

NYSDEC

Electronic Data

Deliverable Manual



NYSDEC EDD Format v.1

November 8, 2011

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ACRONYMS

.accdb	access database
AOC	area of concern
BAL	blank action limit
CRQL	contract required reporting limit
.csv	comma delimited text file
Dup	duplicate
DUSR	data usability summary report
EB	equipment blank
EDD	Electronic Data Deliverable
EDP	EQuIS Data Processor
EIMS	Environmental Information Management System
FB	field blank
FD	field duplicate
J	estimated
L	liter
LB	laboratory blank
LCS	Laboratory Control Sample
.mdb	access database
mg	milligram
ml	milliliter
MS	matrix spike
MSD	matrix spike duplicate
N	normal (based on context)
N	no (based on context)
NA	not applicable
NYSDEC	New York State Department of Environmental Conservation
OU	operable unit
PAH	polycyclic aromatic hydrocarbon
PK	primary key
PM	project manager
QC	quality control
R	rejected

SO	soil
SUR	surrogate
SV	semi-volatile
TB	trip blank
TIC	tentatively identified compound
TRG	target
.txt	text file
U	non-detect
ug	microgram
UJ	estimated below the reporting limit
VOA	volatile organic analyte
.xls	excel spreadsheet
.xlsx	excel spreadsheet
.xml	extensible markup language file
Y	yes
.zip	archived file

1.0 GENERAL INFORMATION

1.1 INTRODUCTION

The purpose of this Electronic Data Deliverable (EDD) guidance manual is to provide instructions on how to report environmental data electronically to the New York State Department of Environmental Conservation (NYSDEC). The types of data that can be reported electronically include data generated during site characterization and investigation phases, soil vapor investigations, data recorded when installing monitoring wells, data generated during long term monitoring events and treatment system performance samples, and analytical and field data routinely collected from a variety of media. Data submitted to NYSDEC will be stored in the Agency's Environmental Information Management System (EIMS). NYSDEC uses the EQuIS software (developed by EarthSoft) specifically as the EIMS. A complete NYSDEC EDD consists of one or more data tables combined in an EDD file. This manual describes both the procedural and formatting requirements for creating and submitting EDDs to NYSDEC.

It is recommended that as an initial step, the reader of this manual should review the following files/information available on the "EarthSoft-for-NYSDEC" website:

<http://www.EarthSoft.com/products/edp/edp-format-for-nysdec/>

- *NYSDEC EDD Format Files & Format Description*
- *NYSDEC EDD Blank EDD template file*
- *EQuIS Data Processor (EDP)*

For successful EDD submittal, Data Providers MUST NOT change the table names, field names, or table structures when creating and populating data files to be processed by the EDP.

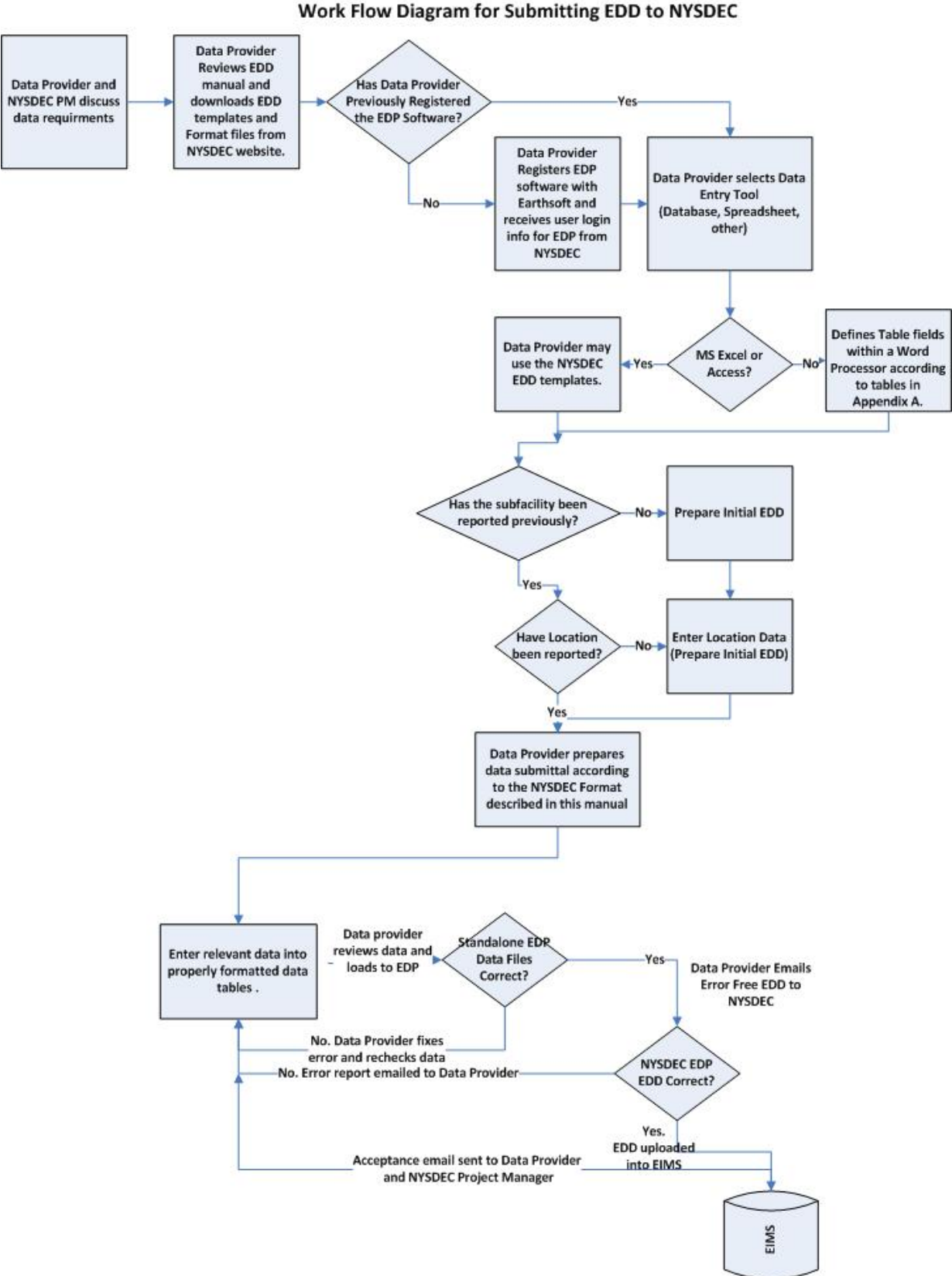
1.2 WORK FLOW PROCESS FOR SUBMITTING EDDS

The work flow process for submitting EDDs to NYSDEC is shown in Figure 1.1. The process begins by identifying the software program that will be used to create the data tables. Data providers often prefer to choose a spreadsheet or database to create the tables, although other software may be used.

NYSDEC requires that data providers consolidate data for each sampling event into a single EDD submittal. For projects where there is a primary consultant, it will be the responsibility of the primary consultant to coordinate the EDD submittal with all subcontractors (labs, surveyors, etc) that are submitting data. Ultimately it is the responsibility of the primary consultant to compile, check, and submit the EDD to NYSDEC. For projects where there is only NYSDEC standby laboratory or remedial contractor, the standby contractor is expected to coordinate with the NYSDEC Project Manager (PM) to create and submit data.

Figure 1.1 shows decision points in the EDD submission process. The final step before submitting data files to NYSDEC is to check the files using the EarthSoft EDP software. The EDP software is a standalone application that is available on the “EarthSoft-for-NYSDEC” website: <http://www.EarthSoft.com/products/edp/edp-format-for-nysdec/>. The EDP application will identify any formatting and integrity errors in the files that must be corrected prior to submitting the EDD. The Sign and Submit feature of the EDP checker associates the data tables with the correct Facility name and code (NYSDEC Site number) and creates a compressed (zip) file, which constitutes the EDD that is sent via e-mail to NYSDEC.

Figure 1.1: Work Flow Diagram for Submitting an EDD to NYSDEC



2.0 INITIAL SET-UP

2.1 COORDINATION WITH NYSDEC

Data providers should consult with the NYSDEC PM throughout all project phases to ensure efforts are in place to meet the NYSDEC EDD requirements. Special attention should be given at the project planning and budgeting phase to ensure Field Activity Plans are developed to incorporate data collection needs for the NYSDEC EDDs into their field, sampling, analysis, and quality assurance plans and procedures. Data collection and storage can be designed to maximize efficiency and eliminate time-consuming data manipulation down the road. Data Providers should also consult with the PM prior to preparing and submitting EDDs to verify what data will be submitted for their project. Communication with the PM can help to avoid unnecessary efforts.

2.2 EDD FORMAT FILES

The NYSDEC Electronic Data Submission website (<http://www.dec.ny.gov/chemical/62440.html>) provides files and instructions to aid the Data Providers submitting data in the EDD format. This format is designed to be software-independent and easy to achieve such that any spreadsheet, database, or text editor can be used to create the EIMS EDD files.

The NYSDEC website contains links to the “EarthSoft-for-NYSDEC” website: <http://www.EarthSoft.com/products/edp/edp-format-for-nysdec/> where the Data Providers can download the NYSDEC Format Description file, the NYSDEC Blank EDD and the free EDP software application. The *NYSDEC EDD Format Description file* is a Microsoft Excel workbook containing separate worksheets (tabs) with descriptions of the fields relating to each specific data table (see Appendix A). The *NYSDEC Blank EDD file* is a Microsoft Excel workbook that contains empty worksheet tables (tabs) in their required formats for each of the specific data tables (see Appendix A). These two files are available to Data Providers to assist them in preparing the EDD. Data Providers may input data into a table template directly or utilize them to construct custom database tables or custom text files. Section 3.1 details the creation of data tables and EDD files.

Data Providers should check the NYSDEC website prior to submitting an EDD to ensure that the most current EDD format is being submitted to NYSDEC. EDD submittals to NYSDEC that are not in the latest format will be returned to the Data Provider for resubmittal using the most current

EDD format. *For successful EDD submittal, Data Providers MUST NOT change the table names, field names, or table structures when creating and populating data files to be processed by the EDP.*

The EDP is a third party application that must be used by data providers to check their data files prior to submission. The EDP performs a series of formatting checks on the data files and then identifies any records that have errors along with a description of the errors. The EDP also formats the data into the zipped text file that is the EDD deliverable, which is provided to NYSDEC.

NYSDEC will periodically update the format and format description files to further enhance the EQUIS database. The Data Providers must always check that they are using the most current version of the format files. As noted above, EDD submittals to NYSDEC that are not in the latest format will be returned to the Data Provider for resubmittal using the most current EDD format.

2.3 NYSDEC EDD FILE DOWNLOAD PROCEDURE

Listed below are the required steps that must be followed to successfully download the EDP and NYSDEC's format files:

1. Browse to <http://www.EarthSoft.com/products/edp/edp-format-for-nysdec/>
2. If you don't already have EDP on your computer, select and install **EQUIS EDP (v. 5.5.1 or greater)**
3. Select and install the corresponding **NYSDEC Format file (v. 5.5.1 or greater)**
4. Note: The EQUIS EDP and NYSDEC Format files are self extracting archive files (.zip). When these files are run they will install files to a default path **C:\Program Files \EarthSoft\EQUIS** and **C:\Program Files \EarthSoft\EQUIS\Formats\NYSDEC** respectively.
5. After installing both files **Browse** to the **C:\Program Files \EarthSoft\EQUIS** directory locate the EDP.exe file to run the software. You may create a shortcut of this file to your Desktop.
6. The first time EDP is launched, a format file must be selected before a data file can be loaded.
 - a. Click on the **Format** button (located in the upper left corner of the EDP in the "Open" section). **Navigate to C:\Program Files \ EarthSoft\ EQUIS\ Formats\ NYSDEC.**
 - b. Select the **NYSDEC.xse** format file and click **Open**.
 - c. Once the format file has been selected and successfully opened, you will be prompted to **register** for an evaluation key for your EDP software. This is a free registration.

7. **Registering** your copy of EDP:

- a. Click the **Register** button on the EDP Evaluation Screen.
- b. Select the link below the New Key Codes box to request a registration key for your workstation. The link will take you an EarthSoft webpage to register for NYSDEC EDP format. Fill out the required items and select **Submit** at the bottom of the page.
- c. Within 48 hours you should receive an email from nyenvdata@gw.dec.state.ny.us containing a registration key, login username and password. This information is needed when you submit your data package to NYSDEC.

(See Notes on next page)

Notes:

To run properly, your system must also have **.NET Framework version 3.5** installed. You can check to see if you already have the .NET Framework 3.5 installed by clicking **Start** on your Windows desktop, selecting **Control Panel**, and then double-clicking **Add or Remove Programs**. When that window appears, scroll through the list of applications. If you see Microsoft .NET Framework 3.5 listed, the latest version is already installed and you do not need to install it again.

Name	Size	Type	Modified
Microsoft .NET Framework 3.5	N/A	External Site	2010.02.05

2.4 EDD DATA TABLES

Although the NYSDEC Blank EDD and Format Files consists of multiple data tables (also known as worksheets or tabs), data is usually submitted to the NYSDEC in EDDs consisting of subsets or groups of these data tables. These groups can be considered to consist of an Initial Group, a Chemistry group, Field Investigation group, Soil Vapor Intrusion, Subsurface Investigation (Drilling), and Historical Data groups.

Data providers will initially submit a NYSDEC EDD to NYSDEC with the following data table included:

- **Data Provider** - provides general information about the data provider and the NYSDEC site contact. This table must **only be submitted once** for each data provider. All subsequent EDD submissions to NYSDEC for any site, by the same data provider, will reference the **Data Provider** information originally submitted.

- If a Data Provider is submitting an EDD with data from a site that is influenced by or is influencing the groundwater of another site (i.e., the plume is a result of multiple releases from more than one site), then please refer to Section 3.2.1 for additional guidance regarding data reporting.

For each site, the following data tables must be submitted:

- **Subfacility** – includes information about a site (site code, type of facility, and location address). In the EQUIS relational database, the term “facility” is analogous to “site,” and “subfacility” is analogous with a site Operable Unit (OU) or Area of Concern (AOC). If a site/facility has multiple OUs, then a separate record must be created in the Subfacility data file for each OU or AOC. A typical subfacility code for a site is “01” to designate “OU1.”
- **Location** - contains a record for each of the sampling locations for a Subfacility. A Location table will need to be included with the EDD if new locations are added to the site, or if additional information is added to existing locations.

These initial EDD files can be submitted prior to or in conjunction with other data submissions. The initial EDD submission(s) provide the data to set up the site in the NYSDEC EQUIS database.

In most cases, EDD submissions from the Data Provider will consist of chemistry and/or field investigation data. The following is a list of tables and their descriptions (please verify with your NYSDEC PM which of the following are required for each specific site):

Chemistry (may also contain **Data Provider**, **Subfacility**, and **Location** tables unless previously submitted):

- **Sample** - contains data for samples collected at a site and location such as sample matrix, collection date, and sample type.
- **TestResultsQC** - contains data relating to analytical tests performed on samples, analytical methods, analytical results, and detection and reporting limits.

Field Investigation (may also contain **Data Provider**, **Subfacility**, and **Location** tables unless previously submitted):

- **Sample** - contains data for samples collected at a site and location such as sample matrix, collection date, and sample type.
- **TestResultsQC** - contains data relating to analytical tests performed on samples, analytical methods, analytical results, and detection and reporting limits.
- **WaterLevel** - contains information on water levels measured during sampling activities such as groundwater elevation and reference elevation.
- **ExtractionInjectionWells** – contains data specific to pumping and injection wells such as pumping rates, period of pumping, and volume pumped.

- **FieldResults** – contains data specific to field parameters (turbidity, temperature, specific conductance, pH, Eh, dissolved oxygen, etc.)

Additional EDD submissions described in this EDD Manual are the Soil Vapor Intrusion, Subsurface Investigation, and Historical data sets/table groups.

3.0 NYSDEC EDD CREATION

Data Providers must submit data in a properly formatted and checked EDD. This section prescribes the rules for entering data in the NYSDEC format. The *NYSDEC Format Description file* defines the tables and file structures for each data table and is available on the “EarthSoft-for-NYSDEC” website: <http://www.EarthSoft.com/products/edp/edp-format-for-nysdec/>. Data Providers should visit the NYSDEC website prior to submitting an EDD to ensure that the most current EDD format is being submitted to NYSDEC. EDD submittals to NYSDEC that are not in the latest format will be returned to the Data Provider for resubmittal using the most current EDD format.

The Format file describes how the *data entered must follow the general rules for data fields (see Section 3.1)*. The relationship between Facilities, their Subfacilities and locations is described in Section 3.2. Some fields may only be populated with data that exactly matches the choices listed in the NYSDEC’s list of valid values. Details using valid values are explained in Section 3.3. Additional data requirements reporting null or retest data is described in Section 3.4. Properly formatted data tables may be produced directly from the NYSDEC template files or by using any database or spreadsheet software application or word processor. The *NYSDEC Blank EDD* file can be used as a template to aid Data Providers in the data file creation if they wish to use their own database software. Data Providers are responsible for enforcing the requirements listed in each table regardless of the application used to create the EDD. Creating the table formats using other software applications is described in Section 3.5. Data submittal format requirements also are described in Section 3.5.

3.1 GENERAL DATA REQUIREMENTS

The *NYSDEC Format Description* file defines the rules data must follow to be accepted by NYSDEC. This Excel file contains field headings that define which fields are required to be filled-in or fields that refer to a lookup (reference) table of valid values for that field. Each field has a defined data type and size. These rules are defined in the following bulleted items.

- All field names that are required are in red text and noted in the ‘Required’ column with a “Y”; these fields must be filled in.
- NYSDEC requests that the Data Provider not limit the information provided in an EDD to the current required fields, but instead provide NYSDEC with the all of the information that is typically provided by a laboratory, report table, or report appendices. Delivery of

additional information assists NYSDEC's ability to provide regulatory support to a responsible party and stakeholders in a more complete and timely manner.

- Although certain EDD fields are not currently required, NYSDEC continues to re-evaluate the EDD requirements and the Data Provider should visit the NYSDEC website prior to submitting an EDD to ensure that the most current format is being submitted and all required fields are sufficiently completed.
- Field names with controlled data input are noted in blue text and are required for selected data fields. The valid values for the field are noted in the 'Lookup' column of the format file and explained in Section 3.3. Valid values are found in the *NYSDEC Valid Values file* on the website.
- The data type for each field name is indicated in the 'DataType' column (i.e., Text, Numeric, DateTime).
 - Text: Alphanumeric values (e.g., A, B, C, a, b, c, 1, 2, 3)
 - Numeric: Decimal numbers (e.g. 12, 23, 23.234532)
 - DateTime: Date format is MM/DD/YYYY (e.g. 04/25/2011)
Time in 24-hr (military) format HH:MM (e.g. 20:54)
 - Use of special characters: Data providers shall not use special characters (e.g. #, ', ", /, \, !, @) when naming locations and samples. Inclusion of such characters in the sys_loc_codes and sys_sample_codes can be incompatible with the database. Use of these characters as part of primary key fields in the database may cause problems for the database and should be avoided. Hyphens and underscores are acceptable for use but are not required.
- The maximum length of each text field is indicated in the 'DataType' column and indicated in parentheses for each of the field names. Maximum length requirements imply that the data entered cannot exceed the specified number of characters but may contain fewer characters (e.g., Text (20) would indicate a maximum of 20 characters can be accepted for the text field).

No changes can be made to the order of fields or names of the data fields. Any deviations from the format will result in errors during the EDP checking process. Readers are encouraged to consult with and use the format descriptions for each data table provided in Appendix A.

3.2 DEFINITION OF A FACILITY, SUBFACILITY AND LOCATION

To submit an EDD, it is important to understand how facility, subfacility, and location are defined for the purposes of the EQUIS database. Each facility (facility_id) will be identified with its NYSDEC Site ID number. The Site ID number is assigned to the EDD during the sign and submit process explained in Section 5.1.

The Subfacility (subfacility_code) will be the OU/AOC identifier. There must always be at least one OU per facility, as all sampling locations, parameters, and results are tied to a subfacility (not the facility). Even if a site is small, has no AOC or OU designations from a regulatory perspective,

but has one or more release to one or more media, the subfacility field must be populated. If groundwater is impacted, each plume at a site should have a separate Subfacility ID.

The Location term is defined as a unique point on the surface of the earth. Locations are distinct points defined by longitude and latitude (based on the World Geodetic System of 1984 datum, i.e. WGS84) reported in **decimal degrees** (i.e., -73.809542 for x_coord and 42.855490 for y_coord). Note that the longitude *must be reported as negative* for locations in the western hemisphere. Examples of locations include soil borings, monitoring wells, and other sampling locations. Each Subfacility can contain one or more locations. Each location identifier (sys_loc_code) must be unique for a subfacility.

If coordinates are not available for sampling locations the centroid coordinate of the subfacility may be used. The NYSDEC PM should be consulted to identify all locations in a subfacility. If the Data Provider is also providing alternative coordinates in state plane or some other coordinate system, those should be included in the alt_x_coord and alt_y_coord coordinate fields and also include PRIMARY as the alt_identifier_code.

3.2.1 Process for Submitting Data for Plumes with Multiple Contributing Sites or Areas

Many sites within New York State's Environmental Remediation Program are located next to each other and may have a co-mingled plumes or source areas. These sites may also have multiple potentially responsible parties investigating them and the nearby areas. NYSDEC needs to ensure that the data collected by multiple parties or in a co-mingled plume is properly managed and not duplicated within the EQIS database. Therefore, EDDs that contain data for multiple sites or co-mingled areas must follow the requirements specified below for submitting this type of EDD.

It is the responsibility of the Data Provider to coordinate with the NYSDEC to ensure that the data collected is submitted under the correct Facility ID.

3.2.1.1 – Samples Collected on a Neighboring Remedial Program Site

When data are collected within the actual site boundary of a neighboring remedial program site, the data must be submitted using the Facility ID associated with that neighboring site. For example, Site A is located next to Site B and Site A collects a sample on Site B. The data associated with the Site B sample must be submitted under the Facility ID for Site B.

NOTE 1:

In the well_v1 section of the NYSDEC EDD format the well owner listed is the party financially responsible for the monitoring well installation regardless of the facility/property on which the well was installed. An example of this would be if Site A pays to install a well on Site B. The data collected from this well would be submitted under Site B's Facility ID; however, the owner of the well would be listed as Site A as they are financially responsible for the well.

NOTE 2:

If data have been collected from two or more facilities, then two or more separate EDDs must be prepared and submitted under the correct Facility IDs. Using the example above, Site A has also collected samples from its own site in addition to the sample collected from Site B. The Data Provider must submit two EDDs, one for the data associated with Site A and one for the data collected within the site boundary of Site B under Site B's Facility ID.

NOTE 3:

The examples above also apply to location and geophysical sections of the EDD format, including the initial, field activities, and subsurface field investigation EDD as outlined in subsequent sections of this Manual.

NOTE 4:

Data Provider is the person/company submitting the data to NYSDEC even when they are submitting data for a different facility.

3.2.1.2 - Samples Collected Within Off-Site Co-Mingled Plume or Area of Impact

This section pertains to data collected from locations not within the property boundaries of a facility. When data associated with a well are collected outside of an actual site boundary of a remedial program site but within a co-mingled plume, the data must be submitted using the Facility ID associated with the well owner's facility. If the data collected are not associated with a well, the data must be submitted under the Facility ID collecting the data.

For example, Site B is located next to Site A and Site B installs a well down gradient from both sites and collects data. The associated data with this well would be submitted under the Site B Facility's ID. Subsequently, Site A samples this well. The data that Site A have collected would also be submitted under the Site B Facility ID, as Site B is the well owner. Another example would be if Site A collects soil samples down gradient from Sites A and B. The soil data collected would be submitted under Site A's Facility ID as Site A is the "owner" of the sampling location.

NOTE:

In the well_v1 section of the NYSDEC EDD format the well owner listed is the party financially responsible for the monitoring well installation regardless of the facility/property on which the well was installed.

3.3 VALID VALUES

Valid values, also known as reference or look-up values, govern the contents of some fields in the data files. In other words, some fields may only be populated with data that exactly matches one of the choices listed in the *NYSDEC's Valid Values file* available on the "EarthSoft-for-NYSDEC" website: <http://www.EarthSoft.com/products/edp/edp-format-for-nysdec/>.

Each data field in the *NYSDEC Format Description* file requiring a valid value is denoted by blue text in the field name column, and the 'Lookup' Column references the valid value table (and the field within the table) where the actual valid values can be found.

For example, [cas_rn](#) is in column A (Field Name), row 29 of the TestResultsQC_v1 *format description* table. In that same row, under the Lookup column (column G), is [rt_analyte.cas_rn](#). In this example, "[rt_analyte](#)" refers to the "RT_ANALYTE" valid value table, and "[cas_rn](#)" refers to the specific field (CAS_RN) in the "RT_ANALYTE" valid value table. The CAS_RN field contains the actual list of acceptable valid values that should be used to populate the cas_rn field (column AB) in the TestResultsQC_v1 table in the EDD.

If Data Providers cannot find an appropriate matching value in the current NYSDEC Valid Value list, they can request an addition to the valid value list by sending an email to the NYSDEC EIMS Administrator at nyenvdata@gw.dec.state.ny.us. In the subject line of the email indicate "Valid Value Request;" in the body include the new value, the valid value table for it to be added and a description of the value and why it needs to be added. If accepted, NYSDEC will update the appropriate reference value table and notify data providers when an updated version of the EDP format file has been posted. This updated reference value file will allow the EDP to recognize the new value as valid. Because valid values are updated periodically, Data Providers should download the NYSDEC Valid Value file frequently.

3.4 SPECIFIC DATA REQUIREMENTS

This section contains reporting requirements for submitting specific data elements such as reporting Null values, retests, and quality control (QC) reporting. Examples for each of them are also included.

3.4.1 Reporting Locations ID

As previously stated, each location identifier (sys_loc_code) must be unique for a facility. Location codes cannot be the same as sample codes. Data providers shall not use special characters (e.g. #, ‘, “, @, !). Inclusion of such characters in the sys_loc_codes can be problematic for the database. The location (sys_loc_code) field should be left null for QC samples such as field blanks or trip blanks not associated with a specific location. Table 3.1 provides an example of reporting Location IDs.

Table 3.1: Example of Reporting Location ID

Sys_sample_code	Sample_type_code	Sample_source	Parent_sample_code	Sample_date	Sys_loc_code
MW-0102122009	N	Field		02/21/2009	MW-01
TripBlank01122009	TB	Field		02/21/2009	
LABBLANK01022010	LB	LAB		01022010	

N = normal TB = trip blank LB = laboratory blank

3.4.2 Reporting Sample ID

The Sample ID (sys_sample_code) field is used to store a unique Sample ID assigned by either the NYSDEC or a Data Provider that is independent of the Lab Sample ID. If the sample type is a duplicate or dup (e.g. matrix spike/matrix spike duplicate (MS/MSD), blind dup, lab dup, etc.), the Sample ID (sys_sample_code) of the original sample the duplicate is derived from is required in the parent_sample_code field of the sample_v1 EDD file. Otherwise this field is left null for all non-duplicate samples.

Data providers shall not use special characters (e.g. #, ‘, “, @, !) when naming samples. Inclusion of such characters in the sys_loc_codes and sys_sample_codes can be incompatible with the database.

Table 3.2: Example of Reporting Sample ID

Sys_sample_code	Sample_type_code	Sample_source	Parent Sample Required (Y/N)?	Parent_sample_code	Sample_date	Sys_loc_code
MW-0102122009	N	Field	N		02/21/2009	MW-01
MW-FB-02122009	FB	Field	N		02/21/2009	
MW-TB-02122009	TB	Field	N		02/01/2009	
MW-01FD01022009	FD	Field	Y	MW-0102122009	02/21/2009	MW-01
MW-01MS01022009	MS	Field	Y	MW-0102122009	02/21/2009	MW-01

N = normal FB = field blank TB = trip blank FD = field duplicate MS = matrix spike
 Y = yes N = no

As identified in the table above, the sys_loc_codes for field QC samples, including trip blanks (TB) and field blanks (FB) must be null. Further, the sys_sample_codes for QC samples must be consistent with the codes identified in the valid values file referenced in Section 3.3. Further, when identifying field QC samples, such as TBs and FBs, the data provider must include a unique identifier in the sample name, such as a sample date, so that the result is unique in the database.

Currently, the NYSDEC format is not programmed to require the start and end sample depth and start and end depth unit fields be populated when the sample matrix is soil (SO) and this information is recorded during sample collection in the field; however, NYSDEC now requires that these fields be populated in the EDD by the Data Provider.

3.4.3 Reporting Null Values

If the field is not required and contains no information it cannot be eliminated from the EDD submittal; it must be left blank if no information is needed.

- Null data represented in a spreadsheet or database cell would be left blank.
- Null data represented in a tab delimited (.txt) text file would appear as a double tab data<TAB><TAB>data.
- Null data represented in a comma delimited (.csv) text file would appear as "data","","data".

3.4.4 Reporting Re-Tests

All analytes for initial tests and subsequent retests should be reported. When a retest is performed on a sample, the result that is considered the reportable result should be indicated with a “Yes” in the reportable_result field. The initial test result, or any retest result not considered reportable, will

have “No” in the reportable_result field. Table 3.3 provides an example of reporting a re-tested result.

Table 3.3: Example of Reporting Re-Test Results

Test Type	Analyte	Cas No	Result Value	Detect Flag	Lab Qualifiers	Reportable Results	Result Comments
Initial	Benzene	71-43-2	1000	Y	E	No	Too concentrated
Initial	Toluene	108-88-3	8.2	N		Yes	Not detected
Dilution1	Benzene	71-43-2	650	Y		Yes	Quantitated

Y = yes N = no

3.4.5 Reporting Non-Detects

When reporting non-detected results, the detect flag field should be populated with an “N” and a “U” in the Lab_Qualifier or Validation_Qualifier field, whichever is applicable. The reporting detection limit field and the detection limit unit field must be populated with actual values. The result value field must be null.

The EDD shall include three sets of values: the method detection limit, the reporting detection limit, and the quantitation limit. The quantitation limit, also called the Contract Required Reporting Limit (CRQL), is usually the required quantifiable limit that laboratories are under contract to report. This might also be the value used as the reporting detection limit, with some sample-specific exceptions. The method detection limit is rarely used as the quantitation limit. If the detect flag is N, indicating that NO, the chemical was not detected, then the result field should be null and the reporting limit field populated. In contrast, if the detect flag is Y, indicating that YES, the chemical is detected, then the result field would be populated.

Should a detected result provided in the result field need to be adjusted to a non-detect as a result of data validation, the detect Y/N flag should be changed from a Y to a N, the result removed from the result field (result field to become null), the appropriate reporting limit provided in the reporting limit field (if not already present), and a U (and any other relevant qualifiers) be provided in the Validator and Interpreted Qualifier fields by the Data Provider.

NYSDEC strongly recommends that the Data Provider provide the rationale for the validator qualification in the Result Comment field. Populating the method detection limit, reporting limit, and quantitation limit fields ensures that the original limits are presented and NYSDEC or other end user of the data may understand the results of the validation process in the database. The Data Provider is responsible for ensuring these fields are populated correctly. The changes to the data

that should be identified in an EDD resulting from data validation are described in more detail in Section 3.4.8.

Table 3.4 is an example of reporting non-detected results.

Table 3.4: Example of Reporting Non-Detected Results

Cas No	Result Value	Detect Flag	Reporting Detection Limit	Detection Limit Unit	Result Comment	Laboratory qualifiers
71-43-2	0.15	Y	0.005	ug/ml		
71-43-2		N	0.005	ug/ml	Not detected	U

Y = yes N = no ug/ml = micrograms per milliliter U = not detected

3.4.6 Tentatively Identified Compounds (TIC) Reporting

TICs detected by the laboratory should be reported in the EDD. The TIC should first be identified to the analyte name, then to the class of the TIC. If neither can be used to identify the TIC, it should be identified as “unknown.” All TIC records should have “TIC” in the result_type_code field in the TestResultsQC_v1 table. Table 3.5 provides an example of the nomenclature for unknown TIC reporting.

Table 3.5: Example of Nomenclature for Unknown TIC Reporting

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

PAH = polycyclic aromatic hydrocarbon

VOA = volatile organic analyte

SV = semi-volatile

3.4.7 QC Reporting for Analytical Data

The following section defines the format and data fields required when reporting QC data for analytical data.

QC fields for a normal field sample (e.g., Sample_type_code = N, TB, equipment blank (EB), etc.) would all be left blank (Null). Table 3.6 provides a partial list of the QC fields in a TestResultsQC file for a normal field sample.

Table 3.6: Quality Control Fields for a Normal Field Sample

Cas No.	Result value	result unit	result type code	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	mg/l	TRG						
94-75-7	3.17	mg/l	TRG						
94-82-6	2.31	mg/l	TRG						

mg/l = milligrams per liter TRG = target

QC fields for a normal field sample with surrogates (e.g. Sample_type_code = N, TB, EB, etc.) are left blank (Null) except on surrogate rows. Data Providers will need to complete the qc_spike_added, qc_spike_measured, and qc_spike_recovery data fields. Table 3.7 provides a partial list of the fields in a TestResultQC file for a normal field sample with surrogates.

Table 3.7: Quality Control Fields in a Normal Field Sample with Surrogates

Cas No.	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				
PHEN2BR246	12.9	mg/l	SUR		12.5	12.9	103

mg/l = milligrams per liter TRG = target SUR = surrogate

QC fields for a MS (i.e., Sample_type_code = MS) required to be completed by Data Providers are the qc_original_conc, qc_spike_added, qc_spike_measured, and the qc_spike_recovery fields. Table 3.8 provides a partial list of the QC fields in a TestResultsQC file for a MS.

Table 3.8: Quality Control Fields for a Matrix Spike

Cas No.	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	5.36	1.56	4.18	5.36	90.9				
94-75-7	7.15	3.17	4.18	7.15	95.2				
94-82-6	5.66	2.31	4.22	5.66	79.3				

QC fields for a MSD (i.e., Sample_type_code = MSD) required to be completed by Data Providers are the qc_dup_original conc, qc_dup_spike_conc, qc_dup_spike_measured,

qc_dup_spike_recovery and qc_rpd fields. Table 3.9 provides a partial list of the QC fields in a TestResultsQC file for a MSD.

Table 3.9: Quality Control Fields for a Matrix Spike Duplicate

Cas No.	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	5.7					1.56	4.23	5.70	97.8
94-75-7	7.62					3.17	4.23	7.62	105
94-82-6	5.33					2.31	4.13	5.33	73.1

QC fields for a Laboratory Control Sample (LCS) (e.g. Sample_type_code = BS, BD, LB etc.) follow MS and MSD reporting procedures described previously. LCS blank spike samples (i.e., sample_type_code = BS) require the same fields as QC fields for a MS. LCS blank spike duplicate samples (i.e., Sample_type_code = BD) require the same fields as QC fields for a MSD.

3.4.8 Data Validation Fields for Analytical Data

Data validation results can be reported in the EDD using the following fields: validator_qualifiers and interpreted_qualifiers. The lab_qualifier field should be filled out for all results with qualifiers as reported by the laboratory. The remaining validation fields should be used when applicable. Non validated data deliverables (raw data) would have the interpreted_qualifier field populated with the lab qualifier. Category B deliverables and the validated results provided in a data usability summary report (DUSR) would include the validator_qualifier and interpreted_qualifier fields entered.

The result value field should be left null when data validation qualifiers indicate non-detect (U) and may be left null when data are rejected (R). When laboratory or validator qualifiers (or both) are reported in an EDD, additional fields on the dt_result tab should be populated. The Interpreted Qualifier results should be populated following a review of the laboratory and validator qualifiers. If no validation is conducted (the data reported is raw), then the results in the lab_qualifier field should also populate the interpreted_qualifier field. NYSDEC strongly recommends that the Data Provider provide the rationale for the validator qualification in the Result Comment field.

Examples of qualification presentation in EDDs are provided below:

- If an R value is provided as an Interpreted Qualifier based on the results of data validation (from the validator qualifier result field), then the reportable result column should be populated appropriately. The use of rejected data is determined by the NYSDEC PM on a

case-by-case basis. This may also require discussion with the validator as these results typically are considered as not reportable (NO in the reportable result = YES/NO field), but project-specific information may indicate the result should remain YES, reportable.

- The R value data can be provided a number of different ways in the EDD including the following:
 - a. A value in the result field, an R in one or more of the qualifier fields, and reportable (YES in the reportable result field) indicates a detected value that is rejected but the data user wants to use it due to lack of data;
 - b. A value in the result field, an R in one or more of the qualifier fields, and not reportable (NO in the reportable result field) indicates a non-detect that is rejected and the data user does not want to use it since it is rejected;
 - c. No value in the result field, an R in one or more of the qualifier fields, and reportable (YES in the reportable result field);
 - i. If the value was detected, the detect flag will be Y for Yes; the original detected value was provided in the result field by the laboratory but removed so the data would be reported as rejected but not impact data analysis since the result value is removed.
 - ii. If the original result was not detected, the detect flag will be N for No; the Data Provider will need to remove the reporting limit (reporting field will become null) in order to report the data as rejected but prevent the reporting detection limit from inclusion into data analysis.
 - d. No value in the result field, an R in one or more of the qualifier fields, and not reportable (NO in the reportable result field) indicates a non-detect that is rejected and won't be considered usable.
- The implications of the selections above involve whether the rejected result should be included in reports and data analysis. The rejected result is included and considered as detected or non-detected (examples 1 and 3) or not included (examples 2 and 4) in the overall sample analysis count and calculation of frequency of detection.
- The NYSDEC PM or other database user has the ability (example 1 only) or inability (examples 2, 3, or 4) to view the results that were rejected to evaluate if the resulting loss of data point(s) may skew the results and impact site characterization in some way.
- It is critical that the NYSDEC PM be consulted prior to submittal of an EDD if data was rejected to determine how the affected fields of the EDD should be populated to meet the project-specific objectives.

- Due to the variety of possible presentations of rejected results in the EDD, an example is not provided below in Table 3.10.
- If the validation confirms that qualification provided in the laboratory can remain as provided, then the same qualifier presented in the lab qualifier field is presented in the validator and interpreted qualifier fields (Example 1 in Table 3.10 below).
- If the validation confirms that qualification provided in the laboratory can remain as provided but additional qualification is necessary, then the qualifier presented in the lab qualifier field and the one presented in the validator qualifier fields are presented in the interpreted qualifier field (Example 7 in Table 3.10 below).
- If a U or UJ is provided as the Interpreted Qualifiers, then the detect flag should be N, indicating that NO, the chemical was not detected. If a chemical is not detected, then the result field should be null and the reporting limit field populated (Example 3 in Table 3.10 below).

3.4.8.1 Qualification Action Based On Blank Contamination

The following are examples of qualification that may be required as a result of contamination of the blank.

- If a chemical is reported as an estimated value below the reporting limit (a value is present in the result field and is qualified with a J value by the laboratory) and it is not detected in the blank, then the value remains a value in the result field and is estimated below the reporting limit (J qualifier remains in the laboratory qualifier column and is added to the Interpreted Qualifier column) (Example 4 in Table 3.10 below).
- If a chemical is detected in the blank, then a blank action limit (BAL) is calculated by the validator. If the reported value (value in the result field) is an estimated value below the reporting limit (J value in the laboratory qualifier column) and below the BAL, then the result is qualified as nondetect (value is removed from the results field) and raised to the reporting limit (reporting limit field is populated and U is placed in Interpreted Qualifier field). For example: BAL = 12 micrograms per Liter (ug/L) and Reporting Limit = 5 ug/L, a reported value of 2 J ug/L becomes 5 U ug/L (Example 5 in Table 3.10 below).
- If a chemical is detected in the blank and the reported concentration (value in result field) is greater than the reporting limit, but less than the BAL, then the result becomes nondetect at the reported concentration. Thus, the result is moved to the reporting limit field, the result field is null, and a U is entered in the Interpreted Qualifier field. For example: BAL

= 12 ug/L and Reporting Limit = 5 ug/L, a reported value of 8 ug/L becomes 8 U ug/L (Example 6 in Table 3.10 below).

- If a chemical is detected in the blank and the reported concentration is greater than the BAL, then no qualification is required. Thus, the data provided in the result and qualifier fields remain unchanged (Example 2 in Table 3.10 below).

Table 3.10 provides an additional example of validated and non-validated data.

Table 3.10: Data Validation Fields for Analytical Data

cas_rn_	Chemical name	Result value_	Result type code	Reportable result	Detect flag	Method detection limit	Reporting Detection Limit	Quantitation Limit	Lab_qualified	Validator - qualifiers	Interpreted qualifier	Validated yn
93-76-5	Benzene ⁽¹⁾	2.0	TRG	Yes	Y	1.00	5.00	5.0	J	J	J	Y
94-75-7	Toluene ⁽²⁾	81	TRG	Yes	Y	1.00	5.00	5.0				Y
94-82-6	Xylenes ⁽³⁾		TRG	Yes	N	1.00	5.00	5.0	U		U	N
93-76-5	Benzene ⁽⁴⁾	3.1	TRG	Yes	Y	1.00	5.00	5.0	J	J	J	Y
94-75-7	Toluene ⁽⁵⁾		TRG	Yes	N	1.00	5.00	5.0	J	U	U	Y
94-82-6	Xylenes ⁽⁶⁾		TRG	Yes	N	1.00	8.00	5.0		U	U	Y
UNKVOC 1	Unknown VOA ⁽⁷⁾	1.1	TRG	Yes	Y	1.00	5.00	5.0	J	N	NJ	Y

VOA = volatile organic analyte

TRG = target

Y = yes

N = no

U = not detected

J = estimated

Note: the superscripted values provided in the chemical name column of the table above reference the number of the example of qualification and resulting database entry described above in Section 3.4.8.

NYSDEC assumes that if a percentage of the data is validated, then the entire data set will be noted as validated in the validated y/n field. If the data are validated, then the laboratory qualifiers become the Interpreted Qualifiers unless revised by the validator. If the validator provides additional qualification or revisions to the laboratory qualification, then these become the Interpreted Qualifiers and these values populate the Interpreted Qualifier field. NYSDEC will typically rely upon the Interpreted Qualifiers.

3.4.9 Samples Collected But Not Analyzed

Samples that are taken but cannot be analyzed due to the sample being “lost” as a result of broken glassware or instrument malfunction must be accounted for in the database. For each parameter

that could not be analyzed, the Lab Qualifier field should be populated with “NA” for Not Applicable. All other fields should be filled out the same way as any other sample that was analyzed at a laboratory or in the field, whichever is applicable.

3.5 DATA SUBMITTAL FORMAT REQUIREMENTS

Data Providers may manage their data in any software tool sufficient for editing and formatting data such as a spreadsheet or database, however, prior to submitting the data tables to NYSDEC they must be checked and formatted through the EDP. The EDP application accepts several types of files which allow the Data Provider to choose among several spreadsheet, database or word processing applications. Software that can output one of the following file types may be used: .xlsx, .xls, .csv, .txt, .xml, .mdb, and .accdb. The EDP will also accept .zip files that consist of the aforementioned file types.

3.5.1 Data Management Formats

Properly formatted data files may be produced by various methods. Many spreadsheet, database or word processor applications are capable of producing a formatted data file. Regardless of the application used to create the table, the data file must be loaded into the EDP to check its content for completeness and accuracy with the EDD submittal requirements. The EDP is capable of accepting the following file types: text (.csv, .txt), Microsoft Excel (.xls, .xlsx) Microsoft Access (.mdb, .accdb). Below are some general instructions for creating data files from a few applications.

Steps to create Microsoft Access (.mdb, .accdb) data files:

- Create individual Access tables for each data file section using file structures from Appendix A. Make sure to name the tables exactly as the Format Table Name column in Tables 3.11 to 3.16 below and name the table fields exactly as they are written in Appendix A. The *NYSDEC Format file* can also be used as a guide to create individual tables for each EDD section.
- Database tables may be created using the *NYSDEC Blank EDD* template file as an import file to create tables already properly named and formatted.
- Enter the data for all required fields, noted in the Appendix A file structures, and use valid values for fields that require specific content.
- Open the EDP and navigate to the saved database file and load the entire file.

Steps to create Microsoft Excel (.xls, .xlsx) data files:

- Create individual Excel tables for each data file section using file structures from Appendix A. Make sure to name the tables exactly as the Format Table Name column in Tables 3.11

to 3.16 below and name the table fields exactly as they are written in Appendix A. The *NYSDEC Format file* can also be used as a guide to create individual tables for each EDD section.

- The *NYSDEC Blank EDD* template file may be used directly for data entry without the need for any modifications.
- Enter the data for all required fields, noted in the Appendix A file structures, and use valid values for fields that require specific content.
- Open the EDP and navigate to the saved Excel file and load the entire file.

Steps to create tab delimited text (.txt) data files using Microsoft Word

- Create a word table for the appropriate data file section using file structures from Appendix A. Make sure to name the table field headings exactly as they are written. A separate file must be created for each data table.
- Enter data into a table in Word. Any text entered must be contained within double quotes. Enter the data for all required fields, noted in the Appendix A file structures, and use valid values for fields that require specific content.
- Using Microsoft 2007, select the entire table and then on the Microsoft ribbon, choose “convert to text” in the data section on the Layout tab. In the “convert to text” window, choose “tabs” and press “ok.”
- Select “File,” “Save As,” from the top menu. Change “Save as Type” to plain text (*.txt), see Text File Name column in Tables 3.11 to 3.16. Click “save.” After clicking “save,” choose the MS encoding button in the file conversion box and click “ok.”
- Users must be aware that using a text editor is laborious and formatting page sizes to accommodate all data fields is difficult.

3.5.2 Data Submittal Types

The NYSDEC Blank EDD consists of 27 individual worksheet tables. Although in the current NYSDEC EDD the worksheet tables are not arranged in logical “groups,” each of the individual worksheet tables should be thought of as belonging to one of the following six “groups:”

- Initial
- Chemistry
- Field Investigation
- Subsurface Investigation
- Vapor Intrusion Investigation
- Historical

Some tables, such as Sample_v1, are common to more than one of these logical groups. Not all tables must be used for all EDD submittals. Data Providers and PMs should discuss what specific

information is required for project-specific needs. Prior to any data submissions, Data Providers will initially submit an EDD with data tables that provide contact information and site information. This may only need to be submitted once, unless there are changes or additions that would require a re-submittal. These initial EDD tables may also be submitted in conjunction with other data submissions. Instructions for checking and processing the data submittal are presented in Section 4. NYSDEC continues to re-evaluate the EDD requirements and continues to update both the format and guidance documents periodically as the use of the EIMS expands.

3.5.2.1 The Initial Group

An Initial EDD provides information about the Data Provider contact information and the Subfacility and its monitoring locations. The Initial EDD consists of three data tables, DataProvider, Subfacility and Location. Table 3.11 provides general information on the Initial EDD. A Data Provider may be required to resubmit this file to change information about the Data Provider, such as a new contact name.

Table 3.11: General Information on the Tables that Comprise the Initial Group

Table Name Format	Text File Name	Created By	Contents	Submission Frequency
Data Provider_v1	Dataprovider_v1.txt	Data Provider	Contact information	Initial
Subfacility_v1	Subfacility_v1.txt	Data Provider (NYSDEC PM may need to provide info to the Data Provider so they populate the EDD with appropriate OU numbers, etc)	Defined OUs or AOC, facility address, type of facility	Initial
Location_v1	Location_v1.txt	Data Provider Field Personnel (NYSDEC PM may need to provide info to the Data Provider so they populate the EDD with appropriate Location Names, etc)	Monitoring points, coordinates, elevations	Initial And for all NEW sample locations

3.5.2.2 Chemistry Group

The Chemistry Group consists of data tables for analytical samples collected at a Subfacility and associated Locations. The Sample_v1 table will contain sample matrix, collection date, sample type, etc. The TestResultsQC_v1 table will contain analytical results, methods, detection limits, reporting limits, etc. This table also contains laboratory and validator QC data.

Note previous version of the NYSDEC EQuIS EDD tables contained a table called TestResults_v1 and this table has been eliminated. Data Providers should check the NYSDEC website prior to submitting an EDD to ensure that the most current EDD format is being submitted to NYSDEC.

Table 3.12: General Information on the Tables that Comprise the Chemistry Group

Table Name Format	Text File Name	Created By	Contents	Submission Frequency
Sample_v1	Sample_v1.txt	Data Providers With input from: Field Personnel	One row record for each sample collected at the facility	Whenever analytical data is collected and provided to NYSDEC
TestResultsQC_v1	TestResults_v1.txt	Data Providers With input from: Analytical Labs Data Validators	One row record for each analyte reported for a given sample and test	Whenever analytical data is collected and provided to NYSDEC
Batch_v1	Batch_v1.txt	Data Provider's Analytical Laboratory	Data that relates Laboratory QC samples with field samples that were analyzed together	Whenever analytical data is collected and provided to NYSDEC

3.5.2.3 Field Activities Group

The Field Activities Group consists of data tables for field parameters, water level measurements, PID readings, extraction wells pumping rates, and other field related activities.

Table 3.13: General Information on the Tables that Comprise the Field Activities Group

Table Name Format	Text File Name	Created By	Contents	Submission Frequency
WaterLevel_v1	WaterLevel_v1.txt	Data Providers Field Personnel	Groundwater level data for monitoring wells	Whenever water level data is collected and provided to NYSDEC
ExtractionInjectionWells_v1	ExtractionInjectionWells_v1.txt	Data Providers Field Personnel	Data that relates to any extraction wells that are operating as part of the remedial action	Whenever well pumping data is collected and provided to NYSDEC.
FieldResults_v1	FieldResults_v1.txt	Data Providers Field Personnel	Data that relates to collection of field parameters or field results data	Whenever field investigation data is collected and provided to NYSDEC
Sample_v1	Sample_v1.txt	Data Providers Field Personnel	One row record for each sample collected at the Facility	Whenever sample data is collected and provided to NYSDEC

3.5.2.4 Subsurface Investigation Group

The Subsurface Investigation Group contains geology data obtained during well installation at the site. Subsurface investigation data tables are only submitted once for each well or boring location. New EDDs are submitted if new wells or borings are installed at a Facility.

Table 3.14: General Information on the Tables that Comprise the Subsurface Investigation Group

Table Name Format	Text File Name	Created By	Contents	Submission Frequency
DrillActivity_1	DrillActivity_1.txt	Data Providers Field Personnel	Soil Boring Information	Once per location
Lithology_v1	Lithology_v1.txt	Data Providers Field Personnel	Lithology data for a borehole	Once per location
Well_v1	Well_v1.txt	Data Providers Field Personnel	Well installation information	Once per location
WellConstruction_v1	WellConstruction_v1.txt	Data Providers	Well	Once per

Table Name Format	Text File Name	Created By	Contents	Submission Frequency
		Field Personnel	construction information	location
GeologySamples_v1	GeologySamples_v1.txt	Data Providers Field Personnel	Geotechnical sample information	Once per location
WaterTable_v1	WaterTable_v1.txt	Data Providers Field Personnel	Groundwater data during drilling activities	Once per location
DownholePoint_v1	DownholePoint_v1.txt	Data Providers Field Personnel	Data from down hole logging methods	Once per location
SoilGas_v1	SoilGas_v1.txt	Data Providers Field Personnel	Soil gas survey data	Once per location

3.5.2.5 Vapor Intrusion Group

The Vapor Intrusion Group consists of the data tables used for building construction and locations, sub-slab sampling parameters, tracer gas testing, etc. *Note, the VI_TaskParameter table is not to be used and is reserved for future use.*

Table 3.15: General Information on the Tables that Comprise the Vapor Intrusion Group

Table Name Format	Text File Name	Created By	Contents	Submission Frequency
VI_Bldg_Address	VI_Bldg_Address.txt	Data Providers Field Personnel	Information on the location of a structure	Once per location
VI_Building	VI_Building.txt	Data Providers Field Personnel	Information on the construction of a structure	Once per location
VI_Sample	VI_Sample.txt	Data Providers Field Personnel	One row record for each sample collected at a structure.	Anytime structure sampling data is collected and provided to NYSDEC

3.5.2.6 Historical Group:

The Historical Group consists of data tables for “historical” data. These tables can be used to load relevant data from historical sampling events at sites in the site management phase. The historical data tables should not be used to enter new data. An Initial Group submission must be done prior to any historical data submission.

Table 3.16: General Information on the Tables that Comprise the Historical Group

Table Name	Format	Text File Name	Created By	Contents	Submission Frequency
BasicLoc_v1		BasicLoc_v1.txt	Data Provider	Monitoring points, coordinates, elevations	Once
BasicWater_Level_v1		BasicWater_Level_v1.txt	Data Provider	Groundwater level data for monitoring wells	Once
BasicChemistry_v1		BasicChemistry_v1.txt	Data Provider	One row record for each sample and associated analytical data	Once
BasicGeology_v1		BasicGeology_v1.txt	Data Provider	Subsurface and well information	Once

3.5.3 Additional Considerations for EDD Submittals:

The following are additional items that should be considered by the Data Provider when submitting EDDs to NYSDEC so that the data are accepted and loaded into the database without errors. Since these are frequent issues with EDD submittals observed by NYSDEC, it is NYSDEC’s objective to assist the Data Provider by reviewing these items and providing specific guidance below.

- Completion of location identification in both the basic historical section (basic_loc_v1) and the location_v1 sections of the EDD will result in duplicate data. If the objective is to provide historical data, the locations should be provided in the basic_loc_v1 section only.
- The Location_v1, FieldResults_v1, and BasicLoc_v1 should be submitted separately so that presentation of information for duplicate locations does not present errors for the database.
- The analysis date and time should be consistent between the Test Result QC file and the Batch_V1 file because of relationships between these two sections of an EDD.
- When providing both the sample date and time and an associated analysis date and time, the analysis date and time should not precede the sample date and time. This can occur when the analysis occurs on the same date as the sample collection and no specific analysis time is provided by the laboratory, resulting in presentation of a default analysis time.

- If a test type is flagged as a dilution, the dilution factor field should not have a factor of 1 presented. A factor greater than 1 should be provided and both the dilution and initial result should be presented in the appropriate fields.
- NYSDEC uses the task_code field to identify the individual sampling events for each facility. Data Providers are requested to work directly with the NYSDEC PM to identify the proper task codes. This field should then be populated by the Data Provider in the Sample_v1 and Field Results_v1 sections of an EDD.

4.0 EDD VALIDATION

To ensure accurate data is provided to NYSDEC in the correct format required by the database, Data Providers must check their data using the EDP prior to submittal. There are two main data checks that must occur, first a quality control step that reviews the raw data and then the EDP step that verifies the tables are formatted correctly.

4.1 QUALITY CONTROL

Prior to import, all location data should be checked to confirm that they plot in the correct geographic location. The raw analytical data should go through a complete QC process to verify the EDD matches the hardcopy results and appropriate data qualifiers have been added. The minimum QC requirements to follow are:

1. Perform a QC data overview and check for obvious errors.
2. Are reported values within reason for each method?
3. Ensure reported values have the same number of decimal places as the detection limit and limit the result to three significant figures.
4. Ensure analytical units are correct.
5. Ensure detection limits are correct and reported.
6. Ensure correct analytical methods are reported.
7. Ensure analysis dates are reported.
8. Ensure results less than the detection limit reported as Not Detected. Exception is when lab uses J- flag reporting for results between the method detection limit and detection limit (reporting limit).
9. Check that location coordinates are in the latitude and longitude format, in decimal degrees.

4.2 THE ELECTRONIC DATA PROCESSOR

After all the appropriate worksheets have been populated with data, the data file is ready for data checking using the EDP. The EDP is a standalone application that must be used by Data Providers to check their EDD files prior to submission to ensure they are formatted as described in this guidance manual. If the EDP detects errors, the errors will be identified and the Data Provider must correct them. After the errors are corrected, the EDP must be re-run to ensure that no errors remain. An EDD must be error free from the EDP before it can be submitted to NYSDEC.

Information on using the EDP can be found within the *EDP QuickStart Guide* and EarthSoft's *EDP User Guide*, available now at the NYSDEC Website <http://www.dec.ny.gov/chemical/62440.html>.

Data Integrity Rules:

The EDP will check for, and the Data Providers are responsible for, running three types of integrity checks on their data.

- **Validity:** All fields that require specific valid values are designated in the EDD format files in blue text. The valid values for specific fields are provided in NYSDEC Valid Values file on the "EarthSoft-for-NYSDEC" website. The validity check performed by the EDP will identify "errors" if a value entered does not match one of the NYSDEC valid values for that field. In those instances, the Data Provider must revise the EDD with appropriate NYSDEC valid values. This can be done in the Data Provider's choice of software if there are many edits to make, or within the EDP program itself if there are just a few. When an EDD is opened in the EDP program, the valid values appear in a drop down list for each record in a blue field. The EDD can be edited inside the EDP, and the EDP will reference the most current valid value files.
- **Row Uniqueness:** verifies no two rows in a file contain the same values for primary key fields. The primary key of a table is indicated by the presence of "PK" in the Key column of the *NYSDEC Format Description* file. For example, the primary key field in the Sample_v1 table is *sys_sample_code*; no two rows in the *sys_sample_code* field can have the same value. In addition, each *sys_sample_code* must be unique for a site, including the records already in the database from previous EDD submittals. If there is more than one primary key for a table the combination of values in each primary key must be unique within the file. Five primary fields are defined in the TestResultsQC table as part of a unique key: *sys_sample_code*, *analysis_date*, *total* or *dissolved*, *test type* and *lab_anl_method_name*. This means that each combination of sample ID, lab method, analysis date, type of test, and if it was a metal or other sample, can be used to uniquely define a lab test event. For example, the given combination of primary keys will allow multiple occurrences of a given combination of sample ID and lab method, provided that analysis date is different for each retest or re-dilutions.
- **Row Integrity:** The relationships between the tables that require that a record in one table must be present before a record in a related table can be added. Typically these relationships, known as a "one-to-many" relationship, require a parent record to exist before child record can be entered. For example, the values of *sys_sample_code* present in the Result and Test tables must also be present in the Sample table.

5.0 EIMS EDD SUBMITTAL PROCESS

Once the EIMS EDD files are created and checked, and errors have been addressed, they must be formatted and zipped for submission to NYSDEC by using the EDP Sign and Submit tool (described in Section 5.1). Once the data package is submitted to NYSDEC by the Data Provider, another round of data validation occurs. Some errors cannot be identified by the EDP, specifically because the EDP is stand-alone and not connected to the NYSDEC EQUIS database. If the NYSDEC database already contains data that is not compatible with data in an EDD submittal, the EDP will not catch it, but the NYSDEC's internal/final validation check will catch these errors. If any errors are found in the final validation check, Data Providers will be contacted by e-mail notification with an error log file listing the errors that were found. The data will not be imported into EIMS until error free. If errors are reported, they must be fixed prior to resubmitting the EIMS EDD. Once the EDD passes the final validation step, it will be loaded into the database and Data Providers will receive an e-mail notification that the data were accepted into EIMS.

5.1 THE DATA PACKAGE

After an EDD has passed through the EDP with no errors, the Data Provider is ready to create the final data package. The data package is a single .zip file that consists of the EDD, any attached documents referenced in the EDD, and the Data Provider's user certificate. The Sign and Submit feature in EDP automatically formats the EDD into the .zip file. With this tool the Data Provider will be asked to enter the user name, password, Facility ID and the Facility Name. Once the Data Provider clicks "submit," the tool packages the data with the user certificate into a "zipped" file. Additional guidance for creating a data package can be found in the *EDP Guidance Manual on the NYSDEC website*.

The Sign and Submit feature of the EDP checker allows the user to associate the data with the correct NYSDEC Site (Facility Name and Facility Code) and creates a single .zip file that comprises the submittal that is sent to NYSDEC. The EDD is named according to the following convention: the date, the time, Site ID, and the Format File name used to create the EDD (e.g. **'20101110 1414.130121.NYSDEC.zip'**). The contents of the zipped file include text files named according to each data table used to create them (e.g. **20101110 1414.130121.Sample_v1.txt**). Submit this data package in an email to the NYSDEC EIMS Administrator nyenvdata@gw.dec.state.ny.us and be sure to "cc" the NYSDEC PM.

After the Data Provider sends the data package, NYSDEC will import the EDD into EIMS. If the EDD was checked in the EDP prior to submission, there should be no errors and the data should load successfully. The Data Provider will receive an email confirming successful import into the database. If there are errors, the Data Provider will receive an email indicating what needs to be corrected. The errors will need to be corrected in the tables, rechecked with the EDP, and then the revised EDD will need to be resubmitted to NYSDEC.

5.2 SUBMITTAL WORK FLOW

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. The EDD email submittal subject field must state which type of EDD is attached: Original, Corrected Resubmittal or Update. For Division of Environmental Remediation projects, the EDD email submittal subject field must include the NYSDEC Site Number (i.e. 130001) and the NYSDEC PM must be copied on all email submittals.

5.2.1 Original Submittal

An original EDD submittal contains data being submitted for the first time to NYSDEC. NYSDEC will only accept the EDD submittal if it has been processed by the EDP. If there are no errors at the final validation step, NYSDEC will load the data to the permanent database. An original submittal could consist of an initial EDD containing DataProvider, Subfacility, Location, Sample, and TestResultQC tables. Subsequent EDDs for the same subfacility and locations would only need the Sample and TestResultQC tables, but would still be considered an original submittal. If the EDD contains any errors, NYSDEC will send the Data Provider an email specifying the errors that need to be corrected. The email should state that it is an original submittal in the subject line and in the body of the email.

5.2.2 Corrected 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. The email should state that it is a corrected submittal in the subject line and in the body of the email. The Data Provider should provide details within the body of the email to aid in

the upload. At a minimum, information should include the error logs, the previous submittal date and any other information that will aid in the upload of the file.

A resubmittal is required within 30 days. *It is important that the resubmitted EDD contain all of the files and use 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 must be identical to the original submittal except the errors are corrected.

5.2.3 Update Submittal

In the case where previous information was provided to and accepted by NYSDEC and updated through the course of a project (e.g., location re-surveyed or updated x,y coordinates), the EDD submittal should contain only the data for the records being updated. Prior to submitting the EDD to NYSDEC, the Data Provider should check the file(s) with the EDP, and then submit the updated EDD. The files of an updated EDD submittal should follow the normal naming convention of an EDD submittal and contain only data for the records being updated. The email should state that it is an update submittal in the subject line (e.g. insert and update or insert and replace) and in the body of the email. The reason and details of what was updated should also be provided within the body of the email to aid in the upload.

For example, if a site is resurveyed and it is discovered that three of the locations' coordinate information have 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. Note: All required fields need to be populated for the three locations regardless of whether or not these fields were updated.

APPENDIX A

NYSDEC EDD FORMATS

APPENDIX A

Definition of the Data Format tables:

- Table Column Letter: is the column placement of the Field Name in a data table. Field names cannot be omitted and their order cannot change.
- Field Name: the name of the data element for each column of the data table.
- Required Field: Indicates if a data element is required to be entered into the field.
- Description: Explains the data elements for each column.
- Data Type:
 - DateTime: Date format is MM/DD/YYYY Time format is 24-hour (military) HH:MM
 - Numeric: Decimal number.
 - Text: characters and numbers. Length restrictions are indicated in parentheses
- Valid Values: Indicates data requirement either described as text or is a required valid value from the valid value file indicated by <worksheet name>.<column name>.

Data Provider_v1 Table

Table Column #	Field Name	Required Field	Description	Data Type	Valid Values <Table>.<Field>
A	<u>data_provider_code</u>	Y	Data Provider company code. This code is assigned by DEC. Received by email. Example: GH	Text(20)	
B	data_provider	Y	Data provider company name. Example: GH Environmental Services, Inc.	Text(70)	
C	data_contact_name	Y	Name of contact person. Format: First Name Last Name. Example: John Smith	Text(50)	
D	data_contact_address1	Y	Contact mailing address. (street or box number) Example: 123Main St.	Text(40)	
E	data_contact_address2		Contact mailing address. (if second line is required)	Text(40)	
F	data_contact_city	Y	Contact city. Example: Albany	Text(30)	
G	data_contact_state	Y	Contact state abbreviation. Example: NY	Text(2)	rt_state.state_code
H	data_contact_zipcode	Y	Contact zip code. Example: 12207	Text(30)	
I	data_contact_country		Contact country. Example USA	Text(50)	
J	data_contact_phone	Y	Contact phone number. Example: 518-434-4546	Text(20)	
K	data_contact_email		This field is required if available. Contact email address. Example: jsmith@email.com	Text(100)	

Subfacility_v1 Table

Table Column #	Field Name	Required Field	Description	Data Type	Valid Values <Table>.<Field>
A	subfacility_code	Y	Code indicating the subfacility operable unit (OU) for which the data is collected or area of concern (AOC). Use the code is '01' unless there is a second or third operable unit at facility. Code of '02' and '03' should be used for second and third unit, respectively.	Text(20)	
B	subfacility_type		Subfacility type: BASIN, BLDG, OU or SWMU. – Although not required by the database, this field should be populated.	Text(20)	rt_subfacility_type.subfacility_type
C	subfacility_name	Y	Name of Project. Example: Offsite investigation. Use "Remedial Program" unless NYSDEC PM directs otherwise.	Text(60)	
D	subfacility_task_code		Code used to identify the task under which the subfacility or area is investigated. Field samples are formally associated with task codes. Example: SC= Site Characterization; RD=Remedial Design; RIFS=Remedial Investigation/Feasibility Study; RC=Remedial Construction IRM=Interim Remedial Measure; SM=Operations & Maintenance Phase	Text(20)	
E	subfacility_desc1		A brief description of the subfacility	Text(255)	
F	subfacility_desc2		subfacility description, part two (if needed).	Text(255)	
G	contact_name		The name of the person responsible for the subfacility	Text(50)	
H	address1		Subfacility mailing address. (street or box number) Example: 123Main St.	Text(40)	
I	address2		Subfacility mailing address. (if second line is required)	Text(40)	
J	city		Subfacility city. Example: Albany	Text(30)	

Subfacility_v1 Table

Table Column #	Field Name	Required Field	Description	Data Type	Valid Values <Table>.<Field>
K	state		Subfacility state abbreviation. Example: NY	Text(2)	rt_state.state_code
L	zipcode		Subfacility zip code. Example: 12207	Text(10)	
M	phone_number		Subfacility phone number. Example: 518-434-4546	Text(30)	
N	alt_phone_number		Alternative subfacility contact phone number.	Text(30)	
O	fax_number		Subfacility contact fax number. Example: 518-434-4546	Text(30)	
P	email_address		Subfacility email address. Example: jsmith@email.com	Text(100)	

Location_v1Table

Table Column #	Field Name	Required Field	Description	Data Type	Valid Values <Table>.<Field>
A	data_provider	Y	Data provider for location data.	Text(20)	Must be the valid code for the data provider and match the data_provider field of the Data Provider_v1 EDD file submitted in the current or previous EDD rt_company.company_code
B	<u>sys_loc_code</u>	Y	Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each OU or AOC. Examples: MW-01, A-1, SB6, etc. See Section 3.2 'Definition of a Facility, Subfacility, and Location' for additional information. This should not include special characters (e.g. #, ', ").	Text(20)	
C	x_coord	Y	Longitude of sampling location in decimal degrees Longitude. Must be negative for western hemisphere. (-dd.xxxxxx). Must contain a minimum of 6 six significant figures. If unknown, use the site centroid longitude. Example: -73.740476	Numeric	
D	y_coord	Y	Latitude of sampling location in decimal degrees, Latitude. (dd.xxxxxx). Must contain a minimum of 6 six significant figures. If unknown, use the site centroid latitude. Example: 43.020295	Numeric	
E	surf_elev	Y	Elevation of the ground surface, or if location is for surface water samples, water surface elevation. If unknown use "0".	Numeric	

Location_v1Table

Table Column #	Field Name	Required Field	Description	Data Type	Valid Values <Table>.<Field>
F	elev_unit	Y	Unit of measurement for elevations. Units should be in feet	Text(2)	
G	coord_sys_desc	Y	Must be Latitude and Longitude based on the World Geodetic System 1984 (WGS84) datum.	Text(20)	LAT LONG
H	observation_date		Date observation or site survey was made.	DateTime	
I	alt_x_coord		X Coordinate in alternate system.	Text(20)	
J	alt_y_coord		Y Coordinate in alternate system.	Text(20)	
K	alt_coord_type_code		Must reference alternate system type code. SP designates State Plane,	Text(20)	UTM ZONE 17, UTM ZONE 18, SP
L	identifier		If providing alternative coordinates in state plane or some other coordinate system, include in the alt_x_coord and alt_y_coord coordinate fields and use PRIMARY as the alt_identifier code	Text(20)	Primary
M	horz_collect_method_code	Y	Method used to determine the latitude/longitude. Example: S1 for NYS Licensed Professional Land Survey.	Text(3)	rt_coord_horz_method.horz_collect_method_code
N	horz_accuracy_value	Y	Accuracy range (+/-) of the latitude and longitude. Only the least accurate measurement should be reported, regardless if it is for latitude or longitude. Use "0.1" for professional survey, use "100" for site centroid, or "10" for all other methods.	Text(20)	

Location_v1Table

Table Column #	Field Name	Required Field	Description	Data Type	Valid Values <Table>.<Field>
O	horz_accuracy_unit	Y	Unit of the horizontal accuracy value. Use "5" for feet	Text(8)	5-feet
P	horz_datum_code	Y	This is the reference datum of 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 GPS survey, enter 003 for WGS84.	Text(3)	rt_coord_horz_datum.horz_datum_code
Q	elev_collect_method_code		Method used to determine the ground elevation of the sampling location. Example: S1 for NYS Licensed Professional Land Survey.	Text(3)	rt_coord_elev_method.elev_collect_method_code
R	elev_accuracy_value		Accuracy range (+/-) of the elevation measurement. Only the least accurate measurement should be reported, regardless if it is for latitude or longitude. Use "0.1" for professional survey, or "1" for all other methods.	Text(20)	
S	elev_accuracy_unit		Unit of the elevation accuracy value. Use "5" for feet.	Text(8)	5-feet
T	elev_datum_code		Reference datum for the elevation measurement. Example: If the elevation references mean sea level, the code is "003".	Text(3)	rt_coord_elev_datum.elev_datum_code
U	source_scale		Leave this field Null	Text(2)	NULL
V	subcontractor_name_code		Code used to distinguish subcontractor name.	Text(20)	rt_company.company_code
W	verification_code		Leave this field null.	Text(1)	NULL

Location_v1Table

Table Column #	Field Name	Required Field	Description	Data Type	Valid Values <Table>.<Field>
X	reference_point		Leave this field null.	Text(2)	NULL
Y	loc_name		Leave this field null.	Text(40)	NULL
Z	loc_desc		Sampling location description. Example: 50 feet northwest of dog pen.	Text(255)	
AA	loc_type		Identifies the type of location. Example: For a monitoring well, the code is MW.	Text(20)	rt_location_type.location_type_code
AB	loc_purpose		Sampling location purpose. Example: Staining observed on soil.	Text(20)	
AC	subfacility_code	Y	Unique code for subfacility or area.	Text(20)	Must be the valid code for this subfacility and match the subfacility_code in the Subfacility_v1 EDD file submitted currently or previous EDD.
AD	within_facility_yn	Y	Indicates whether this sampling location is within facility boundaries, 'Y' for yes or 'N' for no.	Text(1)	'Y' for yes or 'N' for no.
AE	loc_county_code		Location county code; controlled vocabulary using FIPS (Federal Information Processing Standard) codes.	Text(20)	rt_county.county_code
AF	DEC_region		Location district code; controlled vocabulary using FIPS codes.	Text(20)	
AG	loc_state_code		Location state code; controlled vocabulary using FIPS codes.	Text(2)	rt_state.state_code

Location_v1Table

Table Column #	Field Name	Required Field	Description	Data Type	Valid Values <Table>.<Field>
AH	loc_major_basin		Location major basin; controlled vocabulary using HUC (Hydrologic Unit Codes). The first 8 digits of the HUC code should be entered here. Example: The sample location is located within the Black River Basin the HUC Code is "04150101"	Text(8)	rt_basin.basin_code
AI	loc_minor_basin		Location minor basin; controlled vocabulary using HUC codes from rt_basin.basin_code valid value table. Any digits after the 8th (first 8 are reported in loc_major_basin) should be reported here.	Text(20)	
AJ	remark		Location specific comment.	Text(255)	
AK	NYS_drainage_basin_code		NYS Drainage Basin Code. Basin Codes can be found at http://www.dec.ny.gov/lands/56800.html	Text(2)	

Drill Activity_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>sys_loc_code</u>	Y	Location ID for the soil boring or well installation location. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs.
B	<u>drill_event</u>	Y	Use month and year the drilling event started. Use the start month for events that take longer than a month.	Text(20)	
C	start_depth		The start depth, in feet below ground surface, of the drilling.	Numeric	Feet
D	end_depth		End depth, in feet below ground surface of the drilling.	Numeric	Feet
E	drill_date		Date drilling began.	DateTime	MM/DD/YYYY
F	diameter		Diameter of boring.	Numeric	
G	<u>diameter_unit</u>		Unit of measure for diameter.	Text(15)	<u>rt_unit.unit_code</u>
H	drill_method		Method used to drill boring. Example: Rotary mud	Text(50)	
I	fluid		Description of fluid used during drilling. Example: Benonite	Text(50)	
J	viscosity		Viscosity of drilling fluid.	Text(50)	
K	hammer_wt		Weight of hammer, in pounds, used for sampling.	Text(50)	

Drill Activity_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
L	hammer_fall		Distance of hammer fall during sampling in inches.	Text(50)	
M	lift_mechanism		Type of mechanism used to lift hammer. Example: Hydraulic	Text(50)	
N	new_yn		Is this a new boring?	Text(1)	'Y' for yes or 'N' for no.
O	repair_yn		Is this drilling event to repair an existing boring	Text(1)	'Y' for yes or 'N' for no.
P	deepen_yn		Is this drilling event to deepen an existing boring	Text(1)	'Y' for yes or 'N' for no.
Q	abandon_yn		Has the boring been abandoned	Text(1)	'Y' for yes or 'N' for no.
R	replace_yn		Is this boring event to replace an existing boring?	Text(1)	'Y' for yes or 'N' for no.
S	public_yn		Is well being installed for a public use?	Text(1)	'Y' for yes or 'N' for no.
T	purpose		Describe the purpose of the boring event. Example: Installation of new monitoring wells for RI.	Text(70)	

Lithology_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>sys_loc_code</u>	Y	Location ID for the soil boring or well installation location. This should not include special characters (e.g. #, ', "").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs.
B	<u>start_depth</u>	Y	The start depth, in feet below ground surface, of the lithologic unit.	Numeric	Feet
C	<u>material_type</u>		The type of material that composes the lithologic unit. Material Type listed in Valid Values Table.	Text(40)	<u>rt_material.material.name</u>
D	geo_unit_code_1		The data providers interpretation of the hydrogeologic unit present at this lithologic unit. Example: Upper aquifer, lower aquifer, Magothy aquifer, upper confined aquifer, glacial aquifer, etc.	Text(20)	
E	geo_unit_code_2		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.	Text(20)	
F	remark1		Comment on the lithologic unit.	Text(255)	
G	remark2		Comment on the geologic unit.	Text(255)	
H	moisture		Was any moisture detected within the lithologic unit?	Text(1)	'Y' for yes or 'N' for no.
I	permeable		Description of the permeability of the lithologic unit. Example: impervious, semi, pervious or very.	Text(20)	

Lithology_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
J	consolidated_yn		Was lithologic unit consolidated?	Text(1)	'Y' for yes or 'N' for no.
K	color		Color of the lithologic unit. Example: Light brown	Text(30)	
L	observation		General field observations of the lithologic unit. Example: Running sand.	Text(255)	
M	consistency		Description of the consistency of the soil. Example: very soft, soft firm, hard or very hard.	Text(20)	
N	sorting		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.	Text(20)	Poor, Well
O	grainsize		Description of grain size.	Text(20)	
P	odor		Description of odor from the soil.	Text(20)	

Well_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>sys_loc_code</u>	Y	Location ID for the well installation location. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs.
B	well_id		Used to track well id (if different from sys_loc_code). Example: CDM_MW-1	Text(30)	
C	well_description		Used for additional well description if necessary. Example: "Located in right of way in front of Town Hall"	Text(30)	
D	well_owner		Name of entity that owns the well. Example: ACME Associates.	Text(30)	
E	well_purpose		Purpose of well. Example: Installed to track downgradient plume	Text(20)	
F	well_status		Current status of well. Example: Operational, Abandoned, Active, Destroyed	Text(20)	
G	top_casing_elev		Elevation of the top of well casing. Elevation must be in feet.	Numeric	
H	<u>datum_value</u>	Y	Datum elevation used for water level measurements. Elevation must be in feet. Typically this is the elevation of top of well casing.	Numeric	
I	<u>datum_unit</u>	Y	Unit of measure for the well datum. Elevation must be feet.	Text(15)	rt_unit.unit_code

Well_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
J	datum_desc	Y	Description of the datum. Example: Top of well casing.	Text(70)	
K	step_or_linear		Leave this field NULL.	Text(6)	NULL
L	datum_start_date	Y	Date that current datum was first recorded.	DateTime	MM/DD/YYYY
M	datum_collection_method_code		Method used to determine the water level datum elevation. Use codes in rt_coord_elev_method.elev_collect_method_code valid values table.	Text(2)	rt_coord_elev_method.elev_collect_method_code
N	depth_of_well		Depth below ground surface of the well bottom. Must be in feet	Numeric	
O	depth_unit		Unit of measurement for well bottom depth. Must be in feet.	Text(15)	rt_unit.unit_code
P	depth_to_bedrock		Depth below ground surface of bedrock. Must be in feet.	Numeric	
Q	depth_measure_method		Method of measuring depth of well.	Text(20)	
R	stickup_height		Height of casing above ground surface. Must be in feet.	Text(8)	
S	stickup_unit		Unit of measure for the stickup height. Must be in feet	Text(15)	rt_unit.unit_code
T	sump_length		Length of sump constructed in well. Must be in feet.	Text(20)	
U	sump_unit		Unit of measure for the sump length. Must be in feet	Text(15)	rt_unit.unit_code
V	installation_date		Date of well installation.	DateTime	MM/DD/YYYY
W	construct_start_date		Date well construction began in MM/DD/YYYY format.	DateTime	MM/DD/YYYY

Well_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
X	construct_complete_date		Date well construction was completed in MM/DD/YYYY format.	DateTime	MM/DD/YYYY
Y	construct_contractor		Code used to distinguish subcontractor name.	Text(20)	rt_company.company_code
Z	pump_type		Type of pump used at well. Example: Centrifugal, propeller, jet, helical, rotary, etc.	Text(20)	
AA	pump_capacity		Pump Rate capacity. Example: 10	Text(6)	
AB	pump_unit		Unit of measure for the pump capacity and yield. Use code from rt_unit valid value table.	Text(15)	rt_unit.unit_code
AC	pump_yield		Actual pumping rate. Example: 10 gpm	Text(6)	
AD	pump_yield_method		Method used for pump yield. Example: Flow meter	Text(20)	
AE	weep_hole		Is there a weep hole?	Text(1)	'Y' for yes or 'N' for no.
AF	head_configuration		Description of the well head. Example: manhole entry, well vault	Text(50)	
AG	access_port_yn		Is there an access port?	Text(1)	'Y' for yes or 'N' for no.
AH	casing_joint_type		Type of casing joint. Example: threaded, flush, or solvent welded.	Text(50)	
AI	perforator_used		Description of well perforation. Example: slotted, drilled, or wound.	Text(50)	
AJ	intake_depth		Depth below ground surface of the well intake. Must be in feet.	Numeric	

Well_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
AK	disinfected_yn		Was well disinfected?	Text(1)	'Y' for yes or 'N' for no.
AL	historical_reference_elev		Historical reference value. Used for the elevation of past reference points. Elevation must be in feet. Do not use to reference current elevation.	Numeric	
AM	geologic_unit_code		Geologic unit in which the well intake is installed. Use established USGS rock unit codes as applicable.	Text(20)	
AN	remark		Available for general remarks.	Text(255)	

Well Construction_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>sys_loc_code</u>	Y	Location ID for the well installation location. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
B	<u>segment_type</u>	Y	This field is used to describe an individual section of a well, such as filter pack. A new record is generated for each section of the well construction. Use Segment Types codes listed in rt_well_segment_type valid values table.	Text(20)	rt_well_segment_type. Segment_type
C	<u>material_type_code</u>	Y	This field is used to describe the material used in an individual section of the well, such as sand pack. A new record is generated for each section of the well construction. Use material type codes listed in rt_well_segment_type. valid values table.	Text(20)	rt_well_segment_type.m aterial_type_code
D	<u>start_depth</u>	Y	Depth below ground surface of the top of the section. Must be in feet.	Numeric	
E	<u>end_depth</u>	Y	Depth below ground surface of the bottom of the section. Must be in feet.	Numeric	
F	<u>depth_unit</u>	Y	The unit of depth measurements. Units must be feet.	Text(15)	rt_unit.unit_code
G	inner_diameter		The inside diameter of section.	Numeric	
H	outer_diameter		The outside diameter of the section.	Numeric	

Well Construction_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
I	diameter_unit		The unit of measurement for inner_diameter and outer_diameter.	Text(15)	rt_unit.unit_code
J	thickness		Leave this field null.	Numeric	
K	thickness_unit		Leave this field null.	Text(15)	rt_unit.unit_code
L	slot_type		Type of screen slots. Example: bridge, shutter, and continuous.	Text(20)	
M	slot_size		Width of slots.	Numeric	
N	slot_size_unit		The unit of measurement for slot size. Use codes in rt_unit valid value table.	Text(15)	rt_unit.unit_code
O	perf_length		Length of perforated portion of screen. Must be in feet.	Numeric	
P	screen_type		Type of screen. Example: Slotted, micro-perforated, etc.	Text(15)	
Q	material_quantity		Quantity of annular seal or fill material used Must be in pounds.	Text(20)	
R	material_density		Density of the annular seal material in lbs/ft3.	Text(20)	Units in lbs/ft3.
S	remark		Remarks regarding the segment. Example: Encountered running sands use micro-perforated screen.	Text(255)	

GeologySamples_v1Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	sys_loc_code	Y	Location ID for the soil boring or well installation location where geologic samples are collected. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
B	geo_sample_code	Y	Unique sample identifier used only for geology section. Combine sys_loc_code with sample depth to create identifier, Example: MW-01-2ft-4ft.	Text(40)	
C	sample_name		Use to provide a name or description of sample. Does not have to be a unique name in the database.	Text(50)	
D	sample_top	Y	Depth to top of sample, below ground surface.	Numeric	Unit in Feet
E	sample_bottom	Y	Depth to bottom of sample, below ground surface.	Numeric	Unit in Feet
F	sample_date		Date and time sample was collected.	DateTime	MM/DD/YYYY HH:MM:SS
G	sample_method		Method used to obtain sample. Example: hand auger.	Text(30)	
H	material_type		Soil or rock type of geologic sample. Use codes in rt_material.material_name	Text(40)	rt_material.material_name .
I	sample_desc		General description of the sample or sampling activities. Example: Delineation of surface soil contamination.	Text(255)	
J	geologic_unit_code		Geologic unit sample was collected from. Use established USGS rock unit or NRCS soil codes as applicable.	Text(20)	
K	liquid_limit		Liquid limit of sample.	Numeric	

GeologySamples_v1Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
L	plastic_limit		Plastic limit of sample.	Numeric	
M	shrinkage_limit		Shrinkage limit of sample.	Numeric	
N	flow_index		Flow index of sample.	Numeric	
O	plasticity_index		Plasticity index of sample.	Numeric	
P	activity		Atterberg Activity of sample.	Numeric	
Q	e		Void ratio of sample.	Numeric	
R	e_max		Maximum void ratio of sample.	Numeric	
S	e_min		Minimum void ratio of sample.	Numeric	
T	n		Porosity of sample.	Numeric	
U	specific_gravity		Specific gravity of sample.	Numeric	
V	w		Water content of sample in decimal percentage.	Numeric	
W	opt_w		Optimum water content.	Numeric	
X	s		Degree of saturation of the sample in decimal percentage.	Numeric	
Y	K		Hydraulic conductivity of sample.	Numeric	
Z	K_unit		Unit of measure for K. Use code from rt_unit valid value table.	Text(15)	rt_unit.unit_code
AA	unit_wt		Unit weight of sample. All unit weights for one sample must be reported in a consistent unit of measurement.	Numeric	

GeologySamples_v1Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
AB	sat_unit_wt		Saturated unit weight. All unit weights for one sample must be reported in a consistent unit of measurement.	Numeric	
AC	dry_unit_wt		Dry unit weight. All unit weights for one sample must be reported in a consistent unit of measurement.	Numeric	
AD	dry_unit_wt_max		Maximum dry unit weight. All unit weights for one sample must be reported in a consistent unit of measurement.	Numeric	
AE	dry_unit_wt_min		Minimum dry unit weight. All unit weights for one sample must be reported in a consistent unit of measurement.	Numeric	
AF	density_unit		Unit of measure for the densities of the sample. Unit of measure for all reported densities of the sample. Use code from rt_unit valid value table.	Text(15)	rt_unit.unit_code
AG	rel_density		Relative density of sample in decimal percentage.	Numeric	
AH	rel_compaction		Relative compaction of sample in decimal percentage.	Numeric	
AI	consistency		Description of the consistency of the soil sample. Example: very soft, soft, firm, hard or very hard.	Text(20)	
AJ	organic_carbon		Organic carbon content of sample.	Numeric	
AK	organic_carbon_unit		Unit of measurement of organic content. Use code from rt_unit valid value table.	Text(15)	rt_unit.unit_code

WaterTable_v1Table

Table Column #	Field Name	Required Field (conditions)	Description	Data Type	Valid Value
A	<u>sys_loc_code</u>	Y	Location ID for the soil boring or well installation location where Water Table data are collected. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
B	<u>type</u>	Y	Aquifer designation Example: unconfined1, confined1, or confined2, upper, lower etc.	Text(20)	
C	<u>sequence</u>	Y	Designation of water level conditions at time of measurement. Input STABILIZED for stabilized water conditions and input UNSTABILIZED for unstabilized conditions.	Text(20)	Unstabilized or Stabilized
D	depth	Y	Depth of water table below reference point. Must be in feet	Numeric	Units in Feet
E	flowing_yn		Is the water table flowing? "Y" for yes or "N" for no.	Text(1)	'Y' for yes or 'N' for no.
F	measurement_method		Method of measuring water table depth. Example: water level probe.	Text(50)	
G	capped_pressure		Hydrostatic pressure of confined aquifer.	Numeric	
H	<u>capped_pressure_unit</u>		Unit of measure for confined aquifer.	Text(15)	rt_unit.unit_code
I	reference_point		Description of reference point from which depth was measured. Example: Top of casing.	Text(50)	
J	reference_elevation	Y	Elevation of the reference point from which depth measurements were taken. Must be in feet.	Numeric	Units in Feet
K	temperature		Temperature of water in the water table.	Numeric	
L	<u>temperature_unit</u>		Unit of temperature.	Text(15)	rt_unit.unit_code

Downhole_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>sys_loc_code</u>	Y	Location ID for the soil boring or well installation location where Downhole data were collected. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
B	<u>depth</u>	Y	Depth of measurement below ground surface. Must be in feet.	Numeric	Units in Feet
C	<u>param</u>	Y	The parameter being measured. Example: such as tip stress, resistivity, or pore pressure.	Text(20)	rt_downhole_point_param_type.param
D	<u>param_value</u>	Y	The measured value of the parameter.	Numeric	
E	<u>param_unit</u>	Y	The unit of the measured value. Use rt_unit valid value table.	Text(15)	rt_unit.unit_code

SoilGas_v1Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	sys_loc_code	Y	Location ID for the Soil Gas collection. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
B	survey_date	Y	Sample survey date	DateTime	MM/DD/YYYY HH:MM
C	param_code	Y	Parameter measured by soil gas survey. Example Soil Vapor	Text(20)	rt_soil_gas_param_type.param_code
D	reading_depth		Depth of soil gas survey measurement. Must be in feet.	Text(8)	
E	reading_unit		Unit of measure of soil gas survey measurement.	Text(15)	rt_unit.unit_code
F	reading		Leave this field null.	Text(8)	NULL
G	depth_unit		Leave this field null	Text(15)	NULL
H	sampling_method		Sampling method. Example: Summa Canister.	Text(10)	
I	instrument_type		Leave this field null.	Text(15)	NULL
J	east		Leave this field null.	Text(14)	NULL
K	north		Leave this field null.	Text(14)	NULL
L	secondary_east		Leave this field null.	Text(14)	NULL
M	secondary_north		Leave this field null.	Text(14)	NULL
N	lithology_code		Lithology code. Example: Fine sand	Text(10)	
O	area_desc		Description of area. Example: Grassy area behind building.	Text(70)	
P	equipment_code		Leave this field null.	Text(60)	NULL

SoilGas_v1Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
Q	borehole_drill_method		Drilling method. Example: Direct push.	Text(10)	
R	technician		Technician. Example: J.Smith	Text(50)	
S	remark		Remark. Example: Neighbor mowing lawn.	Text(255)	

WaterLevel_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>sys_loc_code</u>	Y	Location ID for the soil boring, well installation location, or surface water measuring point where Water Level data are collected. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
B	<u>measurement_date</u>	Y	Date and time of water level measurement.	DateTime	MM/DD/YYYY HH:MM
C	<u>historical_reference_elev</u>	Y	Elevation of the reference point from which depth measurements were taken. For groundwater elevations this must match watertable_v1 table reference_elevation_code for this location. Must be in feet. In units of feet above mean sea level.	Numeric	Units in Feet
D	<u>water_level_depth</u>	Y	Depth of water below reference point. . If a well is measured under artesian conditions use negative number for calculated water level above reference point. For surface of a water body or dry water bodies, water level is zero "0". Must be in feet.	Numeric	Units in Feet
E	water_level_elev		Calculated elevation of water level. Elevation must be in feet above mean sea level.	Numeric	Units in Feet
F	corrected_depth		Depth of water level after any necessary corrections, e.g., if corrections were necessary to water_level_depth because free product was encountered. Must be in feet.	Numeric	Units in Feet
G	corrected_elev		Elevation of water level after any necessary corrections, e.g., if free product was encountered.	Numeric	Units in Feet
H	measured_depth_of_well		The actual measured depth below ground surface to the bottom of the well. Must be in feet.	Numeric	Units in Feet
I	<u>depth_unit</u>		Unit of measure for depths and elevations. Must use feet code from rt_unit valid value table.	Text(15)	<u>rt_unit.unit_code</u>
J	technician		Name of technician measuring water level. Example: J. Smith	Text(30)	
K	dry_indicator_yn		Is the well dry?	Text(1)	'Y' for yes or 'N' for no.

WaterLevel_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
L	measurement_method		Method used to make water level measurements. Example: water level probe.	Text(20)	
M	batch_number		Level this field null	Text(10)	NULL
N	dip_or_elevation		Input 'elevation' if water level measurement is above the datum (i.e., artesian well) or input 'dip' if water level is below datum.	Text(10)	Dip Elevation
O	remark		Remark on measurement.	Text(255)	
P	Lnapl_cas_rn		If light non-aqueous phase liquid (lnapl) present in the well use primary constituent CAS No. from rt_analyte valid value table.	Text(15)	rt_analyte.cas_rn
Q	Lnapl_depth		Depth to the top surface of the lnapl below the reference_point. Must be in feet.	Numeric	
R	Dnapl_cas_rn		If dense non-aqueous phase liquid (dnapl) present in the well use primary constituent CAS No. from rt_analyte.cas_rn.	Text(15)	rt_analyte.cas_rn
S	Dnapl_depth		Depth to the top surface of the dnapl below the reference point. Must be in feet.	Numeric	
T	Task_code		Code used to identify the task under which the sampling occurred. Example: SC= Site Characterization; RD=Remedial Design; RIFS=Remedial Investigation/Feasibility Study; RC=Remedial Construction IRM=Interim Remedial Measure; SM=Operations & Maintenance Phase	Text(20)	

ExtractionInjection_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>sys_loc_code</u>	Y	Location ID for the well installation location. This should not include special characters (e.g. #, ', "").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
B	<u>start_measure_date</u>	Y	Date and time that the pumping measures began in	DateTime	MM/DD/YYYY HH:MM:SS
C	<u>end_measure_date</u>	Y	Date and time that the pumping measures concluded	DateTime	MM/DD/YYYY HH:MM:SS
D	<u>ave_pump_rate</u>	Y	Average pumping rate.	Numeric	
E	<u>pump_rate_unit</u>	Y	Unit of measure for the pumping rate.	Text(15)	rt_unit.unit_code
F	pct_operating_time		Percentage of the measurement time interval that the well was operating. 0 - 100 (no %).	Numeric	
G	<u>operating_mode</u>	Y	Status of well operation during the reported interval.	Text(20)	Extraction, Injection, Recirculation, Pulse, Devel, Unuse
H	<u>design_rate</u>	Y	Pumping rate specified in the remedial design to fully capture site's contamination.	Numeric	
I	<u>design_rate_unit</u>	Y	Unit of measure for the design pumping rate.	Text(15)	rt_unit.unit_code
J	rate_measurement_type		Type of measurement used for averaging. TOTALIZER: totalizing flow meter, MANIFOLD: estimated from total manifold flow, ESTIMATE: estimate from prior values, or AVERAGE: average of instantaneous measurements.	Text(20)	Totalizer, Manifold, Estimate, Average
K	suction		Leave this field null.	Numeric	NULL
L	remark		Remarks regarding the pumping rate measurements. Example: Well field down for three weeks due to repairs.	Text(255)	

FieldResults_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>data_provider</u>	Y	Data Provider Company Code provided by DEC.	Text(20)	rt_company.company_code
B	<u>sys_loc_code</u>	Y	Location ID for the field sampling location. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
C	<u>sys_sample_code</u>	Y	Unique Sample identifier for the sample that was tested and analyzed. This should not include special characters (e.g. #, ', ").	Text(255)	Must match the associated sys_sample_code field of the Sample_v1 EDD file submitted in the current or previous EDD.
D	<u>field_parameter</u>	Y	Field parameter. Example: The code for OXIDATION-REDUCTION POTENTIAL is ORP.	Text(15)	rt_analyte.cas_rn
E	start_depth		Sample start depth below ground surface. Must be in feet. Although not currently required, population of this field is recommended when the matrix is soil (SO).	Numeric	
F	end_depth		Sample end depth below ground surface. Must be in feet. Although not currently required, population of this field is recommended when the matrix is soil (SO).	Numeric	
G	depth_unit	Required if start_depth and/or end_depth are present)	Sample depth unit. Must be in feet.	Text(2)	rt_unit.unit_code
H	<u>result_date</u>	Y	Result date/time	Date	MM/DD/YYYY hh: mm:ss
I	<u>result_time</u>	Y	Time result was collected. Format HH:MM	Text(8)	hh: mm:ss
J	<u>result_value</u>	Y	Qualitative or Quantitative parameter unit. Example: For the field parameter color, "Red" could be entered.	Text(14)	
K	<u>result_unit</u>	Y	Result unit.	Text(15)	rt_unit.unit_code
L	quantitation_limit		Quantitation limit	Text(20)	

FieldResults_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
M	task_code		Code used to identify the task under which the sampling occurred. Example: SC= Site Characterization; RD=Remedial Design; RIFS=Remedial Investigation/Feasibility Study; RC=Remedial Construction IRM=Interim Remedial Measure; SM=Operations & Maintenance Phase	Text(20)	
N	sample_matrix_code	Y	Sample matrix code.	Text(20)	rt_matrix.matrix_code
O	qualifier		Field Parameter Qualifier. Note: At this time this field should be limited to no more than two qualifiers.	Text(20)	rt_qualifier.qualifier
P	sampling_company_code		Company Code provided by DEC	Text(20)	Must be the valid code for the company and match the data_provider field of the Data Provider_v1 EDD file submitted in the current or previous EDD rt_company.company_code
Q	sampling_reason		sampling reason. Example: 3rd Quarter event.	Text(40)	
R	sampling_method		Field sampling methodology.	Text(40)	rt_sample_method.method_code
S	reportable_result	Y	Is this a reportable result?	Text(10)	'Y' for yes or 'N' for no.
T	value_type	Y	How value was derived.	Text(10)	Actual Calculated Estimated
U	remark		Remarks regarding Field parameter collected. Example: Collected near oil stain.	Text(225)	

VI_Bldg_Address Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	building_code	Y	Unique code that identifies the building within the facility (i.e. B001, B002, etc.)	Text(20)	
B	building_name	Y	Name of SVI phase. Example: Offsite SVI Investigation. Use SVI Investigation unless NYSDEC PM directs otherwise.	Text(60)	
	Subfacility_code	Y	Code indicating the subfacility operable unit (OU) for which the data is collected or area of concern (AOC). Use the code is '01' unless there is a second or third operable unit at facility. Code of '02' and '03' should be used for second and third unit, respectively.	Text(20)	Must be the valid code for this subfacility and match the subfacility_code in the Subfacility_v1 EDD file submitted currently or previous EDD.
C	contact_name		Building contact name. Example: J.Smith	Text(50)	
D	address1		Building street address line 1Example: 123 Main Street	Text(40)	
E	address2		Building street address, line 2.	Text(40)	
F	city		Building city. Example: Albany	Text(30)	
G	state		Building state. Example: NY	Text(2)	rt_state.state_code
H	zip_code		Building zipcode. Example: 12233	Text(10)	
I	county		Building county. Example: Albany	Text(50)	rt_county.county_code
J	phone_number		Building contact phone number. Example: 518-473-2222	Text(30)	
K	alt_phone_number		Alternative site phone number.	Text(30)	
L	fax_number		Building contact fax number.	Text(30)	
M	email_address		Building contact email address. Example: J.smith@emal.com	Text(100)	
N	remark		Remark	Text(2000)	

VI_Building Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>building_code</u>	Y	Unique code that identifies the building within the facility (i.e. B001, B002, etc.)	Text(20)	Must be a valid building_code and match the building_code field of the VI_Bldg_Address EDD file submitted in the current or previous EDD
B	<u>building_name</u>	Y	Building name (i.e. Denison Medical Building)	Text(255)	
C	<u>building_type</u>		Type of building Example: Residential, Industrial, etc.	Text(20)	rt_building_type.building_type
D	building_size		Size of building Input Small, Medium, or Large	Text(20)	Small Medium Large
E	num_floors		Number of floors in the building	Numeric	
F	construct_year		Year of construction	Numeric	
G	foundation_depth		Foundation depth below ground surface. Must be in feet	Numeric	
H	foundation_depth_unit		Foundation depth unit. Must be in feet	Text(15)	Ft for Feet M for Meters
I	<u>foundation_type</u>		Foundation type. Example: Basement, crawlspace, etc.	Text(20)	rt_foundation_type.foundation_type
J	<u>foundation_wall_material</u>		Foundation wall material. Example: Poured concrete	Text(20)	rt_material.material_name
K	<u>foundation_floor_material</u>		Foundation floor material. Example: Poured concrete.	Text(20)	rt_material.material_name
L	foundation_wall_thickness		Foundation wall thickness. Must be in feet.	Numeric	
M	foundation_floor_thickness		Foundation floor thickness. Must be in feet.	Numeric	

VI_Building Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
N	foundation_thickness_unit		Foundation thickness units. Must be in feet.	Text(15)	Ft for Feet M for Meters
O	attached_garage_yn		Existence of an attached garage (Y/N)?	Text(1)	'Y' for Yes or 'N' for No
P	radon_mitigation_yn		Existence of radon mitigation system (Y/N)?	Text(1)	'Y' for Yes or 'N' for No
Q	heat_fuel_type		Type of heating fuel. Example: Natural gas	Text(255)	Oil, Gas, Wood, Electric, Other, None
R	heat_system_type		Type of heating system. Example: Forced hot air	Text(255)	Forced Air, Radiant Heating, Hot Water Baseboard, Steam Radiant, Geothermal, Other, None
S	central_air_yn		Existence of central air system (Y/N)?	Text(1)	'Y' for Yes or 'N' for No
T	sump_yn		Existence of sump pump (Y/N)?	Text(1)	'Y' for Yes or 'N' for No
U	voc_mitigation_yn		Existence of a VOC mitigation system (Y/N)?	Text(1)	'Y' for Yes or 'N' for No
V	remark		Building remarks	Text(2000)	
W	custom_field_1		Leave this field null.	Text(255)	
X	custom_field_2		Leave this field null.	Text(255)	
Y	custom_field_3		Leave this field null.	Text(255)	
Z	custom_field_4		Leave this field null.	Text(255)	
AA	custom_field_5		Leave this field null.	Text(255)	

VI_Task_parameters Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>task_code</u>	Y	Table reserved for future use. Do not use.	Text(40)	Task code
B	<u>param_code</u>	Y	Table reserved for future use. Do not use.	Text(20)	rt_task_param_type.param_code
C	task_desc		Table reserved for future use. Do not use.	Text(255)	
D	<u>building_use_type</u>		Table reserved for future use. Do not use.	Text(20)	rt_building_use_type.building_use_type
E	measurement_date		Table reserved for future use. Do not use.	DateTime	
F	param_value		Table reserved for future use. Do not use.	Text(255)	
G	<u>param_unit</u>		Table reserved for future use. Do not use.	Text(15)	rt_unit.unit_code
H	remark		Table reserved for future use. Do not use.	Text(2000)	

VI_Sample Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	data_provider	Y	Data provider company code	Text(20)	rt_company.company_code
B	sys_loc_code	Y	Location ID for the vapor intrusion sampling location Recommend naming based on building_code (tableA15) and valid value table rt_location.location_type_codeFor example: B001_Basement. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
C	<u>sys_sample_code</u>	Y	Unique sample identifier. Recommend naming based on building_code (table 15), valid value table rt_location.location_type_code and date (YYYYMMDD). For Example B001_Basement_20110425. This should not include special characters (e.g. #, ', ").	Text(40)	Must match one of the reported values in the sys_sample_code field of the Sample file (Table A19) submitted in the current or previous EDD.
D	sample_matrix_code	Y	Code which distinguishes between different type of sample matrix	Text(3)	rt_matrix.matrix_code
E	task_code		Leave this field NULL	Text(40)	NULL
F	sampling_company_code	Y	Company Code of sampling company.	Text(20)	rt_company.company_code
G	sample_start_date	Y	Sample start date and time	DateTime	MM/DD/YYYY_HH:MM:SS
H	sent_to_lab_date		Date sample was sent to laboratory for analysis	DateTime	MM/DD/YYYY_HH:MM:SS
I	chain_of_custody		Chain of custody #	Text(40)	
J	sample_end_date		Sample end date and time	DateTime	MM/DD/YYYY_HH:MM:SS
K	sample_duration		The sampling duration	Text(20)	
L	sample_duration_unit		Sample duration units	Text(15)	rt_unit.unit_code
M	floor_material		Lowest level floor material at sample location	Text(20)	rt_material.material_name

VI_Sample Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
N	slab_thickness		Slab thickness at sample location (in inches)	Text(20)	
O	subfloor_material		Material found below the foundation floor	Text(20)	rt_material.material_name
P	subfloor_moisture		Moisture content at subslab sample location (i.e. Dry, Damp, Saturated)	Text(20)	
Q	seal_type		Type of seal used during sampling (i.e. Beeswax, Clay, Teflon Tape)	Text(20)	
R	seal_adequate_yn		Did the sample probe seal pass the tracer test (Y/N)?	Text(1)	Y' for Yes or 'N' for No
S	purge_yn		Was the sample equipment purged in accordance with work plan (Y/N)?	Text(1)	Y' for Yes or 'N' for No
T	purge_pid		PID instrument reading	Numeric	
U	purge_pid_unit		PID instrument reading units (i.e. ppb)	Text(15)	
V	vac_gauge_initial		Vacuum gauge reading immediately after start	Numeric	
W	vac_gauge_final		Vacuum gauge reading immediately before end	Numeric	
X	vac_gauge_unit		Vacuum gauge instrument units (i.e. inches of water)	Text(15)	rt_unit.unit_code
Y	vapor_loc_desc		Soil vapor intrusion sample location description	Text(255)	
Z	sampling_reason		Reason for sampling	Text(30)	
AA	sampling_method		Sampling method	Text(40)	rt_sample_method.method_code
AB	sampler		Person taking sample.	Text(50)	
AC	remark		Remark	Text(2000)	

Sample_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	data_provider	Y	Company code for data provider	Text(20)	rt_company.company_code
B	<u>sys_sample_code</u>	Y	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®. If no Sample ID exists use sys_loc_code and suffix with date. For Example MW01 + June 06, 2001= MW0106062001). For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB04052000. This should not include special characters (e.g. #, ‘, “).	Text(40)	
C	sample_name		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.	Text(30)	
D	sample_matrix_code	Y	Code which distinguishes between different types of sample matrix. Must use rt_matrix valid values table. Example: soil samples are coded “SO”, groundwater samples are coded “WG”, etc.	Text(3)	rt_matrix.matrix_code
E	sample_type_code	Y	Code which distinguishes between different types of samples. Must use rt_sample_type valid values table. Example: Normal field samples are coded “N”, laboratory method blank samples are coded “LB”, etc.	Text (2147483647)	rt_sample_type.sample_type_code
F	sample_source	Y	This field identifies where the sample originated. Samples collected in the Field are entered as “Field”, samples originating in the Lab are entered “LAB”.	Text(10)	Lab Field
G	parent_sample_code	Required for duplicate samples.	If the sample is a duplicate, MS/MSD, blind dup, lab dup, etc, input the parent sample “sys_sample_code”. Example: A field duplicate "FD" (coded in sample_type_code) is collected for sample MW0106062001; therefore MW0106062001 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.	Text(40)	
H	sample_delivery_group		This is the laboratory sample delivery group.	Text(20)	

Sample_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
I	sample_date	Y	Date and time sample was collected Example: MM/DD/YYYY HH:MM	DateTime	MM/DD/YYYY HH:MM:SS
J	sys_loc_code	Required for all samples except QC samples	Location ID of sample collection. This field must be null if a sample is not associated with a location, such as a QC sample. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
K	start_depth		Depth to top of sample below ground surface. For surface water samples, use depth below water surface elevation. This field maybe left null for most groundwater samples if the database contains the start depth of the well screen in the well construction table, otherwise it must be entered. An exception to this rule is discrete samples taken at various depth elevations from a single well, start depth must be entered. Although not currently required, population of this field is recommended when the matrix is soil (SO).	Numeric	
L	end_depth		Depth to bottom of sample below ground surface. For surface water samples, use depth below water surface elevation. This field maybe left null for most groundwater samples if the database contains the start depth of the well screen in the well construction table, otherwise it must be entered. An exception to this rule is discrete samples taken at various depth elevations from a single well, start depth must be entered. Although not currently required, population of this field is recommended when the matrix is soil (SO).	Numeric	
M	depth_unit		Unit of measurement for the sample begin and end depths. Use values from rt_unit valid value table.	Text(15)	rt_unit.unit_code
N	chain_of_custody		Chain of custody identifier. Note, a single sample may be assigned to only one chain of custody.	Text(15)	
O	sent_to_lab_date		Shipping Date sample was sent to lab	DateTime	MM/DD/YYYY

Sample_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
P	sample_receipt_date		Date that sample was received at laboratory	DateTime	MM/DD/YYYY
Q	sampler		Name or initials of sampler.	Text(30)	
R	sampling_company_code	Y	Name or initials of sampling company.	Text(10)	
S	sampling_reason		Leave this field null	Text(30)	NULL
T	sampling_technique		Sampling technique. Example: Field filtration, etc.	Text(40)	
U	task_code		Code used to identify the task under which the field sample was retrieved. SC= Site Characterization, RD=Remedial Design, RIFS=Remedial Investigation/Feasibility Study, RC=Remedial Construction, IRM=Interim Remedial Measure, SM=Operations & Maintenance Phase	Text(20)	
V	collection_quarter		Leave this field null	Text(5)	Null
W	composite_yn	Y	Is sample a composite sample?	Text(1)	'Y' for yes or 'N' for no.
X	composite_desc		Description of composite sample (if composite_yn is 'Yes'). Example: Composite soil samples taken from soil stockpile.	Text(255)	
Y	sample_class		Leave this field null	Text(10)	Null
Z	custom_field_1		Leave this field null	Text(20)	Null
AA	custom_field_2		Leave this field null	Text(50)	Null
AB	custom_field_3		Leave this field null	Text(50)	Null
AC	comment		Any comments regarding the sample.	Text(255)	

TestResultsQC_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>sys_sample_code</u>	Y	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®. If no Sample ID exists use sys_loc_code and suffix with date/time For Example MW01 + June 06, 2001= MW0106062001). For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB04052000. This should not include special characters (e.g. #, ', ").	Text(40)	Must match one of the reported values in the sys_sample_code field of the Samples_v1 EDD table submitted in the current or prior EDD.
B	<u>lab_anl_method_name</u>	Y	Laboratory analytical method name or description. Example: SW8260B, E130.1, etc. Must rt_analytic_method valid values table.	Text(35)	rt_analytic_method.analytic_method
C	<u>analysis_date</u>	Y	Date and time of sample analysis. May refer to either beginning or end of the analysis as required.	DateTime	MM/DD/YYYY HH:MM:SS
D	<u>total_or_dissolved</u>	Y	Must be either 'D' for dissolved or filtered [metal] concentration, or 'T' for total or 'NA' for not applicable, or L for leachate extraction from TCLP and SPLP analysis.	Text(10)	T,D, L, NA
E	column_number		Leave this field null	Text(2)	Null
F	<u>test_type</u>	Y	Type of test. Use code from rt_test_type.test_type valid values. Examples: 'Initial', 'Reextract1', 'Reextract2', 'Reextract3', 'Reanalysis', 'Dilution1', 'Diluton2', and 'Diluton3'.	Text(10)	rt_test_type.test_type
G	<u>lab_matrix_code</u>		This code distinguishes differences between the matrix that was analyzed, and not the matrix of the sample received. Example: TCPL analysis of a soil sample would report "Leachate", not "SO" for soil. Must use rt_matrix valid values table.	Text(3)	rt_matrix.matrix_code
H	<u>analysis_location</u>	Y	Denoted location of analysis. Must be either 'FI' for field instrument or probe, 'FL' for mobile field laboratory analysis, or 'LB' for fixed_based laboratory analysis.	Text(2)	FI FL LB
I	<u>basis</u>	Y	Denotes reporting basis. 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.	Text(10)	Wet Dry NA
J	container_id		Leave this field null.	Text(30)	Null
K	dilution_factor		Input Effective test dilution factor. Example: 5, 10, 50	Numeric	

TestResultsQC_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
L	prep_method		Laboratory sample preparation method name or description. Example: Acid digestion of waters would be entered as “SW3005A”. Must use rt_prep_method valid values table.	Text(20)	rt_prep_method.prep_method
M	prep_date		Beginning date and time of sample preparation.	DateTime	MM/DD/YYYY HH:MM
N	leachate_method		Laboratory leachate generation method name or description. The method name should be sufficient to reflect operation of the laboratory. Example: pH dependence, percolation, tank, or granular	Text(15)	
O	leachate_date		Beginning date and time of leachate preparation in	DateTime	MM/DD/YYYY HH:MM:SS
P	lab_name_code		Company name of the laboratory.	Text(20)	rt_company.company_code
Q	qc_level		Must use either 'screen' for screening or 'quant' for quantitative data.	Text(10)	Screen Quant
R	lab_sample_id		Laboratory LIMS identifier assigned to the sample.	Text(20)	
S	percent_moisture		Percent moisture of the sample portion used in this test. Report in Numeric format to two decimal places. Example: 70.1.% = 70.1	Text(5)	
T	subsample_amount		Weight or volume of sample used for test. Example: 20	Text(14)	
U	subsample_amount_unit		Unit of measurement for subsample amount. Must us rt_unit valid values table.	Text(15)	rt_unit.unit_code
V	analyst_name		Leave this field null	Text(30)	Null
W	instrument_id		Leave this field null	Text(50)	Null
X	comment		Comments about the test.	Text(255)	
Y	preservative		Input sample preservative used in sample analysis. Example: HYDROCHLORIC ACID, 12N, 5 ML/L is entered as “HCL”. Must use rt_preservative valid values table.	Text(20)	rt_preservative.preservative
Z	final_volume		The final volume of the sample after sample preparation. Include all dilution factors.	Numeric	
AA	final_volume_unit		The unit of measure that corresponds to the final_volume.	Text(15)	rt_unit.unit_code

TestResultsQC_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
AB	cas_rn	Y	CAS number code for chemical. Use rt_analyte valid value table.	Text(15)	rt_analyte.cas_rn
AC	chemical_name	Y	Actual name of the Chemical. Use name in the rt_analyte valid value table.	Text(75)	rt_analyte.chemical_name
AD	result_value	Required if detect_flag = "Y" and result_tpye_code = "TRG" or "TIC"	Analytical result reported at an appropriate number of significant digits. May only be null for non_detects. Required field if detect_flag field is entered "Y" and result_type_code is entered "TRG" or "TIC"	Numeric	
AE	result_error_delta		Error range applicable to the result value. Typically used only for radiochemistry results.	Text(20)	
AF	result_type_code	Y	Identifies the type of result of the parameter. Must enter "TRG" for a target or regular result, enter "TIC" for a tentatively identified compound, enter "SUR" for surrogates, enter "IS" for internal standards, or enter "SC" for spiked compounds. Default is "TRG" for target analyte. Must use rt_result_type valid values table.	Text(3)	rt_result_type.result_type_code
AG	reportable_result	Y	This field is used to state if the sample is reportable. Use 'Yes' for results which are considered to be reportable, or 'No' for results that are not reportable. This field is used to distinguish the value to be reported for a diluted or reanalysis run. It is also used to indicate if a sample has been rejected during validation. Example: A sample was diluted and reanalyzed due to a calibration exceedence. The diluted result for the chemical that exceeded its calibration range would have a "Y" input, where the non-diluted result would have an "N" input.	Text(10)	Yes No
AH	detect_flag	Y	Enter either 'Y' for detected analytes or 'N' for non-detects. Use 'Y' for estimated values (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)	Text(2)	'Y' for Yes 'N' for No '> '<
AI	lab_qualifiers		Qualifier flags assigned by the laboratory.	Text(10)	
AJ	validator_qualifiers		Qualifier flags assigned by the validator.	Text(10)	

TestResultsQC_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
AK	interpreted_qualifiers		Final qualifier flags assigned by the validator. Must use rt_qualifier valid values table. Example: The validator adds a "J" flag to a sample result that the laboratory has qualified as "D", DJ would be the value entered.	Text(10)	rt_qualifier.qualifier
AL	validated_yn		Indicates if the result has been validated. "Y" for validated, "N" for not validated.	Text(1)	Y' for Yes or 'N' for No
AM	organic_yn	Y	Must be either 'Y' for organic constituents or 'N' for inorganic constituents.	Text(1)	'Y' for Yes or 'N' for No
AN	method_detection_limit		Input method detection limit.	Text(20)	
AO	reporting_detection_limit	Y	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.	Numeric	
AP	quantitation_limit		Input quantitation limit.	Text(20)	
AQ	result_unit	Y	Units of measurement for the result. Must use rt_units valid value table.	Text(15)	rt_unit.unit_code
AR	detection_limit_unit	Yes if Detect_flag = 'N'Y	Units of measurement for the detection limit(s). This field is required if a reporting_detection_limit is reported. Must use rt_units valid value table.	Text(15)	rt_unit.unit_code
AS	tic_retention_time		Leave this field null.	Text(8)	
AT	minimum_detectable_conc		Minimum detectable concentration or activity. Must be in the same units as the result_value.	Numeric	
AU	counting_error		Counting error as reported by the laboratory. Must be in the same units as the result_value.	Numeric	
AV	uncertainty	Yes if counting_error Is not Null	The uncertainty of the counting error.	Text(10)	"1 sigma" "2 sigma"
AW	critical_value		Leave this field null.	Numeric	Null
AX	validation_level		Validation level. Example: Raw, DUSR, Category B.	Text(20)	

TestResultsQC_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
AY	result_comment		Result specific comments.	Text(255)	
AZ	qc_original_conc		The concentration of the analyte in the original (unspiked) sample. May 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).	Numeric	
BA	qc_spike_added		The concentration of the analyte added to the original sample. May be required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample (depending on user needs).	Numeric	
BB	qc_spike_measured		The measured concentration of the analyte. Use zero for spiked compounds that were not detected in the sample. May be required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample (depending on user needs).	Numeric	
BC	qc_spike_recovery		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").	Numeric	
BD	qc_dup_original_conc		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).	Numeric	
BE	qc_dup_spike_added		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.	Numeric	
BF	qc_dup_spike_measured		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.	Numeric	
BG	qc_dup_spike_recovery		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").	Numeric	

TestResultsQC_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
BH	qc_rpd		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").	Text(8)	
BI	qc_spike_lcl		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").	Text(8)	
BJ	qc_spike_ucl		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").	Text(8)	
BK	qc_rpd_cl		Relative percent difference control limit. Required for any duplicated sample. Report as percentage multiplied by 100 (e.g., report "25%" as "25").	Text(8)	
BL	qc_spike_status		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.	Text(10)	'*' or Null
BM	qc_dup_spike_status		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.	Text(10)	'*' or Null
BN	qc_rpd_status		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.	Text(10)	'*' or Null

Batch_v1 Table

Table Column#	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>sys_sample_code</u>	Y	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®. If no Sample ID exists use sys_loc_code and suffix with date/time For Example MW01 + June 06, 2001= MW0106062001). For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB04052000. This should not include special characters (e.g. #, ', ").	Text(40)	Must match one of the reported values in the sys_sample_code field of the Samples_v1 EDD table submitted in the current or prior EDD.
B	<u>lab_anl_method_name</u>	Y	Laboratory analytical method name Must use rt_analytic_method valid values table.	Text(35)	rt_analytic_method.analytic_method
C	<u>analysis_date</u>	Y	Date and time of sample analysis. May refer to either beginning or end of the analysis as required.	DateTime	MM/DD/YYYY_HH:MM
D	<u>total_or_dissolved</u>	Y	Must be either 'D' for dissolved or filtered [metal] concentration, or 'T' for total or 'NA' for not applicable.	Text(10)	D T NA
E	column_number		Leave this field null	Text(2)	Null
F	<u>test_type</u>	Y	Type of test. Example Enter "INITIAL" if unknown or data is from measurements taken in the field (e.g., pH, dissolved oxygen), enter Dilution for samples that are diluted. Must use rt_test valid value table.	Text(10)	rt_test_type.test_type
G	<u>test_batch_type</u>	Y	Laboratory batch type. Example: Enter "Prep" for sample preparation or extraction batch. Must use rt_test_batch_type valid values table.	Text(10)	rt_test_batch_type.test_batch_type
H	<u>test_batch_id</u>	Y	Unique identifier for all laboratory analytical batches.	Text(20)	

BasicLoc_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	data_provider	Y	Company Code assigned to Data provider	Text(20)	rt_company.company_code
B	<u>sys_loc_code</u>	Y	Location identifier of sample collection, soil boring, or well installation. Examples of possible sys_loc_code are MW-01, A-1, SB6, etc. See Section 3.2 'Definition of a Facility, Subfacility, and Location' for additional information. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
C	well_id		Alternate well ID.	Text(30)	
D	site_code	Y	Code indicating the subfacility operable unit (OU) for which the data is collected or area of concern (AOC). Use the code is '01' unless there is a second or third operable unit at facility. Code of '02' and '03' should be used for second and third unit, respectively.	Text(20)	Must be the valid code for this subfacility and match the subfacility_code in the Subfacility_v1 EDD file submitted currently or previous EDD.
E	x_coord	Y	Longitude of sampling location in decimal degrees Longitude. Must be negative for western hemisphere. (-dd.xxxxxx). Must contain a minimum of 6 six significant figures. If unknown, use the site centroid longitude. Example: -73.740476	Numeric	
F	y_coord	Y	Latitude of sampling location in decimal degrees, Latitude. (dd.xxxxxx). Must contain a minimum of 6 six significant figures. If unknown, use the site centroid latitude. Example: 43.020295	Numeric	
G	surf_elev	Y	Elevation of the ground surface, or if location is for surface water samples, water surface elevation. Must be in feet above mean sea level. If unknown use "0".	Numeric	
H	elev_unit	Y	Unit of measurement for elevations. Units must be in feet.	Text(2)	Ft for Feet
I	coord_sys_desc	Y	Must be Latitude and Longitude based on the World Geodetic System 1984 (WGS84) datum.	Text(20)	LAT, LONG
J	loc_name		Leave this field null.	Text(40)	Null
K	loc_desc		Sampling location description. Example: 50 feet northwest of dog pen.	Text(255)	

BasicLoc_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
L	loc_type		Identifies the type of location. Example: For a monitoring well, the code is MW.	Text(10)	rt_location_type.location_type_code
M	loc_purpose		Sampling location purpose. Example: Staining observed on soil.	Text(20)	
N	within_facility_yn	Y	Indicates whether this sampling location is within facility boundaries, "Y" for yes or "N" for no.	Text(1)	'Y' for yes or 'N' for no.
O	depth_to_top_of_screen		Depth below ground surface to the top of the well screen. Must be in Feet	Numeric	
P	depth_to_bottom_of_screen		Depth below ground surface to bottom of well screen. Must be in Feet This information is required to obtain the vertical location from which the groundwater sample was taken.	Numeric	
Q	top_casing_elev		Elevation of the top of well casing. Elevation must be in feet.	Numeric	
R	depth_to_bottom_of_well		Depth below ground surface to bottom of well. Must be in Feet	Numeric	
S	total_depth		Total depth below ground surface of boring. Must be in Feet	Numeric	
T	remark		Remark.	Text(255)	
U	horz_collect_method_code	Y	Method used to determine the latitude/longitude. Example: S1 for NYS Licensed Professional Land Survey.	Text(3)	rt_coord_horz_method.horz_collect_method_code
V	horz_accuracy_value	Y	Accuracy range (+/-) of the latitude and longitude. Only the least accurate measurement should be reported, regardless if it is for latitude or longitude. Use "0.1" for professional survey, use "100" for site centroid, or "10" for all other methods.	Text(20)	
W	horz_accuracy_unit	Y	Unit of the horizontal accuracy value. Use "5-feet"	Text(8)	5-feet
X	horz_datum_code	Y	This is the reference datum of 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 GPS survey, enter 003 for WGS84.	Text(3)	rt_coord_horz_datum.horz_datum_code

BasicWater_Level_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>sys_loc_code</u>	Y	Location ID for the soil boring, well installation location, or surface water measuring point where Water Level data are collected. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
B	<u>measurement_date</u>	Y	Date and time of water level measurement.	DateTime	MM/DD/YYYY_HH:MM:SS
C	<u>historical_reference_elev</u>	Y	Elevation of the reference point from which depth measurements were taken. For groundwater elevations this must match watertable_v1 table reference_elevation_code for this location. Must be in feet above mean sea level.	Numeric	
D	water_level_depth		Depth of water below reference point. . If a well is measured under artesian conditions use negative number for calculated water level above reference point. For surface of a water body or dry water bodies, water level is zero "0". Must be in feet.	Numeric	Units in Feet
E	water_level_elev		Calculated elevation of water level. Elevation must be in feet above mean sea level.	Numeric	Units in Feet
F	measured_depth_of_well		The actual measured depth below ground surface to the bottom of the well. Must be in feet.	Numeric	Units in Feet
G	<u>depth_unit</u>		Unit of measure for depths and elevations. Must use feet code from rt_unit valid value table.	Text(15)	rt_unit.unit_code
H	remark		Remark on measurement.	Text(255)	
I	dry_indicator_yn		Is the well dry? "Y" for yes or "N" for no.	Text(1)	'Y' for yes or 'N' for no
J	<u>Lnapl_cas_rn</u>		If light non-aqueous phase liquid (lnapl) present in the well use primary constituent CAS No. from rt_analyte valid value table.	Text(15)	rt_analyte.cas_rn
K	Lnapl_depth		Depth to the top surface of the lnapl below the reference_point. Must be in feet.	Numeric	
L	<u>Dnapl_cas_rn</u>		If dense non-aqueous phase liquid (dnapl) present in the well use primary constituent CAS No. from rt_analyte.cas_rn.	Text(15)	rt_analyte.cas_rn

BasicWater_Level_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
M	Dnapl_depth		Depth to the top surface of the dnapl below the reference point. Must be in feet.	Numeric	
N	Task_code		Code used to identify the task under which the sampling occurred. Example: SC= Site Characterization; RD=Remedial Design; RIFS=Remedial Investigation/Feasibility Study; RC=Remedial Construction IRM=Interim Remedial Measure; SM=Operations & Maintenance Phase	Text(20)	

BasicChemistry_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	data_provider	Y	Data Provider Company Code provided by DEC.	Text(20)	rt_company.company_code
B	<u>sys_sample_code</u>	Y	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®. If no Sample ID exists use sys_loc_code and suffix with date/time For Example MW01 + June 06, 2001= MW0106062001). For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB04052000. This should not include special characters (e.g. #, ‘, “).	Text(40)	
C	sys_loc_code	Required for all samples except field QC samples	Location ID of sample collection. This field is null if a sample is not associated with a location, such as a QC sample. This should not include special characters (e.g. #, ‘, “).	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
D	sample_name		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.	Text(30)	
E	sample_matrix_code	Y	Code which distinguishes between different types of sample matrix. Example: soil samples are coded “SO”, ground water samples are coded “WG”, etc. Must use rt_matrix valid values table.	Text(2)	rt_matrix.matrix_code
F	sample_type_code	Y	Code which distinguishes between different types of samples. Example: Normal field samples are coded “N”, laboratory method blank samples are coded “LB”, etc. Must use rt_sample_type valid values table.	Text (2147483647)	rt_sample_type.sample_type_code
G	sample_source	Y	This field identifies where the sample originated. Samples collected in the Field are entered as “Field”, samples originating in the Lab are entered “LAB”.	Text(10)	Lab Field
H	parent_sample_code	(Required for Field duplicate samples).	If the sample is a duplicate, MS/MSD, blind dup, lab dup, etc, input the parent sample “sys_sample_code”. Example: A field duplicate "FD" (coded in sample_type_code) is collected for sample MW0106062001; therefore MW0106062001 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.	Text(40)	

BasicChemistry_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
I	sample_date	Y	Date sample was collected (in MM/DD/YYYY format for EDD).	DateTime	MM/DD/YYYY
J	start_depth		Depth to top of sample below ground surface. For surface water samples, use depth below water surface elevation. This field maybe left null for most groundwater samples if the database contains the start depth of the well screen in the well construction table, otherwise it must be entered. An exception to this rule is discrete samples taken at various depth elevations from a single well, start depth must be entered. Although not currently required, population of this field is recommended when the matrix is soil (SO).	Numeric	
K	end_depth		Depth to bottom of sample below ground surface. For surface water samples, use depth below water surface elevation. This field maybe left null for most groundwater samples if the database contains the start depth of the well screen in the well construction table, otherwise it must be entered. An exception to this rule is discrete samples taken at various depth elevations from a single well, start depth must be entered. Although not currently required, population of this field is recommended when the matrix is soil (SO).	Numeric	
L	depth_unit		Unit of measurement for the sample begin and end depths. Use values from rt_unit valid value table.	Text(15)	rt_unit.unit_code
M	composite_yn		Is sample a composite sample?	Text(1)	"Y" for yes or "N" for no.
N	lab_anl_method_name	Y	Laboratory analytical method name or description. Example: SW8260B, E130.1, etc. Must use rt_analytic_method valid values table.	Text(35)	rt_analytic_method.analytic_method
O	analysis_date	Y	Date of sample analysis. May refer to either beginning or end of the analysis as required.	DateTime	MM/DD/YYYY
P	total_or_dissolved	Y	Must be either 'D' for dissolved or filtered [metal] concentration, or 'T' for total or 'NA' for not applicable.	Text(10)	D T NA
Q	test_type	Y	Type of test. Example Enter "INITIAL" if unknown or data is from measurements taken in the field (e.g., pH, dissolved oxygen); enter Dilution for samples that are diluted. Must use rt_test valid value table.	Text(10)	rt_test_type.test_type
R	lab_matrix_code		This code distinguishes differences between the matrix that was analyzed, and not the matrix of the sample received. Example: TCPL analysis of a soil sample would report "Leachate", not "SO" for soil. Must use rt_matrix valid values table.	Text(10)	rt_matrix.matrix_code

BasicChemistry_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
S	analysis_location	Y	Denoted location of analysis. Must be either 'FI' for field instrument or probe, 'FL' for mobile field laboratory analysis, or 'LB' for fixed based laboratory analysis.	Text(2)	FI FL LB
T	basis		Denotes reporting basis. 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.	Text(10)	WET DRY NA
U	dilution_factor		Input effective test dilution factor. Example: 5, 10, 50	Numeric	
V	qc_level		Must use either 'screen' for screening or 'quant' for quantitative data.	Text(10)	Screen Quant
W	lab_sample_id		Laboratory LIMS identifier assigned to the sample.	Text(20)	
X	<u>cas_rn</u>	Y	Analyte code of chemical. Use rt_analyte valid value table.	Text(15)	rt_analyte.cas_rn
Y	chemical_name	Y	Name of Chemical. Use rt_analyte valid value table.	Text(75)	rt_analyte.chemical_name
Z	result_value		Analytical result reported at an appropriate number of significant digits. May only be null for non_detects. Required field if detect_flag field is entered "Y" and result_type_code is entered "TRG" or "TIC"	Numeric	
AA	result_type_code	Y	Identifies the type of result of the parameter. Must enter "TRG" for a target or regular result, enter "TIC" for a tentatively identified compound, enter "SUR" for surrogates, enter "IS" for internal standards, or enter "SC" for spiked compounds. Default is "TRG" for target analyte. Must use rt_result_type valid values table.	Text(10)	rt_result_type.result_type_code
AB	reportable_result	Y	Must be either 'Yes' for results which are considered to be reportable, or 'No' for other results. 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).	Text(10)	YES NO
AC	detect_flag	Y	May be either 'Y' for detected analytes or 'N' for non_detects. Use 'Y' for estimated values (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).	Text(2)	'Y' for Yes 'N' for No or Non Detects '>' '<'

BasicChemistry_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
AD	lab_qualifiers		Qualifier flags assigned by the laboratory.	Text(10)	
AE	validator_qualifiers		Qualifier flags assigned by the validation firm.	Text(10)	
AF	interpreted_qualifiers		Final qualifier flags assigned by the validator. Must use rt_qualifier valid values table. Example: The validator adds a "J" flag to a sample result that the laboratory has qualified as "D", DJ would be the value entered.	Text(10)	rt_qualifier.qualifier
AG	validated_yn	Y	Indicates if the result has been validated.	Text(1)	"Y" for Yes "N" for No
AH	organic_yn	Y	Must be either "Y" for organic constituents or "N" for inorganic constituents.	Text(1)	"Y" for Yes "N" for No
AI	reporting_detection_limit		The value entered in this field should be the sample-specific detection limit concentration level above which results can be quantified with confidence. It must reflect conditions such as dilution factors and moisture content. Required if detect_flag is "N" (non-detect)	Numeric	
AJ	result_unit		Units of measurement for the result. Controlled vocabulary, see Units valid value table.	Text(15)	rt_unit.unit_code
AK	detection_limit_unit		Units of measurement for the detection limit(s). This field is required if a reporting_detection_limit is reported.	Text(15)	rt_unit.unit_code
AL	method_detection_limit		Method detection limit. Value reported in detection_limit_unit field.	Text(20)	
AM	quantitation_limit		Quantitation limit. Unit reported in detection_limit_unit field.	Text(20)	
AN	task_code		Code used to identify the task under which the field sample was retrieved. SC= Site Characterization, RD=Remedial Design, RIFS=Remedial Investigation/Feasibility Study, RC=Remedial Construction, IRM=Interim Remedial Measure, SM=Operations & Maintenance Phase	Text(20)	
AO	result_comment		Result specific comments.	Text(255)	

BasicGeology_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	<u>sys_loc_code</u>	Y	Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each OU or AOC. Examples: MW-01, A-1, SB6, etc. See Section 3.2 'Definition of a Facility, Subfacility, and Location' for additional information. This should not include special characters (e.g. #, ', ").	Text(20)	Must be a valid sys_loc_code for the subfacility and match the sys_loc_code field in the Location_v1 EDD file submitted in the current or previous EDDs
B	<u>start_depth</u>	Y	Depth to top of lithologic unit below ground surface. Must be in Feet.	Numeric	
C	<u>material_type</u>		The type of material that composes a lithologic unit. Must be used in all cases except when a depth specific comment is being made.	Text(40)	<u>rt_material.material.name</u> .
D	<u>geo_unit_code_1</u>	Y	The data providers interpretation of the hydrogeologic unit present at this lithologic unit. Example: Upper aquifer lower aquifer, Magothy aquifer, upper confined aquifer, glacial aquifer, etc.	Text(20)	<u>rt_geologic_unit.geologic_unit_code</u>
E	<u>geo_unit_code_2</u>		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.	Text(20)	<u>rt_geologic_unit.geologic_unit_code</u>
F	remark		Comment on the lithologic unit.	Text(255)	

Files_v1 Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values
A	file_name	Y	Name of the file.	Text(255)	
B	file_type	Y	Type of the file. Example: Data file, image, GIS, CAD, etc.	Text(20)	rt_file_type.file_type
C	file_date		Date of the file. MM/DD/YYYY	DateTime	MM/DD/YYYY
D	title		Title of the file.	Text(255)	
E	author		Author of the file.	Text(255)	
F	remark		Remark for the file.	Text(255)	
G	place_type		Type of place this file is associated with. Example: DEC site name	Text(50)	
H	place_code		Code/identifier of the place this file is associated with. Example: DEC site code.	Text(50)	
I	place_subcode		Subcode/identifier of the place this file is associated with.	Text(50)	
J	content		Content of the file.		