

# **DNREC EQuIS Electronic Data Deliverable Submittal Requirements Manual**



**State of Delaware**

**Department of Natural Resources and Environmental Control**

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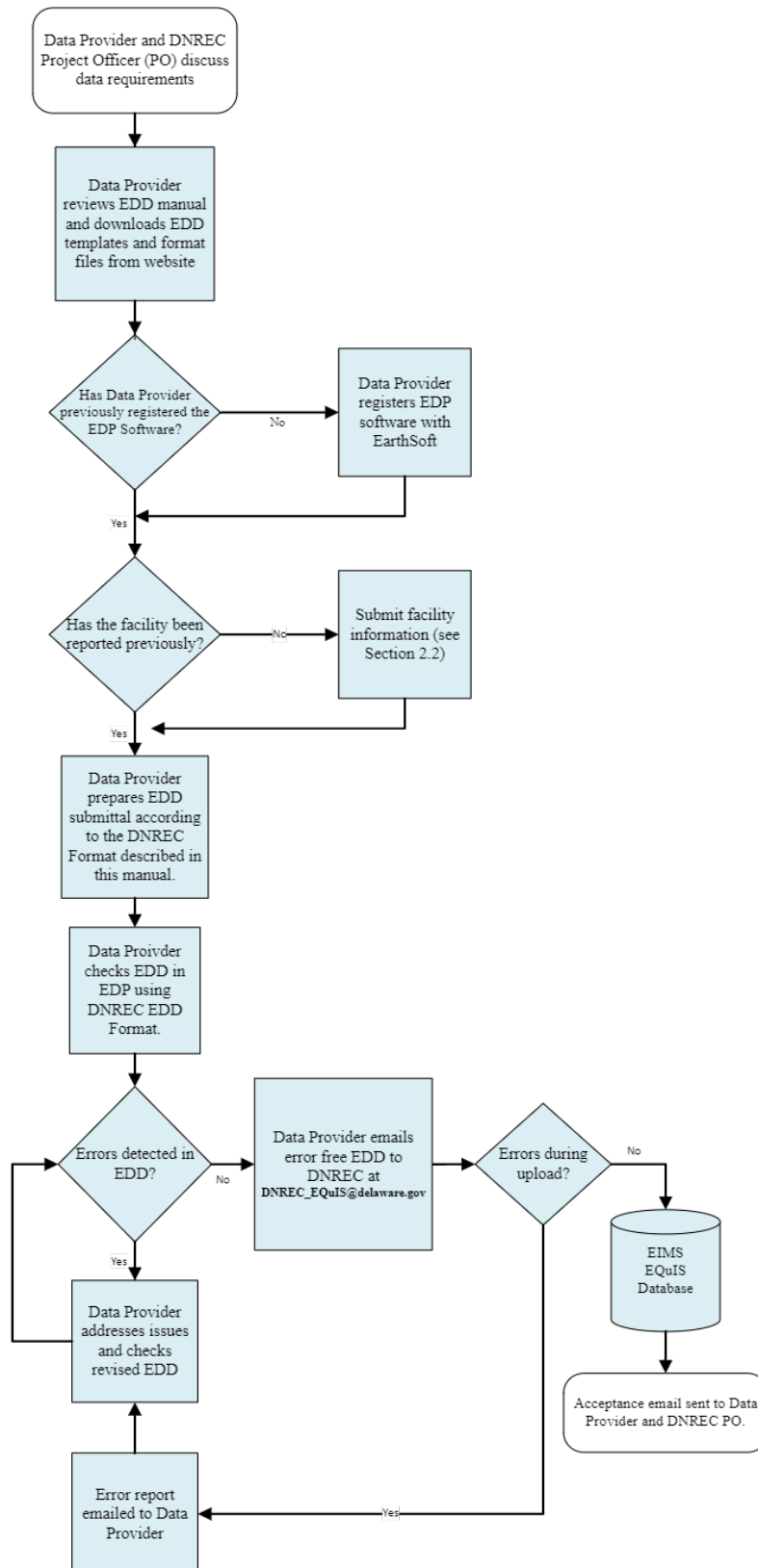
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## Appendix A: DNREC v5 EDD Format Definitions

DOCUMENT HISTORY			
Revision #	Revision Date	Revised By	Notes
Version 1	7/2014	Stephanie Gordon	Initial document development
Version 2	6/2015		
Version 3	11/2019	Vanessa Hamm	Revised to suit version 4 of our DNREC EDD Format & processes; adding Vapor Intrusion.
Version 4	10/2023	Vanessa Hamm	Revised to reflect EarthSoft/TRC changes for version 5 of our DNREC EDD Format & processes, adding Location Parameter info, additional Vapor Intrusion info, and document history. Also, updated general info tables for each section of the format and created an 'Appendix' for these tables.

**Figure 1. Work Flow Diagram for Submitting  
 an EDD to DNREC**



## 1. INTRODUCTION

The Delaware Department of Natural Resources and Environmental Control (DNREC) is using the Environmental Quality Information System (EQuIS) database, developed by EarthSoft, Inc., to help manage the environmental data they obtain. The EQuIS database will facilitate improved analysis of data by DNREC and allow DNREC to capture a large amount of data over time. The environmental data is uploaded into the database via Electronic Data Deliverables (EDDs). This manual will assist data providers with preparing and submitting EDDs.

EDDs are a collection of files (or worksheets) which are used to report data electronically and in a specific format. For example, in DNREC's EDD format, a file is used to report location data, another file is used to report samples collected at a location, and another file is used to report the laboratory test results for the samples. By using EDDs, the need to report the same data over and over again is eliminated. For instance, once the location data is reported for a particular facility, that same location data does not need to be resubmitted when additional samples are collected unless the location has been updated.

EDDs may be created with various software applications including spreadsheets (i.e. Excel), databases (i.e. Access), and text editors (i.e. Notepad).

This manual provides examples of EDD files as well as other essential information to prepare and submit EDD files. The workflow for submitting EDD files to DNREC is shown in Figure 1 below. Data providers must follow the instructions within this manual to avoid errors with uploading EDDs into the database.

DNREC's EQuIS EDD Submittal Webpage (<https://dnrec.alpha.delaware.gov/waste-hazardous/equis/>) provides links to the tools necessary to complete and submit EDDs. One important tool is the free software program, the EQuIS Data Processor (EDP). EDP must be used to check EDDs for errors prior to submittal to DNREC. An EDP user guide is available on the website as well.

## 2. GENERAL REPORTING REQUIREMENTS

### 2.1 DNREC'S EDD FORMAT

DNREC has a customized EDD format that is based on the EDD format of surrounding EPA regions and states. This EDD is meant for loading historical, current, and future data into DNREC's database. DNREC's EDD format consists of these files: DNREC.dll, DNREC.xml, DNREC\_RVF.rvf, and DNREC-enum.xml.

The DNREC EDD format is divided into 32 sections which are organized in the following groupings: Initial, Subsurface Investigations, Field Activities, Chemistry, and Basic Historical. Below is an overview of the sections that comprise DNREC's EDD format:

#### **Initial**

- Data Provider
- Subfacility
- Location
- Files
- Task

#### **Subsurface Investigation**

- Drill Activity
- Downhole Point
- Lithology

Well  
Well Construction  
Geology Samples

**Field Activities**

Location Parameter  
Field Sample  
COC  
Sample Parameter  
Water Level  
Extraction Injection Wells  
Soil Gas  
Field Results  
DNREC Screening Results

**Chemistry**

Sample  
Test Result QC  
Batch

**Basic Historical**

Basic Locations  
Basic Well  
Basic Water Level  
Basic Chemistry  
Basic Geology

**Vapor Intrusion**

VI Building Address  
VI Building Inspection  
VI Building Parameters  
VI Locations  
VI Outdoor Locations  
VI Sample  
TestResultsQC  
VI Batch

The contents of DNREC's EDD format may be viewed by loading DNREC's Format File (DNREC.dll, DNREC.xml, and DNREC-enum.xml) and Reference Value File (DNREC\_RVF.rvf) into the EQuIS Data Processor. The EQuIS Data Processor (EDP) is available for download online at no cost to DNREC data providers. The provides further information about how to install and use EDP and how to register the DNREC Format File and Reference Value File. EQuIS Data Processor (EDP) User Guide provides further information about how to install and use EDP and how to register the DNREC Format File and Reference Value File.

## **2.2 PRIOR TO SUBMITTING EDD FILES TO DNREC**

Before submitting EDD files, it is important that data providers contact the DNREC Project Officer assigned to the site (and prior to sampling) to determine what site data should be submitted via EDDs. Then, the DNREC Project Officer and/or the data provider must provide some basic site/facility information directly to the DNREC EQuIS database management team via email at DNREC\_EQuIS@state.de.us. This information should include the following:



- Facility Name
- Facility ID #
- DNREC Project Officer Name
- Data Provider Name (consultant company name & primary contact person for EDDs)
- Facility Address (street, city, zip code, county)
- Program: Brownfield, DOD, HSCA, LAST, LUST, NPL, PA/SI, RCRA CA, Resource Recovery, Solid Waste, SSA, or VCP

The DNREC EQuIS database management team will create the new Facility in the database and then the data provider can begin to submit EDD files. If the facility already exists in the DNREC EQuIS database and the basic facility information has not changed, then the DNREC Project Officer and/or data provider do not need to provide this information to the DNREC EQuIS database management team.

## 2.3 SUBMITTING EDD FILES TO DNREC

### 2.3.1 General

At minimum, DNREC requires EDD files containing the following sections to be submitted for data collected at each facility in the database:

- **Location:** identifies the sampling locations at the facility and their coordinates.
- **Lithology:** contains lithological data collected from soil samples or drill cuttings generated during drilling of borings.
- **Sample:** contains data for the samples collected at the site and sent to a fixed lab for analysis. Fields include sample date, location, type, matrix, source, start and end depths, etc.
- **TestResultQC:** contains data regarding the laboratory tests performed on samples, the results of those tests, and the associated quality control data.
- **Batch:** contains data associating samples with the laboratory batch identifier.

If wells were installed and/or sampled at the facility, EDD files containing the following sections are also required:

- **Well:** contains data regarding wells at the facility including installation date, well permit number, top of casing elevation, depth of well, and stickup height.
- **Well Construction:** contains data regarding the construction of the well. At a minimum, the well segment of 'SCREEN' with a start and end depth is required.
- **WaterLevel:** contains data regarding water level measurements collected during sampling activities including water level depth and water level elevation.

If there is any air data, it should be populated in the “Vapor Intrusion” section of the DNREC EDD.

EDD files for additional sections may be populated and submitted if approved by the DNREC Project Officer. Note: Certain EDD files (i.e. Location, Well) may only need to be submitted once for a facility. Whereas other EDD files (i.e. Sample, TestResultQC, and WaterLevel) may need to be submitted periodically as new data is generated through subsequent sampling events.

### 2.3.2 Consultants as Data Providers

Consultants are responsible for the submittal of field and lab data from any subcontractors that are providing

data collection, laboratory or validation services. Consultants should submit both lab and field EDD files to DNREC via email at [DNREC\\_EQuIS@delaware.gov](mailto:DNREC_EQuIS@delaware.gov). Consultants must check the lab and field EDDs together in EDP before submitting them to DNREC. Please contact the lab in advance of sampling event to let them know you will require EDDs in the DNREC format and ensure they have the latest DNREC format and reference value file, available through the DNREC EQuIS EDP Download [webpage](#).

### 2.3.3 Laboratories as Data Providers

Labs contracted by a consultant should submit lab EDD files to the consultant and not to DNREC directly.

Labs contracted by DNREC should submit lab EDD files via email to [DNREC\\_EQuIS@delaware.gov](mailto:DNREC_EQuIS@delaware.gov) (or as agreed). Along with the EDD files, email submittals must include the facility name, facility code (DE#), and person to contact regarding the EDD. The DNREC Project Officer should be cc'd on this email as well.

## 2.4 OVERALL DNREC EQuIS DATABASE ORGANIZATION

Understanding the basic hierarchy of organization of the DNREC EQuIS database may assist data providers in understanding how the DNREC EDD format functions.

DNREC's EQuIS database is a relational database. In the example below, each row represents a table in the database. In this case, each table except the 'Result' table is a parent to the table below. This means that each row in the parent table can have one or more child rows in the table below it. Reading down, a facility may have one or more subfacilities, a subfacility may have one or more locations, a location may have one or more samples, a sample may have one or more tests, a test may have one or more results. Conversely, a row in a child table can have only one parent in its associated parent table. Reading up the hierarchy, an individual result must have only one test, an individual test can be associated with only one sample, a sample can be assigned to only one location, a location can only belong to one subfacility and a subfacility can only be associated with one facility.

The relations described above are also true of the way the worksheets in the EDD format work together. Therefore, if you have laboratory data, each sample will have one location and can have multiple tests with multiple results. If you miss the parent data of an existing child, the EDP will display an error. For example, if you have sample and result data filled in but no test information, EDP will show an error.

### Example:

**Facility** (Old Gas Station A (DE-XXXX))  
    **Subfacility** (OU-1...operable unit 1)  
        **Location** (GSMW-01)  
            **Sample** (GSSO-01D...deep soil sample)  
                **Test** (SW8260 = volatile organic compounds by GC/MS)  
                    **Result** (Benzene = 10 mg/kg)

### **What is a facility?**

According to EarthSoft, “A facility is the physical or logical extent of data that is made available for reporting or modeling” and it “...may correspond to physical boundaries within which investigation or remediation is being conducted”. The DNREC EQuIS database consists of numerous facilities. “Facility” and “site” may be used interchangeably. Each facility is assigned a facility\_code.

### **What is a Facility Code?**

A facility\_code is the DNREC ID for the site. For example: DE-0321. The facility\_code is used to identify the site in the database. Please contact the DNREC project officer assigned to the site if you are unsure of the facility\_code.

## **2.5 CREATING EDD FILES/WORKSHEETS**

Data providers can add data directly to DNREC’s **Blank EDD**. The **Blank EDD** is a convenient tool for creating EDDs using an Excel Workbook Template. It is available on EarthSoft’s DNREC Format and EDP Download Page: <https://earthsoft.com/products/edp/edp-format-for-dnrec/> as well as in EDP when the DNREC format file is loaded.

The sections of the DNREC format are described in general terms in Sections 3 through 8 of this manual. The fields within each individual section (i.e. sys\_sample\_code, sys\_loc\_code) are described in the **EDD Description** Excel Workbook and Appendix A of this manual. The **EDD Description** is available on [EarthSoft’s DNREC Format and EDP Download Page](https://earthsoft.com/products/edp/edp-format-for-dnrec/) as well as in EDP when the DNREC format file is loaded. Data providers must refer to the **EDD Description** for a full description of the field, field data type and length, whether the field is required, and whether the field is restricted by a reference table or enumeration file and must be populated by a valid value.

DNREC strongly encourages data providers to use the **Blank EDD** to create EDDs; however, data providers may also use the **Blank EDD** and **EDD Description** as a guide to create custom database tables or custom text files.

Acceptable files include:

1. Excel workbook (.xls or .xlsx)
2. Individual Tab delimited file (.txt)
3. Individual Comma delimited file (.csv) (aka Comma separated file)
4. Zip file (.zip) with individual files included
5. Access database (.mdb or .accdb)

### **2.5.1 Required Fields**

Data providers must populate all *required* fields in the EDD sections which are submitted to DNREC. In general, **Red** fields are required fields and must be populated. **Red and Underlined** fields are required and are primary key fields, meaning they must be unique in the database. Required fields are also distinguished in the *DNREC EDD Description* file. Although required fields must be populated, DNREC encourages data providers to populate non-required fields as well when relevant information is available.

### **2.5.2 Fields with Controlled Vocabulary / Lookup Fields**

Specific fields have controlled vocabulary and must be populated in compliance with DNREC reference and/or enumerated values. Data providers must look to the appropriate reference table or section of the enumeration

file (DNREC-enum.xsd) to determine what values are valid for the field. Note: In EDP, a drop-down list of these valid values is available for each field.

### 2.5.2.1 Reference Values

**Reference value** fields must be populated with values from a designated reference table and by default they are **blue**. Reference values (aka valid values or lookups) may be viewed by reference table under the “Reference Values” tab in EDP when the DNREC.rvf file is loaded. DNREC reference values are also located in an Excel document on DNREC’s EQuIS webpage. To determine what reference table is associated with a specific field, data providers may hover over the blue field header in EDP or they may view the Lookup column of the EDD Description Tool in EDP.

*Example:*

*Field Name= **Sample\_type\_code** (in Sample)*

*Reference Table= rt\_sample\_type*

*Reference Values= N (Normal Sample), FD (Field Duplicate), FB (Field Blank), etc.*

### 2.5.2.2 Enumerated Values

The enumeration file (.enum) of the DNREC EDD format allows EDP to enforce a set of lookup values similar to a reference table lookup. These enumerated values may be viewed in the DNREC-enum.xsd file. The Lookup column of the EDD Description Tool highlights the appropriate section of the .enum file to reference for a specific field.

## 2.5.3 Specific Reporting Requirements

This section provides additional guidance and emphasis on how to report specific types of data including null values, re-tests, non-detects, tentatively identified compounds (TICs), qualifiers, and co-eluting congeners.

### 2.5.3.1 Null Values

If a field is not required and contains no information (a null field), it cannot be removed from the EDD; instead, it must remain blank.

### 2.5.3.2 Re-Tests

For initial tests, all analytes should be reported. In the case where retests are performed on a sample (i.e. Dilution1, Dilution2, Reextract1, etc.), the result that is considered the reportable result should indicate “Yes” in the reportable\_result field. The initial test, and any retest result not considered reportable should have reportable\_result set to “No”.

See the example in the table below.

Test_type	Cas_rn	Chemical_name	Result_value	Reportable_result	Detect_flag	Lab_qualifiers	Result_comment
Initial	79-01-6	Trichloroethene	2000	No	Y	E	Exceeds calibration
Dilution1	79-01-6	Trichloroethene	500	Yes	Y		

### 2.5.3.3 Non-Detects

When reporting non-detects in the EDD files, the result\_value field must be null, the detect\_flag field must be 'N', and the reporting\_detection\_limit and reporting\_detection\_limit\_unit fields must be populated. The laboratory should assign a qualifier of 'U' to the result in the lab\_qualifier field and interpreted\_qualifier field. Even though the result may be non-detect, it is still considered a reportable\_result to DNREC; therefore reportable\_result should be 'Yes'.

Alternatively, if a result is detected and the detect\_flag = 'Y', then the result\_value field must be populated. See the example in the table below.

Cas_rn	Result_value	Reportable_result	Detect_flag	Reporting_detection_limit	Detection_limit_unit	Lab_qualifier
7440-38-2	11	Yes	Y	2.2	mg/kg	
7440-38-2		Yes	N	2.2	mg/kg	U

#### 2.5.3.4 Tentatively Identified Compounds (TICs)

Tentatively Identified Compounds (TICs) should be reported in the EDD when detected. However, DNREC only requires that TICs with the top 10 highest concentrations are reported and that any TIC with a concentration greater than or equal to 10,000 ppb is reported. The TICs should first be identified to the analyte name if possible and then to the class of the TIC (i.e. Unknown PAHs). If the TIC cannot be identified by analyte name or class, it should be identified as "Unknown". All TIC results should have "TIC" in the result\_type\_code field and TIC retention time in the tic\_retention\_time field of the Test Result QC EDD file. The table below provides examples of naming for unknown TICs.

Cas_rn	Chemical_name
UNKNOWN1	UNKNOWN with highest conc.
UNKALCOHOL2	UNKNOWN ALCOHOLS with 2nd highest conc.
UNKALKALDHYDE1	UNKNOWN ALKYL ALDEHYDES with highest conc.
UNKALKKEYTONE1	UNKNOWN ALKYL KEYTONES with highest conc.
UNKAROMATIC10	UNKNOWN AROMATICS with 10th highest conc.
UNKCARBACID4	UNKNOWN CARBOXYLIC ACID with 4th highest conc.
UNKHYDROCARB1	UNKNOWN HYDROCARBONS with highest conc.
UNKPAH1	UNKNOWN PAHS with highest conc.
UNKSV5	UNKNOWN Semi-Volatile with 5th highest conc.
UNKVOA8	UNKNOWN VOA with 8th highest conc.

#### 2.5.3.5 Qualifiers

Data providers must refer to the codes and definitions within DNREC's reference table for qualifiers (rt\_qualifier) when submitting results with qualifiers. For the interpreted\_qualifier field, the data provider should select the code that best matches the definition of the lab qualifier used to qualify the results. If an equivalent qualifier is not listed in rt\_qualifier, then a 'Z' qualifier should be populated in the interpreted\_qualifier field with a subsequent note in the case narrative of the lab report.

Although not common, if data is validated by a third party, the validator's qualifiers should be included in the validator\_qualifier field; the interpreted\_qualifier field should include the equivalent of both the lab\_qualifier and validator\_qualifier entries combined.

### 2.5.3.6 Co-eluting Congeners

If an EDD includes co-eluting congeners, the lowest numbered congener in the co-elution should be reported with a “C” as the qualifier. The other congeners should be reported with a “CXXX” as the qualifier, where the “XXX” is the congener number for the lowest numbered congener in the co-elution. No value should be entered into the result\_value field for these congeners (designated as CXXX). The table below provides an example of how to report co-eluting congeners in an EDD.

Cas_rn	Chemical_name	Result value	Detect flag		Lab_qualifier	Interpreted_qualifier
2974-92-7	PCB-12	100	Y		C	C
2974-90-5	PCB-13		N		C12	C12

### 2.5.4 Checking Data Integrity

When checking data, data providers must assure valid data, row uniqueness, and row integrity. The EQuIS Data Processor (EDP) helps data providers perform these data checks. All EDDs must be checked, and all tabs populated with data should be **green**. All EDDs should pass the EDP check before submitting to DNREC.

#### 2.5.4.1 Validity

Data must be valid and must adhere to the descriptions provided in the EDD Description. Data must also adhere to the valid reference and enumeration values. For example, the sample\_type\_code field in the Sample EDD file must be populated with sample type information (i.e. normal sample, field blank, etc.) designated by a code from the sample\_type reference table.

#### 2.5.4.2 Row Uniqueness

A primary key field or fields make the row/record unique. The primary key fields are identified in the EDD Description as ‘PK’. Primary key field headers are usually **red and underlined**. For a facility, no two rows can have the exact same values in the primary key field(s). For example, no two rows in the Sample EDD file can have the same sys\_sample\_code. Every sys\_sample\_code ever reported must be unique for a facility. For example: Adding the sample date to the sample name to create the sys\_sample\_code is a way to this field unique for each sample. (ex. MW-01\_20190819)

Certain EDD files, such as the Water Level EDD file, have *multiple* primary key fields and at least one of the primary key fields per row must have a unique value. For example, in WaterLevel, sys\_loc\_code and measurement\_date are primary key fields. If two rows had the same sys\_loc\_code (MW01) and measurement\_date (12/1/09), this would violate row uniqueness. Row uniqueness would not be violated if one row had a sys\_loc\_code of MW01 and a measurement\_date of 12/1/09 and another row had the same sys\_loc\_code of MW01 and a measurement\_date of 12/8/09.

#### 2.5.4.3 Row Integrity

Certain rows/records within the various EDD files are related to other rows/records. For example, the Location EDD file contains the sys\_loc\_code. The sys\_loc\_code in the Location EDD file must be included in the Sample EDD file, therefore linking the normal environmental sample information to the location information. Without a location, the sample data cannot be loaded.

## 2.6 NAMING AND SAVING EDDS

This section provides guidance for naming and saving EDDs. Please see the EDP User Guide for more information regarding naming files.

### 2.6.1 Excel Workbook/Worksheets

Once populated with data, the Excel workbook (.xls, .xlsx) can be saved with any name; however, the individual worksheets in the workbook must be named exactly as the DNREC format section is named (e.g. Location, Well, etc). If a worksheet does not contain the **exact** (spelling counts) name of a section of the DNREC format, then the worksheet will not be loaded into EDP.

It is recommended that the date and facility ID are included in the file name of the Excel workbook.

Note: When populating Excel worksheets, if you find it helpful you may hide (but do *not* delete) the columns you will not be using. The hidden columns still appear when the worksheet is loaded into EDP.

Below is a screenshot of an Excel workbook with worksheets named correctly:

	A	B	C	D	E	F	G
1	<b>data_provider_code</b>	<b>data_provider</b>	<b>data_contact_name</b>	<b>data_contact_address1</b>	<b>data_contact_address2</b>	<b>data_contact_city</b>	<b>data_contact_state</b>
2	\$Text(20)	Text(70)	Text(50)	Text(40)	Text(40)	Text(30)	Text(2)
3							
4							
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### 2.6.2 Access Database/Tables

Once it is populated with data, the Access database (.mdb, accdb) can be saved with any name; however the individual tables in the database must be named exactly as the DNREC format section is named.

It is recommended that the date and facility ID are included in the file name of the Access database.

### 2.6.3 Tab Delimited Files

Tab delimited files must be named in the following way:

<Unique ID>.<EDD Section Name>.txt

Where:

<Unique ID> = A unique identifier such as the date or sample delivery group name

<EDD Section Name> = The name of the section within the EDD (i.e. Location, Lithology, TestResultQC)

The EDD Section name must be spelled exactly as it is in the DNREC EDD format. It is important that a period (.) is between each of the name elements.

**Example:** 20111205.Sample.txt

#### 2.6.4 Comma Delimited Files

Comma delimited files must be named in the following way:

<Unique ID>.<EDDSectionName>.csv

Where:

<Unique ID> = A unique identifier such as the date or sample delivery group name

<EDD Section Name> = The name of the section within the EDD (i.e. Location, Lithology, TestResultQC)

The EDD Section name must be spelled exactly as it is in the DNREC EDD format. It is important that a period (.) is between each of the name elements.

**Example:** 20111205.Sample.csv

#### 2.6.5 Zip Files

The zip file must be named in the following way:

<Unique ID>.<Facility Code>.<Format Name>.zip.

Where:

<Unique ID> = A unique identifier such as the date or sample delivery group name

<Facility Code> = The DNREC identifier for the facility (i.e. DE- 1365)

<Format> = DNREC

Example: 20111205.DE-1348.DNREC.zip

It is important that a period (.) is between each of the zip file name elements.

The .zip file may include .txt, .csv, .xls files, etc. Remember that any individual files within a zip file must also be named appropriately. See above Sections 2.6.1 – 2.6.4 for more information.

## 2.7 CHECKING EDD FILES WITH THE EQUIS DATA PROCESSOR

All EDD files ***must*** be checked for errors by data providers by loading data into the [EQuIS Data Processor \(EDP\)](#). EDP checks EDD files for required fields, field lengths, data types, reference values, duplicate rows, range, and orphan rows. EDP also checks to ensure that data within the EDDs follow DNREC's business rules. It enables users to identify and correct errors easily and save the changes to the EDD files. Data providers must correct any errors in their data. All EDD files must be **error-free** before they are submitted to DNREC via e-mail. Please note that the standalone EDP does not check EDD files against existing data in DNREC's EQuIS database.



**Tip: Be sure to hit ‘Refresh All’ in EDP after uploading data.**

More details regarding EDP are provided in the [EQuIS Data Processor \(EDP\) User Guide](#) available online.

### 2.7.1 Latest DNREC Format Files and Reference Value File

To use EDP, you will need the most up-to-date DNREC format files (DNREC.dll, DNREC-enum.xsd, DNREC.xml and reference value file (DNREC\_RVF.rvf), located on DNREC’s EQuIS webpage. Since these files (especially the reference value file) may be updated occasionally over time, please check the webpage for the most recent DNREC format files and reference value file before using EDP to check data:

<https://dnrec.alpha.delaware.gov/waste-hazardous/equis/>. Save these files to C:\ProgramFiles\EarthSoft\EQuIS\Formats\DNREC and replace existing files.

### 2.7.2 Modifying Comment Indicator

The comment indicator instructs EDP to ignore header rows. The DNREC format uniquely uses \$ (instead of the default of #) as the comment indicator in EDP. You can modify the comment indicator by navigating to the Application button in the top left portion of the EDP window, go to Options, select General, change comment indicator to \$, and click OK.

## 2.8 ADDING NEW REFERENCE VALUES

Please follow DNREC reference values as closely as possible when populating EDD files. However, if you need to add a new reference value to the database/reference value file, please send an email to DNREC\_EQuIS@state.de.us including:

1. Your name and company name
2. Reference value you want to add
3. Name of reference table the value belongs in (i.e. rt\_analyte)
  - If its an analyte being added, please provide the analyte type (i.e. SC, TIC, SUR, TRG)
4. Brief description of the reference value (i.e. for analytic methods)
5. Project/DNREC Project Officer
6. Reasoning as to ‘why’ the value is needed
7. Error Log as attachment (optional)

Once the reference value is approved and added to the database, an updated DNREC\_RVF.rvf will be available. When the datasets are checked using this updated file, the errors associated with this reference value will be eliminated.

## 2.9 SUBMITTING AN EDD

Once the EDD is **free of errors**, please submit it to DNREC via email at [DNREC\\_EQuIS@delaware.gov](mailto:DNREC_EQuIS@delaware.gov). The subject line of the email should include the name of the facility, facility code (i.e. DE #, Facility ID), and whether it is an original submittal or a corrected submittal of an EDD. Please cc the DNREC Project Officer assigned to the facility on the submittal email.

If the submittal is accepted, the data provider and the DNREC Project Officer will receive an acceptance email. If there is a problem with the submittal, the data provider will receive an email with a list of errors to correct. When you resubmit the EDD, the title and body of the email should state that it is a corrected submittal.

At this time, the ‘Sign and Submit’ feature of EDP **should not** be used by DNREC data providers.

### 3. INITIAL EDD FILES

The DNREC format is divided into 32 sections which are organized in the following groupings: Initial, Subsurface Investigation, Field Activities, Chemistry, Basic Historical, and Vapor Intrusion. This portion of the manual briefly describes and provides examples of the Initial EDD files. Please refer to the EDD Description Tool (in EDP) for a full description of the fields within each file, field data type and length, whether the field is required, and whether the field is restricted by a reference table or enumeration file and must be populated by a valid value.

Initial EDD files are usually created by consultants (as data providers). Not all Initial EDD files must be submitted. See Section 2.3.1 for the EDD files that DNREC requires for each facility in the database. However, all required fields within an EDD file must be populated.

#### 3.1 DESCRIPTION OF INITIAL EDD FILES

##### 3.1.1 Data Provider EDD

The data provider EDD file includes information about the company or agency submitting the EDD. This file is for first time data providers or for existing data providers who need to update their information in the database. If a data provider is already listed as a valid value in the `rt_company` section of the reference values, this EDD file does not need to be filled in.

##### 3.1.2 Subfacility EDD

Facilities may be organized into subfacilities. The subfacility EDD file includes the subfacility code, name, type, etc. The subfacility code is a code indicating the subfacility operable unit (OU) or area of concern for which the data is collected. Use the code ‘OU1’ unless there are additional operable units at a facility. In the case of additional operable units, use codes of ‘OU2’, ‘OU3’, etc. The subfacility name is the name of the operable unit and is site-specific. The subfacility type is also site-specific but values must be selected from a reference table. When providing Vapor Intrusion data, the data has to link to a specific subfacility(ies) of a site.

##### 3.1.3 Location EDD

**The location EDD file is critical and must be submitted prior to or in conjunction with all other EDD files.** This EDD file identifies the unique sampling locations at the facility and their coordinates. Please note that DNREC requires that the X (Easting) and Y (Northing) coordinates are submitted in the **Delaware State Plane** coordinate system based on the **North American Datum of 1983 in meters** in accordance with [6 Del. C., Chapter 55, Plane Coordinate System](#). If the X and Y coordinates are in other units, they must be converted prior to EDD submission. The law states that “the unit used to convert feet to meters shall be the United States survey foot, which is 39.37 / 12 feet for each meter”.

While the data provider must populate the location EDD file with X and Y coordinates in the primary coordinate system mentioned above, the alternate coordinate system fields are automatically populated by EDP with the DNREC EDD format file. Upon uploading a location EDD file to EDP, the X and Y coordinates in Delaware State Plane NAD 83 meters are automatically converted to Latitude and Longitude in decimal degrees (the alternate coordinate system) and EDP automatically populate the fields `alt_x_coord` and `alt_y_coord`.

When populating any coordinates in State Plane NAD 83 meters, you must populate `alt_coord_type` with “LAT

LONG” & alt\_identifier with “PRIMARY”. The DNREC EDD format will automatically calculate the LAT LONGs based on the State Plane NAD 83 coordinates entered.

Similarly, if you enter the LAT LONG coordinates, the State Plane NAD 83 coordinates will calculate automatically if the coord\_sys\_desc is selected as ‘SP NAD 83 DE 0700’.

Vertical measurements (i.e. elevation, depth) may be submitted in either feet or meters. However, the unit must be specified and should be consistent for the entire facility.

In the location EDD file, records should *not* be created for samples which are not linked to a location, such as field blanks and trip blanks. If there are “nested” wells in the same borehole, each well must be given a unique sys\_loc\_code for the facility (i.e. MW-01S, MW-01M, MW-01D).

Data providers only need to submit sampling location information once. However, if a location’s coordinates are updated, data providers may submit the updated information.

#### New Rules:

- If any location types that contain ‘well’ or ‘PZMTR’, some additional information is required in the Well tab.
- All vapor intrusion locations should be populated in the VI\_Location/VI\_Outdoor\_Location tab.
- If surface elevation is unknown, populate ‘9999’ for surf\_elev.
- Delaware surface elevations are restricted to be within a minimum (-500) and a maximum of (500).

#### 3.1.4 Files EDD

The files EDD contains supplementary file information, such as base map metadata. File name and file type are required fields. An example file to be submitted would be the base map of a site. File types may include image, GIS, CAD, etc.

#### 3.1.5 Task EDD

The task code is a unique identifier for all data collected during a sampling event. It allows data from a given study to be retrieved by the original report with which it was submitted.

#### General Information for the Initial Group EDD Section

Table Name Format	Text File Name	Created By	Contents	Submission Frequency
Data Provider_v5	Dataprovider_v5.txt	Data Provider	Contact information	Initial
Subfacility_v5	Subfacility_v5.txt	Data Provider  (DNREC PM may need to provide info to the Data Provider so they populate the EDD with appropriate OU names, numbers, etc.)	Defined OUs or AOC, facility address, type of facility	Initial

Table Name Format	Text File Name	Created By	Contents	Submission Frequency
Location_v5	Location_v5.txt	Data Provider Field Personnel  (to avoid duplicate entries, the DNREC PM may need to provide info to the Data Provider so they populate the EDD with appropriate location names (sys_loc_codes), etc.)	Monitoring points, coordinates, elevations	Initial  And for all <b>NEW</b> sample locations
Files_v5	Files_v5.txt	Data Provider	Metadata associated with files submitted to DNREC, such as a base map drawing file	Initial
Task_v5	Task_v5.txt	Data Provider	Code used to identify the task under which the field sample was taken Unique task codes for each sampling event	Initial

## 4. SUBSURFACE INVESTIGATION EDD FILES

The DNREC format is divided into 32 sections which are organized in the following groupings: Initial, Subsurface Investigation, Field Activities, Chemistry, Basic Historical, and Vapor Intrusion. This portion of the manual briefly describes and provides examples of the Subsurface Investigation EDD files. Please refer to the EDD Description Tool (in EDP) for a full description of the fields within each file, field data type and length, whether the field is required, and whether the field is restricted by a reference table or enumeration file and must be populated by a valid value.

Subsurface Investigation EDD files are usually created by consultants (as data providers). Not all Subsurface Investigation EDD files must be submitted. See Section 2.3.1 for the EDD files that DNREC requires for each facility in the database. However, all required fields within an EDD file must be populated.

### 4.1 DESCRIPTION OF SUBSURFACE INVESTIGATION EDD FILES

#### 4.1.1 Drill Activity EDD

The drill activity EDD file contains data associated with drilling activities such as the drilling start and end date, drilling method, and diameter of boring.

#### 4.1.2 Downhole Point EDD

The downhole point EDD file collects data related to measurements taken downhole from the sample locations. Parameters measured at these downhole points may include tip stress, resistivity, and pore pressure.

#### 4.1.3 Lithology EDD

The lithology EDD file contains lithology data for soil borings including the start/end depth, material, degree of moisture, color, etc. in each lithological layer.

#### 4.1.4 Well EDD

The well EDD file contains data regarding wells at the facility including installation date, well permit number, top of casing elevation, depth of well, and stickup height.

Well permit numbers are especially important and should be included in this EDD file to comply with the [Policy for Correlating Well Sampling Results to DNREC Well ID Numbers](#).

#### 4.1.5 Well Construction EDD

The well construction EDD file contains data about the construction of wells installed at the facility. This file must include the start and end depth of each segment of the wells (i.e. protective casing, screen) and the material used to construct each segment (i.e. PVC, concrete).

#### 4.1.6 Geology Samples EDD

The geology samples EDD file contains data regarding geotechnical samples and may include hydraulic conductivity, organic carbon content, porosity, etc.

**General Information on the Subsurface Investigation Group EDD Section**

<b>Table Name Format</b>	<b>Text File Name</b>	<b>Created By</b>	<b>Contents</b>	<b>Submission Frequency</b>
DrillActivity_v5	DrillActivity_v5.txt	Data Providers Field Personnel	Soil Boring Information	Once per location
DownholePoint_v5	DownholePoint_v5.txt	Data Providers Field Personnel	Data from down hole logging methods	Once per location or when subsequent logs are run in a well installed at the location
Lithology_v5	Lithology_v5.txt	Data Providers Field Personnel	Lithology data for a borehole	Once per location
Well_v5	Well_v5.txt	Data Providers Field Personnel	Well installation information	Once per location
WellConstruction_v5	WellConstruction_v5.txt	Data Providers Field Personnel	Well construction information	Once per location or when the surface completion or top of casing elevation or datum value is changed
GeologySamples_v5	GeologySamples_v5.txt	Data Providers Field Personnel	Geotechnical sample information	Once per location

## 5.0 FIELD ACTIVITIES EDD FILES

The DNREC format is divided into 32 sections which are organized in the following groupings: Initial, Subsurface Investigation, Field Activities, Chemistry, Basic Historical, and Vapor Intrusion. This portion of the manual briefly describes and provides examples of the Field Activities EDD files. Please refer to the EDD Description Tool (in EDP) for a full description of the fields within each file, field data type and length, whether the field is required, and whether the field is restricted by a reference table or enumeration file and must be populated by a valid value.

Field Activities EDD files are usually created by consultants (as data providers). Not all Field Activities EDD files must be submitted. See Section 2.3.1 for the EDD files that DNREC requires for each facility in the database. However, all required fields within an EDD file must be populated.

### 5.1 DESCRIPTION OF FIELD ACTIVITIES EDD FILES

#### 5.1.1 Location Parameter

The location parameter EDD section has been added for DNREC internal data collection purposes. The location parameter file contains data regarding observation at a particular location. The parameter code is used to identify parameters associated with a location that are measured, observed, or described. Additionally, location parameters are related by the Primary Key `sys_loc_code`, which must exist in `dt_location` before a location parameter can be added. Parameter codes must be added to the `rt_location_param_type` table first.

#### 5.1.2 Field Sample EDD

The field sample EDD section has been added for DNREC internal data collection purposes for pre-loading sample information directly from the field prior to receiving analytical results in the Chemistry EDD grouping. The chemistry field sample EDD is the crucial file by which all chemistry result data is based. Field samples are summarized in this EDD, and the laboratory analytical samples are connected to the field samples by the unique identifier `sys_sample_code`. This value is unique throughout the database, even for resamples, duplicates, etc.

#### 5.1.3 COC EDD

The COC EDD section has been added for DNREC internal data collection purposes. The chain of custody EDD details the cooler ID, temperature, and shipping details of the collected samples.

#### 5.1.4 Sample Parameter EDD

The sample parameter EDD contains data regarding observations for a particular sample. The parameter code is used to identify parameters associated with a sample that are measured, observed, or described. Additionally, sample parameters are related by the Primary Key `sys_sample_code`, which must exist in `dt_sample` before a sample parameter can be added. Parameter codes must be added to the `rt_sample_param_type` prior to use.

#### 5.1.5 Water Level EDD

The water level EDD file contains data regarding water level measurements collected during sampling activities including water level depth and water level elevation.

#### 5.1.6 Extraction Injection Wells EDD

The extraction/injection wells EDD file contains data, such as pumping rates, for wells where extraction and/or injection is occurring.

### 5.1.7 Soil Gas EDD

The soil gas EDD file contains the field instrument readings collected during a soil gas sampling.

### 5.1.8 Field Results EDD

The field results EDD file contains the results from analyzing samples in the field.

### 5.1.9 DNREC Screening Results EDD

The DNREC screening results EDD file contains the sample XRF and GC/MS screening results from the Remediation lab. This EDD file should only be populated with screening data from the Remediation lab. *For more guidance on the DNREC Screening Results EDDs, please contact Remediation Lab.*

Note: Samples not analyzed by a fixed lab, and therefore not included in the Sample EDD (see Section 6.1.1), will typically be included in the DNREC Screening Results EDD file or the Field Results EDD file.

### General Information on the Field Activities Group EDD Section

Table Name Format	Text File Name	Created By	Contents	Submission Frequency
Location Parameter_v5	Location Parameter_v5.txt	Data Providers Field Personnel	Location Observations	Whenever location observations are collected.
FieldSample_v5	FieldSample_v5.txt	DNREC Field Personnel	Field sample information	When samples are collected.
COC_v5	COC_v5.txt	DNREC Field Personnel	Chain of Custody information pertaining to Field Samples.	When samples are collected.
SampleParameter_v5	SampleParameter_v5. txt	DNREC Field Personnel	Additional information about field samples.	When samples are collected.
WaterLevel_v5	WaterLevel_v5.txt	Data Providers Field Personnel	Groundwater level data for monitoring Wells	Whenever water level data is collected.
ExtractionInjectionW ells_v5	ExtractionInjection Wells_v5.txt	Data Providers Field Personnel	Data that relate to any extraction wells operating as part of the remedial action	Whenever well pumping data is collected.
SoilGas_v5	SoilGas_v5.txt	Data Providers Field Personnel	Soil gas survey, data not associated with soil vapor intrusion.	Once per location



Table Name Format	Text File Name	Created By	Contents	Submission Frequency
FieldResults_v5	FieldResults_v5.txt	Data Providers Field Personnel	Data that relate to collection of field parameters or field	Whenever field investigation data is collected
DNREC_Screening_ Results_v5	DNREC_Screening_ Results_v5	DNREC Personnel Only	Data that relate to the screening of samples (rtf & pdf files	Once per sampling event

## 6. CHEMISTRY EDD FILES

The DNREC format is divided into 32 sections which are organized in the following groupings: Initial, Subsurface Investigation, Field Activities, Chemistry, Basic Historical, and Vapor Intrusion. This portion of the manual briefly describes and provides examples of the Chemistry EDD files. Please refer to the EDD Description Tool (in EDP) for a full description of the fields within each file, field data type and length, whether the field is required, and whether the field is restricted by a reference table or enumeration file and must be populated by a valid value.

The Chemistry EDD files are primarily populated by the Laboratory (with the exception of the Sample Parameter EDD). However, there is some required data in the sample EDD that the Consultant will need to fill in because the laboratory will not have this data (e.g. sys\_loc\_codes, identity of field duplicate samples, etc.).

### 6.1 DESCRIPTION OF CHEMISTRY EDD FILES

#### 6.1.1 Sample EDD

The Sample EDD file contains data for the samples collected at the site and sent to a fixed lab for analysis. Fields include sample date, location, type, matrix, source, start and end depths, etc. The Sample EDD file must be submitted either prior to or in conjunction with TestResultQC and Batch EDD files.

Each sample at a facility must have a unique value, including spikes and duplicates. sys\_sample\_codes cannot match sys\_loc\_codes. DNREC prefers using the sys\_loc\_code as part of the sample ID and adding a date in the format (YYYYMMDD) or SDG # in order to make it unique.

For Example: MW-001 + June 06, 2001= MW-001- 20010606).

For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB-20000405.

Non alpha-numeric characters (save for the underscore \_ and the dash - characters) are prohibited in the sys\_sample\_code. Other segments can be added to the sample ID such as information regarding the sample type, sample round, or sample depths.

One of the benefits of naming the sys\_sample\_code in this way may be seen in the following example: If a groundwater sample was taken at a second sampling event and named MW03 again at the later date, the sys\_sample\_code would not cause errors within the database because the date would make it unique.

The sys\_loc\_code field should be left null if the sample is not associated with a specific location. For example, a field blank or a trip blank does not need a sys\_loc\_code.

Once the lab has completed the Sample EDD, the field project officer/consultant must add the sys\_loc\_code, duplicate sample information, sample depths, task code, and other necessary field sample data to the EDD.

Special Note to Labs: When checking the Sample EDD in EDP, you should expect errors from the data you do not have (i.e. sys\_loc\_code, parent\_sample\_code). The field project mana/consultant will fill in this information.

### 6.1.2 Sample Parameter EDD

The sample parameter EDD file contains data associated with a sample such as PID, temperature, etc.

### 6.1.3 Test Result QC EDD

The Test Result QC EDD file contains data regarding the laboratory tests performed on samples, the results of those tests, and the associated quality control data. The sys\_sample\_code in the Test Result QC EDD file must match the sys\_sample\_code in the Sample EDD file.

### 6.1.4 Batch EDD

The Batch EDD file contains data associating samples with the laboratory batch identifier, and therefore connecting the laboratory quality control samples to the field sample which was processed and analyzed at the same time. Values in the following fields need to match those found in the Test Result QC EDD file: sys\_sample\_code, lab\_anl\_method\_name, analysis\_date, fraction, and test\_type.

## General Information on the Chemistry Group EDD Section

Table Name Format	Text File Name	Created By	Contents	Submission Frequency
Sample_v5	Sample_v5.txt	Data Providers with input from Field Personnel	One row record for each sample collected at the facility	Whenever analytical data that is collected
SampleParameter_v5	SampleParameter_v5.txt	Data Providers Field Personnel	Parameters related to a sample that is not a part of the analytical analysis	Whenever analytical data is collected where observational data is also collected
TestResultQC_v5	TestResultQC_v5.txt	Data Providers with input from: Analytical Laboratory Data	One row record for each analyte reported for a given sample and test	Whenever analytical data is collected
Batch_v5	Batch_v5.txt	Data Provider's Analytical Laboratory	Data that relate laboratory QC samples with field samples that were analyzed together	Whenever analytical data is collected

## 8. BASIC HISTORICAL EDD FILES

The DNREC format is divided into 32 sections which are organized in the following groupings: Initial, Subsurface Investigation, Field Activities, Chemistry, Basic Historical, and Vapor Intrusion. This portion of the manual briefly describes and provides examples of the Basic Historical EDD files. Please refer to the EDD Description Tool (in EDP) for a full description of the fields within each file, field data type and length, whether the field is required, and whether the field is restricted by a reference table or enumeration file and must be populated by a valid value.

**Data providers must obtain approval from the DNREC Project Officer before populating or submitting Basic Historical EDD files.** These files consist of “historical” data only.

Basic Historical EDD files are usually created by consultants (as data providers). Not all Basic Historical EDD files must be submitted. See Section 2.3.1 for the EDD files that DNREC requires for each facility in the database. However, all required fields within an EDD file must be populated.

### 7.1 DESCRIPTION OF BASIC HISTORICAL EDD FILES

#### 7.1.1 Basic Well EDD

The basic well EDD file contains historical well data that cannot be populated in Well\_v5 due to EDD requirements.

#### 7.1.2 Basic Locations EDD

The basic location EDD file contains historical location information that cannot be populated in Location\_v5 due to EDD requirements.

#### 7.1.3 Basic Water Level EDD

The basic water level EDD file contains data in reference to water level measurements collected during historical sampling activities. This section is only used if the data cannot be populated in WaterLevel\_v5 due to EDD requirements.

#### 7.1.4 Basic Chemistry EDD

The basic chemistry EDD file contains historical chemistry data including sample, analytical test, and analytical result information. This section is only used if the data cannot be populated in Chemistry section of DNREC EDD format due to EDD requirements.

#### 7.1.5 Basic Geology EDD

The basic geology EDD file contains historical geology and lithology data. This section is only used if the data cannot be populated in Subsurface Investigation section of DNREC EDD format due to EDD requirements.

**General Information on the Basic Historical Group EDD Section**

<b>Table Name Format</b>	<b>Text File Name</b>	<b>Created By</b>	<b>Contents</b>	<b>Submission Frequency</b>
BasicWell_v5	BasicWell_v5.txt	Data Providers Field Personnel	Historical well installation information	Once
BasicLocation_v5	BasicLocation_v5.txt	Data Provider	Historical monitoring points, coordinates, elevations	Once
BasicWater_Level_v5	BasicWater_Level_v5.txt	Data Providers	Historical groundwater elevation data for monitoring wells	Once
BasicChemistry_v5	BasicChemistry_v5.txt	Data Providers	Historical chemistry data for each sample and associated analytical data	Once
BasicGeology_v5	BasicGeology_v5.txt	Data Providers	Subsurface and well information	Once

## 8. VAPOR INTRUSION

The DNREC format is divided into 32 sections which are organized in the following groupings: Initial, Subsurface Investigation, Field Activities, Chemistry, Basic Historical, and Vapor Intrusion. This portion of the manual briefly describes and provides examples of the Vapor Intrusion EDD files.

The Vapor Intrusion (VI) section of the EDD exists to capture “soil vapor intrusion” data. Soil Vapor Intrusion investigations focus on the potential for vapors to enter a building and usually include subslab vapor samples, indoor air vapor samples, outdoor air vapor samples, and any soil gas samples collected as part of a vapor intrusion investigation. Building information is also required. This EDD group contains all the EDD sections necessary to submit VI data. For Vapor Intrusion data, it is not necessary to include portions of other EDD Groups. The VI EDD Group consists of data tables for inventorying buildings and structures, cataloging factors that impact air quality within structures, and for the location, sample and chemistry results for soil vapor, indoor air and ambient outdoor air samples collected.

### 8.1 DESCRIPTION OF VAPOR INTRUSION EDD FILES

#### 8.1.1 VI Building Address EDD

The VI\_Bldg\_Address EDD section contains information on the location of the structure (buildings) included in the SVI investigation. Each building must include a building\_code, all uppercase, which is a unique identifying code for the building such as ‘BUILDING-01’, or ‘RESIDENCE-01’. If samples were not collected within a building or structure, use ‘OUTDOOR’. Outdoor sample locations should be associated with the indoor sample location via the VI\_Outdoor\_Locations EDD section.

The VI\_Bldg\_Address EDD section assigns buildings to subfacilities. ***Buildings must be assigned a subfacility code using the operable unit or area of concern codes that have been populated in the Subfacility EDD section of the current EDD or a prior EDD submittal.*** If a subfacility has not been established in the database already, then other options could be used such as OU, SWMU, AOC, etc.

#### 8.1.2 VI Building Inspection EDD

The VI\_Building\_Inspection EDD section contains information about the building at the time of the inspection. This information is populated from the SVI Form in the Building Details section on page one and includes information about the current buildings use, foundation, and heating and ventilation systems. Information regarding a building’s air flows or potential vapor intrusion pathway penetrations can also be noted.

#### 8.1.3 VI Building Parameter EDD

The VI\_Building\_Parameters EDD section is used to enter supplemental data about a building and the conditions of the building areas where sub-slab and indoor air samples are collected. Questions on the DNREC VI Forms are entered into EQuIS using a parameter code which represents the question on the form and the associated result value. The table below lists parameter codes established by DNREC to represent these certain questions about the building that are entered as param\_code. Each param\_code is required to be used on the VI\_Building\_Parameters EDD section.

**Table 1.3 VI\_Building\_Parameter Parameter Codes**

<b><i>Parameter Code</i></b>	<b><i>Description Value</i></b>	<b><i>Data Type and Example</i></b>
GASOLINE_CANS	Are there any gasoline storage cans present?	Y/N – If so, provide its location(s) in the remark field.
GAS-POWERED_EQUIP	Is there any gas-powered	Y/N - If so, provide its

	equipment present?	location(s) in the remark field.
KEROSENE_CANS	Are there any kerosene storage cans present?	Y/N - If so, provide its location(s) in the remark field.
PAINT_STRIPPER_GLUE	Are there any paints, thinners, strippers, glues, or caulks present?	Y/N - If so, provide its location(s) in the remark field.
CLEANING_SOLVENTS	Are there any cleaning solvents present?	Y/N - If so, provide its location(s) in the remark field.
MOTH_BALLS	Are there any moth balls present?	Y/N - If so, provide its location(s) in the remark field.
BEAUTY_PRODUCTS	Are there any beauty products such as hair/shaving products, polishes, and/or removers present?	Y/N - If so, provide its location(s) in the remark field.
INSECTICIDES	Are there any insecticides present?	Y/N - If so, provide its location(s) in the remark field.
HAIRSPRAY	Are there any hairspray present?	Y/N - If so, provide its location(s) in the remark field.
FRAGRANTS_AFTERSHAVE	Are there any cologne/perfume/after-shave, etc. present?	Y/N - If so, provide its location(s) in the remark field.
AIR_FRESHNER	Are there any air fresheners present?	Y/N - If so, provide its location(s) in the remark field.
FUEL_TANK	Are there any fuel tank present, either inside or outside?	Y/N - If so, provide its location(s) in the remark field.
WOOD_STOVE_FIREPLACE	Are there any wood stove or fireplace present?	Y/N - If so, provide its location(s) in the remark field.
FURNITURE_UPHOLSTERY	Are there any new furniture/upholstery present?	Y/N - If so, provide its location(s) in the remark field.
CARPET_FLOOR_PANEL	Are there any new carpeting/flooring/paneling installed?	Y/N - If so, provide its location(s) in the remark field.
PAINTING	Are there any recent painting in building?	Y/N - If so, provide its location(s) in the remark field.
TOILET_SEPTIC_ADDT	Are there any toilet or septic additives present?	Y/N - If so, provide its location(s) in the remark field.
PROPER_DRAINAGE	Are there any dry drain traps, plugged drains, toilets won't flush?	Y/N - If so, provide its location(s) in the remark field.
STAND_WTR_TIRE_PILE	Are there any standing	Y/N - If so, provide its

	water/tire piles/recent flooding?	location(s) in the remark field.
SEWAGE_SEPTAGE	Are there any sewage/septage present?	Y/N - If so, provide its location(s) in the remark field.
DEAD_ANIMALS	Are there any dead animals or unusual number of insects present?	Y/N - If so, provide its location(s) in the remark field.
MOLD_MILDEW	Are there any mold/mildew present?	Y/N - If so, provide its location(s) in the remark field.
WET_WALLS_OR_FLOOR	Are there any wet sheetrock/paneling/flooring present?	Y/N - If so, provide its location(s) in the remark field.
DRUGS_EXPLOSIVES	Are there any neighbors making drugs/explosives?	Y/N - If so, provide its location(s) in the remark field.
MERCURY_INSTRUMENTS	Are there any mercury-containing switches or instruments present?	Y/N - If so, provide its location(s) in the remark field.
CONCRETE_MASONERY	Are there any recent concrete/masonry work done?	Y/N - If so, provide its location(s) in the remark field.
FLOWERS	Are there any flowers present?	Y/N - If so, provide its location(s) in the remark field.
PETS_KITTY_LITTER	Are there any pets (specify) and/or scented kitty litter present?	Y/N - If so, provide its location(s) in the remark field.
COMPOST_MANURE	Are there any compost/manure present?	Y/N - If so, provide its location(s) in the remark field.
OCCUPANTS_INTERVIEW	Were the occupants interviewed?	Y/N
OCCUPANTS_SMOKE	Are there any occupants that smoke?	Y/N - If so, provide its location(s) in the remark field.
HEALTH_PROBLEMS	Is there anyone with chronic health problems?	Y/N - If so, provide in the remark field.
SMOKING_IN_48HRS	Is there any smoking within 48hrs?	Y/N - If so, provide its location(s) in the remark field.
CHEMICAL_FIRE_SEWAGE	Are there any new spills of chemicals/fires/fuel/sewage in or outside the building?	Y/N - If so, provide its location(s) in the remark field.
PESTICIDE_HERBICIDE	Are there any pesticides/herbicides present either inside or outside the property?	Y/N - If so, provide its location(s), when, and what chemical in the remark field.
DRY_CLEANING	Are there any recent dry-cleaning present?	Y/N - If so, provide the name of the dry cleaner in the remark field.
SINKHOLES_DEBRIS	Are there any	Y/N - If so, provide its



	sinkholes/debris pits present?	location(s) in the remark field.
ODOR	Are there any unusual odors present?	Y/N - If so, explain when/where its most noticeable in the remark field.
TRAFFIC_NEARBY	Is there any heavy vehicular traffic nearby?	Y/N - If so, provide its location(s) in the remark field.
GAS_STATIONS	Are there any gas stations nearby?	Y/N - If so, provide its location(s) in the remark field.
WASTE_DISPOSAL	Are there any Waste disposal facilities nearby?	Y/N - If so, provide its location(s) in the remark field.
DRY_CLEANERS	Are there any dry cleaners nearby?	Y/N - If so, provide its location(s) in the remark field.
EMISSION_STACKS	Are there any emission stacks nearby?	Y/N - If so, provide its location(s) in the remark field.
BEAUTY_SHOPS	Are there any Beauty shops nearby?	Y/N - If so, provide its location(s) in the remark field.
REFINERY_CHEMICAL	Are there any refineries/chemical plants nearby?	Y/N - If so, provide its location(s) in the remark field.
HOT-MIX_PLANT	Are there any hot-mix plants nearby?	Y/N - If so, provide its location(s) in the remark field.
AUTO_REPAIR_SHOP	Are there any auto repair/body shops nearby?	Y/N - If so, provide its location(s) in the remark field.
FUEL_OIL_TANKS	Are there any fuel oil tanks nearby?	Y/N - If so, provide its location(s) in the remark field.
ROAD_ROOF_REPAIR	Are there any road/roof repair w/hot tar nearby?	Y/N - If so, provide its location(s) in the remark field.
AIR_EXCHANGE_RATE	What is the air exchange rate?	Provide the value & unit.
DRAIN_TRAP	Is there a floor drain with a trap?	Y/N
DRAIN_NO_TRAP	Is there a floor drain without a trap?	Y/N

#### 8.1.4 VI Locations EDD

The VI\_Locations EDD section contains information about the sample locations within buildings. Each sample location is assigned to a building by the building code. Location IDs (sys\_loc\_code) must not be the same as the building code and must also be all upper case. For example, a building (RESIDENCE-01), may have multiple locations within the building representing sub-slab samples, and various indoor air samples on different levels.

Individual coordinates must be provided for each sample location. The coordinates can be the same for multiple locations within a building if using the centroid coordinates of the building. For larger buildings, unique coordinates can be provided for each sample location.

Codes representing rooms can be used as the building\_code to assign individual locations to a room within a building. The rooms are subsequently assigned to the building on the VI\_Bldg\_Address EDD section, as noted above. The coordinates for locations within a room can be unique per each sample location or they can be the same if using the centroid coordinates for a room within a building.

#### 8.1.5 VI Outdoor Locations EDD

The VI\_Outdoor\_Location section has been developed so an outdoor sampling location can be assigned to multiple buildings during a soil vapor intrusion investigation. The outdoor sampling location information must be included in the VI\_Locations EDD section of the current EDD or previously submitted EDD so it is recognized in the database. For assigning an outdoor air sample location to multiple buildings

#### 8.1.6 VI Samples EDD

The VI\_Samples EDD section is designed for the data provider to submit all samples associated with the SVI investigation, including laboratory samples. This section is different from the Sample EDD section because it also includes additional information about the sample collection area and process for collecting SVI sub-slab samples.

Sample IDs (sys\_sample\_codes) must be unique from Location IDs (sys\_loc\_codes) and must be all uppercase. For example, a sample collected at location “RESIDENCE-01-AS”, the sub-slab vapor port in this building, should have a sample ID such as “RESIDENCE-01-AS-20120518” for a sample collected on May 18, 2012. This will allow for future samples to be collected in the same building, at the same sub-slab vapor port, on a different day in the future. Samples with a matrix code of AS-Subslab.

Vapor intrusion samples (sample matrix AI-indoor air, AS-subslab air, AO-outdoor air) are required to be submitted in use the VI\_Sample EDD section.

#### 8.1.7 VI Test Results QC EDD

The VI\_TestResultsQC section is included in the VI EDD Grouping to complete the VI EDD submittal. This EDD section is in the same format as the original TestResults EDD section allowing laboratories to keep their test results formats consistent with the exception of the leachate\_method and leachate\_date fields which do not exist in the VI\_TestResultsQC EDD section. Data Providers can combine the laboratory EDD data with the SVI field sample information in the VI EDD Grouping. Data providers must not submit the same sample and laboratory results in both the VI\_TestResultsQC and TestResultsQC. It is for this reason we suggest that VI EDD submittals be submitted to DNREC separate from the rest of the soil, groundwater, or other site-specific sample matrices data.

#### 8.1.8 VI Batches EDD

The VI\_Batches EDD section contains data that relate to the individual laboratory batch numbers that samples are assigned to in the lab to prepare and analyze samples. This section is identical to the Batch EDD section, however, it is designed here for data providers to submit a single EDD containing all the SVI data.

### General Information on the Vapor Intrusion Group EDD Section

Table Name Format	Text File Name	Created By	Contents	Submission Frequency
VI_Bldg_Address_v5	VI_Bldg_Address_v5.txt	Data Providers Vapor Intrusion	Information on the location of the structure/building	Once per building inspected/AOC
VI_Building_Inspection_v5	VI_Building_Inspection_v5.txt	Data Providers Vapor Intrusion	Information about the building at the time of the	Once per building inspected
VI_Building_Parameter_v5	VI_Building_Parameter_v5.txt	Data Providers Vapor Intrusion	Data about a building and the conditions of the building areas	Once per building inspected
VI_Location_v5	VI_Location_v5.txt	Data Providers Vapor Intrusion Team	Coordinates for locations and location assignments to buildings or subfacilities	Once per building inspection or sample collection event for new locations
VI_Outdoor_Location_v5	VI_Outdoor_Location_v5.txt	Data Providers Vapor Intrusion Team	Location codes of outdoor sample locations that are assigned to multiple buildings	Once per sample collection event
VI_Sample_v5	VI_Sample_v5.txt	Data Providers Vapor Intrusion Team	One row record for each sample collected at a structure	Anytime structure sampling data is collected
VI_TestResultsQC_v5	VI_TestResultsQC_v5.txt	Data Providers Vapor Intrusion	Laboratory analytical method and chemistry result	Once per sample collection event
VI_Batches_v5	VI_Batches_v5.txt	Data Providers Vapor Intrusion Team	Laboratory analytical method batch information	Once per sample collection event

**APPENDIX A:**  
**DNREC v5 EDD Format Definitions**

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 Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<a href="#">data_provider_code</a>	Y	Data Provider company code. This code is assigned by DNREC. Received by email. <i>Example: ABC</i>	Text (20)	
B	<a href="#">data_provider</a>	Y	Data provider company name. <i>Example: ABC, Inc.</i>	Text (70)	
C	<a href="#">data_contact_name</a>	Y	Name of contact person. Format: First Name Last Name. <i>Example: John Smith</i>	Text (50)	
D	<a href="#">data_contact_address1</a>	Y	Contact mailing address. (street or box number) <i>Example: 123 Main St.</i>	Text (40)	
E	data_contact_address2		Contact mailing address. (if second line is required)	Text (40)	
F	<a href="#">data_contact_city</a>	Y	Contact city. <i>Example: Wilmington</i>	Text (30)	
G	<a href="#">data_contact_state</a>	Y	Contact state abbreviation. <i>Example: DE</i>	Text (2)	<a href="#">rt_state.state_code</a>
H	<a href="#">data_contact_zipcode</a>	Y	Contact zip code. <i>Example: 19808</i>	Text (30)	
I	data_contact_country		Contact country. <i>Example USA</i>	Text (50)	
J	<a href="#">data_contact_phone</a>	Y	Contact phone number. <i>Example: 302-395-2600</i>	Text (20)	
K	<a href="#">data_contact_email</a>	Y	This field is required if available. Contact email address. <i>Example: jsmith@email.com</i>	Text (100)	
L	<a href="#">data_contact_county</a>		County	Text (50)	<a href="#">rt_county.county_code</a>

**Subfacility Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b><u>subfacility_code</u></b>	<b>Y</b>	Code indicating the subfacility operable unit (OU) for which the data is collected or area of concern (AOC). Use the code 'OU1' unless there are additional operable units at a facility. In the case of additional operable units, use codes of 'OU2', 'OU3', etc., respectively. Verify the subfacility codes with your DNREC Project Manager.	Text(20)	
B	<b>subfacility_type</b>	<b>Y</b>	Subfacility type. <i>Example: OU, Remediation Area, Landfill, etc.</i> If subfacility type is unknown, use the type 'OU'.	Text(20)	<b>rt_subfacility_type.subfacility_type</b>
C	<b>subfacility_name</b>	<b>Y</b>	Name of Operable Unit.	Text(60)	
D	<b>subfacility_task_code</b>	<b>Y</b>	Code used to identify the OU or AOC.	Text(40)	
E	subfacility_desc1		A brief description of the subfacility.	Text(2000)	
F	subfacility_desc2		Subfacility description, part two (if needed).	Text(2000)	
G	contact_name		The name of the person responsible for the subfacility	Text(50)	
H	address1		Subfacility mailing address. (street or box number). <i>Example: 123 Main Street</i>	Text(40)	
I	address2		Subfacility mailing address. (if second line is required)	Text(40)	
J	city		Subfacility city. <i>Example: Wilmington</i>	Text(30)	
K	<b>county</b>		County	Text(50)	<b>rt_county.county_code</b>
L	<b>state</b>		Subfacility state abbreviation. <i>Example: DE</i>	Text(2)	<b>rt_state.state_code</b>
M	zipcode		Subfacility zip code. <i>Example: 19808</i>	Text(10)	
N	phone_number		Contact phone number. <i>Example: 302-395-2600</i>	Text(30)	
O	alt_phone_number		Alternative subfacility contact phone number.	Text(30)	
P	fax_number		Subfacility contact fax number. <i>Example: 302-395-2601</i>	Text(30)	
Q	email_address		<u>Subfacility contact email address. Example: jsmith@email.com</u>	Text(100)	

**Subfacility Table**

<b>Table Column #</b>	<b>Field Name</b>	<b>Required Field (Conditions)</b>	<b>Description</b>	<b>Data Type</b>	<b>Valid Values &lt;Table&gt;.&lt;Field&gt;</b>
R	Parent_subfacility_code		Code indicating the subfacility operable unit (OU) for which the data in this subfacility belongs to. This is a way that DNREC can link various subfacilities using arbitrary subfacility codes to a single subfacility code such as 'OU1', 'OU2', 'OU3', etc., respectively. Verify the parent subfacility codes with your DNREC Project Manager.	Text(20)	

**Location Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b>data_provider</b>	Y	Data provider for location data. Must be the valid code for the data provider and match the data_provider field of the Data Provider EDD file submitted in the current or previous EDD.	Text (20)	<a href="#">rt_company.company_code</a>
B	<b><u>sys_loc_code</u></b>	Y	Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. <i>Examples: MW-01, A-1, SB6, etc.</i>  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ].	Text (20)	
C	<b>easting</b>	Y	Sampling location Easting or X coordinate in DE State Plane NAD 83 meters. Only populate one coordinate type. If both are populated, do nothing.	Numeric	
D	<b>northing</b>	Y	Sampling location Northing or Y coordinate in DE State Plane NAD 83 meters. Only populate one coordinate type. If both are populated, do nothing.	Numeric	
E	<b>surf_elev</b>	Y	Elevation of the ground surface, or if location is for surface water samples, water surface elevation. If unknown use "9999."	Numeric	
F	<b>elev_unit</b>	Y	Unit of measurement for elevations. Units must be in ft.	Text (15)	ft
G	<b>coord_sys_desc</b>	Y	Sampling location coordinate system description. Must be Delaware State Plane in meters based on the North American Datum of 1983. <i>Valid Value is: SP NAD 83 DE 0700.</i>	Text (20)	
H	observation_date		Date observation or site survey was made.	DateTime	



**Location Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
I	<b>latitude</b>	Y	Latitude of sampling location in decimal degrees (dd.xxxxxx). Must contain a minimum of 6 six significant figures. <i>Example: 38.5855215044</i> . Only populate one coordinate type. If both are populated, do nothing.	Numeric	
J	<b>longitude</b>	Y	Longitude of sampling location in decimal degrees. Must be negative for western hemisphere (-ddd.xxxxxx). Must contain a minimum of 6 six significant figures. <i>Example: -75.3018944966</i> . Only populate one coordinate type. If both are populated, do nothing.	Numeric	
K	<b>alt_coord_type_code</b>	Y	Alternate coordinate system must be Latitude and Longitude based on World Geodetic System 1984 (WGS84) datum. Valid value is <i>LAT LONG</i>	Text (20)	LAT LONG
L	<b>alt_identifier</b>	Y	Use <i>PRIMARY</i> as the alt_identifier code.	Text (20)	PRIMARY
M	<b>horz_collect_method_code</b>	Y	Method used to determine x and y coordinates in DE State Plane NAD83. <i>Example: S1 is for Licensed Professional Land Survey.</i>	Text (3)	<a href="#">rt_coord_horz_method.horz_collect_method_code</a>
N	<b>horz_accuracy_value</b>	Y	Accuracy range (+/-) of the latitude and longitude. Use "0.1" for professional survey, "100" for site centroid, or "10" for all other methods.	Text (20)	
O	<b>horz_accuracy_unit</b>	Y	Unit of the horizontal accuracy.	Text (15)	
P	<b>horz_datum_code</b>	Y	Reference datum of the x and y coordinates. Must use valid value from rt_coord_horz_datum.horz_datum_code.	Text (3)	<a href="#">rt_coord_horz_datum.horz_datum_code</a>
Q	<a href="#">elev_collect_method_code</a>	If surf_elev is populated then elev_collect_method_cod, elev_accuracy_value, elev_accuracy_unit and elev_datum_code is required.	Method used to determine ground elevation of the sampling location. <i>Example: S1 is for Licensed Professional Land Survey.</i>	Text (3)	<a href="#">rt_coord_elev_method.elev_collect_method_code</a>
R	elev_accuracy_value		Accuracy range (+/-) of the ground elevation. Use "0.1" for professional survey, "1" for all other methods.	Text (20)	
S	elev_accuracy_unit		Unit of the elevation accuracy.	Text (15)	

**Location Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
T	elev_datum_code		Reference datum for the elevation measurement. Must use valid value from elev_datum code from the valid values table. <i>Example: If the elevation references mean sea level, the code is "003".</i>	Text (3)	rt_coord_elev_datum.elev_datum_code
U	source_scale		If coordinates were derived from a published map enter the scale of the map source (e.g. 1 inch = 100 feet)	Text (2)	
V	subcontractor_name_code		Code used to distinguish subcontractor name – the company that collected coordinate and elevation data.	Text (20)	rt_company.company_code
W	verification_code		The verification code should indicate how the survey coordinate/elevation reference point was verified.	Text (20)	
X	reference_point		If coordinates and elevations were surveyed using a traditional survey method in the field without a GPS, a description of the reference point used as the survey benchmark.	Text (50)	
Y	loc_name		Descriptive name given to a location. This can be the same as the sys_loc_code.	Text (40)	
Z	loc_desc		Sampling location detailed description. <i>Example: "50 feet northwest of dog pen." or "Sample location just inside of northeast corner of property line."</i>	Text (255)	
AA	loc_type	Y	Sampling location type. Use codes in loc_type valid values table. <i>Example: For a monitoring well the code is "MONWELL".</i>  <u><b>Note:</b></u> loc_type cannot equal 'BASEMENT', 'CRAWLSPACE', 'FIRST FLOOR', 'IA', 'INDOOR', 'OUTDOOR', 'SUBSLAB', 'UPPER FLOOR', and VAPOR. Those values are reserved for the VI_Locations EDD Section. If the loc_type is associated with a well or 'PZMTR', then a child record must exist in the Well or BasicWell sections.	Text (20)	rt_location_type.location_type_code

**Location Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AB	loc_purpose		Sampling location purpose. <i>Example: Staining observed on soil.</i>	Text (50)	
AC	subfacility_code	Y	Code indicating the subfacility operable unit (OU) for which the data is collected or area of concern (AOC). Use the code 'OU1' unless there are additional operable units at a facility. In the case of additional operable units, use codes of 'OU2', 'OU3', etc., respectively. Verify the subfacility codes with your DNREC Project Manager.	Text (20)	
AD	<b>within_facility_yn</b>	Y	Indicates whether this sampling location is within facility boundaries, 'Y' for yes or 'N' for no.	Text (1)	
AE	<b>loc_county_code</b>	Y	Location county code; controlled vocabulary using FIPS (Federal Information Processing Standard) codes. <i>Example: Kent=001, New Castle=003, Sussex=005</i>	Text (3)	
AF	loc_district_code		Location district code; controlled vocabulary using FIPS codes.	Text (20)	
AG	<b>loc_state_code</b>	Y	Location state code; controlled vocabulary using FIPS codes.	Text (2)	<b>rt_state.state_code</b>
AH	<b>loc_major_basin_huc_8</b>		List the HUC 8. (Example: For HUC 8, enter the entire 8-digit number).	Text (8)	<b>rt_basin.basin_code</b>
AI	<b>loc_minor_basin_huc_12</b>		List the HUC 12. (Example: For HUC 12, enter the entire 12-digit number).	Text (20)	<b>rt_basin.basin_code</b>
AJ	remark		Location specific comment. Refrain from using commas in the remark field.	Text (255)	
AK	remark_2		Additional location specific comments. Refrain from using commas in the remark field.	Text (255)	
AL	total_depth		Total depth below ground surface of boring, in feet.	Numeric	

**Location Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AM	datum_value		Datum elevation, must be in <i>ft</i> or <i>m</i> .	Numeric	
AN	datum_unit		Unit of measure for datum.	Text(15)	
AO	step_or_linear		For re-surveys of well elevations. If a section of the well casing was removed or added use “ <i>step</i> ” as the value. If nothing was added or removed from the last survey, use “ <i>linear</i> ” as the value.	Text(6)	
AP	datum_collection_method_code		Method used to determine the water level datum elevation.	Text(2)	
AQ	datum_desc		Description of the datum. <i>Example: Top of well casing.</i>	Text(255)	
AR	datum_start_date		Date that current datum was first recorded. MM/DD/YYYY format.	DateTime	
AS	stream_mile		This indicates where in the river or stream (stream_code) the station exists.	Numeric	
AT	stream_code		This indicates the river or stream in which the station exists. Stream_mile indicates where in the river/stream the stations exists.	Text(30)	
AU	parent_loc_code		If the current record is a child location, such as a nested well, or one of the samples that makes up a composite sample, populate the parent_loc_code with the sys_loc_code for the parent location.	Text(20)	

**Files Table**

Table Column#	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b>file_name</b>	<b>Y</b>	Name of the file.	Text(255)	
B	<b>file_type</b>	<b>Y</b>	Type of the file. <i>Example: Data file (.xlsx), image (.jpg), GIS/CAD (.dxf/.dwg), etc.</i>	Text(20)	<b>rt_file_type.file_type</b>
C	file_date		Date of the file. MM/DD/YYYY	DateTime	
D	title		Title of the file.	Text(255)	
E	author		Author of the file.	Text(255)	
F	remark		Remark for the file. Refrain from using commas in the remark field.	Text(255)	
G	place_type		Type of place this file is associated with. Example: "sys_loc_code" for linking files to a location or "sys_sample_code" for linking files to a sample. Other place types include facility_code (a.k.a. site_code) or building_code.	Text(50)	
H	place_code		Depending on the place type entered, enter the code/identifier. For example, if you put "sys_loc_code" as the place_type enter the actual value such as "MW-001" that you want to link this file to. For base maps use "facility_code" as the place_type and enter the facility_code (a.k.a. DNREC site code) in this field.	Text(50)	
I	place_subcode		Subcode/identifier of the place this file is associated with.	Text(50)	
J	content		Content of the file.		

**Task Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b>task_code</b>	Y	Code used to identify the task under which the samples were collected. Example: SC= Site Characterization; RD=Remedial Design; RIFS=Remedial Investigation/Feasibility Study; RA=Remedial Action; IRA=Interim Remedial Action; LTS=Long-Term Stewardship Phase; PM=Periodic Monitoring; NRS=Non-Routine Sampling.	Text(40)	
B	<b>task_desc</b>	Y	Description of task or project, if necessary.	Text(255)	
C	start_date		Date/time field for when the task began.	DateTime	
D	end_date		Date/time field for when the task ended.	DateTime	
E	delivery_code		Project billing code or delivery order number.	Text(20)	
F	client		Project client name.	Text(50)	
G	<b>task_type</b>		Sampling activity/task categorization; must use DNREC valid value found on rt_task_type.	Text(50)	
H	custom_field_1		Reserved for DNREC future use. Leave NULL.	Text(255)	
I	custom_field_2		Reserved for DNREC future use. Leave NULL.	Text(255)	
J	custom_field_3		Reserved for DNREC future use. Leave NULL.	Text(255)	
K	custom_field_4		Reserved for DNREC future use. Leave NULL.	Text(255)	
L	custom_field_5		Reserved for DNREC future use. Leave NULL.	Text(255)	
M	parent_task_code		Code used to identify the parent task code.	Text(40)	

**DrillActivity Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u><a href="#">sys_loc_code</a></u>	Y	<p>Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. <i>Examples: MW-01, A-1, SB6, etc.</i></p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   \ ? [ ] .</p> <p>Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.</p>	Text(20)	
B	<u><a href="#">drill_event</a></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	
D	end_depth		End depth, in feet below ground surface of the drilling.	Numeric	
E	drill_date		Date drilling began (MMDDYYYY).	DateTime	
F	diameter		Diameter of boring.	Numeric	
G	diameter_unit	If diameter is present.	Unit of measure for diameter, inches (in), feet (ft), millimeters (mm), or centimeters (cm).	Text(15)	
H	drill_method		Method used to drill boring. <i>Example: Rotary Mud.</i>	Text(50)	
I	fluid		Description of fluid used during drilling. <i>Example: Bentonite</i>	Text(50)	
J	viscosity		Viscosity of drilling fluid.	Text(50)	
K	hammer_wt		Weight of hammer, in pounds, used for sampling.	Text(50)	
L	hammer_fall		Distance of hammer fall during sampling in inches.	Text(50)	
M	lift_mechanism		Type of mechanism used to lift hammer. <i>Example: Hydraulic</i>	Text(50)	
N	new_yn		Is this a new boring? 'Y' for yes or 'N' for no.	Text(1)	

**DrillActivity Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
O	repair_yn		Is this drilling event to repair an existing boring? 'Y' for yes or 'N' for no.	Text(1)	
P	deepen_yn		Is this drilling event to deepen an existing boring? 'Y' for yes or 'N' for no.	Text(1)	
Q	abandon_yn		Has the boring been abandoned? 'Y' for yes or 'N' for no.	Text(1)	
R	replace_yn		Is this boring event to replace an existing boring? 'Y' for yes or "N" for no.	Text(1)	
S	public_yn		Is well installed for a public use? 'Y' for yes or 'N' for no.	Text(1)	
T	purpose		Describe the purpose of the boring event. <i>Example: Installation of new monitoring for RI.</i>	Text(70)	
U	remark		Comments about the drill activity. Refrain from using commas in the remark field.	Text(2000)	
V	<b>contractor</b>		Contractor	Text(40)	<b>rt_company.company_code</b>
W	task_code		Code used to identify the task under which the samples were collected. Example: SC= Site Characterization; RD=Remedial Design; RIFS=Remedial Investigation/Feasibility Study; RA=Remedial Action; IRA=Interim Remedial Action; LTS=Long-Term Stewardship Phase; PM=Periodic Monitoring; NRS=Non-Routine Sampling.	Text(40)	



**DownholePoint Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u>sys_loc_code</u>	Y	<p>Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   \ ? [ ].</p> <p>Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.</p>	Text(20)	
B	<u>depth</u>	Y	Depth of measurement below ground surface. Must be in feet.	Numeric	
C	<u>param</u>	Y	The parameter being measured. Example: tip stress, resistivity, pore pressure, etc. Use code from rt_downhole_point_param_type.param valid value table.	Text(20)	<a href="#">rt_downhole_point_param_type.param</a>
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 code from rt_unit.unit_code valid value table.	Text(15)	<a href="#">rt_unit.unit_code</a>

**Lithology Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
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 DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ].  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.	Text(20)	
B	<u>start_depth</u>	Y	The start depth below ground surface of the lithologic unit.	Numeric	
C	<u>end_depth</u>	Y	The end depth below ground surface of the lithologic unit.	Numeric	
D	<u>material_name</u>	Y	The type of material that composes the lithologic unit.	Text(40)	<u>rt_material.material_name</u>
E	<u>observation</u>	Y	Full description of lithological unit interval as written in the field notes.	Text(255)	
F	classification_system		Select the code for the soil classification system used. For example: 'ASTM', 'USDA', or 'USCS'.	Text(40)	
G	DGS_Formation		Delaware Geologic Survey Formation Unit.	Text(20)	
H	DGS_Aquifer		Delaware Geologic Survey Aquifer.	Text(20)	
I	USGS_Geo_Unit		USGS Geologic Unit Codes for the state of Delaware. <a href="https://mrdata.usgs.gov/geology/state/geog-units.html">https://mrdata.usgs.gov/geology/state/geog-units.html</a>	Text(20)	
J	remark1		Additional observations on geologic unit. Refrain from using commas in the remark field.	Text(255)	
K	remark2		Additional comments of the DGS formation, DGS Aquifer, or USGS geo unit. Refrain from using commas in the remark field.	Text(255)	
L	moisture		What degree of moisture was observed within the lithologic unit? <i>For example: dry, damp, moist, wet, or saturated.</i>	Text(20)	

**Lithology Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
M	permeable		Description of the permeability of the lithologic unit. <i>Example: impervious, semi, pervious, or very.</i>	Text(20)	
N	<u>consolidated_yn</u>		Was the lithologic unit consolidated? 'Y' for yes or 'N' for no.	Text(1)	
O	color		Color of the lithologic unit. <i>Example: light brown</i>	Text(30)	
P	consistency_density		Description of the consistency/density of soil. <i>Example: soft, firm, hard, very hard, loose, stiff, weak, etc.</i>	Text(20)	
Q	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)	
R	grainsize		Description of grain size.	Text(20)	
S	odor		Description of odor from the soil.	Text(20)	
T	PID		PID reading in ppm for the lithologic unit.	Numeric	
U	geo_unit_code_4		geo_unit_code_4	Text(20)	
V	geo_unit_code_5		geo_unit_code_5	Text(20)	

### Well Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
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 DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ].  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.	Text(20)	
B	well_id	Y	DNREC well permit ID. <i>Example: 123456</i>	Text(30)	
C	well_description		Used for additional well description if necessary. Example: Located in right-of-way in front of town hall.	Text(255)	
D	well_owner		Name of entity that owns the well. <i>Example: ACME Associates.</i>	Text(30)	
E	well_purpose		Purpose of well. <i>Example: Installed to track down-gradient plume.</i>	Text(20)	
F	well_status		Current status of well. <i>Example: Active, abandoned, destroyed, etc.</i>	Text(20)	
G	abandonment_date		Date the well was abandoned (MMDDYYYY format).	DateTime	
H	top_casing_elev		Elevation of the top of well casing. Elevation must be in feet.	Numeric	
I	datum_value	Y	Datum elevation used for water level measurements. Elevation must be in feet. Typically this is the elevation of top of well casing. Please visit: <a href="http://help.earthsoft.com/default.asp?W849">http://help.earthsoft.com/default.asp?W849</a> for more information on how datum measurements are used in calculating water levels at well location points.	Numeric	
J	datum_unit	Y	Enter the unit for the datum elevation provided. Elevation units must be in feet.	Text(15)	
K	datum_desc	Y	Description of the datum. Example: Top of well casing.	Text(255)	

### Well Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
L	step_or_linear		For re-surveys of well elevations. If a section of the well casing was removed or added use “step” as the value. If nothing was added or removed from the last survey, use “linear” as the value.	Text(6)	
M	<b>datum_start_date</b>	<b>Y</b>	Date that current datum was first recorded. MM/DD/YYYY format.	DateTime	
N	<b>datum_collection_method_code</b>		Method used to determine the water level datum elevation.	Text(2)	<b>rt_coord_elev_method.elev_collect_method_code</b>
O	<b>depth_of_well</b>	<b>Y</b>	Depth below ground surface of the well bottom. Must be in feet.	Numeric	
P	depth_unit		Unit of measure for the well datum. Must be feet.	Text(15)	
Q	depth_to_bedrock		Depth below ground surface of bedrock. Must be in feet.	Numeric	
R	depth_measure_method		Method of measuring depth of well. Example: Tape down.	Text(20)	
S	stickup_height		Unit of measure for height of well casing above ground surface. This is equal to top of casing elevation minus ground surface elevation.	Text(8)	
T	stickup_unit		Unit of measure for height of well casing above ground surface. Must be feet (ft) or meters (m).	Text(15)	
U	sump_length		Length of sump constructed in well.	Text(20)	
V	sump_unit		Unit of measure for the sump length, must be feet (ft) or meters (m).	Text(15)	
W	installation_date		Date of well installation in MM/DD/YYYY format.	DateTime	
X	construct_start_date		Date well construction began in MM/DD/YYYY format.	DateTime	
Y	construct_complete_date		Date well construction was completed in MM/DD/YYYY format.	DateTime	
Z	<b>construct_contractor</b>		Code used to distinguish subcontractor name.	Text(20)	<b>rt_company.company_code</b>

### Well Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AA	pump_type		Type of pump used at well. <i>Example: centrifugal, propeller, jet, helical, rotary, etc.</i>	Text(20)	
AB	pump_capacity		Pump Rate Capacity: <i>Example: 10.</i>	Text(6)	
AC	<b>pump_unit</b>		Unit of measure for the pump capacity and yield. Use code from rt_unit.unit_code valid value table.	Text(15)	<b>rt_unit.unit_code</b>
AD	pump_yeild		Actual pumping rate. <i>Example: 10 gpm</i>	Text(6)	
AE	pump_yield_method		Method used for pump yield. <i>Example: Flow meter.</i>	Text(20)	
AF	weep_hole		Is there a weep hole? 'Y' for yes or 'N' for no.	Text(1)	
AG	head_configuration		Description of the well head. <i>Example: man-hole entry well vault.</i>	Text(50)	
AH	access_port_yn		Is there an access port? 'Y' for yes or 'N' for no.	Text(1)	
AI	casing_joint_type		Type of casing joint. <i>Example: threaded, flush, or solvent welded.</i>	Text(50)	
AJ	perforator_used		Description of well perforation. <i>Example: slotted, drilled, or wound.</i>	Text(50)	
AK	intake_depth		Depth below ground surface of the well intake. Must be in feet.	Numeric	
AL	disinfected_yn		Was well disinfected? 'Y' for yes or 'N' for no.	Text(1)	
AM	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	
AN	<b>dgs_aquifer</b>		Geologic unit in which the well intake is installed. Use established USGS rock unit codes as applicable.	Text(20)	<b>rt_geologic_unit.geologic_unit_code</b>
AO	remark		Available for general remarks. Refrain from using commas in the remark field.	Text(255)	

**WellConstruction Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
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 DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ].  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.	Text(20)	
B	<u>segment_type</u>	Y	This field is used to describe an individual section of the 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.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.materials_type valid values table.	Text(20)	rt_well_segment_type.material_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 measure for the depth, feet (ft).	Text(15)	
G	inner_diameter		The inside diameter of section.	Numeric	
H	outer_diameter		The outside diameter of the section.	Numeric	
I	diameter_unit		The unit of measure for the diameter, inches (in), feet (ft), millimeters (mm), or centimeters (cm).	Text(15)	
J	thickness		Horizontal thickness of the material used. E.g. Difference between the inner diameter and outer diameter.	Numeric	
K	thickness_unit		The unit of measurement for the well thickness.	Text(15)	

**WellConstruction Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
L	slot_type		Enter type of well screen slots. <i>Example: bridge, shutter, and continuous.</i>	Text(20)	
M	slot_size		Width of slots.	Numeric	
N	slot_size_unit		The unit of measure for the slot size, inches (in), feet (ft), millimeters (mm), or centimeters (cm).	Text(15)	
O	perf_length		Length of perforated portion of screen. Must be in feet.	Numeric	
P	screen_type		The type of well screen used such as pipe-based screen, rod based screen, "v" wire, slotted, or perforated plate.	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)	
S	remark		Remarks regarding the segment. Refrain from using commas in the remark field. <i>Example: Encountered running sands; needed to use micro-perforated screen.</i>	Text(255)	



**GeologySamples Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b>sys_loc_code</b>	Y	Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ].  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.	Text(20)	
B	<b><u>geo_sample_code</u></b>	Y	Unique sample identifier used only for geology section. Combine sys_loc_code with sample depth to create identifier. <i>Example: MW-001-2ft-4ft</i>	Text(40)	
C	sample_name		Use to provide a name or description of sample. Does not have to be a unique throughout database.	Text(50)	
D	<b>sample_top</b>	Y	Depth to top of sample below ground surface. Must be in feet.	Numeric	
E	<b>sample_bottom</b>	Y	Depth to bottom of sample below ground surface. Must be in feet.	Numeric	
F	<b>sample_date</b>	Y	Date and time sample was collected in 'MM/DD/YYYY HH:MM:SS' format.	DateTime	
G	<b>sample_method</b>		Method used to obtain sample. <i>Example: Hand Auger</i>	Text(30)	<b>rt_sample_method.method_code</b>
H	<b>sample_type</b>		Soil or rock type geologic sample. Use codes in rt_material.material_name valid value table.	Text(40)	<b>rt_material.material_name</b>
I	sample_desc		General description of the sample or sampling activities. <i>Example: Delineation of Surface Soil Contamination.</i>	Text(255)	
J	<b>geologic_unit_code</b>		Code used to describe the geologic unit where the sample was collected from. Use codes in rt_geologic_unit.geologic_unit_code valid value table.	Text(20)	<b>rt_geologic_unit.geologic_unit_code</b>
K	liquid_limit		Liquid limit of sample.	Numeric	
L	plastic_limit		Plastic limit of sample.	Numeric	

**GeologySamples Table**

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

**GeologySamples Table**

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

**LocationParameter Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u>sys_loc_code</u>	Y	<p>Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   \ ? [ ].</p> <p>Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.</p>	Text(20)	
B	<u>param_code</u>	Y	Code used to identify parameter being measured, observed, or attribute being described.	Text(20)	rt_location_param_type.param_code
C	param_value		Value of parameter.	Text(255)	
D	<u>param_unit</u>		Parameter unit.	Text(15)	rt_unit.unit_code
E	<u>measurement_date</u>	Y	Date of parameter measurement or observation.	DateTime	
F	measurement_method		Measurement method	Text(20)	
G	remark		Remark. Refrain from using commas in the remark field.	Text(2000)	
H	task_code		Code used to identify the task under which the field sample was taken.	Text(40)	
I	activity_code		Required for EDGE	Text(40)	

**FieldSample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u>sys_sample_code</u>	Y	<p>Unique sample identifier. Each sample at a facility must have a unique value, including spikes and duplicates. sys_sample_codes cannot match sys_loc_codes. DNREC prefers using the sys_loc_code as part of the sample ID and adding a date in the format (YYYYMMDD) in order to make it unique. For Example: MW-001 + June 06, 2001= MW-001-20010606). For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB-20000405. Non alpha-numeric characters (save for the underscore _ and the dash - characters) are prohibited in the sys_sample_code. Other segments can be added to the sample ID such as information regarding the sample type, sample round, or sample depths. Example: MW-01S_20221024</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   / \ ? [ ].</p>	Text(40)	
B	<u>sample_name</u>		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(50)	
C	<u>sample_matrix_code</u>	Y	Code which distinguishes between different types of sample matrix. For example, soil samples must be distinguished from ground water samples, etc.	Text(10)	<u>rt_matrix.matrix_code</u>
D	<u>sample_type_code</u>	Y	Code that distinguishes between different types of samples. Use code from rt_sample_type.sample_type_code valid values table. Example: Normal field samples are coded "N", field duplicate samples are coded "FD", etc.	Text(20)	<u>rt_sample_type.sample_type_code</u>
E	sample_source		This field identifies where the sample came from, either Field or Lab. In this import, this should always be Field.	Text(10)	

**FieldSample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
F	parent_sample_code		If the sample is a field duplicate input the parent sample "sys_sample_code". For example: A field duplicate "FD" (coded in sample_type_code) is collected for sample MW-001-20010606; therefore, MW-001-20010606 is input into this field. This field is left null for all non-duplicate samples. Sys_sample_code records should be listed in the EDD prior to being used as a parent_sample code. Only field duplicate samples should be listed in the Field duplicate samples with a sample_type_class of FQ should have parent_sample_code populated.	Text(40)	
G	sample_delivery_group		The sampling event with which the sample is associated.	Text(20)	
H	<u>sample_date</u>	Y	Date and time sample was collected (in MM/DD/YYYY HH:MM format)	DateTime	
I	sys_loc_code		Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ].  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.	Text(20)	
J	start_date		Depth to top of sample below ground surface. For surface water samples, use depth below water surface elevation. Depths are required for normal and field duplicate samples where the matrix is SO, SS, or WG. For other matrices it is required when the information is available.	Numeric	

**FieldSample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
K	end_date		Depth to bottom of sample below ground surface. For surface water samples, use depth below water surface elevation. Depths are required for normal and field duplicate samples where the matrix is SO, SS, or WG. For other matrices it is required when the information is available.	Numeric	
L	<b>depth_unit</b>		Relative to the Reference Point; Unit of measure for depths and elevations, must be in feet (ft) or inches (in).	Text(15)	<b>rt_unit.unit_code</b>
M	chain_of_custody		Chain of custody identifier. A single sample may be assigned to only one chain of custody.	Text(40)	
N	sent_to_lab_date		Date sample was sent to lab (in MM/DD/YYYY format)	DateTime	
O	sample_receipt_date		Date that sample was received at laboratory (in MM/DD/YYYY format)	DateTime	
P	sampler		Name or initials of sampler.	Text(50)	
Q	<b>sampling_company_code</b>		Name or initials of sampling company must be an DNREC valid value on reference table RT_COMPANY.	Text(40)	<b>rt_company.company_code</b>
R	sampling_reason		Reason for conducting the sampling.	Numeric	
S	<b>sampling_method</b>		Sampling method. Example: "Field filtration", etc.	Numeric	<b>rt_sample_method.method_code</b>
T	task_code		Code used to identify the task under which the samples were collected. Example: SC= Site Characterization; RD=Remedial Design; RIFS=Remedial Investigation/Feasibility Study; RA=Remedial Action; IRA=Interim Remedial Action; LTS=Long-Term Stewardship Phase; PM=Periodic Monitoring; NRS=Non-Routine Sampling.	Text(40)	
U	collection_quarter		Enter the quarter of the year for samples collected that are part of quarterly monitoring with the format of: YYQ# where YY is year and # is 1, 2, 3, or 4 representing which quarter.	Text(5)	
V	composite_yn		Is sample a composite sample? 'Y' for yes or 'N' for no.	Text(1)	
W	composite_desc		Description of composite sample (if composite_yn is 'Yes'). Example: Composite sample from soil stock pile.' or 'Composite sample from individual samples SB-001, SB-005, and SB-009.'	Text(255)	

**FieldSample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
X	sample_class		Enter in the class code for the sample type.	Text(10)	
Y	custom_field_1		Reserved for DNREC future use. Leave NULL.	Text(255)	
Z	custom_field_2		Reserved for DNREC future use. Leave NULL.	Text(255)	
AA	custom_field_3		Reserved for DNREC future use. Leave NULL.	Text(255)	
<b>AB</b>	<b>geologic_unit_code</b>		The geologic unit (e.g. stratigraphy) from which the sample was taken.	Text(20)	<b>rt_geologic_unit.geologic_unit_code</b>
AC	comment		Comments on sampling. Refrain from using commas in the comment field.	Text(2000)	
AD	filter_type		Enter a method used for field filtering the sample.	Text(20)	
AE	custom_field_4		Reserved for DNREC future use. Leave NULL.	Text(255)	
AF	bottle_ids		This field is mapped to dt_sample.custom_field_5 and is used for recording the field bottle ids or the number of bottles used per sample.	Text(60)	
AG	equipment_code		A code used to uniquely describe the equipment used for collecting the sample.	Text(60)	
AH	weather_condition_1		Weather condition when the sample was collected.	Text(100)	
AI	weather_condition_2		Additional Weather Condition	Text(155)	
AJ	fld_qualifier		Qualifier field used to flag field samples.	Text(20)	
AK	fld_qualifier_note		Note describing field qualifier applied.	Text(255)	
AL	sample_start_date		Date and time sample collection was begun for samples taken over time. (in MM/DD/YYYY HH:MM:SS format)	DateTime	
AM	filtered_date		Date and time sample was filtered. (in MM/DD/YYYY HH:MM:SS format)	DateTime	
AN	<b>field_lab_name_code</b>		Name or initials of on-site field lab if one is used. Company code or initials should come from RT_COMPANY reference table.	Text(40)	<b>rt_company.company_code</b>
AO	<b>medium</b>		Matrix medium can be equivalent to a lab matrix e.g. water, soil, air that provides a general description of the actual field matrix sampled.	Text(10)	<b>rt_medium.medium_code</b>
AP	air_temp		Air temperature	Text(20)	



**FieldSample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AQ	wind_direction		Wind direction	Text(20)	
AR	wind_speed		Wind speed	Text(20)	
AS	precipitation		Precipitation	Text(20)	
AT	cloud_cover		Cloud Cover	Text(5)	
AU	sample_desc		Additional sample description information as necessary. Is not required to be unique (i.e., duplicates are OK).	Text(255)	
AV	humidity		Humidity	Text(20)	
AW	pressure		Pressure	Text(20)	
AX	duration		Record the time it takes to collect the sample. The duration is often used for air sampling.	Text(20)	
AY	<b>duration_unit</b>		Unit of measurement for duration.	Text(15)	
AZ	equipment_cal_date		The most recent date/time when the equipment was calibrated.	DateTime	
BA	alkalinity_calc_value		This field is used to display the last Alkalinity calculated value in field results. This field is not mapped to the database.	Text(50)	
BB	sample_end_date		Date and time sample collection was ended for samples taken over time.	DateTime	
BC	<b>material_name</b>		Material name FK to rt_material used when collecting geological samples.	Text(40)	
BD	arrival_start_time		Arrival Start Time. This field will be mapped to dt_sample_parameter where param_code = ArrivalStartTime	Time	
BE	arrival_end_time		Arrival End Time. This field will be mapped to dt_sample_parameter where param_code = ArrivalEndTime	Time	
BF	ice_in_cooler		Ice in cooler. Maps to dt_sample_parameter	Text(30)	
BG	sampling_equipment_multi		Sampling equipment(s). saves to dt_sample_parameter. Used if more than one sampling equipment is needed	Text(255)	

**FieldSample Table**

<b>Table Column #</b>	<b>Field Name</b>	<b>Required Field (Conditions)</b>	<b>Description</b>	<b>Data Type</b>	<b>Valid Values &lt;Table&gt;.&lt;Field&gt;</b>
BH	filtered_screened		This field will be mapped to dt_sample_parameter where param_code = FilteredOrScreened.	Text(10)	
BL	field_quality_comment		This field will be mapped to dt_sample_parameter where param_code = FieldQualityComment. Used to enter comments regarding questionable field practices and therefore data quality eg by Sampler. This field will be visible in DQM. Refrain from using commas in the comment field.	Text(255)	
BJ	spm_sample_id		Copy spm sample id to dt_sample. Used for completeness checks especially for qc samples.	Numeric	
BK	filtered_yn		Is sample filtered? 'Y' for yes or 'N' for no. If this field is populated with 'Y', the FILTERED_DATE field in the DT_FIELD_SAMPLE table will be populated with the sample date automatically	Text(1)	
BL	field_result_time		This field if populated then it updates the time in the sample date for each row. (hh:mm).	Time	
BM	task_code_2		A secondary task code is used to define the task or phase of a sampling project where data is collected. Consult with DNREC Project Manager to confirm values entered.	Text(40)	
BN	geo_data		Geography data	Text(255)	
BO	geo_remark		Geography remark. Refrain from using commas in the remark field.	Text(2000)	
BP	air_volume		The air volume of a sample collected in the field.	Numeric	
BQ	<a href="#">air_volume_unit</a>		The unit of measure for the air volume of a sample collected in the field.	Text(15)	<a href="#">rt_unit.unit_code</a>

COC Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u>chain_of_custody</u>		The identifier used to track the changing of hands of samples from one party to another (e.g. from field to lab or from lab to lab). This is an optional field for laboratory EDDs unless otherwise specified by the DNREC project manager.	Text(40)	
B	lab_code		Code for the lab associated with the COC. Must be a valid value on RT_COMPANY.	Text(40)	rt_company.company_code
C	shipping_date		The date the COC was shipped to the lab.	DateTime	
D	shipping_company		The company used to ship samples from one point to another. Must be a valid value on RT_COMPANY.	Text(40)	rt_company.company_code
E	shipping_tracking_number		The number used to track a sample shipment from one point to another.	Text(50)	
F	project_manager		Project manager field listed on the COC.	Text(50)	
G	project_ID		Project number listed on the COC.	Text(50)	
H	po_number		PO number listed on the COC.	Text(50)	
I	quote_number		Quote Number assigned to the field event.	Text(50)	
J	department		Department name listed on the COC.	Text(50)	
K	sampler_1		Sampler name on the COC.	Text(50)	
L	sampler_2		Sampler name on the COC.	Text(50)	
M	sampler_3		Sampler name on the COC.	Text(50)	
N	relinquished_by		The person that relinquished the COC to the next party handling the samples.	Text(100)	
O	relinquished_date		Relinquished date.	DateTime	
P	email_invoice_to		Field on the COC to instruct the lab where to email the invoice to.	Text(100)	
Q	email_report_to		Field on the COC to instruct the lab where to email the lab report to.	Text(100)	

**COC Table**

<b>Table Column #</b>	<b>Field Name</b>	<b>Required Field (Conditions)</b>	<b>Description</b>	<b>Data Type</b>	<b>Valid Values &lt;Table&gt;.&lt;Field&gt;</b>
R	turn_around_time		Stores lab turn around time if entered on the COC in the field.	Text(50)	
S	cooler_count		The number of coolers per chain of custody.	Numeric	
T	cooler_desc		The cooler description.	Text(255)	
U	cooler_temp		Temperature of the cooler, upon laboratory receipt, associated with a specific chain of custody.	Numeric	
V	lab_cooler_count		The lab count of coolers received by the lab.	Numeric	
W	lab_cooler_desc		Any observations about the coolers made by the lab when unpacking the cooler.	Text(255)	
X	lab_receipt_date		The date when the lab received the COC. This date is used by SPM SRN Manger.	DateTime	
Y	lab_cooler_temp		The cooler temperature received by the lab.	Text(50)	
Z	lab_security_seal		A field to indicate by the lab if the security seal was intact.	Text(20)	
AA	contact_name_1		The name of a contact person associated with a chain of custody.	Text(50)	
AB	contact_name_2		The name of a contact person associated with a chain of custody.	Text(50)	
AC	complete_yn		Denotes whether the chain of custody was complete (Y) or not (N).	Text(1)	
AD	custom_field_1		Reserved for DNREC future use. Leave NULL.	Text(255)	
AE	custom_field_2		Reserved for DNREC future use. Leave NULL.	Text(255)	
AF	custom_field_3		Reserved for DNREC future use. Leave NULL.	Text(255)	
AG	custom_field_4		Reserved for DNREC future use. Leave NULL.	Text(255)	
AH	custom_field_5		Reserved for DNREC future use. Leave NULL.	Text(255)	
AI	remark		Optional general remark on the COC. Refrain from using commas in the remark field.	Text(2000)	

**COC Table**

<b>Table Column #</b>	<b>Field Name</b>	<b>Required Field (Conditions)</b>	<b>Description</b>	<b>Data Type</b>	<b>Valid Values &lt;Table&gt;.&lt;Field&gt;</b>
AJ	cooler_id		Name of cooler associated with a specific chain of custody (COC), if necessary. EQUIS Professional has a limit of one cooler per COC.	Text(10)	
AK	nb_of_bottles_returned		The number of empty bottles returned to the lab.	Numeric	
AL	bottles_returned_desc		Description of empty bottles returned to the lab.	Text(255)	

**SampleParameter Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u>sys_sample_code</u>	Y	<p>Unique sample identifier. Each sample at a facility must have a unique value, including spikes and duplicates. sys_sample_codes cannot match sys_loc_codes. DNREC prefers using the sys_loc_code as part of the sample ID and adding a date in the format (YYYYMMDD) in order to make it unique. For Example: MW-001 + June 06, 2001= MW-001-20010606). For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB-20000405. Non alpha-numeric characters (save for the underscore _ and the dash - characters) are prohibited in the sys_sample_code. Other segments can be added to the sample ID such as information regarding the sample type, sample round, or sample depths. Example: MW-01S_20221024</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   / \ ? [ ].</p>	Text(40)	
B	<u>param_code</u>	Y	Unique code for sample parameter type.	Text(20)	rt_sample_param_type.param_code
C	<u>measurement_date</u>	Y	Date of sample parameter measurement.	DateTime	
D	<u>param_unit</u>		Unit of measurement for subsample amount.	Text(15)	rt_unit.unit_code
E	param_value		Sample parameter value.	Text(255)	
F	measurement_method		Measurement method.	Text(20)	
G	remark		Parameter measurement specific comment. Refrain from using commas in the remark field.	Text(2000)	

**WaterLevel Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
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 DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ] .  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.	Text(20)	
B	measurement_date	Y	Date and time of water level measurement in 'MM/DD/YYYY HH:MM' format.	DateTime	
C	historical_reference_elev		Elevation of the reference point from which depth measurements were taken. Must be in feet and precision not to exceed 3 decimal places.	Numeric	
D	water_level_depth	If dry_indicator_yn = 'N'	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 the surface of a water body or dry water bodies, water level is zero "0", must be in feet (ft).	Numeric	
E	water_level_elev	If dry_indicator_yn = 'N'	Elevation of water level must be in feet (ft) below the reference_point in the same record. Should be a calculation of the reference point minus the depth to water.	Numeric	
F	corrected_depth		Depth below reference point 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	
G	corrected_elev		Elevation of water level after any necessary corrections, e.g., if free product was encountered. Must be in feet (ft).	Numeric	
H	measured_depth_of_well		The actual measured total depth below the reference_point to the bottom of the well. Must be in feet.	Numeric	

**WaterLevel Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
I	depth_unit		Unit of measure for depths and elevations, must be feet (ft).	Text(15)	
J	technician		Name of technician measuring water level. <i>Example: J. Smith.</i>	Text(30)	
K	dry_indicator_yn		Is the well dry? 'Y' for yes or 'N' for no.	Text(1)	
L	measurement_method		Method used to make water level measurements. <i>Example: water level probe.</i>	Text(20)	
M	batch_number		Batch identifier for a group of water level measurements.	Text(10)	
N	dip_or_elevation		Input ' <i>elevation</i> ' if water level measurement is above the datum (i.e., artesian well) or input ' <i>dip</i> ' if water level is below datum.	Text(10)	
O	remark		Remark on measurement. Refrain from using commas in the remark field.	Text(255)	
P	<a href="#">lnapl_cas_rn</a>		If light non-aqueous phase liquid (LNAPL) is present in the well, use primary constituent CAS No. from rt_analyte valid value table.	Text(15)	<a href="#">rt_analyte.cas_rn</a>
Q	lnapl_depth		Depth to the top surface of the LNAPL below the reference_point. Must be in feet or meters.	Numeric	
R	<a href="#">dnapl_cas_rn</a>		If dense non-aqueous phase liquid (DNAPL) is present in the well, use primary constituent CAS No. from rt_analyte.cas_rn.	Text(15)	<a href="#">rt_analyte.cas_rn</a>
S	dnapl_depth		Depth to the top surface of the DNAPL below the reference_point. Must be in feet or meters.	Numeric	
T	<b>task_code</b>	<b>Y</b>	Code used to identify the task under which the samples were collected. Example: SC= Site Characterization; RD=Remedial Design; RIFS=Remedial Investigation/Feasibility Study; RA=Remedial Action; IRA=Interim Remedial Action; LTS=Long-Term Stewardship Phase; PM=Periodic Monitoring; NRS=Non-Routine Sampling.	Text(40)	
U	<b>reportable_yn</b>	<b>Y</b>	Must be either "Y" for water levels which are considered to be reportable and final, or "N" for all other water level readings. This field can be used to distinguish between multiple water level readings where only the final reading would be used for reporting.	Text(1)	
V	custom_field_3		Reserved for DNREC future use. Leave NULL.	Text(255)	
W	custom_field_4		Reserved for DNREC future use. Leave NULL.	Text(255)	



**WaterLevel Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
X	custom_field_5		Reserved for DNREC future use. Leave NULL.	Text(255)	
Y	fld_qualifier		Qualifier field used to flag field samples.	Text(20)	
Z	fld_qualifier_note		Note describing field qualifier applied.	Text(255)	
AA	equipment_code		Unique code used to represent a piece of equipment used for capturing water levels.	Text(60)	
AB	approval_code		Code used to represent the status of the data in EQuIS.	Text(10)	
AC	<b>elev_datum_code</b>		Reference datum for the elevation measurement. Must use valid value from elev_datum code from the valid values table. <i>Example: If the elevation references mean sea level, the code is "003".</i>	Text(20)	<b>rt_coord_elev_datum.elev_datum_code</b>
AD	reference_point		The reference point the water level depth is measured from. For example 'Top of Casing', 'Ground Surface', 'Observation Point', please select one of the valid values.	Text(255)	

**ExtractionInjectionWell Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
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 DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ].  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.	Text(20)	
B	<u>start_measure_date</u>	Y	Date and time that the pumping measures began in MM/DD/YYYY HH:MM:SS format.	DateTime	
C	<u>end_measure_date</u>	Y	Date and time that the pumping measures concluded in MM/DD/YYYY HH:MM:SS format.  End_measure_date cannot be before start_measure_date.	DateTime	
D	<u>ave_pump_rate</u>	Y	Average pumping rate.	Numeric	
E	<u>pump_rate_unit</u>	Y	The unit of measure for the pumping rate. Use code from rt_unit.unit_code valid value table.	Text(15)	<u>rt_unit.unit_code</u>
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	Mode in which well was operating during the reported interval. <i>Example: Extraction, injection, recirculation, pulse, devel, or unuse.</i>	Text(20)	
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. Use code from rt_unit.unit_code valid value table.	Text(15)	<u>rt_unit.unit_code</u>
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. For details see EDD Manual.	Text(20)	
K	suction		Vacuum in well (e.g., wellpoint vacuum) or well casing (e.g., vacuum well), reported in equivalent feet of water.	Numeric	
L	remark		Remarks regarding the pumping rate measurements. Refrain from using commas in the remark field. <i>Example: Well down for three weeks due to repairs.</i>	Text(255)	

### SoilGas Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
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 DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ].  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.	Text(20)	
B	<u>survey_date</u>	Y	Sample survey date in mm/dd/yyyy hh:mm.	DateTime	
C	<u>param_code</u>	Y	Parameter measured by soil gas survey. Use code from rt_soil_gas_param_type.param_code valid values table.	Text(20)	rt_soil_gas_param_type.param_code
D	<u>reading_depth</u>	Y	Depth of soil gas survey measurement below ground surface. Must be in feet.	Text(8)	
E	<u>depth_unit</u>	Y	Unit of measure for depth, inches (in), feet (ft), centimeters (cm), or meters (m).	Text(15)	ft
F	<u>reading</u>	Y	Soil gas survey measurement.	Text(8)	
G	<u>reading_unit</u>	Y	Unit of measure of soil gas survey measurement. Use code from rt_unit.unit_code valid value table.	Text(6)	rt_unit.unit_code
H	<u>sampling_method</u>	Y	Sampling method. <i>Example: GC, MICROPURGE etc.</i>	Text(10)	rt_sample_method.method_code
I	instrument_type		Instrument type. 4 Gas Meter, Data Logger etc.	Text(15)	
J	east		Easting coordinate of soil gas survey measurement.	Text(14)	
K	north		Northing coordinate of soil gas survey measurement.	Text(14)	
L	secondary_east		Secondary easting coordinate of soil gas survey measurement.	Text(14)	
M	secondary_north		Secondary northing coordinate of soil gas survey measurement.	Text(14)	

**SoilGas Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
N	lithology_code		Lithology code. Example: Fine sand or USCS code.	Text(10)	
O	area_desc		Description of area. Example: Grassy Area behind building.	Text(70)	
P	equipment_code		A code used to uniquely describe the equipment used for collecting the sample.	Text(60)	
Q	borehole_drill_method		Drilling method. <i>Example: Direct Push.</i>	Text(10)	
R	technician		Technician. <i>Example: J. Smith</i>	Text(50)	
S	remark		Remark. Refrain from using commas in the remark field. <i>Example: Neighbor mowing lawn.</i>	Text(255)	

### FieldResults EDD

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b>data_provider</b>	Y	Must be the valid code for the company that is submitting the data and match a data_provider field of the Data Provider_v13 EDD file submitted in the current or previous EDD.	Text(20)	<b>rt_company.company_code</b>
B	<u>sys_loc_code</u>	Y	<p>Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   \ ? [ ].</p> <p>Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.</p>	Text(20)	
C	<u>sys_sample_code</u>	Y	<p>Unique sample identifier. Each sample at a facility must have a unique value, including spikes and duplicates. sys_sample_codes cannot match sys_loc_codes. DNREC prefers using the sys_loc_code as part of the sample ID and adding a date in the format (YYYYMMDD) in order to make it unique. For Example: MW-001 + June 06, 2001= MW-001-20010606). For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB-20000405. Non alpha-numeric characters (save for the underscore _ and the dash - characters) are prohibited in the sys_sample_code. Other segments can be added to the sample ID such as information regarding the sample type, sample round, or sample depths. <i>Example: MW-01S_20221024</i></p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   \ ? [ ].</p>	Text(40)	
D	<u>field_parameter</u>	Y	Field parameter CAS number. Use code from rt_analyte.cas_rn valid value table. <i>Example: The code for oxidation-reduction potential is ORP.</i>	Text(15)	<b>rt_analyte.cas_rn</b>

FieldResults Table

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
E	start_depth	If sample_matrix_code='WG', 'SO', or 'SS' then start and end depth are required.	Depth to top of sample below ground surface. For surface water samples, use depth below water surface elevation. Depths are required for samples where the matrix is SO or WG. For other matrices it is required when the information is available.	Numeric	
F	end_depth		Depth to bottom of sample below ground surface. For surface water samples, use depth below water surface elevation. Depths are required for samples where the matrix is SO or WG. For other matrices it is required when the information is available.	Numeric	
G	depth_unit	Required if start_depth and/or end_depth are present)	Unit of measure for the start and end depths, feet (ft) or inches (in).	Text(15)	rt_unit.unit_code
H	<u>result_date</u>	Y	Result date (in MM/DD/YYYY format).	Date	
I	result_value	Y	Qualitative or Quantitative parameter result.	Text(14)	
J	result_unit	Y	Result unit. Use code from rt_unit.unit_code valid value table.	Text(15)	rt_unit.unit_code
K	quantitation_limit		Quantitation limit	Text(20)	
L	task_code	Y	Code used to identify the task under which samples were collected.	Text(40)	
M	sample_matrix_code	Y	Code that distinguishes between different types of sample matrix.	Text(10)	rt_matrix.matrix_code
N	qualifier	If provided by laboratory.	Field Parameter Qualifier. Use code from rt_qualifier.qualifier valid value table. NOTE: At this time this field should limited to no more than two qualifiers.	Text(20)	rt_qualifier.qualifier

**FieldResults Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
O	sampling_company_code	Y	Must be the valid code for the company that conducted the sampling.	Text(20)	rt_company.company_code
P	sampling_reason		Reason for conducting the sampling. <i>Example: 2016 Q3 Sampling Event.</i>	Text(30)	
Q	sample_method		Field sampling methodology. Use code from rt_sample_method.method_code valid value table.	Text(40)	rt_sample_method.method_code
R	reportable_result	Y	Is this a reportable result? "Yes" or "No."	Text(10)	
S	value_type	Y	How value was derived, actual, calculated, or estimated.	Text(10)	
T	remark		Remarks regarding field parameters collected. Refrain from using commas in the remark field. <i>Example: Collected near oil stain.</i>	Text(225)	

**DNREC\_Screening\_Results Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<a href="#">data_provider</a>		Data Provider.	Text(20)	<a href="#">rt_company.company_code</a>
B	<a href="#">sys_loc_code</a>	Y	Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ].	Text(20)	
C	<a href="#">sys_sample_code</a>	Y	Sample code.	Text(40)	
D	sample_name		Sample name.	Text(50)	
E	<a href="#">sample_date</a>	Y	Date and time sample was collected (in MM/DD/YYYY HH:MM format).	DateTime	
F	<a href="#">field_anl_meth_name</a>	Y	Field Analytic Method.	Text(20)	<a href="#">rt_analytic_method.analytic_method</a>
G	<a href="#">cas_rn</a>	Y	Field parameter by CASRN.	Text(15)	<a href="#">rt_analyte.cas_rn</a>
H	<a href="#">chemical_name</a>	Y	Field parameter by chemical name.	Text(255)	
I	start_depth		Sample start depth	Numeric	
J	end_depth		Sample end depth	Numeric	
K	<a href="#">depth_unit</a>		Sample depth unit.	Text(15)	<a href="#">rt_unit.unit_code</a>
L	<a href="#">result_date</a>	Y	Date and time of sample analysis or result (in MM/DD/YYYY HH:MM format).	DateTime	
M	<a href="#">result_value</a>	Y	Result value.	Text(20)	
N	<a href="#">result_unit</a>	Y	Result unit.	Text(15)	<a href="#">rt_unit.unit_code</a>
O	quantation_limit		Quantitation limit	Text(20)	
P	task_code		Code used to identify the task under which the samples were collected. Example: SC= Site Characterization; RD=Remedial Design; RIFS=Remedial Investigation/Feasibility Study; RA=Remedial Action; IRA=Interim Remedial Action; LTS=Long-Term Stewardship Phase; PM=Periodic Monitoring; NRS=Non-Routine Sampling.	Text(40)	
Q	<a href="#">sample_matrix_code</a>	Y	Sample matrix code.	Text(10)	
R	<a href="#">qualifier</a>		Qualifier	Text(20)	



**DNREC\_Screening\_Results Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
S	<a href="#">Sampling_company_code</a>		Name of sampling company.	Text(20)	<a href="#">rt_company.company_code</a>
T	Sampling_reason		Sampling reason.	Text(30)	
U	<a href="#">Sampling_method</a>		Sampling method	Text(40)	<a href="#">rt_sample_method.method_code</a>
V	<b>reportable_result</b>	<b>Y</b>	Reportable result.	Text(10)	
W	<b>value_type</b>	<b>Y</b>	How value was derived.	Text(10)	
X	screen_result		Screen Result.	Text(255)	
Y	<a href="#">sample_type_code</a>		Sample type code.	Text(20)	<a href="#">rt_sample_type.sample_type_code</a>
Z	remark		Remark. Refrain from using commas in the remark field.	Text(2000)	

**Sample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b>data_provider</b>	Y	Must be the valid code for the company that is submitting the data and match a data_provider field of the Data Provider EDD file submitted in the current or previous EDD.	Text(20)	<b>rt_company.company_code</b>
B	<u><b>sys_sample_code</b></u>	Y	<p>Unique sample identifier. Each sample at a facility must have a unique value, including spikes and duplicates. sys_sample_codes cannot match sys_loc_codes. DNREC prefers using the sys_loc_code as part of the sample ID and adding a date in the format (YYYYMMDD) in order to make it unique. For Example: MW-001 + June 06, 2001= MW-001-20010606). For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB-20000405. Non alpha-numeric characters (save for the underscore _ and the dash - characters) are prohibited in the sys_sample_code. Other segments can be added to the sample ID such as information regarding the sample type, sample round, or sample depths. Example: MW-01S_20221024</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   / \ ? [ ] ..</p>	Text(40)	
C	<b>sample_name</b>	Y	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(50)	
D	<b>sample_matrix_code</b>	Y	Code that distinguishes between different types of sample matrix.	Text(3)	<b>rt_matrix.matrix_code</b>
E	<b>sample_type_code</b>	Y	Code that distinguishes between different types of samples. Use code from rt_sample_type.sample_type_code valid values table. Example: Normal field samples are coded “N”, laboratory method blank samples are coded “LB”, etc.	Text(20)	<b>rt_sample_type.sample_type_code</b>
F	<b>sample_source</b>	Y	This field identifies where the sample originated. Samples collected in the Field are entered as “FIELD,” samples originating in the Lab are entered as “LAB.”	Text(10)	

**Sample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
G	parent_sample_code		If the sample is a duplicate, MS/MSD, blind dup, lab dup, etc, input the parent sample "sys_sample_code." For example: A field duplicate "FD" (coded in sample_type_code) is collected for sample MW-001-20010606; therefore, MW-001-20010606 is input into this field. This field is left null for all non-duplicate samples. This field is Required when the sample_type_code contains "BD," "FD," "FR," "FS," "LR," "MS," "MSD," or "SD" entries. Parent_sample_code records should be listed in the EDD as sys_sample_codes. Additional information may be found in the EDD manual.	Text(40)	
H	<b>sample_delivery_group</b>	<b>Y</b>	This is the laboratory sample delivery group.	Text(20)	
I	<b>sample_date</b>	<b>Y</b>	Date and time sample was collected (in MM/DD/YYYY HH:MM:SS format). <i>Example: 01/18/2023 11:17:03 AM</i>	DateTime	
J	sys_loc_code		Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " ' \ ? [ ] .  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs..	Text(20)	
K	start_depth		Depth to top of sample below ground surface. For surface water samples, use depth below water surface elevation. Depths are required for samples where the matrix is SO or WG. For other matrices it is required when the information is available.	Numeric	

**Sample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
L	end_depth		Depth to bottom of sample below ground surface. For surface water samples, use depth below water surface elevation. Depths are required for samples where the matrix is SO or WG. For other matrices it is required when the information is available.	Numeric	
M	depth_unit		Unit of measure for the start and end depths, feet (ft) or inches (in).	Text(15)	
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 (in MM/DD/YYYY format).	DateTime	
P	sample_receipt_date		Date that sample was received at laboratory (in MM/DD/YYYY format).	DateTime	
Q	sampler		Name or initials of sampler.	Text(30)	
R	<b>sampling_company_code</b>	<b>Y</b>	Name or initials of sampling company.	Text(20)	<b>rt_company.company_code</b>
S	sampling_reason		Reason for conducting the sampling.	Text(30)	
T	<b>sample_method</b>		Sampling method. Use code from rt_sample_method.method_code valid value table.	Text(40)	<b>rt_sample_method.method_code</b>
U	<b>task_code</b>	<b>Y</b>	Code used to identify the task under which the samples were collected. Example: SC= Site Characterization; RD=Remedial Design; RIFS=Remedial Investigation/Feasibility Study; RA=Remedial Action; IRA=Interim Remedial Action; LTS=Long-Term Stewardship Phase; PM=Periodic Monitoring; NRS=Non-Routine Sampling.	Text(40)	
V	collection_quarter		Enter the quarter of the year for samples collected that are part of quarterly monitoring. i.e. Q1, Q2, Q3, or Q4	Text(5)	

**Sample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
W	<b>composite_yn</b>	<b>Y</b>	Is sample a composite sample? 'Y' for yes or 'N' for no.	Text(1)	
X	composite_desc		Description of composite sample (if composite_yn is 'Yes'). Example: Composite sample from soil stock pile.' or 'Composite sample from individual samples SB-001, SB-005, and SB-009.'	Text(255)	
Y	sample_class		Enter in the class code for the sample type.	Text(10)	
Z	custom_field_1		Reserved for DNREC future use. Leave NULL.	Text(20)	
AA	custom_field_2		Reserved for DNREC future use. Leave NULL.	Text(50)	
AB	custom_field_3		Reserved for DNREC future use. Leave NULL.	Text(50)	
AC	comments		Comments on sampling. Refrain from using commas in the comment field.	Text(255)	

**TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u>sys sample code</u>	Y	<p>Unique sample identifier. Each sample at a facility must have a unique value, including spikes and duplicates. Sys_sample_codes cannot match sys_loc_codes. DNREC prefers using the sys_loc_code as part of the sample ID and adding a date in the format (YYYYMMDD) in order to make it unique. For Example: MW-001 + June 06, 2001= MW-001-20010606). For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB-20000405. Non alpha-numeric characters (save for the underscore _ and the dash - characters) are prohibited in the sys_sample_code. Other segments can be added to the sample ID such as information regarding the sample type, sample round, or sample depths. Example: MW-01S_20221024</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   / \ ? [ ] ..</p>	Text(40)	
B	<u>lab anl method name</u>	Y	<p>Laboratory analytical method name or description. Use code from rt_analytic_method.analytic_method valid values table. Example: SW8260, E130.1, etc.</p>	Text(20)	<a href="#">rt_analytic_method.analytic_method</a>
C	<u>analysis date</u>	Y	<p>Date and time of sample analysis in 'MM/DD/YYYY HH:MM:SS' format. May refer to either beginning or end of the analysis as required.</p>	DateTime	
D	<u>fraction</u>	Y	<p>Must be either 'D' for dissolved or filtered [metal] concentration, or 'T' for total concentration. TCLP and SPLP are also options for these leaching methods. Must match one of the reported values in the fraction field of the TestResultsQC EDD section submitted in the current EDD.</p>	Text(10)	

**TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
E	<b><u>column_number</u></b>	Y	Must be either "1C" for first column analyses, "2C" for second column analyses, or "NA" for analyses for which neither "1C" nor "2C" is applicable. Second column data may not be required, depending on the needs identified by the EQUIS project manager, in which case all results may be reported as "NA". However, if any "2C" tests are reported, then there must be corresponding "1C" tests present also. Also, laboratories typically can report which of the two columns is to be considered "primary". This distinction is handled by the "reportable-result" field in the result table. At project start, EQUIS can be set to always use an asterisk in this field and prevent its appearance on screens or reports.	Text(2)	
F	<b><u>test_type</u></b>	Y	Type of test. Use code from rt_test_type.test_type valid values. <i>Examples: 'INITIAL', 'REEXTRACT1', 'REEXTRACT2', 'REEXTRACT3', 'REANALYSIS', 'DILUTION1', 'DILUTION2', and 'DILUTION3'.</i>	Text(10)	<b>rt_test_type.test_type</b>
G	<b><u>lab_matrix_code</u></b>	Y	This code distinguishes differences between the matrix that was analyzed, and not the matrix of the sample received. Example: TCLP analysis of a soil sample would report "WL" for leachate not "SO" for soil.	Text(3)	<b>rt_matrix.matrix_code</b>
H	<b><u>analysis_location</u></b>	Y	Denotes 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)	
I	<b><u>basis</u></b>	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)	
J	container_id		Report as null.	Text(30)	

**TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
K	<b>dilution_factor</b>	Y	Input effective test dilution factor. <i>Example: 5, 10, 50. If no dilution, use 1.</i>	Numeric	
L	<b>prep_method</b>		Laboratory sample preparation method name or description. Use code from rt_prep_method.prep_method valid values table.	Text(20)	<b>rt_prep_method.prep_method</b>
M	prep_date		Beginning date and time of sample preparation in 'MM/DD/YYYY HH:MM:SS' format.	DateTime	
N	leachate_method		Laboratory leachate generation method name or description. The method name should be sufficient to reflect operation of the laboratory. <i>Example: pH dependent, percolation, tank, granular.</i>	Text(15)	
O	leachate_date		Beginning date and time of leachate preparation in 'MM/DD/YYYY HH:MM:SS' format.	DateTime	
P	<b>lab_name_code</b>	Y	Code used to distinguish laboratory name.	Text(20)	<b>rt_company.company_code</b>
Q	<b>qc_level</b>	Y	Input analysis type. For screening analysis input "SCREEN" ; for quantitative analysis input "QUANT".	Text(10)	
R	<b>lab_sample_id</b>		Laboratory LIMS identifier assigned to the sample.	Text(40)	
S	percent_moisture		Input Percent moisture of the sample portion used in this test. Report in numeric format to two decimal places. <i>Example: 70.5% will be reported as 70.50.</i>	Text(5)	
T	subsample_amount		Weight or volume of sample used for test.	Text(14)	
U	<b>subsample_amount_unit</b>		Unit of measurement for sample amount. Use code from rt_unit.unit_code valid value table.	Text(15)	<b>rt_unit.unit_code</b>
V	anlyst_name		Analyst/Laboratory technician name or initials conducting the analysis.	Text(30)	



**TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
W	instrument_id		Instrument ID	Text(50)	
X	comments		Comments about the test as necessary. Refrain from using commas in the comment field.	Text(255)	
Y	<b>perservative</b>		Input sample preservative used in sample analysis. Must use rt_preservative valid values table.	Text(20)	<b>rt_preservative.preservative</b>
Z	final_volume		Final volume of the sample after sample preparation. Include all dilution factors.	Numeric	<b>rt_unit.unit_code</b>
AA	<b>final_volume_unit</b>		The unit of measure that corresponds to the final sample volume. Use code from rt_unit.unit_code valid value table.	Text(15)	<b>rt_analyte.cas_rn</b>
AB	<b>cas_rn</b>		Input CAS number code for chemical name. Use code from rt_analyte.cas_rn valid value table.	Text(15)	<b>rt_analyte.chemical_name</b>
AC	<b>chemical_name</b>		Input actual name of chemical. Use name from rt_analyte valid value table.	Text(75)	
AD	result_value		Analytical results reported at an appropriate number of significant digits. May only be null for non-detects	Numeric	
AE	<b>result_unit</b>		Units of measurement for the result. Use code from rt_unit.unit_code valid value table.	Text(15)	<b>rt_unit.unit_code</b>
AF	result_error_delta		Error range applicable to the result value; typically used only for radiological results.	Text(20)	
AG	<b>result_type_code</b>	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)	<b>rt_result_type.result_type_code</b>

**TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AH	<b>reportable_result</b>	Y	This field is used to state which results are reportable for a given sample. Use 'Yes' for results that 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 where there can be more than one result per chemical for a sample. Only one of the results should be considered reportable. Example: A sample was diluted and reanalyzed due to a calibration exceedance. The initial analysis will have all results with reportable result = "Yes" except for the chemical that exceeded the calibration. On the dilution analysis all results would have reportable result = "No" except the chemical that exceeded the calibration of the initial test and was the reason for diluting the sample.	Text(10)	
AI	<b>detect_flag</b>	Y	Input 'Y' for detected analytes or 'N' for non-detects. Use "Y" for estimated (above detection limit but below the quantitation limit) or "<" or ">" for tests such as flash point. Note that '<' MUST NOT be used to indicate non-detects.	Text(2)	
AJ	lab_qualifier		Qualifier flags assigned by the laboratory.	Text(10)	
AK	validator_qualifiers		Qualifier flags assigned by the validator.	Text(10)	
AL	<b>interpreted_qualifiers</b>		Final qualifier flags assigned by the validator. If data will not be validated, then the laboratory must include the lab_qualifiers as the interpreted_qualifiers. Use codes from rt_qualifier.qualifier valid value table.	Text(10)	<b>rt_qualifier.qualifier</b>
AM	<b>validated_yn</b>		Indicates if the result has been validated. Input "Y" for validated and "N" for not validated.	Text(1)	

**TestResultQC Table**

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

**TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AP	quantitation_limit		<p>"Quantitation limits refer to a minimum concentration of an analyte that can be measured within specified limits of precision and accuracy. They are generally 5-10 times the detection limit.</p> <p>Thus, when quantitation limits are used as reporting limits, the laboratory is saying that the analyte is not present in a sufficient amount to be reliably quantified (i.e., at a concentration above the quantitation limit).</p> <p>It may be present and even positively identified or ""seen"" at a lower concentration."</p>	Numeric	
AQ	detection_limit_unit		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
AR	tic_retention_time		TIC retention time. Required for TIC result types.	Text(8)	
AS	minimum_detectable_conc		For radiological results: Minimum detectable concentration or activity. This value must be in the same units as the result_value.	Numeric	
AT	counting_error		For radiological results: Counting error as reported by the laboratory. This value must be in the same units as the result_value.	Numeric	
AU	uncertainty		For radiological results: The uncertainty of the counting error, valid values include "1 sigma" or "2 sigma". This field is required if the counting_error field is populated.	Text(10)	
AV	critical_value		For radiological results: Leave this field Null	Numeric	
AW	validation_level		Validation level.	Text(20)	
AX	result_comment		Result specific comments. Refrain from using commas in the comment field.	Text(255)	

**TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AY	qc_original_conc		The concentration of the analyte in the original (unspiked) sample. Might be required for spikes and spike duplicates (depending on user needs). Not necessary for surrogate compounds or LCS samples (where the original concentration is assumed to be zero).	Numeric	
AZ	qc_spike_added		The concentration of the analyte added to the original sample. Might be required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample (depending on user needs).	Numeric	
BA	qc_spike_measured		The measured concentration of the analyte. Use zero for spiked compounds that were not detected in the sample. Might be required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample (depending on user needs).	Numeric	
BB	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	
BC	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	
BD	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	

**TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
BE	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	
BF	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	
BG	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)	
BH	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)	
BI	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)	
BJ	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)	

**TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
BK	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)	
BL	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)	
BM	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)	
BN	<b>lab_sdg</b>	<b>Y</b>	Lab Sample Delivery Group (SDG) identifier. A single sample may be assigned to multiple Sample Delivery Group (SDG) based on different analysis.	Text(20)	

**Batch Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u>sys_sample_code</u>	Y	<p>Unique sample identifier. Each sample at a facility must have a unique value, including spikes and duplicates. sys_sample_codes cannot match sys_loc_codes. DNREC prefers using the sys_loc_code as part of the sample ID and adding a date in the format (YYYYMMDD) in order to make it unique. For Example: MW-001 + June 06, 2001= MW-001-20010606). For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB-20000405. Non alpha-numeric characters (save for the underscore _ and the dash - characters) are prohibited in the sys_sample_code. Other segments can be added to the sample ID such as information regarding the sample type, sample round, or sample depths. Example: MW-01S_20221024</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   / \ ? [ ] ..</p>	Text(40)	
B	<u>lab_anl_method_name</u>	Y	Laboratory analytical method name or description. Use code from rt_analytic_method.analytic_method valid values table. Example: SW8260, E130.1, etc.	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 in MM/DD/YYYY_HH:MM:SS format. Must match one of the reported values in the analysis_date field of the TestResultsQC EDD table submitted in the current EDD.	DateTime	
D	<u>fraction</u>	Y	Must be either 'D' for dissolved or filtered [metal] concentration, or 'T' for total concentration. TCLP and SPLP are also options for these leaching methods. Must match one of the reported values in the fraction field of the TestResultsQC EDD section submitted in the current EDD.	Text(10)	rt_fraction.fraction
E	<u>column_number</u>	Y	Report as null.	Text(2)	



**Batch Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
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', 'Dilution2', and must match one of the reported values in the column number test_type field on the TestResultsQC EDD table submitted in the current EDD.	Text(10)	
G	<u>test_batch_type</u>	Y	Lab batch type. Valid values include 'Prep', 'Analysis', and 'Leach'. This is a required field for all batches.	Text(10)	
H	<u>test_batch_id</u>	Y	Unique identifier for all laboratory analytical batches.	Text(20)	

**BasicLocation Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b>data_provider</b>	Y	Data provider for location data. Must be the valid code for the data provider and match the data_provider field of the Data Provider EDD file submitted in the current or previous EDD.	Text (20)	<b>rt_company.company_code</b>
B	<b><u>sys_loc_code</u></b>	Y	Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ] .  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location or BasicLocation EDD file submitted in the current or previous EDDs.	Text (20)	
C	<b>easting</b>	Y	Sampling location Easting or X coordinate in DE State Plane NAD 83 meters. Only populate one coordinate type. If both are populated, do nothing.	Numeric	
D	<b>northing</b>	Y	Sampling location Northing or Y coordinate in DE State Plane NAD 83 meters. Only populate one coordinate type. If both are populated, do nothing.	Numeric	
E	site_code		Code indicating the subfacility operable unit (OU) for which the data is collected or area of concern (AOC). Use the code 'OU1' unless there are additional operable units at a facility. In the case of additional operable units, use codes of 'OU2', 'OU3', etc., respectively.	Text(20)	
F	<b>surf_elev</b>	Y	Elevation of the ground surface, or if location is for surface water samples, water surface elevation. If unknown use "9999."	Numeric	
G	<b>elev_unit</b>	Y	Unit of measurement for elevations. Units must be in ft.	Text (15)	ft
H	<b>coord_sys_desc</b>	Y	Sampling location coordinate system description. Must be Delaware State Plane in meters based on the North American Datum of 1983. <i>Valid Value is: SP NAD 83 DE 0700.</i>	Text (20)	SP NAD 83 DE 0700.
I	observation_date		Date observation or site survey was made.	DateTime	

**BasicLocation Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
J	<b>latitude</b>	Y	Latitude of sampling location in decimal degrees (dd.xxxxxx). Must contain a minimum of 6 six significant figures. <i>Example:</i> 38.5855215044. Only populate one coordinate type. If both are populated, do nothing.	Text (20)	
K	<b>longitude</b>	Y	Longitude of sampling location in decimal degrees. Must be negative for western hemisphere (-ddd.xxxxxx). Must contain a minimum of 6 six significant figures. <i>Example:</i> -75.3018944966. Only populate one coordinate type. If both are populated, do nothing.	Text (20)	
L	<b>alt_coord_type_code</b>	Y	Alternate coordinate system must be Latitude and Longitude based on World Geodetic System 1984 (WGS84) datum. Valid value is LAT LONG	Text (20)	LAT LONG
M	<b>alt_identifier</b>	Y	Use <i>PRIMARY</i> as the alt_identifier code.	Text (20)	PRIMARY
N	<b>horz_collect_method_code</b>	Y	Method used to determine x and y coordinates in DE State Plane NAD83. <i>Example:</i> S1 is for Licensed Professional Land Survey.	Text (3)	rt_coord_horz_method.horz_collect_method_code
O	<b>horz_accuracy_value</b>	Y	Accuracy range (+/-) of the latitude and longitude. Use "0.1" for professional survey, "100" for site centroid, or "10" for all other methods.	Text (20)	
P	<b>horz_accuracy_unit</b>	Y	Unit of the horizontal accuracy.	Text (15)	rt_unit.unit_code
Q	<b>horz_datum_code</b>	Y	Reference datum of the x and y coordinates. Must use valid value from rt_coord_horz_datum.horz_datum_code.	Text (3)	rt_coord_horz_datum.horz_datum_code
R	<b>elev_collect_method_code</b>	If surf_elev is populated then elev_collect_method_cod, elev_accuracy_value, elev_accuracy_unit and elev_datum_code is required.	Method used to determine ground elevation of the sampling location. <i>Example:</i> S1 is for Licensed Professional Land Survey.	Text (3)	rt_coord_elev_method.elev_collect_method_code
S	elev_accuracy_value		Accuracy range (+/-) of the ground elevation. Use "0.1" for professional survey, "1" for all other methods.	Text (20)	
T	elev_accuracy_unit		Unit of the elevation accuracy.	Text (15)	rt_unit.unit_code

**BasicLocation Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
U	<b>elev_datum_code</b>		Reference datum for the elevation measurement. Must use valid value from elev_datum code from the valid_values table. <i>Example: If the elevation references mean sea level, the code is "003".</i>	Text (3)	<b>rt_coord_elev_datum.elev_datum_code</b>
V	source_scale		If coordinates were derived from a published map enter the scale of the map source (e.g. 1 inch = 100 feet)	Text (2)	
W	<b>subcontractor_name_code</b>	<b>Y</b>	Code used to distinguish subcontractor name – the company that collected coordinate and elevation data.	Text (20)	<b>rt_company.company_code</b>
X	verification_code		The verification code should indicate how the survey coordinate/elevation reference point was verified.	Text (20)	
Y	reference_point		If coordinates and elevations were surveyed using a traditional survey method in the field without a GPS, a description of the reference point used as the survey benchmark.	Text (50)	
Z	loc_name		Descriptive name given to a location. This can be the same as the sys_loc_code.	Text (40)	
AA	loc_desc		Sampling location detailed description. <i>Example: "50 feet northwest of dog pen." or "Sample location just inside of northeast corner of property line."</i>	Text (255)	
AB	<b>loc_type</b>	<b>Y</b>	Sampling location type. Use codes in loc_type valid values table. <i>Example: For a monitoring well the code is "MONWELL".</i>  loc_type cannot equal 'BASEMENT', 'CRAWLSPACE', 'FIRST FLOOR', 'IA', 'INDOOR', 'OUTDOOR', 'SUBSLAB', 'UPPER FLOOR', and VAPOR. Those values are reserved for the VI_Locations EDD Section. If the loc_type is associated with a well or 'PZMTR', then a child record must exist in the Well or BasicWell sections.	Text (20)	<b>rt_location_type.location_type_code</b>

**BasicLocation Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AC	loc_purpose		Sampling location purpose. <i>Example: Staining observed on soil.</i>	Text (20)	
AD	subfacility_code	Y	Code indicating the subfacility operable unit (OU) for which the data is collected or area of concern (AOC). Use the code 'OUI' unless there are additional operable units at a facility. In the case of additional operable units, use codes of 'OU2', 'OU3', etc., respectively. Verify the subfacility codes with your DNREC Project Manager.	Text (20)	
AE	<b>within_facility_yn</b>	Y	Indicates whether this sampling location is within facility boundaries, 'Y' for yes or 'N' for no.	Text (1)	
AF	<b>loc_county_code</b>	Y	Location county code; controlled vocabulary using FIPS (Federal Information Processing Standard) codes. Kent=001, New Castle=003, Sussex=005	Text (3)	<b>rt_county.county_code</b>
AG	loc_district_code		Location district code; controlled vocabulary using FIPS codes.	Text (20)	
AH	<b>loc_state_code</b>	Y	Location state code; controlled vocabulary using FIPS codes.	Text (2)	<b>rt_state.state_code</b>
AI	<b>loc_major_basin_huc_8</b>		List the HUC 8. (Example: For HUC 8, enter the entire 8-digit number).	Text (8)	<b>rt_basin.basin_code</b>
AJ	<b>loc_minor_basin_huc_12</b>		List the HUC 12. (Example: For HUC 12, enter entire 12-digit number).	Text (20)	<b>rt_basin.basin_code</b>
AK	total_depth		Total depth below ground surface of boring, in feet.	Numeric	
AL	remark		Location specific comment. Refrain from using commas in the remark field.	Text (255)	
AM	remark_2		Additional location specific comments. Refrain from using commas in the remark field.	Text(255)	

**BasicLocation Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AN	datum_value		Datum elevation, must be in ft or m.	Numeric	
AO	datum_unit		Unit of measure for datum.	Text(15)	
AP	step_or_linear		For re-surveys of well elevations. If a section of the well casing was removed or added use “ <i>step</i> ” as the value. If nothing was added or removed from the last survey, use “ <i>linear</i> ” as the value.	Text(6)	
AQ	datum_collection_method_code		Method used to determine the water level datum elevation.	Text(2)	
AR	datum_desc		Description of the datum. <i>Example: Top of well casing.</i>	Text(255)	
AS	Datum_start_date		Date that current datum was first recorded. MM/DD/YYYY format.	DateTime	
AT	stream_mile		This indicates where in the river or stream (stream_code) the station exists.	Numeric	
AU	stream_code		This indicates the river or stream in which the station exists. Stream_mile indicates where in the river/stream the stations exists.	Text (30)	
AV	parent_loc_code		If the current record is a child location, such as a nested well, or one of the samples that makes up a composite sample, populate the parent_loc_code with the sys_loc_code for the parent location.	Text(20)	

**BasicWell Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u>sys_loc_code</u>	Y	<p>Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   \ ? [ ].</p> <p>Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location or BasicLocation EDD file submitted in the current or previous EDDs.</p>	Text(20)	
B	well_id		DNREC well permit ID. <i>Example: 123456</i>	Text(30)	
C	well_description		Used for additional well description if necessary. <i>Example: Located in right-of-way in front of town hall.</i>	Text(255)	
D	well_owner		Name of entity that owns the well. <i>Example: ACME Associates.</i>	Text(30)	
E	well_purpose		Purpose of well. <i>Example: Installed to track down-gradient plume.</i>	Text(20)	
F	well_status		Current status of well. <i>Example: Active, abandoned, destroyed, etc.</i>	Text(20)	
G	abandonment_date		Date the well was abandoned (MMDDYYYYY format).	DateTime	
H	depth_to_top_of_screen	Y	Depth in feet below ground surface to the top of the well screen. This information is required to obtain the vertical location from which the groundwater sample was taken.	Numeric	
I	depth_to_bottom_of_screen	Y	Depth in feet below ground surface to bottom of well screen. This information is required to obtain the vertical location from which the groundwater sample was taken.	Numeric	
J	top_casing_elev		Elevation of the top of well casing. Elevation must be in feet.	Numeric	

**BasicWell Table**

Table Column#	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
K	datum_value		Datum elevation used for water level measurements. Elevation must be in feet. Typically, this is the elevation of top of well casing. Please visit: <a href="http://help.earthsoft.com/default.asp?W849">http://help.earthsoft.com/default.asp?W849</a> for more information on how datum measurements are used in calculating water levels at well location points.	Numeric	
L	datum_unit		Enter the unit for the datum elevation provided. Elevation units must be in feet.	Text(15)	
M	datum_desc		Description of the datum. <i>Example: Top of well casing.</i>	Text(255)	
N	step_or_linear		For re-surveys of well elevations. If a section of the well casing was removed or added use “step” as the value. If nothing was added or removed from the last survey, use “linear” as the value.	Text(6)	
O	datum_start_date		Date that current datum was first recorded.	DateTime	
P	<a href="#">datum_collection_method_code</a>		Method used to determine the water level datum elevation.	Text(2)	<a href="#">rt_coord_elev_method.elev_collect_method_code</a>
Q	depth_of_well		Depth below ground surface of the well bottom. Must be in feet.	Numeric	
R	depth_unit		Unit of measure for the well datum. Must be feet.	Text(15)	
S	depth_to_bedrock		Depth below ground surface of bedrock. Must be in feet.	Numeric	
T	depth_measure_method		Method of measuring depth of well. <i>Example: Tape down.</i>	Text(20)	
U	stickup_height		Unit of measure for height of well casing above ground surface. This is equal to top of casing elevation minus ground surface elevation.	Text(8)	



**BasicWell Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
V	stickup_unit		Unit of measure for height of well casing above ground surface. Must be feet (ft).	Text(15)	
W	sump_length		Length of sump constructed in well.	Text(20)	
X	sump_unit		Unit of measure for the sump length, must be feet (ft) or meters (m).	Text(15)	
Y	installation_date		Date of well installation in MM/DD/YYYY format.	DateTime	
Z	construct_start_date		Date well construction began in MM/DD/YYYY format.	DateTime	
AA	construct_complete_date		Date well construction was completed in MM/DD/YYYY format.	DateTime	
AB	<b>construct_contractor</b>		Code used to distinguish subcontractor name.	Text(20)	<b>rt_company.company_code</b>
AC	pump_type		Type of pump used at well. <i>Example: centrifugal, propeller, jet, helical, rotary, etc.</i>	Text(20)	
AD	pump_capacity		Pump Rate Capacity: <i>Example: 10.</i>	Text(6)	
AE	<b>pump_unit</b>		Unit of measure for the pump capacity and yield. Use code from rt_unit.unit_code valid value table.	Text(15)	<b>rt_unit.unit_code</b>
AF	pump_yeild		Actual pumping rate. <i>Example: 10 gpm</i>	Text(6)	
AG	pump_yield_method		Method used for pump yield. <i>Example: Flow meter.</i>	Text(20)	
AH	weep_hole		Is there a weep hole? 'Y' for yes or 'N' for no.	Text(1)	
AI	head_configuration		Description of the well head. <i>Example: man-hole entry well vault.</i>	Text(50)	
AJ	access_port_yn		Is there an access port? 'Y' for yes or 'N' for no.	Text(1)	

**BasicWell Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AK	casing_joint_type		Type of casing joint. <i>Example: threaded, flush, or solvent welded.</i>	Text(50)	
AL	perforator_used		Description of well perforation. <i>Example: slotted, drilled, or wound.</i>	Text(50)	
AM	intake_depth		Depth below ground surface of the well intake. Must be in feet.	Numeric	
AN	disinfected_yn		Was well disinfected? 'Y' for yes or 'N' for no.	Text(1)	
AO	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	
AP	<b>DGS_aquifer</b>		Geologic unit in which the well intake is installed. Use established USGS rock unit codes as applicable.	Text(20)	<b>rt_geologic_unit.geologic_unit_code</b>
AQ	remark		Available for general remarks. Refrain from using commas in the remark field.	Text(255)	

**BasicWater\_Level Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
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 DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % != + * < > " ' \ ? [ ].  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location or BasicLocation EDD file submitted in the current or previous EDDs.	Text(20)	
B	<u>measurement_date</u>	Y	Date and time of water level measurement in 'MM/DD/YYYY HH:MM' format.	DateTime	
C	historic_reference_elev		Elevation of the reference point from which depth measurements were taken. Must be in feet above mean sea level.	Numeric	
D	water_level_depth	If dry_indicator_yn = 'N'	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 the surface of a water body or dry water bodies, water level is zero "0", must be in feet (ft).	Numeric	
E	water_level_elev	If dry_indicator_yn = 'N'	Calculated elevation of water level. Elevation must be in feet above mean sea level.	Numeric	
F	Corrected_depth		Depth below reference point 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	
G	Corrected_elev		Elevation of water level after any necessary corrections, e.g., if free product was encountered. Must be in feet (ft).	Numeric	
H	measured_depth_of_well		The actual measured depth below ground surface to the bottom of the well. Must be in feet.	Numeric	
I	<u>depth_unit</u>		Unit of measure for depths and elevations, feet (ft).	Text(15)	<u>rt_unit.unit_code</u>

**BasicWater\_Level Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
J	technician		Name of technician measuring water level. Example: J. Smith.	Text(30)	
K	dry_indicator_yn		Is the well dry? "Y" for yes or "N" for no.	Text(1)	
L	measured_method		Method used to make water level measurements. Example: water level probe.	Text(20)	
M	batch_number		Batch identifier for a group of water level measurements.	Text(10)	
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)	
O	remark		Remark on measurement. Refrain from using commas in the remark field.	Text(255)	
P	<a href="#">lnapl_cas_rn</a>		If light non-aqueous phase liquid (LNAPL) is present in the well, use primary constituent CAS No. from rt_analyte valid value table.	Text(15)	<a href="#">rt_analyte.cas_rn</a>
Q	lnapl_depth		Depth to the top surface of the LNAPL below the reference_point. Must be in feet or meters.	Numeric	
R	<a href="#">dnapl_cas_rn</a>		If dense non-aqueous phase liquid (DNAPL) is present in the well, use primary constituent CAS No. from rt_analyte.cas_rn.	Text(15)	<a href="#">rt_analyte.cas_rn</a>
S	dnapl_depth		Depth to the top surface of the DNAPL below the reference_point. Must be in feet or meters.	Numeric	
T	task_code	<b>Y</b>	Code used to identify the task under which the water levels were collected.	Text(40)	
U	<b><a href="#">reportable_yn</a></b>	<b>Y</b>	Must be either "Y" for water levels which are considered to be reportable and final, or "N" for all other water level readings. This field can be used to distinguish between multiple water level readings where only the final reading would be used for reporting.	Text(1)	

**BasicWater\_Level Table**

<b>Table Column #</b>	<b>Field Name</b>	<b>Required Field (Conditions)</b>	<b>Description</b>	<b>Data Type</b>	<b>Valid Values &lt;Table&gt;.&lt;Field&gt;</b>
V	custom_field_1		Reserved for DNREC future use. Leave NULL.	Text(255)	
W	custom_field_2		Reserved for DNREC future use. Leave NULL.	Text(255)	
X	custom_field_3		Reserved for DNREC future use. Leave NULL.	Text(255)	
Y	custom_field_4		Reserved for DNREC future use. Leave NULL.	Text(255)	
Z	custom_field_5		Reserved for DNREC future use. Leave NULL.	Text(255)	
AA	fld_qualifier		Qualifier field used to flag field samples.	Text(20)	
AB	fld_qualifier_note		Note describing field qualifier applied.	Text(255)	
AC	equipment_code		Unique code used to represent a piece of equipment used for capturing water levels.	Text(60)	
AD	approval_code		Code used to represent the status of the data in EQuIS.	Text(10)	
AE	elev_datum_code		Reference datum for the elevation measurement. Must use valid value from elev_datum code from the valid values table. <i>Example: If the elevation references mean sea level, the code is "003".</i>	Text(20)	
AF	reference_point		The reference point the water level depth is measured from. For example, 'Top of Casing', 'Ground Surface', 'Observation Point', please select one of the valid values.	Text(255)	

**BasicChemistry Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b>data_provider</b>	<b>Y</b>	Must be the valid code for the company that is submitting the data and match a data_provider field of the Data Provider EDD file submitted in the current or previous EDD.	Text(20)	<b>rt_company.company_code</b>
B	<u><b>sys_sample_code</b></u>	<b>Y</b>	<p>Unique sample identifier. Each sample at a facility must have a unique value, including spikes and duplicates. sys_sample_codes cannot match sys_loc_codes. DNREC prefers using the sys_loc_code as part of the sample ID and adding a date in the format (YYYYMMDD) in order to make it unique. For Example: MW-001 + June 06, 2001= MW-001-20010606). For trip blanks that do not have unique sample IDs, enter TB plus the date, e.g., TB + April 5, 2000 = TB-20000405. Non alpha-numeric characters (save for the underscore _ and the dash - characters) are prohibited in the sys_sample_code. Other segments can be added to the sample ID such as information regarding the sample type, sample round, or sample depths. Example: MW-01S_20221024</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   \ ? [ ] ..</p>	Text(40)	
C	sys_loc_code		<p>Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   \ ? [ ] ..</p> <p>Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location or BasicLocation EDD file submitted in the current or previous EDDs.</p>	Text(20)	
D	<b>sample_name</b>	<b>Y</b>	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(50)	
E	<b>sample_matrix_code</b>	<b>Y</b>	Code that distinguishes between different types of sample matrix. <i>Example: Soil samples are coded "SO," Groundwater samples are coded "WG," etc.</i> Must use rt_matrix valid values table.	Text(2)	<b>rt_matrix.matrix_code</b>

**BasicChemistry Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
F	<b>sample_type_code</b>	<b>Y</b>	Code that distinguishes between different types of samples. Use code from rt_sample_type.sample_type_code valid values table. Example: <i>Normal field samples are coded "N", laboratory method blank samples are coded "LB", etc.</i>	Text(20)	<a href="#">rt_sample_type.sample_type_code</a>
G	<b>sample_source</b>	<b>Y</b>	This field identifies where the sample originated. Samples collected in the Field are entered as "FIELD," samples originating in the Lab are entered as "LAB."	Text(10)	
H	parent_sample_code		If the sample is a duplicate, MS/MSD, blind dup, lab dup, etc, input the parent sample "sys_sample_code." For example: A field duplicate "FD" (coded in sample_type_code) is collected for sample MW-001-20010606; therefore, MW-001-20010606 is input into this field. This field is left null for all non-duplicate samples. This field is required when the sample_type_code contains "BD," "FD," "FR," "FS," "LR," "MS," "MSD," or "SD" entries. Parent_sample_code records should be listed in the EDD as sys_sample_codes. Additional information may be found in the EDD manual.	Text(40)	
I	<b>sample_date</b>	<b>Y</b>	Date and time sample was collected (in MM/DD/YYYY HH:MM:SS format).	DateTime	
J	start_depth		Depth to top of sample below ground surface. For surface water samples, use depth below water surface elevation. Depths are required for samples where the matrix is SO or WG. For other matrices it is required when the information is available.	Numeric	
K	start_depth		Depth to bottom of sample below ground surface. For surface water samples, use depth below water surface elevation. Depths are required for samples where the matrix is SO or WG. For other matrices it is required when the information is available.	Numeric	
L	<b>depth_unit</b>		Unit of measure for the start and end depths, feet (ft) or inches (in).	Text(15)	<a href="#">Rt_unit.unit_code</a>
M	composite_yn		Is sample a composite sample?	Text(1)	

**BasicChemistry Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
N	<u>lab_anl_method_name</u>	Y	Laboratory analytical method name or description. Use code from rt_analytic_method.analytic_method valid values table. <i>Example: SW8260, E130.1, etc.</i>	Text(20)	rt_analytic_method.analytic_method
O	<u>analysis_date</u>	Y	Date of sample analysis. May refer to either beginning or end of the analysis as required.	DateTime	
P	<u>fraction</u>	Y	Must be either 'D' for dissolved or filtered [metal] concentration, 'T' for total concentration, or 'NA' for not applicable. TCLP and SPLP are also options for these leaching methods. Must match one of the reported values in the fraction field of the TestResultsQC EDD section submitted in the current EDD.	Text(10)	
Q	<u>column_number</u>	Y	Must be either "1C" for first column analyses, "2C" for second column analyses, or "NA" for analyses for which neither "1C" nor "2C" is applicable. Second column data may not be required, depending on the needs identified by the EQuIS project manager, in which case all results may be reported as "NA". However, if any "2C" tests are reported, then there must be corresponding "1C" tests present also. Also, laboratories typically can report which of the two columns is to be considered "primary". This distinction is handled by the "reportable-result" field in the result table. At project start, EQuIS can be set to always use an asterisk in this field and prevent its appearance on screens or reports.	Text(2)	
R	<u>test_type</u>	Y	Type of test. Use code from rt_test_type.test_type valid values. <i>Examples: 'INITIAL', 'REEXTRACT1', 'REEXTRACT2', 'REEXTRACT3', 'REANALYSIS', 'DILUTION1', 'DILUTION2', and 'DILUTION3'.</i>	Text(10)	rt_test_type.test_type
S	lab_matrix_code		This code distinguishes differences between the matrix that was analyzed, and not the matrix of the sample received. Example: TCLP analysis of a soil sample would report "WL" for leachate not "SO" for soil.	Text(10)	rt_matrix.matrix_code
T	<u>analysis_location</u>	Y	Denotes 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)	



**BasicChemistry Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
U	basis	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)	
V	<b>dilution_factor</b>	Y	Input Effective test dilution factor. <i>Example: 5, 10, 50. If no dilution, use 1.</i>	Numeric	
W	qc_level	Y	Input analysis type. For screening analysis input "SCREEN" ; for quantitative analysis input "QUANT".	Text(10)	
X	<b>lab_sample_id</b>	Y	Laboratory LIMS identifier assigned to the sample. "UNKNOWN-HISTORICAL" is option when this data is not available.	Text(40)	
Y	<b><u>cas_rn</u></b>	Y	Input CAS number code for chemical name. Use code from rt_analyte.cas_rn valid value table.	Text(15)	<b>rt_analyte.chemical_name</b>
Z	<b>chemical_name</b>	Y	Input actual name of chemical. Use name from rt_analyte valid value table.	Text(75)	<b>rt_analyte.chemical_name</b>
AA	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	
AB	<b>result_type_code</b>	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)	<b>rt_result_type.result_type_code</b>

**BasicChemistry Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AC	<b>reportable_result</b>	<b>Y</b>	This field is used to state which results are reportable for a given sample. Use 'Yes' for results that 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 where there can be more than one result per chemical for a sample. Only one of the results should be considered reportable. Example: A sample was diluted and reanalyzed due to a calibration exceedance. The initial analysis will have all results with reportable result = "Yes" except for the chemical that exceeded the calibration. On the dilution analysis all results would have reportable result = "No" except the chemical that exceeded the calibration of the initial test and was the reason for diluting the sample.	Text(10)	
AD	<b>detect_flag</b>	<b>Y</b>	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)	
AE	lab_qualifier		Qualifier flags assigned by the laboratory.	Text(10)	
AF	validator_qualifiers		Qualifier flags assigned by the validator.	Text(10)	
AG	<b>interpreted_qualifiers</b>		Final qualifier flags assigned by the validator. If data will not be validated, then the laboratory must include the lab_qualifiers as the interpreted_qualifiers. Use codes from rt_qualifier.qualifier valid value table.	Text(10)	<b>rt_qualifier.qualifier</b>
AH	<b>validated_yn</b>	<b>Y</b>	Indicates if the result has been validated. <i>Input "Y" for validated and "N" for not validated.</i>	Text(1)	

**BasicChemistry Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AI	reporting_detection_limit		<p>"Concentration level above which results can be quantified with confidence. It must reflect conditions such as dilution factors and moisture content.</p> <p>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.</p> <p>This is the primary field used by EQuIS to report non-detect results with a U qualifier."</p>	Numeric	
AJ	<a href="#">result_unit</a>		Units of measurement for the result. Use code from rt_unit.unit_code valid value table.	Text(15)	<a href="#">rt_unit.unit_code</a>
AK	<a href="#">detection_limit_unit</a>		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)	<a href="#">rt_unit.unit_code</a>
AL	method_detection_limit		<p>"Lowest concentration that can be detected by an instrument with correction for the effects of sample matrix and method-specific parameters such as sample preparation.</p> <p>MDLs are explicitly determined as set forth in 40 CFR Part 136. They are defined as three times the standard deviation of replicate spiked analyses. This represents 99% confidence that the analyte concentration is greater than zero.</p> <p>The organic methods in the EPA 500 series, EPA 600 series, and Standard Methods all give typical MDLs for clean water samples. Generally, these clean-water MDLs (corrected for %moisture, sample size, and dilution) are used for reporting limits, but the laboratory may use MDLs that they have generated. MDLs generated by the laboratory using the sample matrix of interest are the most reliable. If the clean-water MDLs are used, remember that they do not include all of the upward correction necessary to account for the effects of sample matrix. This is important to remember especially for risk assessments and highly contaminated samples."</p>	Text(20)	

**BasicChemistry Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AM	quantitation_limit		<p>"Quantitation limits refer to a minimum concentration of an analyte that can be measured within specified limits of precision and accuracy. They are generally 5-10 times the detection limit.</p> <p>Thus, when quantitation limits are used as reporting limits, the laboratory is saying that the analyte is not present in a sufficient amount to be reliably quantified (i.e., at a concentration above the quantitation limit).</p> <p>It may be present and even positively identified or """"seen"""" at a lower concentration."</p>	Text(20)	
AN	task_code		Code used to identify the task under which the samples were collected. Example: SC= Site Characterization; RD=Remedial Design; RIFS=Remedial Investigation/Feasibility Study; RA=Remedial Action; IRA=Interim Remedial Action; LTS=Long-Term Stewardship Phase; PM=Periodic Monitoring; NRS=Non-Routine Sampling.	Text(40)	
AO	result_comment		Result specific comments. Refrain from using commas in the comment field.	Text(255)	
AP	lab_sdg		Lab Sample Delivery Group (SDG) identifier. A single sample may be assigned to multiple Sample Delivery Group (SDG) based on different analysis.	Text(20)	
AQ	validation_level		Validation level.	Text(20)	
AR	<b>lab_name_code</b>		Code used to distinguish laboratory name.	Text(20)	<b>rt_company.company_code</b>

**BasicGeology Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
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 DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ] .  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location or BasicLocation EDD file submitted in the current or previous EDDs.	Text(20)	
B	<u>start_depth</u>	Y	Depth to top of lithologic unit below ground surface. Must be in feet.	Numeric	
C	<u>end_depth</u>	Y	Depth to bottom of lithologic unit below ground surface. Must be in feet.	Numeric	
D	<u>material_type</u>	Y	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)	rt_material.material_name
E	<u>geo_unit_code_1</u>	Y	The data provider's interpretation of the hydrogeologic unit present at this lithologic unit. <i>Example: Upper aquifer, lower aquifer, Magothy aquifer, upper confined aquifer, glacial aquifer, etc.</i>	Text(20)	rt_geologic_unit.geologic_unit_code
F	<u>geo_unit_code_2</u>	Y	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)	rt_geologic_unit.geologic_unit_code
G	remark		Comment on the lithologic unit. Refrain from using commas in the remark field.	Text(255)	

**VI\_Bldg\_Address Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b>building_code</b>	Y	Unique code that identifies the building within the facility (i.e. <i>B001, B002, etc.</i> ) For additional information, please refer to the EDD Manual.	Text(20)	
B	subfacility_code		Code indicating the subfacility operable unit (OU) for which the data is collected or area of concern (AOC). Use the code ' <i>OUI</i> ' unless there are additional operable units at a facility. In the case of additional operable units, use codes of ' <i>OU2</i> ', ' <i>OU3</i> ', <i>etc.</i> , respectively. Must match the code in the Subfacility EDD section submitted in the current or previous EDDs.	Text(20)	
C	<b>task_code</b>	Y	For soil vapor intrusion sampling and building inspection information enter " <i>SVI</i> ".	Text(40)	
D	<b>contact_name</b>	Y	Building Contact Name: This should be populated with the DNREC project manager name. Occupant or Owner personal information (Name, telephone numbers, and address) are not to be included for SVI Building Information.	Text(50)	
E	<b>address1</b>	Y	Building Street Address Line 1 <i>Example: 391 Lukens Drive</i>	Text(40)	
F	address2		Building Street Address Line 2	Text(40)	
G	<b>city</b>	Y	Building city. <i>Example: New Castle</i>	Text(30)	
H	<b>county</b>		Building county. Use code from rt_county.county_code valid values table. <i>Example: Kent, New Castle, or Sussex</i>	Text(50)	<b>rt_county.county_code</b>
I	<b>state</b>	Y	Building state. Use code from rt_state.state_code valid value table. <i>Example: DE</i>	Text(30)	<b>Rt_state.state.code</b>
J	<b>zip_code</b>	Y	Building zip code. <i>Example: 19720</i>	Text(10)	
K	phone_number		Leave this field NULL: Occupant or Owner personal information (Name, telephone numbers, and address) are not to be included for SVI Building Information.	Text(30)	

**VI\_Bldg\_Address Table**

<b>Table Column #</b>	<b>Field Name</b>	<b>Required Field (Conditions)</b>	<b>Description</b>	<b>Data Type</b>	<b>Valid Values &lt;Table&gt;.&lt;Field&gt;</b>
L	alt_phone_number		Leave this field NULL: Occupant or Owner personal information (Name, telephone numbers, and address) are not to be included for SVI Building Information.	Text(30)	
M	fax_number		Leave this field NULL: Occupant or Owner personal information (Name, telephone numbers, and address) are not to be included for SVI Building Information.	Text(30)	
N	email_address		Leave this field NULL: Occupant or Owner personal information (Name, telephone numbers, and address) are not to be included for SVI Building Information.	Text(100)	
O	remark		Remarks regarding building. Refrain from using commas in the remark field.	Text(2000)	
P	remark2		Remarks regarding building. Refrain from using commas in the remark field.	Text(2000)	

**VI\_Building\_Inspection Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b><u>building_code</u></b>	Y	Unique code that identifies the building within the facility ( <i>i.e. B001, B002, etc.</i> ). Must be a valid building_code and match the building_code field in the current EDD.	Text(20)	
B	<b><u>inspection_date</u></b>	Y	Please enter the date the building inspection was conducted in MM/DD/YYYY HH:MM:SS format.	DateTime	
C	<b>task_code</b>	Y	For soil vapor intrusion sampling and building inspection information enter "SVI".	Text(40)	
D	<b>building_name</b>	Y	Building name ( <i>i.e. Denison Medical Building</i> ).	Text(255)	
E	<b>building_type</b>	Y	Type of building. Use code from rt_building_type.building_type valid value table. <i>Example: Residential, Industrial, etc.</i>	Text(20)	rt_building_type.building_type
F	<b>building_use_type</b>	Y	Enter the building's use type from rt_building_use_type.building_use_type valid value table. <i>Example: Dry Cleaners, Single Family, Multi-use Residence</i>	Text(20)	rt_building_use_type.building_use_type
G	building_size		Size of building. Input, "Small", "Medium", or "Large".	Text(20)	
H	num_floor		Input number of floors in the building	Numeric	
I	construction_year		Input year of construction.	Numeric	
J	foundation_depth		Input foundation depth below ground surface.	Numeric	
K	foundation_depth_unit		Unit of measurement for Foundation depth.	Text(15)	
L	<b>foundation_type</b>	Y	Foundation type. <i>Example: Basement, crawlspace, etc.</i>	Text(20)	rt_foundation_type.foundation_type
M	foundation_wall_material		Foundation wall material. Use code from rt_material.material_name valid value. <i>Example: Poured Concrete.</i>	Text(20)	



**VI\_Building\_Inspection Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
N	foundation_floor_material		Foundation floor material. Use code from rt_material.material_name valid value. <i>Example: Poured Concrete.</i>	Text(20)	
O	foundation_wall_thickness		Foundation wall thickness.	Numeric	
P	foundation_floor_thickness		Foundation floor thickness.	Numeric	
Q	foundation_thickness_unit		Foundation thickness units.	Text(15)	
R	attached_garage_yn		Existence of an attached garage (Y/N)?	Text(1)	
S	radon_mitigation_yn		Existence of radon mitigation system (Y/N)?	Text(1)	
T	heat_fuel_type		Type of heating fuel. <i>Example: Oil, Gas, Wood, Electric, Other, or None.</i>	Text(255)	
U	heat_system_type		Type of heating system. <i>Example: Forced hot air, Radiant Heating, Hot Water Baseboard, Steam Radiant, Geothermal, Other, or None.</i>	Text(255)	
V	central_air_yn		Existence of central air system (Y/N)?	Text(1)	
W	sump_yn		Existence of sump pump (Y/N)?	Text(1)	
X	voc_mitigation_yn		Existence of VOC mitigation flag (Y/N)?	Text(1)	
Y	remark		Building remarks. Refrain from using commas in the remark field.	Text(2000)	
Z	custom_field_1		Reserved for DNREC future use. Leave NULL.	Text(255)	
AA	custom_field_2		Reserved for DNREC future use. Leave NULL.	Text(255)	
AB	custom_field_3		Reserved for DNREC future use. Leave NULL.	Text(255)	
AC	custom_field_4		Reserved for DNREC future use. Leave NULL.	Text(255)	
AD	custom_field_5		Reserved for DNREC future use. Leave NULL.	Text(255)	

**VI\_Building\_Parameter Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b><u>building_code</u></b>	Y	Unique code that identifies the building within the facility ( <i>i.e.</i> B001, B002, etc.) For additional information, please refer to the EDD Manual.	Text(20)	
B	<b><u>param_code</u></b>	Y	A unique parameter code designed for buildings such as the Soil Vapor Intrusion Building Inventory Form parameters found on rt_subfacility_parameter_type.	Text(20)	<b>rt_subfacility_param_type.param_code</b>
C	<b>task_code</b>	Y	For soil vapor intrusion sampling and building inspection information enter “SVI”.	Text(40)	
D	<b>measurement_date</b>	Y	The specific date the measurement was collected. For Soil Vapor Intrusion form data the date should be the building inspection date. DD/MM/YYYY HH:MM:SS format.	DateTime	
E	<b>param_value</b>	Y	The value related to the parameter code used.	Text(255)	
F	param_unit		The corresponding unit that relates to the parameter value used.	Text(15)	
G	remark		A comment or other free text to further describe the parameter code or parameter value. Refrain from using commas in the remark field.	Text(2000) )	

**VI\_Location Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b>data_provider</b>	Y	Data provider for location data. Must be the valid code for the data provider for this subfacility and match the data_provider field of the DataProvider EDD file submitted in the current or previous EDDs.	Text (20)	<b>rt_company.company_code</b>
B	<b><u>sys_loc_code</u></b>	Y	Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " ' \ ? [ ].  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.	Text (20)	
C	<b>building_code</b>	Y	Must be the valid code for a building and match the building_code field in the VI_Bldg_Address EDD file submitted in the current or previous EDD.	Text (20)	
D	<b>easting</b>	Y	The x-coordinate in a coordinate system. Note: Multiple sys_loc_codes can share the same coordinates if a centroid point is used to represent sample locations in a building	Numeric	
E	<b>northing</b>	Y	The y-coordinate in a coordinate system. Note: Multiple sys_loc_codes can share the same coordinates if a centroid point is used to represent sample locations in a building	Numeric	
F	<b>coord_sys_desc</b>	Y	Sampling location coordinate system description. Must be Delaware State Plane in meters based on the North American Datum of 1983. <i>Valid Value is: SP NAD 83 DE 0700.</i>	Text (20)	
G	observation_date		Date observation or site survey was made. DD/MM/YYYY HH:MM:SS format.	DateTime	

**VI\_Location Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
H	latitude		x-Coordinate in alternate system.	Text (20)	
I	longitude		y-Coordinate in alternate system.	Text (20)	
J	alt_coord_type_code		Must reference alternate coordinate system type code. LAT LONG	Text (20)	
K	alt_identifier		Use <i>PRIMARY</i> as the alt_identifier code.	Text (20)	
L	<b>horz_collect_method_code</b>	<b>Y</b>	Method used to determine latitude/longitude. <i>Example: S1 is for NYS Licensed Professional Land Survey.</i>	Text (3)	<b>rt_coord_horz_method.horz_collect_method_code</b>
M	<b>horz_accuracy_value</b>	<b>Y</b>	Accuracy range (+/-) of the latitude and longitude. <i>Use "0.1" for professional survey, "100" for site centroid, or "10" for all other methods.</i>	Text (20)	
N	<b>horz_accuracy_unit</b>	<b>Y</b>	Unit of the horizontal accuracy.	Text (15)	
O	<b>horz_datum_code</b>	<b>Y</b>	This is the reference datum for the original survey coordinates. <i>Example: If the latitude and longitude were calculated from a NAD83 survey, the code would be "002". If the coordinates are directly from a GPS survey, enter "003" for WGS84.</i>	Text (3)	<b>rt_coord_horz_datum.horz_datum_code</b>
P	source_scale		If coordinates were derived from a published map, enter the scale of the map source (e.g., 1 inch = 100 feet).	Text (2)	
Q	<b>subcontractor_name_code</b>		Code used to distinguish subcontractor name.	Text (20)	<b>rt_company.company_code</b>
R	verification_code		The verification code should indicate how the survey coordinate/elevation reference point was verified.	Text (20)	

**VI\_Location Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
S	reference_point		If coordinates and elevations were surveyed using a traditional survey method in the field without a GPS, a description of the reference point used as the survey benchmark.	Text (50)	
T	loc_name		Provide a more detailed name for sample location. 40 characters. <i>For example, "Laundry Room Soil Vapor Sample Location."</i>	Text (40)	
U	loc_desc		Sampling location detailed description. Example: "Laundry room sample collected 4 feet above ground surface to capture breathing zone."	Text (255)	
V	<b>loc_type</b>	<b>Y</b>	Sampling location type. Use codes in loc_type valid values table for Soil Vapor Intrusion. Options include: <i>BASEMENT, CRAWLSPACE, FIRST FLOOR, OUTDOOR, SUBSLAB, and UPPER FLOOR.</i>	Text (20)	
Q	loc_purpose		Sampling location purpose. <i>Example: "Odors detected in basement," "Visible Floor Penetrations."</i>	Text (20)	
R	<b>within_facility_yn</b>	<b>Y</b>	Indicates whether this sampling location is within facility boundaries, 'Y' for yes or 'N' for no.	Text (1)	
S	<b>loc_county_code</b>	<b>Y</b>	Location county code; controlled vocabulary using FIPS (Federal Information Processing Standard) codes. Found within the valid values tables. Example: '001' for New Castle.	Text (20)	<b>rt_county.county_code</b>
T	<b>loc_state_code</b>	<b>Y</b>	Location state code; controlled vocabulary using FIPS codes.	Text (2)	<b>rt_state.state_code</b>
U	remark		Location specific comment. Refrain from using commas in the remark field.	Text (255)	
V	Remark_2		Additional location specific comments. Refrain from using commas in the remark field.	Text (255)	

**VI\_Outdoor\_Location Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u>sys_loc_code</u>	Y	<p>Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.</p> <p>Value cannot contain any of the following special characters: \$ @ &amp; # % ! = + * &lt; &gt; " '   \ ? [ ].</p> <p>Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.</p>	Text (20)	
B	<u>building_loc_type_code</u>	Y	The default building_loc_type should be <i>OUTDOOR</i> .	Text (10)	
C	<u>building_code</u>	Y	Must be the valid code for a building and match the building_code field in the VI_Bldg_Address EDD file submitted in the current EDD.	Text (20)	

**VI\_Sample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<b>data_provider</b>	<b>Y</b>	Must be the valid code for the company that is submitting the data and match a data_provider field of the DataProvider EDD file submitted in the current EDD.	Text(20)	<b>rt_company.company_code</b>
B	<b><u>sys_sample_code</u></b>	<b>Y</b>	Unique sample identifier. Recommend naming based on sample matrix, building_code, valid value table rt_location.location_type_code and date (YYYYMMDD). <i>For example: AS-001_Basement_20110425.</i> Non alpha-numeric characters (save for the underscore _ and the dash - characters) are prohibited in the sys_sample_code.	Text(40)	
C	<b>sample_name</b>	<b>Y</b>	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(50)	
D	<b>sample_matrix_code</b>	<b>Y</b>	Code that distinguishes between different types of sample matrix.	Text(4)	<b>rt_matrix.matrix_code</b>
E	<b>sample_type_code</b>	<b>Y</b>	Code that distinguishes between different types of samples. Use code from rt_sample_type.sample_type_code valid values table. <i>Example: Normal field samples are coded "N", laboratory method blank samples are coded "LB", etc.</i>	Text(20)	<b>rt_sample_type.sample_type_code</b>
F	<b>sample_source</b>	<b>Y</b>	This field identifies where the sample originated. Samples collected in the Field are entered as " <i>FIELD</i> ," samples originating in the Lab are entered as " <i>LAB</i> ."	Text(10)	
G	parent_sample_code		If the sample is a duplicate, MS/MSD, blind dup, lab dup, etc, input the parent sample "sys_sample_code." For example: A field duplicate "FD" (coded in sample_type_code) is collected for sample MW-001-20010606; therefore, MW-001-20010606 is input into this field. This field is left null for all non-duplicate samples. This field is Required when the sample_type_code contains "BD," "FD," "FR," "FS," "LR," "MS," "MSD," or "SD" entries. Parent_sample_code records should be listed in the EDD as sys_sample_codes. Additional information may be found in the EDD manual.	Text(40)	

**VI\_Sample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
H	<b>sample_delivery_group</b>	<b>Y</b>	This is the laboratory sample delivery group.	Text(20)	
I	<b>sample_start_date</b>	<b>Y</b>	Date and time sample was collected (in MM/DD/YYYY HH:MM:SS format). This is the date that labs should report as the sample date.	DateTime	
J	sys_loc_code		Location identifier of sample collection, soil boring, or well installation. Use sample location ID. Must be unique for each DNREC site. Examples: MW-01, A-1, SB6, etc.  Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " '   \ ? [ ] .  Must be a valid sys_loc_code for this facility and match the sys_loc_code field in the Location EDD file submitted in the current or previous EDDs.	Text(20)	
K	chain_of_custody		Chain of custody identifier. Note: A single sample may be assigned to only one chain of custody.	Text(40)	
L	sent_to_lab_date		Shipping date sample was sent to lab (in MM/DD/YYYY HH:MM:SS format).	DateTime	
M	sample_receipt_date		Date that sample was received at laboratory (in MM/DD/YYYY HH:MM:SS format).	DateTime	
N	sampler		Person who took the sample.	Text(50)	
O	<b>sampling_company_cod</b>	<b>Y</b>	Company Code of sampling company.	Text(20)	<a href="#">rt_company.company_code</a>
P	sampling_reason		Reason for sampling.	Text(30)	
Q	sample_method		Sampling method. <i>Example: Summa Cannister.</i>	Text(40)	
R	<b>task_code</b>	<b>Y</b>	For soil vapor intrusion sampling and building inspection information enter "SVI."	Text(40)	
S	sample_end_date		Date and time sample collection was completed. Input in MM/DD/YYYY HH:MM:SS format	DateTime	



**VI\_Sample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
T	sample_duration		The sampling duration.	Text(20)	
U	sample_duration_unit		Sample duration units. Use code from rt_unit.unit_code valid value table.	Text(15)	
V	sloor_material		Lowest level floor material at sample location. Use code from rt_material.material_name valid value table.	Text(20)	
W	slab_thickness		Slab thickness at sample location (in inches)	Text(20)	
X	subslab_material		Material found below the foundation floor. Use code from rt_material.material_name valid value table.	Text(20)	
Y	subslab_moisture		Moisture content at subslab sample location. <i>Example: Dry, Damp, Saturated, etc.</i>	Text(20)	
Z	shut-in_yn		Did the sample pass the Shut-in test (Y/N)?	Text(1)	
AA	seal_adequate_yn		Did the sample probe seal pass the O2 test (Y/N)?	Text(1)	
AB	purge_yn		Was the sample equipment purged in accordance with work plan (Y/N)?	Text(1)	
AC	purge_pid		Photo-Ionization Detector (PID) instrument reading.	Numeric	
AD	purge_pid_unit		PID instrument reading units. ( <i>i.e. ppbv</i> ).	Text(15)	
AE	vac_gauge_initial		Vacuum gauge reading immediately after start.	Numeric	
AF	vac_gauge_final		Vacuum gauge reading immediately before end.	Numeric	
AG	vac_gauge_unit		Vacuum gauge instrument units. ( <i>i.e. inches of water</i> ).	Text(15)	
AH	vapor_loc_desc		Soil vapor intrusion location description.	Text(255)	
AI	remark		Remark. Refrain from using commas in the remark field.	Text(2000)	

**VI\_Sample Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AJ	tracer_test_conducted_yn	Y	Enter a Y to indicate that the helium tracer tests were conducted and passed for any sub slab samples.	Text(1)	
AN	custom_field_1		Reserved for DNREC future use. Leave NULL.	Text(20)	
AO	custom_field_2		Reserved for DNREC future use. Leave NULL.	Text(50)	
AP	custom_field_3		Reserved for DNREC future use. Leave NULL.	Text(50)	
AQ	custom_field_4		Reserved for DNREC future use. Leave NULL.	Text(50)	
AR	custom_field_5		Reserved for DNREC future use. Leave NULL.	Text(50)	
AS	comments		Comments on sampling. Refrain from using commas in the comment field.	Text(255)	

**VI\_TestResultsQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u>sys_sample_code</u>	Y	Unique sample identifier. Recommend naming based on sample matrix, building_code, valid value table rt_location.location_type_code and date (YYYYMMDD). <i>For example: AS-001_Basement_20110425.</i> Non alpha-numeric characters (save for the underscore _ and the dash - characters) are prohibited in the sys_sample_code.	Text(40)	
B	<u>lab_anl_method_name</u>	Y	Laboratory analytical method name or description. Example: TO-15. Must use rt_analytic_method valid values table.	Text(20)	rt_analytic_method.analytic_method
C	<u>analysis_date</u>	Y	Date and time of sample analysis in 'MM/DD/YYYY HH:MM:SS' format. May refer to either beginning or end of the analysis as required.	DateTime	
D	<u>fraction</u>	Y	For soil vapor intrusion samples enter "NA" for not applicable.	Text(10)	
E	<u>column_number</u>	Y	For SVI air samples report as "NA" for not applicable. Contact DNREC PM if data provider has a need for reporting something else in this field.	Text(2)	
F	<u>test_type</u>	Y	Type of test. Valid values include 'Initial', 'Reextract1', 'Reextract2', 'Reextract3', 'Reanalysis', 'Dilution1', 'Dilution2', and 'Dilution3'.	Text(10)	rt_test_type.test_type
G	<u>lab_matrix_code</u>	Y	Code designating matrix as categorized by the laboratory. Laboratories can identify a sample matrix differently than a field team identifies it on the VI_Sample or Sample EDD sample matrix code fields. This is OK as long as valid values from rt_matrix is used. Samples will be reported out by their field sample matrix code.	Text(4)	
H	<u>analysis_location</u>	Y	Denotes location of analysis. Must be either 'FT' for field instrument or probe, 'FL' for mobile field laboratory analysis, or 'LB' for fixed_based laboratory analysis.	Text(2)	

**VI\_TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
I	<b>basis</b>	<b>Y</b>	For SVI samples enter “NA” for not applicable. Other options are either 'Wet' for wet_weight basis reporting or 'Dry' for dry_weight basis reporting.	Text(10)	
J	container_id		Report the SUMMA canister ID in this field for SVI samples.	Text(30)	
K	<b>dilution_factor</b>	<b>Y</b>	Effective test dilution factor. If the value is less than 1, then put 'concentration factor' in the comment column.	Numeric	
L	<b>prep_method</b>		Laboratory sample preparation method name or description. Use code from rt_prep_method.prep_method valid values table.	Text(20)	<b>rt_prep_method.prep_method</b>
M	prep_date		Beginning date and time of sample preparation in 'MM/DD/YYYY HH:MM:SS' format.	DateTime	
N	<b>lab_name_code</b>		Unique identifier of the laboratory as defined by the DNREC. Controlled vocabulary, see lab valid value table in the appendix.	Text(20)	<b>rt_company.company_code</b>
O	qc_level		May be either 'screen' or 'quant'.	Text(10)	
P	lab_sample_id		Laboratory LIMS identifier assigned to the sample.	Text(40)	
Q	percent_moisture		Input Percent moisture of the sample portion used in this test. Report in numeric format to two decimal places. Example: 70.5% will be reported as 70.50.	Text(5)	
R	subsample_amount		Amount of sample used for test.	Text(14)	
S	<b>subsample_amount_unit</b>		Unit of measurement for subsample amount. Controlled vocabulary, see Unit valid values table in appendix.	Text(15)	<b>rt_unit.unit_code</b>
T	analyst_name		Laboratory technician name or initials conducting the analysis.	Text(30)	

**VI\_TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
U	instrument_id		ID or name of instrument used in the laboratory during analysis.	Text(50)	
V	comments		Comments about the test as necessary. Refrain from using commas in the comment field.	Text(255)	
W	<b>perservative</b>		Sample preservative used.	Text(20)	<b>rt_preservative.preservative</b>
X	final_volume		The final volume of the sample after sample preparation. Include all dilution factors.	Numeric	
Y	<b>final_volume_unit</b>		The unit of measure that corresponds to the final_volume.	Text(15)	<b>rt_unit.unit_code</b>
Z	<b><u>cas_rn</u></b>	<b>Y</b>	Use values in analyte valid value table.	Text(15)	<b>rt_analyte.cas_rn</b>
AA	<b>chemical_name</b>	<b>Y</b>	Use the name in the analyte valid value table.	Text(75)	<b>rt_analyte.chemical_name</b>
AB	result_value		Analytical results reported at an appropriate number of significant digits. May be blank for non-detects.	Numeric	
AC	<b>result_unit</b>		Units of measurement for the result. Controlled vocabulary, see Units valid value table in the appendix.	Text(15)	<b>rt_unit.unit_code</b>
AD	result_error_delta		Error range applicable to the result value; typically used only for radiological results.	Text(20)	
AE	<b>result_type_code</b>	<b>Y</b>	Must be either 'TRG' for a target or regular result, 'TIC' for tentatively identified compounds, 'SUR' for surrogates, 'IS' for internal standards, or 'SC' for spiked compounds.	Text(10)	<b>rt_result_type.result_type_code</b>
AF	<b>reportable_result</b>	<b>Y</b>	Must be either 'Yes' for results that are considered to be reportable, or 'No' for other results. This field has many purposes. For example, it can be used to distinguish between multiple results where a sample is retested after dilution. It can also be used to indicate which of the first or second column result should be considered primary. The proper value of this field in both of these two examples should be provided by the laboratory (only one result should be flagged as reportable).	Text(10)	

**VI\_TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AG	<b>detect_flag</b>	<b>Y</b>	Maybe either 'Y' for detected analytes or 'N' for non-detects. Use 'Y' for estimated (above detection limit but below the quantitation limit) or '<' and '>' for tests such as flash point. Note that '<' must not be used to indicate non-detects (use 'N' for non-detects instead).	Text(2)	
AH	lab_qualifier		Qualifier flags assigned by the laboratory.	Text(10)	
AI	validator_qualifiers		Qualifier flags assigned by the validation firm.	Text(10)	
AJ	<b>interpreted_qualifiers</b>		Final qualifier flags assigned by the validator. If data will not be validated, then the laboratory must include the lab_qualifiers as the interpreted_qualifiers. Use codes from rt_qualifier.qualifier valid value table.	Text(10)	<b>rt_qualifier.qualifier</b>
AK	<b>validated_yn</b>	<b>Y</b>	Indicates if the result has been validated. "Y" for validated, "N" for not validated.	Text(1)	
AL	method_detection_limit		"Lowest concentration that can be detected by an instrument with correction for the effects of sample matrix and method-specific parameters such as sample preparation.  MDLs are explicitly determined as set forth in 40 CFR Part 136. They are defined as three times the standard deviation of replicate spiked analyses. This represents 99% confidence that the analyte concentration is greater than zero."	Numeric	
AM	reporting_detection_limit		"Concentration level above which results can be quantified with confidence. It must reflect conditions such as dilution factors.  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.  This is the primary field used by EQUIS to report non-detects with a U qualifier."	Numeric	<b>rt_unit.unit_code</b>

**VI\_TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AN	quantitation_limit		<p>"Quantitation limits refer to a minimum concentration of an analyte that can be measured within specified limits of precision and accuracy. They are generally 5-10 times the detection limit.</p> <p>Thus, when quantitation limits are used as reporting limits, the laboratory is saying that the analyte is not present in a sufficient amount to be reliably quantified (i.e., at a concentration above the quantitation limit).</p> <p>It may be present and even positively identified or ""seen"" at a lower concentration."</p>	Numerid	
AO	<b>detection_limit_unit</b>		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)	<b>rt_unit.unit_code</b>
AP	tic_retention_time		TIC retention time. Required for TIC result types.	Text(8)	
AQ	minimum_detectable_conc		Minimum detectable concentration or activity. This value should be in the same units as the result_value.	Numeric	
AR	count_error		Counting error as reported by the laboratory. This value should be in the same units as the result_value.	Numeric	
AS	uncertainty		The uncertainty of the counting error, valid values include " <i>1 sigma</i> " or " <i>2 sigma</i> ". This field is required if the counting_error field is populated.	Text(10)	
AT	critical_value		Critical value as reported by the laboratory.	Numeric	
AU	validation_level		Validation level. Use one of the following: Raw, DUSR, Category A, Category B, or Unknown.	Text(20)	

**VI\_TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
AV	result_comment		Result specific comments. Refrain from using commas in the comment field.	Text(255)	
AW	qc_original_conc		The concentration of the analyte in the original (unspiked) sample. Might be required for spikes and spike duplicates (depending on user needs). Not necessary for surrogate compounds or LCS samples (where the original concentration is assumed to be zero).	Numeric	
AX	qc_spike_added		The concentration of the analyte added to the original sample. Might be required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample (depending on user needs).	Numeric	
AY	qc_spike_measured		The measured concentration of the analyte. Use <i>zero</i> for spiked compounds that were not detected in the sample. Might be required for spikes, spike duplicates, surrogate compounds, LCS and any spiked sample (depending on user needs).	Numeric	
AZ	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	
BA	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	
BB	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	



**VI\_TestResultQC Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
BC	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	
BD	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	
BE	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)	
BF	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)	
BG	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)	
BH	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)	

**VI\_TestResultQC Table**

<b>Table Column #</b>	<b>Field Name</b>	<b>Required Field (Conditions)</b>	<b>Description</b>	<b>Data Type</b>	<b>Valid Values &lt;Table&gt;.&lt;Field&gt;</b>
BH	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)	
BI	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 duplicate sample.	Text(10)	
BJ	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 duplicate sample.	Text(10)	
BK	lab_sdg		Lab Sample Delivery Group (SDG) identifier. A single sample may be assigned to multiple Sample Delivery Group (SDG) based on different analysis.	Text(20)	

**VI\_Batch Table**

Table Column #	Field Name	Required Field (Conditions)	Description	Data Type	Valid Values <Table>.<Field>
A	<u>sys_sample_code</u>	Y	Unique sample identifier. Recommend naming based on sample matrix, building_code, valid value table rt_location.location_type_code and date (YYYYMMDD). <i>For example: AS-001_Basement_20110425.</i> Non alpha-numeric characters (save for the underscore _ and the dash - characters) are prohibited in the sys_sample_code.	Text(40)	
B	<u>lab_anl_method_name</u>	Y	Laboratory analytical method name or description. Example: TO-15. Must use rt_analytic_method valid values table. Must match one of the reported values in the lab_anl_method_name field of the VI_TestResultsQC EDD table submitted in the current EDD.	Text(20)	rt_analytic_method.analytic_method
C	<u>analysis_date</u>	Y	Date and time of sample analysis in 'MM/DD/YYYY HH:MM:SS' format. May refer to either beginning or end of the analysis as required. Must match one of the reported values in the analysis_date field of the VI_TestResultsQC EDD table submitted in the current EDD.	DateTime	
D	<u>fraction</u>	Y	For soil vapor intrusion samples enter "NA" for not applicable.	Text(10)	rt_fraction.fraction
E	<u>column_number</u>	Y	For SVI air samples report as "NA" for "Not Applicable". Contact DNREC Project Manager if data provider has a need for reporting something else in this field.	Text(2)	
F	<u>test_type</u>	Y	Type of test. <i>Example enter "INITIAL" or "REANALYSIS".</i> See rt_test_type valid values table for a list of options. Must match one of the reported values in the test_type field on the VI_TestResultsQC EDD table submitted in the current EDD.	Text(10)	rt_test_type.test_type
G	<u>test_batch_type</u>	Y	Lab batch type. Valid values include 'PREP', and 'ANALYSIS'. This is a required field for all batches.	Text(10)	
H	<u>test_batch_id</u>	Y	Unique identifier for all lab batches.	Text(20)	