

EQuIS Electronic Data Processor User Guide and QuickStart Guide

Department of Natural Resources and Environmental Control
(DNREC)



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November 2023

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Appendix A: DNREC’s Electronic Data Processor (EDP) QuickStart Guide for Data Providers

I. 1. The Standalone EQulS Data Processor

The Standalone EQulS Data Processor (EDP) is a software program used to check data prior to loading into the Delaware Department of Natural Resources and Environmental Control's (DNREC's) EQulS database. The purpose of the EDP is to identify incorrect valid values, missing information or data that contradicts the business rules of the database. There are two desktop modes of EDP: Standalone and Professional. Professional EDP is linked directly to the database and can be used to check and load data into the database. This manual only addresses the Standalone EDP which was designed to assist data providers with checking their data prior to submitting it to clients or regulators to ensure high data quality as well as to streamline the data submittal process.

EDP checks all of the following data quality issues:

- Required Fields
- Field Lengths
- Data Types
- Valid Dates
- Reference Values
- Duplicate Rows
- Range Checking
- Program Business Rules

1.1 Getting Started

Data providers first need to obtain the following:

- Standalone EDP
- DNREC Format Files
- DNREC References Values

The EDP, the DNREC format file, and the DNREC reference value file are all available for download by DNREC data providers on the DNREC EDP Download page:

- <http://www.earthsoft.com/products/edp/edp-format-for-dnrec/>.

Note: Directions for installing the EDP and registering the DNREC format are described in Appendix A of this user guide.

Start EDP by selecting **Programs > EarthSoft > EQulS Data Processor** from the **Start Menu**. The EQulS Data Processor opens on the main EDP screen.

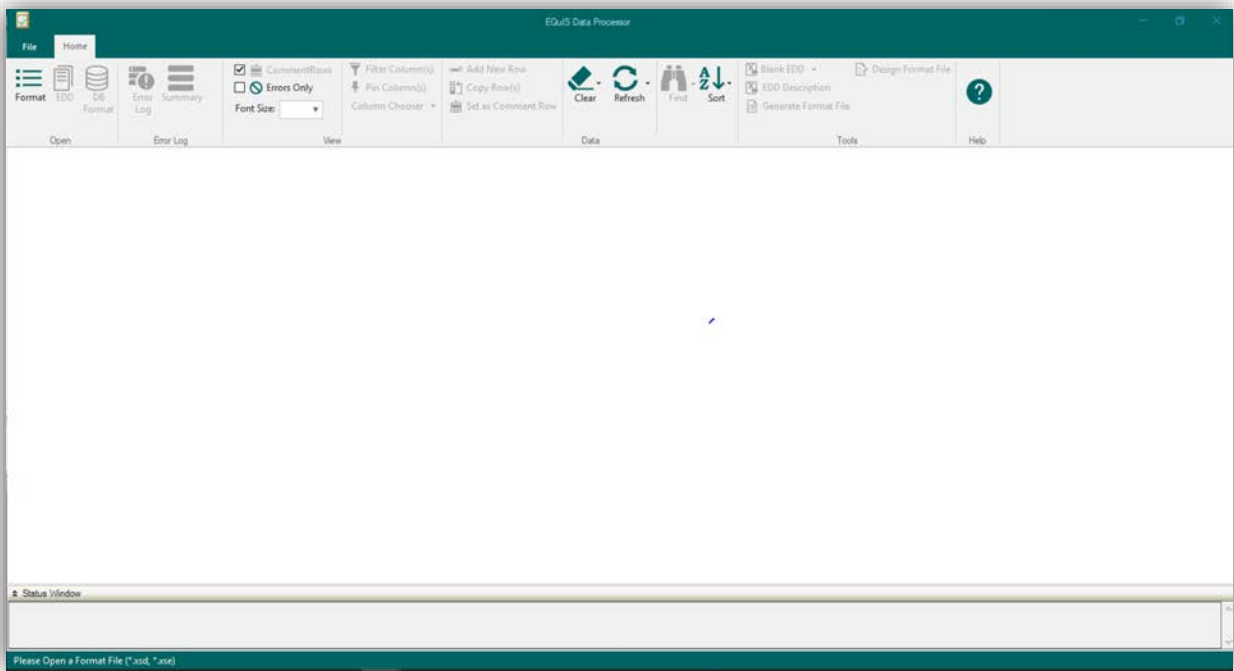


Figure 1 – EQuIS Data Processor

1.2 Format File


The Format File contains the definitions that are attributed to the DNREC EDD format for each individual section. The DNREC format ensures that the data provided to DNREC meets DNREC’s data quality standards. The DNREC EDD format file consists of the following files that reside in the same folder (typically the Program Files\EarthSoft\EQuIS\Formats\EarthSoft\ folder):

- DNREC.dll
- DNREC.xml
- DNREC_RVF.rvf
- DNREC-enum.xml

Name	Type	Compressed size	Password ...	Size	Ratio	Date modified
DNREC.dll	Application extension	133 KB	No	1,036 KB	88%	10/26/2023 12:34 PM
DNREC.xml	XML File	10 KB	No	69 KB	87%	10/26/2023 12:34 PM
DNREC_RVF.rvf	RVF File	253 KB	No	2,103 KB	88%	8/21/2023 3:44 PM
DNREC-enum.xml	XML File	4 KB	No	30 KB	88%	9/5/2023 12:51 PM

Figure 2 – Folder with DNREC Format File and Reference Value File

To open a Format File in EDP:

1. Click **Format File**  located in the upper left hand corner of EDP, and browse to the **DNREC.xse** file (\EarthSoft\EQuIS\ Formats\DNREC\ folder).
2. Select the **DNREC.xse format file** and click **Open**.
3. Register the format file when opening it for the first time – See Appendix A for details.

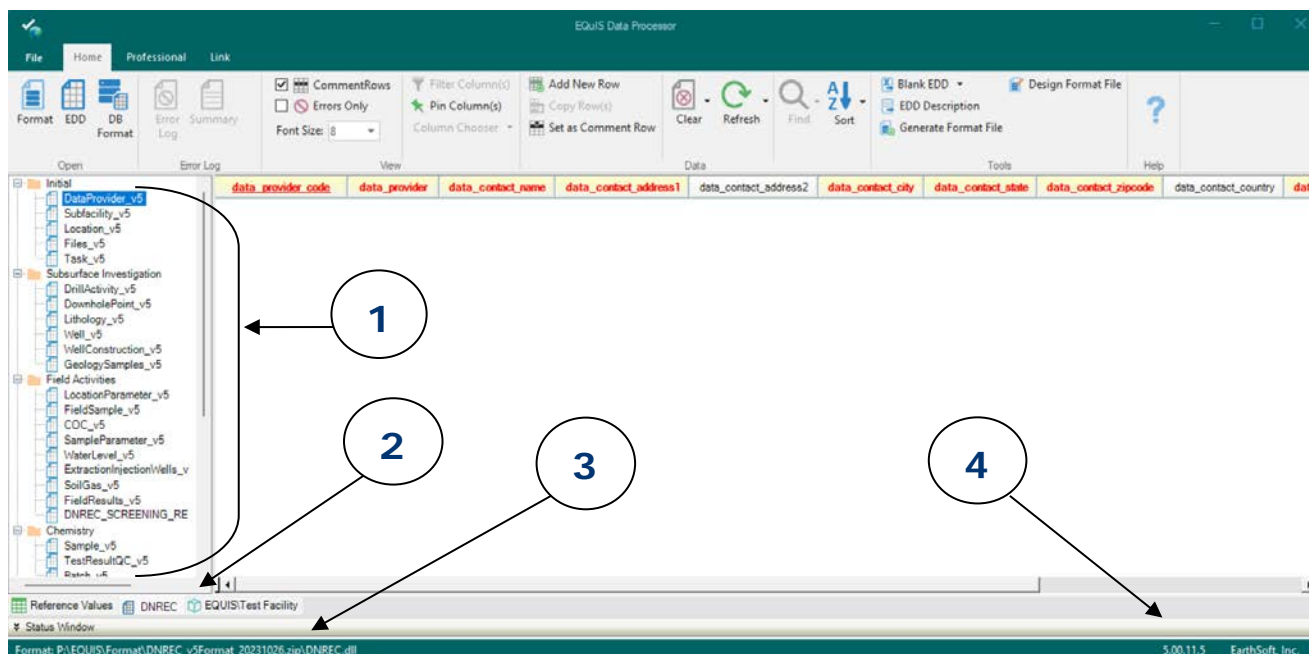


Figure 3 – Standalone EDP with DNREC Format open

When you have successfully opened the DNREC Format, your computer screen looks like Figure 3.

The following are the parts of the file format :

- (1) Sections of the DNREC format
- (2) DNREC format tab
- (3) Directory path to the DNREC format
- (4) Version of the DNREC format

Users can identify what format file and the version of the format file that has been loaded by selecting the Format Tab. The path to the format file is displayed in the lower left corner. The version of the format file is displayed in the lower right corner. It is recommended that all EDP users check this path and version prior to each use of EDP.

Now that a **Reference Value File** and **Format File** have been successfully opened, EDP is ready to load and check a data file.

Note: If you use the same **Format File** repeatedly, there is a preference you can set in the **Options** menu so that you always open that particular **Format File** when EDP starts (**For more information, see 1.17 EDP Options in this manual**).

1.3 Understanding the DNREC Format

The DNREC format includes tools to assist users in understanding the format's requirements. These tools include tool tips, color-coded column headers, and drop-down boxes that enforce reference values.

To view the DNREC Format, click on the second tab in the lower left corner of the main EDP Screen (See above Figure 3 – Standalone EDP with DNREC Format Open).

In the DNREC Format, tool tips are displayed in the column headers (See Figure 4 – EDP Tooltip Example). To access these tool tips, hold your mouse over the column headers' name. Use these tool tips to help you determine what values to use when populating each field, as well as to determine which reference value table is used to populate the field. Data providers may also refer to the EDD Description for this same information (See Section 1.15 – Exporting EDD Description for more information).

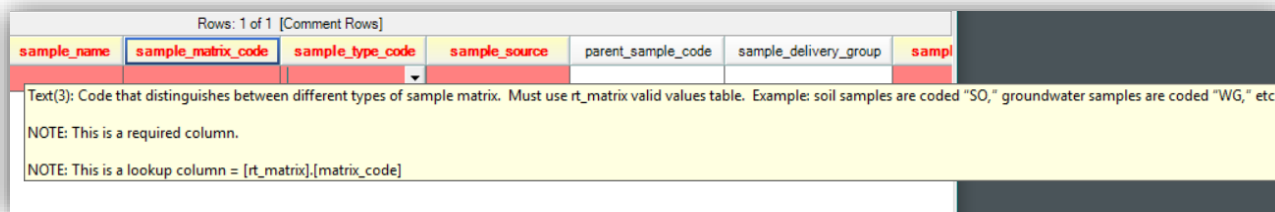


Figure 4 – EDP Tooltip Example

Another aid to help you understand the format, is the color-coding that is used to indicate what each column represents. The defaults are:

- **(Underlined) Red** – Column headers that are underlined and use red font (default color) are **required primary key** fields. The primary key fields are required and must be unique.
- **Red** – Column headers with red font (default color) are **required** fields.
- **Blue** – Column headers with a blue font (default color), are **reference value** fields.

Note: Required fields may also be reference value fields; when this occurs, the column header is displayed in a red font.

You can modify the default font colors in the **Options Tool** in EDP (See 1.17 EDP Options in this manual).

Finally, the DNREC format provides you with drop-down lists that appear when you place your cursor over any **Reference Value** or **Enumeration Value** field. These drop-down lists display the approved reference values from the applicable reference table or values from the **enumeration file**. If an error indicating a **“Reference value not found”** or **“Value not found in list”** is displayed, you can select one of the values from the drop-down lists to resolve the error.

Figure 5 shows an example of a drop-down list in EDP. In this example, the selected sample matrix is soil – which is indicated by the code “SO”.

sample_matrix_code	sample_type_code	sample_source	parent_sample_code	sample_delivery_group	sampl
SO					
SO					
SQ					
SR					
ST					
TA					
TP					
TQ					
U					

Figure 5 – EDP Drop-Down List Example

1.4 Reference Value File

The **Reference Value File** (RVF) specifies what reference values, or valid values, are allowed in the data file. This file is a lookup list that displays the values that you can choose from for a particular field.

Note: This file is extremely important for data management and the communication of data across many organizations.

To review the **Reference Values** directly in EDP, click on the first tab in the lower left corner of the main EDP Screen.

You do not have to manually open the reference value file to ensure that you load the appropriate set of reference values for each format. Instead, each time you open the DNREC format file, or any other format file, EDP goes to the same folder as the format file and looks for a file with the extension “.RVF “ (the reference value file). If a file is present, that file is opened and used. If there is no *.RVF file, then you are prompted to browse to the appropriate *.RVF file.

When EDP loads the format file, the **Reference Values** tab, located in the lower left corner of EDP, shows the various tables and valid values defined within each table.

Note: Values displayed on this tab are not editable, and if values need to be added, data submitters need to notify DNREC and request that a new .rvf file be created.

If you need to add a new reference value to the database/reference value file, please send an email to DNREC_EQuIS@delaware.gov with the following information:

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)
4. Brief description of the reference value (i.e. for analytic methods)
5. Reason to ‘Why’ the value is needed
6. Error Log as attachment (optional)

Once DNREC approves the reference value and adds it to their database, an updated DNREC.rvf will be made available to data providers via email or the [DNREC Download Page](#). When the datasets are checked using this updated file, the errors associated with this reference value will be eliminated.

To facilitate finding the appropriate reference value, click the column headers to sort the **Reference Values**.

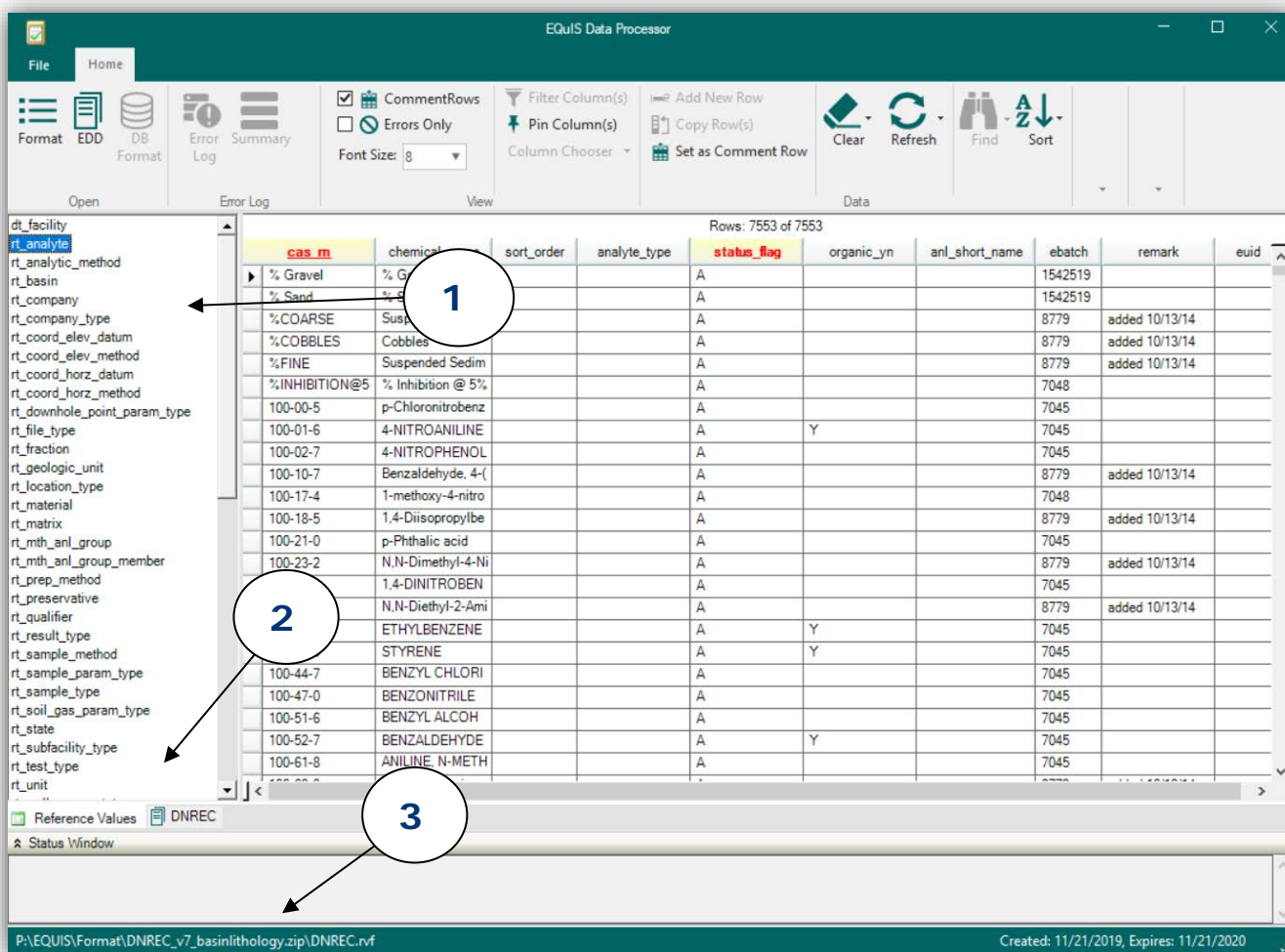


Figure 6 – Reference Value File

- (1) Reference tables
- (2) Reference values tab
- (3) Directory path to reference value file

1.5 Data Files

The data file, also known as an **Electronic Data Deliverable (EDD)**, contains the data that needs to be checked in EDP. The data file can be an individual Tab delimited (.txt) or Comma Separated (.csv) file. Alternatively, you can also load an Excel workbook (.xls), Access database (.mdb), or Zip (.zip) file containing several .txt or .csv files. To use these alternate data file formats (.xls, .mdb, .zip, etc.) with EDP, you must include the EDD format name in the data file name. Including the format name allows the data file

to be checked against the correct format. Additional naming convention details are provided in the sections that follow.

1.6 Loading Individual CSV or TXT Data Files



You can load data files into the EDP by selecting the **EDD button** from the main EDP toolbar and browsing to the EDD file you want to load into EDP. When multiple sections exist within a given **Format File**, and you are loading individual data files in the .csv or .txt formats, the data file selected is loaded into the currently selected section.

For example, in the DNREC Format tab, the section **DataProvider_v4** is the first section listed. This section is highlighted by default upon opening the format. Any data file opened **without changing the format section selection** will be loaded into this section, even if this data should be loaded into a different section.

To load a data file:

1. Select the section of the format, for example Sample_v4.



2. Click **EDD** from the EDP Toolbar.
3. Browse to the folder where data resides and select the appropriate file.
4. Click **Open**.

The data check occurs in the background while the data file is being loaded. When using EDP, EarthSoft recommends loading data into the DNREC format's sections in the order listed to ensure that all data checks are completed properly. The sections are listed in parent-child order, such that if the last section is loaded before the first, errors may appear which require you to refresh the data to enable EDP to relate the sections.

1.7 Loading Excel, Access, or ZIP Data Files



You can also load Excel, Access, and Zipped data files into EDP by selecting the **EDD button** from the main EDP toolbar and browsing to the EDD file you would like to load into EDP. Unlike .csv or .txt files, when loading Excel, Access, and Zipped data files, the section of the format currently selected is not relevant. Instead, EDP uses the *name* of the individual Excel worksheet, Access table, or file included in the zip file, to open the file into the appropriate section(s) of the format. This functionality allows users to open data into more than one section of an EDD at one time, thus streamlining the data checking process.

The following sections outline the specifications that you need to follow when loading data from an Excel, Access, or ZIP file.

1.7.1 Excel Files

When using Excel files with EDP, the Excel file (.xls or .xlsx) can use any nomenclature, however you must name the worksheets according to the EDD section names. For example, the Excel spreadsheet shown in

Figure 7 – Excel Spreadsheet, contains data in the DNREC format. Figure 7 shows how the worksheet names must correspond to the section names of the DNREC format. In this example, the first worksheet tab is named DataProvider_v4 to match the first section of the DNREC format. Note the additional worksheets are also named for their respective EDD sections (Subfacility_v4, Location_v4, etc.).

The **Blank EDD Template** is a very useful tool built into EDP for creating EDDs using Excel Workbook templates. (See Section 1.14 – Exporting Blank EDD Template for more information).

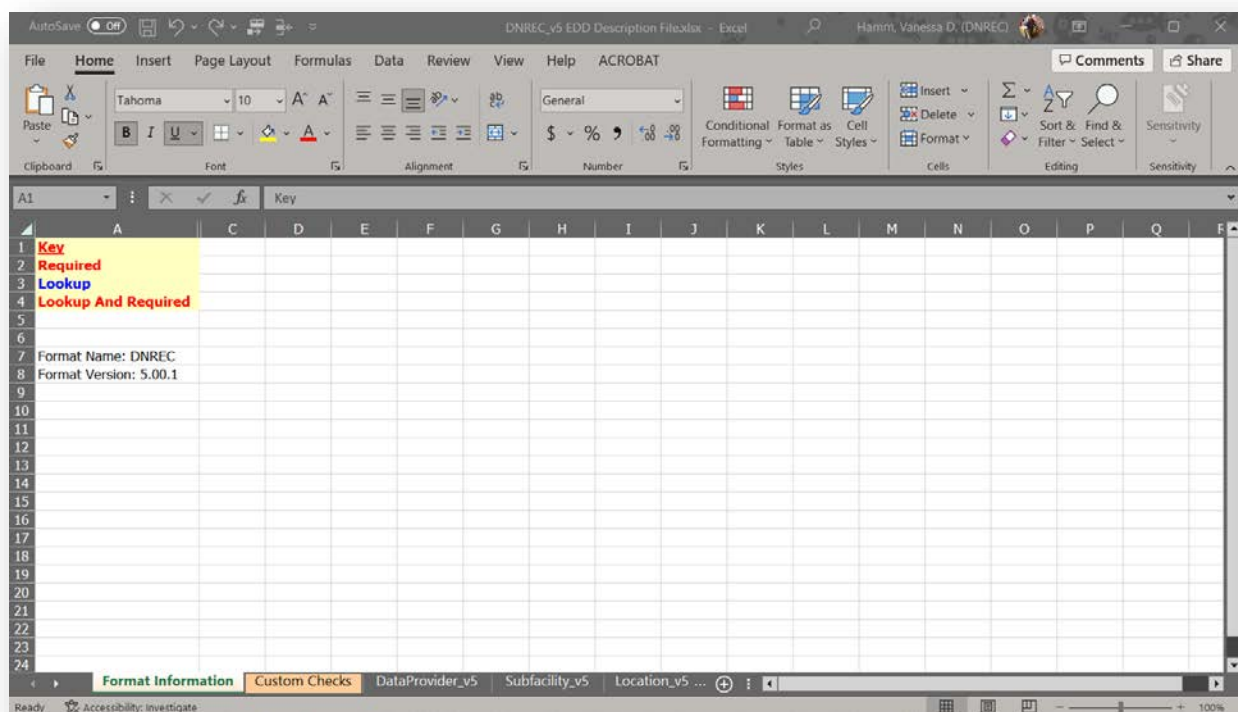


Figure 7 – Excel Spreadsheet

1.7.2 Access Database Files

Similar to Excel files, you can use Access database files (.mdb or .accdb) to load data into EDP. The individual Access database file can use any nomenclature, but you must name the data tables according to the EDD format name. For example, the Access database shown in Figure 8 – Access Database contains tables, which use the DNREC Chemistry section's names as the table names.

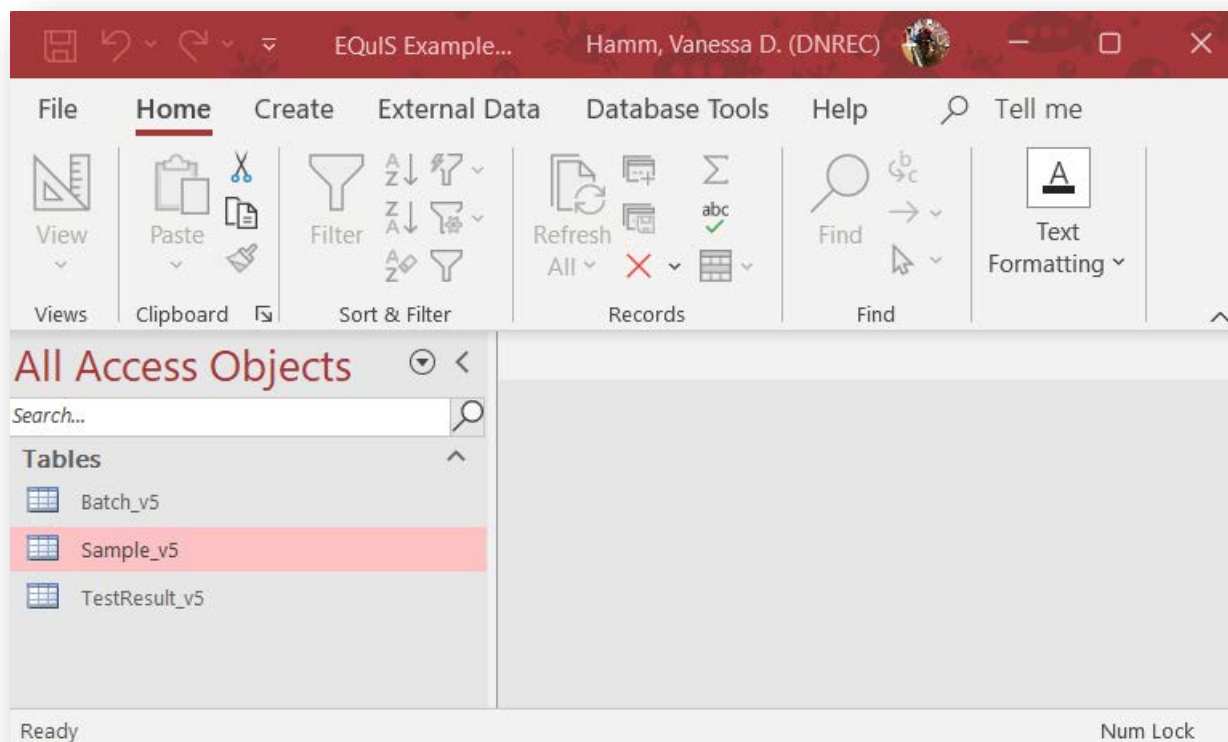


Figure 8 – Access Database

1.7.3 ZIP Data Files

When using Zipped data files with EDP, you must name the individual .csv/.txt files, Excel worksheets, or Access tables within the *.zip file with the appropriate corresponding section name of the DNREC EDD format. For example, the zipped file shown in Figure 9 – Loading Zip Files contains data files which use the DNREC Chemistry section's names as the text file names. Within a Zipped file, it is also acceptable to include Excel files or Access database files as specified in Sections 1.7.1 and 1.7.2 above.

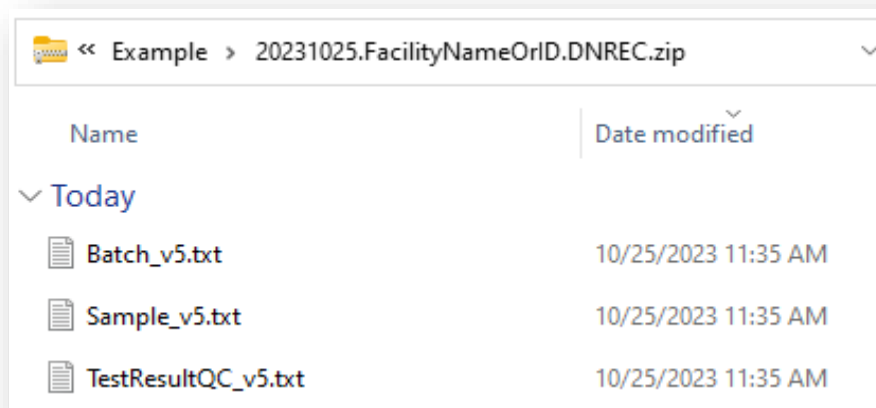


Figure 9 – Loading Zip Files

1.7.4 Load and Append Multiple Data Files

When you load data files, it is also possible to load multiple data files of the same format during the same “EDP session” (as shown in **Figure 10 – Load and Append Data File**). For example, if after loading the **Sample** data you receive another Sample_v4 data file, which should be included with the current data set, you can use the **Load and Append Data File** utility to simultaneously check both files in EDP.

Note: This functionality is only enabled once a data file is loaded.

To load and append data:

1. Right-click on a section name to bring up a list that includes the **Load and Append Data File** utility.
2. Browse to the data folder and select the next data file to load.

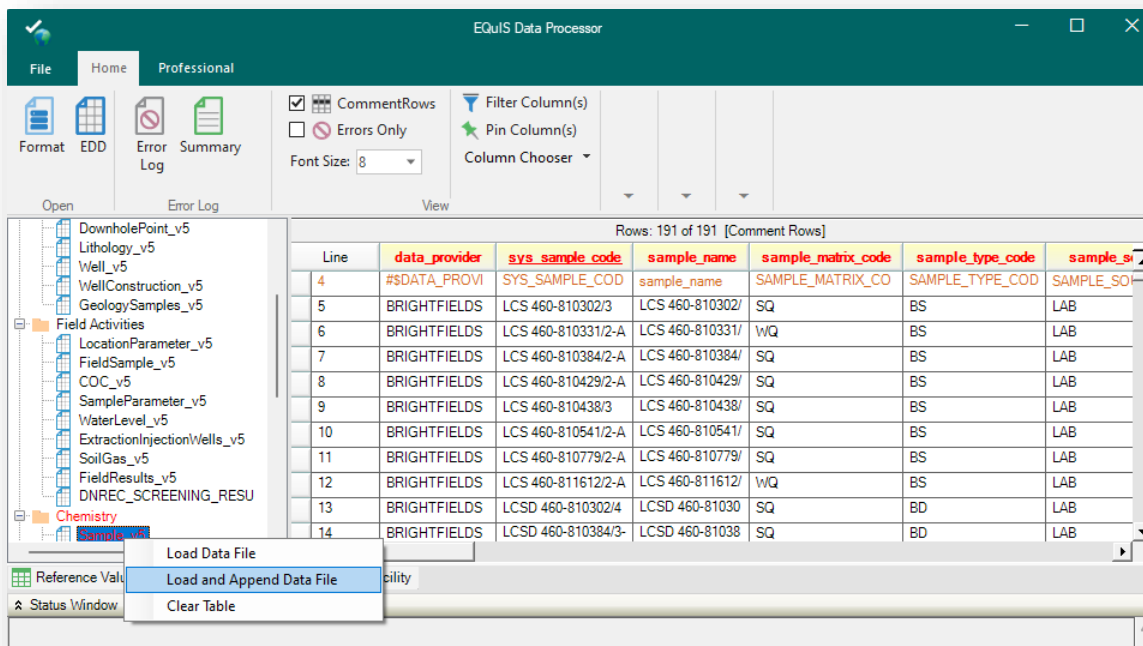


Figure 10 – Load and Append Data File

Using the **Load and Append** utility appends the new data file to the end of the original data file.

1.8 Clearing Tables

If you accidentally load a data file to the wrong section, you can clear all data rows by right clicking on the format name and selecting **Clear Table** or clicking **Clear** from the **Data** section of the EDP toolbar and selecting **Clear EDD**.

1.9 Finding Errors

Once you load an EDD into EDP, you can identify which section(s) contain at least one error because the sections' name listed on the left side of the screen will be highlighted in red.

Note: In Figure 11 – Displaying Errors, the section TestResultQC_v4 is red.

Also, any data that do not satisfy the checking requirements identified in the **Format File** are highlighted in the data grid. Finally, the line numbers along the left side of the data grid are red in lines where an error exists.

To obtain additional details about what each error means, hold your cursor over the highlighted cell in the data grid.

Note: You can change the colors assigned to each error. For additional information on changing these color codes, see 1.17 EDP Options section in this manual.

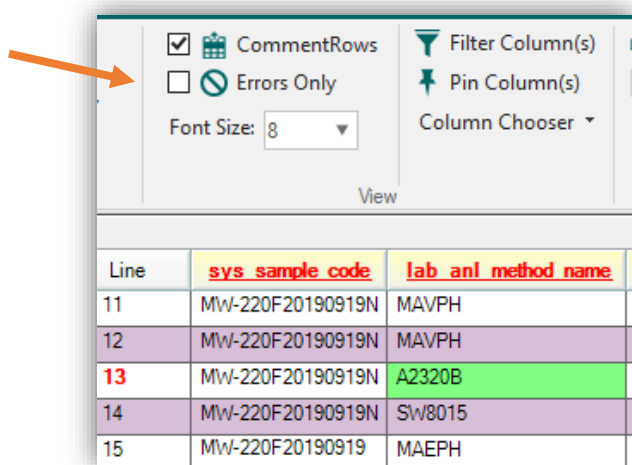


Figure 11 – Displaying Errors

To view only the records with errors, check **Errors Only**  from the View section of the EDP toolbar.

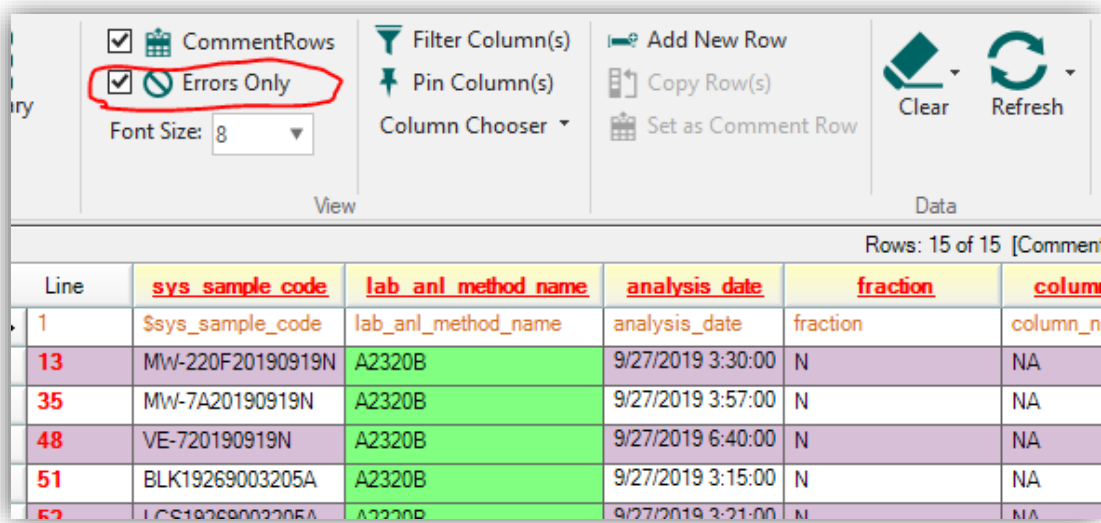


Figure 12 – Displaying Errors Only

1.10 Error Log Reports

You can view a summary report of all errors in the data files by reviewing the Error Log or Error Summary Reports.

The **Error Log Report** is a report that can be created to show what line in each section of the format contains exactly what error. The Error Log Report maintains EDP’s error color coding to make error resolution easier.

The **Error Summary Report** may also be created to show a summary of all of the errors in the data files. Each row of the Error Summary Report contains the number of rows where the specified error occurred in each section of the format. The Summary Report does not maintain the color coding.

The Error Log and Error Summary Reports are saved as HTML files by default and open automatically in your default browser, but the reports may also be saved as XML, Excel, or Text files.

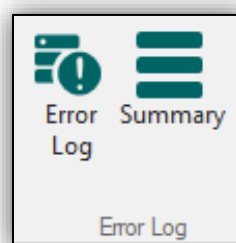
Note: The EDD Format File name and Version information are also reported in Error Logs. In addition, information related to the EDD Data Files, User Name, and Reference Values File that were used during the error checking process are also listed in both of these logs to facilitate error resolution.

To view the Error Log:

1. Select the Error Log option from the Error Log Group.
2. Enter a file name and click Save.

To view the Error Summary:

1. Select Summary from the Error Log Group.
2. Enter a file name and click Save.



EDP Error Summary

There are 4503 records in the Error Table

User Name: Vanessa.Hamm

Format Name: DNREC

Format Version: 5.00.1

EDD File(s):
P:\EQulS\Format\EDDs_v5_Testing\4602462031.DE-1755_v5Revised.xls

RefVals Set: Database

Run Date: 10/25/2023 11:56:34 AM

Table	# of Rows	Column	Value	Message	Type
TestResultQC_v5	2	sys_sample_code	\$PG-GP22-S002	Error: Value cannot contain any of the following special characters: \$ @ & # % ! = + * < > " ' \ ? [] { } .	ERROR
TestResultQC_v5	1	cas_rn	214-17-5	Reference value not found	ERROR
TestResultQC_v5	1	chemical_name	Benzo(B)Chrysene	Reference value not found	ERROR

Figure 13 – EDP Error Summary Report

1.11 Saving Modifications

Before you begin, it is important to understand that edits made to data files within EDP are **not** automatically saved. If you are modifying data files using the edit feature available in EDP, then you should save your data files frequently during an EDP Session.

Note: It is important to keep your original file and file name. Using the “Save As” feature, save your modified file with another file name.

To save modifications made to data in EDP:

1. Select the **File** tab located in the upper left corner of EDP.
2. Select **Save As> EDD**.
3. Browser will pop-up. Re-name the EDD.
4. Select **Save**.

1.12 Error Resolution

As discussed in section 1.9 Finding Errors, errors that are found in EDP are highlighted with a specified color to signify the type of error. You can correct these data errors within EDP if the **Edit** feature was enabled during installation of EDP.

- To make modifications to any cell within the data file after it is loaded, highlight the cell and type the modification.
- To correct **Reference Value** errors, use the drop-down lists associated with the field where the error occurred.

Note: See 1.4 Reference Value File in this manual for additional information.

1.12.1 Column Headers

The top one or two rows of an EDD typically contain column header information, useful to ensure that the correct data populates each column, and to check that the appropriate data file was loaded into the correct section of the format.

You can instruct EDP to ignore any header rows in the data grid.

To ignore header rows:

1. Highlight the header row(s)
2. Select **Set as Comment Row**.

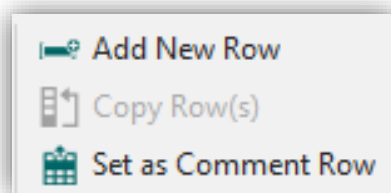


Figure 14 - Set as Comment Row

The text in the row(s) becomes *italicized* and includes a dollar sign (\$) directly before the first letter of the column header.

Note: Typically, the comment indicator is a pound sign (#), however, DNREC's format uniquely uses the dollar sign (\$) as the comment indicator instead.

You can skip the step of setting a row as a column header if the data file's comment row(s) include this dollar sign (\$) prior to being loaded into EDP.

Line	data_provider	sys_sample_code	sample_name	sample_matrix_code	sample
1	\$data_provider	sys_sample_code	sample_name	sample_matrix_code	sample_

Figure 15 - Example of Dollar Sign (\$) Comment Indicator

You can choose to not view the **Comment Row(s)** using the option on the **View** group.

Note: Find the check next to the word "Comment Rows". If you click the **Comment Row** option, the check is removed and the **Comment Row(s)** will not be displayed. To view the comment row(s) again, toggle the switch.

1.12.2 Reporting Reference Value Errors and Error Logs

As outlined in the Reference values section of this manual (**1.4 Reference Value File**), using consistent nomenclature is extremely important for data management. Therefore, reference value and enumeration files are part of DNREC's format file to make resolving reference value errors as easy as possible. New reference values may need to be added to the database.

Note: These new reference values will need to be reported to the DNREC data management team via email to DNREC_Equis@delaware.gov.

Using Standalone EDP, you can easily provide a summary list of missing reference values for the database manager to resolve. This can be useful for data providers to do when requesting that new reference values be added to the .RVF file, enabling them to successfully submit data. Once all data issues are resolved, other than the new reference values, you can create an error summary log outlining the new reference values.

Providing the error log to the database management team displays a summary of any missing reference values that may need to be added to the database.

1.13 Tools

There are several options available in EDP toolbar to assist with data review.

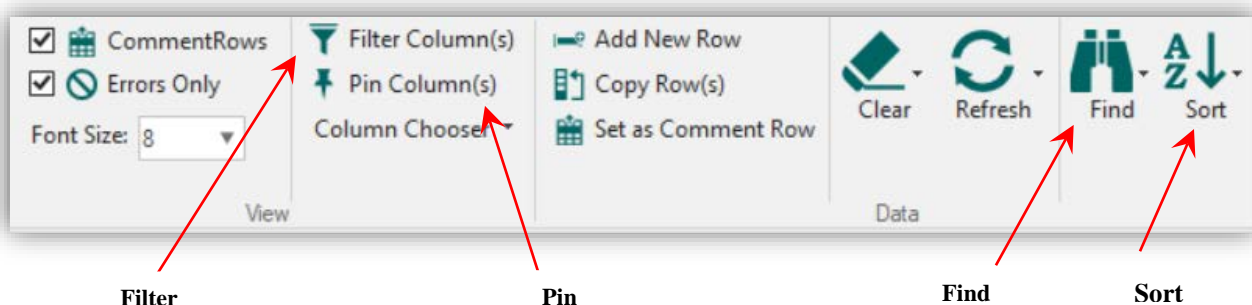


Figure 16 – Filter, Pin, Find, and Sort Tools



Use **Sort** to sort the data in ascending or descending order. For example, if you want to sort the result data based on chemical name, you can highlight the chemical name column and click **Sort**.



Use **Filter** to narrow the data set for viewing subsets of the data. Click **Filter**, and each column is enabled with a pull-down menu, which allows you to filter on the available values for that field. Do this by clicking on the filter icon, then chose the selection you wish to use. Click the **Filter** again and select All to remove the filter. You can also select **Custom** to build your own selection criteria.

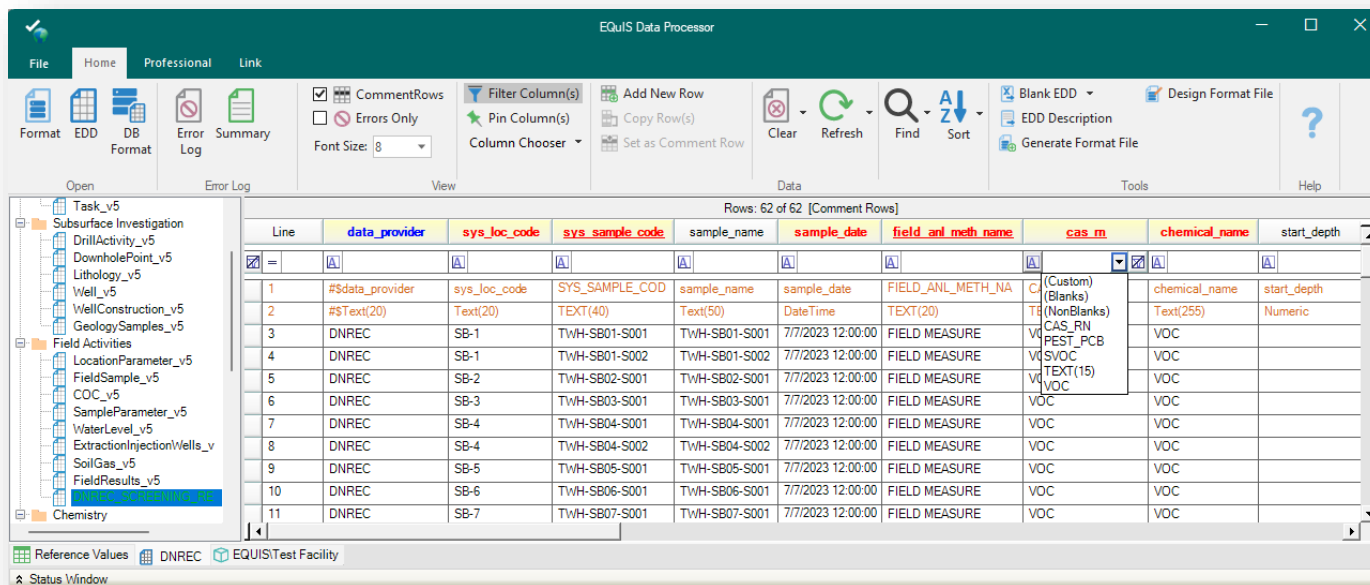


Figure 17 – Using the Filter Tool



Use **Pin** to assist with viewing large data sets. Click **Pin** and a “pin” is enabled adjacent to each field. When selected, the pin holds that column in place while viewing the related fields for each record. As you scroll to the right, the “pinned” column remains stationary so you can review the data associated with each sample.

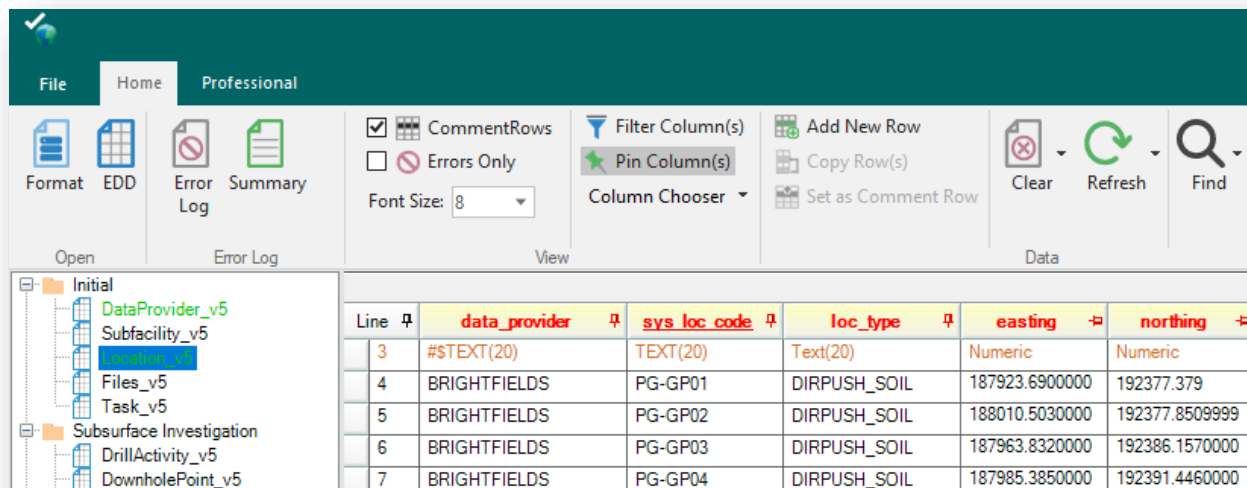


Figure 18 – Using the Pin Tool

Use **Find** button to find or replace multiple fields with new data. To use this, select any field within the column you would like to search. Then select the Find button and the **Find and Replace** window opens. This will allow you to enter the text to be found (and the text to replace the original text with if desired).

Note: Recent selections are available for reuse under the drop-down arrow(s).

The **Find and Replace** tool can be focused on a selection of the available rows in a displayed data file by selecting these rows prior to the opening the Find and Replace option and choosing “Selection” from the drop-down menu in the “Within:” option.

Additional choices are “Table” for the entire data file screen displayed, and “All” for all EDD tables open.

- **Search by** provides options to search by rows or columns.

Other options include “Match Case” and “Match entire cell contents”, which should be used when an exact match is desired. These options also eliminate the inclusion of partial matches, which could create new errors. For example, when changing a Method from E300.0 to E310.1, selecting Match entire cell contents will prevent the modification of a Batch ID or Lab QC Sample ID that may also include the text "E300.1". With this setting, only the method cells containing E300.1 as the sole content will be selected.

- **Show Matches** will open a detail box that will list the matches found.
- **Replace** will replace the items one at a time.
- **Replace All** will replace all items found.

Note: Be careful using the Replace feature. If you do not correctly set your search to “Selection” or “Table” or fail to choose “Match Case” or “Match entire cell contents” you may replace data that you do not intend to.

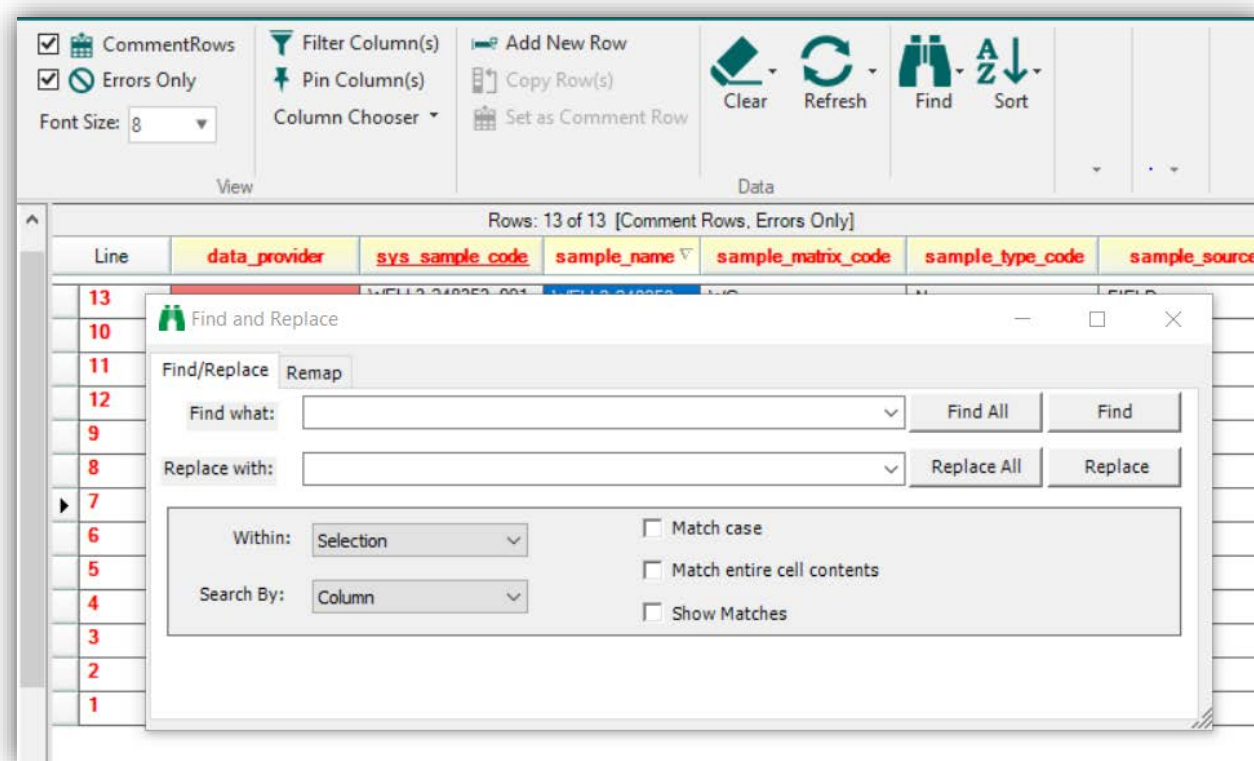


Figure 19 – Using the Find and Replace Tool

1.14 Exporting Blank EDD Template

Built into EDP is a tool for creating EDDs using Excel Workbook templates. Data providers may add data to this blank EDD. To use this tool:

- From the Tools group select Blank EDD
- Excel will open and an EDD template will be created. The template includes the column header color coding and tool tips.

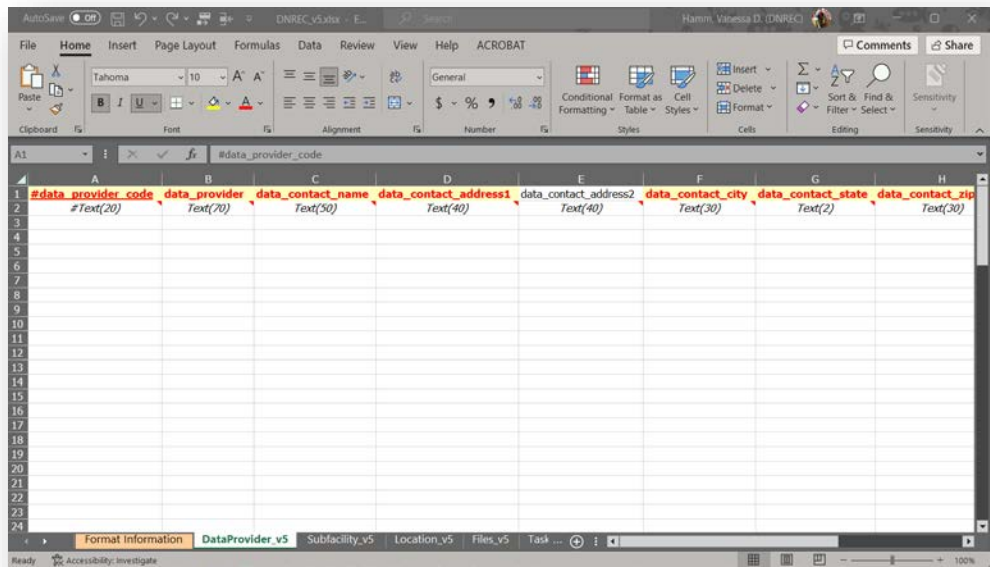
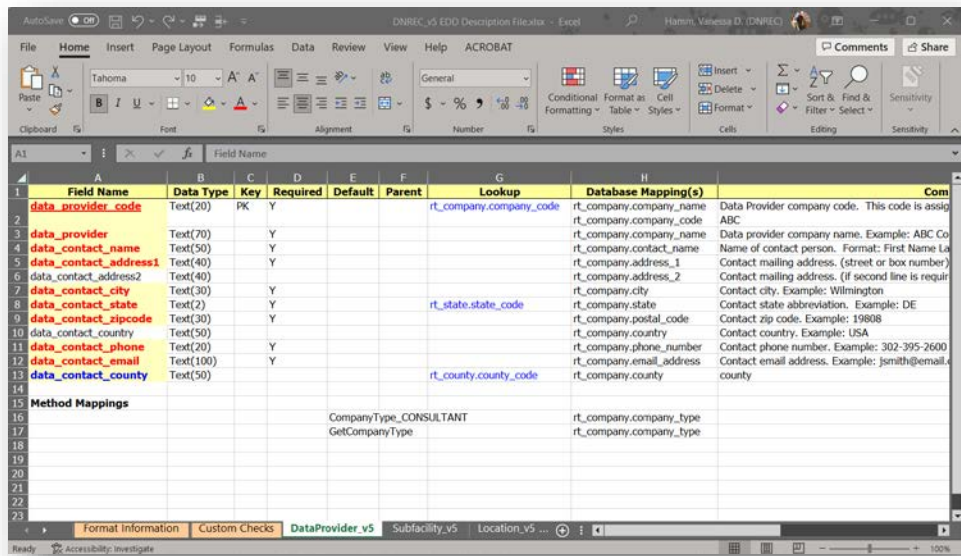


Figure 20 – Blank EDD Template (DNREC Format)

1.15 Exporting EDD Description

The EDD Description option allows users to export detailed description of a format. This detail includes data types, key fields, required fields, field description and the database mapping.

To review the descriptions in Excel, select EDD Description from the Tools group. Excel will open and the descriptions will be displayed. If the format contains multiple sections, such as the DNREC format, worksheets will be created for each section.



Field Name	Data Type	Key	Required	Default	Parent	Lookup	Database Mapping(s)	Comments
data_provider_code	Text(20)	PK	Y			rt_company.company_code	rt_company.company_name	Data Provider company code. This code is assigned by the user.
data_provider	Text(70)		Y			rt_company.company_name	rt_company.company_name	Data provider company name. Example: ABC Company
data_contact_name	Text(50)		Y			rt_company.contact_name	rt_company.contact_name	Name of contact person. Format: First Name Last Name
data_contact_address1	Text(40)		Y			rt_company.address_1	rt_company.address_1	Contact mailing address. (street or box number)
data_contact_address2	Text(40)		Y			rt_company.address_2	rt_company.address_2	Contact mailing address. (If second line is required)
data_contact_city	Text(30)		Y			rt_company.city	rt_company.city	Contact city. Example: Wilmington
data_contact_state	Text(2)		Y			rt_state.state_code	rt_company.state	Contact state abbreviation. Example: DE
data_contact_zipcode	Text(30)		Y			rt_company.postal_code	rt_company.postal_code	Contact zip code. Example: 19080
data_contact_country	Text(50)		Y			rt_company.country	rt_company.country	Contact country. Example: USA
data_contact_phone	Text(20)		Y			rt_company.phone_number	rt_company.phone_number	Contact phone number. Example: 302-395-2600
data_contact_email	Text(100)		Y			rt_company.email_address	rt_company.email_address	Contact email address. Example: jsmith@email.com
data_contact_county	Text(50)		Y			rt_county.county_code	rt_company.county	Contact county. Example: Delaware
Method Mappings								
					CompanyType_CONSULTANT		rt_company.company_type	
					GetCompanyType		rt_company.company_type	

Figure 21 – EDD Description (DNREC Format)

1.16 Submitting an EDD

After using the tools outlined above to resolve all of the errors in a set of Data Files, the data is ready to be submitted to DNREC for loading into the EQuIS database. This “EDD Package” should be submitted to DNREC via email at DNREC_Equis@delaware.gov.

Things to note with each submittal:

- cc: the DNREC Project Officer
- The subject line of the email should include the facility name, facility code (i.e. DE #), and whether it is an original submittal or a corrected submittal.

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

1.17 EDP Options

You can modify the following:

- The default functionality of EDP so that EDP will not recall the last Format File used.
- Use a different comment indicator code.
- Increase the number of errors that EDP checks for when Data Files are initially loaded into EDP.
- Change the EDP Application Appearance.

1.17.1 Remember Last Format File

By default, EDP was designed to always recall the last format file the application used. If you do not plan to use the same Format File repeatedly, there is a preference you can set in the **Options** menu, so the last Format File used is not always opened when EDP starts.

To set the Remember Last Format File option:

1. Select the **File** menu, then click **Options** on the bottom left.
2. On the **Options** dialog, click **General**.

The option **RecallLastUsedFormatFile** has a default setting of **Yes**. This indicates that the last format file used in EDP will be opened during the following EDP session.

You can change the setting to **No** to have EDP open to a blank screen each time EDP is launched.

Note: If **RecallLastUsedFormatFile** is set to **Yes** and the specified Format File is not available or cannot be found, a warning message is displayed, and you have the opportunity to select a different Format File

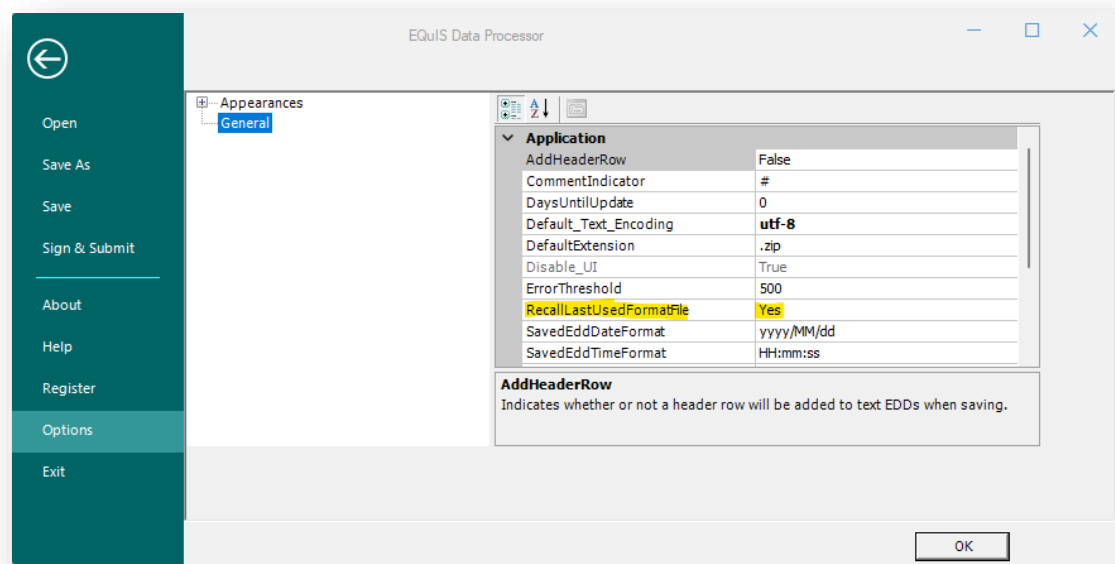


Figure 22 – Option to recall last format opened in EDP.

1.17.2 DNREC Default Comment Indicator Code & Error Threshold

The default comment row indicator in EDP is a pound sign (#).

Note: DNREC’s Format uses the dollar sign symbol “\$” as the comment indicator by default. Users do not need to change any EDP settings for this to work. Please make sure that any EDDs submitted to DNREC use the “\$” as the comment indicator.

Appendix A

DNREC's Electronic Data Processor (EDP) QuickStart Guide for Data Providers

DNREC's Electronic Data Processor (EDP)
QuickStart Guide for Data Providers

This document provides a quick overview on how to download, install, and use the EQuIS Data Processor (EDP) software to check and submit the Department of Natural Resources & Environmental Control (DNREC) Electronic Data Deliverables (EDDs). (**Prepared for version 4 EDD format**)

For a more detailed discussion of the functionality and technical specifications of EDP, **Data Providers are strongly encouraged to review the instructions and information available on the DNREC EQuIS Data Submittal Website:** <https://dnrec.alpha.delaware.gov/waste-hazardous/equis/>

EDP Download Procedure

1. From the [DNREC EQuIS Data Submission web page](#), click on the “[EQuIS Documents and Reference Files](#)” on the right of “Step 2”.

The Database Manager will create the new Facility/Site in the database and then the Data Provider can begin to submit EDDs. You will receive confirmation when this is complete. **If the Facility/Site already exists in the database and the basic Facility/Site information has not changed, then the DNREC Project Officer or Data Provider does not need to provide this information again.**

Step 2: Prepare the EDD

Electronic data must be submitted in DNREC's custom EDD format. Data Providers should download and add Facility/Site data to the *Blank EDD*. The *EDD Description* provides information about the fields within each section of the *Blank EDD*.

Data Providers must populate all required fields in the EDD, however not all sections of the EDD must be populated. Specific fields have controlled vocabulary as well and must be populated in compliance with DNREC reference values and enumeration values.

Please review DNREC's *Electronic Data Deliverable Submittal Requirements Manual for EQuIS* for more detailed instructions and examples.

EQuIS Documents and Reference Files

This collection includes the documents, program files, and reference files for the EQuIS system. Documents and files *highlighted in italics* on this page are found at this link.

Note: This will take you to the [DNREC EDP Format Files Download Page](#).

2. Click on the appropriate link for the “32 bit (x86)” or “64 bit (x64)” under “EQuIS Data Processor (EDP) v7.x” to download a version of the EQuIS Data Processor (EDP) software (where x is the latest version of the EDP application that DNREC distributes on this page).
3. Click on the “[Delaware DNREC EDP Format](#)” link to download the latest DNREC EDD Format files.

Delaware DNREC EDP Format

EQuIS Data Processor (EDP) developed for Delaware DNREC.			
Name	Size	Type	Modified
EQuIS Data Processor (EDP) v7.22.1 x86 (32bit) x64 (64bit)	~53 MB	.zip	2022/03/17
Delaware DNREC EDP Format	399 KB	.zip	2023.10.26
EDD Description	116 KB	.xlsx	2023.10.26

Note: When downloading these files, you must save them to a folder in which you have read-write privileges. This will be the folder from which EDP locates the format file. Make a note of the folder so that you can navigate to the format when you open EDP.

The EDP file is the user interface (software program) that must be used to check and prepare the DNREC EQuIS EDD for submittal. The DNREC Format file contains the information that the EDP program uses to check the completeness and accuracy of the DNREC EQuIS EDD being submitted. Please make sure you are using the most up-to-date version of the DNREC format.

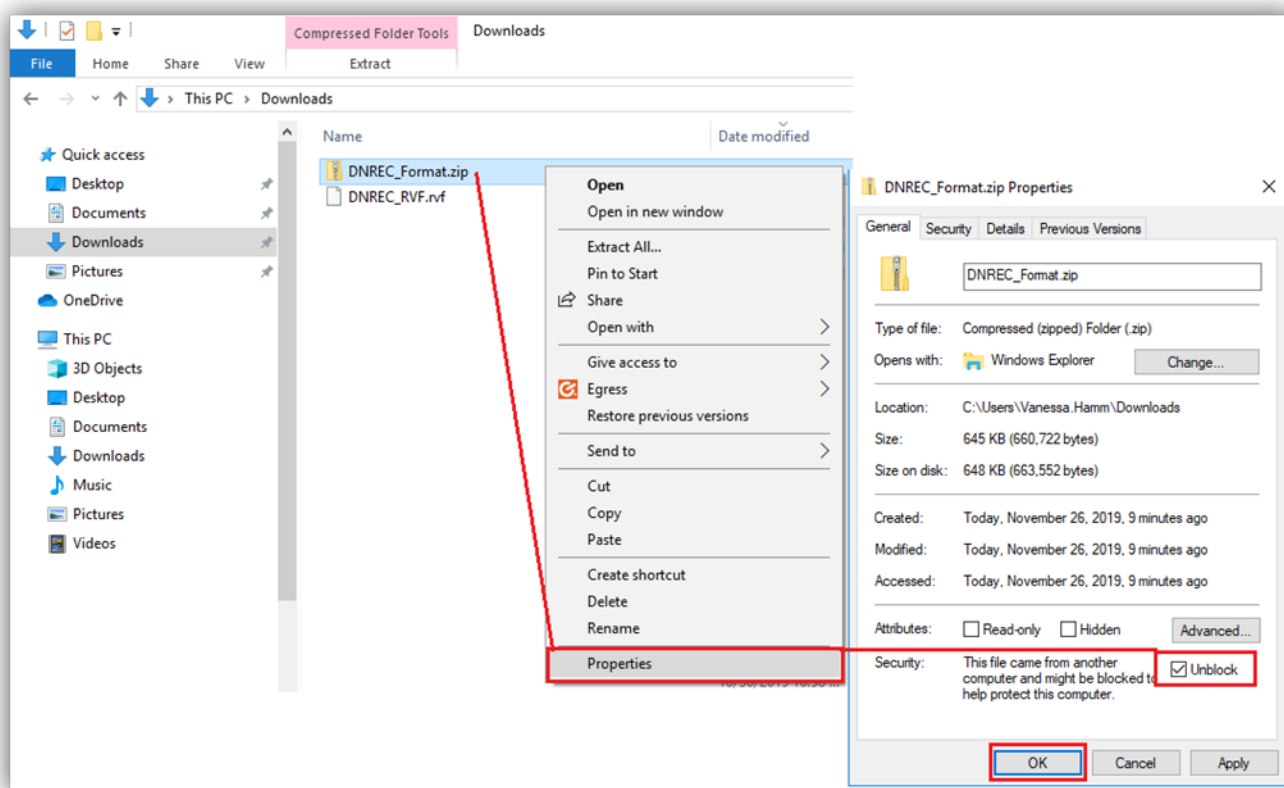
Unblock the Downloaded Zip Files

When downloading files from the Internet or other location, Windows may set an attribute on the file to Blocked. When this happens, it may not load properly into the application. For example, if you download a non-standard EQuIS format, it may be blocked. When attempting to use that format in EDP, it may not show up in the list. This behavior is the default for .NET 4.x, which is used in EDP and is designed to help protect the computer from executing malicious files. Whenever downloading a file, the recommendation is to check for the blocked attribute and then “Unblock” the file so it will load properly.

Tip: When you download a file, save it to a known folder where you have update permissions – e.g. the "Downloads" folder.

To unblock the EDP and DNREC Format Files:

1. Right click each file and select properties from the content sensitive menu.
2. On the “General” tab, click the “Unblock” check box, click Apply, and click “OK” to save these changes.



Unblocking Files

3. Now you can extract the contents of the EDP_7.x_x64 or _x86 file to run the EarthSoft_EDP_Standalone_7.x_x64.exe file to begin the installation of EDP.

Installing the Files

1. Open the directory where the EDP file was downloaded and right click and select “Extract All.”
2. After the contents of the EDP zip file have been extracted, navigate to the location of the files and double click on the EarthSoft_EDP_Standalone_7.x_x64.exe file to begin the installation.
3. Follow the installation wizard prompts to complete the EDP software installation.

Periodically, EDP and Format files will be updated and posted to the DNREC EDD Submission Website. Updated files will be posted when DNREC updates the format of the EQuIS EDD or revises the valid values tables. Data Providers will be notified via e-mail from DNREC_Equis@delaware.gov.

Note: Data Providers are encouraged to check for the most recent file version prior to preparing EDD submittals to the DNREC.

- ✓ To update the EDP program, download the most recent version from the [DNREC EDP Format Webpage](#). Prior to installing the updated program, you must uninstall the current version. Once the previous version is uninstalled then the new version can be installed following the step-by-step instructions above.

- ✓ To update the DNREC Format File, download the most recent version from the EarthSoft's DNREC EDP Format Webpage. Each new copy of the format zip file will need to be unblocked. Right click on the zip package, select Properties, and "unblock" the files. You may then extract the files to the folder.

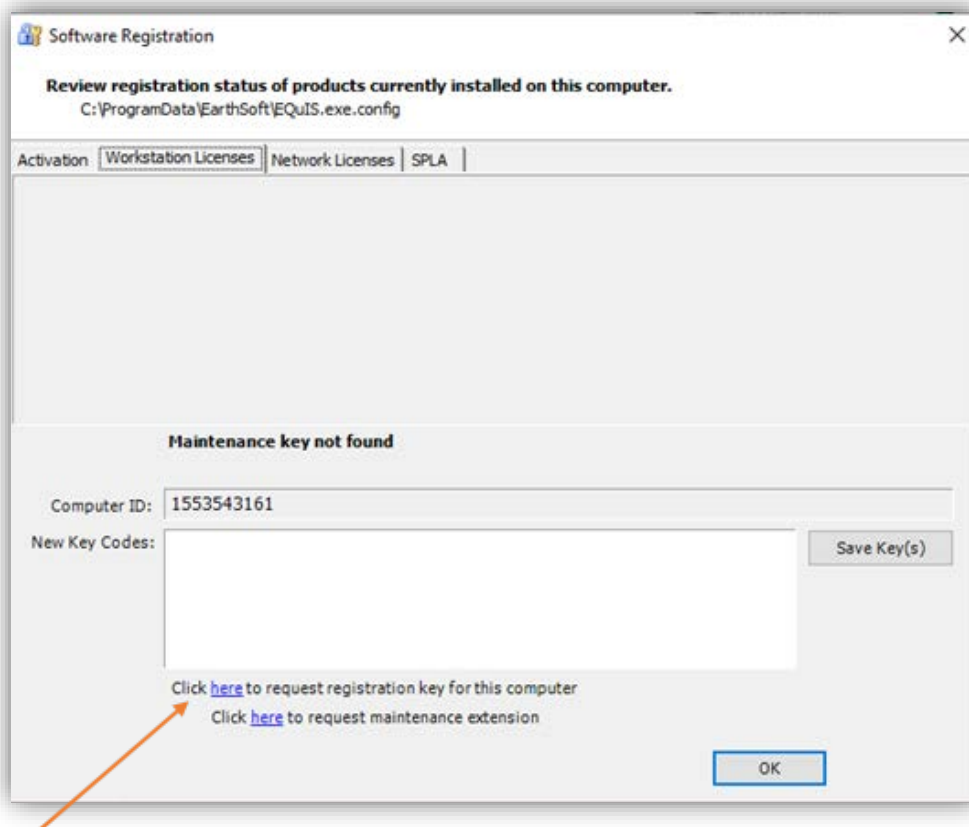
Registering the EQuIS Data Processor

After the EDP program has been installed, you must register the software with a free registration key:

1. Double-check the EDP icon on your desktop to open the program.



2. Click on the “Format” button, which is the first button in the EDP ribbon menu on the top left and looks like a checklist.
3. Browse to the location on your hard drive where you unblocked and extracted the DNREC EDD format files and open the **DNREC.xse** file.
4. The first time you install EDP and open the DNREC.xse EDD format files, you will be prompted to register the software. This register screen can also be accessed by clicking on the “notepad with green checkmark” icon in the upper left corner and selecting “Register” from the drop-down menu.



Registering EDP

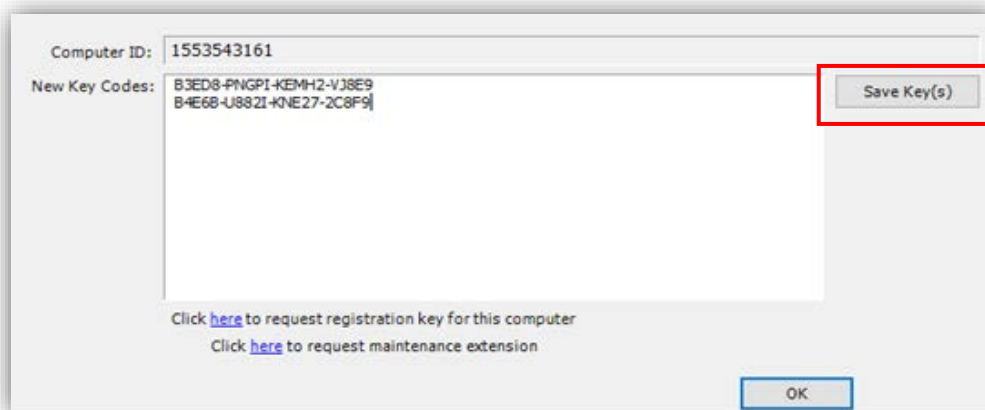
5. The Software Registration dialogue box will open (**See screenshot above**). At the bottom of this window, click the link to “request registration key for this computer” and follow the online

instructions providing the necessary information (**Step 6 below**). A registration key will be emailed to you, usually within an hour. Once you receive the e-mail, open it and copy (Control+C) the code, and then paste (Control+V) it into the “New Key Codes” box in the Software Registration window (**Step 7 below**). To get back to the window, simply follow the instructions for Step 4 described above. After you paste your registration key code into the box, click the “Save Key(s)” button to complete your registration. Then click “OK” to close the registration window.

The screenshot shows a web-based registration form for Earthsoft software. At the top is the Earthsoft logo, which consists of the word "earthsoft" in green lowercase letters with a globe icon replacing the "o". Below the logo is the title "Delaware DNREC EDP Format Registration" in blue. Underneath the title is a note: "To request software registration keys, please provide the following information (fields in red are required):". To the right of the form is a "Quicklinks" section with two links: "Register Software" and "Community Center". The form itself contains several input fields, each with a label in red text indicating it is required: "Name:", "Project Manager (RPM):", "Site/Project Name:", "Company:", "Address:", "City:", "State:", "Zip Code:", "Country:", "Phone Number:", "Email Address:", and "Computer ID:". The "Computer ID" field is pre-filled with the value "1553543161". Below these fields is a note: "*Note that this request form is for local workstation Computer IDs only. To purchase the format for network licensing, please contact support@earthsoft.com." followed by a "Comment:" label and a text area for additional information. At the bottom of the form are two buttons: "Submit" and "Clear".

EDP Registration Form

6. Complete the Registration Form and click “**Submit**”.
7. Once you receive the e-mail with a registration code, copy & paste that code back into the EDP Software Registration window under the “**New Key Codes**” box and click “**Save Key(s)**”. Make sure there are no blank spaces in the key you paste into the window.



Key Code Window

After the EDP software is installed and registered, the DNREC **Format File** can be opened:

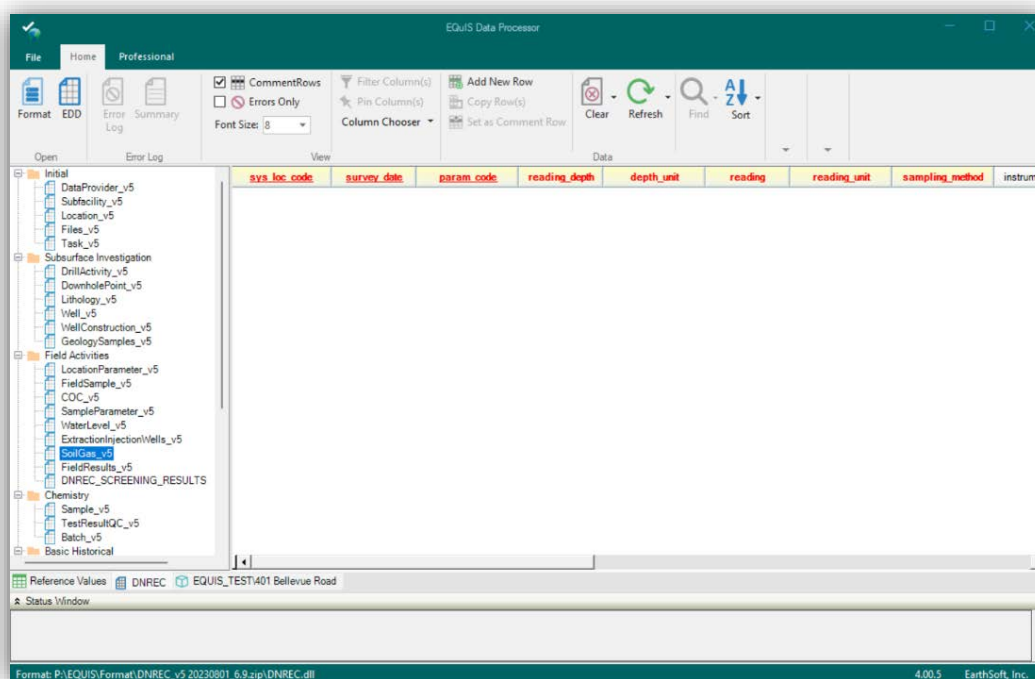
1. Start the EDP program (**it may already be open if you just completed registration**).



2. Select the “checklist” icon labeled **Format** in the upper left corner.
3. Select the **DNREC.xse file**.

Note: If you did not save the Format Files to a default location when downloading, you may have to browse to their location on your computer.

4. Click **Open**.



DNREC EDD Format

The DNREC EDD Format has six groups of EDD sections. These EDD groups all appear in the left panel within EDP (**visible on the previous page**) and are:

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

More information about each EDD section, in each grouping, is detailed in the [DNREC EDD Manual and the EDD Description](#) file, which can be accessed by clicking on the Excel icon for an EDD Description file button.

Loading your EDD

To load an Excel or Access EDD file containing multiple data sections:

Note: It is recommended that you close the Office application – Excel – prior to opening your EDD in EDP. (**The excel formula functions can do strange things to your data if the application is still open.**)



1. Click the **EDD button** from the Open menu.
2. Browse to the file, and select **“Open”**.

EDP will load all the tables of the EDD file into the appropriate EDD sections. To load a text EDD file (**preferred method**):

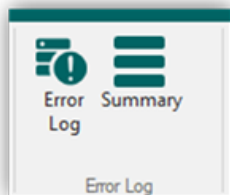
1. Select the format section the text file corresponds to (**for example, if a location_v5.txt file is to be checked, the location_v5 format is selected**).



2. Click the **EDD button** from the Open menu.
3. Browse to the EDD file and select **“Open”**.
4. EDP will load the file into the selected format.

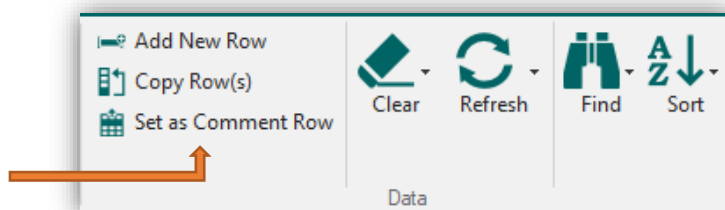
Correcting Errors in the EDD

After the file has been loaded, any errors will be identified with various colors. Additional details on why a record is in error are available by hovering the cursor over the error in question. You can also download an “Error Summary” containing a summary of all unique errors or an “Error Log” containing a detailed list of the first 500 errors on each row in the EDD file.



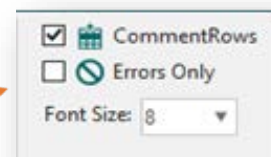
Error Log Tab of EDP

Note: If the Access or Excel EDD contains header rows, EDP will identify fields in the header rows as errors unless the first entry in each header row is preceded by a dollar-sign character (\$). The “\$” sign identifies the row as a **comment row**. If you have a header row, which you would like to set as a comment row, right click on the button to the left of the row and select “**Set as Comment Row**”. Alternatively, you may also delete the header row after it is imported to the EDP program.

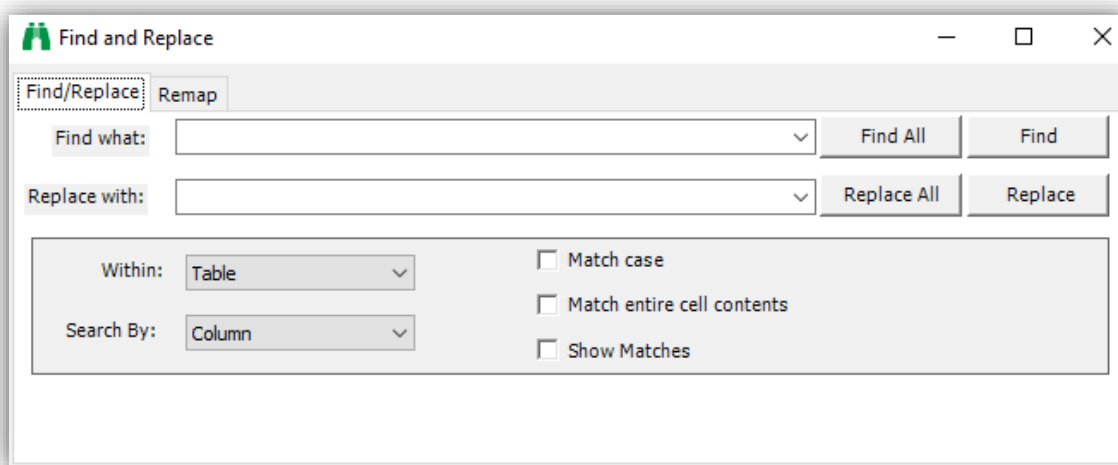


Data tab in EDP

- To view only records with errors, check the box next to “**Errors Only**” located in the top menu bar.
- To see all the records, uncheck the “**Errors Only**” box.
- You can also clear the data from EDP by selecting the “**Clear**” button in “Data” section of the menu. Choose to “**Clear Table**” to clear the current table or “**Clear All**” to clear all tables and re- open the data from a source EDD file.



- For reoccurring errors with similar values that need to be changed, the “**Find and Replace**” button, also in the Data section of the menu allows users to search a portion of the EDD file for specified values and replace them with another value. Predicate



Find and Replace

- If an error is related to a DNREC Valid Value list, a drop-down list will be available to select the appropriate value.
- If a valid value is not present, Data Providers should follow the procedure in the EDD manual or [DNREC EDP User Guide](#) for requesting valid values.
- Once the error is corrected, the cursor is moved off the cell, the color highlights should be removed indicating a correct value has been entered. You may need to refresh the table using the **Refresh**



button, also in the “**Data**” section of the menu bar, to have the error highlight cleared.

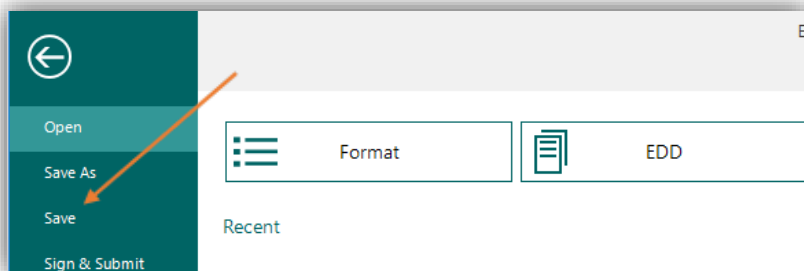
- Once the record is error free, highlights indicating errors will disappear from view. Errors will appear in **Red** until they are resolve. Once all errors are resolved in a tab, the tab color will change to **Green**. The goal is for all tabs with populated data should be **Green**, error-free.

Re-load the remaining tables that make up your EDD and repeat the procedures above until no errors are identified in any of the tables. For example, a typical analytical data EDD submittal would include at a minimum:

- DataProvider
- Location
- Sample
- TestResultQC
- Batch

Note: You can always save and re-open your EDD as you work in EDP making changes to correct errors.

It is always best to first start correcting errors in the sections of the “Initial” EDD grouping first at the top of the list moving down to the lower tables on the list. Relationships exist between many of the sections within the EDD and editing or deleting records in one table may result in “orphan records” in the lower tables. Once you have corrected the EDD data file, save it by checking the upper left corner icon and select **“Save”**.



Saving in EDP

If you need further assistance after reviewing this Quick Start Guide, please refer to the [Delaware DNREC EDP Format page](#) for the following file:

- The full DNREC EDD Submittal Requirements Manual (PDF).
-

For additional questions related to the DNREC EDD format and submittal process please direct all inquiries to DNREC_EQuIS@delaware.gov.

For technical issues with installing EDP and getting the latest DNREC EDD format installed and registered, please contact the EarthSoft Support Team at support@earthsoft.com.