2-BROMO-OCTANE	557-35-7
2-BROMOPHENOL	95-56-7
2-BUTANOL	15892-23-6
2-BUTANOL,3-BROMO-,ACETATE	BR3ABTOH
2-BUTANOL,3-CHLORO ACETATE	CL3ABTOH2
2-BUTANONE-D5	24313-50-6
2-BUTENE	107-01-7
2-BUTENOIC ACID	3724-65-0
2-BUTOXY-,PHOSPHATE ETHANOL	BTOX2PET
2-BUTYL-1,1,3-TRIMETHYLCYCLOHEXANE	BT2CYHX113T
2-BUTYL-1-OCTANOL	3913-02-8
2-Butyl-ethylhexyl phthalate	85-69-8
2-CHLORO-1,3-BUTADIENE	126-99-8
2-CHLORO-4,5-DIMETHYLPHENOL	1124-04-5
2-CHLORO-5-METHYLPHENOL	615-74-7
2-CHLOROANTHRACENE	17135-78-3
2-CHLOROBIPHENYL	2051-60-7
2-CHLOROCYCLOHEXANOL	1561-86-0

Table A-15 Analyte

Chemical_Name	Cas_rn
2-CHLOROETHYL VINYL ETHER	110-75-8
2-CHLORONAPHTHALENE	91-58-7
2-CHLOROPHENOL	95-57-8
2-CHLOROPHENOL-D4	93951-73-6
2-CHLOROPHOSPHATE ETHANOL	CLP2ET
2-CHLOROTOLUENE	95-49-8
2-CYCLO HEXENE-1-OL	822-67-3
2-CYCLOHEXEN-1-ONE	930-68-7
2-Cyclohexen-1-one 3-methyl	1193-18-6
2-CYCLOHEXEN-1-ONE,3-(2-BUT	CYHX2B2
2-CYCLOHEXYL EICOSANE	CYHE2C20N
2-CYCLOHEXYL-4,6-DINITROPHENOL	131-89-5
2-CYCLOHEXYL-DECANE-2-CYCLOHEXYL	CH2C10N2CH
2-DECENAL, (E)-	3913-71-1
2-ETHENYL-6-METHYL-PYRAZINE	EN2M6PYZ
2-ETHYL 1-DECANOL	E2DC
2-ETHYL HEXYL DIPHEN PHOSPHORIC ACID	E2HXDPHA
2-ETHYL-1,3-DIMETHYL BENZENE	2870-04-4
2-ETHYL-1,3-HEXANEDIOL	94-96-2
2-ETHYL-1,4-DIMETHYL BENZENE	1758-88-9
2-ETHYL-1-BUTANOL	97-95-0
2-ETHYL-1-HEXANOL	104-76-7
2-ETHYL-2-(HYDROXYMETHYL)-1,3-PROPANEDIOL	77-99-6
2-ETHYL-4-METHYL-1,3-DIOXOLANE	4359-46-0
2-ETHYL-4-METHYLPHENOL	E2MP4
2-ETHYL-5-METHYLPHENOL	E2MP5
2-ETHYL-6-METHYLPHENOL	E2MP6
2-ETHYLANILINE	578-54-1

Table A-15 Analyte

Chemical_Name	Cas_rn
2-ETHYLBUTYRALDEHYDE	97-96-1
2-ETHYLHEXANOIC ACID	149-57-5
2-ETHYLHEXYL ACETATE	103-09-3
2-ETHYLHEXYL ACRYLATE	103-11-7
2-ETHYLHEXYL ADIPATE	4337-65-9
2-ETHYLHEXYL ALDEHYDE	123-05-7
2-ETHYLPHENOL	90-00-6
2-FLUORO-4-NITROPHENOL	21571-34-6
2-FLUOROBIPHENYL	321-60-8
2-FLUOROPHENOL	367-12-4
2-HEPTADECANONE	2922-51-2
2-HEPTANONE	110-43-0
2-HEXANONE	591-78-6
2-Hexanone-d5	4840-82-8
2-HEXEN-1-OL	HXN2OL
2-Hexyl-1-octanol	19780-79-1
2H-PERFLUORO-2-DECENOIC ACID	70887-84-2
2H-PERFLUORO-2-OCTENOIC ACID	FHUEA
2-ISOHEXYL-6-METHYL-1-HEPTANE	IS2M6C7N
2-ISOPROPYL-1,3-DIMETHYL-CYCLOPENTANE	IP2DMCYP13
2-Isopropyl-10-methylphenanthrene	66552-97-4
2-METHOXYETHANOL	109-86-4
2-METHOXYPHENOL	90-05-1
2-METHYL BUTANE	78-78-4
2-METHYL BUTANOIC ACID	116-53-0
2-METHYL CYCLOPENTANOL	24070-77-7
2-METHYL DECANE	6975-98-0
2-METHYL HEXANE	591-76-4
2-METHYL HEXANOIC ACID	4536-23-6

Table A-15 Analyte

Chemical_Name	Cas_rn
2-METHYL NONANE	871-83-0
2-METHYL P OCTADECANOIC ACID	ME2OCPA
2-METHYL PENTADECANE	1560-93-6
2-METHYL PROPANE	75-28-5
2-METHYL PROPANOIC ACID	79-31-2
2-METHYL TRIDECANE	1560-96-9
2-METHYL UNDECANE	31807-55-3
2-METHYL-,2 PROPANOIC ACID	ME2PA2
2-METHYL-1(1,1-DIMETHYLETHYL PROPANOIC ACID)	2MDMEPA
2-METHYL-1,3-BUTADIENE (ISOPRENE)	78-79-5
2-METHYL-1-BUTANOL	137-32-6
2-METHYL-1-HEPTENE	15870-10-7
2-METHYL-1-PENTENE	763-29-1
2-METHYL-1-PENTENE-3-OL	2088-07-5
2-METHYL-1-UNDECENE	18516-37-5
2-METHYL-2-PENTENE	625-27-4
2-METHYL-2-PROPENOIC ACID, DODECYL ESTER	142-90-5
2-METHYL-3-HEPTANONE	13019-20-0
2-METHYL-3-PENTANONE	565-69-5
2-METHYL-3-PENTEN 1-OL	M2PN3
2-METHYL-4-(2-METHYLPROPYL)-CYCLOPENTANONE	M24MPR2CYP
2-METHYL-5-ETHYL PYRIDINE	104-90-5
2-METHYL-8-PROPYLDODECANE	M2P8C12N
2-METHYL-A-HEXADECANOL	M2HXDC
2-METHYLBENZENESULFONAMIDE	88-19-7
2-METHYLBENZENESULFONYLCHLORIDE	133-59-5

Table A-15 Analyte

Chemical_Name	Cas_rn
2-METHYL-BENZONITRILE	529-19-1
2-METHYL-DODECANE	1560-97-0
2-METHYL-EICOSANE	M2C20N
2-METHYL-ETHENYL ESTER-2-PROPENOIC ACID	2MEE2PA
2-METHYL-HEPTANE	592-27-8
2-METHYLNAPHTHALENE	91-57-6
2-METHYLOCTANE	3221-61-2
2-METHYLPENTALDEHYDE	ME2PEHYDE
2-METHYL-PENTANE	107-83-5
2-METHYLPHENOL (O-CRESOL)	95-48-7
2-METHYLPYRENE	3442-78-2
2-NITROANILINE	88-74-4
2-Nitrofluorene	607-57-8
2-NITROPHENOL	88-75-5
2-NITROPROPANE	79-46-9
2-NITROTOLUENE	88-72-2
2-NITROTOLUENE AND 4-NITROTOLUENE (TOTAL)	NBZME24
2-NONADECANONE	629-66-3
2-NONANONE	821-55-6
2-NONENAL	2463-53-8
2-OCTANOL	123-96-6
2-PENTADECANONE	2345-28-0
2-PENTANOL	6032-29-7
2-PHENYL NAPHTHALENE	612-94-2
2-PHENYL-AZETIDINE	PHAZT2
2-PICOLINE (ALPHA-PICOLINE)	109-06-8
2-PIPERIDINONE	675-20-7

Table A-15 Analyte

Chemical_Name	Cas_rn
2-PROPANOL, 1,3-DIBROMO-, P	18713-51-4
2-PROPEN-1-OL	107-18-6
2-PROPENYL BENZENE	300-57-2
2-PROPENYL-CYCLOHEXANE	2114-42-3
2-PROPOXY-ETHANOL	2807-30-9
2-PROPYL-1-HEPTANOL	10042-59-8
2-PROPYLFURAN	4229-91-8
2-PROPYN-1-OL	107-19-7
2-PYRROLIDINONE	616-45-5
2-TRIDECANONE	593-08-8
2-UNDECENE (Z)-	821-96-5
3 & 4-METHYLPHENOL (M, P-CRESOLS)	65794-96-9
3- AND 4- METHYLPHENOL (TOTAL)	MEPH3MEPH4
3-(2-PHENYLETHYL)PHENOL	33675-75-1
3-(3,4-DICHLOROPHENYL)-1,1-DIMETHYLUREA	330-54-1
3-(3,4-DICHLOROPHENYL)-1-METHOXY-1-METHYLUREA	330-55-2
3-(CHLOROMETHYL) PYRIDINE	CLM3PYRDN
3-(P-CHLOROPHENYL)-1,1-DIMETHYLUREA	150-68-5
3-(P-CHLOROPHENYL)-1-1-DIMETHYLUREA TRICHLOROACETA	MONURONTCA
3,3',4,4',5,5',-HEXABROMOBIPHENYL	60044-26-0
3,3,4-TRIMETHYL HEXANE	16747-31-2
3,3',5,5'-TETRABROMOBIPHENYL	16400-50-3
3,3,5-TRIMETHYL-1-HEXENE	4316-65-8
3,3,5-trimethylcyclohexanone	873-94-9
3,3'-DICHLOROBENZIDINE	91-94-1
3,3'-Dichlorobiphenyl	2050-67-1

Table A-15 Analyte

Chemical_Name	Cas_rn
3,3'-DIMETHOXYBENZIDINE	119-90-4
3,3-DIMETHYL-1-HEXENE	3404-77-1
3,3'-DIMETHYLBENZIDINE	119-93-7
3,3-DIMETHYLOCTANE	4110-44-5
3,3-OXYBIS-1-PROPENE	557-40-4
3,3-THIOBIS PROPANOIC ACID	111-17-1
3,4,5-TRIBROMOBIPHENYL	115245-80-4
3,4-DICHLOROPHENOL	95-77-2
3,4-DIH 1(2H) NAPHTHALENONE	D34NAPHN2H
3,4'-Diisopropylbiphenyl	61434-46-6
3,4-DIMETHYL BENZOIC ACID	619-04-5
3,4-DIMETHYL-1-DECENE	DM34DCN
3,4-DIMETHYL-2-PENTENE	24910-63-2
3,4-DIMETHYLANILINE	95-64-7
3,4-DIMETHYLPHENOL	95-65-8
3,4-DINITROTOLUENE	610-39-9
3,5,6-TRIS 2(1H)-PYRAZINONE	TPYR356
3,5-DIAMINOBENZOIC ACID	535-87-5
3,5-DICHLOROBENZOIC ACID	51-36-5
3,5-DIMETHYL OCTANE	15869-93-9
3,5-DIMETHYL PHENOL	108-68-9
3,5-DIMETHYL-1-ETHYLBENZENE	934-74-7
3,5-DIMETHYL-4-(METHYLTHIO) PHENYL METHYLCARBAMATE	2032-65-7
3,5-DIMETHYLANILINE	108-69-0
3,5-DIMETHYLBENZOIC ACID	499-06-9
3,5-DINITROANILINE	618-87-1
3,5-HEXADIEN-2-OL	HXD352OL
3,6-DIMETHYL OCTANE	15869-94-0

Table A-15 Analyte

Chemical_Name	Cas_rn
3,6-DIMETHYL UNDECANE	DM36C11N
3,6-DIMETHYLDECANE	DM36C10N
3,6-DIMETHYLPHENANTHRENE	1576-67-6
3,7,11-TRIMETHYL-2,6,10-DODECATRIEN-1-OL	4602-84-0
3,7-DIMETHYL UNDECANE	DM37C10N
3,7-DIMETHYLNONANE	DMN37
3,8-DIMETHYL UNDECANE	DM38C11N
3,9-DIMETHYL-UNDECANE	DM39C11N
30 SIEVE (RETAINED)	SIEVEUS30
35 SIEVE (RETAINED)	SIEVEUS35
37CL-2378-TCDD	37CL-1746-01-6
3-AMINO-9-ETHYLCARBAZOLE	132-32-1
3-BROMODECANE	BRC10N3
3-BROMOHEXANE	3377-87-5
3-CHLOROCYCLOHEXENE	CLCYHX
3-CHLORODIPHENYL	2051-61-8
3-CHLOROPHENOL	108-43-0
3-CHLOROPHENOL AND 4-CHLOROPHENOL	CLPHNL3_4
3-CHLOROPROPANENITRILE	542-76-7
3-CHLOROTOLUENE	108-41-8
3-CYCLOHEXENE-1-METHANOL	CHX3MEOH
3-ETHYL HEPTANE	15869-80-4
3-ETHYL OCTANE	5881-17-4
3-ETHYL PENTANE	617-78-7
3-ETHYL TRIDECANE	E3C13N
3-ETHYL-1-OCTENE	3ETO
3-ETHYL-2,7-DIMETHYL OCTANE	E3ME27C8N
3-ETHYL-2-METHYL-HEPTANE	14676-29-0

Table A-15 Analyte

Chemical_Name	Cas_rn
3-ETHYL-4-4-DIMETHYL-2-PENTENE	E3DMPTN2
3-ETHYL-4-METHYL HEXANE	3074-77-9
3-ETHYL-5-METHYL HEPTANE	E3ME5C7N
3-FLUORO-4-NITROPHENOL	394-41-2
3-HEXADECENE (Z)	HXDCN3
3-HEXANONE	589-38-8
3-Hexen-2-one	763-93-9
3-HEXENE-2,5-DIONE	HX3DIN25
3-HYDROXYBENZOIC ACID	99-06-9
3-HYDROXYCARBOFURAN	16655-82-6
3-METHYL DECANE	13151-34-3
3-METHYL DODECANE	17312-57-1
3-METHYL OCTADECANE	M3OC10N
3-METHYL PHENANTHRENE	832-71-3
3-METHYL UNDECANE	M3C11N
3-METHYL-1,3-PENTADIENE	4549-74-0
3-METHYL-1-PENTENE	760-20-3
3-METHYL-2-HEPTANONE	2371-19-9
3-METHYL-2-PENTENE	922-61-2
3-METHYLBENZOIC ACID	99-04-7
3-METHYLBUTANOIC ACID	503-74-2
3-METHYLCHOLANTHRENE	56-49-5
3-METHYLHEPTANE	589-81-1
3-METHYLHEXANE	589-34-4
3-METHYL-NONANE	ME3C9N
3-METHYLPENTANE	96-14-0
3-METHYLPHENOL	108-39-4
3-METHYLPHENOL & 4-METHYLPHENOL (M&P-CRESOL)	MTPHN3_4

Table A-15 Analyte

Chemical_Name	Cas_rn
3-METHYL-TRIDECANE	M3C13N
3-MONOBROMOBIPHENYL	2113-57-7
3-NITROANILINE	99-09-2
3-NITROTOLUENE	99-08-1
3-OCTADECENE (E)	OCD
3-OCTADECYNE	OCDCYN3
3-PENTANONE	96-22-0
3-PENTEN-2-ONE,4-METHOXY-	MTX4PN3ON2
3-PERFLUOROHEPTYL PROPANOIC ACID	812-70-4
3-PHENYL-1,1-DIMETHYLUREA	101-42-8
3-PICOLINE	108-99-6
3-TETRADECENE, (Z)	TDCEN
4 INCH SIEVE (RETAINED)	SIEVE4IN
4 METHYL UNDECANE	ME4C11N
4 SIEVE (RETAINED)	SIEVEUS4
4-(1,1,3,3-TETRAMETHYLBUTYL)	TMB4
4-(1,1-DIMETHYL PHENOL)	DMPH4
4-(1-METHYLETHYL)-HEPTANE	ME4C7N
4-(ACETYLOXY)2-BUTANONE	10150-87-5
4-(DIMETHYLAMINO)-3-METHYLPHENOLMETHYL-CARBAMATE	2032-59-9
4,4'-BUTYLIDENE BIS[2-(1,1-DIMETHYLETHYL)]5-M-ETH	BBDMEEP
4,4'-BUTYLIDENE PHENOL	BUT44PH
4,4'-DIBROMOBIPHENYL	92-86-4
4,4'-DIBROMOOCTAFLUOROBIPHENYL	10386-84-2
4,4'-DICHLOROBIPHENYL	2050-68-2
4,4-DIMETHYL-1-PENTEN	762-62-9
4,4'-METHYLENE DIANILINE	101-77-9

Table A-15 Analyte

Chemical_Name	Cas_rn
4,4'-METHYLENE-BIS(2-CHLOROANILINE)	101-14-4
4,4'-METHYLENEBIS(N,N-DIMETHYLANILINE	101-61-1
4,4'-OXYDIANILINE	101-80-4
4,5-DIMETHYL-2,6-OCTADIENE	DM45OCD26
4,5-NONADIENE	NDN45
4,6-DIMETHYL DODECANE	DM46C12N
4,6-DIMETHYL UNDECANE	DM46C11N
4,6-DINITRO-2-METHYLPHENOL	534-52-1
4,7-DIMETHYL UNDECANE	17301-32-5
4,7-Methanoazulene octahydro-	514-51-2
4,8-DIMETHYL TRIDECANE	DM48C13N
4-AMINO-2,6-DINITROTOLUENE	19406-51-0
4-AMINOBIPHENYL (4-BIPHENYLAMINE)	92-67-1
4-AMINO-M-CRESOL	2835-99-6
4B,5,6,7,8,8A,9,10-OCTAHYDRO-4B,8,8-TRIMETHYL-1-(1	OTP
4-BROMO-3,5-DIMETHYLPHENYL	B4DMP35MC
4-BROMOBENZENESULFONIC ACID	79326-93-5
4-BROMOCHLOROBENZENE	106-39-8
4-BROMOPHENYL PHENYL ETHER	101-55-3
4-BUTOXY BUTANOIC ACID	55724-73-7
4-Chloro-1,1'-biphenyl	2051-62-9
4-CHLORO-1,2-PHENYLENEDIAMINE	95-83-0
4-CHLORO-1,3-PHENYLENEDIAMINE	5131-60-2
4-CHLORO-2-BUTYNYL M-CHLOROCARBANILATE	101-27-9
4-CHLORO-2-METHYL ANILENE	95-69-2
4-CHLORO-2-METHYLPHENOL	1570-64-5
4-CHLORO-3-METHYLPHENOL	59-50-7

Table A-15 Analyte

Chemical_Name	Cas_rn
4-CHLOROANILINE	106-47-8
4-CHLOROBENZENESULFONIC ACID	98-66-8
4-CHLOROPHENOL	106-48-9
4-CHLOROPHENYL PHENYL ETHER	7005-72-3
4-CHLORORESORCINOL	95-88-5
4-CHLOROTOLUENE	106-43-4
4-DIMETHYLAMINO-3,5-XYLYL N-METHYLCARBAMATE	315-18-4
4-ETHYL 2-OCTENE	4ETO2
4-ETHYL 3-HEPTANE	E4C7N3
4-ETHYL OCTANE	15869-86-0
4-ETHYL-1,2-DIMETHYL BENZENE	934-80-5
4-ETHYL-2-METHYL HEXANE	3074-75-7
4-ETHYLTOLUENE	622-96-8
4-FLUORO-1,1'-BIPHENYL	324-74-3
4H-CYCLOPENTA[DEF]PHENANTHRENE	203-64-5
4H-Cyclopenta[def]phenanthrene	203-65-5
4-HYDROXY-3-METHYLBENZALDEHYDE	15174-69-3
4-HYDROXYBENZOIC ACID	99-96-7
4-HYDROXYPHENYL ESTER THIOCYCANIC ACID	HYP4ETC
4-ISOPROPYL HEPTANE	IPR4C7N
4-METHOXY-4-METHYL-2-PENTANONE	107-70-0
4-METHOXYPHENOL	150-76-5
4-METHYL CYCLOHEXANOL	589-91-3
4-METHYL DECANE	2847-72-5
4-METHYL HEXADECANE	M4C16N
4-METHYL-2-HEPTANONE	6137-06-0
4-METHYL-4-PENTEN-2-ONE	M4PTN4

Table A-15 Analyte

Chemical_Name	Cas_rn
4-METHYLBENZENESULFONAMIDE	70-55-3
4-METHYLBENZENESULFONYLCHLORIDE	98-59-9
4-METHYLBENZOYL CHLORIDE	874-60-2
4-METHYLDIBENZOFURAN	7320-53-8
4-METHYLHEPTANE	589-53-7
4-METHYL-IH-PYRAZOLE	M4PYRZ
4-METHYLNAPHTHALENE	4-90-12-0
4-METHYLPHENOL (P-CRESOL)	106-44-5
4-METHYLPYRENE	3353-12-6
4-METHYLTRIDECANE	METD
4-MONOBROMOBIPHENYL	92-66-0
4-NITROANILINE	100-01-6
4-NITROBIPHENYL	92-93-3
4-NITROPHENOL	100-02-7
4-NITROQUINOLINE-N-OXIDE	56-57-5
4-NITROTOLUENE	99-99-0
4-NONYL PHENOL	104-40-5
4-OCTENOIC ACID, 6-ETHYL-3-HYDROXY-3,7-DIMETHYL-,M	EHDMMOA
4-OXIDE 1,4-OXATHIANE	OX4OXAT14
4-PENTEN-2-OL	625-31-0
4-PHENYL-OXAZOLE	PH4OXZ
4-PICOLINE	108-89-4
4-PROPYL DECANE	PR4C10N
4-PROPYL HEPTANE	3178-29-8
4-PROPYL-3-HEPTENE	4485-13-6
4-TERT-BUTYLPHENOL	98-54-4
4-TETRAMETHYLBUTYL-PHENOL	TMB4PH
5-(1-METHYLPROPYL)NONANE	MEPR5C9N

Table A-15 Analyte

Chemical_Name	Cas_rn
5-(ACETYLOXY)-2-PENTANONE	5185-97-7
5,5-DIMETHYL-2-(5H)-FURANONE	DM55FUR25H
5,5-DIPHENYLHYDANTOIN	57-41-0
5,6-DIMETHYL UNDECANE	DM56C11N
5,7-DIMETHYL UNDECANE	DM57C11N
50 SIEVE (RETAINED)	SIEVEUS50
5-ALPHA-ANDROSTANE	438-22-2
5-AMINO-O-CRESOL	2835-95-2
5-BROMO-2-(P-FLUOROPHENOXY ANILINE)	BR5FLPPAN
5-BUTYL NONANE	BC9N5
5-CHLORO-2-METHYLANILINE	95-79-4
5-EICOSENE (E)-	C20N5
5-ETHYL UNDECANE	E5C11N
5-ETHYL-2-METHYL HEPTANE	E5ME2C7N
5-ETHYL-2-METHYL OCTANE	E5ME2C8N
5-HYDROXYDICAMBA	HYDDICAM
5-METHOXY-2-PENTANONE	MTX5PN2
5-METHYL-2-(1-METHYLETHYLIDENE)-CYCLOHEXANONE	M5METN2CYH
5-METHYL-2-UNDECANE	ME5C11N2
5-Methylchrysene	3697-24-3
5-METHYLUNDECANE	ME5C11N
5-NITROACENAPHTHENE	602-87-9
5-NITRO-O-ANISIDINE	99-59-2
5-NITRO-O-TOLUIDINE	99-55-8
5-OCTADECENAL	OCTDEC5
5-OCTADECENE (E)	OCD5
5-PROPYL DECANE	PR5C10N
5-PROPYL TRIDECANE	PR5C13N

Table A-15 Analyte

Chemical_Name	Cas_rn
6 INCH SIEVE (RETAINED)	SIEVE6IN
6-(ACETYLOXY)2-HEXANONE	AC6HXN2
6,10,14-TRIMETHYL-2-PENTADECANONE	502-69-2
6,6-DIMETHYL UNDECANE	DM66C11N
6,9-DIMETHYL TETRADECANE	DM69C14N
6-AMINO HEXANOIC ACID	60-32-2
6-ETHYL-2-METHYL DECANE	E6ME2C10N
6-ETHYL-2-METHYL OCTANE	E6ME2C8N
6H,8H-BENZO[10,11]CHRYSENO [1	B68HCHRY
6-METHYL-UNDECANE	ME6C11N
6-Nitrochrysene	7496-02-8
6-OCTADECANOL	OCDC6
6-OCTADECENAL	OCTDEC6
6-PHENYL-1,3,5-TRIAZINE-2,4-DIAMINE	91-76-9
6-PROPYL TRIDECANE	PR6C13N
7,12-DIMETHYLBENZ(A)ANTHRACENE	57-97-6
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6	82304-66-3
7-BUTYL-DOCOSANE	BC22N7
7H-DIBENZO(C,G)CARBAZOLE	194-59-2
7-HEXYL EICOSANE	HE7C20N
7-METHYL TRIDECANE	M7C13N
8 SIEVE (RETAINED)	SIEVEUS8
8-AMINO-2-NAPHTHALENOL	A8NAPHL2
8-METHYL,2-DECENE	DEC2M8
8-METHYL-1-DECENE	M8DCN
9,10-ANTHRACENEDIONE	84-65-1
9,10-DIPHENYLANTHRACENE	1499-10-1
9,12-ANTHRACENE DIONE	ANTHD912
9,12-OCTADECADIEN-1-OL	OCTDNOL912

Table A-15 Analyte

Chemical_Name	Cas_rn
9,12-OCTADECADIENOIC A	OCTDNA912
91-METHYL PROPYL CYCLOHEXANE	MPCYHX91
9-BUTYL-DOCOSANE	BC22N9
9-DODECYL TETRA PHENANTHRENE	DCT9PHN
9-HEXADECANOIC ACID	2091-29-4
9H-FLUOREN-9-ONE	486-25-9
9-HYDROXY-2-NONANONE	HY9NON2
9-OCTADECANAL	OCTDC9
9-OCTADECANOIC ACID (Z), METHYL ESTER	MEOCDNA9
9-OCTADECENOIC ACID (Z)-,2,3-BIS(ACETYLOXY)PROPYL	OA9BA23PE
9-OCTYL-EICOSANE	O9C20N
9-OCTYL-HEPTADECANE	OHPC10N9
9-PHENYLANTHRACENE	602-55-1
ABATE	3383-96-8
ACENAPHTHENE	83-32-9
ACENAPHTHENE-D10	15067-26-2
ACENAPHTHYLENE	208-96-8
ACEPHATE	30560-19-1
ACETALDEHYDE	75-07-0
ACETALDEHYDE BENZENE	ACABZ
ACETATE 2-HEPTANOL	ACETHPT2
ACETIC ACID	64-19-7
ACETONE	67-64-1
ACETONITRILE	75-05-8
ACETOPHENONE	98-86-2
ACETYLENE	74-86-2
A-CHLOROBENZYLIDENEMALONONITRILE	CSGAS
Acid Insoluble Residue	AIRES

Table A-15 Analyte

Chemical_Name	Cas_rn
ACID INSOLUBLE SULFIDE	AIS
ACID SOLUBLE SULFIDE	ASS
ACID VOLITILE SULFIDES	AVS
ACIDITY, TOTAL	ACID
ACIFLUORFEN	50594-66-6
ACIFLUORFEN	62476-59-9
ACROLEIN	107-02-8
ACRYLAMIDE	79-06-1
ACRYLONITRILE	107-13-1
ACTINIUM 227	14952-40-0
ACTINIUM 228	14331-83-0
AEROBIC BTEX SPECIFIC MICROBIAL POPULATION	AEROBTEXSPMICPO
AEROBIC TCE SPECIFIC MICROBIAL POPULATION	AEROTCESPMICPO
ALACHLOR	15972-60-8
ALDICARB (SULFIDE, SULFOXIDE, AND SULFONE)	116-06-3
ALDICARB SULFONE	1646-88-4
ALDICARB SULFOXIDE	1646-87-3
ALDRIN	309-00-2
ALKALINITY, BICARBONATE (AS CACO3)	ALKB
ALKALINITY, CARBONATE (AS CACO3)	ALKC
ALKALINITY, HYDROXIDE (AS CACO3)	ALKH
ALKALINITY, PHENOLPHTHALEIN	ALKP
ALKALINITY, TOTAL (AS CACO3)	ALK
ALKYL SUBSTITUTED BENZENES WITH 10TH HIGHEST CONC.	ALKYLSUBBENZE10
ALKYL SUBSTITUTED BENZENES WITH 2ND	ALKYLSUBBENZE2

Table A-15 Analyte

Chemical_Name	Cas_rn
HIGHEST CONC.	
ALKYL SUBSTITUTED BENZENES WITH 3RD HIGHEST CONC.	ALKYLSUBBENZE3
ALKYL SUBSTITUTED BENZENES WITH 4TH HIGHEST CONC.	ALKYLSUBBENZE4
ALKYL SUBSTITUTED BENZENES WITH 5TH HIGHEST CONC.	ALKYLSUBBENZE5
ALKYL SUBSTITUTED BENZENES WITH 6TH HIGHEST CONC.	ALKYLSUBBENZE6
ALKYL SUBSTITUTED BENZENES WITH 7TH HIGHEST CONC.	ALKYLSUBBENZE7
ALKYL SUBSTITUTED BENZENES WITH 8TH HIGHEST CONC.	ALKYLSUBBENZE8
ALKYL SUBSTITUTED BENZENES WITH 9TH HIGHEST CONC.	ALKYLSUBBENZE9
ALKYL SUBSTITUTED BENZENES WITH HIGHEST CONC.	ALKYLSUBBENZE1
ALLOPREGNANE	ALPREG
ALLYL CHLORIDE (3-CHLOROPROPENE)	107-05-1
ALPHA (AS U)	ALPHAU
ALPHA 1-NAPHTHALENEPROPANOL	NPHPROPA
ALPHA BENZENE ACETIC ACID	ABZAA
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	319-84-6
ALPHA ENDOSULFAN	959-98-8
ALPHA METHYLSTYRENE	98-83-9
ALPHA RADIATION	12587-46-1
ALPHA, ALPHA DIMETHYLPHENETHYLAMINE	122-09-8
ALPHA, GROSS	ALPHA

Table A-15 Analyte

Chemical_Name	Cas_rn
alpha-2,3,4,5,6-Hexachlorostyrene	68705-15-7
alpha-Caryophyllene	6753-98-6
ALPHA-CHLORDANE	5103-71-9
ALPHA-TERPINEOL	98-55-5
ALUMINUM	7429-90-5
AMERICIUM-241	86954-36-1
AMETRYN	834-12-8
AMITROLE	61-82-5
AMMONIUM	14798-03-9
AMOSITE	12172-73-5
AMYL ACETATE (MIXED ISOMERS)	628-63-7
AMYL ALCOHOL	71-41-0
ANAEROBIC BTEX SPECIFIC MICROBIAL POPULATION	ANAEBTEXSPMICPO
ANAEROBIC TCE SPECIFIC MICROBIAL POPULATION	ANAETCESPMICPO
Anaeromyxobacter spp.	ANA
A'-NEOGAMMACER-22(29)-EN-3-ONE	NEOGAM
ANHYDRIDE HEXANOIC ACID	ANHHXCA
ANILAZINE	101-05-3
ANILINE (PHENYLAMINE, AMINOBENZENE)	62-53-3
ANILINE-D5	4165-61-1
ANTHRACENE	120-12-7
ANTIMONY	7440-36-0
ANTIMONY-124	14683-10-4
ANTIMONY-125	14234-35-6
ARAMITE (TOTAL)	140-57-8
AROCLOR 6050	PCT6050
ARSENIC	7440-38-2

Table A-15 Analyte

Chemical_Name	Cas_rn
ASBESTOS	132207-33-1
ASBESTOS	1332-21-4
ASH, PERCENT	497-19-8
ATRATON	1610-17-9
ATRAZINE	1912-24-9
AZINPHOS, METHYL (GUTHION)	86-50-0
AZOBENZENE	103-33-3
AZOBENZENE-D10	AZBZD10
AZULENE	275-51-4
BALAN	1861-40-1
BARIUM	7440-39-3
BARIUM/LANTHANUM-140	BA/LA-140
BARIUM-131	14914-75-1
BARIUM-133	13981-41-4
BARIUM-140	14798-08-4
BAROMETRIC PRESSURE	BAROP
BAROMETRIC PRESSURE TREND	BPT
BAV1 Vinyl chloride reductase	BVC
BENOMYL	17804-35-2
BENTAZON	25057-89-0
BENZ[A]ANTHRACENE,1-ME	BZAAM
BENZACEPHENANTHRYLENE	BZAANT
BENZAL CHLORIDE	98-87-3
BENZALDEHYDE	100-52-7
BENZANTHRACENE-7-ONE	BZANTH7
BENZANTHRACENONE	BZANTN
BENZANTHRONE	82-05-3
BENZENE	71-43-2
BENZENE PROPANOIC ACID	BZPA

Table A-15 Analyte

Chemical_Name	Cas_rn
Benzene, (2-bromoethyl)-	103-63-9
Benzene, 1,1'-(1,1,2,2-tetramethyl-1,2-e	1889-67-4
Benzene, 1,4-dibromo-	106-37-6
Benzene, pentachloromethyl-	877-11-2
BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES	BTEX
BENZENE,1-METHYL-2-(1-METHYL	M2MBZ
Benzene.1.1'-(oxydiethylidene)bis-	93-96-9
BENZENEACETALDEHYDE, ALPHA-METHYL	93-53-8
BENZENEACETIC ACID	103-82-2
BENZENE-D6	1076-43-3
BENZENESULFOMANIDE, N-BUTYL-	BBZSM
BENZENETHIOL	108-98-5
BENZIDINE	92-87-5
BENZO(A)ANTHRACENE	56-55-3
BENZO(A)FLUORENE	238-84-6
BENZO(A)PYRENE	50-32-8
BENZO(A,B)FLUORANTHENE	205-99-2-AB
BENZO(B)FLUORANTHENE	205-99-2
BENZO(B)FLUORENES	243-17-4
BENZO(B)NAPHTHO(2,1-D)THIOPHENE	293-35-0
BENZO(C)FLUORENES	205-12-9
BENZO(C)PHENANTHRENE	195-19-7
BENZO(E)PYRENE-D12	205440-82-0
BENZO(G,H,I)FLUORANTHENE	203-12-3
BENZO(G,H,I)PERYLENE	191-24-2
BENZO(J)FLUORANTHENE	205-82-3
BENZO(K)FLUORANTHENE	207-08-9
BENZO[B]NAPHTHO[2,3-D]FURAN	243-42-5

Table A-15 Analyte

Chemical_Name	Cas_rn
BENZO[B]THIOPHENE	95-15-8
BENZO[E]PYRENE	192-97-2
BENZOFLUORANTHENE ISOMER	56832-73-6
BENZOFLUORENE ISOMER	61089-87-0
BENZOIC ACID	65-85-0
BENZONAPHTHOTHIOPHENE	BZNPHT
BENZONITRILE	100-47-0
BENZOPHENONE	119-61-9
BENZOTHIAZOLE	95-16-9
BENZOTHIAZOLONE	BZTZLN
BENZOTHIOPHENE	11095-43-5
BENZOTRICHLORIDE	98-07-7
BENZYL ALCOHOL	100-51-6
BENZYL BUTYL PHTHALATE	85-68-7
BENZYL CHLORIDE	100-44-7
BERYLLIUM	7440-41-7
BERYLLIUM-7	13966-02-4
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	319-85-7
BETA ENDOSULFAN	33213-65-9
BETA RADIATION	12587-47-2
BETA, GROSS	BETA
BETA, GROSS (AS CS-137)	BETACS
BETA, GROSS (AS SR-90)	BETASR
beta,beta-2,3,4,5,6-Heptachlorostyrene	29082-75-5
BETA-CHLORDANE	5103-74-2
beta-Sitosterol	83-46-5
BICARBONATE	71-52-3
Bicyclo heptene, 2,6-dimethyl-6-(4-methyl-3-p	17699-05-7

Table A-15 Analyte

Chemical_Name	Cas_rn
Bicyclo undeca-1,3,5,7,9-pentaene	2443-46-1
BIOAVAILABLE LEAD	7439-92-1BIO
BIOCHEMICAL OXYGEN DEMAND (BOD)	BOD
BIOCHEMICAL OXYGEN DEMAND, 20 DAY	BOD20
BIOLOGIC OXYGEN DEMAND, FIVE DAY	BOD5
BIPHENYL (DIPHENYL)	92-52-4
BIPHENYL-D10	1486-01-7
BIS-(1,1-DIMETHYLETHYL)-DIAZENE	927-83-3
BIS-(1-METHYL)HEXANEDIOIC ACID	MHAB
BIS(2-CHLOROETHOXY) METHANE	111-91-1
BIS(2-CHLOROETHOXY) METHANE-D8	BECEMD8
BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	111-44-4
BIS(2-CHLOROISOPROPYL) ETHER	108-60-1
BIS(2-CHLOROISOPROPYL) ETHER-D12	BIS2CIED12
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7
BIS-CHLOROMETHYLETHER	542-88-1
BISMUTH	7440-69-9
BISMUTH-207	13982-38-2
BISMUTH-212	14913-49-6
BISMUTH-214	14733-03-0
BISPHENOL A	80-05-7
BOLSTAR	35400-43-2
BORATE(1-), HYDROXYTRIPHENYL-, SODIUM, (T-4)	SHBOR
BORON	7440-42-8
BROMACIL	314-40-9
BROMIDE	24959-67-9
BROMOBENZENE	108-86-1

Table A-15 Analyte

Chemical_Name	Cas_rn
BROMOCHLOROBENZENE	694-80-4
BROMOCHLORODIFLUOROMETHANE	353-59-3
BROMOCHLOROMETHANE	74-97-5
BROMOCYCLOHEXANE	108-85-0
BROMODICHLOROMETHANE	75-27-4
BROMOETHANE	74-96-4
BROMOFORM	75-25-2
BROMOMETHANE	74-83-9
BROMOMETHENE	593-60-2
BROMOXYNIL	1689-84-5
BULK DENSITY OF SOILS	BULKDENSITY
BUTACHLOR	23184-66-9
BUTANE	106-97-8
BUTANE, 2-METHYOXY-3-M	MOX2M3BT
BUTANOIC ACID	107-92-6
BUTANOIC ACID,2-ETHYL-3-OXO,METHYL	E2OX3MBTA
BUTYL CELLOSOLVE PHOSPHATE	39454-62-1
BUTYL CYCLOHEXANE	1678-93-9
BUTYL HEXADECANOATE	111-06-8
BUTYLATE	2008-41-5
BUTYLTRIMETHYLCYCLOHEXANE	BTMCYHX
C10-BICYCLOPARAFFINS	BCYPFIN
C10H20 ISOMER	C10H20
C10H22	C10H22
C1-Benz[a]anthracenes/Chrysenes	C1BZACHRYS
C1-BENZENE	71-43-2-C1
C1-CHRYSENES	218-01-9-C1
C1-DIBENZOTHIOPHENE	132-65-0-C1
C1-FLUORANTHENES/PYRENES	C1FLPY

Table A-15 Analyte

Chemical_Name	Cas_rn
C1-FLUORENES	86-73-7-C1
C1-FLUORENES	C1FLUOR
C1-NAPHTHALENE	91-20-3-C1
C1-Naphthalenes	C1NAPH
C1-PHENANTHRENES/ANTHRACENES	120-12-7-C1
C1-PHENANTHRENES/ANTHRACENES	C1PHAN
C2 CYCLOHEXANE(S)	CHXNC2
C2-ALKYLBENZENES	ABZC2
C2-BENZ(A)ANTHRACENE/CHRYSENE	C2BANCHRYS
C2-BENZENE	71-43-2-C2
C2-CHRYSENES	218-01-9-C2
C2-DIBENZOTHIOPHENE	132-65-0-C2
C2-FLUORANTHENES/PYRENES	C2FLPY
C2-FLUORENES	86-73-7-C2
C2-FLUORENES	C2FLUOR
C2-NAPHTHALENE	91-20-3-C2
C2-NAPHTHALENE	NPHC2
C2-PHENANTHRENES/ANTHRACENES	120-12-7-C2
C2-PHENANTHRENES/ANTHRACENES	C2PHAN
C3 BENZENE	BZC3
C3 CYCLOHEXANE(S)	CHXNC3
C3-ALKYLBENZENES	ABZC3
C3-BENZENE	71-43-2-C3
C3-Benzo(a)anthracenes/Chrysenes	C3BAACYR
C3-CHRYSENES	218-01-9-C3
C3-DIBENZOTHIOPHENE	132-65-0-C3
C3-FLUORANTHENES/PYRENES	C3FLPY
C3-FLUORENES	86-73-7-C3
C3-FLUORENES	C3FLUOR

Table A-15 Analyte

Chemical_Name	Cas_rn
C3-NAPHTHALENE	91-20-3-C3
C3-NAPHTHALENE	NPHC3
C3-PHENANTHRENES/ANTHRACENES	120-12-7-C3
C3-PHENANTHRENES/ANTHRACENES	C3PHAN
C4-ALKYLBENZENES	ABZC4
C4-BENZENE	71-43-2-C4
C4-Benzo(a)anthracenes/Chrysenes	C4BAACYR
C4-CHRYSENES	218-01-9-C4
C4-DIBENZOTHIOPHENE	132-65-0-C4
C4-NAPHTHALENE	91-20-3-C4
C4-NAPHTHALENE	NPHC4
C4-PHENANTHRENES/ANTHRACENES	120-12-7-C4
C4-PHENANTHRENES/ANTHRACENES	C4PHAN
C4-SUBSTITUTED CYCLOHEXANES	SUBCHC4
C5-BENZENE	71-43-2-C5
C5-NAPHTHALNE	NPHC5
C6 BENZAMIDE	BZDC6
C6H14 ISOMER	C6H14
CADMIUM	7440-43-9
CADMIUM-109	14109-32-1
CAFFEINE	58-08-2
CALCIUM	7440-70-2
Calculated TEQs in Environ databaseCalculated TEQs in Environ database	ETEQ
CAMPHOR	76-22-2
CAPROLACTAM	105-60-2
CAPTAFOL	2939-80-2
CAPTAN	133-06-2
CARBAZOLE	86-74-8

Table A-15 Analyte

Chemical_Name	Cas_rn
CARBOFURAN	1563-66-2
CARBON DIOXIDE	124-38-9
CARBON DISULFIDE	75-15-0
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CARBON, BLACK PWDR	1333-86-4
CARBON-14	14762-75-5
CARBONACEOUS BIOLOGICAL OXYGEN DEMAND	CBOD
CARBONATE (AS CO3)	3812-32-6
CARBOPHENOTHION (TRITHION)	786-19-6
CARBOXIN	5234-68-4
CATION-EXCHANGE CAPACITY	CATION-EX
CELLULOSE	CELLULOSE
CELLULOSE FIBER	CELLFIBER
CENTRIFUGE MOISTURE EQUIVALENT	CENTMOIST
CERIODUBIA	CERIODUBIA
CERIUM	7440-45-1
CERIUM/PRASEODYMIUM-144	CE/PR-144
CERIUM-139	CE-139
CERIUM-141	13967-74-3
CERIUM-144	14762-78-8
CESIUM 139	CS-139
CESIUM-134	13967-70-9
CESIUM-137	10045-97-3
CHLORAL	75-87-6
CHLORAMBEN	133-90-4
CHLORDANE	57-74-9
CHLORDIMEFORM	6164-98-3

Table A-15 Analyte

Chemical_Name	Cas_rn
CHLORIDE (AS CL)	16887-00-6
CHLORINATED BENZENES WITH 10TH HIGHEST CONC.	CHLORBENZENE10
CHLORINATED BENZENES WITH 2ND HIGHEST CONC.	CHLORBENZENE2
CHLORINATED BENZENES WITH 3RD HIGHEST CONC.	CHLORBENZENE3
CHLORINATED BENZENES WITH 4TH HIGHEST CONC.	CHLORBENZENE4
CHLORINATED BENZENES WITH 5TH HIGHEST CONC.	CHLORBENZENE5
CHLORINATED BENZENES WITH 6TH HIGHEST CONC.	CHLORBENZENE6
CHLORINATED BENZENES WITH 7TH HIGHEST CONC.	CHLORBENZENE7
CHLORINATED BENZENES WITH 8TH HIGHEST CONC.	CHLORBENZENE8
CHLORINATED BENZENES WITH 9TH HIGHEST CONC.	CHLORBENZENE9
CHLORINATED BENZENES WITH HIGHEST CONC.	CHLORBENZENE1
CHLORINE	7782-50-5
CHLORINE 37 TETRACHLORODIBENZODIOXIN	TCDDCL37
CHLORINE DIOXIDE	10049-04-4
CHLORMEPHOS	24934-91-6
CHLORNEB	2675-77-6
CHLOROACETALDEHYDE	107-20-0
CHLOROACETIC ACID	79-11-8
CHLOROACETONITRILE	107-14-2

Table A-15 Analyte

Chemical_Name	Cas_rn
CHLOROALKYL ETHERS	CLAE
CHLOROBENZENE	108-90-7
CHLOROBENZENE-D5	3114-55-4
CHLOROBENZILATE	510-15-6
CHLOROBIPHENYL	37324-23-5
CHLOROCYCLOHEXANE	542-18-7
CHLOROCYCLOHEXANONE	822-87-7
CHLORODIFLUOROMETHANE	75-45-6
CHLOROETHANE	75-00-3
CHLOROETHANE-D5	19199-91-8
CHLOROFENVINPHOS	470-90-6
CHLOROFORM	67-66-3
Chloroform reductase	67-66-3_REDC
Chloroform-d	865-49-6
CHLOROHEXANONE	CLHXN
CHLOROIODOMETHANE	593-71-5
CHLOROMETHANE	74-87-3
CHLOROMETHYL METHYL ETHER	107-30-2
CHLOROTHALONIL	1897-45-6
CHLOROTOLUENES	25168-05-2
CHLORPYRIFOS	2921-88-2
CHLORPYRIFOS-METHYL	5598-13-0
CHOLESTANE	14982-53-7
CHOLESTEROL	57-88-5
CHROMIUM III	16065-83-1
CHROMIUM, DISSOLVED	CR-DISSOLVED
CHROMIUM, HEXAVALENT	18540-29-9
CHROMIUM, TOTAL	7440-47-3
CHROMIUM-51	14392-02-0

Table A-15 Analyte

Chemical_Name	Cas_rn
CHRYSENE	218-01-9
CHRYSENE-D12	1719-03-5
CHRYSOTILE	12001-29-5
CIS-1,1,3,5-TETRAMETHYL CYCLOHEXANE	50876-32-9
CIS-1,2-CYCLOHEXANEDIOL	1792-81-0
CIS-1,2-DICHLOROETHYLENE	156-59-2
CIS-1,2-DICHLOROPROPENE	6923-20-2
CIS-1,3-DICHLOROPROPENE	10061-01-5
CIS-1,3-DIMETHYL CYCLOHEXANE	638-04-0
CIS-1,3-DIMETHYL CYCLOOCTANE	MDMCYOC
CIS-1,4-DICHLORO-2-BUTENE	1476-11-5
CIS-1,4-DIMETHYL CYCLOOCTANE	PDMCYOC
CIS-1-BROMO-2-CHLOROCYCLOHEXANE	BRCL2CYHXC
CIS-1-ETHYL-2-METHYL-CYCLOHEXANE	ETMCYC6NC
CIS-1-ETHYL-3-METHYL-CYCLOHEXANE	19489-10-2
CIS-1-ETHYL-4-METHYL-CYCLOHEXANE	EM4CYHX
CIS-8,11,14-EICOSATRIENOIC ACID	ECOSTNA
CIS-9-HEXADECENOIC ACID	HXDA9C
CIS-DECALINE	493-01-6
CIS-DIALLATE	DIALLATEC
CIS-ISOSAFROLE	17627-76-8
CIS-NONACHLOR	5103-73-1
CIS-PERMETHRIN	54774-45-7
CLAY	GS-CLAY
COBALT	7440-48-4
COBALT 56	CO-56
COBALT-57	13981-50-5
COBALT-58	13981-38-9
COBALT-60	10198-40-0

Table A-15 Analyte

Chemical_Name	Cas_rn
COD - CHEMICAL OXYGEN DEMAND	COD
COLIFORM	COLIF
COLOR	COLOR
COMBUSTIBLE GAS INDEX	CGI
Copaene	3856-25-5
COPPER	7440-50-8
CORONENE	191-07-1
CORROSIVITY	CORROS
COUMAPHOS	56-72-4
CRESOLS, M & P	MEPH1314
CRESOLS, TOTAL	1319-77-3
CROCIDOLITE	12001-28-4
CROTONALDEHYDE	4170-30-3
CROTONALDEHYDE, (E)-	123-73-9
CROTOXYPHOS	7700-17-6
CUPROUS OXIDE	1317-39-1
CYANAZINE	21725-46-2
CYANIDE	57-12-5
CYANIDE (FREE)	FREE CN
CYANIDE, AMENABLE TO CHLORINATION	CNA
CYANIDE, AVAILABLE	OIA-1677
CYANIDE, REACTIVE	57-12-5R
CYANOGEN CHLORIDE	506-77-4
CYCLOATE	1134-23-2
CYCLODECANE	293-96-9
CYCLODODECANE	294-62-2
CYCLOHEPTANE	291-64-5
Cycloheptasiloxane, tetradecamethyl-	107-50-6
CYCLOHEXADECANE	295-65-8

Table A-15 Analyte

Chemical_Name	Cas_rn
CYCLOHEXANE	110-82-7
Cyclohexane 4-ethenyl-4-methyl-3-(1-methyleth	20307-84-0
CYCLOHEXANE CARBOXYLIC ACID	98-89-5
CYCLOHEXANE, (1-HEXYLTETRADE)	HXTCY
CYCLOHEXANE, (4-METHYLPENTYL)	M4PNLCYHX
Cyclohexane, 1-ethyl-1-methyl-	4926-90-3
Cyclohexane, 1-methyl-4(1-methylethyl)-	6069-98-3
CYCLOHEXANE,1,1-ETHYLIDENEBIS	2319-61-1
CYCLOHEXANE,1,3,5-TRIMETHYL-,(1.ALPHA.,3.ALPHA.,5!	TM135CYHXAAB
CYCLOHEXANE,1-ETHYL-2-METHYL	ETMCYC6N
CYCLOHEXANEDIOL	CYHXDL
CYCLOHEXANOL	108-93-0
CYCLOHEXANONE	108-94-1
CYCLOHEXENE	110-83-8
Cyclohexene, 3-propyl	3983-06-0
CYCLOHEXENE,1-METHYL-4-(1-METHYLETHENYL)	7705-14-8
CYCLOHEXYLBENZENE	827-52-1
Cyclonansiloxane, octadecamethyl	556-71-8
Cyclooctasiloxane-hexadecamethyl	556-68-3
CYCLOPENTA [CD] PYRENE	27208-37-3
CYCLOPENTANE	287-92-3
Cyclopentane 1,3-dimethyl-2-(1-methylethenyl)	61142-31-2
CYCLOPENTANECARBOXALDEHYDE	CBOXALDCY
CYCLOPENTANONE, 2-METHYL-4-	M2CYP4
CYCLOPENTENE	142-29-0

Table A-15 Analyte

Chemical_Name	Cas_rn
CYCLOPHOSPHAMIDE	50-18-0
CYCLOPHOSPHAMIDE (HYDRATED)	6055-19-2
Cyclopropane,1-1-dibromo-2-bromomethyl-	57613-57-7
CYCLOPROPYLBENZENE	873-49-4
CYCLOTETRADECANE	295-17-0
Cyclotridecane	295-02-3
CYMENE	99-87-6
D:A-FRIEDOOLEANAN-3-ONE	FRIEDELIN
D3-N-MEFOSAA	MeFOSAA
D5-N-ETFOSAA	EtFOSAA
DALAPON	75-99-0
DCPA (DACTHAL)	1861-32-1
DCPA ACID METABOLITES (A)	METABOLITES
DDD (1,1-BIS(CHLOROPHENYL)-2,2-DICHLOROETHANE)	DDD
DDE (1,1-BIS(CHLOROPHENYL)-2,2-DICHLOROETHENE)	3547-04-4
DDT (1,1-BIS(CHLOROPHENYL)-2,2,2-TRICHLOROETHANE)	DDT
DDT TOTAL	DDTS
DECACHLOROBIPHENYL	2051-24-3
Decachlorobiphenyl-C13	105600-27-9
DECAFLUOROBIPHENYL	434-90-2
DECAHYDRO NAPHTHALENE	91-17-8
DECAHYDRO-2-METHYL NAPHTHALENE	DHYM2NPH
DECAHYDRO-4,4,8,9,10-PENTAMETHYLNAPHTHALENE	DHPMN448910
DECAHYDROMETHYL NAPHTHALENE	28258-89-1
DECAHYDROMETHYL-2-NAPHTHALENE	DHYD2NPHME

Table A-15 Analyte

Chemical_Name	Cas_rn
METHANOL ISOMER	
DECAHYDROPENTAMETHYLNAPHTHALENE	DHPMNPH
DECAMETHYL-CYCLOPENTASILOXANE	541-02-6
DECANOIC ACID	334-48-5
DECENE	25339-53-1
DECYL ALDEHYDE	112-31-2
DECYL ESTER ACETIC ACID	DEAA
Dehalobacter DCM	DCM
Dehalobacter spp.	DHBt
Dehalobium chlorocoercia	DECO
Dehalococcoides	DHC
Dehalogenimonas spp.	DHG
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	319-86-8
DEMETON	8065-48-3
DEMETON-O	298-03-3
DEMETON-S	126-75-0
DENSITY	DENSITY
Desulfitobacterium spp.	DSB
Desulfuromonas spp.	DSM
D-FRIEDOOLEAN-14-EN-3-ONE	FRIEDOOL
DIACETATE 1,1-DODECANEDIOL	DADCN
DIACETONE ALCOHOL	123-42-2
DIALLATE (TOTAL OF CIS AND TRANS ISOMERS)	2303-16-4
DIAZINON	333-41-5
DIBENZ (A,B) ANTHRACENE	DBABA
DIBENZ(A,H)ACRIDINE	226-36-8
DIBENZ(A,H)ANTHRACENE	53-70-3

Table A-15 Analyte

Chemical_Name	Cas_rn
DIBENZ(A,J)ACRIDINE	224-42-0
DIBENZO(A,E)PYRENE	192-65-4
DIBENZO(A,H)PYRENE	189-64-0
DIBENZO(A,I)PYRENE	189-55-9
DIBENZO[C,H][2,6]NAPHT	DBZCHNP26
DIBENZOFURAN	132-64-9
DIBENZOTHIOPHENE (SYNFUEL)	132-65-0
DIBENZYL PHTHALATE	523-31-9
DIBROMOCHLOROMETHANE	124-48-1
DIBROMODICHLOROMETHANE	594-18-3
DIBROMODIFLUOROMETHANE	75-61-6
DIBROMOFLUOROMETHANE	1868-53-7
DIBROMOMETHANE	74-95-3
DIBROMOTRIFLUOROETHANE	DBTFE
DIBUTYLCHLORENDATE	1770-80-5
DICAMBA	1918-00-9
DICHLONE	117-80-6
DICHLORAN	102-30-7
DICHLOROACETIC ACID	79-43-6
DICHLOROBENZENES	25321-22-6
DICHLOROCYCLOHEXANE	2108-92-1
DICHLOROCYCLOHEXANONE	DCCYHXN
DICHLORODIFLUOROMETHANE	75-71-8
DICHLOROETHANES	1300-21-6
DICHLOROETHYLENES	540-59-0
DICHLOROFLUOROMETHANE	75-43-4
Dichloromethane Dahologenase	DCMA
DICHLOROPROP	120-36-5
DICHLOROPROPANES	26638-19-7

Table A-15 Analyte

Chemical_Name	Cas_rn
DICHLOROPROPYLENES	26952-23-8
DICHLORVOS	62-73-7
DICHROTOPHOS	BIDRIN
DICOFOL	115-32-2
DICYCLOPENTADIENE	77-73-6
DIELDRIN	60-57-1
DIESEL COMPONENTS	DIESELCOMP
DIESEL RANGE ORGANICS	68334-30-5
DIESEL RANGE ORGANICS (C10C28)	DRO_C10C28
DIETHYL BENZENE (MIXED ISOMERS)	25340-17-4
DIETHYL ETHER (ETHYL ETHER)	60-29-7
DIETHYL MALEATE	141-05-9
DIETHYL PHTHALATE	84-66-2
DIETHYL SUCCINATE	123-25-1
DIETHYL SULFATE	64-67-5
DIETHYLBIPHENYL	28575-17-9
DIETHYLMETHYLCYCLOHEXANE	DEMCYHX
DIETHYLSTILBESTROL	56-53-1
DIFTALONE (USAN)	21626-89-1
DIHYDRO-DIMETHYL-1H-INDENE	DHDMIN1H
DIHYDRODIMETHYLINDENE	DHDMIN
DIHYDROMETHYL FURAN	DHMF
DIHYDROMETHYL INDENE	DHMEIN
DIHYDRO-METHYL-1H-INDENE	DHMIN
DIHYDROTRIMETHYLINDENE	DHTMIN
DIISOBUTYL CARBINOL	108-82-7
DIISOBUTYL KETONE	108-83-8
DIISONYL ESTER 1,2-BENZENEDICARBOXYLIC ACID	DISEBZDA12

Table A-15 Analyte

Chemical_Name	Cas_rn
DIMETHOATE	60-51-5
DIMETHOXYMETHANE	109-87-5
DIMETHYL 1H-INDENE	DMIN
DIMETHYL BENZENE	1330-20-7
DIMETHYL BENZONITRILE	5724-56-1
DIMETHYL CYCLOHEXANE	27195-67-1
DIMETHYL CYCLOOCTANE	DMCYO
DIMETHYL DODECANE ISOMERS	DMC12N
DIMETHYL HEXANE ISOMERS	DMHX
DIMETHYL HEXYLADIPATE	DMHEA
DIMETHYL NAPHTHALENE	28804-88-8
DIMETHYL OCTADECANE	1560-86-7
DIMETHYL OCTANE	DMC8N
DIMETHYL OCTENE	DMO
DIMETHYL PHENETHYAMINE	DMPHTHM
DIMETHYL PHTHALATE	131-11-3
DIMETHYL PROPANEDIOIC	DMPDA
DIMETHYL SULFONE	67-71-0
DIMETHYL UNDECANE	79004-83-4
DIMETHYL-(E)-1-METHYL-2-METHYLCARBAMOYLVINYL PHOS.	MONOCROPHOS
DIMETHYL-1-HEPTANOL	628-44-4
DIMETHYLBENZOIC ACID	603-79-2
DIMETHYLCYCLOHEXADIENE	DMCYH
DIMETHYLCYCLOPENTANE(S)	28729-52-4
DIMETHYLCYCLOPROPANE	62862-34-4
DIMETHYLETHYL PHENOL ISOMER	DMEP
DIMETHYLHEPTANE ISOMERS	30498-66-9
DIMETHYLHEXYNEDIOL	142-30-3

Table A-15 Analyte

Chemical_Name	Cas_rn
DIMETHYLHEXYNEDIOL	DMHXYD
DIMETHYLISOPROPYLNAPHTHALENE	DMISOPNAPH
DIMETHYLPENTANE	38815-29-1
DIMETHYLPHENANTHRENE	29062-98-4
DIMETHYLPHENYLETHYLAMINE	DMPET
DI-N-BUTYL PHTHALATE	84-74-2
DINITROBENZENE, TOTAL	DNBS
DINITROTOLUENES	DNT
DINOCAP	39300-45-3
DI-N-OCTYLPHTHALATE	117-84-0
DINOSEB	88-85-7
DIOCTADECYL ESTER PHOSPHORIC ACID	DODEPHA
DIOCTYL ADIPATE	103-23-1
DIOCTYL ESTER HEXANEDIOIC ACID	DOEHA
DIOCTYL PHTHALATE HEXANEDIOIC ACID	DOPHA
DIOXACARB	6988-21-2
Dioxins and Furans as 2,3,7,8-TCDD & PCB TEQs	TEQ_2378DF_PCB
Dioxins and Furans as 2,3,7,8-TCDD TEQs	TEQ
DIOXOLANE	646-06-0
DIPHENAMID	957-51-7
DIPHENYL ETHER (PHENYLETHER)	101-84-8
DIPHENYL PHENYL METHYL PHOSPHI	DPPMPH
DIPHENYL SULFONE	127-63-9
DIPHENYLAMINE	122-39-4
Diphenylethyne	501-65-5
DIPROPYL PHTHALATE	131-16-8
DIQUAT	231-36-7
DIQUAT	85-00-7

Table A-15 Analyte

Chemical_Name	Cas_rn
DISSOLVED ORGANIC CARBON	DOC
DISSOLVED OXYGEN	DISS_OXYGEN
DISSOLVED OXYGEN, PERCENT	DO_PER
DISULFOTON	298-04-4
DISULFOTON SULFONE	2497-06-5
DISULFOTON SULFOXIDE	2497-07-6
DMPA	24650-42-8
DOCOSANOIC ACID	112-85-6
DODECAMETHYL CYCLOHEXASILOXANE	540-97-6
DODECANOIC ACID	143-07-7
DOTRIACONTANE	544-85-4
DXYA12	DXYA12
ENDOSULFAN	115-29-7
ENDOSULFAN SULFATE	1031-07-8
ENDOTHAL	145-73-3
ENDRIN	72-20-8
ENDRIN ALDEHYDE	7421-93-4
ENDRIN KETONE	53494-70-5
EPICHLOROHYDRIN	106-89-8
EPN (ENT)	2104-64-5
Epoxyalkane Transferase	ETNE
ERYTHRITYL TETRANITRATE	7297-25-8
ESCHERICHIA COLI	ECOLI
ETHANE	74-84-0
ETHANE, 1,1-DICHLORO-2,2-DIETHOXY-	619-33-0
ETHANOL	64-17-5
ETHANONE, 1-OXIRANYL	OXIRET
ETHENE	74-85-1
Ethene Monooxygenase	ETNC

Table A-15 Analyte

Chemical_Name	Cas_rn
ETHENYL DIMETHYL BENZENE	ENDMBZ
ETHENYL METHYL BENZENE ISOMER	ENMBZ
ETHION	563-12-2
ETHOPROP	13194-48-4
ETHOXY ETHOXY ETHANOL	111-90-0
ETHYL 1-METHYL-1-PENTENE-3-SELENIDE	EMPTNSED3
ETHYL ACETATE	141-78-6
ETHYL ACETOACETATE	141-97-9
ETHYL ACRYLATE	140-88-5
ETHYL ANTHRACENE	ETANTH
ETHYL CARBAMATE	51-79-6
ETHYL CROTONATE	10544-63-5
ETHYL CYCLOHEXANE	1678-91-7
ETHYL CYCLOHEXANE	1678917S
ETHYL CYCLOHEXANONE	4423-94-3
ETHYL FORMATE	109-94-4
ETHYL METHACRYLATE	97-63-2
ETHYL METHANESULFONATE	62-50-0
ETHYL METHYL BENZENE	25550-14-5
ETHYL METHYL CYCLOPENTANE	16747-50-5
ETHYL METHYL HEPTANE	5911-04-6
ETHYL METHYL PHENOL (ISOMER)	EMP
ETHYLBENZENE	100-41-4
ETHYLBENZENE-D10	25837-05-2
ETHYL-CYCLOPENTANE	1640-89-7
ETHYLCYCLOPROPANE	1191-96-4
ETHYLENE CHLOROHYDRIN	107-07-3
ETHYLENE GLYCOL	107-21-1
ETHYLENE GLYCOL MONO BUTYL ETHER	111-76-2

Table A-15 Analyte

Chemical_Name	Cas_rn
ETHYLENE GLYCOL MONO ETHYL ETHER	110-80-5
ETHYLENE OXIDE	75-21-8
ETHYLENEDIAMINE	107-15-3
ETHYLENETHIOUREA	96-45-7
ETHYLIDENE ACETONE	625-33-2
ETHYLMETHYL CYCLOHEXANE	1678-92-8
ETRIDIAZOLE	2593-15-9
EUROPIUM 155	14391-16-3
EUROPIUM-152; ISOTOPE	14683-23-9
EUROPIUM-154; ISOTOPE	15585-10-1
EXO-TETRAHYDRODICYCLOPENTADIENE	2825-82-3
EXTRACTABLE ORGANIC HALIDES	EOX
EXTRACTABLE TOTAL PETROLEUM HYDROCARBON	ETPH
FAMPHUR	52-85-7
FATHEAD MINNOW	FATHEADMINNOW
FECAL COLIFORM	FECCOLIFORM
FECAL STREPTOCOCCI, KF AGAR	FECSTREP
FENAMIPHOS (NEMACUR)	22224-92-6
FENARIMOL	60168-88-9
FENSULFOTHION	115-90-2
FENTHION	55-38-9
FERBAM	14484-64-1
FERRIC IRON	FE(FC)
FERROUS IRON	FE(FS)
FERROUS IRON DISSOLVED	FEFERROUSD
FLASH POINT	FLASHPT
FLOW RATE	FLOWRATE
FLUCHLORALIN	33245-39-5

Table A-15 Analyte

Chemical_Name	Cas_rn
FLUORANTHENE	206-44-0
FLUORANTHENES/PYRENES	129-00-0-C1
FLUORENE	86-73-7
FLUORIDE	16984-48-8
FLUORINE	7782-41-4
FLUORO-2-METHOXY BENZENE	321-28-8
FLUOROACETIC ACID	144-49-0
FLUOROBENZENE	462-06-6
FLUORONITROPHENOL	FNTPH
FLUOROTRIMETHYL SILANE	420-56-4
FLURIDONE	59756-60-4
FOLPET	133-07-3
FOR DT_FIELD_PARAMETER LIMIT TEXT(10)	DIS_OXYGEN
FORMALDEHYDE	50-00-0
Formic Acid	64-18-6
FREE LIQUIDS	FLIQUIDS
FREON 123	306-83-2
FUEL OILS	FOIL
FURFURYL ALCOHOL	98-00-0
GADOLINIUM	7440-54-2
GAMMA BHC (LINDANE)	58-89-9
GAMMA SPECTRALANALYSIS, GE(LI)	GAMMA-GELI
GAMMA, GROSS	GAMMA
GAMMA-CHLORDANE	12789-03-6
GAMMA-SITOSTEROL	GAMMASITOS
GAMMA-TOCOPHEROL	54-28-4
GAS C6C10	GAS_C6C10
GASOLINE C4-C12	GASC4C12
GASOLINE COMPONENTS	GASCOMP

Table A-15 Analyte

Chemical_Name	Cas_rn
GASOLINE RANGE ORGANICS (C6-C10)	GRO_C6C10
Geobacter spp.	GEO
GERMANICOL	GERML
Gitoxigenin	545-26-6
GLYCOL DIACETATE (ETHYLENE GLYCOL DIACETATE)	111-55-7
GLYPHOSATE	1071-83-6
GOLD	7440-57-5
GRAVEL	GS-GRAVEL
GRO (GASOLINE RANGE ORGANICS)	C6-C10
GUANIDINE	113-00-8
GUANIDINE NITRATE	506-93-4
HALOMETHANES	XME
HARDNESS (AS CACO3)	HARD
HARDNESS (AS CACO3), NONCARBONATE	HARDNC
HARDNESS (AS CO3), CARBONATE	HARDC
HARDNESS CALCIUM (AS CACO3)	HARDCA
HARDNESS MAGNESIUM (AS CACO3)	HARDMG
HEAVY RANGE ORGANICS	C24C36HRO
HELIUM	7440-59-7
HEM (OIL & GREASE)	HEM
HENEICOSANE,11-(1-ETHYL	E11HECS
HEPTACHLOR	76-44-8
HEPTACHLOR EPOXIDE	1024-57-3
HEPTACHLORINATED DIBENZOFURANS, (TOTAL)	HPCDF
HEPTACHLORINATED DIBENZO-P-DIOXINS, (TOTAL)	HPCDD
HEPTADECANE	629-78-7

Table A-15 Analyte

Chemical_Name	Cas_rn
HEPTANAL	111-71-7
HEPTANE,3,3'-[OXYBIS (METHYL	OX33MC7N
HEPTANOIC ACID	111-14-8
HEXABROMOBENZENE	87-82-1
HEXABROMOBIPHENYL	36355-01-8
HEXACHLORINATED DIBENZOFURANS, (TOTAL)	HXCDF
HEXACHLORINATED DIBENZO-P-DIOXINS, (TOTAL)	HXCDD
HEXACHLOROBENZENE	118-74-1
HEXACHLOROBUTADIENE	87-68-3
Hexachlorocyclohexane	608-73-1
HEXACHLOROCYCLOPENTADIENE	77-47-4
HEXACHLORODIBENZOFURAN	55684-94-1
HEXACHLORODIBENZO-P-DIOXIN	34465-46-8
HEXACHLOROETHANE	67-72-1
HEXACHLOROPHENE	70-30-4
HEXACHLOROPROPENE	1888-71-7
HEXADECANOIC ACID	57-10-3
Hexadecanoic acid, ethyl ester	628-97-7
HEXADECANOL	36653-82-4
Hexaethylbenzene	604-88-6
HEXAFLUOROISOPROPANOL	920-66-1
HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCINE	RDX
HEXAHYDRO-1,3-BENZODIOXOLE	HXHDXL13
HEXAHYDROAZEPINONE	70874-80-5
HEXAMETHYL PHOSPHORAMIDE	680-31-9
HEXAMETHYLBENZENE	87-85-4

Table A-15 Analyte

Chemical_Name	Cas_rn
HEXAMETHYLCYCLOTRISILOXANE	541-05-9
HEXANAL	66-25-1
HEXANE, 1,6-DIBROMO-	629-03-8
HEXANE, 1,6-DICHLORO-	2163-00-0
HEXANE, 1-BROMO-	111-25-1
HEXANE, 1-BROMO-6-CHLORO-	6294-17-3
HEXANE, 2,5-DIBROMO-	24774-58-1
HEXANEDIOIC ACID, MONO (2-ETHYLHEXYL)ESTER	HAM2ETE
HEXANOIC ACID (DOT)	142-62-1
Hexanoic acid, anhydride	2051-49-2
Hexathiepane	17233-71-5
HEXATRIACONTANE	630-06-8
HEXAZINONE	51235-04-2
HEXYL CYCLOHEXANE	4292-75-5
Hexyloctylether	17071-54-4
HNU PID READINGS	HNU
HPAHs	HPAH
HVY PETROLEUM DISTIL. C10-C23(IE:NO. 2 DIESEL ETC)	HPC10C23
HYDRAZINE	302-01-2
HYDROBROMIC ACID	10035-10-6
HYDROCHLORIC ACID	7647-01-0
HYDROCYANIC ACID	74-90-8
HYDROFLUORIC ACID	7664-39-3
HYDROGEN	1333-74-0
HYDROGEN CATION	12408-02-5
HYDROGEN SULFIDE	7783-06-4
HYDROGEN SULFIDE DETECTOR	HSD

Table A-15 Analyte

Chemical_Name	Cas_rn
HYDROMETER 1 PARTICLE SIZE	GS-HYD1PS
HYDROMETER 1 PASSING	GS-HYD1PP
HYDROMETER 2 PARTICLE SIZE	GS-HYD2PS
HYDROMETER 2 PASSING	GS-HYD2PP
HYDROMETER 3 PARTICLE SIZE	GS-HYD3PS
HYDROMETER 3 PASSING	GS-HYD3PP
HYDROMETER 4 PARTICLE SIZE	GS-HYD4PS
HYDROMETER 4 PASSING	GS-HYD4PP
HYDROMETER 5 PARTICLE SIZE	GS-HYD5PS
HYDROMETER 5 PASSING	GS-HYD5PP
HYDROMETER 6 PARTICLE SIZE	GS-HYD6PS
HYDROMETER 6 PASSING	GS-HYD6PP
HYDROMETER 7 PARTICLE SIZE	GS-HYD7PS
HYDROMETER 7 PASSING	GS-HYD7PP
HYDROXYCYCLOHEXANONE	533-60-8
IGNITABILITY	IGNITB
IN ERO (C8-C36)	ERO_C8C36
IN GRO (C5-C12)	GRO_C5C12
INDENE	95-13-6
INDENO(1,2,3-C,D)PYRENE	193-39-5
INDIUM	7440-74-6
IODIDE (AS I)	20461-54-5
IODINE 133	14834-67-4
IODINE-129	15046-84-1
IODINE-131	10043-66-0
IODO CYCLOHEXANE	626-62-0
IODOMETHANE (METHYL IODIDE)	74-88-4
IRIDIUM 192	7439-88-5
IRON	7439-89-6

Table A-15 Analyte

Chemical_Name	Cas_rn
IRON BACTERIA	IRONBAC
IRON, DICARBONYL(.eta.5-2,4	12215-33-7
IRON-59	14596-12-4
ISOBUTANOL	78-83-1
ISOBUTYL ACETATE	110-19-0
ISOBUTYLENE	115-11-7
ISODECYL DIPHENYL PHOSPHATE	29761-21-5
ISODRIN	465-73-6
ISOOCTANOL (ISOMERS)	26952-21-6
ISOPHORONE	78-59-1
ISOPROPANOL	67-63-0
ISOPROPENYL ACETATE	108-22-5
ISOPROPENYL-PYRAZINE	ISOPRLPYR
ISOPROPYL ACETATE	108-21-4
ISOPROPYL CARBANILATE	122-42-9
ISOPROPYL CHLORIDE	75-29-6
ISOPROPYL ETHER	108-20-3
ISOPROPYL M-CHLOROCARBANILATE	101-21-3
ISOPROPYLBENZENE (CUMENE)	98-82-8
ISOSAFROLE	120-58-1
ISOTHIAZOLONES	ITZLN
ISOVALERALDEHYDE	590-86-3
JET FUEL #4 (JP4);JET FUEL #5 (JP5)	94114-58-6
JET FUEL #8 (JP8)	JP8
JET FUEL JP-7	JP7
JUNIPENE	JUNIP
KEPONE	143-50-0
KEROSENE	64742-81-0
KEROSENE	8008-20-6

Table A-15 Analyte

Chemical_Name	Cas_rn
KETONE SPECIFIC BACTERIA	KETSPCBAC
KRYPTON-85	13983-27-2
LABORATORY ARTIFACTS WITH 2ND HIGHEST CONC.	LABARTIFACTS2
LABORATORY ARTIFACTS WITH HIGHEST CONC.	LABARTIFACTS1
LACTIC ACID	50-21-5
LANGELIER INDEX (AT 25 C)	LAI
LANTHANUM	7439-91-0
LANTHANUM-140	LA-140
LEACHATE VOLUME PUMPED	LVOLPUMP
LEAD	7439-92-1
LEAD 211	PB-211
LEAD, TETRAETHYL	78-00-2
LEAD-210	14255-04-0
LEAD-212	15092-94-1
LEAD-214	15067-28-4
LEPTOPHOS	21609-90-5
LIGHT PETROLEUM DISTILLATE C4-C8	LPC4C8
LIME (AS CALCIUM CARBONATE)	471-34-1
LIMONENE	138-86-3
LIPIDS	66455-18-3
LIQUID LIMIT	LIQLIM
LITHIUM	7439-93-2
L-LACTIC ACID	79-33-4
LOWER EXPLOSIVE LIMIT	LEL
LPAHs	LPAH
M AND P XYLENES	79601-23-1
m,p-Xylene	179601-23-1

Table A-15 Analyte

Chemical_Name	Cas_rn
M,P-XYLENE (SUM OF ISOMERS)	XYLMP
MAGNESIUM	7439-95-4
MALATHION	121-75-5
MALEIC ANHYDRIDE	108-31-6
MALONONITRILE	109-77-3
MANEB	12427-38-2
MANGANESE	7439-96-5
MANGANESE 2+	16397-91-4T
MANGANESE-54	13966-31-9
MANGANESE-56	14681-52-8
MCPA	94-74-6
MCPP	93-65-2
M-CYMENE	535-77-3
MECOPROP	7085-19-0
MED. PETROLEUM DISTILLATE C8-C12 (IE:NAPHTHA ETC)	MPC8C12
MEDROXYPROGESTERONE ACETATE	71-58-9
MEPROBAMATE	57-53-4
MERCURY	7439-97-6
MERCURY 203	13982-78-0
MERCURY 210	HG-210
MERPHOS	150-50-5
MESITYL OXIDE	141-79-7
MESTRANOL	72-33-3
METHACROLEIN	78-85-3
METHADATHION	METHAD
METHAMIDOPHOS	10265-92-6
METHANE	74-82-8
METHANE, ISOCYANO	593-75-9

Table A-15 Analyte

Chemical_Name	Cas_rn
Methanogens	MGN
METHANOL	67-56-1
METHAPYRILENE	91-80-5
METHOXONE SODIUM SALT ((4-CHLORO-2-METHYLPGENOXY)	3653-48-3
METHOXYCHLOR	72-43-5
METHOXYCYCLOHEXANE	931-56-6
METHOXYPHENOL	26638-03-9
METHYL ISOBUTYL CHLORIDE	753-89-9
METHYL ACETATE	79-20-9
METHYL ACETOACETATE	105-45-3
METHYL ACRYLATE	96-33-3
METHYL AMYL ALCOHOL	108-11-2
METHYL ANTHRACENE	26914-18-1
METHYL ARACHIDATE	1120-28-1
METHYL BIPHENYL	28652-72-4
METHYL BUTANE	102056-77-9
METHYL CARBONATE	616-38-6
METHYL CHRYSENE	3351-28-8
METHYL DECALINE	MDECL
METHYL DISULFIDE	624-92-0
METHYL DODECANE	90454-15-2
METHYL ESTER BUTANOIC ACID	MEBTA
METHYL ETHYL KETONE (2-BUTANONE)	78-93-3
METHYL HEPTANE ISOMERS	MC7N
METHYL HEXANE ISOMERS	MC6N
METHYL HYDRAZINE	60-34-4
METHYL ISOAMYL KETONE	110-12-3
METHYL ISOBUTYL KETONE (4-METHYL-2-	108-10-1

Table A-15 Analyte

Chemical_Name	Cas_rn
PENTANONE)	
METHYL METHACRYLATE	80-62-6
METHYL METHANESULFONATE	66-27-3
METHYL N',N'-DIMETHYL-N- {(METHYLCARBAMOYL)OXY}-1-	 OXAMYL
METHYL NONANE	63335-87-5
METHYL N-PROPYL KETONE	107-87-9
METHYL OCTANE	61193-19-9
METHYL PARAOXON	950-35-6
METHYL PROPANE BENZENE	MPRBZ
METHYL PROPENYL BENZENE ISOMER	MPBZ
METHYL PYRENE	2381-21-7
METHYL SULFIDE	75-18-3
METHYL THIOURACIL	56-04-2
METHYL TRIPHENYLENE	MTPH
METHYL VINYL ACETATE	MEVACET
METHYL VINYL KETONE	78-94-4
METHYL(METHYLETHYL)BENZENE	MMEBZ
METHYLACRYLONITRILE	126-98-7
METHYLBENZANTHRACENE	2319-96-2
METHYLBENZYL ALCOHOL	MEBZOH
METHYLCYCLOHEPTANE	4126-78-7
METHYLCYCLOHEXANE	108-87-2
METHYLCYCLOPENTANE	96-37-7
METHYLCYCLOPENTANOL	1462-03-9
METHYLCYCLOPENTENE	693-89-0
METHYLCYCLOPROPANE	594-11-6
METHYLDIBENZOTHIOPHENE	30995-64-3
METHYLDIETHYLBENZAMIDE	2728-04-3

Table A-15 Analyte

Chemical_Name	Cas_rn
METHYLENE BISTHIOCYNATE	MEBTHCY
METHYLENE BLUE ACTIVE SUBSTANCES	MBAS
METHYLENE CHLORIDE	75-09-2
METHYLETHYL CYCLOHEXANE	696-29-7
METHYLETHYLHEXANE	MEC6N
METHYLETHYLNAPHTHALENE	29253-36-9
METHYLFLUORENE	26914-17-0
METHYL-N-(3,4-DI-CHLOROPHENYL) CARBAMATE	1918-18-9
METHYLNAPHTHALENES (SUM OF ISOMERS)	MTNPH
METHYLPENTANE	43133-95-5
METHYLPENTANOIC ACID	27936-41-0
METHYLPENTENE	37275-41-5
METHYLPHENANTHRENE	31711-53-2
METHYLPROPYLCYCLOHEXANE	26967-64-6
METOLACHLOR	51218-45-2
METRIBUZIN	21087-64-9
MEVINPHOS	7786-34-7
MGK 264	113-48-4
MIREX	2385-85-5
M-MENTHANE	MNM
MOISTURE, PERCENT	MOIST
MOLINATE	2212-67-1
MOLYBDENUM	7439-98-7
MOLYBDENUM-99	14119-15-4
MORPHOLINE	110-91-8
MOTOR OILS	MOIL
M-PHENYLENEDIAMINE	108-45-2
M-P-XYLENE	136777-61-2

Table A-15 Analyte

Chemical_Name	Cas_rn
M-TERPHENYL	92-06-8
M-TOLUALDEHYDE	620-23-5
M-XYLENE (1,3-DIMETHYLBENZENE)	108-38-3
N-(1,1-DIMETHYLETHYL)-3-METHYLBENZAMIDE	D11M3N
N-(1-METHYLBUTYLIDENE)METHANAMINE	MBUTMN
N,N'-DI-2-PROPENYL UREA	1801-72-5
N,N-DIETHYL-3-METHYL BENZAMIDE	134-62-3
N,N-DIMETHYL FORMAMIDE	68-12-2
N,N-DIMETHYL-1-PHENETHYLAMINE	DMNNPEA
N,N-DIMETHYLANILINE	121-69-7
N,N-DIMETHYLETHANOLAMINE	108-01-0
NALED	300-76-5
NAPHTHALENE	91-20-3
NAPHTHALENE ACETIC ACID	NAA
NAPHTHALENE-D8	1146-65-2
NAPHTHALINE,6,7-DIETHYL-1,2,3,4-TETRAHYDRO-1,1,4!	NDE67THTM
NAPROPAMIDE	15299-99-7
N-BUTANOL	71-36-3
N-BUTYL ACETATE	123-86-4
N-BUTYL ACRYLATE	141-32-2
N-BUTYL CHLORIDE	109-69-3
N-BUTYL ETHER	142-96-1
N-BUTYLBENZENE	104-51-8
N-BUTYRALDEHYDE	123-72-8
N-DECANE	124-18-5
N-DECYL ALCOHOL	112-30-1
N-DOCOSANE	629-97-0

Table A-15 Analyte

Chemical_Name	Cas_rn
N-DODECANE	112-40-3
N-EICOSANE	112-95-8
Net Dry Weight	NDRYWGT
Net Wet Weight	NWETWGT
N-ETFOSAA	2991-50-6
N-ETHYL-4-METHYL-BENZENESULFONAMIDE	80-39-7
N-ETHYLANILINE	103-69-5
N-ETHYLMORPHOLINE	100-74-3
n-Heptadecylcyclohexane	19781-73-8
N-HEPTANE	142-82-5
N-HEXACOSANE	630-01-3
N-HEXADECANE	544-76-3
N-HEXANE	110-54-3
N-HEXYL ETHER	112-58-3
NICKEL	7440-02-0
NICKEL 65	NI-65
NICKEL 69	NI-69
NICKEL-63	13981-37-8
NICOTINE	54-11-5
NIOBIUM	7440-03-1
NIOBIUM-94	NB-94
NIOBIUM-95	13967-76-5
NITRATE AS NITROUS OXIDE	NO3NO2
NITRIC ACID	7697-37-2
NITRILOTRIACETATE	139-13-9
NITROBENZENE	98-95-3
NITROBENZENE-D5	4165-60-0
NITROBENZENE-D6	NO2BZD6
NITROCELLULOSE	9004-70-0

Table A-15 Analyte

Chemical_Name	Cas_rn
NITROFEN	1836-75-5
NITROGEN	7727-37-9
NITROGEN, AMMONIA (AS N)	7664-41-7
NITROGEN, KJELDAHL, TOTAL	KN
NITROGEN, NITRATE (AS N)	14797-55-8
NITROGEN, NITRATE-NITRITE	NO3NO2N
NITROGEN, NITRITE	14797-65-0
NITROGLYCERIN	55-63-0
NITROGUANIDINE	556-88-7
NITROPHENOLS	25154-55-6
NITROSOMETHYLETHYLAMINE	10595-95-6
NITROUS OXIDE	10024-97-2
N-MEFOSAA	2355-31-9
N-METHYLANILINE	100-61-8
N-METHYLMORPHOLINE	109-02-4
N-METHYL-N-(1-OXODODECYL)-GLYCINE	97-78-9
N-NITROSODIETHANOLAMINE	1116-54-7
N-NITROSODIETHYLAMINE	55-18-5
N-NITROSODIISOPROPYLAMINE	601-77-4
N-NITROSODIMETHYLAMINE	62-75-9
N-NITROSODIMETHYLAMINE-D6	NNSMD6
N-NITROSO-DI-N-BUTYLAMINE	924-16-3
N-NITROSODI-N-PROPYLAMINE	621-64-7
N-NITROSODIPHENYLAMINE	86-30-6
N-NITROSODIPHENYLAMINE & DIPHN	NNSP/DIPHN
N-NITROSOMORPHOLINE	59-89-2
N-NITROSO-N-ETHYLUREA	759-73-9
N-NITROSO-N-METHYLUREA	684-93-5
N-NITROSOPIPERIDINE	100-75-4

Table A-15 Analyte

Chemical_Name	Cas_rn
N-NITROSOPYRROLIDINE	930-55-2
N-NONANE	111-84-2
NO. 1 FUEL OILS C9-C16 (IE:NO. 1 DIESEL FUEL ETC.)	HPC9C16
N-OCTACOSANE	630-02-4
N-OCTADECANE	593-45-3
N-OCTANE	111-65-9
N-OCTANOL	111-87-5
NONACOSANE	630-03-5
NONADECANE	629-92-5
NONADECANOL	1454-84-8
NONANE,3-METHYL-5-PROP	ME3PR5C9N
NONANOIC ACID	112-05-0
NON-ASBESTOS FIBER	NASBFIB
NON-ASBESTOS NON-FIBROUS CONSTITUENTS	NASBNFC
NONDISSOLVED ORGANIC CARBON	NDOC
NON-METHANE ORGANIC CARBONS	NMOC
NONPURGEABLE ORGANIC CARBON	NPOC
NONYLPHENOL	25154-52-3
NORBORNANE	279-23-2
NORFLURAZON	27314-13-2
NORPRISTANE	3892-00-0
N-PENTANE	109-66-0
N-PHENYLTHIOUREA	103-85-5
N-PROPANOL	71-23-8
N-PROPYLAMINE	107-10-8
N-PROPYLBENZENE	103-65-1
N-TETRACOSANE	646-31-1

Table A-15 Analyte

Chemical_Name	Cas_rn
N-TETRADECANE	629-59-4
N-TRIACONTANE	638-68-6
N-TRIDECANE	629-50-5
N-UNDECANE	1120-21-4
O-(2-METHYLPROPYL) HYDROXYLAMINE	OMPHY
O-(3-METHYL-BU HYDROXYLAMINE	MB3HY
O,O,O,O-TETRA-N-PROPYL DITHIOPYROPHOSPHATE	3244-90-4
O,O,O-TRIETHYL PHOSPHOROTHIOATE	126-68-1
O,O-DIMETHYL PHOSPHORODITHIOATE	756-80-9
O,P'-DDD	53-19-0
O,P'-DDE	3424-82-6
O,P'-DDT	789-02-6
O-ANISIDINE	90-04-0
OCTABENZONE	1843-05-6
OCTACHLORODIBENZOFURAN	39001-02-0
OCTACHLORODIBENZOFURAN-C13	OCDFC13
OCTACHLORODIBENZOFURANS (TOTAL)	OCDFT
OCTACHLORODIBENZO-P-DIOXIN	3268-87-9
OCTACHLORODIBENZO-P-DIOXIN-C13	OCDDC13
OCTACHLORODIBENZO-P-DIOXINS (TOTAL)	OCDDT
Octachlorostyrene	29082-74-4
OCTADECANAL	638-66-4
OCTADECANOIC ACID	57-11-4
OCTADECENE	27070-58-2
OCTAFLUOROTOLUENE	434-64-0
OCTAHYDE-5H-IDEN-5-ONE	OH5HID
OCTAHYDRO-1-(2-OC)PENTALENE	OCHYPT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-	2691-41-0

Table A-15 Analyte

Chemical_Name	Cas_rn
TETRAZOCINE	
OCTAHYDRO-2,2,4,4-1H-INDENE	OCHY2244IN
OCTAMETHYL PYROPHOSPHORAMIDE	152-16-9
OCTAMETHYLCYCLOTETRASILOXANE	556-67-2
OCTANAL	124-13-0
OCTANE, 1-BROMO-	111-83-1
OCTANOIC ACID	124-07-2
Octatetracontane, 1-iodo-	40710-70-1
OCTENE-1	111-66-0
OCTYL CYCLOHEXANE	1795-15-9
O-CYMENE (O-ISOPROPYLTOLUENE)	527-84-4
O-DECYL HYDROXYLAMINE	29812-79-1
ODOR	ODOR
O-FLUOROANILINE	348-54-9
OIL & GREASE, TOTAL REC	OILGREASE
O-PHENYLENEDIAMINE	95-54-5
o-Phenylphenol	90-43-7
ORGANIC LEAD	PBO
Organic Matter	ORGMAT
ORGANIC VAPOR	OVA
Ortho Phosphate	14265-44-2O
ORTHOCHLOROBENZALDEHYDE	89-98-5
ORYZALIN	19044-88-3
OSMIUM	7440-04-2
O-TERPHENYL	84-15-1
O-TOLUALDEHYDE	529-20-4
O-TOLUIDINE	95-53-4
O-TOLUIDINE HYDROCHLORIDE	636-21-5
OTTO FUEL II	106602-80-6

Table A-15 Analyte

Chemical_Name	Cas_rn
OXACYCLOTETRADECAN-2-ONE	1725-04-8
OXIDATION-REDUCTION POTENTIAL	ORP
OXY BIS ETHANOL	111-46-6
OXYCHLORDANE	27304-13-8
OXYGEN	7782-44-7
O-XYLENE (1,2-DIMETHYLBENZENE)	95-47-6
OZONE	10028-15-6
P,P'-DDD	72-54-8
P,P'-DDE	72-55-9
P,P'-DDT	50-29-3
PAINT FILTER	PAINTFILTER
P-AMINOAZOBENZENE	60-09-3
PARALDEHYDE	123-63-7
PARAQUAT	1910-42-5
PARAQUAT	4685-14-7
PARAQUAT METHOSULFATE	2074-50-2
PARATHION, ETHYL	56-38-2
PARATHION, METHYL	298-00-0
Particulate Methane Monooxygenase	PMMO
P-BENZOQUINONE	106-51-4
PCB 103	PCB103
PCB 118	31508-00-6
PCB 198	PCB198
PCB, TOTAL	PCB
PCB-100	39485-83-1
PCB-1016 (AROCLOR 1016)	12674-11-2
PCB-1020 (AROCLOR 1020)	PCB1020
PCB-103	60145-21-3
PCB-104	56558-16-8

Table A-15 Analyte

Chemical_Name	Cas_rn
PCB-105	32598-14-4
PCB-106/118	70424-69-0M
PCB-107/109	70424-68-9M
PCB-108/112	70362-41-3M
PCB-110	38380-03-9
PCB-111/115	39635-32-0M
PCB-113	68194-10-5
PCB-114	74472-37-0
PCB-119	56558-17-9
PCB-12/13	2974-92-7M
PCB-120	68194-12-7
PCB-121	56558-18-0
PCB-122	76842-07-4
PCB-1221 (AROCLOR 1221)	11104-28-2
PCB-1224 (AROCLOR 1224)	PCB1224
PCB-123	65510-44-3
PCB-1232 (AROCLOR 1232)	11141-16-5
PCB-124	70424-70-3
PCB-1242 (AROCLOR 1242)	53469-21-9
PCB-1248 (AROCLOR 1248)	12672-29-6
PCB-1254 (AROCLOR 1254)	11097-69-1
PCB-126	57465-28-8
PCB-1260 (AROCLOR 1260)	11096-82-5
PCB-1268 (AROCLOR 1268)	11100-14-4
PCB-127	39635-33-1
PCB-128/162	38380-07-3M
PCB-129	55215-18-4
PCB-130	52663-66-8
PCB-131	61798-70-7

Table A-15 Analyte

Chemical_Name	Cas_rn
PCB-132/161	38380-05-1M
PCB-133/142	35694-04-3M
PCB-134/143	52704-70-8M
PCB-135	52744-13-5
PCB-136	38411-22-2
PCB-137	35694-06-5
PCB-138/163/164	35065-28-2M
PCB-139/149	56030-56-9M
PCB-14	34883-41-5
PCB-140	59291-64-4
PCB-141	52712-04-6
PCB-144	68194-14-9
PCB-145	74472-40-5
PCB-146/165	51908-16-8M
PCB-147	68194-13-8
PCB-148	74472-41-6
PCB-150	68194-08-1
PCB-151	52663-63-5
PCB-152	68194-09-2
PCB-153	35065-27-1
PCB-154	60145-22-4
PCB-155	33979-03-2
PCB-156	38380-08-4
PCB-157	69782-90-7
PCB-158/160	74472-42-7M
PCB-159	39635-35-3
PCB-16/32	38444-78-9M
PCB-166	41411-63-6
PCB-167	52663-72-6

Table A-15 Analyte

Chemical_Name	Cas_rn
PCB-168	59291-65-5
PCB-169	32774-16-6
PCB-17	37680-66-3
PCB-170	35065-30-6
PCB-171	52663-71-5
PCB-172	52663-74-8
PCB-173	68194-16-1
PCB-174	38411-25-5
PCB-175	40186-70-7
PCB-176	52663-65-7
PCB-177	52663-70-4
PCB-178	52663-67-9
PCB-179	52663-64-6
PCB-18	37680-65-2
PCB-180	35065-29-3
PCB-181	74472-47-2
PCB-182/187	60145-23-5M
PCB-183	52663-69-1
PCB-184	74472-48-3
PCB-185	52712-05-7
PCB-186	74472-49-4
PCB-188	74487-85-7
PCB-189	39635-31-9
PCB-19	38444-73-4
PCB-190	41411-64-7
PCB-191	74472-50-7
PCB-192	74472-51-8
PCB-193	69782-91-8
PCB-194	35694-08-7

Table A-15 Analyte

Chemical_Name	Cas_rn
PCB-195	52663-78-2
PCB-196/203	42740-50-1M
PCB-197	33091-17-7
PCB-198	68194-17-2
PCB-199	52663-75-9
PCB-20/21/33	38444-84-7M
PCB-200	52663-73-7
PCB-201	40186-71-8
PCB-202	2136-99-4
PCB-204	74472-52-9
PCB-205	74472-53-0
PCB-206	40186-72-9
PCB-207	52663-79-3
PCB-208	52663-77-1
PCB-22	38444-85-8
PCB-23	55720-44-0
PCB-24/27	55702-45-9M
PCB-25	55712-37-3
PCB-26	38444-81-4
PCB-28	7012-37-5
PCB-30	35693-92-6
PCB-34	37680-68-5
PCB-35	37680-69-6
PCB-36	38444-87-0
PCB-37	38444-90-5
PCB-38	53555-66-1
PCB-39	38444-88-1
PCB-4/10	13029-08-8M
PCB-40	38444-93-8

Table A-15 Analyte

Chemical_Name	Cas_rn
PCB-41/64/71/72	52663-59-9M
PCB-42/59	36559-22-5M
PCB-43/49	70362-46-8M
PCB-44	41464-39-5
PCB-45	70362-45-7
PCB-46	41464-47-5
PCB-47	2437-79-8
PCB-48/75	70362-47-9M
PCB-5/8	16605-91-7M
PCB-50	62796-65-0
PCB-51	68194-04-7
PCB-52/69	35693-99-3M
PCB-53	41464-41-9
PCB-55	74338-24-2
PCB-56/60	41464-43-1M
PCB-57	70424-67-8
PCB-58	41464-49-7
PCB-6	25569-80-6
PCB-61/70	33284-53-6M
PCB-62	54230-22-7
PCB-63	74472-34-7
PCB-65	33284-54-7
PCB-67	73575-53-8
PCB-68	73575-52-7
PCB-7/9	33284-50-3M
PCB-73	74338-23-1
PCB-74	32690-93-0
PCB-76/66	70362-48-0M
PCB-77	32598-13-3

Table A-15 Analyte

Chemical_Name	Cas_rn
PCB-78	70362-49-1
PCB-79	41464-48-6
PCB-80	33284-52-5
PCB-81	70362-50-4
PCB-82	52663-62-4
PCB-83	60145-20-2
PCB-84/92	52663-60-2M
PCB-85/116	65510-45-4M
PCB-86	55312-69-1
PCB-87/117/125	38380-02-8M
PCB-88/91	55215-17-3M
PCB-89	73575-57-2
PCB-90/101	68194-07-0M
PCB-93	73575-56-1
PCB-94	73575-55-0
PCB-95/98/102	38379-99-6M
PCB-96	73575-54-9
PCB-97	41464-51-1
PCB-99	38380-01-7
PCB-AROCLORS (UNSPECIFIED)	12767-79-2
PCE Reductase	PCE_1
PCE Reductase	PCE_2
P-CHLOROPHENYLMETHYLSULFIDE	123-09-1
P-CHLOROPHENYLMETHYLSULFONE	98-57-7
P-CHLOROPHENYLMETHYLSULFOXIDE	934-73-6
P-CRESIDINE	120-71-8
PCT 5060 (AROCLOR 5060)	PCT5060
PCT 5432 (AROCLOR 5432)	PCT5432
PCT 5442 (AROCLOR 5442)	PCT5442

Table A-15 Analyte

Chemical_Name	Cas_rn
PCT 5460 (AROCLOR 5460)	PCT5460
P-CYMENE (P-ISOPROPYLTOLUENE)	CYMP
P-DIMETHYLAMINOAZOBENZENE	60-11-7
PEBULATE	1114-71-2
PENDIMETHALIN	40487-42-1
PENTACHLORINATED DIBENZOFURANS, (TOTAL)	PECDF
PENTACHLORINATED DIBENZO-P-DIOXINS, (TOTAL)	PECDD
PENTACHLORO 1,1'-BIPHENYL	18259-05-7
PENTACHLORO DIBENZOFURAN	30402-15-4
PENTACHLOROBENZENE	608-93-5
PENTACHLORODIBENSO-P-DIOXIN	36088-22-9
PENTACHLOROETHANE	76-01-7
PENTACHLORONITROBENZENE	82-68-8
PENTACHLOROPHENOL	87-86-5
Pentachlorostyrene	83484-75-7
Pentacontan-1-ol	40710-43-8
PENTACOSANE	629-99-2
PENTADECANE	629-62-9
PENTADECANOIC ACID	1002-84-2
PENTAERYTHRITOL TETRANITRATE	78-11-5
PENTAFLUOROBENZENE	363-72-4
PENTAFLUOROPHENOL	771-61-9
PENTAMETHYLDISILANE	812-15-7
PENTAMETHYLHEPTANE	30586-18-6
PENTANAL (VALERALDEHYDE)	110-62-3
PENTANE-2-METHOXY	C5NMTX
PENTATRIACONTANE	630-07-9

Table A-15 Analyte

Chemical_Name	Cas_rn
PENTYLCYCLOHEXANE	38792-89-1
PERCENT DRY	DRY
PERCENT LIPIDS	LIPIDPERCENT
Percent passing 0.375 micron	GS-0.375P
Percent passing 0.5 micron	GS-0.5P
PERCENT PASSING 1 MICRON	GS-1P
Percent passing 1000 micron (#18 sieve)	GS-1000P
Percent passing 106 micron (#140 sieve)	GS-106P
Percent passing 11 micron	GS-11P
PERCENT PASSING 1180 MICRONS (#16 SIEVE)	GS-1180P
Percent passing 1189 micron (#16 sieve)	GS-1189P
Percent passing 125 micron (#120 sieve)	GS-125P
Percent passing 1414 micron (#14 sieve)	GS-1414P
Percent passing 15.6 micron	GS-15.6P
Percent passing 180 micron (#80 sieve)	GS-180P
PERCENT PASSING 2 MICRON	GS-2P
PERCENT PASSING 20 MICRON	GS-20P
Percent passing 2000 micron (#10 sieve)	GS-2000P
Percent passing 210 micron (#70 sieve)	GS-210P
PERCENT PASSING 2360 MICRONS (#8 SIEVE)	GS-2360P
Percent passing 25 micron (#500 sieve)	GS-25P
Percent passing 250 micron (#60 sieve)	GS-250P
PERCENT PASSING 300 MICRONS (#50 SIEVE)	GS-300P
Percent passing 31 micron (#450 sieve)	GS-31P
Percent passing 3250 micron (#6 sieve)	GS-3250P
PERCENT PASSING 3350 MICRON SIEVE	GS-3350P

Table A-15 Analyte

Chemical_Name	Cas_rn
Percent passing 354 micron (#45 sieve)	GS-354P
Percent passing 37 micron (#400 sieve)	GS-37P
Percent passing 425 micron (#40 sieve)	GS-425P
Percent passing 44 micron (#325 sieve)	GS-44P
PERCENT PASSING 5 MICRON	GS-5P
PERCENT PASSING 50 MICRON	GS-50P
Percent passing 500 micron (#35 sieve)	GS-500P
Percent passing 53 micron (#270 sieve)	GS-53P
Percent passing 595 micron (#30 sieve)	GS-595P
PERCENT PASSING 600 MICRONS (#30 SIEVE)	GS-600P
Percent passing 63 micron (#230 sieve)	GS-63P
PERCENT PASSING 64 MICRON	GS-64P
Percent passing 7.8 micron	GS-7.8P
Percent passing 707 micron (#25 sieve)	GS-707P
Percent passing 850 micron (#20 sieve)	GS-850P
Percent passing 88 micron (#170 sieve)	GS-88P
PERCHLORATE	14797-73-0
PERFLUORO-(1,2-13C2)DECANESULFONATEC13(2)-8:2 FTS	PFDS13C
PERFLUORO(1,2-13C2)HEXANESULFONATEC13(2)-4:2 FTS	PFHS13C
PERFLUORO-(1,2-13C2)OCTANESULFONATEC13(2)-6:2 FTS	PFOSC13
PERFLUORO-1-DECANESULFONATE (PFDS)	2806-15-7
PERFLUORO-1-HEPTANESULFONATE (PFHPS)	PFHpS
PERFLUORO-1-NONANESULFONATE (PFNS)	98789-57-2
PERFLUORO-1-OCTANESULFONAMIDE (FOSA)	754-91-6
PERFLUORO-1-PENTANESULFONATE (PFPES)	PFPeS

Table A-15 Analyte

Chemical_Name	Cas_rn
PERFLUOROBUTANOATE	375-22-4
PERFLUOROBUTANOATE (13C4)	375-22-4-13C
PERFLUOROBUTYL SULFONATE	29420-49-3
PERFLUORODECANOATE (13C2)	335-76-2-13C
PERFLUORODECANOIC ACID	335-76-2
PERFLUORODODECANOATE (13C2)	307-55-1-13C
PERFLUORODODECANOIC ACID	307-55-1
PERFLUOROHEPTANOIC ACID	375-85-9
PERFLUOROHEXANOATE (13C2)	307-24-4-13C
PERFLUOROHEXANOIC ACID	307-24-4
PERFLUOROHEXYL SULFONATE	3871-99-6
PERFLUOROHEXYL SULFONATE (18O2)	3871-99-6-18O
PERFLUORONONANOATE (13C5)	375-95-1-13C
PERFLUORONONANOIC ACID	375-95-1
PERFLUOROOCTANOATE (13C4)	335-67-1-13C
PERFLUOROOCTANOIC ACID	335-67-1
PERFLUOROOCTYL SULFONATE	1763-23-1
PERFLUOROOCTYL SULFONATE (13C4)	1763-23-1-13C
PERFLUOROPENTANOIC ACID	2706-90-3
PERFLUOROTETRADECANOATE	376-06-7
PERFLUOROTETRADECANOATE	PFT
PERFLUOROTRIDECANOATE	72629-94-8
PERFLUOROUNDECANOATE (13C2)	2058-94-8-13C
PERFLUOROUNDECANOIC ACID	2058-94-8
PERMETHRIN	52645-53-1
PERTHANE	72-56-0
PERYLENE	198-55-0
PERYLENE-D12	1520-96-3
PETROLEUM HYDROCARBONS	8012-95-1

Table A-15 Analyte

Chemical_Name	Cas_rn
PETROLEUM HYDROCARBONS	PHC
PETROLEUM HYDROCARBONS ABOVE C-10	PHCC10(+)
PETROLEUM HYDROCARBONS AS JP-5	PHCJP5
PH	PH
PH (LABORATORY)	E-10139
PH (WATER)	PHWATER
PH CORROSIVITY	CORR
PHC AS #1 FUEL OILS C9-C16 #1 DIESEL, #1 FUEL OIL	PHCHPD1
PHC AS #2 FUEL OILS C10-C23 #2 DIESEL, #2 FUEL OIL	PHCHPD2
PHC AS AVIATION GAS	PHCAVG
PHC AS DIESEL FUEL	PHCD
PHC AS FUEL OILS	PHCFO
PHC AS GASOLINE	PHCG
PHC AS HEAVY/RESIDUAL FUEL OILS FUEL OILS #4,#5,#6	PHCHFO
PHC AS HEAVY/RESIDUAL RANGE ORGANIC COMPOUNDS	PHCHRO
PHC AS JET FUELS	PHCJ
PHC AS JP-4	PHCJP4
PHC AS KEROSENE	PHCK
PHC AS LUBE OIL	PHCLUB
PHC AS MED. PETROLEUM DIST. C8-C12 NAPHTHA/MINSPRT	PHCMPD
PHC AS UNKNOWN/WASTE PRODUCT, HEAVY RANGE C9-C23	PHCMH
PHC AS UNKNOWN/WASTE PRODUCT, LIGHT RANGE C4-C12	PHCML

Table A-15 Analyte

Chemical_Name	Cas_rn
PHC AS UNKNOWN/WASTE PRODUCT, MEDIUM RANGE C8-C12	PHCMM
PHC AS WASTE OILS C25+	PHCWASTE
PHENACETIN	62-44-2
PHENANTHRENE	85-01-8
Phenanthrene, 1-methyl-7-(1-methylethyl)	483-65-8
PHENANTHRENE-D10	1517-22-2
PHENOBARBITAL	50-06-6
PHENOL	108-95-2
PHENOL 4-(2,2,3,3-TETRAMETHYLBUTYL)	P4TMB
Phenol Hydroxylase	PHE
PHENOL, 2-METHYL-5-(1-	M2PH5
PHENOL-D3	PHD3
PHENOL-D5	4165-62-2
PHENOL-D6	13127-88-3
PHENOLICS, TOTAL RECOVERABLE	TOTPHEN
PHENYLNAPHTHALENE	35465-71-5
PHENYLPROPIONIC ACID	501-52-0
Phi class 000+ to 100	PHI_CLASS1
Phi class -100 to -300	PHI_CLASS2
Phi class -100+ to 000	PHI_CLASS3
Phi class 100+ to 200	PHI_CLASS4
Phi class 200+ to 300	PHI_CLASS5
Phi class -300 to -400	PHI_CLASS6
Phi class 300+ to 400	PHI_CLASS7
Phi class 400+ to 800	PHI_CLASS8
Phi class greater (size lesser) than 8	PHI_CLASS9
PHORATE	298-02-2
PHOSALONE	2310-17-0

Table A-15 Analyte

Chemical_Name	Cas_rn
PHOSMET	732-11-6
PHOSPHAMIDON	13171-21-6
PHOSPHATE	14265-44-2
PHOSPHONIC ACID, DIOCTADECYL ESTER	DDEPA
PHOSPHORAMIDIC ACID, 4-METH	TICPHAC4MTH
PHOSPHORIC ACID	7664-38-2
PHOSPHORUS, DISSOLVED (AS P)	7723-14-0-D
PHOSPHORUS, DISSOLVED HYDROLYZABLE (AS P)	PDHYDRO
PHOSPHORUS, DISSOLVED ORGANIC (AS P)	PDORG
PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (AS P)	PDORTHO
Phosphorus, isotope ofmass 32	14596-37-3
PHOSPHORUS, TOTAL (AS P)	7723-14-0
PHOSPHORUS, TOTAL HYDROLYZABLE (AS P)	PHYDRO
PHOSPHORUS, TOTAL ORGANIC (AS P)	PORG
PHOSPHORUS, TOTAL ORTHOPHOSPHATE (AS P)	PORTHO
PHOSPHORUS, TOTAL ORTHOPHOSPHATE (AS PO4)	PO4
PHOTOMIREX	39801-14-4
PHTHALAZINONE	119-39-1
PHTHALIC ACID ESTERS (TOTAL)	PHAE
PHTHALIC ANHYDRIDE	85-44-9
p-Hydroxybiphenyl	92-69-3
PICLORAM	1918-02-1
PICRIC ACID	88-89-1
PINENE	7785-26-4
PINENE	80-56-8

Table A-15 Analyte

Chemical_Name	Cas_rn
PIPERONYL SULFOXIDE	120-62-7
PIRIMIPHOS-ETHYL	23505-41-1
PLASTIC LIMIT	PLASLIM
PLASTICITY INDEX	PLASIND
PLUTONIUM 238	13981-16-3
PLUTONIUM 239	15117-48-3
PLUTONIUM 239 AND 240	PU-239/40
P-MONOCHLOROBENZOTRIFLUORIDE	98-56-6
POLONIUM	7440-08-6
POLONIUM-210	13981-52-7
POLYBROMINATED BIPHENYLS	59536-65-1
Polybrominated biphenyls	67774-32-7
POLYCHLORINATED BIPHENYLS (TOTAL PCBs)	1336-36-3
POLYCHLORINATED DIBENZOFURANS (TOTAL)	136677-10-6
POTASSIUM	7440-09-7
POTASSIUM PERMANGANATE	7722-64-7
POTASSIUM, TRIMETHYLSILANOLATE	10519-96-7
POTASSIUM-40	13966-00-2
P-PHENYLENEDIAMINE	106-50-3
PREGNANE	481-26-5
PROMECARB	2631-37-0
PROMETHIUM-147	14380-75-7
PROMETON	1610-18-0
PROMETRYN	7287-19-6
PRONAMIDE	23950-58-5
PROPACHLOR	1918-16-7
PROPANE	74-98-6

Table A-15 Analyte

Chemical_Name	Cas_rn
PROPANE NITRILE (PROPIONITRILE)	107-12-0
PROPANE, 1,1,2-TRIBROMO-	14602-62-1
PROPANE, 1,2,2-TRIBROMO-	14476-30-3
PROPANE, 1,2,3-TRIBROMO-	96-11-7
PROPANE, 1-BROMO-2,3-DICHLO	33037-07-9
PROPANE, 2-CHLORO-2-NITRO-	594-71-8
PROPANEDIOIC ACID	141-82-2
PROPANENNITRILE, 2,2'-AZOBIS	PROPNIT22AZOB
PROPANIL	709-98-8
PROPANOIC ACID ESTER	PAE
PROPANOIC ACID, 2-METHYL-3	2MEPA3
PROPANOIC ACID,2-METHYL-,1-(1-DI)	M2PA
PROPARGITE	2312-35-8
PROPAZINE	139-40-2
PROPENYLBENZENE	637-50-3
PROPENYLBENZODIOXOLE	PRNBZDXL
PROPIONALDEHYDE	123-38-6
PROPIONIC ACID	79-09-4
PROPYL ACETATE	109-60-4
PROPYLBENZAMIDE	PBZD
PROPYLCYCLOHEXANE ISOMER	PRCYHX
PROPYLCYCLOPROPANE	2415-72-7
PROPYLENE	115-07-1
PROPYLENE GLYCOL	57-55-6
PROPYLENE GLYCOL DINITRATE	6423-43-4
PROPYLENE OXIDE	75-56-9
PROPYLTHIOURACIL	51-52-5
PROTACTINIUM 231	14331-85-2
PROTACTINIUM 234	15100-28-4

Table A-15 Analyte

Chemical_Name	Cas_rn
P-TERPHENYL	92-94-4
P-TERT-BUTYLBENZOIC ACID	98-73-7
p-tert-butylphenylsalicytate	87-18-3
P-TOLUALDEHYDE	104-87-0
P-TOLUIDINE	106-49-0
PULEGONE	89-82-7
PURGE RATE	PURGE_RATE
PURGE VACUUM	PURGE_VAC
PURGE VOLUME	PURGE_VOL
PURGEABLE ORGANIC CARBONS	POC
P-XYLENE (1,4-DIMETHYLBENZENE)	106-42-3
PYRENE	129-00-0
PYRENE-D10	1718-52-1
PYRIDINE	110-86-1
Pyridine-d5, TCLP	7291-22-7
PYRROLIDINE	123-75-1
PYRROLO [1,2-A] QUINOLINE-1-ETHANOL, DODECAHYDRO-!	PQEDPD
PYRUVIC ACID	127-17-3
QUARTZ	14808-60-7
QUINOLINE	91-22-5
RADIATION	RAD
RADIUM	7440-14-4
RADIUM-223	15623-45-7
RADIUM-224	13233-32-4
RADIUM-226	13982-63-3
RADIUM-228	15262-20-1
RADON	10043-92-2
RATIO OF SEM/AVS	RATIO-SEM2AVS

Table A-15 Analyte

Chemical_Name	Cas_rn
REACTIVITY	REACTIVITY
RESIDUAL RANGE ORGANICS	C24C36RRO
RESIDUE, TOTAL	RESTOT
RESISTIVITY	RESISTIVITY
RESORCINOL	108-46-3
RHENIUM	7440-15-5
ROCKET PROPELLANT #1, RP-1	RP1
RONNEL	299-84-3
ROTENONE	83-79-4
RUBIDIUM	7440-17-7
RUTHENIUM/RHODIUM-106	RU/RH-106
RUTHENIUM-103	13968-53-1
RUTHENIUM-106	13967-48-1
S,S,S-TRIBUTYL PHOSPHOROTRITHIOATE	78-48-8
SAE TYPE 1020 STEEL CORROSIVITY	SAE1020
SAFROLE	94-59-7
SALINITY	SAL
SAND	GS-SAND
SAND, COARSE	GS-SANDC
SAND, FINE	GS-SANDF
SAND, MEDIUM	GS-SANDM
SCANDIUM 46	13967-63-0
SEC-BUTYL ALCOHOL	78-92-2
SEC-BUTYLBENZENE	135-98-8
SELENIUM	7782-49-2
SELENIUM 75	14265-71-5
SELF (SPONTANEOUS) POTENTIAL	SELFPOT
S-ETHYL DI-N,N-PROPYLTHIOCARBAMATE	759-94-4
SETTLEABLE MATTER	SETMAT

Table A-15 Analyte

Chemical_Name	Cas_rn
SEVIN (CARBARYL)	63-25-2
SIEVE .375 IN, PERCENT PASSING	SIEVE0.375IN
SIEVE 600UM (% PASSING)	SIEVE600UM
SIEVE BOTTOM PLATE (RETAINED)	SIEVEUSBOT
SIEVE NO. 10, PERCENT PASSING	SIEVE10
SIEVE NO. 140, PERCENT PASSING	SIEVE140
SIEVE NO. 16, PERCENT PASSING	SIEVE16
SIEVE NO. 200, PERCENT PASSING	SIEVE200
SIEVE NO. 230 (63 um)	SIEVE230
SIEVE NO. 30, PERCENT PASSING	SIEVE30
SIEVE NO. 4, PERCENT PASSING	SIEVE4
SIEVE NO. 40, PERCENT PASSING	SIEVE40
SIEVE NO. 50, PERCENT PASSING	SIEVE50
SIEVE NO. 8, PERCENT PASSING	SIEVE8
SIEVE NO. 80, PERCENT PASSING	SIEVE80
SIEVE PAN, PERCENT PASSING	SIEVEPAN
SIEVE, 0.25 INCH, PERCENT PASSING	SIEVE0.25IN
SIEVE, 0.5 INCH, PERCENT PASSING	SIEVE0.5IN
SIEVE, 0.75 INCH, PERCENT PASSING	SIEVE0.75IN
SIEVE, 1 INCH, PERCENT PASSING	SIEVE1IN
SIEVE, 1.5 INCH, PERCENT PASSING	SIEVE1.5IN
SIEVE, 10 PHI, PERCENT PASSING	SIEVE10PHI
SIEVE, 19000 MICRONS, PERCENT PASSING	SIEVE19KU
SIEVE, 2 INCH, PERCENT PASSING	SIEVE2IN
SIEVE, 25000 MICRONS, PERCENT PASSING	SIEVE25KU
SIEVE, 3 INCH, PERCENT PASSING	SIEVE3IN
SIEVE, 38000 MICRONS, PERCENT PASSING	SIEVE38KU
SIEVE, 4.5 PHI, PERCENT PASSING	SIEVE4.5PHI
SIEVE, 4.75 PHI, PERCENT PASSING	SIEVE4.75PHI

Table A-15 Analyte

Chemical_Name	Cas_rn
SIEVE, 5 PHI, PERCENT PASSING	SIEVE5PHI
SIEVE, 50000 MICRONS, PERCENT PASSING	SIEVE50KU
SIEVE, 6 PHI, PERCENT PASSING	SIEVE6PHI
SIEVE, 7 PHI, PERCENT PASSING	SIEVE7PHI
SIEVE, 75000 MICRONS, PERCENT PASSING	SIEVE75KU
SIEVE, 8 PHI, PERCENT PASSING	SIEVE8PHI
SIEVE, 9 PHI, PERCENT PASSING	SIEVE9PHI
SIEVE, 9500 MICRONS, PERCENT PASSING	SIEVE9.5KU
SIEVE, NO. 100, PERCENT PASSING	SIEVE100
SIEVE, NO. 20, PERCENT PASSING	SIEVE20
SIEVE, NO. 60, PERCENT PASSING	SIEVE60
SIEVE1.18MM (% PASSING)	SIEVE1.18MM
SILICA	7631-86-9
SILICA, FUSED	60676-86-0
SILICIC ACID, TETRAKIS (2-ETHYLBUTYL)ESTER	SILCICHA
SILICON	7440-21-3
SILOXANE	13597-73-4
SILT	GS-SILT
SILVER	7440-22-4
SILVER 108 (METASTABLE)	AG-108
SILVER-110M (METASTABLE)	AG-110M
SILVEX (2,4,5-TP)	93-72-1
SIMAZINE	122-34-9
SIMETRYN	1014-70-6
S-METHYL-N-((METHYLCARBAMOYL)-OXY)-THIOACETIMIDATE	METHOMYL
SODIUM	7440-23-5
SODIUM ABSORPTION RATIO	SAR

Table A-15 Analyte

Chemical_Name	Cas_rn
SODIUM SULFATE	7757-82-6
SODIUM TRIMETHYLSILANOLATE	18027-10-6
SODIUM-22	13966-32-0
SODIUM-24	16759-28-7
SOLIDS, PERCENT	SOLID
Soluble Methane Monooxygenase	SMMO
SPECIFIC CONDUCTANCE	SC
SPECIFIC CONDUCTANCE IN FIELD	SCF
SPECIFIC GRAVITY	SG
SPECIFIC IDENTIFICATION OF GASOLINE	8006-61-9
Spiro[5.5]undec-2-ene 3,7,7-trimethyl-1	18431-82-8
STIGMASTANE	STIGM
STIROFOS (TETRACHLORVINPHOS)	961-11-5
STROBANE	8001-50-1
STRONTIUM	7440-24-6
STRONTIUM 85	13967-73-2
STRONTIUM-89	14158-27-1
STRONTIUM-90	10098-97-2
STRYCHNINE	57-24-9
STYRENE	100-42-5
STYRENE OXIDE	96-09-3
SUBSTITUTED NAPTHALENES WITH 10TH HIGHEST CONC.	SUBNAPTH10
SUBSTITUTED NAPTHALENES WITH 2ND HIGHEST CONC.	SUBNAPTH2
SUBSTITUTED NAPTHALENES WITH 3RD HIGHEST CONC.	SUBNAPTH3
SUBSTITUTED NAPTHALENES WITH 4TH HIGHEST CONC.	SUBNAPTH4

Table A-15 Analyte

Chemical_Name	Cas_rn
SUBSTITUTED NAPTHALENES WITH 5TH HIGHEST CONC.	SUBNAPTH5
SUBSTITUTED NAPTHALENES WITH 6TH HIGHEST CONC.	SUBNAPTH6
SUBSTITUTED NAPTHALENES WITH 7TH HIGHEST CONC.	SUBNAPTH7
SUBSTITUTED NAPTHALENES WITH 8TH HIGHEST CONC.	SUBNAPTH8
SUBSTITUTED NAPTHALENES WITH 9TH HIGHEST CONC.	SUBNAPTH9
SUBSTITUTED NAPTHALENES WITH HIGHEST CONC.	SUBNAPTH1
SULFALLATE	95-06-7
SULFAMIDE	7803-58-9
SULFATE (AS SO4)	14808-79-8
Sulfate Reducing Bacteria	10143_SRB
SULFIDE	18496-25-8
SULFIDE (ACID SOLUBLE)	18496-25-BAS
SULFIDE, REACTIVE	18496-25-8R
SULFITE (AS SO3)	14265-45-3
SULFUR	63705-05-5
SULFUR HEXAFLUORIDE	2551-62-4
SULFUR, MOL (S8)	7704-34-9
SULFURIC ACID	7664-93-9
SUM OF CHLORDANE ISOMERS BY EIA	CHLORDANET
SUM OF DDT AND DDT DEGRADATION PRODUCTS (DDT, DDD,	TDDTS
SURFACTANTS	SURFACT
SUSPENDED SOLIDS (RESIDUE, NON-	SS

Table A-15 Analyte

Chemical_Name	Cas_rn
FILTERABLE)	
SYNTHETIC FIBER	SYNFIBER
T-BUTYLBENZENE	98-06-6
tceA Reductase	TCEA
TEBUTHIURON	34014-18-1
TECHNETIUM 99M	TC-99M
TELLURIUM	13494-80-9
TEMPERATURE	TEMP
TEMPERATURE AMBIENT	TEMP_AMB
TEMPERATURE, AMBIENT	TEMPAMB
TEQ B(a)P (ND = 0)	TEQ1
TEQ B(a)P (ND = 1/2 DL)	TEQ2
TEQ WHO2005 ND=0.5	3333-30-1
TEQDF-WHO05 (ND = 0; Mammalian TEFs)	TEQ3
TEQDF-WHO05 (ND = 1/2 DL; Mammalian TEFs)	TEQ4
TEQDF-WHO98 (ND = 0; Mammalian TEFs)	TEQ5
TEQDF-WHO98 (ND = 1/2 DL; Mammalian TEFs)	TEQ6
TERBACIL	5902-51-2
TERBUFOS	13071-79-9
TERBUTRYN	886-50-0
Terphenyl-2-ol	2432-11-3
TERPHENYL-D14	98904-43-9
TERT-AMYL METHYL ETHER	994-05-8
TERT-BUTYL ALCOHOL	75-65-0
TERT-BUTYL ETHYL ETHER	637-92-3
TERT-BUTYL METHYL ETHER	1634-04-4
TETRACHLORINATED DIBENZOFURANS,	TCDF

Table A-15 Analyte

Chemical_Name	Cas_rn
(TOTAL)	
TETRACHLORINATED DIBENZO-P-DIOXINS, (TOTAL)	TCDD
TETRACHLORO 1,1'-BIPHENYL	33284-53-6
Tetrachlorodibenzofurans (TCDF), Total	30402-14-3
TETRACHLORODIBENZO-P-DIOXIN	41903-57-5
TETRACHLOROETHANES	25322-20-7
TETRACHLOROETHYLENE(PCE)	127-18-4
TETRACHLOROPHENOLS, TOTAL	TECLPHS
TETRACHLOROTEREPHTHALIC ACID	2136-79-0
TETRACHLORO-THIOPHENE	6012-97-1
Tetracosahexaene, tetramethyl	111-02-4
TETRADECANE, 1-IODO	IOC14N
TETRADECANOIC ACID	544-63-8
TETRADECENE	1120-36-1
TETRADIFON	116-29-0
TETRAETHYL DIPHOSPHATE	107-49-3
TETRAETHYLENE GLYCOL	112-60-7
TETRAETHYLENE GLYCOL DIMETHYL ETHER	143-24-8
TETRAHYDRODIMETHYLNAPHTHALENE	THDMNPH
TETRAHYDROFURAN	109-99-9
TETRAHYDROMETHYL NAPHTHALENE	31291-71-1
TETRALIN	119-64-2
TETRAMETHYL BENZENE	25619-60-7
TETRAMETHYL BUTYL PHENOL	27193-28-8
TETRAMETHYL CYCLOHEXANE	30501-43-0
TETRAMETHYL HEXANE	79004-85-6
TETRAMETHYL PENTADECANE	TPC10N
TETRAMETHYL PENTANE	60265-51-2

Table A-15 Analyte

Chemical_Name	Cas_rn
TETRAMETHYL PHENOL ISOMER	66586-93-4
TETRAMETHYLUREA	632-22-4
TETRATETRACONTANE	7098-22-8
TETRATRIACONTANE	14167-59-0
TETRAZENE	14097-21-3
TETRYL	479-45-8
THALLIUM	7440-28-0
THALLIUM-208	14913-50-9
THERMALLY STABLE JET FUEL JP(TS)	JPTS
THIENO[3.2-C]PYRIDINE	TN32CPYRDN
THIODIGLYCOL	111-48-8
THIODIGLYCOLIC ACID	123-93-3
THIODIPHOSPHORIC ACID TETRAETHYL ESTER	3689-24-5
THIOUREA	62-56-6
THIRAM	137-26-8
THORIUM	7440-29-1
THORIUM-227	15623-47-9
THORIUM-228	14274-82-9
THORIUM-230	14269-63-7
THORIUM-231	14932-40-2
THORIUM-234	15065-10-8
TIN	7440-31-5
TIN 113	SN-113
TITANIUM	7440-32-6
Tittabawassee TEQ (unknown reported calculation)	TEQ_TBWS_UNK
TOKUTHION (PROTHIOFOS)	34643-46-4
TOLUENE	108-88-3

Table A-15 Analyte

Chemical_Name	Cas_rn
TOLUENE DIISOCYANATE	584-84-9
TOLUENE DIISOCYANATE (MIXED ISOMERS)	26471-62-5
Toluene Dioxygenase	TOD
Toluene Monooxygenase	RMO
Toluene Monooxygenase 2	RDEG
TOLUENE-2,6-DIISOCYANATE	91-08-7
TOLUENE-D8	2037-26-5
TOTAL 1,4-DICHLORO-2-BUTENE	764-41-0
TOTAL AMINOCRESOLS	AMEPH
TOTAL BACTERIA	TB
Total Benzofluoranthenes	TOTBFA
TOTAL C-10 ALKANES	C10TOT
TOTAL C2-C5 HYDROCARBONS	PHCC2C5
TOTAL C-5 ALKANES	C5TOT
TOTAL C-6 ALKANES	C6TOT
TOTAL C6 HYDROCARBONS	PHCC6
TOTAL C-7 ALKANES	C7TOT
TOTAL C7 HYDROCARBONS	PHCC7
TOTAL C-8 ALKANES	C8TOT
TOTAL C8 HYDROCARBONS	PHCC8
TOTAL C-9 ALKANES	C9TOT
TOTAL C9 HYDROCARBONS	PHCC9
TOTAL CARBON	7440-44-0
TOTAL CARCINOGENIC PAHS BY IMMUNOASSAY.	TCXPAH
TOTAL CHROMATOGRAPHICABLE ORGANICS	TCO
Total diCB	25512-42-9
TOTAL DICHLORBIPHENYLS	DCBPH
TOTAL DISSOLVED SOLIDS	E-10173

Table A-15 Analyte

Chemical_Name	Cas_rn
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	TDS
Total Eubacteria	EBAC
TOTAL EXTRACTABLE LIPIDS	LIPIDS
TOTAL FIBERS	TFIBER
TOTAL FIXED SOLIDS	TFS
TOTAL FUEL HYDROCARBONS	TFH
TOTAL GASEOUS NONMETHANE ORGANIC EMISSIONS AS CARB	TGNMO
TOTAL GLYCOLS AS ETHYLENE GLYCOL	GLYETGLY
TOTAL HEPTACHLOROBIPHENYLS	28655-71-2
TOTAL HEPTANE AND HIGHER HYDROCARBONS	C7HT
TOTAL HETEROTROPIC BACTERIA	TOTHETBAC
TOTAL HEXACHLOROBIPHENYLS	26601-64-9
TOTAL HEXANES	73513-42-5
Total HPCDD	37871-00-4
Total HPCDF	38998-75-3
Total HxCDDs	34465-46
TOTAL HYDROCARBONS AS HEXANE	THCHX
TOTAL INORGANIC CARBON	TIC
TOTAL JP-4 DEGRADERS	TJP4D
TOTAL MICROBIAL POPULATION - AEROBIC	AEROBICTMP
TOTAL MICROBIAL POPULATION - ANAEROBIC	ANAEROBICTMP
Total monoCB	27323-18-8
Total nonaCB	53742-07-7
TOTAL NONACHLOROBIPHENYLS	NCBPH
TOTAL NON-METHANE HYDROCARBONS	NCH4H

Table A-15 Analyte

Chemical_Name	Cas_rn
TOTAL NON-METHANE HYDROCARBONS AS HEXANE	NCH4HX
TOTAL NON-METHANE HYDROCARBONS AS METHANE	NCH4HYM
Total octaCB	55722-26-4
TOTAL OCTACHLOROBIPHENYLS	OCBPH
TOTAL OCTANE AND HIGHER HYDROCARBONS	C8HT
TOTAL ORGANIC CARBON	TOC
TOTAL ORGANIC CARBON 2	TOC2
TOTAL ORGANIC CARBON RESULT 1	TOC1
TOTAL ORGANIC HALIDES (TOX)	TOX
TOTAL ORGANIC HALIDES (TOX) - BROMINATED	TOX_BR
TOTAL ORGANIC HALIDES (TOX) - CHLORINATED	TOX_CL
TOTAL ORGANIC HALIDES (TOX) - IODINATED	TOX_I
TOTAL PENTACHLOROBIPHENYLS	25429-29-2
TOTAL PETROLEUM HYDROCARBONS	TPH
TOTAL PETROLEUM HYDROCARBONS (C10-C20)	PHC1020
TOTAL PETROLEUM HYDROCARBONS (C20-C34)	PHC2034
TOTAL PETROLEUM HYDROCARBONS-EXTRACTABLE (DRO)	TPHDIESEL
TOTAL PETROLEUM HYDROCARBONS-PURGEABLE (GRO)	TPHGAS
TOTAL POLYCHLORINATED DIBENZO-P-	PCDD

Table A-15 Analyte

Chemical_Name	Cas_rn
DIOXINS	
TOTAL POLYNUCLEAR AROMATIC HYDROCARBONS BY EIA.	TPAH
TOTAL RADIUM	TRA
Total SIM-Polynuclear Aromatic Hydrocarbons	TPAHSIM
TOTAL SIMULTANEOUSLY EXTRACTED METALS (SEM)	TSEM
TOTAL SOLIDS	TSO
TOTAL SUSPENDED PARTICULATES	TSP
TOTAL SUSPENDED SOLIDS	TSS
Total TCDF	55722-27-5
Total tetraCB	26914-33-0
TOTAL TETRACHLOROBIPHENYLS	TECBPH
TOTAL TETRAMETHYLBENZENE	TMEBZT
TOTAL TOXIC EQUIVALENT,WORLD HEALTH ORGANIZATION 1998	TEQ WHO-98
TOTAL TRICHLOROBIPHENYLS	TRICBPH
TOTAL TRIHALOMETHANES	THM
TOTAL URANIUM	TOT UNRANIUM
TOTAL URANIUM	TOT URANIUM
TOTAL VOLATILE ORGANICS	TVO
TOTAL VOLATILE PETROLEUM HYDROCARBONS	PHCV
TOTAL VOLATILE PETROLEUM HYDROCARBONS AS METHANE	PHCVCH4
TOTAL VOLATILE SOLIDS	TVS
TOTAL, 1,3-DICHLOROPROPENE (CIS AND TRANS)	542-75-6
TOXAPHENE	8001-35-2

Table A-15 Analyte

Chemical_Name	Cas_rn
TOXICITY, 10-DAY SURVIVAL	TOXSURV
TRACETIN	TRIACT
TRANS-1-(CYCLOHEXYLMETHYL) CYCLOHEXANE	CYHEXMCYHXT
TRANS-1-(CYCLOHEXYLMETHYL)-3-METHYL-CYCLOHEXANE	CYHXMME3CYHT
TRANS-1,2-CYCLOHEXANEDIOL	1460-57-7
trans-1,2-DCE Reductase	TDR
TRANS-1,2-DICHLOROETHENE	156-60-5
TRANS-1,2-DIMETHYLCYCLOHEXANE	6876-23-9
TRANS-1,2-DIMETHYL-CYCLOPENTANE	822-50-4
TRANS-1,3-DICHLOROPROPENE	10061-02-6
trans-1,3-Dichloropropene-d4	93951-86-1
TRANS-1,3-DIMETHYL CYCLOHEXANE	2207-03-6
TRANS-1,4-DICHLORO-2-BUTENE	110-57-6
TRANS-1,4-DIMETHYL CYCLOOCTANE	PDMCYOT
TRANS-1-ETHYL-2-METHYL-CYCLOHEXANE	ETMCYC6NT
TRANS-1-ETHYL-4-METHYL-CYCLOHEXANE	6236-88-0
TRANS-2,2-DIMETHYL-3-HEXANE	DM22HX3T
TRANS-2-BROMOCYCLOHEXANOL	16536-57-5
TRANS-2-HEXENAL	6728-26-3
TRANS-2-METHYLCYCLOPENTANOL	25144-04-1
TRANS-DECAHYDRO-NAPHTHALENE	493-02-7
TRANS-DIALLATE	DIALLATET
TRANS-ISOSAFROLE	4043-71-4
TRANSMISSIVITY	TRANS
TRANS-NONACHLOR	39765-80-5
TRANS-OCTAHYDRO-7A-METHYL-1H-INDENE-1-ONE	OH7AMIN

Table A-15 Analyte

Chemical_Name	Cas_rn
TRANS-PERMETHRIN	51877-74-8
TREMOLITE	14567-73-8
TRIADIMEFON	43121-43-3
TRIAZOPHOS	24017-47-8
TRIBUTYL PHOSPHATE	126-73-8
TRIBUTYLPHOSPHINE OXIDE	814-29-9
TRICHLOROBENZENE	12002-48-1
Trichlorobenzene Dioxygenase	120-82-1_DIO
Trichlorobiphenyl	25323-68-6
TRICHLOROEICOSYL-SILANE	TCESS
TRICHLOROETHANE	25323-89-1
TRICHLOROETHANOL PHOSPHATE	TCEHP
TRICHLOROETHYLENE (TCE)	79-01-6
TRICHLOROFLUOROMETHANE	75-69-4
TRICHLORONATE	327-98-0
TRICHLOROPHENOLS, TOTAL	25167-82-2
TRICHLOROPHON	52-68-6
TRICHLOROPROPANE	25735-29-9
TRICHLOROTRIFLUOROETHANE	26523-64-8
TRICOSANE	638-67-5
TRICYCLAZOLE	41814-78-2
TRICYCLO[3.2.1.02,4]OCT-6-ENE,8-METHYLENE(1.ALPHA)	85880-10-0
TRICYCLO[3.3.1.13,7]DECANE,1-NITRO-	7575-82-8
TRICYCLO[4.3.0.07]NONANE	TCYC9N
TRIDECANAL	10486-19-8
TRIDECANOIC ACID	638-53-9
TRIDECANOL	112-70-9
TRIETHYLENE GLYCOL	112-27-6

Table A-15 Analyte

Chemical_Name	Cas_rn
TRIFLURALIN	1582-09-8
TRIMETHYL ACETIC ACID	75-98-9
TRIMETHYL BENZENE	25551-13-7
TRIMETHYL BENZOIC ACID	15012-36-9
TRIMETHYL CYCLOHEXANE	30498-63-6
TRIMETHYL CYCLOPENTENONE	TMCPT
TRIMETHYL DECANE	98060-54-9
TRIMETHYL DODECANE	TMC12N
TRIMETHYL HEPTANE	15869-87-1
TRIMETHYL HEXANE	26447-41-6
TRIMETHYL HYDRAZINE	1741-01-1
TRIMETHYL NONANE	TMC9N
TRIMETHYL OCTANE	98060-52-7
TRIMETHYL OCTENE	TMO
TRIMETHYL OXIRANE	TMOXR
TRIMETHYL PENTANE	29222-48-8
TRIMETHYL PENTYLPHENOL	TMPPH
TRIMETHYL PHENOL	26998-80-1
TRIMETHYL PHOSPHATE	512-56-1
TRIMETHYL-2-PENTENE ISOMER	TMPTN2
TRIMETHYLBENZENESULFONAMIDE	599-69-9
TRIMETHYLCYCLOPENTANE ISOMERS	28652-77-9
TRIMETHYLNAPHTHALENES	TMNPH
TRIMETHYLPHENYLETHANONE	TMPE
TRIPHENYL PHOSPHATE	115-86-6
TRIPHENYL PHOSPHORUS ACID	TPA
TRIPHENYLENE	217-59-4
TRI-P-TOLYL PHOSPHATE	78-32-0
TRIS(2,3-DIBROMOPROPYL) PHOSPHATE	126-72-7

Table A-15 Analyte

Chemical_Name	Cas_rn
TRIS(2-ETHYLHEXYL)PHOSPHATE	78-42-2
TRITETRACONTANE	TTCON
TRITIUM (HYDROGEN-3)	10028-17-8
TURBIDITY	TURB
TURBIDITY IN FIELD	TURBF
UNDECANE 2-CYCLOHEXYL, ?	CYHEX2C11N
UNDECYL-CYCLOHEXANE	54105-66-7
UN-IONIZED H2S AS S2-	HSU
UNKNOWN ALCOHOLS WITH 10TH HIGHEST CONC.	UNKALCOHOL10
UNKNOWN ALCOHOLS WITH 2ND HIGHEST CONC.	UNKALCOHOL2
UNKNOWN ALCOHOLS WITH 3RD HIGHEST CONC.	UNKALCOHOL3
UNKNOWN ALCOHOLS WITH 4TH HIGHEST CONC.	UNKALCOHOL4
UNKNOWN ALCOHOLS WITH 5TH HIGHEST CONC.	UNKALCOHOL5
UNKNOWN ALCOHOLS WITH 6TH HIGHEST CONC.	UNKALCOHOL6
UNKNOWN ALCOHOLS WITH 7TH HIGHEST CONC.	UNKALCOHOL7
UNKNOWN ALCOHOLS WITH 8TH HIGHEST CONC.	UNKALCOHOL8
UNKNOWN ALCOHOLS WITH 9TH HIGHEST CONC.	UNKALCOHOL9
UNKNOWN ALCOHOLS WITH HIGHEST CONC.	UNKALCOHOL1
UNKNOWN ALKYL ALDEHYDES WITH 10TH HIGHEST CONC.	UNKALKALDHYDE10

Table A-15 Analyte

Chemical_Name	Cas_rn
UNKNOWN ALKYL ALDEHYDES WITH 2ND HIGHEST CONC.	UNKALKALDHYDE2
UNKNOWN ALKYL ALDEHYDES WITH 3RD HIGHEST CONC.	UNKALKALDHYDE3
UNKNOWN ALKYL ALDEHYDES WITH 4TH HIGHEST CONC.	UNKALKALDHYDE4
UNKNOWN ALKYL ALDEHYDES WITH 5TH HIGHEST CONC.	UNKALKALDHYDE5
UNKNOWN ALKYL ALDEHYDES WITH 6TH HIGHEST CONC.	UNKALKALDHYDE6
UNKNOWN ALKYL ALDEHYDES WITH 7TH HIGHEST CONC.	UNKALKALDHYDE7
UNKNOWN ALKYL ALDEHYDES WITH 8TH HIGHEST CONC.	UNKALKALDHYDE8
UNKNOWN ALKYL ALDEHYDES WITH 9TH HIGHEST CONC.	UNKALKALDHYDE9
UNKNOWN ALKYL ALDEHYDES WITH HIGHEST CONC.	UNKALKALDHYDE1
UNKNOWN ALKYL KEYTONES WITH 10TH HIGHEST CONC.	UNKALKKEYTONE10
UNKNOWN ALKYL KEYTONES WITH 2ND HIGHEST CONC.	UNKALKKEYTONE2
UNKNOWN ALKYL KEYTONES WITH 3RD HIGHEST CONC.	UNKALKKEYTONE3
UNKNOWN ALKYL KEYTONES WITH 4TH HIGHEST CONC.	UNKALKKEYTONE4
UNKNOWN ALKYL KEYTONES WITH 5TH HIGHEST CONC.	UNKALKKEYTONE5
UNKNOWN ALKYL KEYTONES WITH 6TH	UNKALKKEYTONE6

Table A-15 Analyte

Chemical_Name	Cas_rn
HIGHEST CONC.	
UNKNOWN ALKYL KEYTONES WITH 7TH HIGHEST CONC.	UNKALKKEYTONE7
UNKNOWN ALKYL KEYTONES WITH 8TH HIGHEST CONC.	UNKALKKEYTONE8
UNKNOWN ALKYL KEYTONES WITH 9TH HIGHEST CONC.	UNKALKKEYTONE9
UNKNOWN ALKYL KEYTONES WITH HIGHEST CONC.	UNKALKKEYTONE1
UNKNOWN AROMATICS WITH 10TH HIGHEST CONC.	UNKAROMATIC10
UNKNOWN AROMATICS WITH 2ND HIGHEST CONC.	UNKAROMATIC2
UNKNOWN AROMATICS WITH 3RD HIGHEST CONC.	UNKAROMATIC3
UNKNOWN AROMATICS WITH 4TH HIGHEST CONC.	UNKAROMATIC4
UNKNOWN AROMATICS WITH 5TH HIGHEST CONC.	UNKAROMATIC5
UNKNOWN AROMATICS WITH 6TH HIGHEST CONC.	UNKAROMATIC6
UNKNOWN AROMATICS WITH 7TH HIGHEST CONC.	UNKAROMATIC7
UNKNOWN AROMATICS WITH 8TH HIGHEST CONC.	UNKAROMATIC8
UNKNOWN AROMATICS WITH 9TH HIGHEST CONC.	UNKAROMATIC9
UNKNOWN AROMATICS WITH HIGHEST CONC.	UNKAROMATIC1

Table A-15 Analyte

Chemical_Name	Cas_rn
UNKNOWN CARBOXCYLIC ACID WITH 10TH HIGHEST CONC.	UNKCARBACID10
UNKNOWN CARBOXCYLIC ACID WITH 2ND HIGHEST CONC.	UNKCARBACID2
UNKNOWN CARBOXCYLIC ACID WITH 3RD HIGHEST CONC.	UNKCARBACID3
UNKNOWN CARBOXCYLIC ACID WITH 4TH HIGHEST CONC.	UNKCARBACID4
UNKNOWN CARBOXCYLIC ACID WITH 5TH HIGHEST CONC.	UNKCARBACID5
UNKNOWN CARBOXCYLIC ACID WITH 6TH HIGHEST CONC.	UNKCARBACID6
UNKNOWN CARBOXCYLIC ACID WITH 7TH HIGHEST CONC.	UNKCARBACID7
UNKNOWN CARBOXCYLIC ACID WITH 8TH HIGHEST CONC.	UNKCARBACID8
UNKNOWN CARBOXCYLIC ACID WITH 9TH HIGHEST CONC.	UNKCARBACID9
UNKNOWN CARBOXCYLIC ACID WITH HIGHEST CONC.	UNKCARBACID1
UNKNOWN DICHLOROMETHYLBENZENE 1	UNKDCMB1
UNKNOWN DICHLOROMETHYLBENZENE 2	UNKDCMB2
UNKNOWN DICHLOROMETHYLBENZENE 3	UNKDCMB3
Unknown Hydrocarbon RRT 1.382	UKN-HCRRT-1.382
Unknown Hydrocarbon RRT 1.451	UKN-HCRRT-1.451
UNKNOWN HYDROCARBONS WITH 10TH HIGHEST CONC.	UNKHYDROCARB10
UNKNOWN HYDROCARBONS WITH 2ND HIGHEST CONC.	UNKHYDROCARB2

Table A-15 Analyte

Chemical_Name	Cas_rn
UNKNOWN HYDROCARBONS WITH 3RD HIGHEST CONC.	UNKHYDROCARB3
UNKNOWN HYDROCARBONS WITH 4TH HIGHEST CONC.	UNKHYDROCARB4
UNKNOWN HYDROCARBONS WITH 5TH HIGHEST CONC.	UNKHYDROCARB5
UNKNOWN HYDROCARBONS WITH 6TH HIGHEST CONC.	UNKHYDROCARB6
UNKNOWN HYDROCARBONS WITH 7TH HIGHEST CONC.	UNKHYDROCARB7
UNKNOWN HYDROCARBONS WITH 8TH HIGHEST CONC.	UNKHYDROCARB8
UNKNOWN HYDROCARBONS WITH 9TH HIGHEST CONC.	UNKHYDROCARB9
UNKNOWN HYDROCARBONS WITH HIGHEST CONC.	UNKHYDROCARB1
UNKNOWN PAHS WITH 10TH HIGHEST CONC.	UNKPAH10
UNKNOWN PAHS WITH 2ND HIGHEST CONC.	UNKPAH2
UNKNOWN PAHS WITH 3RD HIGHEST CONC.	UNKPAH3
UNKNOWN PAHS WITH 4TH HIGHEST CONC.	UNKPAH4
UNKNOWN PAHS WITH 5TH HIGHEST CONC.	UNKPAH5
UNKNOWN PAHS WITH 6TH HIGHEST CONC.	UNKPAH6
UNKNOWN PAHS WITH 7TH HIGHEST CONC.	UNKPAH7
UNKNOWN PAHS WITH 8TH HIGHEST CONC.	UNKPAH8
UNKNOWN PAHS WITH 9TH HIGHEST CONC.	UNKPAH9
UNKNOWN PAHS WITH HIGHEST CONC.	UNKPAH1
UNKNOWN PHENOXY BIPHENYL 1	UNKPBP1
UNKNOWN PHENOXY BIPHENYL 2	UNKPBP2
Unknown RRT 1.370	UKN-RRT-1.370

Table A-15 Analyte

Chemical_Name	Cas_rn
Unknown RRT 1.413	UKN-RRT-1.413
Unknown RRT 1.467	UKN-RRT-1.467
Unknown RRT 1.532	UKN-RRT-1.532
UNKNOWN SV WITH 10TH HIGHEST CONC.	UNKSV10
UNKNOWN SV WITH 2ND HIGHEST CONC.	UNKSV2
UNKNOWN SV WITH 3RD HIGHEST CONC.	UNKSV3
UNKNOWN SV WITH 4TH HIGHEST CONC.	UNKSV4
UNKNOWN SV WITH 5TH HIGHEST CONC.	UNKSV5
UNKNOWN SV WITH 6TH HIGHEST CONC.	UNKSV6
UNKNOWN SV WITH 7TH HIGHEST CONC.	UNKSV7
UNKNOWN SV WITH 8TH HIGHEST CONC.	UNKSV8
UNKNOWN SV WITH 9TH HIGHEST CONC.	UNKSV9
UNKNOWN SV WITH HIGHEST CONC.	UNKSV1
UNKNOWN TERPHENYL-OL 1	UNKTERP1
UNKNOWN TERPHENYL-OL 2	UNKTERP2
UNKNOWN VOA WITH 10TH HIGHEST CONC.	UNKVOA10
UNKNOWN VOA WITH 2ND HIGHEST CONC.	UNKVOA2
UNKNOWN VOA WITH 3RD HIGHEST CONC.	UNKVOA3
UNKNOWN VOA WITH 4TH HIGHEST CONC.	UNKVOA4
UNKNOWN VOA WITH 5TH HIGHEST CONC.	UNKVOA5
UNKNOWN VOA WITH 6TH HIGHEST CONC.	UNKVOA6
UNKNOWN VOA WITH 7TH HIGHEST CONC.	UNKVOA7
UNKNOWN VOA WITH 8TH HIGHEST CONC.	UNKVOA8
UNKNOWN VOA WITH 9TH HIGHEST CONC.	UNKVOA9
UNKNOWN VOA WITH HIGHEST CONC.	UNKVOA1
UNKNOWN WITH 10TH HIGHEST CONC.	UNKNOWN10
UNKNOWN WITH 2ND HIGHEST CONC.	UNKNOWN2
UNKNOWN WITH 3RD HIGHEST CONC.	UNKNOWN3
UNKNOWN WITH 4TH HIGHEST CONC.	UNKNOWN4

Table A-15 Analyte

Chemical_Name	Cas_rn
UNKNOWN WITH 5TH HIGHEST CONC.	UNKNOWN5
UNKNOWN WITH 6TH HIGHEST CONC.	UNKNOWN6
UNKNOWN WITH 7TH HIGHEST CONC.	UNKNOWN7
UNKNOWN WITH 8TH HIGHEST CONC.	UNKNOWN8
UNKNOWN WITH 9TH HIGHEST CONC.	UNKNOWN9
UNKNOWN WITH HIGHEST CONC.	UNKNOWN1
URANIUM	7440-61-1
URANIUM 233 AND 234	U-233/234
URANIUM 235 AND 236	U-235/236
URANIUM-234	13966-29-5
URANIUM-235	15117-96-1
URANIUM-236	13982-70-2
VANADIUM	7440-62-2
VANADIUM 48	14331-97-6
Vanillin	121-33-5
VERNOLATE	1929-77-7
VINYL ACETATE	108-05-4
VINYL CHLORIDE	75-01-4
Vinyl chloride reductase	75-01-4_REDC
Vinyl chloride reductase	VCR
VINYL CHLORIDE-D3	6745-35-3
VINYL ETHYL ETHER	109-92-2
VINYL ISOBUTYL ETHER	109-53-5
VINYL N-BUTYL ETHER	111-34-2
VOA TCL	TICVOATCLA
VOA TCL B	TICVOATCLB
VOA TCL C	TICVOATCLC
VOID RATIO OF SOILS	VOIDRATIO
VOLATILE ORGANIC HYDROCARBONS WITH	VOLHYDROCARB2

Table A-15 Analyte

Chemical_Name	Cas_rn
2ND HIGHEST CONC.	
VOLATILE ORGANIC HYDROCARBONS WITH 3RD HIGHEST CONC.	VOLHYDROCARB3
VOLATILE ORGANIC HYDROCARBONS WITH 4TH HIGHEST CONC.	VOLHYDROCARB4
VOLATILE ORGANIC HYDROCARBONS WITH 5TH HIGHEST CONC.	VOLHYDROCARB5
VOLATILE ORGANIC HYDROCARBONS WITH 6TH HIGHEST CONC.	VOLHYDROCARB6
VOLATILE ORGANIC HYDROCARBONS WITH 7TH HIGHEST CONC.	VOLHYDROCARB7
VOLATILE ORGANIC HYDROCARBONS WITH 8TH HIGHEST CONC.	VOLHYDROCARB8
VOLATILE ORGANIC HYDROCARBONS WITH HIGHEST CONC.	VOLHYDROCARB1
VOLATILE SUSPENDED SOLIDS	VSS
VOLATILE TOTAL DISSOLVED SOLIDS	VTDS
WARFARIN	81-81-2
WASTE OIL C25+ (I.E. MOTOR OIL, HYDRAULIC FLUID)	WOIL
XENON-133	14932-42-4
XYLENES, M&P	XYLENES1314
XYLENES, O & M	XYLENES1213
XYLENES, O & P	XYLENES1214
XYLENES, TOTAL	XYLENES
YTTRIUM	7440-65-5
YTTRIUM 88	Y-88
Z-14-Tricosenyl fomate	77899-10-6
ZINC	7440-66-6

Table A-15 Analyte

Chemical_Name	Cas_rn
ZINC-65	13982-39-3
ZINEB	12122-67-7
ZINOPHOS	297-97-2
ZIRAM	137-30-4
ZIRCONIUM	7440-67-7
ZIRCONIUM-95	13967-71-0
z-ocatadecenoic acid (z)-2,3-dihydroxyp	111-03-5

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
1613TRP/RT	E1613 quick turnaround timeE1613 quick turnaround time
8270TRP	8270 for semi-volatile organic, quick turnaround time8270 for semi-volatile organic, quick turnaround time
8270TRP/PCP	8270 for Pentachlorophenol, quick turnaround time8270 for Pentachlorophenol, quick turnaround time
A203	CALCIUM CARBONATE SATURATION
A205	SPECIFIC CONDUCTIVITY
A209A	TOTAL SOLIDS DRIED AT 103-105'C
A209B	TOTAL DISSOLVED SOLIDS DRIED AT 180'C
A209C	TOTAL SUSPENDED SOLIDS, DRIED AT 103-105'C
A209F	TOTAL, FIXED, AND VOLATILE SOLIDS IN SOLID AND SEMISOLID SAMPLES
A2320	STANDARD METHOD FOR ALKALINTY
A2320B	STANDARD METHOD FOR ALKALINITY
A2340B	HARDNESS BY CALCULATION
A2540	PERCENT MOISTURE/ PERCENT SOLID REPORTED BY CT LABORATORIES
A2540C	TOTAL DISSOLVED SOLIDS
A2540G	PERCENT MOISTURE
A2580A	OXIDATION REDUCTION POTENTIAL MEASUREMENT IN CLEAN WATER
A2710F	SPECIFIC GRAVITY
A2720C	SLUDGE DIGESTER GAS GC/TCD METHOD FOR CH4, CO2, N, H, H2S, O
A303A	METALS (BY DIRECT ASPIRATION INTO AN AIR-ACETYLENE FLAME)
A303C	DETERMINATION OF AL,* BA, BE, *MO, OS, RE, SI, TH, TI & V BY DIRECT AS
A303E	DETERM. OF AS & SE BY CONVERSION TO THEIR HYDRIDES BY SODIUM BOROHYDRI
A3113	METALS BY ELECTROTHERMAL AA SPECTROMETRY
A3113B	METALS BY ELECTROTHERMAL AA SPECTROMETRY
A312B	CHROMIUM, HEXAVALENT (COLORIMETRIC METHOD)
A314A	HARDNESS BY CALCULATION
A403	ALKALINITY

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
A405	BROMIDE
A406B	TITRIMETRIC METHOD FOR FREE CARBON DIOXIDE
A407A	CHLORIDE (ARGENTOMETRIC)
A407B	CHLORIDE (MERCURIC NITRATE METHOD)
A4110	INORGANIC ANIONS IN WATER BY IONCHROMATOGRAPHY
A412	CYANIDE
A412D	TOTAL CYANIDE COLORIMETRIC METHOD
A412E	CYANIDE, BY ION SELECTION ELECTRODE
A412F	CYANIDE, AMENABLE TO CHLORINATION
A413B	FLUORIDE, ELECTRODE METHOD
A413C	FLUORIDE (SPADNS)
A417C	NITROGEN (AMMONIA) PHENATE METHOD
A417G	AMONIA
A418B	NITRATE ELECTRODE SCREENING METHOD
A418C	NITROGEN (NITRATE) CADMIUM REDUCTION METHOD
A418F	NITROGEN (NITRATE, AUTOMATED CADMIUM REDUCTION METHOD)
A419	NITROGEN (NITRITE)
A423	PH VALUE
A424G	PHOSPHATE (ASCORBIC ACID REDUCTION)
A425C	SILICA, MOLYBDOSILICATE METHOD
A426C	SULFATE TURBIDIMERIC METHOD
A426D	SULFATE (AUTOMATED METHYLTHYMOL BLUE METHOD)
A429	ANIONS BY ION CHROMATOGRAPHY
A4500B	THE DETERMINATION OF INORGANIC NON-METALLIC CONSTITUENTS
A4500C	THE DETERMINATION OF INORGANIC NON-METALLIC CONSTITUENTS
A503A	OIL AND GREASE, PARTITION - GRAVIMETRIC METHOD
A503D	OIL AND GREASE IN SOIL AND SLUDGE SAMPLES
A503DE	OIL AND GREASE IN SOIL AND SLUDGE WITH SILICA GEL HYDROCARBON REMOVAL
A506	TOTAL ORGANIC HALIDES (TOX)
A507	OXYGEN DEMAND (BIOCHEMICAL)
A508A	CHEMICAL OXYGEN DEMAND (COD)
A508B	CHEMICAL OXYGEN DEMAND (CLOSED REFLUX, TITRIMETRIC)
A509A	ORGANOCHLORINE PESTICIDES
A509B	CHLORINATED PHENOXY HERBICIDES
A510B	PHENOLS, CHLOROFORM EXTRACTION METHOD
A5210	5 DAY BIOCHEMICAL OXYGEN DEMAND TEST
A5220C	CHEMICAL OXYGEN DEMAND BY CLOSED REFLUX, TITRATION
A5520C	A5520C FOR OIL AND GREASE
A703	GROSS ALPHA-GROSS BETA
A704	TOTAL RADIOACTIVE STRONTIUM AND STRONTIUM 90 IN WATER
A705	TOTAL RADIUM
A706	RADIUM-226 BY RADON IN WATER (SOLUBLE, SUSPENDED, AND TOTAL)
A707	RADIUM-228 (SOLUBLE) (TENTATIVE)
A708	TRITIUM

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
A709	RADIOACTIVE CESIUM
A710A	RADIOACTIVE IODINE, PRECIPITATION METHOD
A711	URANIUM
A711A	URANIUM RADIOCHEMICAL (TENTATIVE)
A907A	TOTAL BACTERIA (POUR PLATE METHOD)
A907B	TOTAL BACTERIA (SPREAD PLATE METHOD)
A907C	TOTAL BACTERIA (MEMBRANE FILTER METHOD)
A908C	FECAL COLIFORM, MPN PROCEDURE
A909A	STANDARD TOTAL COLIFORM, MEMBRANE FILTER TECHNIQUE
A918A	IRON BACTERIA
A9215B	HETEROTROPHIC PLATE COUNT, POUR PLATE METHOD
A9215C	HETEROTROPHIC PLATE COUNT - SPREAD PLATE METHOD
A9221E	MULTIPLE TUBE FERMENTATION TECHINIQUE FOR TOTAL AND FECAL COLIFORM
ACID	METHOD FOR THE DETERMINATION OF PERCENT ACID
AK101	GASOLINE RANGE ORGANICS, ALASKA DEPT. OF ENVIRONMENTAL CONSERVATION
AK102	DIESEL RANGE ORGANICS, ALASKA DEPT. OF ENVIRONMENTAL CONSERVATION
AK103	RESIDUAL RANGE ORGANICS, ALASKA DEPT. OF ENVIRONMENTAL CONSERVATION
ALLOW_NEGATIVES	Base method to mark what may rec. negative results
AM18	MICROSEEPS METHOD FOR THE DETERMINATION OF ETHENE
AM19GA	MICROSEEPS METHOD FOR HYDROGEN IN GROUNDWATER
AM20GAX	MICROSEEPS METHOD FOR HYDROGEN
APIRPC	API RP-40 RECOMMENDED PRACTICE FOR CORE ANALYSIS, BULK DENSITY
AS9302	BULK DENSITY
ASA_SSSA	METHODS OF SOIL ANALYSIS PART 3-CHEMICAL METHODS, SOIL SCIENCE SOCIETY OF AMERICA BOOK SERIES 5.3, 1996, SOIL SCIENCE SOCIETY OF AMERICA, AMERICAN SOCIETY OF AGRONOMY
ASA245	PHOPHORUS SOLUBLE IN DILUTE-ACID-FLUORIDE ASA 24-5.1, AVAILABILITY IND
AVS	MODIFIED METHOD FOR THE COLORIMETRIC DETERMINATION OF ACID VOLATILE SU
AVS/SEM	ACID VOLITILE SULFIDES/SIMULTANEOUSLY EXTRACTED METALS (ALLEN ET AL 1991)
BASE	METHOD FOR THE DETERMINATION OF PERCENT BASE
BNASIM	GC/MS-SIM ANALYSIS OF SELECTED BNA'S FROM SW8270.
BS1377	BULK DENSITY (WATER DISPLACEMENT), MANUAL OF SOIL LABORATORY TESTING,
C117_13	ASTM STANDARD TEST METHOD FOR MATERIAL FINER THAN 75-uM (No. 200) SIEVE IN MINERAL AGGREGATES BY WASHING
C200.7	ICP METALS (TCL)
C204.2	ANTIMONY (TCL)
C206.2	ARSENIC (TCL)
C213.2	CADMIUM (AA, FURNACE TECHNIQUE) (TCL)

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
C239.2	LEAD (FURNACE TECHNIQUE) (TCL)
C245.1	MERCURY (TCL)
C245.2	MERCURY, AUTOMATED COLD VAPOR (TCL)
C245.5	MERCURY ANALYSIS IN SOIL/SEDIMENT BY MANUAL COLD VAPOR TECHNIQUE (TCL)
C258.1	POTASSIUM (AA, FURNACE TECHNIQUE) (TCL)
C270.2	SELENIUM (TCL)
C273.1	SODIUM (AA, FURNACE TECHNIQUE) (TCL)
C279.2	THALLIUM (TCL)
C335.2	CYANIDE (TCL)
CAAIR	AIR SAMPLE ANALYSES
CACARB	THE DETERMINATION OF VOLATILE SULFUR COMPOUNDS IN AIR BY GC/RPD (CARB
CALC	CALCULATED ANALYTICAL PARAMETER
CAPBO	DETERMINATION OF ORGANIC LEAD DHS METHOD
CARBV	CARB METHOD FOR BTEX IN AMBIENT AIR BY GC/PID
CARO	EPA BIOACCUMULATION METHOD FOR THE DETERMINATION OF PCB AROCLORS
CATFH	TOTAL FUEL HYDROCARBONS: LUFT METHOD (CALIFORNIA)
CLP FURNACE	CLP METHOD FURNACE
CMET	CLP METHOD FOR THE DETERMINATION OF METALS (TCL)
CNFTEL	COLUMBIA NATIONAL FISHERIES RESEARCH LABORATORY METHOD FOR THE DETERMI
CP288	SENCORE COLOR ANALYZER
CPEST	CLP PESTICIDES (TCL)
CSGAS	THE DETERMINATION OF CSGAS IN SOIL AND WATER, GC/ECD METHOD
CSVOC	CLP METHOD FOR SEMI-VOLATILE ORGANIC COMPOUNDS (TCL)
CSVOL	SEMI-VOLATILE ORGANIC COMPOUNDS (TCL)
CV	CENTRAL LAB PROGRAM STANDARD METH. DET. OF VOLITILES IN GROUND WATER
CVOL	VOLATILE ORGANIC COMPOUNDS (TCL)
D1140	AMOUNT OF MATERIAL IN SOILS FINER THAN THE # 200 (75-UM) SIEVE
D1246	BROMIDE ION-ELECTRODE
D1385	HYDRAZINE (SPECTROPHOTOMETRIC)
D1498	DETERMINATION OF THE OXIDATION-REDUCTION POTENTIAL OF WATER
D1556	DENSITY OF SOIL IN PLACE BY THE SAND-CONE METHOD
D1890	BETA PARTICLE RADIOACTIVITY OF WATER
D1943	ALPHA PARTICLE RADIOACTIVITY OF WATER
D1945	ANALYSIS OF NATURAL GAS BY GAS CHROMATOGRAPHY
D1946	DETERMINATION OF FIXED OR REFORMED GASES BY GC
D2036C	WEAK ACID DISSOCIABLE CYANIDE, COLORIMETRIC DETERMINATION
D2166	UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOIL
D2167	DENSITY & UNIT WEIGHT OF SOIL IN PLACE BY THE RUBBER BALLOON METHOD
D2216	PERCENT SOLID
D2325	CAPILLARY-MOISTURE RELATIONSHIPS FOR COARSE- & MEDIUM-

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
	TEXTURED SOILS B
D2340B	HARDNESS IN WATER BY EDTA TITRATION
D2434	PERMEABILITY
D2460	RADIONUCLIDES OF RADIUM IN WATER
D2487	CLASSIFICATION OF SOILS, FOR ENGINEERING PURPOSES
D2937	DENSITY OF SOIL IN PLACE BY THE DRIVE-CYLINDER METHOD
D2974	TOTAL ORGANIC CONTENT
D2974-87	STANDARD TEST METHODS FOR MOISTURE
D3042_09	STANDARD TEST METHOD FOR INSOLUBLE RESIDUE IN CARBONATE AGGREGATES
D3084	ASTM METHOD FOR ALPHA SPECTROMETRY OF WATER
D3152	CAPILLARY-MOISTURE RELATIONSHIPS FOR FINE-TEXTURED SOILS BY PRESSURE-M
D3155	LIME CONTENT OF UNCURED SOIL-LIME MIXTURES
D3328	ASTM METHOD FOR THE COMPARISON OF WATERBORNE PETROLEUM OILS BY GAS CHR
D3385	INFILTRATION RATE OF SOILS IN FIELD USING DOUBLE-RING INFILTROMETERS
D3416	TOTAL HYDROCARBONS, METHANE, AND CARBON MONOXIDE IN THE ATMOSPHERE GC
D3695	VOLATILE ALCOHOLS IN WATER BY DIRECT AQUEOUS INJECTION GC
D3865	STANDARD TEST METHOD FOR PLUTONIUM IN WATER BY ALPHA SPECTROMETRY
D4129	TOTAL AND ORGANIC CARBON IN WATER OXIDATION BY COULOMETRIC DETECTION
D421	DRY PREPARATION OF SOIL SAMPLES FOR PARTICLE-SIZE ANALYSIS & DETERMINA
D4219	UNCONFINED COMPRESSIVE STRENGTH INDEX OF CHEMICAL-GROUTED SOILS
D422	GRAIN SIZE
D4221	DISPERSIVE CHARACTERISTICS OF CLAY SOIL BY DOUBLE HYDROMETER
D425	CENTRIFUGE MOISTURE EQUIVALENT OF SOILS
D427	SHRINKAGE FACTORS OF SOILS
D4318	LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS
D4373	CALCIUM CARBONATE CONTENT OF SOILS
D4380	DENSITY OF BENTONITIC SLURRIES
D4381	SAND CONTENT BY VOLUME OF BENTONITIC SLURRIES
D4452	X-RAY RADIOGRAPHY OF SOIL-SAMPLES
D4464M	Particle Size Distribution of Catalytic Material by Laser Light Scattering (Grain size) (modified)
D4525	PERMEABILITY OF ROCKS BY FLOWING AIR
D4531	BULK DENSITY OF PEAT AND PEAT PRODUCTS
D4542	PORE WATER EXTRACTION AND DETERMINATION OF THE SOLUBLE SALT
D4564	DENSITY OF SOIL IN PLACE BY THE SLEEVE METHOD
D4643	DETERMINATION OF WATER (MOISTURE) CONTENT OF SOIL BY THE MICROWAVE

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
D4972A	SOIL PH, PH METER METHOD
D4972B	SOIL PH, PH PAPER METHOD
D512A	CHLORIDE ION IN WATER
D516	SULFATE ION IN WATER
D5174	ASTM METHOD FOR TRACE URANIUM IN WATER BY PULSED LASER PHOSPHORIMETRY
D854	SPECIFIC GRAVITY OF SOILS
DCNDMA	DATACHEM LABS METHOD FOR N-NITROSODIMETHYLAMINE BY GC/MS SIM
DISGAS	METHOD FOR THE DETERMINATION OF DISSOLVED GAS
DISMET	CLP METHOD FOR THE DETERMINATION OF DISSOLVED METALS
DLM01.4	MULTI-MEDIA, MULTI-CONCENTRATION DIOXIN AND FURAN ANALYTICAL SERVICE FOR SUPERFUND (2002)
DLM02.0	MULTI-MEDIA, MULTI-CONCENTRATION DIOXIN AND FURAN ANALYTICAL SERVICE FOR SUPERFUND (2005)
DRO	DIESEL RANGE ORGANICS
E110.1	COLOR (COLORIMETRIC, ADMI)
E110.2	COLOR (COLORIMETRIC-PLATINUM-COBALT)
E110.3	COLOR (SPECTROPHOTOMETRIC)
E120.1	SPECIFIC CONDUCTANCE
E130.1	HARDNESS, TOTAL (COLORIMETRIC, AUTOMATED EDTA)
E130.2	HARDNESS, TOTAL (TITRIMETRIC)
E140.1	ODOR (THRESHOLD ODOR, CONSISTENT SERIES)
E150.1	PH, ELECTROMETRIC
E160.1	RESIDUE, FILTERABLE (TDS)
E160.2	RESIDUE, NON-FILTERABLE
E160.3	RESIDUE, TOTAL (GRAVIMETRIC, DRIED AT 103-105 DEGREE CELSIUS)
E160.4	RESIDUE, VOLATILE (GRAVIMETRIC, IGNITION AT 550 DEGREE CELSIUS)
E160.5	SETTLEABLE MATTER (VOLUMETRIC, IMHOFF CONE)
E1613	EPA STANDARD METHOD FOR HIGH RESOLUTION ANALYSIS OF DIOXINS/FURANS IN
E1613B	DIOXINS AND FURANS BY ISOTOPE DILUTION HRGC/HRMS (REVISION B)
E1624	VOLATILE ORGANIC COMPOUNDS BY ISOTOPE DILUTION GC/MS
E1625	SEMIVOLATILE ORGANIC COMPOUNDS BY ISOTOPE DILUTION GC/MS
E1631	MERCURY IN WATER BY OXIDATION, PURGE & TRAP, AND COLD VAPOR ATOMIC FLO
E1631E	MERCURY IN WATER BY OXIDATION, PURGE & TRAP, AND COLD VAPOR ATOMIC FLO
E1658	THE DETERMINATION OF PHENOXY-ACID HERBICIDES IN MUNICIPAL AND INDUSTRI
E1664	ANALYSIS OF GREASE AND OIL AND NON POLAR MATERIAL
E1664A	MODIFIED VERSION OF E1664
E1668A	CHLORINATED BIPHENYL CONGERS IN WATER, SOIL, SEDIMENT, AND TISSUE
E170.1	TEMPERATURE
E1706_95B	STANDARD TEST METHOD FOR MEASURING THE TOXICITY OF SEDIMENT-

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
	ASSOCIATED CONTAMINANTS WITH FRESHWATER INVERTEBRATES
E18	MEASUREMENT OF GASEOUS ORGANIC COMPOUND EMISSIONS BY GAS CHROMATOGRAPH
E180.1	TURBIDITY (NEPHELOMETRIC)
E18PF	MODIFIED E18, ON COLUMN PRE-FRACTIONATION OF VINYL CHLORIDE
E200.7	INDUCTIVELY COUPLED PLASMA (ICP) METALS SCREEN
E200.7/SW6010	COMBINED METHODS E206.2/SW7060
E200.8	INDUCTIVELY COUPLED PLASMA- MASS SPECTROMETRY (METALS IN WATER)
E200.8/SW6020	COMBINED METHOD E200.8 AND SW6020
E200.9	DETERMINATION OF TRACE ELEMENTS BY STABILIZED TEMPERATURE GRAPHITE FUR
E202.1	ALUMINUM
E202.2	ALUMINUM (AA, FURNACE TECHNIQUE)
E204.1	ANTIMONY (AA, DIRECT ASPIRATION)
E204.2	ANTIMONY (AA, FURNACE TECHNIQUE)
E204.2/SW7041	COMBINED METHODS E204.2/SW7041
E206.2	ARSENIC (AA, FURNACE)
E206.2/SW7060	COMBINED METHODS E206.2/SW7060
E206.3	ARSENIC (AA, HYDRIDE)
E208.1	BARIUM (AA, DIRECT ASPIRATION)
E208.2	BARIUM (AA, FURNACE)
E210.1	BERYLLIUM
E210.2	BERYLLIUM (AA, FURNACE TECHNIQUE)
E212.3	BORON (COLORIMETRIC, CURCUMIN)
E213.1	CADMIUM (AA, DIRECT ASPIRATION)
E213.2	CADMIUM (AA, FURNACE)
E215.1	CALCIUM (AA, DIRECT ASPIRATION)
E218.1	CHROMIUM (AA, DIRECT ASPIRATION)
E218.2	CHROMIUM (AA, FURNACE)
E218.4	CHROMIUM HEXAVALENT (AA, CHELATION-EXTRACTION)
E218.5	SOLUBLE CHROMIUM (AA, FURNACE)
E218.6	HEXAVALENT CHROMIUM BY EPA METHOD
E219.1	COBALT (AA, DIRECT ASPIRATION)
E219.2	COBALT (ATOMIC ABSORPTION, FURNACE TECHNIQUE)
E220.1	COPPER (AA, DIRECT ASPIRATION)
E220.2	COPPER (AA, FURNACE)
E23	DETERMINATION OF POLYCHLORINATED DIOXINS AND FURANS IN AIR
E236.1	IRON (AA, DIRECT ASPIRATION)
E236.2	IRON (AA, FURNACE TECHNIQUE)
E239.1	LEAD (AA, DIRECT ASPIRATION)
E239.2	LEAD (AA, FURNACE)
E239.2/SW7421	COMBINED METHODS E239.2/SW7421
E242.1	MAGNESIUM (AA, DIRECT ASPIRATION)
E243.1	MANGANESE (AA, DIRECT ASPIRATION)

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
E243.2	MANGANESE (AA, FURNACE TECHNIQUE)
E245.1	MERCURY (COLD VAPOR, MANUAL)
E245.2	MERCURY (COLD VAPOR, AUTOMATED)
E245.2/SW7470	COMBINED METHODS E245.2/SW7470
E245.4	
E245.5	MERCURY (COLD VAPOR, SEDIMENTS)
E245.7	MERCURY-CVA FLUORESCENCE SPECTROMETRY
E246.1	MOLYBDENUM (AA, DIRECT ASPIRATION)
E246.2	MOLYBDENUM (AA, FURNACE TECHNIQUE)
E249.1	NICKEL (AA, DIRECT ASPIRATION)
E249.2	NICKEL (AA, FURNACE)
E258.1	POTASSIUM BY AA, DIRECT ASPIRATION
E258.1/SW7610	COMBINED METHODS E258.1/SW7610
E25C	DETERMINATION OF TOTAL GASEOUS NONMETHANE ORGANIC EMISSIONS AS CARBON,
E26	DETERMINATION OF HYDROGEN CHLORIDE EMMISIONS FROM STATIONARY SOURCES
E270.1	SELENIUM (AA, DIRECT ASPIRATION)
E270.2	SELENIUM (AA, FURNACE)
E270.2/SW7740	COMBINED METHODS E270.2SW/7740
E270.3	SELENIUM (AA, HYDRIDE)
E272.1	SILVER (AA, DIRECT ASPIRATION)
E272.2	SILVER (AA, FURNACE)
E272.2/SW7761	COMBINED METHODS E272.2/SW7761
E273.1	SODIUM (AA, DIRECT ASPIRATION)
E273.2	SODIUM (AA, FURNACE TECHNIQUE)
E279.1	THALLIUM (AA, DIRECT ASPIRATION)
E279.2	THALLIUM (AA, FURNACE)
E279.2/SW7841	COMBINED METHODS E279.2/SW7841
E282.1	TIN (AA, DIRECT ASPIRATION)
E283.1	TITANIUM (AA, DIRECT ASPIRATION)
E283.2	TITANIUM (AA, FURNACE TECHNIQUE)
E286.1	VANADIUM (AA, DIRECT ASPIRATION)
E286.2	VANADIUM (AA, FURNACE TECHNIQUE)
E289.1	ZINC (AA, DIRECT ASPIRATION)
E289.2	ZINC (AA, FURNACE)
E300	DETERMINATION OF INORGANIC ANIONS IN WATER BY ION CHROMATOGRAPHY
E300.0	DETERMINATION OF INORGANIC ANIONS IN WATER BY ION CHROMATOGRAPHY
E300.0A	INORGANIC ANIONS IN WATER BY IONCHROMATOGRAPHY, METHOD A
E300.0R2.1	DETERMINATION OF INORGANIC ANIONS IN WATER BY ION CHROMATOGRAPHY
E300.1	DETERMINATION OF INORGANIC ANIONS IN WATER BY ION CHROMATOGRAPHY
E300-28DAY	DETERMINATION OF INORGANIC ANIONS IN WATER BY ION

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
	CHROMATOGRAPHY
E300-BR	DETERMINATION OF INORGANIC ANIONS IN WATER BY ION CHROMATOGRAPHY
E300-CL	DETERMINATION OF INORGANIC ANIONS IN WATER BY ION CHROMATOGRAPHY
E300-SO4	DETERMINATION OF INORGANIC ANIONS IN WATER BY ION CHROMATOGRAPHY
E305.1	ACIDITY (TITRIMETRIC)
E306	SULFATE
E310.1	ALKALINITY (TITRIMETRIC)
E310.2	ALKALINITY COLORIMETRIC, METHYL
E314.0	DETERMINATION OF PERCHLORATE IN DRINKING WATER
E320.1	TOTAL BROMIDE, TITRIMETRIC
E325.1	CHLORIDE (COLORIMETRIC, AUTOMATED FERRICYANIDE AAI)
E325.2	CHLORIDE (AS CL), COLORIMETRIC AUTOMATED FERRICYANIDE, AA II
E325.3	CHLORIDE (TITRIMETRIC, MERCURIC NITRATE)
E330.2	CHLORINE, TOTAL RESIDUAL (TITRIMETRIC, BACK, IODOMETRIC)
E330.3	CHLORINE, TOTAL RESIDUAL (TITRIMETRIC, IODOMETRIC)
E330.4	CHLORINE, TOTAL RESIDUAL
E330.5	CHLORINE, TOTAL RESIDUAL (SPECTROPHOTOMETRIC, DPD)
E335.1	CYNAIDES, AMENABLE TO CHLORINATION (TITRIMETRIC; SPECTROPHOTOMETRIC)
E335.2	TOTAL CYANIDE
E335.3	TOTAL CYANIDE (COLORIMETRIC, AUTOMATED UV)
E335.4	TOTAL CYANIDE BY COLOIMETRY
E340.1	FLUORIDE (COLORIMETRIC)
E340.2	FLUORIDE, POTENTIOMETRIC, ION SELECTIVE ELECTRODE
E340.3	FLUORIDE (COLORIMETRIC, AUTOMATED COMPLEXONE)
E345.1	IODIDE (TITRIMETRIC)
E350.1	NITROGEN (AMMONIA - COLORIMETRIC, AUTOMATED PHENATE)
E350.1M	MODIFIED METHOD E350.1 (Ammonia by Automated Colorimetry)
E350.2	NITROGEN AMMONIA
E350.3	NITROGEN, AMMONIA (POTENTIOMETRIC, ION SELECTIVE ELECTRODE)
E351.1	NITROGEN, KJELDAHL, TOTAL (COLORIMETRIC, AUTOMATED PHENATE)
E351.2	NITROGEN, KJELDAHL, TOTAL (COLORIMETRIC, SEMI-AUTOMATED BLOCK DIGESTER
E351.3	NITROGEN, KJELDAHL, TOTAL (COLORIMETRIC; TITRIMETRIC; POTENTIOMETRIC)
E351.4	NITROGEN, KJELDAHL, TOTAL (POTENTIOMETRIC, ION SEL ELECTRODE)
E352.1	NITROGEN (NITRATE - COLORIMETRIC BRUCINE)
E353.1	NITROGEN, NITRATE-NITRITE (COLORIMETRIC AUTOMATED, HYDRAZINE REDUCTION
E353.2	NITROGEN, NITRATE-NITRITE (COLORIMETRIC AUTOMATED, CADMIUM REDUCTION)
E353.3	NITROGEN, NITRATE-NITRITE
E354.1	NITROGEN, NITRITE (SPECTROPHOTOMETRIC)

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
E360.1	OXYGEN, DISSOLVED (MEMBRANE ELECTRODE)
E365.1	PHOSPHORUS, ALL FORMS (COLORIMETRIC, AUTOMATED, ASCORBIC ACID)
E365.2	PHOSPHORUS, ALL FORMS (AS P)
E365.3	PHOSPHORUS, ALL FORMS (COLORIMETRIC, ASCORBIC ACID, TWO REAGENT)
E365.4	PHOSPHORUS, TOTAL (COLORIMETRIC, AUTOMATED BLOCK DIGESTOR AA II)
E370.1	SILICA, DISSOLVED (COLORIMETRIC)
E375.1	SULFATE, COLORIMETRIC, AUTOMATED CHLORANILATE
E375.2	SULFATE, COLORIMETRIC, AUTOMATED METHYLTHYMOL BLUE, AA II
E375.3	SULFATE (AS SO4), GRAVIMETRIC
E375.4	SULFATE (AS SO4), TURBIDIMETRIC
E376.1	SULFIDE, TITRIMETRIC, IODINE
E376.2	SULFIDE (COLORIMETRIC, METHYLENE BLUE)
E377.1	SULFITE (TITRIMETRIC)
E3C	CARBON DIOXIDE, METHANE, NITROGEN, AND OXYGEN FROM STATIONARY SORUCES
E405.1	BIOCHEMICAL OXYGEN DEMAND
E410.1	CHEMICAL OXYGEN DEMAND
E410.2	CHEMICAL OXYGEN DEMAND
E410.3	COD (TITRIMETRIC, HIGH LEVEL FOR SALINE WATERS)
E410.4	CHEMICAL OXYGEN DEMAND (COLORIMETRIC, AUTOMATED MANUAL)
E413.1	OIL AND GREASE, TOTAL RECOVERABLE (GRAVIMETRIC)
E413.2	OIL AND GREASE, TOTAL RECOVERABLE (SPECTROPHOTOMETRIC IR)
E415.1	TOTAL ORGANIC CARBON (COMBUSTION OR OXIDATION)
E415.2	TOTAL ORGANIC CARBON (UV PROMOTED, PERSULFATE OXIDATION)
E418.1	PETROLEUM HYDROCARBONS, TOTAL RECOVERABLE (SPECTROPHOTO IR)
E420.1	PHENOLICS, TOTAL RECOVERABLE (SPECTROPHOTOMETRIC, MANUAL)
E420.2	PHENOLICS (COLORIMETRIC, AUTOMATED 4-AAP WITH DISTILLATION)
E420.3	PHENOLICS, TOTAL RECOVERABLE (SPECTROPHOTOMETRIC, MAN. 4-AAP)
E420.4	PHENOLICS, TOTAL RECOVERABLE (SEMI-AUTOMATED)
E425.1	METHYLENE BLUE ACTIVE SUBSTANCES (MBAS)
E430.2	NTA (COLORIMETRIC, AUTOMATED, ZINC-ZINCON)
E450.1	TOTAL ORGANIC HALIDES (TOX)
E501.1	TRIHALOMETHANES
E502.1	VOLATILE HALOGENATED ORGANIC COMPOUNDS
E502.2	VOL ORGANIC COMPDS IN WATER BY PURGE & TRAP CAP COL GC (PHOTOIONIZATIO
E503.1	VOLATILE AROMATIC AND UNSATURATED ORGANIC COMPOUNDS
E504	1,2-DIBROMOETHANE AND 1,2-DIBROMO-3-CHLOROPROPANE
E505	ORGANOHALIDE PESTICIDES AND AROCLORS (MICROEXTRACTION)
E507	DETERMINATION OF NITROGEN-AND PHOSPHORUS-CONTAINING PESTICIDES IN GROU
E508	DETERMINATION OF CHLORINATED PESTICIDES IN GROUND WATER
E508A	POLYCHLORINATED BIPHENYLS (PCB'S)

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
E510.1	DETERMINATION OF THE MAXIMUM TOTAL TRIHALOMETHANE POTENTIAL
E515	DETERMINATION OF CHLORINATED HERBICIDES IN DRINKING WATER
E515.1	DETERMINATION OF CHLORINATED ACIDS IN WATER BY GC/ECD
E524	MEASUREMENT OF PURGEABLE ORGANIC COMPOUNDS IN DRINKING WATER
E524.1	VOLATILE ORGANIC COMPOUNDS IN WATER BY PURGE AND TRAP GC/MS
E524.2	VOLATILE ORGANIC COMPOUNDS BY PURGE & TRAP CAPILLARY COLUMN GC/MS
E525	ORGANICS IN WATER
E525.1	DETERMINATION OF ORGANIC COMPOUNDS IN DRINKING WATER BY LIQUID-SOLID E
E525.2	ORGANIC COMPOUNDS IN DRINKING WATER BY LIQUID-SOLID EXTRACTION AND GC/MS
E531.1	DETERM. OF N-METHYLCARBAMOYLOXIMES & N-METHYLCARBAMATES IN WATER BY DI
E547	DETERMIN. OF GLYPHOSATE IN DRINKING WATER BY DIRECT AQUEOUS INJECTION
E548	DETERMINATION OF ENDOTHALL IN DRINKING WATER BY AQUEOUS DERIVITIZATION
E548.1	DETERMINATION OF ENDOTHALL IN DRINKING WATER BY ION EXCHANGE EXTRACTIO
E549	DETERMINATION OF DIQUAT AND PARAQUAT IN DRINKING WATER BY LIQUID-SOLID
E549.1	DETERMINATION OF DIQUAT & PARAQUAT IN DRINKING WATER LIQUID-SOLID EXTR
E6/SW7000B	COMBINED METHODS E6 AND SW7000B
E601	PURGEABLE HALOCARBONS
E601-2	COMBINED METHODS E601/E602, SAME COLUMN AND DETECTOR
E602	PURGEABLE AROMATICS
E603	ACROLEIN AND ACRYLONITRILE
E604	PHENOLS
E605	BENZIDINES
E606	PHTHALATE ESTERS
E607	NITROSAMINES
E608	ORGANOCHLORINE PESTICIDES AND PCBS
E609	NITROAROMATICS AND ISOPHORONE
E610	POLYNUCLEAR AROMATIC HYDROCARBONS
E611	HALOETHERS
E612	CHLORINATED HYDROCARBONS
E613	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN
E614	DETERMINATION OF ORGANOPHOSPHORUS PESTICIDES IN WASTEWATER
E615	CHLORINATED HERBICIDES IN INDUSTRIAL & MUNICIPAL WASTEWATER
E617	DETERMINATION OF CARBOPHENOTHION IN WASTEWATER
E619	DETERMINATION OF TRIAZINE PESTICIDES IN WASTEWATER
E624	VOLATILE ORGANICS GC/MS
E625	EXTRACTABLE PRIORITY POLLUTANTS (BASE/NEUTRAL AND ACID)

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
E632	DETERMINATION OF CARBAMATE AND UREA PESTICIDES IN WASTEWATER
E8	METHOD FOR THE DETERMINATION OF SULFURIC ACID AND SULFUR DIOXIDE EMISSIONS FROM STATIONARY SOURCES
E80005	FASP METHOD F080.005 VOLATILE ORGANIC COMPOUNDS IN WATER BY AUTOMATED
E81.1	AMMONIA NITROGEN DETERMINATION BY ION SELECTIVE ELECTRODE
E821/R-91-100	EPA METHOD FOR THE DETERMINATION OF ACID VOLITILE SULFIDE IN SEDIMENT
E868	EN-STANDARD TEST METHODS FOR CONDUCTING PERFORMANCE TESTS ON MECHANICAL CONVEYING EQUIPMENT USED IN RESOURCE
E900	GROSS ALPHA AND BETA RADIATION
E901.1	GAMMA EMITTING RADIONUCLIDES IN DRINKING WATER
E903.0	ALPHA EMITTING RADIUM ISOTOPES IN DRINKING WATER
E903.1	RADIUM
E904.0	RADIUM 228 IN DRINKING WATER (BETA ACTIVITY)
E905.0	RADIOACTIVE STRONTIUM IN DRINKING WATER
E906.0	TRITIUM IN DRINKING WATER
E908	URANIUM IN DRINKING WATER. RADIOCHEMICAL METHOD
EML HASL 300	METHODS FOR THE ANALYSIS OF RADIOACTIVE SUBSTANCES FROM DEPT. O ENER
ENV TEQ CAL	Calculated TEQs in Environ database
ENVR31	DDT IN SOIL BY EIA
ENVR40	CHLORDANE IN SOIL BY EIA
EOX	EPA DRAFT METHOD FOR THE DETERMINATION OF EXTRACTABLE ORGANIC HALIDES
EPA 8270C/D-SIM	ALKYLATED PAHS BY SIM
EPA 901.1	GAMMA RAY SPECTROMETRY, RADIOACTIVE CESIUM
EPA_TO_10A	DETERMINATION OF PESTICIDES AND POLYCHLORINATED BIPHENYLS IN AMBIENT AIR USING LOW VOLUME POLYURETHANE FOAM (PUF) SAMPLING FOLLOWED BY CAS CHROMATOGRAPHIC/MULTI-DETECTOR DETECTION (GC/MD)
EPA600	FIELD AND LABORATORY METHODS APPLICABLE TO OVERBURDEN AND MINESOILS
EQL-0512-202	INDUCTIBELY COUPLED PLASMA MASS SPECTROMETRY with Hot Block Dilute Acid and Hydrogen Peroxide Filter Extraction
FCBGAS	FIELD SCREENING METHOD FOR THE DETERMINATION OF COMBUSTIBLE GASES
FD-REDOX	DETERMINATION OF REDOX POTENTIAL FIELD METHOD
FIELD	FIELD CHEMISTRY METHOD
FLDASV	FIELD SCREENING METHOD FOR HEAVY METALS IN WATER BY ANODE STRIPPING VO
FLDUNKNOWN	
FLDXRF	FIELD METHD FOR COLLECTION OF XRF READINGS
FPUR	FIELD METHOD FOR PURGEABLE AROMATICS BASED ON METHOD E624
FSV	FIELD METHOD FOR SEMI-VOLATILE ORGANICS BASED ON EPA METHOD 8270
FVMS	FIELD METHOD FOR THE DETERMINATION OF VOCS & FUELS BY GC/MS

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
	MODIFIED
FVOC	FIELD METHOD FOR VOLATILE HALOGENATED AND AROMATIC ORGANIC COMPOUNDS;
G9017	GEOCHEMICAL & ENVIRONMENTAL RESEARCH GROUP (GERG) QUANTITATIVE DETERMI
G9202	GEOCHEMICAL & ENVIRONMENTAL RESEARCH GROUP (GERG) ANALYSIS OF TRACE ME
GENCHEM	GENCHEM ANALYTICAL INSTRUMENTATION INDEX
GRO	GASOLINE RANGE ORGANICS
GTELFG	GTEL LABORATORIES MODIFIED METHOD FOR THE DETERMINATION OF FIXED GASES
H8000	HACH Chemical Oxygen Demand, Method 8000 [H8000]
HACH	METHOD INVOLVING THE USE OF CHEMICAL FIELD ANALYSIS INSTRUMENTATION FROM HACH CO.
HACH8146	HACH KIT #8146
HASL 300, 4.5.2	ENVIRONMENTAL MEASUREMENT LABS, HASL 300 SECTION 4.5.2 METHODS
HLI3	DOE HALF LIFE
I	
I-1230-85	CHROMIUM, HEXAVALENT, DISSOLVED, IN WATER BY COLORIMETRIC, DIPHENYLCARBAZIDE
ILM04.0	EPA METHODS FOR THE ANALYSIS OF INORGANICS, MULTI-MEDIA, AND MULTI CON
ILM04.0/4.1	METHODS FROM THE ILM04.1 AND ILM04.0 STANDARD ANALYTICAL METHODS.
ILM04.1	USEPA CONTRACT LAB PROGRAM STANDARD ANALYTICAL METHOD INORGANIC ANALYS
ILM04.2	ILM04.2
ILM05.3	CONTRACT LABORATORY PROGRAM INORGANIC SUPERFUND MULTI-CONCENTRATION ILM05.3
ILM05.4	EPA METHODS FOR THE ANALYSIS OF INORGANICS, MULTI-MEDIA, AND MULTI CON (ILM05.4)
IMPINGER	METHOD INVOLVES THE USE OF AN IMPINGER FOR SAMPLE COLLECTION
ISM01.3	CONTRACT LAB PROGRAM INORGANIC SUPERFUND MULTI-CONCENTRATION ISM01.3
ISM02.2	CONTRACT LAB PROGRAM INORGANIC SUPERFUND MULTI-CONCENTRATION ISM02.2
ISM02.3	CONTRACT LABORATORY PROGRAM INORGANIC SUPERFUND MULTI-CONCENTRATION ISM02.3
ISM02.4	CLP LAB MULTI-CONCENTRATION METHOD
LALHZ	LOCKHEED ANALYTICAL LAB METHOD FOR HYDRAZINES BY ION CHROMATOGRAPHY SO
LCMS_MS	LIQUID CHROMATOGRAPHY TANDEM MASS SPECTROMETRY
LF03	USATHAMA METHOD FOR THE DETERMINATION OF NITROCELLULOSE IN SOIL BY AUT
LF05	USATHAMA METHOD FOR THE AUTOMATED COLORIMETRIC DETERMINATION OF NITROC

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
LIPIDS	LIPIDS
LL04	USATHAMA METHOD FOR THE DETERMINATION OF ORGANOSULFUR COMPOUNDS IN SOI
LW18	USATHAMA METHOD FOR THE ANALYSIS OF THIODIGLYCOL AND CHLOROACETIC ACID
LW27	USATHAMA METHOD FOR THE DETERMINATION OF NITROGLYCERIN AND PETN IN SOI
LW28	USATHAMA METHOD FOR THE DETERMINATION OF TETRAZENE IN SOIL BY HPLC
LW30	USATHAMA METHOD FOR THE DETERMINATION OF NITROGUANIDINE IN SOIL BY HPL
LWGLYS	LAW ENVIRONMENTAL METHOD FOR THE DETERMINATION OF GLYCOLS BY GC/FID
LYDKHN	LLOYD KHAN METHOD FOR DETERMINING TOC IN SEDIMENTS
M110.3	MODIFIED E110.3, FLOOD SCREENING METHOD FOR COLORIMETRIC DETERMINATION
M130.2	PURPLE CARBOHYDRATE FERMENTATION BROTH BASE
M18MS	MODIFIED E18 FOR THE DETERMINATION OF VOLATILE ORGANICS IN AIR BY GC/M
M2720	DISSOLVED GASES IN WATER BY HEADSPACE, HEADSPACE EQUILIBRATION, GC/FID
M2720C	MODIFIED SM2720C METHOD FOR METHANE IN WATER BY HEADSPACE EQUILIBRATIO
M370.1	MODIFIED E370.1, OMITTING DIGESTION PROCEDURE
M418.1	HEAVY OILS IN SOIL AND WATER, MODIFIED 418.1, IR, FREON 113
M4500A	MODIFIED STANDARD METHOD 4500, ELECTROMETRIC AMMONIA ANALYSIS
M4500P	MODIFIED STANDARD METHOD 4500, ASCORBIC ACID PHOSPHATE ANALYSIS
M5500	GLYCOLS AND ALCOHOLS IN SOIL AND WATER BY DIRECT AQUEOUS INJECTION, GC
M617	ANALYSIS OF AQUEOUS AND SOLID SAMPLES FOR MIREX, PHOTOMIREX, AND KEPON
M8015D	MODIFIED SW8015 FOR THE DETERMINATION OF DIESEL RANGE ORGANIC IN SOIL
M8015V	MODIFIED SW8015 FOR THE DETERMINATION OF GASOLINE RANGE ORGANIC IN SOI
M8100	DETERMINATION OF DIESEL RANGE ORGANICS (LAB AND/OR STATE VARIANT OF SW
M8330	MODIFIED SW8330 BY LC/MS
M9215C	MODIFIED STANDARD METHODS 9215C, ENUMERATION OF TOTAL HETEROTROPHS AND
MET	UNKNOWN METHOD FOR THE DETERMINATION OF METALS
METALS	
METHOD IO-3.1	INDUCTIBELY COUPLED PLASMA MASS SPECTROMETRY
MICROENUM	MICROENUMERATION METHOD FOR THE DETERMINATION OF MICROBIOLOGICAL ANALYTES
MISC	UNKNOWN MISCELLANEOUS METHOD

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
MITLAM	VOID RATIO (SOIL TESTING FOR ENGINEERS, W.T. LAMBERT, JOHN WILEY & SON
MLYDKHN	MODIFIED LLOYD KAHN METHOD FOR THE DETERMINATION OF TOTAL ORGANIC CARBON IN SEDIMENT
MMBOC	ORGANIC CARBON IN SOIL BY MODIFIED MEBIUS DICHROMATE TITRATION
MS	CENTRAL LAB PROGRAM METHOD FOR MASS SPECTROMETRY
MS009	VOLATILE LOW LEVEL FULL LIST
MS023	HYDROCHLORIDE
MT13EC	MT13EC MODIFIED TO13 FOR THE DETERMINATION OF PCB'S IN AMBIENT AIR BY
MT13MS	MT13MS MODIFIED TO13 FOR THE DETERMINATION OF SVOCS AND PESTICIDES IN
MT14FI	MT14FI MODIFIED TO14 FOR THE DETERMINATION OF METHANE IN AMBIENT AIR B
MT14FP	MT14FP MODIFIED TO14 FOR THE DETERMINATION OF REDUCED SULFUR COMPOUNDS
MT14MS	MT14MS MODIFIED TO14 FOR THE DETERMINATION OF VOC'S IN AMBIENT AIR BY
MTO3S	SIMULTANEOUS DETERMINATION OF CARBON CHAIN SPECIATION, BTEX, AND TVPH
MTO3T	SIMULTANEOUS DETERMINATION OF CARBON CHAIN SPECIATION, BTEX, AND TVPH
N0500	TOTAL DUST
N0600	NUISANCE DUST, RESPIRABLE
N1000	ALLYL CHLORIDE
N1002	CHLOROPRENE
N1003	HALOGENATED HYDROCARBONS
N1004	SYM-DICHLOROETHYL ETHER
N1005	METHYLENE CHLORIDE
N1007	VINYL CHLORIDE
N1008	ETHYLENE DIBROMIDE
N1009	VINYL BROMIDE
N1010	EPICHLOROHYDRIN
N1011	ETHYL BROMIDE
N1012	DIBROMODIFLUOROMETHANE
N1013	1,2-DICHLOROPROPANE
N1014	METHYL IODIDE
N1300	KETONES I
N1301	KETONES II
N1400	ALCOHOLS I
N1401	ALCOHOLS II
N1402	ALCOHOLS III
N1403	ALCOHOLS IV
N1450	ESTERS I
N1500	HYDROCARBONS, BP 36-126 C

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
N1501	AROMATIC HYDROCARBONS IN AIR
N1550	NAPHTHAS
N1551	TURPENTINE
N1600	CARBON DISULFIDE
N1601	1,1-DICHLORO-1-NITROETHANE
N1602	DIOXANE
N1603	ACETIC ACID
N1604	ACRYLONITRILE
N1606	ACETONITRILE
N1607	ETHYLENE OXIDE
N1608	GLYCIDOL
N1609	TETRAHYDROFURAN
N1610	ETHYL ETHER
N1611	METHYLAL
N1612	PROPYLENE OXIDE
N173	METALS BY ATOMIC ABSORPTION
N189	ANTIMONY
N2000	METHANOL
N2001	CRESOL, ALL ISOMERS
N2002	AMINES, AROMATIC
N2003	1,1,2,2-TETRABROMOETHANE (ACETYLENE TETRABROMIDE)
N2004	DIMETHYLACETAMIDE AND DIMETHYLFORMAMIDE
N2005	NITROBENZENES
N2007	AMINOETHANOL COMPOUNDS
N209	CHLORINE
N217	BENZENE SOLUBLES
N219	PHOSGENE
N221	ALIPHATIC AMINES
N236	4.4'-METHYLENE-BIS-(2-CHLOROANILINE)
N2500	2-BUTANONE
N2501	ACROLEIN
N2502	FORMALDEHYDE
N2503	MEVINPHOS
N2504	TETRAETHYL PYROPHOSPHATE
N2506	ACETONE CYANOHYDRIN
N2507	NITROGLYCERIN AND ETHYLENE GLYCOL DINITRATE
N2508	ISOPHORONE
N2510	1-OCTANETHIOL
N2513	ETHYLENE CHLOROHYDRIN
N2514	ANISIDINE
N2515	DIAZOMETHANE
N2516	DICHLOROFLUOROMETHANE
N2517	PENTACHLOROETHANE
N2518	HEXACHLORO-1,3-CYCLOPENTADIENE
N2519	ETHYL CHLORIDE

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
N2520	METHYL BROMIDE
N2521	METHYLCYCLOHEXANONE
N2523	1,3-CYCLOPENTADIENE
N2524	DIMETHYL SULFATE
N269	4-AMINOBIPHENYL
N272	2-NITROPROPANE
N273	4-NITROBIPHENYL
N276	ETHYLENE DIAMINE
N278	VINYL ACETATE
N331	METHYL ETHYL KETONE PEROXIDE
N3500	FORMALDEHYDE
N3501	FORMALDEHYDE
N3502	PHENOL
N3503	HYDRAZINE
N3505	TETRAMETHYL THIOUREA
N3506	ACETIC ANHYDRIDE
N5000	CARBON BLACK
N5001	2,4-D AND 2,4,5-T
N5002	WARFARIN
N5003	PARAQUAT
N5004	HYDROQUINONE
N5005	THIRAM
N5006	CARBARYL
N5007	ROTENONE
N5008	PYRETHRUM
N5009	BENZOYL PEROXIDE
N5010	BROMOXYNIL AND BROMOXYNIL OCTANOATE
N5011	ETHYLENE THIOUREA
N5012	EPN, MALATHION, AND PARATHION
N5013	DYES, BENZIDINE-, O-TOLIDINE, O-DIANISIDINE
N5014	CHLORINATED TERPHENYL (60% CHLORINE)
N5016	STRYCHNINE
N5017	DIBUTYL PHOSPHATE
N5018	2,4,7-TRINITROFLUOREN-9-ONE
N5019	AZELAIC ACID
N5020	DIBUTYL PHTHALATE AND DI (2-ETHYLHEXYL) PHTHALATE
N5021	O-TERPHENYL
N5022	ARSENIC, ORGANO
N5023	COAL TAR PITCH VOLATILES
N5500	ETHYLENE GLYCOL
N5502	ALDRIN AND LINDANE
N5503	POLYCHLOROBIPHENYLS (PCB'S)
N5505	ISOCYANATE GROUP
N5506	POLYNUCLEAR AROMATIC HYDROCARBONS (HPCL)
N5508	KEPONE

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
N5509	BENZIDINE AND 3,3'-DICHLOROBENZIDINE
N5514	DEMETON
N5515	POLYNUCLEAR AROMATIC HYDROCARBONS (GC)
N6000	MERCURY
N6001	ARSINE
N6402	PHOSPHORUS TRICHLORIDE
N6600	NITROUS OXIDE
N6601	OXYGEN
N6700	NITROGEN DIOXIDE
N6701	AMMONIA
N7013	ALUMINUM AND COMPOUNDS, AS AL
N7020	CALCIUM AND COMPOUNDS, AS CA
N7024	CHROMIUM AND COMPOUNDS, AS CR
N7027	COBALT AND COMPOUNDS, AS CO
N7029	COPPER (DUST AND FUME)
N7030	ZINC AND COMPOUNDS, AS ZN
N7048	CADMIUM AND COMPOUNDS, AS CD
N7074	TUNGSTEN (SOLUBLE AND INSOLUBLE)
N7082	LEAD
N7102	BERYLLIUM AND COMPOUNDS, AS BE
N7200	WELDING AND BRAZING FUME
N7300	ELEMENTS (ICP)
N7300calc	CALCULATED FROM /SAMPLE UNITS
N7300M	ELEMENTS (ICP)
N7303	ELEMENTS BY ICP
N7400	FIBERS, ASBESTOS IN AIR
N7401	ALKALINE DUSTS
N7402	ASBESTOS (TRANSMISSION ELECTRON MICROSCOPE)
N7500	SILICA, CRYSTALLINE, RESPIRABLE
N7501	SILICA, AMORPHOUS
N7502	ZINC OXIDE
N7505	LEAD SULFIDE
N7506	BORON CARBIDE
N7600	CHROMIUM, HEXAVALENT
N7601	SILICA, CRYSTALLINE
N7602	SILICA, CRYSTALLINE (IR)
N7900	ARSENIC AND COMPOUNDS, AS AS
N7901	ARSENIC TRIOXIDE, AS AS
N7902	FLUORIDES, AEROSOL AND GAS
N7903	ACIDS, INORGANIC
N7904	CYANIDES, AEROSOL AND GAS
NIOSH 7303	ELEMENTS BY ICP (HOT BLOCK/HCI/HNO3 DIGESTION) 7303
NJGLYS	NJDEP METHOD FOR THE DETERMINATION OF GLYCOLS IN DRINKING WATER
NONE	NONE

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
NYGLYS	NEW YORK STATE DEPARTMENT OF HEALTH, TENTATIVE METHOD FOR THE DETERMI
OBGEDB	MODIFIED SW8010/E601 FOR THE DETERMINATION OF ETHYLENE DIBROMIDE AND D
OIA-1677	CYANIDE, AVAILABLE IN WATER
OLC02.1	EPA METHOD FOR THE ANALYSIS OF LOW LEVEL VOLITILE ORGANIC COMPOUNDS
OLC03.2	CLP sow low concentration organic analysis
OLM04.2	USEPA CLP STANDARD ANALYTIC METHOD ORGANIC ANALYSIS
ORTPHD	DIESEL IN SOIL - ADAPTED METHOD FROM EPA SW846 METHODS 3540 AND 8000
ORTPHG	GASOLINE IN SOIL - ADAPTED METHOD FROM EPA SW846 5030 &/OR 8020
OTTOFL	THE DETERMINATION OF TRACE LEVELS OF OTTO FUEL II IN SOIL AND WATER BY
PAH_SIM	POLYCYCLIC AROMATIC HYDROCARBON USING SIM
PCB	POLYCHLORINATED BIPHYNL
PEST	UNKNOWN METHOD FOR THE DETERMINATION OF PESTICIDES
PFC	PERFLUORINATED COMPOUNDS
PID	HANDHELD PID FOR PRE-SCREENING VOLATILE ORGANICS IN THE FIELD
RA05	RADIOCHEMICAL DETERMINATION OF RADIUM-228 IN WATER SAMPLES
RSK17	DISSOLVED GASES
RSK175	RS KERR ENVIRONMENTAL LABS METHOD FOR METHANE, ETHANE, ETHENE (IN WATER)
S100	HEXACHLORONAPHTHALENE
S102	FLUOROTRICHLOROMETHANE
S108	DICHLOROTETRAFLUOROETHANE
S111	DICHLORODIFLUOROMETHANE
S124	1,1,2,2-TETRACHLOROETHANE
S125	TRIFLUOROBROMOMETHANE
S126	1,2,3-TRICHLOROPROPANE
S128	TRICHLORONAPHTHALENE
S129	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE
S130	TETRACHLORONAPHTHALENE
S131	1,1,1,2-TETRACHLORODIFLUOROETHANE
S132	1,1,2,2-TETRACHLORODIFLUOROETHANE
S134	1,1,2-TRICHLOROETHANE
S149	METHYL HYDRAZINE
S150	MORPHOLINE
S153	MONOMETHYLANILINE
S155	TETRAMETHYL SUCCINONITRILE
S158	2-AMINOPYRIDINE
S160	PHENYL HYDRAZINE
S161	PYRIDINE
S179	PHTHALIC ANHYDRIDE
S181	QUINONE
S187	TELLURIUM HEXAFLUORIDE

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
S188	RHODIUM (FUME AND DUST)
S189	RHODIUM (SOLUBLE)
S208	TRIBUTYL PHOSPHATE
S209	TRIORTHOCRESYL PHOSPHATE
S210	TRIPHENYL PHOSPHATE
S214	DINITROBENZENE
S215	DINITROTOLUENE
S219	NITROETHANE
S224	TETRANITROMETHANE
S225	TETRYL
S227	N-PROPYL NITRATE
S228	PICRIC ACID
S24	DIPHENYL
S244	SULFUR HEXAFLUORIDE
S249	CARBON DIOXIDE
S272	OIL MIST
S274	DDT ISOMERS
S278	CHLORDANE
S293	NICOTINE
S297	PENTACHLOROPHENOL
S308	SULFUR DIOXIDE
S335	TETRACHLOROETHYLENE
S336	TRICHLOROETHYLENE (TCE)
S340	CARBON MONOXIDE
S346	ALLYL GLYCIDYL ETHER
S350	N-BUTYL MERCAPTAN
S36	ETHYL FORMATE
S365	FURFURYL ALCOHOL
S368	ISOPROPYL ETHER
S374	METHYLCYCLOHEXANOL
S38	METHYL ACRYLATE
S383	TETRAETHYL LEAD
S385	TITANIUM DIOXIDE
S39	METHYL CELLOSOLVE ACETATE
S4	HYDROGEN SULFIDE
S42	METHYL ACETATE
S49	ETHYL ACETATE
S50	ISOPROPYL ACETATE
S67	CHLORINATED CAMPHENE (TOXAPHENE)
S69	DIPROPYLENE GLYCOL METHYL ETHER
S72	PHENYL ETHER
S73	PHENYL ETHER-BIPHENYL MIXTURE
S74	PHENYL GLYCIDYL ETHER
S77	ISOPROPYL GLYCIDYL ETHER
S8	OZONE

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
S81	N-BUTYL GLYCIDYL ETHER
S87	PROPANE
S91	BUTADIENE
S93	LIQUID PETROLEUM GAS
S96	PENTACHLORONAPHTHALENE
S97	OCTACHLORONAPHTHALENE
S99	METHYL CHLORIDE
SEM	SIMULTANEOUSLY EXTRACTED METALS
SGECD	FIELD METHOD FOR SOIL GAS USING CAPILLARY COLUMN WITH ECD.
SGMS	FIELD METHOD FOR SOIL GAS USING A PACKED COLUMN WITH ECD & MS.
SGPID	FIELD METHOD FOR SOIL GAS USING A CAPILLARY COLUMN WITH PID.
SGVOAF	FIELD METHOD FOR SOIL GAS BY MODIFIED SW8010/SW8015, DUAL COLUMN ECD/F
SGVOCF	FIELD METHOD FOR SOIL GAS VOC'S BY MODIFIED SW8010/SW8020 BY GC/FID
SGVOCL	LABORATORY METHOD FOR SOIL GAS VOC'S BY MODIFIED SW8010/SW8020 BY GC/F
SGVOCS	FIELD SCREENING ANALYSIS OF VOC'S IN SOIL GAS BY MODIFIED SW8010 & SW8
SGVOCT	FIELD METHOD FOR SOIL GAS ANALYSIS, DUAL CAPILLARY COLUMNS/TCD
SGVOPF	FIELD METHOD FOR VOC'S IN SOIL GAS USING A CAPILLARY COLUMN AND PID/FI
SIMSVOL	SEMI-VOLATILE BY SIM (LOWER DETECTION LIMIT)
SIMVOL	VOLATILE ORGANIC COMPOUNDS BY SIM
SM 2340B	HARDNESS IN WATER BY EDTA TITRATION
SM 2540G	TOTAL, FIXED AND VOLATILES IN SOLIDS AND SEMI-SOLID SAMPLES
SM 2546	CRESOLS BY GC/FID
SM 3111B	ATOMIC ABSORPTION METHOD
SM 5210	5 DAY BIOCHEMICAL OXYGEN DEMAND TEST
SM 5210B	5 DAY BIOCHEMICAL OXYGEN DEMAND TEST
SM2310	TOTAL ACIDITY
SM2320	CARBONATE, BICARBONATE, AND TOTAL ALKALINITY CARBONATE
SM2320B	ALKALINITY (TITRATION)
SM2340B	TOTAL HARDNESS
SM2510B	CONDUCTIVITY-STANDARD METHODS
SM2540	TOTAL SUSPENDED SOLIDS
SM2540B	TOTAL SOLIDS DRIED AT 180'C
SM2540C	TOTAL DISSOLVED SOLIDS DRIED AT 180'C
SM2540D	TOTAL SUSPENDED SOLIDS DRIED AT 180'C
SM2540G	PERCENT SOLIDS DRIED AT 180'C
SM3500	ORGANIC EXTRACTION AND SAMPLE PREPARATION (PREP METHOD)
SM3500D	STANDARD METHODS FOR THE DETERMINATION OF METALS
SM3500-FE-D	ORGANIC EXTRACTION AND SAMPLE PREPARATION (IRON)
SM4110C	TEST METHOD C. SINGLE-COLUMN ION CHROMATOGRAPHY WITH DIRECT CONDUCTIVITY DETECTION
SM4500	EXAMINATION OF WATER AND WASTE WATER, METHOD VARIES BY

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
	ANALYTE
SM4500CL	EXAMINATION OF WATER AND WASTE WATER FOR CHLORINE
SM4500-CL-E	EXAMINATION OF WATER AND WASTE WATER FOR CHLORINE
SM4500-CN-E	CYANIDE - COLORIMETRIC METHOD
SM4500-CN-I	WEAK ACID DISSOCIABLE CYANIDE METHOD
SM4500-CO2 D	CARBON DIOXIDE
SM4500F	STANDARD METHODS FOR THE AUTOMATED ASCORBIC ACID METHOD
SM4500-F-C	FLUORIDE ION-SELECTIVE ELECTRODE
SM4500-H+B	pH Value in Water by Potentiometry Using a Standard Hydrogen Electrode
SM4500-NH3 C	4500-NH3 C. TITRIMETRIC METHOD
SM4500-NH3 G	AMMONIA IN WATER AUTOMATED PHENATE
SM4500-NH3G	AMMONIA IN WATER AUTOMATED PHENATE
SM4500-NH3-H	AMMONIA BY FLOW INJECTION ANALYSIS
SM4500-NO2 B	NITRITE AS NITROGEN
SM4500-NO3 F	NITRITE AUTOMATED CADMIUM REDUCTION
SM4500-NORG C	TOTAL KJELDAHL NITROGEN
SM4500-P E	PHOSPHORUS BY ASCORBIC ACID
SM4500P,B,E	PHOSPHORUS BY ASCORBIC ACID
SM4500-PE	PHOSPHORUS BY ASCORBIC ACID
SM4500-S2-F	SULFIDE
SM4500-SO4	STANDARD METHODS ANALYSIS FOR SULFATES IN WATER
SM4500-SO4-E	STANDARD METHODS ANALYSIS FOR SULFATES IN WATER
SM5210	5 DAY BIOCHEMICAL OXYGEN DEMAND TEST
SM5210B	5 DAY BIOCHEMICAL OXYGEN DEMAND TEST
SM5310	TOTAL ORGANIC CARBON
SM5310B	STANDARD METHOD FOR THE DETERMINATION OF TOTAL ORGANIC CARBON, COMBUST
SM5310C	TOTAL ORGANIC CARBON IN WATER AND WASTE WATER
SM5310D	TOTAL ORGANIC CARBON IN WATER AND WASTE WATER
SM5520	METHOD FOR THE DETERMINATION OF OIL AND GREASE IN WATER AND WASTE WATER
SM5520C	PARTITION-IR OIL AND GREASE DETERMINATION
SM9215B	HETEROTROPHIC BACTERIA
SM9223B	CHROMOGENIC SUBSTRATE COLIFORM TEST, PRESENCE OR ABSENCE
SOM01.2	VOLATILES
SOM01.2_VOA	VOLATILE ORGANIC ANALYSIS-MULTI-MEDIA, MULTI-CONCENTRATION, ORGANIC ANALYTICAL SERVICES FOR SUPERFUND
SOM02.3	Contract Laboratory Program Mehod
SOMO1.1-VOA_SIM	SOMO1.1-VOA_SIM
SOMO1.1-VOA_TRACE	SOMO1.1-VOA_TRACE
SOMO1.2-VOA_LOW_MED	SOMO1.2-VOA_LOW_MED
SOMO1.2-VOA_SIM	SOMO1.2-VOA_SIM
SOMO1.2-VOA_TRACE	SOMO1.2-VOA_TRACE
SOP175	METHANE, ETHANE AND ETHENE BY LABORATORY SPECIFIC SOP
SOPAR30	SOPAR30

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
SVOC	SEMI-VOLITILE ORGANIC COMPOUNDS
SW1010	FLASH POINT (CLOSED CUP TESTER)
SW1010A	Test Methods for Flash Point by Pensky-Martens Closed Cup Tester
SW1020	SETAFLASH CLOSED-CUP METHOD FOR DETERMINING IGNITABILITY
SW1030	METHOD FOR THE DETERMINATION OF IGNITABILITY OF SOLIDS
SW1051	MIL-STD MTHD 750 MANUAL: TEMPERATURE CYCLING
SW1110	CORROSIVITY TOWARD STEEL
SW1311	TCLP Metals
SW1613	ANALYSIS OF DIOXINS AND FURANS IN WASTE WATER
SW1613B	ANALYSIS OF DIOXINS AND FURANS IN WASTE WATER
SW2510B	CONDUCTIVITY STANDARD METHODS
SW3005	ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS
SW3005A	ACID DIGESTION OF AQUEOUS SAMPLES FOR TOTAL RECOVERABLE OR DISS METALS
SW3010	ACID DIGESTION OF AQUEOUS SAMPLES FOR TOTAL METALS
SW3010A	ACID DIGESTION OF AQUEOUS SAMPLES FOR TOTAL METALS
SW3060A	ALKALINE DIGESTION OF SOIL AND SOLID WASTE FOR HEXAVENT CHROMIUM
SW3510	SEPERATORY FUNNEL LIQUID-LIQUID EXTRACTION
SW3510C	SEPERATORY FUNNEL LIQUID-LIQUID EXTRACTION
SW3540C	SOXHLET EXTRACTION
SW3550	SONICATION EXTRACTION
SW3550C	ULTRASONIC EXTRACTION
SW3810	HEADSPACE
SW3820	HEXADECANE EXTRACTION AND SCREENING OF PURGEABLE ORGANICS
SW4020	PROPOSED SW-846 METHOD FOR SCREENING PCB'S IN SOIL BY IMMUNOASSAY
SW5030B	PURGE AND TRAP FOR AQUEOUS SAMPLES - ORGANIC
SW6010	INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPECTROSCOPY
SW6010A	INDUCTIVELY COUPLED PLASMA-ATOMIC EMISSION SPECTROMETRY METHOD A
SW6010B	INDUCTIVELY COUPLED PLASMA-ATOMIC EMISSION SPECTROMETRY METHOD B
SW6010B/SW3005A	ANALYSIS BY ANALYTIC METHOD SW6010B, PREP BY 3005A
SW6010B/SW3010A	PREP METHOD SW3010A AND ANALYTICAL METHOD SW6010B
SW6010C	INDUCTIVELY COUPLED PLASMA-ATOMIC EMISSION SPECTROMETRY METHOD C
SW6020	INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY
SW6020/SW3005	COMBINED METHODS SW602 AND SW3005
SW6020A	INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY
SW6020A/SW3015	ANALYSIS BY ANALYTIC METHOD SW6020A, PREP BY 3015
SW6200	PORTABLE XRF SPECTROMETRY FOR THE DETERMINATION OF ELEMENTS
SW7.1	IGNITABILITY SW846 CHAPTER7.1
SW7.1.2	SW846, 7.1: IGNITABILITY
SW7.3	SW846 CH 7.3 CYANIDE/SULFIDE REACTIVITY

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
SW7.3.3.2	METHOD FOR THE DETERMINATION OF REACTIVE CYANIDE
SW7.3.4.2	METHOD FOR THE DETERMINATION OF REACTIVE SULFIDE
SW7_2_2	CORROSIVITY
SW7020	ALUMINUM (AA, DIRECT ASPIRATION)
SW7030	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH METHOD FOR ZINC AND COMPOUNDS AS ZN
SW7040	ANTIMONY (AA, DIRECT ASPIRATION)
SW7041	ANTIMONY (AA, FURNACE TECHNIQUE)
SW7060	ARSENIC, (AA, FURNACE TECHNIQUE)
SW7060A	ARSENIC, (AA, FURNACE TECHNIQUE)
SW7061	ARSENIC (AA, GASEOUS HYDRIDE)
SW7062	ANTIMONY AND ARSENIC (ATOMIC ABSORPTION, GASEOUS BOROHYDRIDE)
SW7080	BARIUM (AA, DIRECT ASPIRATION)
SW7081	BARIUM (AA, FURNACE TECHNIQUE)
SW7090	BERYLLIUM (AA, DIRECT ASPIRATION)
SW7091	BERYLLIUM (AA, FURNACE TECHNIQUE)
SW7130	CADMIUM (AA, DIRECT ASPIRATION)
SW7131	CADMIUM (AA, FURNACE TECHNIQUE)
SW7140	CALCIUM (AA, DIRECT ASPIRATION)
SW7190	CHROMIUM (AA, DIRECT ASPIRATION)
SW7191	CHROMIUM (AA, FURNACE TECHNIQUE)
SW7195	CHROMIUM, HEXAVALENT (COPRECIPITATION)
SW7196	CHROMIUM, HEXAVALENT (COLORIMETRIC)
SW7196A	CHROMIUM, HEXAVALENT (COLORIMETRIC)
SW7197	CHROMIUM, HEXAVALENT (CHELATION/EXTRACTION)
SW7198	CHROMIUM, HEXAVALENT (DIFFERENTIAL PULSE POLAROGRAPHY)
SW7199	CHROMIUM, HEXAVALENT (ION CHROMATOGRAPHY)
SW7200	COBALT (AA, DIRECT ASPIRATION)
SW7201	COBALT (AA, FURNACE TECHNIQUE)
SW7210	COPPER (AA, DIRECT ASPIRATION)
SW7211	COPPER (FURNACE)
SW7380	IRON (AA, DIRECT ASPIRATION)
SW7420	LEAD (AA, DIRECT ASPIRATION)
SW7421	LEAD (AA, FURNACE TECHNIQUE)
SW7450	MAGNESIUM (AA, DIRECT ASPIRATION)
SW7460	MANGANESE (AA, DIRECT ASPIRATION)
SW7470	MERCURY IN LIQUID WASTE (MANUAL COLD-VAPOR TECHNIQUE)
SW7470A	COLD VAPOR ATOMIC ABSORBTION FOR MERCURY
SW7471	MERCURY IN SOLID OR SEMISOLID WASTE (MANUAL COLD-VAPOR TECH)
SW7471A	MERCURY IN SOLID OR SEMISOLID WASTE (MANUAL COLD-VAPOR TECH) METHOD A
SW7471B	MERCURY IN SOLID OR SEMISOLID WASTE (MANUAL COLD-VAPOR TECHNIQUE), VERSION B-SW846
SW7480	MOLYBDENUM (AA, DIRECT ASPIRATION)

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
SW7481	MOLYBDENUM (AA, FURNACE TECHNIQUE)
SW7520	NICKEL (AA, DIRECT ASPIRATION)
SW7550	OSMIUM (AA, DIRECT ASPIRATION)
SW7610	POTASSIUM (AA, DIRECT ASPIRATION)
SW7740	SELENIUM (AA, FURNACE TECHNIQUE)
SW7741	SELENIUM (AA, GASEOUS HYDRIDE)
SW7742	SELENIUM (ATOMIC ABSORPTION, GASEOUS BOROHYDRIDE)
SW7760	SILVER (AA, DIRECT ASPIRATION)
SW7761	SILVER (AA, FURNACE TECHNIQUE)
SW7770	SODIUM (AA, DIRECT ASPIRATION)
SW7840	THALLIUM (AA, DIRECT ASPIRATION)
SW7841	THALLIUM (AA, FURNACE TECHNIQUE)
SW7870	TIN (AA, DIRECT ASPIRATION)
SW7910	VANADIUM (AA, DIRECT ASPIRATION)
SW7911	VANADIUM (AA, FURNACE TECHNIQUE)
SW7950	ZINC (AA, DIRECT ASPIRATION)
SW8000C	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
SW8010	HALOGENATED VOLATILE ORGANICS
SW8011	ETHYLENE DIBROMIDE AND DIBROMOCHLOROPROPANE BY MICROEXTRACTION AND GAS
SW8015	NONHALOGENATED VOLATILE ORGANICS
SW8015C	NONHALOGENATED VOLATILE ORGANICS
SW8020	AROMATIC VOLATILE ORGANICS
SW8021	HALOGENATED AND AROMATIC VOLATILES BY GC USING ELECTROLYTIC CONDUCTIVI
SW8021B	AROMATIC AND HALOGENATED VOLATILES BY GAS CHROMATOGRAPHY USING PHOTOIONIZATION OR ELECTROLYTIC CONDUCTIVITY DETECTORS
SW8030	ACROLEIN, ACRYLONITRILE, ACETONITRILE
SW8040	PHENOLS
SW8060	PHTHALATE ESTERS
SW8080	ORGANOCHLORINE PESTICIDES AND PCBS
SW8080/E608	COMBINED METHODS SW8080/E608
SW8080A	ORGANOCHLORINE PESTICIDES AND POLYCHLORINATED BIPHYNLS BY GC
SW8081	ORGANOCHLORINE PESTICIDES AND PCBS AS AROCLORS BY GAS CHROMATOGRAPHY C
SW8081A	ORGANOCHLORINE PESTICIDES BY GAS CHROMATOGRAPHY
SW8081B	ORGANOCHLORINE PESTICIDES BY GAS CHROMATOGRAPHY (UPDATED)
SW8082	POLYCHLORINATED BIPHENYLS (PCBS) BY GAS CHROMATOGRAPHY
SW8082A	POLYCHLORINATED BIPHENYLS (PCBS) BY GAS CHROMATOGRAPHY (NEW)
SW8090	NITROAROMATICS AND CYCLIC KETONES
SW8100	POLYNUCLEAR AROMATIC HYDROCARBONS
SW8120	CHLORINATED HYDROCARBONS
SW8121	CHLORINATED HYDROCARBONS CAPILLARY GC/ECD
SW8140	ORGANOPHOSPHORUS PESTICIDES
SW8141	ORGANOPHOSPHORUS COMPOUNDS BY GAS CHROMATOGRAPHY: CAPILLARY COLUMN TEC

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
SW8150	CHLORINATED HERBICIDES
SW8150B	CHLORINATED PESTICIDES BY GAS CHROMATOGRAPHY
SW8151	CHLORINATED HERBICIDES BY GC USING METHYLATION OR PENTAFLUOROBENZYLATI
SW8151A	CHLORINATED HERBICIDES BY GC USING METHYLATION PENTAFLUOROBENZYLATION DERIVATIZATION
SW8151M	PENTACHLOROPHENOL AND TETRACHLOROPHENOLS BY GC, CHLORINATED HERBICIDES
SW8240	GC/MS FOR VOLATILE ORGANICS
SW8240/E624	COMBINED METHODS SW8240/E624
SW8240B	VOLATILE ORGANICS BY GAS CHROMATOGRAPHY-MASS SPECTROMETRY(GC/MS)
SW8250	GC/MS FOR SEMIVOLATILE ORGANICS (PACKED COLUMN TECHNIQUE)
SW8260	VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATGRAPH/MASS SPECTROMETRY (GC/M
SW8260A	VOLATILE ORGANIC COMPOUNDS BY (GC/MS): CAPILLARY COLUMN TECHNIOUE
SW8260B	VOLITILE ORGANIC COMPOUNDS BY GC/MS
SW8260B/SW5030B	ANALYSIS BY ANALYTIC METHOD SW8260B, PREP BY 5030B
SW8260C	VOLITILE ORGANIC COMPOUNDS BY GC/MS
SW8260SIM	VOLATILE ORGANIC COMPOUNDS BY GC/MS WITH SELECTED ION MONITORING (SIM)
SW8270	GC/MS FOR SEMIVOLATILE ORGANICS (CAPILLARY COLUMN TECHNIQUE)
SW8270/E625	COMBINED METHODS SW8270/E625
SW8270B	SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS: CAPILLARY COLUMN
SW8270C	SEMI-VOLATILE ORGANIC COMPOUNDS BY GD/MS
SW8270C/SW3510C	COMBINED METHODS SW8270C/SW3510C
SW8270D	SVOCs by Gas Chromatography/Mass Spectrometry
SW8272	PARENT AND ALKYL POLYCYCLIC AROMATICS IN SEDIMENT PORE WATER
SW8280	POLYCHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS
SW8280A	POLYCHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS LOW RES MS
SW8290	POLYCHLORINATED DIBENZODIOXINS (PCDDS) & POLYCHLORINATED DIBENZOFURANS
SW8290A	POLYCHLORINATED DIBENZODIOXINS/ POLYCHLORINATED DIBENZOFURANS HRGC/MS
SW8310	POLYNUCLEAR AROMATIC HYDROCARBONS
SW8315A	DETERMINATION OF CARBONYL COMPOUNDS BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)
SW8321	SOLVENT EXTRACTABLE NON-VOLATILE COMPOUNDS BY HPLC/TSP/MS OR UV DETECT
SW8330	NITROAROMATICS AND NITRAMINES BY HIGH PERFORMANCE LIQUID CHROMATOGRAPH
SW9010	TOTAL AND AMENABLE CYANIDE (COLORIMETRIC, MANUAL)
SW9010A	TOTAL AND AMENABLE CYANIDE
SW9012	TOTAL AND AMENDABLE CYANIDE (COLORIMETRIC, AUTOMATED UV)
SW9012A	TOTAL AND AMENABLE CYANIDE (AUTOMATED COLORIMETRIC, WITH

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
	OFFLINE DISTILLATION)
SW9012B	CYANIDE, TOTAL AND AMENABLE - COLORIMENTRIC
SW9014	TITRIMETRIC AND MANUAL SPECTROPHOTOMETRIC DETERMIN. METHOD FOR CYANIDE
SW9020	TOTAL ORGANIC HALIDES (TOX)
SW9022	TOTAL ORGANIC HALIDES (TOX) BY NEUTRON ACTIVATION ANALYSIS
SW9030	SULFIDES
SW9030A	RCRA METHOD FOR SULFIDES
SW9030B	ACID-SOLUBLE AND ACID-INSOLUBLE SULFIDES: DISTILLATION, VERSION B-SW846
SW9034	SULFIDES
SW9035	SULFATE (COLORIMETRIC, AUTOMATED, CHLORANILATE)
SW9036	SULFATE (COLORIMETRIC, AUTOMATED, METHYLTHYMOL BLUE, AA II)
SW9038	SULFATE (TURBIDIMETRIC)
SW9040	PH ELECTROMETRIC MEASUREMENT
SW9040C	pH ELECTROMETRIC MEASUREMENT
SW9041	PH PAPER METHOD
SW9045	SOIL PH
SW9045C	ELECTROMETRIC PROCEDURE FOR MEASURING PH IN SOILS & SOLID WASTE
SW9045D	SOIL AND WASTE pH
SW9050	SPECIFIC CONDUCTANCE
SW9056	ANION CHROMATOGRAPHY
SW9056A	DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY, VERSION A-SW846
SW9060	TOTAL ORGANIC CARBON
SW9060A	TOTAL ORGANIC CARBON, VERSION A-SW846
SW9060M	TOTAL ORGANIC CARBON
SW9065	PHENOLICS (SPECTROPHOTOMETRIC, MANUAL 4-AAP WITH DISTILLATION)
SW9066	PHENOLICS (COLORIMETRIC, AUTOMATED 4-AAP WITH DISTILLATION)
SW9067	PHENOLICS (SPECTROPHOTOMETRIC, MBTH WITH DISTILLATION)
SW9070	TOTAL RECOVERABLE OIL & GREASE (GRAVIMETRIC, SEPARATORY FUNNEL EXTRACT
SW9071	OIL AND GREASE EXTRACTION FOR SLUDGE
SW9073	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
SW9080	CATION-EXCHANGE CAPACITY OF SOILS (AMMONIUM ACETATE)
SW9081	CATION-EXCHANGE CAPACITY OF SOILS (SODIUM ACETATE)
SW9090	COMPATIBILITY TEST FOR WASTES AND MEMBRANE LINERS
SW9095	PAINT FILTER LIQUIDS TEST
SW9100	SATURATED HYDRAULIC CONDUCTIVITY, SATURATED LEACHATE CONDUCTIVITY AND
SW9131	TOTAL COLIFORM: MULTIPLE TUBE FERMENTATION TECHNIQUE
SW9132	TOTAL COLIFORM: MEMBRANE FILTER TECHNIQUE
SW9200	NITRATE
SW9250	CHLORIDE (COLORIMETRIC, AUTOMATED FERRICYANIDE AA I)

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
SW9251	CHLORIDE (COLORIMETRIC, AUTOMATED FERRICYANIDE AA II)
SW9252	CHLORIDE (TITRIMETRIC, MERCURIC NITRATE)
SW9310	GROSS ALPHA & GROSS BETA
SW9315	ALPHA-EMITTING RADIUM ISOTOPES
SW9320	RADIUM-228
SWNDMA	SOUTHWEST LABS METHOD FOR N-NITROSODIMETHYLAMINE BY GC/MS
SWVOL	COMBINED METHODS SW8010/SW8020, SAME COLUMN AND DETECTOR
TL427	THIOKOL LABORATORIES METHOD FOR THE ANALYSIS OF FURFURYL, ALCOHOL, ANI
TO10A	DETERMINATION OF PESTICIDES AND POLYCHLORINATED BIPHENYLS IN AMBIENT AIR USING LOW VOLUME POLYURETHANE FOAM (PUF) SAMPLING FOLLOWED BY GAS CHROMATOGRAPHIC/ MULTI-DETECTOR DETECTION (GC/MD)
TO12	DETERMINATION OF NON-METHANE ORGANIC COMPDS IN AMBIENT AIR USING CRYOG
TO13FI	THE DETERMINATION OF PAH'S IN AMBIENT AIR BY GC/FID
TO13LC	THE DETERMINATION OF PAH'S IN AMBIENT AIR BY HPLC WITH A UV DETECTOR A
TO13MS	THE DETERMINATION OF PAH'S IN AMBIENT AIR BY GC/MS
TO14	THE DETERMINATION OF VOLATILE ORGAINIC COMPOUNDS IN AMBIENT AIR USING
TO14A	DETERMINATION OF VOLATILE ORGANIC COMPOUNDS (VOCS) IN AMBIENT AIR USING SPECIALLY PREPARED CANISTERS WITH SUBSEQUENT ANALYSIS BY GAS CHROMATOGRAPHY
TO15	DETERMINATION OF VOCS IN AIR, ANALYZED BY GC/ MS
TO-15	DETERMINATION OF VOLATILE ORGANIC COMPOUNDS (VOCS) IN AIR COLLECTED IN SPECIALLY-PREPARED CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
TO15_PPBV	DETERMINATION OF VOLATILE ORGANIC COMPOUNDS (VOCS) IN AIR COLLECTED IN SPECIALLY PREPARED CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY/ MASS SPECTROMETRY (GC/MS)- REPORTED IN PPBV
TO15_UGM3	DETERMINATION OF VOLATILE ORGANIC COMPOUNDS (VOCS) IN AIR COLLECTED IN SPECIALLY PREPARED CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY/ MASS SPECTROMETRY (GC/MS)- REPORTED IN UGM3
TO15SIM	TO-15 SIM
TO-17	DETERMINATION OF VOLATILE ORGANIC COMPOUNDS IN AMBIENT AIR USING ACTIVE SAMPLING ONTO SORBENT TUBES
TO3	DETERMINATION OF VOLATILE ORGANIC COMPOUNDS IN AMBIENT AIR USING CRYOG
TOC	TOTAL ORGANIC CARBON
TPH	TOTAL PETROLEUM HYDROCARBONS
TSP	TOTAL SUSPENDED PARTICULATES
TVOL	CENTRAL LAB PROGRAM FOR THE DETERMINATION OF TOTAL VOLITILES
UF03	USATHAMA METHOD FOR THE DETERMINATION OF NITROCELLULOSE IN WATER BY AU
UF05	THE DETERMINATION OF NITROCELLULOSE BY COLORIMETRIC AUTOANALYZER

Table A-16 Lab Analysis Method Name

Lab_Anl_Method_Name	Description
UNKNOWN	UNKNOWN
USA4B	USATHAMA EXPLOSIVES METHOD (SOIL)
USAC2	USATHAMA EXPLOSIVES BY GC/ECD, IN WATER CONTRACTOR/USACE VARIANT OF EP
USAD1	USATHAMA EXPLOSIVES METHOD (WATER)
USAD2	USATHAMA EXPLOSIVES BY GC/ECD, IN SOIL CONTRACTOR/USACE VARIANT OF EPA
USAL32	USATHAMA METHOD FOR THE DETERMINATION OF EXPLOSIVES BY DIODE-ARRAY HPL
USALW2	USATHAMA EXPLOSIVES METHOD FOR SOIL
USAU35	USATHAMA METHOD FOR THE DETERMINATION OF EXPLOSIVES BY DIODE-ARRAY HPL
USAUW4	USATHAMA EXPLOSIVES METHOD FOR WATER
USGS01	TNT, RDX, PICRIC ACID
UW22	USATHAMA METHOD FOR THE ANALYSIS OF THIODIGLYCOL AND THIODIGLYCOLIC AC
UW27	DETERMINATION OF PETN AND NITROGLYCERIN IN WATER BY HIGH PRESSURE LIQU
UW29	USATHAMA METHOD FOR THE DETERMINATION OF NITROGUANIDINE IN WATER BY HP
UW30	USATHAMA METHOD FOR THE DETERMINATION OF TETRAZENE IN WATER BY HPLC, D
VFA	CLP LAB METHOD FOR VOLITILE FATTY ACIDS
VOC	VOLITILE ORGANIC COMPOUNDS
WAHCID	STATE OF WASH. METHOD FOR THE QUALITATIVE IDENTIFICATION OF HYDROCARBO
WBLACK	WALKLEY-BLACK METHOD, ORGANIC CARBON (TOC)
WI DRO	WDNR DIESEL RANGE ORGANICS
WI GRO	WDNR GASOLINE RANGE ORGANICS
XRF	X-RAY FLUORESCENCE SPECTROMETRY

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
A4	A4 SCIENTIFIC, INC.	THE WOODLANDS	TX
ABB	ABB ENVIRONMENTAL SERVICES INC.	PORTLAND	ME
ABNA	ABNA ENGINEERING, INC.		
ACIA	ADVANCE CHEMISTRY LABS, INC.	ATLANTA	GA
ADTT	ADVANCED TERRA TESTING	LAKEWOOD	CO
AECOM	AECOM		
AEI	ANDREWS ENGINEERING, INC.		
AEL	ANALYTICS ENVIRONMENTAL LABORATORY LLC	PORTSMOUTH	NH

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
AESA	ADIRONDACK ENVIRONMENTAL SERVICES, INC.	ALBANY	NY
AGRE	AGUIRRE ENGINEERS, INC.	ENGLEWOOD	CO
ALMO	A & L MIDWEST LABORATORIES, INC.	OMAH	NE
ALPH	ALPHA ANALYTICAL	OKLAHOMA CITY	OK
ALS	ALS LAB GROUP		
ALS_MI	ALS Environmental	Holland	MI
ALTA	ALTA ANALYTICAL LAB INCORPORATED	EL DORADO HILLS	CA
AMEC FW	AMEC FW		
AMTR	AM TEST LAB	REDMOND	WA
ANA	ANA-LAB CORP.	KILGORE	TX
ANIH	ANACON, INC.	HOUSTON	TX
ANTE	ANTECH LTD.	EXPORT	PA
ANTEA	ANTEA GROUP (FORMERLY DELTA CONSULTANTS)		
APPL	AGRICULTURE AND PRIORITY POLLUTANT LABORATORIES (APPL)	FRESNO	CA
AQEA	ANCHOR QEA, LLC	MONTVALE	NJ
AQLV	AQUATIC TESTING LAB	VENTURA	CA
AQTT	AQUATERRA TESTING	MOUNTAIN VIEW	CA
ARC	ARCADIS		
ARDL	APPLIED RESEARCH AND DEVELOPMENT (ARDL) LAB	MT. VERNON	IL
ARIS	ANALYTICAL RESOURCES INC.	SEATTLE	WA
ARLD	ALLIED ANALYTICAL AND RESEARCH LABORATORIES, INC.	DALLAS	TX
ARM	ARMSTRONG LAB, BROOKS AFB	SAN ANTONIO	TX
ASIA	ANALYTICAL SERVICES INC.	ATLANTA	GA
ATL	AIR TOXICS LTD	FOLSOM	CA
ATLI	ACCELERATED TECHNOLOGY LABORATORY INC.	WEST END	NC
ATS	ANN ARBOR TECHNICAL SERVICES	ANN ARBOR	MI
AWSL	AMERICAN WEST ANALYTICAL LABORATORIES	SALT LAKE CITY	UT
AXYS	AXYS ANALYTICAL SERVICES	SYDNEY	BC
BARR	BARRINGER LABS	GOLDEN	CO
BATC	BATELLE	COLUMBUS	OH
BATD	BATELLE	DUXBURY	MA
BIOM	BIONOMIC LABORATORY, INC.	MARIETTA	GA
BION	BIONETICS	NEWPORT NEWS	VA
BIOS	BIOSPHERICS, INC.	BELTSVILLE	MD
BL	BOART LONGYEAR		
BLANK	BLANK		

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
BMC	Burns & McDonell		
BON	BONNER ANALYTICAL LABS	HATTIESBURG	MS
BRCJ	BLEDSOE RIGGERT COOPER JAMES INCORPORATED		
BRIGHTON	BRIGHTON	Brighton	MI
BSKF	BSK & ASSOCIATES	FRESNO	CA
BVSPC	BLACK AND VEATCH SPECIAL PROJECTS CORP.	OVERLAND PARK	KS
CAA	CAMBRIDGE ANALYTICAL ASSOCIATES	BOSTON	MA
CAN	CANONIE ENVIRONMENTAL SERVICES CORPORATION	BELLEVUE	WA
CASC	CENTRE ANALYTICAL LABORATORIES, INC.	STATE COLLEGE	PA
CASE	COLUMBIA ANALYTICAL SERVICES, INC.		
CASH	COLUMBIA ANALYTICAL SERVICES, INC.	HOUSTON	TX
CASJ	COLUMBIA ANALYTICAL SERVICES, INC.	JACKSONVILLE	FL
CASK	COLUMBIA ANALYTICAL SERVICES, INC.	KELSO	WA
CASR	COLUMBIA ANALYTICAL SERVICES, INC.	ROCHESTER	NY
CASW	COAST TO COAST ANALYTICAL SERVICES	WESTBROOK	ME
CEIM	CEIMIC CORPORATION	NARRAGANSETTE	RI
CEIP	CEIMIC CORPORATION	PITTSBURGH	PA
CEP	CONTROLS FOR ENVIRONMENTAL POLLUTION INC.	SANTA FE	NM
CFA	CAPE FEAR ANALYTICAL-WILMINGTON, NC		
CFAL	CFAL		
CH2M	CH2M		
CHEM	CHEMTECH CONSULTING GROUP		
CHM	CH2M HILL		
CHMC	CH2M HILL	CORVALLIS	OR
CHMD	CH2M HILL	DENVER	CO
CHMG	CH2M HILL	GAINESVILLE	FL
CHMM	CH2M HILL	MONTGOMERY	AL
CHMR	CH2M HILL	REDDING	CA
CHMW	CHEMWEST LABS	SACRAMENTO	CA
CHX	CHEMTEX	PORT ARTHUR	TX
CKY	CKY INC.	TORRANCE	CA
CLTP	CLAYTON ENVIRONMENTAL CONSULTANTS, INC.	PLEASANTON	CA
CMPR	COMPUCHEM LABORATORIES, INC.	RESEARCH TRIANGLE PARK	NC
CMTC	CHEM TECH	MOUNTAINSIDE	NJ
CNS	CHEM-NUCLEAR SYSTEMS, INC.	COLUMBIA	SC
CNSL	CONSUL		
COMP	COMPUCHEM LABORATORIES	CARY	NC
COMPUCHEM	COMPUCHEM	Cary	NC

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
COOP	COOPER		
CORE	CORE LABORATORIES	AURORA	CO
COXCOL	COX COLVIN		
CRA	CONESTOGA-ROVERS AND ASSOCIATES LEGACY DATA		
CRIS	CHEMRON INCORPORATED	SAN ANTONIO	TX
CSIS	CONTINENTAL ANALYTICAL SERVICES, INC.	SALINA	KS
CTB	CURTIS & TOMPKINS	BERKELEY	CA
CTBAR	CT LABORATORIES (BARABOO, WI)	BARABOO	WI
CTE	CT&E ENVIRONMENTAL SERVICES INC.	LUNNINGTON	MI
CTL	CURTIS & TOMPKINS, LTD		
CTLAB	CT LABORATORIES	BARABOO	WI
CTLI	CURTIS & TOMPKINS, LTD GENERAL ANALYTICAL LABORATORIES	IRVINE	CA
CTM	CTM ANALYTICAL	LATHAM	NY
D. HUGHES	D. HUGHES		
DABEC	D.A. BROWN ENGINEERING CONSULTANTS	AUBURN	IN
DATAC	ALS ENVIRONMENTAL	SALT LAKE CITY	
DCHM	DATA CHEM LABORATORIES INC.	SALT LAKE CITY	UT
DDMS	DDMS, INC	St Paul	MN
DHL	DHL ANALYTICAL	AUSTIN	TX
DMAX	DE MAXIMIS, INC.	KNOXVILLE	TN
DOW	DOW CHEMICAL		
Eagon	Eagon & Associates, Inc.		
EAL	ENVIRONMENTAL ANALYTICAL LABORATORIES	WALTHAM	MA
EAS	ENVIRONMENTAL ANALYTICAL SERVICES	SAN LOUIS OBISPO	CA
EBAL	EBASCO ENVIRONMENTAL	LAKEWOOD	CO
ECCI	EARTHCON CONSULTANTS, INC.	LAS VEGAS	
ECCS	ENVIRONMENTAL CHEMISTRY CONSULTING SERVICES	MADISON	WI
ECEN	ECOLOGY AND ENVIRONMENT, INC.	LANCASTER	NY
ECOLO	ECOLO		
ECSE	ENVIRONMENTAL CHEMISTRY SERVICES, INC.	ENGLEWOOD	CO
EDC	ENVIRONMENTAL DATA & CONSULTING LLC	MARTINSVILLE	IN
EDE	ENVIRODYNE ENGINEERS, INC.	CHICAGO	IL
EDI	Environmental Design International, Inc.		
EES	ENSECO EAST LAB	SOMERSET	NJ
EGLS	ENVIRONMENTAL GEOTECHNICAL LABORATORY	SANTA FE SPRINGS	CA
EHSB	ENVIRONMENTAL HEALTH LABORATORIES	SOUTH BEND	IN
EMBC	ENVIRONMENTAL MANAGEMENT	EAST OF BLACK	NC

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
	CORPORATION	MOUNTAIN	
EMI	EMI ENVIRONMENTAL GROUP, Inc.		
EMT	ENVIRONMENTAL MONITORING AND TECHNOLOGIES	MORTON GROVE	IL
ENCAM	ENOTECH	ANN ARBOR	MI
ENCH	ENCHEM, INC.	MADISON	WI
ENIM	ENVIRONMENTAL TESTING AND CONSULTING INC.	MEMPHIS	TN
ENMW	ENVIRONMENTAL MICRO ANALYSIS, INC.	WOODLAND	CA
ENRR	ENERGY LABORATORY, INC.	RAPID CITY	SD
ENSAFE	ENSAFE		
ENSR	ENSR AE COM		
ENVS	ENVIROSCAN	ROTHSCHILD	WI
EPA	EPA		
EPLN	EMPIRICAL LAB		
EPSJ	ENVIRONMENTAL PROTECTION SYSTEMS, INC.	JACKSON	MS
ERG	ERG		
ERL	ENO RIVER LABS LLC	DURHAM	NC
ESA	EUROFINS SPECTRUM ANALYTICAL, INC.		
ESC	ENVIRONMENTAL SYSTEMS CORPORATION	KNOXVILLE	TN
ESCB	ENGINEERING-SCIENCE LAB. OF BERKELEY	BERKELY	CA
ESCE	ENVIRONMENTAL SERVICES (ENSR) CONSULTING ENGINEER	ANCHORAGE	AK
ESIC	ENVIRO SYSTEM INC.	COLUMBIA	MD
ESMTH	EASTSMITH		
ESTB	EA ENGINEERING SCIENCE AND TECHNOLOGY, INC.	BALTIMORE	MD
ESTM	EA ENGINEERING SCIENCE AND TECHNOLOGY, INC.	BOSTON	MA
ESTS	EA ENGINEERING SCIENCE AND TECHNOLOGY, INC.	SPARKS	MD
ETC	EARTH TECHNOLOGY ANALYTICAL LAB		
ETCH	EARTH TECHNOLOGY ANALYTICAL LAB	HUNTINGTON BEACH	CA
ETL	ENVIRONMENTAL TOXICOLOGY LAB	SASKATOON	SK
ETSN	ENVIRONMENTAL TESTING SERVICES, INC.	NORFOLK	VA
EVCO	ENCO - ENVIRONMENTAL CONSERVATION LABORATORIES	ORLANDO	FL
EVDS	ENVIRODATA SOLUTIONS INC	LAS VEGAS	NV
FBQP	FIBERQUANT, INC.	PHOENIX	AZ
FEL	FIRST ENVIRONMENTAL LABORATORIES, INC.	NAPERVILLE	IL
FLD	FIELD ANALYSIS		

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
FMCH	FUGRO-MCCLELLAND, INC.	HOUSTON	TX
FORH	FORENSIC ANALYTICAL	HAYWARD	CA
FSSG	FOUR SEASONS INDUSTRIAL SERVICES, INC.	GREENSBORO	NC
FTCH	FISHBECK, THOMPSON, CARR, & HUBER	ADA	MI
FW&W	Wilkin & Wheaton		
GAL	GALSON LABORATORIES	EAST SYRACUSE	NY
GCAL	GULF COAST ANALYTICAL LABORATORY	BATON ROUGE	LA
GEL	GENERAL ENGINEERING LABORATORIES		
GELC	GENERAL ENGINEERING LABORATORIES	CHARLESTON	SC
GEO	GEO ENVIRONMENTAL SERVICES, INC.	ST LOUIS	MO
GEOMATRIX	GEOMATRIX	BUFFALO	NY
GEOPI	GEOTECHNICS	EAST PITTISBURGH	PA
GEOS	Geosyntec	Marietta	OH
GERAGHTY 4	Geraghty & Miller		
GERAGHTY&2	Geraghty&Miller		
GERC	GEOCHEMICAL ENVIRONMENTAL RESEARCH GROUP	COLLEGE STATION	TX
GHD	GHD		
GLB	GALBRAITH LABORATORIES INC.	KNOXVILLE	TN
GLEC	GREAT LAKES ENVIRONMENTAL CENTER	TRAVERSE CITY	MI
GLEI	Global LEI		
GRI	GEOCHEM RESEARCH, INC.	HOUSTON	TX
GRIFFIN	GRIFFIN		
GTSD	GEOTECHNICAL SERVICES, INC.	DENVER	CO
H.C. NUTT1	H.C. Nutting		
HAI	HALEY & ALDRICH, INC.		
HANH	HANNIBAL TESTING LABORATORIES INC.	HANNIBAL	MO
HARRIS	HARRIS DRILLING SERVICES, INC.	FREEBURG	IL
HAZ	HAZEN RESEARCH, INC.	GOLDEN	CO
HEA	HITTMAN EBASCO ASSOCIATES, INC.	COLUMBIA	MD
HES	HERITAGE ENVIRONMENTAL SERVICES	INDIANAPOLIS	IN
HGCH	HYDROGEOCHEM	HUNTINGTON BEACH	CA
HGCP	HYDROGEOCHEM	PHOENIX	AZ
HIST	Historical, unknown		
HUFG	HUFFMAN LABORATORIES, INC.	GOLDEN	CO
HWL	HOWARD LABORATORIES	HATFIELD	MA
IAL	INTEGRATED ANALYTICAL LABORATORIES	RANDOLPH	NJ
IDEM	INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT		
IEA	INDUSTRIAL & ENVIRONMENTAL ANALYSIS (IEA)		
IEAM	INDUSTRIAL & ENVIRONMENTAL ANALYSIS	MONROE	CT

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
	(IEA)		
IMEC	INBERG-MILLER ENGINEERS	CHEYENNE	WY
INAL	INALAB, INC.	HONOLULU	HI
INCR	INCHCAPE TESTING SERVICES	RICHARDSON	TX
ISRN	INTERSCIENCE RESEARCH LAB	NORFOLK	VA
ITRO	IT/RADIOLOGICAL SERVICES LAB	OAKRIDGE	TN
JCAC	JAMES H. CARR & ASSOCIATES	COLUMBIA	SC
JEDB	JONES ENVIRONMENTAL DRILLING, INC.	BOSSIER CITY	LA
JLAS	J.L. ANALYTICAL SERVICES, INC.	MADESTO	CA
JNA	JONES AND NEUSE, INC.	AUSTIN	TX
JRB	JRB ASSOCIATES	MCLEAN	VA
KAP	FORMERLY KAP ENVIRONMENTAL CONSULTING, NOW EARTH TECH		
KAR	KAR LABORATORIES, INC.	KALAMAZOO	MI
KAT	KATAHDIN ANALYTICAL LABORATORIES	WESTBROOK	ME
KEL	KEMRON ENVIRONMENTAL LABORATORY	MARIETTA	OH
KEMRON	KEMRON ENVIRONMENTAL LABORATORY		
KPIR	K-PRIME, INC.	RICHMOND	CA
KSAF	KEN SCHMIDT AND ASSOCIATES	FRESNO	CA
KSTN	KEYSTONE LAB	HOUSTON	TX
LAL	LOCKHEED ANALYTICAL LABORATORY	LAS VEGAS	NV
LANM	LANDMARK LABORATORIES	BENTON HARBOR	MI
LEGENDMN	LEGENDMN		
LIBRTY	LIBERTY ANALYTICAL CORP.	CARY	NC
LIMNO-TECH	LTI-Limno-Tech, Inc.		
LL	LANCASTER LABORATORIES	LANCASTER	PA
LSLB	LIFE SCIENCE LABORATORIES, INC.	EAST SYRACUSE	NY
LTLS	LAUCKS TESTING LAB, INC.	SEATTLE	WA
MACT	MACTEC	PEORIA	IL
MACTEC	MACTEC	Peoria	IL
MARION	MARION		
MATC	MACTEC	ATLANTA	GA
MBW	MARBACH, BRADY, WEAVER, INC.	ELKHART	IN
MCRB	MICROBAC	MARIETTA	OH
MDNR	MICHIGAN DEPARTMENT OF NATURAL RESOURCES	LANSING	MI
META	META ENVIRONMENTAL INC.	WATERTOWN	MA
MICROSEEPS	MICROSEEPS	PITTSBURGH	PA
MISL	MICROBE INOTECH LABORATORIES INC.	ST LOUIS	MO
MKSN	MCKESSON LABORATORIES	SAN FRANCISCO	CA
ML	MONTGOMERY LABORATORIES	PASADENA	CA
MPI	MPI		

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
MRDO	MISSOURI RIVER DIVISION, CORPS. OF ENGINEERS DIVISION LAB.	OMAHA	NE
MRI	MIDWEST RESEARCH INSTITUTE (MRI)	KANSAS CITY	MO
MRTN	MARTIN MARIETTA	DENVER	CO
MSAB	MID-SOUTH ANALYTICAL	BOSSIER CITY	LA
MSB	MARYLAND SPECTRAL SERVICES, INC.	BALTIMORE	MD
MSCM	MISSISSIPPI STATE CHEMICAL LAB	MISSISSIPPI STATE	MS
MSSL	MOUNTAIN STATES ANALYTICAL	SALT LAKE CITY	UT
MTKM	MITKEM CORPORATION	WARWICK	RI
MTST	METLAB TESTING SERVICES, INC.	TULSA	OK
MWH	MWH GLOBAL, INC.	BROOMFIELD	CO
MWM	MONTGOMERY WATSON	MADISON	WI
MXSD	MAXWELL S3	SAN DIEGO	CA
NART	Natural Art		
NCL	NORTH COAST LABORATORIES LTD.	ARCATA	CA
NDRC	NDRC LABORATORIES, INC.	RICHARDSON	TX
NEB	NEW ENGLAND BIO LABS, INC		
NES	NES		
NFLDS	New Fields		
NLS	NORTHERN LAKE SERVICES	CRANDON	WI
NRT	NATURAL RESOURCES TECHNOLOGY	PEWAUKEE	WI
NUS	NUCLEAR UTILITY SERVICES CORPORATION	PITTSBURGH	PA
NUSH	NUS CORPORATION	HOUSTON	TX
NUSP	HALLIBURTON NUS CORPORATION	PITTSBURGH	PA
OAM	O&M, Inc.	KNOXVILLE	TN
OBG	O'BREIN & GERE		
OBGL	O'BRIEN & GERE LABORATORIES, INC.	SYRACUSE	NY
OEHL	OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY, BROOKS AIR FORCE	BROOKS CITY	TX
OHIO DRIL3	Ohio Drilling Co		
OILO	OILAB	OKLAHOMA CITY	OK
OLIN	OLIN		
ONSI	ONSITE ENVIRONMENTAL LABORATORIES, INC.	FREMONT	CA
ORNL	OAK RIDGE NATIONAL LABORATORY	OAK RIDGE	TN
ORTG	ORTEK ENVIRONMENTAL LABORATORIES	GREEN BAY	WI
OSC/FTCH	FISHBECK,THOMPSON,CARR,&HUBER,ONSITE AT OTTSTORY	DALTON TOWNSHIP	MI
OSEL	OKLAHOMA STATE ENVIRONMENTAL LABORATORY	OKLAHOMA CITY	OK
PACE	PACE ANALYTICAL LAB	OAKDALE	MN
PAH_SIM	POLYCYCLIC AROMATIC HYDROCARBON USING SIM		

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
PAIP	PRECISION ANALYTICS INCORPORATION	PULLMAN	WA
PAR	PARAGON LABS	LIVONIA	MI
PARS	PARSONS		
PATEL	PATEL		
PDC	PDC LABORATORIES	PEORIA	IL
PDPW	PDP ANALYTICAL SERVICES	THE WOODLANDS	TX
PEI	PEI ASSOCIATES	NORTH LONG BRANCH	NJ
PEL	PEL LABORATORIES	TAMPA	FL
PESF	PACIFIC ENVIRONMENTAL LABORATORY	SANFRANCISCO	CA
PGI	PREMO GROUP INC., NOW EARTHCON CONSULTANTS INC	LAS VEGAS	NV
PIGB	PACE, INC.	GREEN BAY	WI
PIHT	PACE, INC.	HOUSTON	TX
PIM	PACE, INC.	MINNEAPOLIS	MN
PIP	PACE, INC.	PITTSBURGH	
PLES	PLAINS ENVIRONMENTAL SERVICES	SALINA	KS
PPB	PPB ENVIRONMENTAL LABORATORIES, INC.	GAINESVILLE	FL
PRS	POLLUTION RISK SERVICES	CINCINNATI	OH
PTS	PTS	HOUSTON	TX
QES	QUANTERRA ENVIRONMENTAL SERVICES	SANTA ANA	CA
QESA	QUANTERRA ENVIRONMENTAL SERVICES	ARVADA	CO
QESC	QUANTERRA ENVIRONMENTAL SERVICES	NORTH CANTON	OH
QESF	QUANTERRA ENVIRONMENTAL SERVICES	TAMPA	FL
QESG	QUANTERRA ENVIRONMENTAL SERVICES	GARDEN GROVE	CA
QESI	QUANTERRA ENVIRONMENTAL SERVICES	CITY OF INDUSTRY	CA
QESK	QUANTERRA ENVIRONMENTAL SERVICES	KNOXVILLE	TN
QESL	QUANTERRA ENVIRONMENTAL SERVICES	ST LOUIS	MO
QESP	QUANTERRA ENVIRONMENTAL SERVICES	PITTSBURGH	PA
QESR	QUANTERRA ENVIRONMENTAL SERVICES	RICHLAND	WA
QESS	QUANTERRA ENVIRONMENTAL SERVICES	WEST SACRAMENTO	CA
QEST	QUANTERRA ENVIRONMENTAL SERVICES	AUSTIN	TX
R5CRL	EPA REGION 5 CENTRAL LAB	CHICAGO	IL
RABA	RABA-KISTNER CONSULTANTS, INCORPORATED	SAN ANTONIO	TX
RAS	RADIAN ANALYTICAL SERVICES LAB	AUSTIN	TX
RASP	RADIAN ANALYTICAL SERVICES LAB	PERIMETER PARK	NC
RASR	RADIAN ANALYTICAL SERVICES LAB	RESEARCH TRIANGLE PARK	NC
RASS	RADIAN ANALYTICAL SERVICES LAB	SACRAMENTO	CA
REH	RAMBOLL ENVIRONMENTAL & HEALTH	PRINCETION	NJ

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
REWM	R.E. WRIGHT ASSOCIATES, INC.	MIDDLETOWN	PA
RFW	ROY F. WESTON, INC.		
RFWG	WESTON-GULF COAST LABORATORIES	UNIVERSITY PARK	IL
RFWL	ROY F. WESTON	LIONVILLE	PA
RFWS	ROY F. WESTON	STOCKTON	CA
RMT	RMT INC	Madison	WI
RTBR	RADIATION TECHNICAL SERVICES	BATON ROUGE	LA
RTI	RESEARCH TRIANGLE INSTITUTE	RESEARCH TRIANGLE PARK	NC
SADL	U.S. CORP. OF ENGINEER SOUTH ATLANTIC DIVISION LAB	MARIETTE	GA
SAIC	SCIENCE APPLICATIONS INTERNATIONAL CORPORATION	SAN DIEGO	CA
SCHNCORP	SCHNEIDER CORPORATION	INDIANAPOLIS	IN
SCHULTZ	SCHULTZ		
SEM	SIMULTANEOUSLY EXTRACTED METALS		
SENT	SENTINEL, INC.	HUNTSVILLE	AL
SEQR	SEQUOIA ANALYTICAL	REDWOOD CITY	CA
SETM	SMITH ENVIRONMENTAL TECHNOLOGY	MOBILE	AL
SGSCH	SGS ENVIRONMENTAL SERVICES	CHARLESTON	WV
SHAW	SHAW		
SHEALY	SHEALY ENVIRONMENTAL INC.		
SHLY	SHEALY ENVIRONMENTAL INC.	WEST COLUMBIA	SC
SIDHU	SIDHU		
SLS	SAVANNAH LABS	SAVANNAH	GA
SOLO	SOUTHERN ANALYTICAL LABORATORIES, INC.	OLDSMAR	FL
SPLH	SOUTHERN PETROLEUM LABORATORIES (SPL)	HOUSTON	TX
SPSF	SUPERIOR PRECISION ANALYTICAL	SAN FRANCISCO	CA
SRI	SOUTHWEST RESEARCH INSTITUTE	SAN ANTONIO	TX
SRS	SRS		
SSM	SPOTTS, STEVENS AND MCCOY, INC.	READING	PA
SSPA	SSPA	Bethesda	MD
STAT	STAT ANALYSIS CORP	CHICAGO	IL
STEO	STANDARD TESTING AND ENGINEERING COMPANY	OKLAHOMA	OK
STL	SEVERN TRENT LABORATORIES	UNIVERSITY PARK	IL
STL CANT	TBA		
STL-CANT	SEVERN TRENT LABORATORIES		
STL-SACR	SEVERN TRENT LABORATORIES		
STL_CHI	SEVERN TRENT LABORATIORIES	CHICAGO	IL

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
STLCAN	SEVERN TRENT LABORATORIES	NORTH CANTON	OH
STLD	SEVERN TRENT LABORATORIES	DENVER	CO
STLDN	STLDN		
STLH	ENVIRONMENTAL SUPPORT TECHNOLOGIES, LAGUNA HILLS, CA		
STLM	SEVERN TRENT LABORATORIES	MOBILE	AL
STLP	SEVERN TRENT LABORATORIES	PITTSBURGH	PA
STLS	SEVERN TRENT LABORATORIES	SAVANNAH	GA
STLSC	SEVERN TRENT LABORATORIES	SACRAMENTO	CA
STLT	SEVERN TRENT LABS	TALLAHASSEE	FL
STLUP	SEVERN TRENT LABORATORIES	UPPER PENINSULA	MI
STLV	SEVERN TRENT LABORATORIES	BURLINGTON	VT
STLVT	SEVERN TRENT LABORATORIES		
STS	STS CONSULTANTS		
SUMT	SUMMIT DRILLING COMPANY INC.	BOUND BROOK	NJ
SUNDE	SUNDE LAND SURVEYING, INC.	BLOOMINGTON	MN
SUPERFUND NPL	Superfund NPL site		
SWD	U.S. ARMY CORPS OF ENGINEERS SOUTHWESTERN DIVISION LAB (SWD)	DALLAS	TX
SWO	SOUTHWEST LABORATORY OF OKLAHOMA, INC.	BROKEN ARROW	OK
TABU	TEST AMERICA INC. BURLINGTON	BURLINGTON	
TAIA	TEST AMERICA INC.	AUSTIN	TX
TAIB	TEST AMERICA INC.	BUFFALO	NY
TAIC	TEST AMERICA INC.	CHICAGO	IL
TAICC	TEST AMERICA INC.	CORPUS CHRISTI	TX
TAICF	TEST AMERICA INC.	CEDAR FALLS	IA
TAICN	TEST AMERICA INC. (NORTHWEST CHICAGO)	ELMHURST	IL
TAICR	TEST AMERICA INC.	CEDAR RAPIDS	IA
TAICT	TEST AMERICA INC	SHELTON	CT
TAID	TEST AMERICA INC.	DAYTON	OH
TAIDE	TEST AMERICA INC. DENVER, COLORADO		
TAIE	TEST AMERICA INC.	EDISON	NJ
TAIGA	TEST AMERICA INC.	SAVANNAH	GA
TAIH	TEST AMERICA INC.	HOUSTON	TX
TAIIR	TEST AMERICA INC	IRVINE	CA
TAIK	TEST AMERICA INC.	KNOXVILLE	TN
TAIM	TEST AMERICA INC.	MOBILE	AL
TAIN	TEST AMERICA INC.	NASHVILLE	TN
TAINC	TEST AMERICA INC.	NORTH CANTON	OH
TAIP	TEST AMERICA INC.	PITTSBURGH	PA
TAIS	TEST AMERICA INC.	ST LOUIS	MO

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
TAISB	TEST AMERICA INC.	SOUTH BURLINGTON	VT
TAIV	TEST AMERICA INC.	VALPARAISO	IN
TAIW	TEST AMERICA INC.	WATERTOWN	WI
TAIWS	TEST AMERICA INC.-WESTFIELD, MASSACHUSETTS		
TALM	TALEM, INC.	FORT WORTH	TX
TASAC	TEST AMERICA SACRAMENTO		CA
TBIW	TIGHE AND BOND, INC.	WESTFIELD	MA
TCHM	TECHUMSEH SURVEYING	SHANDON	OH
TECH	TETRA TECH EC	BOTHELL	WA
TECHLAW	TECHLAW, INC.		
TELO	TECHRAD ENVIRONMENTAL LABORATORY	OKLAHOMA CITY	OK
TEMV	TRINITY ENVIRONMENTAL LABORATORIES	MOND VALLEY	KS
THE PAYNE FIRM INC	THE PAYNE FIRM INC	Cincinnati	OH
THKB	THIOKOL ENVIRONMENTAL LABORATORY	BRINGHAM CITY	UT
TLAW	TECHLAW ESAT CONTRACT	Chicago	IL
TRAL	TRACE ANALYTICAL, INC.	LUBBOCK	TX
TRAM	TRACE ANALYTICAL	MUSKEGON	MI
TRC	TRACER RESEARCH CORPORATION	TUCSON	AZ
TRIM	TRI MATRIX		
TRM	TRMX		
TRMX	TRI MATRIX	GRAND RAPIDS	MI
TT	TETRA TECH		
TWC	TEXAS WATER COMMISSION	AUSTIN	TX
TWNG	TWINING LABORATORIES, INC.	FRESNO	CA
TWPB	TOXICON - WEST PALM	WEST PALM BEACH	FL
UECH	UNITEK ENVIRONMENTAL CONSULTANTS, INC.	HONOLULU	HI
UNKNOWN	UNKNOWN		
UOCB	SUB FOR CHM2HILL AT JACOBSVILLE		
UODN	UNIVERSITY OF DELAWARE	NEWARK	DE
URSCIN	URS		OH
USAE	U.S. ARMY ENVIRONMENTAL HYGIENE AGENCY (USAE HA)	ABERDEEN	MD
USCE	U.S. ARMY CORPS OF ENGINEERS	OMAHA	NE
USDA	U.S. DEPARTMENT OF AGRICULTURE	WASHINGTON D.C.	DC
USGS	U.S. GEOLOGICAL SURVEY	WASHINGTON D.C.	DC
USSP	U.S. ARMY CORPS OF ENGINEERS SOUTH PACIFIC LABORATORY	SAUSALITO	CA

Table A-17 Laboratory/ Subcontractor/ Company

Company_code	*Company_name*	*City*	State
UTSL	UTILITIES TESTING LABORATORY	SALT LAKE CITY	UT
VAL	VISTA ANALYTICAL LAB	DORADO HILLS	CA
VERC	VERSAR CORPORATION	COLUMBIA	MD
VERNON	VERNON SURVEYING INC.	MARIETTA	OH
VERS	VERSAR CORPORATION	SPRINGFIELD	VA
VLIV	VERONA LABORATORY, INC.	VERONA	NY
WAR	WATER AND AIR RESEARCH, INC.	GAINSVILLE	FL
WARZYN WA	Warzyn Engineering Inc.		
WBS-PGL	WEC Business Services- peoples Gas and Light		
WBS-WE	WBS WE		
WC	Woodward Curran		
WEST	WESTON SOLUTIONS, INC.	WEST CHERSTER	PA
WETL	WESTON ENVIRONMENTAL TECHNOLOGY LABORATORY	LIONVILLE	PA
WIBR	WILLIAMS BROTHERS	TULSA	OK
WILS	WILSON AND COMPANY	SALINA	KS
WM	Waste Management		
WPSC	WISCONSIN PUBLIC SERVICE CORPORATION		WI
WTCF	WEYERHAEUSER TECHNOLOGY CENTER	FEDERAL WAY	WA
WTIA	WESTERN TECHNOLOGIES INC.	ALBUQUERQUE	NM
WVB	WEAVER BOOS	CHICAGO	IL
WWAA	WHITE WATER ASSOCIATES, INC.	AMASA	MI
XCAL	EXCALIBUR GROUP LLC	WINDBER	PA
XL01002000	XL01002000		
XLNRG	XLNRG		
ZLB	ZALCO LABORATORIES	BAKERSFIELD	CA

Table A-18 Unit

Unit_Code	Description
%	PERCENT
% lel	PERCENT LOWER EXPLOSIVITY LEVEL
% passed	PERCENT PASSED
% recovered	PERCENT RECOVERED
%lipids	PERCENT LIPIDS
%v/v	PERCENT BY VOLUME
/100ml	PER 100 MILLILITERS
/150ml	PER 150 MILLILITERS
/50ml	PER 50 MILLILITERS

Table A-18 Unit

Unit_Code	Description
1	DEGREES - HORZ ACCURACY UNIT, EPA MAD CODE
1/s	PER SECOND
2	MINUTES - HORZ ACCURACY UNIT, EPA MAD CODE
3	SECONDS - HORZ ACCURACY UNIT, EPA MAD CODE
4	METERS - HORZ ACCURACY UNIT, EPA MAD CODE
5	FEET - HORZ ACCURACY UNIT, EPA MAD CODE
5tmpn/100ml	5 TUBE MOST PROBABLE NUMBER /100ML
6	KILOMETERS - HORZ ACCURACY UNIT, EPA MAD CODE
7	MILES - HORZ ACCURACY UNIT, EPA MAD CODE
acre ft	ACRE FEET
acres	ACRES
admi color	ADMI (AMERICAN DYE MANUFACTURERS INSTITUTE) COLOR UNITS
api	DEGREE API (AMERICAN PETROLEUM INSTITUTE) GRAVITY
bars	BARS
bg/l	BECQUEREL/LITER
btu	BRITISH THERMAL UNIT
btu/gal	BRITISH THERMAL UNIT PER GALLON
btu/lb	BRITISH THERMAL UNIT PER POUND
cfm	CUBIC FEET PER METER
cfs	CUBIC FEET PER SECOND
cfu/100ml	COLONY FORMING UNITS PER 100 MILLILITERS
cfu/g	COLONY FORMING UNITS PER GRAM
cfu/l	TOTAL COLIFORM PER 1 LITER
cfu/ml	COLONY FORMING UNITS PER MILLILITERS
cm	CENTIMETERS
cm/hr	CENTIMETERS PER HOUR
cm/sec	CENTIMETERS PER SECOND
cm/yr	CENTIMETERS PER YEAR
cm2/sec	SQUARE CENTIMETERS PER SECOND
cm3	CUBIC CENTIMETERS
coh	COEFFICIENT OF HAZE
coh/100lin.ft	COEFFICIENT OF HAZE PER 1000 LINEAR FEET
colf/100ml	COLIFORM BACTERIA PER 100 MILLILITERS
colf/g	COLIFORM BACTERIA PER GRAM
color unit	COLOR UNIT
cp	CENTIPOISE
cst	CENTIMETERS SQUARED PER SECOND
day	DAYS
deg c	DEGREES CELSIUS

Table A-18 Unit

Unit_Code	Description
deg c/hr	DEGREES CELSIUS PER HOUR
deg f	DEGREES FAHRENHEIT
deg k	DEGREES KELVIN
degree	DEGREE
digits	NUMBER OF DIGITS TO THE RIGHT OF THE DECIMAL POINT
dollars	DOLLARS
dpy	DRUMS PER YEAR
dynes/cm	DYNES PER CENTIMETER
each	EACH
eq	EQUIVALENT UNITS
fg/l	FEMTOGRAMS PER LITER
fibers/l	FIBERS PER LITER
ft	FEET
ft bgs	FEET BELOW GROUND SURFACE
ft bref	FEET BELOW REFERENCE CASING
ft btoc	FEET BELOW TOP OF CASING
ft candles	FOOT CANDLES
ft msl	FEET ABOVE MEAN SEA LEVEL
ft ngvd	NATIONAL GEODETIC VERTICAL DATUM
ft/day	FEET PER DAY
ft/ft	FEET/FEET
ft/in	FEET PER INCH
ft/min	FEET PER MINUTE
ft/sec	FEET PER SECOND
ft2	SQUARE FEET
ft2/day	SQUARE FEET PER DAY (CUBIC FEET/DAY-FOOT)
ft2/min	FEET SQUARED PER MINUTE (FOR UNITS OF TRANSMISSIVITY)
ft3	CUBIC FEET
ft3/yr	CUBIC FEET PER YEAR
g	GRAMS
g/cc	GRAMS PER CUBIC CENTIMETER
g/cm3	GRAMS PER CUBIC CENTIMETER
g/g	GRAMS PER GRAM
g/kg	GRAMS PER KILOGRAM
g/l	GRAMS PER LITER
g/m2/30days	GRAMS PER METER SQUARED PER 30 DAYS
g/m2/yr	GRAMS PER SQUARE METER PER YEAR
g/ml	GRAMS PER MILLILITER
g/mol	GRAMS PER MOLE

Table A-18 Unit

Unit_Code	Description
gal	GALLONS
gal/day	GALLONS PER DAY
gal/hr	GALLONS PER HOUR
gal/min	GALLONS PER MINUTE
gal/sec	GALLONS PER SECOND
gal/wk	GALLONS PER WEEK
gm cal/cm2/min	GRAMS CALCULATED PER CENTIMETERS SQUARED PER MINUTE
gm/m2/month	GRAMS PER METER SQUARED PER MONTH
gpd	GALLONS PER DAY
gpd/ft	GALLONS PER DAY PER FOOT
gpd/ft2	GALLONS PER DAY PER FOOT SQUARED
gphr	GALLONS PER HOUR
gpm/ft	GALLONS PER MINUTE PER FOOT
gpmin	GALLONS PER MINUTE
gpsec	GALLONS PER SECOND
gpy	GALLONS PER YEAR
hr	HOURS
hrs/day	HOURS PER DAY
in	INCHES
in bgs	INCHES BELOW GROUND SURFACE
in(hg)	INCHES OF MERCURY
in/day	INCHES PER DAY
in/ft	INCHES PER FOOT
in/hr	INCHES PER HOUR
in/in	INCHES PER INCH
in/wk	INCHES PER WEEK
in2/ft	SQUARE INCHES PER FOOT
jcu	JACKSON CANDLE UNITS
jtu	JACKSON TURBIDITY UNITS
kbar	KILOBAR
kg/1000gal	KILOGRAMS PER 1000 GALLONS
kg/batch	KILOGRAMS PER BATCH
kg/day	KILOGRAMS PER DAY
kg/m3	KILOGRAM PER METER CUBED
kg/m3/s	KILOGRAM PER METER CUBED PER SECOND
kg/s	KILOGRAM PER SECOND
km/hr	KILOMETERS PER HOUR
km2	SQUARE KILOMETERS
knots	KNOTS

Table A-18 Unit

Unit_Code	Description
l	LITER
l/day	LITERS PER DAY
l/hr	LITERS PER HOUR
l/m3	LITERS PER METER CUBED
l/min	LITERS PER MINUTE
l/sec	LITERS PER SECOND
lb/1000lb	POUNDS PER THOUSAND POUNDS
lb/barrel	POUND PER BARREL
lb/ft3	POUNDS PER FEET CUBED
lb/in2	POUNDS PER SQUARE INCH
lb/ton	POUNDS PER TON
lbs	POUNDS
lbs/acre	POUNDS PER ACRE
lbs/day	POUNDS PER DAY
lbs/gal	POUNDS PER GALLON
lbs/mon	POUNDS PER MONTH
lbs/yr	POUNDS PER YEAR
m	METER
m amsl	METERS ABOVE MEAN SEA LEVEL
m bgs	METERS BELOW GROUND SURFACE
m bref	METERS BELOW REFERENCE ELEVATION
m btoc	METERS BELOW TOP OF CASING
m/day	METERS PER DAY
m/s	METER PER SECOND
m2	METER SQUARED
m2/s	METER SQUARED PER SECOND
m3 x 10(6)	METER CUBED (IN MILLIONS)
m3/day	CUBIC METERS PER DAY
m3/kg	METER CUBED PER KILOGRAM
m3/s	METER CUBED PER SECOND
meq	MILLIEQUIVALENT
meq/100g	MILLIEQUIVALENTS PER 100 GRAMS
meq/l	MILLIEQUIVALENT PER LITER
mfl	MILLION FIBERS PER LITER
mg	MILLIGRAMS
mg/100cm2	MILLIGRAMS PER 100 SQUARE CENTIMETERS
mg/100cm2/30dys	MILLIGRAMS PER 100 CENTIMETERS SQUARED PER 30 DAYS
mg/100cm2/day	MILLIGRAMS PER 100 CENTIMETERS SQUARED PER DAY
mg/flt	MILLIGRAMS PER FILTER

Table A-18 Unit

Unit_Code	Description
mg/ft2	MILLIGRAMS PER SQUARE FOOT
mg/g	MILLIGRAMS PER GRAM
mg/kg	MILLIGRAMS PER KILOGRAM
mg/kg-oc	MILLIGRAMS PER KILOGRAMS-ORGANIC CARBON NORMALIZED
mg/l	MILLIGRAMS PER LITER
mg/m2	MILLIGRAMS PER SQUARE METER
mg/m2/day	MILLIGRAMS PER METER SQUARED PER DAY
mg/m3	MILLIGRAMS PER CUBIC METER (PPBV)
mg/ml	MILLIGRAMS PER MILLILITER
mg/wipe	MILLIGRAMS PER WIPE
mgal	MILLION GALLONS
mgcaco3/l	MILLIGRAMS CALCIUM CARBONATE EQUIVALENTS PER LITER
mgd	MILLIONS OF GALLONS PER DAY
mgdo/l	MILLIGRAMS DISSOLVED OXYGEN PER LITER
mgm	MILLIONS OF GALLONS PER MONTH
mgy	MILLIONS OF GALLONS PER YEAR
mile2	SQUARE MILES
miles	MILES
mill ft3	MILLION FEET CUBED
millivolts	MILLIVOLTS
min	MINUTES
ml	MILLILITER
ml/l	MILLILITER PER LITER
ml/min	MILLILITERS PER MINUTE
mm	MILLIMETERS
mm hg	MILLIMETERS OF MERCURY
mm/hg	MILLIMETERS PER MERCURY
mm/m2/hr	MILLIMETER PER METER SQUARED PER HOUR
mm/sec	MILLIMETERS PER SECOND
mm/yr	MILLIMETER PER YEAR
mmhos/cm	MILLIMHOS PER CENTIMETER
mmol/l	MILLIMOLES PER LITER
mol %	MOLE PERCENT
mole ratio	MOLE RATIO
mon	MONTH
mph	MILES PER HOUR
mpn/100ml	MOST PROBABLE NUMBER PER 100 ML
ms/cm	MILLISIEMENS PER CENTIMETER
mS/m	MILLISIEMENS PER METER

Table A-18 Unit

Unit_Code	Description
nanomoles	NANOMOLES
naut.mile	NAUTICAL MILE
ng/0.258m2	NANOGRAMS PER 0.258 SQUARE METERS
ng/100cm2	NANOGRAMS PER 100 SQUARE CENTIMETERS
ng/g	NANOGRAMS PER GRAM
ng/kg	NANOGRAM PER KILOGRAM
ng/l	NANOGRAM PER LITER
ng/m3	NANOGRAM PER CUBIC METER
ng/ml	NANOGRAMS PER MILLILITER
nm	NANOMOLES
no/m2	NUMBER PER METER SQUARED
none	NO UNIT OF MEASURE
ntu	NEPHELOMETRIC TURBIDITY UNITS
odor	ODOR
odor unit	UNIT FROM WI GEMS DATABASE
orp	OXIDATION REDUCTION POTENTIAL
parts/1000	PARTS PER 1000
pcf	POUNDS PER CUBIC FOOT
pci/g	PICOCURIES PER GRAM
pci/l	PICOCURIES PER LITER
pci/mg	PICOCURIES PER MILLIGRAM
pci/ml	PICOCURIES PER MILLILITERS
pco	PICOMOLES
per loss	PERCENT LOSS
percent	PERCENT
pg	PICOGRAMS
pg/g	PICOGRAM PER GRAM
pg/kg	PICOGRAMS PER KILOGRAM
pg/l	PICOGRAM PER LITER
pg/m3	PICOGRAMS PER CUBIC METER
pg/ul	PICOGRAMS PER MICROLITER
ph units	PH UNITS
ppb	PARTS PER BILLION
ppbv	PARTS PER BILLION BY VOLUME
pphm	PARTS PER HUNDRED MILLION
ppm	PARTS PER MILLION
ppmv	PARTS PER MILLION BY VOLUME
ppmvc	PARTS PER MILLION BY VOLUME OF CARBON (MOLECULAR WEIGHT = 12.01)

Table A-18 Unit

Unit_Code	Description
ppq	PARTS PER QUADRILLION
ppt	PARTS PER TRILLION
pptv	PARTS PER TRILLION BY VOLUME
psf	POUNDS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
s	SECOND
sc	SPECIFIC CONDUCTIVITY
sg	SPECIFIC GRAVITY
si	SATURATED INDEX
su	STANDARD UNITS
t.o.n.	THRESHOLD ORDER NUMBER
tcaco3/kt	TONS CALCIUM CARBONATE EQUIVALENTS PER 1000 TONS
tcu	TCU
tons/acre	TONS PER ACRE
tons/day	TONS PER DAY
tu	TRITIUM UNIT
tua	ACUTE TOXIC UNITS
turbidity	NEPHELOMETRIC TURBIDITY UNITS
ug	MICROGRAMS
ug/100cm2	MICROGRAMS PER 100 SQUARE CENTIMETERS
ug/cm2	MICROGRAM PER SQUARE CENTIMETERS
ug/flt	MICROGRAMS PER FILTER
ug/g	MICROGRAMS PER GRAM
ug/kg	MICROGRAMS PER KILLOGRAM
ug/l	MICROGRAMS/LITER
ug/m2	MICROGRAMS PER SQUARE METER
ug/m3	MICROGRAMS PER CUBIC METER
ug/ml	MICROGRAMS PER MILLILITER
ug/wipe	MICROGRAMS PER WIPE
ug/yr	MICROGRAMS PER YEAR
ul	MICROLITERS
um	MICROMETER
um/sec	MICROMETER PER SECOND
umhos/cm	MICRO MHOS PER CENTIMETER
umhos/cm25c	UMHOS PER CENTIMETER AT 25C
umol/g	MICROMOLES PER GRAM
unknown	UNKNOWN UNITS OF MEASURE
upy	UNITS PER YEAR
us/cm	MICROSIEMENS PER CENTIMETER

Table A-18 Unit

Unit_Code	Description
uV	NANOVOLTS
yd	YARD

Table A-19 Geology Soil Materials

AASHTO	
A-1-a	A-3
A-1-b	A-4
A-2-4	A-5
A-2-5	A-6
A-2-6	A-7-5
A-2-7	A-7-6

USCS	
GW	SC-SM
GP	SW-SM
GM	SW-SC
GC	SP-SM
GC-GM	SP-SC
GW-GM	CL
GW-GC	ML
GP-GM	OL
GP-GC	CH
SW	MH
SP	OH
SM	CL-ML
SC	Pt

USDA	
CLAY	LOAM
SANDY CLAY	SANDY LOAM
SILTY CLAY	SILTY LOAM
SANDY CLAY LOAM	SILT
SILTY CLAY LOAM	LOAMY SAND
CLAY LOAM	SAND

OTHER	
ALBITIZED	SERPENTINIZED
ALLUVIUM	SHALE
ANDESITE	SILIFIED
ANHYDRITE	SILTSTONE
ARCHIMEDES	SHATTERED
ARGILLACEOUS	SHEARED
ARGILLIZED	SKARNED
ARGILLIC	SKARN
ARGILLITE	STROMATOLITES
ASPHALT	TALC
BASEMENT	TILL
BEDROCK	TOPSOIL

OTHER	
BENTONITE	TREMOLITE
BLANK	TUFF
BONY	VITROPHYRE
BRECCIA	ANHYDRITIC DOLOSTONE
CALCIFIED	ARENACEOUS DOLOSTONE
CALCITE	ARENACEOUS LIMESTONE
CAP	ARENACEOUS SHALE
CARBONATE	ARGILLACEOUS DOLOSTONE
CEMENT	ARGILLACEOUS LIMESTONE
CHALCOPYRITE	ARGILLACEOUS SANDSTONE
CHLORITIZED	BIOTITE HORNFELS
CHERT	BRYOZOAN LIMESTONE
CLAYSTONE	CALCAREOUS MUDSTONE
COAL	CALCAREOUS DOLOMITE
COLLUVIUM	CALCAREOUS DOLOSTONE
CONGLOMERATE	CALCAREOUS SANDSTONE
DEVITRIFIED	CALCAREOUS SILTSTONE
DIABASE	CALCITE VEINING
DOLOMITE	CHERTY LIMESTONE
DOLOSTONE	DOLOMITIC LIMESTONE
ENDOSKARN	DOLOMITIC MUDSTONE
FAULT	FINE SAND
GALENA	FOLDED SCHIST
GNEISS	GARNET SKARN
GRANITE	LIMESTONE MUDSTONE
GRANODIORITE	LIMESTONE WITH SHALE INTERBEDS
GRAVEL	LIMESTONE WITH SHALE STRINGERS
GYPSUM	LOST CIRCULATION
JASPEROID	MAFIC INTRUSIVE
KAOLINIZED	No Circulation
LATITE	OOLITIC LIMESTONE
LIMESTONE	PYROXENE HORNFELS
MARBLE	QUARTZ VEIN
METADOLOMITE	QUARTZ VEINING
OIL SHALE	QUARTZ LATITE
OXIDIZED	SAND PEBBLES
PEBBLES	SANDY LIMESTONE
PHYLLIC	SANDY SILT
PYRITE	SHALE AND LIMESTONE INTERBEDS
PYRITIC	SHALE WITH LIMESTONE INTERBEDS
PYROXENE	SHALY LIMESTONE
QUARTZITE	SILTACEOUS SHALE
QUARTZ	TREMOLITE MARBLE
RHYODACITE	UPPER BACKFILL
RHYOLITE	UPPER SEAL
SALT	VERY COARSE SANDSTONE

OTHER	
SANDSTONE	SILTY SAND
SCHIST	SANDY GRAVEL
Screen	GRAVELLY SAND
SERICITIZED	UNKNOWN
SERPENTINE	NULL
SILTY LIMESTONE	
SNOWFLAKE OBSIDIAN	
TAR SAND	
TILTED LIMESTONE	
TREMOLITE HORNFELS	

The following table consists of the types of well segments available for entry into segment_type field and the associated material type of the segment. Entry of data into segment_type and material_type_code fields is restricted to the vocabulary listed in this table. Figure 7-1 presents a monitoring well diagram detailing the various well segments.

Notes:

- Bentonite is abbreviated as bent for certain material_type_codes in order to adhere to the field restriction of 20 characters.
- Segment_types consisting of materials with trade names of Teflon, Halon, Fluon, Hostaflon, Polyflon, Neoflon, Kynar, Kel-F, and Diaflon should use *fluoropolymer* as material_type_code.

Table A-20 Well Segment and Materials

Segment_Type	Material_Type_Code
Protective casing	CARBON STEEL STEEL UNKNOWN
Surface plug	BENTONITE CONCRETE NEAT CEMENT UNKNOWN
Annular backfill	BENT-CEMENT GROUT BENT-SAND SLURRY BENTONITE SLURRY CEMENT-ALUMINUM CEMENT-FLY ASH CEMENT-GYPSUM GROUT CONCRETE GROUT NATURAL FORMATION NEAT CEMENT NEAT CEMENT GROUT SAND UNKNOWN
Annular seal	BENTONITE-CHIPS BENTONITE-GRANULAR BENTONITE-PELLETS BENTONITE-SLURRY UNKNOWN
FLTPK	SNP
FOOT	ENDCAP

Table A-20 Well Segment and Materials

Segment_Type	Material_Type_Code
Casing	ABS BLACK CARBON STEEL CARBON STEEL FLUOROPOLYMER GALVANIZED STEEL LOW-CARBON STEEL PVC SCH 40 PVC SCH 80 STAINLESS STEEL 304 STAINLESS STEEL 316 UNKNOWN
Screen	FLUOROPOLYMER PVC 10 PVC SCH 40 PVC SCH 80 SCREEN STAINLESS STEEL 10 STAINLESS STEEL 20 STAINLESS STEEL 30 STAINLESS STEEL 304 STAINLESS STEEL 316 UNKNOWN
Filter pack	GRAVEL PACK NATURAL FORMATION SAND PACK UNKNOWN
GROUT	GT
RISER	PVC
SCRN	PVC
SEAL	BNT
UNKNOWN	UNKNOWN

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
01010001	HUC	UPPER ST. JOHN
01010002	HUC	ALLAGASH
01010003	HUC	FISH
01010004	HUC	AROOSTOOK
01010005	HUC	MEDUXNEKEAG
01020001	HUC	WEST BRANCH PENOBSCOT
01020002	HUC	EAST BRANCH PENOBSCOT
01020003	HUC	MATTAWAMKEAG
01020004	HUC	PISCATAQUIS
01020005	HUC	LOWER PENOBSCOT

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
01030001	HUC	UPPER KENNEBEC
01030002	HUC	DEAD
01030003	HUC	LOWER KENNEBEC
01040001	HUC	UPPER ANDROSCOGGIN
01040002	HUC	LOWER ANDROSCOGGIN
01050001	HUC	ST. CROIX
01050002	HUC	MAINE COASTAL
01050003	HUC	ST. GEORGE-SHEEPSCOT
01060001	HUC	PRESUMPSCOT
01060002	HUC	SACO
01060003	HUC	PISCATAQUA-SALMON FALLS
01070001	HUC	PEMIGEWASSET
01070002	HUC	MERRIMACK
01070003	HUC	CONTOOCOOK
01070004	HUC	NASHUA
01070005	HUC	CONCORD
01080101	HUC	UPPER CONNECTICUT
01080102	HUC	PASSUMPSIC
01080103	HUC	WAITS
01080104	HUC	UPPER CONNECTICUT-MASCOMA
01080105	HUC	WHITE
01080106	HUC	BLACK-OTTAUQUECHEE
01080107	HUC	WEST
01080201	HUC	MIDDLE CONNECTICUT
01080202	HUC	MILLER
01080203	HUC	DEERFIELD
01080204	HUC	CHICOPEE
01080205	HUC	LOWER CONNECTICUT
01080206	HUC	WESTFIELD
01080207	HUC	FARMINGTON
01090001	HUC	CHARLES
01090002	HUC	CAPE COD
01090003	HUC	BLACKSTONE
01090004	HUC	NARRAGANSETT
01090005	HUC	PAWCATUCK-WOOD
01100001	HUC	QUINEBAUG
01100002	HUC	SHETUCKET
01100003	HUC	THAMES
01100004	HUC	QUINNIPIAC
01100005	HUC	HOUSATONIC
01100006	HUC	SAUGATUCK
01100007	HUC	LONG ISLAND SOUND
01110000	HUC	ST. FRANCOIS

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
02010001	HUC	LAKE GEORGE
02010002	HUC	OTTER
02010003	HUC	WINOOSKI
02010004	HUC	AUSABLE
02010005	HUC	LAMOILLE
02010006	HUC	GREAT CHAZY-SARANAC
02010007	HUC	MISSISQUOI
02020001	HUC	UPPER HUDSON
02020002	HUC	SACANDAGA
02020003	HUC	HUDSON-HOOSIC
02020004	HUC	MOHAWK
02020005	HUC	SCHOHARIE
02020006	HUC	MIDDLE HUDSON
02020007	HUC	RONDOUT
02020008	HUC	HUDSON-WAPPINGER
02030101	HUC	LOWER HUDSON
02030102	HUC	BRONX
02030103	HUC	HACKENSACK-PASSAIC
02030104	HUC	SANDY HOOK-STATEN ISLAND
02030105	HUC	RARITAN
02030201	HUC	NORTHERN LONG ISLAND
02030202	HUC	SOUTHERN LONG ISLAND
02040101	HUC	UPPER DELAWARE
02040102	HUC	EAST BRANCH DELAWARE
02040103	HUC	LACKAWAXEN
02040104	HUC	MIDDLE DELAWARE-MONGAUP-BRODHEAD
02040105	HUC	MIDDLE DELAWARE-MUSCONETCONG
02040106	HUC	LEHIGH
02040201	HUC	CROSSWICKS-NESHAMINY
02040202	HUC	LOWER DELAWARE
02040203	HUC	SCHUYLKILL
02040204	HUC	DELAWARE BAY
02040205	HUC	BRANDYWINE-CHRISTINA
02040206	HUC	COHANSEY-MAURICE
02040207	HUC	BROADKILL-SMYRNA
02040301	HUC	MULLICA-TOMS
02040302	HUC	GREAT EGG HARBOR
02050101	HUC	UPPER SUSQUEHANNA
02050102	HUC	CHENANGO
02050103	HUC	OWEGO-WAPPASENING
02050104	HUC	TIOGA
02050105	HUC	CHEMUNG
02050106	HUC	UPPER SUSQUEHANNA-TUNKHANNOCK

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
02050107	HUC	UPPER SUSQUEHANNA-LACKAWANNA
02050201	HUC	UPPER WEST BRANCH SUSQUEHANNA
02050202	HUC	SINNEMAHONING
02050203	HUC	MIDDLE WEST BRANCH SUSQUEHANNA
02050204	HUC	BALD EAGLE
02050205	HUC	PINE
02050206	HUC	LOWER WEST BRANCH SUSQUEHANNA
02050301	HUC	LOWER SUSQUEHANNA-PENNS
02050302	HUC	UPPER JUNIATA
02050303	HUC	RAYSTOWN
02050304	HUC	LOWER JUNIATA
02050305	HUC	LOWER SUSQUEHANNA-SWATARA
02050306	HUC	LOWER SUSQUEHANNA
02060001	HUC	UPPER CHESAPEAKE BAY
02060002	HUC	CHESTER-SASSAFRAS
02060003	HUC	GUNPOWDER-PATAPSCO
02060004	HUC	SEVERN
02060005	HUC	CHOPTANK
02060006	HUC	PATUXENT
02060007	HUC	BLACKWATER-WICOMICO
02060008	HUC	NANTICOKE
02060009	HUC	POCOMOKE
02060010	HUC	CHINCOTEAGUE
02070001	HUC	SOUTH BRANCH POTOMAC
02070002	HUC	NORTH BRANCH POTOMAC
02070003	HUC	CACAPON-TOWN
02070004	HUC	CONOCOCHEAGUE-OPEQUON
02070005	HUC	SOUTH FORK SHENANDOAH
02070006	HUC	NORTH FORK SHENANDOAH
02070007	HUC	SHENANDOAH
02070008	HUC	MIDDLE POTOMAC-CATOCTIN
02070009	HUC	MONOCACY
02070010	HUC	MIDDLE POTOMAC-ANACOSTIA-OCCOQUAN
02070011	HUC	LOWER POTOMAC
02080101	HUC	LOWER CHESAPEAKE BAY
02080102	HUC	GREAT WICOMICO-PIANKATANK
02080103	HUC	RAPIDAN-UPPER RAPPAHANNOCK
02080104	HUC	LOWER RAPPAHANNOCK
02080105	HUC	MATTAPONI
02080106	HUC	PAMUNKEY
02080107	HUC	YORK
02080108	HUC	LYNNHAVEN-POQUOSON
02080109	HUC	WESTERN LOWER DELMARVA

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
02080110	HUC	EASTERN LOWER DELMARVA
02080201	HUC	UPPER JAMES
02080202	HUC	MAURY
02080203	HUC	MIDDLE JAMES-BUFFALO
02080204	HUC	RIVANNA
02080205	HUC	MIDDLE JAMES-WILLIS
02080206	HUC	LOWER JAMES
02080207	HUC	APPOMATTOX
02080208	HUC	HAMPTON ROADS
03010101	HUC	UPPER ROANOKE
03010102	HUC	MIDDLE ROANOKE
03010103	HUC	UPPER DAN
03010104	HUC	LOWER DAN
03010105	HUC	BANISTER
03010106	HUC	ROANOKE RAPIDS
03010107	HUC	LOWER ROANOKE
03010201	HUC	NOTTOWAY
03010202	HUC	BLACKWATER
03010203	HUC	CHOWAN
03010204	HUC	MEHERRIN
03010205	HUC	ALBEMARLE
03020101	HUC	UPPER TAR
03020102	HUC	FISHING
03020103	HUC	LOWER TAR
03020104	HUC	PAMLICO
03020105	HUC	PAMLICO SOUND
03020106	HUC	BOGUE-CORE SOUNDS
03020201	HUC	UPPER NEUSE
03020202	HUC	MIDDLE NEUSE
03020203	HUC	CONTENTNEA
03020204	HUC	LOWER NEUSE
03030001	HUC	NEW
03030002	HUC	HAW
03030003	HUC	DEEP
03030004	HUC	UPPER CAPE FEAR
03030005	HUC	LOWER CAPE FEAR
03030006	HUC	BLACK
03030007	HUC	NORTHEAST CAPE FEAR
03040101	HUC	UPPER YADKIN
03040102	HUC	SOUTH YADKIN
03040103	HUC	LOWER YADKIN
03040104	HUC	UPPER PEE DEE
03040105	HUC	ROCKY

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
03040201	HUC	LOWER PEE DEE
03040202	HUC	LYNCHES
03040203	HUC	LUMBER
03040204	HUC	LITTLE PEE DEE
03040205	HUC	BLACK
03040206	HUC	WACCAMAW
03040207	HUC	CAROLINA COASTAL-SAMPIT
03050101	HUC	UPPER CATAWBA
03050102	HUC	SOUTH FORK CATAWBA
03050103	HUC	LOWER CATAWBA
03050104	HUC	WATEREE
03050105	HUC	UPPER BROAD
03050106	HUC	LOWER BROAD
03050107	HUC	TYGER
03050108	HUC	ENOREE
03050109	HUC	SALUDA
03050110	HUC	CONGAREE
03050111	HUC	LAKE MARION
03050112	HUC	SANTEE
03050201	HUC	COOPER
03050202	HUC	SOUTH CAROLINA COASTAL
03050203	HUC	NORTH FORK EDISTO
03050204	HUC	SOUTH FORK EDISTO
03050205	HUC	EDISTO
03050206	HUC	FOUR HOLE SWAMP
03050207	HUC	SALKEHATCHIE
03050208	HUC	BROAD-ST. HELENA
03060101	HUC	SENECA
03060102	HUC	TUGALOO
03060103	HUC	UPPER SAVANNAH
03060104	HUC	BROAD
03060105	HUC	LITTLE
03060106	HUC	MIDDLE SAVANNAH
03060107	HUC	STEVENS
03060108	HUC	BRIER
03060109	HUC	LOWER SAVANNAH
03060201	HUC	UPPER OGEECHEE
03060202	HUC	LOWER OGEECHEE
03060203	HUC	CANOOCHEE
03060204	HUC	OGEECHEE COASTAL
03070101	HUC	UPPER OCONEE
03070102	HUC	LOWER OCONEE
03070103	HUC	UPPER OCMULGEE

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
03070104	HUC	LOWER OCMULGEE
03070105	HUC	LITTLE OCMULGEE
03070106	HUC	ALTAMAHA
03070107	HUC	OHOOPEE
03070201	HUC	SATILLA
03070202	HUC	LITTLE SATILLA
03070203	HUC	CUMBERLAND-ST. SIMONS
03070204	HUC	ST. MARYS
03070205	HUC	NASSAU
03080101	HUC	UPPER ST. JOHNS
03080102	HUC	OKLAWAHA
03080103	HUC	LOWER ST. JOHNS
03080201	HUC	DAYTONA-ST. AUGUSTINE
03080202	HUC	CAPE CANAVERAL
03080203	HUC	VERO BEACH
03090101	HUC	KISSIMMEE
03090102	HUC	NORTHERN OKEECHOBEE INFLOW
03090103	HUC	WESTERN OKEECHOBEE INFLOW
03090201	HUC	LAKE OKEECHOBEE
03090202	HUC	EVERGLADES
03090203	HUC	FLORIDA BAY-FLORIDA KEYS
03090204	HUC	BIG CYPRESS SWAMP
03090205	HUC	CALOOSAHATCHEE
03100101	HUC	PEACE
03100102	HUC	MYAKKA
03100103	HUC	CHARLOTTE HARBOR
03100201	HUC	SARASOTA BAY
03100202	HUC	MANATEE
03100203	HUC	LITTLE MANATEE
03100204	HUC	ALAFIA
03100205	HUC	HILLSBOROUGH
03100206	HUC	TAMPA
03100207	HUC	CRYSTAL-PITHLACHASCOTEE
03100208	HUC	WITHLACOOCHEE
03110101	HUC	WACCASASSA
03110102	HUC	ECONFINA-STEINHATCHEE
03110103	HUC	AUCILLA
03110201	HUC	UPPER SUWANNEE
03110202	HUC	ALAPAHA
03110203	HUC	WITHLACOOCHEE
03110204	HUC	LITTLE
03110205	HUC	LOWER SUWANNEE
03110206	HUC	SANTA FE

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
03120001	HUC	APALACHEE BAY-ST. MARKS
03120002	HUC	UPPER OCHLOCKONEE
03120003	HUC	LOWER OCHLOCKONEE
03130001	HUC	UPPER CHATTAHOOCHEE
03130002	HUC	MIDDLE CHATTAHOOCHEE-LAKE HARDING
03130003	HUC	MIDDLE CHATTAHOOCHEE-WALTER F. GEORGE RESERVOIR
03130004	HUC	LOWER CHATTAHOOCHEE
03130005	HUC	UPPER FLINT
03130006	HUC	MIDDLE FLINT
03130007	HUC	KINCHAFOONEE-MUCKALEE
03130008	HUC	LOWER FLINT
03130009	HUC	ICHAWAYNOCHAWAY
03130010	HUC	SPRING
03130011	HUC	APALACHICOLA
03130012	HUC	CHIPOLA
03130013	HUC	NEW
03130014	HUC	APALACHICOLA BAY
03140101	HUC	ST. ANDREW-ST. JOSEPH BAYS
03140102	HUC	CHOCTAWHATCHEE BAY
03140103	HUC	YELLOW
03140104	HUC	BLACKWATER
03140105	HUC	PENSACOLA BAY
03140106	HUC	PERDIDO
03140107	HUC	PERDIDO BAY
03140201	HUC	UPPER CHOCTAWHATCHEE
03140202	HUC	PEA
03140203	HUC	LOWER CHOCTAWHATCHEE
03140301	HUC	UPPER CONECUH
03140302	HUC	PATSALIGA
03140303	HUC	SEPULGA
03140304	HUC	LOWER CONECUH
03140305	HUC	ESCAMBIA
03150101	HUC	CONASAUGA
03150102	HUC	COOSAWATTEE
03150103	HUC	OOSTANAULA
03150104	HUC	ETOWAH
03150105	HUC	UPPER COOSA
03150106	HUC	MIDDLE COOSA
03150107	HUC	LOWER COOSA
03150108	HUC	UPPER TALLAPOOSA
03150109	HUC	MIDDLE TALLAPOOSA
03150110	HUC	LOWER TALLAPOOSA

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
03150201	HUC	UPPER ALABAMA
03150202	HUC	CAHABA
03150203	HUC	MIDDLE ALABAMA
03150204	HUC	LOWER ALABAMA
03160101	HUC	UPPER TOMBIGBEE
03160102	HUC	TOWN
03160103	HUC	BUTTAHATCHEE
03160104	HUC	TIBBEE
03160105	HUC	LUXAPALLILA
03160106	HUC	MIDDLE TOMBIGBEE-LUBBUB
03160107	HUC	SIPSEY
03160108	HUC	NOXUBEE
03160109	HUC	MULBERRY
03160110	HUC	SIPSEY FORK
03160111	HUC	LOCUST
03160112	HUC	UPPER BLACK WARRIOR
03160113	HUC	LOWER BLACK WARRIOR
03160201	HUC	MIDDLE TOMBIGBEE-CHICKASAW
03160202	HUC	SUCARNOOCHEE
03160203	HUC	LOWER TOMBIGBEE
03160204	HUC	MOBILE-TENSAW
03160205	HUC	MOBILE BAY
03170001	HUC	CHUNKY-OKATIBBEE
03170002	HUC	UPPER CHICKASAWHAY
03170003	HUC	LOWER CHICKASAWHAY
03170004	HUC	UPPER LEAF
03170005	HUC	LOWER LEAF
03170006	HUC	PASCAGOULA
03170007	HUC	BLACK
03170008	HUC	ESCATAWPA
03170009	HUC	MISSISSIPPI COASTAL
03180001	HUC	UPPER PEARL
03180002	HUC	MIDDLE PEARL-STRONG
03180003	HUC	MIDDLE PEARL-SILVER
03180004	HUC	LOWER PEARL
03180005	HUC	BOGUE CHITTO
04010101	HUC	BAPTISM-BRULE
04010102	HUC	BEAVER-LESTER
04010201	HUC	ST. LOUIS
04010202	HUC	CLOQUET
04010301	HUC	BEARTRAP-NEMADJI
04010302	HUC	BAD-MONTREAL
04020101	HUC	BLACK-PRESQUE ISLE

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
04020102	HUC	ONTONAGON
04020103	HUC	KEWEENAW PENINSULA
04020104	HUC	STURGEON
04020105	HUC	DEAD-KELSEY
04020201	HUC	BETSY-CHOCOLAY
04020202	HUC	TAHQUAMENON
04020203	HUC	WAISKA
04020300	HUC	LAKE SUPERIOR
04030101	HUC	MANITOWOC-SHEBOYGAN
04030102	HUC	DOOR-KEWAUNEE
04030103	HUC	DUCK-PENSAUKEE
04030104	HUC	OCONTO
04030105	HUC	PESHTIGO
04030106	HUC	BRULE
04030107	HUC	MICHIGAMME
04030108	HUC	MENOMINEE
04030109	HUC	CEDAR-FORD
04030110	HUC	ESCANABA
04030111	HUC	TACOOSH-WHITEFISH
04030112	HUC	FISHDAM-STURGEON
04030201	HUC	UPPER FOX
04030202	HUC	WOLF
04030203	HUC	LAKE WINNEBAGO
04030204	HUC	LOWER FOX
04040001	HUC	LITTLE CALUMET-GALIEN
04040002	HUC	PIKE-ROOT
04040003	HUC	MILWAUKEE
04050001	HUC	ST. JOSEPH
04050002	HUC	BLACK-MACATAWA
04050003	HUC	KALAMAZOO
04050004	HUC	UPPER GRAND
04050005	HUC	MAPLE
04050006	HUC	LOWER GRAND
04050007	HUC	THORNAPPLE
04060101	HUC	PERE MARQUETTE-WHITE
04060102	HUC	MUSKEGON
04060103	HUC	MANISTEE
04060104	HUC	BETSIE-PLATTE
04060105	HUC	BOARDMAN-CHARLEVOIX
04060106	HUC	MANISTIQUE
04060107	HUC	BREVOORT-MILLECOQUINS
04060200	HUC	LAKE MICHIGAN
04070001	HUC	ST. MARYS

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
04070002	HUC	CARP-PINE
04070003	HUC	LONE LAKE-OCQUEOC
04070004	HUC	CHEBOYGAN
04070005	HUC	BLACK
04070006	HUC	THUNDER BAY
04070007	HUC	AU SABLE
04080101	HUC	AU GRES-RIFLE
04080102	HUC	KAWKAWLIN-PINE
04080103	HUC	PIGEON-WISCOGGIN
04080104	HUC	BIRCH-WILLOW
04080201	HUC	TITTABAWASSEE
04080202	HUC	PINE
04080203	HUC	SHIAWASSEE
04080204	HUC	FLINT
04080205	HUC	CASS
04080206	HUC	SAGINAW
04080300	HUC	LAKE HURON
04090001	HUC	ST. CLAIR
04090002	HUC	LAKE ST. CLAIR
04090003	HUC	CLINTON
04090004	HUC	DETROIT
04090005	HUC	HURON
04100001	HUC	OTTAWA-STONY
04100002	HUC	RAISIN
04100003	HUC	ST. JOSEPH
04100004	HUC	ST. MARYS
04100005	HUC	UPPER MAUMEE
04100006	HUC	TIFFIN
04100007	HUC	AUGLAIZE
04100008	HUC	BLANCHARD
04100009	HUC	LOWER MAUMEE
04100010	HUC	CEDAR-PORTAGE
04100011	HUC	SANDUSKY
04100012	HUC	HURON-VERMILION
04110001	HUC	BLACK-ROCKY
04110002	HUC	CUYAHOGA
04110003	HUC	ASHTABULA-CHAGRIN
04110004	HUC	GRAND
04120101	HUC	CHAUTAUQUA-CONNEAUT
04120102	HUC	CATTARAUGUS
04120103	HUC	BUFFALO-EIGHTEENMILE
04120104	HUC	NIAGARA
04120200	HUC	LAKE ERIE

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
04130001	HUC	OAK ORCHARD-TWELVEMILE
04130002	HUC	UPPER GENESEE
04130003	HUC	LOWER GENESEE
04140101	HUC	IRONDEQUOIT-NINEMILE
04140102	HUC	SALMON-SANDY
04140201	HUC	SENECA
04140202	HUC	ONEIDA
04140203	HUC	OSWEGO
04150101	HUC	BLACK
04150102	HUC	CHAUMONT-PERCH
04150200	HUC	LAKE ONTARIO
04150301	HUC	UPPER ST. LAWRENCE
04150302	HUC	OSWEGATCHIE
04150303	HUC	INDIAN
04150304	HUC	GRASS
04150305	HUC	RAQUETTE
04150306	HUC	ST. REGIS
04150307	HUC	ENGLISH-SALMON
05010001	HUC	UPPER ALLEGHENY
05010002	HUC	CONEWANGO
05010003	HUC	MIDDLE ALLEGHENY-TIONESTA
05010004	HUC	FRENCH
05010005	HUC	CLARION
05010006	HUC	MIDDLE ALLEGHENY-REDBANK
05010007	HUC	CONEMAUGH
05010008	HUC	KISKIMINETAS
05010009	HUC	LOWER ALLEGHENY
05020001	HUC	TYGART VALLEY
05020002	HUC	WEST FORK
05020003	HUC	UPPER MONONGAHELA
05020004	HUC	CHEAT
05020005	HUC	LOWER MONONGAHELA
05020006	HUC	YOUGHIOGHENY
05030101	HUC	UPPER OHIO
05030102	HUC	SHENANGO
05030103	HUC	MAHONING
05030104	HUC	BEAVER
05030105	HUC	CONNOQUENESSING
05030106	HUC	UPPER OHIO-WHEELING
05030201	HUC	LITTLE MUSKINGUM-MIDDLE ISLAND
05030202	HUC	UPPER OHIO-SHADE
05030203	HUC	LITTLE KANAWHA
05030204	HUC	HOCKING

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
05040001	HUC	TUSCARAWAS
05040002	HUC	MOHICAN
05040003	HUC	WALHONDING
05040004	HUC	MUSKINGUM
05040005	HUC	WILLS
05040006	HUC	LICKING
05050001	HUC	UPPER NEW
05050002	HUC	MIDDLE NEW
05050003	HUC	GREENBRIER
05050004	HUC	LOWER NEW
05050005	HUC	GAULEY
05050006	HUC	UPPER KANAWHA
05050007	HUC	ELK
05050008	HUC	LOWER KANAWHA
05050009	HUC	COAL
05060001	HUC	UPPER SCIOTO
05060002	HUC	LOWER SCIOTO
05060003	HUC	PAINT
05070101	HUC	UPPER GUYANDOTTE
05070102	HUC	LOWER GUYANDOTTE
05070201	HUC	TUG
05070202	HUC	UPPER LEVISA
05070203	HUC	LOWER LEVISA
05070204	HUC	BIG SANDY
05080001	HUC	UPPER GREAT MIAMI
05080002	HUC	LOWER GREAT MIAMI
05080003	HUC	WHITEWATER
05090101	HUC	RACCOON-SYMMES
05090102	HUC	TWELVEPOLE
05090103	HUC	LITTLE SCIOTO-TYGARTS
05090104	HUC	LITTLE SANDY
05090201	HUC	OHIO BRUSH-WHITEOAK
05090202	HUC	LITTLE MIAMI
05090203	HUC	MIDDLE OHIO-LAUGHERY
05100101	HUC	LICKING
05100102	HUC	SOUTH FORK LICKING
05100201	HUC	NORTH FORK KENTUCKY
05100202	HUC	MIDDLE FORK KENTUCKY
05100203	HUC	SOUTH FORK KENTUCKY
05100204	HUC	UPPER KENTUCKY
05100205	HUC	LOWER KENTUCKY
05110001	HUC	UPPER GREEN
05110002	HUC	BARREN

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
05110003	HUC	MIDDLE GREEN
05110004	HUC	ROUG
05110005	HUC	LOWER GREEN
05110006	HUC	POND
05120101	HUC	UPPER WABASH
05120102	HUC	SALAMONIE
05120103	HUC	MISSISSINEWA
05120104	HUC	EEL
05120105	HUC	MIDDLE WABASH-DEER
05120106	HUC	TIPPECANOE
05120107	HUC	WILDCAT
05120108	HUC	MIDDLE WABASH-LITTLE VERMILION
05120109	HUC	VERMILION
05120110	HUC	SUGAR
05120111	HUC	MIDDLE WABASH-BUSSERON
05120112	HUC	EMBARRAS
05120113	HUC	LOWER WABASH
05120114	HUC	LITTLE WABASH
05120115	HUC	SKILLET
05120201	HUC	UPPER WHITE
05120202	HUC	LOWER WHITE
05120203	HUC	EEL
05120204	HUC	DRIFTWOOD
05120205	HUC	FLATROCK-HAW
05120206	HUC	UPPER EAST FORK WHITE
05120207	HUC	MUSCATATUCK
05120208	HUC	LOWER EAST FORK WHITE
05120209	HUC	PATOKA
05130101	HUC	UPPER CUMBERLAND
05130102	HUC	ROCKCASTLE
05130103	HUC	UPPER CUMBERLAND-LAKE CUMBERLAND
05130104	HUC	SOUTH FORK CUMBERLAND
05130105	HUC	OBEY
05130106	HUC	UPPER CUMBERLAND-CORDELL HULL
05130107	HUC	COLLINS
05130108	HUC	CANEY
05130201	HUC	LOWER CUMBERLAND-OLD HICKORY LAKE
05130202	HUC	LOWER CUMBERLAND-SYCAMORE
05130203	HUC	STONES
05130204	HUC	HARPETH
05130205	HUC	LOWER CUMBERLAND
05130206	HUC	RED
05140101	HUC	SILVER-LITTLE KENTUCKY

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
05140102	HUC	SALT
05140103	HUC	ROLLING FORK
05140104	HUC	BLUE-SINKING
05140201	HUC	LOWER OHIO-LITTLE PIGEON
05140202	HUC	HIGHLAND-PIGEON
05140203	HUC	LOWER OHIO-BAY
05140204	HUC	SALINE
05140205	HUC	TRADEWATER
05140206	HUC	LOWER OHIO
06010101	HUC	NORTH FORK HOLSTON
06010102	HUC	SOUTH FORK HOLSTON
06010103	HUC	WATAUGA
06010104	HUC	HOLSTON
06010105	HUC	UPPER FRENCH BROAD
06010106	HUC	PIGEON
06010107	HUC	LOWER FRENCH BROAD
06010108	HUC	NOLICHUCKY
06010201	HUC	WATTS BAR LAKE
06010202	HUC	UPPER LITTLE TENNESSEE
06010203	HUC	TUCKASEGEE
06010204	HUC	LOWER LITTLE TENNESSEE
06010205	HUC	UPPER CLINCH
06010206	HUC	POWELL
06010207	HUC	LOWER CLINCH
06010208	HUC	EMORY
06020001	HUC	MIDDLE TENNESSEE-CHICKAMAUGA
06020002	HUC	HIWASSEE
06020003	HUC	OCOEE
06020004	HUC	SEQUATCHIE
06030001	HUC	GUNTERSVILLE LAKE
06030002	HUC	WHEELER LAKE
06030003	HUC	UPPER ELK
06030004	HUC	LOWER ELK
06030005	HUC	PICKWICK LAKE
06030006	HUC	BEAR
06040001	HUC	LOWER TENNESSEE-BEECH
06040002	HUC	UPPER DUCK
06040003	HUC	LOWER DUCK
06040004	HUC	BUFFALO
06040005	HUC	KENTUCKY LAKE
06040006	HUC	LOWER TENNESSEE
07010101	HUC	MISSISSIPPI HEADWATERS
07010102	HUC	LEECH LAKE

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
07010103	HUC	PRAIRIE-WILLOW
07010104	HUC	ELK-NOKASIPPI
07010105	HUC	PINE
07010106	HUC	CROW WING
07010107	HUC	REDEYE
07010108	HUC	LONG PRAIRIE
07010201	HUC	PLATTE-SPUNK
07010202	HUC	SAUK
07010203	HUC	CLEARWATER-ELK
07010204	HUC	CROW
07010205	HUC	SOUTH FORK CROW
07010206	HUC	TWIN CITIES
07010207	HUC	RUM
07020001	HUC	UPPER MINNESOTA
07020002	HUC	POMME DE TERRE
07020003	HUC	LAC QUI PARLE
07020004	HUC	HAWK-YELLOW MEDICINE
07020005	HUC	CHIPPEWA
07020006	HUC	REDWOOD
07020007	HUC	MIDDLE MINNESOTA
07020008	HUC	COTTONWOOD
07020009	HUC	BLUE EARTH
07020010	HUC	WATONWAN
07020011	HUC	LE SUEUR
07020012	HUC	LOWER MINNESOTA
07030001	HUC	UPPER ST. CROIX
07030002	HUC	NAMEKAGON
07030003	HUC	KETTLE
07030004	HUC	SNAKE
07030005	HUC	LOWER ST. CROIX
07040001	HUC	RUSH-VERMILLION
07040002	HUC	CANNON
07040003	HUC	BUFFALO-WHITEWATER
07040004	HUC	ZUMBRO
07040005	HUC	TREMPEALEAU
07040006	HUC	LA CROSSE-PINE
07040007	HUC	BLACK
07040008	HUC	ROOT
07040103	HUC	BOURBEUSE
07050001	HUC	UPPER CHIPPEWA
07050002	HUC	FLAMBEAU
07050003	HUC	SOUTH FORK FLAMBEAU
07050004	HUC	JUMP

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
07050005	HUC	LOWER CHIPPEWA
07050006	HUC	EAU CLAIRE
07050007	HUC	RED CEDAR
07060001	HUC	COON-YELLOW
07060002	HUC	UPPER IOWA
07060003	HUC	GRANT-LITTLE MAQUOKETA
07060004	HUC	TURKEY
07060005	HUC	APPLE-PLUM
07060006	HUC	MAQUOKETA
07070001	HUC	UPPER WISCONSIN
07070002	HUC	LAKE DUBAY
07070003	HUC	CASTLE ROCK
07070004	HUC	BARABOO
07070005	HUC	LOWER WISCONSIN
07070006	HUC	KICKAPOO
07080101	HUC	COPPERAS-DUCK
07080102	HUC	UPPER WAPSIPINICON
07080103	HUC	LOWER WAPSIPINICON
07080104	HUC	FLINT-HENDERSON
07080105	HUC	SOUTH SKUNK
07080106	HUC	NORTH SKUNK
07080107	HUC	SKUNK
07080201	HUC	UPPER CEDAR
07080202	HUC	SHELL ROCK
07080203	HUC	WINNEBAGO
07080204	HUC	WEST FORK CEDAR
07080205	HUC	MIDDLE CEDAR
07080206	HUC	LOWER CEDAR
07080207	HUC	UPPER IOWA
07080208	HUC	MIDDLE IOWA
07080209	HUC	LOWER IOWA
07090001	HUC	UPPER ROCK
07090002	HUC	CRAWFISH
07090003	HUC	PECATONICA
07090004	HUC	SUGAR
07090005	HUC	LOWER ROCK
07090006	HUC	KISHWAUKEE
07090007	HUC	GREEN
07100001	HUC	DES MOINES HEADWATERS
07100002	HUC	UPPER DES MOINES
07100003	HUC	EAST FORK DES MOINES
07100004	HUC	MIDDLE DES MOINES
07100005	HUC	BOONE

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
07100006	HUC	NORTH RACCOON
07100007	HUC	SOUTH RACCOON
07100008	HUC	LAKE RED ROCK
07100009	HUC	LOWER DES MOINES
07110001	HUC	BEAR-WYACONDA
07110002	HUC	NORTH FABIUS
07110003	HUC	SOUTH FABIUS
07110004	HUC	THE SNY
07110005	HUC	NORTH FORK SALT
07110006	HUC	SOUTH FORK SALT
07110007	HUC	SALT
07110008	HUC	CUIVRE
07110009	HUC	PERUQUE-PIASA
07120001	HUC	KANKAKEE
07120002	HUC	IROQUOIS
07120003	HUC	CHICAGO
07120004	HUC	DES PLAINES
07120005	HUC	UPPER ILLINOIS
07120006	HUC	UPPER FOX
07120007	HUC	LOWER FOX
07130001	HUC	LOWER ILLINOIS-SENACHWINE LAKE
07130002	HUC	VERMILION
07130003	HUC	LOWER ILLINOIS-LAKE CHAUTAUQUA
07130004	HUC	MACKINAW
07130005	HUC	SPOON
07130006	HUC	UPPER SANGAMON
07130007	HUC	SOUTH FORK SANGAMON
07130008	HUC	LOWER SANGAMON
07130009	HUC	SALT
07130010	HUC	LA MOINE
07130011	HUC	LOWER ILLINOIS
07130012	HUC	MACOUPIN
07140101	HUC	CAHOKIA-JOACHIM
07140102	HUC	MERAMEC
07140104	HUC	BIG
07140105	HUC	UPPER MISSISSIPPI-CAPE GIRARDEAU
07140106	HUC	BIG MUDDY
07140107	HUC	WHITEWATER
07140108	HUC	CACHE
07140201	HUC	UPPER KASKASKIA
07140202	HUC	MIDDLE KASKASKIA
07140203	HUC	SHOAL
07140204	HUC	LOWER KASKASKIA

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
08010100	HUC	LOWER MISSISSIPPI-MEMPHIS
08010201	HUC	BAYOU DE CHIEN-MAYFIELD
08010202	HUC	OBION
08010203	HUC	SOUTH FORK OBION
08010204	HUC	NORTH FORK FORKED DEER
08010205	HUC	SOUTH FORK FORKED DEER
08010206	HUC	FORKED DEER
08010207	HUC	UPPER HATCHIE
08010208	HUC	LOWER HATCHIE
08010209	HUC	LOOSAHATCHIE
08010210	HUC	WOLF
08010211	HUC	HORN LAKE-NONCONNAH
08020100	HUC	LOWER MISSISSIPPI-HELENA
08020201	HUC	NEW MADRID-ST. JOHNS
08020202	HUC	UPPER ST. FRANCIS
08020203	HUC	LOWER ST. FRANCIS
08020204	HUC	LITTLE RIVER DITCHES
08020205	HUC	L'ANGUILLE
08020301	HUC	LOWER WHITE-BAYOU DES ARC
08020302	HUC	CACHE
08020303	HUC	LOWER WHITE
08020304	HUC	BIG
08020401	HUC	LOWER ARKANSAS
08020402	HUC	BAYOU METO
08030100	HUC	LOWER MISSISSIPPI-GREENVILLE
08030201	HUC	LITTLE TALLAHATCHIE
08030202	HUC	TALLAHATCHIE
08030203	HUC	YOCONA
08030204	HUC	COLDWATER
08030205	HUC	YALOBUSHA
08030206	HUC	UPPER YAZOO
08030207	HUC	BIG SUNFLOWER
08030208	HUC	LOWER YAZOO
08030209	HUC	DEER-STEELE
08040101	HUC	OUACHITA HEADWATERS
08040102	HUC	UPPER OUACHITA
08040103	HUC	LITTLE MISSOURI
08040201	HUC	LOWER OUACHITA-SMACKOVER
08040202	HUC	LOWER OUACHITA-BAYOU DE LOUTRE
08040203	HUC	UPPER SALINE
08040204	HUC	LOWER SALINE
08040205	HUC	BAYOU BARTHOLOMEW
08040206	HUC	BAYOU D'ARBONNE

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
08040207	HUC	LOWER OUACHITA
08040301	HUC	LOWER RED
08040302	HUC	CASTOR
08040303	HUC	DUGDEMONA
08040304	HUC	LITTLE
08040305	HUC	BLACK
08040306	HUC	BAYOU COCODRIE
08050001	HUC	BOEUF
08050002	HUC	BAYOU MACON
08050003	HUC	TENSAS
08060100	HUC	LOWER MISSISSIPPI-NATCHEZ
08060201	HUC	UPPER BIG BLACK
08060202	HUC	LOWER BIG BLACK
08060203	HUC	BAYOU PIERRE
08060204	HUC	COLES CREEK
08060205	HUC	HOMOCHITTO
08060206	HUC	BUFFALO
08070100	HUC	LOWER MISSISSIPPI-BATON ROUGE
08070201	HUC	BAYOU SARA-THOMPSON
08070202	HUC	AMITE
08070203	HUC	TICKFAW
08070204	HUC	LAKE MAUREPAS
08070205	HUC	TANGIPAHOA
08070300	HUC	LOWER GRAND
08080101	HUC	ATCHAFALAYA
08080102	HUC	BAYOU TECHE
08080103	HUC	VERMILION
08080201	HUC	MERMENTAU HEADWATERS
08080202	HUC	MERMENTAU
08080203	HUC	UPPER CALCASIEU
08080204	HUC	WHISKY CHITTO
08080205	HUC	WEST FORK CALCASIEU
08080206	HUC	LOWER CALCASIEU
08090100	HUC	LOWER MISSISSIPPI-NEW ORLEANS
08090201	HUC	LIBERTY BAYOU-TCHEFUNCTA
08090202	HUC	LAKE PONTCHARTRAIN
08090203	HUC	EASTERN LOUISIANA COASTAL
08090301	HUC	EAST CENTRAL LOUISIANA COASTAL
08090302	HUC	WEST CENTRAL LOUISIANA COASTAL
09010001	HUC	UPPER SOURIS
09010002	HUC	DES LACS
09010003	HUC	LOWER SOURIS
09010004	HUC	WILLOW

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
09010005	HUC	DEEP
09020101	HUC	BOIS DE SIOUX
09020102	HUC	MUSTINKA
09020103	HUC	OTTER TAIL
09020104	HUC	UPPER RED
09020105	HUC	WESTERN WILD RICE
09020106	HUC	BUFFALO
09020107	HUC	ELM-MARSH
09020108	HUC	EASTERN WILD RICE
09020109	HUC	GOOSE
09020201	HUC	DEVILS LAKE
09020202	HUC	UPPER SHEYENNE
09020203	HUC	MIDDLE SHEYENNE
09020204	HUC	LOWER SHEYENNE
09020205	HUC	MAPLE
09020301	HUC	SANDHILL-WILSON
09020302	HUC	RED LAKES
09020303	HUC	RED LAKE
09020304	HUC	THIEF
09020305	HUC	CLEARWATER
09020306	HUC	GRAND MARAIS-RED
09020307	HUC	TURTLE
09020308	HUC	FOREST
09020309	HUC	SNAKE
09020310	HUC	PARK
09020311	HUC	LOWER RED
09020312	HUC	TWO RIVERS
09020313	HUC	PEMBINA
09020314	HUC	ROSEAU
09030001	HUC	RAINY HEADWATERS
09030002	HUC	VERMILION
09030003	HUC	RAINY LAKE
09030004	HUC	UPPER RAINY
09030005	HUC	LITTLE FORK
09030006	HUC	BIG FORK
09030007	HUC	RAPID
09030008	HUC	LOWER RAINY
09030009	HUC	LAKE OF THE WOODS
10010001	HUC	BELLY
10010002	HUC	ST. MARY
10020001	HUC	RED ROCK
10020002	HUC	BEAVERHEAD
10020003	HUC	RUBY

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
10020004	HUC	BIG HOLE
10020005	HUC	JEFFERSON
10020006	HUC	BOULDER
10020007	HUC	MADISON
10020008	HUC	GALLATIN
10030101	HUC	UPPER MISSOURI
10030102	HUC	UPPER MISSOURI-DEARBORN
10030103	HUC	SMITH
10030104	HUC	SUN
10030105	HUC	BELT
10030201	HUC	TWO MEDICINE
10030202	HUC	CUT BANK
10030203	HUC	MARIAS
10030204	HUC	WILLOW
10030205	HUC	TETON
10040101	HUC	BULLWHACKER-DOG
10040102	HUC	ARROW
10040103	HUC	JUDITH
10040104	HUC	FORT PECK RESERVOIR
10040105	HUC	BIG DRY
10040106	HUC	LITTLE DRY
10040201	HUC	UPPER MUSSELSHELL
10040202	HUC	MIDDLE MUSSELSHELL
10040203	HUC	FLATWILLOW
10040204	HUC	BOX ELDER
10040205	HUC	LOWER MUSSELSHELL
10050001	HUC	MILK HEADWATERS
10050002	HUC	UPPER MILK
10050003	HUC	WILD HORSE LAKE
10050004	HUC	MIDDLE MILK
10050005	HUC	BIG SANDY
10050006	HUC	SAGE
10050007	HUC	LODGE
10050008	HUC	BATTLE
10050009	HUC	PEOPLES
10050010	HUC	COTTONWOOD
10050011	HUC	WHITEWATER
10050012	HUC	LOWER MILK
10050013	HUC	FRENCHMAN
10050014	HUC	BEAVER
10050015	HUC	ROCK
10050016	HUC	PORCUPINE
10060001	HUC	PRARIE ELK-WOLF

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
10060002	HUC	REDWATER
10060003	HUC	POPLAR
10060004	HUC	WEST FORK POPLAR
10060005	HUC	CHARLIE-LITTLE MUDDY
10060006	HUC	BIG MUDDY
10060007	HUC	BRUSH LAKE CLOSED BASIN
10070001	HUC	YELLOWSTONE HEADWATERS
10070002	HUC	UPPER YELLOWSTONE
10070003	HUC	SHIELDS
10070004	HUC	UPPER YELLOWSTONE-LAKE BASIN
10070005	HUC	STILLWATER
10070006	HUC	CLARKS FORK YELLOWSTONE
10070007	HUC	UPPER YELLOWSTONE-POMPEYS PILLAR
10070008	HUC	PRYOR
10080001	HUC	UPPER WIND
10080002	HUC	LITTLE WIND
10080003	HUC	POPO AGIE
10080004	HUC	MUSKRAT
10080005	HUC	LOWER WIND
10080006	HUC	BADWATER
10080007	HUC	UPPER BIGHORN
10080008	HUC	NOWOOD
10080009	HUC	GREYBULL
10080010	HUC	BIG HORN LAKE
10080011	HUC	DRY
10080012	HUC	NORTH FORK SHOSHONE
10080013	HUC	SOUTH FORK SHOSHONE
10080014	HUC	SHOSHONE
10080015	HUC	LOWER BIGHORN
10080016	HUC	LITTLE BIGHORN
10090101	HUC	UPPER TONGUE
10090102	HUC	LOWER TONGUE
10090201	HUC	MIDDLE FORK POWDER
10090202	HUC	UPPER POWDER
10090203	HUC	SOUTH FORK POWDER
10090204	HUC	SALT
10090205	HUC	CRAZY WOMAN
10090206	HUC	CLEAR
10090207	HUC	MIDDLE POWDER
10090208	HUC	LITTLE POWDER
10090209	HUC	LOWER POWDER
10090210	HUC	MIZPAH
10100001	HUC	LOWER YELLOWSTONE-SUNDAY

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
10100002	HUC	BIG PORCUPINE
10100003	HUC	ROSEBUD
10100004	HUC	LOWER YELLOWSTONE
10100005	HUC	O'FALLON
10110101	HUC	LAKE SAKAKAWEA
10110102	HUC	LITTLE MUDDY
10110201	HUC	UPPER LITTLE MISSOURI
10110202	HUC	BOXELDER
10110203	HUC	MIDDLE LITTLE MISSOURI
10110204	HUC	BEAVER
10110205	HUC	LOWER LITTLE MISSOURI
10120101	HUC	ANTELOPE
10120102	HUC	DRY FORK CHEYENNE
10120103	HUC	UPPER CHEYENNE
10120104	HUC	LANCE
10120105	HUC	LIGHTNING
10120106	HUC	ANGOSTURA RESERVOIR
10120107	HUC	BEAVER
10120108	HUC	HAT
10120109	HUC	MIDDLE CHEYENNE-SPRING
10120110	HUC	RAPID
10120111	HUC	MIDDLE CHEYENNE-ELK
10120112	HUC	LOWER CHEYENNE
10120113	HUC	CHERRY
10120201	HUC	UPPER BELLE FOURCHE
10120202	HUC	LOWER BELLE FOURCHE
10120203	HUC	REDWATER
10130101	HUC	PAINTED WOODS-SQUARE BUTTE
10130102	HUC	UPPER LAKE OAHE
10130103	HUC	APPLE
10130104	HUC	BEAVER
10130105	HUC	LOWER LAKE OAHE
10130106	HUC	WEST MISSOURI COTEAU
10130201	HUC	KNIFE
10130202	HUC	UPPER HEART
10130203	HUC	LOWER HEART
10130204	HUC	UPPER CANNONBALL
10130205	HUC	CEDAR
10130206	HUC	LOWER CANNONBALL
10130301	HUC	NORTH FORK GRAND
10130302	HUC	SOUTH FORK GRAND
10130303	HUC	GRAND
10130304	HUC	SOUTH FORK MOREAU

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
10130305	HUC	UPPER MOREAU
10130306	HUC	LOWER MOREAU
10140101	HUC	FORT RANDALL RESERVOIR
10140102	HUC	BAD
10140103	HUC	MEDICINE KNOLL
10140104	HUC	MEDICINE
10140105	HUC	CROW
10140201	HUC	UPPER WHITE
10140202	HUC	MIDDLE WHITE
10140203	HUC	LITTLE WHITE
10140204	HUC	LOWER WHITE
10150001	HUC	PONCA
10150002	HUC	NIOBRARA HEADWATERS
10150003	HUC	UPPER NIOBRARA
10150004	HUC	MIDDLE NIOBRARA
10150005	HUC	SNAKE
10150006	HUC	KEYA PAHA
10150007	HUC	LOWER NIOBRARA
10160001	HUC	JAMES HEADWATERS
10160002	HUC	PIPESTEM
10160003	HUC	UPPER JAMES
10160004	HUC	ELM
10160005	HUC	MUD
10160006	HUC	MIDDLE JAMES
10160007	HUC	EAST MISSOURI COTEAU
10160008	HUC	SNAKE
10160009	HUC	TURTLE
10160010	HUC	NORTH BIG SIOUX COTEAU
10160011	HUC	LOWER JAMES
10170101	HUC	LEWIS AND CLARK LAKE
10170102	HUC	VERMILLION
10170103	HUC	SOUTH BIG SIOUX COTEAU
10170201	HUC	MIDDLE BIG SIOUX COTEAU
10170202	HUC	UPPER BIG SIOUX
10170203	HUC	LOWER BIG SIOUX
10170204	HUC	ROCK
10180001	HUC	NORTH PLATTE HEADWATERS
10180002	HUC	UPPER NORTH PLATTE
10180003	HUC	PATHFINDER-SEMINOE RESERVOIRS
10180004	HUC	MEDICINE BOW
10180005	HUC	LITTLE MEDICINE BOW
10180006	HUC	SWEETWATER
10180007	HUC	MIDDLE NORTH PLATTE-CASPER

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
10180008	HUC	GLENDO RESERVOIR
10180009	HUC	MIDDLE NORTH PLATTE-SCOTTS BLUFF
10180010	HUC	UPPER LARAMIE
10180011	HUC	LOWER LARAMIE
10180012	HUC	HORSE
10180013	HUC	PUMPKIN
10180014	HUC	LOWER NORTH PLATTE
10190001	HUC	SOUTH PLATTE HEADWATERS
10190002	HUC	UPPER SOUTH PLATTE
10190003	HUC	MIDDLE SOUTH PLATTE-CHERRY CREEK
10190004	HUC	CLEAR
10190005	HUC	ST. VRAIN
10190006	HUC	BIG THOMPSON
10190007	HUC	CACHE LA POUDRE
10190008	HUC	LONE TREE-OWL
10190009	HUC	CROW
10190010	HUC	KIOWA
10190011	HUC	BIJOU
10190012	HUC	MIDDLE SOUTH PLATTE-STERLING
10190013	HUC	BEAVER
10190014	HUC	PAWNEE
10190015	HUC	UPPER LODGEPOLE
10190016	HUC	LOWER LODGEPOLE
10190017	HUC	SIDNEY DRAW
10190018	HUC	LOWER SOUTH PLATTE
10200101	HUC	MIDDLE PLATTE-BUFFALO
10200102	HUC	WOOD
10200103	HUC	MIDDLE PLATTE-PRAIRIE
10200201	HUC	LOWER PLATTE-SHELL
10200202	HUC	LOWER PLATTE
10200203	HUC	SALT
10210001	HUC	UPPER MIDDLE LOUP
10210002	HUC	DISMAL
10210003	HUC	LOWER MIDDLE LOUP
10210004	HUC	SOUTH LOUP
10210005	HUC	MUD
10210006	HUC	UPPER NORTH LOUP
10210007	HUC	LOWER NORTH LOUP
10210008	HUC	CALAMUS
10210009	HUC	LOUP
10210010	HUC	CEDAR
10220001	HUC	UPPER ELKHORN
10220002	HUC	NORTH FORK ELKHORN

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
10220003	HUC	LOWER ELKHORN
10220004	HUC	LOGAN
10230001	HUC	BLACKBIRD-SOLDIER
10230002	HUC	FLOYD
10230003	HUC	LITTLE SIOUX
10230004	HUC	MONONA-HARRISON DITCH
10230005	HUC	MAPLE
10230006	HUC	BIG PAPILLION-MOSQUITO
10230007	HUC	BOYER
10240001	HUC	KEG-WEEPING WATER
10240002	HUC	WEST NISHNABOTNA
10240003	HUC	EAST NISHNABOTNA
10240004	HUC	NISHNABOTNA
10240005	HUC	TARKIO-WOLF
10240006	HUC	LITTLE NEMAHA
10240007	HUC	SOUTH FORK BIG NEMAHA
10240008	HUC	BIG NEMAHA
10240009	HUC	WEST NODAWAY
10240010	HUC	NODAWAY
10240011	HUC	INDEPENDENCE-SUGAR
10240012	HUC	PLATTE
10240013	HUC	ONE HUNDRED AND TWO
10250001	HUC	ARIKAREE
10250002	HUC	NORTH FORK REPUBLICAN
10250003	HUC	SOUTH FORK REPUBLICAN
10250004	HUC	UPPER REPUBLICAN
10250005	HUC	FRENCHMAN
10250006	HUC	STINKING WATER
10250007	HUC	RED WILLOW
10250008	HUC	MEDICINE
10250009	HUC	HARLAN COUNTY RESERVOIR
10250010	HUC	UPPER SAPPA
10250011	HUC	LOWER SAPPA
10250012	HUC	SOUTH FORK BEAVER
10250013	HUC	LITTLE BEAVER
10250014	HUC	BEAVER
10250015	HUC	PRAIRIE DOG
10250016	HUC	MIDDLE REPUBLICAN
10250017	HUC	LOWER REPUBLICAN
10260001	HUC	SMOKY HILL HEADWATERS
10260002	HUC	NORTH FORK SMOKY HILL
10260003	HUC	UPPER SMOKY HILL
10260004	HUC	LADDER

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
10260005	HUC	HACKBERRY
10260006	HUC	MIDDLE SMOKY HILL
10260007	HUC	BIG
10260008	HUC	LOWER SMOKY HILL
10260009	HUC	UPPER SALINE
10260010	HUC	LOWER SALINE
10260011	HUC	UPPER NORTH FORK SOLOMON
10260012	HUC	LOWER NORTH FORK SOLOMON
10260013	HUC	UPPER SOUTH FORK SOLOMON
10260014	HUC	LOWER SOUTH FORK SOLOMON
10260015	HUC	SOLOMON
10270101	HUC	UPPER KANSAS
10270102	HUC	MIDDLE KANSAS
10270103	HUC	DELAWARE
10270104	HUC	LOWER KANSAS
10270201	HUC	UPPER BIG BLUE
10270202	HUC	MIDDLE BIG BLUE
10270203	HUC	WEST FORK BIG BLUE
10270204	HUC	TURKEY
10270205	HUC	LOWER BIG BLUE
10270206	HUC	UPPER LITTLE BLUE
10270207	HUC	LOWER LITTLE BLUE
10280101	HUC	UPPER GRAND
10280102	HUC	THOMPSON
10280103	HUC	LOWER GRAND
10280201	HUC	UPPER CHARITON
10280202	HUC	LOWER CHARITON
10280203	HUC	LITTLE CHARITON
10290101	HUC	UPPER MARAIS DES CYGNES
10290102	HUC	LOWER MARAIS DES CYGNES
10290103	HUC	LITTLE OSAGE
10290104	HUC	MARMATON
10290105	HUC	HARRY S. TRUMAN RESERVOIR
10290106	HUC	SAC
10290107	HUC	POMME DE TERRE
10290108	HUC	SOUTH GRAND
10290109	HUC	LAKE OF THE OZARKS
10290110	HUC	NIANGUA
10290111	HUC	LOWER OSAGE
10290201	HUC	UPPER GASCONADE
10290202	HUC	BIG PINEY
10290203	HUC	LOWER GASCONADE
10300101	HUC	LOWER MISSOURI-CROOKED

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
10300102	HUC	LOWER MISSOURI-MOREAU
10300103	HUC	LAMINE
10300104	HUC	BLACKWATER
10300200	HUC	LOWER MISSOURI
11010001	HUC	BEAVER RESERVOIR
11010002	HUC	JAMES
11010003	HUC	BULL SHOALS LAKE
11010004	HUC	MIDDLE WHITE
11010005	HUC	BUFFALO
11010006	HUC	NORTH FORK WHITE
11010007	HUC	UPPER BLACK
11010008	HUC	CURRENT
11010009	HUC	LOWER BLACK
11010010	HUC	SPRING
11010011	HUC	ELEVEN POINT
11010012	HUC	STRAWBERRY
11010013	HUC	UPPER WHITE-VILLAGE
11010014	HUC	LITTLE RED
11020001	HUC	ARKANSAS HEADWATERS
11020002	HUC	UPPER ARKANSAS
11020003	HUC	FOUNTAIN
11020004	HUC	CHICO
11020005	HUC	UPPER ARKANSAS-LAKE MEREDITH
11020006	HUC	HUERFANO
11020007	HUC	APISHAPA
11020008	HUC	HORSE
11020009	HUC	UPPER ARKANSAS-JOHN MARTIN
11020010	HUC	PURGATOIRE
11020011	HUC	BIG SANDY
11020012	HUC	RUSH
11020013	HUC	TWO BUTTE
11030001	HUC	MIDDLE ARKANSAS-LAKE MCKINNEY
11030002	HUC	WHITEWOMAN
11030003	HUC	ARKANSAS-DODGE CITY
11030004	HUC	COON-PICKEREL
11030005	HUC	PAWNEE
11030006	HUC	BUCKNER
11030007	HUC	UPPER WALNUT CREEK
11030008	HUC	LOWER WALNUT CREEK
11030009	HUC	RATTLESNAKE
11030010	HUC	GAR-PEACE
11030011	HUC	COW
11030012	HUC	LITTLE ARKANSAS

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
11030013	HUC	MIDDLE ARKANSAS-SLATE
11030014	HUC	NORTH FORK NINNESCAH
11030015	HUC	SOUTH FORK NINNESCAH
11030016	HUC	NINNESCAH
11030017	HUC	UPPER WALNUT RIVER
11030018	HUC	LOWER WALNUT RIVER
11040001	HUC	CIMARRON HEADWATERS
11040002	HUC	UPPER CIMARRON
11040003	HUC	NORTH FORK CIMARRON
11040004	HUC	SAND ARROYO
11040005	HUC	BEAR
11040006	HUC	UPPER CIMARRON-LIBERAL
11040007	HUC	CROOKED
11040008	HUC	UPPER CIMARRON-BLUFF
11050001	HUC	LOWER CIMARRON-EAGLE CHIEF
11050002	HUC	LOWER CIMARRON-SKELETON
11050003	HUC	LOWER CIMARRON
11060001	HUC	KAW LAKE
11060002	HUC	UPPER SALT FORK ARKANSAS
11060003	HUC	MEDICINE LODGE
11060004	HUC	LOWER SALT FORK ARKANSAS
11060005	HUC	CHIKASKIA
11060006	HUC	BLACK BEAR-RED ROCK
11070101	HUC	UPPER VERDIGRIS
11070102	HUC	FALL
11070103	HUC	MIDDLE VERDIGRIS
11070104	HUC	ELK
11070105	HUC	LOWER VERDIGRIS
11070106	HUC	CANEY
11070107	HUC	BIRD
11070201	HUC	NEOSHO HEADWATERS
11070202	HUC	UPPER COTTONWOOD
11070203	HUC	LOWER COTTONWOOD
11070204	HUC	UPPER NEOSHO
11070205	HUC	MIDDLE NEOSHO
11070206	HUC	LAKE O' THE CHEROKEES
11070207	HUC	SPRING
11070208	HUC	ELK
11070209	HUC	LOWER NEOSHO
11080001	HUC	CANADIAN HEADWATERS
11080002	HUC	CIMARRON
11080003	HUC	UPPER CANADIAN
11080004	HUC	MORA

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
11080005	HUC	CONCHAS
11080006	HUC	UPPER CANADIAN-UTE RESERVOIR
11080007	HUC	UTE
11080008	HUC	REVUELTO
11090101	HUC	MIDDLE CANADIAN-TRUJILLO
11090102	HUC	PUNTA DE AGUA
11090103	HUC	RITA BLANCA
11090104	HUC	CARRIZO
11090105	HUC	LAKE MEREDITH
11090106	HUC	MIDDLE CANADIAN-SPRING
11090201	HUC	LOWER CANADIAN-DEER
11090202	HUC	LOWER CANADIAN-WALNUT
11090203	HUC	LITTLE
11090204	HUC	LOWER CANADIAN
11100101	HUC	UPPER BEAVER
11100102	HUC	MIDDLE BEAVER
11100103	HUC	COLDWATER
11100104	HUC	PALO DURO
11100201	HUC	LOWER BEAVER
11100202	HUC	UPPER WOLF
11100203	HUC	LOWER WOLF
11100301	HUC	MIDDLE NORTH CANADIAN
11100302	HUC	LOWER NORTH CANADIAN
11100303	HUC	DEEP FORK
11110101	HUC	POLECAT-SNAKE
11110102	HUC	DIRTY-GREENLEAF
11110103	HUC	ILLINOIS
11110104	HUC	ROBERT S. KERR RESERVOIR
11110105	HUC	POTEAU
11110201	HUC	FROG-MULBERRY
11110202	HUC	DARDANELLE RESERVOIR
11110203	HUC	LAKE CONWAY-POINT REMOVE
11110204	HUC	PETIT JEAN
11110205	HUC	CADRON
11110206	HUC	FOURCHE LA FAVE
11110207	HUC	LOWER ARKANSAS-MAUMELLE
11120101	HUC	TIERRA BLANCA
11120102	HUC	PALO DURO
11120103	HUC	UPPER PRAIRIE DOG TOWN FORK RED
11120104	HUC	TULE
11120105	HUC	LOWER PRAIRIE DOG TOWN FORK RED
11120201	HUC	UPPER SALT FORK RED
11120202	HUC	LOWER SALT FORK RED

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
11120301	HUC	UPPER NORTH FORK RED
11120302	HUC	MIDDLE NORTH FORK RED
11120303	HUC	LOWER NORTH FORK RED
11120304	HUC	ELM FORK RED
11130101	HUC	GROESBECK-SANDY
11130102	HUC	BLUE-CHINA
11130103	HUC	NORTH PEASE
11130104	HUC	MIDDLE PEASE
11130105	HUC	PEASE
11130201	HUC	FARMERS-MUD
11130202	HUC	CACHE
11130203	HUC	WEST CACHE
11130204	HUC	NORTH WICHITA
11130205	HUC	SOUTH WICHITA
11130206	HUC	WICHITA
11130207	HUC	SOUTHERN BEAVER
11130208	HUC	NORTHERN BEAVER
11130209	HUC	LITTLE WICHITA
11130210	HUC	LAKE TEXOMA
11130301	HUC	WASHITA HEADWATERS
11130302	HUC	UPPER WASHITA
11130303	HUC	MIDDLE WASHITA
11130304	HUC	LOWER WASHITA
11140101	HUC	BOIS D'ARC-ISLAND
11140102	HUC	BLUE
11140103	HUC	MUDDY BOGGY
11140104	HUC	CLEAR BOGGY
11140105	HUC	KIAMICHI
11140106	HUC	PECAN-WATERHOLE
11140107	HUC	UPPER LITTLE
11140108	HUC	MOUNTAIN FORK
11140109	HUC	LOWER LITTLE
11140201	HUC	MCKINNEY-POSTEN BAYOUS
11140202	HUC	MIDDLE RED-COUSHATTA
11140203	HUC	LOGGY BAYOU
11140204	HUC	RED CHUTE
11140205	HUC	BODCAU BAYOU
11140206	HUC	BAYOU PIERRE
11140207	HUC	LOWER RED-LAKE IATT
11140208	HUC	SALINE BAYOU
11140209	HUC	BLACK LAKE BAYOU
11140301	HUC	SULPHUR HEADWATERS
11140302	HUC	LOWER SULPHUR

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
11140303	HUC	WHITE OAK BAYOU
11140304	HUC	CROSS BAYOU
11140305	HUC	LAKE O'THE PINES
11140306	HUC	CADDO LAKE
11140307	HUC	LITTLE CYPRESS
12010001	HUC	UPPER SABINE
12010002	HUC	MIDDLE SABINE
12010003	HUC	LAKE FORK
12010004	HUC	TOLEDO BEND RESERVOIR
12010005	HUC	LOWER SABINE
12020001	HUC	UPPER NECHES
12020002	HUC	MIDDLE NECHES
12020003	HUC	LOWER NECHES
12020004	HUC	UPPER ANGELINA
12020005	HUC	LOWER ANGELINA
12020006	HUC	VILLAGE
12020007	HUC	PINE ISLAND BAYOU
12030101	HUC	UPPER WEST FORK TRINITY
12030102	HUC	LOWER WEST FORK TRINITY
12030103	HUC	ELM FORK TRINITY
12030104	HUC	DENTON
12030105	HUC	UPPER TRINITY
12030106	HUC	EAST FORK TRINITY
12030107	HUC	CEDAR
12030108	HUC	RICHLAND
12030109	HUC	CHAMBERS
12030201	HUC	LOWER TRINITY-TEHUACANA
12030202	HUC	LOWER TRINITY-KICKAPOO
12030203	HUC	LOWER TRINITY
12040101	HUC	WEST FORK SAN JACINTO
12040102	HUC	SPRING
12040103	HUC	EAST FORK SAN JACINTO
12040104	HUC	BUFFALO-SAN JACINTO
12040201	HUC	SABINE LAKE
12040202	HUC	EAST GALVESTON BAY
12040203	HUC	NORTH GALVESTON BAY
12040204	HUC	WEST GALVESTON BAY
12040205	HUC	AUSTIN-OYSTER
12050001	HUC	YELLOW HOUSE DRAW
12050002	HUC	BLACKWATER DRAW
12050003	HUC	NORTH FORK DOUBLE MOUNTAIN FORK
12050004	HUC	DOUBLE MOUNTAIN FORK BRAZOS
12050005	HUC	RUNNING WATER DRAW

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
12050006	HUC	WHITE
12050007	HUC	SALT FORK BRAZOS
12060101	HUC	MIDDLE BRAZOS-MILLERS
12060102	HUC	UPPER CLEAR FORK BRAZOS
12060103	HUC	PAINT
12060104	HUC	LOWER CLEAR FORK BRAZOS
12060105	HUC	HUBBARD
12060201	HUC	MIDDLE BRAZOS-PALO PINTO
12060202	HUC	MIDDLE BRAZOS-LAKE WHITNEY
12060203	HUC	BOSQUE
12060204	HUC	NORTH BOSQUE
12070101	HUC	LOWER BRAZOS-LITTLE BRAZOS
12070102	HUC	YEGUA
12070103	HUC	NAVASOTA
12070104	HUC	LOWER BRAZOS
12070201	HUC	LEON
12070202	HUC	COWHOUSE
12070203	HUC	LAMPASAS
12070204	HUC	LITTLE
12070205	HUC	SAN GABRIEL
12080001	HUC	LOST DRAW
12080002	HUC	COLORADO HEADWATERS
12080003	HUC	MONUMENT-SEMINOLE DRAWS
12080004	HUC	MUSTANG DRAW
12080005	HUC	JOHNSON DRAW
12080006	HUC	SULPHUR SPRINGS DRAW
12080007	HUC	BEALS
12080008	HUC	UPPER COLORADO
12090101	HUC	MIDDLE COLORADO-ELM
12090102	HUC	SOUTH CONCHO
12090103	HUC	MIDDLE CONCHO
12090104	HUC	NORTH CONCHO
12090105	HUC	CONCHO
12090106	HUC	MIDDLE COLORADO
12090107	HUC	PECAN BAYOU
12090108	HUC	JIM NED
12090109	HUC	SAN SABA
12090110	HUC	BRADY
12090201	HUC	BUCHANAN-LYNDON B. JOHNSON LAKES
12090202	HUC	NORTH LLANO
12090203	HUC	SOUTH LLANO
12090204	HUC	LLANO
12090205	HUC	AUSTIN-TRAVIS LAKES

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
12090206	HUC	PEDERNALES
12090301	HUC	LOWER COLORADO-CUMMINS
12090302	HUC	LOWER COLORADO
12090401	HUC	SAN BERNARD
12090402	HUC	EAST MATAGORDA BAY
12100101	HUC	LAVACA
12100102	HUC	NAVIDAD
12100201	HUC	UPPER GUADALUPE
12100202	HUC	MIDDLE GUADALUPE
12100203	HUC	SAN MARCOS
12100204	HUC	LOWER GUADALUPE
12100301	HUC	UPPER SAN ANTONIO
12100302	HUC	MEDINA
12100303	HUC	LOWER SAN ANTONIO
12100304	HUC	CIBOLO
12100401	HUC	CENTRAL MATAGORDA BAY
12100402	HUC	WEST MATAGORDA BAY
12100403	HUC	EAST SAN ANTONIO BAY
12100404	HUC	WEST SAN ANTONIO BAY
12100405	HUC	ARANSAS BAY
12100406	HUC	MISSION
12100407	HUC	ARANSAS
12110101	HUC	NUECES HEADWATERS
12110102	HUC	WEST NUECES
12110103	HUC	UPPER NUECES
12110104	HUC	TURKEY
12110105	HUC	MIDDLE NUECES
12110106	HUC	UPPER FRIO
12110107	HUC	HONDO
12110108	HUC	LOWER FRIO
12110109	HUC	SAN MIGUEL
12110110	HUC	ATASCOSA
12110111	HUC	LOWER NUECES
12110201	HUC	NORTH CORPUS CHRISTI BAY
12110202	HUC	SOUTH CORPUS CHRISTI BAY
12110203	HUC	NORTH LAGUNA MADRE
12110204	HUC	SAN FERNANDO
12110205	HUC	BAFFIN BAY
12110206	HUC	PALO BLANCO
12110207	HUC	CENTRAL LAGUNA MADRE
12110208	HUC	SOUTH LAGUNA MADRE
13010001	HUC	RIO GRANDE HEADWATERS
13010002	HUC	ALAMOSA-TRINCHERA

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
13010003	HUC	SAN LUIS
13010004	HUC	SAGUACHE
13010005	HUC	CONEJOS
13020101	HUC	UPPER RIO GRANDE
13020102	HUC	RIO CHAMA
13020201	HUC	RIO GRANDE-SANTA FE
13020202	HUC	JEMEZ
13020203	HUC	RIO GRANDE-ALBUQUERQUE
13020204	HUC	RIO PUERCO
13020205	HUC	ARROYO CHICO
13020206	HUC	NORTH PLAINS
13020207	HUC	RIO SAN JOSE
13020208	HUC	PLAINS OF SAN AGUSTIN
13020209	HUC	RIO SALADO
13020210	HUC	JORNADA DEL MUERTO
13020211	HUC	ELEPHANT BUTTE RESERVOIR
13030101	HUC	CABALLO
13030102	HUC	EL PASO-LAS CRUCES
13030103	HUC	JORNADA DRAW
13030201	HUC	PLAYAS LAKE
13030202	HUC	MIMBRES
13040100	HUC	RIO GRANDE-FORT QUITMAN
13040201	HUC	CIBOLO-RED LIGHT
13040202	HUC	ALAMITO
13040203	HUC	BLACK HILLS-FRESNO
13040204	HUC	TERLINGUA
13040205	HUC	BIG BEND
13040206	HUC	MARAVILLAS
13040207	HUC	SANTIAGO DRAW
13040208	HUC	REAGAN-SANDERSON
13040209	HUC	SAN FRANCISCO
13040210	HUC	LOZIER CANYON
13040211	HUC	BIG CANYON
13040212	HUC	AMISTAD RESERVOIR
13040301	HUC	UPPER DEVILS
13040302	HUC	LOWER DEVILS
13040303	HUC	DRY DEVILS
13050001	HUC	WESTERN ESTANCIA
13050002	HUC	EASTERN ESTANCIA
13050003	HUC	TULAROSA VALLEY
13050004	HUC	SALT BASIN
13060001	HUC	PECOS HEADWATERS
13060002	HUC	PINTADA ARROYO

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
13060003	HUC	UPPER PECOS
13060004	HUC	TAIBAN
13060005	HUC	ARROYO DEL MACHO
13060006	HUC	GALLO ARROYO
13060007	HUC	UPPER PECOS-LONG ARROYO
13060008	HUC	RIO HONDO
13060009	HUC	RIO FELIX
13060010	HUC	RIO PENASCO
13060011	HUC	UPPER PECOS-BLACK
13070001	HUC	LOWER PECOS-RED BLUFF RESERVOIR
13070002	HUC	DELAWARE
13070003	HUC	TOYAH
13070004	HUC	SALT DRAW
13070005	HUC	BARRILLA DRAW
13070006	HUC	COYANOSA-HACKBERRY DRAWS
13070007	HUC	LANDRETH-MONUMENT DRAWS
13070008	HUC	LOWER PECOS
13070009	HUC	TUNAS
13070010	HUC	INDEPENDENCE
13070011	HUC	HOWARD DRAW
13080001	HUC	ELM-SYCAMORE
13080002	HUC	SAN AMBROSIA-SANTA ISABEL
13080003	HUC	INTERNATIONAL FALCON RESERVOIR
13090001	HUC	LOS OLMOS
13090002	HUC	LOWER RIO GRANDE
14010001	HUC	COLORADO HEADWATERS
14010002	HUC	BLUE
14010003	HUC	EAGLE
14010004	HUC	ROARING FORK
14010005	HUC	COLORADO HEADWATERS-PLATEAU
14010006	HUC	PARACHUTE-ROAN
14020001	HUC	EAST-TAYLOR
14020002	HUC	UPPER GUNNISON
14020003	HUC	TOMICHI
14020004	HUC	NORTH FORK GUNNISON
14020005	HUC	LOWER GUNNISON
14020006	HUC	UNCOMPAHGRE
14030001	HUC	WESTWATER CANYON
14030002	HUC	UPPER DOLORES
14030003	HUC	SAN MIGUEL
14030004	HUC	LOWER DOLORES
14030005	HUC	UPPER COLORADO-KANE SPRINGS
14040101	HUC	UPPER GREEN

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
14040102	HUC	NEW FORK
14040103	HUC	UPPER GREEN-SLATE
14040104	HUC	BIG SANDY
14040105	HUC	BITTER
14040106	HUC	UPPER GREEN-FLAMING GORGE RESERVOIR
14040107	HUC	BLACKS FORK
14040108	HUC	MUDDY
14040109	HUC	VERMILION
14040200	HUC	GREAT DIVIDE CLOSED BASIN
14050001	HUC	UPPER YAMPA
14050002	HUC	LOWER YAMPA
14050003	HUC	LITTLE SNAKE
14050004	HUC	MUDDY
14050005	HUC	UPPER WHITE
14050006	HUC	PICEANCE-YELLOW
14050007	HUC	LOWER WHITE
14060001	HUC	LOWER GREEN-DIAMOND
14060002	HUC	ASHLEY-BRUSH
14060003	HUC	DUCHESNE
14060004	HUC	STRAWBERRY
14060005	HUC	LOWER GREEN-DESOLATION CANYON
14060006	HUC	WILLOW
14060007	HUC	PRICE
14060008	HUC	LOWER GREEN
14060009	HUC	SAN RAFAEL
14070001	HUC	UPPER LAKE POWELL
14070002	HUC	MUDDY
14070003	HUC	FREMONT
14070004	HUC	DIRTY DEVIL
14070005	HUC	ESCALANTE
14070006	HUC	LOWER LAKE POWELL
14070007	HUC	PARIA
14080101	HUC	UPPER SAN JUAN
14080102	HUC	PIEDRA
14080103	HUC	BLANCO CANYON
14080104	HUC	ANIMAS
14080105	HUC	MIDDLE SAN JUAN
14080106	HUC	CHACO
14080107	HUC	MANCOS
14080201	HUC	LOWER SAN JUAN-FOUR CORNERS
14080202	HUC	MCELMO
14080203	HUC	MONTEZUMA
14080204	HUC	CHINLE

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
14080205	HUC	LOWER SAN JUAN
15010001	HUC	LOWER COLORADO-MARBLE CANYON
15010002	HUC	GRAND CANYON
15010003	HUC	KANAB
15010004	HUC	HAVASU CANYON
15010005	HUC	LAKE MEAD
15010006	HUC	GRAND WASH
15010007	HUC	HUALAPAI WASH
15010008	HUC	UPPER VIRGIN
15010009	HUC	FORT PIERCE WASH
15010010	HUC	LOWER VIRGIN
15010011	HUC	WHITE
15010012	HUC	MUDDY
15010013	HUC	MEADOW VALLEY WASH
15010014	HUC	DETRITAL WASH
15010015	HUC	LAS VEGAS WASH
15020001	HUC	LITTLE COLORADO HEADWATERS
15020002	HUC	UPPER LITTLE COLORADO
15020003	HUC	CARRIZO WASH
15020004	HUC	ZUNI
15020005	HUC	SILVER
15020006	HUC	UPPER PUERCO
15020007	HUC	LOWER PUERCO
15020008	HUC	MIDDLE LITTLE COLORADO
15020009	HUC	LEROUX WASH
15020010	HUC	CHEVELON CANYON
15020011	HUC	COTTONWOOD WASH
15020012	HUC	CORN-ORAIBI
15020013	HUC	POLACCA WASH
15020014	HUC	JADITO WASH
15020015	HUC	CANYON DIABLO
15020016	HUC	LOWER LITTLE COLORADO
15020017	HUC	DINNEBITO WASH
15020018	HUC	MOENKOPI WASH
15030101	HUC	HAVASU-MOHAVE LAKES
15030102	HUC	PIUTE WASH
15030103	HUC	SACRAMENTO WASH
15030104	HUC	IMPERIAL RESERVOIR
15030105	HUC	BOUSE WASH
15030106	HUC	TYSON WASH
15030107	HUC	LOWER COLORADO
15030108	HUC	YUMA DESERT
15030201	HUC	BIG SANDY

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
15030202	HUC	BURRO
15030203	HUC	SANTA MARIA
15030204	HUC	BILL WILLIAMS
15040001	HUC	UPPER GILA
15040002	HUC	UPPER GILA-MANGAS
15040003	HUC	ANIMAS VALLEY
15040004	HUC	SAN FRANCISCO
15040005	HUC	UPPER GILA-SAN CARLOS RESERVOIR
15040006	HUC	SAN SIMON
15040007	HUC	SAN CARLOS
15050100	HUC	MIDDLE GILA
15050201	HUC	WILLCOX PLAYA
15050202	HUC	UPPER SAN PEDRO
15050203	HUC	LOWER SAN PEDRO
15050301	HUC	UPPER SANTA CRUZ
15050302	HUC	RILLITO
15050303	HUC	LOWER SANTA CRUZ
15050304	HUC	BRAWLEY WASH
15050305	HUC	AGUIRRE VALLEY
15050306	HUC	SANTA ROSA WASH
15060101	HUC	BLACK
15060102	HUC	WHITE
15060103	HUC	UPPER SALT
15060104	HUC	CARRIZO
15060105	HUC	TONTO
15060106	HUC	LOWER SALT
15060201	HUC	BIG CHINO-WILLIAMSON VALLEY
15060202	HUC	UPPER VERDE
15060203	HUC	LOWER VERDE
15070101	HUC	LOWER GILA-PAINTED ROCK RESERVOIR
15070102	HUC	AGUA FRIA
15070103	HUC	HASSAYAMPA
15070104	HUC	CENTENNIAL WASH
15070201	HUC	LOWER GILA
15070202	HUC	TENMILE WASH
15070203	HUC	SAN CRISTOBAL WASH
15080101	HUC	SAN SIMON WASH
15080102	HUC	RIO SONOYTA
15080103	HUC	TULE DESERT
15080200	HUC	RIO DE LA CONCEPCION
15080301	HUC	WHITEWATER DRAW
15080302	HUC	SAN BERNARDINO VALLEY
15080303	HUC	CLOVERDALE

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
16010101	HUC	UPPER BEAR
16010102	HUC	CENTRAL BEAR
16010201	HUC	BEAR LAKE
16010202	HUC	MIDDLE BEAR
16010203	HUC	LITTLE BEAR-LOGAN
16010204	HUC	LOWER BEAR-MALAD
16020101	HUC	UPPER WEBER
16020102	HUC	LOWER WEBER
16020201	HUC	UTAH LAKE
16020202	HUC	SPANISH FORK
16020203	HUC	PROVO
16020204	HUC	JORDAN
16020301	HUC	HAMLIN-SNAKE VALLEYS
16020302	HUC	PINE VALLEY
16020303	HUC	TULE VALLEY
16020304	HUC	RUSH-TOOELE VALLEYS
16020305	HUC	SKULL VALLEY
16020306	HUC	SOUTHERN GREAT SALT LAKE DESERT
16020307	HUC	PILOT-THOUSAND SPRINGS
16020308	HUC	NORTHERN GREAT SALT LAKE DESERT
16020309	HUC	CURLEW VALLEY
16020310	HUC	GREAT SALT LAKE
16030001	HUC	UPPER SEVIER
16030002	HUC	EAST FORK SEVIER
16030003	HUC	MIDDLE SEVIER
16030004	HUC	SAN PITCH
16030005	HUC	LOWER SEVIER
16030006	HUC	ESCALANTE DESERT
16030007	HUC	BEAVER BOTTOMS-UPPER BEAVER
16030008	HUC	LOWER BEAVER
16030009	HUC	SEVIER LAKE
16040101	HUC	UPPER HUMBOLDT
16040102	HUC	NORTH FORK HUMBOLDT
16040103	HUC	SOUTH FORK HUMBOLDT
16040104	HUC	PINE
16040105	HUC	MIDDLE HUMBOLDT
16040106	HUC	ROCK
16040107	HUC	REESE
16040108	HUC	LOWER HUMBOLDT
16040109	HUC	LITTLE HUMBOLDT
16040201	HUC	UPPER QUINN
16040202	HUC	LOWER QUINN
16040203	HUC	SMOKE CREEK DESERT

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
16040204	HUC	MASSACRE LAKE
16040205	HUC	THOUSAND-VIRGIN
16050101	HUC	LAKE TAHOE
16050102	HUC	TRUCKEE
16050103	HUC	PYRAMID-WINNEMUCCA LAKES
16050104	HUC	GRANITE SPRINGS VALLEY
16050201	HUC	UPPER CARSON
16050202	HUC	MIDDLE CARSON
16050203	HUC	CARSON DESERT
16050301	HUC	EAST WALKER
16050302	HUC	WEST WALKER
16050303	HUC	WALKER
16050304	HUC	WALKER LAKE
16060001	HUC	DIXIE VALLEY
16060002	HUC	GABBS VALLEY
16060003	HUC	SOUTHERN BIG SMOKY VALLEY
16060004	HUC	NORTHERN BIG SMOKY VALLEY
16060005	HUC	DIAMOND-MONITOR VALLEYS
16060006	HUC	LITTLE SMOKY-NEWARK VALLEYS
16060007	HUC	LONG-RUBY VALLEYS
16060008	HUC	SPRING-STEPTOE VALLEYS
16060009	HUC	DRY LAKE VALLEY
16060010	HUC	FISH LAKE-SODA SPRING VALLEYS
16060011	HUC	RALSTON-STONE CABIN VALLEYS
16060012	HUC	HOT CREEK-RAILROAD VALLEYS
16060013	HUC	CACTUS-SARCOBATUS FLATS
16060014	HUC	SAND SPRING-TIKABOO VALLEYS
16060015	HUC	IVANPAH-PAHRUMP VALLEYS
17010101	HUC	UPPER KOOTENAI
17010102	HUC	FISHER
17010103	HUC	YAAK
17010104	HUC	LOWER KOOTENAI
17010105	HUC	MOYIE
17010201	HUC	UPPER CLARK FORK
17010202	HUC	FLINT-ROCK
17010203	HUC	BLACKFOOT
17010204	HUC	MIDDLE CLARK FORK
17010205	HUC	BITTERROOT
17010206	HUC	NORTH FORK FLATHEAD
17010207	HUC	MIDDLE FORK FLATHEAD
17010208	HUC	FLATHEAD LAKE
17010209	HUC	SOUTH FORK FLATHEAD
17010210	HUC	STILLWATER

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
17010211	HUC	SWAN
17010212	HUC	LOWER FLATHEAD
17010213	HUC	LOWER CLARK FORK
17010214	HUC	PEND OREILLE LAKE
17010215	HUC	PRIEST
17010216	HUC	PEND OREILLE
17010301	HUC	UPPER COEUR D'ALENE
17010302	HUC	SOUTH FORK COEUR D'ALENE
17010303	HUC	COEUR D'ALENE LAKE
17010304	HUC	ST. JOE
17010305	HUC	UPPER SPOKANE
17010306	HUC	HANGMAN
17010307	HUC	LOWER SPOKANE
17010308	HUC	LITTLE SPOKANE
17020001	HUC	FRANKLIN D. ROOSEVELT LAKE
17020002	HUC	KETTLE
17020003	HUC	COLVILLE
17020004	HUC	SANPOIL
17020005	HUC	CHIEF JOSEPH
17020006	HUC	OKANOGAN
17020007	HUC	SIMILKAMEEN
17020008	HUC	METHOW
17020009	HUC	LAKE CHELAN
17020010	HUC	UPPER COLUMBIA-ENTIAT
17020011	HUC	WENATCHEE
17020012	HUC	MOSES COULEE
17020013	HUC	UPPER CRAB
17020014	HUC	BANKS LAKE
17020015	HUC	LOWER CRAB
17020016	HUC	UPPER COLUMBIA-PRIEST RAPIDS
17030001	HUC	UPPER YAKIMA
17030002	HUC	NACHES
17030003	HUC	LOWER YAKIMA
17040101	HUC	SNAKE HEADWATERS
17040102	HUC	GROS VENTRE
17040103	HUC	GREYS-HOBOCK
17040104	HUC	PALISADES
17040105	HUC	SALT
17040201	HUC	IDAHO FALLS
17040202	HUC	UPPER HENRYS
17040203	HUC	LOWER HENRYS
17040204	HUC	TETON
17040205	HUC	WILLOW

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
17040206	HUC	AMERICAN FALLS
17040207	HUC	BLACKFOOT
17040208	HUC	PORTNEUF
17040209	HUC	LAKE WALCOTT
17040210	HUC	RAFT
17040211	HUC	GOOSE
17040212	HUC	UPPER SNAKE-ROCK
17040213	HUC	SALMON FALLS
17040214	HUC	BEAVER-CAMAS
17040215	HUC	MEDICINE LODGE
17040216	HUC	BIRCH
17040217	HUC	LITTLE LOST
17040218	HUC	BIG LOST
17040219	HUC	BIG WOOD
17040220	HUC	CAMAS
17040221	HUC	LITTLE WOOD
17050101	HUC	C. J. STRIKE RESERVOIR
17050102	HUC	BRUNEAU
17050103	HUC	MIDDLE SNAKE-SUCCOR
17050104	HUC	UPPER OWYHEE
17050105	HUC	SOUTH FORK OWYHEE
17050106	HUC	EAST LITTLE OWYHEE
17050107	HUC	MIDDLE OWYHEE
17050108	HUC	JORDAN
17050109	HUC	CROOKED-RATTLESNAKE
17050110	HUC	LOWER OWYHEE
17050111	HUC	NORTH AND MIDDLE FORKS BOISE
17050112	HUC	BOISE-MORES
17050113	HUC	SOUTH FORK BOISE
17050114	HUC	LOWER BOISE
17050115	HUC	MIDDLE SNAKE-PAYETTE
17050116	HUC	UPPER MALHEUR
17050117	HUC	LOWER MALHEUR
17050118	HUC	BULLY
17050119	HUC	WILLOW
17050120	HUC	SOUTH FORK PAYETTE
17050121	HUC	MIDDLE FORK PAYETTE
17050122	HUC	PAYETTE
17050123	HUC	NORTH FORK PAYETTE
17050124	HUC	WEISER
17050201	HUC	BROWNLEE RESERVOIR
17050202	HUC	BURNT
17050203	HUC	POWDER

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
17060101	HUC	HELLS CANYON
17060102	HUC	IMNAHA
17060103	HUC	LOWER SNAKE-ASOTIN
17060104	HUC	UPPER GRANDE RONDE
17060105	HUC	WALLOWA
17060106	HUC	LOWER GRANDE RONDE
17060107	HUC	LOWER SNAKE-TUCANNON
17060108	HUC	PALOUSE
17060109	HUC	ROCK
17060110	HUC	LOWER SNAKE
17060201	HUC	UPPER SALMON
17060202	HUC	PAHSIMEROI
17060203	HUC	MIDDLE SALMON-PANTHER
17060204	HUC	LEMHI
17060205	HUC	UPPER MIDDLE FORK SALMON
17060206	HUC	LOWER MIDDLE FORK SALMON
17060207	HUC	MIDDLE SALMON-CHAMBERLAIN
17060208	HUC	SOUTH FORK SALMON
17060209	HUC	LOWER SALMON
17060210	HUC	LITTLE SALMON
17060301	HUC	UPPER SELWAY
17060302	HUC	LOWER SELWAY
17060303	HUC	LOCHSA
17060304	HUC	MIDDLE FORK CLEARWATER
17060305	HUC	SOUTH FORK CLEARWATER
17060306	HUC	CLEARWATER
17060307	HUC	UPPER NORTH FORK CLEARWATER
17060308	HUC	LOWER NORTH FORK CLEARWATER
17070101	HUC	MIDDLE COLUMBIA-LAKE WALLULA
17070102	HUC	WALLA WALLA
17070103	HUC	UMATILLA
17070104	HUC	WILLOW
17070105	HUC	MIDDLE COLUMBIA-HOOD
17070106	HUC	KLICKITAT
17070201	HUC	UPPER JOHN DAY
17070202	HUC	NORTH FORK JOHN DAY
17070203	HUC	MIDDLE FORK JOHN DAY
17070204	HUC	LOWER JOHN DAY
17070301	HUC	UPPER DESCHUTES
17070302	HUC	LITTLE DESCHUTES
17070303	HUC	BEAVER-SOUTH FORK
17070304	HUC	UPPER CROOKED
17070305	HUC	LOWER CROOKED

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
17070306	HUC	LOWER DESCHUTES
17070307	HUC	TROUT
17080001	HUC	LOWER COLUMBIA-SANDY
17080002	HUC	LEWIS
17080003	HUC	LOWER COLUMBIA-CLATSKANIE
17080004	HUC	UPPER COWLITZ
17080005	HUC	LOWER COWLITZ
17080006	HUC	LOWER COLUMBIA
17090001	HUC	MIDDLE FORK WILLAMETTE
17090002	HUC	COAST FORK WILLAMETTE
17090003	HUC	UPPER WILLAMETTE
17090004	HUC	MCKENZIE
17090005	HUC	NORTH SANTIAM
17090006	HUC	SOUTH SANTIAM
17090007	HUC	MIDDLE WILLAMETTE
17090008	HUC	YAMHILL
17090009	HUC	MOLALLA-PUDDING
17090010	HUC	TUALATIN
17090011	HUC	CLACKAMAS
17090012	HUC	LOWER WILLAMETTE
17100101	HUC	HOH-QUILLAYUTE
17100102	HUC	QUEETS-QUINAULT
17100103	HUC	UPPER CHEHALIS
17100104	HUC	LOWER CHEHALIS
17100105	HUC	GRAYS HARBOR
17100106	HUC	WILLAPA BAY
17100201	HUC	NECANICUM
17100202	HUC	NEHALEM
17100203	HUC	WILSON-TRUSK-NESTUCCU
17100204	HUC	SILETZ-YAQUINA
17100205	HUC	ALSEA
17100206	HUC	SIUSLAW
17100207	HUC	SILTCOOS
17100301	HUC	NORTH UMPQUA
17100302	HUC	SOUTH UMPQUA
17100303	HUC	UMPQUA
17100304	HUC	COOS
17100305	HUC	COQUILLE
17100306	HUC	SIXES
17100307	HUC	UPPER ROGUE
17100308	HUC	MIDDLE ROGUE
17100309	HUC	APPLEGATE
17100310	HUC	LOWER ROGUE

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
17100311	HUC	ILLINOIS
17100312	HUC	CHETCO
17110001	HUC	FRASER
17110002	HUC	STRAIT OF GEORGIA
17110003	HUC	SAN JUAN ISLANDS
17110004	HUC	NOOKSACK
17110005	HUC	UPPER SKAGIT
17110006	HUC	SAUK
17110007	HUC	LOWER SKAGIT
17110008	HUC	STILLAGUAMISH
17110009	HUC	SKYKOMISH
17110010	HUC	SNOQUALMIE
17110011	HUC	SNOHOMISH
17110012	HUC	LAKE WASHINGTON
17110013	HUC	DUWAMISH
17110014	HUC	PUYALLUP
17110015	HUC	NISQUALLY
17110016	HUC	DESCHUTES
17110017	HUC	SKOKOMISH
17110018	HUC	HOOD CANAL
17110019	HUC	PUGET SOUND
17110020	HUC	DUNGENESS-ELWHA
17110021	HUC	CRESCENT-HOKO
17120001	HUC	HARNEY-MALHEUR LAKES
17120002	HUC	SILVIES
17120003	HUC	DONNER UND BLITZEN
17120004	HUC	SILVER
17120005	HUC	SUMMER LAKE
17120006	HUC	LAKE ABERT
17120007	HUC	WARNER LAKES
17120008	HUC	GUANO
17120009	HUC	ALVORD LAKE
18010101	HUC	SMITH
18010102	HUC	MAD-REDWOOD
18010103	HUC	UPPER EEL
18010104	HUC	MIDDLE FORK EEL
18010105	HUC	LOWER EEL
18010106	HUC	SOUTH FORK EEL
18010107	HUC	MATTOLE
18010108	HUC	BIG-NAVARRO-GARCIA
18010109	HUC	GUALALA-SALMON
18010110	HUC	RUSSIAN
18010111	HUC	BODEGA BAY

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
18010201	HUC	WILLIAMSON
18010202	HUC	SPRAGUE
18010203	HUC	UPPER KLAMATH LAKE
18010204	HUC	LOST
18010205	HUC	BUTTE
18010206	HUC	UPPER KLAMATH
18010207	HUC	SHASTA
18010208	HUC	SCOTT
18010209	HUC	LOWER KLAMATH
18010210	HUC	SALMON
18010211	HUC	TRINITY
18010212	HUC	SOUTH FORK TRINITY
18020001	HUC	GOOSE LAKE
18020002	HUC	UPPER PIT
18020003	HUC	LOWER PIT
18020004	HUC	MCCLOUD
18020005	HUC	SACRAMENTO HEADWATERS
18020101	HUC	SACRAMENTO-LOWER COW-LOWER CLEAR
18020102	HUC	LOWER COTTONWOOD
18020103	HUC	SACRAMENTO-LOWER THOMES
18020104	HUC	SACRAMENTO-STONE CORRAL
18020105	HUC	LOWER BUTTE
18020106	HUC	LOWER FEATHER
18020107	HUC	LOWER YUBA
18020108	HUC	LOWER BEAR
18020109	HUC	LOWER SACRAMENTO
18020110	HUC	LOWER CACHE
18020111	HUC	LOWER AMERICAN
18020112	HUC	SACRAMENTO-UPPER CLEAR
18020113	HUC	COTTONWOOD HEADWATERS
18020114	HUC	UPPER ELDER-UPPER THOMES
18020115	HUC	UPPER STONY
18020116	HUC	UPPER CACHE
18020117	HUC	UPPER PUTAH
18020118	HUC	UPPER COW-BATTLE
18020119	HUC	MILL-BIG CHICO
18020120	HUC	UPPER BUTTE
18020121	HUC	NORTH FORK FEATHER
18020122	HUC	EAST BRANCH NORTH FORK FEATHER
18020123	HUC	MIDDLE FORK FEATHER
18020124	HUC	HONCUT HEADWATERS
18020125	HUC	UPPER YUBA
18020126	HUC	UPPER BEAR

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
18020127	HUC	UPPER COON-UPPER AUBURN
18020128	HUC	NORTH FORK AMERICAN
18020129	HUC	SOUTH FORK AMERICAN
18030001	HUC	UPPER KERN
18030002	HUC	SOUTH FORK KERN
18030003	HUC	MIDDLE KERN-UPPER TEHACHAPI-GRAPEVINE
18030004	HUC	UPPER POSO
18030005	HUC	UPPER DEER-UPPER WHITE
18030006	HUC	UPPER TULE
18030007	HUC	UPPER KAWEAH
18030008	HUC	MILL
18030009	HUC	UPPER DRY
18030010	HUC	UPPER KING
18030011	HUC	UPPER LOS GATOS-AVENAL
18030012	HUC	TULARE-BUENA VISTA LAKES
18040001	HUC	MIDDLE SAN JOAQUIN-LOWER CHOWCHILLA
18040002	HUC	MIDDLE SAN JOAQUIN-LOWER MERCED-LOWER STANISLAUS
18040003	HUC	SAN JOAQUIN DELTA
18040004	HUC	LOWER CALAVERAS-MORMON SLOUGH
18040005	HUC	LOWER COSUMNES-LOWER MOKELUMNE
18040006	HUC	UPPER SAN JOAQUIN
18040007	HUC	UPPER CHOWCHILLA-UPPER FRESNO
18040008	HUC	UPPER MERCED
18040009	HUC	UPPER TUOLUMNE
18040010	HUC	UPPER STANISLAUS
18040011	HUC	UPPER CALAVERAS
18040012	HUC	UPPER MOKELUMNE
18040013	HUC	UPPER COSUMNES
18040014	HUC	PANOCHE-SAN LUIS RESERVOIR
18050001	HUC	SUISUN BAY
18050002	HUC	SAN PABLO BAY
18050003	HUC	COYOTE
18050004	HUC	SAN FRANCISCO BAY
18050005	HUC	TOMALES-DRAKE BAYS
18050006	HUC	SAN FRANCISCO COASTAL SOUTH
18060001	HUC	SAN LORENZO-SOQUEL
18060002	HUC	PAJARO
18060003	HUC	CARRIZO PLAIN
18060004	HUC	ESTRELLA
18060005	HUC	SALINAS
18060006	HUC	CENTRAL COASTAL
18060007	HUC	CUYAMA

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
18060008	HUC	SANTA MARIA
18060009	HUC	SAN ANTONIO
18060010	HUC	SANTA YNEZ
18060011	HUC	ALISAL-ELKHORN SLOUGHS
18060012	HUC	CARMEL
18060013	HUC	SANTA BARBARA COASTAL
18060014	HUC	SANTA BARBARA CHANNEL ISLANDS
18070101	HUC	VENTURA
18070102	HUC	SANTA CLARA
18070103	HUC	CALLEGUAS
18070104	HUC	SANTA MONICA BAY
18070105	HUC	LOS ANGELES
18070106	HUC	SAN GABRIEL
18070107	HUC	SAN PEDRO CHANNEL ISLANDS
18070201	HUC	SEAL BEACH
18070202	HUC	SAN JACINTO
18070203	HUC	SANTA ANA
18070204	HUC	NEWPORT BAY
18070301	HUC	ALISO-SAN ONOFRE
18070302	HUC	SANTA MARGARITA
18070303	HUC	SAN LUIS REY-ESCONDIDO
18070304	HUC	SAN DIEGO
18070305	HUC	COTTONWOOD-TIJUANA
18080001	HUC	SURPRISE VALLEY
18080002	HUC	MADELINE PLAINS
18080003	HUC	HONEY-EAGLE LAKES
18090101	HUC	MONO LAKE
18090102	HUC	CROWLEY LAKE
18090103	HUC	OWENS LAKE
18090201	HUC	EUREKA-SALINE VALLEYS
18090202	HUC	UPPER AMARGOSA
18090203	HUC	DEATH VALLEY-LOWER AMARGOSA
18090204	HUC	PANAMINT VALLEY
18090205	HUC	INDIAN WELLS-SEARLES VALLEYS
18090206	HUC	ANTELOPE-FREMONT VALLEYS
18090207	HUC	COYOTE-CUDDEBACK LAKES
18090208	HUC	MOJAVE
18100100	HUC	SOUTHERN MOJAVE
18100200	HUC	SALTON SEA
19010001	HUC	EAST ARCTIC SLOPE
19010002	HUC	COLVILLE
19010003	HUC	WEST ARCTIC SLOPE
19020001	HUC	KOTZEBUE SOUND

Table A-21 Basin- Hydrologic Unit Codes (HUC)

Code	Code Meaning	Description
19020002	HUC	NORTON SOUND-ST. LAWRENCE ISLAND
19030001	HUC	FORTYMILE-WHITE
19030002	HUC	UPPER YUKON
19030003	HUC	MIDDLE YUKON
19030004	HUC	TANANA
19030005	HUC	KOYUKUK
19030006	HUC	LOWER YUKON
19040001	HUC	KUSKOKWIM BAY-NUNIVAK ISLAND-ST. MATTHEW ISLAND
19040002	HUC	BRISTOL BAY
19040003	HUC	ALEUTIAN-PRIBILOF ISLANDS
19050001	HUC	KODIAK-SHELIKOF
19050002	HUC	COOK INLET
19050003	HUC	GULF OF ALASKA
19060000	HUC	SOUTHEAST ALASKA
20010000	HUC	HAWAII
20020000	HUC	MAUI
20030000	HUC	KAHOOLAWE
20040000	HUC	LANAI
20050000	HUC	MOLOKAI
20060000	HUC	OAHU
20070000	HUC	KAUAI
20080000	HUC	NIIHAU
20090000	HUC	NORTHWESTERN HAWAIIAN ISLANDS
21010001	HUC	INTERIOR PUERTO RICO
21010002	HUC	CIBUCO-GUAJATACA
21010003	HUC	CULEBRINAS-GUANAJIBO
21010004	HUC	SOUTHERN PUERTO RICO
21010005	HUC	EASTERN PUERTO RICO
21010006	HUC	PUERTO RICAN ISLANDS
21020001	HUC	ST. JOHN-ST. THOMAS
21020002	HUC	ST. CROIX
21030001	HUC	CANAL ZONE
21030002	HUC	NAVASSA
21030003	HUC	RONCADOR-SERRANA
4050001		ST. JOSEPH

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
ILD980397079	A & F MATERIAL RECLAIMING
IND000819904	A O SMITH ELECTRIC MOTOR

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
ILD053219259	ACME SOLVENT RECLAIMING
ILD980607055	ADAMS COUNTY QUINCY LANDFILL
MID006522791	ADAM'S PLATING
MND980904023	ADRIAN MUNICIPAL WELL FIELD
MND980898068	AGATE LAKE SCRAPYARD
OH1170090004	AIR FORCE PLANT 85
MI0001119106	AIRCRAFT COMPONENTS (D & L SALES)
MID980504450	ALBION SHERIDAN TOWNSHIP
ILD000716852	ALBURN INCORPORATION
WID980610380	ALGOMA MUNICIPAL LANDFILL
OHD043730217	ALLIED CHEMICAL & IRONTON
MID006007306	ALLIED PAPER, INC. - PORTAGE CREEK
OHD057243610	ALSCO ANACONDA
MID006029102	AMERICAN ANODCO, INC
IND016360265	AMERICAN CHEMICAL SERVICE
ILD002994259	AMOCO CHEMICALS (JOLIET)
MID006017966	ANCHOR DANLY COMPONENTS
MID002931228	ANDERSON DEVELOPMENT CO
OHD017506171	ARCANUM IRON & METAL
OHD074705930	ARMCO INCORPORATION-HAMILTON PLANT
OHD980510010	ARMENTROUT EXCAVATING
MND980823975	ARROWHEAD REFINERY CO
WISFN0507952	ASHLAND - NSP LAKEFRONT SITE
MID980794382	AUTO ION CHEMICALS, INC
MID980791461	AVENUE E GROUND WATER CONTAMINATION
OHD980794648	B & E LANDFILL
OH0001326610	BAKER WOODS CREOSOTING
MID017188673	BARRELS INC
MID981092935	BAY CITY MIDDLEGROUNDS
MND982425209	BAYTOWN TOWNSHIP GROUND WATER PLUME
OHN000510164	BEHR DAYTON THERMAL SYSTEM VOC PLUME
ILD021440375	BELOIT CORP
ILD980497663	BELVIDERE MUNICIPAL LANDFILL
MID005107222	BENDIX CORP. - ALLIED AUTOMOTIVE
IND006418651	BENNETT STONE QUARRY
MID000605717	BERLIN & FARRO
OHD987045085	BESSIE WILLIAMS LANDFILL
WIT560010118	BETTER BRITE PLATING CO.
OHD980611735	BIG D CAMPGROUND
WID981189632	BOERKE
MID006030373	BOFORS NOBEL, INC.
MND053417515	BOISE CASCADE - ONAN CORP. - MEDTRONICS INC.
WID058735994	BOUNDARY ROAD LANDFILL

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
OHD980509616	BOWER'S LANDFILL
MID005317862	BRUCE PRODUCTS
OHD980509657	BUCKEYE RECLAMATION
MND000686196	BURLINGTON NORTHERN (BRAINERD - BAXTER)
MID980410617	BURROWS SANITATION
MID062222997	BUTTERWORTH NO.2 LANDFILL SITE
OHD004253225	BWAY MANUFACTURING INC
ILD010236230	BYRON SALVAGE YARD
IND005480462	CAM-OR INC
OHD980610893	CAMP PERRY LANDFILL
MID980678627	CANNELTON INDUSTRIES, INC
MID980274179	CARTER INDUSTRIALS, INC
IND016395899	CARTER LEE LUMBER CO
ILD981961634	CELOTEX CORPORATED DUMP
ILD051053692	CELOTEX CORPORATION
MID980794663	CEMETERY DUMP
ILD981781065	CENTRAL ILLINOIS PUBLIC SERVICE COMPANY
MID089966956	CHARLEVOIX CHEMICAL MANUFACTURING CO
MID980794390	CHARLEVOIX MUNICIPAL WELL
MID980477079	CHEM CENTRAL
OHD074727793	CHEM-DYNE CORP
OHD980614549	CHEMICAL & MINERALS RECLAMATION
OHD057001810	CHEMICAL RECOVERY
ILD025506403	CIPS CENTRAL ILLINOIS PUBUBLIC SERVICE CO
ILD050231976	CIRCLE SMELTING CORP.
WID980610646	CITY DISPOSAL CORP. LANDFILL
MID980002273	CLARE WATER SUPPLY
OHD980421937	CLARKS INCINERATOR (SIA)
MID980608970	CLIFF - DOW DUMP
IND980607626	COLUMBUS OLD MUNICIPAL LANDFILL
OHD000816843	COMMERICAL OIL SERVICE INCORPORATION
OH0001406693	CONNEAUT DRUM SITE
IND000715490	CONRAIL RAILYARD ELKHART
IND001213503	CONTINENTAL STEEL CORP
OH0000563122	COPLEY SQUARE PLAZA
OHD980509830	COSHOCTON LANDFILL
WI0000485813	COUNTY A ROAD SLUDGE DISPOSAL
OHD000723882	COUNTY LINE IND INC
ILD980792303	CROSS BROTHERS PAIL RECYCLING
MND981191570	DAKHUE SANITARY LANDFILL
WID980820062	DELAVAN MUNICIPAL WELL #4
ILD062340641	DEPUE - NEW JERSEY ZINC - MOBIL CHEMICAL CORP.
OHD980611909	DIAMOND SHAMROCK CORP. (PAINESVILLE WORKS)

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
IL0001086842	DIXIE AUTO SALVAGE
ILD981196686	DIXON MUNICIPAL DUMP
IND980607881	DOUGLASS ROAD-UNIROYAL, INC., LANDFILL
OHD004210563	DOVER CHEMICAL CORP.
MID980504716	DUELL & GARDNER LANDFILL
ILD980606305	DUPAGE COUNTY LANDFILL - BLACKWELL FOREST PRESERVE
OHD980704704	DUPONT LOCKLAND WORKS
ILD980265797	DUTCH BOY
OHD980509947	E.H. SCHILLING LANDFILL
OH0001095892	EAGLE PICHER
MND981088180	EAST BETHEL DEMOLITION LANDFILL
MI0001326602	EASTON ESTATES METHANE SITE
WID980820054	EAU CLAIRE MUNI WELL FIELD
MID005068143	ELECTROVOICE
IND084259951	ENVIRO-CHEM CORP
EPAR5	EPAR5 Facility
ILD099213498	ESTECH GENERAL CHEMICAL CO.
ILD984836734	EVERGREEN MANOR GROUND WATER CONTAMINATION
WID980901227	FADROWSKI DRUM DISPOSAL
MID980504765	FEDERAL MARINE TERM
OH6890008976	FEED MATERIALS PRODUCTION
IND016208795	FELL IRON & METAL INC
OHD980614572	FIELDS BROOK
IND074315896	FISHER-CALO
MND006481543	FMC CORP (FRIDLEY PLANT)
MID980609366	FOLKERTSMA REFUSE
MID005379847	FORD MOTOR CO
MID981089246	FORD MOTOR CO. (SLUDGE LAGOON)
MID980410740	FOREST WASTE PRODUCTS
IND980679542	FORT WAYNE REDUCTION DUMP
IND000780544	FOUR COUNTY LANDFILL
WI0001954841	FOX RIVER NRDA - PCB RELEASES
MND038384004	FREEWAY SANITARY LANDFILL
MND985701309	FRIDLEY COMMONS PARK WELL
OHD980794630	FULTZ LANDFILL
MID980410823	G&H LANDFILL
IND980999635	GALEN MYERS DUMP - DRUM SALVAGE
ILD990817991	GALESBURG - KOPPERS CO.
OHD981960545	GARLAND ROAD LANDFILL
IND077005916	GARY DEVELOPMENT LANDFILL
IND077001808	GARY SANITARY DISTRICT LAKE STA SEWAGE TRMT PLT
MID011247806	GENERAL DYE CASTING
OHD000817312	GENERAL ELECTRIC CO AIRCRAFT ENGINE

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
MND051441731	GENERAL MILLS - HENKEL CORP
IND006036099	GENERAL MOTOR BEDFORD
OHD980611891	GENEVA CITY DUMP
WI0000485797	GOVERNMENT ROAD SLUDGE DISPOSAL
MID017418559	GRAND TRAVERSE OVERALL SUPPLY CO
OHD004495412	GRANVILLE SOLVENTS INC
MID980794531	GRATIOT COUNTY GOLF COURSE
MID980506281	GRATIOT COUNTY LANDFILL
OHD980794622	GREINER'S LAGOONS
MI0001271535	H & K SALES (MICHIGAN RADIOLOGIC)
MID017075136	H. BROWN CO., INC.
ILD980605836	H.O.D. LANDFILL
WID980610059	HAGEN FARM
MID985601061	HARBOR PLATING WORKS
OHD987032018	HARRISON DRY CLEANERS
WID052906088	HECHIMOVICH SANITARY LANDFILL
MID980794408	HEDBLUM INDUSTRIES
ILN000508134	HEGELER ZINC
IND980500292	HIMCO DUMP
MID005341714	HI-MILL MANUFACTURING CO.
IND981094071	HOUSE'S JUNK YARD
WID980511919	HUNTS DISPOSAL
IND980501811	I.J. COVINGTON ROAD
ILD980996789	ILADA ENERGY COMPANY
ILD042671248	INDIAN REFINERY-TEXACO LAWRENCEVILLE
OHD000377911	INDUSTRIAL EXCESS LANDFILL
ILD005213285	INTERNATIONAL HARVESTER
INT190011833	INTERNATIONAL MINERALS & CHEM CORP
INT190010876	INTERNATIONAL MINERALS & CHEM CORP. (TERRE HAUTE EAST PLANT)
ILT180011975	INTERSTATE POLLUTION CONTROL, INC.
MID980794416	IONIA CITY LANDFILL
MID980609440	J & L LANDFILL
INN000508142	JACOBSVILLE NEIGHBORHOOD
WID000712950	JANESVILLE ASH BEDS
WID980614044	JANESVILLE OLD LANDFILL
ILD006282479	JENNISON-WRIGHT CORPORATION
ILD005443544	JOHNS MANVILLE
MID006023022	JOHNSON IRON INDUSTRIES
IL0210090049	JOLIET ARMY AMMUNITION PLANT (LOAD-ASSEMBLY-PACKING AREA)
IL7213820460	JOLIET ARMY AMMUNITION PLANT (MANUFACTURING AREA)
MND044799856	JOSLYN MANUFACTURING AND SUPPLY CO
WID981101199	JUNKERS LDFL
MID980506463	K&L AVENUE LANDFILL

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
MID006016703	KAYDON CORP
WI0000002436	KENOSHA TRAILER
MID981089915	KENT CITY MOBILE HOME PARK
MID000260281	KENTWOOD LANDFILL
ILD980823991	KERR-MCGEE (KRESS CREEK - W BRANCH DUPAGE RIVER)
ILD980824007	KERR-MCGEE (REED-KEPPLER PARK)
ILD980824015	KERR-MCGEE (RESIDENTIAL AREAS)
ILD980824031	KERR-MCGEE SEWAGE TREATMENT PLANT
MND000686071	KOCH REFINING CO. - N-REN CORP
WID006073225	KOHLER CO. LANDFILL
MND000819359	KOPPERS COKE
MND980904049	KUMMER SANITARY LANDFILL
MND059680165	KURT MANUFACTURING CO
MID043681840	KYSOR INDUSTRIAL CORPORATION
MND981090483	LAGRAND SANITARY LANDFILL
IND980500524	LAKE SANDY JO - M & M LANDFILL
IND064703200	LAKELAND DISPOSAL SERVICE, INC
ILD980677702	LAKELAND ESTATES
OHD981537582	LAMMERS BARREL FACTORY
ILD980794333	LASALLE ELECTRICAL UTILITIES
OHD061722211	LASKIN - POPLAR OIL CO.
OHD980613566	LEAD BATTERY RECYCLERS
MND980792469	LEHILLIER - MANKATO
WID980901243	LEMBERGER LANDFILL INC
WID056247208	LEMBERGER TRANSPORT & RECYCLING, INC.
IND980794341	LEMON LANE LANDFILL
ILD005451711	LENZ OIL SERVICE INC
ILD005468616	LIBBEY OWENS FORD CO PLT
OHD000020487	LINCOLN FIELDS COOP WATER
MID067340711	LIQUID DISPOSAL INC
ILD980824882	LIQUID DYNAMICS
MND980904072	LONG PRAIRIE GROUNDWATER
MID985574227	LOWER ECORSE CREEK DUMP
MND006192694	MACGILLIS & GIBBS CO - BELL LUMBER & POLE CO
WID078934403	MADISON METROPOLITAN SEWERAGE DISTRICT LAGOONS
IND980794358	MAIN STREET WELL FIELD
WID981095995	MARINA CLIFFS BARREL DUMP
IND980794366	MARION (BRAGG) DUMP
MID980794465	MASON COUNTY LANDFILL
WID980820070	MASTER DISPOSAL SERVICE LANDFILL
OHD097613871	MASTER METALS INCORPORATION
IL0000064782	MATTHIESSEN AND HEGELER ZINC COMPANY
IND980500417	MCCARTY'S BALD KNOB LANDFILL

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
MID005339676	MCGRAW-EDISON COMPANY
MID980992952	METAL WORKING SHOP
MID980506562	METAMORA LDFL
ILD982074767	MGP 22ND STREET
ILN000510192	MGP CRAWFORD STATION
ILD982074783	MGP DIVISION STREET
ILD984807990	MGP NORTH PLANT
ILN000510193	MGP NORTH SHORE
ILD982074775	MGP NORTH STATION
ILN000510196	MGP PITNEY
ILD984809228	MGP SOUTH PLANT
ILN000510191	MGP SOUTH STATION
ILN000510194	MGP THROOP STREET
ILD982074759	MGP WILLOW-HAWTHORNE
OHD980611800	MIAMI COUNTY INCINERATOR
MID000775957	MICHIGAN DISPOSAL SERVICE
IND980615421	MIDCO I SITE
IND980679559	MIDCO II
WID980823082	MID-STATE DISPOSAL, INC.
ILD980497788	MIG - DEWANE LANDFILL
ILD000722074	MONSANTO CO W G KRUMMRICH
MND980792287	MORRIS ARSENIC DUMP
OHD000724138	MORTON INTERNATIONAL
WID039052626	MOSS-AMERICAN CO., INC. (KERR-MCGEE OIL CO.)
MID980702989	MOTOR WHEEL, INC.
WID000713180_RP	MUSEKGO SANITARY LANDFILL PRP DATA
WID000713180	MUSKEGO SANITARY LANDFILL
MID072569510	MUSKEGON CHEM CO
WID006196174	NATIONAL PRESTO INDUSTRIES
MN3170022914	NAVAL INDUSTRIAL RESERVE
IND980794549	NEAL'S DUMP (SPENCER)
IND980614556	NEALS LANDFILL BLOOMINGTON
OHD980610018	NEASE CHEMICAL
MN7213820908	NEW BRIGHTON - ARDEN HILLS
OHD980794614	NEW LYME LANDFILL
OH3570024650	NEWARK AIR FORCE BASE
IND980794432	NINTH AVENUE DUMP
MND097891634	NL INDUSTRIES - TARACORP - GOLDEN AUTO
ILD096731468	NL INDUSTRIES-TARACORP LEAD SMELTER
MID005480900	NORTH BRONSON INDUSTRIAL
OHD980679930	NORTH KINGSVILLE LANDFILL
OHD980611875	NORTH SANITARY LANDFILL
ILD984809227	NORTH SHORE GAS - SOUTH PLANT

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
WID006183826	NORTHERN ENGRAVING CO
MID020883609	NORTHERNAIRE PLATING
IND050530872	NORTHSIDE SANITARY LANDFILL
MID084566900	NOVACO INDUSTRIES CO
MND006154017	NUTTING TRUCK & CASTER CO
WID083290981	NW MAUTHE COMPANY, INC.
MND980904056	OAK GROVE SANITARY LANDFILL
MND980609515	OAKDALE DUMP
WID006100275	OCONOMOWOC ELECTROPLATING
ILD049484181	O'HARE AIR RESERVE FACILITY
IL0000034355	OLD AMERICAN ZINC PLANT
OHD980510366	OLD DELAWARE CITY LANDFILL
OHD981795560	OLD KENT CITY DUMP
ILD984774950	OLD LASALLE DUMP
OHD980510200	OLD MILL
MND000874354	OLMSTED COUNTY SANITARY LANDFILL
WID000808568	OMEGA HILLS NORTH LANDFILL
WID980821656	ONALASKA MUNI LANDFILL
MID990858003	ORGANIC CHEM INC
OHD004379970	ORMET CORP.
MID980794440	OSSINEKE GROUND WATER CONTAMINATION
MID060174240	OTT - STORY - CORDOVA CHEMICAL CO
ILD980606750	OTTAWA RADIATION AREAS
ILD000802827	OUTBOARD MARINE CORPORATION
MID980794747	PACKAGING CORP OF AMERICA
ILD980606685	PAGEL'S PIT
ILD005252432	PARSON'S CASKET HARDWARE
MID980476907	PARSONS CHEMICAL WORKS, INC
IND980901086	PEABODY COAL CO LYNNVILLE
MID006031348	PEERLESS PLATING CO INC
WID006176945	PENTA WOOD PRODUCTS
MND980609572	PERHAM ARSENIC
ILD003817137	PETERSEN SAND & GRAVEL
MID006013049	PETOSKEY MUNICIPAL WELL FIELD
MND000245795	PINE BEND SANITARY LANDFILL
IND980684583	POER FARM
OHD000382663	POWELL ROAD LANDFILL
IND006377048	PRESTOLITE BATTERY DIVISION
OHD076773712	PRISTINE INC
MID980413066	RAMONA PARK SANITARY LAND
MID095402210	RASMUSSENS DUMP
WID980610604	REFUSE HIDEAWAY
MND980609804	REILLY TAR & CHEMICAL CORP (ST. LOUIS PARK PLANT)

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
OHD980610042	REILLY TAR & CHEMICAL CORP. (DOVER PLANT)
IND000807107	REILLY TAR & CHEMICAL CORP. (INDIANAPOLIS PLANT)
ILD980607097	REPUBLIC CREOSOTING CO
OHD980903447	REPUBLIC STEEL QUARRY
OH3571924544	RICKENBACKER AIR NATIONAL GUARD BASE
WID980610190	RIPON CITY LANDFILL
MND980904064	RITARI POST & POLE
ILD059446153	RIVERDALE CHEMICAL
MID006028062	ROCKWELL INTERNATIONAL CO
MID980499842	ROSE TOWNSHIP DUMP
MID005340088	ROTO-FINISH CO
IL8143609487	SANGAMO ELEC DUMP-CRAB ORCHARD NATL WL REFUGE (USDOI)
OHD093895787	SANITARY LANDFILL CO. (IND WASTE DISPL CO., INC.)
WID980823926	SANITARY TRANSFER & LANDFILL
ILD000605790	SAUGET & COUNTY LANDFILL
ILD980792006	SAUGET AREA 1
ILD981953623	SAUGET AREA I - DEAD CREEK AREA G
ILD984809277	SAUGET AREA I - DEAD CREEK SEGMENT A
ILD984809285	SAUGET AREA I - DEAD CREEK SEGMENTS C-F
ILD982073603	SAUGET AREA I - H.H. HALL CONSTRUCTION CO
ILD984809251	SAUGET AREA I - H.H. HALL EXCAVATION PIT
ILD980614176	SAUGET AREA I - SAUGET MONSANTO IL LDFL
ILD984809269	SAUGET AREA I - WAGGONER
WID980610141	SAUK COUNTY LANDFILL
IL3210020803	SAVANNA ARMY DEPOT
MID000724930	SCA INDEPENDENT LANDFILL
WID980820096	SCHMALZ DUMP
WID046536785	SCRAP PROCESSIING COMPANY
IND040313017	SEYMOUR RECYCLING CORP
WID980996367	SHEBOYGAN HARBOR & RIVER
MID980794473	SHIAWASSEE RIVER
OHD042319244	SHIELDALLOY METALLURGICAL
OHD063963714	SKINNER LANDFILL
MID123456789	Smart Facility
MND980609614	SOUTH ANDOVER SITES
MID069826170	SOUTH MACOMB DISPOSAL AUTH (LANDFILLS NO. 9 AND 9A)
MNN000509136	SOUTH MINNEAPOLIS RESEDENTIAL GROUNWATER CONTAMINATION
OHD071650592	SOUTH POINT PLANT
ILD981000417	SOUTHEAST ROCKFORD GROUND WATER PLUME
IND980607360	SOUTHSIDE SANITARY LANDFILL
MID980608780	SOUTHWEST OTTAWA COUNTY LANDFILL
MID000268136	SPARTA LANDFILL
MID079300125	SPARTAN CHEMICAL CO.

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
WID980902969	SPICKLER LANDFILL
MID980794481	SPIEGELBERG LANDFILL
SPRINGFIELD	Springfield
MID980499966	SPRINGFIELD TOWNSHIP DUMP
IND980612303	ST JOE LANDFILL
MND057597940	ST REGIS PAPER CO
MND981002256	ST. AUGUSTA SANITARY LANDFILL
MND039045430	ST. LOUIS RIVER SITE
MID980609341	STATE DISPOSAL LANDFILL
OHD000605956	STICKNEY AVENUE LANDFILL
WID980901219	STOUGHTON CITY LANDFILL
MID980703011	STURGIS MUNICIPAL WELLS
IND980900146	SUGAR CREEK AKA WALLACE PIT (AMS)
OHD055523401	SUMMIT EQUIPMENT & SUPPLIES INC
OHD980609994	SUMMIT NATIONAL
MID980794655	TAR LAKE
WID123456789	Test Facility
MID044567162	THERMO CHEM INC
IND984876177	THIRD SITE
MID017274093	THOMAS SOLVENT CO MUSKEGO
IND980997639	TIPPECANOE SANITARY LANDFILL
MID980994354	TITTABAWASSEE RIVER - SAGINAW RIVER
MID980994354_R	TITTABAWASSEE RIVER ARCHIVE
OHD987049202	TOLEDO TIE TREATMENT PLANT
WID980610299	TOMAH ARMORY
WID980616841	TOMAH FAIRGROUNDS
WID980610307	TOMAH MUNICIPAL SAN LANDFILL
MID980901946	TORCH LAKE
INN000508071	TOWN OF PINES GROUND WATER PLUME
OHD980612188	TREMONT CITY LANDFILL AKA NORTH SAN LANDFILL
ILD048306138	TRI-COUNTY LDFL CO.-WASTE MNGNT OF ILLINOIS, INC.
IND006038764	TRI-STATE PLATING
OHD009841214	TRI-STATE TANK CLEANING INC
OHD004166740	TRUE TEMPER SPORTS INCORPORATED
OHD004179339	TRW INC MINERVA PLANT
MN8570024275	TWIN CITIES USAF RESERVE BASE (SMALL ARMS RANGE LDFL)
OHD980510523	TYLER STREET DUMP
MID980794556	U.S. AVIEX
IND982071557	ULERY ENTERPRISES
OHD980612147	UNION CARBIDE CORPORATION
MND022949192	UNION SCRAP IRON & METAL
OHD018392928	UNITED SCRAP LEAD CO., INC
MND980613780	UNIV OF MINNESOTA (ROSEMOUNT RESEARCH CNTR)

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
IL1570024157	US AIR FORCE CHANUTE AIR
MI0571924760	US AIR FORCE K I SAWYER AFB
IL7570024177	US AIR FORCE SCOTT AFB
IL2210020838	US ARMY FORT SHERIDAN
IN5210020454	US ARMY JEFFERSON PROVING GROUND
OH5210020736	US ARMY RAVENNA ARMY AMMUNITION PLANT
IL5210021833	US ARMY ROCK ISLAND ARSENAL
IN4210090003	US ARMY SOLDIER SUPPORT CENTER
MI5210022781	US ARMY TANK AUTOMOTIVE COMMAND
OH3971524357	US DOD DEFENSE ELECTRONIC SUPPLY CENTER
OH6890008984	US DOE MOUND PLANT
OH7890008983	US DOE PORTSMOUTH GASEOUS DIFFUSION PLANT
IN4170023499	US NAVY AVIONICS CENTER
IL3170022930	US NAVY GLENVIEW NAVAL AIR STATION
IL7170024577	US NAVY GREAT LAKES NAVAL BASE
IN9570024472	USDAF USAF GRISSOM AFB ALERT FACILITY
MND981526486	VALENTINE CLARK CORP
OHD980794606	VAN DALE JUNKYARD
ILD000814673	VELSICOL CHEMICAL CORP. (MARSHALL PLANT)
MID000722439	VELSICOL CHEMICAL CORP. (MICHIGAN)
MID980793806	VERONA WELL FIELD
ILD097271563	VULCAN-LOUISVILLE SMELTING CO.
MND981002249	WAITE PARK WELLS
MID980701247	WASH KING LAUNDRY
MND980704738	WASHINGTON COUNTY LANDFILL
MND980609119	WASTE DISPOSAL ENGINEERING
IND980504005	WASTE INC LANDFILL
MID060179587	WASTE MANAGEMENT OF MICHIGAN
WID980901235	WASTE MANAGEMENT OF WISCOSIN
ILD047019732	WAUCONDA SAND & GRAVEL CO
WID980993521	WAUSAU GROUNDWATER CONTAMINATION
IND048989479	WAYNE WASTE OIL
IND980794374	WEDZEB ENTERPRISES INC
IND006062467	WESTINGHOUSE ELECTRIC CORP
WID980610620	WHEELER PIT
IND980999791	WHITEFORD SALES & SERVICE
MID980701254	WHITEHALL MUNICIPAL WELLS
MND006252233	WHITTAKER CORP
MID981089238	WILLOW RUN CREEK
MND980034516	WINDOM DUMP
IND981200322	WINSTON THOMAS
ILD980605943	WOODSTOCK MUNICIPAL LANDFILL
WIN000510058	WPSC CAMP MARINA

Table A-22 EPA Facility IDs (EPA ID Code)

EPA ID	Site Name
WIN000509948	WPSC GREEN BAY MGP
WIN000509949	WPSC MANITOWOC MGP
WIN000509952	WPSC MARINETTE MGP
WIN000509947	WPSC OSHKOSH MGP
WIN000509983	WPSC STEVENS POINT
WIN000509953	WPSC TWO RIVERS MGP
OH7571724312	WRIGHT-PATTERSON AIR FORCE BASE
MI5570024278	WURTSMITH AIR FORCE BASE
ILD980500102	YEOMAN CREEK LANDFILL
OHD980794598	ZANESVILLE WELL FIELD

Table A-23 Total or Dissolved

FRACTION	FRACTION_DESC
D	DISSOLVED
T	TOTAL
N	Not applicable

Table A-24 Test Type

TEST_TYPE	TEST_TYPE_DESC
DILUTION1	DILUTION1
DILUTION2	DILUTION2
DILUTION3	DILUTION3
INITIAL	INITIAL
REANALYSIS	REANALYSIS
REEXTRACT	REEXTRACT
REEXTRACT1	REEXTRACT1
REEXTRACT2	REEXTRACT2
REEXTRACT3	REEXTRACT3

Table A-25 Test Batch Type

TEST_BATCH_TYPE	**TEST_BATCH_DESC**
ANALYSIS	SAMPLE ANALYSIS BATCH
LEACH	LEACHATE BATCH
PREP	SAMPLE PREP/EXTRACTION BATCH

Table A-26 Preservative

PRESERVATIVE	PRESERVATIVE_DESC
(CH3COO)2ZN	Zinc Acetate
ASCORBIC ACID	Ascorbic Acid
CH3OH	Methanol
H2SO4	Sulfuric Acid
HCL	Hydrochloric Acid
HNO3	Nitric Acid
NA2S2O3	Sodium Thiosulfate
NAHSO4	Sodium Bisulfate
NAOH	Sodium Hydroxide

Table A-27-Point Parameter

PARAM	PARAM DESCRIPTION
CONDUCTIVITY	
ECD	ELECTRON CAPTURE DETECTOR
FID	FRAME IONIZATION DETECTOR
PID	PHOTO IONIZATION DETECTOR
PORE WATER	
RESISTIVITY	

TABLE A-28 STATE

State_code	State_name
AK	ALASKA
AL	ALABAMA
AR	ARKANSAS
AS	AMERICAN SAMOA
AZ	ARIZONA
CA	CALIFORNIA
CO	COLORADO
CT	CONNECTICUT
DC	THE DISTRICT
DE	DELAWARE
FL	FLORIDA
FM	FEDERAL STATES OF MICRONESIA
GA	GEORGIA
GU	GUAM
HI	HAWAII
IA	IOWA
ID	IDAHO
IL	ILLINOIS
IN	INDIANA
KS	KANSAS
KY	KENTUCKY
LA	LOUISIANA

TABLE A-28 STATE

State_code	State_name
MA	MASSACHUSETTS
MD	MARYLAND
ME	MAINE
MH	MARSHALL ISLANDS
MI	MICHIGAN
MN	MINNESOTA
MO	MISSOURI
MP	NORTHERN MARIANA ISLANDS
MS	MISSISSIPPI
MT	MONTANA
N/A	NOT AVAILABLE
NC	NORTH CAROLINA
ND	NORTH DAKOTA
NE	NEBRASKA
NH	NEW HAMPSHIRE
NJ	New Jersey
NM	NEW MEXICO
NV	NEVADA
NY	New York
OH	OHIO
OK	OKLAHOMA
OR	OREGON
PA	Pennsylvania
PR	PUERTO RICO
PW	PALAU
RI	RHODE ISLAND
SC	SOUTH CAROLINA
SD	SOUTH DAKOTA
TN	TENNESSEE
TX	TEXAS
UNK	UNKNOWN
UT	UTAH
VA	VIRGINIA
VI	VIRGIN ISLANDS
VT	Vermont
WA	WASHINGTON
WI	WISCONSIN
WV	WEST VIRGINIA
WY	WYOMING

Table A-29 Sample Method

Method_code	Method_desc
110628	
BUCKET AUGER	

Table A-29 Sample Method

Method_code	Method_desc
BUCKET AUGER/SAMPLING TUBE	
CHECK VALVE	
CHECK VALVE - 3 (2' LINER)	
CHECK VALVE - 3 (2' LINER)"	
CHECK VALVE - 3 (4' LINER)	
CHECK VALVE - 3 (4' LINER)"	
CHECK VALVE/GEOPROBE CORE	
CHECK VALVE/SOGGY BOTTOM	
CHECK VALVE/SONIC	
CONTINUOUS TUBE	continuos tube
DIRECT PUSH	
DOUBLE TUBE	double tube
ENCORE, MANUAL MIX/TRANSFER	Encore, manual mix/transfer
GRAB	Grab
GRAB - UNKNOWN DEVICE	
HAND HELD AUGER	hand held auger
HAND-CORE, MANUAL MIX/TRANSFER	Hand-core, manual mix/transfer
HOLLOW STEM AUGER	Hollow Stem Auger
HURRICANE PROBE	Hurricane Probe
LOW-FLOW	low-flow
NULL	
PDB	
PEAT SAMPLER	peat sampler
PISTON	piston
SAMPLING TUBE	
SAMPLING TUBE/BUCKET AUGER	
SCREW AUGER	screw auger
SED	
SHELBY TUBE	shelby tube
SINGLE TUBE	single tube
SOGGY BOTTOM	
SOIL PROBE	soil probe
SOILBORE	
SOLID BARREL	solid barrel
SONIC	SONIC
SPLIT BARREL	split barrel
SPLIT SPOON	split spoon
THIN WALLED TUBE	thin walled tube

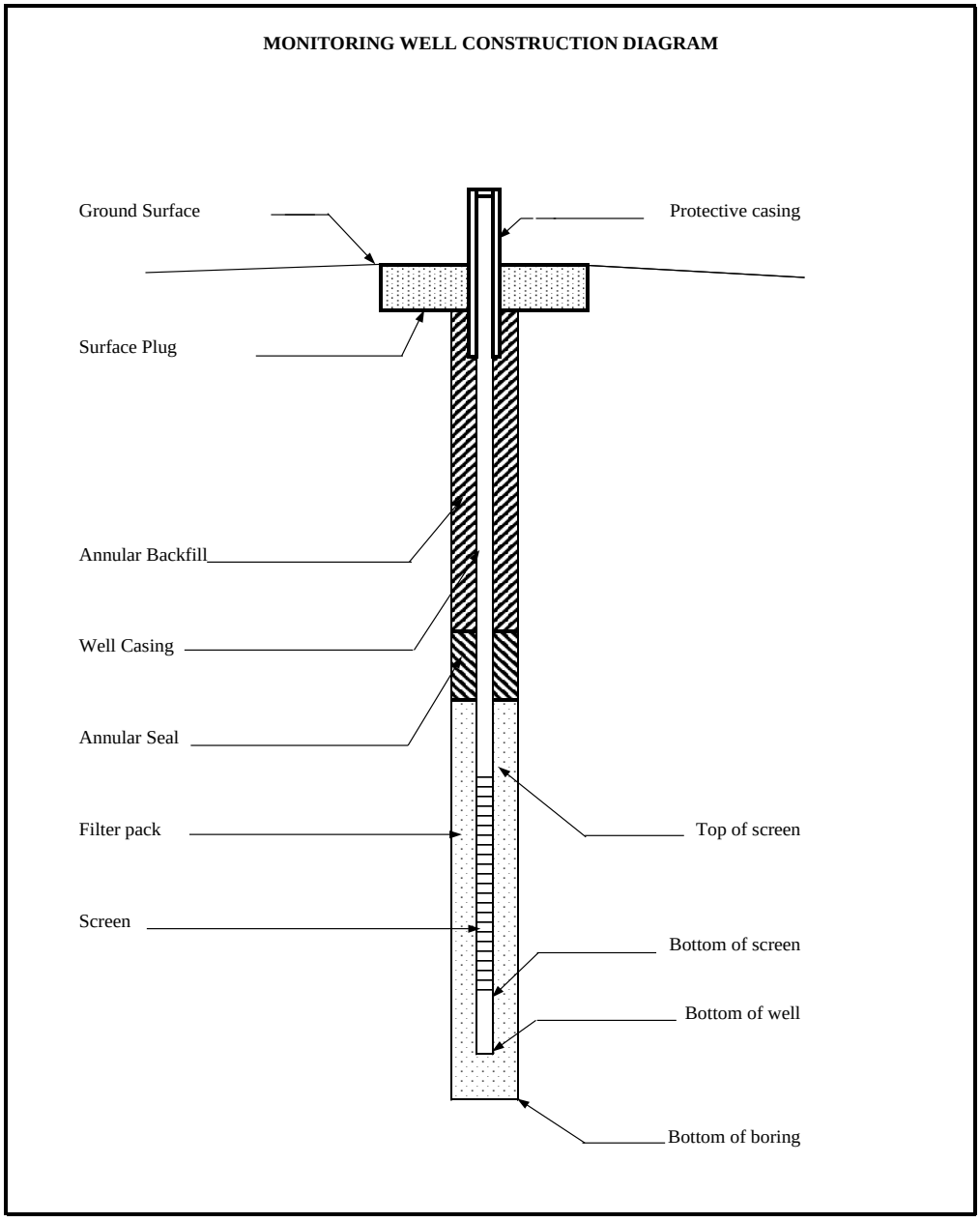
Table A-30 Reference Point

Reference Code	Description
AB	Administrative Building
AM	Air Monitoring Station
AS	Air Release Stack
AV	Air Release Vent
AE	Atmosphere Emissions Treatment Unit
103	Boundary Point
102	Facility Center/Centroid
101	Facility/Station Building Entrance or Street
104	Intake Point
SP	Lagoon or Settling Pond
LW	Liquid Waste Treatment Unit
LC	Loading Area Centroid
LF	Loading Facility
107	Monitoring Point
NE	Northeast Corner of Land Parcel
NW	Northwest Corner of Land Parcel
PF	Plant Entrance Freight
PG	Plant Entrance General
PP	Plant Entrance Personnel
PU	Process Unit
PC	Process Unit Area Centroid
106	Release Point
SE	Southeast Corner of Land Parcel
SW	Southwest Corner of Land Parcel
SD	Solid Waste Treatment/Disposal Unit
SS	Solid Waste Storage Area
105	Treatment/Storage Point
WM	Water Monitoring Station
WR	Water Release Pipe
WL	Well
WA	Well Protection Area
OT	Other
UN	Unknown

Table A-31 Source Scale

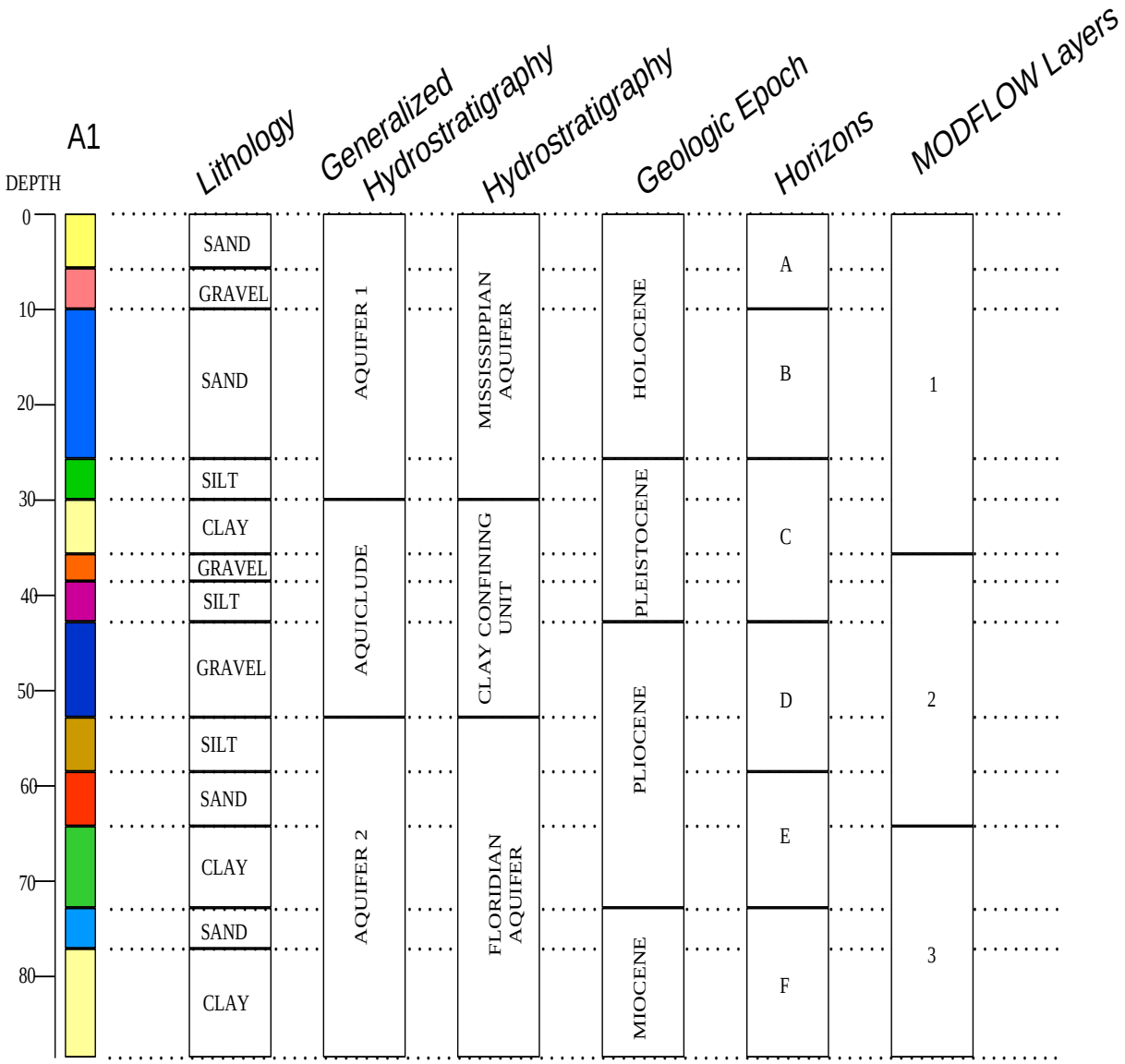
Source_Scale	Description
Ranges	
1	Source scale ranging from 1 >1:500
2	Source scale ranging from 1:500 to 1:5,000
3	Source scale ranging from 1 1:5001 to 1:10,000
4	Source scale ranging from 1 1:10,001 to 1:15,000
5	Source scale ranging from 1 1:15,001 to 1:20,000
6	Source scale ranging from 1 1:20,001 to 1:25,000
7	Source scale ranging from 1 1:25,001 to 1:50,000
8	Source scale ranging from 1 1:50,001 to 1:100,000
9	Source scale 1 < 1:100,000
Discrete values	
A	1:10,000
B	1:12,000
C	1:15,840
D	1:20,000
E	1:24,000
F	1:25,000
G	1:50,000
H	1:62,500
I	1:63,360
J	1:100,000
K	1:125,000
L	1:250,000
M	1:500,000
N	None
O	Other

Figure A-1 Monitoring Well Diagram



The following figure shows the lithology and 5 possible geologic units associated with a soil boring. Data providers are requested to provide only 2 geologic units, however 5 units are shown to illustrate a number of possible geologic units.

Figure A-2 Example of Geologic Units



Please note that this depiction is entirely conceptual, and no scientific correctness in relationship between geologic units is intended. The sole purpose is to demonstrate how multiple geologic units may be utilized.

APPENDIX G EPA REGION 5 EDD FORMAT SPECIFICATIONS

EPA Region 5

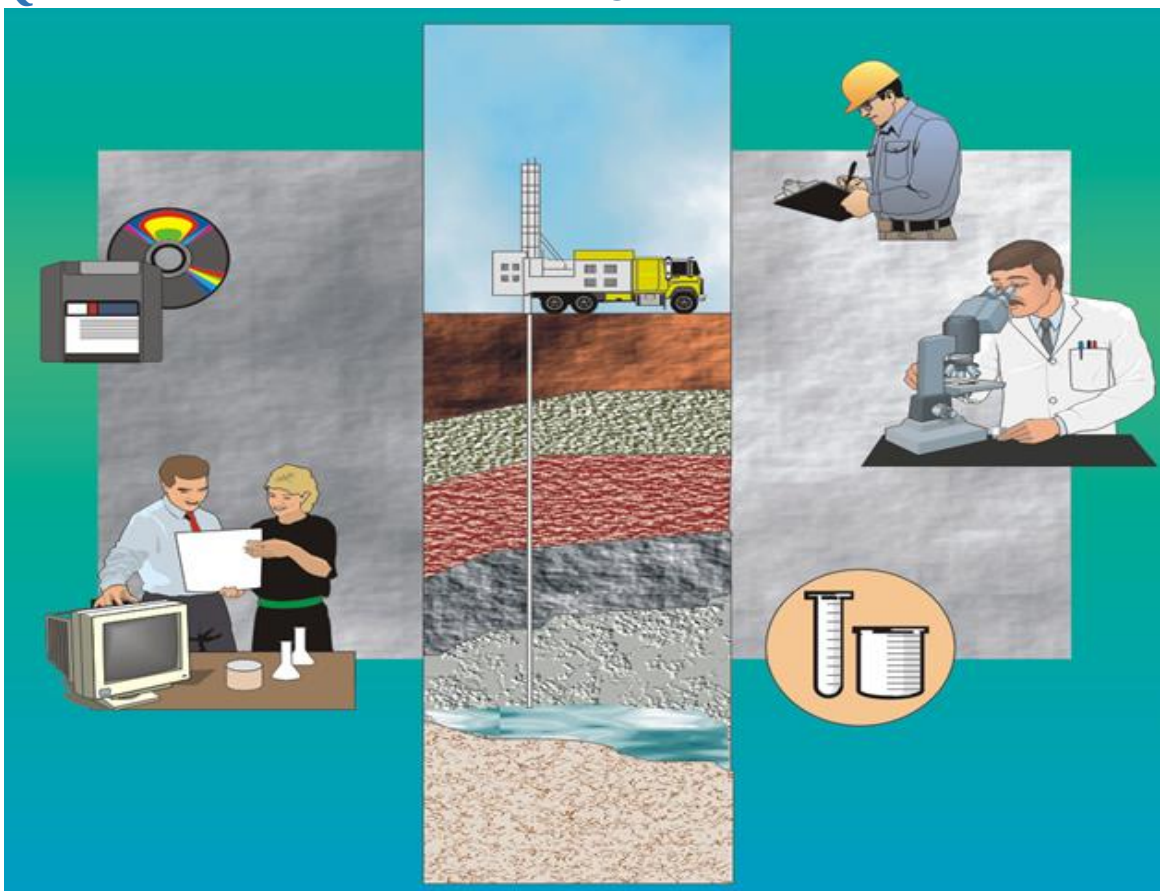
77 West Jackson Blvd. Chicago, IL 60604

Electronic Data Deliverable (EDD)

Comprehensive Manual Version 4.3

February, 2020

EQuIS Professional version 7 • EDD format version 3.0.17



THIS PAGE LEFT BLANK INTENTIONALLY

ACKNOWLEDGEMENTS

This document was originally prepared for EPA Region 5 by the John A. Volpe National Transportation Systems Center (Volpe Center). This document was reviewed and edited by David Wilson and Mary Tierney of EPA Region 5; William Halloran and Joseph Monaghan of the Volpe Center; and John Hennessy and Ellen Baptiste-Carpenter of Battelle Laboratories, Inc. Other technical reviewers from EPA include Patricia Scott, Chemist, EPA Region 5; Douglas Yeskis, Geologist, EPA Region 5; Luanne Vanderpool, Geologist, EPA Region 5; Anthony Kahaly, EPA Region 5, RCRA Division; and Andy Crossland, Hydrogeologist, EPA, Region 2. Other reviewers include Steve Losier of the Volpe Center; Janet Magurn, Scot Weaver and Dave Abercrombie of EarthSoft, Inc.; Rosanna Buhl of Battelle Laboratories, Inc.; and Izak Maitin of the New Jersey Department of Environmental Protection.

EarthSoft Inc. developed the Electronic Data Processor (EDP) and reviewed the EDD format to assure its technical accuracy.

This documentation was reviewed and updated by Diann Cox-Tramel (Region 2), and John Canar, Region 5 and updated on January, 2020 to meet the standards and requirements of EPA Region 5.

DISCLAIMER OF ENDORSEMENT

Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government, and shall not be used for advertising or product endorsement purposes.

EXECUTIVE SUMMARY

The purpose of this specification manual is to provide detailed instructions on how to report environmental data electronically to the United States Environmental Protection Agency (EPA) Region 5. The types of data can be reported electronically include, for example, data generated during site characterization and investigation phases, data recorded when installing monitoring wells, and monitoring data that is routinely collected from a variety of media. This manual describes the procedural and formatting requirements you need to know to submit your Electronic Data Deliverable (EDD) to the EPA Region 5 Superfund Division.

This EDD Comprehensive Specification manual describes the requirements for reporting all **current** and **future** environmental data to EPA Region 5. EPA recognizes that some information about data collected in the past may not be readily available and, by reducing the requirements for electronic basic data, is endeavoring to strike a balance between minimizing the amount of effort involved in inputting information and maximizing the ability to document remedy progress. Environmental data collected and analyzed **prior** to the initial use of this EDD Comprehensive specification manual should be reported using the EPA Region 5 "Basic Manual for Historic Electronic Data". The reporting requirements of the "Basic Manual for Historic Electronic Data" are a subset of this comprehensive EDD Comprehensive specification manual.

The EPA Region 5 EDD is comprised of five groups: **Field, Lab, Basic, Vapor Intrusion and Facility.**

The first group of the EDD is the Field, which contains the data for the point of contact, site information, Locations, alternation Position for locations, Location Parameter, as well as drilling activities, lithology, well installation, well construction and well segment, geotechnical sample information, water levels, water table, downhole logging methods, Extraction and Injection wells, Soil Gas survey data, and a Sample Parameter. Those files are:

Field- the folloing **three** files can be submitted once unless there are new/ additional locations to the site

- Data Provider (named as "EPAR5DATAPROVIDER_v3" is the point of contact for EDD and file providing the information)
- Subfacility (named as "EPAR5SUBFACILITY_v3", which is the general information about the site)
- Location (named as "EPAR5LOC_v3", which is the information regarding the sampling locations)
  This time we added two optional sections below the EPAR5LOC_v3 section: EPAR5AlternatePosition_v3 and EPAR5LocParam_v3.
- Alternate position (named as "EPAR5AlternatePosition_v3", which is the alternate position of the sampling locations).
- Location Parameter (named as "EPAR5LOCPARAM_V3", which is the location parameter of the sampling locations).

The following files are included in the **Field section**, which contains the field data, please submit the data when they are available:

- Drilling Activity (named as "EPAR5DRA_v3", which is the information about drilling activities resulting form the soil borings.)
- Lithology (named as "EPAR5LTH_v3", which is the lithology information for the borings.)
- Well (named as "EPAR5EPAR5WEL_v3", which contains the monitoring well information related to well instruction)
- Well Construction (named as "EPAR5WSG_v3", which contains the well construction details and well segment data.)

- Geology Sample (named as "EPAR5GSMP_v3", which contains the geotechnical sample information)
- Water Level (named as "EPAR5GWTR_v3", which contains the information on water levels measured from the soil borings or wells.)
- Water Table (named as "EPAR5TBL_v3", which contains the information pertaining the water table)
- Downhole Logging (named as "EPAR5DHP_v3", which contains the data from downhole logging methods such as Cone Penetrometer Tests and geophysics.)
- Extraction and Injection Wells (named as "EPAR5EIW_v3", which contains the data about extraction and Injection wells)
- Soil Gas (named as "EPAR5EPAR5SoilGas_v3", which contains the imports soil gas survey data.)
- Sample Parameter (named as "EPAR5SAMPLEPARAM_v3", which contains the samples information.)

In most cases, the vast majority of the electronic data submitted over the life of the project, and that will be submitted on a reoccurring, routine basis, will be lab data.

Lab

The Lab EDD files contain data related to chemistry field measurements, sample collection information, sample tests and result QC. The Lab EDD files are the:

- Sample (named as "EPAR5SMP_v3", which contains the information about sample collection)
- Test Result (named as "EPAR5TRS_v3", which contains the information concerning analytical tests and lab results performed on samples.)
- Test Result QC (named as "EPAR5TRSQC_v3", which contains the information about the analytical test performed on samples with quality control data elements)
- Batch (named as "EPAR5BAT_v3", which contains the data that related the individual samples to the batch identifier.)

Basic Submittals

The Basic EDD files contain historical operation and maintenance (O&M) data. The EDD files are the:

- Basic Location (named as "EPAR5_BasicLOC_v3", which contains the information about sampling locations from historical data)
- Basic Water Level (named as "EPAR5_BasicWTR_v3", which contains the information regarding groundwater level measurements)
- Basic Chemistry Sample (named as "EPAR5_BasicChem_v3", which contains the information about sample collection)
- Basic Geology (named as "EPAR5_BasicGEO_v3", which contains the information about geology data)

Vapor Intrusion

- Building Address (EPAR5_VI_BLDG_Address_v3)
- Building Inspection (EPAR5_VI_Bldg_Inspection_v3)
- Building Parameter (EPAR5_VI_Bldg_Parameter_v3)
- Vapor Intrusion Location (EPAR5_VI_LOCATIONS_V3)
- Vapor Intrusion Outdoor Locations (EPAR5_VI_Outdoor_Locations_v3)
- Vapor Intrusion Samples (EPAR5_VI_Samples_V3)
- Vapor Instrusion Test Results (EPAR5_VI_TestResultsQC_v3)
- Vapor Instrusion Batches (EPAR5_VI_Batches_v3)

Faciltiy

The facility data includes an electronic base map of the site property, one file containing general information about the site and about the point of contact for the EDD, and a file containing data pertaining to site sampling locations.

- Files (named as "Files_v3", which contains any supplementary information about site such as a base map, a cover letter about the data, data provider, or the site sampling information.)

Of the files listed above, the Lab and Field files that most data providers will submit will be the Well, Water Level, Extraction Injection Wells, Sample, Test/Result QC files. The Test Result with QC and Batch files will only be submitted in those rare cases where EPA requires QA/QC data in electronic format. The Extraction/Injection Well file will only need to be submitted for sites with extraction or injection wells.

The process for creating Field, Lab, and/or Facility EDDs are shown in Figures E-1 and E-2, respectively. The process begins by identifying the software tool that will be used. Many software tools, such as text editors, word processors, spreadsheets, and databases, are capable of creating EDDs. Because spreadsheets and databases are designed to enter and manage data, however, they are generally preferred for creating EDDs. The production of the data tables will normally be a collaborative effort between laboratories and environmental contractors. The laboratories will typically produce the test/result tables while the contractors normally will produce all of the other tables.

As shown in Figures E-1 and E-2, decision points are included in the EDD creation process to ensure that Field EDD files have been submitted for a site, as well as to prevent redundancy when getting ready to submit Lab EDDs. For example, one of the Field EDDs called the SUBFACILITY file, which contains data describing the site and site contact information, should generally only be reported once (unless, as previously noted, a change occurs). Similarly, another Field EDD file, the Location file, which contains locational data, typically only needs to be reported once. The only time a Location EDD file would be resubmitted is if **the data changed in some way**. For example, if settling occurs at a site over time, a resurvey of site monitoring wells may be warranted. If the survey results show changes in the elevations of the monitoring wells, the Location file would have to be resubmitted.

The final step before submitting an EDD to EPA Region 5 is to check it using the Electronic Data Processor (EDP) software application that is currently provided on the EPA Region 5 website (located at **https://www.epa.gov/superfund/region-5-superfund-electronic-data-submission**). This software application will identify any formatting errors in the files that must be corrected prior to submitting the EDD.

Figure E-1 Process flow diagram for the creation and checking of Field, and Lab EDD files

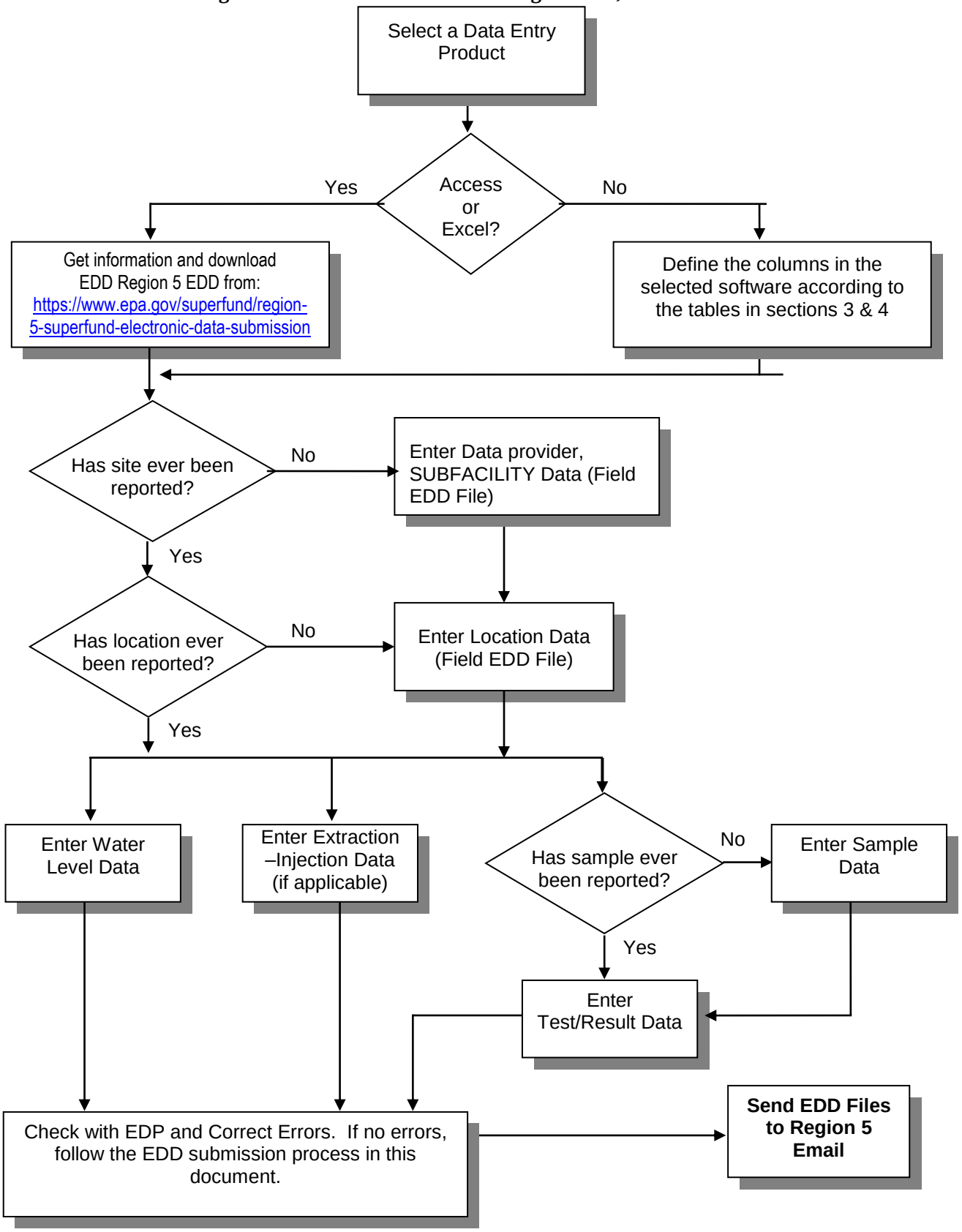
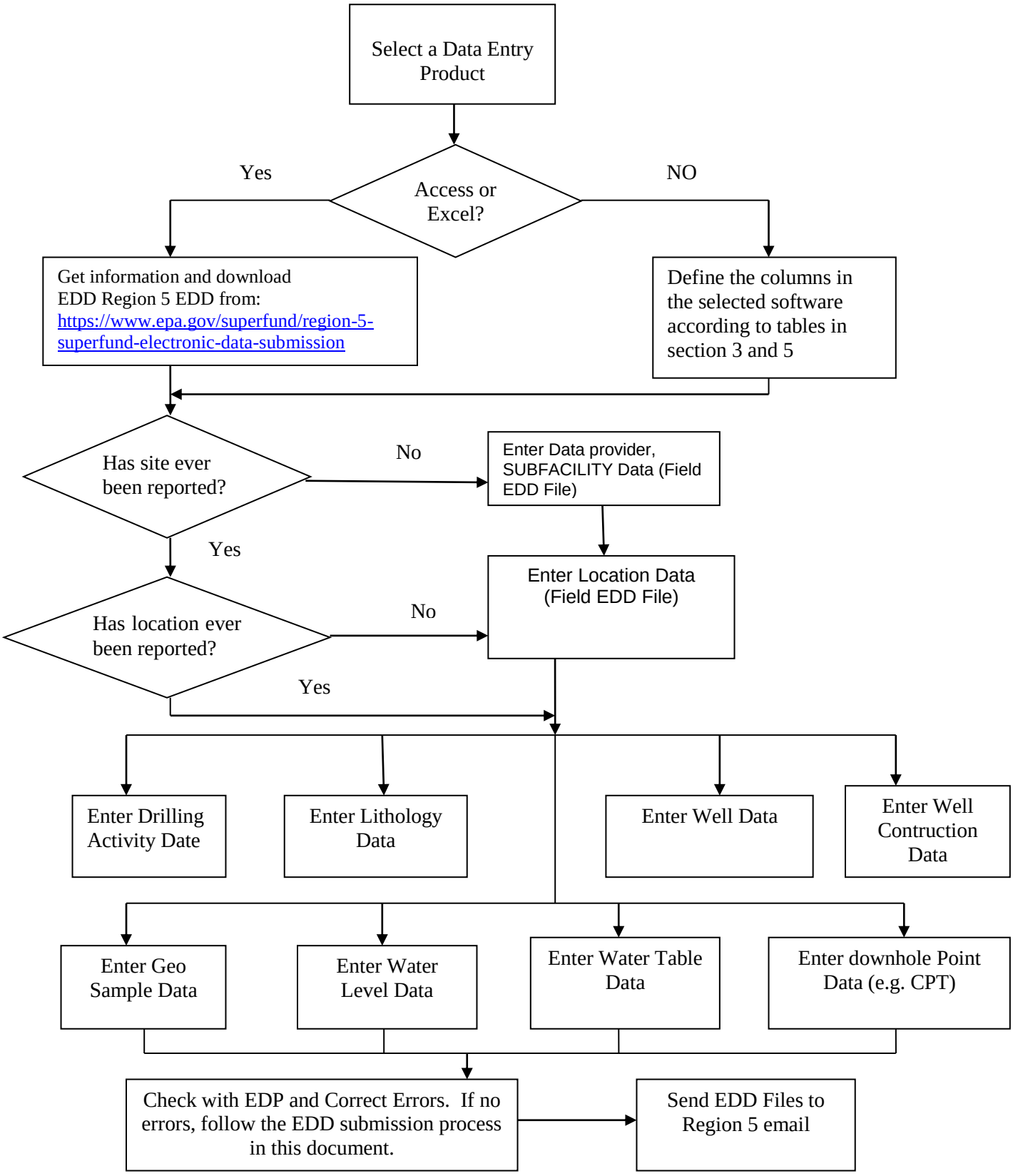


Figure E-2 Process flow diagram for the creation and checking of Field EDD files



THIS PAGE LEFT BLANK INTENTIONALLY

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

THIS PAGE LEFT BLANK INTENTIONALLY

1. INTRODUCTION TO THE EPA REGION 5 ELECTRONIC DATA DELIVERABLE (EDD)

The EPA Region 5 Superfund Division has developed an electronic data management system to improve how environmental data from Superfund sites are acquired and managed. The system will accelerate the review of environmental data submittals, improve service to the regulated community, and enhance the protection of the environment and the public. A vital element in the electronic transfer of environmental data is the submittal of data in a standardized, "computer-friendly" format. The specifications and formatting requirements for the EPA Region 5 EDD were developed to facilitate the transfer of data from data providers to the EPA.

NOTE: This EDD Comprehensive Specification manual describes the requirements for reporting all **current** and **future** environmental data to EPA Region 5. Environmental data collected and analyzed **prior** to the initial use of this EDD specification manual should be reported using the EPA Region 5 "Basic Manual for Electronic Data". EPA recognizes that some information about data collected in the past may not be readily available and, by reducing the requirements for electronic historical data, is endeavoring to strike a balance between minimizing the amount of effort involved in inputting information and maximizing the ability to document remedy progress.

The EPA Region 5 EDD is in part based on standard EDDs used in applications developed by EarthSoft, Inc. However, the format is designed to be software-independent and easy to achieve. Any spreadsheet, database, or text editor can be used to create the EDD files. Examples of applications that can be used to create Region 5 EDDs include Access, FoxPro®, Excel, and Notepad.

Basically, the EDD is a series of files used to report data. For example, one file is used to report location data while another is used to report samples collected at a location. Multiple files are used to eliminate the need to report redundant data. For example, the data for a location (e.g., coordinates and elevations) are reported once in the location (EPAR5LOC_v3) file. Many years of sampling and analytical data may be reported for that location without having to submit the LOC file again.

This specification manual includes examples of EDD files populated with data. In addition, several EDD templates are currently available on the EPA Region 5 E-Data website (https://www.epa.gov/superfund/region-5-superfund-electronic-data-submission) for loading data into the EDD format. The website also contains a no-cost software program, the Electronic Data Processor (EDP) that needs to be used to check EDD files before they are submitted to EPA Region 5. The EDP is a single application that checks all EDD files and provides a much easier user interface for identifying and correcting errors.

This EDD Comprehensive Specification Manual discusses EDD submittals in three separate sections:

- General reporting requirements and submission process are discussed in Section 2.
- The Facility and Field file structures (i.e.data provider, subfacility, location, water level) are defined in Section 3.
- The Lab file structures are defined in Section 4. In most cases, lab data accounts for the majority of data that is reported.

Each file must be reported exactly as defined in these sections. Any deviations will result in loading errors.

EPA Region 5 expects all fields referred to as “Required”, “Not required” or “If available” to be filled in. If data for fields referred to as “If available” meaning the data can be reported when available, such as the result values and the unit. If users reported the result values, it is preferred to repor the unit as well. Data fields indicated as “Not required” meaning the fields are not required fields. These fields were only included so that other EPA regions or states could use the same EDD but have slightly different data type requirements.

Currently, EPA is working to finalize EDD requirements that would be national standards for Superfund data for all 10 EPA Regional offices. When this national Superfund EDD is finalized, data providers who have already begun submitting data according to the EPA Region 5 format will be given time to transition to any national format changes.

2. GENERAL EDD REPORTING REQUIREMENTS

2.1 File Formats

With the exception of the electronic base map, all data from the EPA Region 5 data providers must be reported as **text files**. Each data field must be separated either by tabs (tab-delimited) (indicated by the suffix "txt" on the file name) or comma-delimited (indicated by the suffix "csv" on the file name). One other option is to enclose each field in double quotation marks (") (indicated by the suffix "txt" on the file name). However, because using double quotation marks to delineate fields is typically more time consuming (unless the data are already in this format), it is anticipated that this method will not be widely used. Data fields containing no information should not be simply omitted. Instead they should be represented by the delimiter of choice, e.g., by two tabs in tab-delimited files or two commas in comma-delimited files (see example in Section 2.16). The maximum length of each text field is indicated in parentheses in the EDD tables shown in Sections 3 and 4. If the information is less than the maximum length, there is no need to add spaces to the record to ensure that all spaces are used. Maximum length requirements imply that the field can be no longer than the specified number of characters. However, it is completely acceptable to fill the field with fewer characters than the maximum number. Each record -- which is the term used for each line of information -- must be terminated with a carriage return/line feed (created by pressing the "Enter "key in a text editor).

2.2 Field Data Submittals

The Field data submittal consists of the initial data submittal and the field data including: Data Provider (DataProvider), Subfacility, and the Location (Location) file including facility center point in latitude longitude coordinate, and the field data including drilling activities, lithology, well installation, well construction and well segments, geotechnical sample information, water levels, water table, downhole logging methods, extraction and injections wells, and Soil gas survey data. The first three files in the Field submittals provide information pertaining to the site, the site EDD contact, and site sampling locations. These files generally only need to be submitted once at the beginning of the project. These files only need to be resubmitted if any changes occur. Examples of changes that would require resubmittal include changes in site contact information or location data that changes after being resurveyed. New sampling locations established after the initial Location file submittal will require a new submittal with data only pertaining to the new locations. Table 2-1 provides general information on the first three files in the Field EDD section, sometimes; data provider will submit a cover letter or base maps in the Files_v3 in the Facility secion. Table 2-2 provides general information on the field data files in the Field EDD section.

Table 2-1 General information on the files that comprise the first three files in the Field EDD section

File Type	File Name	Created By	Contents	What makes a row of data unique?	Dependence of other files on these data
Data Provider	EPAR5DATAPROVIDER_v3.txt (or csv)	Data Provider	Information about the data provider	Data_Provider	Not applicable

File Type	File Name	Created By	Contents	What makes a row of data unique?	Dependence of other files on these data
Subfacility (Section 3.3)	EPAR5SUBFACILITY_v3.txt (or csv)	Data provider	One-time definition of site including EPA Region 5 data providers' contact information.	Facility_code, subfacility_name, subfacility_task_code…etc	The location file cannot be loaded without properly referenced subfacility (facility_code).
Location (Section 3.4)	EPAR5LOC_v3. txt (or csv)	Data provider's surveyor	One entry for each location on a site including a facility center point. Contains elevation, coordinate and general locational data. Facility center point is required for the initial submittal. Data should only be reported once for a location.	sys_loc_code	Sample, water levels, field measurements, and extraction well data can only be reported for locations that are defined in this file.
Alternate Position	EPAR5AlternatePosition_v3	Data Provider's surveyor	The entries for the alternate coordinates from EPAR5LOC_v3 are moved to this section, and it is an optional section.	Sys_loc_code	
Location Parameter	EPAR5LOCPARAM_V3	Data Provider's surveyor	Location parameter entries, optional	Sys_loc_code	

Data provider, Subfacility, and location files are generally only need to be submitted once at the beginning of the project, along with the **Files_v3 file** in the **Facility** section.

File Type	File Name	Created by	Contents	What makes a row of data unique?	Dependence of other files on these data

File Type	File Name	Created by	Contents	What makes a row of data unique?	Dependence of other files on these data
File_v3	The site's base map in Lat/Long and the file format must be in .dxf or drawing (.dwg) or ArcGIS Shape files. Another file type can be documents or pdf, such as cover letter or any kind of documents.	Data provider	#1. Basemap of sites in (.dxf), drawing (.dwg), or ArcGIS Shape File. #2. Cover letter or any documents in .pdf or doc files	Not applicable	Not applicable.

Field EDD submittals contain data obtained during subsurface investigations at the site. When submitting the Field EDD, all field EDD files for which information is available should be submitted. The Field EDD includes files for Drilling Activity (EPAR5DRA_v3), lithology data (EPAR5LTH_v3), general well information (EPAR5EPAR5WEL_v3), well construction information (EPAR5WSG_v3), geology sample data (EPAR5GSMP_v3), general information about the water table (EPAR5GWTR_v3), Water Table (EPAR5TBL_v3), downhole logging methods point data (EPAR5DHP_v3), extraction and injection well (ExtractionInjectionWells), soil gas survey data (SoilGas). Unlike the Lab EDD, where submittals are typically submitted on a cyclic basis, in most cases the Geology EDD is submitted only once. Additional Geology EDDs are submitted only if new geology data are collected.

Sites reporting data from monitoring wells installed or from geology-related activities completed more than one year prior to the date of data submittal are not required to submit the Field EDD files – unless the monitoring wells are being used for operation and maintenance (O&M) monitoring. However, for all newly installed monitoring wells or current geology data collection efforts (i.e., within one year from the date of data submittal), data providers must submit all applicable Field files as detailed in Section 3.

Table 2-2 provides general information on the files that make up the field files in the Field EDD. Detailed instructions for creating the Field EDD files are provided in Section 3, "Formats for Field Files". Instructions for submitting your EDDs to EPA Region 5 are presented in Section 2.15.

Table 2-2 General information on the files that comprise the field files in the Field EDD section

File Type	File Name	Created By	Contents	What makes a row of data unique?	Dependence of other files on these data
Drilling Activity (Section 3.5)	EPAR5DRA_v3. txt (or csv)	Data provider's geologist	General Information regarding soil borings.	sys_loc_code drill_event	None.
Lithology (Section 3.6)	EPAR5LTH_v3.txt (or csv)	Data provider's geologist	Lithology data for the borings.	sys_loc_code start_depth	None.

File Type	File Name	Created By	Contents	What makes a row of data unique?	Dependence of other files on these data
Well (Section 3.7)	EPAR5WEL_v3. txt (or csv)	Data provider's geologist	General information regarding well installation.	sys_loc_code	Well construction and water level data can only be reported for wells that are defined in this file.
Well Construction (Section 3.8)	EPAR5WSG_v3.txt (or csv)	Data provider's geologist	Well construction details recorded during well construction and well segments.	sys_loc_code segment_type start_depth end_depth material_type_ code depth_unit	None.
Geology Samples (Section 3.9)	EPAR5GSMP_v3. txt (or csv)	Data provider's geologist or laboratory	Contains geotechnical sample information	Sys_loc_code, geo_sample_code	None.
Water Level (Section 3.10)	EPAR5GWTR_v3.tx t (or csv)	Data provider's field sampling team(s)	Contains water levels measured from he soil borings or wells	sys_loc_code measurement_date	None.
Water Table (Section 3.11)	EPAR5TBL_v3. txt (or csv)	Data provider's geologist	General information pertaining to water table.	sys_loc_code type	None.
Downhole Point (CPT) Data (Section 3.12)	EPAR5DHP_v3. txt (or csv)	Data provider's geologist	Results of all downhole logging such as CPT, resistivity, or other geophysical logs.	sys_loc_code depth param	None.
Extraction-Injection Well (Section 3.13)	EPAR5EIW_v3. Txt (or csv)	Data provider's field sampling team(s)	Data that relates to any extraction wells that are operating as part of the remedial action and injection wells.	sys_loc_code start_measurement_date end_measurement_date	None.
Soil Gas (Section 3.14)	EPAR5SoilGas_v3. Txt (or csv)	Data Provider's geologist	Results of information regarding the soil gas	sys_loc_code	None
Sample parameter	EPAR5SAMPLEPA RAM_V3	Data Provide's sampling team(s)	Define the sample parameter	Sys_sample_code	

2.3 Lab Data Submittals

Lab EDDs are submitted after each round of sampling and include the following types of files: chemistry sample information (EPAR5SMP_v3), Test Result (EPAR5TRS_v3), test/results with QC (EPAR5TRSQC_v3), batch information (EPAR5BAT_v3).

Table 2-3 provides general information on the files that make up the Lab EDD files. Detailed instructions for creating the Lab EDD files are provided in Section 4, "Formats for Lab EDD Files". Instructions for submitting your EDDs to EPA Region 5 are presented in Section 2.15.

Table 2-3 General information on the files that comprise the Chemistry EDD

File Type	File Name	Created By	Contents	What makes a row of data unique?	Dependence of other files on these data
Sample (Section 4.1)	EPAR5SMP_v3. txt (or csv)	Data provider's field sampling team(s)	One row for each sample collected at the site.	sys_sample_code sample_matrix_code sample_type_code sample_source sample_date	Tests/results QC and batch data can only be reported for samples that are defined in this file.
Test Result (Section 4.2)	EPAR5TRS_v3.txt (or csv)	Data provider's field sampling team (s)	Contains data concerning analytical tests and results performed on samples.	Sys_sample_code Lab_anl_method_name Analysis_date	None
Test/ Result with QC Data (Section 4.3)	EPAR5TRSQC_v3.txt (or csv)	Data provider's contractor lab(s)	Test/Result file with additional fields for QC data.	sys_sample_code lab_anl_method_name analysis_date analysis_time total_or_dissolved test_type cas_rn	None.
Batch (Section 4.4)	EPAR5BAT_v3. txt (or csv)	Data provider's contractor lab(s)	Data that relate the individual samples to the batch identifier	sys_sample_code lab_anl_method_name analysis_date analysis_time total_or_dissolved test_type test_batch_type	None.

2.4 Vapor Intrusion

Test Result QC (VI_TestResultQC), and Batch (VI_Batch) data are only for Vapor Intrusion data. If the data is collected for Vapor Intrusion, then it is not required to submit the same Sample (Sample), Test Result QC (TestResultQC), and Batch (Batch) data in the Chemistry group. Table 2-4 provides general information on the Vapor Intrusion EDD files. Detailed instructions for creating the Vapor Intrusion EDD files are provided in Section 5, "Format for Vapro Intrusion Files".

Table 2-4 General information on the files that comprise the Vapor Intrusion EDD

File Type	File Name	Created By	Contents	What makes a row of data unique?	Dependence of other files on these data
Vapor Intrusion Building Address	EPAR5_VI_Bldg_Address_v3	Data provider's Vapor Intrusion team (s)	Address and contact information for the building	Building_code Building_name	None
Building data	EPAR5_VI_Bldg_Inspection_v3	Data Provider's Vapor Intrusion team (s)	Building specific data	Building_code Building_name	None
Vapor Intrusion Task Parameters	EPAR5_VI_Bldg_Parameters_v3	Data Provider's Vapor Intrusion team (s)	Additional Sampling parameters collected in the field and not analized in the lab	Task_code Param_code	None
Vapor intrusion Locations	EPAR5_VI_Locations_v3	Data Provider's Vapor Intrusion team (s)	Sampling location data	Sys_loc_code	
Vapor intrusion Outdoor location	EPAR5_VI_outdoor_locations_v3	Data Provider's Vapor Intrusion team (s)	Outdoor location data	Sys_loc_code	
Vapor Intrusion Samples	EPAR5_VI_Samples_v3	Data Provider's Vapor Intrusion team (s)	Sampling Information for Vapor Intrusion	Data_provider Sys_loc_code Sys_sample_code Sample_matrix_code Task_code Sampling_company_code Sample_start_date	Tests/results QC and batch data can only be reported for samples that are defined in this file.
Vapor Intrusion Test Result QC	EPAR5_VI_TestResultsQC_v3	**Data Provider's Vapor Intrusion team (s)**	Test Result	Sys_sample_code Lab_anl_method_name Analysis_date Total_or_dissolved Column_number Test_type	None
Vapor Intrusion Batches	EPAR5_VI_BATCHES_V3	**Data Provider's Vapor Intrusion team (s)**	Batches	Sys_sample_code Lab_anl_method_name Analysis_date Total_or_dissolved Column_number Test_type Test_batch_type Test_batch_id	None

2.7 File Naming Convention

-Sign and Submit

After using the tools outlined above to resolve all of the issues in a set of Data Files the data is ready to be submitted for loading into the EQuIS 7 database. The Sign and Submit tool was designed to facilitate submittal of data to EQuIS Enterprise EDP. Sign and Submit option packages the data files with the correct naming convention which allows easy submittal of data packages. Use of the Sign and Submit feature requires a user name and password which can be obtained from the EPA Region 5 database administrator. Please email to canar.john@epa.gov for the information.

To use the "Sign and Submit" feature, after data files have been loaded and all of the errors have been resolved,

1. Select Sign and Submit from the Application Menu. This will open the Sign and Submit window.

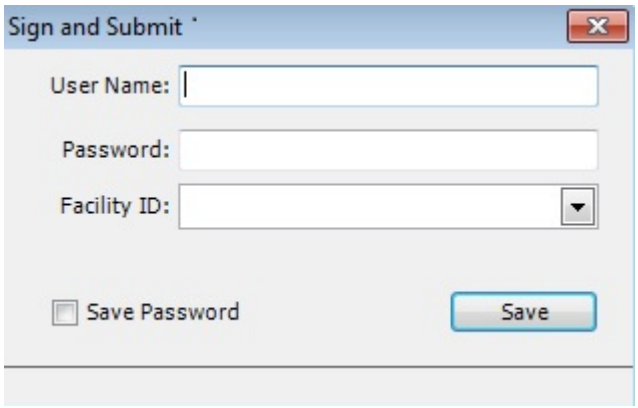


Figure 13: Sign and Submit Window

2. Enter your User Name and Password, and select the facility ID from the drop down that applies to the data package being submitted. If the Facilty ID does not exist, users can send a request to Region 5 contact to add it to the list.

3. Click the Save button, and verify if the facility you selected is corrected:

Figure 14: verify the facility

4. Click "Yes". Users will be prompted to provide a filename and location where you would like to save the file. The Sign and Submit feature will save an archived ("zipped") **file named with the current date, a period, the Facility ID, a period and the Format File name used to create the EDDs**. (Example file name: '20160811. MID000000001.EPAR5.zip'). The contents of the Zipped file include text files named for the sections of the format used to create them.

5. Select Save. Once the zipped EDD Package has been saved the following screen will appear.

Figure 15: saved the EDD file

6. Select OK

After the zipped file has been created the EDD Package is ready to be submitted to your regulator for loading into EQuIS Professional EDP or EQuIS Enterprise EDP.

-Each EDD file naming convention

Each file, except the base map file, must be named according to the following convention:

EDDFileFormat_v3.txt (or .csv)

This is the same file name as it is shown in th EPA Region 5 EDD fomat. The name of the site base map file should include the site name and EPAID and be saved in .dxf format.

Table 2-4 describes the naming formats and for the various Initial, Chemistry and Geology EDD files.

Table 2-5 EDD File Naming Formats

File Type	File Contents	EDD File Name	Submittal Type
Facility	File	Sitename.DXF, *.dwg, or shape files from ArcGIS, or Sitename.doc files from MS WORD for cover letters	Non-Recurring
Field	Data Provider	EPAR5DataProvider_v3.txt	Initial
Field	Subfacility	EPAR5Subfacility_v3.txt	Initial
Field	Location	EPAR5LOC_v3.txt	Initial
Field	Drill Activity	EPAR5DRA_v3.txt	Non-Recurring
Field	Lithology	EPAR5LTH_v3.txt	Non-Recurring
Field	Well	Wel_v3.txt	Non-Recurring
Field	Well Construction	EPAR5WSG_v3.txt	Non-Recurring
Field	Geotechnical Sample	EPAR5GSMP_v3.txt	Non-Recurring
Field	Water Level	EPAR5GWTR_v3.txt	Recurring
Field	Water Table	EPAR5TBL_v3.txt	Non-Recurring
Field	Down Hole Point (CPT) Data	EPAR5DHP_v3.txt	Non-Recurring
Field	Extraction – Injection Well	EPAR5EIW_v3.txt	Recurring
Field	Soil Gas Data	EPAR5SoilGas_v3.txt	Non Recurring
Lab	Sample	EPAR5SMP_v3.txt	Recurring
Lab	Test Result	EPAR5TRS_v3.txt	Recurring
Lab	Test/Results QC	EPAR5TRSQC_v3.txt	Recurring
Lab	Batch	EPAR5BAT_v3.txt	Recurring
Vapor Intrusion	VI Bldg address	EPAR5_VI_BLDG_ADDRESS_V3	Non Recurring
Vapor Intrusion	VI Bldg Inspection	EPAR5_VI_BLDG_INSPETION_V3	Non Recurring
Vapor Intrusion	VI Bldg Parameters	EPAR5_VI_BLDG_PARAMETERS_V3	Non Recurring
Vapor Intrusion	VI Locations	EPAR5_VI_LOCATIONS_V3	Non Recurring
Vapor Intrusion	VI Outdoor Locations	EPAR5_VI_OUTDOOR_LOCATIONS_V3	Non Recurring
Vapor Intrusion	VI Samples	EPAR5_VI_SAMPLES_V3	Non Recurring

Table 2-5 EDD File Naming Formats

File Type	File Contents	EDD File Name	Submittal Type
Vapor Intrusion	VI Test Results QC	EPAR5_VI_TestResultsQC_v3	Non Recurring
Vapor Intrusion	VI Batches	EPAR5_VI_Batches_v3	Non Recurring

2.8 Data Integrity Rules

Data providers are responsible for running three types of integrity checks on their data.

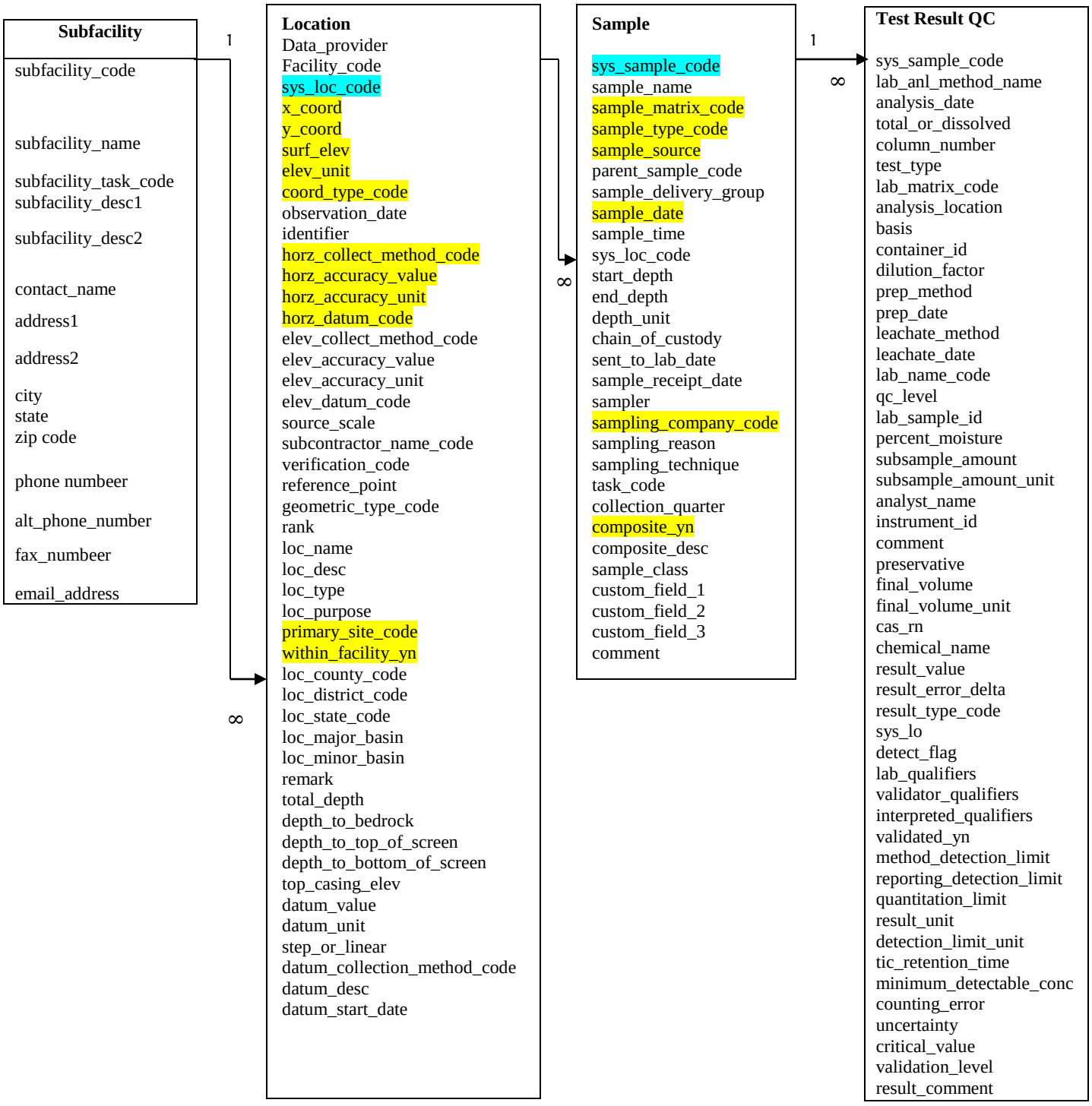
- **Validity:** All codes used in a data set must be valid. Valid values for all coded fields are either provided in the description columns of the tables in Sections 3, and 4 or in the tables in the Appendix of this manual. For example, sample matrix information is inputted in the sample_matrix_code field of the sample file and must be reported using one of the values provided in Table A-1 in the Appendix.

- **Row Uniqueness:** Row uniqueness must be verified using the guidance provided in Tables 2-1, 2-2, and 2-3. Row uniqueness is assured when no two rows in a file contain the same values for all the fields listed under the heading "What makes a row of data unique?" In database terminology this is called a primary key. For example, no two rows in the sample file can contain the same sys_sample_code (commonly called a sample identifier). In addition, no two rows ever reported for a single site can contain the same sys_sample_code. Each sys_sample_code must be unique for a site.

  Files that have a primary key consisting of multiple fields, such as the water level file, must have a different value in at least one of the prmary key fields. For example, no two rows in the water level file can have the same sys_loc_code, measurement_date. For example, two rows with sys_loc_code of "SB-01", measurement_date of "05/02/2000 00:00:00" would violate row uniqueness. However, row uniqueness would not be violated if one row had a sys_loc_code of "SB-01", measurement_date of "05/02/2000 00:00:00" and the other row had sys_loc_code of "SB-01", measurement_date of "06/12/2000 00:00:00".

- **Row Integrity:** The relationship between rows within the files of the EDD must be assured by enforcing the "referential integrity" rules discussed in Tables 2-1, 2-2, and 2-3 under the column labeled "Dependence of other files on these data." For example, the values in the sys_sample_code field in the Test/Result file must match with the corresponding fields in the Sample file. Logical relationships between the various Lab EDD files are shown in Figure 2-1. The lines connecting the files show which column(s) (or field(s)) are related in the two files. The file on the side with the "1" at the end of the connecting line contains one row that is related to more than one row in the related file on the other side. For example, one row in a SUBFACILTY EDD file may correspond to many rows in a LOCATION EDD file because there are always more than one, and in most cases many locations, designated at a site. The logical relationship between the FIELD EDD files is limited to the requirement that all entries in the sys_loc_code fields appear in the LOCATION EDD file.

Figure 2-1 Relationships between Lab file data structures.

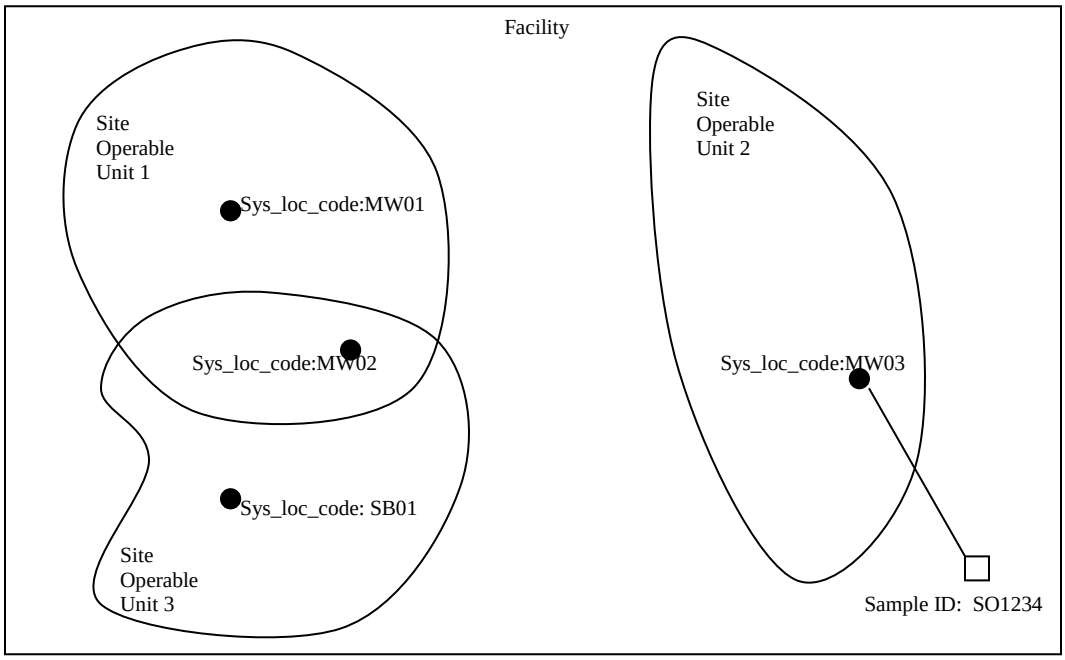


Shaded fields are required to have data. Blue fields define row uniqueness for the specified file.

2.9 Definition of a Facility, Site, and Location

To submit and error-free EDD, it is important to understand how EPA Region 5 defines facility, site, and location for the purposes of this EDD Specification Manual. Each facility (facility_id) will be identified with its EPA ID number (see Table A-22 in the Appendix.) As EPA requirement, a facility center point must be populated with the latitude and longitude centroid of the facility (*). The site (site_code) will be the operable unit identifier. There will always be at least one operable unit per facility. The way the location term is used is that each site can contain one or more locations, as long as they are distinct points defined by X and Y universal transverse Mercator (UTM) coordinates Examples of locations include soil borings, monitoring wells, and sampling locations. Each location identifier (sys_loc_code) must be unique for a facility.
Figure 2-2 provides a diagram of the facility components.

Figure 2-2 Facility component definitions



Facility ID = EPA ID #
Site = Site Operable Unit = site_code *Must be unique at a Facility*
Location= sample location = sys_loc_code Must *be unique at a Facility*

2.10 Reporting Null Values

When a field is not listed as required in Sections 3, and 4 and the data is not available or applicable, a null or blank may be appropriate. However, tabs or commas must still delimit the blank value. In other words, the number of fields is always the same, whether or not the fields include data. So a blank field in a tab-delimited file would appear as "<TAB><TAB>" and a blank field in a comma-delimited file would appear as ",,".Table 2-5 shows a number of examples.

Table 2-6 Examples of how to report null values

Example	Comment
"data_one"<tab>"data_two" <tab>"data_three" "data_one","data_two","data_three"	**O.K.** All fields populated, one tab or comma between fields.

Table 2-6 Examples of how to report null values

Example	Comment
"data_one" <tab><tab>"data_three" "data_one",,"data_three"	**O.K.** Optional field not populated, 2 tabs or 2 commas between first and third field.
"data_one" <tab>"data_three" "data_one","data_three"	**Not O.K**. Optional field omitted, only 1 tab or comma between first and third field.

2.11 Valid Values

Valid values, also known as reference values or code lists, govern the contents of some fields in the EDDs. In other words, some fields may only be populated with data that matches a value listed in the EPA Region 5 list of valid values. The lists of valid values are provided in the "Valid Values Table Reference Manual". A list of all the data fields that must contain valid values is presented in Table 2-6 (below). This list is also cross-referenced to the EDD file(s) the field appears in. If data providers need to enter a value not already in the Region 5 list in the Appendix, they can request the proposed addition to the valid value list in the EDD cover letter. The data provider should explicitly state the valid value that she/he would like added, provide a description of the value, and explain why the addition is necessary. In the case of requesting a new aboratory code, the data provider should include the full name of the laboratory and its address. When requesting an addition of an analyte, the data provider must include the appropriate CAS number or ERPMS code along with a description of the analyte.

Table 2-7 Cross-reference between the valid value tables in appendix and the EDD files

Valid Value Table Name	Table Number	Field Name	EDD File
Matrix	A-1	sample_matrix_code, lab_matrix_code	Chemistry Samples, Test/Results
Geometric type	A-2	Geometric_type_code	Location
Horizontal Collection Method	A-3	horz_collection_method_code	Location
Horizontal Accuracy Unit	A-4	horz_accuracy_unit	Location
Horizontal Datum	A-5	horz_datum_code	Location
Elevation Collection Method	A-6	elev_collect_method_code	Location
Elevation Datum	A-7	elev_datum_code	Location
Material	A-8	Material_type	Basic Geology
Location Type	A-9	loc_type	Location
Qualifier	A-10	lab_qualifiers, validator_qualifiers	Test/Results
Result Type	A-11	result_type_code	Test/Results
Sample Type	A-12	sample_type_code	Chemistry Samples
Geologic Unit	A-13	Geologic_unit_code	Geotechnical Samples
Standard Preparation Method	A-14	lab_prep_meth	Test/Results
Analyte	A-15	cas_rn, chemical_name	Test/Results
Lab Analysis Method Name	A-16	lab_anl_method_name	Test/ Results

Valid Value Table Name	Table Number	Field Name	EDD File
Laboratory	A-17	lab_name_code	Test/Results
Unit	A-18	various_unit fields throughout all files	All Files
Geology Soil Materials	A-19	material_type	Lithology, Geology Samples
Well Segment and Materials	A-20	segment_type, material_type_code	Well Construction
Hydrologic Unit Codes (HUC)-Basin	A-21	loc_major_basin	Location
EPA Facility IDs	A-22	facility_id, site_name	Site
Company code	A-23	Data_provider	Location, Sample, Test Result, Data Provider
Total or dissolved	A-24	Total_or_dissolved	Test Result, Test Result QC, Batch
Test Type	A-25	Test_type	Test Result, Test Result QC, Batch
Test Batch Type	A-26	Test_batch_type	Batch
Reference Point	A-31	reference_point	Location
Source_scale	A-32	Source_scale	Location

2.12 Reporting Re-Tests

For initial tests, all analytes should be reported. In the case where retests are performed on a sample, the result that is considered the reportable result should indicate a "Y" (for "yes") in the reportable_result field. The initial test, and any retest result not considered reportable will have reportable_result set to "No". Table 2-7 provides examples of reporting re-tests.

Table 2-8 Example of reporting re-tests

Test Type	Chem Name	Cas rn	Result Value	Detect Flag	Lab Qualifiers	Reportable Result	Result_Comment
Initial	Benzene	71-43-2	1000	Y	E	No	too concentrated to quantitate
Initial	Toluene	108-88-3	5	N	U	Yes	not detected
Initial	Xylenes	1330-20-7	5	N	U	Yes	not detected
dilution1	Benzene	71-43-2	780	Y		Yes	Quantitated

2.13 Reporting Non-Detects

Non-detects must be reported as shown in the example below. Each non-detect row must show an "N" in the detect_flag field, must have an actual value entered in the reporting_detection_limit and detection_limit_unit fields, and must contain a null in the result_value_field. The reporting_detection_limit cannot be negative unless one of the radiological fields (including minimum_detectable_conc, counting_error, uncertainty, critical_value) are populated. Table 2-8 presents examples of how to report non-detects.

Table 2-9 Example of reporting non-detects

Cas rn	Result Value	Detect Flag	Reporting Detection Limit	Detection Limit Unit	Result_comment	Laboratory_ qualifiers
108-88-3	.15	Y	.005	ug/ml		U
108-88-3		N	.005	ug/ml	not detected	U

2.14 Reporting Tentatively Identified Compounds

Tentatively Identified Compounds (TICs) should be reported when available. The naming of TICs should be applied in a cascade fashion. The TIC should be identified to analyte name if possible. If this is not possible, then the class of the TIC should be entered. If neither an analyte name nor a class can be identified, the TIC should be identified as Unknown. The EPA Region 5 EDD only allows for reporting up to 10 TICs. Only the 10 most concentrated or most relevant TICs should be reported. Table 2-9 shows examples of the nomenclature for TICs. As an example, if a sample has three Unknown Hydrocarbons, then the TICs are labeled UnkHydrocarb1, UnkHydrocarb2, and UnkHydrocarb3. TIC names are to be reported in the cas_rn field, Pos #31, of the Test/Result file (Tables 4-3 and Table 4-4). In addition, the result_type_code, Pos # 35 in the Test/Result file should have "TIC" for all TIC records.

Table 2-10 Example nomenclature for TIC reporting

TIC Name	Number for TIC	Reported Name in cas_rn
Unknown	1-10	Unknown1 – Unknown10
Unknown Hydrocarbon	1-10	UnkHydrocarb1 - UnkHydrocarb10
Unknown PAHs	1-10	UnkPAH1 - UnkPAH10
Unknown Aromatics	1-10	UnkAromatic1 - UnkAromatic10
Unknown VOA	1-10	UnkVOA1 - UnkVOA10
Unknown SV	1-10	UnkSV1 - UnkSV10

2.15 Data Types

The table below describes the data types used in the chemistry and geology file descriptions. In addition to the types listed below, certain fields have single and double data types. The single data type stores numbers from -3.402823×10^{38} to $-1.401298 \times 10^{-45}$ for negative values and from 1.401298×10^{45} to 3.402823×10^{38} for positive values, with a decimal precision of up to 7 digits. The double data type stores numbers from $-1.79769313486231 \times 10^{308}$ to $-4.94065645841247 \times 10^{-324}$ for negative values and from $1.79769313486231 \times 10^{308}$ to $4.94065645841247 \times 10^{-324}$ for positive values, with a decimal precision of up to 15 digits.

Table 2-11 Data type descriptions

Type	Description	Decimal Precision	Comments
Integer	Stores numbers from –32,768 to 32,767 (no fractions).	None	
'Y' or 'N'	Boolean field used to indicate yes or no to a question. Enter either Y or N.	NA	
Time	Time in 24-hr (military) HH:MM:SS format.	NA	Text (8) is standard length for time.
Date	Date format is MM/DD/YYYY.	NA	

Type	Description	Decimal Precision	Comments
Text	Stores characters and numbers.	NA	Length restrictions are indicated in parentheses.

2.16 Data Entry Tools Provided to Create the EDD Files

EDD files can be produced using any software with the capability to create text files. These files are especially easy to create using spreadsheet or database software packages. However, if these are unavailable, the files can be created using a word processor or text editor. Table 2-12 provides instructions for creating tab-delimited text files from some widely-used software packages.

Table 2-12 Instructions for producing tab-delimited text files from some software packages

Package	Type	Instructions
Access	Database	1. Create tables using file structures in Sections 3 and 4. 2. After data are entered, close table. 3. Click on table name (under table tab) and then select "File," "Save As," from the top menu. Save to an external file or database. Change "Save as Type" to a text file. Change the file extension from "txt" to "tab." Press OK. This will start the export wizard. 4. In the export wizard, select "Delimited," then press the "Next" button. Select "Tab" as the delimiter type and " as the text qualifier. Press the "Next" button. Select a destination and name for the file. Press the "Finish" button.
Excel	Spreadsheet	1. Select "File," "Save As," from the top menu. Change "Save as Type" to a "Text (Tab Delimited)" file. Press the "Save" button.
Quattro® v8	Spreadsheet	1. Select "File," "Save As," from the top menu. Change the "File Type" to "ASCII Text (Tab Delimited)." Press the "Save Button."
Word	Word Processor	[Note: A word processor is not the best tool for the job! A large paper size will have to be selected to prevent wrapping for most files.] [wrapping?] 1. Enter data into a table in Word. Any text entered must be contained within double quotes. 2. Select "Table," "Select Table," from the top menu. When the table is highlighted, select "Table," "Convert to Text," "Separate Text with Tabs." 3. Select "File," "Save As," from the top menu. Change "Save as Type" to "MS DOS Text (*.txt).
Lotus 1-2-3	Spreadsheet	1. Select "File," "Save As," from the top menu. Change "Save as Type" to a "Comma Separated Value (CSV)" file. Provide file name. Press the "Save" button.

2.17 Using the Electronic Data Processor to Check EDD Formatting

The Electronic Data Processor (EDP) can be used by Data Providers to check EDD files prior to submittal to EPA Region 5. The EDP is a no-cost application that performs a series of formatting checks on the files and then identifies any records that have errors along with a description of the errors. This allows the Data Provider to correct the errors before sending the files to EPA Region 5. EDD files that pass through the EDP error-free should also result in error-free import at EPA Region 5.

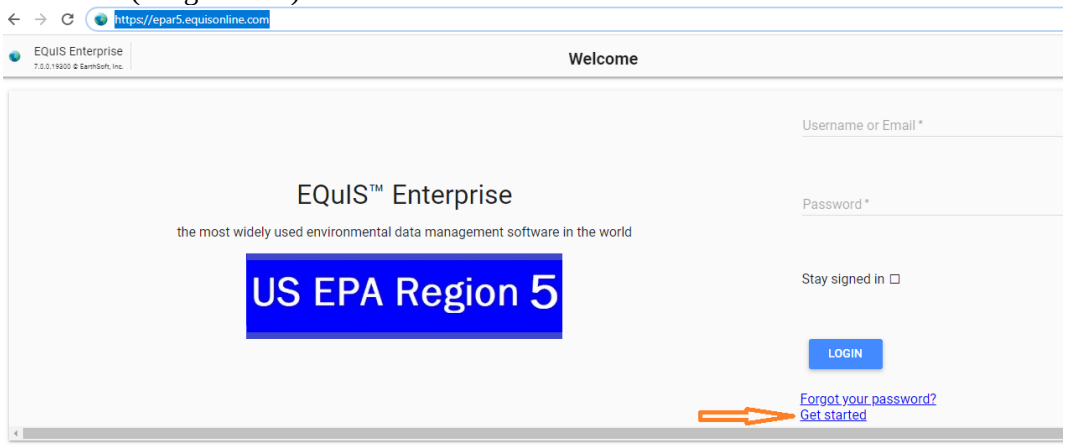
EDP is currently available as a no-cost download from the EPA Region 5 website located at at https://www.epa.gov/superfund/region-5-superfund-electronic-data-submission. Instructions on how to install and use the EDP are also provided on the website.

2.18 Submitting Your EDD to EPA Region 5

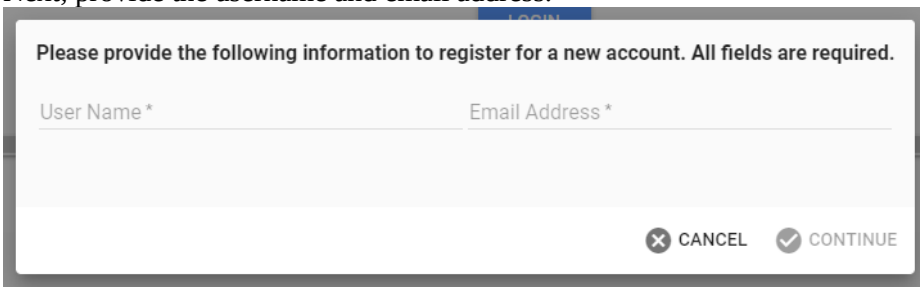
Each EDD must be checked using the EDP and the most updated EDD format before submitting to EPA Region 5. Please follow the three steps below to submit your EDD data:

Got to EQuIS enterprise to set up your own username and password:
In order to use the **Sign and Submit** process in the EDP to create a EDD zip data package, you need to go to EQuIS Enterprise https://epar5.equisonline.com/ , then follow the steps below to set up your username and password:

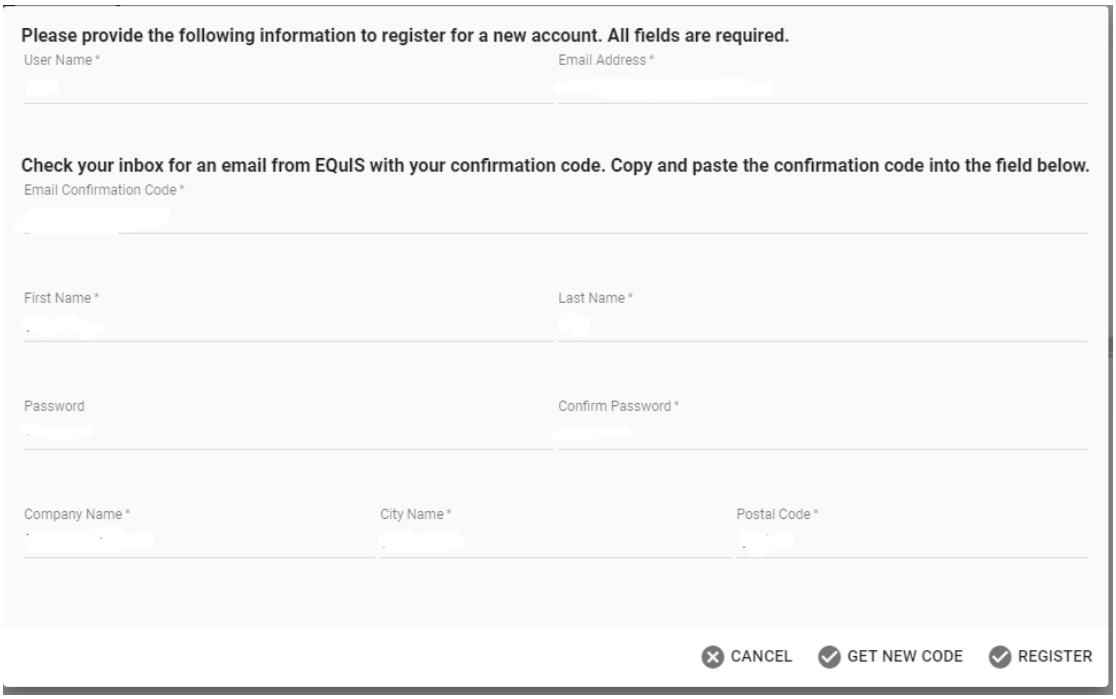
1. Select the "**Get Started**" link below the "Forgot your password?" link to register yourself as a new user. (image below)



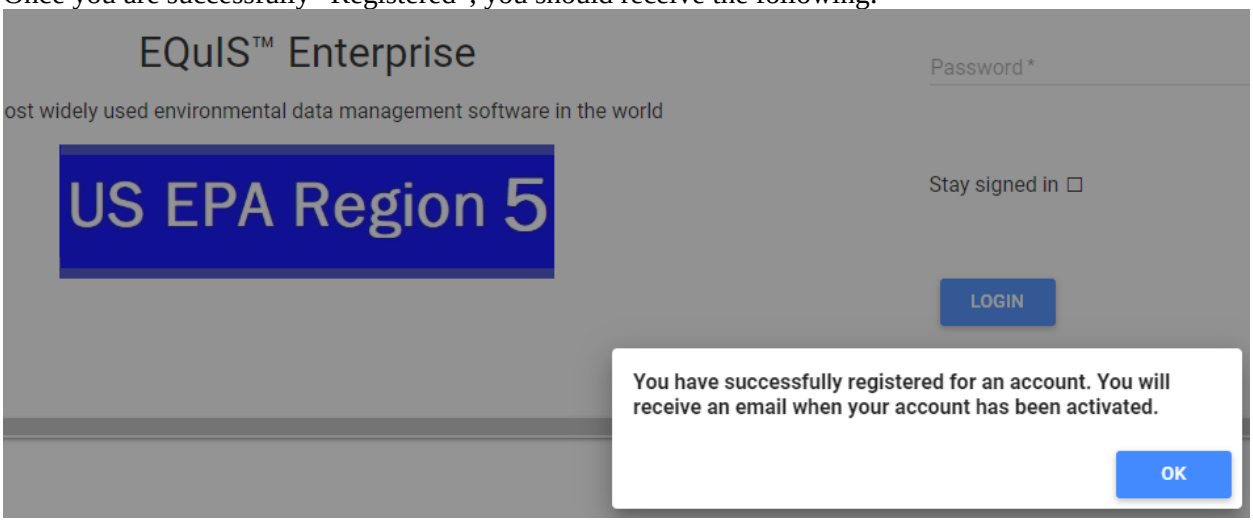
2. Next, provide the username and email address:



3. Click "Continue"
4. If you enter your email address correctly, you should receive a "confirmation code", enter the confirmation code in the next screen:



5. Fill in the form with your First Name, Last Name, Password, Cofirm Password, Company Name, City Name, and Postal Code
6. Click "Register" or if you don't receive your confirmation code, click "GET New Code"
7. Once you are successfully "Registered", you should receive the following:



8. EPA Region 5 database manager John Canar (canar.john@epa.gov) will receive your registeration request, and assign your role and approve your request.
9. Once you are approved with your assigned role, you should receive a email to ask about the site(s) names that you are going to submit data for.
10. Now you should be able to use your username and password in the Sign and Submit process.

The Sign and Submit process allows data provider to save the EDD in their preferred folder or directory. The EDD zip package should be named using the naming convention that was shown in **section 2.4**.

Email to EPA Region 5 EQuIS Enterprise Database:

- Once the EDD zip file has been created, the EDD is ready to be emailed to EPA EQuIS Enterprise processor. Please follow the following 2 steps:

1. Change the file extention from ".zip" to ".edd". In other words, your EDD is zipped in EDP, such as "20190811. MID000000001.EPAR5.zip", you need to change the file extention to ".edd", meaning the file name will become "20160811. MID000000001.EPAR5.edd"

2. Send the ".edd" file to to EPAR5@EQuISOnline.com

Notify EPA Region 5 when the data is sent to the EPA Region 5 EQuIS Enterprise database:

Please notify the EDD database adminstrator canar.john@epa.gov for each EDD that has been emailed to the EPA Region 5 EQuIS Enterprise database.

EDD submittal types

There are three possible EDD submittal types: an original submittal, an error correction resubmittal, and an update submittal. These three EDD types are described below.

- **Original Submittal**: An original EDD submittal contains data being submitted for the first time to EPA Region 5. EPA Region 5 will process and check the EDD. If there are no errors in any of the EDD files, EPA will import the data to the permanent database. EPA Region 5 can only import and accept the EDD submittal if all files in the submittal are error-free. If any of the files on the EDD contain errors, EPA will send the data provider a letter specifying the errors that need to be corrected.

- **Correction Resubmittal**: In the case where an original EDD submittal contains errors, the entire EDD submittal will be returned to the data provider along with an error report explaining the problems identified. The data provider should then correct the errors, check the files again with the EDP, and then resubmit the entire EDD. A response is required within 30 days. It is important that the resubmitted EDD contain all of the files and the SAME FILE NAMES (i.e., use the same site name and submittal date in the file name as was used in the original submittal) as those in the original submittal. Thus, the EDD resubmittal will be identical to the original submittal in everyway except the errors are corrected.

- **Update Submittal:** This type of submittal updates data that has previously been accepted by EPA Region 5. The files of an update submittal should contain only data for the records being updated. For example, say a data provider submits an EDD in 2014 that includes a location file (e.g., EPAR5LOC_v3.txt) that contains ten locations, and the EDD is accepted by EPA Region 5 and loaded into the EPA database. If, in 2016, the site is resurveyed, and it is discovered that three of the locations' coordinate information has changed due to increased accuracy, a new location file containing data for only those three locations would need to be submitted as an update submittal. The update submittal would be included in a cover letter and name the file correctly. Note: All required fields need to be populated for the three locations regardless of whether or not these fields were updated. The reason for the update submittal and the records that have been changed must be clearly indicated in the cover letter accompanying the updated EDD.

2.19 Examples of Field, and Lab EDD Files

Examples of Field and Lab EDD files with the first few rows of the EDD populated with a typical data set are presented in Figures 2-3, 2-4, 2-5, and 2-6. These examples were produced using Excel worksheets. To submit these files, the data provider would save the files as text delimited files (txt) or comma separated files (csv), check the files using the EDP, and then send the error free files to Region 5. In order to fit the examples on one page, not all of the fields (i.e., columns) were included for certain files (e.g., Subfacility, Location, and Sample). The notation "*Additional Fields"* has been inserted where, for purposes of these examples, one or more fields have been omitted. It should be noted that all fields must appear in the EDD files you submit regardless of whether or not the field is populated (see Section 2.7 regarding reporting blanks, or "null" values). Special cases discussed in previous sections of this manual, as well as more standard types of data, are illustrated below.

Figure 2-3. Example Field EDD ready for conversion to text file

Subfacilty File (EPAR5SUBFACILITY_v3):

subfacility_code	subfacility_name	subfacility_task_code	subfacility_desc1	subfacility_desc2	contact_name	address1	*Additional Fields*	email_address
01	Facility Name				John Smith	23 Main Street		abc@abd.com

Location File (EPAR5LOC_v3):

Data_provider	Facility_code	sys_loc_code	X_coord	Y_coord	surf_elev	elev_unit	coord_type_code	observation_date	*Additional Fields*	comment
ABD	MID0000001	MW01	573535.16	46185.25	120.2	ft	UTM Zone 16	02/21/2015		
ABD	MID0000001	SB-01	571535.28	46185.22	126.3	ft	UTM Zone 16	02/23/2015 9		
ABD	MID0000001	MW03	571525.28	47558.33	130.1	ft	UTM Zone 16	02/22/2015		
ABD	MID0000001	MW04	561528.33	46004.25	130.1	ft	UTM Zone 16	02/22/2015		

Figure 2-4. Example Lab EDD ready for conversion to text file

Sample File (EPAR5SMP_v3):

Data_provider	sys_sample_code	sample_name	sample_matrix_code	sample_type_code	sample_source	parent_sample_code	sample_delivery_group	sample_date	sys_loc_code	*Additional Fields*	comment
ABD	MW-01_20150401		WG	N	Field			04/01/201512 :00:00	MW01		
ABDE	MW-02_20150401		WG	N	Field			04/01/2015 12:00:00	MW02		

Test Result QC File (EPAR5TRSQC_v3):

sys_sample_code	lab_anl_method_name	*Additional Fields*	total_or_dissolved	column_number	test_type	lab_matrix_code	analysis_location	basis	*Additional Fields*	dilution_factor	lab_name_code	qc_level	lab_sample id_	*Additional Fields*
MW-01_20150401	SW8240		T		Initial	WG	LB	Wet		1.0	ABC	quant	LAB01	
MW-01_20150401	SW8240		T		Initial	WG	LB	Wet		1.0	ABC	quant	LAB02	
MW-01_20150401	SW8240		T		Reanalysis	WG	LB	Wet		10.0	ABC	quant	LAB02R	

Test Result QC (EPAR5TRSQC_v3) (Continue):

cas_rn	chemical_name	result_value	result_error_delta	result_type_code	reportable_result	detect_flag	lab_qualifiers	Validated_yn	Method_detection_limit	reporting_detection_limit	Quantitation_limit	result_units	*Additional Fields*	result_comment
71-43-2	BENZENE	12		TRG	Yes	Y		Y		10		ug/ml		
108-88-3	TOLUENE			TRG	Yes	N		Y		10		ug/ml		
1330-20-7	XYLENES			TRG	Yes	N		Y		10		ug/ml		

Figure 2-5. Examples of QC data fields in a Chemistry EDD

QC fields in a normal field sample (i.e., sample_type_code = N, TB, etc.)

The following table shows some of the fields in the test/result (TRS) file for a normal field sample. Notice that all QC fields are blank.

cas_rn	result_value	qc_original_conc	qc_spike_added	qc_spike_measured	qc_spike_recovery	qc_dup_original_conc	qc_dup_spike_added	qc_dup_spike_measured	qc_dup_spike_recovery
93-76-5	1.56								
94-75-7	3.17								
94-82-6	2.31								

QC fields in a normal field sample with surrogates (i.e., sample_type_code = N, TB, etc.)

The following table shows some of the fields in the test/result file (TRS) for a normal field sample. Notice that QC fields are blank except in rows related to surrogate samples. . Many data providers will only need to populate the recovery field data; the spike-added and spike-measured fields will not be needed in most situations.

Cas_rn	result_value	result_unit	result_type_ code	qc_original_ conc	qc_spike_added	qc_spike_ measured	qc_spike_ recovery
93-76-5	1.56	mg/l	TRG				
94-75-7	3.17	mg/l	TRG				
PHEN2F		mg/l	SUR		12.5	12.9	103

QC fields in a laboratory method blank sample (i.e., sample_type_code = LB)

The following table shows some of the fields in the test/result file for a laboratory method blank sample. Notice that all QC fields are blank.

cas_rn	result_ value	lab_ qualifier	qc_ original_ conc	qc_spike_ added	qc_spike_ measured	qc_spike_ recovery	qc_dup_ original_ conc	qc_dup_ spike_ added	qc_dup_ spike_ measured	qc_dup_ spike_ recovery
93-76-5		U								
94-75-7		U								
94-82-6	0.01									

Figure 2-5. Examples of QC data fields in a Chemistry EDD (continued)

QC fields in a matrix spike (i.e., sample_type_code = MS*)*

The following table shows some of the fields in the test/result file for a matrix spike sample. Notice that all "dup" QC fields are blank and that the result_value field is not needed. Also, the qc_rpd field would be blank for these rows. Many data providers will only need to populate the calculated recovery field (qc_spike_recovery).

cas_rn	result_ value	qc_ original_ conc	qc_spike_ added	qc_spike_ measured	qc_spike_ recovery	Qc_rpd	qc_dup_ original_ conc	qc_dup_ spike_ added	qc_dup_ spike_ measured	qc_dup_ spike_ recovery
93-76-5		1.56	4.18	5.36	90.9					
94-75-7		3.17	4.18	7.15	95.2					
94-82-6		2.31	4.22	5.66	79.3					

QC fields in a matrix spike duplicate (i.e., sample_type_code = SD*)*

The following table shows some of the fields in the test/result file for a matrix spike duplicate sample. Notice that all "dup" QC fields are filled in and that the result_value field is not needed. Also, the qc_rpd field would be completed for these rows. Many data providers will only need to populate the calculated recovery field (qc_dup_spike_recovery).

cas_rn	result_ value	qc_ original_ conc	qc_spike_ added	qc_spike_ measured	qc_spike_ recovery	Qc_rpd	qc_dup_ original_ conc	qc_dup_ spike_ added	qc_dup_ spike_ measured	qc_dup_ spike_ recovery
93-76-5						10	1.56	4.23	5.70	97.8
94-75-7						12	3.17	4.23	7.62	105
94-82-6						15	2.31	4.13	5.33	73.1

QC fields in a matrix spike/matrix spike duplicate (i.e., sample_type_code = MSD)

The following table shows some of the fields in the test/result file for a matrix spike/matrix spike duplicate considered as a single sample . (Note: Matrix spike and matrix spike duplicate samples can be reported either this way or as two separate samples as shown above). Notice that all QC fields are filled in and the result_value field is not needed. Also, the qc_rpd field would be completed for these rows. Many data providers will only need to populate the calculated recovery fields (qc_spike_recovery and qc_dup_spike_recovery).

cas_rn	result_ value	qc_ original_ conc	qc_spike_ added	qc_spike_ measured	qc_spike_ recovery	Qc_rpd	qc_dup_ original_ conc	qc_dup spike_ added	qc_dup spike_ measured	qc_dup spike_ recovery
93-76-5		1.56	4.18	5.36	90.9	7	1.56	4.23	5.70	97.8
94-75-7		3.17	4.18	7.15	95.2	10	3.17	4.23	7.62	105
94-82-6		2.31	4.22	5.66	79.3	8	2.31	4.13	5.33	73.1

QC fields in a LCS (i.e., laboratory control sample, blank spike, sample_type_code = BS)

The following table shows some of the fields in the test/result file for an LCS sample. The qc_rpd field would be blank for these rows. Many data providers will only need to populate the calculated recovery field (qc_spike_recovery). LCS duplicate samples (i.e., sample_type_code = BD) and LCS/LCSD samples (i.e., sample_type_code = BSD) follow the patterns similar to the SD and MSD samples described above.

cas_rn	result _value	qc_original _conc	qc_spike_ added	qc_spike_ measured	qc_spike_ recovery	qc_dup_ original_ conc	qc_dup_ spike_ added	qc_dup_ spike_ measured	qc_dup_ spike_ recovery
93-76-5			5.00	5.26	105				
94-75-7			1.00	1.02	102				
94-82-6			12.5	12.9	103				

Figure 2-6. Example Field EDD ready for conversion to text file

Drill Activity File:

sys_loc_code	drill_event	start_depth	end_depth	drill_date	diameter	*Additional Fields*	purpose
W-4A	1a	40	80	07/12/1999	8		Advanced well additional 40 feet to reach lower aquifer
W-6B	2c	45	110	07/14/1999	8		Advanced well 55 feet to reach bedrock.

Lithology File:

sys_loc_ code	start_ depth	material_ type	geo_unit_1	*Additional Fields*	Remark_1	*Additional Fields*	odor
W-1A	0	CL	Glacial		grayish brown clay, trace fine sand, med strength, med plastic, rapid dilatancy ,some brick fragments		
W-1A	10	SW	Outwash		med dense, 50% fine to coarse brown sand, 30% gravel, dry, trace clay		
W-1A	23	SP	Outwash		dense, 70% coarse brown sand, 20% gravel, poorly graded, rounded, moist		
W-2A	0	ML	Alluvial		Dark brown silt with little fine sand, low strength, nonplastic, rapid dilatancy		

Well File:

sys_loc_code	*Additional Fields*	top_casing_elev	datum_value	datum_unit	datum_desc	*Additional Fields*	geologic_unit_ code	remark
W-1A		122.0	122.0	ft	top of casing of well		outwash	
W-2A		122.3	122.3	ft	top of casing of well		alluvial	

Figure 2-6. Example Field EDD for new monitoring wells or direct push samples ready for conversion to text file (continued)

Well Construction File

sys_loc_code	segment_type	material_type_code	start_depth	end_depth	depth_unit	inside_diameter	*Additional Fields*	remark
W-1A	surface plug	concrete	0	1.5	ft	4.5		
W-1A	annular backfill	neat cement grout	1.5	8	ft	2.375		
W-1A	annular Seal	Bentonite pellets	8	8	ft	2.375		
W-1A	Filter Pack	sand pack	8	23.1	ft	2.375		
W-1A	Protective Casing	steel	-2.2	3.2	ft	4		
W-1A	Casing	stainless steel 304	-2.1	24	ft	2		
W-1A	Screen	stainless steel 304	24	29	ft	2		
W-2A	protective casing	steel	-2.0	3.0	ft	2		
W-2A	surface plug	concrete	0	1.5	ft	4.5		
W-2A	annular backfill	neat cement grout	1.5	10	ft	2.375		

Geology Sample File:

sys_loc_code	Geo_sample_code	sample_name	sample_top	sample_bottom	sample_date	*Additional Fields*	sample_method	material_type	*Additional Fields*	organic_carbon_units
W-1A	ABCD-1		4	6	04/23/1999 00:00:00		split spoon	SW		
W-1A	ABCD-2		14	16	04/23/1999 00:00:00		split spoon	SW		
W-2A	DEFG-1		5	7	04/24/1999		split spoon	SP		

Figure 2-6. Example Geology EDD for new monitoring wells or direct push samples ready for conversion to text file (continued)

Water Table File:

sys_loc_code	Type	sequence	Depth	flowing_yn	measurement_method	capped_pressure	capped_pressure_unit	*Additional Fields*	temperature_unit
MW01	Unconfined	stable	21.2	y	electric sensor				
MW02	Unconfined	stable	21.0	y	electric sensor				

Downhole Point File:

sys_loc_code	Depth	param	param_value
MW01	10.8	Tip Stress	612
MW01	11.2	Tip Stress	624
MW01	10.8	Sleeve Stress	6.1
MW01	11.2	Sleeve stress	5.8
MW02	9.5	Resistivity	510
MW02	10.1	Resistivity	521
MW02	11.0	Resistivity	489

Water Level File:

sys_loc_code	measurement_date	historical_ref_elev	water_level_depth	water_level_elev	corrected_elev	*Additional Fields*	remark
MW01	05/10/1999 13:10:00		31.1	89.1			
MW02	05/10/1999 13:45:00		34.1	89.0			

Extraction Injection Wells

sys_loc_code	Start_measurement_date	end_measure_date	avg_pump_rate	pump_rate_unit	*Additional Fields*	remark
EX-01	05/12/2000 11:23:00	06/12/2000 11:30:00	2.5	mgd		
EX-02	11/12/2000 12:00:00	12/12/2000 13:10:00	1.75	mgd		

3. FORMATS FOR Facility Files and Field Files

This section contains information regarding the base map and the two files included in the Facility EDD. These files need to be submitted prior to, or in conjunction with, the first Field EDD submittals These files only need to be submitted once unless information in the files changes or additional information, such a new sampling location, needs to be added. Columns marked "Required" must be reported for each row in the file. If these fields are not reported, errors will be identified in the EDD and the EDD will need to be resubmitted. Columns marked "If available" should also be reported if possible.

3.1 Facility EDD Files

Site Base Maps in the file section (Files_v3)
Site base maps can be submitted in CAD files in a DXF interchange format, or drawing (.dwg) file, or Shapfiles generated from ArcGIS. The maps should include all well locations, waste management units, landfills, buildings, and roads. **Do not include any groundwater contours, contaminant contours, or other temporal type information.** If the CAD file is available in real world locational coordinates, provide the coordinates along with a brief text description of the type of projection and datum used. (Note: UTM NAD 83 is the data type preferred by EPA Region 5). Also include text descriptions of the units and scale of the base map. The site base map file should be named according to the following example:

SiteName.DXF (or dwg, or shape files)

The file section allows you to load supplementary information into EQuIS, such as Map, drawing files. The naming convention of the File_v3 is:

File_v3.txt (or .csv)

Table 3-1 Files (Files_v3) structure

Pos#	Column Name	Data type	Required	Description	Valid Values In Appendix
1	File_name	Text (255)	Yes	Name of the file	No
2	File_type	Text (20)	Yes	Type of the file	No
3	File_date	Date time	If available	Date of the file	No
4	Title	Text (255)	If available	Title of the file	No
5	Author	Text (255)	If available	Author of the file	No
6	Confidential _yn	Text (1)	If available	Whether or not the file is confidential	No
7	Remark	Text (255)	If available	Remark for the file	No
8	Place_type	Text (50)	If available	Type of the place tis file is associated with	No
9	Place_code	Text (50)	If available	Code/identifier of the place this file is associate with	No
10	Place_subcode	Text (50)	If available	Subcode/ identifier of the place this file is associated with	No
11	Content			Content of the file	No

3.2. Field Files-DATAPROVIDER

This section contains tables that define the file structures for the FIELD EDD. The file structures include the first three initial EDD files: Data Provier, Subfacility, and Locations, also the drilling activity, lithology, well, well construction, geotechnical samples, water levels, Water Table, downhole point, extraction injection wells, and Soil Gas data. The columns marked "Required" must be reported for each row in the file. If an EDD is submitted with one or more "Required" fields not filled in, EPA will not be able to load the EDD into its database, and the EDD will have to be returned to the data provider for correction(s). The columns marked "If available" should also be reported whenever possible. Examples of the EDD files that make up the Field EDDs are provided in Figure 2-6, section 2.16.

Data Provider (EPAR5DATAPROVIDER_v3)

The Data Provider EDD file provides general information about the data provider who is the contact for the data on the site.

EPAR5DataProvider_v3.txt (or .csv)

Table 3-2 Data Provider (EPAR5DataProvider_v3) File Structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	Data_Provider	Text(20)	Required	This is the name of the company who is responsible for providing the site data.	A-23
2	Data_Contact _Person	Text(30)	Not Required	This is the name of the contact person who is responsible for providing the site data.	No
3	Data_Contact _Address1	Text (40)	Not required	Data Provider address 1	No
4	Data_Contact _Address2	Text (40)	Not required	Data Provider address 2	No
5	Data_Contact _City	Text (30)	Not required	Data Provider city	No
6	Data_Contact _State	Text(5)	If Available	Contact state	No
7	Data_Contact_zi pcode	Text(10)	Not required	Contact zip	No
8	Data_Contact _email	Text(60)	Required	Contact email address	No
9	Data_Contact _Phone	Text(30)	Not Required	Contact phone number	No

3.3 SUBFACILITY EDD File

The SUBFACILITY EDD file provides general information about a site and provides the name, e-mail address, and other contact information for the main EDD data contact for the site. An example of a Subfacility file is provided in Figure 2-3, section 2.16. **NOTE**: If the SUBFACILITY EDD file was previously submitted, including as part of a "Historic Data EDD", as described in the Region 5 "EDD Manual for Historical Data", you DO NOT need to resubmit the file again.
Each SUBFACILITY file must be named according to the following convention:

EPAR5SUBFACILITY_v3.txt (or .csv)

Table 3-3 SUBFACILITY (EPAR5SUBFACILITY_v3) data file structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	SUBFACILITY_code	Text(20)	Required	Code indicating the site operable unit for which the data is collected, or area of concern (AOC). Typically the code is "01" unless there is a second or third operable unit at facility. Codes of "02" and "03" should be used for second and third operable units, respectively. Contact the EPA RPM if unsure of proper code.	No
2	subfacility_name	Text(60)	Required	Name of site	Table A-22
3	site_task_code	Text(40)	Required	Code used to associate individual samples to a specific sampling event. The format for this field is XX-P#, XX is the type of task required and P# is the phase.	No
4	subfacility_desc1	Text(255)	If available	General description of the site.	No
5	subfacility_desc2	Text(255)	If available	Additional description of site, if necessary.	No
6	contact_name	Text(50)	Required	Name of person to contact if EPA Region 5 has any questions about the EDD.	No
7	address1	Text(40)	Required	Site address, part one.	No
8	address2	Text(40)	Not required	Site address, part two. Default to null if information is not needed	No
9	City	Text(30)	Required	Site city.	No
10	State	Text(2)	Required	Site state.	No
11	Zipcode	Text(10)	Required	Site zip code.	No
12	phone_number	Text(30)	Required	Site contact phone number.	No
13	alt_phone_number	Text(30)	If available	Alternate phone number for site contact. Default to null where the data are not available.	No
14	fax_number	Text(30)	If available	Fax number of site contact. Default to null where the data is not available.	No
15	email_address	Text(100)	Required	Site contact e-mail address.	No

3.4 Location EDD File (EPAR5LOC_v3)

The primary purpose of the Location EDD file is to define the sampling locations for a site. Each EPA ID must have a center point identified. The location section will be used to enter the center point. This file is referred to as one of the Initial EDD files because it needs to be submitted -- and error-free -- before EDD files that contain chemistry and geology data can be used. Each row of the Location file contains the definition of a unique sampling location. Do not create any records (i.e., rows) for any samples not associated with a specific sampling location, such as field blanks and trip blanks. In the case of multiple wells located in one borehole, each well in the borehole must have a unique sampling location identifier (sys_loc_code).

Each sampling location should only be reported once for a site. The only time data a previously reported location should be resubmitted is if some information about the location changes, such as when a location

is resurveyed after settling has occurred or after a resurvey using an instrument or methodology with higher accuracy. When resubmitting changes to the Location file, the file should contain rows pertaining to the affected locations only. As in a typical EDD submittal, all "required" fields should be populated when updating data. Changes in the resubmittal should be described in the cover letter accompanying the EDD, and the EPA RPM should receive a copy of the letter or should be otherwise notified. See section 2.15 "Submitting Your EDD to EPA" for more information regarding submitting updated data files.

The data structure of the LOCATION EDD file includes fields (Table 3-4 below) to collect data requirements of EPA's Locational Data Policy (LDP). LDP requires geographic coordinates and associated method, accuracy, and description (MAD) codes for all environmental measurements collected by EPA employees, contractors, and grantees. A key premise of the LDP policy is that secondary use of these data in geographic information systems (GIS) and statistical mapping programs are significant to the overall mission of the Agency. To facilitate the integration of data, EPA has established the LDP to standardize the coding of geologic coordinates and associated attributes. Therefore, in addition to location coordinates being reported in UTM meters, Region 5 requests that coordinates be reported in latitude and longitude, along with associated attributes, if the data is available. An example of a Location file is provided in Figure 2-3, section 2.16.

Each Location file must be named according to the following convention:

EPAR5LOC_v3.txt (or .csv)

Table 3-4 Location Data (EPAR5LOC_v3) File Structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	Data Provider	Text(20)	Required	Data Prodiver company code	A-23
2	Facility_code	Text (20)	Required	Facility ID	A-22
3	sys_loc_code	Text(20)	Required	Location ID, such as MW-01, A24, SW12, or SB-2S, for all samples collected, including groundwater samples, hydropunch samples, surface water/sediment samples, and soil samples. For facility center point, sys_loc_code = "FAC CENTER POINT"	No
4	X_coord	Number w/decimal precision up to 15	Required	Sampling location numeric x UTM NAD83 coordinate in meters.	No
5	Y_coord	Number w/decimal precision up to 15	Required	Sampling location numeric y UTM NAD83 coordinate in meters.	No

Table 3-4 Location Data (EPAR5LOC_v3) File Structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
6	surf_elev	Number w/decimal precision up to 15	Not Required	Elevation of the ground surface, or if location is for surface water samples, water surface elevation. For water surface elevation, use the average annual elevation. Note: Subsequent water surface elevations should be obtained during the surface water sampling period and reported in the Water Level EDD file (see sections 4.2 and 4.4).	No
7	elev_unit	Text(15)	Required	Unit of measurement for elevations.	Units must be in ft/m
8	coord_type_code	Text(20)	Required	Sampling location coordinate system description . Must be 'UTM Zone nn'	No
9	observation_date	DateTime	Not required	Date observation or site survey was made.	*No*
10	horz_collect_method_code	Text(2)	If available	Method used to determine the latitude/longitude measurements. Horizontal Collection Method.	Table A-3
11	horz_accuracy_value	Text(20)	Not required	Accuracy range (+/-) of the latitude and longitude. Only the least accurate measurement should be reported, regardless if it is for latitude or longitude.	No
12	horz_accuracy_unit	Text(1)	If available	Unit of the horizontal accuracy value.	Table A-4. Enumeration list contains the codes and description
13	horz_datum_code	Text(1)	If available	Reference datum of the x_coord and y_coord	Table A-5
14	elev_collect_method_code	Text(2)	If available	Method used to determine the ground elevation of the sampling location.	Table A-6
15	elev_accuracy_value	Text(20)	Not required	Accuracy range (+/-) of the elevation measurement.	
16	elev_accuracy_unit	Text(8)	Not required	Unit of the elevation accuracy value.	Table A-18. Enumberation list contains the codes and description.
17	elev_datum_code	Text(1)	If available	Reference datum for the elevation measurement	Table A-7

Table 3-4 Location Data (EPAR5LOC_v3) File Structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
18	source_scale	Text(2)	Not required	Scale of source used to determine the x_coord and y_coord.	Table A-32
19	subcontractor_name_code	Text(20)	If available	Code used to distinguish subcontractor name.	Table A-23
20	verification_code	Text(1)	Not required	This field is only to be used by EPA Region 5 personnel. Please leave blank.	No
21	reference_point	Text(2)	Not required	Describes the place at which coordinates were established. Use codes from Table A-2 in the Appendix.	Tabel A-31 Enumeration list is available in this field.
22	geometric_type_code	Text(20)	If available	Value: 'POINT'	A-2
23	Rank	Numeric	Not required	This field is for by EPA Region 5 future use. Please leave blank.	No
24	loc_name	Text(40)	Not required	Sampling location name.	No
25	loc_desc	Text(255)	Not required	Sampling location description.	No
26	loc_type	**Text(10)**	If available	Description of sampling type, such as direct push, extraction well, or sediment. Use "CENTROID" to identify facility center point. Use codes from Table A-9 in the Appendix.	Table A-9
27	loc_purpose	**Text(20)**	Not required	Sampling location purpose.	No
28	Primary_subfacility_code	**Text(20)**	Required	Unique code for site or area. Must match subfacility_code field from Table 3-3: Subfacility File Data Structure.	No
29	within_facility_yn	Text(1)	Required	Indicates whether this sampling location is within facility boundaries, "Y" for yes or "N" for no.	No
30	loc_county_code	Text(20)	Not required	Location county code; controlled vocabulary using FIPS (Federal Information Processing Standard) codes. FIPS codes can be found via the internet at https://www.epa.gov/enviro/state-fips-code-listing	No
31	loc_district_code	Text(20)	Not required	Use the EPA region code '005'	No
32	loc_state_code	Text(10)	If available	Location state code; controlled vocabulary using FIPS codes.	No

Table 3-4 Location Data (EPAR5LOC_v3) File Structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
33	loc_major_basin	Text(8)	If available	Location major basin; controlled vocabulary using HUC (hydrologic unit codes	Table A-21
34	loc_minor_basin	Text(20)	Not required	Location minor basin; controlled vocabulary using HUC codes. Any digits after the 8th (first 8 are reported in loc_major_basin) should be reported here.	No
35	Remarks	Text(255)	Not required	Location specific comment.	No
36	total_depth	Number w/decimal precision up to 15	Not required	Total depth below ground surface of boring, in feet.	No
37	depth_to_bedrock	**Number w/decimal precision up to 15**	Not required	Depth below ground surface of bedrock in feet.	No
38	depth_to top_of_screen	**Number w/decimal precision up to 15**	Not required	Depth in feet below ground surface to the top of the well screen. This information is required to obtain the vertical location from which the groundwater sample was taken. Leave null if well is not at this location.	No
39	depth_to_bottom_of_screen	**Number w/decimal precision up to 15**	Not required	Depth in feet below ground surface to bottom of well screen. This information is required to obtain the vertical location from which the groundwater sample was taken. Leave null if well is not at this location.	No
40	top_casing_elev	Number w/decimal precision up to 15	Not required	Elevation of the top of casing in feet. Leave null if well is not at this location.	No
41	datum_value	Number w/decimal precision up to 15	Not required	Datum value	No
42	datum_unit	Text (15)	If available	Datum unit	Table A-18

Table 3-4 Location Data (EPAR5LOC_v3) File Structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
43	step_or_linear	Text (6)	Not required	This field is for by EPA Region 5 future use. Please leave null. Value: 'Step', 'Linear'	No
44	datum_collect_method_code	**Text (2)**	Not required	Datum collect method	No
45	datum_desc	**Text(70)**	Not required	Datum description	No
46	Datum_start_date	DateTime	Not required	Datum start date	No

3.5 Alternate Position

Table 3-5 Alternate Position (EPAR5AlternatePosition_v3) file data structure

EPAR5AlternatePosition (EPAR5AlternatePosition_v3.txt (or .csv)

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	Sys_loc_code	Text(20)	Required	Unique Station or Well ID. Required for mapping.	
2	Coord_type_code	Text (20)	Required	Unique identifier describing coordinate system in which this location is referenced (WGS 1984).	
3	Identifier	Text(20)	Required	Text identifier that facilitates unique representation of the coordinate system. Unless this is a second set of LAT LONG coordinates, enter "PRIMARY".	
4	observation_date	Date		Date observation or subfacility survey was made.	
5	Alt_x_coord	Text(20)		Longitude of sampling location in decimal degrees. (dd.xxxxxxxx). Eight decimal places are desired but must have at least 6 decimal places.	
6	Alt_y_coord	Text(20)		Latitude of sampling location in decimal degrees. (dd.xxxxxxxx) Eight decimal places are desired but must have at least 6 decimal places.	
7	Elev	Text(20)		Alternate elevation.	

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
8	Elev_unit	Text(15)		Unit of measurement for elevations. Units must be f for feet or m for meters.	
9	Horz_collect_method_code	Text(20)		Use codes in horizontal collection method valid value table in appendix. Method used to determine the latitude/longitude.	
10	Horz_accuracy_value	Text(20)		Accuracy range (+/-) of the latitude and longitude. Only the least accurate measurement should be reported, regardless if it is for latitude or longitude.	
11	Horz_accuracy_unit	Text(15)		Use values in unit valid value table in appendix. Unit of the horizontal accuracy value.	
12	Horz_datum_code	Text(20)		Use codes in horizontal datum valid value table in appendix. Reference datum of the latitude and longitude.	
13	Elev_collect_method_code	Text(20)		Use codes in elevation collection method valid value table in appendix. Method used to determine the ground elevation of the sampling location.	
14	Elev_accuracy_value	Text(20)		Accuracy range (+/-) of the elevation measurement.	
15	Elev_accuracy_unit	Text(8)		Use values in unit valid value table in appendix. Unit of the elevation accuracy value.	
16	Elev_datum_code	Text(20)		Reference datum for the elevation measurement. Must use valid value from elev_datum table in appendix.	
17	Source_scale	Text(2)		Scale of the source used to determine the latitude and longitude. Must be a valid code from the source_code table from appendix. If GPS is used scale does not apply and 'N' should be entered.	

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
18	Subcontractor_name_ code	Text(20)		Code used to represent the subcontractor or party responsible for providing coordinate information.	
19	Verification_code	Text(20)		Code that represents the process used to verify the coordinate information.	
20	Reference_point	Text(2)		Use codes in Reference point valid value table in appendix. Describes the place at which geologic coordinates were established.	
21	Geometric_type_code	Text(20)		Please enter POINT. If you have coordinates that are not specific to a point, please email EPA for an addition.	
22	Remark	Text(255)		remark.	
23	Rank	Numeric		Enter a rank if you are or have submitted more than one set of coordinates.	

3.6 Location Parameter

Table 3-6 Location Parameter

EPAR5LOCPARAM_V3

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_loc_code	Text(20)	Y	Unique Location Name	
2	parameter_code	Text(20)	Y	Code used to identify parameter being measured, observed, or attribute being described	
3	parameter_value	Text(255)		Value of parameter	
4	parameter_unit	Text(15)		Parameter unit	
5	measurement_date	DateTim e		Date of parameter measurement or observation	
6	measurement_method	Text(20)		Measurement method	
7	remark	Text(200 0)		Remark	
8	task_code	Text(40)		Code used to identify the task under which the field sample was taken.	
9	activity_type	Text(40)		required for EDGE	

3.7 Drill Activity EDD File

The drill activity (DRA) EDD file contains general information pertaining to the drilling activities resulting from the soil boring. Each drill activity file must be named according to the following convention:

EPAR5DRA_v3.txt (or .csv)

Table 3-7 Drill activity (EPAR5DRA_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_loc_code	Text (20)	Required	Soil boring or well installation location. Must be a valid code for the facility and must match one of the reported values in the sys_loc_code field of the location EDD file (Table 3-4) submitted in the current or previous EDD.	No
2	drill_event	Text (20)	Required	Used to identify drilling event. Examples of drilling events could be "initial" for initial drilling or "second" for a subsequent drilling at the same sys_loc_code.	No
3	start_depth	Number w/decimal precision up to 7	Not required	The start depth, in feet below ground surface, of the drilling.	No
4	end_depth	Number w/decimal precision up to 7	Not required	End depth, in feet below ground surface of the drilling.	No
5	drill_date	Date Time	Not required	Date drilling began	MM/DD/YYYY format.
6	Diameter	Number w/decimal precision up to 7	Not required	Diameter of boring.	No
7	diameter_unit	Text (15)	If available	Unit corresponding to measured diameter. See Table A-18 in the Appendix for appropriate value.	Table A-18
8	drill_method	Text (50)	Not required	Method used to drill boring.	No
9	fluid	Text (50)	Not required	Description of fluid used during drilling.	No
10	viscosity	Text (50)	Not required	Viscosity of drilling fluid.	No
11	hammer_wt	Text (50)	Not required	Weight of hammer, in pounds, used for sampling.	No
12	hammer_fall	Text (50)	Not required	Distance of hammer fall during sampling in inches.	No
13	lift_mechanism	Text (50)	Not required	Type of mechanism used to lift hammer.	No
14	new_yn	Text (1)	Not required	This field is to indicate whether this is a new boring. Enter "Y" for yes or "N" for no.	Y = yes N= no

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
15	repair_yn	Text (1)	Not required	Is this drilling event to repair an existing boring? "Y" for yes or "N" for no.	Y = yes N= no
16	deepen_yn	Text (1)	Not required	Is this drilling event to deepen an existing boring? "Y" for yes or "N" for no.	Y = yes N= no
17	abandon_yn	Text (1)	Not required	Has the boring been abandoned? "Y" for yes or "N" for no.	Y = yes N= no
18	replace_yn	Text (1)	Not required	Is this boring event to replace an existing boring? "Y" for yes or "N" for no.	Y = yes N= no
19	public_yn	Text (1)	Not required	Is well being install for a public use? "Y" for yes or "N" for no.	Y = yes N= no
20	Purpose	Text (70)	Not required	Describe the purpose of the boring event.	No

3.8 Lithology EDD File

The lithology (LTH) EDD file contains all the lithology data for soil borings. For each lithologic unit, 16 fields are available for populating with data about the boring. Optional comments can be recorded in the remark1 and remark2 fields to describe depth-specific observations within a lithologic unit. Each lithology EDD file must be named according to the following convention:

EPAR5LTH_v3.txt (or .csv)

Table 3-8 Lithology (EPAR5LTH_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Valued In Appendix
1	sys_loc_code	Text(20)	Required	Soil boring or well installation location. Must be a valid code for the facility and must match one of the reported values in the sys_loc_code field of the location EDD file (Table 3-4) submitted in the current or previous EDD.	No
2	start_depth	Number w/decimal precision up to 15	Required	The start depth, in feet below ground surface, of the lithologic unit.	No
3	material_type	Text(40)	If available	The type of material that composes the lithologic unit. See Table A-19 in the Appendix for appropriate values.	Table A-19
4	geo_unit_code_1	Text(20)	If available	The data provider's interpretation of the hydrogeologic unit present at this lithologic unit, e.g., aquifer 1, aquitard 1, aquifer 2, upper clay unit. See Figure A-2 in the Appendix for examples.	No
5	geo_unit_code_2	Text(20)	If available	Alternate geologic unit grouping. This can be a sub-classification of geologic_unit_code_1 or a layer used for groundwater flow/transport computer modeling that contains the lithologic unit. See Figure A-2 in the Appendix for examples.	No
6	remark_1	Text(255)	Not required	Comments (if any) on the lithologic unit.	No

Table 3-8 Lithology (EPAR5LTH_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Valued In Appendix
7	remark_2	Text(255)	Not required	Additional comments on the lithologic unit.	No
8	Moisture	Text(1)	Not required	Was any moisture detected within the lithologic unit? "Y" for yes or "N" for no.	Y = yes N=No
9	Permeable	Text(20)	Not required	Description of the permeability of the lithologic unit such as "impervious," "semi," "pervious," or "very."	No
10	consolidated_yn	Text(1)	Not required	Was lithologic unit consolidated? "Y" for yes or "N" for no.	Y=yes N=no
11	Color	Text(20)	Not required	Color of the lithologic unit.	No
12	Observation	Text(255)	Not required	General field observations of the lithologic unit.	No
13	Consistency	Text(20)	Not required	Description of the consistency of the soil, such as "very soft," "soft," "firm," "hard" or "very hard."	No
14	Sorting	Text(20)	Not required	Geologic description of the grain size distribution of the lithologic unit. Use "poor" for soil with a wide range of particle sizes or "well" for soil with a narrow range of particle sizes.	No
15	Grainsize	Text(20)	Not required	Description of grain size.	No
16	Odor	Text(20)	Not required	Description of odor from the soil.	No

3.9 Well EDD File

The well (EPAR5WEL_v3) EDD file contains general information relating to well installation. Each well file must be named according to the following convention:

EPAR5WEL_v3.txt (or .csv)

Table 3-9 Well (EPAR5WEL_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Value In Appendix
1	sys_loc_code	Text(20)	Required	Well installation location Must be a valid code for the facility and must match one of the reported values in the sys_loc_code field of the location EDD file (Table 3-4) submitted in the current or previous EDD.	No
2	Alternate_Well_id	Text(30)	Not required	Well identification number	No
3	well_description	Text(30)	Not required	Used for additional well description if necessary.	No
4	well_owner	Text(30)	Not required	Name of entity that owns the well.	No
5	well_purpose	Text (20)	Not required	Purpose of well.	No
6	well_status	Text (20)	Not required	Current status of well.	No

Table 3-9 Well (EPAR5WEL_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Value In Appendix
7	top_casing_ elev	Number w/decimal precision up to 15	Not required	Elevation of the top of well casing. Elevation must be in feet.	No
8	datum_value	Number w/decimal precision up to 15	Required	Elevation of datum used to reference measurement of water level depths. (EPA normally uses top of well casing for datum.)	No
9	datum_unit	Text(15)	Required	Unit of measure for the well datum..	Table A-18
10	datum_desc	Text (70)	Required	Description of the datum, such as "top of well casing."	No
11	step_or_linear	Text (6)	Not required	Use only for re-surveys of well elevations. If a section of the well casing was removed or added use "step" as the value. If nothing was added or removed from the last survey, use "linear" as the value.	No
12	Datum_start_date	DateTime	Required	Date that datum was first used to take measurements.	MM/DD/YYYY format.
13	datum_collect_ method_code	Text (2)	If available	Method used to determine the datum elevation. Use codes from Table A-6 in the Appendix	Table A-6
14	depth_of_well	Number w/decimal precision up to 15	Not required	Depth below ground surface of the well bottom.	No
15	depth_unit	Text (15)	If available	Unit of measurement for depth.	Table A-18
16	depth_measure_ method	Text (20)	Not required	Method of measuring depth of well.	No
17	stickup_height	Text (8)	Not required	Height of casing above ground surface.	No
18	stickup_unit	Text (15)	If available	Unit of measure for the stickup height	Table A-18
19	sump_length	Text (20)	Not required	Length of sump.	No
20	sump_unit	Text (15)	If available	Unit of measure for the sump length.	Table A-18
21	Installation_date	Date	Not required	Date of well installation	MM/DD/YYYY format.
22	construct_start_ date	DateTime	Not required	Date well construction began	MM/DD/YYYY format.
23	construct_complete_date	DateTime	Not required	Date well construction was completed	MM/DD/YYYY format.
24	construct_ contractor	Text (20)	If available	Name of contractor that installed well.	No
25	pump_type	Text (20)	Not required	Type of pump used at well such as centrifugal, propeller, jet, helical, rotary, etc.	No
26	pump_capacity	Text (6)	Not required	Capacity of pump.	No
27	pump_unit	Text (15)	If available	Unit of measure for the pump capacity and yield.	Table A-18
28	pump_yield	Text (6)	Not required	The yield of the pump.	No

Table 3-9 Well (EPAR5WEL_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Value In Appendix
29	pump_yield_ method	Text (20)	Not required	Method used for pump yield.	No
30	weep_hole	Text (1)	Not required	Is there a weep hole? "Y" for yes or "N" for no.	Y=yes N=No
31	head_configurat ion	Text (50)	Not required	Description of the well-head.	No
32	access_port_yn	Text (1)	Not required	Is there an access port? "Y" for yes or "N" for no.	Y=yes N=No
33	casing_joint_ty pe	Text (50)	Not required	Type of casing joint, such as "threaded," "flush," or "solvent-welded."	No
34	Perforator_used	Text (50)	Not required	Description of well perforation, such as "slotted," "drilled," or "wound."	No
35	intake_depth	Number w/decim al precision up to 15	Not required	Depth in feet below ground surface of the well intake.	Feet
36	Disinfected_yn	Text (1)	Not required	Was well disinfected? "Y" for yes or "N" for no.	Y=yes N=No
37	historical_ reference_elev	Number w/decim al precision up to 15	Not required	Leave null.	No
38	geologic_unit_c ode	Text (20)	If available	Geologic unit in which the well intake is installed.	No
39	Remark	Text (255)	Not required	Available for general remarks.	No

3.10 Well Construction EDD File

The well construction (WSG) file contains information relating to well construction and well segments. Information is required for all well segments within each well, including surface plug, protective casing, well casing, annular backfill, annular seal, screen, and filter pack. In order to obtain the depth of groundwater samples, it is particularly important that the depths of the top and bottom of the well screen be submitted for each well. Each well construction EDD file must be named according to the following convention:

EPAR5WSG_v3.txt (or .csv)

Table 3-10 Well construction (EPAR5WSG_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Value In Appendix
1	sys_loc_code	Text(20)	Required	Well installation location. Must be a valid code for the facility and must match one of the reported values in the sys_loc_code field of the location EDD file (Table 3-4) submitted in the current or previous EDD.	No

Table 3-10 Well construction (EPAR5WSG_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Value In Appendix
2	segment_type	Text(20)	Required	Type of segment within well (e.g., protective casing, well casing, screen, etc.).	Table A-20
3	material_type_ code	Text(20)	Required	Material description of well segment. Use values.	Table A-20
4	start_depth	Number w/decimal precision up to 15	Required	Depth, in feet below ground surface, of the top of the described segment.	No
5	end_depth	Number w/decimal precision up to 15	Required	Depth, in feet below ground surface, of the bottom of the described segment.	No
6	depth_unit	Text(15)	Required	The unit of depth measurements.	Table A-18
7	inner_diameter	Number w/decimal precision up to 15	Not required	The inside diameter of the described segment.	No
8	outer_diameter	Number w/decimal precision up to 15	Not required	The outside diameter of the described segment.	No
9	diameter_unit	Text(15)	If available.	The unit of diameter measurements	Table A-18
10	Thickness	Number w/decimal precision up to 15	Not required	Thickness of the described well segment.	No
11	thickness_unit	Text(15)	If available	The unit of measurement for thickness.	Table A-18
12	slot_type	Text(20)	Not required	Type of slots in screen segment such as bridge, shutter, and continuous.	No
13	slot_size	Number w/decimal precision up to 15	Not required	Width of slots.	No
14	slot_size_unit	Text(15)	If available	The unit of measurement for slot size..	Table A-18
15	perf_length	Number w/decimal precision up to 15	Not required	Length of perforated portion of screen in feet.	No
16	screen_type	Text(15)	Not required	Type of screen.	No
17	material_quant ity	Text(20)	Not required	Quantity of material used in pounds. Applicable to annular seal/fill material.	No
18	material_densi ty	Text(20)	Not required	Density of the annular seal material in lbs/ft^3.	No
19	Remark	Text(255)	Not required	Remarks regarding the segment.	No

3.11 Geology Samples EDD File

The Geology Samples (GSMP) EDD file contains geotechnical sample information. (Samples results related to chemical analyses should be reported using the Lab EDD.) Each Geology sample EDD file must be named according to the following convention:

EPAR5GSMP_v3.txt (or .csv)

Table 3-11 Geology samples (EPAR5GSMP_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_loc_code	Text(20)	Required	Sample collection location. Must be a valid code for the facility and must match one of the reported values in the sys_loc_code field of the location EDD file (Table 3-4) submitted in the current or previous EDD.	No
2	geo_sample_ code	Text(40)	Required	Unique sample identifier. Considerable flexibility is given in the methods used to derive and assign unique sample identifiers, but uniqueness throughout the database is the only restriction enforced.	No
3	sample_name	Text(50)	Not required	Use to provide a name or description of sample. Does not have to be a unique throughout database.	No
4	sample_top	Number w/decimal precision up to 15	Required	Depth, in feet below ground surface, to top of sample.	No
5	sample_ bottom	Number w/decimal precision up to 15	Required	Depth, in feet below ground surface, to bottom of sample.	No
6	Sample_date	DateTime	Not required	Date sample was collected.	MM/DD/YYYY HH:MM:SS format
7	sample_ method	Text(30)	If available	Method used to obtain sample, e.g., split spoon or Shelby tube.	No
8	material_type	Text(40)	If available	Material type of geologic sample. .	Table A-8
9	sample_desc	Text(255)	Not required	General description of the sample or sampling activities.	No
10	geologic_ unit_code	Text(20)	If available	Code used to identify the geologic unit of the sample.	No
11	liquid_limit	Number w/decimal precision up to 7	Not required	Liquid limit (LL) of the sample.	No
12	plastic_limit	Number w/decimal precision up to 7	Not required	Plastic Limit (PL) of the sample.	No

Table 3-11 Geology samples (EPAR5GSMP_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
13	shrinkage_ limit	Number w/decimal precision up to 7	Not required	Shrinkage limit of the sample.	No
14	flow_index	Number w/decimal precision up to 7	Not required	Flow index of the sample.	No
15	plasticity_ index	Number w/decimal precision up to 7	Not required	Plasticity index of the sample.	No
16	Activity	Number w/decimal precision up to 7	Not required	Activity of the sample.	No
17	E	Number w/decimal precision up to 7	Not required	Void ratio of the sample.	No
18	e_max	Number w/decimal precision up to 7	Not required	Maximum void ratio of the sample.	No
19	e_min	Number w/decimal precision up to 7	Not required	Minimum void ratio of the sample.	No
20	N	Number w/decimal precision up to 7	Not required	Porosity of the sample.	No
21	specific_ gravity	Number w/decimal precision up to 7	Not required	Specific gravity of the sample.	No
22	W	Number w/decimal precision up to 7	Not required	Water content of the sample.	No
23	opt_w	Number w/decimal precision up to 7	Not required	Optimum water content.	No
24	S	Number w/decimal precision up to 7	Not required	Degree of saturation of the sample.	No
25	K	Number w/decimal precision up to 7	Not required	Hydraulic conductivity of the sample.	No

Table 3-11 Geology samples (EPAR5GSMP_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
26	K_unit	Text(15)	If available.	Unit of measure for K.	Table A-18
27	unit_wt	Number w/decimal precision up to 7	Not required	Unit weight of the sample.	No
28	sat_unit_wt	Number w/decimal precision up to 7	Not required	Saturated unit weight of the sample.	No
29	dry_unit_wt	Number w/decimal precision up to 7	Not required	Dry unit weight of the sample.	No
30	dry_unit_wt_ max	Number w/decimal precision up to 7	Not required	Maximum dry unit weight of the sample.	No
31	dry_unit_wt_ min	Number w/decimal precision up to 7	Not required	Minimum dry unit weight of the sample.	No
32	density_unit	Text(15)	If available	Unit of measure for the densities of the sample.	Table A-18
33	rel_density	Number w/decimal precision up to 7	Not required	Relative density of the sample.	No
34	rel_ compaction	Number w/decimal precision up to 7	Not required	Relative compaction of the sample.	No
35	Consistency	Text (20)	Not required	Description of the consistency of the soil sample such as very soft, soft, firm, hard or very hard.	No
36	organic_ carbon	Number w/decimal precision up to 7	Not required	Organic carbon content of sample.	No
37	organic_ carbon_unit	Text (15)	If available	Unit of measurement of organic content. Use values from Table A-18 of the Appendix.	No

3.12 Water Levels

The Water Level (EPAR5GWTR_v3) EDD file contains information on water levels measured during sampling activities. Groundwater levels and surface water elevations should be reported using this file; however, in most cases, the file will be used to report groundwater levels. When surface water samples are collected, however, this EDD file should be used to record water surface elevations at the time the samples were collected. Surface water elevations reported in this file will be used as the reference elevation for surface water sample depths (i.e., start_depth, field 11, and end_depth, field 12 in the lab Sample (EPAR5SMP_v3) EDD file. See Table 4-1). When using the Water Level EDD file for reporting surface water data, only the first six fields (fields 1 through 6) and the "remark" field (field 17) should be populated. All fields in the Water Level EDD file, however, should be populated for groundwater elevation data (if data is available). An example of a Water Level file is provided in Figure 2-4, section 2.16. Each water level file must be named according to the following convention:

EPAR5GWTR_v3.txt (or .csv)

Table 3-12 Water Level (EPAR5GWTR_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_loc_code	Text(20)	Required	Water level measurement location. Must be a valid code for the facility and must match one of the reported values in the sys_loc_code field of the location EDD file (Table 3-4) submitted in the current or previous EDD.	No
2	Measurement_ date	DateTime	Required	Date of water level measurement If exact date is not known, enter the best estimate for the date of sampling. If an estimated date is entered, note this and provide an explanation for how the estimate was made in both the EDD cover letter and in the comment field in this file (field 10).	MM/DD/YYYY HH:MM:SS format

Table 3-12 Water Level (EPAR5GWTR_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
3	historical_ reference_elev	Number w/decimal precision up to 15	Required	For groundwater samples, the value in this field should be the elevation, in feet above mean sea level, of the reference point used to take measurements of the water level depth. Typically the reference point for groundwater measurements is the top of the well casing. For surface water samples, the value in this field should be the elevation of the surface water in feet above mean sea level. If elevation is given in units other than feet above mean sea level, please indicate the unit used in the remarks field (field 17).	No
4	water_level_depth	Number w/decimal precision up to 7	Required	For groundwater, the value in this field should be the depth of ground water below the elevation defined in historical_reference_elev field (field 5). For surface water, the value in this field should be the default value of "0"	No
5	water_level_elev	Number w/decimal precision up to 7	Not required	Elevation of water level. Elevation must be in feet.	Feet
6	corrected_depth	Number w/decimal precision up to 7	Not required	Depth of water level after any necessary corrections, e.g., if free product was encountered.	No
7	corrected_elev	Number w/decimal precision up to 7	Not required	Corrected water level elevation that corresponds to the corrected depth. Elevation must be in feet.	feet
8	measured_depth_ of_well	Number w/decimal precision up to 7	Not required	The depth below ground surface to the bottom of the well.	No
9	depth_unit	Text (15)	If available	Unit used for depth measurements. See Table A-18 in the Appendix for appropriate values.	Table A-18

Table 3-12 Water Level (EPAR5GWTR_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
10	Technician	Text (30)	Not required	Name of technician measuring water level	No
11	dry_indicator_yn	Text (1)	Not required	This field is used to indicate whether or not a well is dry -- "Y" for yes or "N" for no.	Y= yes N=No
12	measurement_method	Text (20)	Not required	Method used to make water level measurements.	No
13	batch_number	Text (10)	Not required	Batch number of group of measurements.	No
14	dip_or_elevation	Text (10)	Not required	Use either "elevation" or "dip." Use "elevation" if water level measurement is above the datum (i.e., artesian well) or "dip" if water level is below datum.	Elevation Dip
15	Remark	Text (255)	Not required	Any necessary remarks related to groundwater or surface water information provided in this EDD file.	No
16	Lnapl_cas_rn	Text (15)	If applicable	Analyte code of the light non-aqueous phase liquid (lnapl) present in the well. Use appropriate valid value from Table A-15 in the EDD Specification Manual Valid Value Appendix.	Table A-15
17	Lnapl_depth	Text Number with precision of up to 7	Not required	Depth to the top surface of the lnapl in feet below the reference elevation.	No
18	Dnapl_cas_rn	Text (15)	If applicable	Analyte code of the dense non-aqueous phase liquid (dnalp) present in the well..	Table A-15
19	Dnaple_depth	Number with precision of up to 7	Not required	Depth to the top surface of the dnapl in feet below the reference elevation	No
20	Task_code	Text(40)	Required	Code used to associate individual samples to a specific sampling event. The format for this field is XX-P#, XX is the type of task required and P# is the phase.	No

3.13 Water Table EDD Files

The water table (EPAR5TBL_v3) EDD file stores data pertaining the water table and is used to record groundwater data during drilling activities. Each water table EDD file must be named according to the following convention:

EPAR5TBL_v3.txt (or .csv)

Table 3-13 Water table (EPAR5TBL_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_loc_code	Text (20)	Required	Soil boring or well installation location. Must be a valid code for the facility and must match one of the reported values in the sys_loc_code field of the location EDD file (Table 3-4) submitted in the current or previous EDD.	No
2	Type	Text (20)	Required	Aquifer designation, such as unconfined1, confined1, or confined2.	No
3	Sequence	Text (20)	Required	Designation of when water level measurement was taken. Use "unstabilized" if measurement was taken before water stabilized and use "stabilized" if measurement taken after stabilization.	No
4	Depth	Number w/decimal precision up to 15	Required	Depth of water table, in feet, below reference point.	Feet
5	flowing_yn	Text (1)	Not Required	Is the water table flowing? "Y" for yes or "N" for no.	Y=yes N=No
6	measurement_ method	Text (50)	Not required	Method of measuring water table depth.	No
7	capped_pressu re	Number w/decimal precision up to 15	Not required	Hydrostatic pressure of confined aquifer.	No
8	capped_pressu re_ unit	Text (15)	If available	Unit of measure for capped pressure. Use values from Table A-18 in the Appendix.	Table A-18
9	reference_poin t	Text (50)	Not required	Description of reference point from which depth measurements were taken.	No
10	reference_elev ation	Number w/decimal precision up to 15	Required	Elevation of the reference point from which depth measurement were taken. Elevation must be in feet.	No
11	Temperature	Number w/decimal precision up to 15	Not required	Temperature of water in the water table.	No
12	temperature_u nit	Text (15)	If available	Unit of temperature. Use values from Table A-18 in the Appendix.	Table A-18

3.14 Geology Down Hole Point Data EDD File

The Geology downhole point data (DHP) EDD file stores data from down hole logging methods such as Cone Penetrometer Tests and geophysics. All down hole logging data should be submitted electronically. Report the parameter being measured in the "param" field, such as resistivity, and report the measured value at the depth of the measurement. Table 3.14a presents the DHP EDD file structure.

Each Geology downhole point data EDD file must be named according to the following convention:

EPAR5DHP_v3.txt (or .csv)

Table 3-14 Geology Downhole Point (EPAR5DHP_v3) File Data Structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_loc_code	Text(20)	Required	Sample collection location. Must be a valid code for the facility and must match one of the reported values in the sys_loc_code field of the location EDD file (Table 3-4) submitted in the current or previous EDD.	No
2	Depth	Number w/decimal precision up to 15	Required	Depth of measurement below ground surface in feet.	No
3	Param	Text(20)	Required	The parameter being measured, such as tip stress, resistivity, or pore pressure.	No
4	param_value	Number w/decimal precision up to 15	Required	The measured value of the parameter.	No
5	Param_unit	Text(15)	Required	Measured unit of the parameter	No

Table 3.14a Example of downhole point data file

Sys_loc_code	Depth	Param	Param_Value
MW01	10.8	Tip Stress	612
MW01	11.2	Tip Stress	624
MW01	10.8	Sleeve Stress	6.1
MW01	11.2	Sleeve stress	5.8
MW02	9.5	Resistivity	510
MW02	10.1	Resistivity	521
MW02	11.0	Resistivity	889

3.15 Extraction – Injection Well (EPAR5EIW_v3) EDD File

The Extraction-Injection Well (EIW) EDD file should be submitted on a regular (e.g., quarterly) basis for all sites where extraction and/or injection wells are a part of the remedial action at the site. The purpose of the EIW EDD file is to provide EPA Region 5 with designed pumping rates as well as the actual pumping rates for each well during a particular reporting period. This information will be useful for determining if the remedial system is successfully capturing the contaminant plume. An example of an

Extraction-Injection Well file is provided in Figure 2-4, section 2.16. Each Extraction-Injection Well EDD file must be named according to the following convention:

EPAR5EIW_v3.txt (or .csv)

Table 3-15 Extraction-Injection Well (EPAR5EIW_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_loc_code	Text(20)	Required	Well installation location. Must be a valid code for the facility and must match one of the reported values in the sys_loc_code field of the location EDD file (Table 3-4) submitted in the current or previous EDD.	No
2	start_measure_date	DateTime	Required	Date that the pumping rate measurements began.	MM/DD/YYYY HH:MM:SS format
3	end_measure_date	DateTime	Required	Date that the pumping rate measurements concluded in MM/DD/YYYY HH:MM:SS format.	MM/DD/YYYY HH:MM:SS format
4	avg_pump_rate	Number w/decimal precision up to 15	Required	Average pumping rate. Recommended method is to use volume pumped divided by the reported date span. i.e., from the (start_measurement_date to end_measurement_date)	No
5	pump_rate_unit	Text(15)	Required	Unit of measure for the pumping rate. Use values from Table A-18 in the Appendix.	Table A-18
6	pct_operating_time	Text(3)	Not required	Percentage of the measurement time interval during which the well was operating. Use a value from 0 to 100 (do not include the percent symbol, "%").	No
7	operating_ mode	Text(14)	Required	Mode in which well was operating during the reported interval.	EXTRACTION, INJECTION, RECIRCULATION, PULSE, DEVEL, UNUSE.
8	design_rate	Text(14)	Required	Pumping rate as specified in the approved remedial design report for fully capturing site groundwater contamination.	No
9	design_rate_unit	Text(14)	Required	Unit of measure for the design pumping rate. Use values from Table A-18 in the Appendix.	Table A-18
10	rate_measurement_t ype	Text(14)	Not required	Type of measurements used for averaging.	TOTALIZER (totalizing flow meter), MANIFOLD (estimated from total manifold flow), ESTIMATE (estimate from prior values), AVERAGE (average of instantaneous measurements

Table 3-15 Extraction-Injection Well (EPAR5EIW_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
11	suction	Text(14)	Not required	Vacuum in well (e.g., wellpoint vacuum) or well casing (e.g., vacuum well), reported in equivalent feet of water.	No
12	remark	Text(255)	Not required	Remarks regarding the pumping rate measurements.	No

3.16 Soil Gas Data EDD File

The soil gas (EPAR5SoilGas_v3) data file contains soil gas survey data.

Each Soil Gas data EDD file must be named according to the following convention:

EPAR5SoilGas_v3.txt (or .csv)

Table 3-16 Soil Gas (EPAR5SoilGas_v3) Survey file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_loc_code	Text(20)	Required	Sample collection location	N/A
2	survey date	Datetime	Required	Sample survay date	N/A
3	Parameter_code	Text(20)	Required	Parameter measured by soil gas survey	N/A
4	Reading_depth	Text(8)	Not required	Depth of soil gas survey measurement	N/A
5	Reading unit	Text(15)	If available	Parameter measured by soil gas survey	N/A
6	Reading	Text(8)	Not required	Soil gas survey measurement	N/A
7	Depth_unit	Text(15)	If Available	Unit of measure of soil gas survey measurement	N/A
8	Sampling_method	Text(10)	Not required	Sampling method	N/A
9	Instrument_type	Text(15)	Not required	Instrument type	N/A
10	East	Text(14)	Not required	Easting coordinate of soil gas survey measurement	N/A
11	North	Text(14)	Not required	Northing coordinate of soil gas survey measurement	N/A
12	Secondary_east	Text(14)	Not required	Secondary easting coordinate of soil gas survey measurement	N/A
13	Secondary north	Text(14)	Not required	Secondary easting coordinate of soil gas survey measurement	N/A
14	Lithology_code	Text(10)	Not required	Lithology code	N/A
15	Area_desc	Text(70)	Not required	Discription of area	N/A
16	Equipment_code	Text(60)	Not required	Equipment_code	N/A
17	Borehole_drill_method	Text(10)	Not required	Drilling method	N/A
18	Technician	Text(50)	Not required	Technician	N/A
19	Remark	Text(255)	Not required	remark	N/A

3.17 SAMPLE PARAMETER

EPAR5SAMPLEPARAM_v3.txt (or .csv)

Table 3-17 Sample Parameter (EPAR5SAMPLEPARAM_v3) Survey file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_sample_code	Text(40)	Y	Unique sample identifier. Each sample must have a unique value, including spikes and duplicates. Laboratory QC samples must also have unique identifiers. The laboratory and the EQuIS user have considerable flexibility in the methods they use to derive and assign unique sample identifiers, but uniqueness throughout the database is the only restriction enforced by EQuIS.	N/A
2	measurement_date	DateTime		Measurement date and time	N/A
3	param_code	Text(20)	Y	Parameter code	N/A
4	param_value	Text(255)		Parameter value	
5	param_unit	Text(15)		Unit of measure for parameter value	
6	measurement_method	Text(20)		Measurement method	
7	remark	Text(2000)		Remark	

4. FORMATS FOR LAB FILES

This section contains tables that define the file structures for the Chemistry EDD. The file structures include chemistry sample, sample parameter, test/result QC, and Batch file. Please notice that some columns are labeled as "Reserved for future use." These columns should simply be reported as null values and are only needed to comply with standard EQuIS® reporting formats. Columns marked "Required" must be reported for each row. If an EDD is submitted with one or more "Required" fields not filled in, EPA will not be able to load the EDD into its database, and the EDD will have to be returned to the data provider for correction(s). Columns marked "If available" should be filled in if at all possible.

4.1 Lab Sample EDD File

The Chemistry Sample EDD file contains data for samples collected at a site and location. The unique identifier for each sample is recorded in the sys_sample_code. For trip blank samples, please record the sys_sample_code as "TB" plus the date on which the sample was collected in MMDDYY format. For example a trip blank collected on April 5, 2000 would have a sys_sample_code of TB040500. A sys_sample_code of 'Trip Blank' is unacceptable because it cannot be distinguished from another trip blank labeled the same way. For samples that are not associated with a specific sampling location, such as trip blanks or field blanks, leave the sys_loc_code field (field 10) null. For surface water samples, record the sample depths, start_depth (field 11) and end_depth (field 12), as depth below the water surface elevation. The water surface elevation at the time of the sampling should be recorded in the Water Level file (see Section 4.3). An example of a Lab Sample file is provided in Figure 2-4, section 2.16.

Each Lab Sample file must be named according to the following convention:

EPAR5SMP_v3.txt (or .csv)

Table 4-1 Lab sample (EPAR5SMP_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	Data_provider	Text (20)	Required	Date provider company code	A-23
2	sys_sample_code	Text(40)	Required	**Unique sample identifier**. Each sample at a facility must have a unique value, including spikes and duplicates. You have considerable flexibility in the methods used to derive and assign unique sample identifiers; however, uniqueness throughout the database is required.	No
3	sample_name	Text(50)	Not required	Additional sample identification information as necessary. Is not required to be unique (i.e., duplicates are OK). Can be the same value as in the sys_sample_code field.	No
4	sample_matrix_code	Text(3)	Required	Code that identifies the matrix being sampled, such as soil, groundwater, or sediment. For acceptable valid values, see Table A-1 in the Appendix.	Table A-1

Table 4-1 Lab sample (EPAR5SMP_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
5	sample_type_code	Text(3)	Required	Code that distinguishes between different types of samples, such as normal field samples versus laboratory method blank samples. For acceptable valid values see Table A-12 in the Appendix.	Table A-12
6	sample_source	Text(10)	Required	Identifies where the sample originated. Use either "Field" or "Lab". Use "Field" for all samples originating from the field and use "Lab" if sample originated from the laboratory.	Field Lab
7	parent_sample_code	Text(40)	Required for field duplicate samples	Unique identifier of the original sample from which the current sample was derived, i.e. the "parent" sample. Required for samples with a sample_type_code of "BD", "FD", "FR", "FS", "LR", "MS", "MSD" or "SD."	No
8	sample_delivery_ group	Text(10)	Not required	EPA and most EPA Reigon 5 data providers are accustomed to using the Contract Laboratory Program (CLP) document definition of the sample delivery group (SDG). However, the CLP definition of an SDG relates to a lab payment group which is not what is being asked for in this field. For the purposes of this field in this EDD, the value entered should correspond more to the "sampling event/ matrix" with which the sample is associated. For example, the SDG for ground water samples should be different from that for surface water samples. This will prevent flags associated with surface water matrix effects from being propagated to ground water results	No
9	sample_date	DateTime	Required	Date sample was collected in MM/DD/YYYY HH:MM:SS format.	MM/DD/YYYY HH:MM:SS format.
10	sys_loc_code	Text(20)	Required*	Sample collection location. Must be a valid code for the facility and must match one of the reported values in the sys_loc_code field of the location EDD file (Table 3-4) submitted in the current or previous EDD. * Field should be null if sample is not associated with a specific location, such as QC samples (e.g., field blank, trip blank) and this code cannot be the same as sys_sample_code	No
11	start_depth	Number w/decimal precision up to 15	Not required	Beginning depth (top) of sample in feet below ground surface for Soil or Groundwater sample. Only use for groundwater samples if discrete samples are taken at different depth elevations from a single well, i.e. multiple well packer samples.	No

Table 4-1 Lab sample (EPAR5SMP_v3) file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
12	end_depth	Number w/decimal precision up to 15	Not required	Ending depth (bottom) of sample in feet below ground surface for Soil or Groundwater sample. Only use for groundwater samples if discrete samples are taken at different depth elevations from a single well, i.e. multiple well packer samples.	No
13	depth_unit	Text(15)	If available	Unit of measurement for the sample beginning and end depths. For valid values, see Table A-18 in the Appendix.	Table A-18
14	chain_of_custody	Text(15)	Not required	Chain of custody identifier. A single sample may be assigned to only one chain of custody.	No
15	sent_to_lab_date	DateTime	Not required	Date sample was sent to lab in MM/DD/YYYY format.	No
16	sample_receipt_date	DateTime	Not required	Date that sample was received at laboratory in MM/DD/YYYY format.	No
17	sampler	Text(30)	Not required	Name or initials of sampler.	No
18	sampling_company_code	Text(10)	Required	Name or initials of consulting company performing sampling. (This field does not have a controlled vocabulary, i.e., there is no table of valid values for this field.)	No
19	sampling_reason	Text(30)	Not required	Reason for Sampling	No
20	sampling_technique	Text(40)	If available	Sampling technique.	No
21	task_code	Text(40)	Required	Code used to associate individual samples to a specific sampling event. The format for this field is XX-P#, XX is the type of task required and P# is the phase.	No
22	collection_quarter	Text(5)	Not required	Report as null.	No
23	composite_yn	Text(1)	Required	Is sample a composite sample? Enter "Y" for yes or "N" for no.	Y= Yes N=No
24	composite_desc	Text(255)	Not required	Description of composite sample. If sample is not a composite, leave this field null.	No
25	sample_class	Text(10)	Not required	Report as null.	No
26	custom_field_1	Text (20)	Not required	Report as null.	No
27	custom_field_2	Text(50)	Not required	Report as null.	No
28	custom_field_3	Text(50)	Not required	Report as null.	No
29	comment	Text(255)	Not required	Any comments regarding the sample.	No

4.2 Lab Test Results EDD Files

The Lab Test Results EDD files contain data relating data concerning analytical tests and results performed on samples.

Each Lab Test Results EDD file must be named according to the following convention:

EPAR5TRS_v3.txt (or .csv)

Table 4-2 Lab Test Results (EPAR5TRS_v3) EDD file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_sample_code	Text(40)	Required	Sample identifier of the sample that was tested and analyzed. Must match one of the reported values in the sys_sample_code field of the EPAR5SMP_v3 file submitted in the current or previous EDD.	No
2	lab_anl_method_ name	Text(20)	Required	Laboratory analytical method name or description. For acceptable valid values, see Table A-16 in the Appendix. Default to "Unknown" if data is unavailable.	Table A-16
3	analysis_date	DateTim e	Required	Date of sample analysis in MM/DD/YYYY HH:MM:SS format. May refer to either beginning or end of the analysis. For measurements taken in the field (e.g., pH, dissolved oxygen), use the same date as sample date	No
4	total_or_dissolved	Text(1)	Required	Must be either "D" for dissolved or filtered [metal] concentrations, and "T" for every other case.	A-24
5	column_number	Text(2)	Not required	Report as null.	No
6	test_type	Text(10)	Required	Type of test	A-25
7	lab_matrix_code	Text(3)	If available	Code that identifies the matrix, such as soil, groundwater, and sediment, being sampled... The matrix of the sample as analyzed may be different from the matrix of the sample as retrieved (e.g., leachates), so this field is available at both the sample and test level.	Table A-1
8	analysis_location	Text(2)	Required	Must be either "FI" for field instrument or probe (i.e, "in the field" measurements such as pH, temperature, conductivity, and dissolved oxygen), "FL" for mobile field laboratory analysis, or "LB" for an analysis done at a fixed-based laboratory.	FI = Field Instrument FL = Mobile Field lab LB = Fixed based lab

Table 4-2 Lab Test Results (EPAR5TRS_v3) EDD file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
9	Basis	Text(10)	Required	Must be "Wet" for wet-weight basis reporting, "Dry" for dry-weight basis reporting, or "NA" for tests for which this distinction is not applicable. EPA prefers that results are reported on the basis of dry weight where applicable.	Wet= wet-weight Dry= dry weight N/A = not applicable
10	container_id	Text(30)	Not required	Report as null.	No
11	dilution_factor	Number w/decimal precision up to 7	Not required	Effective test dilution factor.	No
12	prep_method	Text(20)	If available	Laboratory sample preparation method name or description. Must use valid value from Table A-14 in the Appendix.	Table A-14
13	prep_date	DateTime	Not required	Beginning date of sample preparation	MM/DD/YYYY HH:MM:SS format
14	leachate_method	Text(15)	Not required	Laboratory leachate generation method name or description. The method name should be sufficient to reflect the operation methodology used by the laboratory (see analysis method discussion).	No
15	leachate_date	DateTime	Not required	Beginning date of leachate preparation	MM/DD/YYYY HH:MM:SS format
16	lab_name_code	Text(20)	If available	Unique identifier of the laboratory as defined by the EPA. Controlled vocabulary.. [Note: If the lab you are using does not appear in Table A-17, you may propose a valid value for the lab for addition to the EPA Region 5 list. Please provide information about the lab in the cover letter accompanying your EDD submittal.]	Table A-17
17	qc_level	Text(10)	Not required	Not limit to “Screen” or “Quant”, visit Appendix B in the https://semspub.epa.gov/work/HQ/176101.pdf for more values	No
18	lab_sample_id	Text(20)	Not required	Laboratory LIMS sample identifier. If necessary, a field sample may have more than one LIMS lab_sample_id (maximum one per each test event).	No

Table 4-2 Lab Test Results (EPAR5TRS_v3) EDD file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
19	percent_moisture	Text(5)	Not required	Percent moisture of the sample portion used in this test; this value may vary from test to test for any sample. Numeric format is "NN.MM," i.e., 70.1% could be reported as "70.1" but not as "70.1%."	No
20	subsample_ amount	Text(14)	Not required	Amount of sample used for test.	No
21	subsample_ amount_unit	Text(15)	If available	Unit of measurement for subsample amount. Must use valid value from Table A-18 in the Appendix.	Table A-18
22	analyst_name	Text(30)	Not required	Report as null.	No
23	instrument_id	Text(50)	Not required	Report as null.	No
24	comment	Text(255)	Not required	Comments about the test as necessary.	No
25	preservative	Text(20)	If available	Sample preservative used.	No
26	final_volume	Numeric	Not required	The final volume of the sample after sample preparation. Include all dilution factors.	No
27	final_volume_unit	Text(15)	If available	The unit of measure that corresponds to the final_amount.	No
28	cas_rn	Text(15)	Required	Analyte code..	Table A-15
29	chemical_name	Text(75)	Required	Chemical name..	Table A-15
30	result_value	Numeric	Not required	Analytical result reported at an appropriate number of significant digits.	No
31	result_error_delta	Text(20)	Not required	Error range applicable to the result value; typically used only for radiochemistry results.	No
32	result_type_code	Text(3)	Required	Must be either "TRG" for a target or regular result, "TIC" for a tentatively identified compound. Use “TRG” for measurements taken from the field (e.g., pH, dissolved oxygen)	TRG = Target or regular TIC = Tentative identified
33	reportable_result	Text(10)	Required	Must be either "Yes" for results that are considered to be reportable, or "No" for other results. This field has many purposes. For example, it can be used to distinguish between multiple results where a sample is retested after dilution. It can also be used to indicate which of the first or second column result should be considered primary. The proper value of this field in both of these two examples should be provided by the laboratory (only one result should be flagged as reportable).	Yes No

Table 4-2 Lab Test Results (EPAR5TRS_v3) EDD file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
34	detect_flag	Text(2)	Required	Maybe either "Y" for detected analytes or "N" for non-detects. “Y” should be used for detected target compounds and TICs only (i.e. result_type_code is “TRG” or “TIC”). Also use "Y" for estimated (above detection limit but below the quantitation limit) or ">" and "<" for tests such as flash point. Note that "<" must not be used to indicate non-detects.	Y = detected N = non-detects
35	lab_qualifiers	Text(10)	Not required	Qualifier flags assigned by the laboratory.	No
36	validator_qualifiers	Text(10)	Not required	Qualifier flags assigned by the person who validates the laboratory data. The interpret qualifier is required if lap_qualifer or validator _qualifier are populated	No
37	Interpreted_qualifier	Text(20)	If available/ Required	Interpreted qualifier flag assigned by the data provider. The interpret qualifier is required if lap_qualifer or validator _qualifier are populated	Table A-10
38	Validated_yn	Text (1)	Required	Indicates if the result has been validated	
39	organic_yn	Text(1)	Required	Must be either "Y" for organic constituents or "N" for inorganic constituents. Use “Y” for measurements taken from the field (e.g., pH, dissolved oxygen)	Y= organic N= inorganic
40	method_detection_ limit	Text(20)	Not required	Report as null. The minimum concentration of an analyte that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as determined for a specific procedure.	No
41	reporting_detection_ limit	Numeric	Not required	Must be reported if sample result is “non-detect.” The minimum concentration of an analyte that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as determined for a specific procedure, which is equal to or greater than the MDL.	No
42	quantitation_limit	Text(20)	Not required	Concentration level above which results can be quantified with confidence. The value must reflect conditions such as dilution factors and moisture content, and must be sample-specific.	No
43	result_unit	Text(15)	If available	Units of measurement for the result. Must use valid values from Table A-18 in the Appendix.	Table A-18

Table 4-2 Lab Test Results (EPAR5TRS_v3) EDD file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
44	detection_limit_unit	Text(15)	If available	Units of measurement for the detection limit(s). Must use valid value from Table A-18 in the Appendix.	Table A-18
45	tic_retention_time	Text(8)	Not required	Report as null.	No
46	result_comment	Text(255)	Not required	Result specific comments.	No

4.3 Lab Test/Result with QC Data EDD File

The Lab test/results with QC (TRSQC) EDD file contains data from analytical tests performed on samples along with quality control data.

Each Chemistry test/results with QC EDD file must be named according to the following convention:

Table 4-3 Chemistry test/results with QC (EPAR5TRSQC_v3) data file structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_sample_code	Text(40)	Required	Sample identifier of the sample that was tested and analyzed. Must match one of the reported values in the sys_sample_code field of the EPAR5SMP_v3 file submitted in the current or previous EDD.	
2	lab_anl_method_name	Text(20)	Required	Laboratory analytical method name or description. For acceptable valid values. Default to "Unknown" if data is unavailable.	Table A-16
3	analysis_date	DateTime	Required	Date of sample analysis in MM/DD/YYYY HH:MM:SS format. May refer to either beginning or end of the analysis. For measurements taken in the field (e.g., pH, dissolved oxygen), use the same date as sample date	
4	Total_or_dissolved	Text(1)	Required	Enumeration list contains the values	A-24
5	column_number	Text(2)	Not required	Column number, if null, "NA" will be placed in this field	No
6	test_type	Text(10)	Required	Type of test.	A-25
7	lab_matrix_code	Text(3)	If available	Code that identifies the matrix, such as soil, groundwater, and sediment. The matrix of the sample when it is analyzed may be different from the matrix of the sample when it is collected (e.g. leachates), so this field is available at both the sample and test level.	Table A-1
8	analysis_location	Text(2)	Required	Must be either "FI" for field instrument or probe (i.e, "in the field" measurements such as pH, temperature, conductivity, and dissolved oxygen), "FL" for mobile field laboratory analysis, or "LB" for an analysis done at a fixed-based laboratory.	FI = Field Instrument FL = Mobile Field lab LB = Fixed based lab
9	Basis	Text(10)	Required	Must be either "Wet" for wet-weight basis reporting, "Dry" for dry-weight basis reporting, or "NA" for tests for which this distinction is not applicable. EPA prefers that results are reported on the basis of dry weight where applicable.	Wet= wet-weight Dry= dry weight N/A = not applicable
10	container_id	Text(30)	Not required	Report as null.	No

Table 4-3 Chemistry test/results with QC (EPAR5TRSQC_v3) data file structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
11	dilution_factor	Numeric	Not required	Effective test dilution factor.	No
12	prep_method	Text(20)	If available	Laboratory sample preparation method name or description. Must use valid value from Table A-14 in the Appendix.	Table A-14
13	prep_date	DateTime	Not required	Beginning date of sample preparation.	MM/DD/YYYY HH:MM:SS format
14	leachate_method	Text(15)	Not required	Laboratory leachate generation method name or description. The method name should be sufficient to reflect the operation methodology used by the laboratory (see analysis method discussion).	No
15	leachate_date	DateTime	Not required	Beginning date of leachate preparation	MM/DD/YYYY HH:MM:SS format
16	lab_name_code	Text(20)	If available	Unique identifier of the laboratory as defined by the EPA. Controlled vocabulary; see the lab valid value table in appendix.	Table A-17
17	qc_level	Text(10)	Not required	**Not limit to "Screen" or "Quant", visit Appendix B in the https://semspub.epa.gov/work/HQ/176101.pdf for more values**	No
18	lab_sample_id	Text(20)	Not required	Laboratory LIMS sample identifier. If necessary, a field sample may have more than one LIMS lab_sample_id (maximum one per each test event).	No
19	percent_moisture	Text(5)	Not required	Percent moisture of the sample portion used in this test; this value may vary from test to test for any sample. Numeric format is "NN.MM," i.e., 70.1% could be reported as "70.1" but not as "70.1%."	No
20	subsample_amount	Text(14)	Not required	Amount of sample used for test.	No
21	subsample_amount_unit	Text(15)	If available	Unit of measurement for subsample amount. Must use valid value from Table A-18 in the Appendix.	Table A-18
22	analyst_name	Text(30)	Not required	Report as null.	No
23	instrument_id	Text(50)	Not required	Report as null.	No
24	Comment	Text(255)	Not required	Comments about the test, if necessary.	No
25	Preservative	Text(20)	If available	Sample preservative used.	Table A-27

Table 4-3 Chemistry test/results with QC (EPAR5TRSQC_v3) data file structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
26	final_volume	Numeric	Not required	The final volume of the sample after sample preparation. Include all dilution factors.	No
27	final_volume_unit	Text(15)	If available	The unit of measure that corresponds to the final_amount.	Table A-18
28	cas_rn	Text(15)	Required	Analyte code..	Table A-15
29	chemical_name	Text(75)	Required	Chemical name.	Table A-15
30	Result_value	Numeric	Not required	Analytical result reported at an appropriate number of significant digits. May be blank for non-detect results.	No
31	Result_error_delta	Text(20)	If available	Error range applicable to the result value; typically used only for radiochemistry results.	No
32	Result_type_code	Text(10)	Required	Must be either "TRG" for a target or regular result, "TIC" for a tentatively identified compound, "SUR" for surrogates, "IS" for internal standards, or "SC" for spiked compounds. Use "TRG" for measurements taken from the field (e.g., pH, dissolved oxygen). 'CAL' for calculated pore water concentrations.	Table A-11
33	reportable_result	Text(10)	Required	Must be either "Yes" for results that are considered to be reportable, or "No" for other results. This field has many purposes. For example, it can be used to distinguish between multiple results where a sample is retested after dilution. It can also be used to indicate which of the first or second column result should be considered primary. The proper value of this field in both of these two examples should be provided by the laboratory.	Yes No Y N
34	detect_flag	Text(2)	Required	Maybe either "Y" for detected analytes or "N" for non-detects. "Y" should be used for detected target compounds and TICs only (i.e. result_type_code is "TRG" or "TIC"). Also use "Y" for estimated (above detection limit but below the quantitation limit) or ">" and "<" for tests such as flash point. Note that "<" must not be used to indicate non-detects.	Y= detected N = non-detects
35	Lab_qualifiers	Text(10)	Not required	Qualifier flags assigned by the laboratory.	No

Table 4-3 Chemistry test/results with QC (EPAR5TRSQC_v3) data file structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
36	validator_qualifiers	Text(10)	Not required	Qualifier flags assigned by the person who validates the laboratory data.	No
37	Interpreted_qualifiers	Text(10)	If available	Interpreted qualifier flag assigned by the validator. When the validated_yn = N (no, meaning the data is not validated by validator), the interpret qualifier is required if lab_qualifier or validator _qualifier are populated. If the validated_yn = Y (yes, meaning the data has been validated and the validator agreed witht eh lab qualifier), then they should populate the validator_qualifier and the interpreted_qualifier. If the validated_yn = Y (yes, but the validator does not agree with the lab_qualifier), then the validator will leave the qualifier NULL and the final qualifier is also NULL. When populating th e interpreted_qualifier, please use the qualifier in the Valid Value in A-10 with the description that can closely match with the lab qualifier.	A-10
38	Validated_yn	Text (1)	Required	Must be either "Y" for validate or "N" for not validate.	Indicated if the result has been validated
39	Organic_yn	Text(1)	Required	Must be either 'Y' for organic constituents or 'N' for inorganic constituents.	No
40	method_detection_limit	Text(20)	If available	Report as null. The minimum concentration of an analyte that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as determined for a specific procedure.	No
41	reporting_detection_limit	Numeric	Not required	Must be reported if sample result is “non-detect.” The minimum concentration of an analyte that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as determined for a specific procedure, which is equal to or greater than the MDL.	No

Table 4-3 Chemistry test/results with QC (EPAR5TRSQC_v3) data file structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
42	quantitation_limit	Text(20)	Not required	Quantitation limits refer to a minimum concentration of an analyte that can be measured within specified limits of precision and accuracy. They are generally 5-10 times the detection limit. Thus, when quantitation limits are used as reporting limits, the laboratory is saying that the analyte is not present in a sufficient amount to be reliably quantified (i.e., at a concentration above the quantitation limit). It may be present and even positively identified or "seen" at a lower concentration.	No
43	Result_unit	Text(15)	If available	Units of measurement for the result. Must use valid values from Table A-18 in the Appendix.	Table A-18
44	detection_limit_unit	Text(15)	If available	Units of measurement for the detection limit(s). Must use valid value from Table A-18 in the Appendix.	Table A-18
45	tic_retention_time	Text(8)	Not required	Report the value and time when the result type is TIC.	No
46	Result_comment	Text (255)	Not required	Result specific comments	No
47	qc_original_conc	Numeric	Not required	The concentration of the analyte in the original (unspiked) sample. Might be required for spikes and spike duplicates (depending on user needs). Not necessary for surrogate compounds or LCS samples (where the original concentration is assumed to be zero).	No
48	qc_spike_added	Numeric	Not required	The concentration of the analyte added to the original sample. Might be required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample (depending on user needs).	No
49	qc_spike_measured	Numeric	Not required	The measured concentration of the analyte. Use zero for spiked compounds that were not detected in the sample. Might be required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample (depending on user needs).	No

Table 4-3 Chemistry test/results with QC (EPAR5TRSQC_v3) data file structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
50	qc_spike_recovery	Numeric	Not required	The percent recovery calculated as specified by the laboratory QC program. Always required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample. Report as percentage multiplied by 100 (e.g., report "120%" as "120").	No
51	qc_dup_original_conc	Numeric	Not required	The concentration of the analyte in the original (unspiked) sample. Might be required for spike or LCS duplicates only (depending on user needs). Not necessary for surrogate compounds or LCS samples (where the original concentration is assumed to be zero).	No
52	qc_dup_spike_added	Numeric	Not required	The concentration of the analyte added to the original sample. Might be required for spike or LCS duplicates, surrogate compounds, and any spiked and duplicated sample (depending on user needs). Use zero for spiked compounds that were not detected in the sample. Required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample. Also complete the qc-spike-added field.	No
53	qc_dup_spike_measured	Numeric	Not required	The measured concentration of the analyte in the duplicate. Use zero for spiked compounds that were not detected in the sample. Might be required for spike and LCS duplicates, surrogate compounds, and any other spiked and duplicated sample (depending on user needs). Also complete the qc_spike_measured field.	No
54	qc_dup_spike_recovery	Numeric	Not required	The duplicate percent recovery calculated as specified by the laboratory QC program. Always required for spike or LCS duplicates, surrogate compounds, and any other spiked and duplicated sample. Also complete the qc_spike_recovery field. Report as percentage multiplied by 100 (e.g., report "120%" as "120").	No
55	qc_rpd	Text(8)	Not required	The relative percent difference calculated as specified by the laboratory QC program. Required for duplicate samples as appropriate. Report as percentage multiplied by 100 (e.g., report "30%" as "30").	No

Table 4-3 Chemistry test/results with QC (EPAR5TRSQC_v3) data file structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
56	qc_spike_lcl	Text(8)	Not required	Lower control limit for spike recovery. Required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample. Report as percentage multiplied by 100 (e.g., report "60%" as "60").	No
57	qc_spike_ucl	Text(8)	Not required	Upper control limit for spike recovery. Required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample. Report as percentage multiplied by 100 (e.g., report "120%" as "120").	No
58	qc_rpd_cl	Text(8)	Not required	Relative percent difference control limit. Required for any duplicated sample. Report as percentage multiplied by 100 (e.g., report "25%" as "25").	No
59	qc_spike_status	Text(10)	Not required	Used to indicate whether the spike recovery was within control limits. Use the "*" character to indicate failure, otherwise leave blank. Required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample.	No
60	qc_dup_spike_status	Text(10)	Not required	Used to indicate whether the duplicate spike recovery was within control limits. Use the "*" character to indicate failure, otherwise leave blank. Required for any spiked and duplicated sample.	No
61	qc_rpd_status	Text(10)	Not required	Used to indicate whether the relative percent difference was within control limits. Use the "*" character to indicate failure, otherwise leave blank. Required for any duplicated sample.	No

4.4 Lab Batch Data (EPAR5BAT_v3) EDD File

The Lab Batch (EPAR5BAT_v3) EDD file contains data that relate the individual samples to the laboratory batch identifier. For the most part, as with the TestResultQC EDD file, the BATCH EDD file will only need to be submitted by EPA contractors that are submitting quality data elements with their reports. The purpose of this EDD file is so laboratory quality control samples can be associated with the correct field samples with which they were processed and analyzed. This EDD file has been structured to allow samples to have different batch IDs for various phases of analysis (e.g., preparation phase, analysis phase). The majority of samples will only have one batch ID assigned by the laboratory. It is important that the values in the sys_sample_code, lab_anl_method_name, analysis_date, analysis_time, total_or_dissolved and test_type fields match those found in the TestResultQC EDD files. Each Chemistry batch file must be named according to the following convention:

EPAR5BAT_v3.txt (or .csv)

Table 4-4 Lab batch file (EPAR5BAT_v3) data structure

Pos#	Column Name	Data type	Required	Description	Valid Values In Appendix
1	sys_sample_code	Text(40)	Required	Sample identifier of the sample that was tested and analyzed. Must match one of the reported values in the sys_sample_code field of the EPAR5SMP_v3 file (Table 4-1) submitted in the current or previous EDD.	No
2	lab_anl_method_ name	Text(20)	Required	Laboratory analytical method name or description. For acceptable valid values, see Table A-16 in the Appendix. Default to "Unknown" if data is unavailable.	Table A-16
3	analysis_date	Datetime	Required	Date of sample analysis. May refer to either beginning or end of the analysis.	MM/DD/YYYY HH:MM:SS format.
4	total_or_dissolved	Text(1)	Required	Enumeration list contains the values	A-24
5	column_number	Text(2)	Not required	Report as null.	No
6	test_type	Text(10)	Required	Type of test.	A-25
7	test_batch_type	Text(10)	Required	Lab batch type. This is a required field for all batches.	A-26
8	test_batch_id	Text(20)	Required	Unique identifier for all lab batches.	No

5. VAPOR INTRUSION

FORMATS FOR VAPOR INTRUSION FILES

Vapor Intrusion data submittals contain data of sampling taken inside of the contaminated sites or buildings.

5.1 Vapor Intrusion Building Address EDD File

The Vapor Intrusion Building Address (EPAR5_VI_BLDG_ADDRESS_V3) contains address and contact information for the building.

Each Vapor Intrusion file must be named according to the following convention:

EPAR5_VI_BLDG_ADDRESS_V3

Table 5-1 Vapor Intrusion Building Address data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	building_code	Text (20)	Required	Unique code that identifies the building within the facility (i.e. B001, B002, etc.)	

2	Subfacility_code	Text (20)	Required	Code indicating the subfacility operable unit (OU) for which the data is collected or area of concern (AOC). Use the code 'OU1' unless there are additional operable units at a facility. In the case of additional operable units, use codes of 'OU2', 'OU3', etc., respectively.Must match the code in the Subfacility_v4 EDD file submitted in the current or previous EDDs.	
3	Task_code	Text (40)	Required	For soil vapor intrusion sampling and building inspection information enter "SVI".	
4	contact_name	Text (50)	Required	Building Contact Name: This should be populated with the EPA Project Manager name. Occupant or Owner personal information (Name, telephone numbers, and address) are NOT to be included for SVI Building Information.	
5	address1	Text (40)	Required	Building address, part one.	
6	address2	Text (40)		Building address, part two	
7	city	Text (30)	Required	Building city	
8	state	Text (2)	Required	Building state	
9	zip_code	Text (10)	Required	Building zipcode	
10	county	Text (50)	If available	Building county	
11	phone_number	Text (30)	Required	Building contact phone number	
12	alt_phone_number	Text (30)		Alternative site phone number	
13	fax_number	Text (30)		Building contact fax number.	
14	email_address	Text (100)	Required	Building contact email address.	
15	remark	Text (2017)		Remark	
16	Remark_2	Text (2017)		Remarts	

5.2 Vapor Intrusion Building Inspection EDD Files

The Vapor Intrusion Building (EPAR5_VI_BLDG_INSPECTION_V3) contains specific data about the building.

Each Vapor Intrusion building file must be named according to the following convention:

EPAR5_VI_BLDG_INSPECTION_V3

Table 5-2 Vapor Intrusion Building Inspection data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	building_code	Text (20)	Required	Unique code that identifies the building within the facility (i.e. B001, B002, etc.)	
2	Inspection_date	DateTime	Required	Enter the date the building inspection was conducted (in MM/DD/YYYY HH:MM format).	
3	Task_code	Text (40)	Required	For soil vapor intrusion sampling and building inspection information enter "SVI".	
4	building_name	Text (255)	Required	Building name (i.e. Denison Medical Building)	
5	building_type	Text (20)	Required	Type of building (i.e. Residential, Industrial, etc.)	
6	Building_use_type	Text (20)	Required	Enter the building's use type such as Dry Cleaner, Day Care if commercial or Ranch Home if Residential.	
7	building_size	Text (20)		Size of building (Small, Medium, Large)	
8	num_floors	Numeric		Number of floors in the building	
9	construct_year	Numeric		Year of construction	
10	foundation_depth	Numeric		Foundation depth (below ground surface)	
11	foundation_depth_unit	Text (15)		Foundation depth unit	
12	foundation_type	Text (20)	Required	Foundation type (i.e. Basement, crawlspace, ect.)	
13	foundation_wall_material	Text (20)		Foundation wall material	
14	foundation_floor_material	Text (20)		Foundation floor material	
15	foundation_wall_thickness	Numeric		Foundation wall thickness	
16	foundation_floor_thickness	Numeric		Foundation floor thickness	
17	foundation_thickness_unit	Text (15)		Foundation thickness units	
18	attached_garage_yn	Text (1)		Existance of an attached garage (Y/N)?	
19	radon_mitigation_yn	Text (1)		Existance of radon mitigation system (Y/N)?	
20	heat_fuel_type	Text (255)		Type of heating fuels (i.e. Natural gas)	
21	heat_system_type	Text (255)		Type of heating system (i.e. Forced hot air)	
22	central_air_yn	Text (1)		Existance of central air system (Y/N)?	

23	sump_yn	Text (1)		Existance of sump pump (Y/N)?	
24	voc_mitigation_yn	Text (1)		VOC mitigation flag (Y/N)?	
25	remark	Text (2017)		Building remarks	
26	custom_field_1	Text (255)			
27	custom_field_2	Text (255)			
28	custom_field_3	Text (255)			
29	custom_field_4	Text (255)			
30	custom_field_5	Text (255)			

5.3 Vapor Intrusion Building Parameters EDD File

The Vapor Intrusion Building Parameters (EAR5_VI_BLDG_PARAMETERS_v3) contains additional sampling parameter collected in the field and not analyized in the lab.

Each Vapor Intrusion Task Parameter file must be named according to the following convention:

EPAR5_VI_BLDG_PARAMETERS_V3

Table 5-3 Vapor Intrusion Building Parameters data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	Building_code	Text (20)	Required	Unique code that identifies the building within the facility (i.e. B001, B002, etc.) For additional information, please refer to the EDD Manual.	
2	param_code	Text (20)	Required	A unique parameter code designed for buildings such as the Soil Vapor Intrusion Building Inventory Form parameters found on rt_subfacility_parameter_type.	
3	task_code	Text (40)	Required	For soil vapor intrusion sampling and building inspection information enter "SVI."	
4	measurement_date	DateTime	Required	The specific date the measurement was collected. For Soil Vapor Intrusion form data, the date should be the building inspection date (in MM/DD/YYYY HH:MM)	
5	param_value	Text (255)	Required	The value related to the parameter code used.	
6	param_unit	Text (15)		The corresponding unit that relates to the parameter value used.	Enumeration list
7	remark	Text (2017)		A comment or other free text to further describe the parameter code or parameter value.	

5.4 Vapor Intrusion Locations EDD file

The Vapor Intrusion Location (EPAR5_VI_LOCATIONS_V3) contains locations information.

Each Vaport Intrustion Locaiton file must be named according to the following convention:

EPAR5_VI_LOCATIONS_V3

Table 5-4 Vapor Intrusion Location data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	data_provider	Text (20)	Required	Data provider for location data. Must be the valid code for the data provider for this subfacility and match the data_provider field of the DataProvider EDD file submitted in the current or previous EDDs.	**A-23**
2	sys_loc_code	Text (20)	Required	Location identifier of sample collection. Use sample location ID. Must be unique for each OU or Building. Example: RESIDENT01-BSMT for a sample location type (Basement) contained within building code RESIDENT01. Additional informaiton is provided in the EDD Manual. Non alpha-numeric characters (save for the underscore _ and the dash - characters) are prohibited in the sys_loc_code.	
3	building_code	Text (20)	Required	Must be the valid code for a building and match the building_code field in the VI_Bldg_Address_v4 EDD file submitted in the current or previous EDD.	
4	latitude	Numeric	Required	Latitude of sampling location in decimal degrees (dd.xxxxxx). Must contain a minimum of 6 six significant figures. Example: 43.020295 Note: Multiple sys_loc_codes can share the same coordinates if a centroid point is used to represent sample locations in a building.	

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
5	longitude	Numeric	Required	Longitude of sampling location in decimal degrees. Must be negative for western hemisphere (-ddd.xxxxxx). Must contain a minimum of 6 six significant figures. Example: -73.740476 Note: Multiple sys_loc_codes can share the same coordinates if a centroid point is used to represent sample locations in a building.	
6	coord_sys_desc	Text (20)	Required	Sampling location coordinate system description. Must be Latitude and Longitude based on World Geodetic System 1984 (WGS84) datum. Valid Value is: Lat/Long.	
7	observation_date	DateTime		Date observation or site survey was made (in MM/DD/YYYY HH:MM format).	
8	alt_x_coord	Text (20)		x-Coordinate in alternate system.	
9	alt_y_coord	Text (20)		y-Coordinate in alternate system.	
10	alt_coord_type_code	Text (20)		Must reference alternate coordinate system type code. SP designates State Plane.	
11	alt_identifier	Text (20)		If providing alternate coordinates in state plane, UTM Zone 17, or UTM Zone 18, enter PRIMARY.	
12	horz_collect_method_code	Text (3)	Required	Method used to determine latitude/longitude. Example: S1 is for NYS Licensed Professional Land Survey.	
13	horz_accuracy_value	Text (20)	Required	Accuracy range (+/-) of the latitude and longitude. Use "0.1" for professional survey, "100" for site centroid, or "10" for all other methods.	
14	horz_accuracy_unit	Text (15)	Required	Unit of the horizontal accuracy.	
15	horz_datum_code	Text (3)	Required	This is the reference datum for the original survey coordinates. Example: If the latitude and longitude were calculated from a NAD83 survey, the code would be "002". If the coordinates are directly from a GPS survey, enter "003" for WGS84.	
16	source_scale	Text (2)		If coordinates were derived from a published map, enter the scale of the map source (e.g. 1 inch = 100 feet).	

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
17	subcontractor_name_code	Text (20)	Required	Code used to distinguish subcontractor name.	
18	verification_code	Text (20)		The verification code should indicate how the survey coordinate/elevation reference point was verified.	
19	reference_point	Text (50)		If coordinates and elevations were surveyed using a traditional survey method in the field without a GPS, a description of the reference point used as the survey benchmark. (e.g. NYSDOT bridge footing, or Hydrant at station 00+01 elevation 25).	
20	loc_name	Text (40)		Provide a more detailed name for sample location. 40 characters. For example, "Laundry Room Soil Vapor Sample Location."	
21	loc_desc	Text (255)		Sampling location detailed description. Example: "Laundry room sample collected 4 feet above ground surface to capture breathing zone."	
22	loc_type	Text (20)	Requied	Sampling location type. Use codes in loc_type valid values table for Soil Vapor Intrusion. Options include: BASEMENT, CRAWLSPACE, FIRST FLOOR, OUTDOOR, SUBSLAB, and UPPER FLOOR.	
23	loc_purpose	Text (20)		Sampling location purpose. Example: "Odors detected in basement," "Visible Floor Penetrations."	
24	within_facility_yn	Text (1)	Required	Indicates whether this sampling location is within facility boundaries, 'Y' for yes or 'N' for no.	
25	loc_county_code	Text (20)	If availabe	Location county code is found within the Valid Values Table.	
26	loc_district_code	Text (3)		Use EPA Region number 002.	
27	loc_state_code	Text (2)	If available	Location state code; controlled vocabulary using FIPS codes.	
28	remark	Text (255)		Location specific comment.	

5.5 Vapor Intrusion Outdoor Locations EDD file

The Vapor Intrusion Outdoor Locations (EPAR5_VI_OUTDOOR_LOCATIONS_V3) contains samples information.

Each Vapor Intrusion Outdoor Locations must be named according to the following convention:

EPAR5_VI_OUTDOOR_LOCATIONS_V3

Table 5-5 Vapor Intrusion Outdoor Locations data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	**Sys_loc_code**	**Text (20)**	**Required**	Location identifier of sample collection. Use sample location ID. Must be unique for each OU or Building. Example: RESIDENT01-A for a sample location contained within building code RESIDENT01. Additional informaiton is provided in the EDD Manual.	
2	**Building_loc_type_code**	**Text (10)**	**Required**	The default building_loc_type should be OUTDOOR.	
3	**Building_code**	**Text (20)**	**Required**	Must be the valid code for a building and match the building_code field in the VI_Bldg_Address EDD file submitted in the current or previous EDD.	

5.6 Vapor Intrusion Sample EDD file

The Vapor Intrusion Sample (EPAR5_VI_SAMPLES_V3) contains samples information.

Each Vapor Intrusion Sample file must be named according to the following convention:

EPAR5_VI_SAMPLES_V3

Table 5-6 Vapor Intrusion Samples data structure

Pos #	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	data_provider	Text (20)	REQUIRED	Data provider name	
2	sys_sample_code	Text (40)	REQUIRED	Unique sample identifier	
3	Sample_name	Text (50)	Required	Additional sample identification information as necessary. Is not required to be unique (i.e., duplicates are OK). Can be the same value as in the sys_sample_code field.	
4	sample_matrix_code	Text (3)	REQUIRED	Code which distinguishes between different type of sample matrix	**Table A-1**

Pos #	Column Name	Data Type	Required	Description	Valid Values In Appendix
5	Sample_type_code	Text (20)	Rquired	Code that distinguishes between different types of samples. Use code from rt_sample_type.sample_type_code valid values table. Example: Normal field samples are coded "N", laboratory method blank samples are coded "LB", etc.	
6	Sample_source	Text (10)	Required	This field identifies where the sample originated. Samples collected in the Field are entered as "FIELD," samples originating in the Lab are entered as "LAB."	
7	Parent_sample_code	Text (40)		If the sample is a duplicate, MS/MSD, blind dup, lab dup, etc, input the parent sample "sys_sample_code." For example: A field duplicate "FD" (coded in sample_type_code) is collected for sample MW-001-20010606; therefore, MW-001-20010606 is input into this field. This field is left null for all non-duplicate samples. This field is Required when the sample_type_code contains "BD," "FD," "FR," "FS," "LR," "MS," "MSD," or "SD" entries. Additional information may be found in the EDD Manual.	
8	Sample_delivery_group	Text (20)		This is the laboratory sample delivery group.	
9	sample_start_date	DateTime	REQUIRED	Sample start date and time	
10	sys_loc_code	Text (20)		Location identifier of sample collection	
11	chain_of_custody	Text (40)		Chain of custody identifier. Note: A single sample may be assigned to only one chain of custody.	
12	sent_to_lab_date	DateTime		Shipping date sample was sent to lab (in MM/DD/YYYY HH:MM format).	
13	Sample_receipt_date	DateTime		Date that sample was received at laboratory (in MM/DD/YYYY HH:MM format).	
14	sampler	Text (50)		Person taking sample.	
15	sampling_company_code	Text (20)	REQUIRED	Name or initials of sampling company.	
16	sampling_reason	Text (30)		Reason for sampling	
17	sampling_method	Text (40)		Sampling method	
18	task_code	Text (40)		Sampling task code	

Pos #	Column Name	Data Type	Required	Description	Valid Values In Appendix
19	sample_end_date	DateTime		Sample end date and time	
20	sample_duration	Text (20)		The sampling duration	
21	sample_duration_unit	Text (15)		Sample duration units	Table A-18
22	floor_material	Text (20)		Lowest level floor material at sample location	
23	slab_thickness	Text (20)		Slab thickness at sample location (in inches)	
24	subfloor_material	Text (20)		Material found below the foundation floor	
25	subfloor_moisture	Text (20)		Moisture content at subslab sample location (i.e. Dry, Damp, Saturated)	
26	seal_type	Text (20)		Type of seal used during sampling (i.e. Beeswax, Clay, Teflon Tape)	
27	seal_adequate_yn	Text (1)		Did the sample probe seal pass the tracer test (Y/N)?	
28	purge_yn	Text (1)		Was the sample equipment purged in accordance with work plan (Y/N)?	
29	purge_pid	Numeric		PID instrument reading	
30	purge_pid_unit	Text (15)		PID instrument reading units (i.e. ppb)	
31	vac_gauge_initial	Numeric		Vacuum gauge reading immediately after start	
32	vac_gauge_final	Numeric		Vacuum gauge reading immediately before end	
33	vac_gauge_unit	Text (15)		Vacuum gauge instrument units (i.e. inches of water)	
34	vapor_loc_desc	Text (255)		Soil vapor intrusion location description	
35	remark	Text (2017)		Remark	
36	Tracer_test_conducted_yn	Text (1)	Required	Enter a Y to indicate that the helium tracer tests were conducted and passed for any sub slab samples.	

5.7 Vapor Intrusion Test Result QC

The Vapor Intrusion Test Result QC (EPAR5_VI_TESTRESULTSQC_V3) contains data concerning analytical tests performed on samples with quality control data elements.

Each Vapor Intrusion Test Result QC file must be named according to the following convention:

EPAR5_VI_TESTRESULTSQC_V3

Table 5-7 Vapor Intrusion Test Result QC file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix

Table 5-7 Vapor Intrusion Test Result QC file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_sample_code	Text (40)	REQUIRED	Unique sample identifier. Each sample at a facility must have a unique value, including spikes and duplicates. You have considerable flexibility in the methods used to derive and assign unique sample identifiers, but uniqueness throughout the database is the only restriction enforced by EQuIS®.	
2	lab_anl_method_name	Text (35)	REQUIRED	Laboratory analytical method name or description. A controlled vocabulary column, valid values can be found in the appendix in table lab_anl_method_name.	
3	analysis_date	DateTime	REQUIRED	Date and time of sample analysis in 'MM/DD/YYYY HH:MM' format. May refer to either beginning or end of the analysis as required by EPA.	
4	fraction	Text (10)	REQUIRED	Must be either 'D' for dissolved or filtered [metal] concentration, or 'T' for everything else. If fraction = 'TCLP', then leachate_method and leachate_date is required.	
5	column_number	Text (2)	REQUIRED	Report as null.	
6	test_type	Text (10)	REQUIRED	Type of test. Valid values include 'Initial', 'Reextract1', 'Reextract2', 'Reextract3', 'Reanalysis', 'Dilution1', 'Diluton2', and 'Diluton3'.	
7	lab_matrix_code	Text (3)	REQUIRED	Code which distinguishes between different type of sample matrix. For example, soil samples must be distinguished from ground water samples, etc. See matrix valid value table in the appendix. The matrix of the sample as analyzed may be different from the matrix of the sample as retrieved (e.g. leachates), so this field is available at both the sample and test level.	
8	analysis_location	Text (2)	REQUIRED	Must be either 'FI' for field instrument or probe, 'FL' for mobile field laboratory analysis, or 'LB' for fixed_based laboratory analysis.	
9	basis	Text (10)	REQUIRED	Must be either 'Wet' for wet_weight basis reporting, 'Dry' for dry_weight basis reporting, or 'NA' for tests for which this distinction is not applicable. The EPA prefers that results are reported on the basis of dry weight where applicable.	

Table 5-7 Vapor Intrusion Test Result QC file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
10	container_id	Text (30)		Report as null.	
11	dilution_factor	Numeric	REQUIRED	Effective test dilution factor. If value is less than 1, then you need to put 'concentration factor' in the comment column.	
12	prep_method	Text (20)	IF AVAILABLE	Laboratory sample preparation method name or description. A controlled vocabulary (i.e., see Prep_mthd_var valid values in the appendix).	**Table A-14**
13	prep_date	DateTime		Beginning date and time of sample preparation in 'MM/DD/YYYY HH:MM' format.	
14	lab_name_code	Text (20)		Unique identifier of the laboratory as defined by the EPA. Controlled vocabulary, see lab valid value table in the appendix.	**Table A-23**
15	qc_level	Text (10)		May be either 'screen' or 'quant'.	
16	lab_sample_id	Text (40)		Laboratory LIMS sample identifier. If necessary, a field sample may have more than one LIMS lab_sample_id (maximum one per each test event).	
17	percent_moisture	Text (5)		Percent moisture of the sample portion used in this test; this value may vary from test to test for any sample. Numeric format is 'NN.MM', i.e., 70.1% could be reported as '70.1' but not as '70.1%'.	
18	subsample_amount	Text (14)		Amount of sample used for test.	
19	subsample_amount_unit	Text (15)		Unit of measurement for subsample amount. Controlled vocabulary, see Unit valid values table in appendix.	
20	analyst_name	Text (30)		Report as null.	
21	instrument_id	Text (50)		Report as null.	
22	comment	Text (255)		Comments about the test as necessary.	
23	preservative	Text (20)		Sample preservative used.	
24	final_volume	Numeric		The final volume of the sample after sample preparation. Include all dilution factors.	
25	final_volume_unit	Text (15)		The unit of measure that corresponds to the final_volume.	
26	cas_rn	Text (15)	REQUIRED	Use values in analyte valid value table.	

Table 5-7 Vapor Intrusion Test Result QC file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
27	chemical_name	Text (75)	REQUIRED	Use the name in the analyte valid value table.	
28	result_value	Numeric		Analytical result reported at an appropriate number of significant digits. May be blank for non_detects.	
29	Result_unit	Text (15)	If available		
30	result_error_delta	Text (20)		Error range applicable to the result value; typically used only for radiochemistry results.	
31	result_type_code	Text (10)	REQUIRED	Must be either 'TRG' for a target or regular result, 'TIC' for tentatively identified compounds, 'SUR' for surrogates, 'IS' for internal standards, 'SC' for spiked, compounds, 'CAL' for calculated pore water concentrations.	
32	reportable_result	Text (10)	REQUIRED	Must be either 'Yes' for results which are considered to be reportable, or 'No' for other results. This field has many purposes. For example, it can be used to distinguish between multiple results where a sample is retested after dilution. It can also be used to indicate which of the first or second column result should be considered primary. The proper value of this field in both of these two examples should be provided by the laboratory .	
33	detect_flag	Text (2)	REQUIRED	Maybe either 'Y' for detected analytes or 'N' for non_detects. Use 'Y' for estimated (above detection limit but below the quantitation limit) or '<' and '>' for tests such as flash point. Note that '<' must not be used to indicate non_detects (use 'N' for non_detects instead).	
34	lab_qualifiers	Text (10)		Qualifier flags assigned by the laboratory.	
35	validator_qualifiers	Text (10)		Qualifier flags assigned by the validation firm.	

Table 5-7 Vapor Intrusion Test Result QC file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
36	interpreted_qualifiers	Text (10)		Interpreted qualifier flag assigned by the validator. When the validated_yn = N (no, meaning the data is not validated by validator), the interpret qualifier is required if lab_qualifier or validator _qualifier are populated. If the validated_yn = Y (yes, meaning the data has been validated and the validator agreed witht eh lab qualifier), then they should populate the validator_qualifier and the interpreted_qualifier. If the validated_yn = Y (yes, but the validator does not agree with the lab_qualifier), then the validator will leave the qualifier NULL and the final qualifier is also NULL. When populating th e interpreted_qualifier, please use the qualifier in the Valid Value in A-10 with the description that can closely match with the lab qualifier. EPAR region 2 is not going to add any more qualifiers.	**Table A-10**
37	validated_yn	Text (1)	REQUIRED	Indicates if the result has been validated.	**Y= "Yes"** **N= "No"**

Table 5-7 Vapor Intrusion Test Result QC file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
38	method_detection_limit	Text (20)		Lowest concentration that can be detected by an instrument with correction for the effects of sample matrix and method-specific parameters such as sample preparation. MDLs are explicitly determined as set forth in 40 CFR Part 136. They are defined as three times the standard deviation of replicate spiked analyses. This represents 99% confidence that the analyte concentration is greater than zero. The organic methods in the EPA 500 series, EPA 600 series, and Standard Methods all give typical MDLs for clean water samples. Generally these clean-water MDLs (corrected for %moisture, sample size, and dilution) are used for reporting limits, but the laboratory may use MDLs that they have generated. MDLs generated by the laboratory using the sample matrix of interest are the most reliable. If the clean-water MDLs are used, remember that they do not include all of the upward correction necessary to account for the effects of sample matrix. This is important to remember especially for risk assessments and highly contaminated samples.	
39	reporting_detection_limit	Numeric		Concentration level above which results can be quantified with confidence. It must reflect conditions such as dilution factors and moisture content. Required for all results for which such a limit is appropriate. The reporting_detection_limit column must be reported as the sample specific detection limit.	

Table 5-7 Vapor Intrusion Test Result QC file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
40	quantitation_limit	Text (20)		Quantitation limits refer to a minimum concentration of an analyte that can be measured within specified limits of precision and accuracy. They are generally 5-10 times the detection limit. Thus, when quantitation limits are used as reporting limits, the laboratory is saying that the analyte is not present in a sufficient amount to be reliably quantified (i.e., at a concentration above the quantitation limit). It may be present and even positively identified or "seen" at a lower concentration.	
41	detection_limit_unit	Text (15)		Units of measurement for the detection limit(s). Controlled vocabulary, see Units valid value table in the appendix. This field is required if a reporting_detection_limit is reported.	
42	tic_retention_time	Text (8)		Report as null.	
43	minimum_detectable_conc	Numeric		Minimum detectable concentration or activity. This value should be in the same units as the result_value.	
44	counting_error	Numeric		Counting error as reported by the laboratory. This value should be in the same units as the result_value.	
45	uncertainty	Text (10)		The uncertainty of the counting error, valid values include "1 sigma" or "2 sigma" This field is required if the counting_error field is populated.	
46	critical_value	Numeric		Critical value as reported by the laboratory.	
47	validation_level	Text (20)	If available	If Validated_yn = Yes, then validation_level is required	
48	result_comment	Text (255)		Result specific comments.	
49	qc_original_conc	Numeric		The concentration of the analyte in the original (unspiked) sample. Might be required for spikes and spike duplicates (depending on user needs). Not necessary for surrogate compounds or LCS samples (where the original concentration is assumed to be zero).	

Table 5-7 Vapor Intrusion Test Result QC file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
50	qc_spike_added	Numeric		The concentration of the analyte added to the original sample. Might be required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample (depending on user needs).	
51	qc_spike_measured	Numeric		The measured concentration of the analyte. Use zero for spiked compounds that were not detected in the sample. Might be required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample (depending on user needs).	
52	qc_spike_recovery	Numeric		The percent recovery calculated as specified by the laboratory QC program. Always required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample. Report as percentage multiplied by 100 (e.g., report "120%" as "120").	
53	qc_dup_original_conc	Numeric		The concentration of the analyte in the original (unspiked) sample. Might be required for spike or LCS duplicates only (depending on user needs). Not necessary for surrogate compounds or LCS samples (where the original concentration is assumed to be zero).	
54	qc_dup_spike_added	Numeric		The concentration of the analyte added to the original sample. Might be required for spike or LCS duplicates, surrogate compounds, and any spiked and duplicated sample (depending on user needs). Use zero for spiked compounds that were not detected in the sample. Required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample. Also complete the qc-spike-added field.	

Table 5-7 Vapor Intrusion Test Result QC file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
55	qc_dup_spike_measured	Numeric		The measured concentration of the analyte in the duplicate. Use zero for spiked compounds that were not detected in the sample. Might be required for spike and LCS duplicates, surrogate compounds, and any other spiked and duplicated sample (depending on user needs). Also complete the qc-spike-measured field.	
56	qc_dup_spike_recovery	Numeric		The duplicate percent recovery calculated as specified by the laboratory QC program. Always required for spike or LCS duplicates, surrogate compounds, and any other spiked and duplicated sample. Also complete the qc-spike-recovery field. Report as percentage multiplied by 100 (e.g., report "120%" as "120").	
57	qc_rpd	Text (8)		The relative percent difference calculated as specified by the laboratory QC program. Required for duplicate samples as appropriate. Report as percentage multiplied by 100 (e.g., report "30%" as "30").	
58	qc_spike_lcl	Text (8)		Lower control limit for spike recovery. Required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample. Report as percentage multiplied by 100 (e.g., report "60%" as "60").	
59	qc_spike_ucl	Text (8)		Upper control limit for spike recovery. Required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample. Report as percentage multiplied by 100 (e.g., report "60%" as "60").	
60	qc_rpd_cl	Text (8)		Relative percent difference control limit. Required for any duplicated sample. Report as percentage multiplied by 100 (e.g., report "25%" as "25").	

Table 5-7 Vapor Intrusion Test Result QC file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
61	qc_spike_status	Text (10)		Used to indicate whether the spike recovery was within control limits. Use the "*" character to indicate failure, otherwise leave blank. Required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample.	
62	qc_dup_spike_status	Text (10)		Used to indicate whether the duplicate spike recovery was within control limits. Use the "*" character to indicate failure, otherwise leave blank. Required for any spiked and duplicated sample.	
63	qc_rpd_status	Text (10)		Used to indicate whether the relative percent difference was within control limits. Use the "*" character to indicate failure, otherwise leave blank. Required for any duplicated sample.	
64	lab_SDG	Text (20)		Lab Sample Delivery Group (SDG) identifier. A single sample may be assigned to multiple Sample Delivery Group (SDG) based on different analysis.	

5.8 Vapor Intrusion Batch EDD File

Each Vapor Intrusion Batch file must be named according to the following convention:

EPAR5_VI_BATCHES_V3

Table 5-8 Vapor Intrusion Batches file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
1	sys_sample_code	Text (40)	REQUIRED	Unique sample identifier. Each sample must have a unique value, including spikes and duplicates. Laboratory QC samples must also have unique identifiers. The laboratory and the EQuIS® Chemistry user have considerable flexibility in the methods they use to derive and assign unique sample identifiers, but uniqueness throughout the database is the only restriction enforced by EquIS® Chemistry.	

Table 5-8 Vapor Intrusion Batches file data structure

Pos#	Column Name	Data Type	Required	Description	Valid Values In Appendix
2	lab_anl_method_name	Text (35)	REQUIRED	Laboratory analytical method name or description. A controlled vocabulary column, valid values can be found in the appendix in table ab_anl_method_name.	**Table A-16**
3	analysis_date	DateTime	REQUIRED	Date and time of sample analysis in 'MM/DD/YYYY HH:MM' format. May refer to either beginning or end of the analysis as required by EPA.	
4	fraction	Text (10)	REQUIRED	For soil vapor intrusion samples, enter "NA" for 'Not Applicable.' Must match one of the reported values in the fraction field of the VI_TestResultsQC EDD table submitted in the current EDD.	
5	column_number	Text (2)	REQUIRED	Column number, if null, "NA" will be placed in this field	
6	test_type	Text (10)	REQUIRED	Type of test. Valid values include 'Initial', 'Reextract1', 'Reextract2', 'Reextract3', 'Reanalysis', 'Dilution1', 'Diluton2', and 'Diluton3'.	
7	test_batch_type	Text (10)	REQUIRED	Lab batch type. Valid values include 'Prep', 'Analysis', and 'Leach'. This is a required field for all batches.	
8	test_batch_id	Text (20)		Unique identifier for all lab batches.	

6. TECHNICAL SUPPORT

EPA Region 5 provides technical support for users of this Comprehensive EDD Specification Manual. For questions concerning data, data formats, and EDD submittal procedures, please contact EDD EQUIS Coordinator. For more general questions, relating to the site, please contact the EPA RPM assigned to the site.

APPENDIX H EPA REGION 7 GEOSPATIAL DATA DELIVERABLES

STANDARD OPERATING PROCEDURE

2341.01A

R7 Geospatial Data Deliverables

August 7, 2015

McLaughlin, Casey

ENST/EDAB

APPROVED:

Peer Reviewer	8/13/15 Date
ENST Division Director	9/28/15 Date
AWMD Division Director	9/30/15 Date
CNSL Division Director	9/30/15 Date
Acting ARA PLMG Division Director	10/2/15 Date
SUPR Division Director	10/2/2015 Date
WWPD Division Director	10/5/15 Date
Independent Quality Assurance Reviewer	10/05/2015 Date

Recertified:

Reviewer					
Date					

Table of Contents

1. Purpose

The purpose of this Standard Operating Procedure is to establish a uniform process for submission and storage of geospatial data to Region 7. This document provides guidance for contractors, grantees, potentially responsible parties, regional staff and others who provide geospatial data to EPA Region 7 programs, projects, or staff.

This document specifies geospatial file delivery formats for all geospatial materials developed in support of geospatial-related work for and within EPA Region 7 to ensure locational data consistency and integrity. It is the intent of EPA Region 7 to acquire, catalog and manage all geospatial files comprehensively across all projects to:

- ensure future use and access to EPA;
- provide an archive of work accomplished;
- apply appropriate data standards and formats;
- maintain and serve data that spatially represent features pertinent to on-going EPA efforts;
- provide a geospatially consistent basis for future activities such as CERCLA Five Year Reviews; and
- attach/incorporate into consent decrees and orders

2. Applicability

This document covers the types of geospatial data deliverables anticipated in Region 7 and how the Region would like to receive these deliverables. Additionally, data standards, formats, and best management practices are identified and should be used. This SOP applies to all personnel, grantees, and potentially responsible parties involved in generation and or/storage of geospatial data for Region 7. *It is the responsibility of those providing deliverables to the Region to adhere to the procedures provided in this document to the best of their abilities.* The Region relies on EPA staff such as grant/contracting officers, On-Scene Coordinators, Remedial Project Managers, and inspectors to ensure data are submitted for long-term storage and use at EPA.

3. Summary of Procedure

Geospatial data should be created using industry best practices, following EPA National Geospatial Data Policy, and be properly documented as specified in national GIS metadata polices and outlined in this SOP.

4. Definitions/Acronyms

CAD stands for Computer Assisted Drawing and is the use of computer systems to assist in the creation, modification, analysis, or optimization of a design.

Esri (formerly known as the Environmental Systems Research Institute or E.S.R.I.) is an international supplier of Geographic Information System (GIS) software, web GIS and geodatabase management applications. Esri is the current EPA enterprise GIS software provider.

FGDC stands for Federal Geographic Data Committee and is an interagency committee that promotes the coordinated development, use, sharing, and dissemination of geospatial data on a national basis.

Geospatial Data means information that identifies the geographic location and characteristics of natural or constructed features and boundaries on the earth. This information may be derived from, among other things, remote sensing, mapping, and surveying technologies. Statistical data may be included in this definition at the discretion of the collecting agency.

GIS stands for Geographic Information System and is a system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or geographical data.

Machine-Readable refers to information or data that is in a format that can be easily processed by a computer without human intervention while ensuring no semantic meaning is lost (https://project-opendata.cio.gov/glossary/).

Metadata is structured information that describes, explains, locates, or otherwise makes it easier to search and retrieve (for example, through a search engine). The simplest definition of metadata is “structured data about data.”

Rasters consist of a matrix of cells (or pixels) organized into rows and columns (or a grid) where each cell contains a value representing information, such as temperature. Rasters are digital aerial photographs, imagery from satellites, digital pictures, or even scanned maps.

Vectors are coordinate-based data models that represents geographic features as points, lines, and polygons. Each point feature is represented as a single coordinate pair, while line and polygon features are represented as ordered lists of vertices. Attributes are associated with each vector feature, as opposed to a raster data model, which associates attributes with grid cells.

5. Personnel Qualifications

Persons should be knowledgeable in GIS mapping and data management best practices and they should be able to demonstrate organizational and communication skills.

6. Procedures

6.1. GIS Formatted Data Files

All final version geospatial-related files acquired or developed to support mapping and/or spatial analysis by a contractor or grantee are considered property of the EPA and are required to be submitted to EPA. This includes, but is not limited to, all GIS, CAD, and image formatted files used to develop maps for any scoping or decision document developed for EPA, as well as any spatial file used to inform a decision on site management or development. Only final versions of each layer are required for delivery to EPA, and must be in an approved format as specified in this SOP. In addition, all electronic geospatial data, whether vector or raster, must be in a well-known projection defined (have a projection defined and embedded in or associated with the data file), and in the case of CAD data must NOT be in page space or a custom site-specific projection; all CAD data must be in known real world coordinate space, ideally conforming to the projection specifications outlined below. Should tabular data be appropriate to connect location information with attribute information, then documentation specifying the primary and foreign keys is required. Please review the EPA National Geospatial Data Policy for additional principals, responsibilities and requirements for collecting and managing geospatial data. Should coordinate information be provided in tabular format, it should contain *at minimum* the following fields (see EPA Latitude/Longitude Data Standard):

- **ID** – a unique identifier given to each feature.
- **Latitude** – the Y coordinate in decimal degrees, 6 decimal places.
- **Longitude** – the X coordinate in decimal degrees (negative), 6 decimal places.
- **Horizontal Datum** – the datum of the coordinates
- **Horizontal Measure –** the horizontal measure, in meters, of the relative accuracy of the latitude and longitude coordinates.
- **Vertical Measure (when collected) –** The measure of elevation (i.e., the altitude), above or below a reference datum.
- **Reference Point Name** – the name that identifies the place (Plant Entrance, Water Well, Storage Tank, Sampling Point, etc…).

Additionally, all static maps that appear in an EPA document should be in an electronic Adobe PDF format with fonts embedded and at a resolution of *300 dots per inch (dpi)* or greater. Finally, any dynamic maps used in final map production, such as Esri ArcMap/Pro documents (.mxd, .aprx), may also be required for delivery to EPA with accompanying data in a stand-alone directory structure. Such documents should to be provided as documented Esri map packages (.mpk). See the EPA Geospatial/Non-Geospatial Metadata Style Guide for best practices on Esri map documents.

6.2. Projection Requirements

All geospatial files submitted to EPA must have spatial reference information that describes the projection/coordinate system, datum, units of measure and where applicable, the collection methods. The EPA requests that all vector data be submitted in **UTM in Zone 14-16 (NAD83) in meters**. Raster data, such as aerial photographs may be submitted in their native projection, and maps should be in the appropriate projection/coordinate system for the area depicted. EPA Region 7 GeoResources Team members will consult and advise on projection, coordinate, and datum details for submission to EPA.

6.3. Metadata Requirements

All geospatial files developed for EPA are required by Executive Order 12906 and EPA National Geospatial Data Policy to have associated metadata. EPA requires FGDC compliant metadata on all geospatial files developed for site support. Region 7 also requires that all dynamic maps (ArcMap documents) have metadata completed. The Content Standard for Digital Geospatial Metadata can be found at www.fgdc.gov. Metadata, including information about the data's projection, can be developed using one of several built-in or add on tools within a GIS, and typically is associated with the geometry file as an XML file. EPA Region 7's Metadata Steward is available to assist with development of required metadata and recommend following the EPA Geospatial/Non-Geospatial Metadata Style Guide (Version1.0) October 7, 2014.

6.4. Organizational Requirement

If the project is complex, a directory structure and readme text file in the upper level directory that describes the structure is required. Because EPA will be managing data across many projects, it is important to make your submittals as understandable as possible. A *recommended* directory structure is as follows:

<**Project_Name**>
- |_ **Docs** (reports, SOPs, correspondence, and other such documents)
- |_ **Maps** (MXDs and PDFs. Map names should use the project name as a prefix)
- |_ **Raster** (aerial photos, satellite imagery, logos, DEMs, and other raster type data)
- |_ **Source** (original unmodified data that may have been acquired from external/internal sources)
- |_ **Tables** (MS-Access databases, spreadsheets, delimited text files, or other such tabular data not stored in a geodatabase)
- |_ **Vectors** (geodatabases, shape files, and other approved vector data formats)

File naming conventions should be logical, consistent, and contain no spaces or special characters. An underscore may be used in lieu of a space. The format for dates is 8 digits in year, month, day order (yyyymmdd).

6.5. Delivery Requirements

EPA will accept data delivered on CD-ROM, DVD, or external hard drive, as well as direct electronic submission via email or FTP site. Other delivery methods may be allowed if those requirements present a significant burden or as technology changes.

Acceptable EPA Geospatial Data Formats:

The following file formats are considered acceptable and all maps and data must include an associated metadata document:

DATA
Vector - -UTM in Zone 14-16 (NAD83) in meters
File Geodatabase (.gdb) *Preferred Shape File (.shp, .shx, .dbf, .prj, .sbx, .sbn) Personal Geodatabase (.mdb) ESRI Map Package (.mpk)
Raster – native projection acceptable
TIFF image with world reference file or as a GeoTIFF (.tif, .tfw) JPEG image with world reference file (.jpg, .jpw) ERDAS Imagine image with pyramid file (.img, .rrd) MrSid image (.sid) ESRI Grid DEM Multi spectral satellite imagery (generally .bil)
TINs – appropriate projection/coordinate system for the area depicted
ESRI TIN
CAD - UTM in Zone 14-16 (NAD83) in meters
DXF layer separates (.dxf) CAD drawing files (.dwg) Microstation and Integraph Design files (.dgn)
Tabular – primary keys should be clearly identified/documented
MS-Access database (.mdb) MS-Excel spreadsheet (.xls, xlsx) Delimited text file (.txt, .csv)

MAPS
Static
Adobe PDF at 300 dpi or better with embedded fonts (.pdf)
Dynamic
ESRI ArcMap/Pro Document (.mxd, .aprx) please specify version ESRI Map Package (.mpk)
FGDC Compliant METADATA (ISO 19115)
XML (.xml)

7. Records Management

The project officer shall be responsible for records management per program-specific policies. Data provided to the GeoResources Team does not replace submittal to the project officer or other records retention schedules. Data submitted to the GeoResources Team is in addition to regular records retention.

8. Quality Assurance/Quality Control

Geospatial data should have documented quality assessments consistent with a data quality objectives and as defined in applicable standards like the EPA Latitude/Longitude Data Standard or a programmatic specific standards. Each dataset or feature as necessary, should include information that describes the accuracy and precision of the collection/creation method. The project officer shall verify that data collected meets the project needs as defined in any data objectives. Geospatial data developed at the Agency shall include horizontal and vertical (when applicable) positional accuracy information for all data sets (see section 4.6, National Geospatial Data Policy Accuracy Tier Table, EPA Geospatial Technical Document Specification).

9. References

EPA Geospatial Metadata Technical Specification Version 1.0, CIO 05-002, November 2, 2007. This document establishes guidelines for publishing geospatial metadata for data sets, applications and services developed by the EPA and applied in EPA's Environmental Dataset Gateway metadata tool.

EPA Geospatial/Non-Geospatial Metadata Style Guide, Version1.0, October 7, 2014. This guide provides suggestions on metadata preparation for EPA geospatial and non-geospatial resources for internal and external sharing. Detailed guidance on metadata requirements, standard language, and naming conventions are provided with the goal of simplifying the documentation process and standardizing (to the extent possible) EPA dataset metadata and documentation.

EPA Geospatial Metadata Technical Specification, Version 1.0, November 2, 2007. This document describes the guidelines for publishing geospatial metadata for data sets, applications, and services.

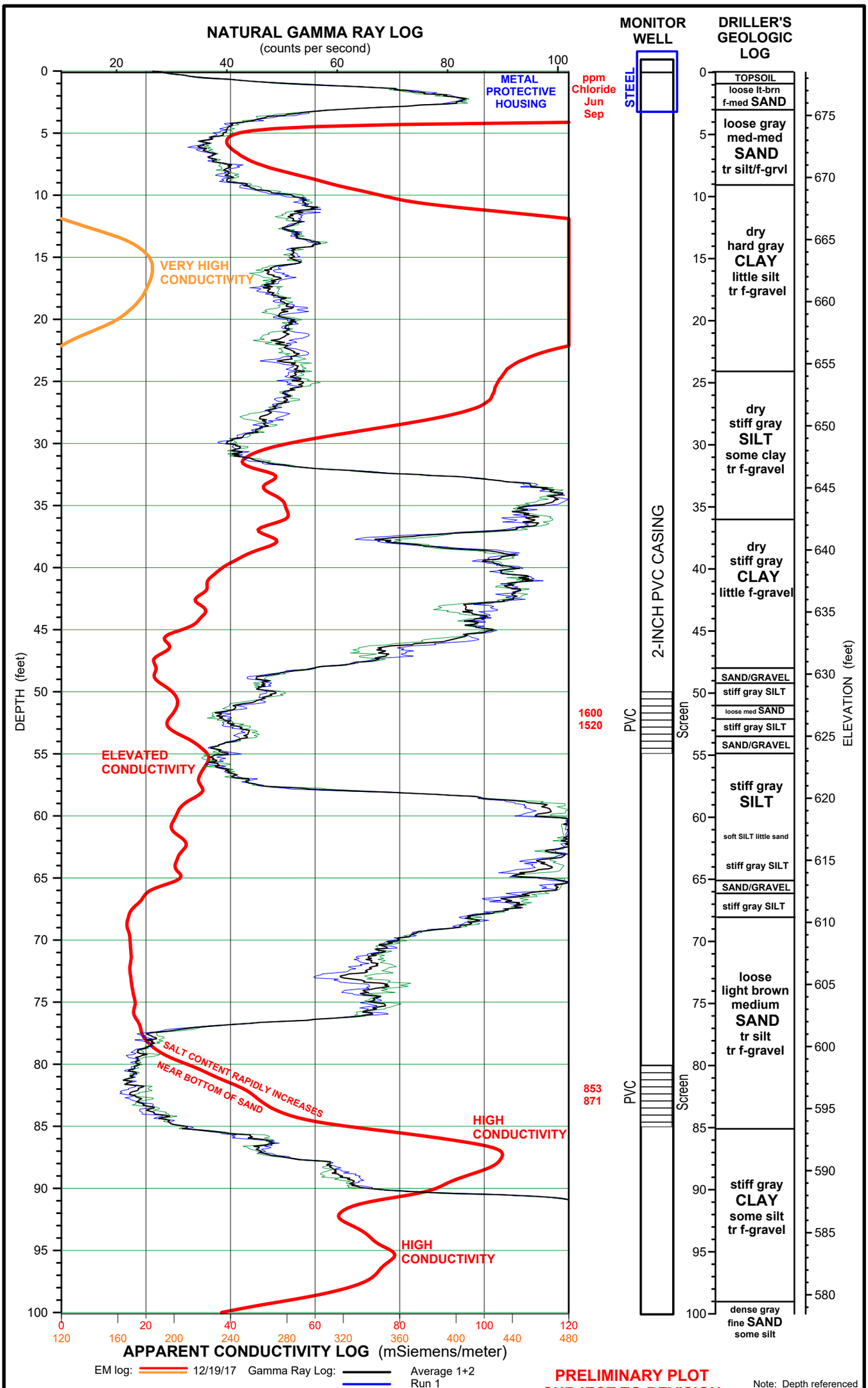
EPA National Geospatial Data Policy, August, 2008. The National Geospatial Data Policy (NGDP) establishes principles, responsibilities, and requirements for collecting and managing geospatial data used by Federal environmental programs and projects within the jurisdiction of the U.S. EPA.

Global Positioning System Technical Implementation Guidance, September 2003. This document serves as reference guidance for Agency staff using GPS equipment and for individuals responsible for the maintenance of this equipment.

Institutional Control Vector Profile Technical Specification, EX000015.1, January 6, 2006. This specification establishes the requirements for documenting geographic lines and boundary coordinates and related method, accuracy, and description data for places of interest to the EPA. Latitude/Longitude Data Standard, EX000017.2, January 6, 2006. This data standard establishes the requirements for documenting latitude and longitude coordinates and related method, accuracy, and description data for places of interest to the EPA.

National Geospatial Data Policy Procedure for Geospatial Metadata Management, CIO 2131-P-01-0, October 2010. The purpose of this document is to establish procedures, requirements and responsibilities for maintaining geospatial metadata used by EPA programs.

APPENDIX I 3D DATA VISUALIZATION OUTPUTS



PRELIMINARY PLOT
SUBJECT TO REVISION

Note: Depth referenced to Grade

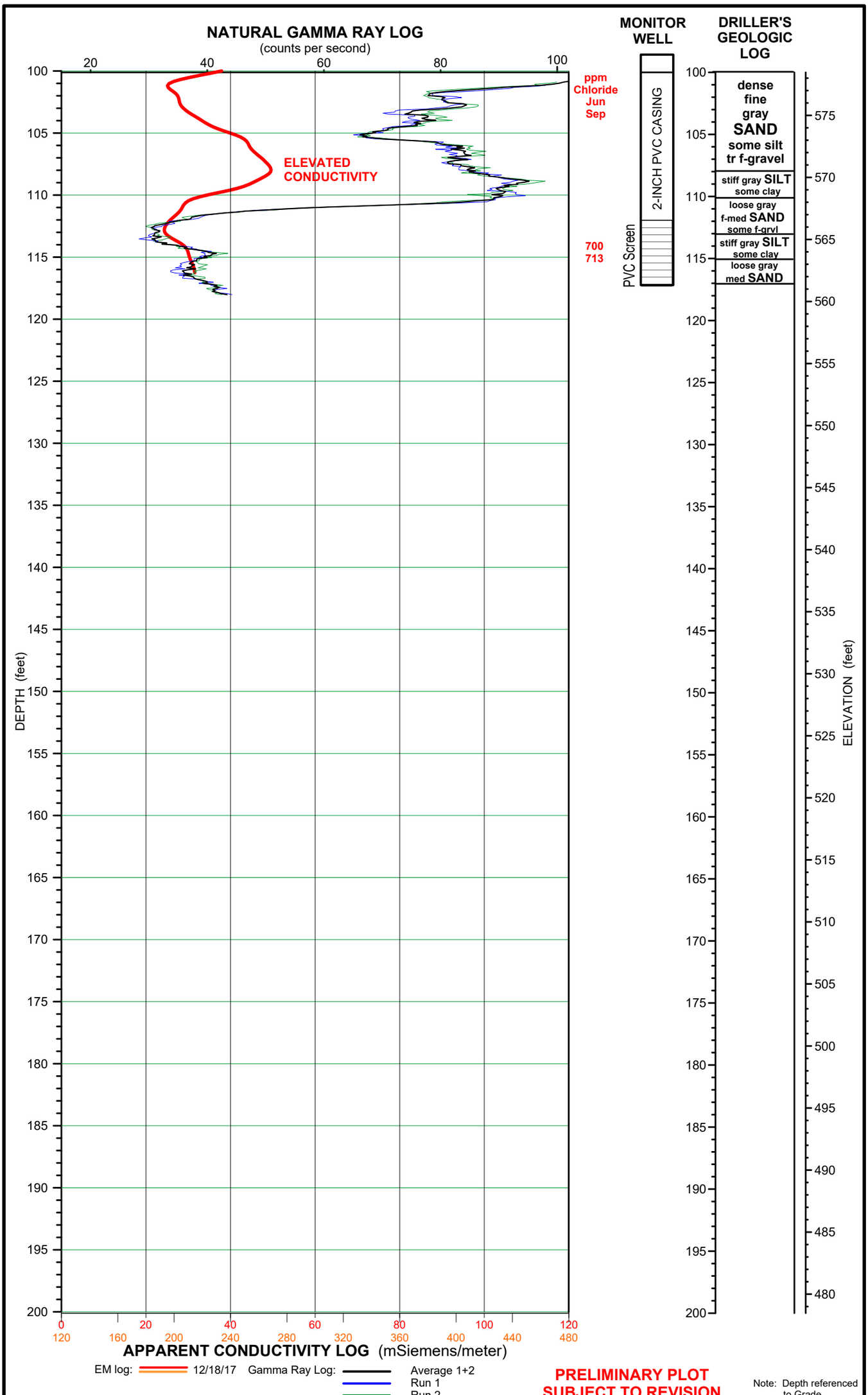
EXAMPLE OUTPUT

Gamma Ray Peak: 000.0 cps
EM39 Conductivity Peak: 184.7 mS/m

Grade:
Top of Casing:
Location:

PANEL 1

GEOSPHERE



EXAMPLE OUTPUT

Gamma Ray Peak: 000.0 cps
EM39 Conductivity Peak: 184.7 mS/m

Grade:
Top of Casing:
Location:

PANEL 2

GEOSPHERE